



TSUUT'INA NATION CIVIC SERVICES
TAZA DEVELOPMENT

INFRASTRUCTURE DESIGN STANDARDS AND SPECIFICATIONS

DRAFT



Prepared for TSUUT'INA NATION
by IBI Group
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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:

INSERT MONTH 2019

The Infrastructure Design Standards and Specifications have been prepared for the benefit of Developers, Tenants, 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, Tenants, Consultants and Contractors 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 designed 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 Tsuut'ina Nation Civic Services to ensure they have the latest version. The document will also be accessible online at the following link:

LINK FUTURE WEBSITE

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 the Public Realm (PR) and Site Servicing Plan (SSP) submissions by Tenants in support of Development Permit 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, 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 the obligation to exercise his/her professional judgment and follow good engineering and construction practice.

These Infrastructure Design Standards and Specifications are intended to provide information to the Developer, Tenants, 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.

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 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*
- *Alberta Transportation Recommended Practices Guidelines for Signage, Traffic Operations and Traffic Signals*

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 Tsuut'ina Nation Civic Services or Public Works.

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 Realm (PR) Permit or Development Permit (DP)/Site Servicing Plan (SSP) application. Conformance to these governing reports and documents will be required in the Statement of Conformance found in Appendix A and B.

- *Taza Development Guidelines by the Tsuut'ina Land Development Limited Partnership*
- *Taza Developments – Detailed Environmental Review Report by Stantec Consulting Ltd.*
- *Master Drainage Plan Tsuut'ina Developments by Stantec Consulting Ltd.*
- *Taza Exchange – Master Drainage Plan by MPE Engineering Ltd.*
- *Taza Exchange, Park and Crossing Traffic Impact Assessment by Watt Consulting Group*

- *Tsuut'ina/Taza Development Servicing MSA Volumes Review (Rev4) by MPE Engineering Ltd.*
- *Taza Exchange – Potable Water Reservoir and Pump Station by MPE Engineering Ltd.*
- *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 following is a list of City of Calgary Guidelines, Manuals and Standards and Specifications that should be abided by, unless discrepancies exist within this document in which, this document shall take precedence. The most current version of these guidelines and manuals will need to be utilized.

- *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*
- *Alberta Transportation Recommended Practices Guidelines for Signage, Traffic Operations and Traffic Signals*

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 an amendment to the Law, Development Permit, or Variance.

APPLICATION NUMBER is a number provided by Tsuut'ina Nation Civic Services for a given Development Permit application or Public Realm Permit application.

AS-BUILT(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.

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

CONSTRUCTION COMPLETION CERTIFICATE (CCC) shall mean the certificate accepted by Tsuut'ina Nation Civic Services 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.

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

CONTRACTOR shall mean the individual or corporation hired by the Developer/Tenant to supply, construct and/or install the Infrastructure Improvements pursuant to the Agreement by or at the expense of the Developer/Tenant. 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 Realm.

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 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 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 Tsuut'ina Nation Civic Services 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 Developer.

INDEMNIFICATION AGREEMENT shall mean the written contract agreement that is duly executed between the Tenant and the Tsuut'ina Nation which authorizes a certified Contractor working on behalf of the Tenant to excavate, break or reconstruct all or any portion of the Tsuut'ina Nation's infrastructure located within the Public Realm.

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 Realm Permit or Development Permit application.

PUBLIC REALM means all exterior social 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.

SERVICING AGREEMENT shall mean the written contract agreement that is duly executed between the Developer and the Tsuut'ina Nation which details the terms and conditions under which the Developer is to construct or install the Infrastructure Improvements.

STATEMENT OF CONFORMANCE is a statement to be signed by the Developer's/Tenant's Consultant certifying that they are in good standing and that the Public Realm/Development Permit application is in conformance with the Infrastructure Design Standards and Specifications and supporting documentation.

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

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

TAZA DEVELOPMENT AUTHORITY is the appointed board by Tsuut'ina Nation to review and approve Development Permit and Public Realm Permit applications.

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 CROSSING is one of three Villages on the Tsuut'ina Nation, located between Taza Park and Taza Exchange. 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.

TAZA EXCHANGE is the one of the three Villages on the Tsuut'ina Nation, located in the southernmost area. Taza Exchange is a 390-acre Development that combines regional retail, office, and residential with recreation, entertainment, and tourism.

TENANT is the sublessee of the privately designated parcels of the Taza Development which would fall under the head lease.

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2 Public Realm

2.1 General

The Public Realm will encompass the infrastructure corridors and open public spaces situated between the privately designated parcels. It is publicly accessible and includes roads, sidewalks, pathways, parks, plazas and open spaces. This section provides the design standards and construction specifications for all aspects that form the Public Realm such as roads, deep/shallow utilities, storm water management facilities and other related infrastructure.

2.2 Drafting Standards

2.2.1 Taza Drawing Requirements

This Section lists the requirements specific to the Tsuut'ina Nation related to the preparation of Engineering Drawings for the Public Realm 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:

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

2.2.2 General Drawing Requirements

2.2.2.1 Sheet Size

The following sheet sizes will be accepted:

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

2.2.2.2 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.

2.2.2.3 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:

- Developer's name
- Consultant's name
- Relevant Taza file documentation numbers (if available at the time of application):
 - Tsuut'ina Nation Civic Services Application Number
 - Note: The Application Number may not be available at the First Submission therefore, it may be provided by the Second Submission.
 - Servicing Agreement Number

- Village name including staging and/or phasing, if applicable
- Legal plan, if available
- Civic address, if applicable
- Drawing number/name (Refer to Section 2.2.3.1)
- 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 initials of the Approving Authority
- An allocated space for the name of the Consultant, the signed professional stamp (P.Eng., P.L.(Eng.), P.Tech.) and Permit to Practice number
- Legend
- Total site area in hectares
- Notes

2.2.2.4 Drawing Scale

The following scales are 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.

2.2.3 Plan Drawing Requirements

2.2.3.1 List of Applicable Drawings

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

Table 2A – Public Realm Drawing Requirements

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	Building/Site 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	Ponds and Pond Details*
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 as Required
IR1.0, IR1.1, etc.	Irrigation Plan
C11.0, C12.0, etc.	Other Details as Required
PP1.0, PP2.0, etc.	Plan/Profiles
ESC1.0, ESC2.0, etc.	Erosion and Sediment Control Plan

*Project specific.

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

2.2.3.2 Building/Site Grading Plan

The following must be 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

2.2.3.3 Cut/Fill Plan

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

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

2.2.3.4 Overland Drainage

The following must be identified on the Overland Drainage:

- Construction boundary
- Original ground contours
- Major drainage routes

- Location of traplows with relevant design information
- Drainage catchment areas
- Direction of drainage flow
- If applicable, a stage, area, volume and discharge table
- Emergency spill route
- Legal base plan including easements
- Drainage easements

2.2.3.5 Storm Sewer Design

The following must be 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

2.2.3.6 Storm Catchment Area Plan

The following must be 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
- Delineated stormwater catchment areas
- Catchment flow directions
- Easement/right-of-way
- Minor systems table (i.e. stage, area, volume and discharge table, etc.)

2.2.3.7 Sanitary Sewer Design

The following must be 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)

2.2.3.8 Waterworks Design

The following must be 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

2.2.3.9 Surface Works

The following must be 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

2.2.3.10 Pavement Marking and Signage

The following must be 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 Tsuut'ina Language) will be required and will need to be coordinated with Tsuut'ina Nation Civic Services. Refer to Appendix C for all current Tsuut'ina Nation signage specifications.

2.2.3.11 Cross-section Details

The following must be 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.

2.2.3.12 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:

2.2.3.12.1 Concept Plan

Concept Plans are a visual representation of the written Design Statement required as part of the Public Realm Permit Approval Process. Concept Plans should clearly indicate how the Public Realm 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.

2.2.3.12.2 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).

2.2.3.12.3 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.

2.2.3.12.4 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.

2.2.3.12.5 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).

2.2.3.12.6 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.

2.2.3.13 Plan/Profile

2.2.3.13.1 Plan View

See requirements as described in Section 2.2.3.

2.2.3.13.2 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

2.2.4 As-built Drawing Requirements

As-built plan/profile drawings will need to be prepared and submitted at the completed stage of construction that meets the minimum requirements of the Tsuut'ina Nation Civic Service's standards.

As-built plan/profiles are detailed engineering drawings of a record showing the surface and the underground features such as legal, roadworks, waterworks, sanitary and storm sewers. The As-built plan/profiles shall include two plan views and one profile view as described below:

- The first plan view will consist of a top plan view displaying the final surface features such as legal descriptions and bordering property data, curbs, sidewalks, etc.
- The second plan view will consist of a utility plan view displaying the underground utilities such as, the waterworks, sanitary, and storm sewers.

- The profile view shows the utility grades, elevations and related data.

For major roads or rights-of-way that are over 30 metres, the information required on the top plan and the utility plan views would need to be combined.

2.2.4.1 Infrastructure Asset Numbering System

A Developer's local numbering system (for manholes, stormwater facilities and hydrants) may be used on design drawings submitted in support of a Permit application. However, As-built drawings shall be in accordance with Tsuut'ina Nation's Taza Infrastructure Asset Numbering System for water, sanitary and stormwater facilities. Tsuut'ina Nation Civic Services will provide, upon request, a list of the numbering convention/sequence, pertaining to each Public Realm Permit application, to be shown on the As-built drawings prior to their submission.

2.2.4.1.1 Manhole Numbering

The Infrastructure Asset Numbering System, as it pertains to sanitary and stormwater manholes, 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)

2.2.4.1.2 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)

2.2.4.1.3 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.

2.3 Submission Requirements

2.3.1 General

All submission documents including drawings, letters, studies and/or reports shall be submitted in digital format such as PDF. In the event supporting documentation has been prepared by others; the Applicant shall scan all documents as required. PR Permit applications must be dated and submitted through email or online via the Tsuut'ina Nation Civic Services' website, when it becomes available. In addition hardcopies of the PR Permit application and all supporting drawings/documentation must be submitted to Tsuut'ina Nation Civic Services. All drawings shall conform to the drawing requirements outlined in Section 2.2 - Drafting Standards. Applications that are incomplete or found to not be in accordance with the requirements outlined in this standard will be rejected.

A Statement of Conformance executed by the Consultant will be required with submission.

2.3.2 First Submission Requirements

The following must be submitted for a Public Realm Permit Application:

- Signed cover letter
- Public Realm Permit Application
- Public Realm Permit Checklist
- Public Realm Permit Fee
- Statement of Conformance executed by the Consultant
- Four (4) hardcopies of signed engineering, landscape and irrigation drawing sets
- Tentative Legal Plans of Survey
- Tentative Utility Right-of-Way Plans
- Two (2) hardcopies of a Geotechnical Report
- Two (2) hardcopies of a Stormwater Management Model/Report and Drainage Studies as per Section 2.8 and Appendix A, including Stormwater Management Checklist
- Two (2) hardcopies of an Erosion & Sediment Control Report and Drawing Application as per Section 2.10 and Appendix A
- Other pertinent items as deemed necessary by Tsuut'ina Nation Civic Services, as outlined in Section 2.3.4
- One (1) un-editable/printer-friendly electronic format of the entire Public Realm Permit Application and supporting drawings and documentation

Should Tsuut'ina Nation Civic Services not approve the Developers' plans, drawings or proposals, one set of the documents will be returned to the Developer for revision to the satisfaction of the Tsuut'ina Nation Civic Services.

2.3.3 Second/Final Submission Requirements

The following must be submitted:

- Signed cover letter giving a description of the revisions to first submission
- Revised Public Realm Permit Checklist (if applicable)
- Four (4) hardcopy sets of the revised signed engineering, landscape and irrigation drawing sets
- One (1) hardcopy of the final detailed cost estimate prepared by the Developer's Engineering Consultant breaking out and showing individual costs
- Confirmation from Tsuut'ina Nation Civic Services of 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
- Construction Management Plan (if applicable)
- Letters from the Shallow Utility Companies acknowledging the proposed alignments and utility right-of-way plan(s)
- Letter and plan from Canada Post illustrating proposed community mailbox locations within the Development (if applicable)

- Other pertinent items as deemed necessary by Tsuut'ina Nation Civic Services, as outlined in Section 2.3.4
- One (1) un-editable/printer-friendly electronic format of the entire revised Public Realm Permit Application and supporting drawings and documentation

Further submissions may be required by the Developer to achieve Permission to Construct/Public Realm Permit approval and release based on Tsuut'ina Nation Civic Services review and comments at each submission stage. Advisory Comments, Prior to Release Conditions and Permanent Conditions will be provided at each submission stage by Tsuut'ina Nation Civic Services.

2.3.4 Studies Prepared in Support of Application

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

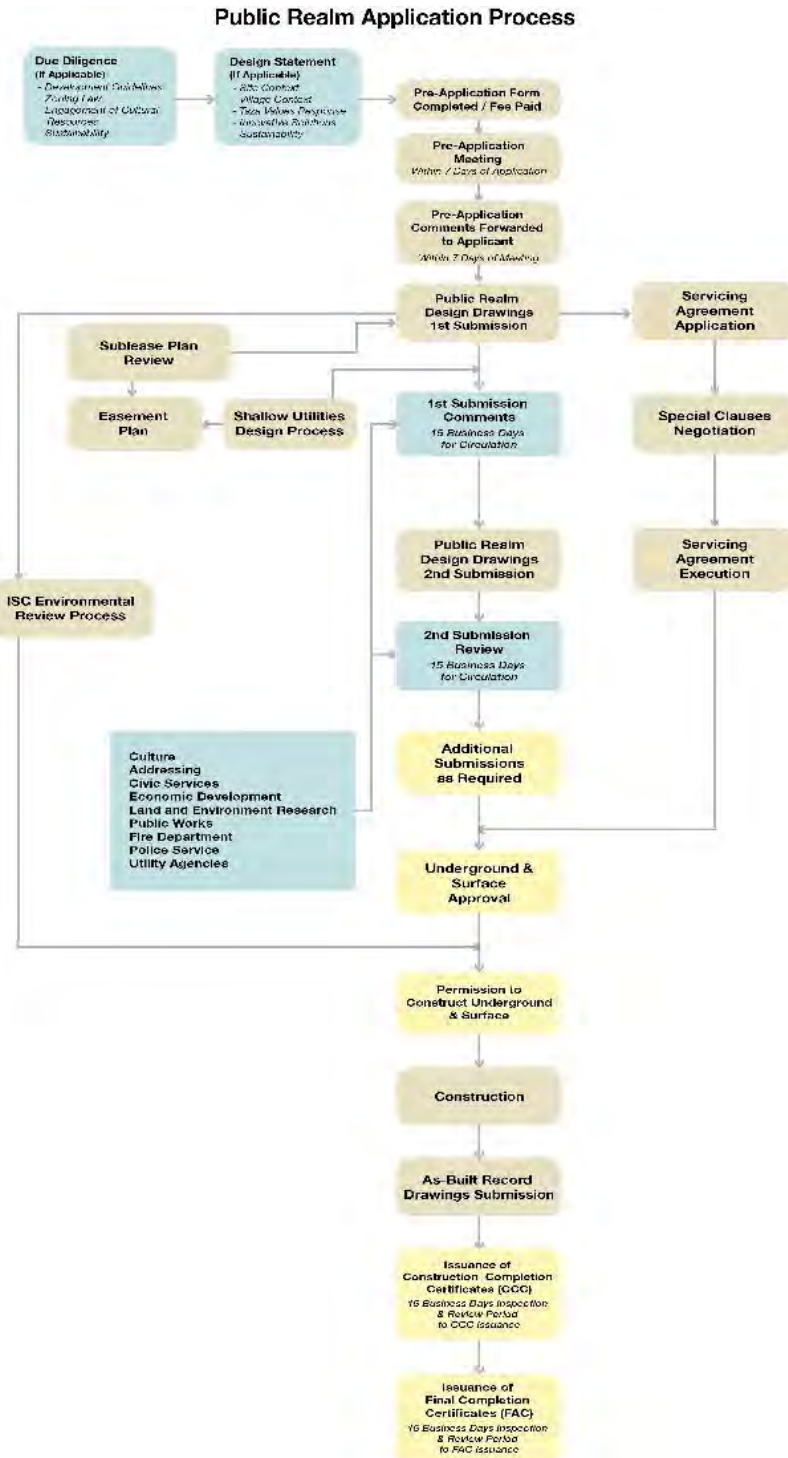
- Access Management Plan – Construction Access
- Archaeological Sites
- Biophysical Impact Assessment
- Chemical Management Plan
- Construction Management Plan
- Cost Feasibility and Sustainability Analysis (Water, Wastewater and Stormwater)
- Environmental Impact Assessment
- Environmental Site Assessment
- Erosion & Sedimentation Control Plan
- Geotechnical Reports
- Groundwater Supply Evaluation
- Historical Studies
- Paleontological Sites
- Sanitary Servicing Study
- Stormwater Management Report
- Traffic Accommodation Plan
- Traffic Impact Assessment
- Tree Protection Plan
- Natural Environment Park Restoration Plan
- Other reports and agreements that Tsuut'ina Nation Civic Services deems necessary

The requirements for these studies and any other supporting documentation on a given Public Realm Permit application will be discussed at the Pre-Application Meeting with Tsuut'ina Nation Civic Services.

2.4 Reviews/Approvals Process

2.4.1 Public Realm Permit Application Circulation Process

The following figure is the circulation, review and approvals process administered by Tsuut'ina Nation Civic Services for a given Public Realm Permit Application. Refer to Appendix A for the applicable Public Realm Permit application forms, fee schedule, and checklists.



2.4.2 Redline Review

2.4.2.1 Procedure

In the event of design revisions that may be required as a result of unexpected and/or unforeseen field conditions following a Public Realm Permit drawing approval; a redline review may be accepted Tsuut'ina Nation Civic Services. To initiate a redline review process, the following must be submitted:

- A cover letter detailing project information such as the PR 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.
- A tabloid (11"x17") drawing detailing the proposed changes in red. An electronic submission of this drawing will be acceptable.

If the changes are too significant to be captured in a redline review process, a full drawing submission may be required.

