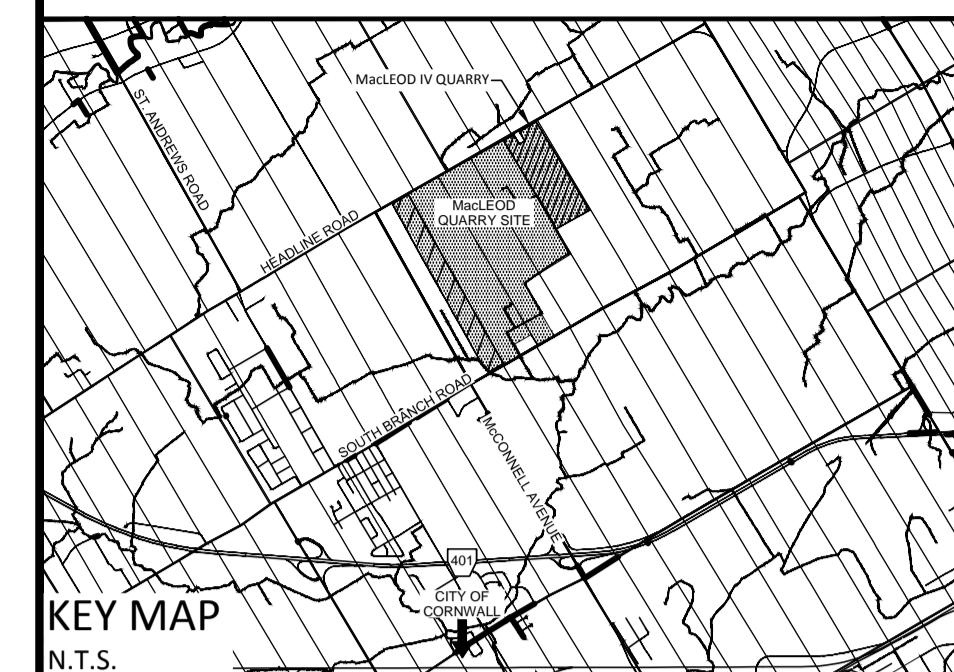




# ARA No. \_\_\_\_\_



LOCATION OF SITE  
PART OF LOT 2  
CONCESSION 4  
GEOGRAPHIC TOWNSHIP OF CORNWALL  
COUNTY OF SOUTH STORMONT

APPLICANT & PROPERTY OWNER  
CORNWALL GRAVEL COMPANY  
P.O. BOX 67 - 390 ELEVENTH STREET WEST  
CORNWALL, ONTARIO, K6H 5R9

DATE \_\_\_\_\_ PETER GRANT, VICE PRESIDENT  
I HAVE THE AUTHORITY TO BIND THE CORPORATION

PLAN CERTIFICATION  
I HEREBY CERTIFY THAT THIS SITE PLAN WAS PRODUCED UNDER MY SUPERVISION.

DATE \_\_\_\_\_ MARK PRIDDLE, P.GEO.

SCALE 1 : 2000  
0 50 100 150 200 Metres  
DISTANCES SHOWN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048. ALL ELEVATIONS ON THIS PLAN ARE GEODETIC.

DESCRIPTION	AREA(ha)
PROPERTY	40.5
LICENCE AREA	40.5
EXTRACTION AREA	32.4

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
A	CONTROL 7 - SCALE HOUSE WELL	4992474.452	519456.395	74.613

No.	Amendment	Date
<b>FOR REVIEW ONLY</b> <b>NOT FOR CONSTRUCTION</b>		



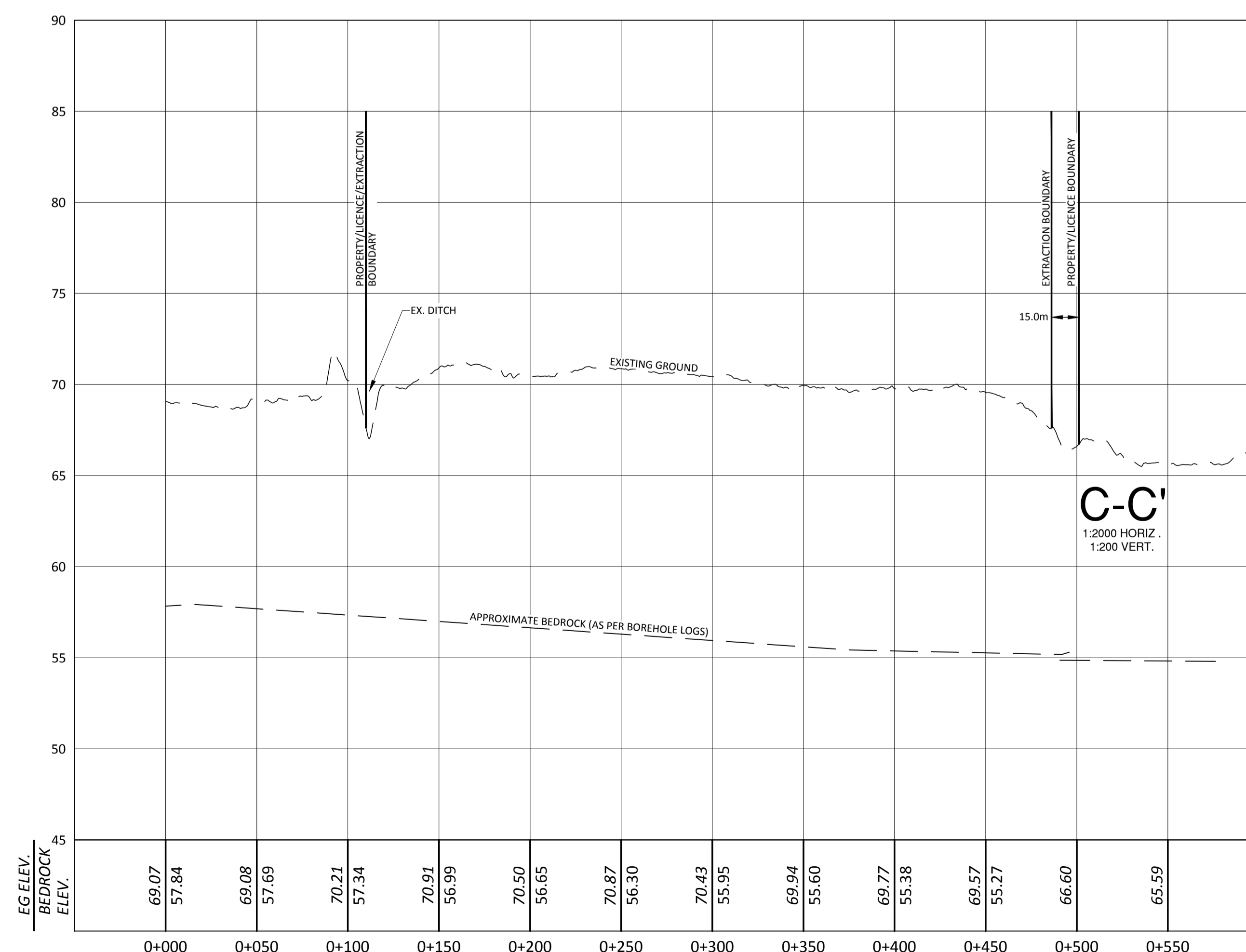
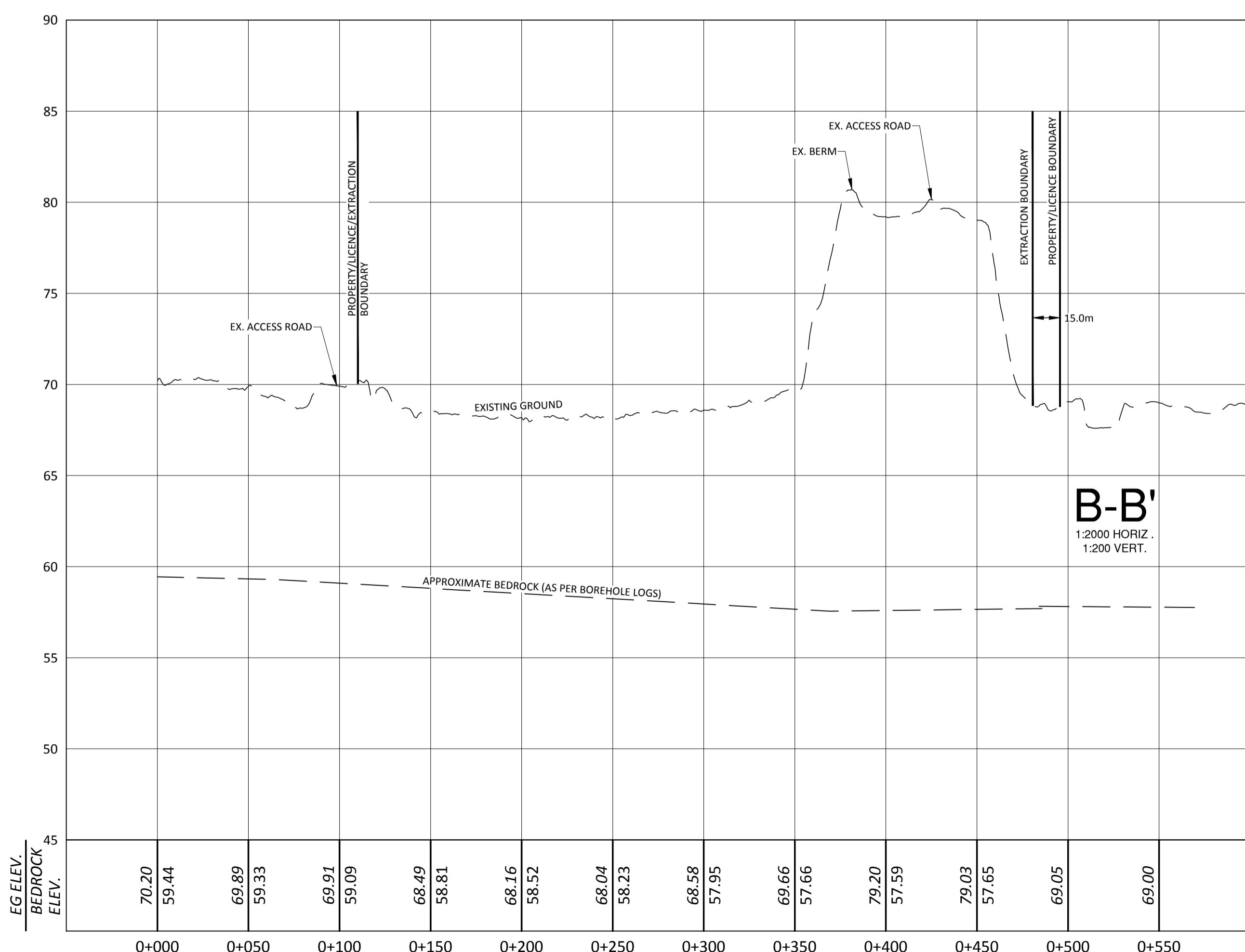
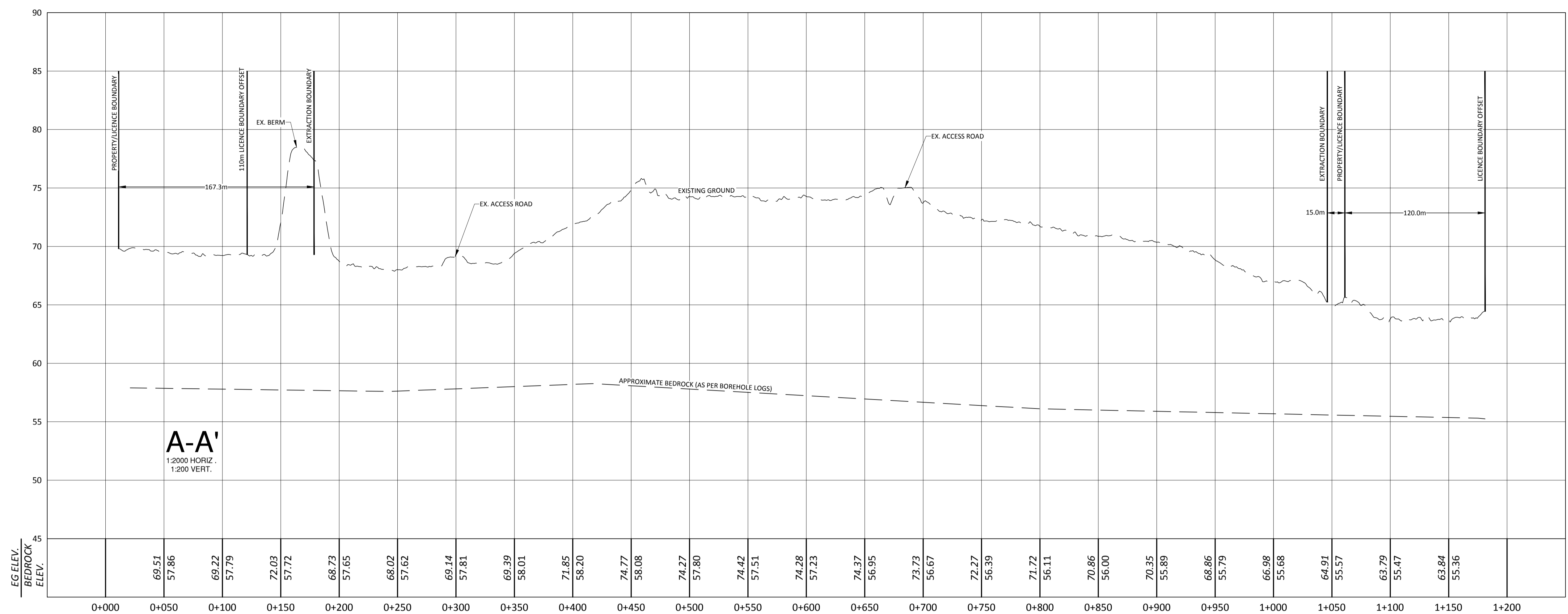
115 Walgreen Road R.R. #3, Carp, ON K0A 1L0  
Tel: 613-836-2184 Fax: 613-836-3742

