



# STRUCTURAL STEEL DETAILING

WE MAKE EASIER TO BUILD

[www.endproc.com](http://www.endproc.com)

 **ENDPROC**

### OUR VISION

To be a globally recognized company specialized in Virtual Design and Construction.

### OUR MISSION

To make the construction process more efficient by designing cost-effective structures and providing accurate fabrication and constructions documents.



# A company built to make steel construction easier

**+7** years in business    **+10,000** man hour capacity



## WE ARE ENDPROC

### Designing and detailing Constructible Structures across North America.

A full-service structural design and steel detailing company headquartered in Calgary Canada working closely with engineers, architects, contractors and Steel Fabricators to provide accurate and cost-effective structural steel detailing and design services.

During our more than seven years of dedication and experience we have proudly served clients completing projects in a spectrum of economic sectors from commercial and industrial buildings to heavy structures for production plants in agriculture, mining, and oil & gas.

Success in a competitive market and a globalized economy depends on differentiation and the agility to respond to client demands. To meet these challenges we have worked hard to build a fully integrated organization with superior technical capabilities to support our clients on their steel fabrication and construction projects. We provide support through the entire project in a comprehensive manner from design phase to final fabrication deliverables.

Our capacity to bring a complete range of specialized services in design and detailing of structures; to develop cost-effective technical solutions; and to attend our clients in a holistic manner with a superior customer service are what make Endproc not only a technical expert in steel structures, but a reliable business partner you can count on to successfully complete your projects.



TO KNOW MORE ABOUT OUR COMPANY PLEASE SCAN THE QR CODE AT THE LEFT

[www.endproc.com](http://www.endproc.com)

# DELIVERING VALUE TO CUSTOMERS

Endproc's primary goal is to bring Constructible solutions that meet or exceed client's requirements.

Aligned with client objectives we use a value design approach to achieve cost benefits without compromising project quality.

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**WE BUILD OUR BUSINESS TO BE AN OUTSTANDING PROJECT PARTNER, HELPING CLIENTS TO SUCCEED WITH STRUCTURAL STEEL PROJECTS BY PROVIDING FLEXIBLE, CONSTRUCTIBLE AND COST EFFECTIVE SOLUTIONS**



## WE WORK AS EXTENSION OF YOUR ORGANIZATION



### SOLID INFRASTRUCTURE

DELL servers and windows network allow access to models and documents on demand.



### LOCAL COMPANY

We are locals, headquartered in western Canada and have years of experience in North America market with CISC and AISC standards



### CUSTOMER ORIENTED

We understand our client's needs, deliver exceptional customer service and we are capable to meet challenging deadlines

## FEATURE BENEFITS

01

### OBTAIN CONSISTENT RESULTS

Established quality procedures, a robust document control system, and an experienced team with local expertise; make possible to maintain quality deliverables regardless of the project size.

02

### KEEP YOUR PROJECTS ON TRACK

Open communication is vital for project success, we work hand in hand with our clients to provide immediate response to inquiries. To ensure projects stay on schedule, we constantly monitor the overall progress and take prompt actions to keep each task within its deadline.

03

### CONTROL OVERHEAD COSTS

Control your overhead costs and keep your projects moving at an affordable fair price, we have the resources you need to adjust your production capacity as demand fluctuates.

04

### GET FABRICATION AND ERECTION SAVINGS

Selecting appropriate connections based on allowable loads, fabricator capabilities, labor intensity and suitable material have a significant impact on fabrication costs. We coordinate with Engineers and Fabricators to select cost effective connections with focus on Constructability and economy.

## BIM based Structural Steel Detailing to streamline project workflow, from design to construction.

Building Information Modeling, a process based on data rich 3D models, has transformed the AEC industry giving professionals the necessary tools to plan and execute projects from design to construction.

At Endproc we use leading edge BIM software to streamline the detailing process and enable model centered collaboration with structural engineers, architects, steel fabricators, mechanical contractors and other stakeholders involved in the design process. For many years we have been working in a complete virtual environment.

