

**State of Illinois**  
**Department of Natural Resources**  
**Office of Mines and Minerals**  
**Division of Abandoned Mined Lands**

Funded by the  
 United States Department of Interior  
 Federal Office of Surface Mining

**Bell & Zoller #2 Mine Reclamation Project**  
**AML-GFrE-0413**  
**Franklin County**  
**3LR**



**Bell & Zoller #2 Mine**  
**Franklin County**


**PRE-BID MEETING**  
 A PRE-BID MEETING IS SCHEDULED FOR THIS PROJECT AT 10:00 A.M.  
 WEDNESDAY, NOVEMBER 9, 2005. DUE TO RESTRICTED SITE ACCESS  
 THROUGH AN ACTIVE MINE, ALL INTERESTED POTENTIAL BIDDERS  
 ARE TO MEET AT THE BELL & ZOLLER #2 MINE OFFICE ADJACENT  
 TO IL RTE 149. SEE LOCATION MAP ON SHEET 3.

**SCHEDULE OF DRAWINGS:**

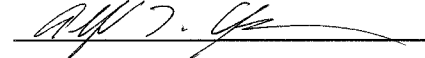
1. Cover Sheet
2. Summary of Quantities/General Notes/Location Map
3. Site Information
- 4.-6. Existing & Proposed Conditions
- 7.-15. Cross Sections
16. Details

Prepared By IDNR Staff

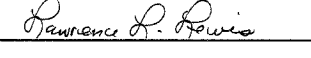
Approved for Bidding:

  
 Joe Angleton, Director  
 Office of Mines and Minerals

Approved By:

  
 Alfred L. Clayborne, Manager  
 AMLR Division

Approved By:

  
 Lawrence L. Lewis, P.E.  
 IL Licensed Professional Engineer  
 No. 0062-038880



Summary of Quantities					
#	Item	Section	Quantity	Unit	Rates/Remarks
1	Special Clearing	201	1	L.S.	
2	Earth Excavation	202	8,744	C.Y.	COMPACTION SHALL BE IN ACCORDANCE WITH SECTION 205 OF THE SPECIAL PROVISIONS
3	Mine Refuse Excavation	202	22,059	C.Y.	
4	Special Excavation	214	178	C.Y.	
5	Riprap Fill, C-4	216	199.9	TON	
6	CA Fill, CA-2	216	26.6	TON	
7	Filter Fabric for use with Riprap	216	54	S.Y.	
8	Seeding	250	12.0	ACRE	
9	Nitrogen Fertilizer Nutrient	250	2,400	POUND	100 LB / ACRE - TWICE
10	Phosphorus Fertilizer Nutrient	250	1,800	POUND	150 LB / ACRE
11	Potassium Fertilizer Nutrient	250	4,200	POUND	350 LB / ACRE
12	Agricultural Ground Limestone	250	120.0	TON	10 TON / ACRE
13	Mulch, Method 2, Procedure 2	IDOT 251	12.0	ACRE	2 TON / ACRE
14	Mine Refuse Treatment - Limestone	255	20.0	TON	40 TON / ACRE AT EXPOSED SLURRY
15	Mowing	258	12.0	ACRE	
16	Special Excelsior Blanket	286	671	S.Y.	8' WIDTH
17	Removal of Existing Structures	501	1	L.S.	
18	Fine Aggregate Fill Material	501	2,200.0	TON	
19	Dewatering Impoundments	614	1	L.S.	
20	Mine Opening Marker	666	2	EACH	
21	Mobilization (Max. 6% of Bid)	671	1	L.S.	

**GENERAL NOTES**

Unless otherwise noted on the plans, all disturbed areas within the construction limits will be amended with agricultural ground limestone, fertilizer nutrients, seeded and mulched at the required rates specified in the plans.

The contractor is responsible for visiting the site and familiarizing himself with the existing conditions and the proposed reclamation work prior to submitting a bid.

The contractor shall provide and pay for all field engineering services to execute the project as specified in the Field Engineering section of the Special Provisions.

The contractor is responsible for locating and protecting all existing utility lines pertaining to the work.

Unless noted on the plans, all onsite access roads may be used for construction and must be maintained during construction. Access roads to the site as designated on the plans are to be maintained to the satisfaction of the engineer.

The construction limits will be staked by the contractor prior to construction. The contractor is responsible for the repair and or restitution at his own expense for all damages done to any area outside the construction limits.

Application rates specified in the plans are shown in the Summary of Quantities-Rates/Remarks column.

**CONSTRUCTION NOTES**

**BURIAL/REMOVAL OF MATERIAL**-Concrete and masonry debris designated for burial by the engineer shall be buried at least three foot below proposed final grade. Onsite organic debris and trash shall be disposed of in an engineer approved offsite landfill in accordance with Sections 201 and 501 of the Special Provisions.

**TREE REMOVAL**-Trees removed shall be disposed of onsite per Section 201 of the Special Provisions.

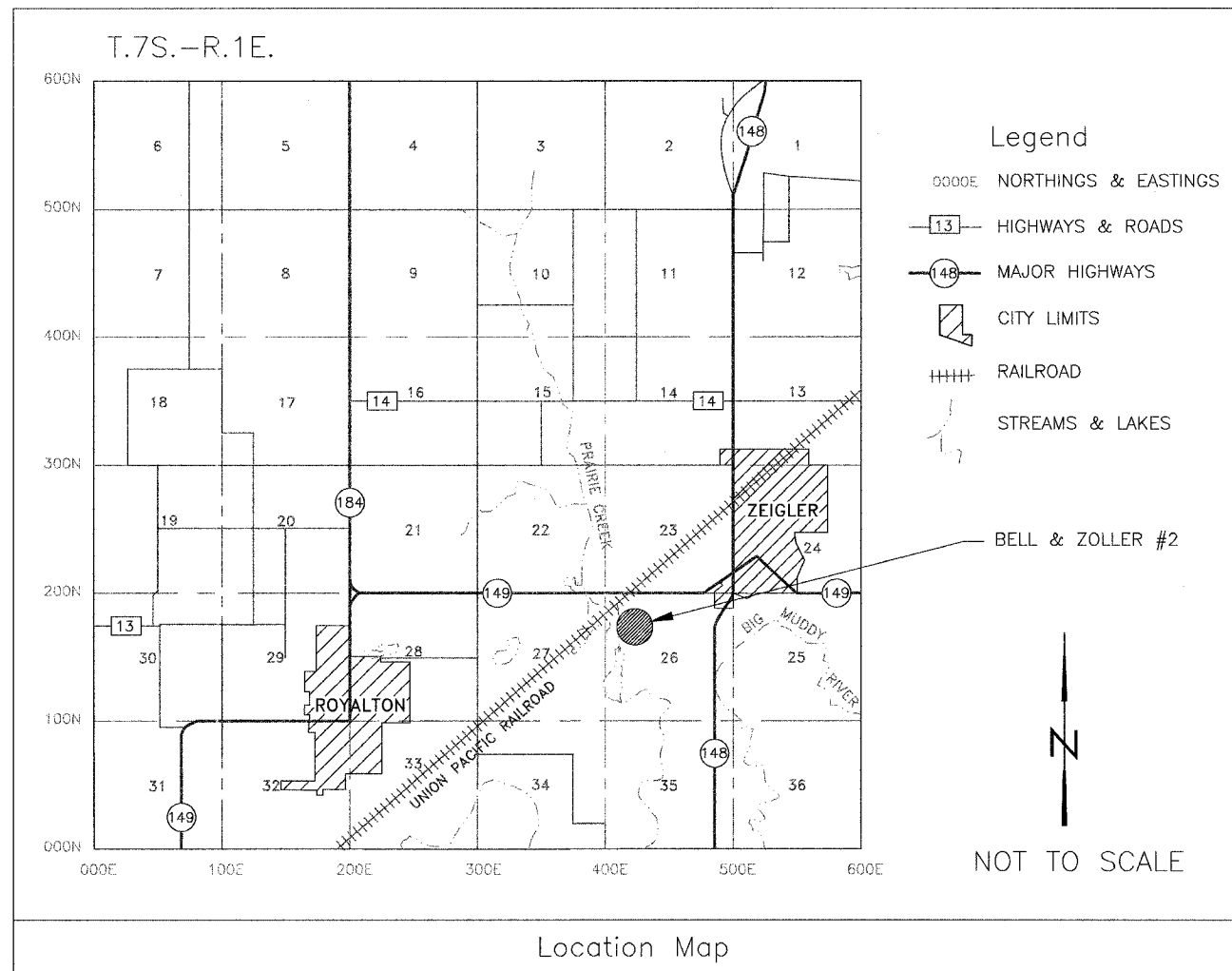
**ACID WATER TREATMENT**-Acid mine drainage treatment shall be in accordance with Section 614 of the Special Provisions.

**EROSION CONTROL**-The contractor shall schedule his operations and take such precautions that may be necessary to prevent or minimize erosion. Failure to comply with this requirement shall cause the contractor to be fully responsible for repairing any eroded areas and cleaning up areas or drainage structures that have become silted in or damaged.

