



24 September 2025

Reference No. CA0033354.8741_300

Kevin Kehl, Manager of Licensing, Approvals and Compliance
Aggregates & Construction Division
Walker Aggregates Inc.

REVIEW OF THE AGGREGATE RESOURCES ACT SITE PLANS REGARDING BLASTING
WALKER AGGREGATES, DUNTROON QUARRY
9861 COUNTY RD 91, DUNTROON, ONTARIO

Walker Aggregates Inc. (Walker) is preparing a Site Plan amendment to their Duntroon Quarry and Duntroon Quarry Expansion (Site) Aggregate Resources Act licences. Walker is proposing to deepen the limit of extraction in portions of the licenced lands. This letter provides a summary of our findings in regard to blasting implications from the deepening. In summary, we conclude that there are no adverse impacts with the proposed deepening from a blasting perspective and that appropriate mitigation is in place at the Site.

INTRODUCTION

Currently, extraction at the Duntroon Quarry is permitted to between 485 and 490 MASL in certain portions of the operation and to a depth 500 MASL in other locations. The proposed amendment would allow for extraction to between 485 and 490 MASL across the entire site. WSP understands that there are no changes proposed to the existing plant locations and equipment operating on site. The Aggregate Resources Act (ARA) Site Plans for the Walker's Duntroon Quarry and Duntroon Quarry Expansion are attached. These Site Plans were prepared by MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC) and were approved by the Minister of Natural Resources and Forestry in September 2014.

BLASTING

The ARA Site Plans, provided by Walker were reviewed by WSP Canada Inc (WSP). The following is a summary of the site plan notes as they relate to blasting issues.

- Blasting could occur daily in accordance with provincial standards. Standard blasting hours are Monday to Friday from 8:00 AM to 5:00 PM and Saturday from 8:00 AM to 3:00 PM. Blasting will not occur on Sundays or on a Statutory Holiday or between the hours of 8:00 PM on any day and 8:00 AM the following day.

- A Blast Design Report, commonly referred in the industry as a Blast Impact Assessment (BIA), was prepared for the Duntroon Quarry Expansion by Golder Associates Ltd. (Golder) and presented in September 2005. An addendum to the assessment was submitted by Golder on September 23, 2007.
- All blasts are to be monitored for ground vibrations and air overpressure and will operate to ensure compliance with current provincial guidelines. These guidelines are set out in the Ontario Ministry of the Environment, Conservation and Parks (MECP) document NPC-119 and have a guideline ground vibration limit of 12 mm/s and an air overpressure limit of 128 dBL (linear decibels). The purpose of the BIA, mentioned above, is to assess whether the blasting at the proposed quarry can remain compliant with the NPC 119 limits set by MECP.
- All blast monitoring reports are to be retained by Walker and made available upon request by the Ministry of Natural Resources for audit purposes. According to the ARA (Ontario Regulation 466/20), blast monitoring reports shall be retained for a period of seven years after each blast. The blast monitoring report will also inform future blast design changes, if necessary.
- When blasting within 350 metres of a receptor, the maximum explosive weight detonated per delay may be adjusted by one of the following three options to ensure compliance with the MECP guideline:
 - a) reduce the bore hole diameter with a corresponding reduction in the drill pattern.
 - b) introduce decked charges within each bore hole.
 - c) reduce the bore hole length (depth) by reducing the bench height.

SUMMARY

WSP has reviewed the ARA Site Plans for the Duntroon Quarry and Duntroon Quarry Expansion provided by Walker. The following is a summary of our findings:

- Blasting is currently carried out in accordance with provincial standards.
- A Blast Impact Assessment was prepared for the initial quarry development and cited in the ARA Site Plans for the expansion.
- The following mitigation measures related to the quarry blasting are provided on the ARA Site Plans:
 - All blasts will be monitored for ground vibrations and air overpressure and will operate to ensure compliance with NPC-119.
 - Blast monitoring reports will be prepared and retained for a period of seven years, as stipulated by the ARA. These can be used for audits and inform blast design changes, if necessary.
 - Should blast design changes be necessary to comply with NPC-119, example parameters were listed within the Site Plans.

- The ARA Site Plan notes for the original Duntroon Quarry do not reference blasting. The blast mitigation measures listed above are appropriate for the proposed deepening of both the Duntroon Quarry and the Duntroon Quarry Expansion.

CLOSURE

This letter provides a summary of the blasting related ARA Site Plan Notes for Walker's Duntroon Quarry and Duntroon Quarry Expansion. We confirm that there are no adverse impacts with the proposed quarry deepening from a blasting perspective. It is WSP's professional opinion that appropriate mitigation measures to enable compliance with current provincial guidelines have been listed with the ARA Site Plans. Should you have any questions or concerns, please do not hesitate to contact the undersigned.

Yours truly,

WSP Canada Inc.



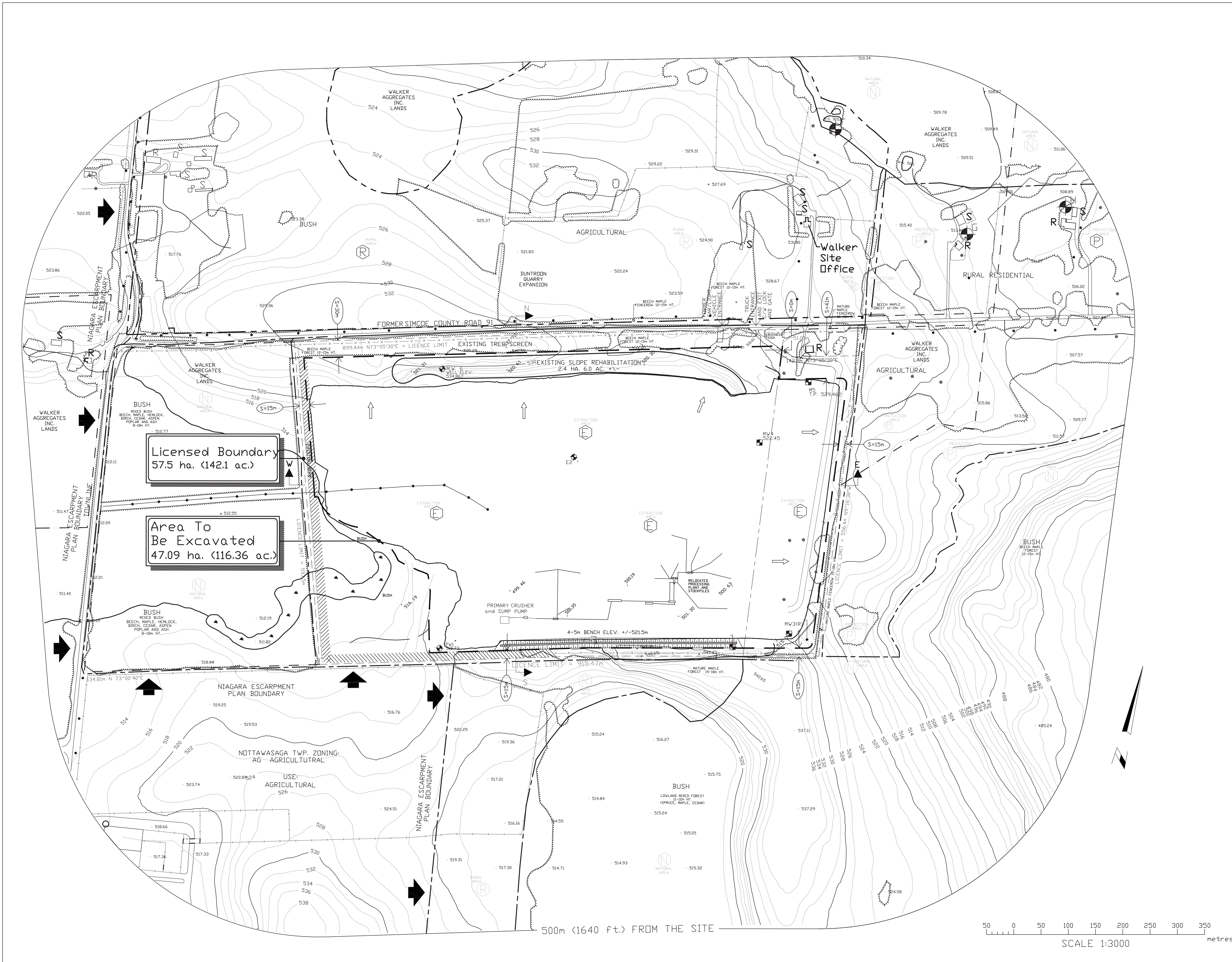
Daniel Corkery
Principal Blasting Consultant

DJC/KJF/jl

Attachments: ARA Site Plans - Duntroon Quarry
ARA Site Plans - Duntroon Quarry Expansion

ATTACHMENT

**ARA Site Plans
Walker Duntroon Quarry -MNR
Approved April 14.2015**



Notes

- BOUNDARY OF PROPERTY TAKEN FROM 1970 LEGAL SURVEY PREPARED BY ZUBEK, EMD AND PATTEN LTD.
- EXISTING TREE SCREENS TAKEN FROM JUNE 1989 MNR AIRPHOTO, CONFIRMED BY OCTOBER 1989 VEGETATION SURVEY.
- WATER WELL DATA TAKEN FROM "WATER WELL RECORDS FOR ONTARIO, SIMCOE, 1946-77", MINISTRY OF THE ENVIRONMENT, 1981; NOVEMBER, 1989 SITE SURVEY, AND "HYDROGEOLOGY OF PROPOSED EXPANSION OF THE MCKEAN QUARRY", TROW, DAMES & MOORE, MARCH, 1991. THE WATER TABLE, AS SHOWN ON THE TYPICAL SECTIONS, HAS BEEN DETERMINED FROM ANALYSIS OF THIS INFORMATION.
- TOPOGRAPHIC BASE MAPPING FOR SITE AND 500m SURROUNDING FROM 1:8000 NOVEMBER 1989 AERIAL PHOTOGRAPHY PREPARED DECEMBER 1989, BY INTERA KENTING EARTH SCIENCES. MAPPING WAS THEN UPDATED FROM DECEMBER 1991, ELECTRONIC FIELD SURVEY BY LONG ASSOCIATES CONSULTING LIMITED.
- EXISTING AND MONITOR WELL TABLE

	NAME	ELEV.	DEPTH	BOTTOM	STATIC	FOUND	TYPE
E2	SHOP	520.97	N/A	N/A	517.97	N/A	DRILLED
MW2(R)	MONITOR	520.16	20.79	497.94	510.84	N/A	DRILLED
MW3(R)	MONITOR	515.56	N/A	N/A	506.11	N/A	DRILLED
MW4	MONITOR	522.45	39.91	482.00	507.36	N/A	DRILLED
MW5	MONITOR	529.43	46.08	483.28	514.45	N/A	DRILLED
MW6	MONITOR	534.87	36.44	497.17	519.75	N/A	DRILLED
PW1	TEST WELL	518.73	9.40	509.33	511.45	N/A	DRILLED
CLF1	FARM WELL	521.05	N/A	N/A	511.73	N/A	DRILLED
CLF2	FARM WELL	519.23	N/A	N/A	511.69	N/A	DRILLED
F	MILLARS	515.00	2.7	N/A	N/A	N/A	DUG
G	STRIBLING	512.50	7.5	N/A	N/A	N/A	N/A
H	SACCUCI	509.00	N/A	N/A	N/A	N/A	DRILLED
- THE OPERATOR INTENDS TO CONVEY TO THE BRUCE TRAIL ASSOCIATION LAND AS IDENTIFIED IN NOTE 9, PAGE 3 OF 5.
- ALL EXISTING FENCES TO BE IMPROVED OR REPLACED TO PROVIDE HEAVY DUTY FENCE 1.2m MINIMUM HEIGHT.
- FENCING ALONG THE WESTERLY BOUNDARY MAY NOT BE FEASIBLE, IN SOME AREAS, DUE TO THE PRESENCE OF DENSE BUSH AND SWAMP. IN THESE AREAS, SIGNS TO BE POSTED EVERY 30m (100') WHICH READ "DANGER - OPEN QUARRY". IF NOT ON LICENSED BOUNDARY THEN FENCE WILL BE CONSTRUCTED ON EXTREME WEST BOUNDARY OF PROPERTY.

Final Approved Plan - AMENDMENT

Date: April 14, 2015

Signature: [Signature]

Ministry of Natural Resources
Midhurst District Office

APPROVED BY MINISTRY OF NATURAL RESOURCES

SIGNATURE: [Signature]

DATE: Aug 29/22

APPLICANT:



Walker
Aggregates
Inc.

P.O. Box 100,
Thorold, Ontario
L2V 3Y8

DECLARATION OF PURPOSE:

THIS SITE PLAN HAS BEEN PREPARED TO COMPLY WITH THE PROVISIONS OF SECTION 69 OF THE AGGREGATE RESOURCES ACT AND REPLACES THE SITE PLAN ORIGINALLY SUBMITTED AS PART OF A LICENCE APPLICATION UNDER THE PITS AND QUARRIES CONTROL ACT AND REGULATIONS.

LEGEND

- LICENSED BOUNDARY
- AREA TO BE EXCAVATED
- WALKER AGGREGATES INC. LANDS
- DUNTROON QUARRY EXPANSION LANDS
- EXISTING CONTOURS
- SPOT ELEVATIONS
- OFFSITE FENCES
- LICENSED BOUNDARY FENCING
- WIDTH OF EXCAVATION SETBACK AREA, METRES
- TOPSOIL BERM/STOCKPILE
- B.M. > BENCH MARK - CONCRETE RADIO TOWER BASE AT 531.6m
- SURFACE DRAINAGE
- BOUNDARY OF EXISTING DISTURBED AREA
- EXISTING WELLS
- MONITOR WELLS
- RESIDENCE
- SHED
- NIAGARA ESCARPMENT DESIGNATIONS
- Plan Boundary
- Designation Boundary
- Mineral Resource Extraction Area
- Escarpment Natural Area
- Escarpment Protection Area
- Escarpment Rural Area

NO.	REVISIONS	DATE	INITIAL
6.	TO FACILITATE DUNTROON QUARRY EXPANSION	JULY 11/14	A.J.M.
5.	UPDATE TOP OF FACE	NOV.03/11	A.J.M.
4.	TEMPORARY RAMP TO QUARRY FLOOR	SEP.05/03	[Signature]
3.	REVISE ENTRANCE/EXCAVATION FACE	SEP.19/02	[Signature]
2.	GENERAL REVISIONS	SEP.20/01	D.G.S.
1.	CHANGE LOCATION OF PRIMARY CRUSHER	JAN.25/00	D.G.S.

BRENT CLARKSON
IS AUTHORIZED BY THE MINISTRY OF NATURAL RESOURCES PURSUANT TO SECTION 69 OF THE AGGREGATE RESOURCES ACT TO PREPARE AND CERTIFY SITE PLANS.

MacNaughton Hermesen
Britton Clarkson
Planning Limited

DUNTROON QUARRY

PT. LOT 24 CONCESSION 12
TOWNSHIP OF CLEARVIEW, COUNTY OF SIMCOE
LICENCE NO 3514

WALKER AGGREGATES INC.

P.O. BOX 100,
THOROLD, ONTARIO
L2V 3Y8

EXISTING FEATURES

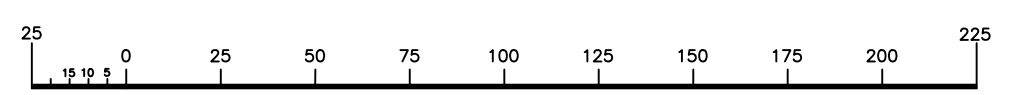
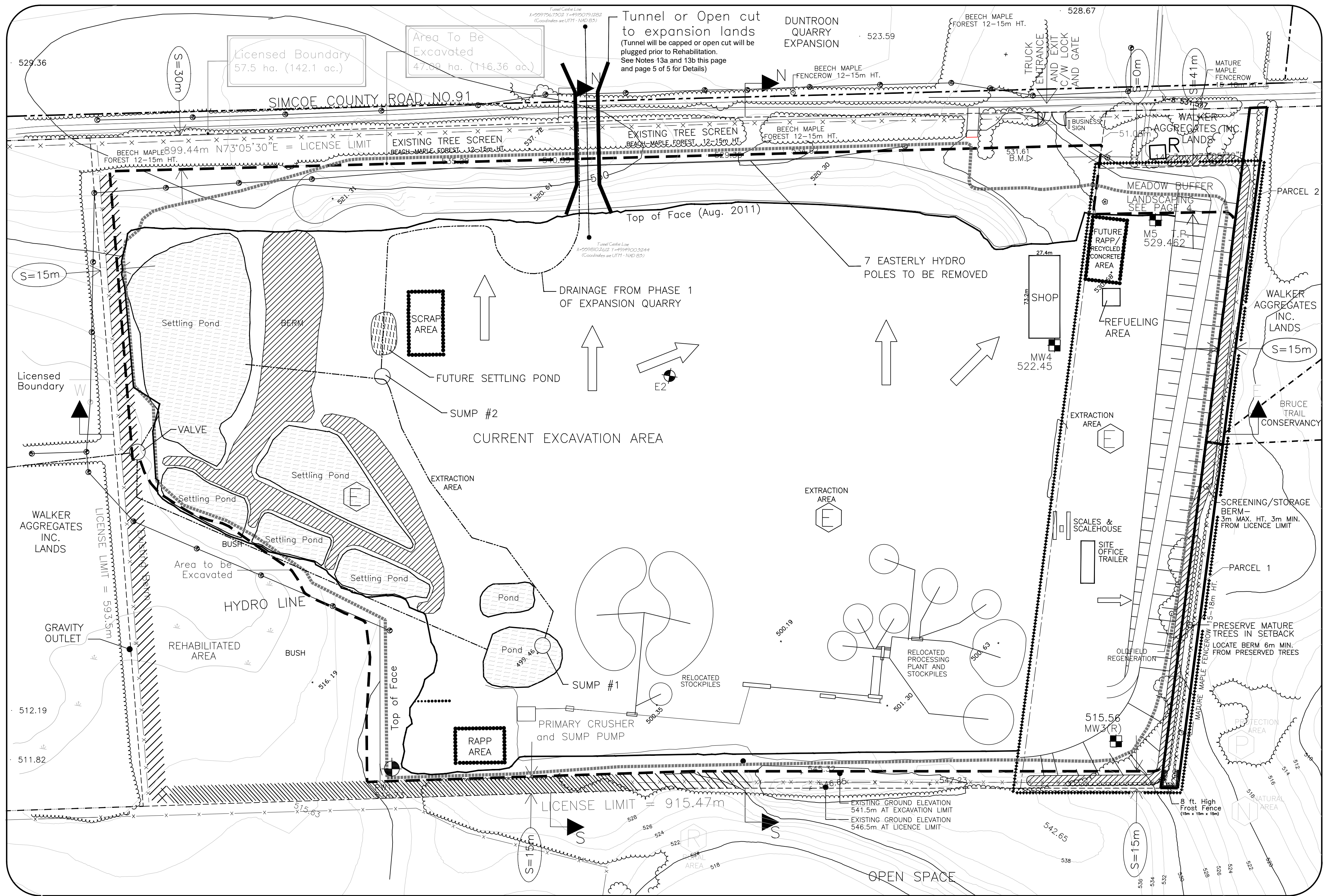
ZUBEK, EMD AND PATTEN LTD.
ONTARIO LAND SURVEYORS

39 Stewart Road, Collingwood Ontario (705) 445-8107

SCALE - 1 : 3000

DATE - AUGUST 25, 1997
JOB # 78-84-8, EXIST.DGN

PAGE 1 OF 5



SCALE 1:2000

Ministry of Northern Development,
Mines, Natural Resources and Forestry

APPROVED
Under the Aggregate Resources Act
Date: April 14, 2015

Notes
1. PLAN COMPILED FROM INFORMATION FROM R.G. ROBINSON AND ASSOC. LTD.
RECEIVED AUGUST 1996 AND UPDATED BY MHBC PLANNING LTD., MARCH 2015

- OPERATIONS**
- THE DIRECTION OF EXTRACTION SHALL GENERALLY BE FROM THE SOUTH EAST CORNER OF THE SITE IN A NORTH WESTERLY DIRECTION AS SHOWN ON THE PLAN WITH A MAXIMUM DEPTH OF 500 m.
 - THE DESIGNATED PROCESSING AND STOCKPILE AREA IS AS OUTLINED ON THE PLAN. HOWEVER AS EXTRACTION PROGRESSES TO THE NORTH IT MAY BE NECESSARY TO STOCKPILE SOME OF THE MATERIAL ON THE 514 m LEVEL.
 - IT IS INTENDED TO RELOCATE THE PRIMARY CRUSHER TO THE 500m ELEVATION WHEN THERE IS AN AREA LARGE ENOUGH, THIS AREA MAY ALSO BE USED TO STOCKPILE MATERIAL.
 - THE MAINTENANCE SHOP, PROCESSING PLANT, WASH PLANT, PONDS AND ASPHALT PLANT WILL ALSO BE RELOCATED ELSEWHERE ON THE SITE AS EXTRACTION CONTINUES.
 - AREAS HAVE BEEN DESIGNATED ON THE SITE PLAN TO ALLOW FOR STOCKPILING OF COLD MIX ASPHALT, AND CONCRETE/ASPHALT TO BE RECYCLED INTO GRANULAR PRODUCTS
 - AREAS HAVE BEEN DESIGNATED ON THE SITE PLAN AS A TEMPORARY STORAGE FOR THE FINES FROM THE WASH POND UNTIL IT CAN BE USED AS BACKFILL FOR REHABILITATION.
 - PROGRESSIVE REHABILITATION PROGRAM SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE ENVIRONMENTAL FEATURES OUTLINED ON PAGES 4-5 AND 6-5 OF THE SITE PLANS AND THE DETAILED RESTORATION MANAGEMENT PLAN PREPARED BY SAAR ENVIRONMENTAL LTD. DATED 1996 AND UPDATED OCTOBER 2000.
 - CLEAN INERT FILL MAY BE IMPORTED TO FACILITATE THE ESTABLISHMENT OF 2:1 (HORIZONTAL: VERTICAL) SLOPES ON THE QUARRY FACES. THE LICENSEE/ PERMITTEE MUST ENSURE THAT THE MATERIAL IS TESTED AT THE SOURCE, BEFORE IT IS DEPOSITED ON-SITE, TO ENSURE THAT THE MATERIAL MEETS THE MINISTRY OF THE ENVIRONMENT (MOE) CRITERIA UNDER TABLE 1 OF MOE'S SOILS, GROUND WATER AND SEDIMENT STANDARDS FOR USE UNDER PART XV.1 OF THE ENVIRONMENTAL PROTECTION ACT. SAMPLING RESULTS WILL BE PROVIDED TO MNR UPON REQUEST.
 - NOTWITHSTANDING NOTE 8a, WHERE THE IMPORTED MATERIAL IS NOT BEING PLACED WITHIN 1.5 METRES OF THE SURFACE, THE CRITERIA UNDER TABLE 1 FOR SODIUM ADSORPTION RATIO AND ELECTRICAL CONDUCTIVITY DO NOT HAVE TO BE MET.
- VARIATIONS FROM OPERATIONAL STANDARDS**
- EXCAVATION WILL BE ALLOWED WITHIN THE 30 METRE SETBACK ALONG COUNTY ROAD 91 FOR PURPOSES OF THE TUNNEL OR OPEN CUT.