Technology empowers collaboration with structural engineers. The structural engineering model can be imported directly from Revit to Tekla to speed up detailing. When designing connections, the process is streamlined by a shared interface between Tekla and Risa, it allows to run analysis of moment and shear connections, and eliminates the need to manually enter connection components into separate software.

Working on a virtual design environment, we explore the best sequence for steel

erection, well in advance of the start of the construction phase; we determine the best location of splices taking into consideration shipping constraints and available steel shapes.

A data rich model means automation of the use of information to obtain precise reports for fabrication and erection workflows.

Complete Material take offs and sets of drawings can be imported to a Management Information System (MIS), this brings the opportunity to track materials and automate the steel fabrication process from production to shipping.

Automated fabrication is supported by the generation of CNC files for automatically drilling, marking and cutting steel parts. CNC files can be generated in different formats including DSTV and DXF, we are able to prepare DXF files containing contours of parts for welding, which not only speed up welding process but also helps to avoid mistakes.

Based on the data rich model we can generate and customize different types of reports and project documents to manage fabrication and erection processes.

BIM based steel detailing has fuelled collaboration and dramatically improved project delivery. At Endproc we have the unrivaled expertise to help your company with all structural steel detailing needs working in a collaborative environment.

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**We transform design concepts into highly detailed structures.**



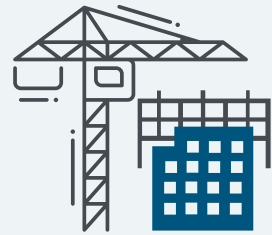
### THE RIGHT TOOLS TO SUPPORT PROJECT EXECUTION

We use Tekla Structures for detailing and we are proficient users of Autodesk products for the AEC industry



# STEEL DETAILING SERVICES TO BUILD FASTER AND BETTER

+ 7 YEARS  
WORKING IN NORTH  
AMERICA,



## STRUCTURAL STEEL DETAILING

We are flexible to work with different requirements and project sizes, from small structural assemblies to whole buildings and industrial facilities. Our understanding of the complexities of large structures and their interrelations with other disciplines allow us to manage the detailing process efficiently.



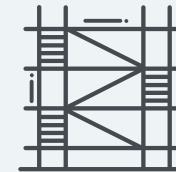
## CONNECTION DESIGN

We oversee the connection design process in a holistic manner, ensuring compliance with statutory codes and designing connections with careful consideration on economy and constructability. As standard procedure we take into account key factors as erection sequence, weld and bolt access, wrench clearances, fabricator capabilities and project owner standards.



## PLATEWORK AND DUCTING DESIGN

We have the capabilities to detail light and heavy platework structures such as hoppers, bins, chutes, etc., for different industrial applications. When working with platework structures special consideration is given to large components to make shipping and site assembly more efficient.



## MISCELLANEOUS STEEL DETAILING

Working in close cooperation with clients to adhere to their standards, we can carry out the miscellaneous requirements of any project despite of their complexity. At Endproc we had designed and detailed a variety of staircases, ladders, mezzanines, and handrails for commercial and industrial sectors.



**Endproc is a single source solution for your design and detailing needs in projects involving structural steel.**

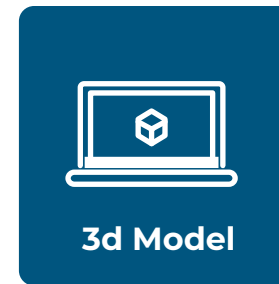
# CUSTOM DELIVERABLES TO MATCH YOUR STANDARDS



We can provide an array of deliverables to suit the specific needs of steel fabricators, from material sourcing to shipping.

Building Information Modeling (BIM) softwares expedite the extraction of data from 3D models, we organize the data to help clients to manage effectively the fabrication process.

**+7** years in business    **+10,000** man hour capacity



### 3D STRUCTURAL MODEL

Conceptual and detailed data-rich 3D models to achieve smooth coordination with other disciplines and allow steel fabricators and erectors to visualize in advance any potential issue.