2.5 Road and Streetscape Design

2.5.1 General

The current editions of the following City of Calgary, and Provincial/Federal Design Guidelines, Standards and Specifications need to be utilized by the Developer 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 (TAC) Manual*
- *Alberta Transportation Recommended Practices Guidelines for Signage, Traffic Operations and Traffic Signals*

It will be the Developer'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:

- *Taza Exchange, Park and Crossing Traffic Impact Assessment by Watt Consulting Group*
- *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*

2.5.2 Traffic Analyses

The *Taza Exchange, Park and Crossing Traffic Impact Assessment by Watt Consulting Group* is an overall traffic analysis for all three (3) Taza Villages. This analysis will need to be referenced

for any road design, intersection configurations and laning changes within the Public Realm. An additional, more detailed, traffic analysis pertaining to the PR Permit application may be requested from the Developer and their Engineering Consultant.

2.5.3 Road Classification/Right-of-Way

Detailed Street Network Plans and unique Street Sections have been developed for each of the three (3) Taza Villages in the latest version of the *Taza Development Guidelines*. Road design within the Public Realm will need to conform to the applicable sections, right-of-way requirements, landscape architecture requirements and Public Realm 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.

2.5.4 Traffic Signalization/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 Tsuut'ina Nation Civic Services and will need to be included as a drawing in the submission set. It will be the responsibility of the Developer to install the approved Street signage to reflect the Street names approved by Tsuut'ina Nation Civic Services.

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 Developer 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 Tsuut'ina language, is required for all traffic signage. This will need to be coordinated early on in the project, at the Pre-application stage or Development Permit application stage, with Tsuut'ina Nation Civic Services. Refer to Appendix C for all current Tsuut'ina Nation signage specifications.

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

2.5.5 Street Naming

The Taza Development Authority 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.

2.5.6 Streetlighting

Streetlighting 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 in order to maintain and preserve the nighttime environment.

2.6 Water Infrastructure

2.6.1 General

The current editions of the following City of Calgary Design Guidelines, Standards and Specifications need to be utilized by the Developer 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 Developer'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:

- *Tsuut'ina/Taza Development Servicing MSA Volumes Review (Rev4) by MPE Engineering Ltd.*
- *Taza Exchange – Potable Water Reservoir and Pump Station completed by MPE Engineering Ltd.*

2.6.2 Hydrants

2.6.2.1 Hydrant Type

Hydrants located within the Taza Development shall be of the following hydrant model unless otherwise approved by Tsuut'ina Nation Civic Services:

Mueller – Centurion, Type DBC

- Two (2) 57mm hose connections at 180° with Alberta Mutual Aid Thread
- One (1) 114mm pumper connection (4 threads per 25.4mm, 154mm OD., root 145mm with 0.51mm flat top and bottom)
- The operating nut shall be 32mm x 32mm and shall turn counter-clockwise to open

Refer to Appendix C for the Hydrant Specification.

2.7 Wastewater Infrastructure (Sanitary Sewer)

2.7.1 General

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

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

It will be the Developer'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:

- *Tsuut'ina/Taza Development Servicing MSA Volumes Review (Rev4) completed by MPE Engineering Ltd.*

2.7.2 Manholes

Manholes located within the Taza Development shall be composed of the following frame and cover unless otherwise approved by Tsuut'ina Nation Civic Services:

- *TF- 150 Shallow Frame by Trojan Industries Inc.*
- *TF-50C Tsuut'ina Cover by Trojan Industries Inc.*

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

2.7.3 Lift Stations

Lift stations are generally required along mains that need to overcome the effects of gravity. Each installation will be reviewed by the Tsuut'ina Nation Civic Services on a site specific basis.

2.8 Stormwater Management

2.8.1 General

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

- *Design Guidelines for Subdivision Servicing*
- *Standard Specifications – Sewer Construction*
- *Stormwater Management & Design Manual*

It will be the Developer'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:

- *Master Drainage Plan Tsuut'ina Developments by Stantec Consulting Ltd.*
- *Master Drainage Plan Taza Exchange by MPE Engineering Ltd.*
- *Taza Development Guidelines by the Tsuut'ina-Canderel Land Development Limited Partnership*

2.8.2 Analysis Methodology

2.8.2.1 Modeling Programs

The Rational Method will be accepted for stormwater modelling for Developments under 2.0ha. For sites larger than 2.0ha, the following list of software suites will be accepted for the Taza Development:

- *SWMHYMO*

- *XPSWMM*
- *EPA SWMM*
- *PCSWMM*

2.9 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 Tsuut'ina Developments by Stantec Consulting Ltd.*
- *Master Drainage Plan Taza Exchange by MPE Engineering Ltd.*
- *Taza Development Guidelines by the Tsuut'ina-Canderel Land Development Limited Partnership*
- *Stormwater Management & Design Manual*
- *Low Impact Development Guidelines:*
 - *Geotechnical and Hydrological Considerations*
 - *Bioretention and Swales*
 - *Green Roofs*
 - *Permeable Pavement*

2.10 Erosion and Sediment Control

2.10.1 General

An Erosion and Sediment Control Plan 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*

2.10.2 Erosion and Sediment Control Requirements

An Erosion and Sediment Control (ESC) Report and Drawing Application should consist of a Tsuut'ina Nation Civic Services ESC application. The number of drawings required is dependent on the type of Development which is clearly outlined in the application. Any drawings that are omitted from the submission will require a justification outlined within the cover letter enclosed with the submission package.

Refer to Appendix A for the ESC Application.

2.11 Landscaping

2.11.1 General

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

- *Development Guidelines and Standard Specifications – Landscape Construction*

It will be the Developer'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:

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

2.12 Construction Completion Certificate (CCC)

Tsuut'ina Nation Civic Services utilizes a Construction Completion Certificate (CCC) and Final Acceptance Certificate (FAC) procedure to sign off on all Infrastructure Improvements completed by the Developer.

Once the Developer completes an Infrastructure Improvement, the Consultant must follow the procedure below, in the order shown:

1. Inspect the Infrastructure Improvement with the Developer's Contractor and record any deficiencies.
2. Conduct further inspection(s) once the Developer's Contractor repairs the initial deficiencies until all deficiencies are repaired to a satisfactory level.
3. Resolve any outstanding field orders related to the Infrastructure Improvement.
4. Conduct an inspection with Tsuut'ina Nation Civic Services. 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.
5. Submit the CCC, As-built drawings and the required documentation for the Infrastructure Improvement to Tsuut'ina Nation Civic Services.

The Infrastructure Improvements are defined into the following categories:

- A. Underground Infrastructure – Water and Water Services
- B. Underground Infrastructure – Sanitary Sewer and Sanitary Sewer Services
- C. Underground Infrastructure – Storm Sewer and Storm Sewer Services
- D. Surface Works – Concrete – Curb, Gutter & Sidewalk
- E. Surface Works – Asphalt – Parking Lots, Roads and Recreational Path
- F. Surface Works – Landscaping
- G. Surface Grading – Overland Drainage
- H. Facilities (Stormwater Management Facilities, Lift Stations and Booster Pump Stations)

The CCC application package for each Infrastructure Improvement category shall be submitted to Tsuut'ina Nation Civic Services and must include:

- Detailed Cover Letter
- Design Compliance Statement executed by the Consultant
- CCC Checklist found in Appendix A for the respective Infrastructure Improvement
- Four (4) original hardcopies of the Construction Completion Certificate, duly signed and sealed by the appropriate Consultant with tabloid (11"x17") plans attached highlighting the Improvement constructed. The template for the Construction Completion Certificate can be found in Appendix A.
- Four (4) complete sets of engineering, landscape and/or irrigation drawings indicating the completed Improvements and marked "As-built Drawing" with the Consultant's stamp and signature being dated to reflect the CCC application date
- One (1) complete current cost calculation, certified by a Consultant, outlining the actual costs of construction for the Development including unit rate costs and/or Schedule of Quantities.
- One (1) complete cost estimate, certified by a Consultant, outlining the costs of construction, including unit rate costs and/or Schedule of Quantities, to complete Improvements outlined within the Servicing Agreement.
- Testing Material / Requirements as listed in Table B
- Four (4) copies of a list identifying the Contractors that the Developer 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) un-editable/printer-friendly digital format of the entire Construction Completion Certificate application package.

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 Tsuut'ina Nation Civic Services, the Construction Completion Certificate will be accepted.

Table B – CCC Requirements

Infrastructure Improvement Category	Testing Material / Requirements
UNDERGROUND INFRASTRUCTURE	
Water and Water Services	Pressure Test Results Water Quality Test Compaction Test Results Grade Sheets Hydrant Pressure & Flow Testing in accordance with current Specifications
Sanitary Sewer and Sanitary Sewer Services	Video Inspection completed within the last 90 days (Submit electronically or via a CD/DVD) Video Inspection Log Infiltration / Exfiltration Testing Compaction Test Results Grade Sheets
Storm Sewer and Storm Sewer Services	Video Inspection completed within the last 90 days (Submit electronically or via a CD/DVD) Video Inspection Log Infiltration / Exfiltration Testing Compaction Test Results Grade Sheets
SURFACE WORKS	
Concrete – Curb, Gutter & Sidewalk	Concrete Test Results Compaction Test Results Grade Sheets Erosion & Sediment Control Inspection Logs
Asphalt – Parking Lots, Roads, Recreational Path (Paved and Gravel)	Asphalt Test Results Compaction Test Results Confirmation of Proof Rolling (Subgrade) Erosion & Sediment Control Inspection Logs
LANDSCAPING	
Landscaping	Plumbing Permit 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 Annual Double Check Valve (DCV) Report Seed Testing Certificate (as required) Concrete Mix Design Geotechnical Testing

INFRASTRUCTURE DESIGN STANDARDS AND SPECIFICATIONS

	<p>Compaction Testing for Backfill</p> <p>Field leak test for main line as per ASTM F216-13 and Fusion Test Logs</p> <p>Back Bend Test (as required)</p> <p>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</p> <p>Irrigation "As-built Drawings" stamped and signed by a Certified Irrigation Designer</p> <p>Paper and Digital Landscape "As-built Drawings" stamped and signed by a Landscape Architect</p>
Surface Grading	
Overland Drainage	<p>Grade Sheets</p> <p>Rough Grading Plan based on actual field survey and certified by an Engineering Consultant as "As-built"</p>
FACILITIES	
Stormwater Management Facilities	<p>Erosion & Sediment Control Inspection Log</p> <p>Operation & Maintenance Plan Log</p> <p>Registrations and copies of existing / new Code of Practice</p> <p>Pond and/or Outfall registrations and approvals transferred to the Tsuut'ina Nation</p>
Lift Stations and Booster Pump Stations	<p>Substantial or Construction Complete Certificates for the construction contract</p> <p>Tsuut'ina Nation Civic Services Approval to Operate (If applicable)</p> <p>Operation & Maintenance Plans and Manuals</p> <p>Registrations and copies of existing / new Code of Practice (If applicable)</p> <p>Commission reports and summaries</p>

2.13 Final Acceptance Certificate (FAC)

The Final Acceptance Certificate (FAC) can be applied for after the noted maintenance period expiry date shown on the CCC, currently set for two (2) years for each infrastructure improvement category. The FAC application categories will be the same as the CCC application categories.

A final inspection with Tsuut'ina Nation Civic Services 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.

The FAC application package for each Infrastructure Improvement category shall be submitted to the Tsuut'ina Nation Civic Services and must include:

- Detailed Cover letter
- Design Compliance Statement executed by the Consultant
- FAC Checklist found in Appendix A for the respective Infrastructure Improvement
- Four (4) original copies of the Final Acceptance Certificate, duly signed and sealed by the Consultant with tabloid (11"x17") plans attached highlighting the Improvement constructed
- Four (4) complete sets 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 and/or irrigation drawings as per Section 2.2.4.
- One (1) list of deficiencies and/or defects indicating when they were repaired.
- One (1) un-editable/printer-friendly digital format of the entire Final Acceptance Certificate application package.

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 Tsuut'ina Nation Civic Services, the Final Acceptance Certificate will be accepted.

Table C – FAC Requirements

Infrastructure Improvement Category	Testing Material / Requirements
UNDERGROUND INFRASTRUCTURE	
Water and Water Services	Pressure Test Results Water Quality Test Hydrant Pressure & Flow Testing in accordance with current Specifications
Sanitary Sewer and Sanitary Sewer Services	Video Inspection completed within the last 90 days (Submit electronically or via a CD/DVD) Video Inspection Log Infiltration / Exfiltration Testing
Storm Sewer and Storm Sewer Services	Video Inspection completed within the last 90 days (Submit electronically or via a CD/DVD) Video Inspection Log Infiltration / Exfiltration Testing
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 Erosion & Sediment Control Inspection Logs
SURFACE GRADING	
Overland Drainage	Grade Sheets Rough Grading Plan based on actual field survey and certified by an Engineering Consultant as “As-built” Confirmation that public utility lots have been graded as per the Final Grading Plan, top-soiled and seeded
LANDSCAPING	
Landscaping	Maintenance Log 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
FACILITIES	
Stormwater Management Facilities	Erosion & Sediment Control Inspection Log Operation & Maintenance Plan Log Water Table Testing Reports
Lift Stations and Booster Pump Stations	Submission of FAC only

2.14 Procedures for Servicing Agreement

The construction of Infrastructure Improvements within the Public Realm is subject to the terms and conditions of a Servicing Agreement. Without a signed Servicing Agreement, the construction of the Development will not proceed (i.e. no deep underground infrastructure or roadwork can be constructed).

2.14.1 Engineering Consultant of Record

For the entire duration of the Servicing Agreement, the Developer must retain an Engineering Consultant(s) to design, supervise, inspect, monitor and certify all work carried out. The Engineering Consultant is deemed to be an agent of the Developer for the purposes of the Servicing Agreement.

Prior to signing a Servicing Agreement, the Engineering Consultant must submit a form, approved by the Tsuut'ina Nation, identifying they are the Engineering Consultant of Record for the purposes of the Servicing Agreement. If they cease to be the Engineering Consultant of Record, they should send immediate notice to the Tsuut'ina Nation. In this case, the Developer must immediately retain the services of a new Engineering Consultant and have the new Engineering Consultant submit a form identifying they are the Engineering Consultant of Record for the remainder of the Servicing Agreement.

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

It is the Developer'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 Developer'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 right-of-ways

2.14.3 Power, Gas, Telephone and Cable TV

The Developer is responsible for coordinating the location of the power, gas, telephone and cable TV, including obtaining alignment and utility right-of-way approvals. The location of the shallow utilities must be confirmed to ensure that all of the required utility right-of-ways are shown on the Utility Right-of-Way Plan before it is submitted to the Tsuut'ina Nation Civic Services for registration. The Legal Plan and Utility Right-of-Way Agreements are released for registration when the Servicing Agreement has been signed by the Developer and the Tsuut'ina Nation.

The Developer must forward copies of the roadway, deep utility plans and engineering drawings to the shallow utility companies.

2.14.4 Servicing Agreement Endorsement

When the Developer has completed all the requirements for the Servicing Agreement, the Taza Development Authority will draft the Servicing Agreement for the Developer to review. Attention should be paid to any Special Clauses inserted in the Servicing Agreement. Once accepted and signed by the Developer, including payment of all applicable levies, the Servicing Agreement will be forwarded for signatures.

The Taza Development Authority will issue a Servicing Agreement Endorsement letter notifying the Developer may proceed with construction once the Servicing Agreement has been signed by the Tsuut'ina Nation.

Tsuut'ina Nation is entitled to register and maintain caveats evidencing the Tsuut'ina Nation's interest under the Servicing Agreement on the certificate of title to every lot within the Development until such time as all obligations under the Servicing Agreement have been fulfilled.

In cases where the Transmittal of Decision or Notice of Decision requires construction or upgrades of existing Civic infrastructure, special consideration will be required with regard to accommodating the needs of existing users and the general public. In some cases, the Taza Development Authority may require the Developer to enter into a separate Servicing Agreement for offsite improvements.

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3 Private Realm (Development Permit/Site Servicing Plan)

3.1 General

A Site Servicing Plan (SSP) is a supporting document of the Development Permit application which outlines the supply and distribution of potable water, the network of sanitary sewer service, the collection of stormwater, and road geometrics/grading. The submission of a Site Servicing Plan ensures that private developments are designed to comply with the following design standards and construction specifications. Approval of a Site Servicing Plan and ultimately approval/release of the Development Permit grants permission to Tenants/Private Developments to connect to the Tsuut'ina Nation water, sanitary, stormwater and road networks.

3.1.1 Site Servicing Plan Requirement

The Tsuut'ina Nation requires a review and inspection of a Site Servicing Plan (SSP) for all proposed private developments where new utility connections (water, sanitary and stormwater) are proposed to the Tsuut'ina Nation system 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 Tsuut'ina Nation Civic Services 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 Engineering Consultant maintains full responsibility to exercise competence and good engineering judgement for the entirety of the design. Further, they must adhere to the most current versions of standards and specifications as outlined and listed in Section 1.4. The Engineering Consultant is also responsible for ensuring any other applicable federal requirements are adhered to and for performing inspection and documentation for all site development and retaining these records for the use of the Tenant. The Contractor maintains full responsibility for the entirety of their construction, installation or alteration activities, ensuring their work is as per the approved plans and meets all the above requirements.

Review and inspection by Tsuut'ina Nation Civic Services is not to be considered a substitute for supervision by the Engineering Consultant, Tenant or Contractor. The professional responsibility of the design and construction of the proposed development remains with the Tenant and their Consultant and Contractor.

Approval of drawing and studies is only one element of the Development Permit (DP) approval process. This approval must not be construed as a clearance to commence work on a project. The final Notice of Decision and Development Permit certificate is issued by Tsuut'ina Nation Civic Services.

3.2 Drafting Standards

3.2.1 Taza Drawing Requirements

Section 3.2 lists the requirements specific to the Tsuut'ina Nation related to the preparation of Engineering Drawings for a Site Servicing Plan 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*

3.2.2 General Drawing Requirements

3.2.2.1 Sheet Size

The following sheet sizes will be accepted:

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

3.2.2.2 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.

