

PROJECT REFERENCE DATA SHEET

Project Name	▶ Mine - Oil Sands - Alberta	Year	▶ --
Client / Owner	▶ Demolition Client	Contract Cost	▶ --
Design Cost	▶ --		

Description of Work:

Carvajal Structural Engineers Inc. (CSE) was retained to be the Demolition Specialist for the preparation of detailed demolition guidelines and procedures for the complete demolition of the a Mine facility at the Oil Sands.

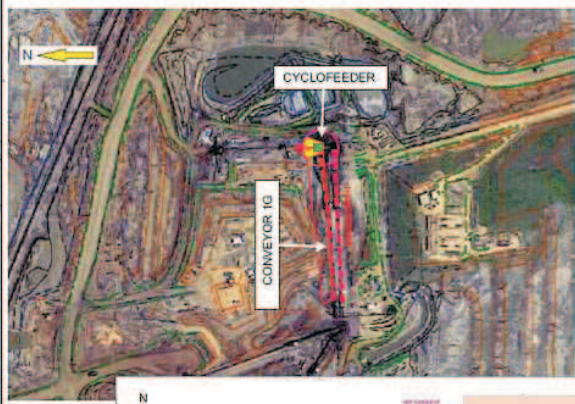
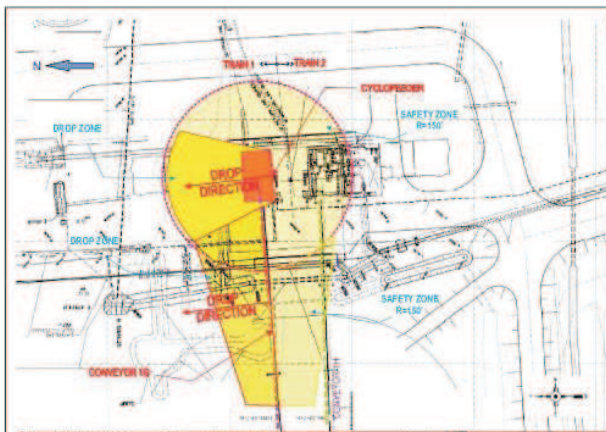
During the course of work CSE was engaged to perform structural reviews and structural integrity reviews for all the related structures associated with the extraction and initial processing of the oil sands. A few of the structural components to be demolished included.

- Booster Pump-House, Feed Conveyors, Slurry Prep Plants 78-1/78-2, Plant 79 (Reject Plant).
- Surge Facility (excluding concrete structure and embedded metal). Head Stations 1J/1K and Mine Control Centre and adjacent Building 703, Emergency Dump-Pond Pump-house, DRC Crushers 6+7, Head-end Stations 9A/10A
- Conveyor Systems (including head-end, tail-end and drive units) 1J, 1K, 1G, 1H, 1R, 2R, 9A, + 10A (including 10A overpass arches).
- Hydro Transport Pipelines from Plants 78-1 and 78-2 (to identified boundary).
- Slurry Lines from Plant 79 to Plants 78-1 and 78-2. Dump Pond Return Lines.
- Booster Pump-house Drain Line.
- All Culverts and Sleeves associated with the above ground lines.

All the work had to be co-ordinated with the Facility Remaining fully operational.

Figure/Photographs:

REINFORCEMENT DETAIL (PDF) - COLUMN B6 DOUBLE "Y" CUT - DETAIL (SD) - COLUMN B6	REINFORCEMENT DETAIL (PDF) - COLUMN B5 DOUBLE "Y" CUT - DETAIL (SD) - COLUMN B5
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DESIGN/PERMISSION NOTES

1. EXISTING FOUNDATION NOTES
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20. EXISTING FOUNDATION NOTES

PROPOSED DETAIL
KEY PLAN

D1-06

DATE: 01/05/2016
 DRAWN: [Name]
 CHECKED: [Name]
 APPROVED: [Name]