Client: CORNWALL GRAVEL COMPANY LIMITED

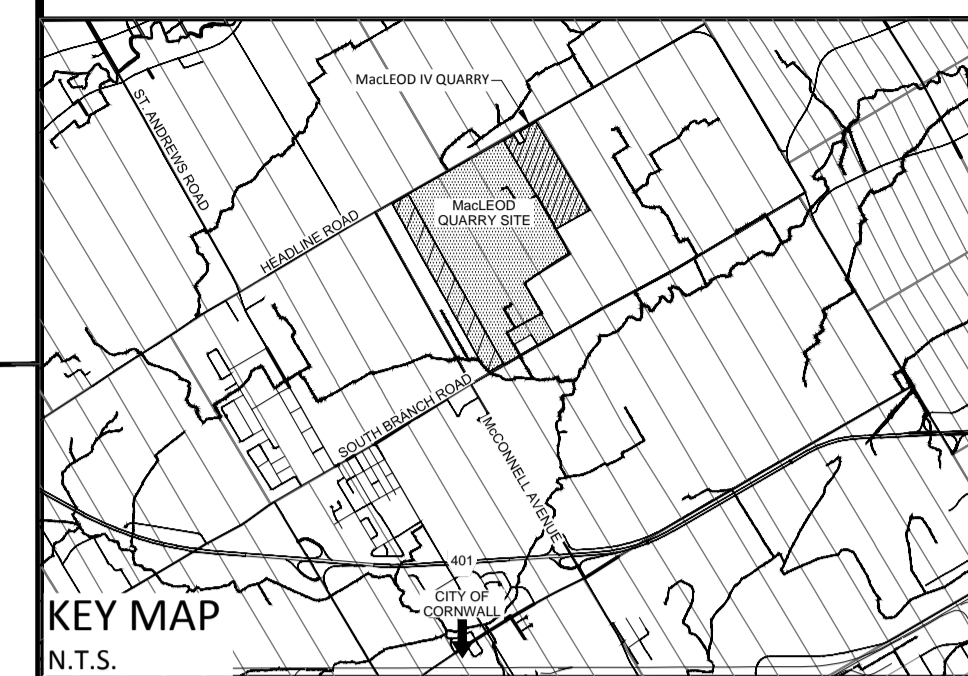
Project: MACLEOD 5  
CATEGORY 1 CLASS "A" PIT BELOW WATER  
CATEGORY 2 CLASS "A" QUARRY BELOW WATER

Drawing Title: EXISTING FEATURES SECTIONS

Drawn By: DL	Project Number: CP-16-0280
Checked By: MP	Drawing Number: Sheet 2 of 8
Paper Size: 24" x 36"	Scale: 1:2000 (H) 1:200 (V)
Date: AUG. 17, 2017	02



ARA No. \_\_\_\_\_



KEY MAP  
N.T.S.

LOCATION OF SITE  
PART OF LOT 2  
CONCESSION 4  
GEOGRAPHIC TOWNSHIP OF CORNWALL  
COUNTY OF SOUTH STORMONT

APPLICANT & PROPERTY OWNER  
CORNWALL GRAVEL COMPANY  
P.O. BOX 67 - 390 ELEVENTH STREET WEST  
CORNWALL, ONTARIO, K6H 5R9

DATE \_\_\_\_\_ PETER GRANT, VICE PRESIDENT  
I HAVE THE AUTHORITY  
TO BIND THE CORPORATION

PLAN CERTIFICATION  
I HEREBY CERTIFY THAT THIS SITE PLAN WAS PRODUCED  
UNDER MY SUPERVISION.

DATE \_\_\_\_\_ MARK PRIDDLE, P.GEO.

SCALE 1 : 2000  
0 50 100 150 200 Metres  
DISTANCES SHOWN ARE IN METRES AND CAN BE CONVERTED TO FEET  
BY DIVIDING BY 0.3048. ALL ELEVATIONS ON THIS PLAN ARE GEODETIC.

AREAS	DESCRIPTION	AREA(ha)
	PROPERTY	40.5
	LICENCE AREA	40.5
	EXTRACTION AREA	32.4

SITE BENCHMARKS				
No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
A	CONTROL 7 - SCALE HOUSE WELL	4992474.452	519456.395	74.613

No.	Amendment	Date

**FOR REVIEW ONLY**  
**NOT FOR CONSTRUCTION**



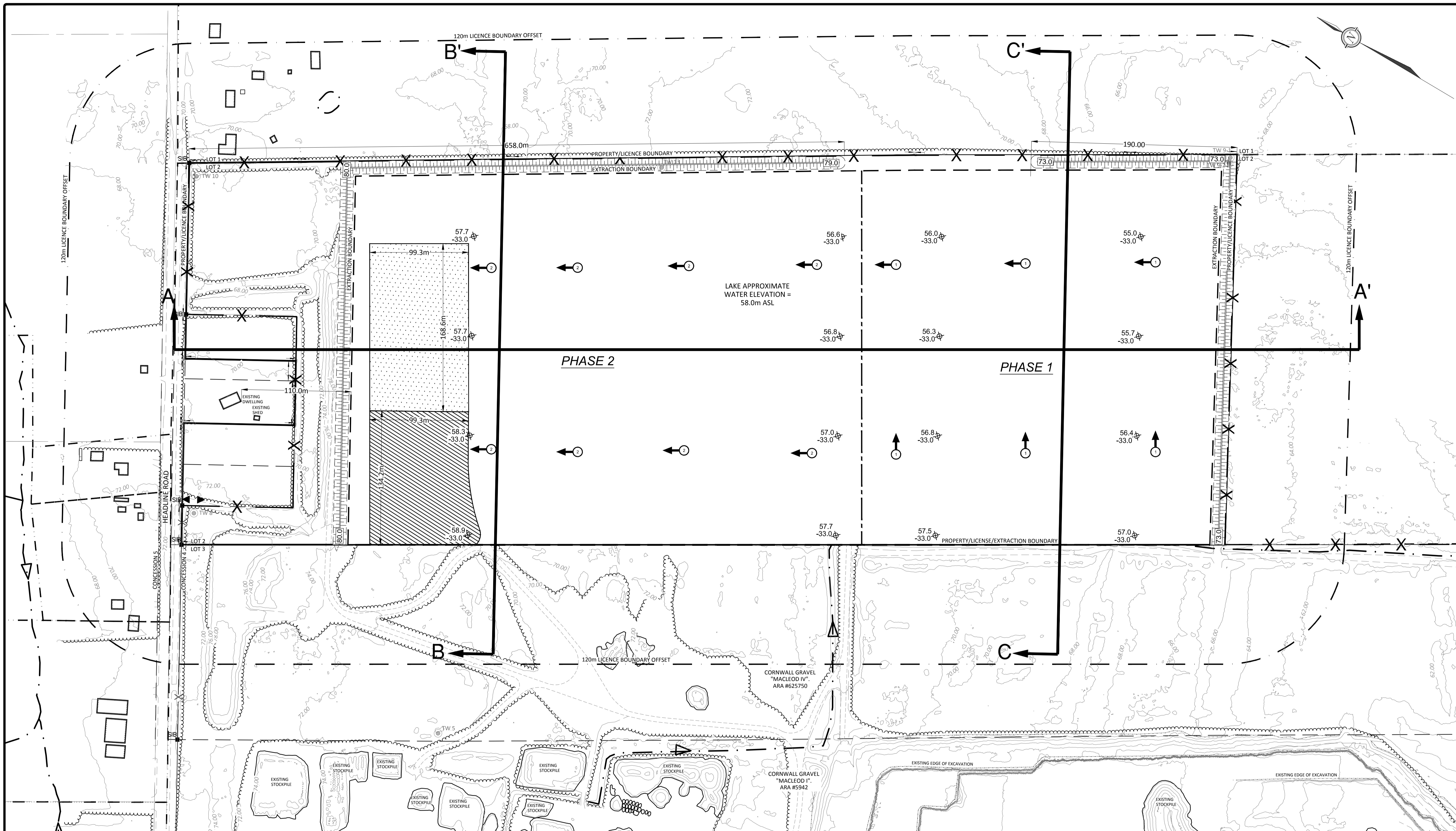
115 Walgreen Road R.R. #3, Carp, ON K0A 1L0  
Tel: 613-836-2184 Fax: 613-836-3742

Client: **CORNWALL GRAVEL COMPANY LIMITED**

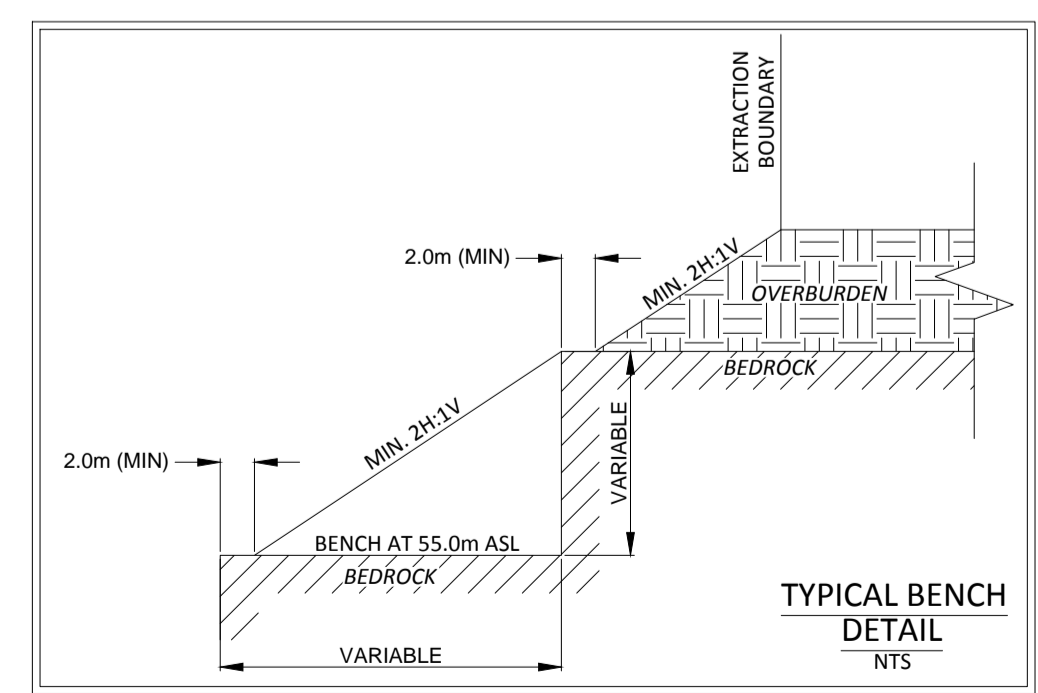
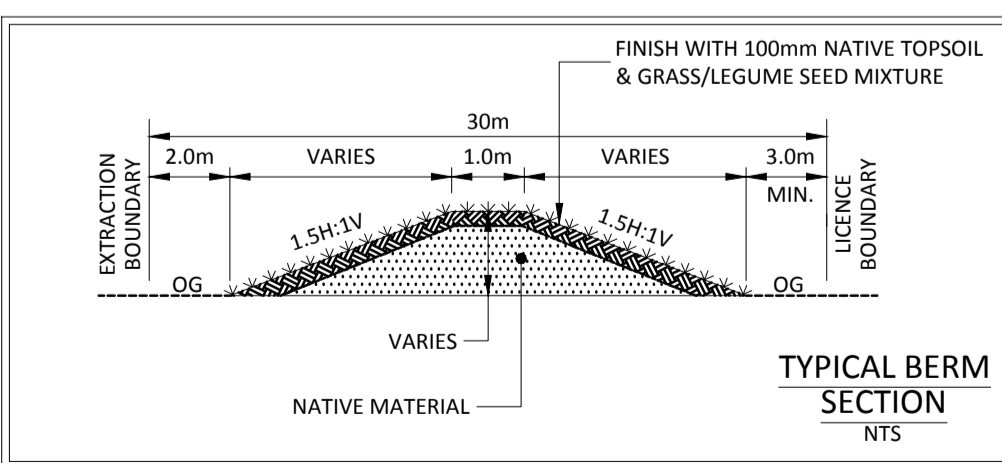
Project: **MACLEOD 5**  
CATEGORY 1 CLASS "A" PIT BELOW WATER  
CATEGORY 2 CLASS "A" QUARRY BELOW WATER

Drawing Title: **OPERATIONS PLAN**

Drawn By: DL	Project Number: CP-16-0280
Checked By: MP	Drawing Number: Sheet 3 of 8
Paper Size: 24" x 36"	Scale: 1:2000 (metric)
Date: AUG. 17, 2017	Sheet 3 of 8