3.2.2.3 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:

- Tenant's name
- Consultant's name
- Relevant Taza file documentation numbers:
 - Tsuut'ina Nation Civic Services Application Number
 - Note: The Application Number may not be available at the First Submission therefore, it may be provided by the Second Submission.
 - Development Permit Number
- Village name including staging and/or phasing, if applicable
- Legal plan
- Civic address
- Drawing number/name (refer to Section 3.2.3.1)
- 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 Approving Authority
- An allocated space for the name of the Consultant, an original signed professional stamp (P.Eng., P.L.(Eng.), P.Tech.) and Permit to Practice number
- Legend

- Total site area in hectares
- Notes

3.2.2.4 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.

3.2.3 Plan Drawing Requirements

3.2.3.1 List of Applicable Plan Drawings

The following is a list of Plan Drawings that may be submitted in support of a Site Servicing Plan application.

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

*Project specific.

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

3.2.3.2 Underground Layout Plans

The following must be 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.

3.2.3.3 Surface and Grading Plans

The following must be 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.

3.2.3.4 Stormwater Management Plans

Stormwater Management Plans are required for private Developments that require the submission of a Stormwater Management Report. Refer to Section 3.7 for Stormwater Management Submissions. If required, the following may be identified on the Storm Management Plan:

- Catchment labels including catchment number, total area (m²) 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.

3.2.3.5 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 Site Servicing Plan Drawing Submission.

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 Tsuut'ina Developments by Stantec Consulting Ltd.*
- *Master Drainage Plan Taza Exchange by MPE Engineering Ltd.*
- *Taza Development Guidelines by the Tsuut'ina-Canderel Land Development Limited Partnership*
- *Stormwater Management & Design Manual*
- *Low Impact Development Guidelines:*
 - *Geotechnical and Hydrological Considerations*
 - *Bioretention and Swales*
 - *Green Roofs*
 - *Permeable Pavement*

3.2.3.6 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 Tsuut'ina language, may be required for onsite traffic/directional signage. This will need to be coordinated early on in the project, at the Pre-application stage or Development Permit application stage, with Tsuut'ina Nation Civic Services.

Refer to Appendix C for all current Tsuut'ina Nation signage specifications.

3.2.3.7 Cross-sections

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

3.2.3.8 Details

Detail sheets may be included with a Site Servicing Plan 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 and,
- Water/wastewater infrastructure details.

3.2.3.9 Additional Site Plans

Additional site plans covering project specific items will be required as part of the Site Servicing Plan Drawing Submission. These include but are not limited to the following:

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

3.2.3.10 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:

3.2.3.10.1 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.

3.2.3.10.2 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).

3.2.3.10.3 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.

3.2.3.10.4 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.

3.2.3.10.5 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).

3.2.3.10.6 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.

3.3 Submission Requirements

3.3.1 General

All submission documents including drawings, letters, studies and/or reports shall be submitted in digital format such as PDF. In the event supporting documentation has been prepared by others; the Applicant shall scan all documents as required. Development Permit applications must be dated and submitted through email or online via the Tsuut’ina Nation Civic Services’ website, when it becomes available. In addition hardcopies of the PR Permit application and all supporting drawings/documentation must be submitted to Tsuut’ina Nation Civic Services. All drawings shall conform to the drawing requirements outlined in Section 2.2 - Drafting Standards. Applications that are incomplete or found to not be in accordance with the requirements outlined in this standard will be rejected.

A Site Servicing Plan (SSP) Checklist has been prepared to assist the Applicant in the preparation of an SSP application. Refer to Appendix B for a copy of the Site Servicing Plan Checklist. Applications that are incomplete or found to not be in accordance with the requirements will be rejected.

It is recommended that 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.

A Statement of Conformance executed by the Consultant will be required with submission.

3.3.2 First Submission Requirements

The following must be submitted for the First Submission of a Development Permit application in the event the Tenant is including the Site Servicing Plan, detailed drawings and any supporting documentation. (Detailed requirements on the Pre-Application and Development Permit application can be found in the *Taza Development Guidelines*.)

- Signed cover letter
- Development Permit Application (refer to *the Taza Development Guidelines* for further details on DP requirements)
- Design Statement (in accordance with the *Taza Development Guidelines*)
- Applicable Development Permit Checklist
- Development Permit Fee Calculation Form
- Statement of Conformance executed by the Consultant
- Site Servicing Plan Checklists (and other applicable checklists as outlined in Appendix B)
- Four (4) hardcopies of signed engineering, landscape and irrigation drawing sets
- Tentative Legal Plans of Survey
- Tentative Utility Right-of-Way Plan(s)
- Two (2) hardcopies of a Geotechnical Report
- Two (2) hardcopies of a Stormwater Management Model/Report and Drainage Studies as per Section 3.8 and Appendix B, including Stormwater Management Checklist
- Two (2) hardcopies of an Erosion & Sediment Control Report and Drawing Application as per Section 3.10 and Appendix B
- Other pertinent items as deemed necessary by Tsuut'ina Nation Civic Services as per Section 3.3.4
- One (1) un-editable/printer-friendly electronic format of the entire Development Permit Application and supporting drawings and documentation

Should Tsuut'ina Nation Civic Services not approve the Tenants' plans, drawings or proposals, one set of the documents will be returned to the Tenant for revision to the satisfaction of the Tsuut'ina Nation Civic Services.

Submission requirements for a complete Development Permit Application need to conform to the *Taza Development Guidelines* and the applicable DP checklists listed in Appendix B. All Site Servicing Plan checklists and Statement of Conformance are also listed in Appendix B.

3.3.3 Second/Final Submission Requirements

The following must be submitted for the Second Submission:

- All revisions to existing applications for the Site Servicing Plan must include a cover letter prepared by the Consultant giving a description of the revisions
- Four (4) hardcopies of revised signed engineering, landscape and irrigation drawing sets
- Design Statement (if revised)
- Statement of Conformance executed by the Consultant
- Site Servicing Plan Checklists (and other applicable checklists as outlined in Appendix B)
- Resubmission of any drawings, plans and reports as required
- One (1) un-editable/printer-friendly electronic format of the entire revised Development Permit Application and supporting drawings and documentation

Further submissions may be required by the Tenant to achieve Development Permit approval and release based on Tsuut'ina Nation Civic Services review and comments at each submission stage. Advisory Comments, Prior to Release Conditions and Permanent Conditions will be provided at each submission stage by Tsuut'ina Nation Civic Services.

3.3.4 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
- Chemical Management Plan
- Construction Management Plan
- Cost Feasibility and Sustainability Analysis (Water, Wastewater and Stormwater)
- Environmental Impact Assessment
- Environmental Site Assessment
- Erosion & Sedimentation Control Plan
- Geotechnical Reports
- Groundwater Supply Evaluation
- Historical Studies
- Paleontological Sites
- Sanitary Servicing Study
- Stormwater Management Report
- Traffic Accommodation Plan
- Traffic Impact Assessment
- Tree Protection Plan
- Natural Environment Park Restoration Plan
- Other reports and agreements that Tsuut'ina Nation Civic Services deems necessary

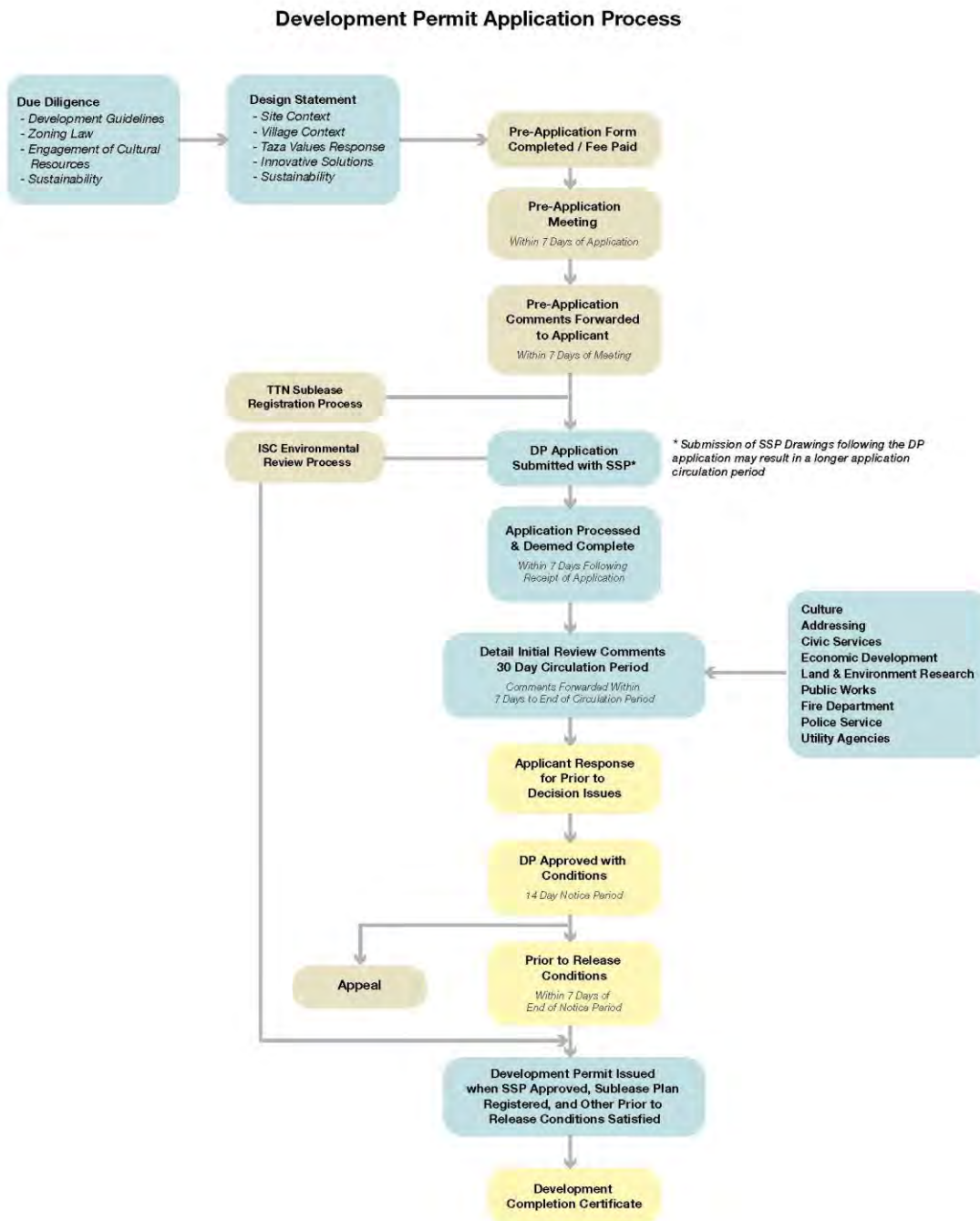
The requirements for these studies and any other supporting documentation on a given Development Permit application will be discussed at the Pre-Application Meeting with Tsuut'ina Nation Civic Services.

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3.4 Reviews/Approvals Process

3.4.1 Development Permit Application Circulation Process

The following figure is the circulation, review and approvals process administered by Tsuut'ina Nation Civic Services for a given Development Permit application. Refer to Appendix B for the applicable Development Permit application forms, fee schedule, and checklists.



3.4.2 Redline Review

3.4.2.1 Procedure

In the event of design revisions that may be required as a result of unexpected and/or unforeseen field conditions following a Site Servicing Plan Approval; a redline review may be accepted. To initiate a redline review process, the following must be submitted:

- A cover letter detailing project information such as the SSP Application Number, Development Permit Number, any other relevant project information as well as a description of the redline revisions and justification for the changes.
- A tabloid (11"x17") drawing detailing the proposed changes in red. An electronic submission of this drawing will be acceptable.

If the changes are too significant to be captured in a redline review process, a full drawing submission may be required.

3.5 Road and Streetscape Design

3.5.1 General

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

- *Design Guidelines for Subdivision Servicing*
- *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 Tenant'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:

- *Taza Exchange, Park and Crossing Traffic Impact Assessment by Watt Consulting Group*
- *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*

3.5.2 Traffic Analyses

The *Taza Exchange, Park and Crossing Traffic Impact Assessment by Watt Consulting Group* is an overall traffic analysis for all three (3) Taza Villages. 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 Development Permit application may be requested from the Tenant and their Engineering Consultant.

3.5.3 Road Classification/Right-of-Way

Detailed Street Network Plans and unique Street Sections have been developed for each of the three (3) 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 guidelines.

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

3.5.4 Traffic Signalization/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 Tsuut'ina Nation Civic Services and will need to be included as a drawing in the submission set. It will be the responsibility of the Tenant to install the approved Street signage to reflect the Street names approved by Tsuut'ina Nation Civic Services.

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 Tenant 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 Tsuut'ina language, is required for all traffic signage. This will need to be coordinated early on in the project, at the Pre-application stage or Development Permit application stage, with Tsuut'ina Nation Civic Services. Refer to Appendix C for all current Tsuut'ina Nation signage specifications.

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

3.5.5 Street Naming

The Taza Development Authority 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.

3.5.6 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 in order to maintain and preserve the nighttime environment.

3.6 Water Infrastructure

3.6.1 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 following document(s) compiled for the Taza Development:

- *Tsuut'ina/Taza Development Servicing MSA Volumes Review (Rev4) completed by MPE Engineering Ltd.*
- *Taza Exchange – Potable Water Reservoir and Pump Station completed by MPE Engineering Ltd.*

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
- Construction Standard Specifications – Waterworks

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

3.6.2 Hydrants

3.6.2.1 Hydrant Type

Hydrants located within the Taza Development shall be of the following hydrant model unless otherwise approved by the Tsuut'ina Nation Civic Services:

Mueller – Centurion, Type DBC

- Two (2) 57mm hose connections at 180° with Alberta Mutual Aid Thread
- One (1) 114mm pumper connection (4 threads per 25.4mm, 154mm OD., root 145mm with 0.51mm flat top and bottom
- The operating nut shall be 32mm x 32mm and shall turn counter-clockwise to open

Refer to Appendix C for the Hydrant Specification.

3.6.3 Meter Units

3.6.3.1 General

All water connections to the Tsuut'ina Nation water system will require the installation of a water meter. Tenants will need to contact and coordinate with Tsuut'ina Nation Public Works for water meter specifications and requirements. All current contact information for Tsuut'ina Nation departments can be found in the *Tsuut'ina Nation Civic Services for Taza Development Level of Service* document.

3.6.3.2 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 a Tsuut'ina Nation Public Works Representative only. The following stipulations for metering apply:

- One water meter is required for each registered Tenant.
- No branch line or tap between the water meter and service line are permitted.
- The Tsuut'ina Nation Public Works will determine the size, type and number of water meters to be supplied and installed for each Tenant.

3.7 Wastewater Infrastructure (Sanitary Sewer)

3.7.1 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:

- *Tsuut'ina/Taza Development Servicing MSA Volumes Review (Rev4) completed by MPE Engineering Ltd.*

For any aspect of the wastewater network 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,*
- *Construction Standard Specifications – Sewer*

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

3.7.2 Manhole Covers

Manholes located within the Taza Development shall be composed of the following unless otherwise approved by the Tsuut'ina Nation Civic Services:

- TF- 150 Shallow Frame by Trojan Industries Inc.
- TF-50C Tsuut'ina Cover by Trojan Industries Inc.

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

3.8 Stormwater Management

3.8.1 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 Tsuut'ina Nation:

- *Master Drainage Plan Tsuut'ina Developments by Stantec Consulting Ltd.*
- *Master Drainage Plan Taza Exchange by MPE Engineering Ltd.*
- *Taza Development Guidelines by the Tsuut'ina-Canderel Land Development Limited Partnership*

For any aspect of stormwater management or storm sewer design 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 – Sewer Construction*

- *Stormwater Management & Design Manual*

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

3.8.1.1 Modeling Programs

The Rational Method will be accepted for stormwater modelling for Developments under 2.0ha. For sites larger than 2.0ha, the following list of modelling programs will be accepted for use in Taza:

- *SWMHYMO*
- *XPSWMM*
- *EPA SWMM*
- *PCSWMM*

3.9 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 LIDs that can 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 Tsuut'ina Developments by Stantec Consulting Ltd.*
- *Master Drainage Plan Taza Exchange by MPE Engineering Ltd.*
- *Taza Development Guidelines by the Tsuut'ina-Canderel Land Development Limited Partnership*
- *Stormwater Management & Design Manual*
- *Low Impact Development Guidelines:*
 - *Geotechnical and Hydrological Considerations*
 - *Bioretention and Swales*
 - *Green Roofs*
 - *Permeable Pavement*

3.10 Erosion and Sediment Control

An Erosion and Sediment Control Plan is designed 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*

3.10.1 Erosion and Sediment Control Requirements

An Erosion and Sediment Control (ESC) Plan submission should consist of a Tsuut'ina Nation Civic Services ESC application. The number of drawings required is dependent on the type of Development which is outlined in the application. Any drawings that are omitted from the submission will require a justification outlined within the cover letter enclosed with the submission package.

Refer to Appendix B for the ESC application.

3.11 Landscaping

The following document (s) have been compiled for the Taza Development and shall be reviewed prior to designing landscaping 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 Tenant and the Consultant for the landscape design:

- *Development Guidelines and Standard Specifications: Landscape Construction*

It will be the Tenant'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.

3.12 Waste and Recycling Requirements

Waste and recycling services will be the responsibility of the Tenant. Refer to the *Tsuut'ina Nation Civic Services for Taza Development Level of Service* for further information.

3.13 Development Completion Certificate

In order to initiate the request for a Development Completion Certificate (DCC). It will be the responsibility of the Tenant to contact Tsuut'ina Nation Civic Services for a DCC inspection. A DCC will only be issued to the Tenant once the Development has been fully constructed to the satisfaction of Tsuut'ina Nation Civic Services and in accordance with the current standards.

3.14 Indemnification Agreement

Any work, excavation, reconstruction or service extensions within the Public Realm will require an Indemnification Agreement with Tsuut'ina Nation. This includes streets, sidewalks, driveway crossings, landscaping, boulevards, curbs and gutters, back lanes/alleys, walkways and utilities within the Public Realm.

An Indemnification Agreement authorizes a Tenant and their Contractor to excavate, break or reconstruct all or any portion of a Street for a particular project. This Agreement will:

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

The Indemnification Agreement will be executed upon approval of the Development Permit. The Agreement must be properly executed in one of two ways:

- If it's by a company, then the Agreement must be signed under corporate seal.
- If it's by an individual, the individual's signature must be accompanied by a Corporate Signing Affidavit, and witnessed and accompanied by an Affidavit of Execution sworn by the witness in the presence of a Commissioner for Oaths.

