August 30, 2024
241180

The Corporation of the City of Sault Ste. Marie
Planning Department
99 Foster Drive
Sault Ste. Marie, ON
P6A 5X6

Attn: Mr. Peter Tonazzo, RPP, Director of Planning

Re: Albert Street East Parking Garage Feasibility Review

INTRODUCTION

TULLOCH was retained to complete a feasibility review and high-level Class 'D' Construction Cost Estimate for a two-level parking garage structure located on the City-owned property between Albert Street East and King Street, west of Elgin Street (civic address 347 Albert Street East).

The subject property is currently utilized as a City-owned parking lot approximately 59.5 metres by 64 metres and contains approximately 129 parking spaces. The property is Central Commercial Zone – C2 which permits lot-line-to-lot-line building footprints as stated in the City of Sault Ste. Marie Zoning By-Law 2005-150. See **Figure 1** for an ariel view of the subject property.

Figure 1: Albert Street East Parking Lot, *City of Sault Ste. Marie Mapping*

As part of this feasibility review, TULLOCH completed a conceptual parking garage layout to determine approximate ramp requirements, ramp and stairwell locations, entrance/exit locations and maximum vehicular capacity (i.e. number of parking spaces) for a two-level parking structure.

FEASIBILITY REVIEW

In completion of the feasibility review, the following design guidelines and parking structure best practices were considered:

- Lot-line-to-lot line building footprint construction in accordance with the City of Sault Ste. Marie Zoning By-Law resulting in structure plan dimension of approximately 57.3 metres by 61.5 metres (+/-1.0 metre offset from property line to allow for traditional spread/strip footing foundations). Property dimensions were approximated from the information available on the City of Sault Ste. Marie's online mapping tool.
- Parking space size and aisle width as specified in the City of Sault Ste. Marie Zoning By-Law 2005-150.
- Finished floor to finished floor height of 3 metres (10 feet), which would allow for a minimum Level-1 headroom clearance of approximately 2.1 metres (7 feet).
- Maximum ramp slope of 14% complete with 3 metre long transition ramps at each end.
- Two (2) stair locations, one (1) located on Albert Street East and one (1) located on King Street, to provide two (2) means of egress.
- No dead-end parking corridors.
- Cast-in-place concrete suspended slab and column construction. Other construction materials (i.e. pre-cast concrete complete with shear walls) may be considered in the design development phase of the project but were not considered for this feasibility review.

Based on the above guidelines, a two-level parking structure approximately 57.3 metres by 61.5 metres (total area of 7,048 sq.m or 75,860 sq.ft) at the proposed property would have a total capacity of **+/-175 parking stalls**. This represents an approximate 35% increase in the number of parking stalls in comparison to the existing parking lot. Appended to this letter is a conceptual parking garage layout for reference. Based on our review, the following would generally apply to the parking structure:

Level-2 Access Ramp: The ramp to Level-2 would be approximately 25 to 28 metres long and would consist of a 3 metre long transition ramp at the top and bottom with 6 to 7% grade, and a main ramp approximately 19 to 22 metres long with 12 to 14% grade. The ramp may be located on any of the four (4) perimeter walls to best suit the desired entrance and exit locations without significant impact to vehicular parking capacity.

Entrances / Exits: For the purposes of this review and to maximize the number of parking spaces, we have located the entrance and exit at the same location on Albert Street East. The final entrance and exit locations may be modified

to suit the desired traffic flow from Albert Street East and King Street without significant impact to vehicular parking capacity. If separate entrance and exit locations are required, a reduction in the number of parking stalls can be expected.

Stair Locations: Stairs have preliminary been located along Albert Street East and King Street, generally in corners which do not significantly impact the total number of parking stalls.

CLASS 'D' CONSTRUCTION COST ESTIMATE

In preparation of the Class 'D' Construction Cost Estimate, the structure was assumed to be of reinforced cast-in-place concrete construction which is common practice for parking structures. It should be noted that no structural design work was completed as part of this assignment, and all structural members as stated below were assumed based on structures of similar size and construction. The following was generally included in the construction cost estimate:

- Traditional spread/strip footing foundations at frost depth bearing on native soils.
- Concrete slab-on-grade 125mm thick at Level-1.
- Concrete columns and exterior walls/columns 300mm thick, supporting a two-way concrete suspended slab 300mm thick at Level-2.
- Concrete ramp 450mm thick.
- Concrete barrier walls 200mm thick at Level-2.
- Level-2 complete with waterproofing and 60mm asphalt wearing surface.
- Ancillary items including electrical/lighting, gates, line painting, fire suppression, etc.

