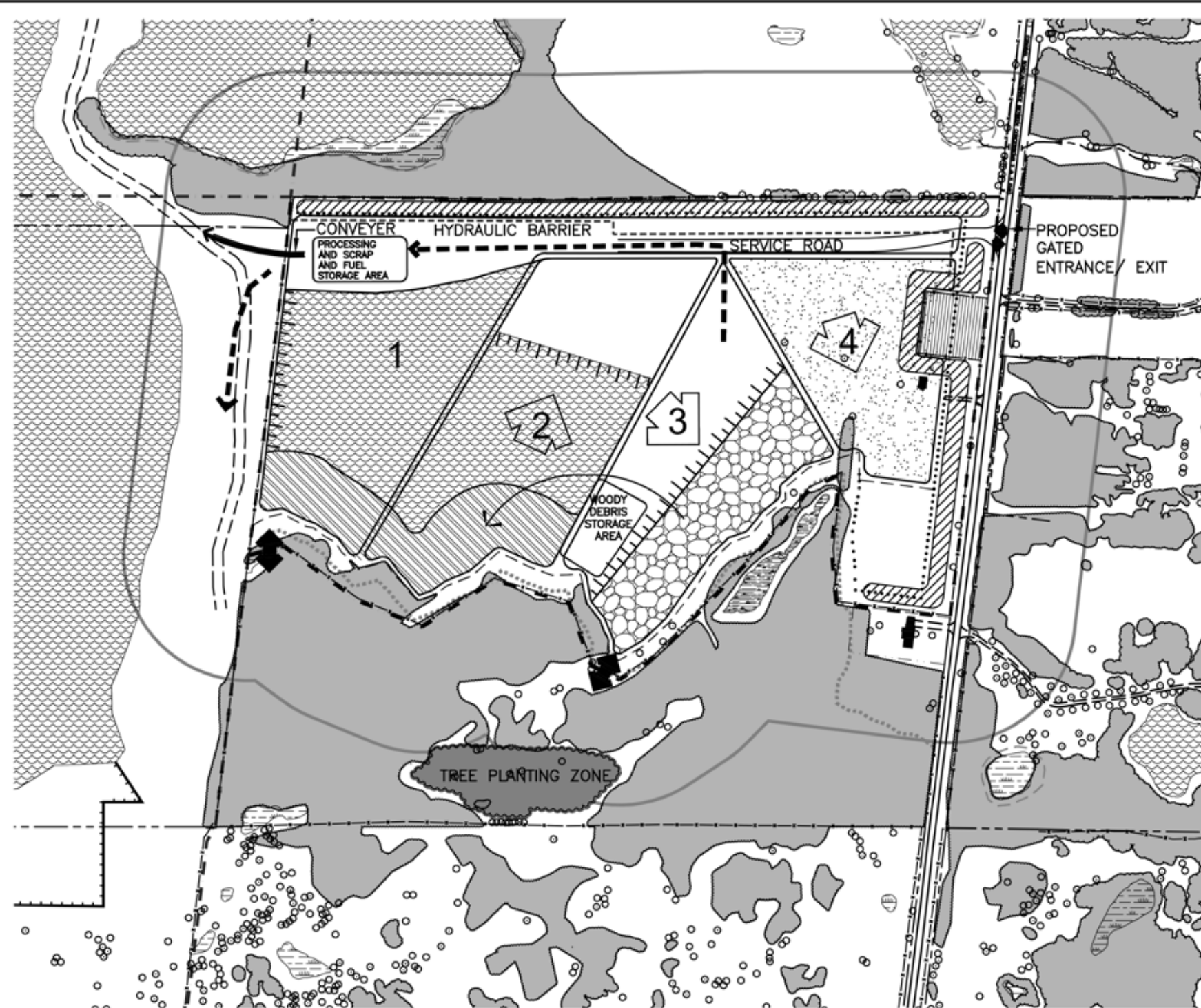


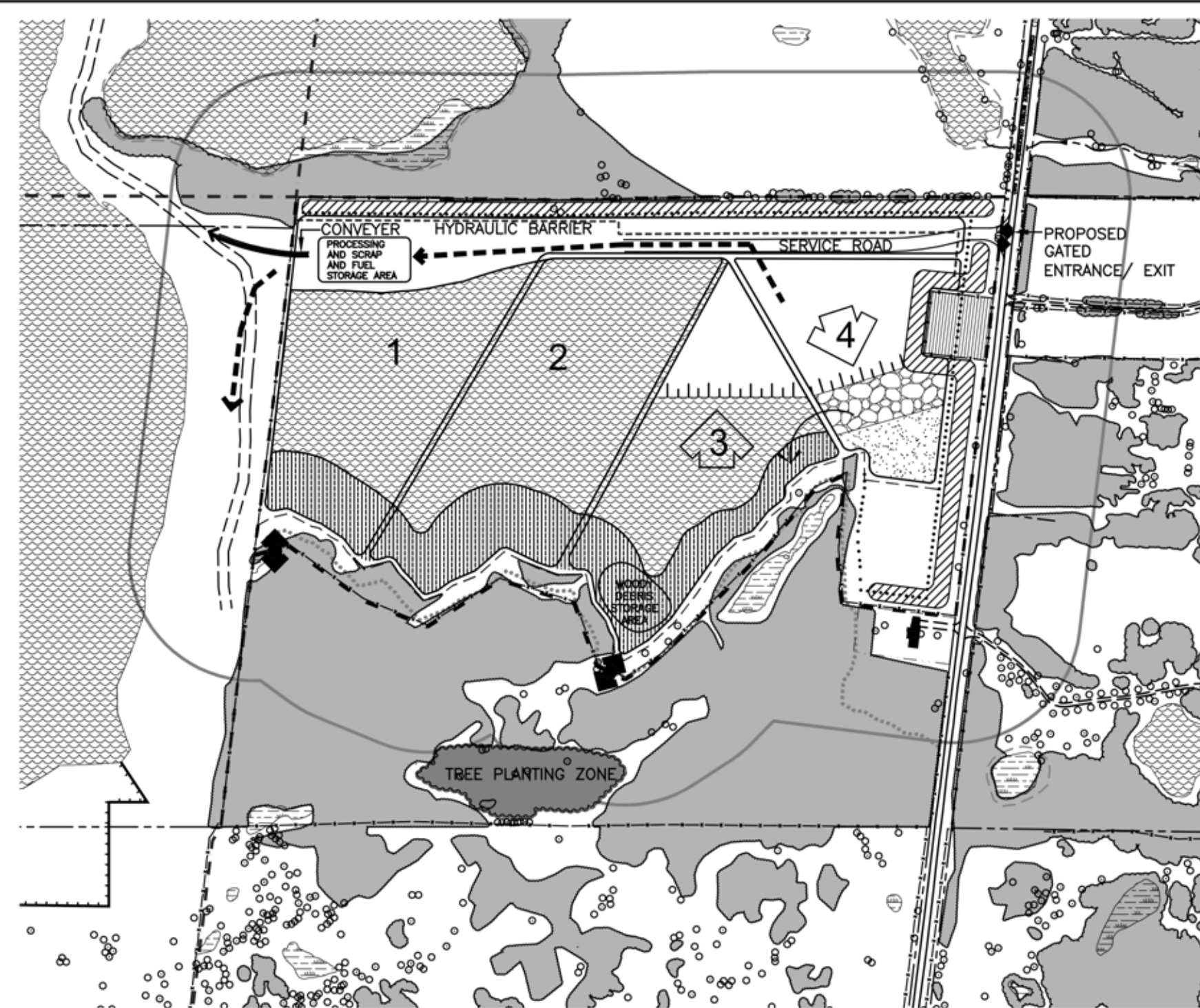
PHASE B

- BEGIN SEQUENTIAL CLEARING AND GRUBBING OF AREA 2. SALVAGE LARGER STUMPS AND TREES FOR HABITAT CREATION AND STORE IN WOODY DEBRIS STORAGE AREA IN AREA 3.
- STRIP TOPSOIL AND OVERBUDEN SEPARATELY FROM AREA 2 AND USE MATERIALS TO CONTINUE CONSTRUCTION OF ACoustic BERM ALONG HEART LAKE ROAD AND ADJACENT TO THE PROPERTY LINE OF RESIDENCE R5, AS SHOWN.
- BEGIN ABOVE WATER EXTRACTION IN AREA 2 IN DIRECTION SHOWN.
- BEGIN CONSTRUCTION OF HYDRAULIC BARRIER AS PER STUDY RECOMMENDATIONS (SEE HYDROLOGICAL TECHNICAL RECOMMENDATION, THIS PAGE).
- BEGIN BELOW WATER EXTRACTION IN AREA 1 IN DIRECTION SHOWN.
- MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION. AREAS 3 (EXCEPT WOODY DEBRIS STORAGE) AND 4 (EXCEPT BERM) TO REMAIN UNDISTURBED.



PHASE C

- BEGIN CLEARING AND GRUBBING OF AREA 3 SEQUENTIALLY. SALVAGE LARGER STUMPS AND TREES FOR HABITAT CREATION. REMOVE BUILDINGS LOCATED IN AREA 3 AND DISPOSE OF IN AN ACCEPTABLE MANNER.
- STRIP TOPSOIL AND OVERBUDEN SEPARATELY FROM AREA 3 AND USE MATERIALS TO BEGIN PROGRESSIVE REHABILITATION OF SOUTH SIDE SLOPES AND SHORELINE IN AREA 1 AND 2.
- COMPLETE ABOVE WATER EXTRACTION IN AREA 2 AND BEGIN BELOW WATER EXTRACTION IN DIRECTION SHOWN.
- BEGIN ABOVE WATER EXTRACTION IN AREA 3 IN DIRECTION SHOWN.
- MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION. AREA 4 (EXCEPT BERM) TO REMAIN UNDISTURBED.



