



Engineering Services

2022 Work Plan

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Table of Contents

1. Vision, Mission, Values
2. Department Sections and Areas of Responsibility
3. Core Service Areas
 - a. Capital Construction
 - b. Engineering Projects
 - c. Land Management
 - d. Land Development Engineering
4. Summary of Work Program / Service Delivery Recommendations
5. Strategic Documents to Enhance Engineering Service Delivery

Appendices

- | | |
|------------|------------------------|
| Appendix A | 2022 Org Structure |
| Appendix B | Key Activities Summary |

Vision, Mission and Values

Corporate Statement

One Parkland, Powerfully Connected

Engineering Services Department Vision

Safe & reliable infrastructure to promote the well being and prosperity of our community

Department Mission “What we do”

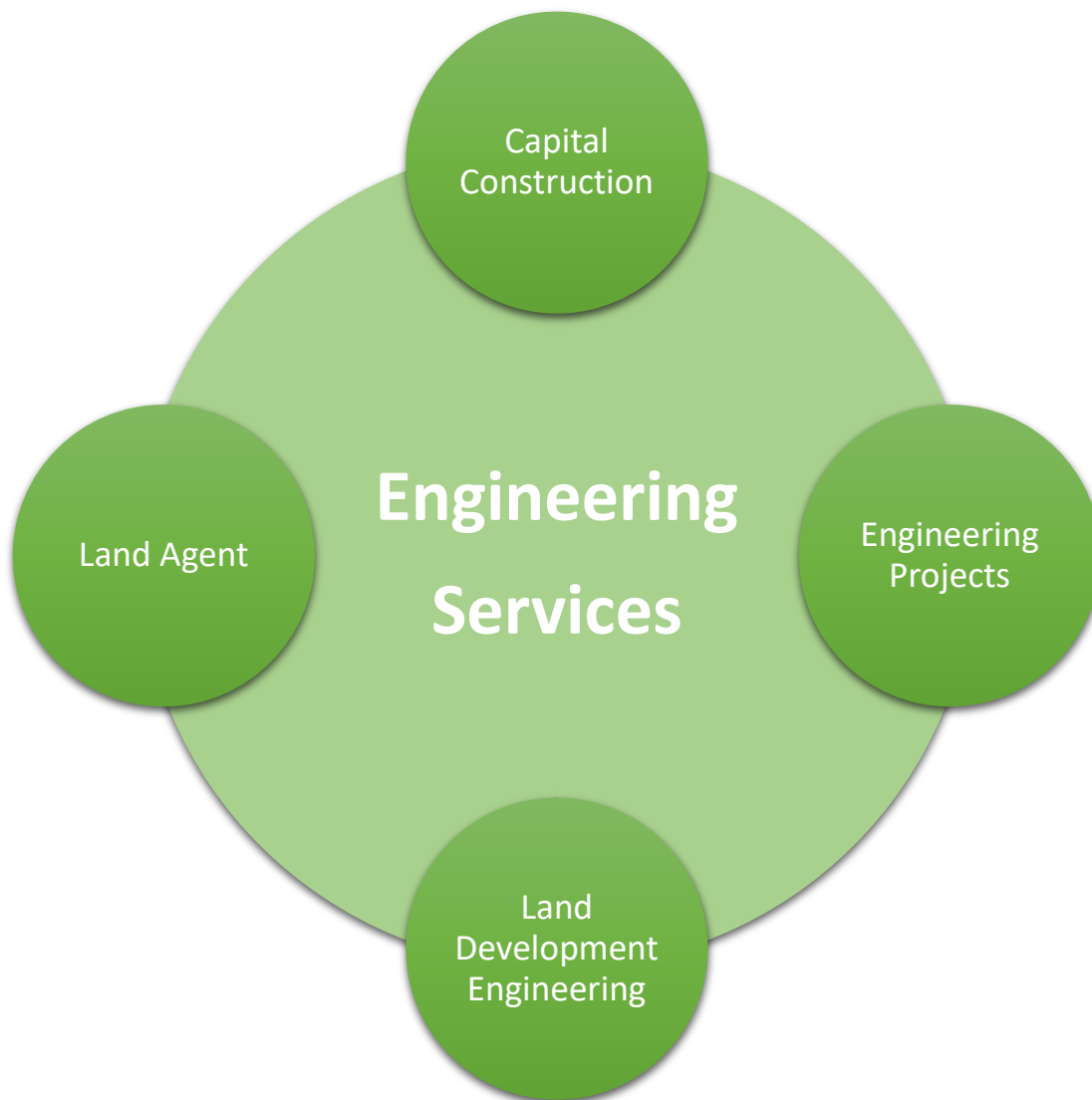
Work together to share ideas, build knowledge, promote best practises, foster leadership, develop quality infrastructure, and encourage leading edge solutions with available resources

Core Values

- We strive for **quality customer engagement**
- We are **advocates** for Health, Safety and the Environment
- We maintain a **collaborative** work environment
- We apply standards and guidelines that intertwines **innovation** with **best practises**
- We **deliver** high **quality** results
- We create and maintain **knowledgeable** leadership

