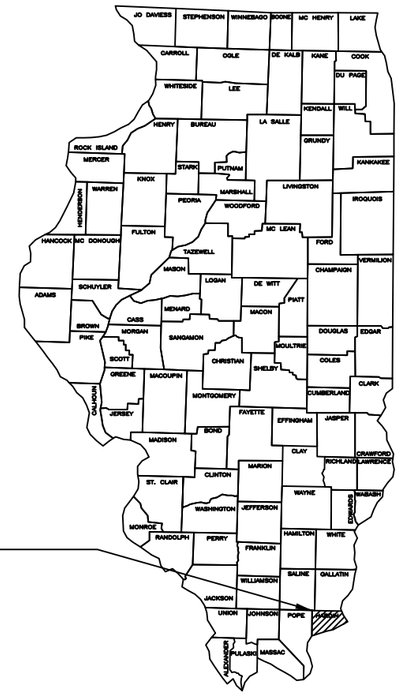
State of Illinois
Department of Natural Resources
Office of Mines and Minerals

Division of Abandoned Mined Lands Reclamation

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



Fluorspar Mine Group 2014
Hardin County

Fluorspar Mine Group 2014 Reclamation Project
AML-Fluo-1408
Hardin County
3LR

PRE–BID MEETING
A PRE–BID MEETING IS SCHEDULED FOR THIS PROJECT ON WEDNESDAY, NOVEMBER 12th, 2014 AT 10:00 A.M. AT THE KARBERS RIDGE FAST STOP STORE LOCATED AT THE INTERSECTION OF RT 34 SOUTH AND THE KARBERS RIDGE ROAD. ALL PRIME AND SUBCONTRACTORS ARE ENCOURAGED TO ATTEND.

SCHEDULE OF DRAWINGS:

Prepared By IDNR Staff

Approved for Bidding:

James Hafliger, Acting Director
Office of Mines and Minerals

Approved By:

J. Gregory Pinto,
Acting Manager
AMLR Division

Approved By:

Olga Moya Aranzubia, P.E.
IL Licensed Professional Engineer
No. 062-062471

OLGA MOYA ARANZUBIA 062-062471 LICENSED PROFESSIONAL ENGINEER OF ILLINOIS

Contract No. M1408

Summary of Quantities

Item No.	#	Item	Section	Quantity						Unit	Rates/Remarks
				Blue Diggings	Deardorf #2	Hamp Mine	Hill Mine	North Boundary	Total		
NRM20110	1	SPECIAL CLEARING	201	0.2	0.2	0.2	0.2	0.2	1	L SUM	
NRM20480	2	FURNISHED EXCAVATION	204	0	273	1,146	0	68	1,487	CU YD	compaction as noted below
NRM21510	3	SPECIAL EXCAVATION	215	0	260	1,332	0	493	2,085	CY YD	
NRM21621	4	CA FILL, CA–1	216	0	11.7	3.4	0	0	15.1	TON	
NRM21640	5	SHOT ROCK FILL	216	143.0	195.0	74.0	1,760.0	0	2,172.0	TON	
NRM21661	6	CLASS SI CONCRETE PLUG	216	0	117	134	0	94	345	CU YD	
NRM25040	7	NITROGEN FERTILIZER NUTRIENT	250	50	50	140	30	30	300	POUND	Rate: 100 LB/Acre
NRM25050	8	PHOSPHOROUS FERTILIZER NUTRIENT	250	75	75	210	45	45	450	POUND	Rate: 150 LB/Acre
NRM25060	9	POTASSIUM FERTILIZER NUTRIENT	250	125	125	350	75	75	750	POUND	Rate: 250 LB/Acre
NRM25070	10	AGRICULTURAL GROUND LIMESTONE	250	5.0	5.0	14.0	3.0	3.0	30.0	TON	Rate: 10 Ton/Acre
NRM25090	11	SEEDING	250	0.5	0.5	1.4	0.3	0.3	3.0	ACRE	Seeding date 3/15/2015
25100115	12	MULCH, METHOD 2, PROCEDURE 1	IDOT 251	0.5	0.5	1.4	0.3	0.3	3.0	ACRE	Rate: 2 Ton/Acre
40200800	13	AGGREGATE SURFACE COURSE, TYPE B	IDOT 402	20.0	10.0	10.0	20.0	20.0	80.0	TON	CA–6
NRM42510	14	PORTLAND CEMENT CONCRETE CAP	425	0	0	0	2.5	0	2.5	CU YD	
50800105	15	REINFORCEMENT BARS	IDOT 508	0	0	0	1,141	0	1,141	POUND	
NRM59310	16	CONTROLLED LOW–STRENGTH MATERIAL	593	0	0	56	0	0	56	CU YD	
NRM66510	18	BARBED WIRE FENCE	665	70	0	0	0	0	70	FOOT	
NRM66520	17	ENTRANCE GATE	665	1	0	0	0	0	1	EACH	
NRM66610	19	MINE OPENING MARKER	666	1	0	2	0	0	3	EACH	
NRM67110	20	MOBILIZATION (MAX. 6% OF BID)	671						1	L SUM	