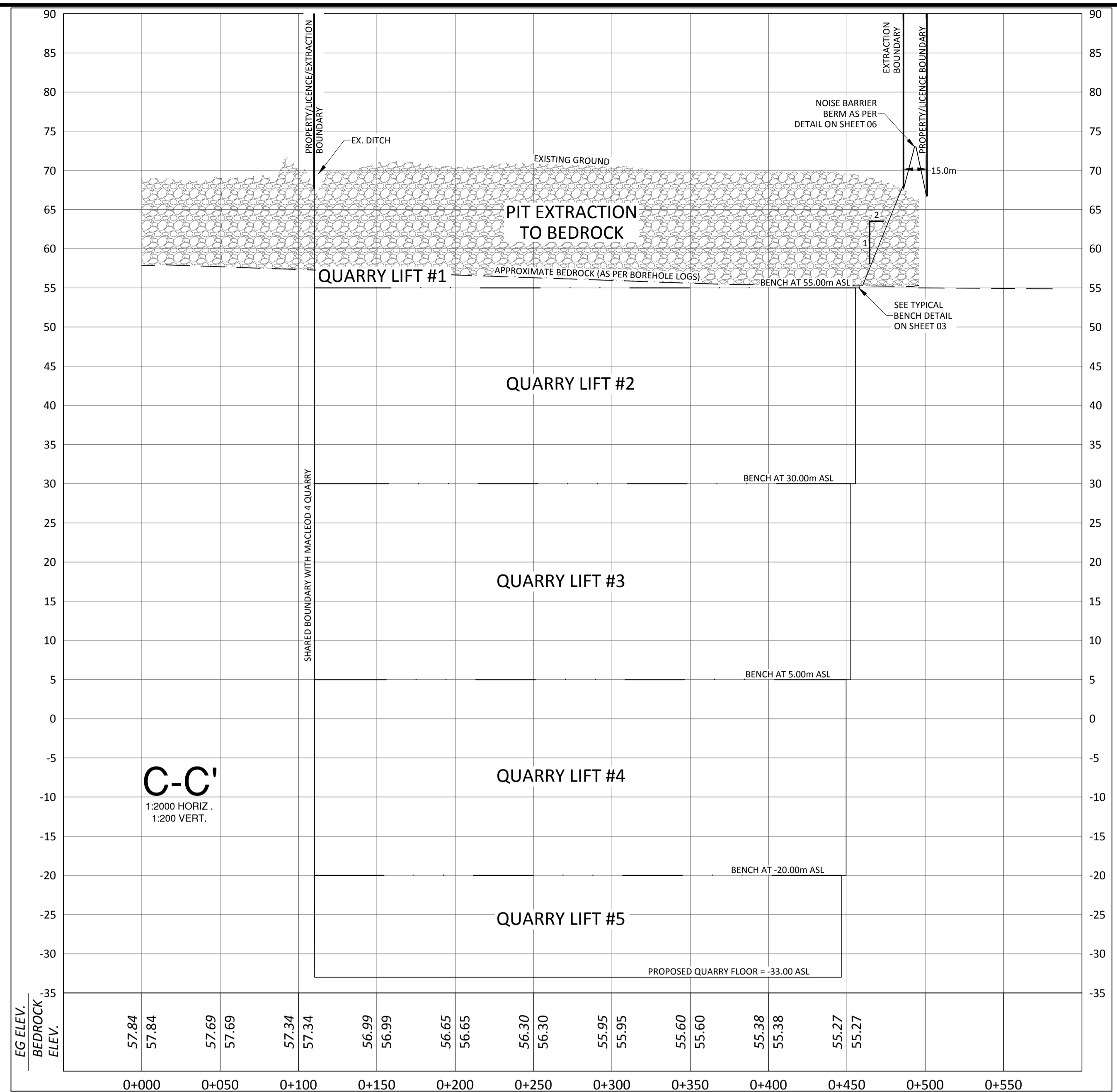
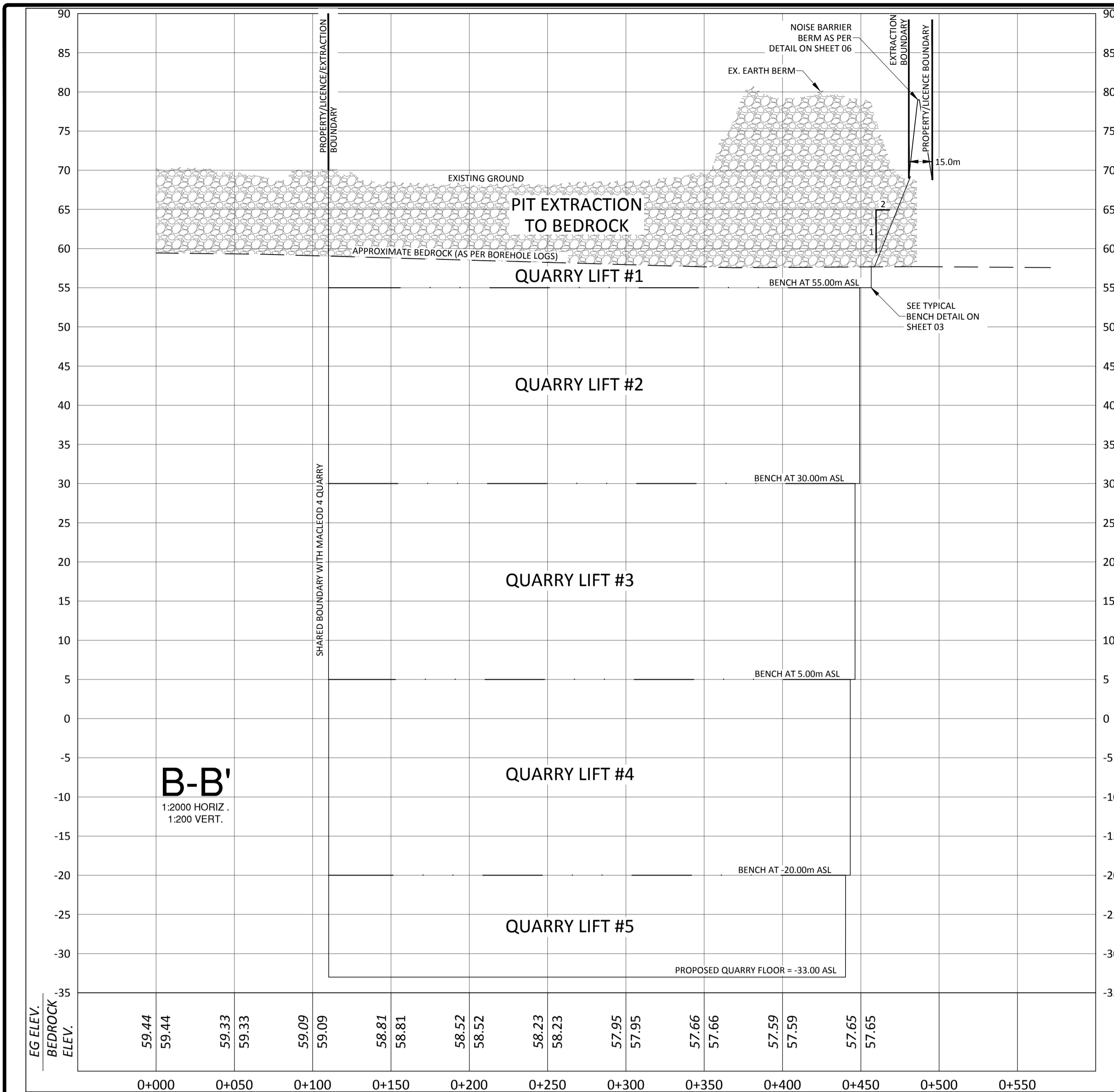
NO.	VARIATIONS FROM OPERATIONAL STANDARDS	APPROVED BY INSPECTOR	DATE
	NO EXCAVATION SETBACK ALONG THE WEST BOUNDARY THAT ABUTS WITH CORNWALL GRAVEL PROPERTIES		
	A COMMON BOUNDARY AGREEMENT DOWN TO ELEV. -33.0m BETWEEN MACLEOD IV AND MACLEOD V ALONG WEST BOUNDARY		
	NO FENCING ALONG THE WEST BOUNDARY THAT ABUTS WITH CORNWALL GRAVEL PROPERTIES		
	EXCESS TOPSOIL MAY BE REMOVED FROM THE SITE		
	EXCESS OVERBURDEN MAY BE REMOVED FROM THE SITE		



- LEGEND**
- EXISTING GROUND SURFACE CONTOUR (m asl)
  - EXISTING BUILDING
  - NEW SITE ENTRANCE / EXIT (EQUIPPED WITH LOCKABLE GATE)
  - PROPERTY LINE
  - LICENCE BOUNDARY
  - EXTRACTION BOUNDARY
  - 120m LICENCE OFFSET
  - MUNICIPAL ROAD (ASPHALT)
  - EXISTING DITCH LINE
  - EXISTING BELL AND HYDRO POLE
  - EXISTING POLE ANCHOR
  - EXISTING FENCE LINE
  - APPROXIMATE TEST PIT LOCATION
  - EXISTING RESIDENTIAL WELL LOCATION
  - EXISTING OFFSITE LEGAL
  - GENERAL DIRECTION OF PHASE EXTRACTION
  - ANTICIPATED PIT FLOOR ELEVATION (m asl)
  - ANTICIPATED QUARRY FLOOR ELEVATION (m asl)
  - PHASE LIMITS
  - MAIN INTERNAL HAUL ROAD
  - 1.2m HIGH POST AND WIRE FENCE
  - NEW BERM/ACOUSTIC BARRIER (OVERBURDEN STORAGE)
  - TOP OF BERM ELEVATION
  - DESIGNATED SCRAP LOCATION
  - DESIGNATED RECYCLED MATERIAL LOCATION

FILENAME: A:\B\Drawings\2016\08\16\2016 Cornwall Gravel ARA Application\_Cornwall\5 - Drawings\MacLeod 5 - Rehabilitation.dwg  
 LISTSAVED: Thursday, August 17, 2017 1:58:54 PM  
 LAST PLOTTED: Thursday, August 17, 2017 1:58:54 PM





(CONTINUED FROM PREVIOUS SHEET)

- 1.2.28 RECOMMENDATIONS:
- NO FURTHER ARCHAEOLOGICAL ASSESSMENT OF THE STUDY AREA AS PRESENTLY DEFINED IN THE SITE PLANS IS REQUIRED.
  - GENERAL RECOMMENDATIONS RELATING TO EXCAVATION WERE INCLUDED AS INDICATED BELOW:
    - SHOULD PREVIOUSLY UNDISCOVERED ARCHAEOLOGICAL RESOURCES BE DISCOVERED, THEY MAY BE A NEW ARCHAEOLOGICAL SITE AND THEREFORE SUBJECT TO SECTION 48 (1) OF THE ONTARIO HERITAGE ACT. THE PROPOSER OR PERSON DISCOVERING THE ARCHAEOLOGICAL RESOURCES MUST CEASE ALTERATION OF THE SITE IMMEDIATELY AND ENGAGE A LICENSED CONSULTANT ARCHAEOLOGIST TO CARRY OUT ARCHAEOLOGICAL FIELDWORK, IN COMPLIANCE WITH SECTION 48 (1) OF THE ONTARIO HERITAGE ACT.
    - THE CEMETERIES ACT, R.S.O. 1990 C. C. 4 AND THE FUNERAL, BURIAL AND CREMATION SERVICES ACT, 2002, S.O. 2002, C. 23 (WHEN PROCLAIMED IN FORCE) REQUIRE THAT ANY PERSON DISCOVERING HUMAN REMAINS MUST NOTIFY THE POLICE OR CORONER AND THE REGISTRAR OF CEMETERIES AT THE MINISTRY OF CONSUMER SERVICES AT (416) 326-8404.

GENERAL: THE CONTRACTOR SHALL PERFORM REGULAR SITE INSPECTIONS OF THE PIT TO ENSURE THAT IMMEDIATE ACTION IS TAKEN TO CORRECT ANY DEFICIENCIES, MALFUNCTIONS OR ACCIDENTS. A LOG WILL BE KEPT TO RECORD ANY ACTIONS TAKEN TO CORRECT AND ELIMINATE DEFICIENCIES, MALFUNCTIONS OR ACCIDENTS.

IF, THROUGH REGULAR MONITORING, IT IS DISCOVERED THAT SEDIMENT IS TRAVELING OFF SITE, SILT FENCES AND STRAW BALE CHECK DAMS WILL BE EMPLOYED.

THE APPLICANT SHALL BE PROACTIVE IN ENSURING THERE ARE NO NEGATIVE IMPACTS ON WELLS IN THE VICINITY OF THE PROPERTY. THE APPLICANT SHALL DEVELOP AN ACTION PLAN TO DEAL WITH PROBLEMS SHOULD THEY ARISE, INCLUDING INVESTIGATING COMPLAINTS AND IMPLEMENTING APPROPRIATE TESTING AND MITIGATION MEASURES AT THEIR OWN COST.