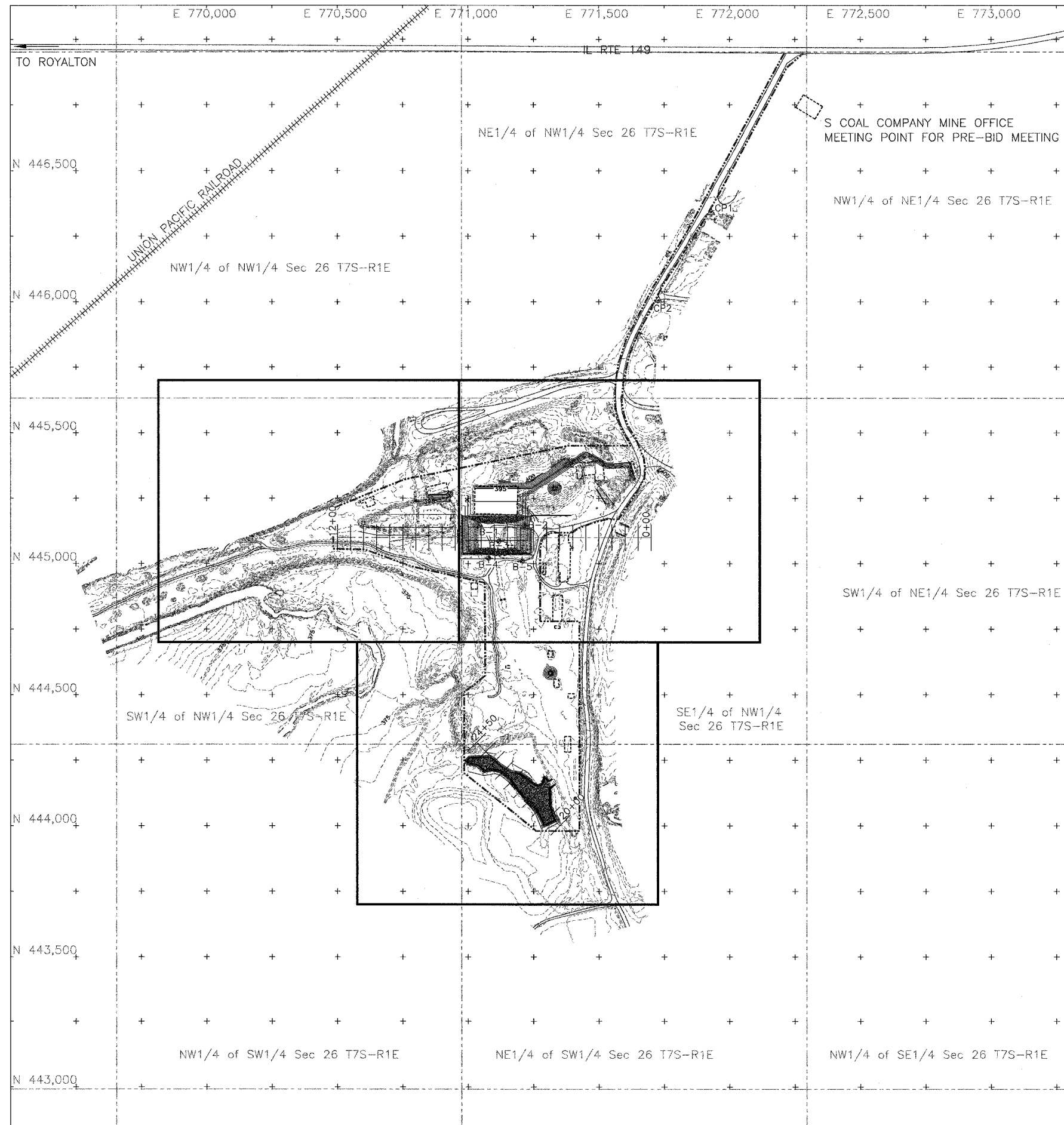
**AGRICULTURAL GROUND LIMESTONE**-Immediately prior to seed bed preparation, fertilizer nutrients and agricultural ground limestone shall be uniformly spread at the rates specified in the plans.

**MULCHING**-Within 24 hours from the time seeding has been performed, the seeded area shall be given a covering of mulch at the rates specified in the plans. The mulch is to be anchored into the soil in accordance with the requirements for method 2, procedure 2 of Article 251.03 of the Standard Specifications. If Excelsior or Special Excelsior Blanket is to be used, the blanket shall be placed the same day that the areas are seeded.

**MINE REFUSE TREATMENT** (on areas shown on plans)-Agricultural ground limestone shall be uniformly spread over the exposed slurry area at a rate specified in the plans. A 3 inch layer of mine refuse shall then be spread over the mine refuse treatment area and blended to a depth of 6 inches with an industrial offset disk approved by the engineer. The treated area shall then be covered with additional mine refuse and soil as directed in the plans.



Schedule of Seeding, Fertilizer Nutrients and Mulch				
ITEM (unit)	INITIAL APPLICATION FALL 2006 AUG 20 - SEPT 30	SECOND APPLICATION SPRING 2007 JAN 1 - MARCH 15	MOWING SUMMER 2007 (EXACT DATE TO BE SET BY ENGINEER)	TOTAL QUANTITY
SEEDING (acres)	12.0			12.0
NITROGEN FERTILIZER NUTRIENT (pounds)	1,200	1,200		2,400
PHOSPHOROUS FERTILIZER NUTRIENT (pounds)	1,800			1,800
POTASSIUM FERTILIZER NUTRIENT (pounds)	4,200			4,200
AGRICULTURAL GROUND LIMESTONE (tons)	120.0			120.0
MULCH, METHOD 2 PROCEDURE 2 (acres)	12.0			12.0
MOWING (acres)			12.0	12.0



TO ZEIGLER  
& IL RTE 148

CONTROL POINT INFORMATION				
CP#	ELEV.	NORTHING	EASTING	DESCRIPTION
1	387.71	446,342.92	771,929.34	5/8" IRON PIN WITH RED CAP
2	388.26	446,006.26	771,728.05	5/8" IRON PIN WITH RED CAP

BASELINE INFORMATION		
STATION	NORTHING	EASTING
0+00	445,100	771,700
12+00	445,100	770,500
20+00	440,000	771,350
24+50	444,318	771,032

	400	EXISTING CONTOUR
	395	PROPOSED CONTOUR
		PROPOSED RUBBLE PIT CONTOUR
		PROPOSED CONSTRUCTION LIMITS
		BASELINE FOR CROSS SECTIONS
		SHEET BORDER
		TREE LINE
		SECTION LINE
		EDGE OF WATER
		CONTROL POINT
		BORING LOCATION (APPROX.)
		EXISTING STRUCTURE

Legend

**Bell & Zoller #2 Mine**

N

**SHEET LAYOUT**

4	5
6	

0      200      400

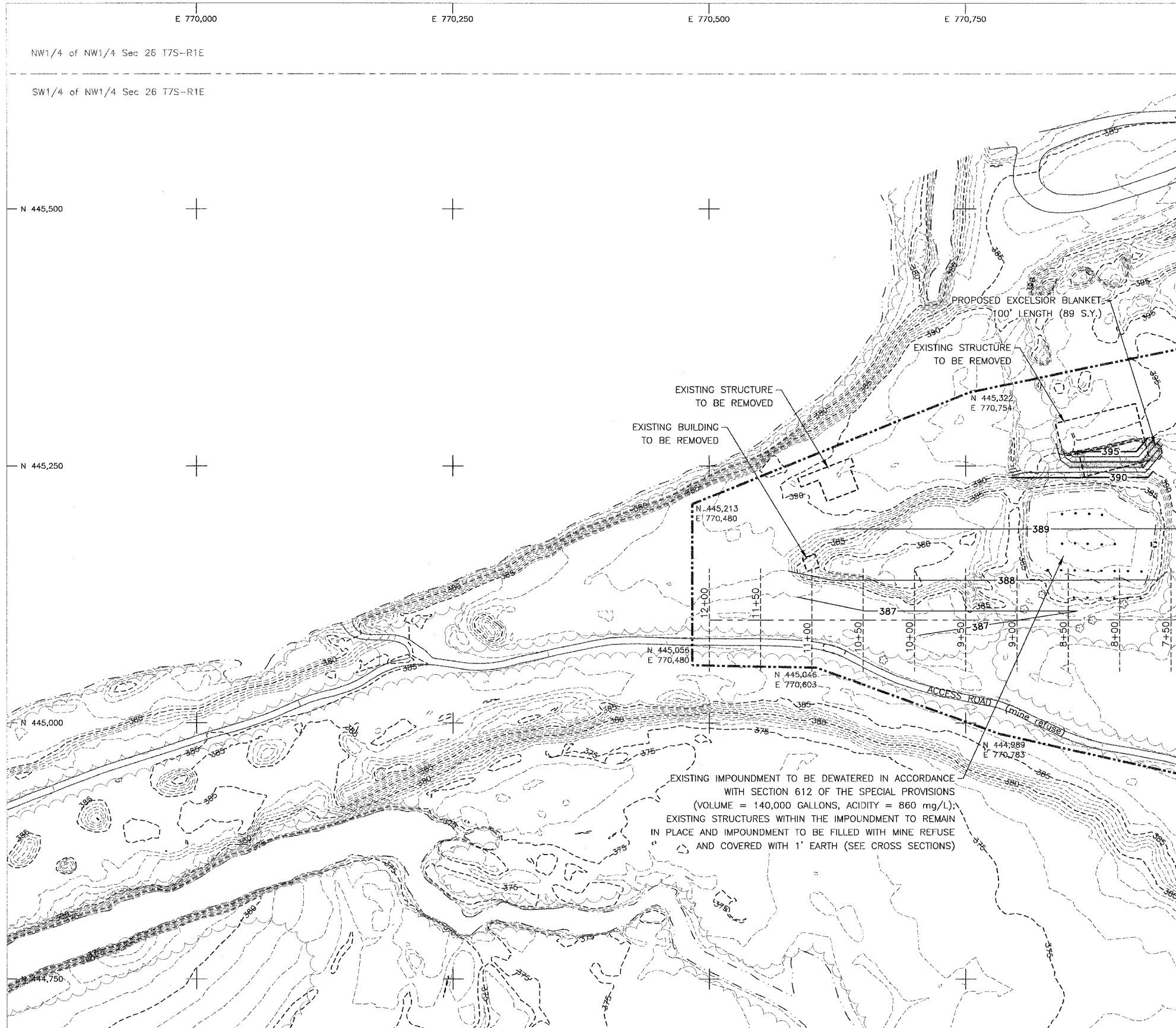
**SCALE IN FEET**

State of Illinois  
Department of Natural Resources

Bell & Zoller #2 Mine  
Reclamation Project  
AML-GFrE-0413  
Franklin County

Drawn By: JLU  
Checked By: \_\_\_\_\_  
Date: 10/11/05

Site Information  
Sheet 3 of 16



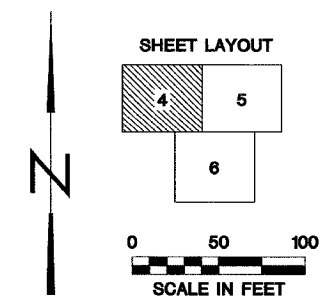
Notes

1. THE CONTRACTOR SHALL USE EXTREME CAUTION WORKING AROUND AND DEMOLISHING THE BUILDINGS AND STRUCTURES.
2. ALL BUILDINGS, STRUCTURES AND FOUNDATIONS SHALL BE REMOVED IN ACCORDANCE WITH SECTION 501 OF THE SPECIAL PROVISIONS. EACH SHALL BE REMOVED TO A MINIMUM DEPTH OF 3' BELOW THE FINAL GRADE.
3. CLEARING OF TREES SHALL BE KEPT TO A MINIMUM AND SHALL BE SIGNIFICANTLY LESS THAN SHOWN BY THE CONSTRUCTION LIMITS. ACCESS TO ISOLATED AREAS THROUGHOUT THE SITE SHALL BE BY EXISTING PATHWAYS OR BY CLEARED AREAS AS SHORT AND AS NARROW AS POSSIBLE.