NOTES

- TOPSOIL AND OVERBURDEN ARE TO BE STRIPPED, STOCKPILED AND KEPT IN SEPARATE BERMS AS SHOWN ON THE PLAN, GRADED WITH 3:1 SLOPES, SEEDED AND MAINTAINED FOR REHABILITATION.
- THE EXCAVATION DIRECTION SHALL GENERALLY FOLLOW AS SHOWN ON THE PLAN BUT MAY VARY DUE TO THE LIMESTONE QUALITY AND MARKET DEMAND.
- WELL DATA IS FROM THE HYDROGEOLOGY REPORT PREPARED BY TROW, DAMES AND MOORE DATED MARCH 1991, AND ADDITIONAL MONITORING WELLS INSTALLED IN 1989 AND 1995. THE LICENSEE SHALL ESTABLISH A PROGRAM FOR THE ON AND OFF SITE WELLS IN ACCORDANCE WITH THE CONDITIONS ATTACHED TO THE PERMIT TO TAKE WATER NO. 96-P-5019 WHICH ALSO REQUIRES THAT A REPORT BE SUBMITTED TO THE M.O.E. & M.N.R. ON AN ANNUAL BASIS.
- DUST SHALL BE MITIGATED ON SITE, INTERNAL HAUL ROUTES USING WATER OR OTHER APPROVED SUPPRESSANTS.
- THE COMPANY HAS A SPILLS CONTINGENCY PROGRAM IN EFFECT.
- REFUELING OF EQUIPMENT WILL BE CARRIED OUT IN A DESIGNATED AREA. FUEL STORAGE TANKS SHALL CONFORM TO THE INSTALLATION AND MAINTENANCE REQUIREMENTS OF THE GASOLINE HANDLING ACT.
- THE LICENSEE SHALL MONITOR ALL BLASTS FOR GROUND VIBRATIONS AND BLAST OVERPRESSURE IN ACCORDANCE WITH THE CURRENT PROVINCIAL GUIDELINES AND REGULATIONS, ALL REPORTS SHALL BE RETAINED ON FILE AND MADE AVAILABLE UPON REQUEST TO THE M.O.E. AND THE M.N.R.
- SCRAP WILL BE STORED IN THE DESIGNATED AREA AS SHOWN ON THE PLAN.
- FENCES AS SHOWN ARE 1.2m HIGH POST AND WIRE AND SHALL BE MAINTAINED FOR THE LIFE OF THE QUARRY.
- EQUIPMENT FOR EXTRACTION AND PROCESSING WILL INCLUDE DRILL RIGS, LOADERS, TRUCKS, BULLDOZERS, CRUSHERS, SCREENING, CONVEYERS, WASH PLANT, ASPHALT PLANT, MAINTENANCE SHOP, TRANSFORMERS AND DIESEL GENERATING PLANTS.
- THE LICENSEE SHALL ENSURE THAT ANY WATER LEAVING THE LICENSED SITE MEETS THE SURFACE WATER QUALITY GUIDELINES OF THE M.O.E. AND M.N.R.
- THE HEIGHT OF THE EXTRACTION FACE SHALL AT ALL TIMES BE IN COMPLIANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT.
- FOR DETAILS ON THE OPEN CUT TO THE EXPANSION LANDS, SEE QUARRY ACCESS SLOT AND PLUG DESIGN OPEN CUT COUNTY ROAD 91 DESIGN BRIEF, PREPARED BY C.C. TATHAM & ASSOCIATES LTD. DATED APRIL 21, 2014
- FOR DETAILS ON THE TUNNEL SCENARIO, SEE WALKER INDUSTRIES / WALKER AGGREGATES INC. DUNTROON QUARRY TUNNEL, TOWNSHIP OF CLEARVIEW, SIMCOE COUNTY, ONTARIO, DESIGN BRIEF, PREPARED BY GOLDER ASSOCIATES DATED MARCH 11, 2015.
- AS LONG AS THE TOWNSHIP OF CLEARVIEW OWNS COUNTY ROAD 91, THE DESIGN, CONSTRUCTION AND OPERATION OF ANY TUNNEL, WHETHER IT BE A SMALL TUNNEL TO ACCOMMODATE A CONVEYOR SYSTEM FOR MOVEMENT OF AGGREGATE MATERIALS, OR A LARGE TUNNEL TO ALLOW MOVEMENT OF QUARRY ROCK TRUCKS, SHALL BE TO THE SATISFACTION OF THE TOWNSHIP OF CLEARVIEW. THIS SHALL REQUIRE THE ENTERING INTO OF AN AGREEMENT AND COMPLIANCE WITH ASSOCIATED APPROPRIATE CONDITIONS AND REQUIREMENTS, ALSO TO THE SATISFACTION OF CLEARVIEW. A FULL OPEN CUT THROUGH COUNTY ROAD 91 SHALL ONLY BE PERMITTED AT SUCH TIME AS THAT PORTION OF COUNTY ROAD 91 IS STOPPED UP, CLOSED AND CONVEYED TO THE QUARRY OPERATOR.
- UPON CLOSURE OF COUNTY ROAD 91 ABUTTING THE WALKER LANDS, THIS SITE SHALL BE SECURED.
- PRIOR TO THE CONSTRUCTION OF THE TUNNEL OR ROAD CUT A GEOTECHNICAL ENGINEERING STUDY WILL BE PREPARED TO ENSURE THE SAFE CONSTRUCTION OF THE TUNNEL OR ROAD CUT AND TO DEMONSTRATE THE ABILITY TO PERMANENTLY CLOSE THE TUNNEL OR ROAD CUT. THE GEOTECHNICAL ENGINEERING STUDY SHALL BE CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE PROVINCE OF ONTARIO.
- A PROCESSING PLANT PROCESSING MATERIAL FROM THE QUARRY EXPANSION SITE (LICENCE NO. 607841) IS PERMITTED ON THIS SITE BUT ONLY FOR SUCH PERIOD OF TIME AS IS NECESSARY TO CREATE SUFFICIENT QUARRY FLOOR ON THE QUARRY EXPANSION SITE TO THE NORTH TO ACCOMMODATE A PROCESSING PLANT FACILITY AND THE STOCKPILES, OFFICE, SCALES SCALE HOUSE AND OTHER RELATED USES, BEING AN AREA OF 18 HA. ONCE THE QUARRY FLOOR OF THE QUARRY EXPANSION SITE TO THE NORTH AT ELEVATION 500 MSL REACHES AN AREA OF 18 HA, THE PROCESSING PLANT SHALL BE RELOCATED TO THE QUARRY EXPANSION SITE. THE TUNNEL OR OPEN CUT SHALL BE PLUGGED IN ACCORDANCE WITH NOTES 13A OR 13B (THIS PLAN) AND THIS QUARRY SHALL BE REHABILITATED.



LEGEND

- LICENSED BOUNDARY
- AREA TO BE EXCAVATED
- WALKER AGGREGATES INC. LANDS
- DUNTROON QUARRY EXPANSION LANDS
- EXISTING CONTOURS
- SPOT ELEVATIONS
- OFFSITE FENCES
- FENCE ON LICENSED BOUNDARY
- EXCAVATION SETBACK AREA (METRES)
- B.M. ▷ BENCH MARK - CONCRETE RADIO TOWER BASE AT 531.610m
- E2 EXISTING WELLS SEE TABLE
- MW5 MONITOR WELLS SEE TABLE
- DEVELOPMENT PERMIT AREA (7.5 HA.) REC. PERMIT NO. 3774/S/E/90-91/286
- GENERAL DIRECTION OF EXTRACTION
- PERIMETER ROAD
- BRUCE TRAIL ASSOCIATION

NIAGARA ESCARPMENT DESIGNATIONS

- Designation Boundary
- Mineral Resource Extraction Area
- Escarpment Protection Area
- Escarpment Natural Area
- Escarpment Rural Area

NO.	REVISIONS	DATE	INITIAL
1	EXTRACTION LIMITS/GENERAL	AUG.09/01	D.G.S.
2	GENERAL REVISIONS	AUG.27/01	D.G.S.
3	GENERAL REVISIONS	AUG.30/01	D.G.S.
4	GENERAL REVISIONS	SEP.17/01	D.G.S.
5	GENERAL REVISIONS	SEP.20/01	D.G.S.
6	ADD FROST FENCE/SHIFT CONVEYANCE LINE	AUG.14/02	D.G.S.
7	REVISE ENTRANCE/EXCAVATION FACE	SEP.19/02	D.G.S.
8	RELOCATE STOCKPILES, PLANT TO FLOOR	NOV.13/06	J.F.D.
9	ADD OPERATIONS NOTE 8a & 8b	JAN.14/10	G.D.
10	REVISE NORTH FACE	NOV.03/11	A.M.
11	GENERAL REVISIONS	JULY.16/12	A.M.
12	GENERAL REVISIONS	SEPT. 4/12	A.M.
13	TO FACILITATE DUNTROON QUARRY EXPANSION	JULY 11/14	A.M.
14	NOTES REGARDING REHABILITATION OF TUNNEL/OPEN CUT	MAR. 16/15	D.G.S.

BRENT CLARSON
IS AUTHORIZED BY THE MINISTRY OF NATURAL RESOURCES AND FORESTRY TO SEAL THIS PLAN AND TO SIGN AND RECOMMEND IT TO PREPARE AND CARRY OUT THE PLAN.

7050 Weston Road
Suite #250
Woodbridge, ON L4L 5G7
T: (905) 761.5588
F: (905) 761.5589
www.mhbcplan.com

MHBC
Regional and
Planning &
Resource
Development

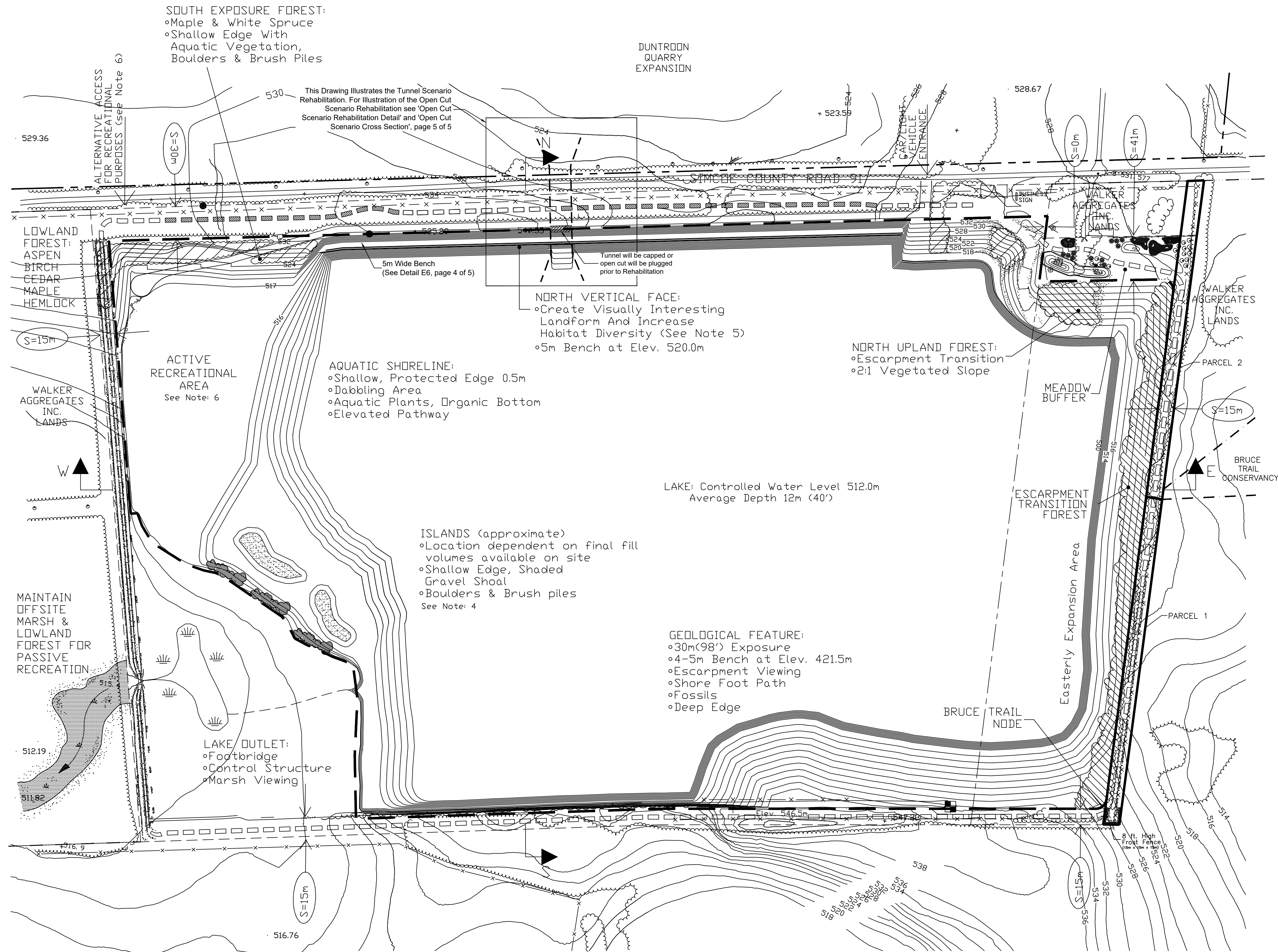
DUNTROON QUARRY
PART OF LOT 24 CONCESSION 12
TOWNSHIP OF CLEARVIEW, COUNTY OF SIMCOE
LICENCE NO. 3514

WALKER AGGREGATES INC.
P.O. BOX 100,
THOROLD, ONTARIO
L2V 3Y8

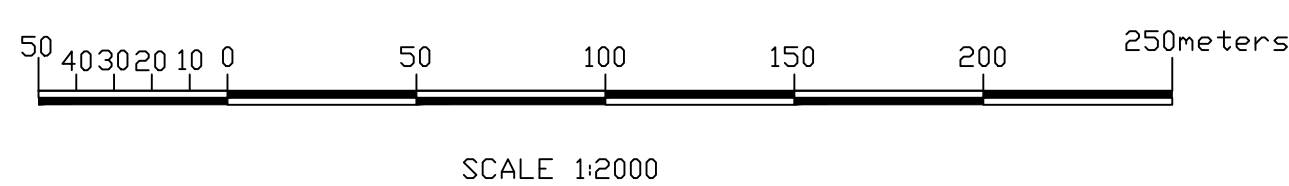
OPERATIONAL PLAN

ZUBEK, EMO AND PATTEN LTD.
ONTARIO LAND SURVEYORS

38 Street Road, Collingwood Ontario (705) 442-4910	
SCALE - 1 : 2000	
DATE - AUGUST 25,1997	PAGE 2 OF 5
JOB # 78-84-8, OPER.DGN	



- Notes**
1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
 2. FOR GENERAL NOTES SEE PAGE 2.
 3. FOR ALL CROSS SECTIONS SEE PAGE 4.
 4. THE CONTOUR MAPPING WAS PREPARED BY LONG ASSOCIATES CONSULTING LIMITED IN MAY 31, 1999.
 5. PROPERTY BOUNDARY AND CORRESPONDING INFORMATION WAS DERIVED FROM AN EXISTING SITE PLAN PREPARED BY ZUBEK, EMO AND PATTEN LTD.
 6. TOPOGRAPHIC INFORMATION IS RELATED TO THE BENCH MARK REFERRED TO.
 7. PLAN COMPILED FROM INFORMATION FROM R.G. ROBINSON AND ASSOC. LTD. RECEIVED AUGUST 1996.
 8. PLAN UPDATED BY MHBC PLANNING LTD., AUGUST 2001, AND MARCH 2015.



Ministry of Northern Development,
Mines, Natural Resources and Forestry

APPROVED

Under the Aggregate Resources Act

Date: April 14, 2015

Notes

1. THE DUNTROON QUARRY COMPRISING OF A LICENSED AREA OF 49.81 ha. (123.08 ac.) WAS LICENSED AS 710197 DURING THE EARLY 1970'S. AN ADDITIONAL 7.5 ha. WAS LICENSED IN JUNE 1992 AS P716459, SUBJECT TO NIAGARA ESCARPMENT DEVELOPMENT PERMIT. THE TOTAL LICENSED AREA IS +/-57.5 ha (142.1 ac.) THE FINAL REHABILITATION PLAN PROVIDES FOR A 36.0 ha LAKE. THE LAKE SECTION OF THE QUARRY WILL BE EXCAVATED TO AN AVERAGE ELEVATION OF 500.0m. PERIMETER ELEVATIONS VARY SUBSTANTIALLY FROM 512.0m, NEAR THE SOUTHWEST CORNER TO 546.5m, AT THE PEAK OF THE GEOLOGICAL FEATURE IN THE SOUTHEAST SECTOR.
2. A VARIETY OF LAKE EDGE TREATMENTS ARE PROPOSED, TO SUPPORT A RANGE OF COMPLIMENTARY AFTER USES. ACTIVITIES IN THE EASTERLY SECTOR WILL INCLUDE AN ACTIVE TRAIL SYSTEM AREA AND REFORESTED SLOPES. THE 546.5m HEIGHT OF LAND WILL BE RETAINED, AS A GEOLOGICAL FEATURE, PROVIDING A SUBSTANTIAL EXPOSURE OF THE AMABEL DOLOSTONE AND FOSSILS, INCLUDING CRINOID, STROMATOPOROID, CORALS, NAUTILOIDS AND BRACHIOPODS. A FENCE SHALL BE ERECTED AT THE TOP OF THE FEATURE TO THE SATISFACTION OF THE MINISTRY OF NATURAL RESOURCES.
3. THE WESTERLY EDGE ABUTS AN UNLICENSED AREA, DESIGNATED ESCARPMENT NATURAL AREA, SUPPORTING A MIXED LOWLAND WOODLOT. THIS SHORELINE WILL SUPPORT A SHALLOW, PROTECTED EDGE, WITH AQUATIC PLANTS AND ORGANIC BOTTOM, TO PROVIDE A DEGREE OF WATERFOWL HABITAT. AQUATIC PLANT SPECIES WILL BE SELECTED AND ESTABLISHED DURING THE FINAL STAGES OF LAKE AND SHORELINE DEVELOPMENT.
4. THE EXISTING BERM LOCATED ALONG THE WESTERLY LIMIT OF THE SITE, TO BE USED FOR BACKFILL ALONG ENTIRE ELEVATION TO CREATE ISLANDS LOCATED IN LAKE PORTION OF THE QUARRY.
5. PORTIONS OF THE NORTHERLY SHORELINE WILL BE DEVELOPED WITH ACCESS ROAD AND UPLAND FOREST, WITH SOUTH EXPOSURE, TO EXTEND THE EXISTING IMMATURE FOREST BUFFER. THE REMAINING PORTION OF THE NORTHERLY SHORELINE MAY BE LEFT EXPOSED AS VERTICAL FACE, WITH A 5.0m WIDE BENCH AT ELEVATION 520.0. THIS WILL CREATE A VISUALLY INTERESTING LANDFORM AND INCREASE HABITAT DIVERSITY.
6. THE FINAL REHABILITATION PLAN INCLUDES 5 SPECIFIC FEATURES. AS SHOWN, TO PROVIDE FOR RECREATIONAL AND NATURAL RESOURCE ACTIVITIES AND CONNECTION TO THE BRUCE TRAIL SYSTEM. AN AREA TO ACCOMMODATE RECREATIONAL ACTIVITIES MAY BE PROVIDED IN THE NORTHWEST CORNER. THE AREA SHALL BE GRADED AND SEEDED ACCORDINGLY. AN ALTERNATIVE ACCESS TO THE RECREATIONAL AREA AT LOCATION SHOWN IS SUBJECT TO APPROVAL OF THE COUNTY OF SIMCOE.
7. THE OPERATOR WILL GRADE, TOPSOIL AND SEED THE ACTIVE RECREATION AREA, DURING FINAL REHABILITATION. THIS AREA WILL THEN BE REDEVELOPED FOR PRIVATE RECREATIONAL AFTER USES.
8. THE CONTROL STRUCTURE WILL BE ASSUMED AND MAINTAINED BY THE LICENSEE AND UPGRADED IF AND WHEN NECESSARY TO THE SATISFACTION OF THE MINISTRY OF NATURAL RESOURCES.
9. WHEN FINAL REHABILITATION OF EASTERLY SIDE SLOPE IS COMPLETE, PARCEL 1 & 2 WILL BE CONVEYED TO THE BRUCE TRAIL CONSERVANCY.

REHABILITATION AREAS	HA.	AC.	%
TOTAL LICENSED AREA	57.5	142.1	100
LESS SETBACKS	6.4	15.8	11.1
LESS EXISTING REHABILITATION	2.4	6.0	4.2
NET AREA TO BE REHABILITATED (INCLUDES PROPOSED LAKE)	48.7	120.3	84.7

Rehabilitation Components

- Meadow Buffer
 - See Page 4
- Escarpment Transition Forest
 - Beech, Maple, White Spruce
 - Choke Cherry, Hawthorn, Sumac
 - Legume and Wildflower Ground Cover
- Shoreline
 - See Page 4 Edge Standards
- Aquatic Vegetation
 - See Page 4
- South Exposure Forest
 - Maple, White Spruce
 - Sumac, Choke Cherry,
 - Crab Apple, Hawthorn
 - Legume and Wildflower Ground Cover
 - See this Page



PART OF LOT 24
CONCESSION 12
(FORMERLY TOWNSHIP OF NOTTAWASAGA)
TOWNSHIP OF CLEARVIEW
COUNTY OF SIMCOE

LEGEND

- LICENSED BOUNDARY
- AREA TO BE EXCAVATED
- WALKER AGGREGATES INC. LANDS
- DUNTROON QUARRY EXPANSION LANDS
- EXISTING CONTOURS
- SPOT ELEVATIONS
- FENCES
- WIDTH OF EXCAVATION SETBACK AREA, METRES
- PROPOSED CONTOURS
- EXISTING TRAIL SYSTEM
- PROPOSED TRAIL SYSTEM
- BRUCE TRAIL ASSOCIATION

11	REVISE NORTH FACE TO SHOW 5m WIDE BENCH AND TUNNEL/OPEN CUT INFORMATION	MAR.16/15	D.G.S.
10	TO FACILITATE DUNTROON QUARRY EXPANSION	JULY.11/14	A.J.M.
9	GENERAL REVISIONS	JULY.16/12	A.J.M.
8	REVISE NORTH FACE & NOTES 5 AND 9	NOV.03/11	A.J.M.
7	REVISE ENTRANCE/EXCAVATION FACE	SEP.19/02	D.G.S.
6	ADD FROST FENCE/SHIFT CONVEYANCE LINE	AUG.14/02	D.G.S.
5	REVISIONS AS PER TOWNSHIP COMMENTS	FEB.13/02	D.G.S.
4	GENERAL REVISIONS	SEP.17/01	D.G.S.
3	GENERAL REVISIONS	AUG.30/01	D.G.S.
2	GENERAL REVISIONS	AUG.27/01	D.G.S.
1	GENERAL REVISIONS	AUG.13/01	D.G.S.
NO.	REVISIONS	DATE	INITIAL

BRENT CLARKSON
IS AUTHORIZED BY THE MINISTRY
OF NATURAL RESOURCES
TO SEE THAT THE AGGREGATE
RESOURCES ARE PROPERLY
CERTIFY SITE PLANS.