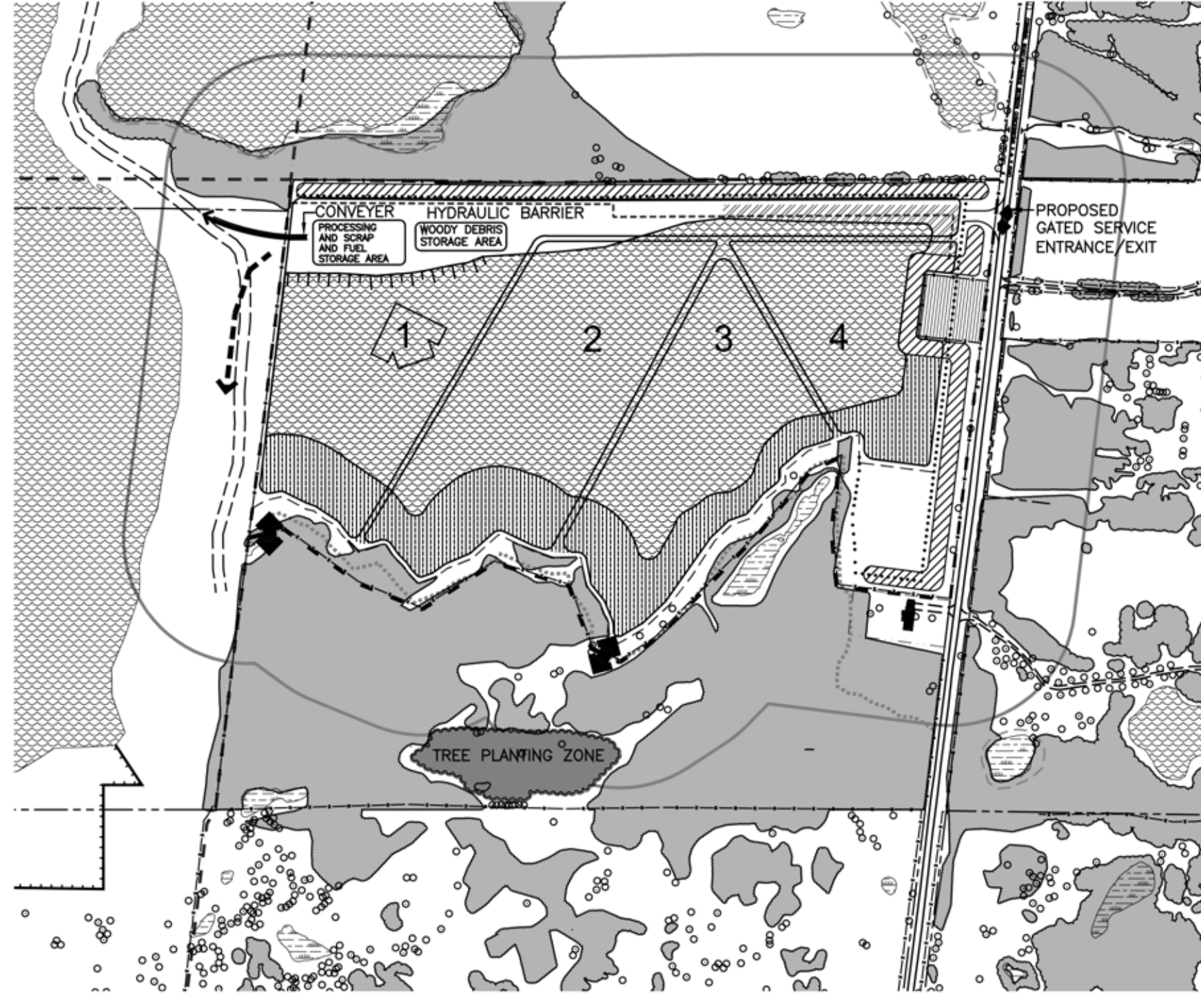
PHASE D

- PRIOR TO EXTRACTION IN AREA 4, THE ACoustic BERM ALONG HEART LAKE ROAD AND THE SOUTH SIDE OF AREA 4 MUST BE COMPLETE. BEGIN CLEARING AND GRUBBING OF AREA 4. SALVAGE LARGER STUMPS AND TREES FOR HABITAT CREATION AND STORE IN AREA 3.
- STRIP TOPSOIL AND OVERBUDEN SEPARATELY FROM AREA 4 AND USE TO CONTINUE PROGRESSIVE REHABILITATION OF SIDE SLOPES AND SHORELINE IN AREA 2.
- COMPLETE BELOW WATER EXTRACTION IN AREA 2.
- BEGIN BELOW WATER EXTRACTION IN AREA 3 IN DIRECTION SHOWN AND BEGIN PROGRESSIVE REHABILITATION OF SIDESLOPES AND SHORELINE.
- BEGIN ABOVE WATER EXTRACTION IN AREA 4 IN DIRECTION SHOWN.
- MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION.



PHASE E

- CONTINUE EXTRACTION OF AREA 4 IN DIRECTION SHOWN.
- COMPLETE BELOW WATER EXTRACTION AND PROGRESSIVE REHABILITATION OF SIDESLOPES AND SHORELINE IN AREA 3. BEGIN PROGRESSIVE REHABILITATION OF SIDESLOPES AND SHORELINE IN AREA 4.
- COMPLETE ABOVE WATER EXTRACTION IN AREA 4 AND BEGIN BELOW WATER EXTRACTION IN DIRECTION SHOWN.
- MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION.