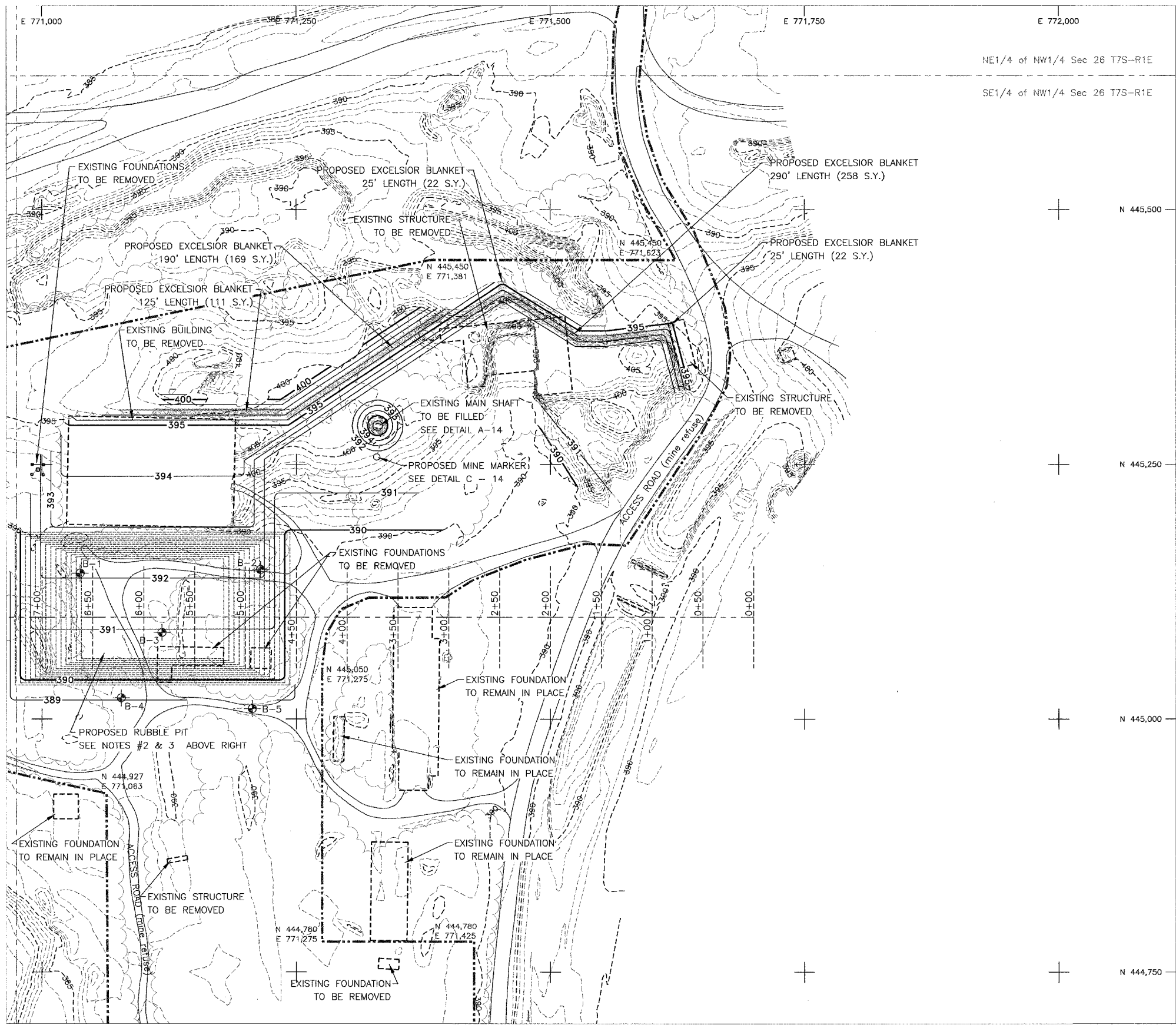
	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED RUBBLE PIT CONTOUR
	PROPOSED CONSTRUCTION LIMITS
	BASELINE FOR CROSS SECTIONS
	TREE LINE
	SECTION LINE
	EDGE OF WATER
	CONTROL POINT
	BORING LOCATION (APPROX.)
	EXISTING STRUCTURE
	PROPOSED EXCELSIOR BLANKET (8' WIDTH)

Legend

Bell & Zoller #2 Mine



Drawn By: JLU  
Checked By: \_\_\_\_\_  
Date: 10/11/05



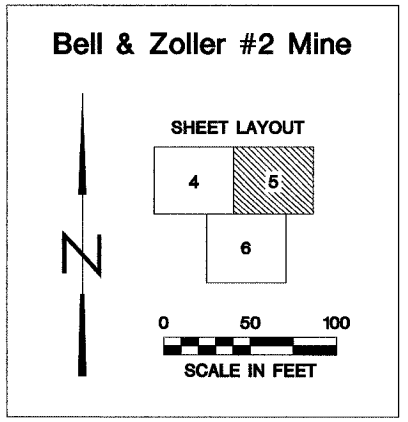
NE1/4 of NW1/4 Sec 26 T7S-R1E  
SE1/4 of NW1/4 Sec 26 T7S-R1E

Notes

1. WHERE NORTHINGS AND EASTINGS ARE NOT NOTED, THE CONSTRUCTION LIMITS SHALL FOLLOW THE EDGES OF THE EXISTING ROADS.
2. THE EXCAVATED RUBBLE PIT SHALL HAVE THE DIMENSIONS OF 270' x 150' AT ELEVATION 389 AND 135' x 96' AT THE BOTTOM ELEVATION OF 375.5.
3. ALL RUBBLE AND FOUNDATIONS NOT PLACED WITHIN THE AIR SHAFT AS RUBBLE FILL ARE TO BE PLACED WITHIN THE RUBBLE PIT. ALL VOIDS ARE TO BE FILLED WITH FINE AGGREGATE FILL MATERIAL (2,200 TON) IN ACCORDANCE WITH SECTION 501 OF THE SPECIAL PROVISIONS. THE RUBBLE SHALL THEN BE COVERED WITH A MINIMUM 3' MINE REFUSE AND 1' EARTH MATERIAL (SEE CROSS SECTIONS).

	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED RUBBLE PIT CONTOUR
	PROPOSED CONSTRUCTION LIMITS
	BASELINE FOR CROSS SECTIONS
	TREE LINE
	SECTION LINE
	EDGE OF WATER
	CONTROL POINT
	BORING LOCATION (APPROX.)
	EXISTING STRUCTURE
	PROPOSED EXCELSIOR BLANKET (8' WIDTH)

Legend



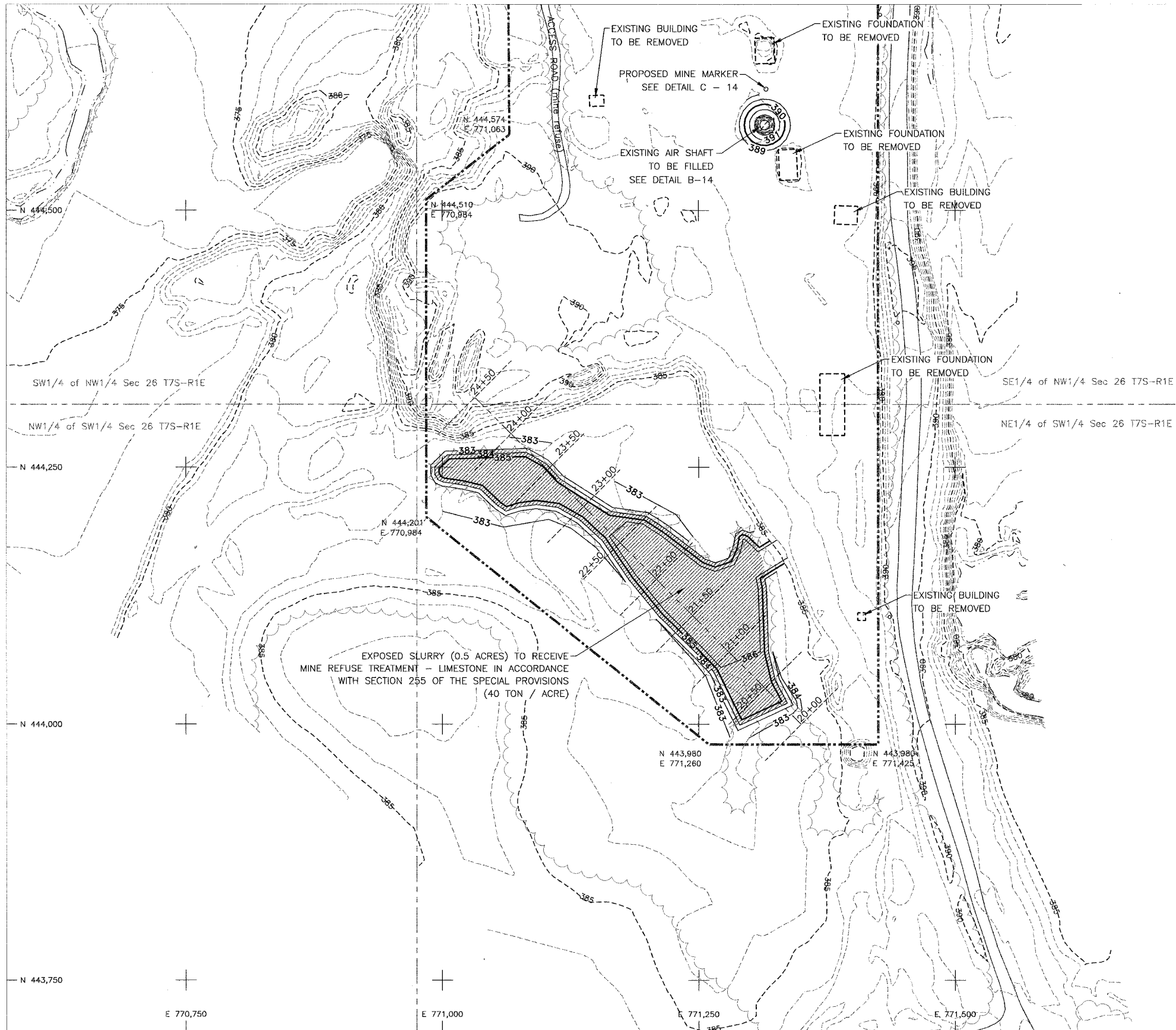
State of Illinois  
Department of Natural Resources