AS PART OF THIS QUARRY DEVELOPMENT, THE FOLLOWING TECHNICAL REPORTS HAVE BEEN PREPARED:

- LEVEL 1 & 2 HYDROGEOLOGICAL REPORT - MCINTOSH PERRY
- LEVEL 1 & 2 NATURAL ENVIRONMENT REPORT - MCINTOSH PERRY
- STAGE 1 ARCHAEOLOGICAL ASSESSMENT OF MACLEOD QUARRY V - PAST ARCHAEOLOGY
- TRAFFIC IMPACT STUDY - MCINTOSH PERRY
- NOISE IMPACT STUDY - AERCOUSTICS
- BLASTING IMPACT ANALYSIS - EXPLOTECH
- PLANNING RATIONALE - MACLEOD III AND V QUARRIES - MCINTOSH PERRY

**NATURAL ENVIRONMENT REPORT LEVEL 1:**  
A LEVEL 1 & 2 NATURAL ENVIRONMENT REPORT WAS PREPARED BY MCINTOSH PERRY CONSULTING ENGINEERS IN SUPPORT OF THIS APPLICATION. THE FOLLOWING LIST OF RECOMMENDATIONS HAS BEEN PROVIDED BASED ON THE FINDINGS OF THE REPORT:

- ALL SETBACK AREAS SHOULD BE ALLOWED TO NATURALLY REGENERATE WITH VEGETATION WHERE POSSIBLE;
- NO FURTHER REMOVAL OF EXISTING SIGNIFICANT WOODLANDS OR WETLAND AREAS SHOULD OCCUR. IF FURTHER REMOVAL OF WOODY VEGETATION FROM SIGNIFICANT WOODLANDS OR REMOVAL OF WETLAND AREAS BE REQUIRED, AN ADDITIONAL IMPACT ASSESSMENT SHOULD BE COMPLETED TO DEMONSTRATE THE WORK WILL NOT IMPACT THE FEATURE OR THAT SUFFICIENT MITIGATION CAN BE IMPLEMENTED TO PREVENT ADVERSE IMPACTS TO THE NATURAL FUNCTION OF THE FEATURE;
- ACOUSTIC SURVEYS MUST BE COMPLETED PRIOR TO VEGETATION REMOVAL WITHIN REMAINING WOODED AREAS PRIOR TO ANY SITE ALTERATION WITHIN THE TREADED AREAS TO DETERMINE IF SPECIES AT RISK BATS ARE PRESENT WITHIN SUITABLE HABITAT;
- GIVEN THE LONG TIME FRAME OF QUARRY DEVELOPMENT, LEGISLATIVE REQUIREMENTS PERTAINING TO SPECIES AT RISK AND THEIR HABITAT MUST BE ADHERED TO THROUGHOUT THE LIFESPAN OF THE QUARRY;
- SHOULD DE-WATERING ACTIVITIES OF THE FUTURE QUARRY DEVELOPMENT DISCHARGE WATER TO THE EASTMAN DRAIN AT A DIFFERENT LOCATION THAN IS CURRENTLY APPROVED, IT IS RECOMMENDED THAT IMPACTS TO FISH AND FISH HABITAT BE ASSESSED AT THAT TIME FOLLOWING CURRENT LEGISLATIVE REQUIREMENTS, AND;
- ANY ACTIVITY THAT OCCURS WITHIN 30M OF TOP OF BANK MUST ENSURE THAT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES ARE INSTALLED PRIOR TO WORK COMMENCING AND MAINTAINED UNTIL WORK IS COMPLETED.

**HYDROGEOLOGY STUDY:**  
A LEVEL 1 & 2 HYDROGEOLOGICAL REPORT WAS PREPARED BY MCINTOSH PERRY CONSULTING ENGINEERS IN SUPPRT OF THE MACLEOD III AND V PIT AND QUARRY APPLICATIONS. THE FOLLOWING CONCLUSIONS AND RECOMMENDATIONS ARE PROVIDED AS FOLLOWS:

THIS ASSESSMENT SHOWS THAT A PIT CAN BE DEVELOPED UNDER THE FOLLOWING CONDITIONS:

- IT IS DEVELOPED, OPERATED, AND REHABILITATED AS PER THESE PLANS.
- A 200M SEPARATION EXISTS BETWEEN THE EXTRACTION AREA AND PERMANENT WATER BODIES.
- NO CONSUMPTIVE WATER TAKING OR TRANSFER OCCURS WITHOUT A VALID PERMIT TO TAKE WATER.

THE FOLLOWING ACTIONS ARE RECOMMENDED TO ENSURE ONGOING COMPLIANCE SHOULD THE SITE BE DEVELOPED:

- SEMI-ANNUAL WATER LEVEL MONITORING IS TO BE CONDUCTED AT ALL ACCESSIBLE BEDROCK MONITORING WELLS ON SITE.
- DISCHARGE FROM THE QUARRY SUMP SHOULD CONTINUE TO BE DIRECTED TO THE DRAINAGE DITCH ALONG THE WESTERN QUARRY FACE, IN COMPLIANCE WITH THE TERMS OF THE PTW.

RE-EVALUATION OF THE SURROUNDING DOMESTIC WATER SUPPLY WELL NETWORK SHOULD BE COMPLETED AT LEAST ONE (1) YEAR PRIOR TO EXTRACTION BEGINNING AT MACLEOD V, WITH A DOOR-TO-DOOR DOMESTIC WATER WELL SURVEY COMPLETED AT ALL WELLS CONSIDERED BY A QUALIFIED PROFESSIONAL TO HAVE THE POTENTIAL TO BE IMPACTED BY EXTRACTION.

IN ORDER TO PROTECT GROUNDWATER:

- THERE WILL BE NO STORAGE OF LIQUID FUELS AT THE SITE WITHIN 30M OF A WATER BODY.
- MOBILE EQUIPMENT WILL BE SERVICED OFF-SITE OR IN DESIGNATED SHOP AREAS ON SITE. NO SERVICING OF MOBILE EQUIPMENT WILL OCCUR IN THE EXTRACTION AREA, WHERE PRACTICAL.
- ALL PETROLEUM WASTE LIQUIDS GENERATED ON-SITE WILL BE COLLECTED AND TRANSPORTED OFF-SITE BY A LICENSED LIQUID WASTE TRANSPORTATION AND DISPOSAL CONTRACTOR.
- THE IMMEDIATE REPORTING OF ANY FUEL AND LUBRICANT SPILLS TO THE MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE IS MANDATORY.

THE DATA ARE TO BE REVIEWED ANNUALLY BY A QUALIFIED PROFESSIONAL (P.GEO. OR P.ENG.) TO ASSESS POSSIBLE IMPACTS TO THE GROUNDWATER/SURFACE WATER REGIME. WATER SUPPLY AND/OR MONITORING WELLS WITHIN THE EXTRACTION AREA ARE TO BE ABANDONED AS PER O. REG. 903 WHEN EXTRACTION AT THE WATER TABLE OCCURS WITHIN 15M OF THEM, WITH THE EXCEPTION OF INTERFERS WITH AGGREGATE EXTRACTION.

**ARCHAEOLOGICAL ASSESSMENT STAGE 1**  
A STAGE 1 ARCHAEOLOGICAL ASSESSMENT WAS CONDUCTED BY PAST RECOVERY ARCHAEOLOGICAL SERVICES, DATED SEPTEMBER 2016. THE FINDINGS OF THIS STUDY ARE AS FOLLOWS:

**STAGE 1:**  
THE RESULTS OF THE BACKGROUND RESEARCH CONDUCTED INDICATE THAT NONE OF THE STUDY AREA EXHIBITS POTENTIAL FOR THE PRESENCE OF SIGNIFICANT ARCHAEOLOGICAL RESOURCES. ACCORDINGLY, IT IS RECOMMENDED THAT:

1. NO FURTHER ARCHAEOLOGICAL ASSESSMENT OF THE STUDY AREA AS PRESENTLY DEFINED IN THE SITE PLANS IS REQUIRED.

GENERAL RECOMMENDATIONS RELATING TO EXCAVATION WERE INCLUDED AS INDICATED BELOW:

- SHOULD PREVIOUSLY UNDISCOVERED ARCHAEOLOGICAL RESOURCES BE DISCOVERED, THEY MAY BE A NEW ARCHAEOLOGICAL SITE AND THEREFORE SUBJECT TO SECTION 48 (1) OF THE ONTARIO HERITAGE ACT. THE PROPOSER OR PERSON DISCOVERING THE ARCHAEOLOGICAL RESOURCES MUST CEASE ALTERATION OF THE SITE IMMEDIATELY AND ENGAGE A LICENSED CONSULTANT ARCHAEOLOGIST TO CARRY OUT ARCHAEOLOGICAL FIELDWORK, IN COMPLIANCE WITH SECTION 48 (1) OF THE ONTARIO HERITAGE ACT.
- THE CEMETERIES ACT, R.S.O. 1990 C. C. 4 AND THE FUNERAL, BURIAL AND CREMATION SERVICES ACT, 2002, S.O. 2002, C. 23 (WHEN PROCLAIMED IN FORCE) REQUIRE THAT ANY PERSON DISCOVERING HUMAN REMAINS MUST NOTIFY THE POLICE OR CORONER AND THE REGISTRAR OF CEMETERIES AT THE MINISTRY OF CONSUMER SERVICES AT (416) 326-8404.

**NOISE IMPACT STUDY:**

- HOURS OF OPERATION SHALL BE AS FOLLOWS:
  - LOADING AND TRANSPORT ONLY (TO MACLEOD II): 7:00 TO 7:00 (24 HOURS), MONDAY TO SUNDAY
  - FULL OPERATION - EXTRACTION, PROCESSING, ROCK DRILLING, LOADING AND TRANSPORT: 7:00 TO 19:00, MONDAY TO SUNDAY
- THE EXTRACTION, PROCESSING AND TRANSPORT EQUIPMENT OPERATING SIMULTANEOUSLY IN BOTH THE MACLEOD III AND V QUARRIES SHALL BE LIMITED TO:
  - ONE (1) PORTABLE PROCESSING PLANT
  - ONE (1) PORTABLE ASPHALT PLANT
  - ONE (1) ROCK DRILL
  - TWO (2) EXTRACTION LOADERS
  - TWO (2) SHIPMENT/ASPHALT PLANT LOADERS
  - 20 OFF-ROAD TRUCK TRIPS/HOUR (40 PASSES/HOUR)
- THE AGGREGATE QUARRY EQUIPMENT SHALL SATISFY THE NOISE EMISSION LEVELS LISTED BELOW:

EQUIPMENT	REFERENCE SOUND PRESSURE LEVEL (dB(A))
PORTABLE PROCESSING PLANT (EXHAUST, SCREENING & WASHERS)	88
PORTABLE ASPHALT PLANT	78
ROCK DRILL	78
EXTRACTION LOADER	78
SHIPMENT OR ASPHALT PLANT LOADER	78
OFF-ROAD TRUCK	75

THE APPROVED LOADS WERE ASSIGNED TO OPERATE AT A 90% DUTY CYCLE.

- THE SOUND EMISSIONS OF ALL CONSTRUCTION EQUIPMENT INVOLVED IN SITE PREPARATION AND REHABILITATION ACTIVITIES SHALL COMPLY WITH THE SOUND LIMITS SPECIFIED IN MOECC PUBLICATION NPC 115 "CONSTRUCTION EQUIPMENT"
- NEW EQUIPMENT TECHNOLOGY OR DIFFERENT CONFIGURATIONS MAY ALLOW PROPOSED CHANGES TO ANY PORTION OF THE EXTRACTION AND PROCESSING OPERATIONS INCLUDING ADDITIONAL EQUIPMENT TO OPERATE ON THE SITE. EQUIPMENT TO BE SUBSTITUTED, AND/OR DIFFERENT BERM HEIGHTS WHILE STILL MEETING THE APPLICABLE SOUND LEVEL LIMITS, MUST BE APPROVED BY THE SITE OPERATIONS AND REGULATIONS DIVISION. DRILLING, REDUCED-HOLE DIAMETERS AND SEQUENTIAL BLASTING TECHNIQUES WILL BE USED TO ENSURE COMPLIANCE WITH THE SOUND LIMITS. DOCUMENTATION PREPARED BY A PROFESSIONAL ENGINEER SPECIALIZING IN NOISE CONTROL. PRIOR TO ANY MODIFICATION, NOTIFICATION SHALL BE GIVEN TO THE MNRF.
- THE PHASING ORDER AND DIRECTION OF EXTRACTION SHALL BE AS INDICATED ON THE PLANS.
- PERMETER BERMS SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS. THE MINIMUM REQUIRED TOP-OF-BERM ELEVATIONS ARE SPECIFIED. BERM C SHALL BE CONSTRUCTED PRIOR TO EXTRACTION IN PHASE 1. BERMS A AND B SHALL BE CONSTRUCTED PRIOR TO PHASE 2. ONCE CONSTRUCTED, THE BERMS SHALL REMAIN IN PLACE FOR THE PROJECT LIFETIME.
- DURING THE FIRST LIFT, THE PORTABLE ASPHALT PLANT SHALL NOT OPERATE WITHIN 300 M OF THE NORTH EXTRACTION LIMIT.
- THE QUARRY FLOOR SHALL HAVE AN ELEVATION OF 52M ASL OR LOWER.
- PERMETER BERMS SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS. THE MINIMUM REQUIRED TOP-OF-BERM ELEVATIONS ARE SPECIFIED. BERM C SHALL BE CONSTRUCTED PRIOR TO EXTRACTION IN PHASE 1. BERMS A AND B SHALL BE CONSTRUCTED PRIOR TO PHASE 2. ONCE CONSTRUCTED, THE BERMS SHALL REMAIN IN PLACE FOR THE PROJECT LIFETIME.
- DURING THE FIRST LIFT, THE PORTABLE ASPHALT PLANT SHALL NOT OPERATE WITHIN 300 M OF THE NORTH EXTRACTION LIMIT.
- THE QUARRY FLOOR SHALL HAVE AN ELEVATION OF 52M ASL OR LOWER.
- PERMETER BERMS SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS. THE MINIMUM REQUIRED TOP-OF-BERM ELEVATIONS ARE SPECIFIED. BERM C SHALL BE CONSTRUCTED PRIOR TO EXTRACTION IN PHASE 1. BERMS A AND B SHALL BE CONSTRUCTED PRIOR TO PHASE 2. ONCE CONSTRUCTED, THE BERMS SHALL REMAIN IN PLACE FOR THE PROJECT LIFETIME.
- DURING THE FIRST LIFT, THE PORTABLE ASPHALT PLANT SHALL NOT OPERATE WITHIN 300 M OF THE NORTH EXTRACTION LIMIT.
- THE QUARRY FLOOR SHALL HAVE AN ELEVATION OF 52M ASL OR LOWER.