### FABRICATION DRAWINGS

Clearly presented drawings that show all information required to efficiently fabricate each steel part and all assemblies.

### ERECTION DRAWINGS

Clear and accurate drawings showing tagged steel assemblies with necessary sections and elevations to clarify erection sequence.



Erection Dwg



CNC Files

### CNC FILES

We can generate DXF and DSTV to automate fabrication processes as drilling, marking and cutting.



Take-Off

### MATERIALS TAKE OFF

Based on data obtained directly from the 3D model, we can create accurate custom material reports. It is also common to export data to be used by a Management Information System (MIS) to facilitate material sourcing and fabrication planning.



Custom Rpt

### CUSTOM REPORTS

We can prepare specific reports to manage materials, parts, assemblies, bolts, shipping or another relevant information stored in the 3D model.

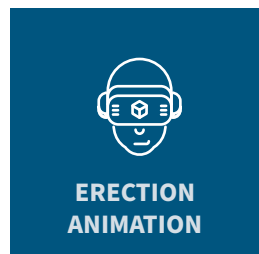
# BEYOND STEEL DETAILING

Technology has profound impact on design and construction projects, bringing new ways to boost productivity, develop efficiencies and enhance collaboration from conceptual design to fabrication and construction.

At Endproc we are proficient utilizing Building Information Modeling (BIM) software and have experience with Virtual Design and construction projects (VDC) where different applications are used to create and coordinate architectural, structural, and MEP models.

Coordinated models break down communication silos and in the event of clashes with models prepared by other disciplines, we can bring a solution that can be rapidly discussed accelerating project execution.

We have the capabilities to help our clients at different project's phases, from structural design with a Design-Build approach to site work creating Erection Animations to show assembly by assembly erection sequence.



ERECTION ANIMATION



BIM COORDINATION



## ESTIMATION MODELS

Estimation can be a complex process with many external factors impacting on final numbers from volatility of steel prices to complexities of forecasting labor demands.

There are many factors outside the estimator control, however we can help to minimize uncertainty providing accurate materials take offs.

Having a model in 3D not only improves quantity accuracy but also helps to analyze constructability issues in advance and detect if there are missing steel members that should be incorporated in the estimate.



## DESIGN BUILD FOR STRUCTURAL ENGINEERS

Early involvement of Steel Detailing team, when structural design is still in process at 40% to 50% brings substantial benefits for stakeholders.

Under this approach the Structural Engineering company holds the detailing contract and we work together in a collaborative environment.

Experience shows dramatic improvements on schedules since fabrication documents can be delivered to fabricators shortly after the fabrication contract has been awarded.