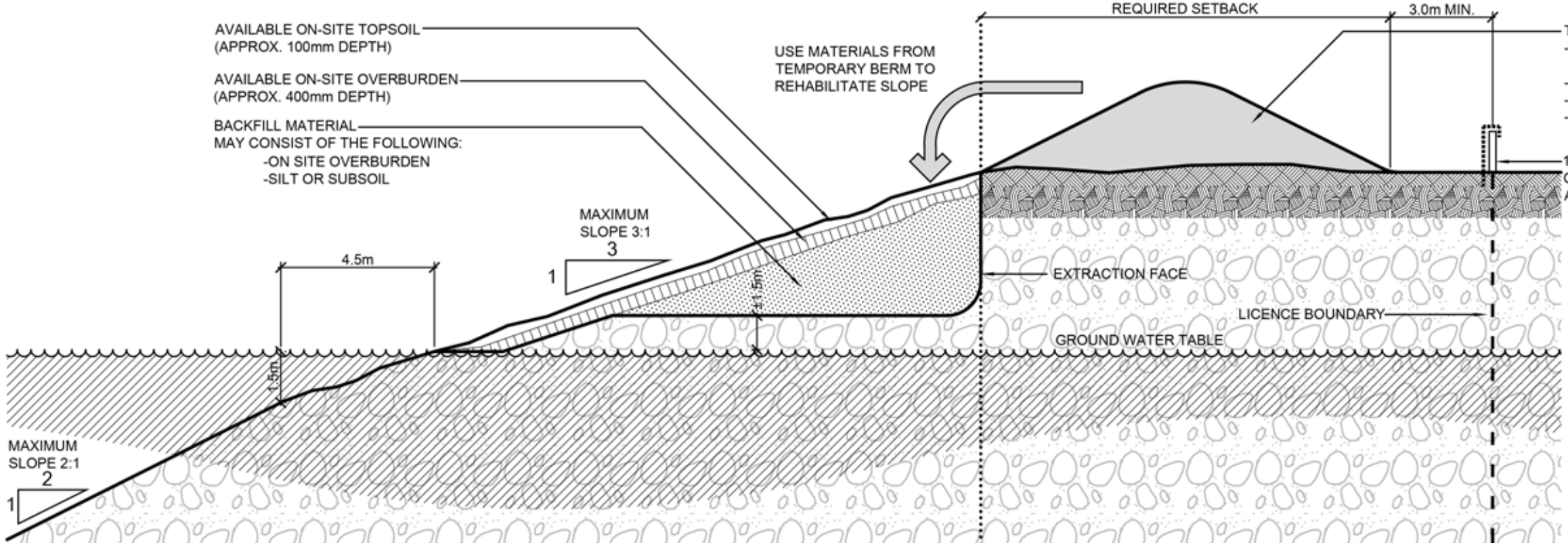


PHASE F

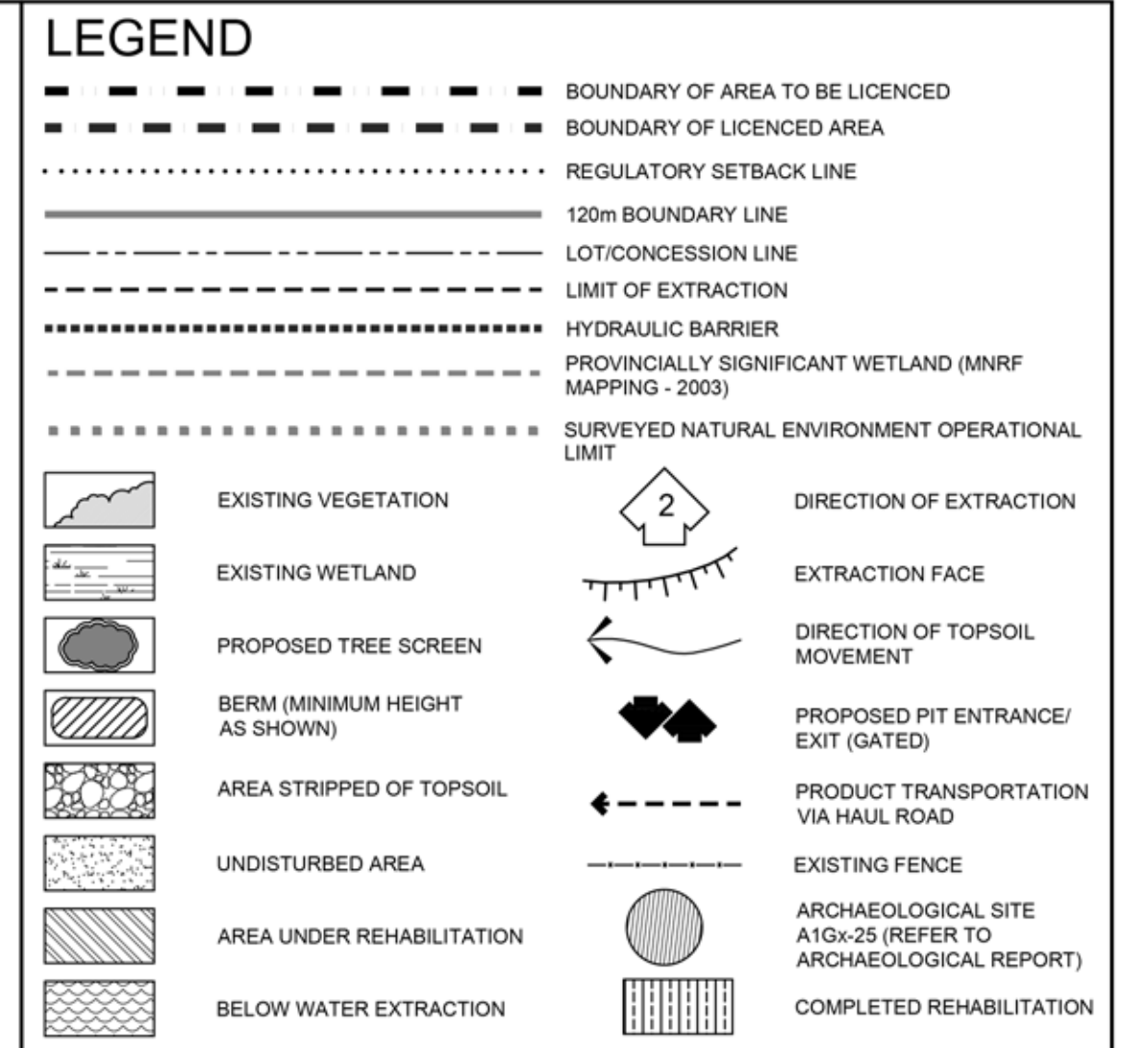
- COMPLETE BELOW WATER EXTRACTION IN AREA 4. CONTINUE BELOW WATER EXTRACTION OF PROCESSING AREA IN DIRECTION SHOWN.
- COMPLETE PROGRESSIVE REHABILITATION OF SIDESLOPES AND SHORELINE IN AREA 4 WITH ON SITE TOPSOIL AND OVERBUDEN (ALL ACoustic BERMS SHALL REMAIN UNTIL EXTRACTION OF ENTIRE PIT IS COMPLETED).
- MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION.