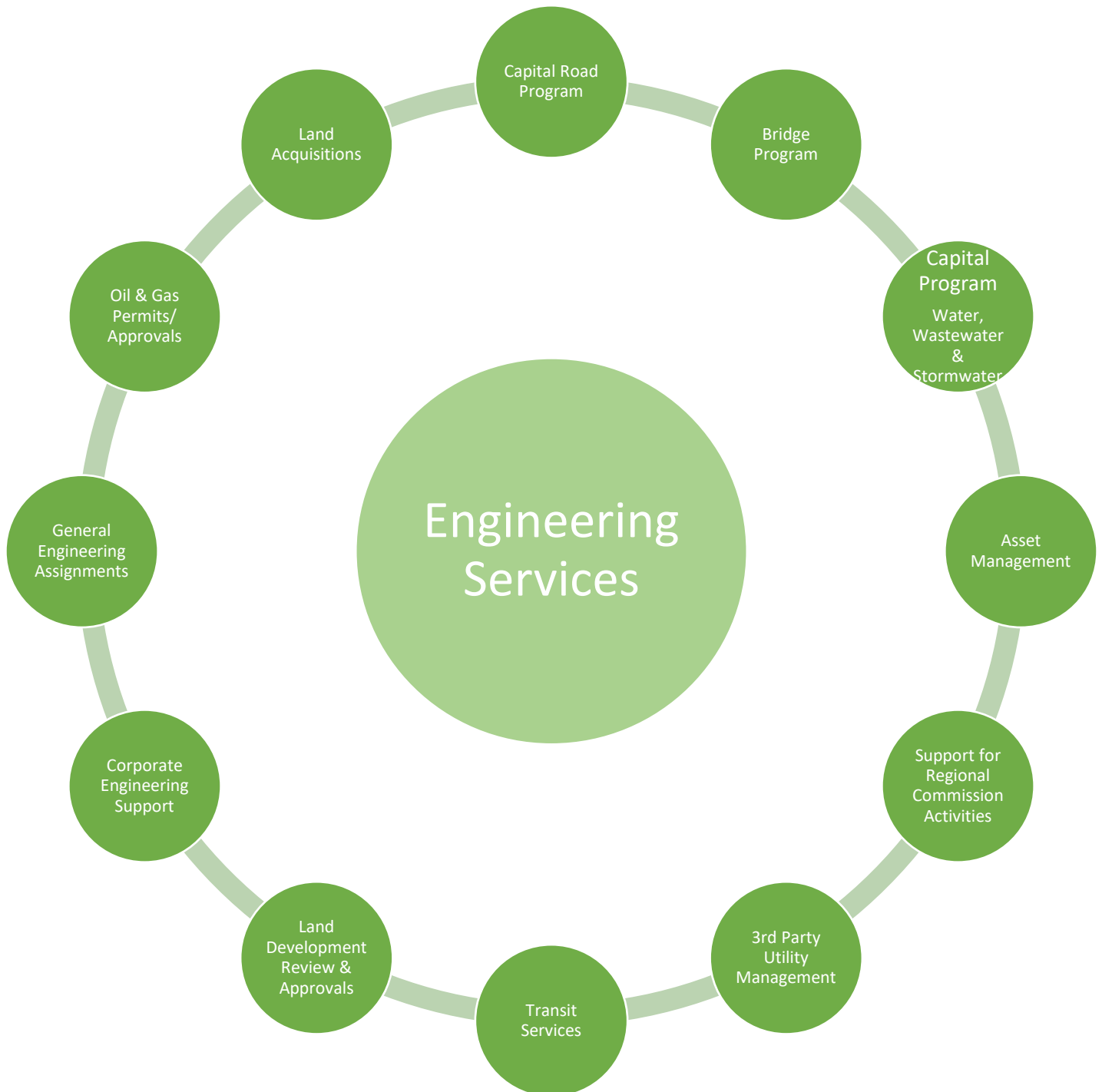
Department Sections and Areas of Responsibility

Engineering Services is comprised of three internal business sections as well as management of land acquisition activities and rights-of-way for the County. These business units, plus the Land Agent, work as a collaborative team to provide technical support, project management and professional engineering expertise.



Core Service Areas

Engineering Services primary functions can be summarized into the following areas. The three sections oversee the identified key activities. A detailed overview of these activities and what is included in each category is further identified within the annual work plan and can vary from year-to-year base on corporate and departmental priorities. Additional highlights and breakdown of the activities is included in Appendix B.



2022 Assignments and Resource Overview

CAPITAL CONSTRUCTION

Capital Construction has the following tasks assigned:

CORE FUNCTIONS:

- Corporate Support (D365, Safety, HR Leadership)
- Capital Plan Development – Roads Portion
- Oversight of Multi-Year Contracts
- Survey Services
- Annual Traffic Count Program
- Benkleman Beam Road Testing - Support
- GM Contingency Activities
- Oversight/ Assist on Alberta Transportation projects

REHABILITATION AND MAINTENANCE:

- Aggregate Seal Coat Program
- Grid Road Overlay Program
- Subdivision Preservation Program
- Local Improvements Program
- Twp Rd 524 (Mink Lake Rd), Hwy 770 to RR 25
- Helenslea Health Subdivision area, Full Depth Reclamation and ACP asphalt overlay
- 50A Avenue Design and Reconstruction (2023)
- Asphalt Overlay on RR273, Hwy 16 to Twp 534
- Erosion Control RR43, north of Burtonsville Rd
- Reclamation from 2021 Fires at RR63 and Jack Pine

GROWTH:

- 114 Avenue (Twp Rd 531A), east of Hwy 60 future widening
- Asphalt Overlay in Wabamun – Osprey Subdivision
- Trans Mountain Pipeline Expansion Oversight

BRIDGE PROGRAM

- Bridge File Assessments
- Bridge Design / Construction program

Resources Available

Manager – Rob de Kleer

- Annual Road Program Development and Oversight
- Master Servicing Agreement Contracts (multi-year)

Project Officer – Pam Ehrler

- Helenslea Heath ACP Overlay
- Fire Reclamation Activities
- Mink Lake Rd Design

Project Officer – Jeremy Hemsing

- Bridge Construction Program
- Bridge File Assessments
- Subdivision Overlay Program
- RR43 Erosion Control
- Traffic County Program

Project Officer – Trevor Lucas

- Subdivision Overlay Program
- Aggregate Seal Coat Program
- 114 Avenue Widening
- Osprey & RR273 ACP Overlay
- Grid Road Overlay Program

Survey Team

- Survey activities as assigned
- Traffic Counter Placement and Relocations
- Benkleman Beam Support
- Construction support for internal crews as assigned

Temp Contract Staff – Axel Forester

- Trans Mountain Pipeline expansion oversight

CAPITAL CONSTRUCTION (continued)

Current Status

Engineering Services infrastructure program continues to place emphasis on rehabilitation, reconstruction, and maintenance-based activities over the growth activities. This has been a reoccurring theme for the past 3-5 years and we are seeing continual improvement on condition ratings of our existing roadway network. These positive gains mean higher quality roadways for our residents and reduced maintenance efforts required for our roadway crews.

2022 Road Program
emphasises rehabilitation,
reconstruction, and
maintenance-based activities

An additional focus area for this team is the capital replacement of aged bridge infrastructure, both bridge structures and bridge culverts. They are responsible asset renewal/replacement and for major maintenance activities. When renewal/replacement is not an immediate option, the team develops interim solutions such as installation of weight restrictions and/or placement of temporary bridges. Creative solutions keep the bridges open for general use and bridge the gap between identification of the issues and completion of a long-term fix.

