Energy Mining Infrastructure Construction





Bantrel - delivering sustaining capital programs for our Clients since 1991.

Industry leading safety performance. >1000 days without an LTI

<1% field rework

Worker turnover reduction of <1.4%

Estimate and schedule developed with +/- 10% accuracy at the completion of FEED

All outage and turnaround commitments met

# **Sustaining Capital Program Introduction**

Bantrel is a leader in sustaining capital execution, having completed more than 7M hours of engineering design, and over 20M brownfield construction hours, representing more than 5,000 sustaining capital projects.

The Bantrel sustaining capital integrated delivery model was created from our long-term Client relationships, including Imperial Oil, Husky, Suncor and Enbridge. Our processes and procedures are designed to continually de-risk your project through each phase of the project, providing you with safe, operable and maintainable facilities based on consistent and predictable results.

The model is operationally proven and has delivered concrete benefits in capital execution related to safety, cost and efficiency. We understand the complexities of executing small projects in an operating facility and the importance of gaining operation and constructability input throughout the design process will avoid costly changes that lead to re-work. Bantrel has routinely achieved a field rework number of less than one per cent by optimizing and anaalzing the entire EPC value chain as compared to the more traditional approach of managing EP and C independently.

Our processes, tools, checking protocols and quality programs have been modified over the years to be fit for purpose in this environment. These methodologies are modified based on our lessons learned program and our continuous improvement program (CI) which seeks to remove inefficiency and enhance productivity.

Closely coupled with the CI program is a metrics programs to track man-hours per deliverable. This allows Bantrel to identify emerging trends and rectify any issues with team performance or capability gaps as they appear. Bantrel has executed capital projects within an owner-managed program of work as part of our core business from incorporation to the present day. Our 25-year partnership with Imperial Oil Limited at the Strathcona Refinery is an example of Bantrel's success in delivering on a capital program while continuing to improve value to our Client.

# **Sustaining Capital Delivery Model**

Collaboration

Sustaining Capital Delivery Model Value



oss Prevention









## An integrated end-to-end solutions company.

# Integrated project delivery from engineering through to construction.

# **Integrated Program Execution**

Bantrel incorporates an EPC approach to design, procurement and installation of all projects regardless of execution strategy. Our integrated team approach consists of operations, construction, and engineering.

In this way, designs are fit for purpose, operations needs are met, and the project is fully constructible in the manner in which it was planned and designed. This approach produces consistent and predictable results, lowers field rework and costly inefficiencies are avoided.

#### Early Construction Input Benefits:

- Optimum use of construction knowledge and experience in planning, design, procurement, and field operations to achieve overall project objectives
- Early constructability program has high ability to influence cost

#### Early Operations Input Benefits:

- Design includes detailed front end planning for plant start-up and maintenance activities
- Involve commissioning experts in early engineering phase to address:
- Start-up system identification and scoping
- Sequence of turnover
- System test boundaries and packaging
- Allows adequate time for pre-commissioning and commissioning tasks to be completed prior to operations
- Allows engineering to capture and include start-up system identifiers on design documents
- Allows to control and status the construction work by unit and process start-up systems

## **Program Management**

Our program management system has a number of stand-alone programs represented by the four independent circles surrounding the core. These four programs include a safety council, quality council, the portfolio management system, and our continuous improvement program. The core represents the stewardship elements that provide guidance to the project execution teams by establishing team norms, clear goals and lines of accountability. All elements in this program can be customized and tailored to meet our Clients unique execution requirements.



# **Stewardship**

The primary purpose of the stewardship meetings is to ensure the success of the program through the creation and maintenance of a strong relationship between Bantrel and the Client. Regular stewardship creates trust, drives accountability, defines program objectives, and establishes / reinforces the team norms and working culture. Stewardship is essential for a program and is the primary mechanism for managing the interface between the Client and Bantrel teams.

Bantrel believes in maintaining regular stewardship meetings at the program level that are independent of the individual project meetings to gain a deeper understanding of the Client's business drivers. These meetings focus on driving continuous improvement, seeking opportunities to streamline process and procedures between both organizations and attack issues that may derail the team from concentrating on achieving mutual project goals.