Bell & Zoller #2  
Reclamation Project  
AML-GFRE-0413  
Franklin County

Drawn By: JULU  
Checked By:  
Date: 10/11/05

Existing & Proposed Conditions

Sheet  
5 of 16

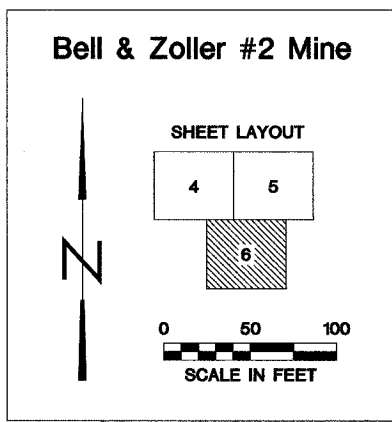


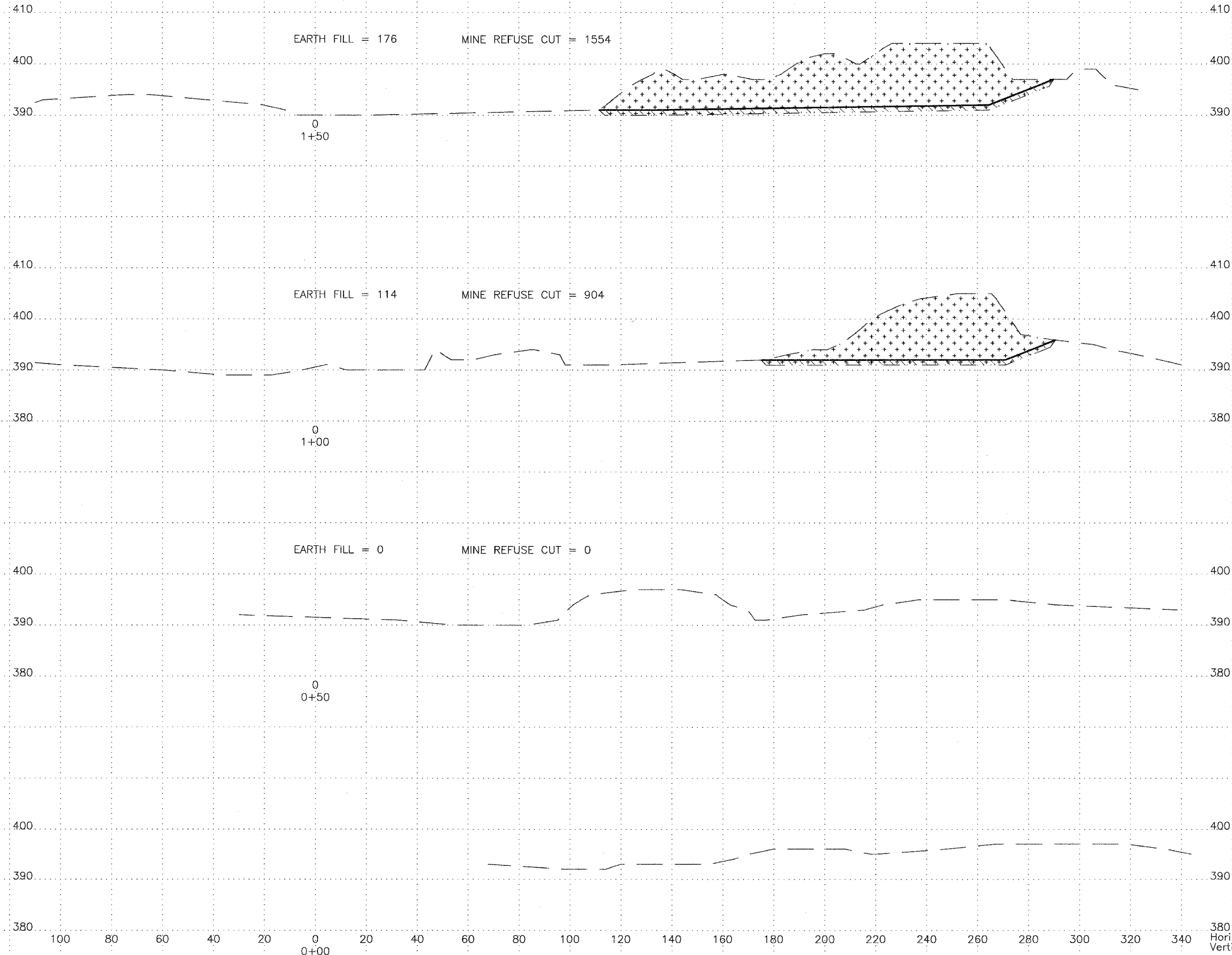
Notes

1. THE CONTRACTOR SHALL USE CAUTION WHEN WORKING WITH EQUIPMENT ON THE EXPOSED SLURRY AS IT IS UNSTABLE MATERIAL ESPECIALLY DURING WET PERIODS. THE DEPTH OF SLURRY IS AT LEAST 5 FEET (PER THREE HAND-AUGERED BORINGS).
2. ALL DISTURBED AREAS AND ALL ROADS WITHIN THE CONSTRUCTION LIMITS (EXCEPT THE MAIN ACCESS ROAD FROM IL RTE 149) SHALL BE DIRECTLY SEEDED IN ACCORDANCE WITH SECTION 250 OF THE SPECIAL PROVISIONS. ALL SEEDED AND MULCHED AREAS SHALL BE MEASURED IN ACRES FOR PAYMENT.

Legend

	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED RUBBLE PIT CONTOUR
	PROPOSED CONSTRUCTION LIMITS
	BASELINE FOR CROSS SECTIONS
	TREE LINE
	SECTION LINE
	EDGE OF WATER
	CONTROL POINT
	BORING LOCATION (APPROX.)
	EXISTING STRUCTURE
	PROPOSED EXCELSIOR BLANKET (8' WIDTH)





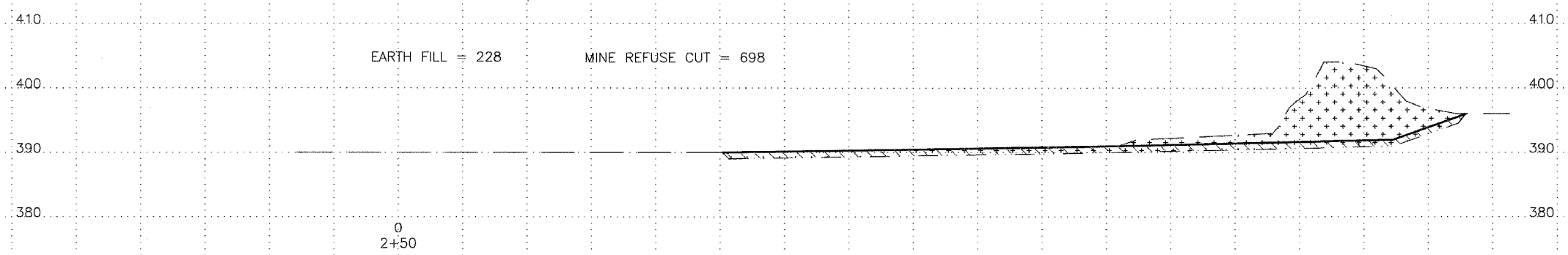
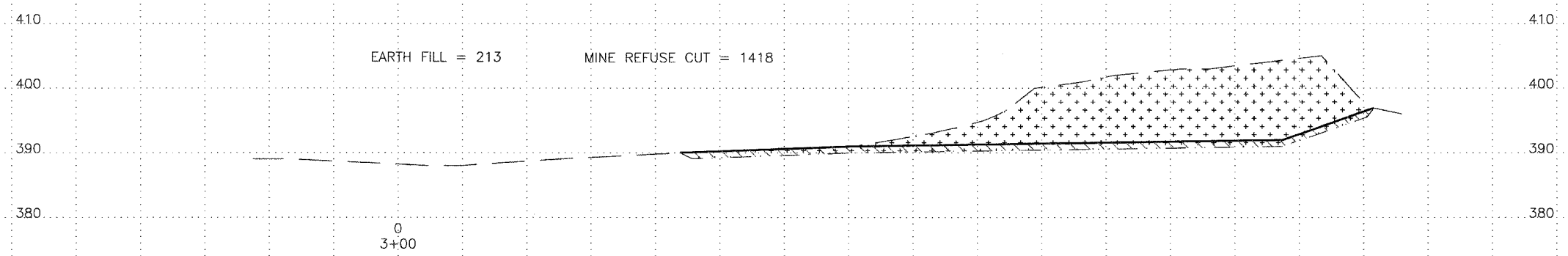
**LEGEND**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SUBGRADE
- PROPOSED SUBGRADE
- [Stippled pattern] MINE REFUSE CUT
- [Wavy line pattern] MINE REFUSE FILL
- [Vertical line pattern] EARTH CUT
- [Diagonal line pattern] EARTH FILL
- [Cross-hatch pattern] RUBBLE & SAND FILL