Tsuut'ina Nation Civic Services will provide Tenants with an Indemnification Agreement outlining the details of the indemnity, security/fee amounts and insurance requirements. Upon execution of the Agreement, the following must be submitted to Tsuut'ina Nation Civic Services:

1. Four (4) executed copies of the Agreement;
2. Certificate of insurance; and
3. Applicable security/fees as outlined in the Agreement.

DRAFT

Appendix A – Public Realm

1. Public Realm Permit Application Form
2. Public Realm Permit Application Fee Schedule
3. Public Realm Permit Application Checklist
4. Erosion and Sediment Control Report and Drawing Application
5. Stormwater Management Report Checklist
6. Construction Completion Certificate (CCC) Checklists:
 - a. Checklist CCC for Facilities – Stormwater Management Facilities, Lift Stations & Booster Pump Stations
 - b. Checklist CCC for SG – Overland Drainage
 - c. Checklist CCC for SW – Asphalt – Parking Lots, Roads & Recreational Path
 - d. Checklist CCC for SW – Concrete – Curb, Gutter & Sidewalk
 - e. Checklist CCC for SW – Landscaping
 - f. Checklist CCC for UI – Sanitary Sewer & Sanitary Services
 - g. Checklist CCC for UI – Storm Sewer & Storm Sewer Services
 - h. Checklist CCC for UI – Water & Water Services
 - i. Construction Completion Certificate Template
7. Final Acceptance Certificate Checklists:
 - a. Checklist FAC for Facilities – Stormwater Management Facilities, Lift Stations & Booster Pump Stations
 - b. Checklist FAC for SG – Overland Drainage
 - c. Checklist FAC for SW – Asphalt – Parking Lots, Roads & Recreational Path
 - d. Checklist FAC for SW – Concrete – Curb, Gutter & Sidewalk
 - e. Checklist FAC for SW – Landscaping
 - f. Checklist FAC for UI – Sanitary Sewer & Sanitary Services
 - g. Checklist FAC for UI – Storm Sewer & Storm Sewer Services
 - h. Checklist FAC for UI – Water & Water Services
 - i. Final Acceptance Certificate Template
8. Statement of Conformance



TSUUT'INA NATION CIVIC SERVICES

TAZA DEVELOPMENT

Public Realm

Permit Application Form

<i>OFFICE USE ONLY</i>			
APPLICATION FOR:			
<input type="checkbox"/> WASTEWATER/STORM SEWERS <input type="checkbox"/> WATERMAINS <input type="checkbox"/> ROADWORKS <input type="checkbox"/> SIDEWALKS <input type="checkbox"/> LANES/PATHWAYS <input type="checkbox"/> STRIPPING AND GRADING <input type="checkbox"/> STORM PONDS <input type="checkbox"/> PARKS/PUBLIC SPACE <input type="checkbox"/> SHALLOW UTILITIES <input type="checkbox"/> WATER/WASTEWATER FACILITIES <input type="checkbox"/> SIGNAGE <input type="checkbox"/> OTHER			
FILE#	FEES \$	DATE RECEIVED	RECEIPT #

Contact Information

SUBLEASE HOLDER:	APPLICANT/ AGENT (if different from Sublease Holder):
CONTACT NAME:	CONTACT NAME:
MAILING ADDRESS:	MAILING ADDRESS:
PHONE (OFFICE):	PHONE (OFFICE):
PHONE (CELL):	PHONE (CELL):
FAX:	FAX:
EMAIL:	EMAIL:

Legal Description of the Property

LOT	PLAN
LEGAL DESCRIPTION/INFORMATION (IF APPLICABLE):	
EXISTING LAND USE UNDER THE TTN ZONING LAW:	
STREET ADDRESS / PROPOSED ROAD NAME (IF AVAILABLE):	

Public Realm Permit Application Information

TYPE:	NUMBER OF PARCELS:	
AREA (Ha)	UTILITY LENGTH (m)	FACILITY AREA (ha)
GENERAL NATURE OF DEVELOPMENT <i>(attach additional pages if necessary)</i>		

NOTE: If the applicant is not the holder of the sublease for the property concerned, then sublease holder's signature is required on 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 (Sublease Holder/ 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 Nation Taza Civic Services Department at (403)258-4016, if you have any further questions.

Signature of Applicant / Agent

Date

Signature of Sublease Holder

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

Inquiries regarding the policies & procedures for development can be made to the following:

Tsuut'ina Nation Taza Civic Services
Telephone: (403) 258-4016



TSUUT'INA NATION CIVIC SERVICES

TAZA DEVELOPMENT

Public Realm Permit Application Fees

Permit Type	Cost	Notes
Stripping / Grading / Excavation	\$1 000	Flat Fee
Public Realm Permit Application – Transportation Infrastructure/ Parks / Public Space / Water / Wastewater / Stormwater Facilities	\$10 000	Per Application
CCC Application & Inspections	\$5 000	Per Application (Includes two (2) inspections; \$350 per additional inspection)
FAC Application & Inspections	\$5 000	Per Application (Includes two (2) inspections; \$350 per additional inspection)
Change to a Public Realm Permit Application after circulation	50%	Of original application fee
Request to re-evaluate a condition of a Public Realm Approval	25%	Of original application fee

TSUUT'INA NATION CIVIC SERVICES

TAZA DEVELOPMENT



Public Realm Permit Application Checklist

The Public Realm 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:

- Application Fee (See Public Realm Permit Fee Schedule)
- Application Form (The form is to be completed in full and signed by the Developer of the land and/or the Person authorized to act on their behalf, if applicable)
- Letter of Authorization from the Developer of the land, or their agent (if required)
- The proposed land uses, including densities in units per hectare
- The proposed road system, identifying all the road types (e.g. collector, major, etc.), with all the carriageway right-of-way dimensions labeled
- Existing and proposed grades, including any interim, future and ultimate road grades and proposed lot grading adjacent to major roads, expressways and the Transportation and Utility Corridor (future ring road/utility right-of-way encircling the city), dimensioned to the property lines and the lip of gutter
- Cross-sections and detailed geometric plan/profiles showing the interim and future intersections/interchanges, where applicable
- INAC Environmental Approval Application Form
- Key plan showing the location of the Development area in relation to Taza as a whole
- Where applicable, back sloping requirements to determine property requirements for future intersection/interchange
- Other technical reports and support information that may be required (Refer to pre-application consultation notes for a list of additional reports required to support the permit application)
 - Access Management Plan – Construction Access
 - Archaeological Sites
 - Biophysical Impact Assessment (BIA) Report
 - 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
- Groundwater Supply Evaluation
- Historical Studies
- Paleontological Sites
- Sanitary Servicing Studies
- Stormwater Management Report
- Traffic Accommodation Plan
- Traffic Impact Assessment
- One (1) un-editable and printer-friendly electronic copy (PDF) of the complete Public Realm Design Application package including all supporting drawings/documentation. Four (4) hardcopies of the same package must be submitted to the Taza Development Authority.

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

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

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

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

<input type="checkbox"/>	<input type="checkbox"/>	Label new landscaped areas and areas to be retained
Irrigation:		
<input type="checkbox"/>	<input type="checkbox"/>	Method of irrigation (Watering)
<input type="checkbox"/>	<input type="checkbox"/>	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:		
<input type="checkbox"/>	<input type="checkbox"/>	Buildings
<input type="checkbox"/>	<input type="checkbox"/>	Fences
<input type="checkbox"/>	<input type="checkbox"/>	Retaining walls (over 1.2 m in height)
<input type="checkbox"/>	<input type="checkbox"/>	Screening (i.e. mechanical equipment)
<input type="checkbox"/>	<input type="checkbox"/>	Additional walls or structures (i.e. exhaust fan shed)
<input type="checkbox"/>	<input type="checkbox"/>	Cross reference with other plans, where applicable
Include on elevations:		
<input type="checkbox"/>	<input type="checkbox"/>	Doors, windows, overhead doors
<input type="checkbox"/>	<input type="checkbox"/>	Projections and decorative elements
<input type="checkbox"/>	<input type="checkbox"/>	Screening (i.e. service meters, privacy screens)
<input type="checkbox"/>	<input type="checkbox"/>	Dimension all doors, windows, and overhead doors
Label finishing materials:		
<input type="checkbox"/>	<input type="checkbox"/>	Exterior materials (i.e. brick, stucco, vinyl siding)
<input type="checkbox"/>	<input type="checkbox"/>	Roof materials (i.e. asphalt, cedar shakes, concrete tile)
<input type="checkbox"/>	<input type="checkbox"/>	Colours of all major exterior materials
Lighting:		
<input type="checkbox"/>	<input type="checkbox"/>	Plot location of light fixtures
<input type="checkbox"/>	<input type="checkbox"/>	Dimension height of fixtures from grade to bottom of fixture
Grade:		
<input type="checkbox"/>	<input type="checkbox"/>	Plot existing and proposed grade
Signage:		
<input type="checkbox"/>	<input type="checkbox"/>	Label materials, lettering details, copy and colours
<input type="checkbox"/>	<input type="checkbox"/>	Dimension sign and signable area
<input type="checkbox"/>	<input type="checkbox"/>	Dimension distance from grade to bottom of sign
<input type="checkbox"/>	<input type="checkbox"/>	Label means of supporting sign (i.e., structures, guy wires, brackets, bracing)
<input type="checkbox"/>	<input type="checkbox"/>	Label physical form of sign (i.e., cabinet, box, individual letters)
<input type="checkbox"/>	<input type="checkbox"/>	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)

<i>office use only</i>	
Screened by:	Date:
Taza Development Authority	

TSUUT'INA NATION CIVIC SERVICES

TAZA DEVELOPMENT



Public Realm & Private Sites

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 Taza 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 <small>(I.e Stripping & Grading, Industrial/Commercial/Institutional, Public Realm)</small>	
A.10 Servicing Agreement Number (if applicable)	
A.11 Development Permit/Public Realm 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
<input type="checkbox"/> ESC1	Before Stripping and Grading	Required	*Site Dependent	
<input type="checkbox"/> ESC2	During Stripping and Grading	Likely Required	*Site Dependent	
<input type="checkbox"/> ESC3	Post Stripping and Grading	Required	*Site Dependent	
<input type="checkbox"/> ESC4	**Cut and Fill	Likely Required	Site Dependent	Site Dependent
<input type="checkbox"/> ESC5	Before Development		Required	Required
<input type="checkbox"/> ESC6	Post Underground		Required	Required
<input type="checkbox"/> ESC7	Above Ground Work		Required	Required
<input type="checkbox"/> ESC8	Development Completion		Required	
<input type="checkbox"/> ESC9	Landscaping		Required	Site Dependent
<input type="checkbox"/> 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. 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.

F. 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

SEED Specification # 200.1.1					
F.1.1	C-Value	Type % Cover	Drawings Represented On	Location Description	Supplemental Information

SOD Specification # 200.1.2					
F.1.2	C-Value	Sod Type	Drawings Represented On	Location Description	Supplemental Information

ROLLED EROSION CONTROL PRODUCTS (RECP) Specification # 200.1.3					
F.1.3	C-Value	Blanket Type	Drawings Represented On	Location Description	Supplemental Information

HYDROMULCH/TACKIFIER Specification # 200.1.4					
F.1.4	C-Value	Type & Application Rates	Drawings Represented On	Location Description	Supplemental Information

COMPOST BLANKETS Specification # 200.1.5					
F.1.5	C-Value	Type and Application Rates	Drawings Represented On	Location Description	Supplemental Information

AGGREGATE COVER Specification # 200.1.6					
F.1.6	C-Value	Type and Application Rates	Drawings Represented On	Location Description	Supplemental Information

F.2 Sediment Control

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

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

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

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

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

SILT FENCE Specification # 200.2.6					
F.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

F.4.1	Nonstandard Specification Number:	
*Include the Manufacturer's Specification Sheet for any Nonstandard Erosion and Sediment Control Measures and Practices proposed on-site.		

G. 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

H. 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

I. Winterization Plan

				If an ESC Measure/Practice cannot be installed on Frozen or Snow Covered Ground, either confirm that it must be installed prior to Winter or provide an alternate Measure/Practice that will be used instead.	
List <u>ALL</u> 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)	Specify that the ESC Measure/Practice must be installed before Winter or	Provide an Alternate Measure/Practice if installation is required during frozen conditions

J. Transition Planning

Start Drawing Code		Next Drawing Code		Duration of Transition	
Order of Actions for Erosion and Sediment Control Measures/Practices Implementation					Action
1.					
2.					
3.					
4.					
5.					
Transition Details			Contingency Plan if transition can't be conducted in the duration specified		

Start Drawing Code		Next Drawing Code		Duration of Transition	
Order of Actions for Erosion and Sediment Control Measures/Practices Implementation					Action
1.					
2.					
3.					
4.					
5.					
Transition Details			Contingency Plan if transition can't be conducted in the duration specified		

Start Drawing Code		Next Drawing Code		Duration of Transition	
Order of Actions for Erosion and Sediment Control Measures/Practices Implementation					Action
1.					
2.					
3.					
4.					
5.					
Transition Details			Contingency Plan if transition can't be conducted in the duration specified		

K. 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 and donuts 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:

Taza Development Authority

TSUUT'INA NATION CIVIC SERVICES TAZA DEVELOPMENT



Public Realm & Private Sites

Stormwater Management Report Checklist

Project Name:	Village Name:
Phase Number:	Circulation (First or Second):
Developer:	Consultant:
Contact Name:	Contact Email:
Servicing Agreement <u>OR</u> Development Permit and Site Servicing Plan Number(s):	Tsuut'ina Nation Civic Services Application Number:

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 Taza Development Authority may require additional supporting documentation considered necessary to properly evaluate the proposed Development.

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REQUIRED ITEMS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ALL items identified as "Not Applicable" or "Incomplete" by the Applicant are explained in the Comments section below.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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. Submit four (4) hardcopies of the same Stormwater Management Report (SWMR) to the Tsuut'ina Nation Civic Services.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Outline any outstanding area(s) in the SWMR that could not meet the Taza Infrastructure Design Standards and Specifications in the cover letter.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	List any related Master Drainage Plans, Staged Master Drainage Plans and/or related Stormwater Management Reports.
Site Description and Design Criteria			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Include the Village name and Phase number, if applicable.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	State the legal land location, Site address and total area in hectares.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide a Study Area Figure and Location Plan that summarizes the location of the proposed Development and the adjacent area(s).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	State design objectives.
Analysis Methodology and Data			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Include a brief description of the computer model, methodology, design storm parameters, catchment parameters, catchbasin/inlet curves, manhole losses, and/or storage curves.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Outline criteria used for sizing of the minor system.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Catchment boundaries should align with preceding reports. If discrepancies exist, provide supplemental information to rationalize the changes.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identify any areas beyond the construction boundary, including their size, that contribute to the stormwater management system.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Include a figure and table delineating sub-catchments and sizes of the sub-catchments within the Development.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide a schematic drawing that supports the computer model and submitted drawings.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attach the computer input, summary and output files.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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

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REQUIRED ITEMS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	confirm that all drainage gutters fully contain the 1:100 year peak flow rate without overtopping/spillover into adjacent area(s).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the traplow storage table shows all trap lows in the Development and those on/adjacent to the construction boundary.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tabulate all major and minor system boundary conditions entering and/or exiting the Development.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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 Realm SWMR, the following section can be disregarded.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ensure that natural flows from upstream are not impeded.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ensure that on-site minor system is designed for the 1:5 year flow rate.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A dynamic hydraulic analysis has been conducted for flow controls that are in series.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identify minimum building elevations (MGs) based on critical spillover elevation, located within the Development or within adjacent areas.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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 Realm Drawing Requirements
			General Drawing Requirements:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Plans to be in metric scale, minimum 1:100, all elevations in metric are NAD 83 Geodetic Datum Ground Coordinates
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	North arrow, pointing to top or left of page
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Address (i.e. street address) and legal address (i.e. plan/block/lot)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Size of parcel (ha)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Label all elements of plan as existing or proposed (Proposed to be used for in circulation elements)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Signed and dated Engineering Consultant's stamp (i.e. P.Eng., P.L.Eng., or P.Tech)

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REQUIRED ITEMS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Permit to Practice number
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Construction boundary
			Overland Drainage Drawing Requirements:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Q,v,d's for critical segments
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Traplow storage table
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Traplow location and outline at spill elevation
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ICDs, catch basin types, and interconnected catch basins
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Manhole and catchbasin rim elevations
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Overland arrows indicating the escape route
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concrete drainage gutter locations and details for deep or non-standard gutter sections
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Direction of drainage flow, displayed by arrows, from the high points to a low point. Include a slope value.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Original ground contour lines
			Storm Sewer Design Drawing Requirements:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minor system table that follows a logical flow pattern
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ICDs, catch basin types, and interconnected catch basins
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe layout including pipe sizes and manhole numbers
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Overall drainage plans, if applicable
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe inverts, and rim elevations at all manhole and catchbasins
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe numbering system, if applicable
			Storm Catchment Area Plan Drawing Requirements
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drainage area boundary lines
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drainage area sizes, release rate and/or runoff coefficients
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Catchment IDs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Direction of drainage flow, displayed by arrows, from the high points to a low point. Include a slope value.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe layout including pipe sizes, pipe slope and manhole numbers
			Site Servicing Plan Drawing Requirements
			General Drawing Requirements:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Plans to be in metric scale, minimum 1:100, all elevations in metric are NAD 83 Geodetic Datum Ground Coordinates
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	North arrow, pointing to top or left of page
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Address (i.e. street address) and legal address (i.e. plan/block/lot)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Size of parcel (ha)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Label all elements of plan as existing or proposed (Proposed to be used for in circulation elements)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Signed and dated Engineering Consultant's stamp (i.e. P.Eng., P.L.Eng., or P.Tech)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Permit to Practice number
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Construction boundary
			Underground Layout Plan Drawing Requirements:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Overall site plan
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Building outlines, parking lots, driveways and parking garage access routes