**BLAST IMPACT ASSESSMENT:**  
IT IS RECOMMENDED THAT THE FOLLOWING CONDITIONS BE APPLIED FOR ALL BLASTING AT THE PROPOSED CORNWALL GRAVEL MACLEOD III NEW LICENSE AREA:

- ALL BLASTS SHALL BE MONITORED FOR BOTH VIBRATION AND OVERPRESSURE AT THE CLOSEST PRIVATELY OWNED RECEPTORS ADJACENT TO THE SITE, OR CLOSER, WITH A MINIMUM OF TWO (2) DIGITAL SEISMOGRAPHS - ONE INSTALLED IN FRONT OF THE BLAST AND ONE INSTALLED BEHIND THE BLAST. MONITORING SHALL BE PERFORMED BY A COMPETENT, ACCREDITED INDIVIDUAL WITH SPECIALIZED TRAINING IN BLASTING AND MONITORING.
- ORIENTATION OF THE MINERAL EXTRACTION OPERATION WILL BE DESIGNED AND MAINTAINED SO THAT THE DIRECTION OF THE OVERPRESSURE PROPAGATION AND FLYROCK FROM THE BLAST WILL BE AWAY FROM STRUCTURES AS MUCH AS POSSIBLE.
- BLAST DESIGNS SHALL BE CONTINUALLY REVIEWED WITH RESPECT TO FRAGMENTATION, GROUND VIBRATION AND OVERPRESSURE. BLAST DESIGNS SHALL BE MODIFIED AS REQUIRED TO ENSURE COMPLIANCE WITH THE VIBRATION AND OVERPRESSURE LIMITS AND REGULATIONS. DRILLING, REDUCED-HOLE DIAMETERS AND SEQUENTIAL BLASTING TECHNIQUES WILL BE USED TO ENSURE MINIMAL EXPLOSIVES PER DELAY PERIOD INITIATED.
- ONCE BLASTING PROGRESS REACHES 250M SEPARATION DISTANCE FROM ANY OFF-SITE STRUCTURE OR RESIDENCE, ACCUMULATED BLAST DATA AND DESIGNS SHALL BE REVIEWED BY A QUALIFIED BLAST CONSULTANT PRIOR TO PROCEEDING CLOSER IN ORDER TO ENSURE SUITABLE PARAMETERS ARE EMPLOYED.
- ALL BLASTS SHALL BE DESIGNED TO ENSURE COMPLIANCE WITH NPC-119 LIMITS FOR GROUND VIBRATION (12.5MM/S) AND OVERPRESSURE (128DBL).
- CLEAR CRUSHED STONE WILL BE USED FOR STEMMING.
- BLASTING PROCEDURES SUCH AS DRILLING AND LOADING SHALL BE REVIEWED ON A YEARLY BASIS AND MODIFIED AS REQUIRED TO ENSURE COMPLIANCE WITH INDUSTRY STANDARDS.
- DETAILED BLAST RECORDS SHALL BE MAINTAINED. THE MOECC (1985) RECOMMENDS THAT THE BODY OF BLAST REPORTS SHOULD INCLUDE THE FOLLOWING INFORMATION:
  - LOCATION, DATE AND TIME OF BLAST.
  - DIMENSIONAL SKETCH INCLUDING PHOTOGRAPHS, IF NECESSARY, OF THE LOCATION OF THE BLASTING OPERATION, AND THE NEAREST POINT OF RECEPTION.
  - PHYSICAL AND TOPOGRAPHICAL DESCRIPTION OF THE GROUND BETWEEN THE SOURCE AND THE RECEPTOR LOCATION.
  - TYPE OF MATERIAL BEING BLASTED.
  - SUB-SOIL CONDITIONS, IF KNOWN.
  - PREVAILING METEOROLOGICAL CONDITIONS INCLUDING WIND SPEED IN M/S, WIND DIRECTION, AIR TEMPERATURE IN °C, RELATIVE HUMIDITY, DEGREE OF CLOUD COVER AND GROUND MOISTURE CONTENT.

- NUMBER OF DRILL HOLES.
- PATTERN AND PITCH OF DRILL HOLES.
- SIZE OF HOLES.
- DEPTH OF DRILLING.
- DEPTH OF CHARGE (OR STEMMING).
- DEPTH OF TOE-LOAD.
- WEIGHT OF CHARGE PER DELAY.
- NUMBER AND TIME OF DELAYS.
- THE RESULT AND CALCULATED VALUE OF PEAK PRESSURE LEVEL IN DB AND PEAK PARTICLE VELOCITY IN MM/S.
- APPLICABLE LIMITS.
- THE EXCESS, IF ANY, OVER THE PRESCRIBED LIMIT.

THE BLAST PARAMETERS DESCRIBED WITHIN THIS REPORT ARE SUPPORTED BY THE MODELING IN THE ATTACHED APPENDICES, AS THE QUARRY PROGRESSES AND AS SITE-SPECIFIC DATA IS COLLECTED FROM THE ON-GOING OPERATION, THE BLAST PARAMETERS CAN BE REFINED, AS NECESSARY, TO ENSURE CONTINUAL COMPLIANCE WITH THE MOECC GUIDELINES.

**TRANSPORTATION BRIEF:**  
A TRAFFIC IMPACT STUDY HAS BEEN PREPARED BY MCINTOSH PERRY CONSULTING ENGINEERS IN SUPPORT OF THE MACLEOD III AND V PIT AND QUARRY APPLICATIONS. THE CONCLUSIONS AND RECOMMENDATIONS OF THIS REPORT ARE SUMMARIZED AS FOLLOWS:

IN COMPLETING THIS TRAFFIC IMPACT STUDY FOR THE PROPOSED PIT/QUARRY OPERATIONS AT 17631 SOUTH BRANCH ROAD IN THE GEOGRAPHIC TOWNSHIP OF CORNWALL, ANALYSIS OF THE SURROUNDING ROAD NETWORK WAS COMPLETED FOR THE FOLLOWING SCENARIOS:

- 2016 EXISTING CONDITIONS
- 2021 5-YEAR HORIZON CONDITIONS (BACKGROUND AND TOTAL TRAFFIC)
- 2026 10-YEAR HORIZON CONDITIONS (BACKGROUND AND TOTAL TRAFFIC)

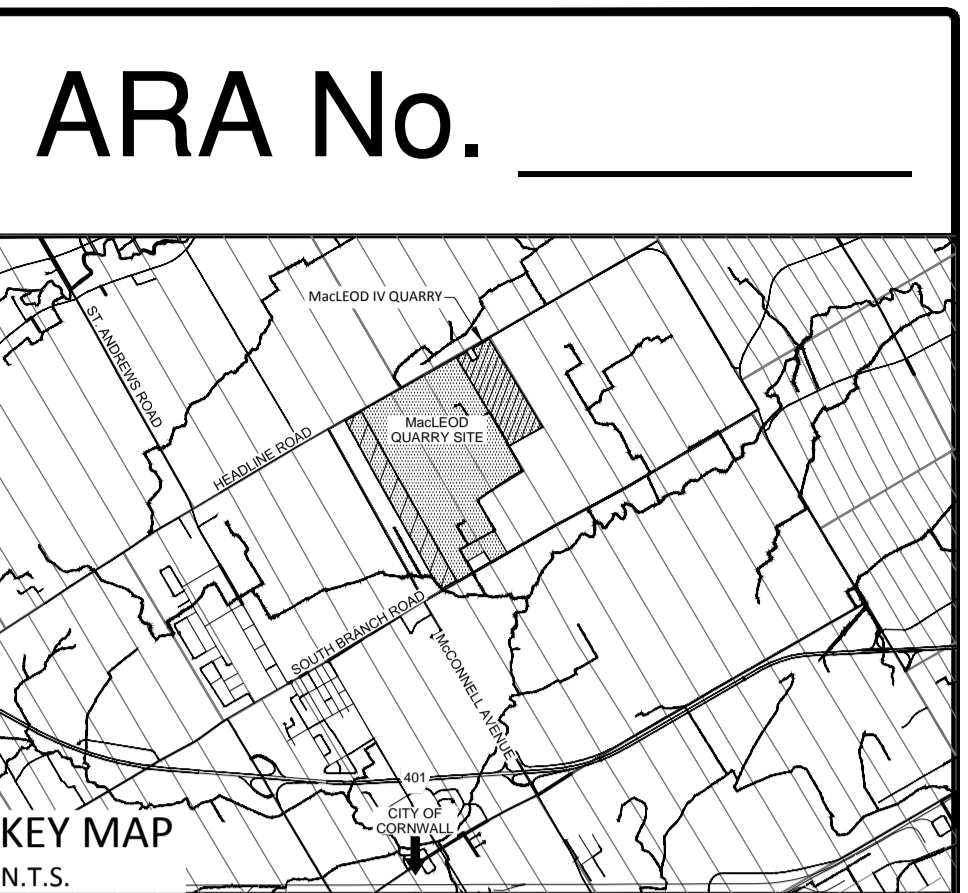
THE RESULTS OF THIS ANALYSIS INDICATES THAT THE NETWORK IS ANTICIPATED TO OPERATE AT ACCEPTABLE LEVELS OF SERVICE, HOWEVER CAPACITY AND DELAY DEFICIENCIES ARE EXPECTED TO OCCUR AT THE WESTBOUND APPROACH AT THE INTERSECTION OF HEADLINE RD & HWY 138 DURING THE PEAK HOURS FOR BOTH THE 2021 AND 2026 HORIZON YEARS.

DEFICIENCIES WERE OBSERVED UNDER BACKGROUND AS WELL AS TOTAL TRAFFIC CONDITIONS, WHICH SUGGESTS THAT POOR LEVELS OF SERVICE WILL OCCUR IN THE HORIZON YEARS REGARDLESS OF SITE GENERATED TRAFFIC. THE IMPACTS OF SIGNALIZATION AND THE ADDITION OF NORTHBOUND / SOUTHBOUND LEFT TURN LANES WAS ANALYZED AND FOUND TO IMPROVE THE INTERSECTION PERFORMANCE. AS SUCH, MCINTOSH PERRY RECOMMENDS THAT TRAFFIC VOLUMES AND PERFORMANCE AT THE INTERSECTION OF HEADLINE RD & HWY 138 BE MONITORED IN THE FUTURE AND THAT CONSIDERATION BE GIVEN TO SIGNALIZATION.

THE EXISTING SITE ACCESSES ARE BOTH ANTICIPATED TO OPERATE AT HIGH LEVELS OF SERVICE FOR ALL CONDITIONS THROUGH TO THE 10-YEAR HORIZON YEAR 2026. SIMILARLY, BOTH SIGNALIZED INTERSECTIONS IN PROXIMITY TO THE SUBJECT SITE ARE ANTICIPATED TO OPERATE AT OVERALL ACCEPTABLE LEVELS OF SERVICE UNDER ANTICIPATED TOTAL FUTURE TRAFFIC CONDITIONS. LEFT TURN AND SIGNALIZATION WARRANTS WERE CONSIDERED FOR THE SITE ENTRANCES AND IT HAS BEEN DETERMINED THAT NEITHER IS WARRANTED, AS SUCH, NO ROADWAY MODIFICATIONS ARE RECOMMENDED AS A RESULT OF THE PROPOSED PIT/QUARRY DEVELOPMENT.

**PLANNING RATIONALE:**

- THE PROPOSED USE IS CONSISTENT WITH THE PPS (2014) WITH REGARD TO MATTERS OF PROVINCIAL INTEREST, INCLUDING LAND USE COMPATIBILITY, LONG-TERM ECONOMIC PROSPERITY, NATURAL HERITAGE & WATER IMPACTS, MINERAL AGGREGATE RESOURCES, AND CULTURAL HERITAGE;
- ADAPTABLE JUSTIFICATION HAS BEEN PROVIDED FOR THE PROPOSED LONG-TERM ECONOMIC PROSPERITY, NATURAL HERITAGE & WATER IMPACTS, MINERAL AGGREGATE RESOURCES, AND CULTURAL HERITAGE; FROM EXTRACTION RESOURCE LANDS (MINERAL AGGREGATE RESERVE) TO EXTRACTION RESOURCE LANDS (LICENSED PIT AND QUARRY) THROUGH TECHNICAL STUDIES THAT ADDRESS ENVIRONMENTAL AND LAND USE COMPATIBILITY ISSUES;
- MACLEOD III LANDS ARE CURRENTLY ZONED MINERAL EXTRACTION, RESERVE SPECIAL EXCEPTION TWO (MXR-2) AND FLOOD PLAIN, AND MACLEOD V LANDS ARE ZONED MINERAL EXTRACTION, RESERVE (MXR);
- BOTH MACLEOD III AND V LANDS ARE PROPOSED TO BE REZONED MINERAL AGGREGATE RESERVE (EXCEPT FOR FLOOD PLAIN AND FLOOD PLAIN INCLUDING A SMALL AREA OF FLOOD PLAIN ON MACLEOD III THAT WILL BE REZONED TO EXTRACTION RESOURCE LANDS);
- REZONING OF THE LANDS WILL APPLY UNLESS SETBACKS TO PROVIDE ADEQUATE SEPARATION DISTANCES FROM NEARBY SENSITIVE LAND USES WITHSTANDING APPLICABLE PROVISIONS TO THE CONTRARY;
- PREVIOUSLY RECOMMENDED MITIGATION MEASURES AND CONTROLS ARE INCORPORATED INTO LAND USE PLANNING MECHANISMS AND MNRF LICENSING REQUIREMENTS. THE PROPOSED EXTRACTION PLAN AND ZONING BYLAW AMENDMENTS ARE CONSISTENT WITH MATTER'S OFFICIAL PLAN INTEREST ANALYSIS AND THE INTEREST AND PURPOSES OF MATTER'S OFFICIAL PLAN FOR THE COUNTY OF STORMONT, DUNDAS AND GLENORAIRY.