Current resources can successfully complete the bulk of our annual rehabilitation and major maintenance activities. Projects are typically on-schedule and come in at or near budgets assigned. Work production rates are well defined and maximum capacity levels are established. Requests to increase the current volume of work should consider resource implications.

The two growth projects led by Parkland County that are identified within the 2022 road program include a widening project on 114 Avenue, east of Hwy 60. This project facilitates ongoing growth and development within Acheson Zone 2 and 4 (design 2022, construct 2023). The second project is for the final completion of the Osprey Subdivision, in Wabamun, which includes placing the final lift of asphalt to fully complete the subdivision.

Engineering does have shovel ready projects should the current fiscal environment change and is continuing to develop options for the roadways in consultation with the Roads and Drainage Department. Additional near-term growth projects are anticipated to be in areas that see strategic economic diversification opportunities.

We have
shovel
ready
projects

CAPITAL CONSTRUCTION (continued)

In consideration of our current work program, our Asset Management models indicate there has been a historical downward trend in the overall quality of the network. Indications are that we were under-spending on an annual basis for our rehabilitation, repair and maintenance programs. Additional efforts have been directed towards rehabilitation, repair and maintenance programs and we are beginning to see a reverse

Good news!

Our Asset Management reports tell us our trendline for overall road condition ratings point in a positive direction

trend. In 2021, we applied the full amount of the \$3.8M Municipal Sustainability Program (MSP) grant to road rehabilitation programs. This was essentially a doubling of annual efforts for one year on our key programs. This helped correct the course that we were on and is a big contributor to the reversing of the trendline that we were on. This further indicates how important it is to remain focused on taking care of existing assets. In summary, over the past 1-2 years, the Roadway condition ratings continue to improve indicating we are seeing the right focus and direction of available

resources. Our current Asset Management reports tell us our trendline for overall road condition ratings point in a positive direction.

This is an area of focus for the Engineering team. The asset management tools we use, and the annual road programs must ensure that our system rehabilitation keeps pace with the rate of system degradation.

This team is functioning at full capacity with current workloads. This group has deferred a significant number of growth projects in the past 4 years to balance budgets and resources. There is a need to be very sensitive to mid-year addition of projects and initiatives. This should only occur after all committed tasks are well in hand and nearing completion.

The following are the recommendations going forward for 2022:

2022 Requirements w/ Recommended Actions for Capital Construction

- 1) Engineering Services proposes no adjustments. The team is functioning well and is at the proper resource level to manage annual workloads

2022 Assignments and Resource Overview

ENGINEERING PROJECTS

Engineering Projects has the following tasks assigned:

CORE FUNCTIONS:

- Corporate Support (D365, Safety, Ec Div)
- Capital Plan Development – Full Program
- 4, 10 and 25-Year Capital Plan
- Oversight of Multi-Year Contracts
- Off-Site levy (support only)
- Traffic Signal Program & signal inquiries
- General Engineering Based Support
- Oversight/ Assist on Alberta Transportation projects
- Federal Rail Activities
 - CN Rail - Track Twinning, Whistle Cessation, Crossing Upgrades
 - Transport Canada – primary liaison

REHABILITATION AND MAINTENANCE:

- Wastewater Line Replacement – Entwistle
- Hamlet Strategy Implementation (Support only)
- Tomahawk Lagoon Rehab/Replace

GROWTH:

- Concept Plan – Bevington Rd
- Concept Plan – Twp 524, Stony Plain to Hwy 770
- Concept Plan – 50A Avenue Entwistle
- Acheson/Big Lake Water and Wastewater Model update
- Zone 4 Water Reservoir
- Entwistle Water Facility (lifecycle replacement)
- Zone 1 and Zone 2 Sanitary Pipe Upsizing – construct
- Walker Lake Water Line Loop
- Acheson Zone 5 – Wastewater Trunk upgrade
- Entwistle – Hwy 16 waterline looping investigation
- Active Transportation

Resources Available

Manager – Keith Bobey

- Oversight on all projects
- Lead on Regional Initiatives
- Lead on CN Rail/ Transport Canada activities
- General Engineering Tasks
- Storm Water Master Plan
- Master Servicing Agreement Contracts (multi-year)

Project Engineer – Amanda Soetaert

- Zone 4 Reservoir
- Concept Plan (Twp 534)
- Entwistle Wastewater Line Replacement

Project Engineer – Ryan McCaffery

- Concept Plan (Bevington Rd)
- Concept Plan (50A Ave, Ent)
- Walker Lake Water Loop

Project Engineer – M. Markiwsky

- Fence Line Annual Report
- Storm Water Master Plan
- Fallis Drainage – Phase 2
- Storm Pond Water Quality tests
- 3rd Party Utilities inspections
- Underground Line Assignment (ULA) approvals
- General Utility Coordination
- Tomahawk Lagoon Rehab/Renewal

ENGINEERING PROJECTS (Continued)

REGIONAL PROJECTS

- ACRWC Backflow Retention Lagoon and Lift Station
- ACRWC CIPP lining, Hwy 60 to east County limits
- WILD Phase 3 Expansion to Entwistle & Connection into existing Reservoir
- CRPWSC line twinning
- CRPWSC Booster Station Connection

TRANSIT SERVICES

- Transit Management of Daily Operations
- Transit Shuttle Agreement
- Regional Transit Services Commission - support
- Tri-Region Transit Planning

ASSET MANAGEMENT

- LiDAR Analysis for Storm
- Asset Management Database & Expansion
- CCTV Program (Storm and Sanitary)
- Condition Assessment Rating Program
- 2022-2026 Infrastructure Plan development
- 25 Year Capital Plan (Infrastructure)
- Wabamun Transition into Parkland County

STORM SYSTEM – OPERATIONS & MAINTENANCE

- Compliance Reporting (Fence Line)
- Water Quality Testing of Storm Ponds
- Drainage Master Plan
- Fallis Drainage Improvements

UTILITY REVIEW AND APPROVALS

- Underground Line Assignments
- Private Utility Approvals Coordination
- Private Utility Inspections

Resources Available (Cont)