### **Values and Culture**

Bantrel understands that one of the most significant indicators of project success is predicated on strong cultural alignment with the Client. Our values are described in our quality policy statement and are based on the principles of 100% safe culture, accountability, transparency, sustainability goals, and open communication leading to long term, trusting relationships.

## **Safety Council**

Safety is a core value at Bantrel and is embedded throughout the complete project development cycle. Bantrel is considered an industry leader with regard to safety in design with a focus on loss management. Health, safety and sustainable environmental considerations are integral in all Bantrel projects and design. We work with our customers to ensure that the best of our safety cultures are integrated and all work follows the same premise. The safety council will consist of joint Client and Bantrel project team members whose mandate is to review all incidents, disseminate learning, and support and maintain our zero harm, 100% safe culture. Through understanding Client business requirements, Bantrel provides sustainable value.

# **Portfolio Management**

Portfolio management is the key to successfully executing multiple projects with common project support services and methodologies which allow for continually improving performance in cost, schedule, and quality. Good portfolio management depends upon using stable high performing teams, properly managing resources on and off each project, robust processes for bringing each project into the portfolio for execution, and a strong set of program procedures which can be applied to each project to ensure common approaches while still allowing customization for best possible outcomes. Key elements of Bantrel's portfolio management structure are:

- Creating high performing, structured and stable teams .
- . Managing resources according to the work fronts and translating the project plan into a time-based resource plan
- Evaluating and *planning the work* to ensure appropriate resources • skill-sets are available for the distinct project needs
- Subproject execution with the same objectivity as within the overall portfolio management
- Effective use of the portfolio planner •
- Implementation of program procedures to ensure consistent results throughout the portfolio of projects, while adapting project specific procedures for specialized work scopes

## **Quality Council**

With a view to continuously improve the quality of work within the program, the quality council will meet on a quarterly basis, or as necessary in unforeseen circumstances, with the objective of achieving leadership alignment on quality issues and initiatives. The quality council will be made up of members from both the Client and Bantrel leadership teams.

### **Continuous Improvement Program**

As part of Bantrel's drive to continuously improve efficiencies, quality of engineering and project execution performance, we have cultivated a monitoring and enhancement program. Bantrel has been collecting project metrics, implementing improvements and maintaining key performance indicators (KPIs) for our programs since 1991. We bring this knowledge to all of our capital projects and programs.

Stewardshin Client Scorecard Performance Metrics Lessons Learned

Gap Analysis

Client Feedback

Continuous Improvement Opportunity Team Feedback

Savings

**Easy Win** 

dea Screening & Opportunity Development

Measurmen & Analys

mprovemer

plementation & Validation

# **Management Philosophy**

Bantrel is committed to providing high quality engineering and procurement services that will be safe and fit for purpose. This commitment starts with an intimate understanding of each scope of work within the program and Client expectations. As these are defined, agreed and understood by both Bantrel and the Client, project execution strategies are created. It is Bantrel's experience that time spent properly planning each project results in reduced cost and schedule and increased quality over the life of each project. Once project management plans and procedures are in place, the challenge is to jointly support the team to execute the plans and processes as intended.

There are instances where further related scopes of work (scope creep) are added as a project progresses. Bantrel follows a rigorous change management procedure aligned with Client processes. New scope will be challenged to ensure it meets the intent of the project objectives and strategies and no new scope is executed without the required approval. Scope alignment is maintained throughout the duration of the project through document reviews by the Client and through scheduled project review meetings.

Cost and progress reports, and project schedules are regularly updated to ensure each project is on track. Bantrel also identifies and manages project risks. For each risk identified, Bantrel determines and documents the probability that the risk event will occur and the potential impact on the project. Mitigations are then planned and implemented in alignment with the Client team.

