

# 5.0 Infrastructure Policy

## 5.1 WATER SERVICING

The Town receives its water supply via a pipeline from the Henry Kroeger Regional Water Services Commission (HKRWSC). The raw water originates from the Red Deer River where it is treated by the HKRWSC in the Town of Hanna and delivered via pipeline to the Town of Oyen. The pipeline feeds into two potable water storage reservoirs, one above ground and one below ground. The water is pumped from the reservoirs to the Town's distribution system.

Although the HKRWSC supply pipeline passes through the Plan Area, the pipeline is not designed to provide significant service demand and will not provide any fire flow to the Plan Area. Only trickle type service connections are tapped into the supply pipeline for which will require the permission of HKRWSC.

### Water System Concept 1

The Oyen Railyard Industrial Park area will be serviced with municipal potable water by extending the Town's water mains from the existing distribution system as shown in **Figure 11: Water System Concept 1**. The proposed connection to the existing distribution system is at 2<sup>nd</sup> Avenue E. In 2020, a 200 mm diameter stub was installed for this connection on 2<sup>nd</sup> Avenue E.

A target supply of 10,000 L/min for fire flows is being pursued by the Town of Oyen for the Plan Area. To achieve fire flow, the minimum water main size should be 200 mm in diameter in the Plan Area. Fire hydrants have been placed to meet the minimum spacing of 90 m for industrial coverage as outlined in the Fire Underwriters Survey Water Supply for Public Fire Protection, 1999.

The serviceable area of a water distribution system should provide a minimum pressure of 40 psi anywhere in the system at peak-hour demand flows. The developable area is generally flat, ranging in elevation between 764 m and 771 m. The pump station is at approximately 766 m elevation, therefore, there should be no issues providing water pressure in the proposed developable areas using the minimum main size of 200 mm in diameter. For redundancy, increased reliability, and increased fire flow in the water supply to the Plan Area, it is good practice to loop the water mains. Looping will require a second water main connection to the Oyen Railyard Industrial area further to the west. This connection is not mandatory to service the Plan Area.

### Water System Concept 2

The Town's long-term plan may be to re-route the HKRWSC as shown in **Figure 12: Water System Concept 2** to reduce the number of rail crossings for the water line. In **Water Concept 2** the HKRWSC main line is moved along Railway Ave W and the Plan area is serviced by a single line under the rail tracks. This re-route of the water line would have numerous benefits, including easy maintenance of the water line and less reliance on rail crossings.

**The following policies apply to ASP Planning Areas 1, 2, or 3 as shown on Figure 7: Planning Areas:**

- Policy 5.1.1** Piped municipal water servicing shall be required for all new developments in ASP Planning Areas 1, 2 or 3 as shown on **Figure 7: Planning Areas**.
- Policy 5.1.2** Notwithstanding **Policy 5.1.1** above, interim on-site water servicing solutions may be permitted by the subdivision or development authority under the following conditions:
- i) Piped water servicing is not yet available at the property line;
  - ii) The development authority has determined the proposed development is a low to moderate water user;
  - iii) The developer shall enter into a **Deferred Servicing Agreement** to be placed on title specifying the legal parcel connect to piped water servicing either when it is available at the property line or at the time of future subdivision or development; and
  - iv) The proposed on-site water servicing solution complies with the Safety Codes Act.

**Policy 5.1.3** All new water main connections shall be designed by a professional engineer and shall be designed to accommodate a minimum fire flow of 150 litres per second at each hydrant.

**Policy 5.1.4** All costs associated with the construction of water infrastructure on a private lot are the responsibility of the landowner or developer.

**Policy 5.1.5** Where a proposed development has a significant need for water the developer may be required to provide and transfer to the Town / HKRWSC a Licence to Divert Water.

**Policy 5.1.6** The Town encourages the reduction and reuse of water in accordance with provincial laws and regulations.

**The following policies apply to ASP Planning Area 4 as shown on Figure 7: Planning Areas:**

**Policy 5.1.7** All future developments in ASP Planning Area 4 shall require piped municipal water servicing.

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## 5.2 WASTEWATER SERVICING

**The following policies apply to ASP Planning Areas 1, 2, or 3 as shown on Figure 7: Planning Areas:**

**Policy 5.2.1** Individual on-site wastewater and septic solutions shall be permitted in Planning Areas 1, 2, or 3 in accordance with the Safety Codes Act.

**Policy 5.2.2** All costs associated with the construction wastewater infrastructure on a private lot are the responsibility of the landowner or developer.