Manager – Keith Bobey

Asset Management Coordinator-
Brandi Dechkoff

- Zone ½ Pipe Upsizing
- CCTV Program
- LiDAR Analysis
- Hamlet strategy support
- Off-Site Levy support
- Asset Management Database – management and expansion
- 2022-2025 Infrastructure Plan
- 25 Year Capital Plan
- Acheson/ Big Lake Water & Wastewater updates
- Wabamun Asset Management transition into Parkland County

Transit Tech – Sydney Gordon

- Transit Agreements
- Daily Operations as needed
- RTSC Regional transit support
- Tri-Regional transit support
- Asset Management Support
- Wastewater Line Rehab – Entwistle
-

To be Assigned:

- Entwistle Water Facility (Lifecycle Replacement)
- Acheson Zone 5 Wastewater Trunk upgrade
- Concept Plan (Twp 524, Stony Limits to Hwy 779)
- Active Transportation
- Entwistle water loop Hwy 16

ENGINEERING PROJECTS (continued)

Current Status

The Engineering Projects team has had a full plate of initiatives for several years. This is an area of focus for the Department as there are key activities managed in this area that support many strategic initiatives across the County. This group maintains a very high volume of activity and retains a considerable amount of strategic information that is needed for successful delivery of projects across the organization. The list of potential projects and initiatives seems endless. There is a need to be selective in assigning tasks to this group to ensure the highest potential is available for key deliverables.

Carefully assign high risk projects and those with greatest influence across a broad spectrum

Equally challenging is the nature and source of assigned activities. Influences outside the control and direction of the group often create the highest priority items. This creates challenges to coordinate and plan activities and to properly resource activities. Regional Commissions (ACRWC, CRPWSC, WILD), Federal Agencies (CN Rail) set their own schedules and budgets that we react to and accommodate as identified. For many of these types of projects, we have no influence or direction to provide on schedule and timing.

Manage the sources and timing of new tasks

In the past, when considering larger scale projects, the group has hired external engineering resources via contract. While the resources were helpful to manage field

Direct Hire or Temp Contract is preferred when considering additional resources for short term projects

activities, there is still a need for internal supervision and support. The in-house requirements for supervision and oversight limits the effectiveness of this approach. An imbedded person, through either direct hire or contract employee, is an alternative option to consider, should we be

contemplating additional short term resource options. It is important to have fluid conversations on a regular basis to keep track of progress for projects as well as to provide ongoing advice and direction. An imbedded person is also more flexible in their assigned duties and can be readily deployed to tackle new tasks or emerging priorities. We get more value from this approach.

ENGINEERING PROJECTS (continued)

Several this team's activities ensure high quality planning and strategic direction is in place for future decisions. The team also ensures other areas, such as Land Development Engineering, Economic Diversification, and Community Sustainability, and our regional partners have sufficient information to make their decisions. Apart from specific projects, base level work activity within this group supports many tasks across the organization, both internally and externally.

The following are the recommendations going forward for 2022:

2022 Requirements w/ Recommended Actions for Engineering Projects

- 1) Transit Management lies solely within Engineering Services however the majority of the efforts involve operational service delivery. System growth, regional connectivity, network planning still fit within Engineering. The day-to-day systems operations do not align well with the general activities within the Department.
 - **Recommendation** – Assign responsibility for Transit Operations outside of Engineering Department, **AND**
 - **Recommendation** – Maintain regional and sub-regional transit planning within the Engineering Department

- 2) Parkland County did not own or operate any Traffic Signals until 2018. As part of the work done at the intersection of Hwy 60 and 114 Avenue in 2016/17, there are now two existing signal lights under Parkland County's responsibility. A consulting agreement and a contractor agreement are in place to address annual inspections and emergency response repair requirements; now that this is an operational asset, consideration could be made to reassign the responsibility. In addition to the signal lights, there are two pedestrian flashers in the County: one at Blueberry School on Parkland Drive and one at Devonian Trail crossing of Woodbend Road
 - **Recommendation** – Assign responsibility for Traffic Signal Operations outside of Engineering Department, **AND**
 - **Recommendation** – Combine operational responsibilities of Pedestrian Crossing Flashers with Traffic Signals

ENGINEERING PROJECTS (continued)

- 3) Support new large-scale projects with temporary Project Manager agreements. Additional project managers funded through project budgets would supplement the available personnel and with right persons and direction, increase the output from the team on strategic initiatives. With current finance systems, it is easy to track and report on all costs related to the project, including project-costed employees.
 - **Recommendation** – provide support to Engineering Services to develop a strategy on what this would look like and how it may be implemented, including an outline of project costs and budget expenditures.

- 4) Increase the support for Asset Management. A formalized role began in 2016 when the Asset Management Coordinator position was created. It was identified at that time that this role likely required a technical support position to balance demands; particularly as we added components to our asset management module. Initially only roads were formally managed. We now have Road, Water, Wastewater, Storm and Sidewalks. This position also participates heavily in year-end project reconciliation, off-site levy updates and 4-year and 25-year Capital Infrastructure planning.
 - **Recommendation** – increase area by 1.0 FTE at Engineering Technician level. Request to be considered in 2023 budget

2022 Assignments and Resource Overview

LAND DEVELOPMENT ENGINEERING

Land Development Engineering has the following tasks assigned:

CORE FUNCTIONS:

- Corporate Support (D365, Safety, Enforcement, Operations, Agg. Services, Customer Service)
- Review Developer submitted Reports, Studies and Documentation in support of their submissions
- Engineering Design Standards Review and Amendments
- Develop Policy, Procedures and Administrative Directives, Standard Operating Procedures in support of Development Approval processes
- Site specific area improvements
 - Acheson Zone 3 Stormwater Rehabilitation
 - Acheson Commercial Corner
 - Non-compliant Approach Removals (RR264)
 - 3rd Party Development Support (Camp He Ho Ha)

Current Planning & Long-Range Planning Referrals

- Review and Respond to Engineering Compliance as it relates to Design Submissions
- Support Engineering Studies and Analysis related to long term infrastructure Planning (Roads, Water, Wastewater, Storm, etc)
- Field Inspections and Approvals
 - **Amazon** Offsite Improvements

Resources Available

Manager – Matt Good

- Oversight of all Development Approvals with Off-site and On-site construction requirements
- Completion of Acheson Commercial Corner
- Amazon (Highlands Business Park) Site Development
- Lot Grading Bylaw
- Development Agreement Review & Updates
- Regional Municipal Committee Participant
- EMRB – Stormwater Member
- Asset Management Support (DCA) & Year End
- Offsite Levy Support
- Engineering Compliance Review and Support on Developer Activity
- Engineering Standards Review & Updates
- Engineering Policy (C-EN10) Review & Updates
- Enforcement Support Services
- Non-compliant Approaches Enforcement
- Delinquent Development – clean up and bring to FAC
- Manages LDE Duties