The Construction Cost Estimate including Consulting Fees (design, contract administration and review during construction) for the 7,048 sq.m (75,860 sq.ft) parking structure is as follows:

Estimated Construction Cost.....$7,200,000

Estimated Consulting Fees $600,000

TOTAL CLASS 'D' CONSTRUCTION COST ESTIMATE .....$7,800,000 +/- 30%

The above estimate results in the following breakdowns:

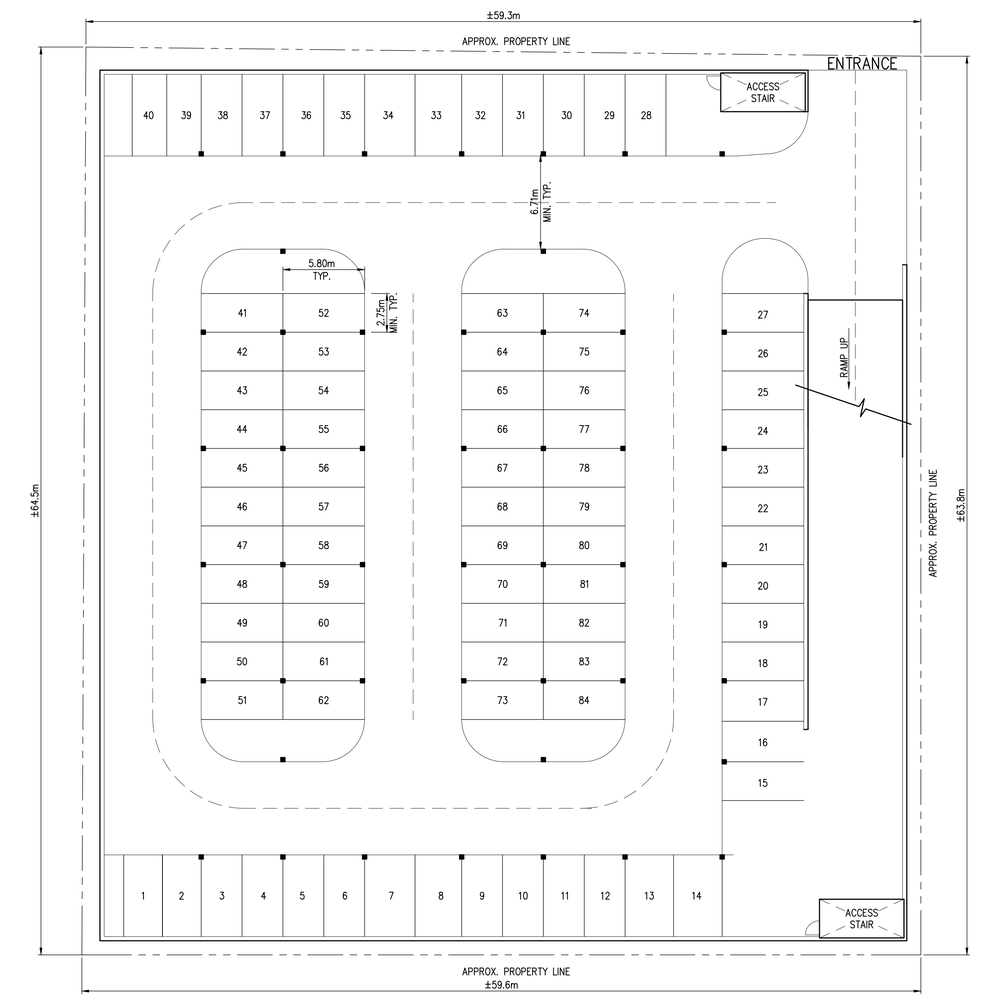
- Cost per square metre (per square foot)..... $1107/sq.m ($103/sq.ft)
- Cost per parking stall.....$44,500/stall

CLOSURE

We trust that this meets your needs, if you have any questions or would like to discuss further, please contact the undersigned.

Regards,
TULLOCH Engineering Inc.