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 and restored to original or better condition at the completion of work by the contractor. Access roads to the site as designated in 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

FURNISHED EXCAVATION – All borrow locations are subject to the environmental review requirements of Article 107.22 and must be approved by the Department prior to disturbance.

COMPACTION – All earth materials placed as fill shall be placed in lifts not to exceed 12 inches and shall be compacted to the Engineer's satisfaction. Earth fill materials placed within the excavation shall be compacted using the excavator bucket. Earth fill material placed above grade shall be compacted using the excavator bucket or by multiple passes of on–site equipment to the satisfaction of the engineer.

BURIAL/REMOVAL OF MATERIAL – Concrete and masonry debris designated for burial by the engineer shall be buried at least two feet 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 cleared from the site shall be disposed of onsite per Section 201 of the Special Provisions. No clearing of trees outside the construction limits may occur.

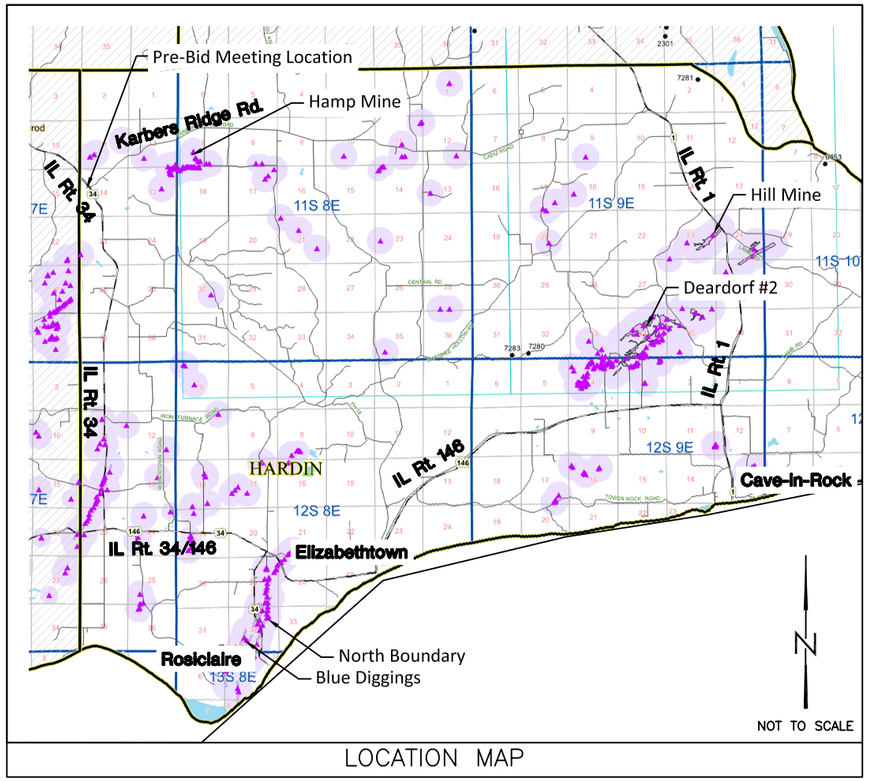
ACID WATER TREATMENT – If acid mine drainage treatment is determined necessary by the engineer, and not otherwise specified in the plans, any water treatment will be paid for in accordance with Article 109.04 of the Standard Specifications.