LAND DEVELOPMENT ENG (continued)

Development Planning Referrals

- Review and Respond to Engineering Compliance as it relates to Design Submissions
- Field Inspections and Approvals
 - **Carmelite** Off-Site Improvements

Access/Approach Approval and Permitting

- Review and Respond to Engineering Compliance as it relates to Design Submissions
- Supports General Approach Inquiries, Oil & Gas Submissions, Formal Development Reviews
- Field Inspections and Approvals
- Addressing Delinquent Approach files
- Addressing Non-conforming Approaches

Supportive Roles and General Assignments

- Lot Grading Bylaw, Policy, Procedure – in draft
- Traffic Impact Assessment (TIA) Guidelines
- As-Built Drawing Requests and Responses
- Developer Funding Streetlight Installations
- Utility Line Assignments as related to Development Activities

Resources Available

Eng. Officer: Dwayne Hollett

- Engineering Compliance Review and Support on Developer Activity
- Acheson Zone 3 – Stormwater Rehabilitation
- Amazon Site Development
- West Point Estates Subdivision Development
- Delinquent Approaches – clean up old files
- Street Light Energization Program
- Leads/Supervises/Delegates LDE Tasks

Eng Officer: Chad Fremmerlid

- Engineering Compliance Review and Support on Developer Activity
- Carmelite Site Inspections and development oversight
- Traffic Impact Assessment Guidelines

Eng Officer: VACANT

LAND DEVELOPMENT ENGINEERING (continued)

Current Status

Land Development Engineering team works in direct alignment with Planning and Development Services with regards to developer based initiatives. Planning manages the files and issues the development conditions and/or agreements through a series of reviews and approval documents. The Land Development Engineering team assists with developing engineering based conditions outlined in permits and approvals, manages the

Aligned with
Planning and
Development
Services

Developer Activity Stages

- Permit/Condition Approvals
- Design Approvals
- Construction Approvals

design approval process and facilitates the physical construction oversight and final infrastructure approvals that are in alignment with or in coordination with the end user Departments.

Development processes are more or less broken down into three stages. They are as follows: Permit/Condition approvals, Design Approvals and Construction Approvals. Our Land Development

Engineering team is intricately involved in each stage of the process. We have significant engagement from inception of a project to completion and we manage the transfer from Developer owned project to Parkland County ownership and operations, otherwise known as Developer Contributed Assets (DCA).

There are a number of file types that are managed within Parkland County. The four most common

Planning approvals are Land Use Districting, Subdivision, Development Permit and Approach Permit. There are numerous other activities supported by the Land Development Engineering team such as Master Site Development Plan, Area Structure Plan, Overlays, etc.

Workload and volume of tasks is difficult to outline as it is subject to and based upon land development industry activity. The workload increases/ decreases based on market trends, conditions and our corporate ability to attract economic development. In 2021, this team, along with Planning and Development Services, managed a historically high

Land Development Engineering supports
development files associated with:

Land Use Districting, Subdivisions,
Development Permits and Approach Approvals

LAND DEVELOPMENT ENGINEERING (continued)

volume of submissions, applications and approvals. This placed significant pressure on the team to keep pace and they showed, as a fully staffed unit, that they were able to keep pace with demand. Customer support and levels of service were all met with and in most circumstances exceeded expectations. The increased development throughout 2021 was mitigated through efficiencies created in change of process and increased overtime hours to accommodate the fluxuations in development demands.

This team was reassigned from the Planning and Development Service Department to the Engineering Services Department at the start of 2020. A new manager was hired to lead the the team, the team was fully staffed and a new mindset was put in place to build structure, policy, process and procedures towards a highly efficient, well managed team in support of the development activities. The volume of activity in 2021, total number of responses provided, quality customer feedback, reduction of delayed approvals from disagreements and the enhaced ability for quality responses indicate that the team is providing a high quality service to Parkland County residents, businesses and Developers.

In addition to the activities ongoing from the permitting and processing, the team managed oversight on several significant projects. The off-site improvements for the Amazon (Highlands Business Park) development were, and continue to be, managed by this team. This is roughly \$25M worth of offsite infrastructure. Apart from the Coal Plants, this is the largest and most complex singular development in the history of Parkland County. This has been a very positive project within the County and is identified as a significant project in the discussions around the Edmonton Metro Regional Board.

The group also took on project management of delinquent projects in 2021. Acheson Commercial Corner, Legend Estates and delinquent approaches have been managed by the Team. In 2022, this will continue with the team taking on Stormwater Rehabilitation in Acheson Zone 3, completion of Acheson Commercial Corner, and will continue to pursue delinquent application files as they are identified.

The following are the recommendations going forward for 2022.

2022 Requirements w/ Recommended Actions for Land Development Engineering

- 1) One of the team resigned in late 2021 so there is an open position to fill:
 - **Recommendation** – post vacant position in Q1 2022 with intent to fill

LAND DEVELOPMENT ENGINEERING (continued)

- 2) Develop Supportive documents and guidelines to assist with technical review of development files. Include opportunities for teaching and training staff for personal and professional development.
 - **Recommendation** – continue to develop documents like the recently drafted Transportation Impact Assessment (TIA) guidelines and Engineering Standards

LAND AGENT

CORE FUNCTIONS:

- Land Management Activities
 - Road Closure Applications, Planning & Development Circulations, Development Based Inquiries
 - General support on all activities involving public rights-of-way
- Land Agent Activities
 - Legal Survey Coordination,
 - Land Title Registrations
 - Land Acquisitions
 - Utility Right-of-Way Acquisitions,
 - Land Valuations,
 - Construction Agreements
 - Temporary Workspace agreements,
 - Borrow Agreements,
 - Road Slope Agreements,

Collaborate and respond to Oil & Gas and large energy project submissions (ACRWC, CRPWSC, WILD)

- Pipeline Crossing Agreements,
- Pipeline Right-of-way Agreements
- Temporary Workspace Agreements
- General Inquiries

REHABILITATION AND MAINTENANCE

- Right of Entry Agreements

GROWTH

- Land Acquisition for Capital Projects – identified annual through 4-year Road Program

CORPORATE SUPPORT (OUTSIDE ENGINEERING)

- Provide support to Corporate Land Management activities as needed toward furthering municipal initiatives

Resources Available

Land Agent – Linda Murtha


- Corporate Support (D365, Safety, Planning & Development, Assessment)
- Land Management Activities
- Land Agent Activities
- Oil & Gas and large energy project submissions
- Oversight of Multi-Year Legal Survey Master Agreement
- All Growth requirements
- All Corporate support land requirements

LAND AGENT (continued)

Current Status

Parkland County Land Management Activities include the acquisition, management and disposal of lands in an efficient, transparent and responsible manner aligning with the Municipal Government Act and related legislation.