PHASE G (NOT SHOWN)

- COMPLETE BELOW WATER EXTRACTION AND CONTINUE PROGRESSIVE REHABILITATION OF SIDESLOPES AND SHORELINE IN AREA 1 USING TOPSOIL AND OVERBUDEN STOCKPILED IN THE ACoustic BERM.
- UPON COMPLETION OF EXTRACTION, REMOVE ALL EQUIPMENT, STRUCTURES, SCRAP AND MACHINERY FROM THE SITE.
- THE SITE WILL BE REHABILITATED TO A POND (REFER TO REHABILITATION PLAN ON DRAWING 5).



TYPICAL SIDESLOPE REHABILITATION AND BERM BY BACKFILLING N.T.S.



TECHNICAL RECOMMENDATIONS

THE FOLLOWING ARE THE TECHNICAL RECOMMENDATIONS FROM ALL OF THE EXPERTS' REPORTS AS OF DECEMBER 2012. ADDITIONAL RECOMMENDATIONS MAY BE INCLUDED AS A RESULT OF THE PRE-LICENCE REVIEW PROCESS.

THE FOLLOWING TECHNICAL RECOMMENDATIONS SHALL BE IMPLEMENTED AT THE MCCORMICK SITE.

- THE SOUND EMISSIONS OF ALL CONSTRUCTION EQUIPMENT INVOLVED IN SITE PREPARATION AND REHABILITATION ACTIVITIES SHALL COMPLY WITH THE SOUND LEVEL LIMITS SPECIFIED IN MNRCC PUBLICATION NFO-115 'CONSTRUCTION EQUIPMENT'.
- EXCEPT WHERE FURTHER RESTRICTIONS APPLY AS OUTLINED BELOW, THE EXTRACTION AND EQUIPMENT OPERATING IN THE PIT SHALL BE LIMITED TO TWO EXTRACTION LOADERS, ONE SMALL LINE OR EXCAVATOR, TWO ROCK TRUCKS, AND THE CONVEYERS REQUIRED TO TRANSPORT MATERIAL FROM THE EXTRACTION AREA(S) TO THE PROCESSING PLANT TO THE WEST OF THE SITE.
- THE REFERENCE SOUND EMISSION LEVELS OF THE EQUIPMENT SHALL NOT EXCEED:

EQUIPMENT	REFERENCE SOUND LEVEL (ONE HOUR L _{EQ} 30 METRES)
PROCESSING PLANT (INCLUDING CRUSHERS AND CONVEYERS)	82
EXTRACTION LOADER (EACH)	74
ROCK TRUCK (EACH)	74
DRAG LINE OR EXCAVATOR	72