MacNaughton Hermes
Planning Limited

DUNTROON QUARRY

PART OF LOT 24 CONCESSION 12
TOWNSHIP OF CLEARVIEW, COUNTY OF SIMCOE
LICENCE NO. 3514

WALKER AGGREGATES INC.
P.O. Box 100,
Thorold, Ontario
L2V 3Y8

PROGRESSIVE REHABILITATION PLAN

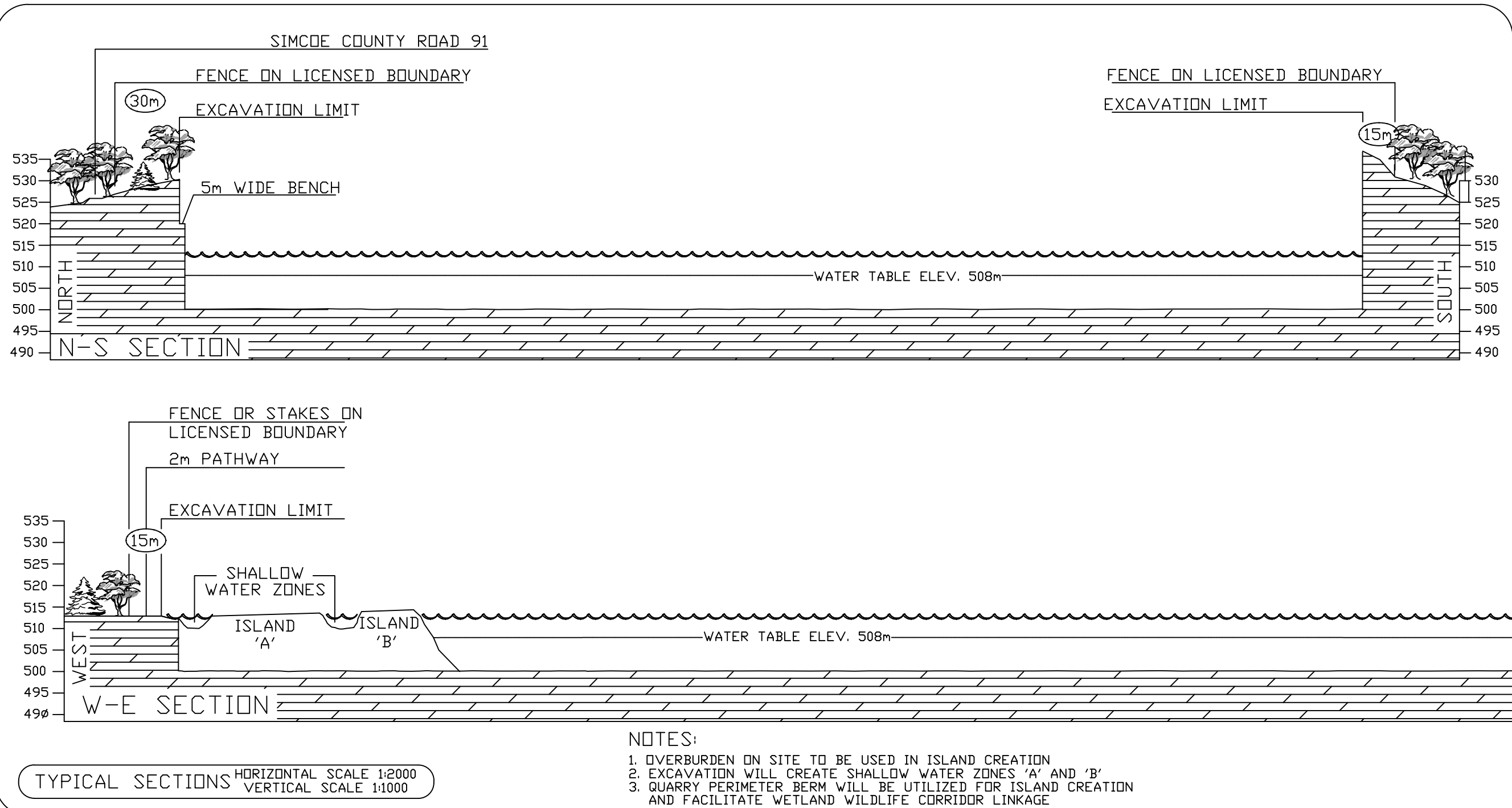
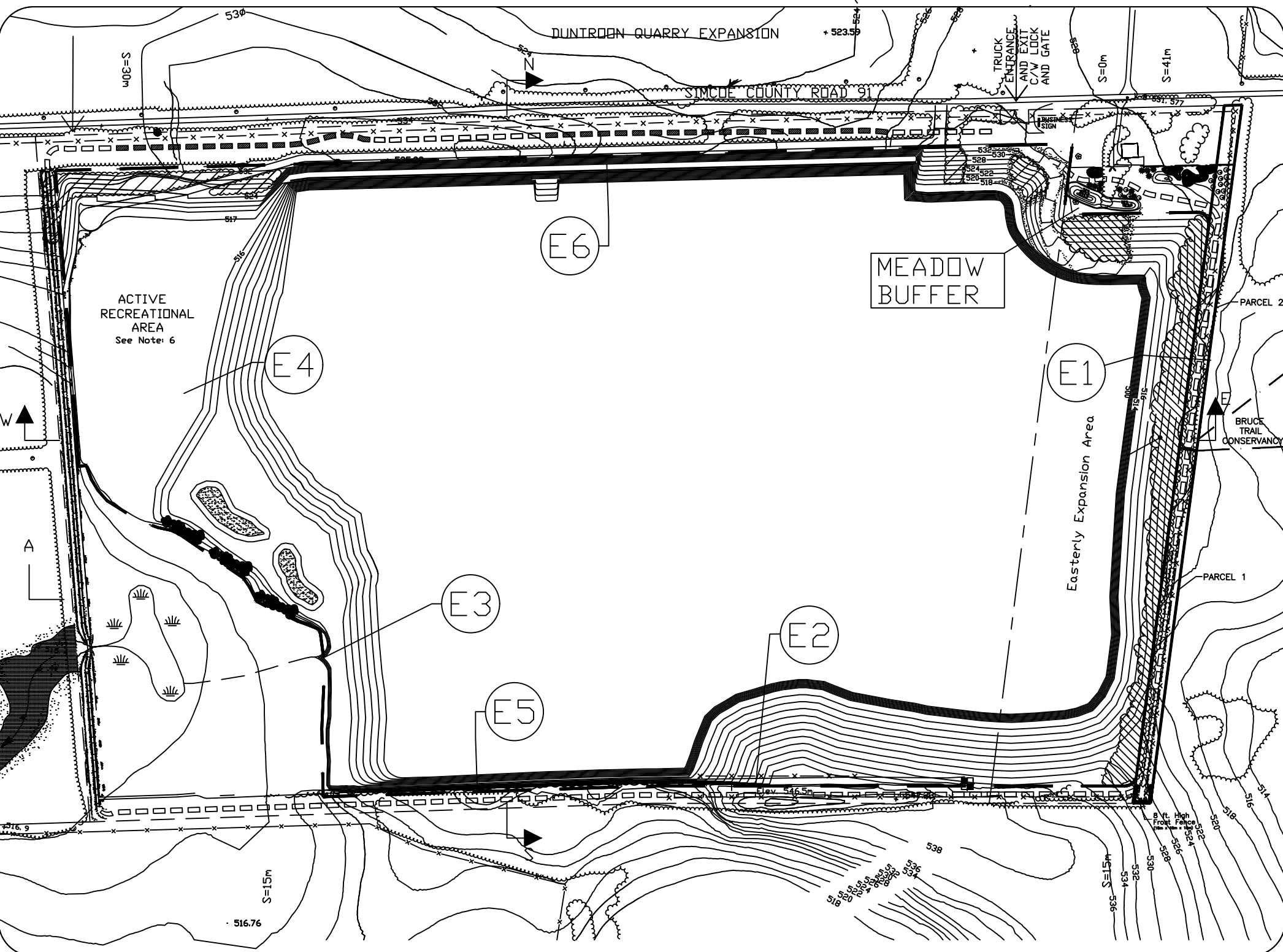
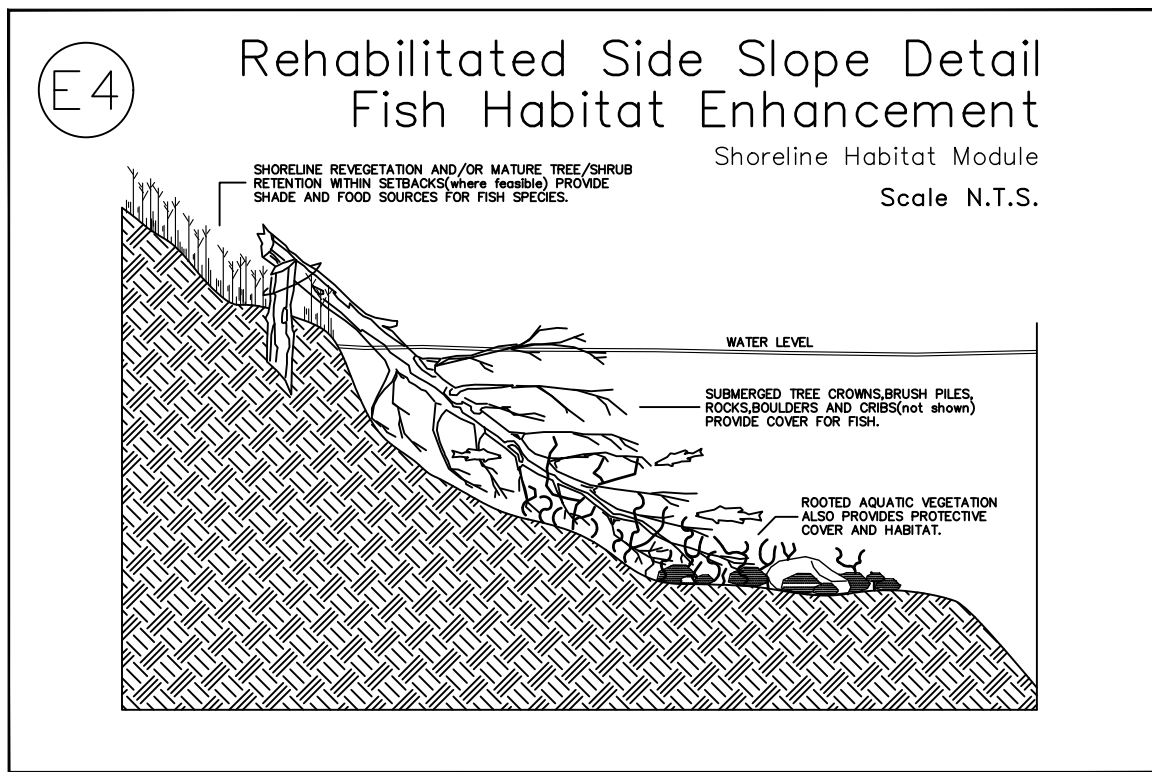
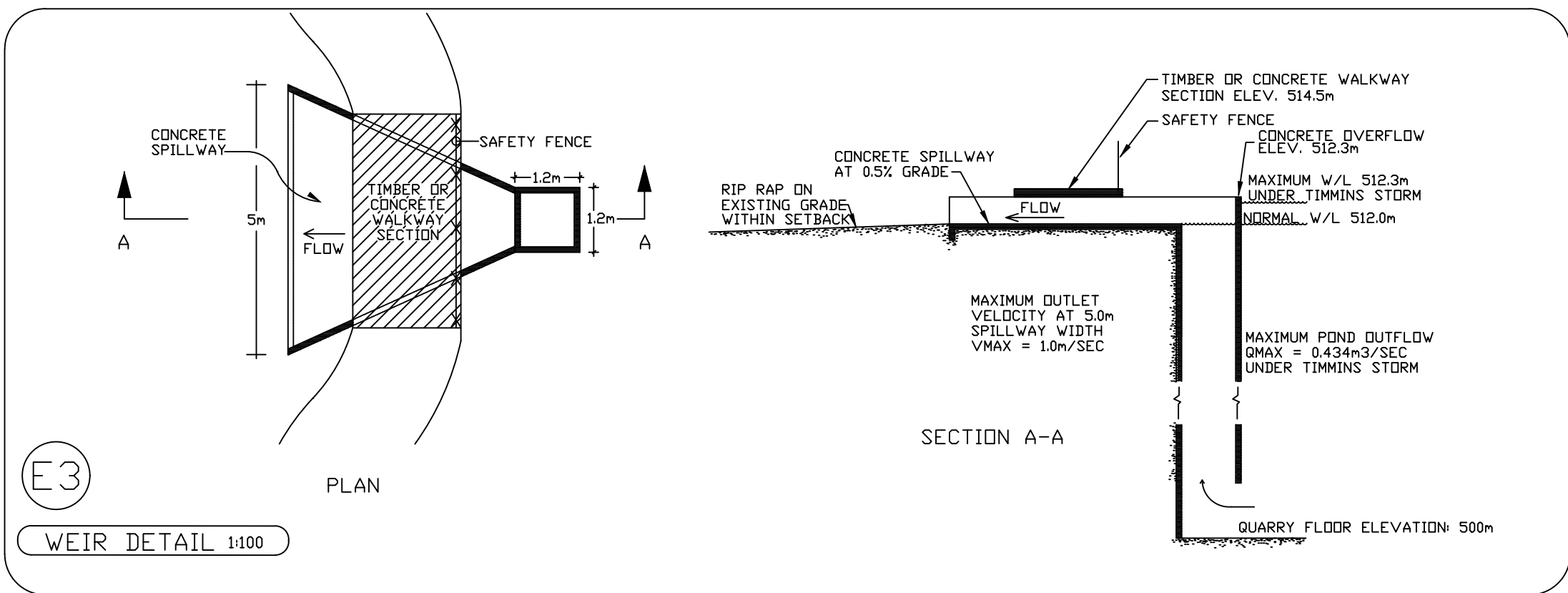
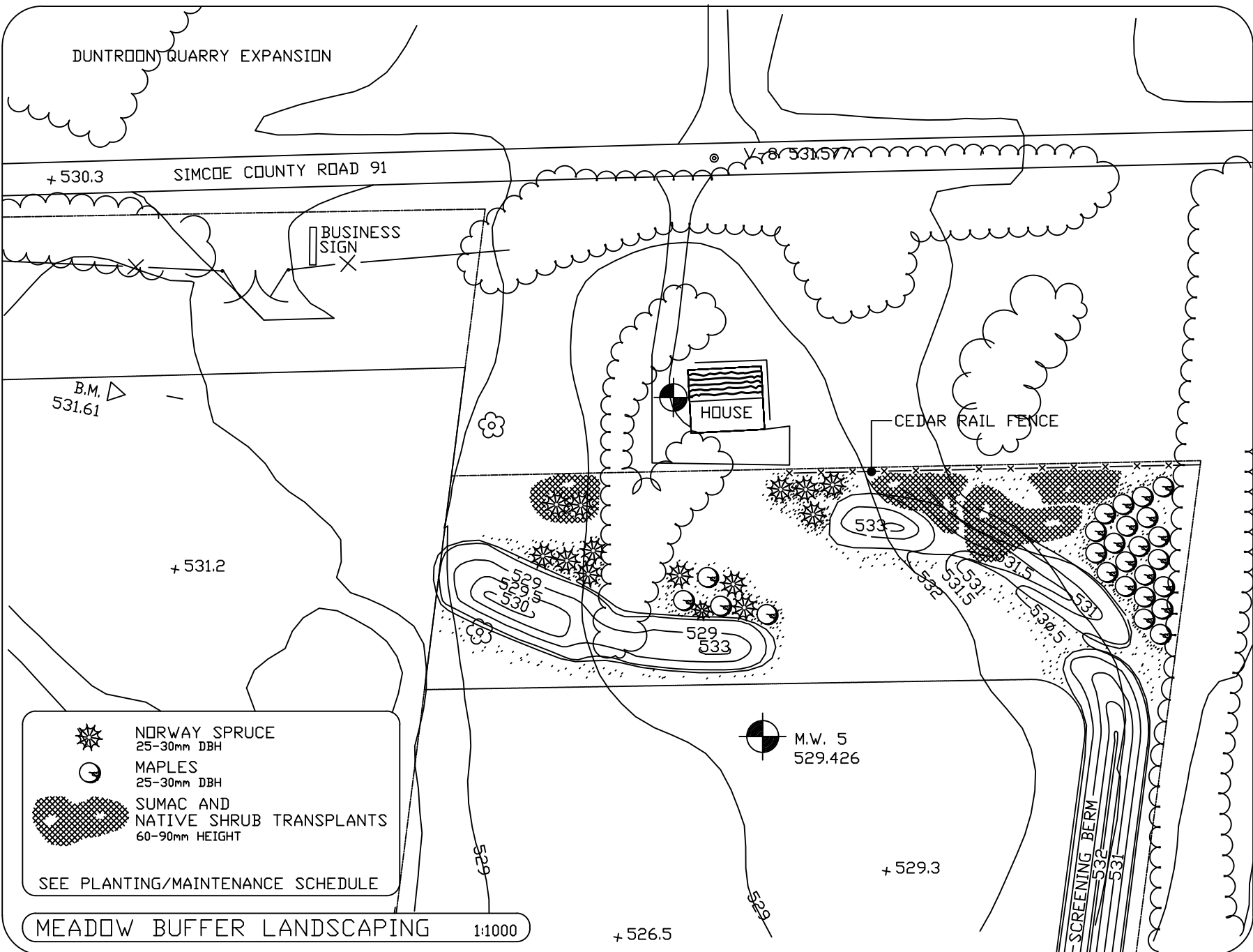
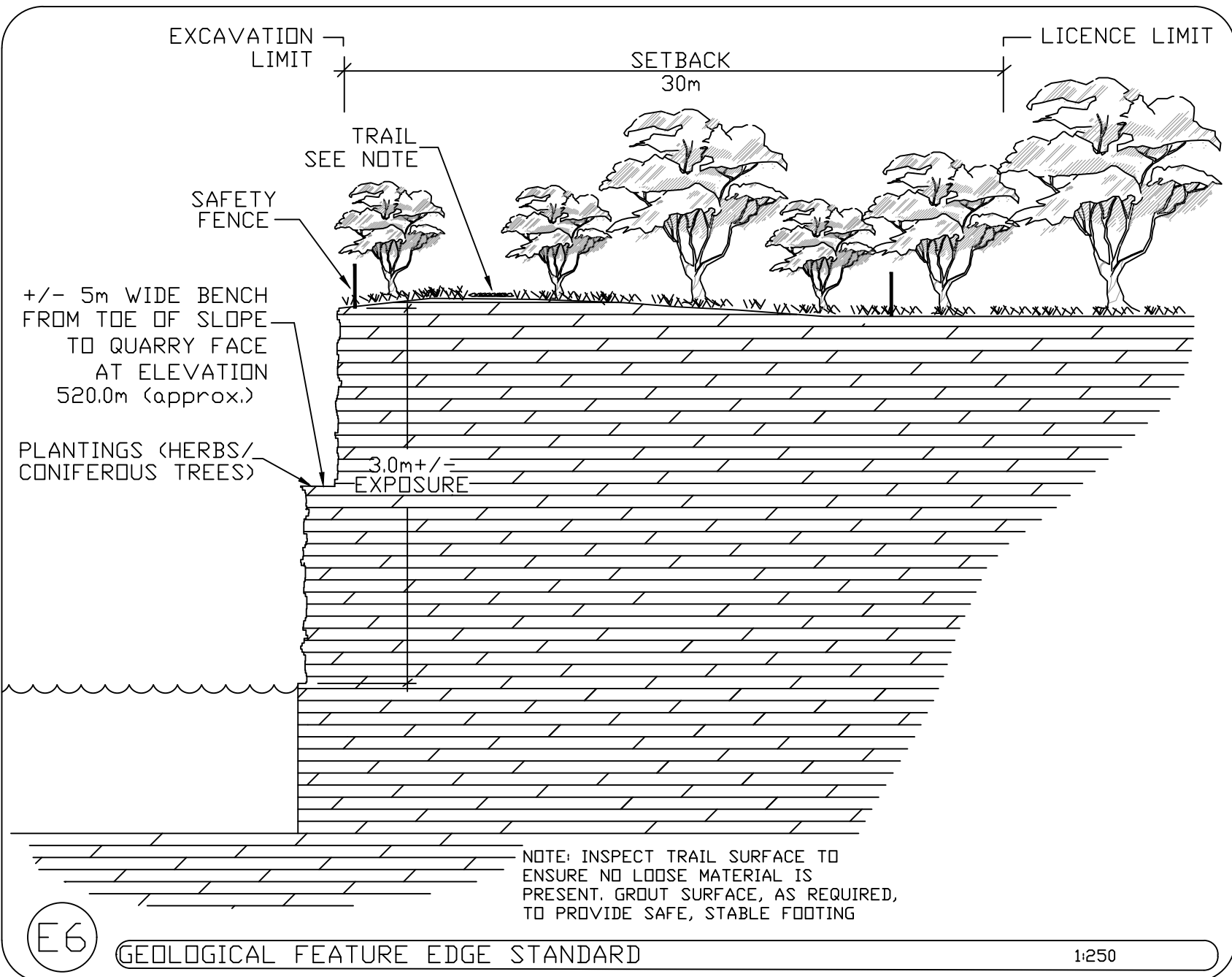
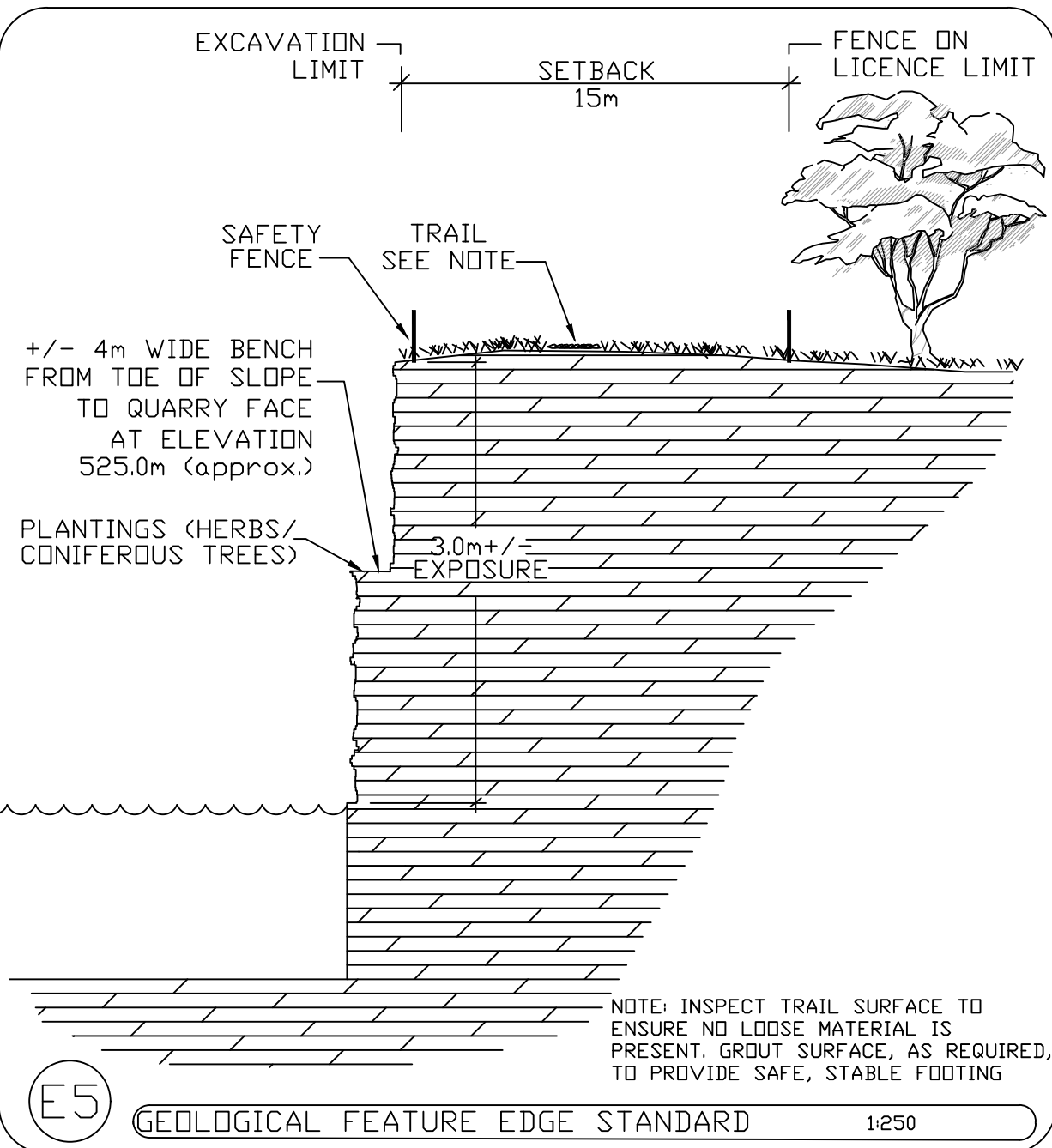
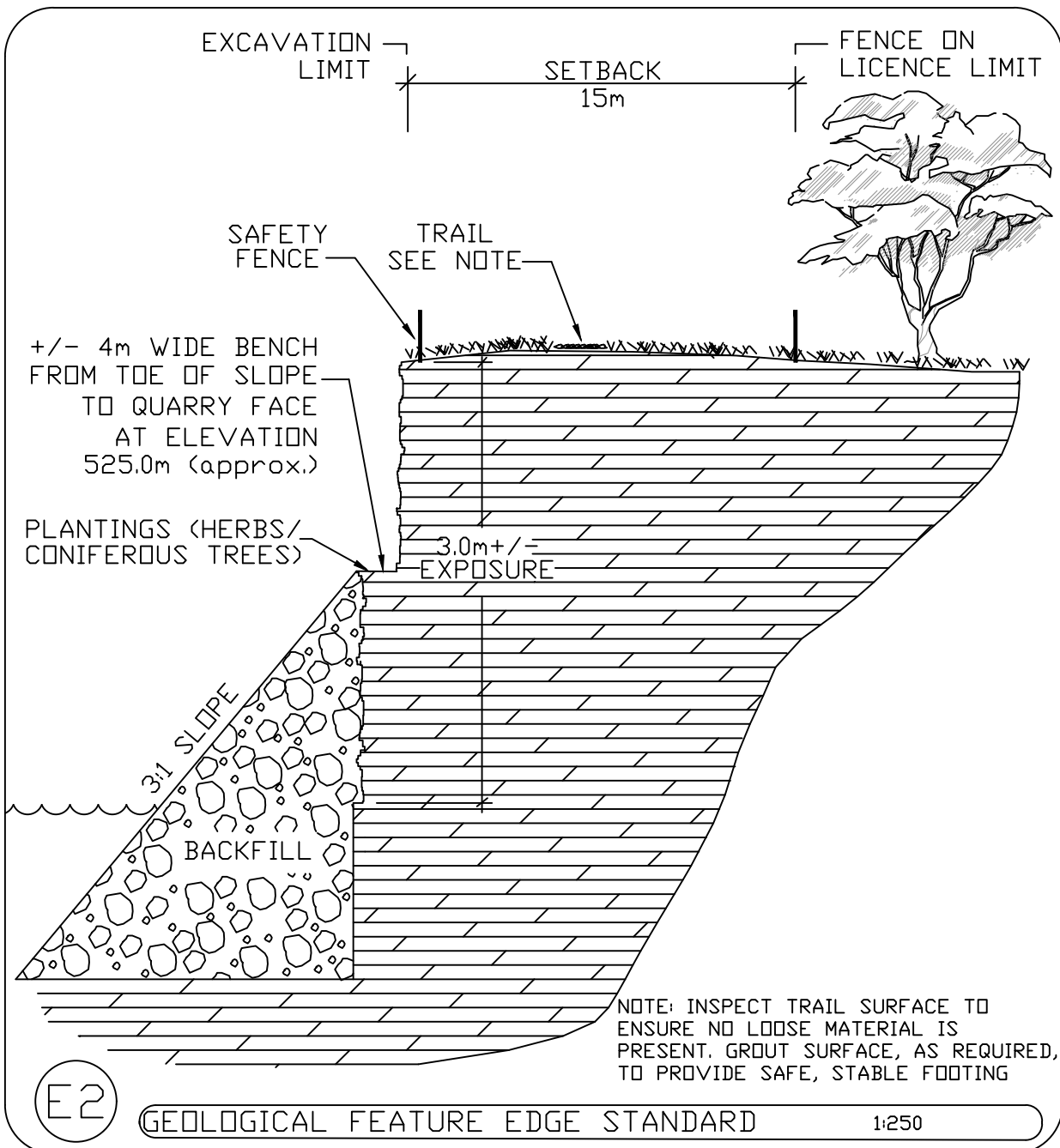
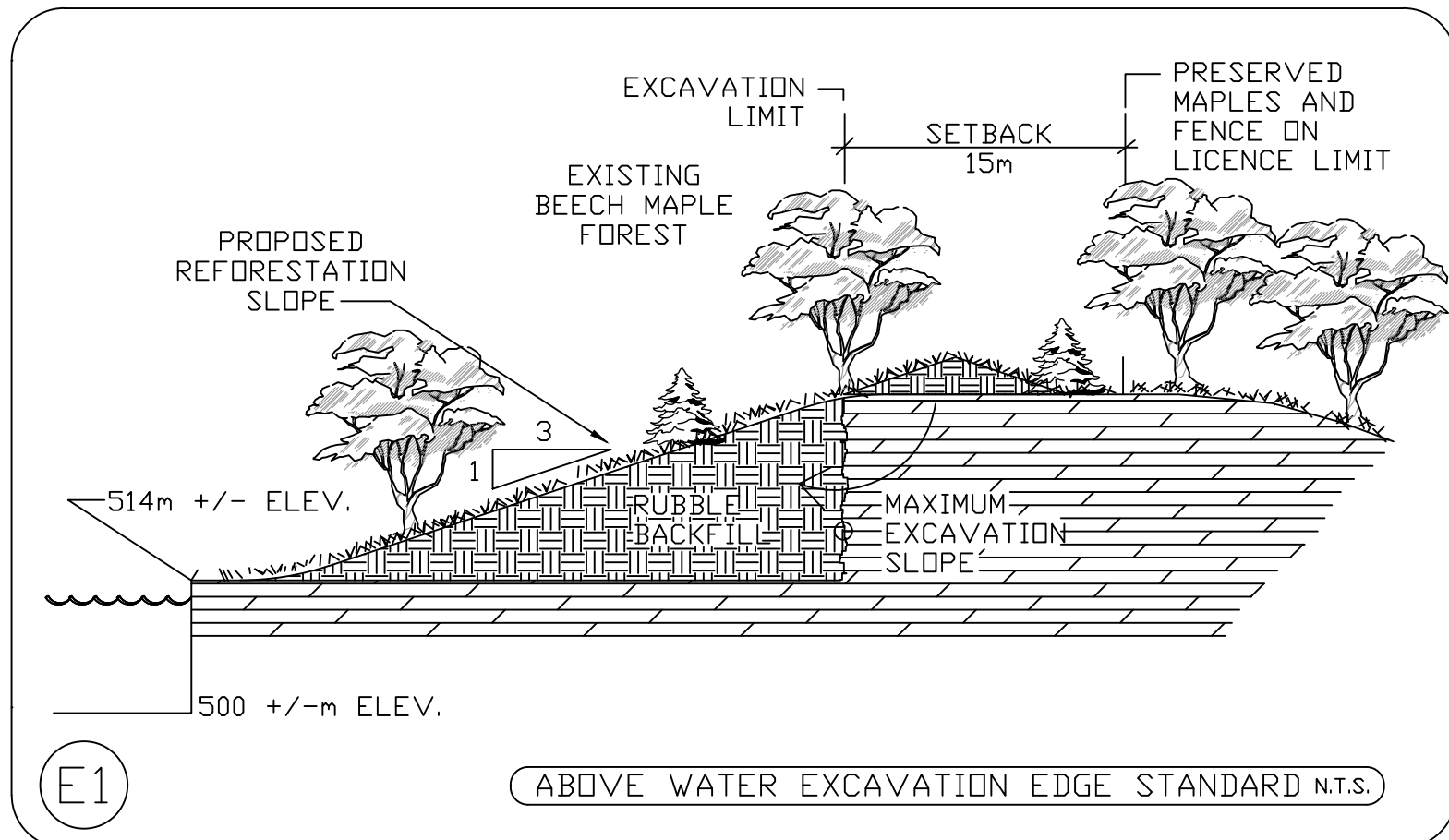
ZUBEK, EMO AND PATTEN LTD.
ONTARIO LAND SURVEYORS