There is one position identified in the County that is assigned the title of Land Agent, and this person is responsible for managing a number of land functions across the County. While there is a Land Management area within the County, started in 2020, the distinct difference is that the Land Agent generally manages rights-of-way and acquisitions for Capital Works, while the Corporate Land Management Area manages County owned titled lands (including lease areas of County controlled lands).



Land Agent manages
Acquisitions for
Capital Projects and
general oversight of
public rights-of-way

The following are the recommendation going forward for 2022:

2022 Requirements w/ Recommended Actions for Land Management

- 1) Engineering Services proposes no adjustments. The person leading this team is functioning well and is at the proper resource level to manage annual workloads.

Summary of Work Program/ Service Delivery Recommendations

The recommendations identified below are fully outlined and explained in detail above. Below is an executive summary of the recommendations for quick review. Each business section has a detailed summary of activities, an update on current status of operations and a list of service delivery recommendations for each area to meet current demands.

This is not intended to be an exhaustive list and there are other options that could be discussed.

Capital Construction

- 1) Engineering Services proposes no adjustments. The team is functioning well and is at the proper resource level to manage annual workloads.

Engineering Projects

- 2) Transit Management lies solely within Engineering Services however the majority of the efforts involve operational service delivery.
 - **Recommendation** – Assign responsibility for Transit Operations outside of Engineering Department, **AND**
 - **Recommendation** – Maintain regional and sub-regional transit planning within the Engineering Department
- 3) Traffic Signals are a functioning operational service that could be operated from any area
 - **Recommendation** – Assign the operational responsibilities for Traffic Signals outside of Engineering Department, **AND**
 - **Recommendation** – Combine operational responsibilities of Pedestrian Crossing Flashers with Traffic Signal Operations outside of Engineering Department
- 4) Support core resources with externally contracted Project Managers.
 - **Recommendation** – provide support to Engineering Services to develop a strategy on how it may be implemented, including outline of project costs and budget expenditures.
- 5) Increase the support for Asset Management.
 - **Recommendation** – increase area by 1.0 FTE at Engineering Technician level. Request to be considered in 2023 budget

Land Development Engineering

- 6) One member of the team resigned in late 2021 so there is an open position to fill:
 - **Recommendation** – post vacant position in Q1 2022 with intent to fill
- 7) Develop Supportive documents and guidelines to assist with technical review of development files. Include opportunities for teaching and training staff for personal and professional development.
 - **Recommendation** – develop documents like the recently completed Transportation Impact Assessment (TIA) guidelines. These can be used to support internal processes and guide external expectations