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REQUIRED ITEMS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Catchment boundaries and area sizes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe size, type, class, material, length, slope and bedding material
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe inverts, and rim elevations at all manhole and catchbasins
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minor system table that follows a logical flow pattern
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sanitary sewer manholes requiring seals or one-hole manhole lids
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All ICDs, CB type and locations, and interconnected CBs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sump pump and details
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pump start and stop elevations, and pump rating curve (excluding sump pumps)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Special hydraulic requirements (e.g. benching, backwater valves, HGLs)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum Main Floor (MF/MMF/MSE/TOS) elevation(s) for buildings.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Floodway, flood fringe, and overland flow zone lines complete with all step elevations and labels, as well as distance to buildings and structures
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Details of source control practices (SCPs) (e.g. OGS including type and model number, installation details, etc.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Underground storage including capacity required, elevations and design details
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water quality requirements and applicable details
			Surface and Grading Plan Drawing Requirements
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adjacent properties and streets including contours, property line elevations, and (critical) traplow spillover elevations
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Direction of drainage flow, displayed by arrows, from high points to low points. Include a slope value.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Permitted release rate (in L/s and L/s/ha)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Imperviousness values and/or runoff coefficients
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Trap low low point, 1:100 year and spillover elevations, depth, capacity and 1:100 year storage requirements, and outline at spillover elevation
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Roof top storage including capacity required, discharge rate and design details
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Grading showing landscaping, berms, escape routes, ponds, and applicable elevations
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type, alignment, elevations and cross-sections of drainage gutters or swales (concrete and grass)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drainage crossing locations
			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:
			Stormwater Management Plan Drawing Requirements
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Catchment boundaries and area sizes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Imperviousness and runoff coefficients
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe layout including pipe sizes and manhole numbers
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe inverts, and rim elevations at all manhole and catchbasins
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ICDs, catch basin types, and interconnected catch basins
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Details of source control practices (SCPs) (e.g. OGS including type and model number, installation details, 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** _____

<i>Office use only</i>	
Screened by: _____	Date: _____
Taza Development Authority	



CHECKLIST

CONSTRUCTION COMPLETION CERTIFICATE

FOR FACILITIES: STORMWATER MANAGEMENT FACILITIES, LIFT STATIONS AND BOOSTER PUMP STATIONS

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
B. Four (4) original copies of the Construction Completion Certificate (CCC), duly signed and sealed by the appropriate Engineering Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) complete sets of Engineering Drawings indicating the completed Improvements and marked "As-built Drawing" with the Engineering Consultant's stamp and signature being dated to reflect the CCC application date	_____
D. One (1) complete current Cost Calculation, certified by an Engineering Consultant, outlining the actual costs of construction for the Development	_____
E. One (1) complete Cost Estimate, certified by an Engineering Consultant, outlining the costs of construction to complete Improvements outlined within the Servicing Agreement	_____
F. Testing Material/Requirements	
F.1. <u>Stormwater Management Facilities</u>	
F.1.a. Erosion & Sediment Control Inspection Log	_____
F.1.b. Operation & Maintenance Plan Log	_____
F.1.c. Registrations and copies of existing / new Code of Practice	_____
F.1.d. Pond and/or Outfall registrations and approvals transferred to the Tsuut'ina Nation	_____
F.2. <u>Lift Stations and Booster Pump Stations</u>	
F.2.a. Substantial or Construction Complete Certificates for the construction contract	_____
F.2.b. Civic Services Approval to Operate (If applicable)	_____
F.2.c. Operation & Maintenance Plans and Manuals	_____
F.2.d. Registrations and copies of existing / new Code of Practice (If applicable)	_____
F.2.e. Commission reports and summaries	_____
G. One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	_____



CHECKLIST

CONSTRUCTION COMPLETION CERTIFICATE **FOR FACILITIES: STORMWATER MANAGEMENT FACILITIES, LIFT STATIONS AND BOOSTER PUMP STATIONS**

H. Four (4) copies of a list identifying the Contractors that the Developer 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



CHECKLIST
CONSTRUCTION COMPLETION CERTIFICATE
FOR SURFACE GRADING: OVERLAND DRAINAGE

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
B. Four (4) original copies of the Construction Completion Certificate (CCC), duly signed and sealed by the appropriate Engineering Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) complete sets of Engineering Drawings indicating the completed Improvements and marked "As-built Drawing" with the Engineering Consultant's stamp and signature being dated to reflect the CCC application date	_____
D. One (1) complete current Cost Calculation, certified by an Engineering Consultant, outlining the actual costs of construction for the Development	_____
E. One (1) complete Cost Estimate, certified by an Engineering Consultant, outlining the costs of construction to complete Improvements outlined within the Servicing Agreement	_____
F. Testing Material/Requirements	
F.1. Grade Sheets	_____
F.2. Rough Grading Plan based on actual field survey and certified by an Engineering Consultant as "As-built"	_____
G. One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	_____
H. Four (4) copies of a list identifying the Contractors that the Developer has retained to carry out underground infrastructure, surface works, surface grading and facility maintenance. The list, at a minimum shall include the following: <ul style="list-style-type: none">• Contractor name and area of responsibility• Contractor business phone number and contact information• Contractor after hours phone number• Contractor emergency phone number	_____



CHECKLIST
CONSTRUCTION COMPLETION CERTIFICATE
FOR SURFACE WORKS: ASPHALT – PARKING LOTS, ROADS AND RECREATIONAL PATH

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
B. Four (4) original copies of the Construction Completion Certificate (CCC), duly signed and sealed by the appropriate Engineering Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) complete sets of Engineering Drawings indicating the completed Improvements and marked "As-built Drawing" with the Engineering Consultant's stamp and signature being dated to reflect the CCC application date	_____
D. One (1) complete current Cost Calculation, certified by an Engineering Consultant, outlining the actual costs of construction for the Development	_____
E. One (1) complete Cost Estimate, certified by an Engineering Consultant, outlining the costs of construction to complete Improvements outlined within the Servicing Agreement	_____
F. Testing Material/Requirements	
F.1. Asphalt Test Results	_____
F.2. Compaction Test Results	_____
F.3. Confirmation of Proof Rolling (Subgrade)	_____
F.4. Erosion & Sediment Control Inspection Logs	_____
G. One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	_____
H. Four (4) copies of a list identifying the Contractors that the Developer 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	



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

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
B. Four (4) original copies of the Construction Completion Certificate (CCC), duly signed and sealed by the appropriate Engineering Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) complete sets of Engineering Drawings indicating the completed Improvements and marked "As-built Drawing" with the Engineering Consultant's stamp and signature being dated to reflect the CCC application date	_____
D. One (1) complete current Cost Calculation, certified by an Engineering Consultant, outlining the actual costs of construction for the Development	_____
E. One (1) complete Cost Estimate, certified by an Engineering Consultant, outlining the costs of construction to complete Improvements outlined within the Servicing Agreement	_____
F. Testing Material/Requirements	
F.1. Concrete Test Results	_____
F.2. Compaction Test Results	_____
F.3. Grade Sheets	_____
F.4. Erosion & Sediment Control Inspection Logs	_____
G. One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	_____
H. Four (4) copies of a list identifying the Contractors that the Developer has retained to carry out underground infrastructure, surface works, surface grading and facility maintenance. The list, at a minimum shall include the following: <ul style="list-style-type: none">• Contractor name and area of responsibility• Contractor business phone number and contact information• Contractor after hours phone number• Contractor emergency phone number	_____



CHECKLIST
CONSTRUCTION COMPLETION CERTIFICATE
FOR SURFACE WORKS: LANDSCAPING

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
B. Four (4) original copies of the Construction Completion Certificate (CCC), duly signed by the appropriate Landscape Architectural Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) original copies of the Construction Inspection Check List and CCC Report	_____
D. Four (4) complete sets of Irrigation Drawings indicating the completed Improvements and marked "As-built Drawing" with the Certified Irrigation Consultant's stamp and signature being dated to reflect the CCC application date	_____
E. One (1) complete current Cost Calculation, certified by a Registered Landscape Architect, outlining the actual costs of construction for the Development	_____
F. One (1) complete Cost Estimate, certified by a Registered Landscape Architect, outlining the costs of construction to complete Improvements outlined within the Servicing Agreement	_____
G. Paper and Digital Landscape "As-built Drawings" stamped and signed by a Landscape Architect	_____
H. Testing Material/Requirements (As required/outstanding from CCC Inspection)	
H.1. Plumbing Permit	_____
H.2. Topsoil Test	_____
H.3. Open Trench Inspection Log (for Mains and Laterals)	_____
H.4. Certificate of CSA Compliance Letter (for playgrounds)	_____
H.5. Poured in Place Rubber Fall Surface Drop Test	_____
H.6. Asphalt/ Compaction Density Reports	_____
H.7. Annual Double Check Valve (DCV) Report	_____



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

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
B. Four (4) original copies of the Construction Completion Certificate (CCC), duly signed and sealed by the appropriate Engineering Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) complete sets of Engineering Drawings indicating the completed improvements and marked "As-built Drawing" with the Engineering Consultant's stamp and signature being dated to reflect the CCC application date	_____
D. One (1) complete current Cost Calculation, certified by an Engineering Consultant, outlining the actual costs of construction for the Development	_____
E. One (1) complete Cost Estimate, certified by an Engineering Consultant, outlining the costs of construction to complete Improvements outlined within the Servicing Agreement	_____
F. Testing Material/Requirements	
F.1. Video Inspection completed within the last 90 days (electronically submitted or via CD/DVD)	_____
F.2. Video Inspection Log	_____
F.3. Infiltration / Exfiltration Testing	_____
F.4. Compaction Test Results	_____
F.5. Grade Sheets	_____
G. One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	_____
H. Four (4) copies of a list identifying the Contractors that the Developer has retained to carry out underground infrastructure, surface works, surface grading and facility maintenance. The list, at a minimum shall include the following: <ul style="list-style-type: none">• Contractor name and area of responsibility• Contractor business phone number and contact information• Contractor after hours phone number• Contractor emergency phone number	_____



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

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
Four (4) original copies of the Construction Completion Certificate (CCC), duly signed and sealed by the appropriate Engineering Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) complete sets of Engineering Drawings indicating the completed Improvements and marked "As-built Drawing" with the Engineering Consultant's stamp and signature being dated to reflect the CCC application date	_____
D. One (1) complete current Cost Calculation, certified by an Engineering Consultant, outlining the actual costs of construction for the Development	_____
E. One (1) complete Cost Estimate, certified by an Engineering Consultant, outlining the costs of construction to complete Improvements outlined within the Servicing Agreement	_____
F. Testing Material/Requirements	
F.1. Video Inspection completed within the last 90 days (electronically submitted or via CD/DVD)	_____
F.2. Video Inspection Log	_____
F.3. Infiltration / Exfiltration Testing	_____
F.4. Compaction Test Results	_____
F.5. Grade Sheets	_____
G. One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	_____
H. Four (4) copies of a list identifying the Contractors that the Developer 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	



CHECKLIST
CONSTRUCTION COMPLETION CERTIFICATE
FOR UNDERGROUND INFRASTRUCTURE: WATER AND WATER SERVICES

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
B. Four (4) original copies of the Construction Completion Certificate (CCC), duly signed and sealed by the appropriate Engineering Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) complete sets of Engineering Drawings indicating the completed Improvements and marked "As-built Drawing" with the Engineering Consultant's stamp and signature being dated to reflect the CCC application date	_____
D. One (1) complete current Cost Calculation, certified by an Engineering Consultant, outlining the actual costs of construction for the Development	_____
E. One (1) complete Cost Estimate, certified by an Engineering Consultant, outlining the costs of construction to complete Improvements outlined within the Servicing Agreement	_____
F. Testing Material/Requirements	
F.1. Pressure Test Results	_____
F.2. Water Quality Test	_____
F.3. Compaction Test Results	_____
F.4. Grade Sheets	_____
F.5. Hydrant Pressure & Flow Testing in accordance with current Specifications	_____
G. One (1) digital copy of "As-built" Engineering Design Drawings as per the Infrastructure Design Standards and Specifications	_____
H. Four (4) copies of a list identifying the Contractors that the Developer has retained to carry out underground infrastructure, surface works, surface grading and facility maintenance. The list, at a minimum shall include the following: <ul style="list-style-type: none">• Contractor name and area of responsibility• Contractor business phone number and contact information• Contractor after hours phone number• Contractor emergency phone number	_____

**TSUUT'INA NATION CIVIC SERVICES
TAZA DEVELOPMENT**



CONSTRUCTION COMPLETION CERTIFICATE

VILLAGE: _____

DEVELOPER: _____

CONTRACTOR: _____

IMPROVEMENT: _____

CONSULTANT: _____

I, _____, of the firm of _____, do hereby certify that the Improvement noted herein and shown on the attached plan has been installed and completed in accordance with the Tsuut'ina Nation Infrastructure Design Standards and Specifications and in accordance with previously examined drawings. I have carried out a complete inspection of the Improvement immediately prior to making this application and hereby recommend this Improvement for acceptance under this Construction Completion Certificate.

Professional's Stamp and Date

Permit to Practice Stamp (If applicable)

Approved/Rejected:

Taza Development Authority

Date

Conditions of Approval/Reasons for Rejection:

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



CHECKLIST

FINAL ACCEPTANCE CERTIFICATE

FOR FACILITIES: STORMWATER MANAGEMENT FACILITIES, LIFT STATIONS AND BOOSTER PUMP STATIONS

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
B. Four (4) original copies of the Final Acceptance Certificate (FAC), duly signed and sealed by the Engineering Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) complete sets of Engineering Drawings indicating the completed Improvements and marked as "As-built" with the Engineering Consultant's stamp and signature being dated to reflect the FAC application date	_____
D. Testing Material/Requirements	
D.1. <u>Stormwater Management Facilities</u>	
D.1.a. Erosion & Sediment Control Inspection Log	_____
D.1.b. Operation & Maintenance Plan Log	_____
D.1.c. Water Table Testing Reports	_____
D.2. <u>Lift Stations and Booster Pump Stations</u>	
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	_____



CHECKLIST
FINAL ACCEPTANCE CERTIFICATE
FOR SURFACE GRADING: OVERLAND DRAINAGE

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
B. Four (4) original copies of the Final Acceptance Certificate (FAC), duly signed and sealed by the Engineering Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) complete sets of Engineering Drawings indicating the completed improvements and marked as "As-built" with the Engineering Consultant's stamp and signature being dated to reflect the FAC application date	_____
D. Testing Material/Requirements	
D.1. Grade Sheets	_____
D.2. Rough Grading Plan based on actual field survey and certified by an Engineering Consultant as "As-built"	_____
D.3. Confirmation that public utility lots have been graded as per the Final Grading Plan, top-soiled and seeded	_____
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	_____



CHECKLIST
FINAL ACCEPTANCE CERTIFICATE
FOR SURFACE WORKS: ASPHALT – PARKING LOTS, ROADS AND RECREATIONAL PATH

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
B. Four (4) original copies of the Final Acceptance Certificate (FAC), duly signed and sealed by the Engineering Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) complete sets of Engineering Drawings indicating the completed Improvements and marked as "As-built" with the Engineering Consultant's stamp and signature being dated to reflect the FAC application date	_____
D. Testing Material/Requirements	
D.1. Asphalt Test Results (Top-lift and any repaired areas)	_____
D.2. Compaction Test Results	_____
D.3. 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	_____



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

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
B. Four (4) original copies of the Final Acceptance Certificate (FAC), duly signed and sealed by the Engineering Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) complete sets of Engineering Drawings indicating the completed Improvements and marked as "As-built" with the Engineering Consultant'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	_____



CHECKLIST
FINAL ACCEPTANCE CERTIFICATE
FOR SURFACE WORKS: LANDSCAPING

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
B. Four (4) original copies of the Final Acceptance (FAC) form, signed by the appropriate Landscape Architectural Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) original copies of the Final Acceptance Inspection Checklist and Report	_____
D. Four (4) complete sets of Irrigation Drawings indicating the completed Improvements and marked "As-built Drawing" with the Certified Irrigation Consultant's stamp and signature being dated to reflect the CCC application date	_____
E. Paper and Digital Landscape "As-built Drawings" stamped and signed by a Landscape Architect	_____
F. One (1) list of deficiencies and/or defects indicating when they were repaired	_____
G. Testing Material/Requirements (As required/outstanding from FAC Inspection)	
G.1. Maintenance Log	_____
G.2. Meter Information Sheet	_____
G.3. Maintenance Manuals	_____
G.4. Annual Double Check Valve (DCV) Report	_____



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

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
B. Four (4) original copies of the Final Acceptance Certificate (FAC), duly signed and sealed by the Engineering Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) complete sets of Engineering Drawings indicating the completed Improvements and marked as "As-built" with the Engineering Consultant's stamp and signature being dated to reflect the FAC application date	_____
D. Testing Material/Requirements	
D.1. Video Inspection completed within the last 90 days (electronically submitted or via CD/DVD)	_____
D.2. Video Inspection Log	_____
D.3. Infiltration / Exfiltration Testing	_____
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	_____



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

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
B. Four (4) original copies of the Final Acceptance Certificate (FAC), duly signed and sealed by the Engineering Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) complete sets of Engineering Drawings indicating the completed Improvements and marked as "As-built" with the Engineering Consultant's stamp and signature being dated to reflect the FAC application date	_____
D. Testing Material/Requirements	
D.1. Video Inspection completed within the last 90 days (electronically submitted or via CD/DVD)	_____
D.2. Video Inspection Log	_____
D.3. Infiltration / Exfiltration Testing	_____
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	_____



CHECKLIST
FINAL ACCEPTANCE CERTIFICATE
FOR UNDERGROUND INFRASTRUCTURE: WATER AND WATER SERVICES

<u>Submission Item</u>	<u>Comment(s)</u>
A. Detailed Cover Letter	_____
B. Four (4) original copies of the Final Acceptance Certificate (FAC), duly signed and sealed by the Engineering Consultant with 11"x17" plans attached highlighting the Improvement constructed	_____
C. Four (4) complete sets of Engineering Drawings indicating the completed Improvements and marked as "As-built" with the Engineering Consultant's stamp and signature being dated to reflect the FAC application date	_____
D. Testing Material/Requirements	
D.1. Pressure Test Results	_____
D.2. Water Quality Test	_____
D.3. Hydrant Pressure & Flow Testing in accordance with current Specifications	_____
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	_____

**TSUUT'INA NATION CIVIC SERVICES
TAZA DEVELOPMENT**



FINAL ACCEPTANCE CERTIFICATE

VILLAGE: _____

DEVELOPER: _____

CONTRACTOR: _____

IMPROVEMENT: _____

CONSULTANT: _____

I, _____, of the firm of _____, do hereby certify that the Improvement noted herein and shown on the attached plan has been installed and completed in accordance with the Tsuut'ina Nation Infrastructure Design Standards and Specifications and has performed satisfactorily throughout the maintenance period or, if it has not performed satisfactorily, that all deficiencies have since been corrected. I have carried out a complete inspection of the Improvement immediately prior to making this application and hereby recommend this Improvement for acceptance under this Final Acceptance Certificate.