39 Stewart Road, Collingwood Ontario (705) 445-4910

SCALE - 1 : 2000

DATE - OCT.9, 1997
JOB # 78-84-B, REHAB.DGN

PAGE 3 OF 5



NOTES:
1. OVERBURDEN ON SITE TO BE USED IN ISLAND CREATION
2. EXCAVATION WILL CREATE SHALLOW WATER ZONES 'A' AND 'B'
3. QUARRY PERIMETER BERM WILL BE UTILIZED FOR ISLAND CREATION AND FACILITATE WETLAND WILDLIFE CORRIDOR LINKAGE

Notes
1. PLAN COMPILED FROM INFORMATION FROM DRAWINGS BY R.G. ROBINSON AND ASSOC. LTD. RECEIVED AUGUST 1996, AND UPDATED BY MHBC PLANNING LTD., MARCH 2015.

Ministry of Northern Development,
Mines, Natural Resources and Forestry

APPROVED

Under the Aggregate Resources Act
Date: April 14, 2015

PART OF LOT 24
CONCESSION 12
(FORMERLY TOWNSHIP OF NOTTAWASAGA)
TOWNSHIP OF CLEARVIEW
COUNTY OF SIMCOE

12	REVISE NORTH FACE TO SHOW 5m WIDE BENCH	MAR.16/15	D.G.S.
11	TO FACILITATE DUNTROON QUARRY EXPANSION	JULY.11/14	A.M.
10	ADD 'E6' DETAIL AS PER MNR COMMENTS	FEB.6/13	A.M.
9	GENERAL REVISIONS	JULY.16/12	A.M.
8	REVISE NORTH SOUTH CROSS SECTION	NOV.03/11	A.M.
7	REVISE ENTRANCE/EXCAVATION FACE	SEP.19/02	D.G.S.
6	ADD FROST FENCE/SHIFT CONVEYANCE LINE	AUG.14/02	D.G.S.
5	REVISIONS AS PER TOWNSHIP COMMENTS	FEB.13/02	D.G.S.
4	GENERAL REVISIONS	SEP.17/01	D.G.S.
3	GENERAL REVISIONS	AUG.30/01	D.G.S.
2	GENERAL REVISIONS	AUG.27/01	D.G.S.
1	GENERAL REVISIONS	AUG.13/01	D.G.S.

NO.	REVISIONS	DATE	INITIAL
-----	-----------	------	---------

BRENT CLARKSON
IS AUTHORIZED BY THE MINISTRY
OF NATURAL RESOURCES PURSUANT
TO SECTION 10 OF THE AGGREGATE
RESOURCES ACT TO PREPARE AND
CERTIFY SITE PLANS.

MacNaughton Hermes
Brent Clarkson
MHBC
Planning Limited

DUNTROON QUARRY

PART OF LOT 24 CONCESSION 12
TOWNSHIP OF CLEARVIEW, COUNTY OF SIMCOE
LICENCE NO 3514

WALKER AGGREGATES INC

P.O. BOX 100,
THOROLD, ONTARIO
L2V 3Y8

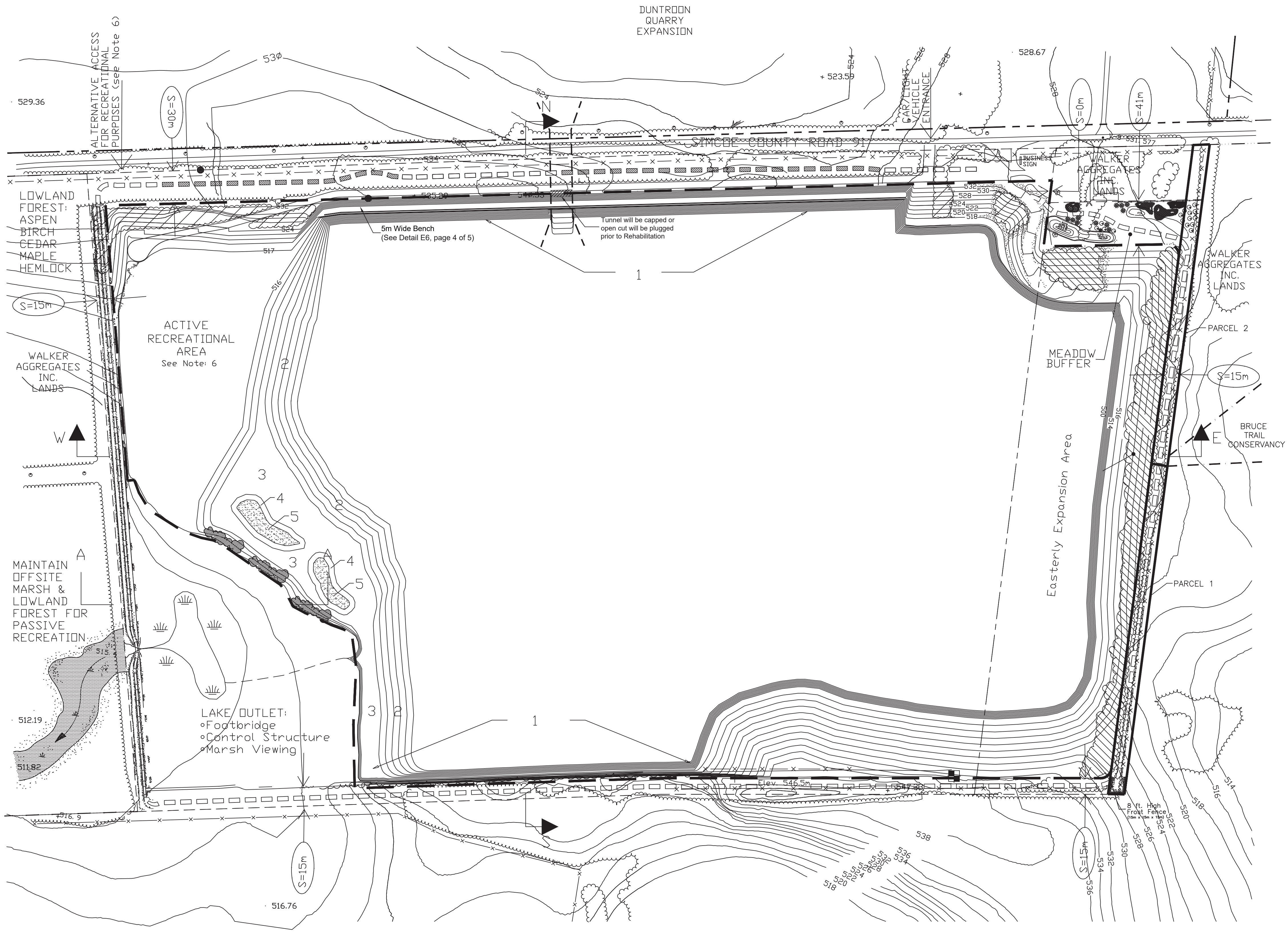
TYPICAL CROSS
SECTIONS

ZUBEK, EMO AND PATTEN LTD.
ONTARIO LAND SURVEYORS

29 Stewart Road, Collingwood Ontario (705) 445-4910

SCALE - 1 : AS SHOWN

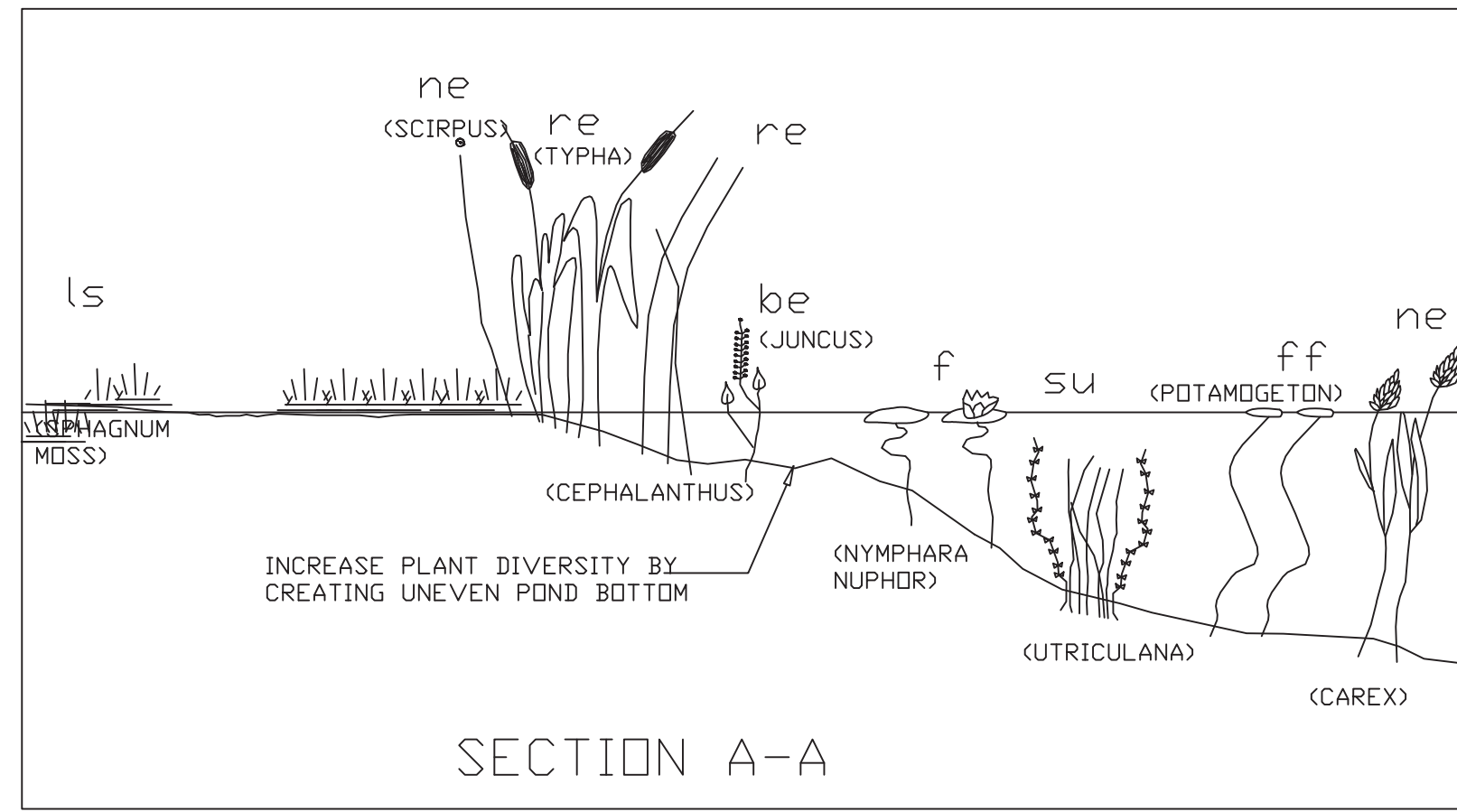
DATE - OCT.9, 1997
JOB # 78-84-8, REHAB.DGN PAGE 4 OF 5



- Notes
1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
 2. FOR GENERAL NOTES SEE PAGE 2.
 3. FOR ALL CROSS SECTIONS SEE PAGE 4.
 4. THE CONTOUR MAPPING WAS PREPARED BY LONG ASSOCIATES CONSULTING LIMITED IN MAY 31, 1993.
 5. PROPERTY BOUNDARY AND CORRESPONDING INFORMATION WAS DERIVED FROM AN EXISTING SITE PLAN PREPARED BY ZUBEK, EMD AND PATTEN LTD.
 6. TOPOGRAPHIC INFORMATION IS RELATED TO THE BENCH MARK REFERRED TO.
 7. PLAN COMPILED FROM INFORMATION FROM R.G. ROBINSON AND ASSOC. LTD. RECEIVED AUGUST 1996.
 8. PLAN UPDATED BY MHBC PLANNING LTD., AUGUST 2001 AND MARCH 2015.

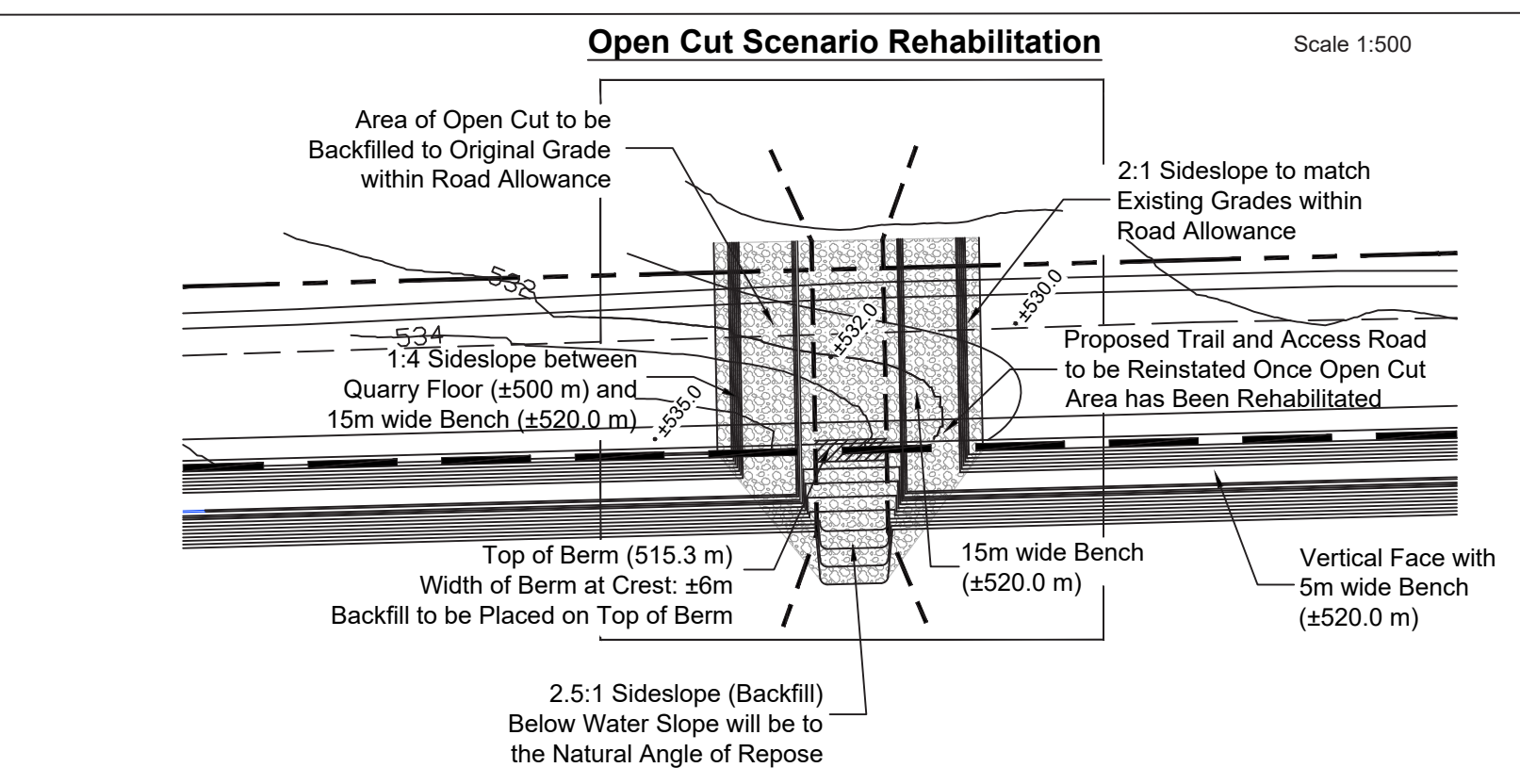
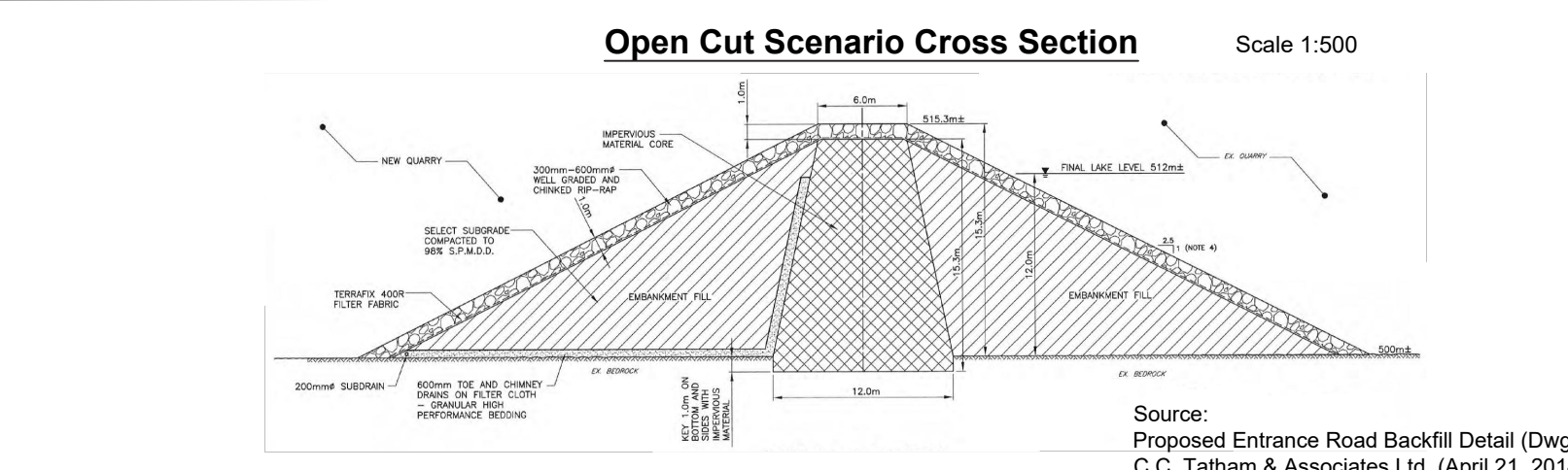
Notes

1. ORIGINAL REHABILITATION PLANS PREPARED BY LONG AND ASSOCIATES CONSULTING LIMITED, APPROVED BY THE MINISTRY OF NATURAL RESOURCES ON MAY 30, 1993.
2. PLAN COMPILED FROM INFORMATION FROM PLANS PREPARED BY R.G. ROBINSON AND ASSOCIATES LTD.
3. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
4. FOR GENERAL NOTES SEE DWG. No. 2.
5. FOR ALL CROSS SECTIONS SEE DWG. No. 4.
6. THE CONTOUR MAPPING WAS PREPARED BY M.N.R. AIR PHOTO IN OCTOBER 1989.
7. PROPERTY BOUNDARY AND CORRESPONDING INFORMATION WAS DERIVED FROM AN EXISTING SITE PLAN PREPARED BY ZUBEK, EMD AND PATTEN LTD.
8. TOPOGRAPHIC INFORMATION IS RELATED TO THE BENCH MARK REFERRED TO.