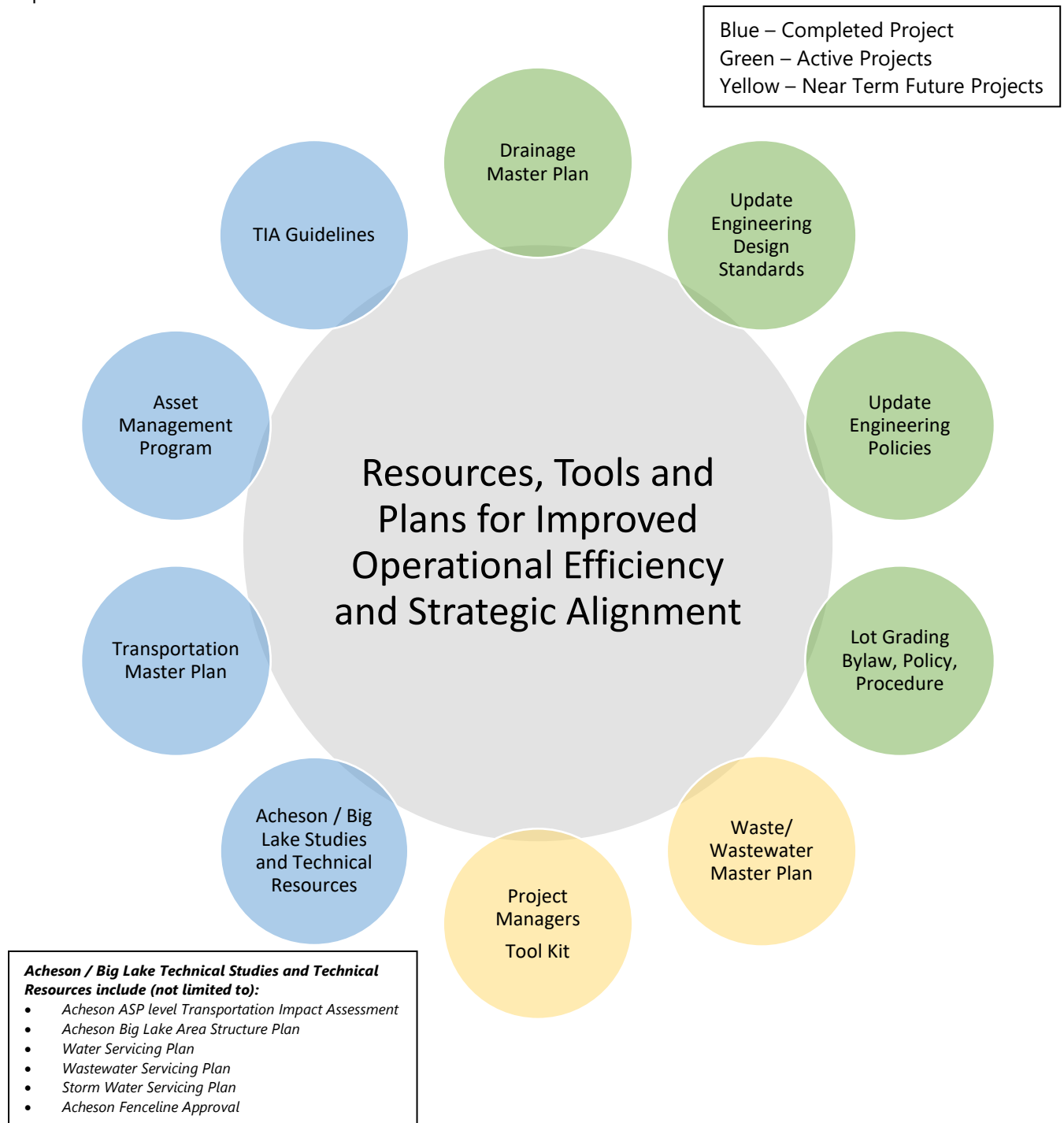
Land Agent

- 8) Engineering Services proposes no adjustments. The person leading this team is functioning well and is at the proper resource level to manage annual workloads.

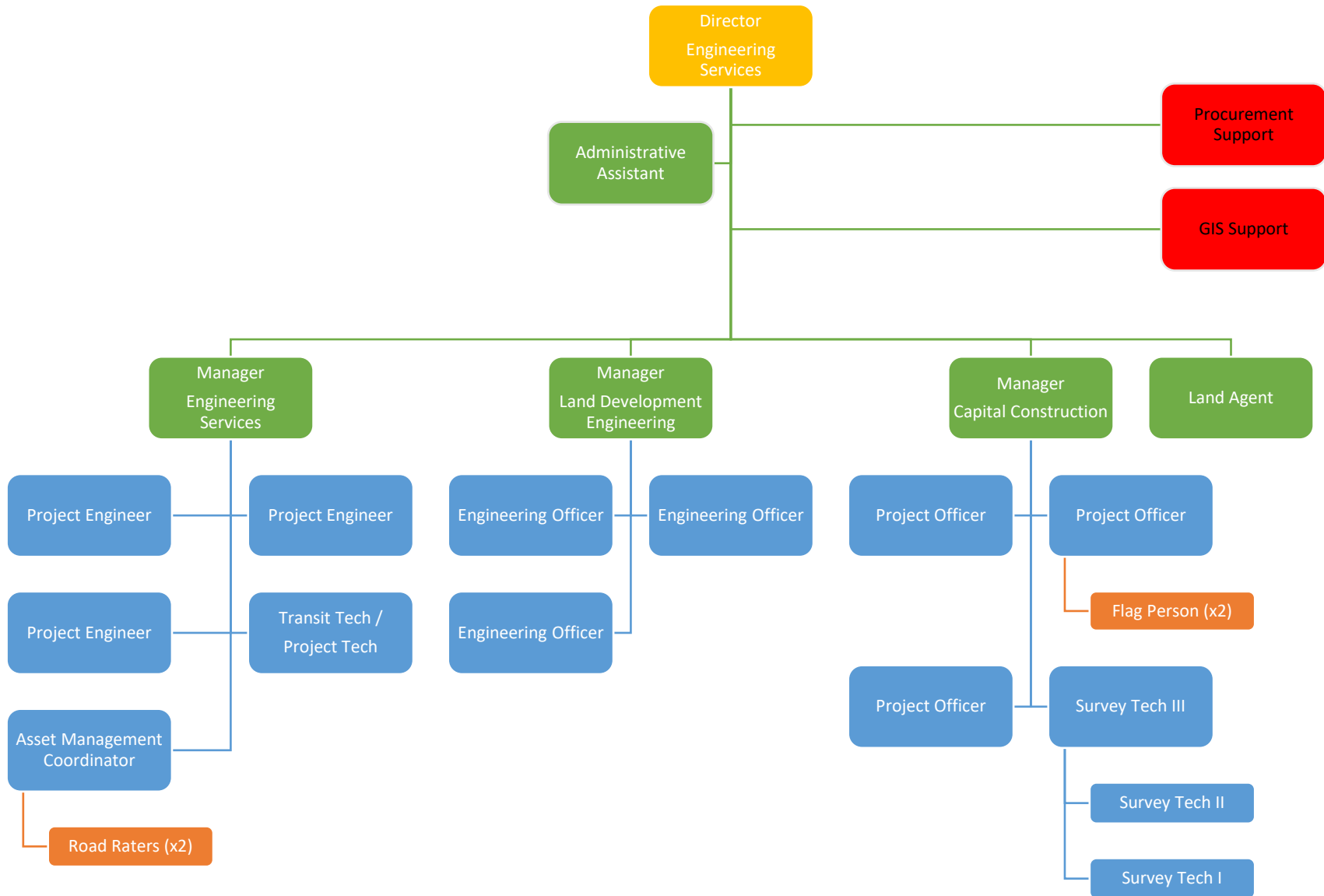
Strategic Documents to Enhance Engineering Service Delivery

Engineering Services does the best possible work with all existing and available tools. Greater access to current information, improved clarity on expectations and solid foundations for which decisions can be made will further improve the level of service capabilities, without increases to budget and resources.

Engineering identifies the following as key strategic plans, programs, or strategies to pursue in the next 3-4 years. The ones marked as complete (Blue) can and always will be in transition as we seek constant improvement and evolution.



APPENDIX A – 2022 Org Structure



APPENDIX B – Key Activities – Detailed Summary

2022 Initiatives & Ongoing Activities CFWD from 2021

1. 2022 Road Program (includes 2021 CFWD)

- Road Design projects (\$150K)
- Road Construction (\$2.5M)
 - Twp 524 (Mink Lake Road), Hwy 770 to RR25
 - Design 2022, Construction 2023
 - Helenslea Heath Subdivision Full Depth Reconstruction w ACP Overlay
 - Osprey Subdivision (Wabamun) ACP Overlay
 - RR43, north of Burtonsville Road Slough
 - Active Transportation Connections (Tomahawk)
- Asphalt Overlays (8 road segments) (\$2.415M)
- Seal Coat Surfacing (4 road segments) (\$0.5M)
- Subdivision Surfacing – Cold Mix (ASBC) (10 subdivisions) (\$1.45M)
 - * Individual project cost breakdown not provided to protect integrity of 2022 procurement activities