**The following policies apply to ASP Planning Area 4 as shown on Figure 7: Planning Areas:**

**Policy 5.2.3** All future developments in ASP Planning Area 4 shall require piped municipal wastewater servicing.



North Arrow  
1:3,400

Watermain Concept

- Legend**
- Henry Kroeger Water Line
  - Proposed Hydrant
  - ASP Boundary
  - Town Boundary
  - Proposed Water Line
  - Existing Water Line

Not responsible for error or omissions: "Development Concept". [15,4"11" P2F, ActGIS] 1:3,400 Town of Oyen, Industria ASP Area. Palliser Regional Municipality Services, January 2021.

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Figure 11: Water System Concept 1



1:3,400

Watermain Concept 2

Legend

-  Proposed Hydrant
-  Existing Water Line
-  Proposed HKWL Reroute
-  Existing HKWL
-  Proposed Water Line
-  Existing Water Line
-  ASP Boundary
-  Town Boundary

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Not responsible for error or omissions. "Development Concept", [15.4"-1" PCF, ArcGIS] 1:3,400, Town of Oyen Industrial ASP Area, Palliser Regional Municipal Services, January 2021.

Figure 12: Water System Concept 2

## 5.3 STORMWATER SERVICING

Stormwater management systems are based on the dual drainage concept to provide collection, conveyance, storage, and treatment of stormwater runoff. Dual drainage systems are comprised of both minor and major collection systems. The minor system includes roof leaders, roof gutters, lot drainage, roads and gutters, and underground pipe infrastructure. It is designed to collect and convey stormwater runoff during minor rainfall events. The major system includes overland conveyance systems, roads and gutters, drainage ditches/swales, trapped lows and end-of-pipe stormwater management facilities such as dry ponds, wet ponds, evaporation ponds, and constructed wetlands. The major system is designed to convey, store, treat and discharge stormwater runoff collected during major rainfall events in excess of the minor system.

The Plan Area is currently all overland drainage with minimal existing defined drainage paths except the highway ditches along Highways 895 and 41. The Town indicates there are existing drainage issues in the area particularly along the southwest corner of parcel #14 as identified on

### Figure 3: Legal Parcels.

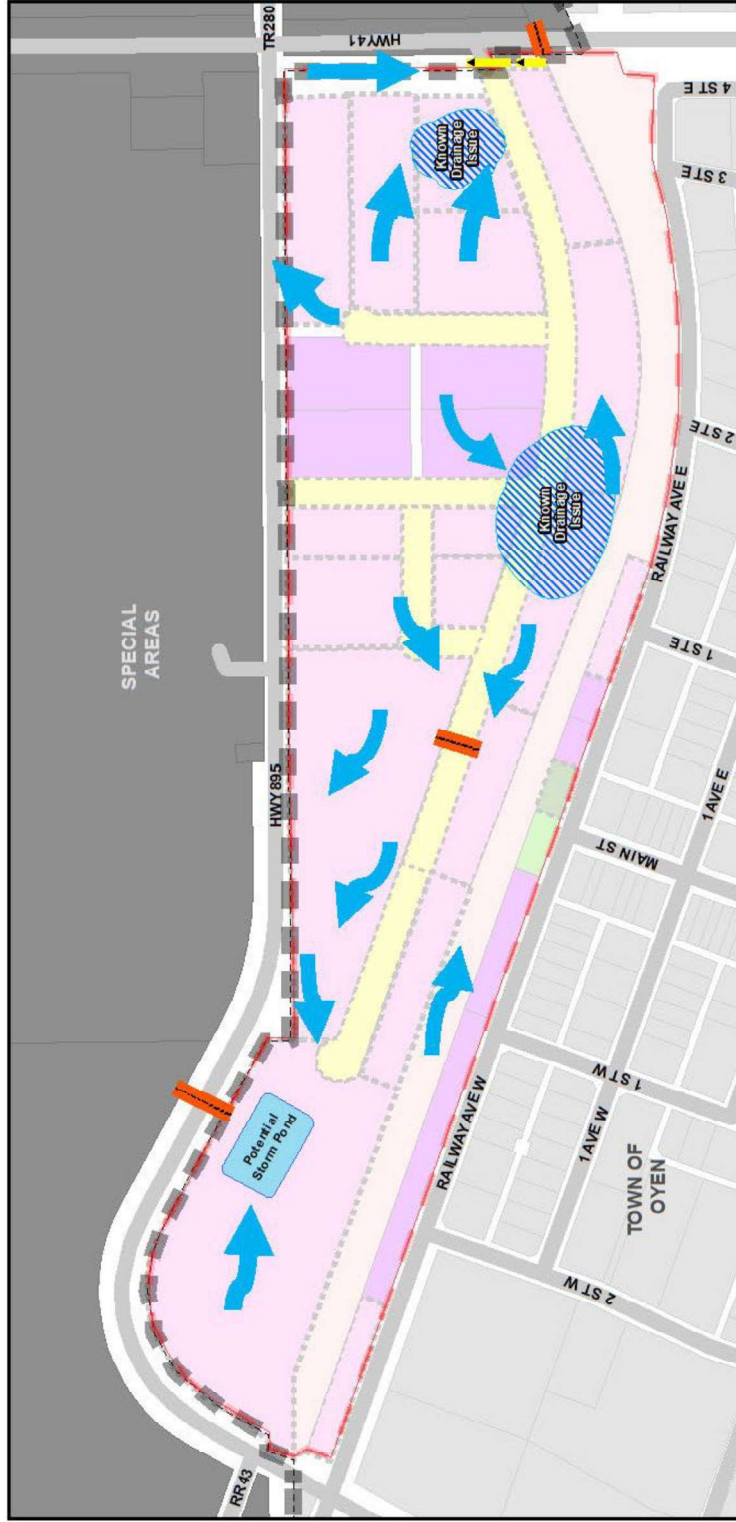
Several constraints within the Plan Area are identified that impact the stormwater drainage:

- The area is relatively flat in elevation.
- Existing development within the Plan Area, including buildings and other existing infrastructure, such as roads and gravelled parking areas.
- The area is bound on all four sides by Highway 895, Highway 41, and the railway for which are all at higher elevation than the surrounding lands.
- Narrow width of existing road rights-of-ways. Currently, the Plan Area is comprised of road rights-of-way that are between 9 m and 15 m in width; whereas 24 metres is a recommended standard.

Asphalt paved roads with overland drainage ditches are desired for the Plan Area. Storm sewers and curb and gutter are not desired. To accommodate a paved road with ditches, a minimum 24 m wide right-of-way is required to achieve a road with suitable ditches. A proposed right-of-way cross section for the Plan Area is shown in **Figure 13: Road Cross-Section**. A potential location for a stormwater management facility in the Plan Area's northwest is shown on **Figure 11: Drainage**. An overflow to the land to the north is recommended as shown on **Figure 11: Drainage**.

- Policy 5.3.1** Developments shall adhere to the Stormwater Master Plan for the ASP as shown on **Figure 11: Drainage**.
- Policy 5.3.2** Developers shall be required to submit a Drainage Plan or Stormwater Management Plan that reflects alignment with **Figure 11: Drainage**.
- Policy 5.3.3** Drainage Plans and Stormwater Management Plans submitted by a developer shall comply with any new stormwater plans, management policies, and interim servicing policies that may be introduced after the adoption of this Plan.
- Policy 5.3.4** Stormwater conveyance systems should be designed to accommodate upstream and downstream properties and adjacent road networks.
- Policy 5.3.5** Measures should be taken to maintain the value of any natural wetlands and/or natural drainage courses that are retained. This may involve receiving treated stormwater through direct or indirect flow.





1:3,400

Drainage Plan

Drainage Flow Direction

**Legend**

- Existing Culvert
- Proposed Culvert
- ASP Boundary
- Town Boundary

**OYEN INDUSTRIAL ASP**

**MPE Engineering Ltd.**

**Palliser Regional Municipal Services**

**Oyen ALTA.**

Not responsible for error or omissions "Development Concept" [16.4+11] PDF, A+cGIS | 1:3,400 Town of Oyen Industrial ASP Area - Falls er Regional Municipal Services, July 2020

Figure 13: Drainage Plan

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## 5.4 TRANSPORTATION

- Policy 5.4.1** The future road network for the Plan Area shall align with the existing and future roads identified on **Figure 5: Development Concept** and **Figure 8: Existing and Future Transportation Network**.
- Policy 5.4.2** At the time of subdivision or development permit application the developer should identify potential impacts on the local and regional transportation systems either through a **Transportation Impact Assessment** (TIA) or **Transportation Study**.
- Policy 5.4.3** Where a **TIA** or **Transportation Study** identifies a road requires upgrading due to a development, the Town may require the developer to upgrade the road at the expense of the developer.
- Policy 5.4.5** Roads and rights-of-way in the plan area shall adhere to Town of Oyen’s engineering standards for industrial roads.
- Policy 5.4.6** Road right-of-ways should be 24 metres in accordance with **Figure 13: Road Cross-Section** and as shown on **Figure 8: Existing and Future Transportation Network**.
- Policy 5.4.7** In accordance with Municipal Government Act Section 662, where a future roadway or roadway widening is required as identified in this ASP or by the Town at the time of subdivision, the developer shall dedicate land for the required roadway to the Town without compensation.