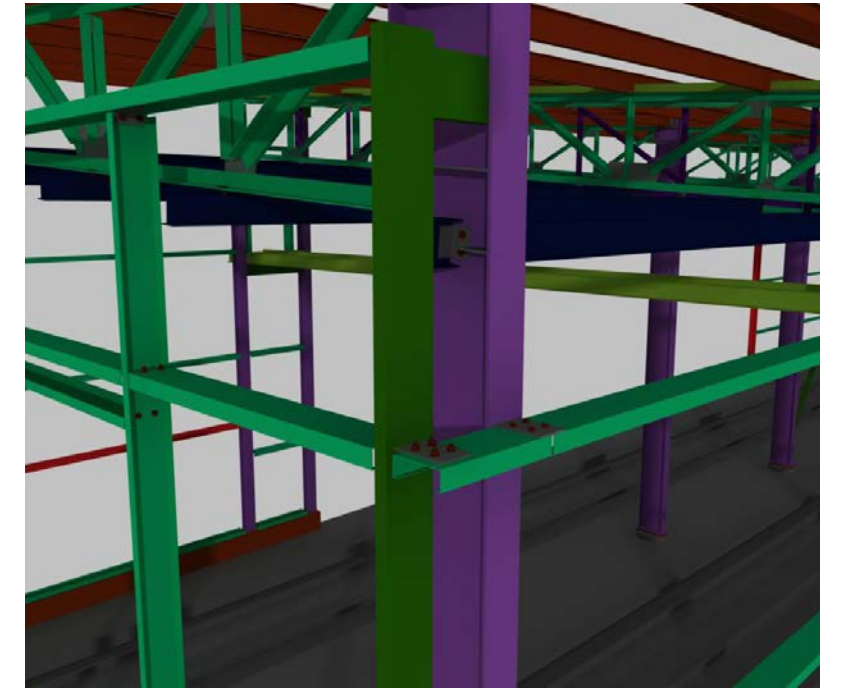
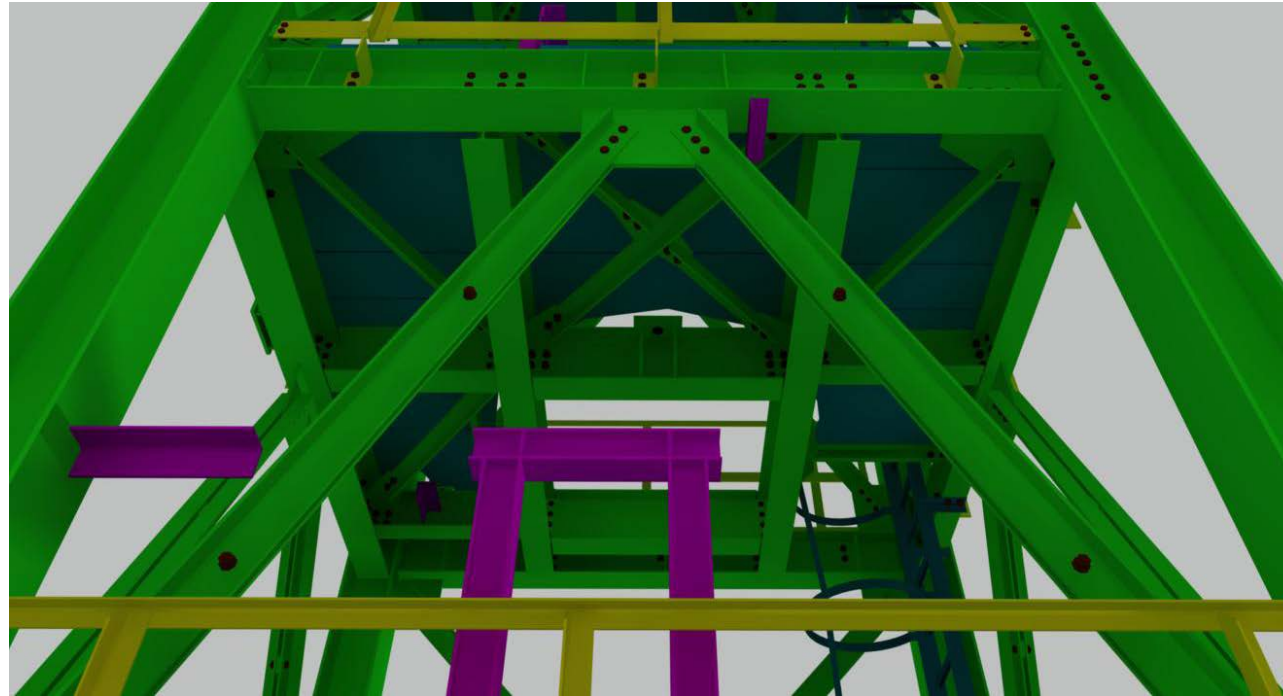
For more information about this approach see our website or request a brochure.