Professional's Stamp and Date

Permit to Practice Stamp (If applicable)

Approved/Rejected:

Taza Development Authority

Date

Conditions of Accepted/Reasons for Rejection:



TSUUT'INA NATION CIVIC SERVICES TAZA DEVELOPMENT

Statement of Conformance

Application Number: _____

Development/Project: _____

Tenant/Developer: _____

Applicant/Consultant: _____

This Statement of Conformance certifies that I, (Name of Professional) of (Name of Company/Firm), being a Professional (Profession) in good standing with the (Relevant Association) and licensed to perform (Consulting Service) services in the Province of Alberta, have reviewed and comply with the approved development studies/documents, guidelines, standards and specifications outlined in Section 1.4 of the Infrastructure Design Standards and Specifications.

I also hereby certify that I have conducted a site visit of the proposed development property of interest as well as reviewed all applicable background documentation including the most recent legal survey plan, registered easements affecting the subject site, and approved plans/studies/reports that encompass this property and adjacent properties.

The enclosed submission under this permit application consisting of drawings, reports, and studies listed in 'Schedule A' (list all drawings by number/revision number, reports, studies, etc.) meets all the criteria set out in the Taza Development Guidelines and the Infrastructure Design Standards and Specifications. *(If any of the guidelines or standards have not been met, a list of the non-compliances with a brief summary of the issue(s) and the engineering principle/justification concluding the reason(s) for non-compliance will need to be provided.)*

Yours truly,

(Name, Title and Designation of Professional)
(Name of Company/Firm)

Professional Stamp

Date: _____

(Professional to sign, date and stamp Statement of Conformance as part of the permit application)



TSUUT'INA NATION CIVIC SERVICES TAZA DEVELOPMENT

Statement of Conformance

Schedule A

Appendix B – Private Realm (Development Permit/Site Servicing Plan)

1. Development Permit Application Checklists:
 - a. Change of Use to Commercial Building
 - b. New/Addition to Commercial Building
 - c. Stripping and Grading Permit
2. Development Permit Application Form(s):
 - a. Development Permit Pre-Application Form
 - b. Development Permit Application Form
 - c. Development Permit Fee Schedule
 - d. Development Permit Fee Calculation Form
3. Site Servicing Plan Forms
 - a. Site Servicing Plan Checklist
 - b. Erosion and Sediment Control Report and Drawing Application
 - c. Stormwater Management Report Checklist
4. Statement of Conformance



TSUUT'INA NATION CIVIC SERVICES

TAZA DEVELOPMENT

Change of Use to Commercial Building

Development Permit Application Checklist

The change of use commercial development application requirement list outlines all the information necessary to evaluate and provide a timely decision on your application. This application is to be used where a new use is proposed for an existing building without proposed changes to the exterior of the building.

Refer to the Taza Development Guidelines and 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 (Refer to Development Permit Fee Schedule)
- Current copies of any Restrictive Covenants, Utility Rights-of-Way, Easements, or Caveats registered on the Title(s)
- Application Form (The form is to be completed in full and signed by the sublease holder of the land and/or the person authorized to act on their behalf (if any))
- Colour Photographs (minimum of four different views, label and identify each photograph)
- Detailed project design statement for the development (showing how the project fits within the site context and incorporates the four pillars)
- Cultural Statement
- Letter of Authorization from the Sublease holder to the land, or their agent (if required)
- Four (4) copy of the Elevation Drawing (see attached requirements)
- Four (4) copy of the Floor Plan (see attached requirements)
- Four (4) electronic copy (Acrobat) of the full application package
- Other technical reports and support information that may be required (refer to pre-application consultation notes for a list of additional reports required to support the development permit application)

Plan Requirements:

- Contain a title block with information such as:**
 - address and legal description
 - project uses and project name
 - name of consultant
 - applicant name and contact information
- To be sorted into sets:**
 - sets should be rolled, not folded
 - each set must be stapled together, NOT bound by tape
- Paper size:**
 - all plans submitted must be on the same sized paper and be clear and legible
 - maximum size of drawing not to exceed 610mmx914mm

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.

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

COMPLETED BY APPLICANT	OFFICE USE ONLY	Required Items – Elevation Drawings
		Signage:
<input type="checkbox"/>	<input type="checkbox"/>	Label materials, lettering details, copy and colours
<input type="checkbox"/>	<input type="checkbox"/>	Dimension sign and signable area
<input type="checkbox"/>	<input type="checkbox"/>	Dimension distance from grade to bottom of sign
<input type="checkbox"/>	<input type="checkbox"/>	Label means of supporting sign (i.e., structures, guy wires, brackets, bracing)
<input type="checkbox"/>	<input type="checkbox"/>	Label physical form of sign (i.e., cabinet, box, individual letters)
<input type="checkbox"/>	<input type="checkbox"/>	Provide details on external lighting, label if internally illuminated

COMPLETED BY APPLICANT	OFFICE USE ONLY	Required Items – Floor Plans
		Areas for the consumption of food/ beverages:
<input type="checkbox"/>	<input type="checkbox"/>	Plot and label public areas where food will be consumed or served
<input type="checkbox"/>	<input type="checkbox"/>	Include a seating plan that clearly indicates the area to which the public will have access
<input type="checkbox"/>	<input type="checkbox"/>	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
<input type="checkbox"/>	<input type="checkbox"/>	Plot and label areas for food preparation
<input type="checkbox"/>	<input type="checkbox"/>	Letter of intent stating the provincial licence regulations (i.e., will minors be allowed, will the establishment have a liquor licence)
		Use of building:
<input type="checkbox"/>	<input type="checkbox"/>	Describe the purposes of spaces
<input type="checkbox"/>	<input type="checkbox"/>	Indicate use areas (tenant areas)

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:

Taza Development Authority



TSUUT'INA NATION CIVIC SERVICES

TAZA DEVELOPMENT

New/Addition to Commercial Building Development Permit Application Checklist

The commercial development application 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:

- Application Fee (See Development Permit Fee Schedule)
- Current copies of any Restrictive Covenants, Utility Rights-of-Way, Easements, or Caveats registered on the Title(s)
- Application Form (The form is to be completed in full and signed by the sublease holder of the land and/or the person authorized to act on their behalf (if any))
- Colour Photographs (minimum of four different views, label and identify each photograph)
- Detailed project design statement for the development (showing how the project fits within the site context and incorporates the four pillars)
- Cultural statement
- Letter of Authorization from the Sublease holder to the land, or their agent (if required)
- INAC Environmental Approval Application Form
- Four (4) copy of the Site Plan (see attached requirements)
- Four (4) copy of the Landscape Plan (see attached requirements)
- Four (4) copy of the Elevation Drawing (see attached requirements)
- Four (4) copy of the Floor Plan (see attached requirements)
- Four (4) copy of the Site Servicing Plan (see attached requirements)
- Four (4) electronic copy (Acrobat) of the full application package
- Other technical reports and support information that may be required (refer to pre-application consultation notes for a list of additional reports required to support the development permit application)

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.

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

COMPLETED BY APPLICANT	OFFICE USE ONLY	REQUIRED ITEMS – SITE PLANS
		Drafting Requirements:
<input type="checkbox"/>	<input type="checkbox"/>	Plans to be in metric scale, minimum 1:100, all elevations in metric are NAD 83 Geodetic Datum Ground Coordinates
<input type="checkbox"/>	<input type="checkbox"/>	North arrow, pointing to top or left of page
<input type="checkbox"/>	<input type="checkbox"/>	Address (i.e. street address) and legal address (i.e. plan/block/lot)
<input type="checkbox"/>	<input type="checkbox"/>	Size of parcel (ha)
<input type="checkbox"/>	<input type="checkbox"/>	Label all elements of plan as existing or proposed (proposed to be used for in circulation elements)
		Legal Information:
<input type="checkbox"/>	<input type="checkbox"/>	Plot and dimension lease lines
<input type="checkbox"/>	<input type="checkbox"/>	Provide lease plan where applicable
		Adjacent to Parcel:
<input type="checkbox"/>	<input type="checkbox"/>	Streets, label street names
<input type="checkbox"/>	<input type="checkbox"/>	Sidewalks and public paths
<input type="checkbox"/>	<input type="checkbox"/>	Curb cuts, medians and breaks in medians
<input type="checkbox"/>	<input type="checkbox"/>	Road widening setbacks and corner cuts, dimensioned and labelled
		Easements, Utility Rights-of-Way, etc.:
<input type="checkbox"/>	<input type="checkbox"/>	Dimension (width and location)
<input type="checkbox"/>	<input type="checkbox"/>	Label type of easement and registration number
		Proposed and Existing Utilities on and adjoining the parcel:
<input type="checkbox"/>	<input type="checkbox"/>	Water, storm, and sanitary sewer
<input type="checkbox"/>	<input type="checkbox"/>	Gas, electrical, cable, and telephone
		Geodetic point datum/ contours:
<input type="checkbox"/>	<input type="checkbox"/>	At the corners of a parcel
<input type="checkbox"/>	<input type="checkbox"/>	At the back of sidewalk or curb
<input type="checkbox"/>	<input type="checkbox"/>	At primary corners of the building
<input type="checkbox"/>	<input type="checkbox"/>	Main floor and roof peak of building
<input type="checkbox"/>	<input type="checkbox"/>	Proposed geodetic contours at 0.5 m intervals, including berming for the site
<input type="checkbox"/>	<input type="checkbox"/>	Label existing and proposed geodetic datum points
		Outline and dimension buildings:
<input type="checkbox"/>	<input type="checkbox"/>	Label projections and structures
<input type="checkbox"/>	<input type="checkbox"/>	Detached buildings and structures
<input type="checkbox"/>	<input type="checkbox"/>	Mechanical equipment and screening proposed
<input type="checkbox"/>	<input type="checkbox"/>	Use area within the building (i.e., tenant locations)
<input type="checkbox"/>	<input type="checkbox"/>	Label uses to be located in each use area
<input type="checkbox"/>	<input type="checkbox"/>	Label existing and proposed buildings (or portions of buildings with gross floor area)
<input type="checkbox"/>	<input type="checkbox"/>	Location of all openings (i.e., windows, doors, overhead doors)

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

<input type="checkbox"/>	<input type="checkbox"/>	Outline and label the location of all proposed canopy, freestanding, for fascia signage
<input type="checkbox"/>	<input type="checkbox"/>	Label the source of illumination (e.g., backlit)
<input type="checkbox"/>	<input type="checkbox"/>	Plot location of all existing signage on the parcel (if applicable)
<input type="checkbox"/>	<input type="checkbox"/>	Dimension distance from property lines to signage
Phasing for multi-building developments:		
<input type="checkbox"/>	<input type="checkbox"/>	Outline areas encompassed by each phase
<input type="checkbox"/>	<input type="checkbox"/>	Label the sequencing of phasing

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

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

COMPLETED
BY
APPLICANTOFFICE
USE
ONLY**REQUIRED ITEMS – ELEVATION DRAWINGS**

		Include elevations for:
<input type="checkbox"/>	<input type="checkbox"/>	Buildings
<input type="checkbox"/>	<input type="checkbox"/>	Fences
<input type="checkbox"/>	<input type="checkbox"/>	Retaining walls (over 1.2 m in height)
<input type="checkbox"/>	<input type="checkbox"/>	Screening (i.e., mechanical equipment)
<input type="checkbox"/>	<input type="checkbox"/>	Additional walls or structures (i.e., exhaust fan shed)
<input type="checkbox"/>	<input type="checkbox"/>	Cross reference with other plans, where applicable
		Include on elevations:
<input type="checkbox"/>	<input type="checkbox"/>	Doors, windows, overhead doors
<input type="checkbox"/>	<input type="checkbox"/>	Projections and decorative elements
<input type="checkbox"/>	<input type="checkbox"/>	Screening (i.e., service meters, privacy screens)
<input type="checkbox"/>	<input type="checkbox"/>	Dimension all doors, windows, and overhead doors
		Label finishing materials:
<input type="checkbox"/>	<input type="checkbox"/>	Exterior materials (i.e., brick, stucco, vinyl siding)
<input type="checkbox"/>	<input type="checkbox"/>	Roof materials (i.e., asphalt, cedar shakes, concrete tile)
<input type="checkbox"/>	<input type="checkbox"/>	Colours of all major exterior materials
		Lighting:
<input type="checkbox"/>	<input type="checkbox"/>	Plot location of light fixtures
<input type="checkbox"/>	<input type="checkbox"/>	Dimension height of fixtures from grade to bottom of fixture
		Grade:
<input type="checkbox"/>	<input type="checkbox"/>	Plot existing and proposed grade
		Building height (indicate on all elevations):
<input type="checkbox"/>	<input type="checkbox"/>	Plot line for main floor
<input type="checkbox"/>	<input type="checkbox"/>	Plot line for roof when concealed by parapet
<input type="checkbox"/>	<input type="checkbox"/>	Dimension height of building from existing and proposed grade
<input type="checkbox"/>	<input type="checkbox"/>	Dimension height of main floor from existing and proposed grade
<input type="checkbox"/>	<input type="checkbox"/>	Dimension height of structures (i.e., fences, retaining walls) from existing and proposed grade
		Signage:
<input type="checkbox"/>	<input type="checkbox"/>	Label materials, lettering details, copy and colours
<input type="checkbox"/>	<input type="checkbox"/>	Dimension sign and signable area
<input type="checkbox"/>	<input type="checkbox"/>	Dimension distance from grade to bottom of sign
<input type="checkbox"/>	<input type="checkbox"/>	Label means of supporting sign (i.e., structures, guy wires, brackets, bracing)
<input type="checkbox"/>	<input type="checkbox"/>	Label physical form of sign (i.e., cabinet, box, individual letters)
<input type="checkbox"/>	<input type="checkbox"/>	Provide details on external lighting, label if internally illuminated

COMPLETED BY APPLICANT	OFFICE USE ONLY	REQUIRED ITEMS – FLOOR PLANS
OUTLINE AND DIMENSION WALLS:		
<input type="checkbox"/>	<input type="checkbox"/>	Interior and exterior dimensions (dimension to centre line of common walls)
<input type="checkbox"/>	<input type="checkbox"/>	Plot location of interior and exterior openings (i.e., windows, doors, overhead doors)
<input type="checkbox"/>	<input type="checkbox"/>	Label uses to be located in each area
<input type="checkbox"/>	<input type="checkbox"/>	Identify the purpose of spaces
<input type="checkbox"/>	<input type="checkbox"/>	Label existing and proposed rooms and portions of the building

COMPLETED BY APPLICANT	OFFICE USE ONLY	REQUIRED ITEMS – SITE STUDIES
SNOW MANAGEMENT PLAN:		
<input type="checkbox"/>	<input type="checkbox"/>	Outline areas of site where snow is to be stored temporarily
<input type="checkbox"/>	<input type="checkbox"/>	Outline methods of removal of snow from the development site
SUN/SHADOW STUDY:		
<input type="checkbox"/>	<input type="checkbox"/>	Required for the following development sites:
<input type="checkbox"/>	<input type="checkbox"/>	F.A.R. is greater than 1.0
<input type="checkbox"/>	<input type="checkbox"/>	Structures greater than 4 storeys
<input type="checkbox"/>	<input type="checkbox"/>	Structures within or adjacent to a SP-PK Zone
<input type="checkbox"/>	<input type="checkbox"/>	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

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)

<i>office use only</i>	
Screened by:	Date:
Taza Development Authority	



TSUUT'INA NATION CIVIC SERVICES TAZA DEVELOPMENT

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.

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.

Plan Requirements:

- Contain a title block with information such as:**
 - Applicant name, and contact information.
 - Project name and project use.
 - Address and legal description (i.e. section number, plan, block, lot).
- To be sorted into sets:**
 - sets should be rolled, not folded to a size no larger than 8-1/2" x 14" (21.5 x 35.5 cm).
 - each set must be stapled together, NOT bound by tape.
 - sets may be accordion-pleated, provided they can be hole punched in the top left-hand corner.
- Paper size:**
 - all plans submitted must be on the same sized paper and be clear and legible.
 - maximum size of drawing A1 594mmx841mm or Arch D 24"x36"(610mmx914mm).

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.