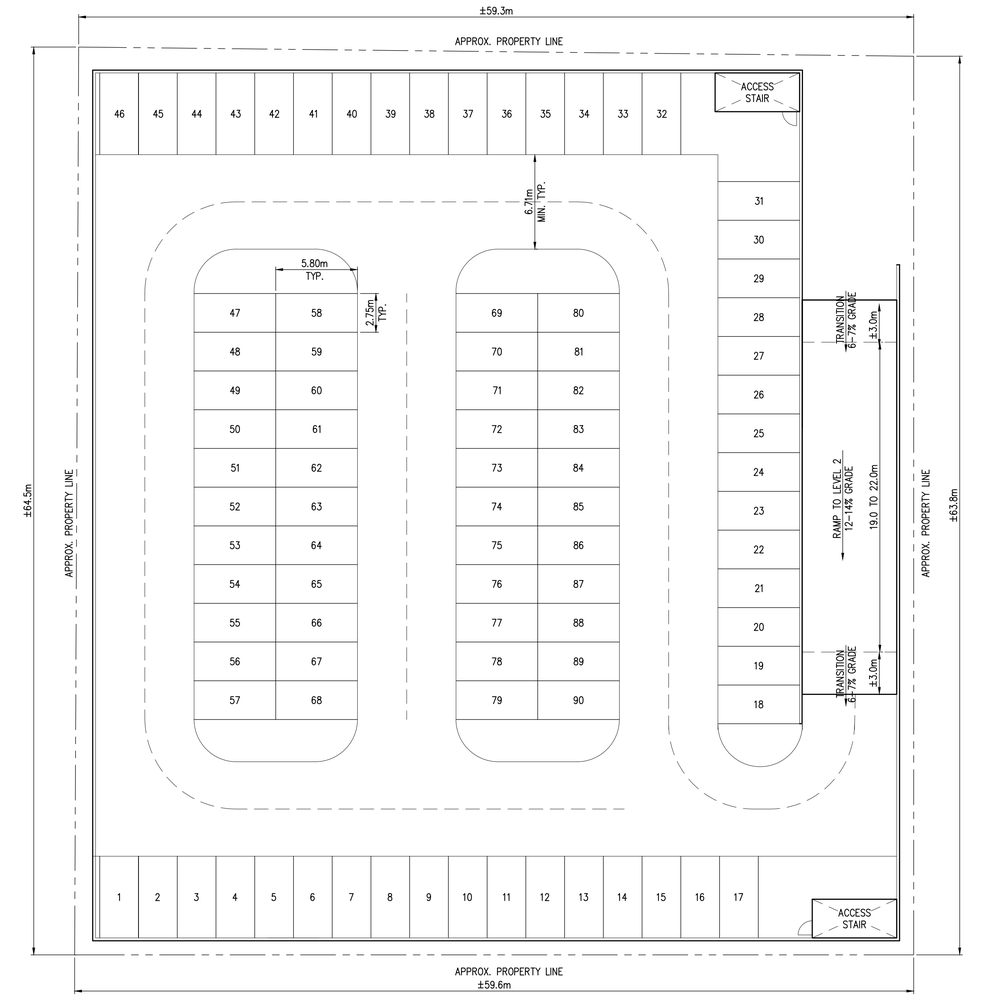
Nick Giunti, P.Eng.
Project Manager



LEVEL 1 – CONCEPTUAL PLAN A

SCALE 1:200

APPROXIMATE PARKING CAPACITY: 84 STALLS

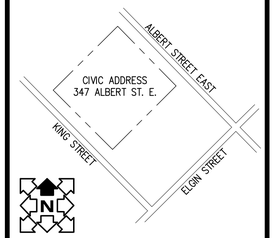


LEVEL 2 – CONCEPTUAL PLAN A

SCALE 1:200

APPROXIMATE PARKING CAPACITY: 90 STALLS

KEY PLAN



ENGINEER'S SEAL:

CONCEPTUAL ONLY

NOT FOR TENDER OR CONSTRUCTION

AUG. 28, 2024

DATE	REV.	REVISION	BY	APP'D
2024/08/28	A	CONCEPTUAL PLAN	–	–

CLIENT:

SAULT STE. MARIE

CONSULTANT:

TULLOCH

PROJECT TITLE:

PARKING STRUCTURE FEASIBILITY REVIEW

347 ALBERT STREET E. SAULT STE. MARIE, ON

DRAWING TITLE:

CONCEPTUAL PLAN A

DRAWN	DESIGNED	CHECKED	APPROVED
-	-	-	-

SCALE	DATE
AS NOTED	AUG. 27, 2024

PROJECT No.	REVISION	DRAWING
24-1180	A	sk1

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