- EXTRACTION OPERATIONS SHALL BE RESTRICTED TO THE TIME PERIOD 07:00-19:00. SITE PREPARATION AND REHABILITATION OPERATIONS SHALL BE RESTRICTED TO WEEKDAYS 07:00-19:00 AND SATURDAYS 07:00-15:00.
- ONCE EXTRACTION IS TAKING PLACE IN PHASE 1:
- THE CRUSHER SHALL BE LOCATED AT A MINIMUM DISTANCE OF 150m FROM THE NORTH EXTRACTION LIMIT AND 30m FROM THE WEST EXTRACTION LIMIT. THE PLANT SHALL REMAIN IN THIS LOCATION FOR THE PROJECT DURATION AS SEEN IN FIGURE 2.
- A 4m HIGH LOCAL ACoustic BARRIER SHALL BE LOCATED WITHIN 50m OF THE CRUSHER, BETWEEN THE PLANT AND RECEPTORS R01 TO R08 AS SEEN IN FIGURE 2.
- PERIMETER ACoustic BERMS SHALL BE CONSTRUCTED AS INDICATED ON THE SITE PLANS. THE MINIMUM HEIGHT OF BERMS SHALL BE SPECIFIED. THE PHASING OF BERM CONSTRUCTION SHALL BE AS INDICATED ON THE SITE PLANS.
- PRIOR TO PHASE 1, A BERM SHOULD BE CONSTRUCTED ALONG THE ENTIRE NORTH PERIMETER, SUCH THAT THE BERM HEIGHT IS AT LEAST 4m.
- PRIOR TO PHASE 4, A BERM SHOULD BE CONSTRUCTED ALONG THE ENTIRE SOUTH EDGE OF PHASE 4, AT AN ELEVATION OF 422m A.S.L.
- PRIOR TO PHASE 4, A BERM SHOULD BE CONSTRUCTED ALONG THE EAST PERIMETER, SUCH THAT THE BERM HEIGHT IS AT LEAST 4m.
- THE PHASING AND DIRECTION OF EXTRACTION SHALL BE AS INDICATED ON THE SITE PLANS.
- WITHIN PHASE 2, DUE TO THE TOPOGRAPHY OF THE LAND, THE EXTRACTION EQUIPMENT SHOULD OPERATE WITHIN 30m OF THE FACE SUCH THAT THE EQUIPMENT IS SHIELDED BY THE EXTRACTION FACE ON BOTH THE NORTH AND EAST SIDE AT ALL TIMES.
- WITHIN PHASE 3, DUE TO THE TOPOGRAPHY OF THE LAND, THE EXTRACTION EQUIPMENT SHOULD OPERATE WITHIN 30m OF THE FACE SUCH THAT THE EQUIPMENT IS SHIELDED BY THE EXTRACTION FACE ON BOTH THE NORTH AND EAST SIDE AT ALL TIMES.
- WITHIN PHASE 4, DUE TO THE TOPOGRAPHY OF THE LAND, THE EXTRACTION EQUIPMENT SHOULD OPERATE WITHIN 30m OF THE FACE SUCH THAT THE EQUIPMENT IS SHIELDED BY THE EXTRACTION FACE ON THE SOUTH SIDE AT ALL TIMES.
- THE DEPTH OF EACH LIFT SHALL WHERE POSSIBLE BE A MINIMUM OF 2 METRES. IF THIS REQUIREMENT CANNOT BE MET FOR THE 2ND OR 3RD LIFT, THE LIFTS SHALL BE LIMITED TO CLOSE SUCCESSION SUCH THAT THE COMBINED FACE HEIGHT IS A MINIMUM OF 7m.
- ANY PROPOSED CHANGES TO THE ASPECTS OF THE EXTRACTION AND PROCESSING OPERATIONS DEALT WITH ABOVE AS RELATING TO NOISE CONTROL SHALL BE REVIEWED BY A QUALIFIED ACoustic CONSULTANT FOR COMPLIANCE WITH THE RELEVANT NOISE CRITERIA.

TECHNICAL RECOMMENDATIONS (CONTINUED)

NATURAL ENVIRONMENT (SAVANTA - SEPTEMBER 2017)
 THE EXTRACTION LIMIT SHALL MAINTAIN A MINIMUM SETBACK DISTANCE OF 15M FROM THE IDENTIFIED AND SURVEYED OPERATIONAL LIMIT, AS SHOWN ON FIGURE 10, APPENDIX A.
 NO SITE ALTERATIONS ASSOCIATED WITH THE PIT OPERATIONS SHALL OCCUR BEYOND THE OPERATIONAL LIMIT LINE.

HYDROLOGICAL ASSESSMENT (GROUNDWATER SCIENCE CORP. - OCTOBER 2017)
 THE FOLLOWING ARE THE RECOMMENDATIONS OF THIS ASSESSMENT:
 WATER WELL INTERFERENCE COMPLAINT RESPONSE
 WHERE THE MINISTRY OF NATURAL RESOURCES AND FORESTRY WITH THE ASSISTANCE OF THE MINISTRY OF THE ENVIRONMENT AND CLIMATE CHANGE HAS DETERMINED THAT THE OPERATION OF THE PIT HAS CAUSED ANY WELL WATER TO BE ADVERSELY AFFECTED, THE LICENSEE SHALL, AT THE LICENSEE'S EXPENSE, EITHER DEEPEN THE WELL OR REPLACE THE WELL TO ENSURE THAT HISTORIC WATER PRODUCTION QUALITY STANDARDS ARE MAINTAINED FOR THAT WELL. IF THIS PIT OPERATION HAS CAUSED A WATER SUPPLY PROBLEM, THE LICENSEE SHALL, AT THEIR EXPENSE, ENSURE A CONTINUOUS SUPPLY OF POTABLE WATER TO THE AFFECTED LANDOWNER.