- AQUATIC VEGETATION TYPE SYMBOLS
- | | | | |
|----|-------------------------|--------|-------------------------------|
| re | ROBUST EMERGENTS | ff | FREE FLOATING VEGETATION |
| ne | NARROW LEAVED EMERGENTS | ls | LOW SHRUBS |
| be | BROAD LEAVED EMERGENTS | ts | TALL SHRUBS |
| f | FLOATING PLANTS | gc | GROUND COVER (MOSS, HERBS) |
| su | SUBMERGED VEGETATION | dh, dc | DEAD HARDWOODS, DEAD CONIFERS |
| u | UNVEGETATED | | |

- VEGETATION COMMUNITY TYPES
1. CLIFF FACE (FERN ASSEMBLAGE AND CONIFERS)
 2. AQUATIC MARSH COMMUNITY (>0.25m TO 2.0m LIMIT)
 3. SEMI-AQUATIC MARSH COMMUNITY (AS ABOVE BUT UPSLOPE IN LESS WATER: 0.25m TO HIGH AND DRY)
 4. THICKET SWAMP (AS ABOVE BUT ONLY A FEW CENTIMETRES OF WATER)
 5. MAN MADE ISLAND
- FUTURE WOODLANDS



PART OF LOT 24
CONCESSION 12
(FORMERLY TOWNSHIP OF NOTTAWASAGA)
TOWNSHIP OF CLEARVIEW
COUNTY OF SIMCOE

- LEGEND
- LICENSED BOUNDARY
 - N.E.P. DESIGNATION BOUNDARY
 - AREA TO BE EXCAVATED
 - WALKER AGGREGATES INC. LANDS
 - DUNTROON QUARRY EXPANSION LANDS
 - EXISTING CONTOURS
 - SPOT ELEVATIONS
 - FENCES
 - WIDTH OF EXCAVATION SETBACK
 - PROPOSED CONTOURS
 - EXISTING TRAIL SYSTEM
 - PROPOSED TRAIL SYSTEM
 - BENCH
 - BRUCE TRAIL ASSOCIATION

11	REVISE NORTH FACE TO SHOW 5m WIDE BENCH AND TUNNEL/OPEN CUT INFORMATION	MAR.16/15	D.G.S.
10	TO FACILITATE DUNTROON QUARRY EXPANSION	JULY.11/14	A.M.
9	GENERAL REVISIONS	JULY.16/12	A.M.
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6	ADD FRDST FENCE/SHIFT CONVEYANCE LINE	AUG.14/02	D.G.S.
5	REVISIONS AS PER TOWNSHIP COMMENTS	FEB.13/02	D.G.S.
4	GENERAL REVISIONS	SEP.17/01	D.G.S.
3	GENERAL REVISIONS	AUG.30/01	D.G.S.
2	GENERAL REVISIONS	AUG.27/01	D.G.S.
1	GENERAL REVISIONS	AUG.14/01	D.G.S.
NO.	REVISIONS	DATE	INITIAL

BRENT CLARKSON
IS AUTHORIZED BY THE
MINISTRY OF NATURAL RESOURCES
TO SEE TO THE AGGREGATE
RESOURCES AND TO PREPARE AND
VERIFY SITE PLANS.

MacNaughton Hermes
Britton Clarkson
Planning Limited
MHBC

DUNTROON QUARRY
PART OF LOT 24 CONCESSION 12
TOWNSHIP OF CLEARVIEW, COUNTY OF SIMCOE
LICENCE NO 3514

WALKER AGGREGATES INC.
P.O. Box 100,
Thorold, Ontario
L2V 3Y8

VEGETATION COMMUNITY
AND FINAL REHABILITATION
PLAN

ZUBEK, EMD AND PATTEN LTD.
ONTARIO LAND SURVEYORS

39 Stewart Road, Collingwood Ontario (705) 445-4910

SCALE - 1:2000
DATE - OCT.9, 1997
JOB # 78-84-8, REHAB.DGN
PAGE 5 OF 5
3/16/22

ATTACHMENT

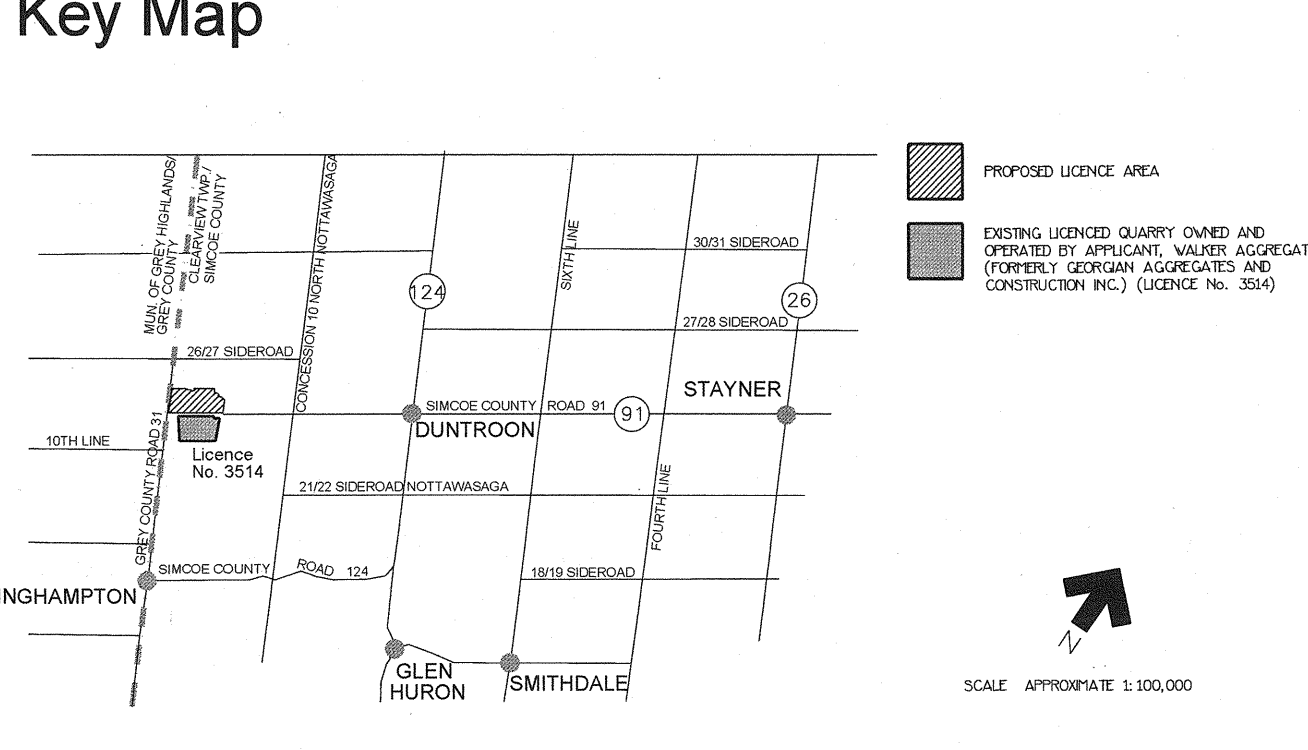
**ARA Site Plans
Walker Duntroon Quarry Expansion
Approved September 2014**

- Legend
- | | |
|----------------------------------|---|
| Expansion Licence Boundary | South Quarry Licence Boundary |
| Limit of Extraction | Walker Aggregates Inc. Lands |
| Lots and Concessions | Hydro Pole Line |
| Building/Structure Entrance | Niagara Escarpment Designation Boundary |
| Existing Driveway | Existing Stream |
| Field/Service Entrance | Entrance to Phase 1 |
| Entrance/Exit | Existing Vegetation |
| Direction of Surface Drainage | Wetland Boundary (Surveyed & Estimated) |
| Existing Fence | Pond |
| Existing Spot Elevation | Elevation, Contour |
| Niagara Escarpment Plan Boundary | Parcel Fabric |
| Cross Sections | Existing Ditch |

NOTES:

1. TOPOGRAPHIC INFORMATION PREPARED BY NORTHMAP PHOTOGRAPHY INC. AND GENERATED FROM AERIAL PHOTOGRAPHY FLOWN IN SPRING OF 2002. CONTOUR INTERVAL IS 2.0M. WITH FULL LOW INTERPOLATED CONTOURS. ALL ELEVATIONS ARE INDICATED IN METRES ABOVE SEA LEVEL (MASL). SPOT ELEVATIONS IN RED. ROYALTY LINE 2. WETLAND BASED ON SURVEY BY ZUBER, ETC. PATTEN & THORSEN, SEPTEMBER 2007.
2. LICENCE BOUNDARY COPIED FROM EXISTING AREA SITE PLANS ORIGINALLY PREPARED BY ZUBER, ETC. PATTEN & THORSEN LTD., DATE 1. JULY 2005. LICENCE BOUNDARY COPIED FROM EXISTING AREA SITE PLANS ORIGINALLY PREPARED BY ZUBER, ETC. PATTEN & THORSEN LTD., DATE 1. JULY 2005. LICENCE BOUNDARY COPIED FROM EXISTING AREA SITE PLANS ORIGINALLY PREPARED BY ZUBER, ETC. PATTEN & THORSEN LTD., DATE 1. JULY 2005. LICENCE BOUNDARY COPIED FROM EXISTING AREA SITE PLANS ORIGINALLY PREPARED BY ZUBER, ETC. PATTEN & THORSEN LTD., DATE 1. JULY 2005.
3. ZONING INFORMATION OBTAINED FROM THE MINISTRY OF NATURAL RESOURCES, JUNE 13, 2005. ZONING INFORMATION OBTAINED FROM THE MINISTRY OF NATURAL RESOURCES, JUNE 13, 2005. ZONING INFORMATION OBTAINED FROM THE MINISTRY OF NATURAL RESOURCES, JUNE 13, 2005. ZONING INFORMATION OBTAINED FROM THE MINISTRY OF NATURAL RESOURCES, JUNE 13, 2005.
4. ALL MEASUREMENTS SHOWN ON THIS PLAN ARE IN METRES.
5. BOUNDARY OF AREA TO BE LICENSED 55.93 ha (138.93 ac.) 58.41 ha (144.52 ac.)
6. HYDROLOGICAL INFORMATION OBTAINED FROM "HYDROLOGICAL REPORT AND LEVEL 2 HYDROLOGICAL ASSESSMENT" DATED SEPTEMBER 2005, AND "LEVEL 2 HYDROLOGICAL ASSESSMENT ADDENDUM" DATED OCTOBER 2007 PREPARED BY JACQUES HENRI LEMIEUX.
7. THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENSE, CATEGORY 2.
8. HIGH REQUIRED CROSSLANDSCAPE LEVELS VARY FROM 50% PACE TO 50% PACE, ACROSS THE SITE.

Final Approved Plan
Date: Sept. 4, 2014
Signature: [Signature]
Ministry of Natural Resources
Midhurst District Office