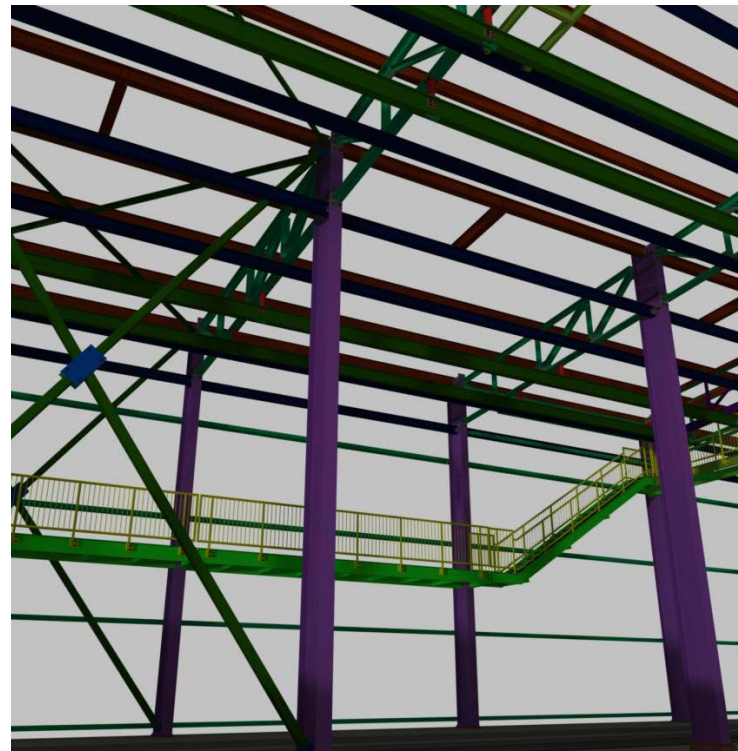
**Digital Workflow supported by BIM software.**