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

Completed by applicant	Office use only	REQUIRED ITEMS
<input type="checkbox"/>	<input type="checkbox"/>	A copy of the current sub-lease
<input type="checkbox"/>	<input type="checkbox"/>	Color Photographs (minimum of four different views, label and identify each photograph) showing:
<input type="radio"/>	<input type="radio"/>	parcel from front and rear
<input type="radio"/>	<input type="radio"/>	unique features and aspects of significance to development of the parcel
<input type="radio"/>	<input type="radio"/>	details of curbs, driveways, sidewalks, garbage enclosures and overhead poles
<input type="checkbox"/>	<input type="checkbox"/>	Development Permit Fee (Refer to Development Permit Fee Schedule)
<input type="checkbox"/>	<input type="checkbox"/>	Completed Site Contamination Statement
<input type="checkbox"/>	<input type="checkbox"/>	Ten (10) copies of Site Plans, including: <i>(1:100 metric scale recommended, include scale bar)</i>
<input type="radio"/>	<input type="radio"/>	north arrow, pointing to top or left of page
<input type="radio"/>	<input type="radio"/>	municipal address (i.e. street address) and legal address (i.e. plan/block/lot)
<input type="radio"/>	<input type="radio"/>	all elements of plan labelled as existing or proposed
<input type="radio"/>	<input type="radio"/>	property lines
<input type="radio"/>	<input type="radio"/>	existing survey control stations and markers
<input type="radio"/>	<input type="radio"/>	details of loam stockpiles; include height, width, length, and volumes
<input type="radio"/>	<input type="radio"/>	easements, utility rights-of-way, right-of-way setback lines
<input type="radio"/>	<input type="radio"/>	location of all existing and proposed shallow and deep utilities (e.g. water, sewers, gas, electrical, cable, telephone, either underground or overhead)
<input type="radio"/>	<input type="radio"/>	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
<input type="radio"/>	<input type="radio"/>	any intended stripping and grading on adjacent lands, including details of edge conditions, back sloping requirements, and areas to be reloaded or seeded and maintained until natural conditions are restored
<input type="radio"/>	<input type="radio"/>	any unusual parcel conditions (features of archaeological value, etc.)
<input type="radio"/>	<input type="radio"/>	existing trees and major vegetation on the parcel; what is to remain and what is to be removed
<input type="checkbox"/>	<input type="checkbox"/>	Ten (10) copies of an Area Map, including: <i>(8.5" x 11" – 21.5cm x 35.5cm)</i>
<input type="radio"/>	<input type="radio"/>	area to be stripped and rough graded, outlined in red
<input type="radio"/>	<input type="radio"/>	locations of any stockpiles of stripped loam, outlined in green
<input type="checkbox"/>	<input type="checkbox"/>	Ten (10) copies of 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.
<input type="checkbox"/>	<input type="checkbox"/>	Ten (10) copies of Phasing Plans:
<input type="radio"/>	<input type="radio"/>	indicating areas expected to be developed during the current year
<input type="radio"/>	<input type="radio"/>	type of soil stabilization proposed for areas to be developed in following years
<input type="checkbox"/>	<input type="checkbox"/>	Two (2) copies of Deep Fills Report. Required when fill is being proposed for depths greater than two metres.
<input type="checkbox"/>	<input type="checkbox"/>	Two (2) copies of Erosion & Sediment Control (ESC) Report

Completed by applicant	Office use only	REQUIRED ITEMS
<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="radio"/>	<input type="radio"/>	Supporting Information, required depending on site conditions:
<input type="radio"/>	<input type="radio"/>	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.
<input type="radio"/>	<input type="radio"/>	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)

<i>office use only</i>	
Screened by:	Date:
Taza Development Authority	



TSUUT'INA NATION CIVIC SERVICES

TAZA DEVELOPMENT

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 Tsuut'ina Nation Civic Services (see "Scheduling a Meeting" below for more information).

Purpose

- Pre-application meetings allow future applicants to meet with Tsuut'ina Nation Civic Services 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 Nation Civic Services Staff and Agencies review the proposal with the applicant, ask the applicant questions, provide feedback and an opportunity for further questions and answers
- A Staff contact is assigned
- 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 by emailing your signed Application form and sketch to: tazadevelopment@tsuutina.com or delivering in person to Tsuut'ina Nation Civic Services, 206, 5 Richard Way SW, Calgary, Alberta T3E 7M8.

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 Nation Civic Services staff. Meeting attendees include the following:

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

Submission Standards

Please note that electronic submissions are preferred and shall include:

- Complete application form, signed by the owner
- Project Design Statement (refer to TAZA Development Guidelines)
- Drawing(s)
 - 11X17 PDF format or 1 hardcopy each of any drawings in 11X17 dimensions
- Drawing(s) 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 Tsuut'ina Nation Civic Services 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.

TSUUT'INA NATION CIVIC SERVICES TAZA DEVELOPMENT

Pre-Application Form

PROPOSED APPLICATION IS FOR:			<i>OFFICE USE ONLY</i>
<input type="checkbox"/> NEW COMMERCIAL BUILDING <input type="checkbox"/> NEW RESIDENTIAL BUILDING <input type="checkbox"/> CHANGE OF USE WITHIN EXISTING BUILDING <input type="checkbox"/> STRIPPING AND GRADING			
FILE#	FEES \$	DATE RECEIVED	RECEIPT #

Contact Information

SUBLEASE HOLDER:	APPLICANT/ AGENT (if different from Sublease Holder):
MAILING ADDRESS:	MAILING ADDRESS:
PHONE (OFFICE):	PHONE (OFFICE):
PHONE (CELL):	PHONE (CELL):
FAX:	FAX:
EMAIL:	EMAIL:

Legal Description of the Property

LOT	PLAN
STREET ADDRESS:	
EXISTING LAND USE UNDER THE TTN ZONING LAW:	
PROPOSED LAND USE (IF DIFFERENT):	
SUBLEASE REGISTRATION #	

Development Proposal Information

TYPE	NUMBER OF UNITS	BUILDING AREA (SQ.M)
HEIGHT	NUMBER OF STOREYS	PARCEL(S) SIZE
SUPPORTING INFORMATION SUBMITTED WITH THIS FORM:		
<input type="checkbox"/> PROJECT DESIGN STATEMENT <input type="checkbox"/> SITE PLAN <input type="checkbox"/> ELEVATION DRAWINGS		

NOTE: If the applicant is not the holder of the sublease for the property concerned, then sublease holder'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 Nation Civic Services, if you have any further questions.

Signature of Applicant / Agent

Date

Signature of Sublease Holder

Date

Inquiries regarding the policies & procedures for development can be made to the following:

Tsuut'ina Nation Civic Services

Telephone: (403) 258-4016

Application Forms and Checklists can also be obtained at: (project website)



TSUUT'INA NATION CIVIC SERVICES TAZA DEVELOPMENT

Development Permit Application Form

APPLICATION FOR: <i>OFFICE USE ONLY</i>			
<input type="checkbox"/> NEW COMMERCIAL BUILDING <input type="checkbox"/> NEW RESIDENTIAL BUILDING <input type="checkbox"/> CHANGE OF USE WITHIN EXISTING BUILDING			
<input type="checkbox"/> STRIPPING AND GRADING			
FILE#	FEES \$	DATE RECEIVED	RECEIPT #

Contact Information

SUBLEASE HOLDER:	APPLICANT/ AGENT (if different from Sublease Holder):
CONTACT NAME:	CONTACT NAME:
MAILING ADDRESS:	MAILING ADDRESS:
PHONE (OFFICE):	PHONE (OFFICE):
PHONE (CELL):	PHONE (CELL):
FAX:	FAX:
EMAIL:	EMAIL:

Legal Description of the Property

LOT	PLAN
STREET ADDRESS:	
EXISTING LAND USE UNDER THE TTN ZONING LAW:	
PROPOSED USE (IF DIFFERENT):	
SUBLEASE REGISTRATION #	

Development Permit Application Information

TYPE	NUMBER OF UNITS	BUILDING AREA (SQ.M)
HEIGHT	NUMBER OF STOREYS	PARCEL(S) SIZE
GENERAL NATURE OF DEVELOPMENT <i>(attach additional pages if necessary)</i>		

NOTE: If the applicant is not the holder of the sublease for the property concerned, then sublease holder's signature is required on 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 (Sublease Holder/ 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 Nation Civic Services, if you have any further questions.

Signature of Applicant / Agent

Date

Signature of Sublease Holder

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

Inquiries regarding the policies & procedures for development can be made to the following:

Tsuut'ina Nation Civic Services

Telephone: (403) 258-4016



TSUUT'INA NATION CIVIC SERVICES

TAZA DEVELOPMENT

Development and Building Permit Application Fees

DEVELOPMENT PERMIT APPLICATION FEES

Permit Type	Cost	Notes
General Permits		
Stripping, Grading, Excavation for 2 or more parcels	\$1000	
Signs	\$265	Per Freestanding and Fascia sign
Change to an application prior to circulation	25%	Of original application fee
Change to an application prior to decision	50%	Of original application fee
Request to re-evaluate a condition of DP approval	25%	Of original application fee
Commercial, Industrial, Institutional Permits (New Construction)		
600 sq.m. (6468 sf) or less	\$550	
601 sq.m. (6469 sf) to 1499 sq.m. (16,136 sf)	\$1025	
1500 sq.m. (16,146 sf) and over	\$2025	Plus \$0.75/sq.m. over 1500 sq.m.
Change of use in an existing building	\$330	Per change of use
Residential Permits (New Construction)		
Multiple unit dwelling	\$340	Plus \$140/dwelling unit
Show home or sales trailer	\$315	
Development Compliance Permit		
First inspection	No Cost	
Re-inspection – First	\$150	
Re-inspection – Second and any subsequent re-inspections	\$250	Per inspection
Other Fees		
Development commencement without an issued Development Permit	200%	Of the fee prescribed herein
Indemnification Agreement	\$1500	

BUILDING PERMIT APPLICATION FEES

Permit Type	Cost	Notes
Building Permit Commercial	\$9.75	Per \$1000 construction value
Building Permit – Multiple Unit Residential	\$5.50	Per \$1000 construction value
Electrical Permit	See attached Fee Schedule	Plus \$5.00 per \$1000 electrical Contract value over \$1,000,000
Plumbing Permit	\$110	Plus \$11.50 per outlet plus \$1000 Sewer connection
Gas Permit	\$340	Plus \$45 per additional 1 Million BTU over 2 Million BTU

TSUUT'INA NATION CIVIC



SERVICES

TAZA DEVELOPMENT

9911 Chiila Blvd, Tsuut'ina, AB T2W 6H6

Date: _____

Invoice #: _____

Permit #: _____

Development Permit Fee Calculation Sheet

Applicant Name: _____

Address: _____

Project: _____

Permit Type	Cost	Quantity/ Units	Total
General Permits			
Stripping, Grading, Excavation for 2 or more parcels	\$1,000		
Signs	\$265 - Per Freestanding and Fascia Sign		
Change to application prior to circulation	25% - Of original application fee		
Change to application prior to decision	50% - Of original application fee		
Request to re-evaluate a condition of DP approval	25% - Of original application fee		
Commercial, Industrial, Institutional Permits (New Construction)			
600 sq.m. (6468 sf) or less	\$550		
601 sq.m. (6469 sf) to 1499 sq.m. (16,136sf)	\$1,025		
1500 sq.m. (16,146 sf) and over	\$2025 – Plus \$0.75/sq.m. over 1500 sq.m.		
Change of use in an existing building	\$330 – Per change of use		
Residential Permits (New Construction)			
Multiple Unit Dwelling	\$340 – Plus \$140/dwelling unit		
Show Home or Sales Trailer	\$315		
Development Compliance Permit			
First Inspection	No Additional Cost		
Re-Inspection – First	\$150		
Re-Inspection – Second	\$250 – Per inspection and subsequent inspections		
Other Fees – As built	200% - Of calculated fees		
Total:			_____



TSUUT'INA NATION CIVIC SERVICES

TAZA DEVELOPMENT

Site Servicing Checklist

The Site Servicing Plan (SSP) application 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:

- Three (3) copies of the entire submission package.
- 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.
- Three (3) site plans, for approval by the Tsuut'ina Fire Department (When required by Development Permit Conditions of Approval).
- A Storm Water Management Report (If a report is required, provide the name of the report and a copy of the approval letter).
- Three (3) executed copies of all public/private easements, utility/access right of ways, and drainage agreements, where applicable.
- Fee (Refer to Development Permit Fee Schedule for review fees and inspection fees and procedures)

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).
- Include a circulation block**
- To be sorted into sets:**
 - sets should be rolled, not folded.
 - each set must be stapled together, NOT bound by tape.
- Paper size:**
 - all plans submitted must be on the same sized paper and be clear and legible.
 - maximum size of drawing A1 594mmx841mm or Arch D 24"x 36" (610mmx914mm).

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.

The Taza 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:
<input type="checkbox"/>	<input type="checkbox"/>	Plans to be in metric scale, minimum 1:100, all elevations in metric are NAD 83 Geodetic Datum Ground Coordinates
<input type="checkbox"/>	<input type="checkbox"/>	North arrow, pointing to top or left of page
<input type="checkbox"/>	<input type="checkbox"/>	Municipal address (i.e. street address) and legal address (i.e. plan/block/lot)
<input type="checkbox"/>	<input type="checkbox"/>	Size of parcel (ha)
<input type="checkbox"/>	<input type="checkbox"/>	Label all elements of plan as existing or proposed (proposed to be used for in circulation elements)
		Legal Information:
<input type="checkbox"/>	<input type="checkbox"/>	Plot and dimension property lines
<input type="checkbox"/>	<input type="checkbox"/>	Specify elevations at back of sidewalk – at property line corners and VPIs
<input type="checkbox"/>	<input type="checkbox"/>	Specify lane grade design elevations – at property line corners and VPIs
<input type="checkbox"/>	<input type="checkbox"/>	Provide tentative legal plan where applicable (consolidation, subdivision, or strata)
		Adjacent to Parcel:
<input type="checkbox"/>	<input type="checkbox"/>	City streets, label street names
<input type="checkbox"/>	<input type="checkbox"/>	Sidewalks, City and public paths (Regional Pathway System)
<input type="checkbox"/>	<input type="checkbox"/>	Curb cuts, medians and breaks in medians
<input type="checkbox"/>	<input type="checkbox"/>	Road widening setbacks and corner cuts, dimensioned and labelled
		Easements, Utility Rights-of-Way, etc.:
<input type="checkbox"/>	<input type="checkbox"/>	Dimension (width and location)
<input type="checkbox"/>	<input type="checkbox"/>	Label type of easement and registration number
		Site Details:
<input type="checkbox"/>	<input type="checkbox"/>	Architectural floor plan showing water meter room location (indicated by M)
<input type="checkbox"/>	<input type="checkbox"/>	Outline of all detached buildings and structures (sheds, garages)
<input type="checkbox"/>	<input type="checkbox"/>	Total residential unit count
<input type="checkbox"/>	<input type="checkbox"/>	Label main floor elevations
<input type="checkbox"/>	<input type="checkbox"/>	Label principal entrance to building
<input type="checkbox"/>	<input type="checkbox"/>	Specify surface materials (proposed and existing to remain)
<input type="checkbox"/>	<input type="checkbox"/>	Show proposed and existing retaining walls and fences
<input type="checkbox"/>	<input type="checkbox"/>	Show landscaping, berms, swales including slopes and other physical features which could affect utility servicing both on the site and adjoining boulevards
<input type="checkbox"/>	<input type="checkbox"/>	Label and dimension curb cuts to be removed and rehabilitated
		Water, storm and sanitary sewer (on and adjoining the parcel):
<input type="checkbox"/>	<input type="checkbox"/>	Locations and full dimensions for mains, services, manholes, hydrants and valves to property lines, buildings, and other utilities (existing and proposed)
<input type="checkbox"/>	<input type="checkbox"/>	Indicate pipe size, type, class material, length, slope, and bedding material

Completed by applicant	Office use only	REQUIRED ITEMS
<input type="checkbox"/>	<input type="checkbox"/>	Location of all manholes and catch basins complete with pipe inverts and rim elevations
<input type="checkbox"/>	<input type="checkbox"/>	Proposed sanitary/storm inverts at property lines and buildings
<input type="checkbox"/>	<input type="checkbox"/>	Pipe support details where applicable: required where foundation wall less than 4 metres from property line
<input type="checkbox"/>	<input type="checkbox"/>	Locations of sanitary test manholes with details of easement if located on private property, if applicable
<input type="checkbox"/>	<input type="checkbox"/>	Pipe capacity for large developments
Shallow utilities (existing and proposed on and adjoining the parcel):		
<input type="checkbox"/>	<input type="checkbox"/>	Gas (structures, fixtures, crossing signs)
<input type="checkbox"/>	<input type="checkbox"/>	Electrical (poles, fixtures, guy wires/pole anchors, transformer boxes, etc.)
<input type="checkbox"/>	<input type="checkbox"/>	Cable, telephone (poles, fixtures, guy wires/pole anchors, pedestal boxes, etc.)
Surface drainage:		
<input type="checkbox"/>	<input type="checkbox"/>	Plot existing and proposed surface grades along property lines and on site
<input type="checkbox"/>	<input type="checkbox"/>	Grade changes & ramps within all driveways and parking areas
<input type="checkbox"/>	<input type="checkbox"/>	Drainage pattern indicated by boundary lines and arrows
<input type="checkbox"/>	<input type="checkbox"/>	Stormwater release rate is being controlled to the rate provided with the Development Permit submission
<input type="checkbox"/>	<input type="checkbox"/>	Surface drainage contained on site which spills to a public roadway (spill elevation and location provided)
<input type="checkbox"/>	<input type="checkbox"/>	Stormwater features such as storm ponds, trap lows, ICDs, oil/grit separators, BMPs, or Low Impact Development Practices.
<input type="checkbox"/>	<input type="checkbox"/>	ICD's and HYDROVEX details (include all HYDROVEX details with application)
Floodway, Flood Fringe and Overflow:		
<input type="checkbox"/>	<input type="checkbox"/>	Floodway/flood fringe/overland flow lines on the plans complete with all step elevations and labels
<input type="checkbox"/>	<input type="checkbox"/>	Dimension distance to buildings and structures
<input type="checkbox"/>	<input type="checkbox"/>	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)

<i>office use only</i>	
Screened by:	Date:

Taza Development Authority	

TSUUT'INA NATION CIVIC SERVICES

TAZA DEVELOPMENT



Public Realm & Private Sites

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 Taza 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 <small>(I.e Stripping & Grading, Industrial/Commercial/Institutional, Public Realm)</small>	
A.10 Servicing Agreement Number (if applicable)	
A.11 Development Permit/Public Realm 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
<input type="checkbox"/> ESC1	Before Stripping and Grading	Required	*Site Dependent	
<input type="checkbox"/> ESC2	During Stripping and Grading	Likely Required	*Site Dependent	
<input type="checkbox"/> ESC3	Post Stripping and Grading	Required	*Site Dependent	
<input type="checkbox"/> ESC4	**Cut and Fill	Likely Required	Site Dependent	Site Dependent
<input type="checkbox"/> ESC5	Before Development		Required	Required
<input type="checkbox"/> ESC6	Post Underground		Required	Required
<input type="checkbox"/> ESC7	Above Ground Work		Required	Required
<input type="checkbox"/> ESC8	Development Completion		Required	
<input type="checkbox"/> ESC9	Landscaping		Required	Site Dependent
<input type="checkbox"/> 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. 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.