Horizontal Scale 20  
 Vertical Scale 10

**LEGEND**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- - - EXISTING SUBGRADE
- - - PROPOSED SUBGRADE
- [Stippled pattern] MINE REFUSE CUT
- [Wavy pattern] MINE REFUSE FILL
- [Vertical lines] EARTH CUT
- [Diagonal lines] EARTH FILL
- [Cross-hatch pattern] RUBBLE & SAND FILL

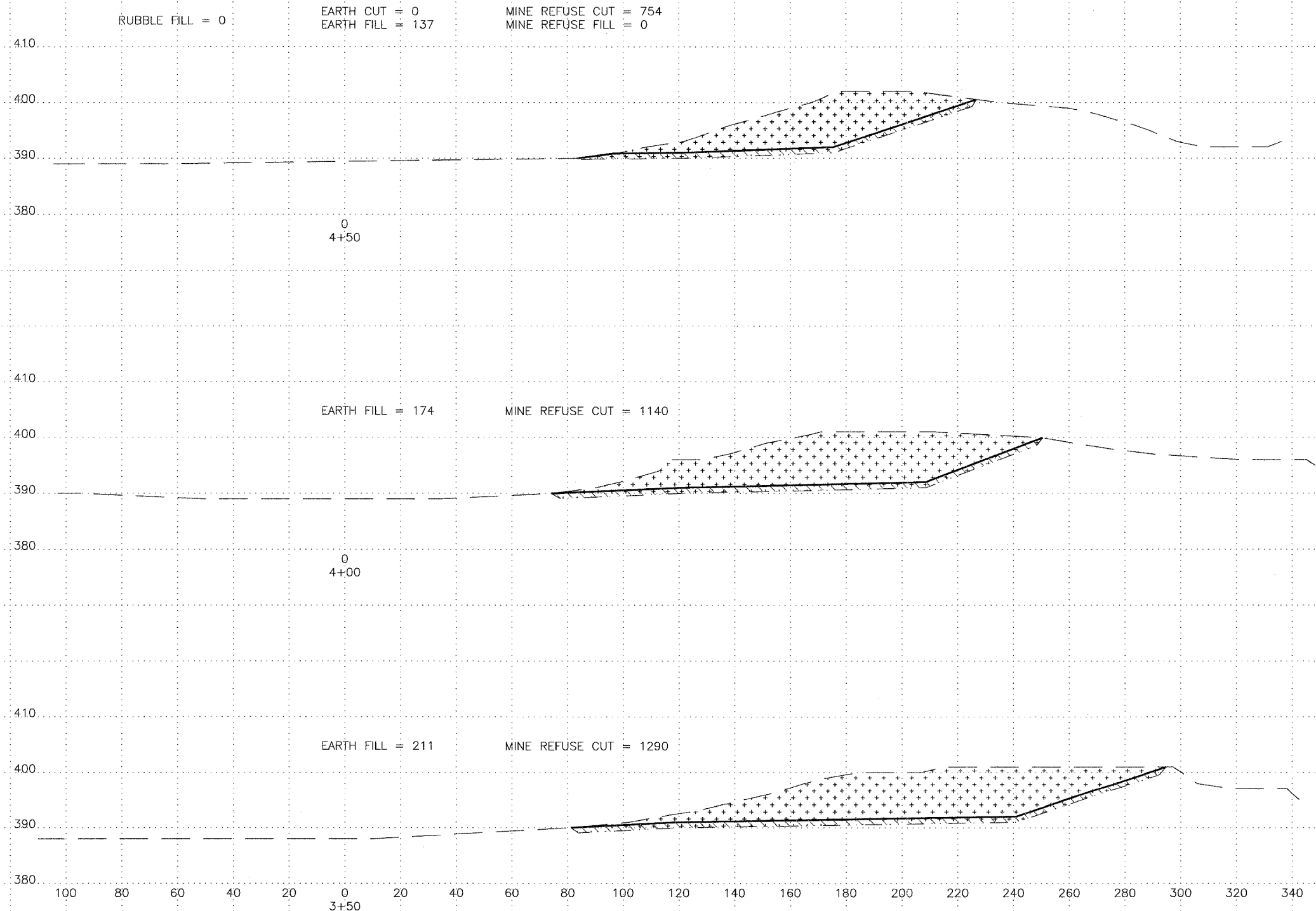


Horizontal Scale 20  
 Vertical Scale 10

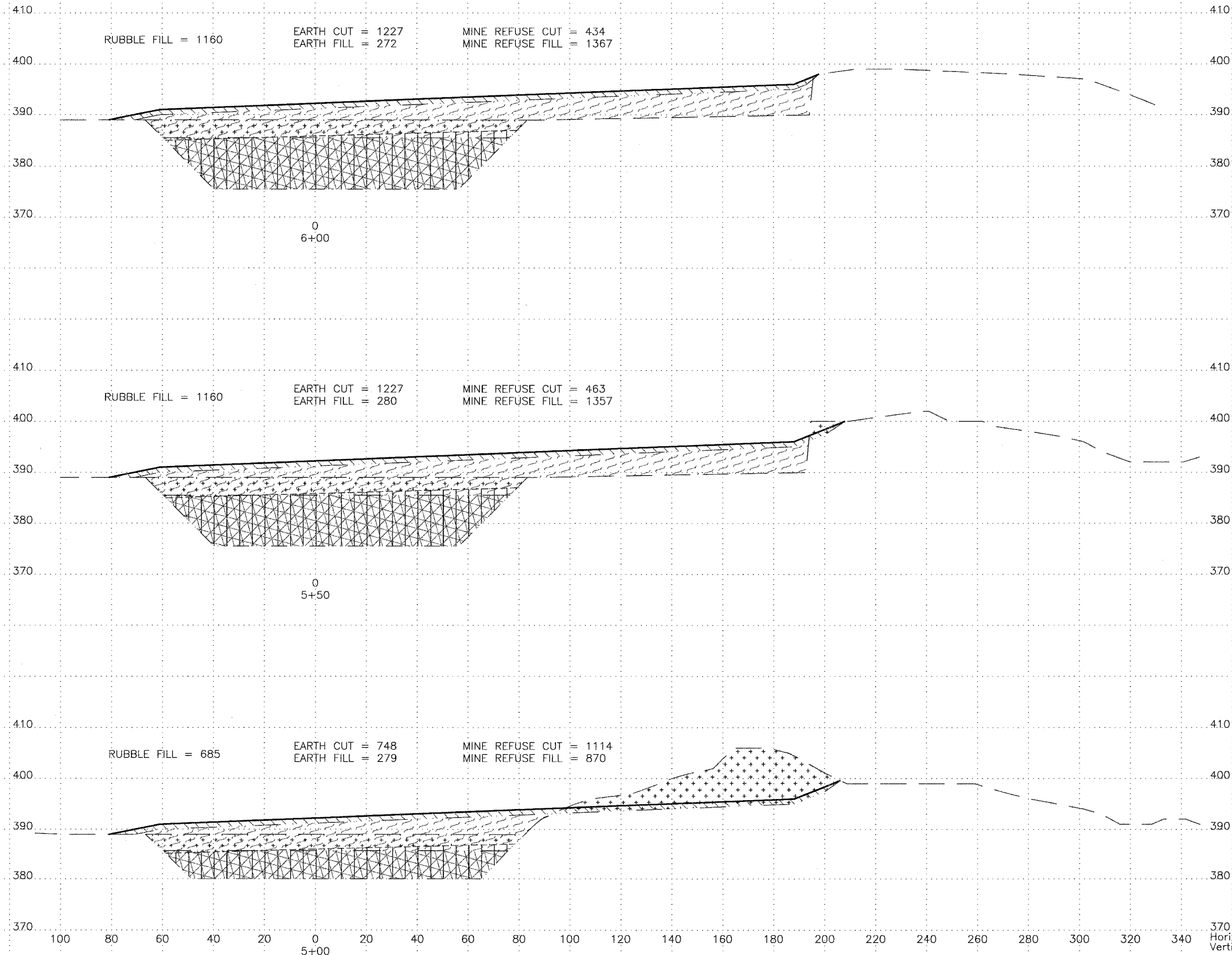


**LEGEND**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- - - EXISTING SUBGRADE
- · - · - PROPOSED SUBGRADE
- [+ + +] MINE REFUSE CUT
- [wavy lines] MINE REFUSE FILL
- [vertical lines] EARTH CUT
- [diagonal lines] EARTH FILL
- [cross-hatch] RUBBLE & SAND FILL