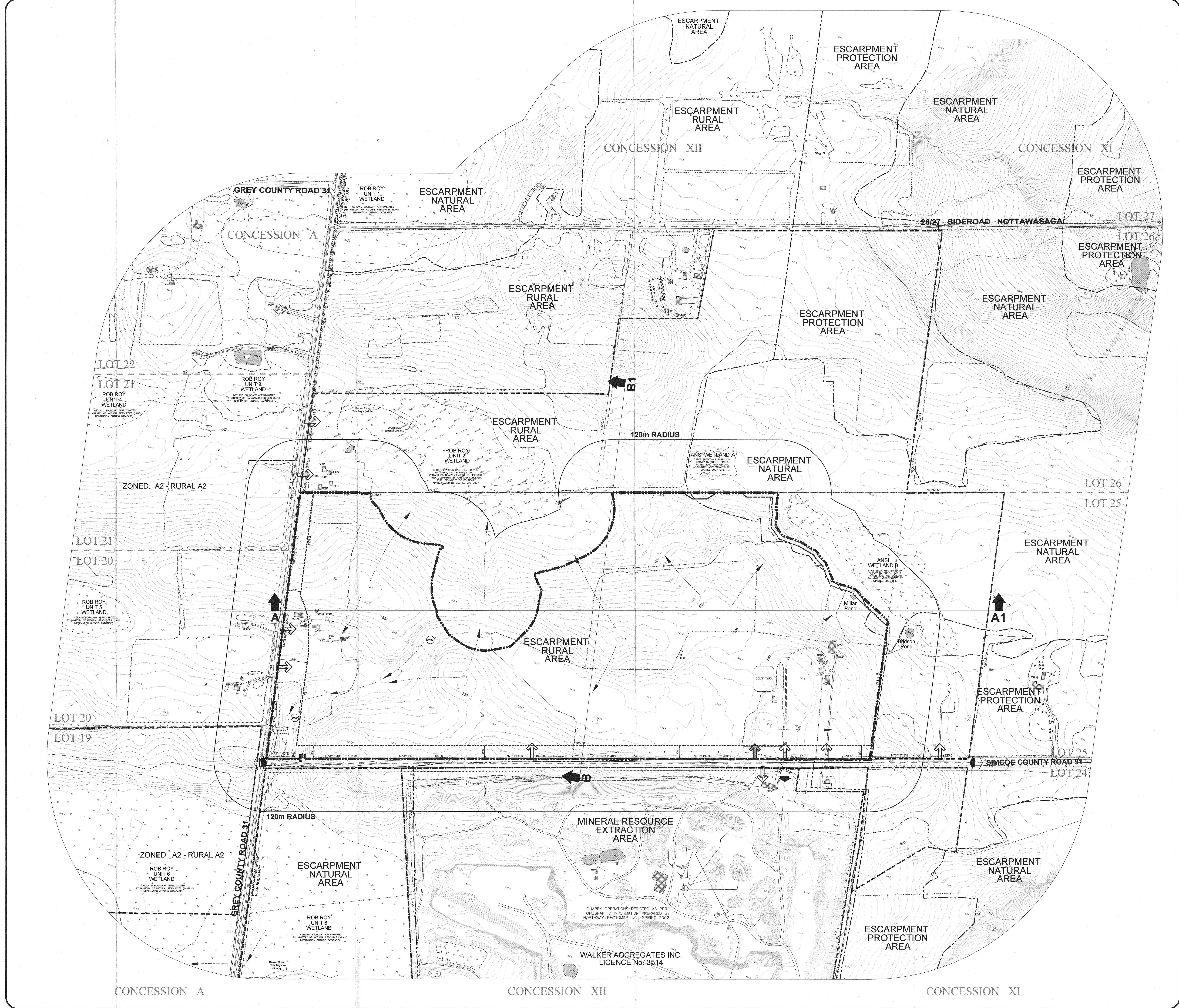
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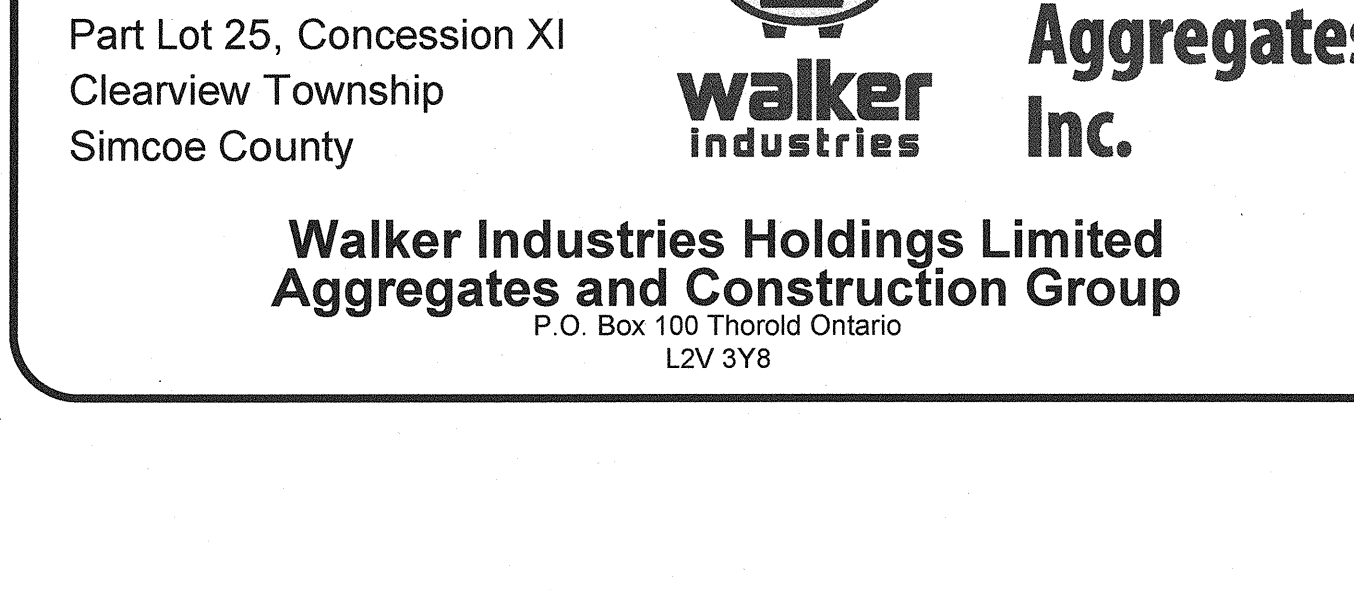
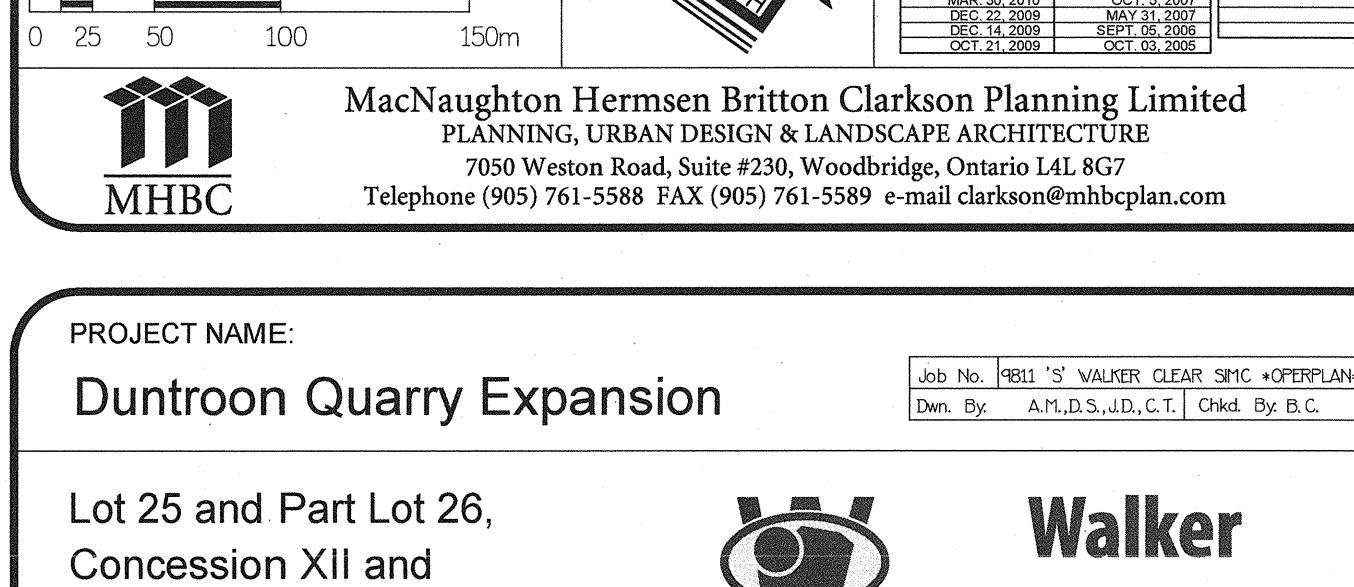
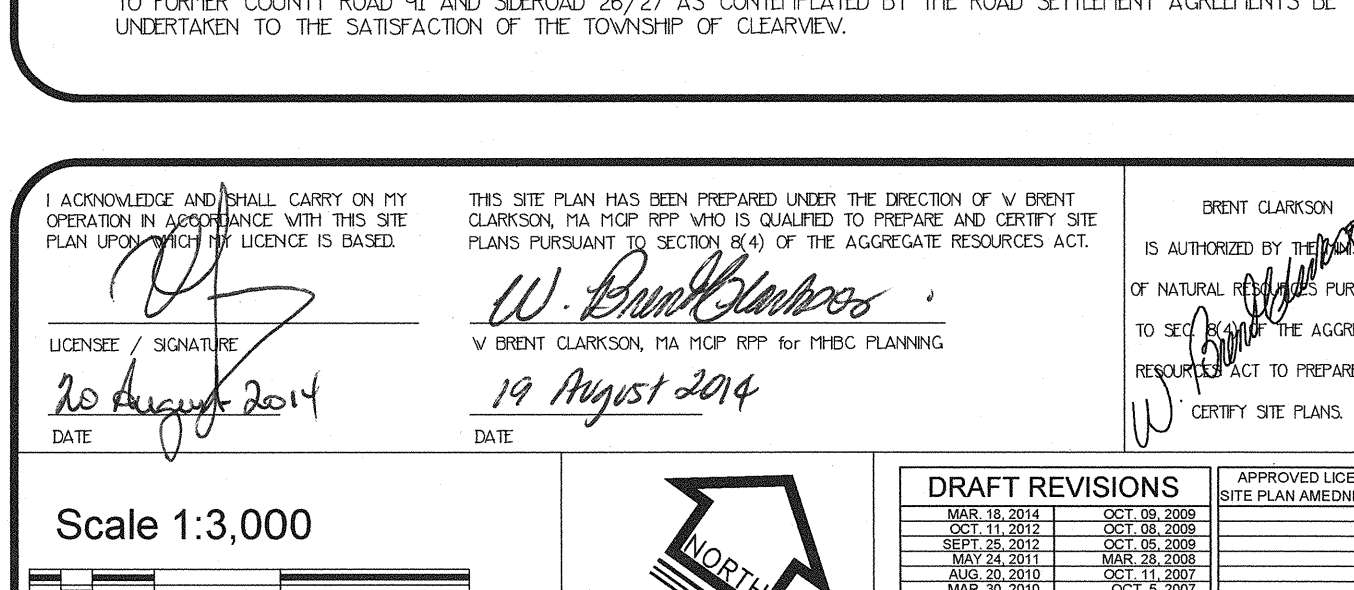
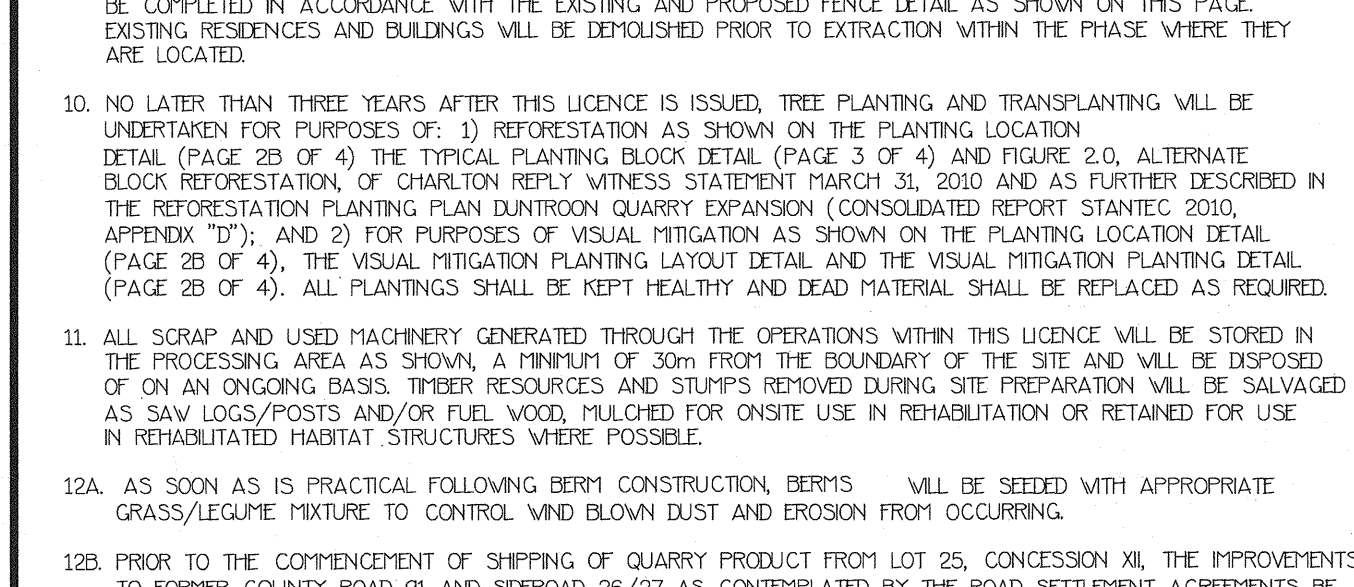
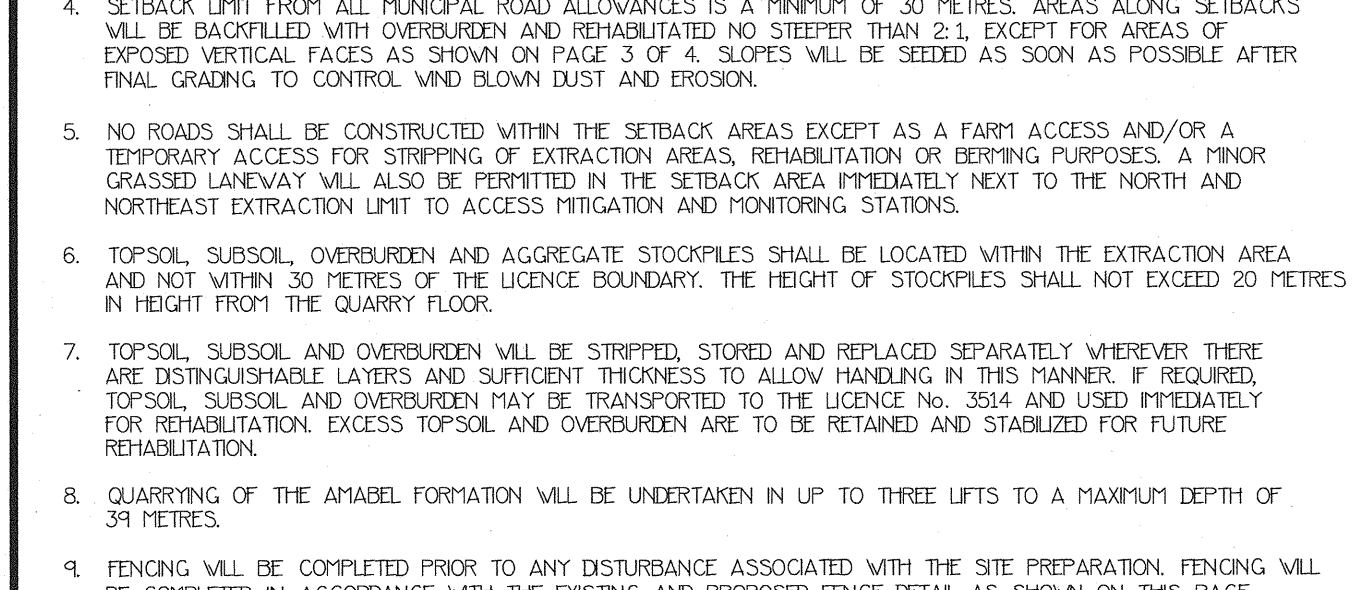
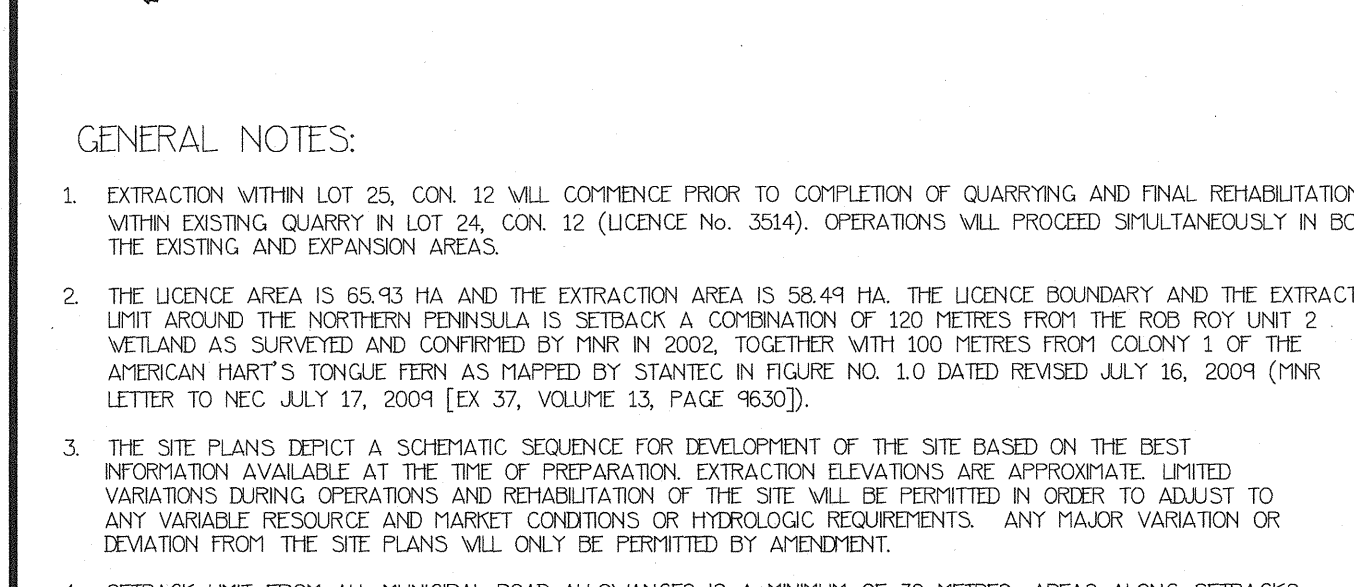
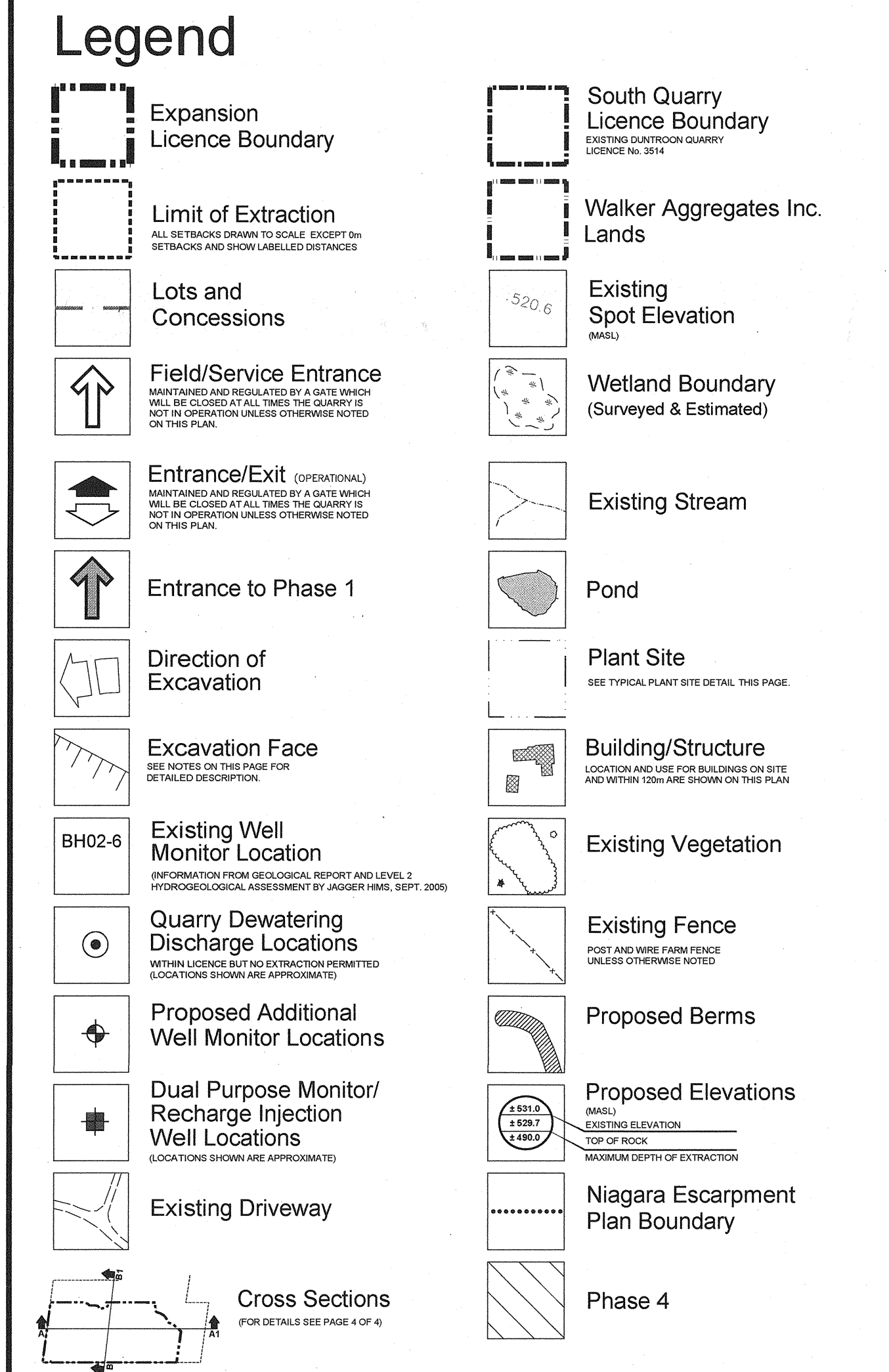
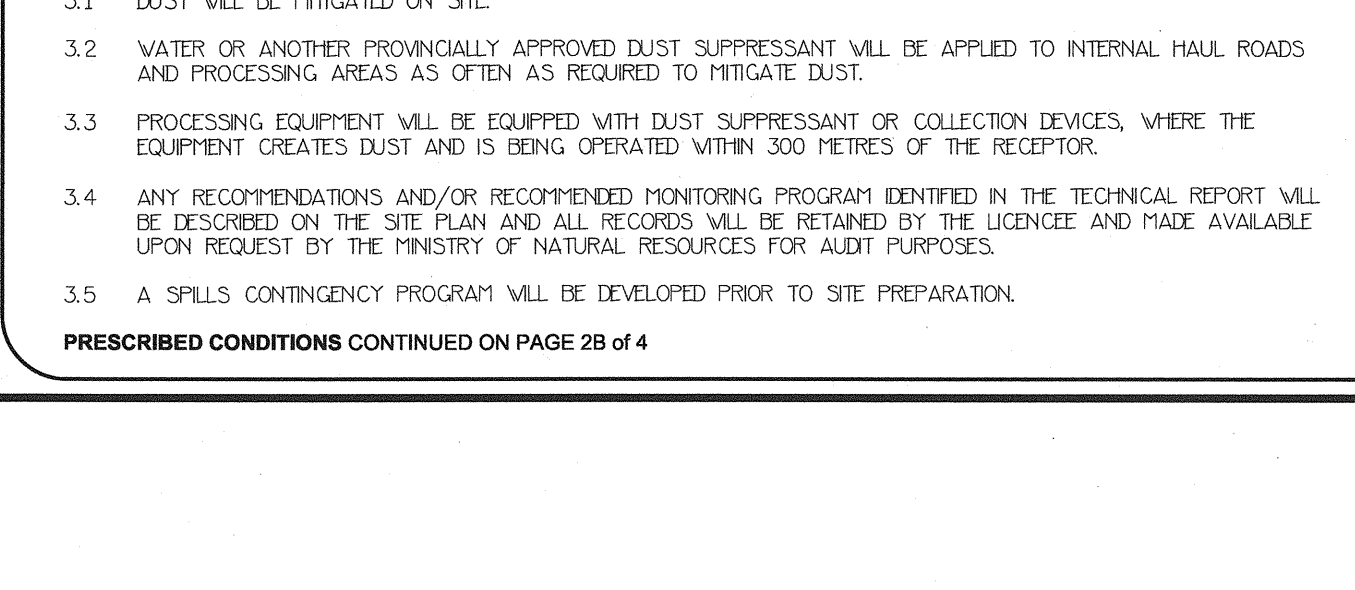
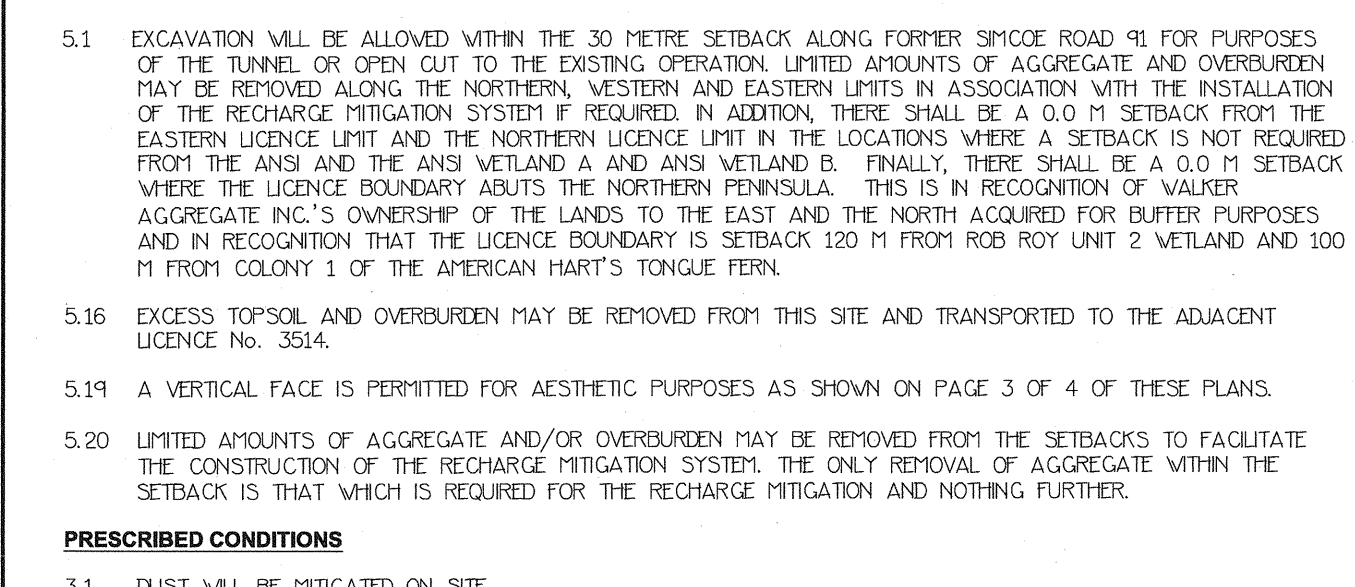
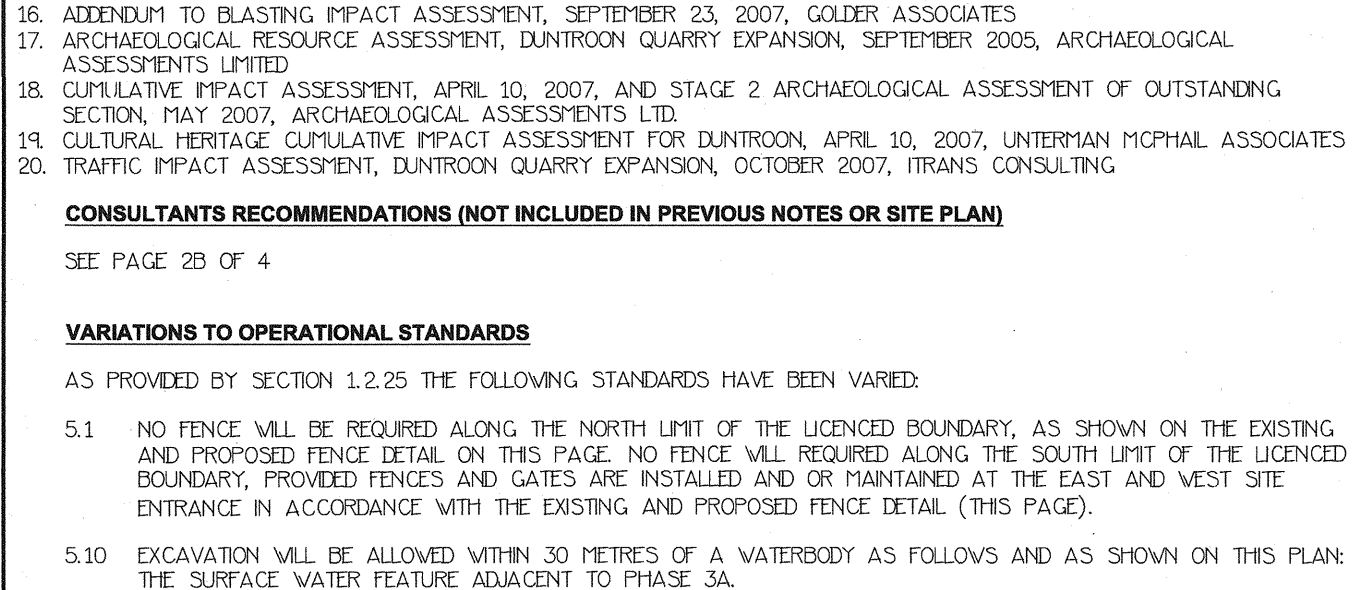
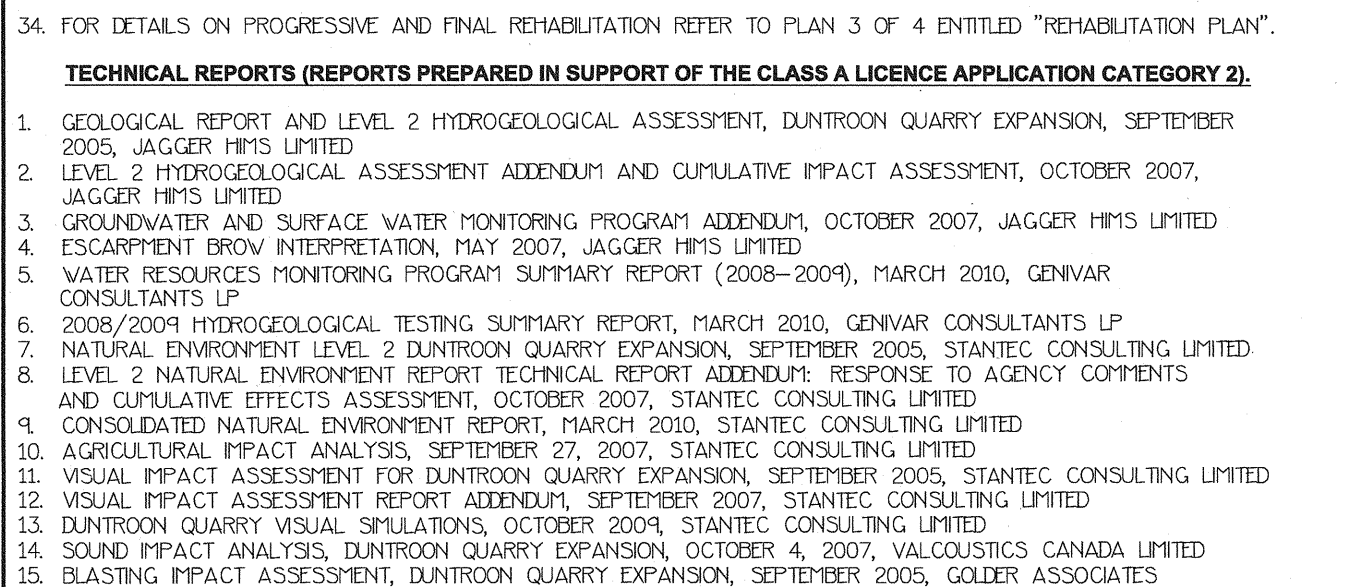
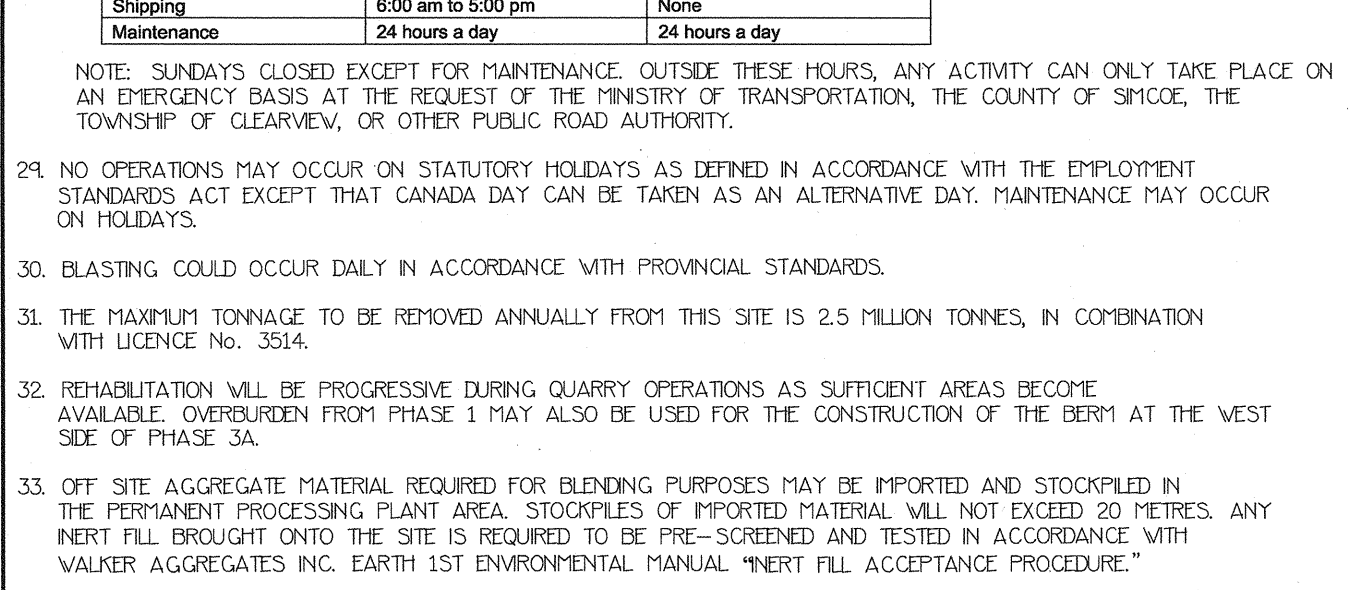
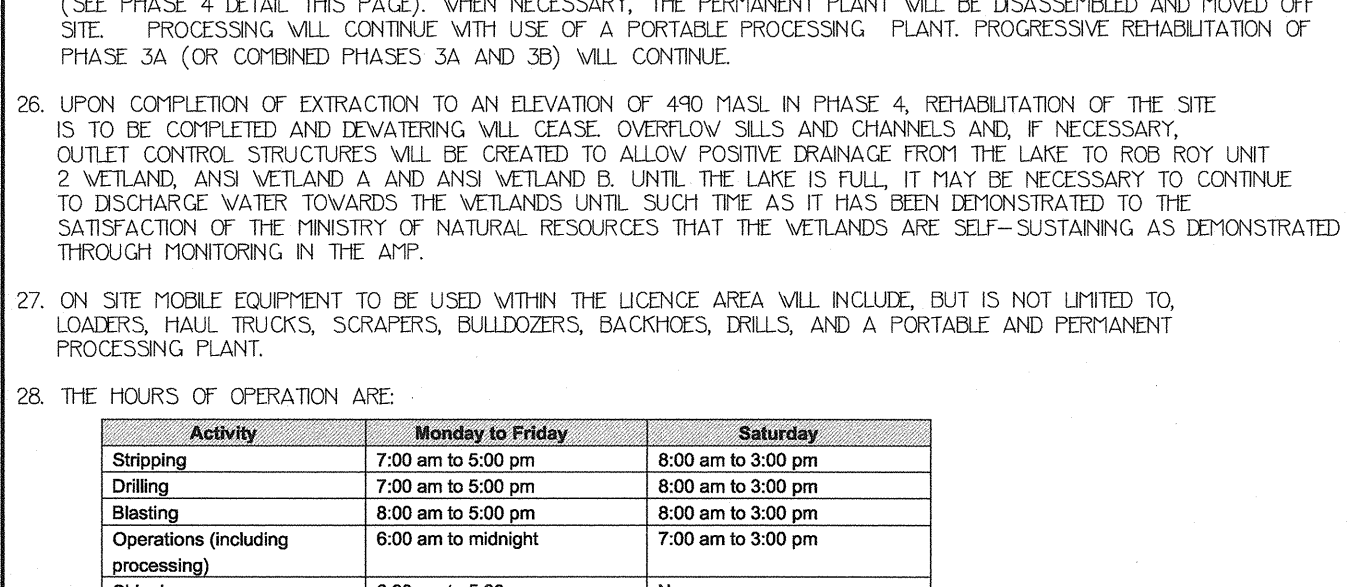
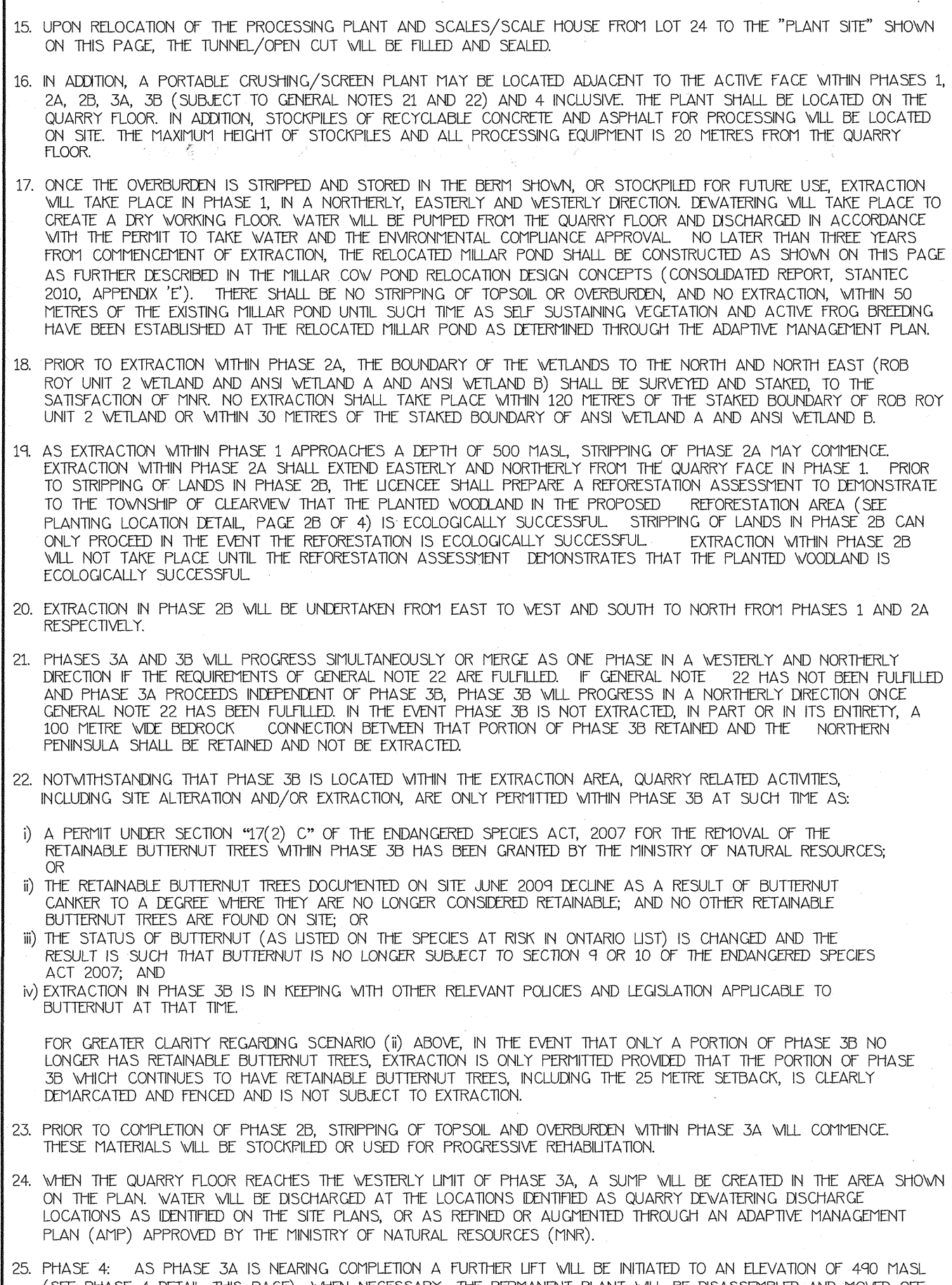
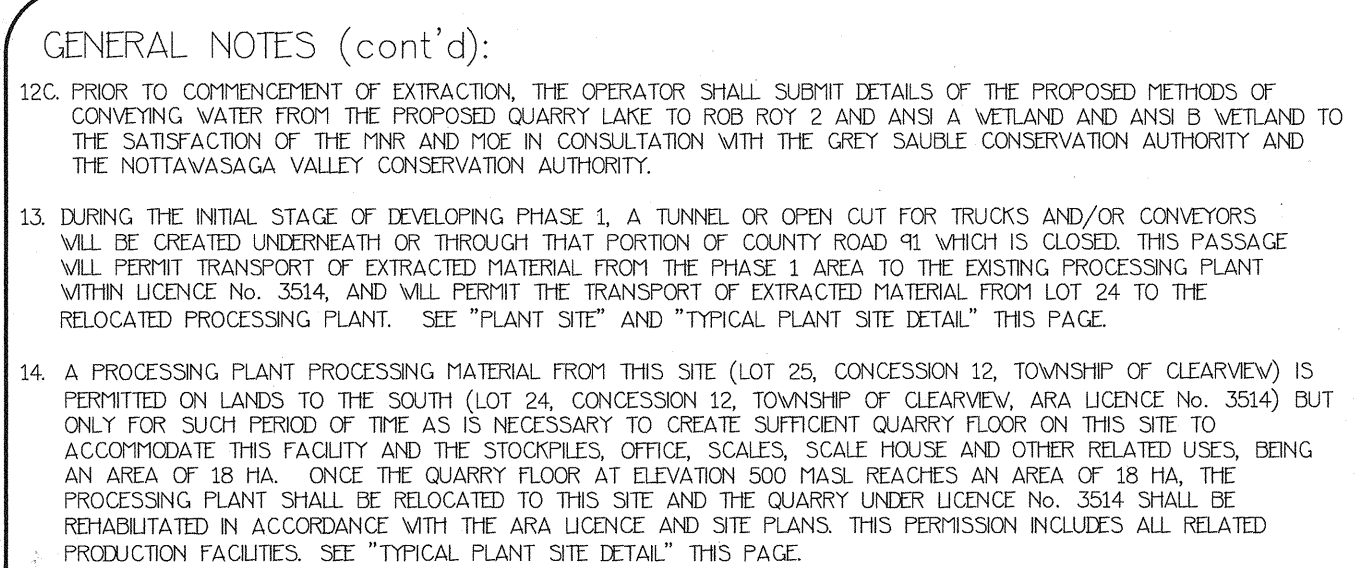
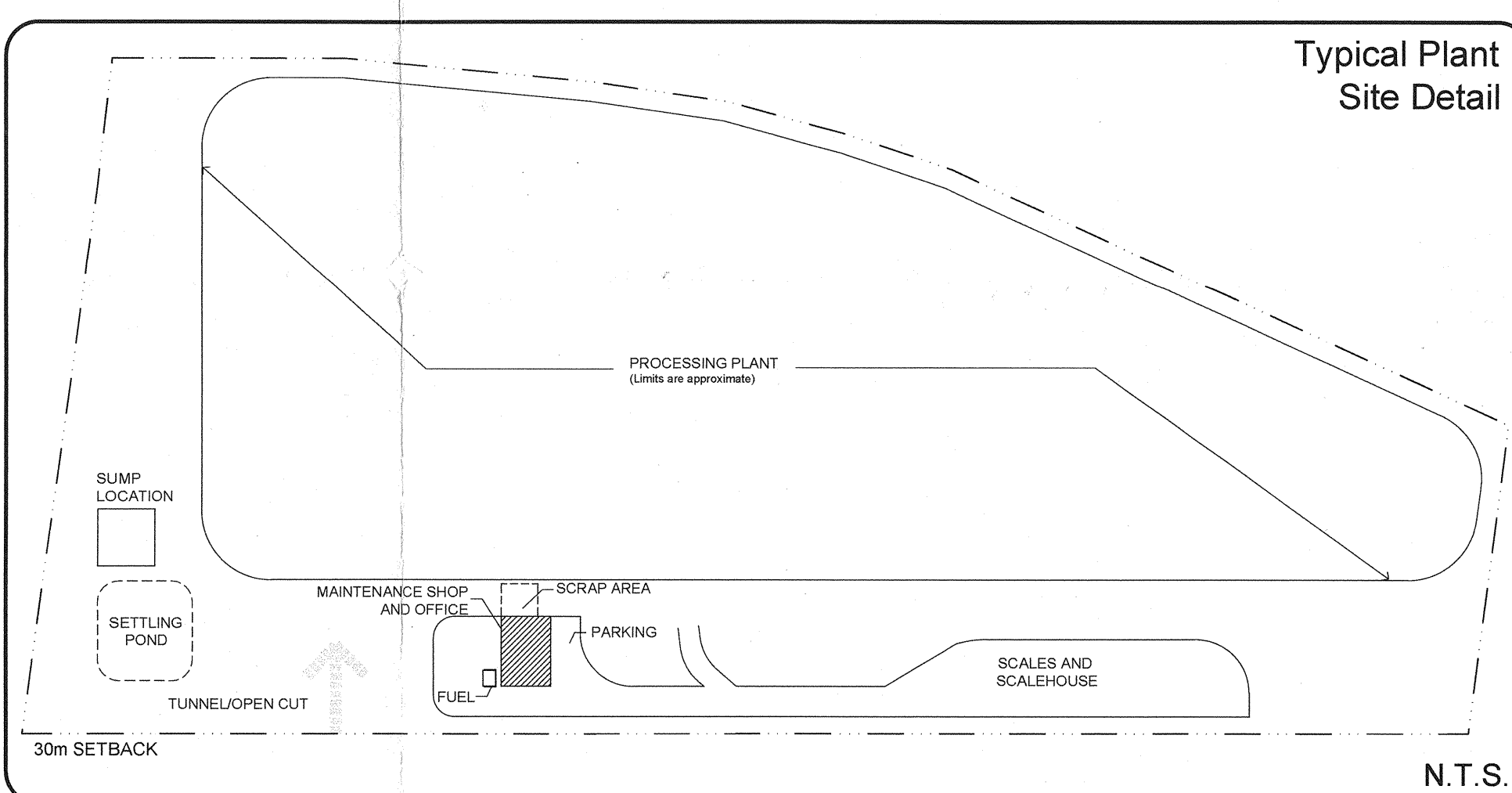
MacNaughton Hermen Britton Clarkson Planning Limited
PLANNING, URBAN DESIGN & LANDSCAPE ARCHITECTURE
7050 Weston Road, Suite #230, Woodbridge, Ontario L4L 8G7
Telephone (905) 761-5588 FAX (905) 761-5589 e-mail clarkson@mhbcplan.com