HYDRAULIC BARRIER STUDY
 A DETAILED ASSESSMENT THAT SHALL INCLUDE A COMPUTER GROUNDWATER MODELING STUDY IF NEEDED, SHALL BE COMPLETED IN ORDER TO REFINE THE DESIGN AND LOCATION OF THE HYDRAULIC BARRIER WALL AND ENSURE THE SEASONAL WATER AVAILABILITY AND HYPERDOPED AT THE CALEDON CREEK/WETLAND #1 AND WANNOCK LAKE/WETLAND #1 NATURAL ENVIRONMENT SYSTEM IS MAINTAINED. THE STUDY SHALL INCORPORATE ANY AGENCY REVIEW COMMENTS AND TECHNICAL INPUT PROVIDED AND AVAILABLE THROUGH THE APPLICATION PROCESS BY THE MINISTRY OF NATURAL RESOURCES AND FORESTRY, THE MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE, CREDIT VALLEY CONSERVATION, THE REGION OF PEEL AND THE TOWN OF CALEDON.

WETLAND AND CLIMATE AREA
 DURING REHABILITATION AND AREA REGRADING, THE SUBSOIL WITHIN THE NEW DRAINAGE AREA NORTH OF WETLAND #4 SHOULD BE AMENDED OR REPLACED WITH FINE GRAINED MATERIAL FROM ON-SITE, SUCH AS TILL.

MONITORING PROGRAM

- PRIOR TO EXTRACTION ACTIVITIES A PRIVATE WATER WELL SURVEY SHALL BE COMPLETED FOR ALL RESIDENCES WITHIN 500 M OF THE LICENSE BOUNDARY. THE SURVEY SHALL OBTAIN WATER LEVEL MEASUREMENTS AND WATER QUALITY SAMPLES (AMMONIA AND METALS) TO SERVE AS A BASELINE DATA SET AT ALL RESIDENCES FOR WHICH ACCESS IS PROVIDED BY A QUALIFIED ENGINEER.
- GROUNDWATER LEVEL MONITORING SHALL BE COMPLETED AT MONITORS B#1, B#2R, B#4, B#5, B#6 AND B#7. B#1 MONITORING SHALL INCLUDE SEMI-CONTINUOUS MEASUREMENTS USING WATER LEVEL DATALOGGERS INSTALLED AT EACH LOCATION AND RECORDING ON AN HOURLY BASIS. MANUAL QUARTERLY MEASUREMENTS SHALL BE COMPLETED.
- IF ACCESS IS AVAILABLE, A STAFF GAUGE WATER LEVEL MONITORING STATION SHALL BE ESTABLISHED AT WANNOCK LAKE PRIOR TO EXTRACTION ACTIVITIES AT THE SITE. MONITORING SHALL BE COMPLETED USING A DATALOGGER AND INCLUDE QUARTERLY MANUAL MEASUREMENTS, SIMILAR TO THAT COMPLETED AT ON-SITE LOCATIONS.
- THE HYDRAULIC BARRIER SHALL BE COMPLETED PRIOR TO BELOW GROUNDWATER TABLE EXTRACTION AT THE SITE. THE BARRIER DESIGN SHALL BE FINALIZED THROUGH THE COMPUTER MODELING STUDY AND CONSTRUCTION SHALL BE OVERSEEN BY A QUALIFIED ENGINEER.
- PRIOR TO THE COMMENCEMENT OF BELOW GROUNDWATER TABLE EXTRACTION, WATER LEVEL TRIGGER LEVELS SHALL BE IDENTIFIED FOR B#1, B#2R, B#3 AND B#4. THE TRIGGER LEVELS SHALL INCORPORATE BOTH SEASONAL BASELINE DATA FOR EACH LOCATION ESTABLISHED THROUGH THE MONITORING PROGRAM AND THE RESULTS OF THE COMPUTER MODELING STUDY.
- UPON COMMENCEMENT OF BELOW GROUNDWATER TABLE EXTRACTION AT THE SITE A QUALIFIED GEOCHEMIST SHALL REVIEW THE GROUNDWATER MONITORING DATA AND PREPARE AN ANNUAL REPORT ON THE FOLLOWING:
 - A SUMMARY OF THE MONITORING DATA FROM THE CURRENT YEAR AND PREVIOUS YEARS;
 - A RECOMMENDATION REGARDING THE ADEQUACY OF THE MONITORING PROGRAM, AND ANY AMENDMENTS THAT MAY BE REQUIRED; AND
 - THE NEED TO IMPLEMENT THE CONTINGENCY PLAN, IF NECESSARY AND WARRANTED.
- THE ANNUAL MONITORING REPORT SHALL BE PROVIDED TO THE MINISTRY OF NATURAL RESOURCES AND FORESTRY, THE MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE, CREDIT VALLEY CONSERVATION, THE REGION OF PEEL AND THE TOWN OF CALEDON.