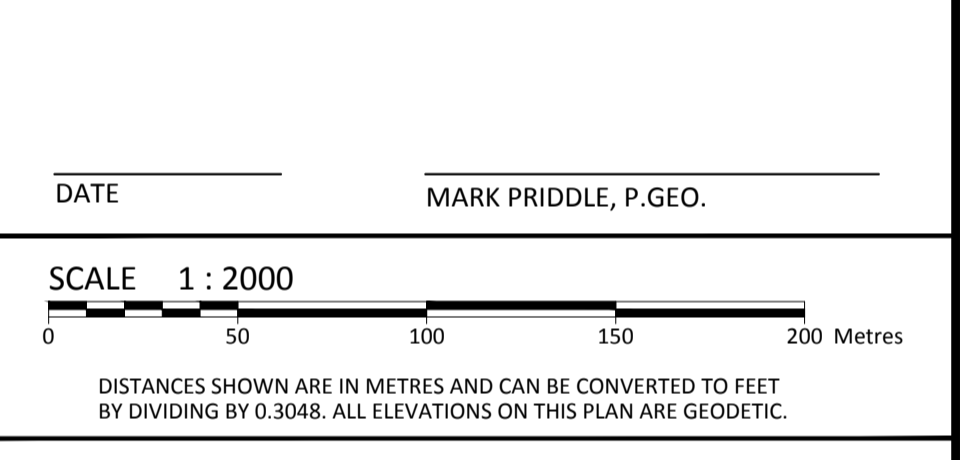
**LOCATION OF SITE**  
PART OF LOT 2  
CONCESSION 4  
GEOGRAPHIC TOWNSHIP OF CORNWALL  
COUNTY OF SOUTH STORMONT

**APPLICANT & PROPERTY OWNER**  
CORNWALL GRAVEL COMPANY  
P.O. BOX 67 - 390 ELEVENTH STREET WEST  
CORNWALL, ONTARIO, K6H 5R9

DATE \_\_\_\_\_ PETER GRANT, VICE PRESIDENT  
I HAVE THE AUTHORITY TO BIND THE CORPORATION

**PLAN CERTIFICATION**  
I HEREBY CERTIFY THAT THIS SITE PLAN WAS PRODUCED UNDER MY SUPERVISION.

DATE \_\_\_\_\_ MARK PRIDDLE, P.GEO.



**AREAS**

DESCRIPTION	AREA(ha)
PROPERTY	40.5
LICENCE AREA	40.5
EXTRACTION AREA	32.4

**SITE BENCHMARKS**

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
A	CONTROL 7 - SCALE HOUSE WELL	4992474.452	519456.395	74.613

No. \_\_\_\_\_ Amendment \_\_\_\_\_ Date \_\_\_\_\_

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**NOT FOR CONSTRUCTION**

**McINTOSH PERRY**  
115 Walgreen Road R.R. #3, Carp, ON K0A 1J0  
Tel: 613-836-2184 Fax: 613-836-3742

Client: **CORNWALL GRAVEL COMPANY LIMITED**

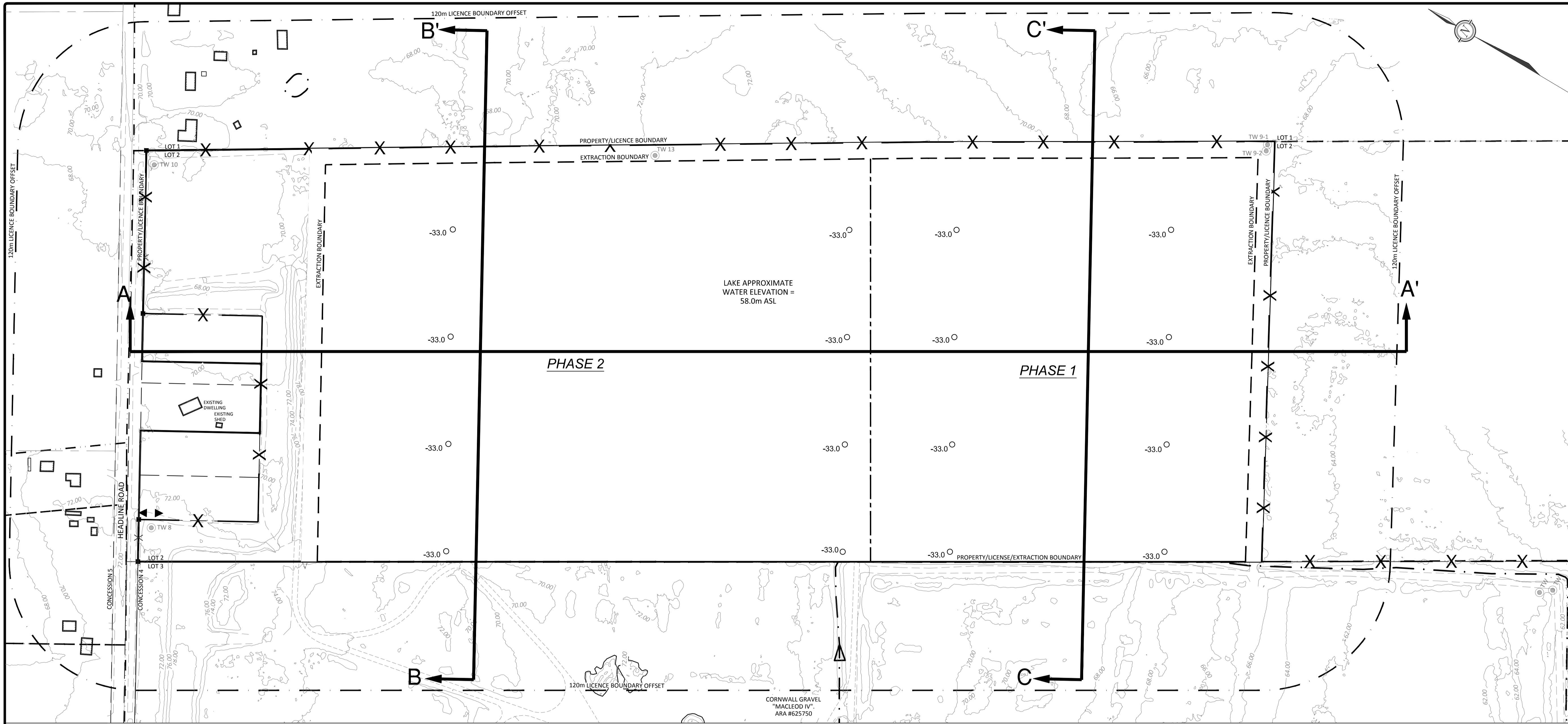
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CATEGORY 1 CLASS "A" PIT BELOW WATER  
CATEGORY 2 CLASS "A" QUARRY BELOW WATER

Drawing Title: **OPERATIONS SECTIONS (2)**

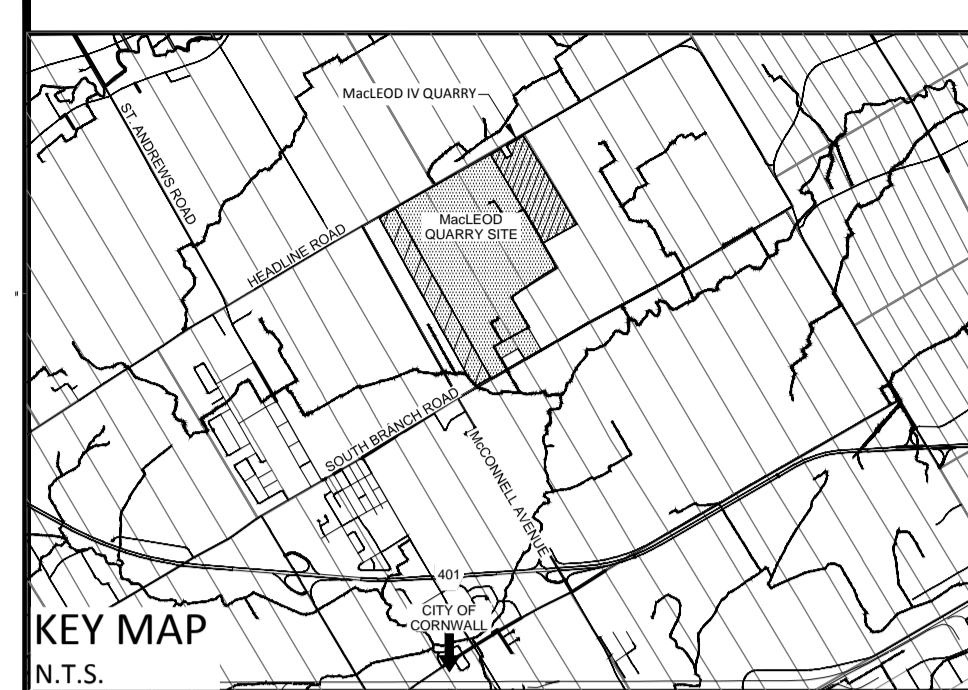
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Checked By: MP Drawing Number: Sheet 5 of 8

Paper Size: 24" x 36" Scale: 1:2000 (metric) Drawing Number: Sheet 5 of 8  
Date: AUG. 17, 2017

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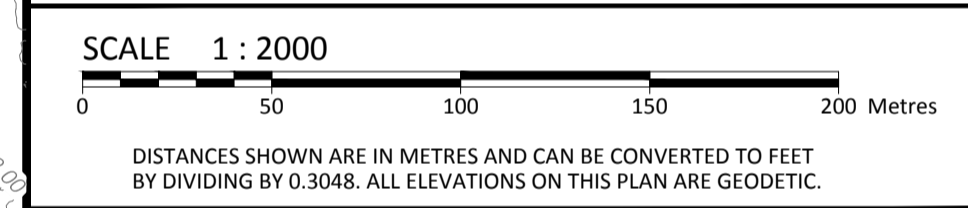
LOCATION OF SITE  
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COUNTY OF SOUTH STORMONT

APPLICANT & PROPERTY OWNER  
CORNWALL GRAVEL COMPANY  
P.O. BOX 67 - 390 ELEVENTH STREET WEST  
CORNWALL, ONTARIO, G6H 5R9

DATE \_\_\_\_\_ PETER GRANT, VICE PRESIDENT  
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PLAN CERTIFICATION  
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DATE \_\_\_\_\_ MARK PRIDDLE, P.GEO.



AREAS	DESCRIPTION	AREA(ha)
	PROPERTY	40.5
	LICENCE AREA	40.5
	EXTRACTION AREA	32.4

SITE BENCHMARKS				
No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
A	CONTROL 7 - SCALE HOUSE WELL	4992474.452	519456.395	74.613

No.	Amendment	Date
<b>FOR REVIEW ONLY</b> <b>NOT FOR CONSTRUCTION</b>		

**McINTOSH PERRY** **MP**  
115 Walgreen Road R.R. #3, Carp, ON K0A 1L0  
Tel: 613-836-2184 Fax: 613-836-3742

Client: **CORNWALL GRAVEL COMPANY LIMITED**

Project: **MACLEOD 5**  
CATEGORY 1 CLASS "A" PIT BELOW WATER  
CATEGORY 2 CLASS "A" QUARRY BELOW WATER

Drawing Title: **REHABILITATION PLAN**

Drawn By: DL	Project Number: CP-16-0280
Checked By: MP	Drawing Number: Sheet 6 of 8
Paper Size: 24" x 36"	Scale: 1:2000 (metric)
Date: AUG. 17, 2017	Sheet 6 of 8

**SITE REHABILITATION NOTES:**

REHABILITATION PLAN WAS PREPARED IN ACCORDANCE WITH THE 'AGGREGATE RESOURCES OF ONTARIO, PROVINCIAL STANDARDS VERSION 1.0' USING THE SITE PLAN STANDARDS FOR A CATEGORY 1, BELOW GROUNDWATER EXTRACTION OF PIT OPERATIONS, AND A CATEGORY 2, BELOW GROUNDWATER EXTRACTION OF QUARRY OPERATIONS.

**1.3 PROGRESSIVE REHABILITATION:**

**1.3.1 SEQUENCE AND DIRECTION OF PROGRESSIVE REHABILITATION**  
PROGRESSIVE REHABILITATION WILL CONSIST OF BACKFILLING AND SLOPING TO THE BENCH CONSTRUCTED AT ELEV. 55 M AROUND THE PERIMETER OF THE EXTRACTION AREA. THE BENCH WILL BE BACKFILLED USING NATIVE OVERBURDEN STOCKPILED WITHIN THE LICENSED AREA. PROGRESSIVE REHABILITATION OF THE FIRST LIFT WILL START DURING THE MINING OF THE SECOND LIFT AND WILL BE IN A NORTH TO SOUTH DIRECTION FOLLOWING THE PROGRESSION OF THE MINING.

**1.3.2 USE OF OVERBURDEN IN PROGRESSIVE REHABILITATION**  
AS PART OF THE OPERATIONAL PLANS, SUFFICIENT AMOUNT OF NATIVE OVERBURDEN AND NATIVE TOPSOIL WILL HAVE BEEN STORED IN STOCKPILES/BERMS IN ORDER TO REHABILITATE THE SITE (REFER TO NOTE 1.2.2). SIDE SLOPES WILL BE CREATED USING NATIVE OVERBURDEN FROM THE SITE TO PROVIDE A MAXIMUM SLOPE OF 2(H):1(V) TO 55 M ASL. A MINIMUM OF 100MM OF NATIVE TOPSOIL SHALL COVER THE OVERBURDEN ON THE GRADED SIDE SLOPES.

**1.3.3 VEGETATION TO BE ESTABLISHED DURING PROGRESSIVE REHABILITATION**  
DURING PROGRESSIVE REHABILITATION, SLOPES WILL BE SEEDED USING A LEGUME PASTURE FIELD MIX TO AID WITH THE IMMEDIATE VEGETATION PROCESS. SEED SHALL BE APPLIED AS RECOMMENDED BY THE SUPPLIER. AFTERWARDS THE SLOPES SHALL BE LEFT TO REGENERATE NATURALLY WITH LOCAL VEGETATION SPECIES. VEGETATED SLOPES WILL BE MONITORED TO ENSURE SLOPE EROSION IS MINIMIZED.

