



IBI GROUP
101 – 410 Albert Street
Waterloo ON N2L 3V3 Canada
tel 519 585 2255
ibigroup.com

October 20, 2021

Mr. Paul Nunes (paul.nunes@ontario.ca)
Planner (Niagara/Hamilton)
Ministry of Transportation
Highway Corridor Management Section - Central Operations
159 Sir William Hearst Avenue, 7th Floor
Toronto, ON M3M 0B7

Dear Mr. Nunes:

**PORT COLBORNE QUARRIES INC. – PIT 3 EXTENSION
MNR FILING NO. 626511
ARA APPLICATION FOR A CATEGORY 2 (QUARRY BELOW WATER)
CITY OF PORT COLBORNE, REGION OF NIAGARA**

We acknowledge receipt of your email correspondence dated June 7, 2021 wherein you provided formal Ministry of Transportation (MTO) comments to the above noted proposed quarry application. This letter is in response to those comments.

Traffic:

1. Port Colborne Quarries Inc. acknowledges and agrees that:
 - a) the financial costs for construction of the recommended east-bound left turn on Highway 3 and the access will be their responsibility.
 - b) in advance of such construction, it will be their responsibility to provide an updated TIS report regarding its operation and details of other geometric improvements (if required), for your Ministry's review and approval.
2. Regarding the recommended increase in the taper length of the south-bound right turn lane on Highway 140 and Second Concession Road, Port Colborne Quarries Inc. understands that no further action is required by the applicant.

Drainage:

1. The post to pre-development flow condition to be met for 5, 10, 25, 50 and 100 year storm events at all outlets from the proposed Pit 3;

Response:

The surface water engineering consultant retained by PCQ Inc. is Golder Assoc. and they have concluded that this type of analysis and comparison is best suited to conventional stormwater management with passive gravity outflows. The proposed Pit 3 Extension does not consider use of that type of stormwater control; instead, all drainage from the Pit 3 Extension (from top of perimeter berms inward) will be directed to a sump, where it will be detained long enough for suspended solids to settle, prior to it being pumped out of the quarry to the receiving watercourse at a constant flow rate.

The pump will operate as required to maintain suitable working conditions in the quarry and variable precipitation inputs will be handled by operating the pump for different durations each day. The peak outflow rate during any of the aforementioned storm events will be limited to the pump rate, which is subject to approval by MECP on the site Environmental Compliance Approval (ECA). During the initial phase of extraction of the Pit 3 Extension, the existing pump rate is expected to be sufficient for dewatering

Mr. Paul Nunes (paul.nunes@ontario.ca) – October 20, 2021

purposes. As the extraction proceeds, Port Colborne Quarries Inc. may apply to MECP to increase the pump rates on their Permit to Take Water (PTTW) and ECA and would need to complete an updated receiving watercourse assessment, in support of the ECA amendment application, to MECP's satisfaction at that time. The receiving watercourse assessment will consider the range of flows in the receiving watercourse and identify its capacity to accept increased flow without causing detrimental effects

With regard to drainage from the 'top of the perimeter berms outward', it will be minor in nature as it will only capture the exterior half of the prescribed 30.0 metre setback for the abutting roads (Provincial Highway 3, Regional Road 84, [Miller Road] and City of Port Colborne - Second Concession Road). Roadside ditches which are beyond the property limits will not be disturbed and as such, all peripheral site drainage will continue to be directed to these ditches. Furthermore, the proposed perimeter berms will be vegetated (native grass seed) and designed with a maximum 3:1 slope, ensuring that silt/erosion is minimized.

Refer to Figure 1 – Surface Water Drainage During Extraction Operation and Figure 2 – Pre-Extraction Surface Water Drainage.

2. The peak pumping rate in existing quarry, proposed extension and duration of peak flow pumping;

Response:

Golder Assoc. has also concluded that as described in the response to Comment 1 above, the peak pumping rate is expected to be the same as under existing conditions (Pit 3 – ARA Licence 4444) during the initial phases of extraction in Pit 3 Extension. Any change to the pumping rate would be subject to future approvals by MECP by applying to amend the site ECA. The current discharge pump rate (the maximum rate) over the last few years the quarry has averaged approx. 91,000 m³/month.

3. Site Servicing, Grading, and Erosion & Sediment Control Plans;

Response

Site Servicing: There will be no traditional site servicing as the site is intended to be fully extracted to a depth of 12.0 metres (north portion) to 19.0 metres (south portion) in depth. When the new access onto Highway 3 is initiated, only a weigh scale office will be located in the vicinity (refer to Site Plans), and a Class 4 septic system will be applied for through the local municipality. No other site servicing will be required nor necessary.