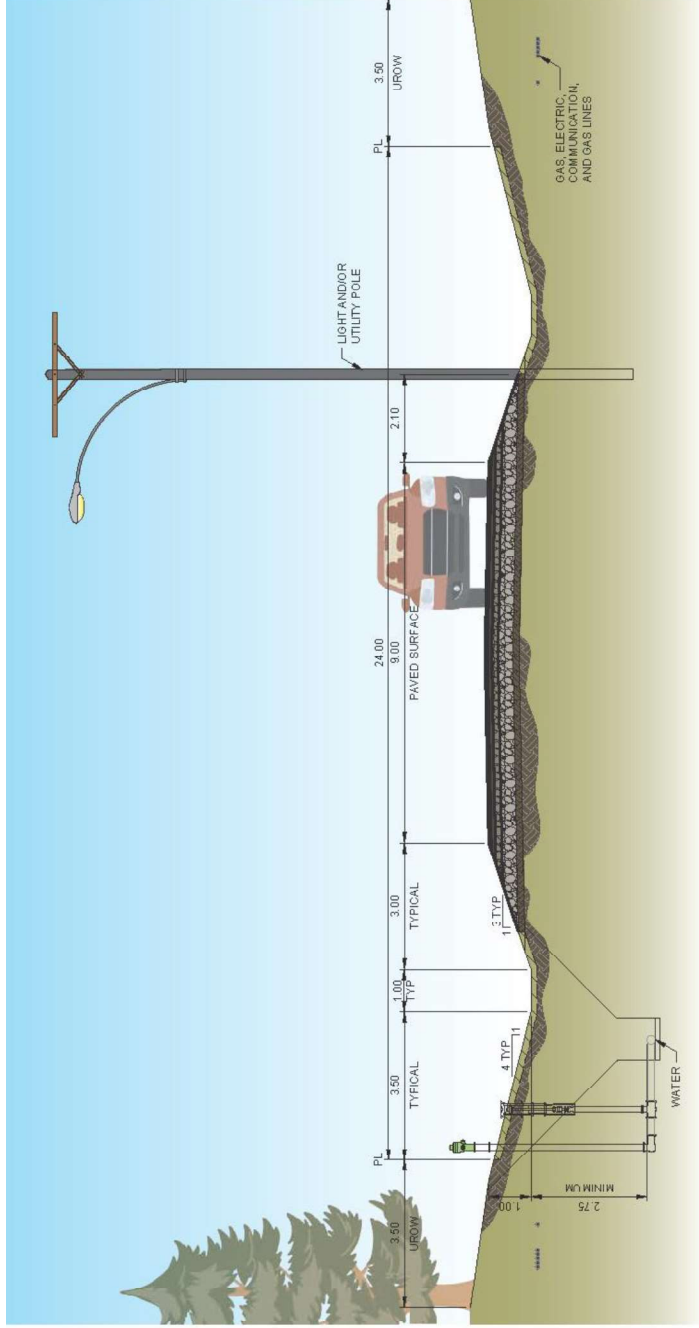
## 5.5 EMERGENCY SERVICING

- Policy 5.5.1** The Town of Oyen’s existing emergency services agencies and departments (RCMP, Town Fire Department and Big Country Hospital/EMS) will serve the ASP lands.
- Policy 5.5.2** Following adoption of this ASP, the Town of Oyen should update its Emergency Management Plan to take into consideration industrial and railyard development as outlined in this ASP.
- Policy 5.5.3** The Town of Oyen should consult with CN Railway to assess the risks and potential risk mitigations pertaining to the railway and development on the north side of the railway. For example, in the case of an emergency situation where transportation access to the north side is blocked.

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## 5.6 SHALLOW UTILITIES

- Policy 5.6.1** All new development shall be serviced with shallow utilities at the expense of the developer.



1:125

All dimensions in meters

Typical Road Cross-Section

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Figure 14: Road Cross-Section