**1.3.4 QUARRY SLOPING**  
DURING QUARRY EXTRACTION AGGREGATE MAY BE EXCAVATED IN VERTICAL LIFTS AS NOTED ON THE QUARRY OPERATIONS PLAN. REHABILITATION OF THE QUARRY WILL INCLUDE THE IN-FILLING OF THE VERTICAL SECTIONS WITH NATIVE MATERIAL TO ACHIEVE A MAXIMUM SLOPE OF 2(H):1(V).

**1.3.5 PROGRESSIVE REHABILITATION IN RELATION TO THE OPERATION SEQUENCE**  
THE PERIMETER OF THE EXTRACTION AREA WILL BE PROGRESSIVELY REHABILITATED ONCE THE AREA HAS BEEN DEPLETED OF MARKETABLE AGGREGATE MATERIALS AND ENOUGH AREA IS AVAILABLE TO ENSURE THAT REHABILITATION ACTIVITIES WILL NOT INTERFERE WITH THE OPERATION.

**1.3.6 AND 1.4.1 PROPOSED IMPORTATION OF MATERIAL TO FACILITATE REHABILITATION**  
NO IMPORTATION OF TOPSOIL FOR REHABILITATION PURPOSES IS ANTICIPATED.

**1.4 FINAL REHABILITATION NOTES:**

**1.4.2 HOW THE FINAL SLOPES WILL BE ESTABLISHED ON ALL EXCAVATION FACES AND THE QUARRY FLOOR**  
FINAL QUARRY SLOPES WILL BE A MAXIMUM OF 2(H):1(H) ALONG THE ENTIRE NORTHERN, EASTERN AND SOUTHERN, BOUNDARY OF THE SITE. NO REHABILITATION WILL OCCUR ON THE WESTERN BOUNDARY OF THE SITE WHERE THERE IS A COMMON BOUNDARY WITH THE ADJACENT MACLEOD IV QUARRY. SLOPES WILL BE AT 2(H):1(V) TO A MINIMUM OF APPROXIMATELY 3 M BELOW ANTICIPATED LAKE LEVEL. THE FINAL QUARRY FLOOR ELEVATION SHALL BE -33.0M ASL.

**1.4.3 VEGETATION TO BE ESTABLISHED DURING FINAL REHABILITATION**  
MUCH OF THE VEGETATION ON THE SLOPES WILL BE ESTABLISHED DURING PROGRESSIVE REHABILITATION AS DESCRIBED IN NOTE 1.3.3. UPON FINAL REHABILITATION, SLOPED AREAS SHALL BE INSPECTED ANNUALLY TO ENSURE THAT A 60% OR HIGHER SURVIVAL RATE OF THE PLANTINGS IS ACHIEVED FOR 5 YEARS POST REHABILITATION. IF OBJECTIVES ARE NOT ACHIEVED, THEN PLANTINGS SHALL BE SUPPLEMENTED TO ACHIEVE THE 60% SURVIVAL RATE.

**1.4.4 BUILDINGS/STRUCTURES TO REMAIN ONSITE**  
UPON FINAL REHABILITATION THE USE OF ANY BUILDINGS ON SITE SHALL BE DETERMINED BY THE OWNER.

**1.4.5 ANTICIPATED ELEVATION FINAL LAKE LEVEL**  
THE ANTICIPATED FINAL ELEVATION OF THE GROUNDWATER TABLE ON SITE IS ± 58M ASL AS SHOWN ON THE CROSS-SECTIONS.

**1.4.6 INTERNAL HAUL ROADS TO REMAIN**  
NO INTERNAL HAUL ROADS WILL REMAIN ON SITE AFTER EXTRACTION IS COMPLETED. ACCESS ROADS MAY REMAIN AT THE DISCRETION OF THE OWNER.

**1.4.7 FINAL SURFACE WATER DRAINAGE**  
AT THE COMPLETION OF EXTRACTION THE SITE WILL BE A LAKE WITH AN ANTICIPATED FINAL WATER ELEVATION OF ± 58M ASL. THERE WILL BE A MINOR IMPACT ON THE OVERALL SURFACE WATER DRAINAGE AROUND THE SITE. SURFACE FLOWS TO THE NORTH AND WEST PORTION OF THE SITE WILL BE REDUCED SLIGHTLY WITH WATER REMAINING ON SITE CONTAINED IN THE LAKE.

**1.4.8 FINAL ELEVATIONS OF THE REHABILITATED SITE**  
THE FINAL ELEVATIONS OF THE REHABILITATED SITE IS ILLUSTRATED ON THE PLAN BY A 1M CONTOUR INTERVAL EXPRESSED AS METRES ABOVE SEA LEVEL (ASL).

**1.4.9 LOCATION OF CROSS-SECTIONS OF REHABILITATED PLAN**  
THE LOCATION OF THE THREE (3) CROSS-SECTIONS ARE SHOWN ON THE PLAN.

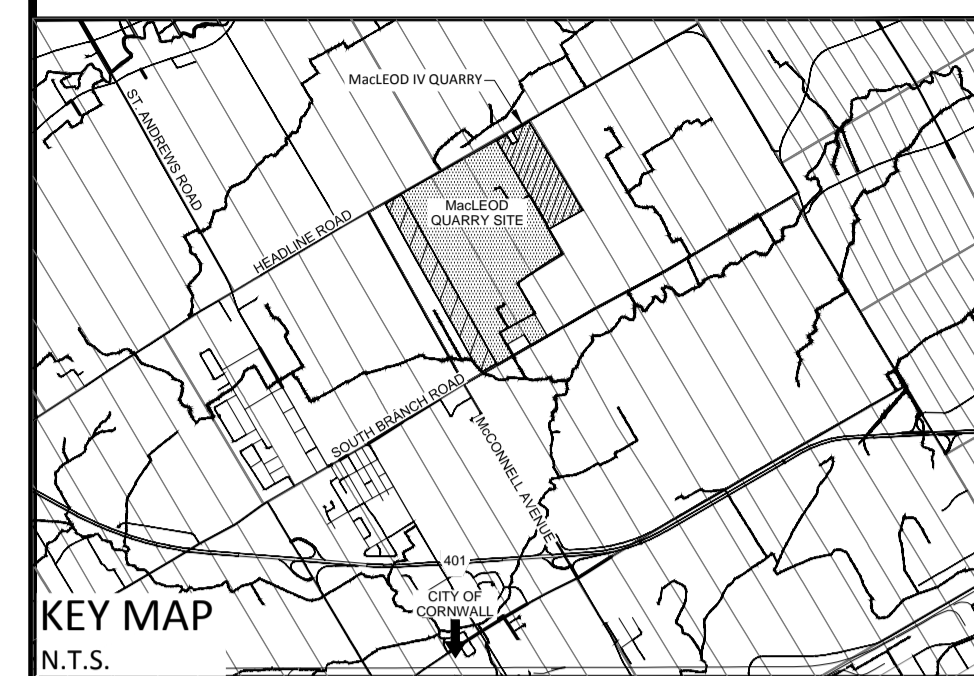
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	A COMMON BOUNDARY AGREEMENT DOWN TO ELEV. -33.0m BETWEEN MACLEOD IV AND MACLEOD V ALONG WEST BOUNDARY		
	NO FENCING ALONG THE WEST BOUNDARY THAT ABUTS WITH CORNWALL GRAVEL PROPERTIES		
	EXCESS TOPSOIL MAY BE REMOVED FROM THE SITE		
	EXCESS OVERBURDEN MAY BE REMOVED FROM THE SITE		

**LEGEND**

	EXISTING GROUND SURFACE CONTOUR (m asl)
	EXISTING BUILDING
	PROPERTY LINE
	LICENCE BOUNDARY
	EXTRACTION BOUNDARY
	120m LICENCE OFFSET
	MUNICIPAL ROAD (ASPHALT)
	EXISTING DITCH LINE
	REHABILITATED SITE CONTOURS
	ANTICIPATED QUARRY FLOOR ELEVATION (m ASL)
	PHASE LIMITS
	EXISTING OFFSITE LEGAL
	EXISTING FENCE LINE
	1.2m HIGH POST AND WIRE FENCE

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 USER: JAWED, Thursday, August 17, 2017 1:27:27 PM  
 LAST PLOTTED: Thursday, August 17, 2017 1:27:27 PM

ARA No. \_\_\_\_\_



**KEY MAP**  
N.T.S.

**LOCATION OF SITE**  
PART OF LOT 2  
CONCESSION 4  
GEOGRAPHIC TOWNSHIP OF CORNWALL  
COUNTY OF SOUTH STORMONT

**APPLICANT & PROPERTY OWNER**  
CORNWALL GRAVEL COMPANY  
P.O. BOX 67 - 390 ELEVENTH STREET WEST  
CORNWALL, ONTARIO, G6H 5R9

DATE \_\_\_\_\_ PETER GRANT, VICE PRESIDENT  
I HAVE THE AUTHORITY TO BIND THE CORPORATION

**PLAN CERTIFICATION**  
I HEREBY CERTIFY THAT THIS SITE PLAN WAS PRODUCED UNDER MY SUPERVISION.

DATE \_\_\_\_\_ MARK PRIDDLE, P.GEO.

**SCALE** 1 : 2000  
0 50 100 150 200 Metres  
DISTANCES SHOWN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048. ALL ELEVATIONS ON THIS PLAN ARE GEODETIC.

**AREAS**

DESCRIPTION	AREA(ha)
PROPERTY	40.5
LICENCE AREA	40.5
EXTRACTION AREA	32.4

**SITE BENCHMARKS**

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
A	CONTROL 7 - SCALE HOUSE WELL	4992474.452	519456.395	74.613

No.	Amendment	Date

**FOR REVIEW ONLY**  
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115 Walgreen Road R.R. #3, Carp, ON K0A 1J0  
Tel: 613-836-2184 Fax: 613-836-3742

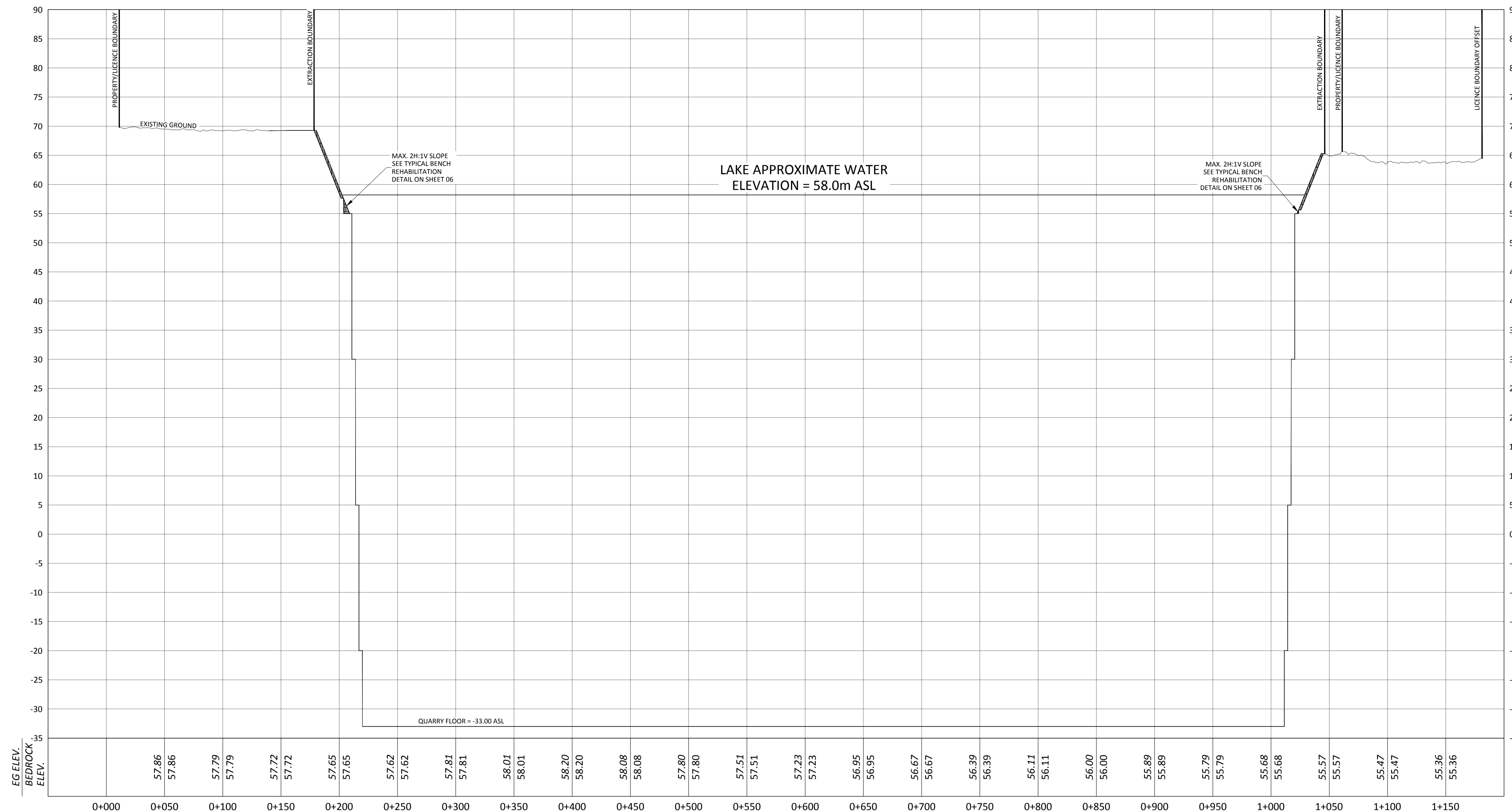
**Client:**  
CORNWALL GRAVEL COMPANY LIMITED