### **Bantrel Team**

Bantrel team members are technically capable and are effective team players. They will build solid relationships with the Clients' project, technical, operations, reliability, construction and procurement groups. These excellent working relationships will create positive and progressive team morale and a very productive environment. It is Bantrel's experience that functioning as one integrated team will allow the Client and Bantrel personnel to work together towards common objectives that result in breakthrough and leading performance. Integrated project delivery is best achieved when engineering has first-hand experience with construction and operations and maintenance challenges. Energy Mining Infrastructure Construction





### **Engineering Execution**

The key elements for managing engineering services at Bantrel are based on industry best practices and a comprehensive set of processes and procedures to provide a structured, predictable approach to planning, scheduling, organizing and executing projects. Success starts with the team and their knowledge of Client processes, procedures and site personnel. Key characteristics of Bantrel's approach include:

- Establishing a dedicated organization having direct hands-on experience executing Client projects
- Strong project/program management
- Customized project execution plans (PEP) detailing the project execution strategy, significant milestones, and accountabilities
- Customized project quality plans (PQP) detailing specific quality strategies and internal audit requirements for each project
- Following Client gating process

Bantrel has in-house engineering expertise to provide the full range of project stages including:

- Scoping/feasibility studies or concept selection
- Design basis memorandum (DBM or CO studies)
- Detailed engineering design phase including procurement support
- Engineering design specifications (EDS or FEED)
- Engineering support during construction

### **Procurement Execution**

The successful procurement of the equipment will be a critical determinant of overall program success. Bantrel's strong procurement capability will be applied to this program by closely integrating procurement with engineering and the Clients construction execution functions. In addition to having established processes, world class tools and experienced personnel, Bantrel's procurement embraces the concept of continuous improvement. The procurement team will consist of an experienced procurement manager who reports to the program manager and will be accountable for the preparation of the procurement including purchasing, expediting and traffic and logistics and will draw on other expertise as required, specifically for automation and supplier quality support.

## **Construction Support**

Constructability activities occur throughout the project life cycle. Maximum influence on key constructability issues are achieved during the early stages of the project scope and design development, particularly during concept optimization/ design basis memorandum (DBM). Constructability review activities are not a standalone activity and at Bantrel these are considered an inherent part of the project development. One of Bantrel's value practices is to have constructability input during the early stages on all projects. The ability to influence project total installed cost (TIC) is highest during the early phase of engineering specifically DBM. In this stage, construction experience and knowledge is applied to the feasibility of the conceptual design and also to the cost estimate. Construction directs, indirects, and execution strategies form the basis of the estimates.



Bantrel designs are advanced with constructability in mind. Project managers and key project engineers have on-site construction experience which keeps engineering design as a construction led activity throughout the project.



### **Project Controls**

The purpose of this project controls plan is to describe in detail, processes and applications utilized by Bantrel to set up, plan, monitor and control job-hours, cost and schedule and report progress, performance and forecast for a typical sustaining capital engineering and procurement program consisting of multiple projects. It establishes a framework to ensure individual project expectations in particular and Client expectations as a whole are met and have a consistent approach from all disciplines in managing Client projects. Bantrel employs a scalable project controls approach based on the phase and size of a project.

### **Program Performance Management**

Bantrel takes a disciplined approach to maintaining KPIs and lessons learned that allow predictability and improvement from one project to another. Using our current data and learnings will provide immediate benefits to our client in cost and schedule certainty. Using this same data driven approach will provide our client even further benefits over the life cycle of this relationship. During the detail engineering phase, the following are monitored to provide the management team with an indication of the overall health of the project:

- Budgets
- Progress
- Engineering performance

Quality

Schedule

Growth in key commodities

Engineering rework

Attainment of key milestones

At the close of a project, a high priority is placed on gathering key metrics such as job-hours/deliverables, rework, cost performance, schedule, quality, etc. Gathering this data at project closeout drives improvements for subsequent projects. Cross comparison between projects identifies positive or negative emerging trends.

Sharing these findings, both positive and negative, focuses the project team on:

- Understanding the key drivers for success and how success is defined; •
- Challenging the team to maintain consistent performance;
- Eliminating non-value added procedures or activities; and
- Making course corrections as necessary.