Grading: As noted above, within the limit of extraction, (i.e., not including the prescribed 15.0 metre setbacks to abutting lands nor the 30.0 metre setbacks to residential dwellings and roads), PCQ Inc. will, over a period of 30 – 35 years, extract the site through a series of three (3) phases, each using multiple benches/lifts of 8.0 metres each to reach a variable depth (below grade) of 12.0 metres to 19.0 metres. Extraction will be carried out under dry conditions, thereby requiring the site to be dewatered, in the same manner as their existing/abutting Pit 2 and Pit 3 lands to the west. Post extraction, and upon the dewatering pumps being removed, the overall extracted lands will become a lake through groundwater recharge and precipitation, rising to a final surface water level of 178.0 masl.

Erosion and Sedimentation Control Plans: Berms: As part of the initial start-up stage of the quarry operation, extensive perimeter berms will be constructed to attenuate noise and augment the mitigation of fugitive dust. The berms will range in height as noted below but all will be constructed with the following restrictions as per the Site Plan General Operational Notes:

Mr. Paul Nunes (paul.nunes@ontario.ca) – October 20, 2021

16. Perimeter Berms: *Perimeter berms will be constructed to provide attenuation for noise, dust and visual impacts. The core of the berms will be constructed of overburden clay from the site and then a veneer of subsoil and topsoil applied to the berms. The berms will then be vegetated as specified in General Operational Note 18. If moderate or extensive erosion or gullyng occurs during the life of the quarry, that portion is to be re-graded and reseed as necessary. The external (public) side of the berms fronting onto Highway 3 and Miller Road will be constructed with a 4:1 slope and maintained (cut) on a regular basis. The berms will be constructed to the heights noted on the Plan. Refer also to Berm Sketch - Detail 2, 3 and 4 on Sheet 4 of 9.*

18. Vegetation:

a) *All berms shall be seeded as per the Level 1 and 2 Natural Environment Report Recommendations (See Sheet 5 of 9).*

b) *All rehabilitated side slopes are to be vegetated with native, non-invasive seed mixture capable of:*

- *Rapid germination and growth,*
- *Controlling erosion.*
- *Maintaining or enhancing soil fertility.*

c) *The seeding is to be established in a timely manner and if necessary, facilitated by the application of fertilizer, water and/or additional seeding.*

d) *During the start-up stage of Phase 1 the Licensee will plant a mixture of native deciduous and coniferous trees (red maple, sugar maple, elm, black oak, white pine, black walnut, white pine and black spruce) along the Highway 3 frontage and Miller Street frontage to create a long-term shade canopy. The tree stock at the time of planning shall be:*

- *for coniferous a minimum of 1.5 metres in height and*
- *for deciduous trees, a minimum of 55 mm cal.*

e) *Monitoring of all vegetation within the setbacks and on berms will continue throughout the life of the quarry and if any vegetation dies, it will be replaced immediately (during the proper planting season).*

As a related design matter, we confirm that the Aggregate Resources Act - Ontario Regulations 244/97, and specifically within 'Control and Operation of Pit or Quarry', under Section 0.13(1)-16 states "*All berms shall be located at least three metres away from the boundary of the site*". Therefore, within this defined 3.0 metre area, surface water from the berm will be able to infiltrate.

4. The Stormwater Management Report signed and sealed by a Professional Engineer of Ontario.

Response:

Golder Assoc. has concluded that: the Stormwater Management (SWM) Report prepared by their firm as part of the initial application can be stamped/sealed by a Professional Engineer but it does not include design information typically included in a traditional land development SWM report. As noted above, there will be no conventional on-site SWM required as all internal site drainage will be handled via the quarry dewatering system as described above for Comment 1.

Mr. Paul Nunes (paul.nunes@ontario.ca) – October 20, 2021

Planning & Design:

1. As noted above, Port Colborne Quarries Inc. acknowledges and agrees that in advance of any construction of the recommended Highway 3 access and east-bound left turning lane, that they will prepare updated reports, details of geometric improvements required at the intersection and intersection design layout based on future conditions (2034 and 2039) before construction/opening to site traffic for the Ministry's review and approval.
2. Regarding the Highway 3/Carl Road/Weaver Road intersection, we can advise that Carl Road between Highway 3 (south end) and Second Concession Road (north end) has been closed as a Municipal Street and ownership of the right-of-way transferred to Port Colborne Quarries Inc. Furthermore, Port Colborne Quarries Inc. acknowledges that they shall not use this access until it is formally permitted at which time, they will use it for operational purposes.

At this time, we await your Ministry's review of the attached documentation provided by Golder Assoc. regarding the requested surface water information. In the interim, should you have any questions, please do not hesitate to call.