F. 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

SEED Specification # 200.1.1					
F.1.1	C-Value	Type % Cover	Drawings Represented On	Location Description	Supplemental Information

SOD Specification # 200.1.2					
F.1.2	C-Value	Sod Type	Drawings Represented On	Location Description	Supplemental Information

ROLLED EROSION CONTROL PRODUCTS (RECP) Specification # 200.1.3					
F.1.3	C-Value	Blanket Type	Drawings Represented On	Location Description	Supplemental Information

HYDROMULCH/TACKIFIER Specification # 200.1.4					
F.1.4	C-Value	Type & Application Rates	Drawings Represented On	Location Description	Supplemental Information

COMPOST BLANKETS Specification # 200.1.5					
F.1.5	C-Value	Type and Application Rates	Drawings Represented On	Location Description	Supplemental Information

AGGREGATE COVER Specification # 200.1.6					
F.1.6	C-Value	Type and Application Rates	Drawings Represented On	Location Description	Supplemental Information

F.2 Sediment Control

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

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

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

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

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

SILT FENCE Specification # 200.2.6					
F.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

F.4.1	Nonstandard Specification Number:	
*Include the Manufacturer's Specification Sheet for any Nonstandard Erosion and Sediment Control Measures and Practices proposed on-site.		

G. 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

H. 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

I. Winterization Plan

				If an ESC Measure/Practice cannot be installed on Frozen or Snow Covered Ground, either confirm that it must be installed prior to Winter or provide an alternate Measure/Practice that will be used instead.	
List <u>ALL</u> 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)	Specify that the ESC Measure/Practice must be installed before Winter or	Provide an Alternate Measure/Practice if installation is required during frozen conditions

J. Transition Planning

Start Drawing Code		Next Drawing Code		Duration of Transition	
Order of Actions for Erosion and Sediment Control Measures/Practices Implementation					Action
1.					
2.					
3.					
4.					
5.					
Transition Details			Contingency Plan if transition can't be conducted in the duration specified		

Start Drawing Code		Next Drawing Code		Duration of Transition	
Order of Actions for Erosion and Sediment Control Measures/Practices Implementation					Action
1.					
2.					
3.					
4.					
5.					
Transition Details			Contingency Plan if transition can't be conducted in the duration specified		

Start Drawing Code		Next Drawing Code		Duration of Transition	
Order of Actions for Erosion and Sediment Control Measures/Practices Implementation					Action
1.					
2.					
3.					
4.					
5.					
Transition Details			Contingency Plan if transition can't be conducted in the duration specified		

K. 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 and donuts 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:

Taza Development Authority

TSUUT'INA NATION CIVIC SERVICES TAZA DEVELOPMENT



Public Realm & Private Sites

Stormwater Management Report Checklist

Project Name:	Village Name:
Phase Number:	Circulation (First or Second):
Developer:	Consultant:
Contact Name:	Contact Email:
Servicing Agreement <u>OR</u> Development Permit and Site Servicing Plan Number(s):	Tsuut'ina Nation Civic Services Application Number:

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 Taza 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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ALL items identified as "Not Applicable" or "Incomplete" by the Applicant are explained in the Comments section below.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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. Submit four (4) hardcopies of the same Stormwater Management Report (SWMR) to the Tsuut'ina Nation Civic Services.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Outline any outstanding area(s) in the SWMR that could not meet the Taza Infrastructure Design Standards and Specifications in the cover letter.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	List any related Master Drainage Plans, Staged Master Drainage Plans and/or related Stormwater Management Reports.
Site Description and Design Criteria			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Include the Village name and Phase number, if applicable.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	State the legal land location, Site address and total area in hectares.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide a Study Area Figure and Location Plan that summarizes the location of the proposed Development and the adjacent area(s).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	State design objectives.
Analysis Methodology and Data			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Include a brief description of the computer model, methodology, design storm parameters, catchment parameters, catchbasin/inlet curves, manhole losses, and/or storage curves.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Outline criteria used for sizing of the minor system.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Catchment boundaries should align with preceding reports. If discrepancies exist, provide supplemental information to rationalize the changes.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identify any areas beyond the construction boundary, including their size, that contribute to the stormwater management system.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Include a figure and table delineating sub-catchments and sizes of the sub-catchments within the Development.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide a schematic drawing that supports the computer model and submitted drawings.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attach the computer input, summary and output files.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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

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REQUIRED ITEMS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	confirm that all drainage gutters fully contain the 1:100 year peak flow rate without overtopping/spillover into adjacent area(s).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the traplow storage table shows all trap lows in the Development and those on/adjacent to the construction boundary.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tabulate all major and minor system boundary conditions entering and/or exiting the Development.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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 Realm SWMR, the following section can be disregarded.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ensure that natural flows from upstream are not impeded.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ensure that on-site minor system is designed for the 1:5 year flow rate.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A dynamic hydraulic analysis has been conducted for flow controls that are in series.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identify minimum building elevations (MGs) based on critical spillover elevation, located within the Development or within adjacent areas.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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 Realm Drawing Requirements
			General Drawing Requirements:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Plans to be in metric scale, minimum 1:100, all elevations in metric are NAD 83 Geodetic Datum Ground Coordinates
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	North arrow, pointing to top or left of page
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Address (i.e. street address) and legal address (i.e. plan/block/lot)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Size of parcel (ha)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Label all elements of plan as existing or proposed (Proposed to be used for in circulation elements)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Signed and dated Engineering Consultant's stamp (i.e. P.Eng., P.L.Eng., or P.Tech)

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REQUIRED ITEMS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Permit to Practice number
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Construction boundary
			Overland Drainage Drawing Requirements:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Q,v,d's for critical segments
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Traplow storage table
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Traplow location and outline at spill elevation
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ICDs, catch basin types, and interconnected catch basins
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Manhole and catchbasin rim elevations
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Overland arrows indicating the escape route
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concrete drainage gutter locations and details for deep or non-standard gutter sections
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Direction of drainage flow, displayed by arrows, from the high points to a low point. Include a slope value.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Original ground contour lines
			Storm Sewer Design Drawing Requirements:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minor system table that follows a logical flow pattern
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ICDs, catch basin types, and interconnected catch basins
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe layout including pipe sizes and manhole numbers
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Overall drainage plans, if applicable
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe inverts, and rim elevations at all manhole and catchbasins
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe numbering system, if applicable
			Storm Catchment Area Plan Drawing Requirements
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drainage area boundary lines
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drainage area sizes, release rate and/or runoff coefficients
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Catchment IDs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Direction of drainage flow, displayed by arrows, from the high points to a low point. Include a slope value.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe layout including pipe sizes, pipe slope and manhole numbers
			Site Servicing Plan Drawing Requirements
			General Drawing Requirements:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Plans to be in metric scale, minimum 1:100, all elevations in metric are NAD 83 Geodetic Datum Ground Coordinates
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	North arrow, pointing to top or left of page
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Address (i.e. street address) and legal address (i.e. plan/block/lot)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Size of parcel (ha)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Label all elements of plan as existing or proposed (Proposed to be used for in circulation elements)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Signed and dated Engineering Consultant's stamp (i.e. P.Eng., P.L.Eng., or P.Tech)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Permit to Practice number
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Construction boundary
			Underground Layout Plan Drawing Requirements:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Overall site plan
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Building outlines, parking lots, driveways and parking garage access routes

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REQUIRED ITEMS

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Catchment boundaries and area sizes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe size, type, class, material, length, slope and bedding material
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe inverts, and rim elevations at all manhole and catchbasins
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minor system table that follows a logical flow pattern
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sanitary sewer manholes requiring seals or one-hole manhole lids
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All ICDs, CB type and locations, and interconnected CBs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sump pump and details
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pump start and stop elevations, and pump rating curve (excluding sump pumps)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Special hydraulic requirements (e.g. benching, backwater valves, HGLs)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum Main Floor (MF/MMF/MSE/TOS) elevation(s) for buildings.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Floodway, flood fringe, and overland flow zone lines complete with all step elevations and labels, as well as distance to buildings and structures
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Details of source control practices (SCPs) (e.g. OGS including type and model number, installation details, etc.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Underground storage including capacity required, elevations and design details
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water quality requirements and applicable details
			Surface and Grading Plan Drawing Requirements
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adjacent properties and streets including contours, property line elevations, and (critical) traplow spillover elevations
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Direction of drainage flow, displayed by arrows, from high points to low points. Include a slope value.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Permitted release rate (in L/s and L/s/ha)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Imperviousness values and/or runoff coefficients
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Trap low low point, 1:100 year and spillover elevations, depth, capacity and 1:100 year storage requirements, and outline at spillover elevation
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Roof top storage including capacity required, discharge rate and design details
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Grading showing landscaping, berms, escape routes, ponds, and applicable elevations
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type, alignment, elevations and cross-sections of drainage gutters or swales (concrete and grass)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drainage crossing locations
			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:
			Stormwater Management Plan Drawing Requirements
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Catchment boundaries and area sizes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Imperviousness and runoff coefficients
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe layout including pipe sizes and manhole numbers
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe inverts, and rim elevations at all manhole and catchbasins
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ICDs, catch basin types, and interconnected catch basins
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Details of source control practices (SCPs) (e.g. OGS including type and model number, installation details, 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** _____

<i>Office use only</i>	
Screened by: _____	Date: _____
Taza Development Authority	



TSUUT'INA NATION CIVIC SERVICES TAZA DEVELOPMENT

Statement of Conformance

Application Number: _____

Development/Project: _____

Tenant/Developer: _____

Applicant/Consultant: _____

This Statement of Conformance certifies that I, (Name of Professional) of (Name of Company/Firm), being a Professional (Profession) in good standing with the (Relevant Association) and licensed to perform (Consulting Service) services in the Province of Alberta, have reviewed and comply with the approved development studies/documents, guidelines, standards and specifications outlined in Section 1.4 of the Infrastructure Design Standards and Specifications.

I also hereby certify that I have conducted a site visit of the proposed development property of interest as well as reviewed all applicable background documentation including the most recent legal survey plan, registered easements affecting the subject site, and approved plans/studies/reports that encompass this property and adjacent properties.

The enclosed submission under this permit application consisting of drawings, reports, and studies listed in 'Schedule A' (list all drawings by number/revision number, reports, studies, etc.) meets all the criteria set out in the Taza Development Guidelines and the Infrastructure Design Standards and Specifications. *(If any of the guidelines or standards have not been met, a list of the non-compliances with a brief summary of the issue(s) and the engineering principle/justification concluding the reason(s) for non-compliance will need to be provided.)*

Yours truly,

(Name, Title and Designation of Professional)
(Name of Company/Firm)

Professional Stamp

Date: _____

(Professional to sign, date and stamp Statement of Conformance as part of the permit application)



TSUUT'INA NATION CIVIC SERVICES TAZA DEVELOPMENT

Statement of Conformance

Schedule A

Appendix C – Specifications & Plan Drawings

1. Hydrant Specification by Clow Canada.
2. Shallow Frame and Tsuut'ina Cover by Trojan Industries Inc.
3. Stop Sign Specification by ATS Traffic

DRAFT

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 Fibreglas 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 180° 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

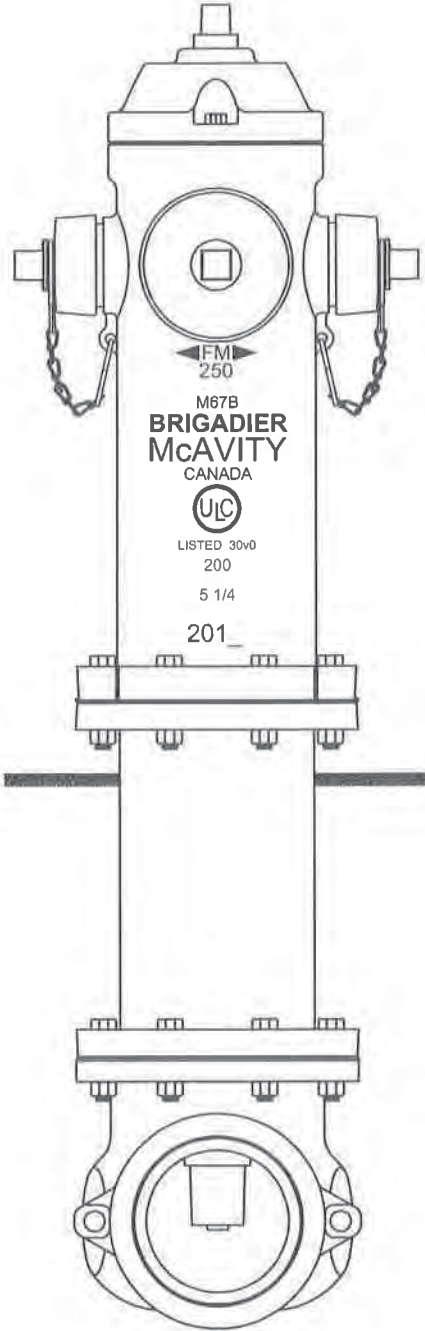
- .1 Install hydrants at indicated locations in accordance with AWWA Manual of Practice and as detailed on construction drawings.

- .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 L.G. McKAY	CHECKED	EXAMINED	NOTED	APPROVED
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**M67B 2 HOSE 1 PUMPER
WITH 6" PUSH-ON ELBOW**

CLOW CANADA

M67B - 022

SCALE NOT TO SCALE DATE SEPT. / 2010

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-lube™ 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.

McAvity

CLOW

CONCORD

A division of Canada Pipe Company Ltd.

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

McAvity

CLOW

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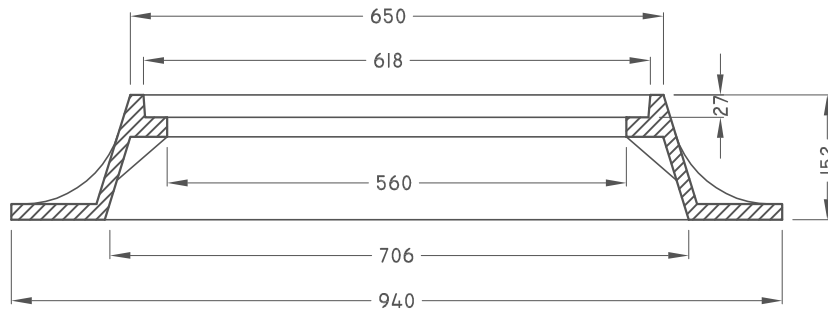
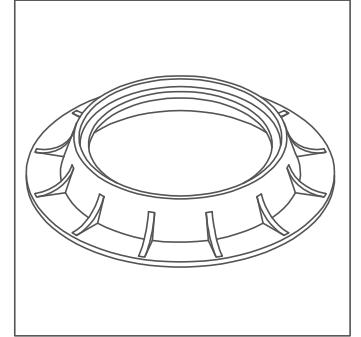
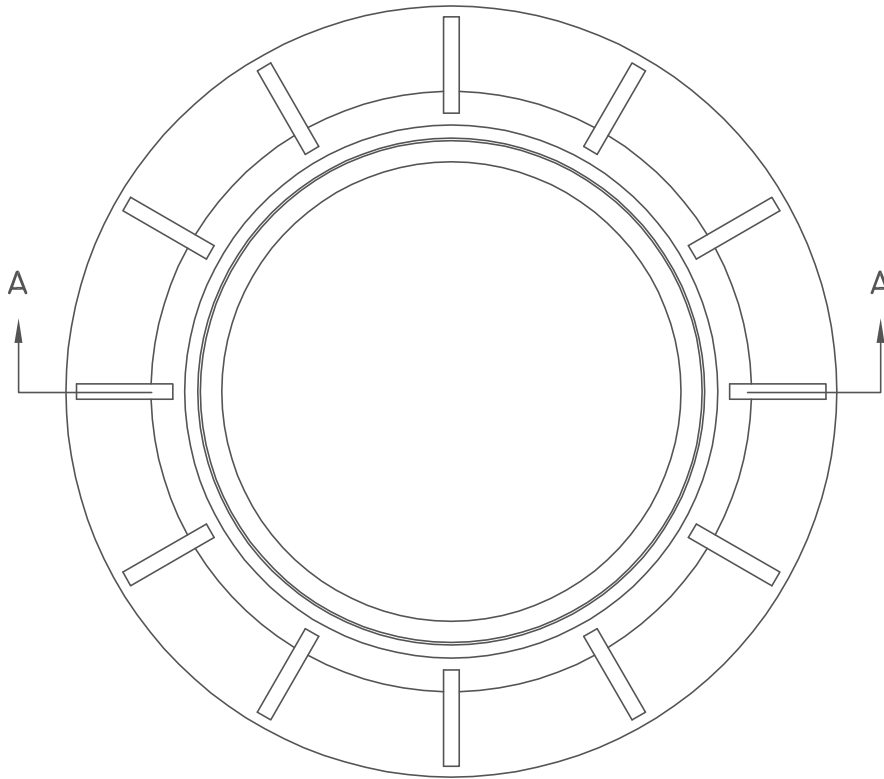
CONCORD



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.

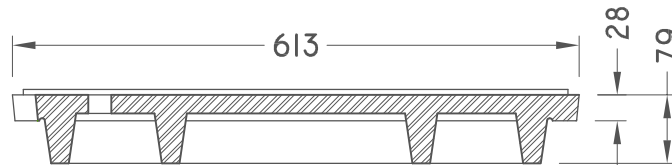
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TSUUT'INA COVER

TF-50CT

PLAN



SECTION

ISO 9001-2000 CERTIFIED

RATED FOR HS-20 LIVE LOAD

MEASUREMENTS IN MILLIMETERS

TROJAN INDUSTRIES INC.
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PROOF

August 2, 2018	Original	S.C.
	Rev. 1	
	Rev. 2	
	Rev. 3	
	Rev. 4	

Original Artwork and One Revision is included with the original quoted price. Subsequent revisions will be subject to additional charges.

Please check (✓) the appropriate box, sign and return.

Layout approved as submitted ; with changes shown ;

Provide a new layout with changes shown.

Signature: _____ Date: _____
email confirmations accepted

NOTE: Once artwork has been approved ATS will NOT be held responsible for any errors or omissions.

Tsuu t'ina Nation 1121-50010299



60X30 cm



60X60 cm