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 much is to be anchored into the soil in accordance with the requirements for method 2, procedure 1 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.

AGGREGATE SURFACE COURSE, CA–6 shall be placed as directed by the Engineer after completion of the grading for access restoration.



LOCATION MAP

State of Illinois
Department of Natural Resources

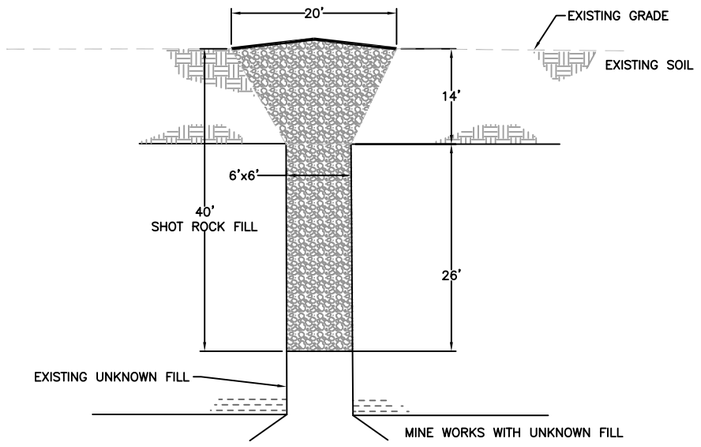
Fluorspar Mine Group 2014
Reclamation Project
AML-Fluo-1408
Hardin County