2. Land Management

- Road Closure Applications - 2 active in 2022 Q1
- Land Agreements (Project requirements, property valuations, etc.)
- Legal surveys (Historical acquisitions for Road ROW) (\$30K)
 - i. Additional CFWD from 2021 for RR43, north of Burtonsville Road (\$25K)
- Acquisitions (Opportunity Purchases) (\$25K)
- Corporate Project Support (that have land implications)

3. Transit

- Operational Activities for Transit Route and Acheson Shuttle
- Transit workshop with Council and Executive Committee planned for March 1

4. Bridge Files

- Construction - BF#70280 (RR64, 200m north of Twp 504)
- Construction - BF#09046 (RR25, 950m south of Twp 520)
- Major Rehabilitation - BF#82036 (Twp 522, 650m west of RR 275)
- Major Rehabilitation - BF#71229 (Twp 524, 400m east of RR 73)
- 2022 Bridge Design (for 2023/2024 Construction) – 4 locations
- Bridge File Assessments 2022 (\$10K)
 - * Individual project cost breakdown not provided to protect integrity of 2022 procurement activities

5. Utility Management

- Trans Mountain (Oil and Gas Pipeline expansion) – currently active in west end
- Oil & Gas activities – crossing permits, title land approvals, workspace & approaches
- On-site field inspections for shallow utilities
 - Includes AB One Call set up and management
- Manage Underground Line Assignment (ULA) permits
 - Grants approval for utility work on County lands and ROWs
- Annual Utility Coordination Meetings with Major Utility Franchises

- 6. CN Rail Crossings**
- Coordinate crossing upgrades approvals with CN Rail (\$100K)
 - Oversight of CN Rail line twinning initiative from Fallis to Seba Beach
 - Whistle Cessation Requests and Implementation on request only
- 7. Survey Team Services**
- Benklemen Beam support
 - General Survey services as needed
- 8. Miscellaneous Systems Tasks**
- GM Contingency Misc. Projects (as-needed basis only) (\$325K)
 - Policy Updates anticipated for 2022 – as time permits
 - Updates to Engineering Services Design and Construction Standards
 - Draft complete and planned update to publish in 2022
 - Offsite Levies update and overall project support
- 9. Storm Water in County**
- Initiate Drainage Master Plan 2021-2022 (\$300K)
 - Water Quality Analysis Report in existing storm ponds
 - Water sampling recently constructed storm ponds in Acheson (\$16K)
 - 2022 Report on Fenceline Approvals (Acheson / Big Lake)
 - 2021 CFWD Projects and Initiatives
 - Fallis – Drainage Improvements (\$575K)
 - i. Phase 1 completed in 2021
 - ii. Phase 2 planned for 2022
 - Acheson Zone 3
 - i. Concept work completed in 2021, (\$50K)
 - ii. Phase 2 is design in 2022 (active), and (\$75K)
 - iii. Construction being planned for 2023 (TBD)
 - Initial estimate is \$2M to \$3M
- 10. Water Systems in County**
- Capital Region Parkland Water Services Commission (CRPWC)
 - Technical support of System Expansion – Acheson to Spruce Grove
 - Booster Station connection to Acheson Zone 4 Reservoir (\$750K) 2022
 - West Interlake District (WILD) Commission
 - Technical support of system expansion - Phase 3 (ext. to Entwistle) (\$1.78M) 2022
 - Acheson and Big Lake system – update to 2016 report (\$50K)
 - Active Project from 2021 – to be completed in Q1 2022
 - 2021 CFWD Project and Initiatives
 - Walker Lake/ Lakeshore Water Looping (Q1 2022 completion) (\$1.6M)
 - 2022 Projects and Initiatives
 - Entwistle Water Reservoir Lifecycle Replacement (~\$900K)
 - Entwistle Hwy 16 Crossing Water Loop (\$50K)
- 11. Sanitary Water Systems in County**
- Alberta Capital Region Wastewater Commission (ACRWC) - regional line initiatives

- Cured In Place Pipe (CIPP) lining of existing pipe along south shoreline of Big Lake is an active project (mulching/clearing) in 2022. Construction planned summer 2022
 - Support for Backflow storage options using existing lagoons north of Spruce Grove.
- Wet Weather (I/I) Servicing Strategy
 - Work with ACRWC and develop new standards for testing, construction, monitoring and reporting on Inflow and Infiltration concerns
- Acheson Big Lake Systems - update to 2016 reports (\$50K)
 - Active Project from 2021 – to be completed in Q1 2022
- 2021 CFWD Projects and Initiatives
 - Finalize Acheson Zone 1-2 pipe rehabs (\$1.1M)
 - Tomahawk Lagoon Rehab/ Renewal – ongoing activity (\$100K)
 - Wastewater Rehabilitation Program (Replace line in Entwistle) (\$1.0M)
 - i. Completed design in 2021
 - ii. Pending construction in 2022
- 2022 Projects and Initiatives
 - Acheson Zone 5 wastewater trunk upgrade

12. Asset Management Initiatives

- 2021 Road Rating programs – asphalt roads and sidewalks
- 2021 Infrastructure Rating programs (Water, wastewater, storm, etc.)
 - CCTV of wastewater and stormwater (\$75K)
- Development and maintain VEMAX software for continued asset tracking. (\$20K)
- Growth and development of 5, 10 and long-term capital programs
- GIS Based Activities for Engineering Services
 - 2021 LiDAR Imaging in key drainage basins (\$30K)

13. Land Development Engineering

- High volume of activity early in 2021. This will result in continued high volume of activity in 2022. Significant increase in year over year activity for past 5-year average.
- Highlands Site Development – highlights are as follows: (\$8M)
 - i. All approvals in place.
 - ii. Construction started February 2021 to meet aggressive timeline.
 - iii. Project has significant progress with targeted completion in summer 2022
- Planning Services Support
 - Acheson Commercial Corner – storm pond construction completion in 2022 (\$600K)
 - Carmelite Development – project support

Internal Initiatives that will need to be supported

Parkland County Initiatives

- UNITE – Ongoing Adaptations to SharePoint, O365, D365, Records Management
 - UNITE – Planning and Development Services Modernization
 - UNITE – CRM Phase III - Transition for Engineering Services
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Regional Initiatives

- Tri-Municipal Regional Planning projects
- EMRB Integrated Regional Transportation Master Plan (IRTMP)
- EMRB Stormwater Collaborative