- 1.0 GENERAL**
1. ALL DIMENSIONS ARE IMPERIAL UNLESS OTHERWISE NOTED.
 2. DO NOT SCALE DRAWINGS.
 3. WHERE DOCUMENTS ARE REFERRED THEY SHALL BE THE LATEST EDITION.
 4. THIS GUIDELINE IS PROVIDED EXCLUSIVELY TO TERRA ENVIRONMENTAL SERVICES (TERRA) FOR THE SOLE PURPOSE OF USING THE GUIDELINE DURING THE CONTROLLED DROP OF THE "CYCLOFEEDER BUILDING # 819" AND PORTION OF "CONVEYOR 80+109" (STRUCTURE) LOCATED AT TRUCK 1 SINGAPORE NORTH MINE DIVISION # 16, ALBERTA, CANADA. NO COPIES OR OTHER FORM OF DISTRIBUTION SHALL BE MADE WITHOUT THE WRITTEN AUTHORIZED CONSENT OF CSE. THIS GUIDELINE IS SITE SPECIFIC AND IS NOT TRANSFERABLE AND IS ONLY APPLICABLE TO THE NOTED STRUCTURE.
 5. CSE DOES NOT AUTHORIZE THE USE OF THIS GUIDELINE OR ANY PORTION OF THIS GUIDELINE FOR THE CONTROLLED DEMOLITION OF ANY OTHER STRUCTURE OR ANY THIRD PARTY USE.
 6. THE DETAILED COLUMN PREP WORK HAS BEEN SPECIFICALLY DESIGNED FOR THE ABOVE NOTED STRUCTURE BASED ON THE WEIGHT OF THE STRUCTURE AND ITS STRUCTURE CONFIGURATION.
 7. THIS GUIDELINE DEALS ONLY WITH STRUCTURAL RELATED ISSUES.
 8. ALL STRUCTURAL SAFETY RELATED WORK WILL BE IN ACCORDANCE WITH PROVISIONS FOUND IN THE ALBERTA OHS ACT & ITS REGULATIONS, THE CANOSA 300 CODE OF PRACTICE FOR SAFETY IN DEMOLITION OF STRUCTURES, THE NATIONAL

- 2.0 SPECIAL PRECAUTIONS**
1. A DEMOLITION SITE SPECIALIST (SPECIALIST OR DROP THE SITE SPECIALIST SHALL BE SPECIFICALLY EXPERT) SHALL ONLY REMAIN RESPONSIBLE FOR THE DESIGN RESPONSIBILITY TO IMPLEMENT THE DESIGN AND RELOAD TO ACCOMMODATE THE ACTUAL REACTION OF THE SITE. THE CONTROLLED DROP OF THE STRUCTURE SHALL BE ONLY ACCOMMODATE TO IN-SITU CONDITIONS SHOWN BY THE SPECIALIST.
 2. THE DESIGNATED CONSTRUCTOR SHALL ENSURE THAT REGULATIONS FOR CONSTRUCTION PROJECTS ARE FOLLOWED. ALL WORK SHALL BE PERFORMED WITH GREAT CARE. IT IMMEDIATELY REPORT TO ENGINEER ANY INCONSISTENCIES.
- 3.0 RIGGING AND BRACING**
- UNLESS OTHERWISE INDICATED, ALL STEEL PULLING CHAINS AND CHIPS WITH MINIMUM WORKING LOAD CAPACITY SHALL BE USED.
- | Chain | Capacity | Grade | Size | Material |
|-------|-------------|----------|--------|----------|
| 1 | 100,000 lbs | Grade 80 | 1 1/2" | SAE 80B |
| 2 | 50,000 lbs | Grade 80 | 1" | SAE 80B |
| 3 | 25,000 lbs | Grade 80 | 3/4" | SAE 80B |
| 4 | 12,500 lbs | Grade 80 | 5/8" | SAE 80B |
| 5 | 6,250 lbs | Grade 80 | 3/4" | SAE 80B |
| 6 | 3,125 lbs | Grade 80 | 1/2" | SAE 80B |
| 7 | 1,562 lbs | Grade 80 | 3/4" | SAE 80B |
| 8 | 781 lbs | Grade 80 | 1/2" | SAE 80B |
| 9 | 390 lbs | Grade 80 | 3/4" | SAE 80B |
| 10 | 195 lbs | Grade 80 | 1/2" | SAE 80B |
- LEGEND**
- 1. CHAIN (SEE TABLE OF CHAINS)
 - 2. BRACING AND BRACING (SEE TABLE OF BRACING)
 - 3. RIGGING POINTS (SEE TABLE OF RIGGING POINTS)
 - 4. BRACING POINTS (SEE TABLE OF BRACING POINTS)
 - 5. BRACING POINTS (SEE TABLE OF BRACING POINTS)
- PLAN VIEW**

APPROVED CLIENT SIGNATURE:

APPROVED ENGINEER SIGNATURE:

DATE: 01/05/2016