Yours truly,

IBI GROUP

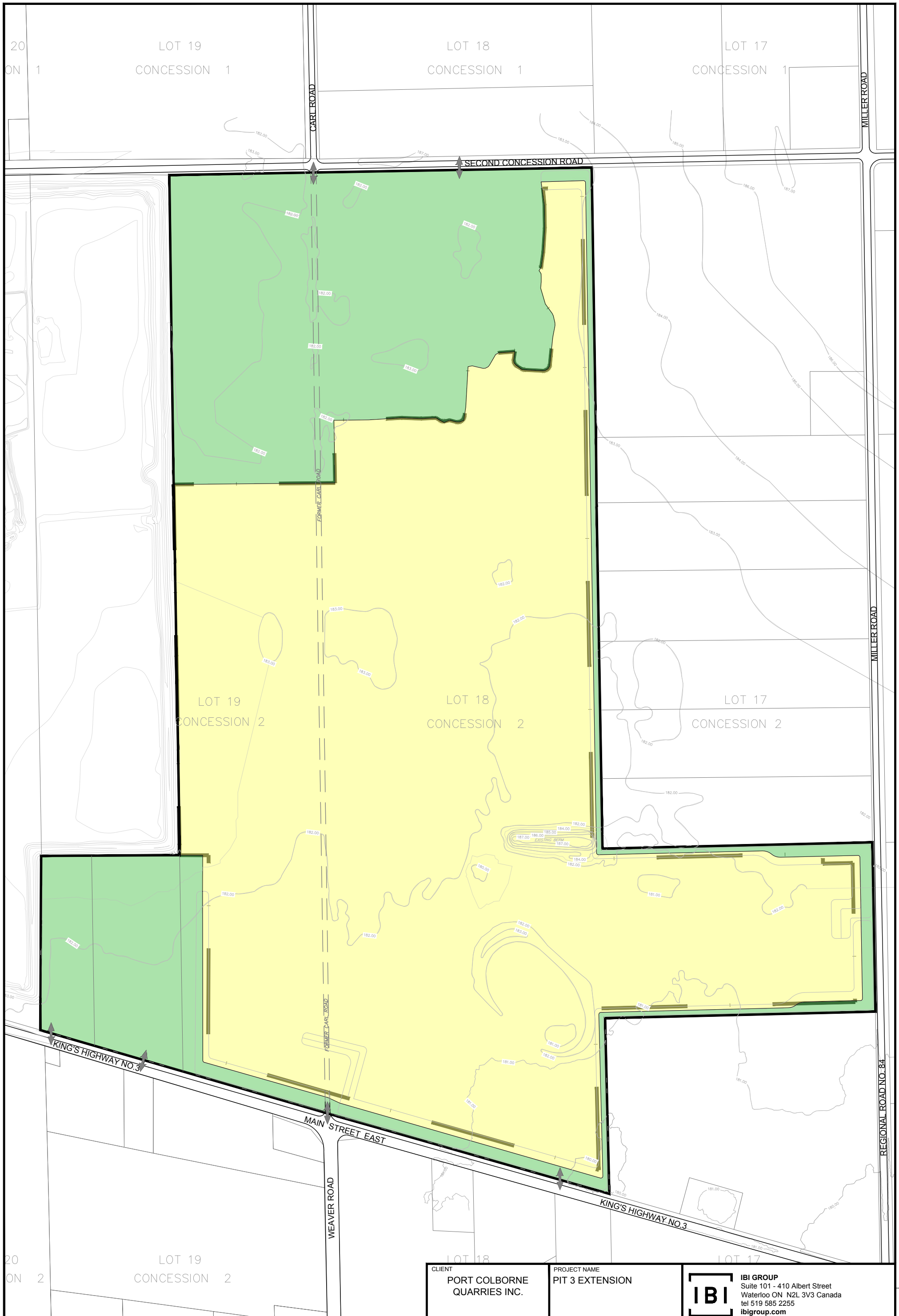


David R. Sisco, BA, MCIP, RPP
Senior Planner

DRS/baw

Encl.