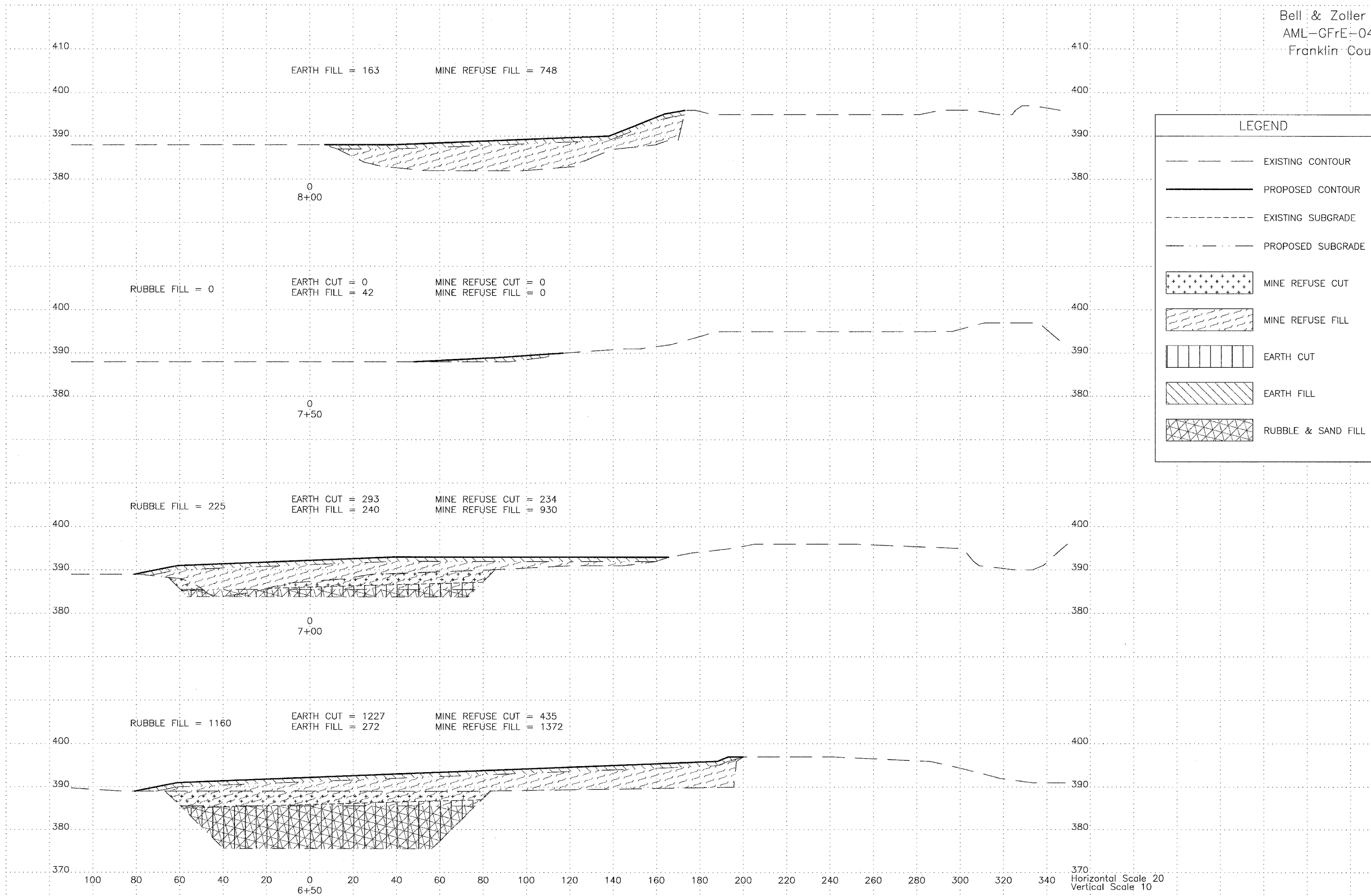
Horizontal Scale 20  
 Vertical Scale 10