**Project:**  
MACLEOD 5  
CATEGORY 1 CLASS "A" PIT BELOW WATER  
CATEGORY 2 CLASS "A" QUARRY BELOW WATER

**Drawing Title:**  
REHABILITATION SECTIONS (1)

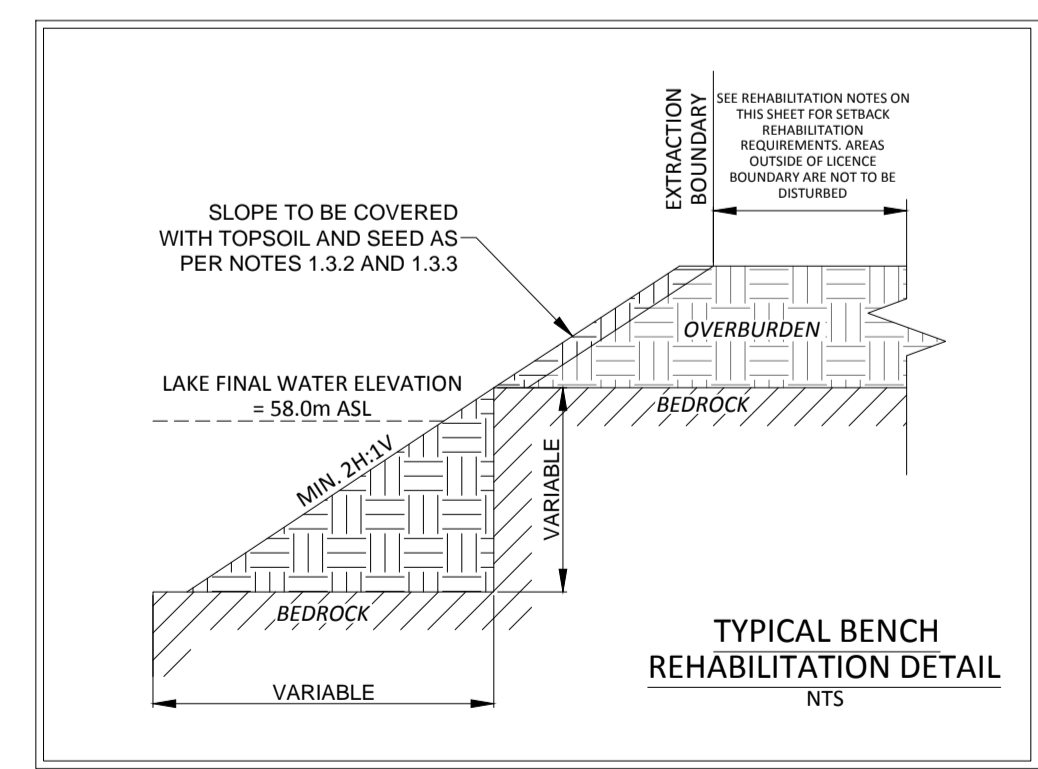
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**Checked By:** MP

**Paper Size:** 24" x 36" **Scale:** 1:2000 (metric) **Drawing Number:** Sheet 7 of 8  
**Date:** AUG. 17, 2017



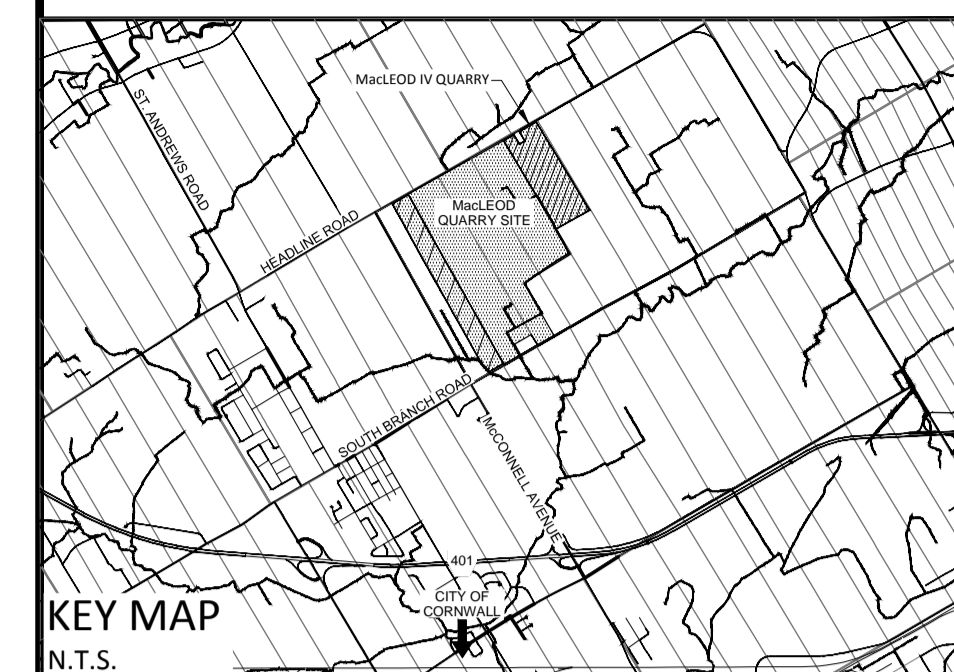
EG ELEV.  
BEDROCK  
ELEV.

NO.	VARIATIONS FROM OPERATIONAL STANDARDS	APPROVED BY INSPECTOR	DATE
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	EXCESS OVERBURDEN MAY BE REMOVED FROM THE SITE		



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**LOCATION OF SITE**  
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 COUNTY OF SOUTH STORMONT

**APPLICANT & PROPERTY OWNER**  
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**SITE BENCHMARKS**

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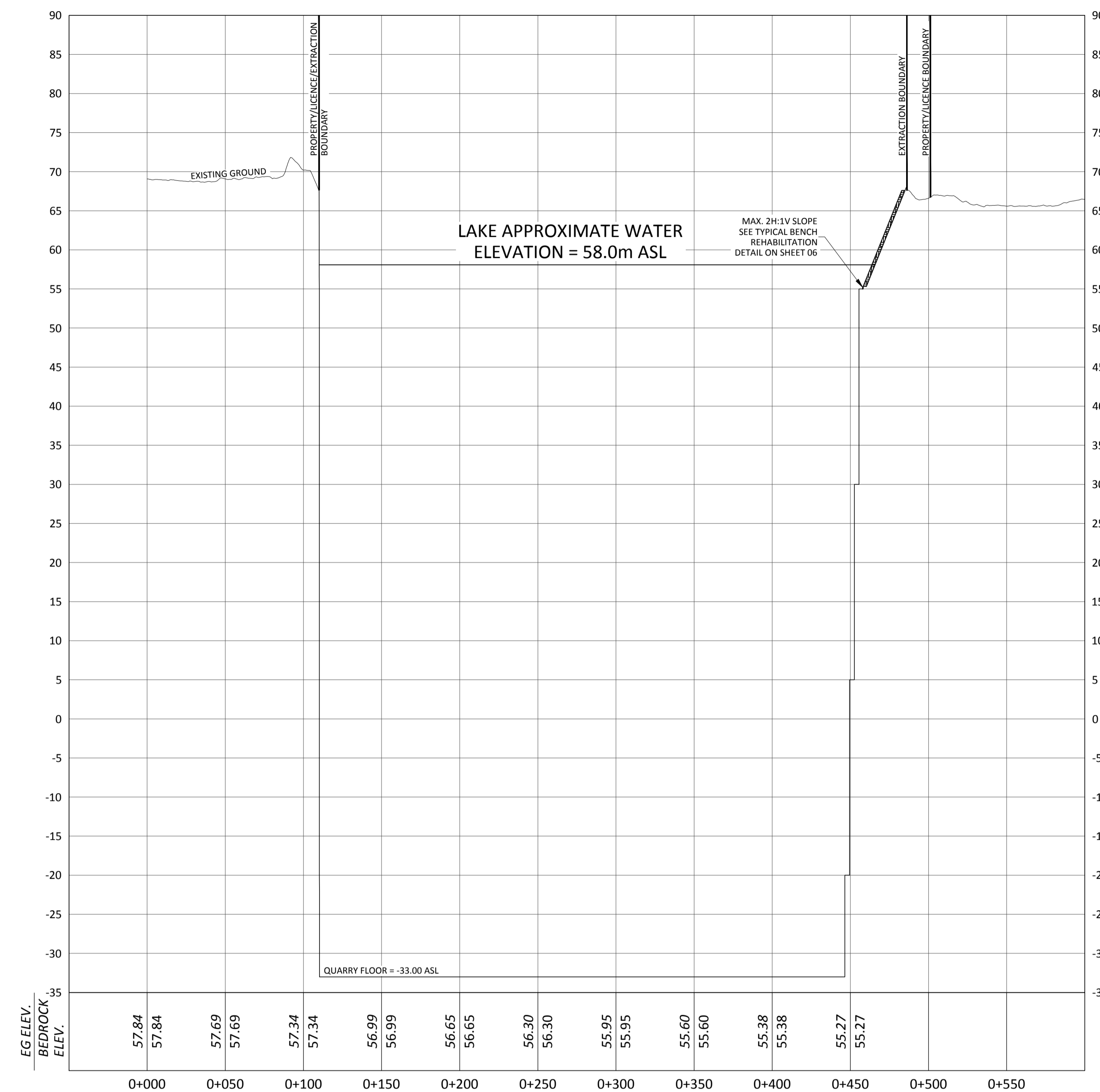
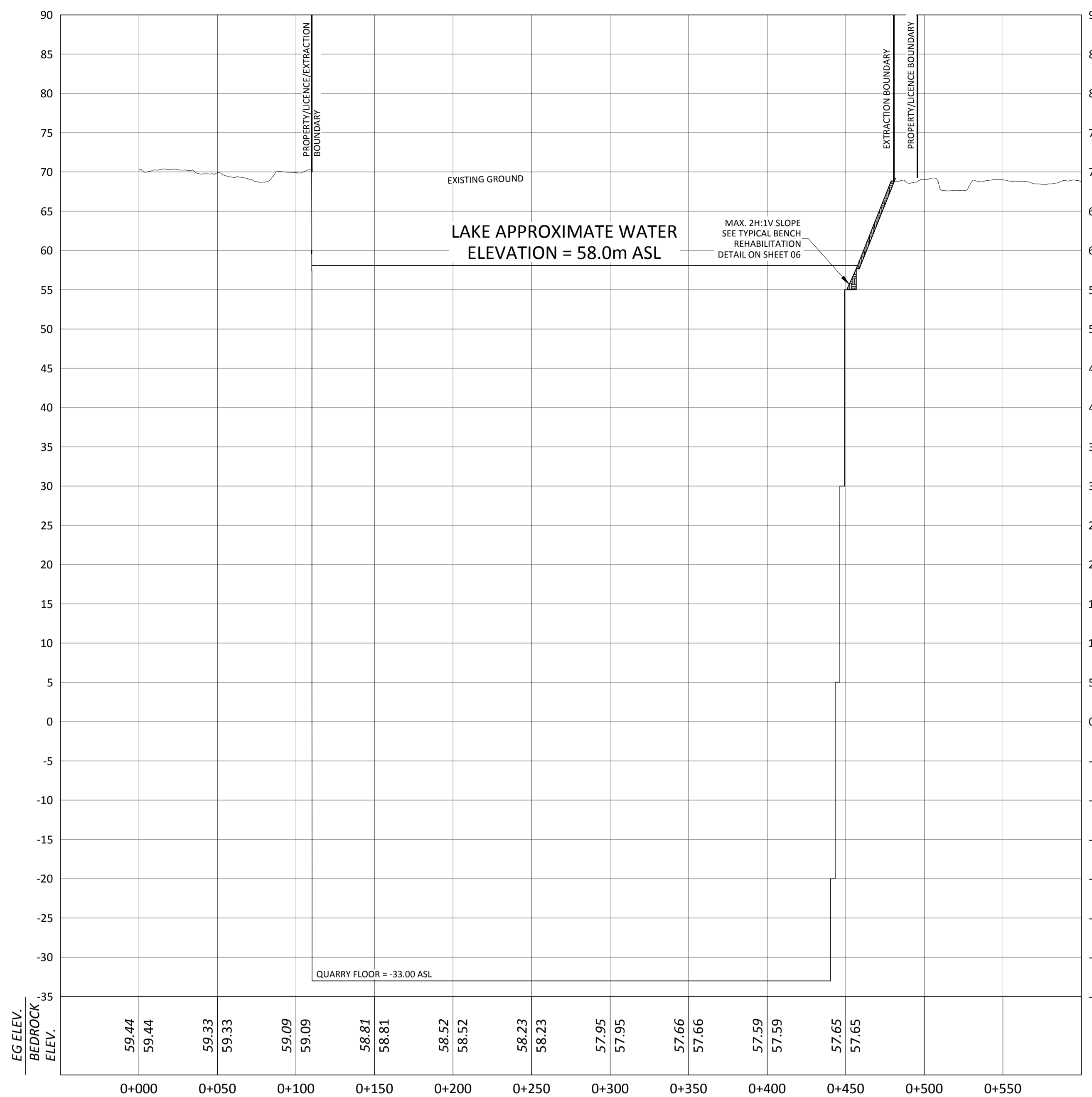
**Project:**  
 MACLEOD 5  
 CATEGORY 1 CLASS "A" PIT BELOW WATER  
 CATEGORY 2 CLASS "A" QUARRY BELOW WATER

**Drawing Title:**  
 REHABILITATION SECTIONS (2)

**Drawn By:** DL **Project Number:** CP-16-0280  
**Checked By:** MP

**Paper Size:** 24" x 36" **Scale:** 1:2000 (metric)  
**Drawing Number:** Sheet 8 of 8

**Date:** AUG. 17, 2017



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