PROJECT NAME:
Duntroon Quarry Expansion

Lot 25 and Part Lot 26,
Concession XII and
Part Lot 25, Concession XI
Clearview Township
Simcoe County

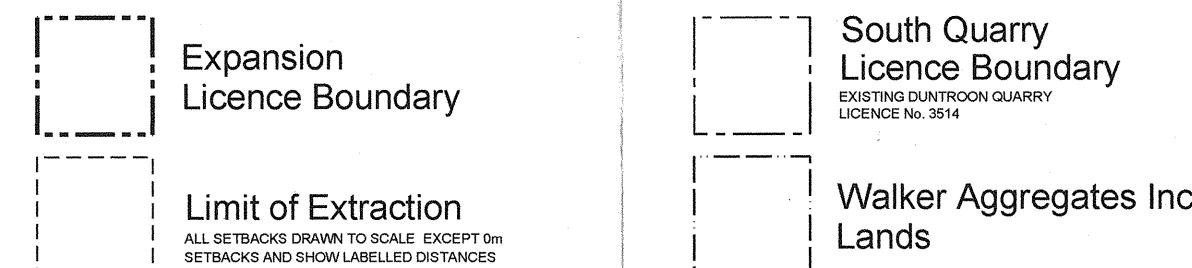
Walker Industries Holdings Limited
Aggregates and Construction Group
P.O. Box 100 Thorold Ontario
L2V 3Y8





Operational 2B of 4 Plan

Legend



PRESCRIBED CONDITIONS (cont'd)

- REFILLING AND MAINTENANCE OF MOBILE ON-SITE EQUIPMENT (NOT OFF-SITE HAULAGE TRUCKS) WILL TAKE PLACE ON AN INTERMITTENT BASIS DESIGNED TO CONTROL FUEL SPILLS (IF ANY). ABOVE GROUND FUEL TANKS SHALL BE DOUBLE WALLED IN ACCORDANCE WITH THE TECHNICAL STANDARDS AND SAFETY ACT AND THE ONTARIO LIQUID FUELS HANDLING CODE AND THE FUEL OIL CODE. ALL FUEL STORAGE AND REFILLING OPERATIONS WILL BE CONDUCTED IN THE AREA SHOWN AS "FUEL" ON THE TYPICAL PLANT SITE DETAIL. MOBILE FUEL DISPENSERS WILL BE USED TO TRANSPORT FUEL TO THE SITE AND TO REFUEL THE PORTABLE PROCESSING PLANT AND MOBILE EQUIPMENT. FUEL STORAGE AND SPILLS CONTINGENCY PLANS AS SET OUT IN WALKER'S DARTH 1ST PROTOCOL AND EMERGENCY RESPONSE HANDBOOK SHALL BE IMPLEMENTED AS REQUIRED.
- IF REQUIRED, AN ENVIRONMENTAL COMPLIANCE APPROVAL WILL BE OBTAINED FOR THE DISCHARGE SYSTEM SHOULD WATER BE DISCHARGED OFF-SITE.
- IF REQUIRED, AN ENVIRONMENTAL COMPLIANCE APPROVAL WILL BE OBTAINED FOR PROCESSING EQUIPMENT TO BE USED ON-SITE.
- IF REQUIRED, A PERMIT TO TAKE WATER WILL BE OBTAINED FOR UNLOADING GROUND AND/OR SURFACE WATER.
- THE LICENSEE WILL MONITOR ALL PLASTICS, GROUND VIBRATIONS AND BLASTS OVERPRESSURE AND WILL OPERATE TO ENSURE COMPLIANCE WITH CURRENT PROVINCIAL GUIDELINES.
- BLASTING WILL NOT OCCUR ON A HOLIDAY OR BETWEEN THE HOURS OF 6:00 PM ON ANY DAY AND 8:00 AM ON THE FOLLOWING DAY.
- ALL BLAST MONITORING REPORTS MUST BE RETAINED BY THE LICENSEE AND MADE AVAILABLE UPON REQUEST BY THE MINISTRY OF NATURAL RESOURCES FOR ALL PLANT MONITORING STATIONS.

CONSULTANTS RECOMMENDATIONS (NOT INCLUDED IN PREVIOUS NOTES OR SITE PLAN)

1. PUMPING OF WATER THAT ACCUMULATES IN THE EXCAVATION AS A RESULT OF DIRECT PRECIPITATION, SURFACE WATER RUNOFF, AS WELL AS SOFT GROUNDWATER RISE, WILL BE REQUIRED IN ORDER TO MAINTAIN DRY WORKING CONDITIONS ACROSS THE QUARRY FLOOR.
2. WATER THAT ACCUMULATES IN THE QUARRY FLOOR WILL BE CHANNELLED INTO THE MAIN SLURP PUMP FOR RE-USE. EXCESS WATER WILL BE REMOVED BY PUMPING, PRIOR TO PUMPING OFF-SITE, THE OWNER SHALL OBTAIN AN ENVIRONMENTAL COMPLIANCE APPROVAL PRIOR TO THE WORK WHICH SHALL INCLUDE APPROPRIATE WATER QUALITY DISCHARGE STANDARDS.
3. WATER ACCUMULATED IN THE AREAS NOTED ABOVE WILL BE USED IN THE FOLLOWING ORDER OF PRIORITY FOR: (1) IRRIGATION OF OFF-SITE PROPERTIES IN ACCORDANCE WITH THESE SITE PLANS OR AS REFERRED TO OR AUTHORIZED BY AN ADAPTIVE MANAGEMENT PLAN APPROVED BY THE MINISTRY OF NATURAL RESOURCES; (2) DUST CONTROL AND ROAD CLEANING; (3) FOR AGRICULTURAL PROCESSING OPERATIONS; AND (4) FOR IRRIGATION OF LANDSCAPE AREAS.
4. AGGREGATE PROCESS WATER WILL BE DIRECTED TO A SETTING POND SYSTEM FOR REMOVAL OF FINES AND CLEAN WATER WILL BE RETURNED TO THE SLURP OR OTHER SOURCE WATER PONES FOR REUSE.
5. A SLURP, EXTENDING BEYOND THE QUARRY FLOOR, IS TO BE LOCATED WITHIN THE PHASE 1 EXTRACTION AREA FOR QUARRY PROCESSING PURPOSES. SEE TYPICAL PLANT SITE DETAIL, PAGE 2A OF 4. ONCE THE QUARRY FLOOR HAS REACHED 100 MILES AND WILL REMAIN IN THAT GENERAL LOCATION THROUGHOUT THE LIFE OF THE QUARRY, THE SLURP IS TO BE SIZED TO PROVIDE SUFFICIENT STORAGE OF WATER PRODUCED IN WORKING OPERATIONS FOR THE LIFE OF THE QUARRY. (IE. APPROXIMATELY 50 METERS BY 50 METERS AT THE MINIMUM DEPTH OF 5 METERS). THE SLURP WILL BE DEFINED AND DIMENSIONED AS NECESSARY TO ACCOMMODATE THE WATER EXCAVATION (DOWN TO ELEVATION AND TSS) NEAR THE PHASE 1 AREA. IN ADDITION, A SECOND SLURP MAY BE CREATED AND WILL FOLLOW THE EXTRACTION FACE FOR ONGOING QUARRY DEVELOPMENT.
6. EFFLUENT GROUNDWATER AND SURFACE WATER MONITORING PROGRAMS AS DESCRIBED BELOW, OR AS REFERRED TO OR AUTHORIZED IN AN ADAPTIVE MANAGEMENT PLAN APPROVED BY THE MINISTRY OF NATURAL RESOURCES.

GENERAL

MONITORING SHALL BE CONDUCTED BY A QUALIFIED PERSON AS DEFINED BY THE MINISTRY OF THE ENVIRONMENT FOLLOWING CONTINGENCY INDUSTRIAL STANDARDS.

MONITORING LOCATIONS DESIGNATED AS OF JUNE 2008 ARE SHOWN IN FIGURE 2-1 OF THE WATER RESOURCES MONITORING SURVEILLANCE REPORT (2008-2009), SHALL, SWA1, SWA2, SWA3, SWA4, SWA5, SWA6, SWA7, SWA8, SWA9, SWA10, SWA11, SWA12, SWA13, SWA14, SWA15, SWA16, SWA17, SWA18, SWA19, SWA20, SWA21, SWA22, SWA23, SWA24, SWA25, SWA26, SWA27, SWA28, SWA29, SWA30, SWA31, SWA32, SWA33, SWA34, SWA35, SWA36, SWA37, SWA38, SWA39, SWA40, SWA41, SWA42, SWA43, SWA44, SWA45, SWA46, SWA47, SWA48, SWA49, SWA50, SWA51, SWA52, SWA53, SWA54, SWA55, SWA56, SWA57, SWA58, SWA59, SWA60, SWA61, SWA62, SWA63, SWA64, SWA65, SWA66, SWA67, SWA68, SWA69, SWA70, SWA71, SWA72, SWA73, SWA74, SWA75, SWA76, SWA77, SWA78, SWA79, SWA80, SWA81, SWA82, SWA83, SWA84, SWA85, SWA86, SWA87, SWA88, SWA89, SWA90, SWA91, SWA92, SWA93, SWA94, SWA95, SWA96, SWA97, SWA98, SWA99, SWA100, SWA101, SWA102, SWA103, SWA104, SWA105, SWA106, SWA107, SWA108, SWA109, SWA110, SWA111, SWA112, SWA113, SWA114, SWA115, SWA116, SWA117, SWA118, SWA119, SWA120, 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Typical Planting Block Detail

SCALE N.T.S.

TYPICAL ONE HECTARE PLANTING UNIT
10000 sq.m.

Typical Planting Block Layout

SCALE N.T.S.

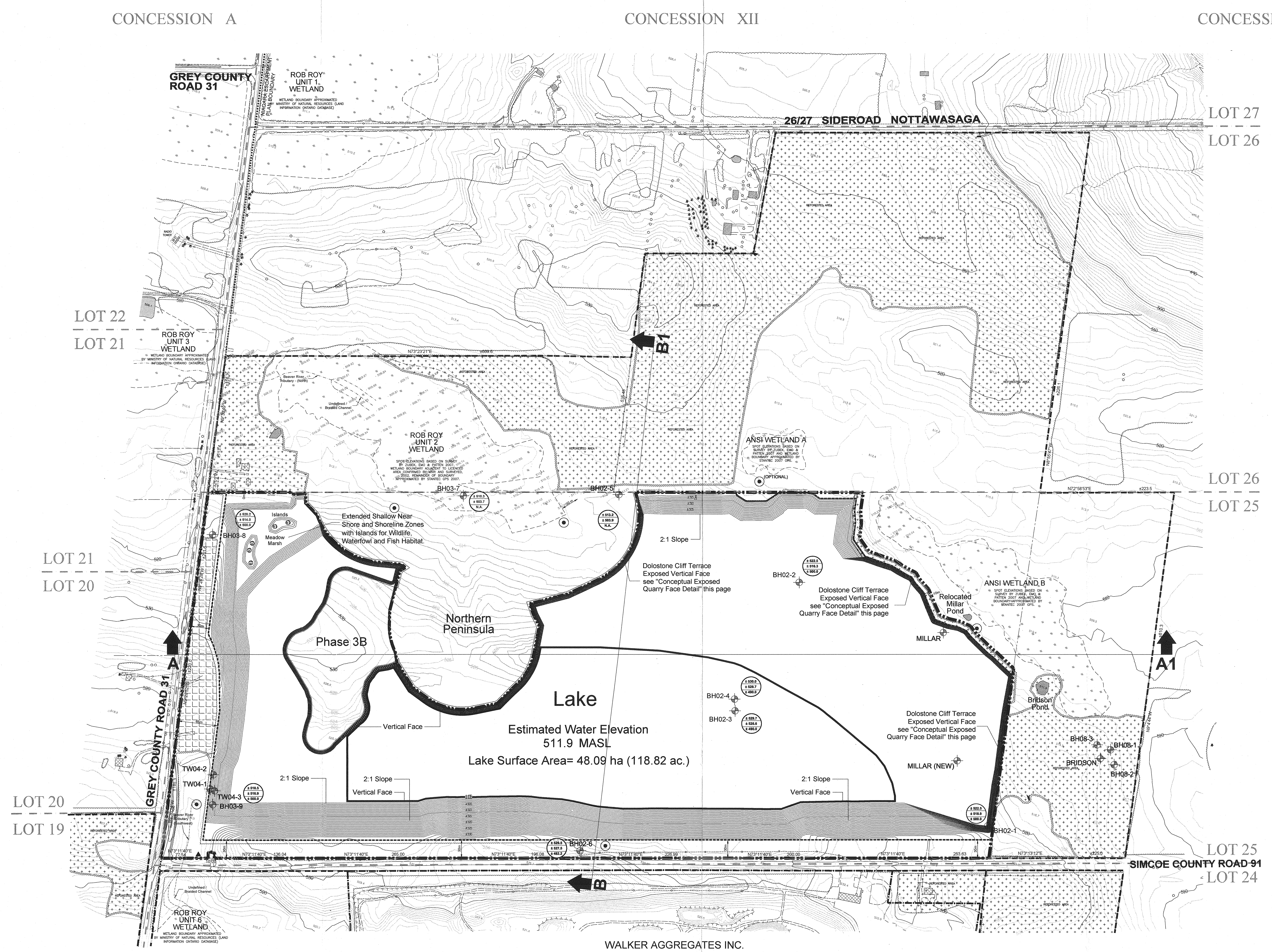
TYPICAL ONE HECTARE PLANTING UNIT
10000 sq.m.