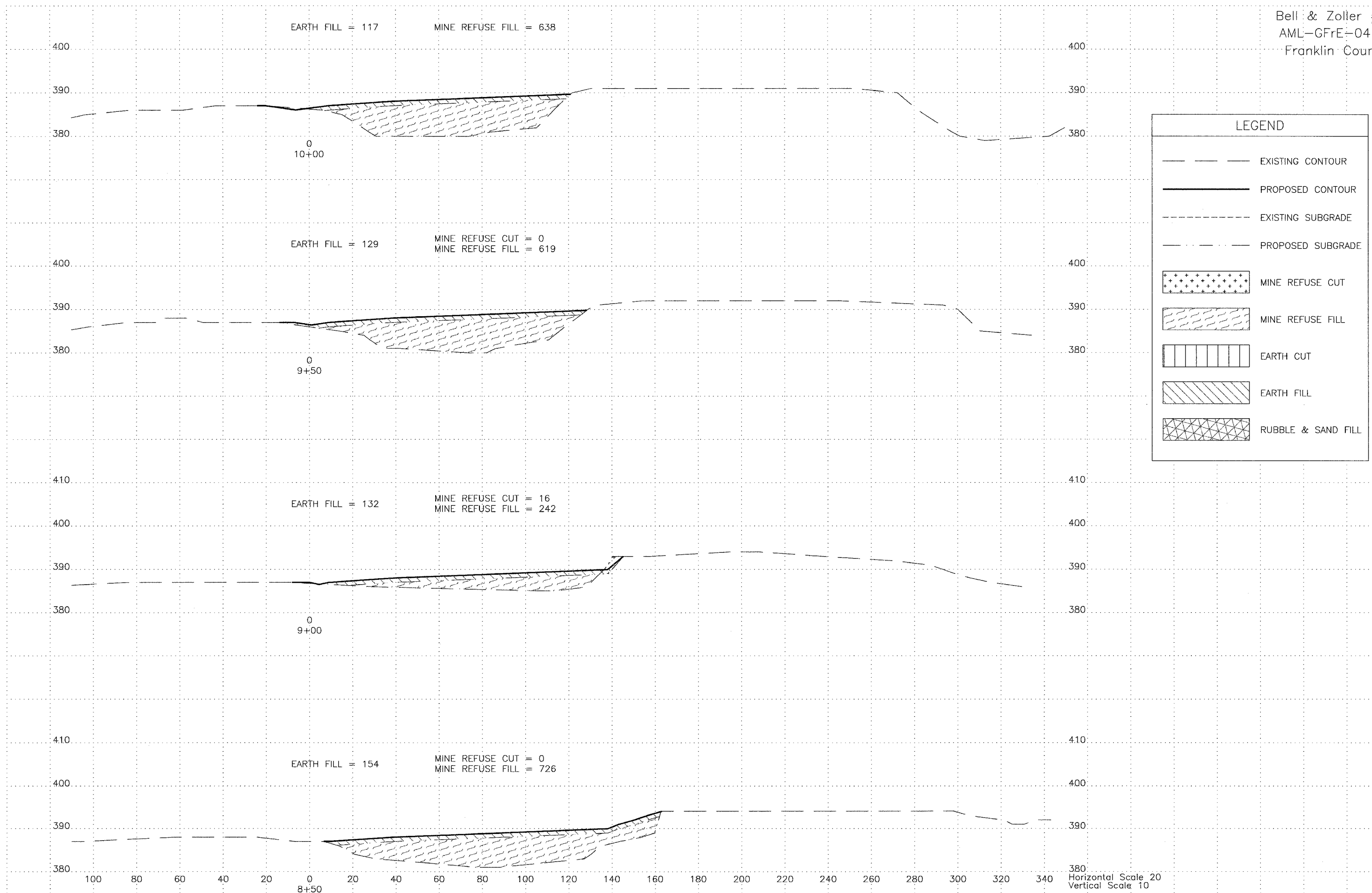


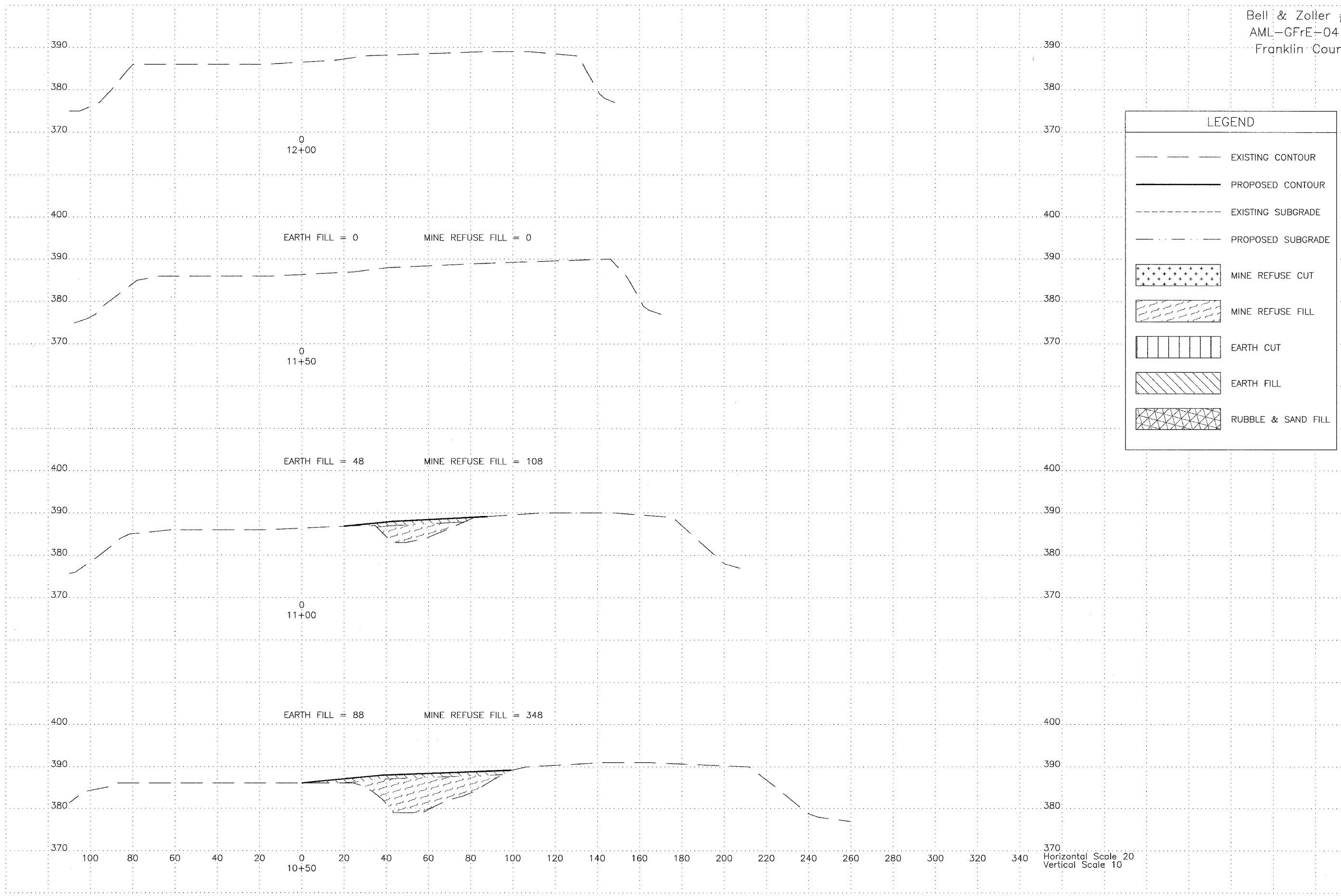
**LEGEND**

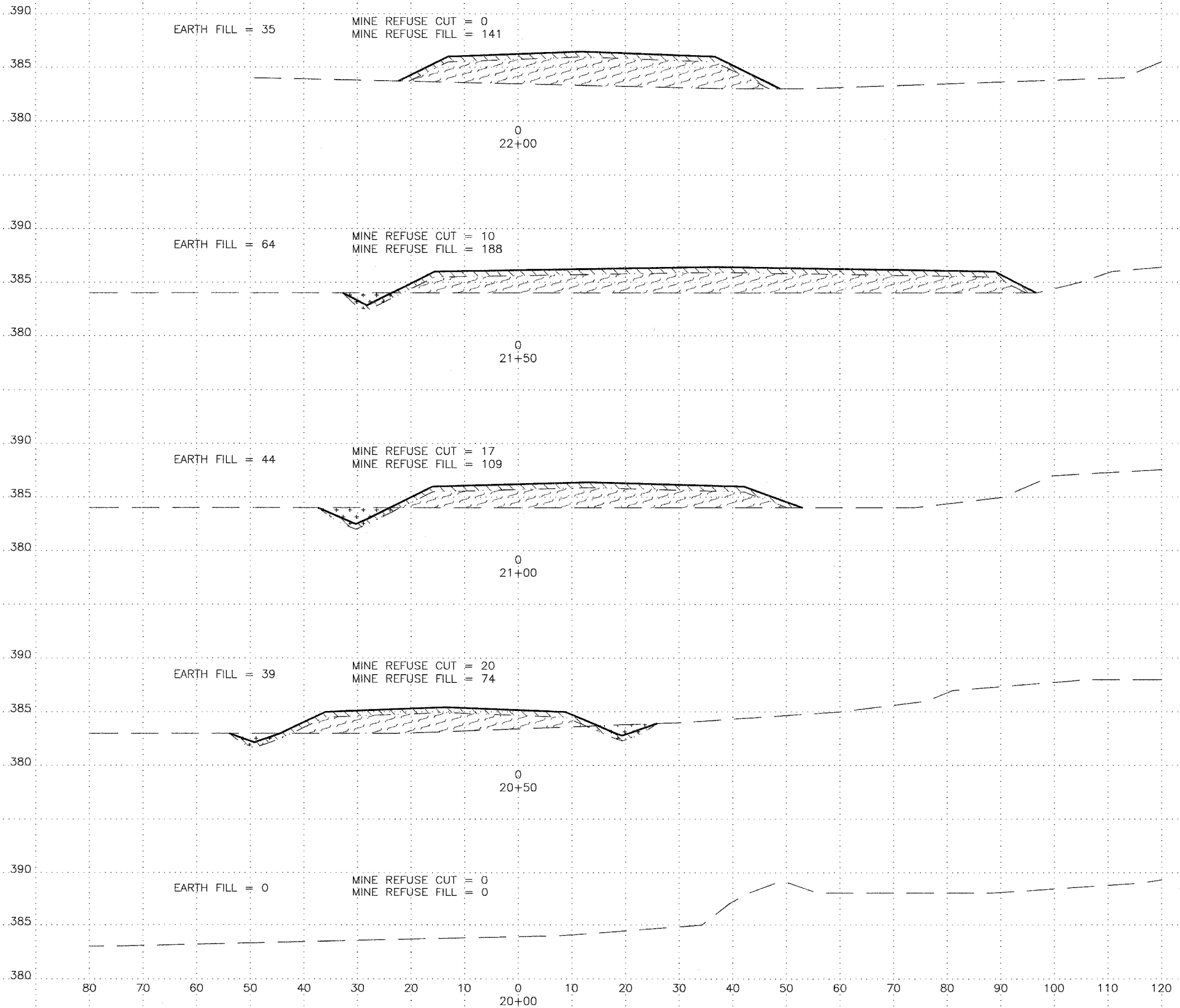
- EXISTING CONTOUR
- PROPOSED CONTOUR
- - - EXISTING SUBGRADE
- - - PROPOSED SUBGRADE
- [MINE REFUSE CUT PATTERN] MINE REFUSE CUT
- [MINE REFUSE FILL PATTERN] MINE REFUSE FILL
- [EARTH CUT PATTERN] EARTH CUT
- [EARTH FILL PATTERN] EARTH FILL
- [RUBBLE & SAND FILL PATTERN] RUBBLE & SAND FILL

Horizontal Scale 20  
 Vertical Scale 10










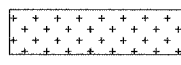

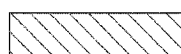


**LEGEND**

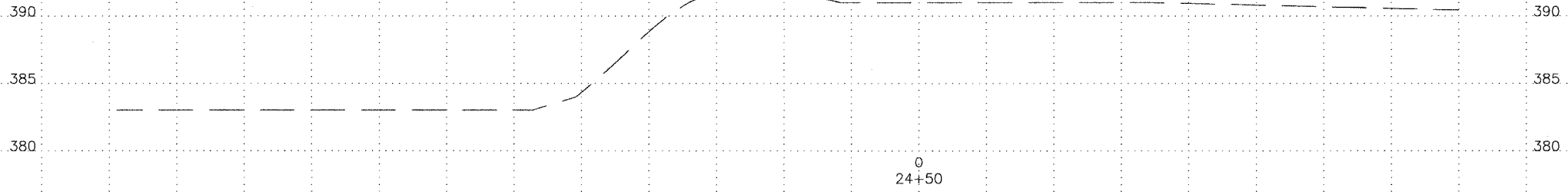
- EXISTING CONTOUR
- PROPOSED CONTOUR
- · - · - PROPOSED SUBGRADE
- [Cross-hatched box] MINE REFUSE CUT
- [Wavy-hatched box] MINE REFUSE FILL
- [Diagonal-hatched box] EARTH FILL