# SOME OF OUR PROJECT PORTFOLIO

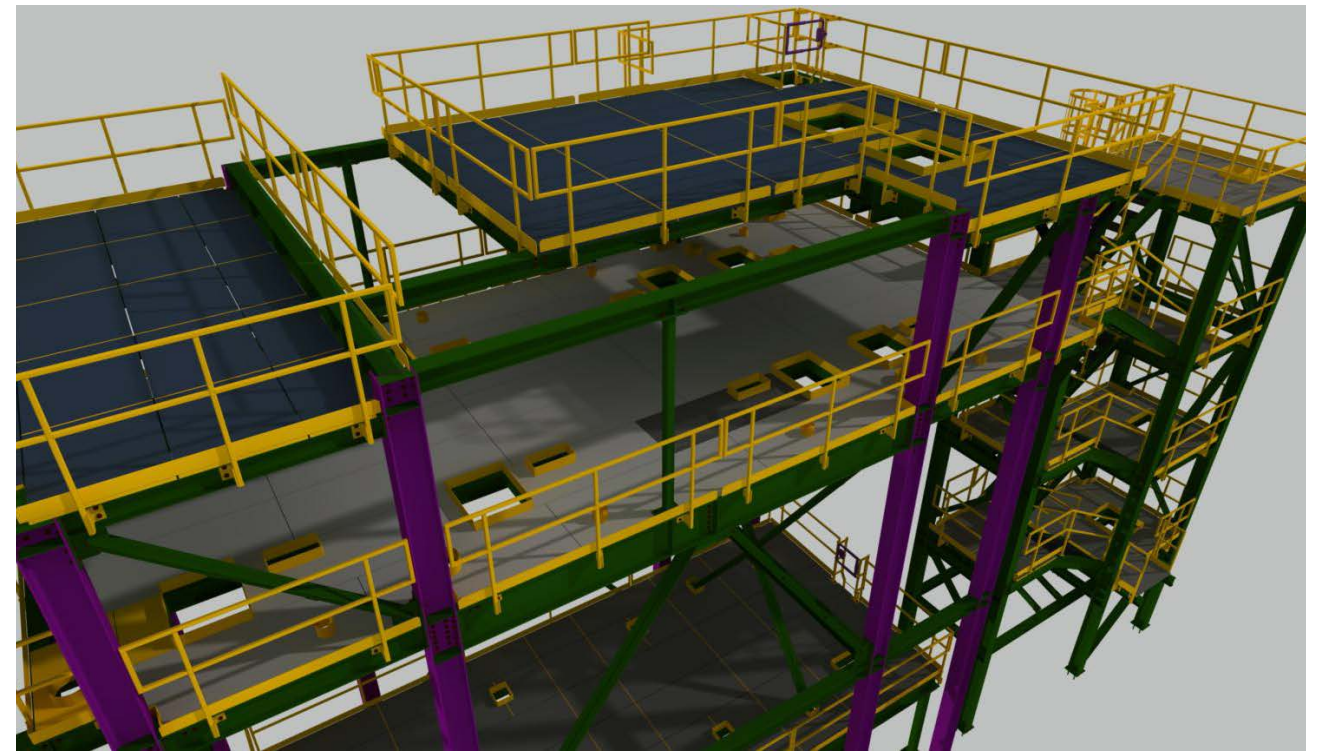
## QUALITY OVER QUANTITY



Enerkem Bio-fuels Plant | Edmonton



Bunge Loadout Enclosure | Altona



Pioneer Canola Plant Expansion | Lethbridge



## SOLID PLATFORM AND PROCEDURES TO IMPROVE PROJECT EXECUTION

To successfully execute projects we have developed robust processes, deployed a quality assurance program that meets the most stringent industry standards, and we work with specialized software.



### PRECISE DOCUMENT CONTROL

Fabrication, engineering and construction projects are fast moving with complex relationships that generates large volume of documentation and correspondence. Managing all of these content in an efficient manner is critical for project success, we keep strict control over incoming and outgoing documents, and keep them organized to facilitate the access to the right document version.



### STRONG QUALITY ASSURANCE

At Endproc we have developed an internal quality assurance process that is integrated into our design and detailing workflows, to monitor and control critical variables and dimensions at specific points throughout the project.



### AUTOMATED OPERATIONS

In recent years technological advancements have brought new opportunities to increase productivity and efficiency throughout the design, detailing, fabrication and construction

process. At Endproc our operations are supported by technology, connecting data with technical expertise to digitally deliver solutions to our customer challenges.



Stable processes, technical expertise and technology, help us to deliver effective solutions



### ONLINE COLLABORATION TOOLS

We are a company driven by technology, working for many years with BIM based structural design and steel detailing. A data rich model and project documentation, well organized in an easy to understand electronic structure, can be accessed 24/7.



### LOCAL TECHNICAL EXPERTISE

Our project teams, including Project Managers, Checkers, Steel Detailers and Structural Engineers, have extensive experience working with American (AISC) and Canadian (CISC) standards in both imperial and metric units, our expertise in local markets will ensure you always comply with the applicable codes and regulations in your jurisdiction.



### KNOWLEDGE SHARING INTRANET

A collaborative environment and availability of standards, codes, templates, and reference materials streamlines detailing and design process. Team members have access Online 24/7, to our collective expertise.



### SUITABLE BUSINESS SOFTWARE

As digital collaboration, accurate design and prompt project delivery is essential to our business, we have selected the best possible commercial software and developed components and applications to accelerate project execution.

# QUALITY CONTROL TO DELIVER CONSISTENT RESULTS

At Endproc we maintain consistency by carefully monitoring adherence to our quality policy in all projects.



 <p><b>QUALITY CHECKLISTS</b></p>	 <p><b>DOCUMENT CONTROL</b></p>
 <p><b>EXPERIENCED TEAM</b></p>	 <p><b>DOCUMENTED PROCEDURES</b></p>