PLANTING LIST

Plant Species	Plant Species	Plant Species
...

NOTES

1. All proposed new plantings will consist of native trees identified in the planting list, which provide habitat for native wildlife and are suitable for the proposed use of the area.
2. All proposed new plantings will be planted in the proposed planting blocks, which are identified in the planting list.
3. All proposed new plantings will be planted in the proposed planting blocks, which are identified in the planting list.
4. All proposed new plantings will be planted in the proposed planting blocks, which are identified in the planting list.
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6. All proposed new plantings will be planted in the proposed planting blocks, which are identified in the planting list.
7. All proposed new plantings will be planted in the proposed planting blocks, which are identified in the planting list.



Conceptual Island Rehabilitation Detail

SCALE N.T.S.

Rehabilitated Side Slope Detail

SCALE N.T.S.

Conceptual Exposed Quarry Face Detail

SCALE N.T.S.

Planting Location Detail

SCALE N.T.S.

Rehabilitation 3 of 4 Plan

Legend

Expansion Licence Boundary	South Quarry Licence Boundary
Limit of Extraction	Walker Aggregates Inc. Lands
Lots and Concessions	Existing Elevation and Contour
Existing Spot Elevation	Proposed Elevation and Contour
Building/Structure	Proposed Elevations
Existing Fence	Existing Vegetation
Existing Wetland Boundary	Reforested Area
Pond	Existing Well Monitor Location
Niagara Escarpment Plan Boundary	Quarry Dewatering Discharge Locations
Existing Driveway	Excavation Face
Proposed Visual Mitigation Planting	Existing Stream
Cross Sections	

GENERAL NOTES:

1. THE QUARRY WILL BE PROGRESSIVELY REHABILITATED. FINAL QUARRY SLOPES WILL BE ESTABLISHED AS THE LIMITS OF EXTRACTION IN THE AREA ADJACENT TO THEM ARE REACHED. GENERALLY, THE FINAL FLOOR ELEVATION WILL BE 550.0 MASL OUTSIDE OF PHASES 4 AND 440.0 MASL IN PHASE 4, BUT MAY VARY SLIGHTLY ACROSS THE SITE.
2. REHABILITATED SLOPES WILL BE ESTABLISHED USING A CUT-FILL METHOD. THE MAJORITY OF SLOPES WILL HAVE A SLOPE OF AT LEAST 1:1 HORIZONTAL VERTICAL. WHERE NEARER SLOPES ARE REQUIRED, THEY WILL BE LIMITED TO 2:1 HORIZONTAL VERTICAL. WHERE NEARER SLOPES ARE REQUIRED, THEY WILL BE LIMITED TO 2:1 HORIZONTAL VERTICAL. WHERE NEARER SLOPES ARE REQUIRED, THEY WILL BE LIMITED TO 2:1 HORIZONTAL VERTICAL.
3. CLEAN FILL (E.G. TOPSOIL, OVERBURDEN) MAY BE REQUIRED TO FACILITATE QUARRY REHABILITATION. ONLY SUFFICIENT MATERIAL TO CREATE A 1:1 HORIZONTAL VERTICAL GRADE MAY BE REQUIRED. ANY FILL BROUGHT ONTO THE SITE IS REQUIRED TO BE RE-CONTAINED AND REUSED IN ACCORDANCE WITH WALKER AGGREGATES INC. EARTH LOT OVERBURDEN, FILLING, AND FILLING MATERIALS. ANY FILL BROUGHT ONTO THE SITE IS REQUIRED TO BE RE-CONTAINED AND REUSED IN ACCORDANCE WITH WALKER AGGREGATES INC. EARTH LOT OVERBURDEN, FILLING, AND FILLING MATERIALS.
4. AS PART OF PROGRESSIVE REHABILITATION, THE 2:1 SLOPES ADJACENT TO THE QUARRY SLOPES WILL BE REHABILITATED. THE REHABILITATION WILL BE DONE IN ACCORDANCE WITH THE REHABILITATION PLAN. THE REHABILITATION WILL BE DONE IN ACCORDANCE WITH THE REHABILITATION PLAN. THE REHABILITATION WILL BE DONE IN ACCORDANCE WITH THE REHABILITATION PLAN.
5. THE QUARRY WILL BE REHABILITATED TO AN ESTIMATED WATER ELEVATION OF 511.9 MASL. AS FINAL REHABILITATION TAKES PLACE, OVERLAY SLOPES OF CHANNELS TOGETHER WITH OUTLET STRUCTURES IF NECESSARY WILL BE CREATED TO ALLOW POSITIVE DRAINAGE FROM THE LAKE TO THE REHABILITATED AREA. IT IS RECOMMENDED THAT THE QUARRY SLOPES NOT BE REHABILITATED TO A HIGHER ELEVATION THAN THE PRESENT LAKE LEVEL. THE QUARRY SLOPES NOT BE REHABILITATED TO A HIGHER ELEVATION THAN THE PRESENT LAKE LEVEL.
6. THE PROPOSED PLANTING AND RELATED PRODUCTION EQUIPMENT SHALL BE INSTALLED PRIOR TO THE EXTRACTION AREA FOLLOWING COMPLETION OF EXTRACTION AND REHABILITATION OF THE QUARRY. THE PROPOSED PLANTING AND RELATED PRODUCTION EQUIPMENT SHALL BE INSTALLED PRIOR TO THE EXTRACTION AREA FOLLOWING COMPLETION OF EXTRACTION AND REHABILITATION OF THE QUARRY.
7. REHABILITATION DETAILS ARE PROVIDED IN THE "CONCEPTUAL QUARRY FACE DETAIL", "CONCEPTUAL ISLAND REHABILITATION DETAIL", AND REHABILITATED SLOPE DETAIL/POSH HABITAT ENHANCEMENT" (THIS PAGE).
8. SHALLOW SHORELINE ZONES WILL BE CREATED AND TREATED TO SUPPORT NATURAL VEGETATION, COURTS AND STRUCTURE DIVERSITY WILL BE PROVIDED BY REHABILITATING BRUSH PILES, LOGS, STUMPS AND LOGS ALONG THE SHORELINE ZONE BOTH ABOVE AND BELOW THE LAKE ELEVATION IN THE EXISTING QUARRY AND WETLAND AREAS.
9. THE EXTENDED SHALLOW SHORELINE ZONE (APPROPRIATE LOCATION SHOWN ON PLANS) WILL BE CREATED ON-SITE USING ON-SITE EXISTING MATERIAL. A VARIETY OF SPECIES WILL BE INCORPORATED AROUND THE EDGE OF THE ISLANDS. THESE MAY INCLUDE, BUT ARE NOT LIMITED TO, BULrush, GRASS, SAGE AND PINE. THESE WILL BE PLANTED IN THE ISLANDS. THESE MAY INCLUDE, BUT ARE NOT LIMITED TO, BULrush, GRASS, SAGE AND PINE. THESE WILL BE PLANTED IN THE ISLANDS.
10. A PORTION OF THE QUARRY FACE ALONG THE NORTHEAST AND EAST LIFT OF THE EXTRACTION AREA AND ALONG THE NORTHERN PENINSULA AREA WILL BE LEFT VERTICAL AND PROPOSED TO BE REHABILITATED TO A HIGHER ELEVATION. THE REHABILITATION WILL BE DONE IN ACCORDANCE WITH THE REHABILITATION PLAN. THE REHABILITATION WILL BE DONE IN ACCORDANCE WITH THE REHABILITATION PLAN.
11. IN THE EVENT PHASE 3B IS NOT EXTRACTED IN PART, OR IN ITS ENTIRETY, A 300M WIDE REDWOOD CONNECTION BETWEEN THAT PORTION OF PHASE 3B REMAINING AND THE REMAINING PORTION OF PHASE 3B WILL BE PROVIDED. THE REDWOOD CONNECTION WILL BE PROVIDED IN ACCORDANCE WITH THE REHABILITATION PLAN. THE REDWOOD CONNECTION WILL BE PROVIDED IN ACCORDANCE WITH THE REHABILITATION PLAN.
12. IN THE EVENT REHABILITATION LOCATED AT PHASE 3B IS NOT EXTRACTED, EXTRACTION TAKES PLACE IN ACCORDANCE WITH THE REHABILITATION PLAN. THE REHABILITATION WILL BE DONE IN ACCORDANCE WITH THE REHABILITATION PLAN.
13. IN THE EVENT REHABILITATION LOCATED AT PHASE 3B IS NOT EXTRACTED, EXTRACTION TAKES PLACE IN ACCORDANCE WITH THE REHABILITATION PLAN. THE REHABILITATION WILL BE DONE IN ACCORDANCE WITH THE REHABILITATION PLAN.
14. PRIOR TO COMPLETION OF THE QUARRY, THE OPERATOR SHALL POST FINANCIAL SECURITY TO BE HELD BY A REPUTABLE PARTY, IN AN AMOUNT EQUAL TO ONE-TWENTY (1/20) OF THE COST OF CLOSING WATER MANAGEMENT AND MONITORING ACTIVITIES THAT MAY BE REQUIRED DURING THE QUARRY REHABILITATION AND LAKE FILLING PERIOD. THE SECURITY OF THE BALANCE THEREOF TOGETHER WITH ANY ACCUMULATED INTEREST, SHALL BE RETURNED TO THE OPERATOR UPON SUCCESSFUL COMPLETION OF THE REHABILITATION AND UPON SURRENDER OF THE LICENSE.
15. ALL DISCHARGE AREAS, MONITORING WELLS AND ANY RESOURCE WELLS SHALL ALSO BE FULLY REHABILITATED OR DECOMMISSIONED.

Scale 1:3,000

0 25 50 100 150m

MacNaughton Hermes Britton Clarkson Planning Limited

PLANNING, URBAN DESIGN & LANDSCAPE ARCHITECTURE
7050 Weston Road, Suite #230, Woodbridge, Ontario L4L 8C7
Telephone (905) 761-5588 FAX (905) 761-5589 e-mail clarkson@mhbcplan.com

PROJECT NAME:

Duntroon Quarry Expansion

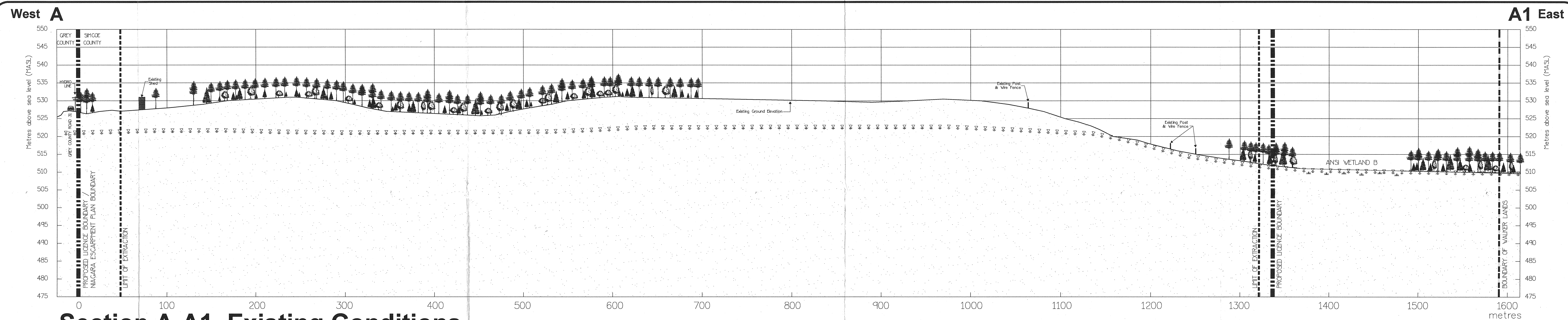
Lot 25 and Part Lot 26, Concession XII and Part Lot 25, Concession XI, Clearview Township, Simcoe County

Walker Aggregates Inc.

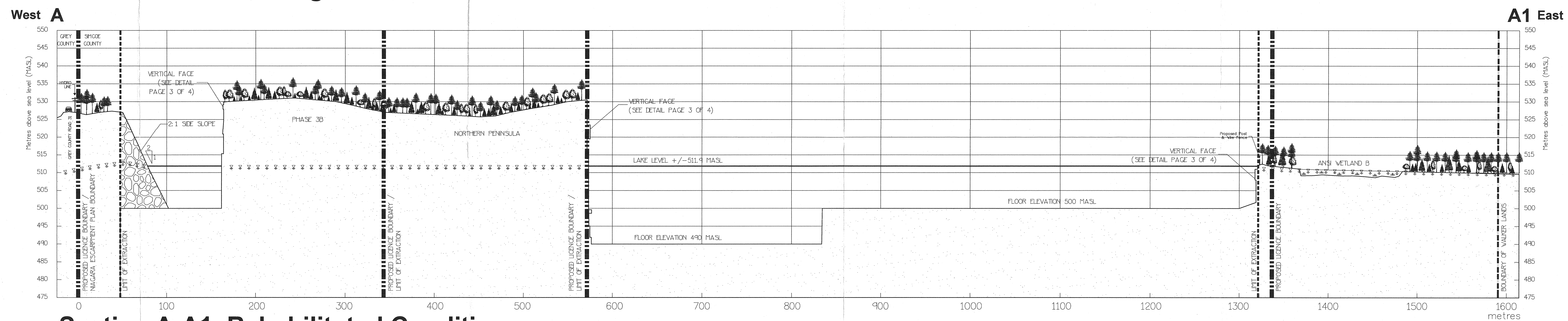
Walker Industries Holdings Limited
Aggregates and Construction Group
P.O. Box 100 Thorold Ontario L2V 3Y8

Final Approved Plan

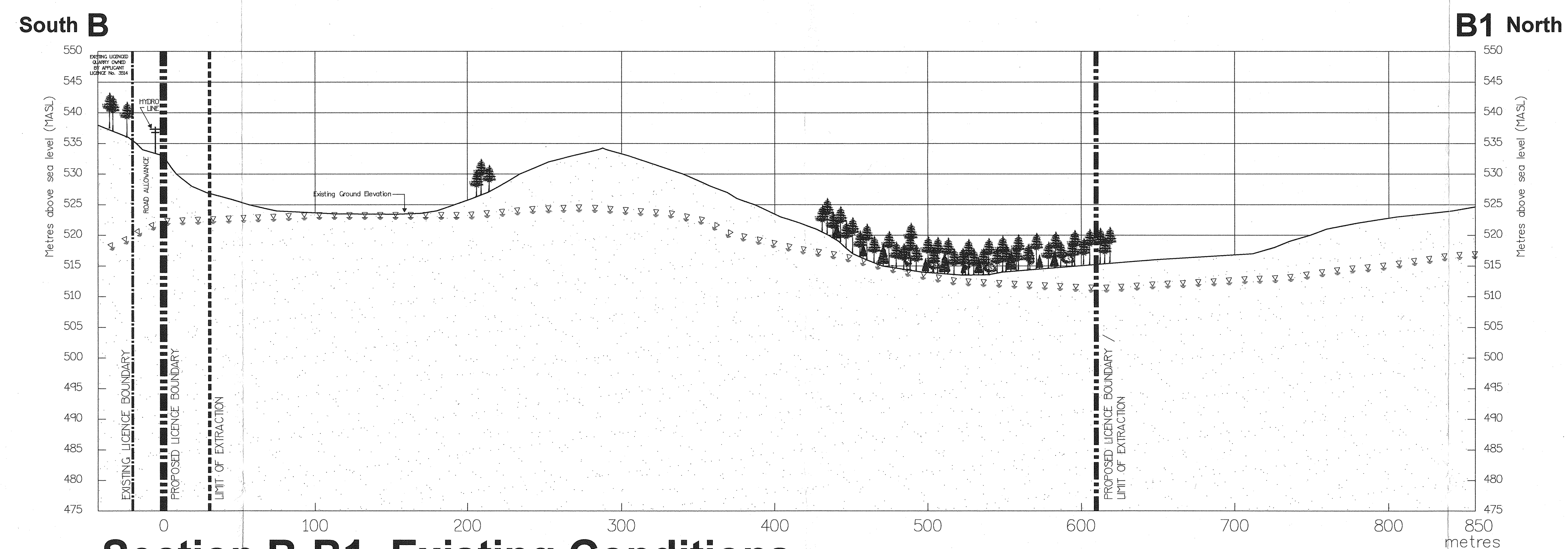
Date: Sept 4, 2014
Signature: [Signature]
Ministry of Natural Resources
Midhurst District Office



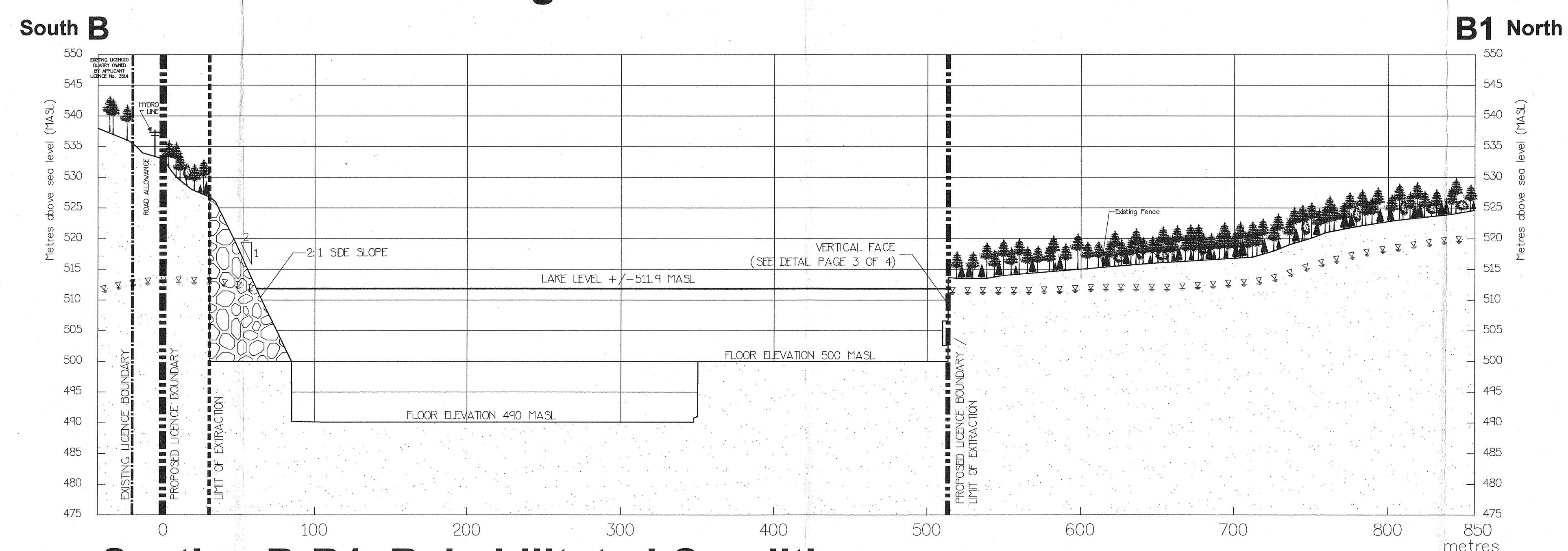
Section A-A1 Existing Conditions



Section A-A1 Rehabilitated Conditions



Section B-B1 Existing Conditions



Section B-B1 Rehabilitated Conditions

Cross Sections 4 of 4

Legend

- Walking Aggregate Lands
- Expansion Licence Boundary
- Swamp or Wetland
- Limit of Extraction
- South Quarry Licence Boundary
- Ground Water Table

- NOTES:
1. TOPOGRAPHIC INFORMATION PROVIDED BY NORTON-PHOTOGRAPHY INC. AND GENERATED FROM AERIAL PHOTOGRAPHY FLOWN IN SPRING OF 2002. CONTOUR INTERVAL IS 2.0m, WITH 1.0m INTERPOLATED CONTOURS. ALL ELEVATIONS ARE INDICATED IN (MASL).
 2. HYDROLOGICAL INFORMATION OBTAINED FROM "GEOLOGICAL REPORT AND LEVEL 2 HYDROLOGICAL ASSESSMENT" DATED SEPTEMBER 2005 AND "LEVEL 2 HYDROLOGICAL ASSESSMENT" DATED OCTOBER 2007 PREPARED BY JAGGER THIS LIMITED INDICATES THE GROUND WATER TABLE ACROSS THE LICENSED AREA VARIES SEASONALLY FROM 4.50m MASL TO 4.55m MASL IN THE TOPOGRAPHICALLY LOW AREAS, TO 4.58m MASL TO 4.59m MASL IN THE TOPOGRAPHICALLY HIGH AREAS.
 3. CROSS SECTIONS PLOTTED FROM ABOVE REFERENCED TOPOGRAPHIC INFORMATION.
 4. FOR PLAN VIEW OF CROSS SECTIONS, SEE "EXISTING FEATURES" PLAN, PAGE 1 OF 4 AND "REHABILITATION" PLAN, PAGE 3 OF 4.
 5. SEE TYPICAL PLANTING BLOCK DETAIL (PAGE 3 OF 4) AND GENERAL NOTE 4 (PAGE 3 OF 4) FOR ADDITIONAL INFORMATION ON SLOPE TREATMENTS.
 6. GROUNDWATER ELEVATIONS SHOWN ARE BASED ON ASSUMPTION THAT THE HAD QUARRY (WEST OF GREY COUNTY ROAD 33) IS OPERATING AT THE SAME TIME AND IS REHABILITATED AT THE SAME TIME AS THIS LICENSE.

Final Approved Plan
 Date: Sept 4, 2014
 Signature: *[Signature]*
 Ministry of Natural Resources
 Midhurst District Office

I, AGGREGATES, SHALL CARRY ON MY OPERATION IN ACCORDANCE WITH THIS SITE PLAN UPON WHICH MY LICENSE IS BASED. LICENSEE / SIGNATURE: <i>[Signature]</i> DATE: 14 August 2014	THIS SITE PLAN HAS BEEN PREPARED UNDER THE DIRECTION OF A DRAFT CLARKSON, HILTOP INC. AND IS GUARANTEED TO PREPARE AND CARRY OUT PLANS PURSUANT TO SECTION 16(4) OF THE AGGREGATES RESOURCES ACT. DRAFT CLARKSON, HILTOP INC. BY: <i>[Signature]</i> DATE: 14 August 2014	DRAFT REVISIONS NO. 1 DATE: 14 August 2014 BY: <i>[Signature]</i>
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PROJECT NAME:
 Duntroon Quarry Expansion

Lot 25 and Part Lot 26,
 Concession XII and
 Part Lot 25, Concession XI
 Clearview Township
 Simcoe County

Walker Industries Inc.
 Walker Industries Holdings Limited
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 P.O. Box 100 Thorold Ontario
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