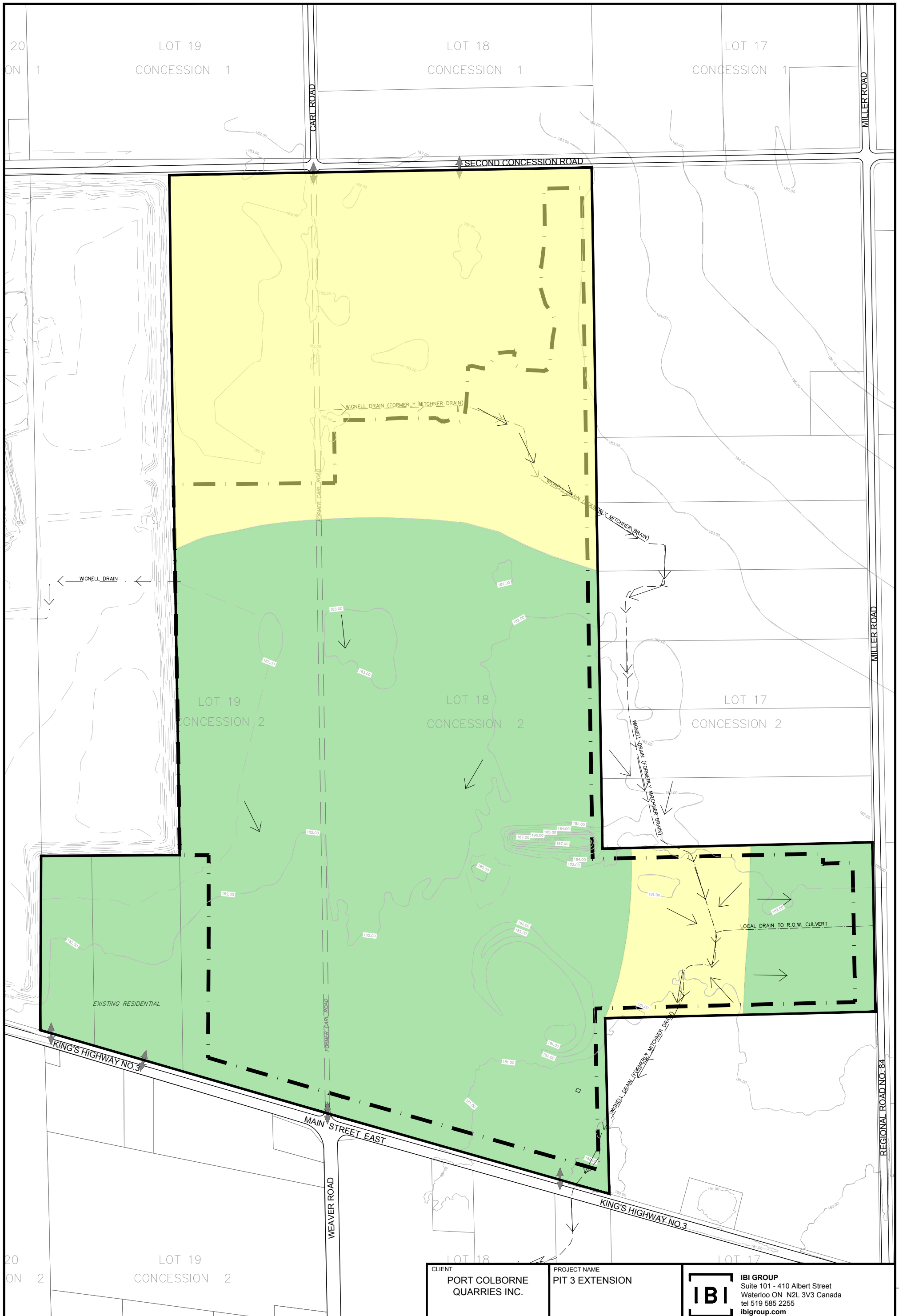
cc: Shawn Tylee
Sean McFarland, Golder
David Hook, IBI Group



LEGEND	
	External Site Drainage
	Internal Site Drainage

CLIENT PORT COLBORNE QUARRIES INC.	PROJECT NAME PIT 3 EXTENSION
222 MARTINDALE ROAD PO BOX 1116 ST. CATHARINES ON L2R 7A3	SCALE: 1 : 5,000
	DATE: 2021-07-28
	PROJECT MGR: D.S.
	DRAWN BY: J.M.
	CHECKED BY: D.S.
	APPROVED BY: D.S.
	PROJECT NO: 115774

IBI	IBI GROUP Suite 101 - 410 Albert Street Waterloo ON N2L 3V3 Canada tel 519 585 2255 ibigroup.com	
	FIGURE NAME Surface Water Drainage During Extraction Operation	FIGURE NO. REVISION 1 1



LEGEND	
	Positive Surface Water Flow Toward Peripheral Roads
	Internal Drainage
	Surface Water Direction

CLIENT
PORT COLBORNE QUARRIES INC.
 222 MARTINDALE ROAD
 PO BOX 1116
 ST. CATHARINES
 ON L2R 7A3

PROJECT NAME
PIT 3 EXTENSION

SCALE: 1 : 5,000	DATE: 2021-07-28
PROJECT MGR: D.S.	DRAWN BY: J.M.
CHECKED BY: D.S.	APPROVED BY: D.S.
PROJECT NO: 115774	

	IBI GROUP Suite 101 - 410 Albert Street Waterloo ON N2L 3V3 Canada tel 519 585 2255 ibigroup.com	
	FIGURE NAME Pre-Extraction Surface Water Flows	FIGURE NO. REVISION 2 1