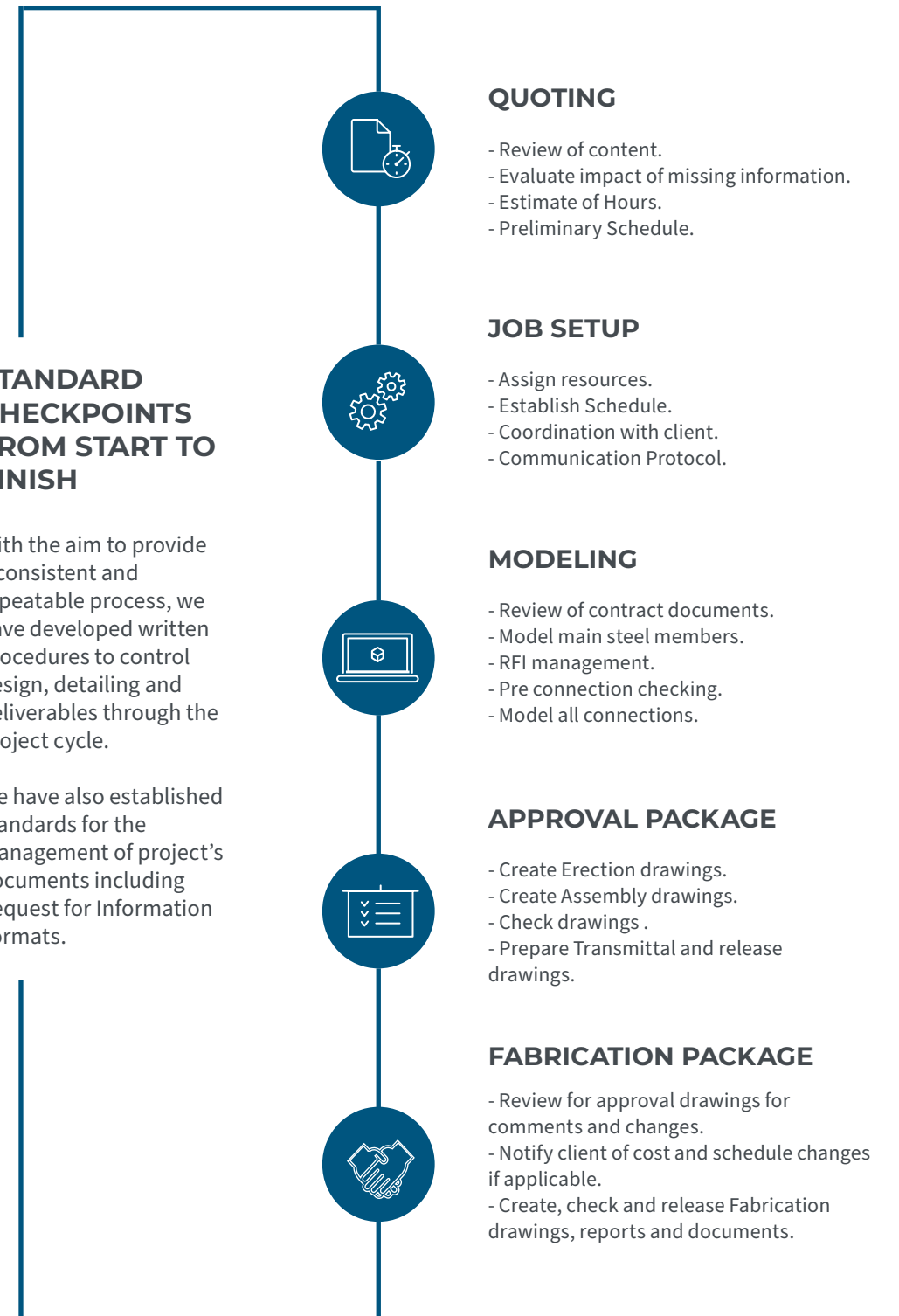


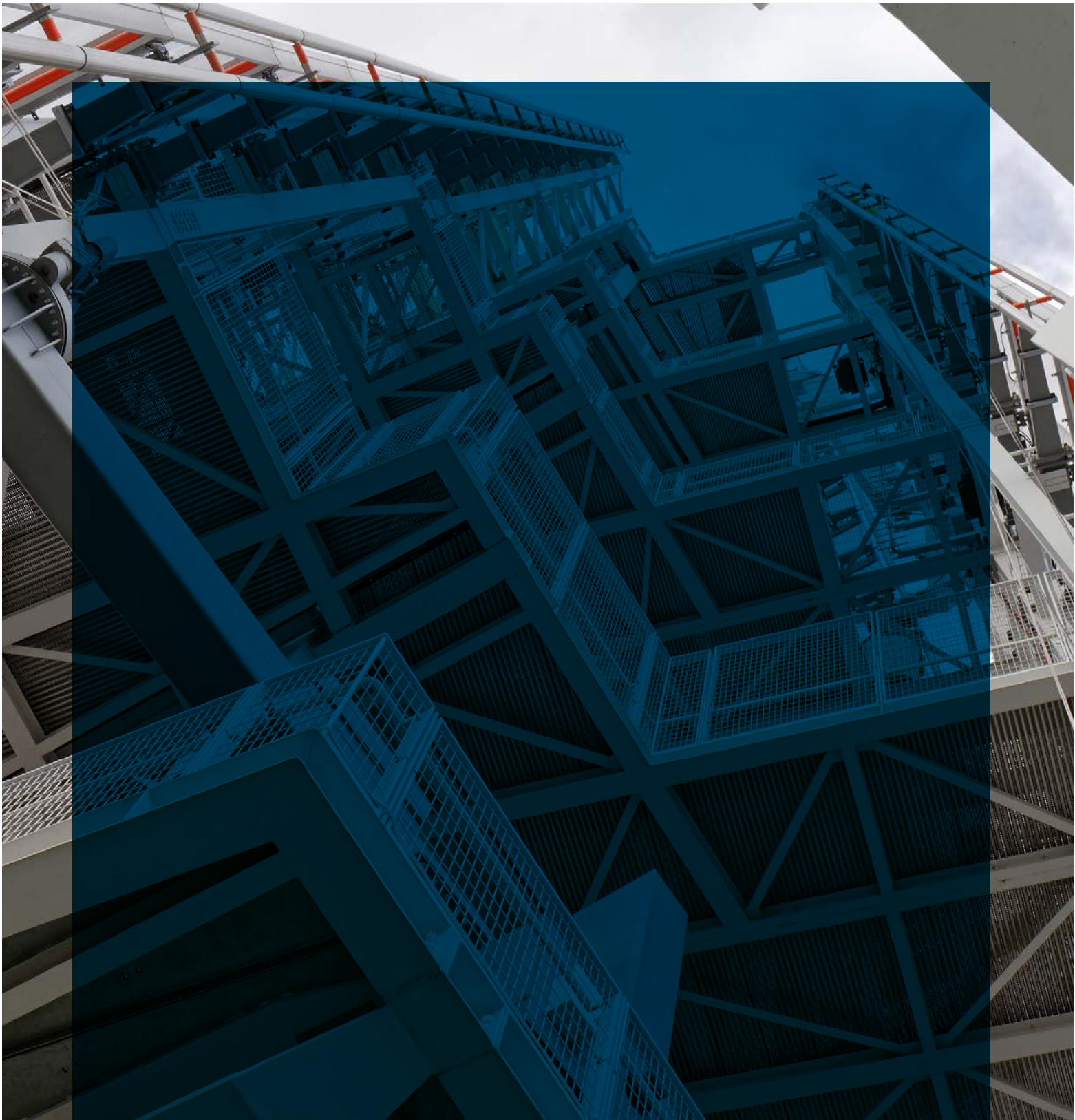
**Our Quality Control System meets the requirements of the National Institute of Steel Detailing Quality Procedures Program.**

## STANDARD CHECKPOINTS FROM START TO FINISH

With the aim to provide a consistent and repeatable process, we have developed written procedures to control design, detailing and deliverables through the project cycle.

We have also established standards for the management of project's documents including Request for Information Formats.





 **ENDPROC**  
STEEL DETAILING SPECIALISTS

**CANADA**

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