Horizontal Scale 10  
 Vertical Scale 5

**LEGEND**

-  EXISTING CONTOUR
-  PROPOSED CONTOUR
-  PROPOSED SUBGRADE
-  MINE REFUSE CUT
-  MINE REFUSE FILL
-  EARTH FILL

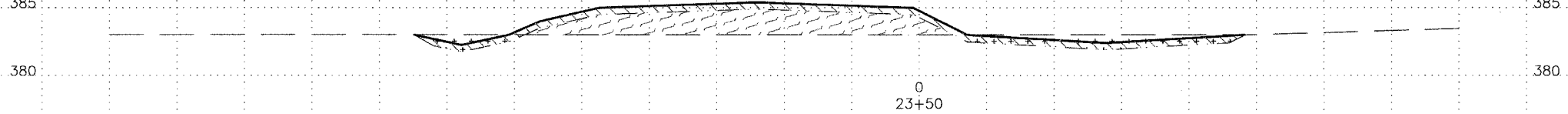
EARTH FILL = 0  
 MINE REFUSE CUT = 0  
 MINE REFUSE FILL = 0



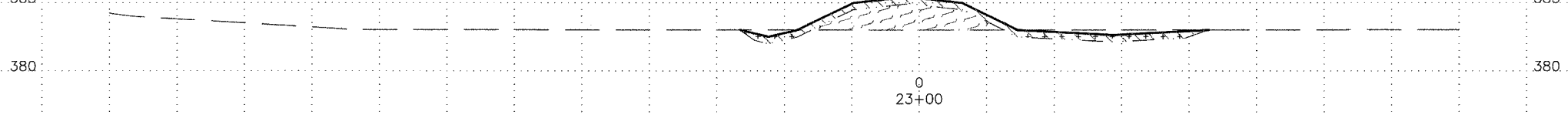
EARTH FILL = 46  
 MINE REFUSE CUT = 38  
 MINE REFUSE FILL = 68



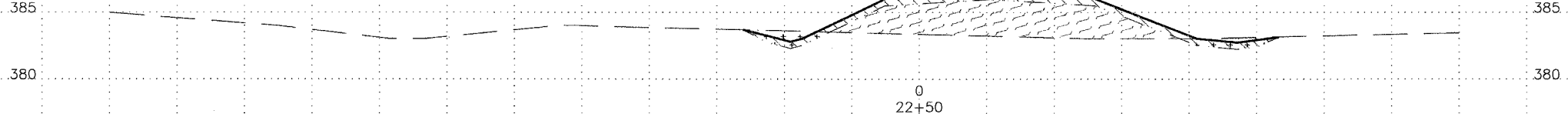
EARTH FILL = 60  
 MINE REFUSE CUT = 45  
 MINE REFUSE FILL = 93

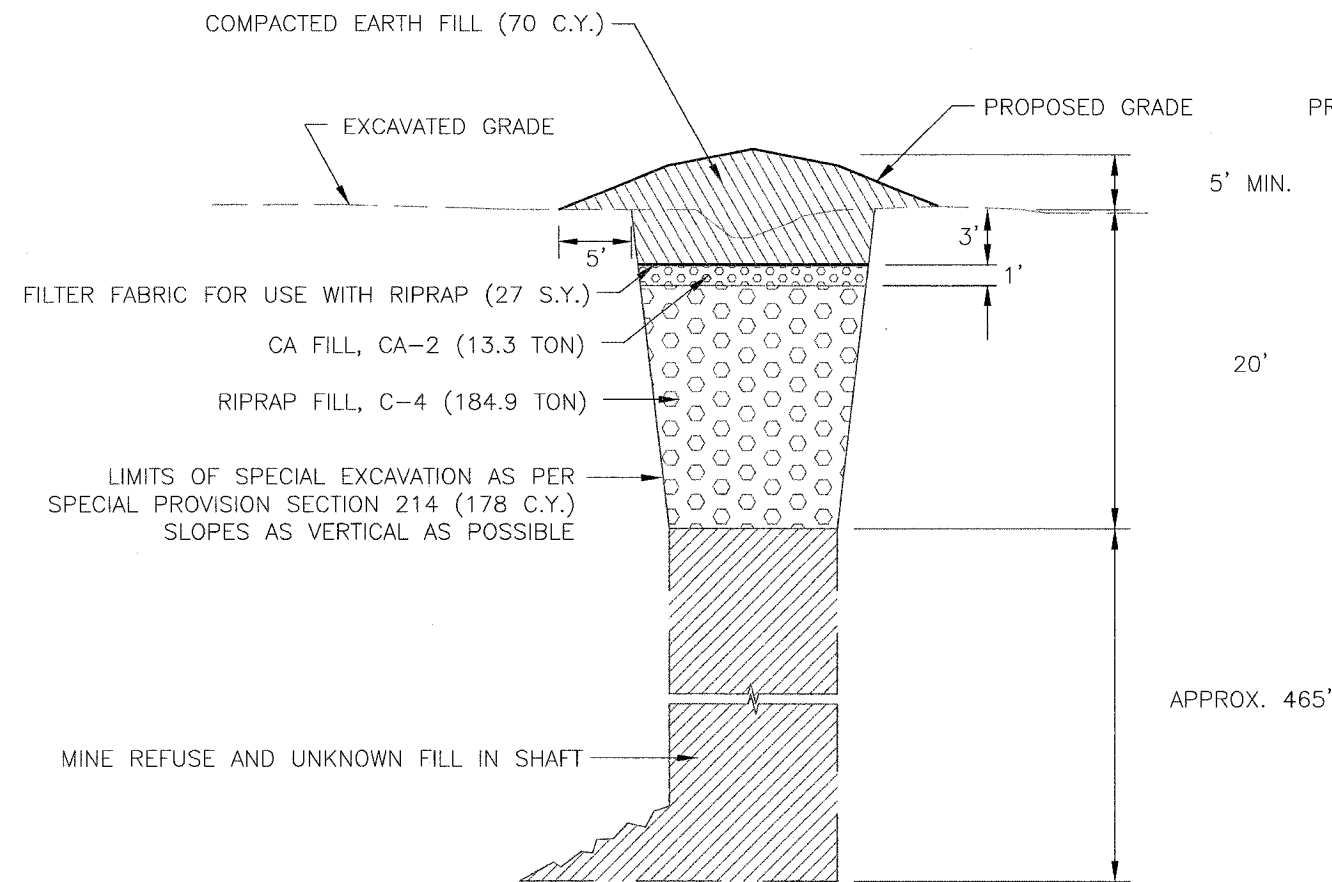


EARTH FILL = 33  
 MINE REFUSE CUT = 25  
 MINE REFUSE FILL = 37

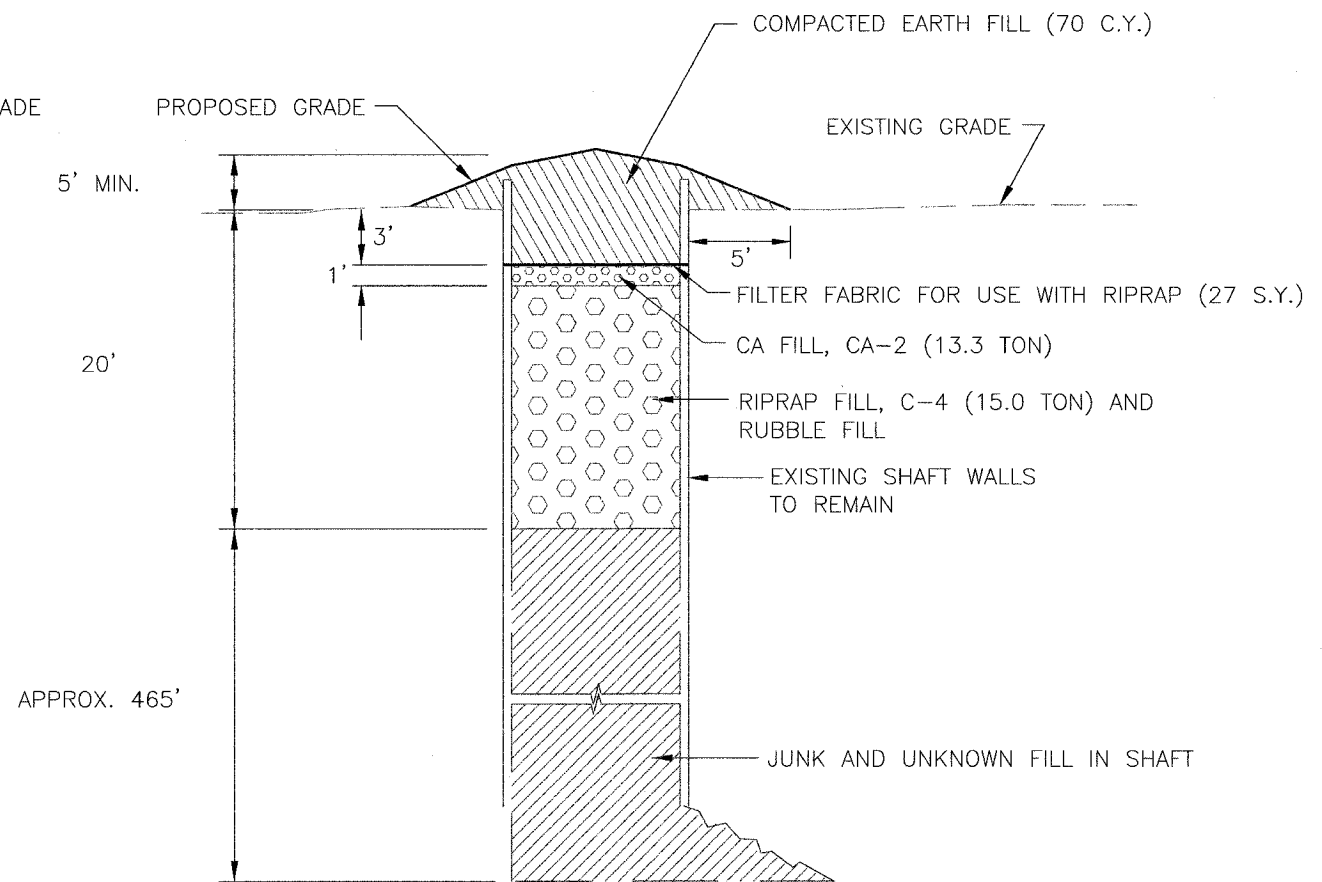


EARTH FILL = 38  
 MINE REFUSE CUT = 18  
 MINE REFUSE FILL = 103





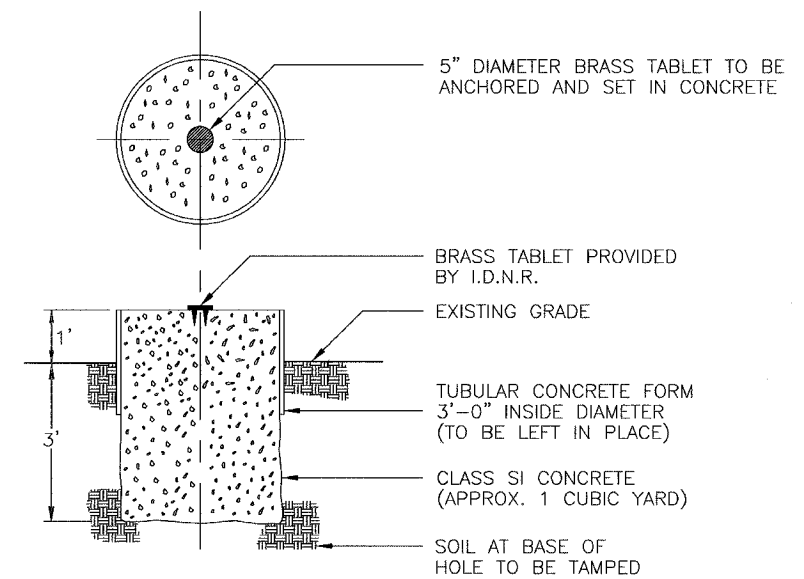
A-14 MAIN SHAFT FILLING DETAIL  
NOT TO SCALE



B-14 AIR SHAFT FILLING DETAIL  
NOT TO SCALE

NOTES:

1. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN THE SHAFT AREAS DUE TO THE UNKNOWN CONDITION OF THE SHAFTS AND THE UNKNOWN STABILITY OF THE SURROUNDING AREAS.
2. THE ENGINEER RESERVES THE RIGHT TO INCREASE OR DECREASE THE VOLUME OF SPECIAL EXCAVATION AND BACKFILLING OF MATERIALS REQUIRED. THE ENGINEER WILL MAKE THE DETERMINATION DURING CONSTRUCTION BASED UPON THE CONDITIONS ENCOUNTERED DURING THE SPECIAL EXCAVATION PROCESS.
3. THE DIMENSIONS OF THE MAIN SHAFT ARE ESTIMATED TO BE 12' X 20'. AFTER THE RIPRAP FILL, C-4, HAS BEEN PLACED, THE CONTRACTOR SHALL SECURE THE AREA WITH TEMPORARY FENCING FOR A THIRTY DAY PERIOD TO ALLOW FOR SETTLEMENT BEFORE PROCEEDING WITH THE BACKFILLING. THE TEMPORARY FENCING SHALL BE INCIDENTAL TO THE RIPRAP FILL, C-4.
4. THE DIMENSIONS OF THE AIR SHAFT ARE APPROXIMATELY 12' X 20'. THE NATURE OF THE MATERIAL WITHIN THE AIR SHAFT IS NOT KNOWN. AS MUCH TRASH AS POSSIBLE (TO AT LEAST 20' DEPTH) SHALL BE TAKEN FROM THE SHAFT AND REMOVED FROM THE SITE. AFTER THE RIPRAP FILL, C-4, AND RUBBLE FILL HAVE BEEN PLACED, THE CONTRACTOR SHALL SECURE THE AREA WITH TEMPORARY FENCING FOR A THIRTY DAY PERIOD TO ALLOW FOR SETTLEMENT BEFORE PROCEEDING WITH THE BACKFILLING. THE TEMPORARY FENCING AND REMOVAL OF TRASH SHALL BE INCIDENTAL TO THE RIPRAP FILL, C-4. ALL RUBBLE FILL SHALL MEET THE REQUIREMENTS OF SECTION 216 OF THE SPECIAL PROVISIONS.



C-14 MINE OPENING MARKER DETAIL  
NOT TO SCALE  
EXACT LOCATION TO BE SET BY ENGINEER