TRIGGER MECHANISMS FOR CONTINGENCY RESPONSE
 THE CONTINGENCY PLAN SHALL BE IMPLEMENTED IF ANY OF THE FOLLOWING CONDITIONS OCCUR:

- GROUNDWATER LEVEL IN THE MONITORS ARE REDUCED BELOW THE TRIGGER LEVELS, AS DETERMINED PRIOR TO BELOW WATER EXTRACTION AT THE SITE; OR
- THE ECOLOGICAL INSPECTION IDENTIFIES UNUSUAL STRESS RESPONSE ADJACENT TO PIT AREA THAT IS NOT PRESENT ELSEWHERE IN THE VICINITY; OR
- A WATER WELL COMPLAINT IS SUBSTANTIATED BY THE INVESTIGATION TO HAVE RESULTED FROM THE OPERATION OF THE PIT.

IN THE EVENT THAT THE CONTINGENCY PLAN IS TRIGGERED, THE FOLLOWING ACTIONS SHALL BE IMPLEMENTED:

- THE OPERATOR SHALL CEASE ANY BELOW-WATER EXTRACTION OPERATIONS;
- THE DISTRICT OFFICE OF THE MINISTRY OF THE ENVIRONMENT AND CLIMATE CHANGE AND THE MINISTRY OF NATURAL RESOURCES AND FORESTRY SHALL BE INFORMED OF THE TRIGGER, AND THE IMPLEMENTATION OF THE CONTINGENCY PLAN;
- GROUNDWATER LEVEL MONITORING SHALL CONTINUE TO BE COLLECTED AND DATA DOWNLOADED DURING THE PERIOD WHEN THE IMPACT PERSISTS;
- THE MONITORING DATA AND OTHER RELEVANT INFORMATION SHALL BE REVIEWED BY A QUALIFIED GEOLOGIST AND/OR GEOCHEMIST (DEPENDENT ON THE ISSUE) WHO SHALL, AS SOON AS REASONABLY POSSIBLE, PREPARE A MITIGATION PLAN SPECIFIC TO THE ISSUE, DOCUMENTING THE NATURE, EXTENT AND MONITORING REQUIREMENTS OF THE TRIGGER, A RECOMMENDATION REGARDING THE MITIGATION RECOMMENDATIONS REGARDING ANY ADDITIONAL MONITORING REQUIREMENTS, AND RECOMMENDATIONS REGARDING THE RESOLUTION OF OPERATIONS. THE REPORT SHALL BE CIRCULATED TO THE DISTRICT OFFICE OF THE MINISTRY OF THE ENVIRONMENT AND CLIMATE CHANGE AND THE MINISTRY OF NATURAL RESOURCES AND FORESTRY.
- SUBJECT TO APPROVAL BY THE DISTRICT OFFICE OF THE MINISTRY OF THE ENVIRONMENT AND CLIMATE CHANGE AND THE MINISTRY OF NATURAL RESOURCES AND FORESTRY, THE OPERATOR SHALL IMPLEMENT THE MITIGATION PLAN.

ARCHAEOLOGICAL ASSESSMENT (STAGE 1, 2 AND 3) (ARCHAEOLOGICAL INC. - MARCH 2004, STANTEC TECHNICAL RECOMMENDATIONS UPDATED NOVEMBER 2017)

THE STAGE 3 ASSESSMENT OF LOCATION 1 (RESULTED IN THE RECOVERY OF A SIGNIFICANT QUANTITY OF M.D.-19TH CENTURY ARTIFACTS CONSISTENT WITH THE PRESENCE OF A DOMESTIC STRUCTURE AND ASSOCIATED ACTIVITY AREAS. DUE TO THE RELATIVE RARITY AND HIGH SIGNIFICANCE OF A SHORT TERM, M.D.-19TH CENTURY OCCUPATION, IT IS RECOMMENDED THAT LOCATION 1 BE SUBJECT TO A STAGE 4 ASSESSMENT TO ADVANCE ANY EXTRACTION ACTIVITY IN THIS AREA.

AIR QUALITY ASSESSMENT (ARCADIS - OCTOBER 2017)
 CONSTRUCTION ACTIVITIES ON SITE SHALL MEET OR EXCEED THOSE USED IN THIS ASSESSMENT, PARTICULARLY FOR THE SITE MAIN ENTRANCE ROAD, WHICH SHALL BE PAVED OR HARD SURFACE WITH RECYCLED ASPHALT PRODUCT.

- ANY ON-SITE ROADS THAT ARE PAVED TO REDUCE DUST EMISSIONS SHALL BE KEPT CLEAN AND FREE OF DIRT THROUGH WATER FLUSHING, AS APPROPRIATE.
- VEHICLE SPEEDS ON ALL ON-SITE HAUL ROADS SHALL REMAIN AT 20 KM/H OR LESS.

Pre Licence Review

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Offices in Markham & Cambridge

Project Name
McCORMICK PIT

PART OF LOT 12, CONCESSION 2 EHS
TOWN OF CALEDON, PEEL REGION

LICENCE NO. _____

APPLICANT SIGNATURE _____

Scale 1:5000 North

Drawing Status
SUBMITTED TO MNRF FOR REVIEW

Drawn S.B. Checked G.D.H./M.H. Issue Date JAN 2018

Drawing Title
OPERATIONS PLAN PHASES B-G

Project Number
02-48

Drawing Number
3 OF 5