Drawn By :
Checked By :
TSL
Date : 09-30-14

Summary of Quantities/
General Notes/Location Map

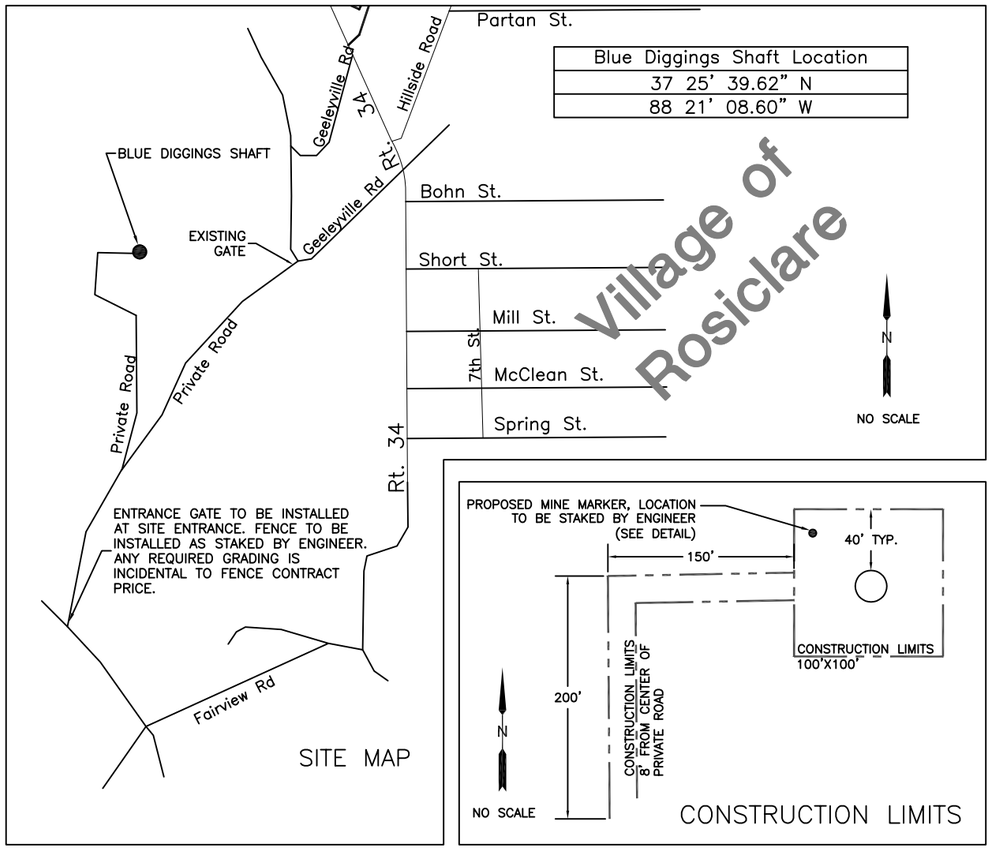
Sheet 2 of 7

THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN THE AREA OF THE SHAFTS DUE TO THE UNKNOWN STABILITY OF THE AREA AROUND THE SHAFTS AND THE POSSIBILITY OF MINE GASES. THE ENGINEER WILL VERIFY THE NATURE AND EXTENT OF THE OPEN VOIDS, IF ANY, IN THE STRATA AS SPECIAL EXCAVATION PROGRESSES. THE ENGINEER WILL MAKE THE DETERMINATION WHETHER TO INCREASE OR DECREASE VOLUMES OF MATERIALS REQUIRED DURING CONSTRUCTION BASED UPON THE EXACT CONDITIONS ENCOUNTERED DURING SPECIAL EXCAVATION PROCESS.



BLUE DIGGINGS SHAFT FILLING DETAIL

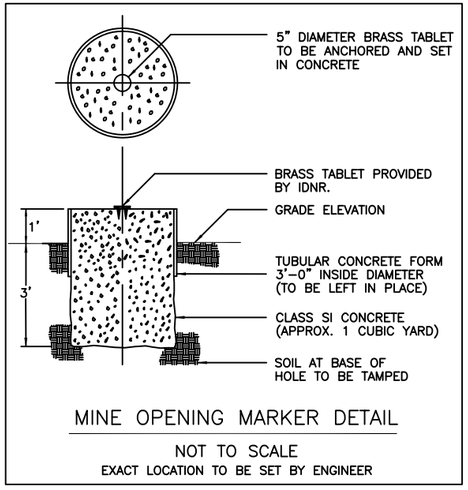
NO SCALE, TYPICAL SECTION



SITE MAP

CONSTRUCTION LIMITS

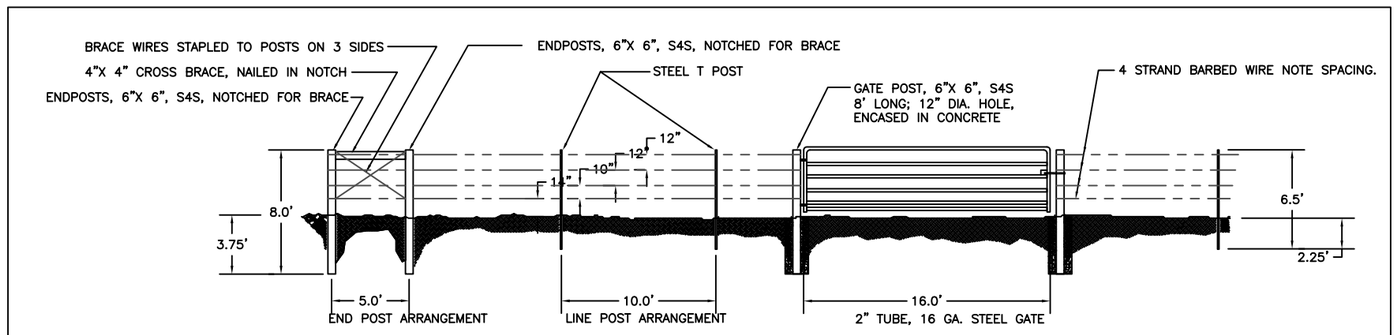
BLUE DIGGINGS QUANTITIES				
#	ITEM	SECTION	QUANTITY	UNIT
5	SHOT ROCK FILL	216	143.0	TON
19	MINE OPENING MARKER	666	1	EACH



MINE OPENING MARKER DETAIL

NOT TO SCALE

EXACT LOCATION TO BE SET BY ENGINEER



GATE AND FENCE DETAIL

TYPICAL SECTION

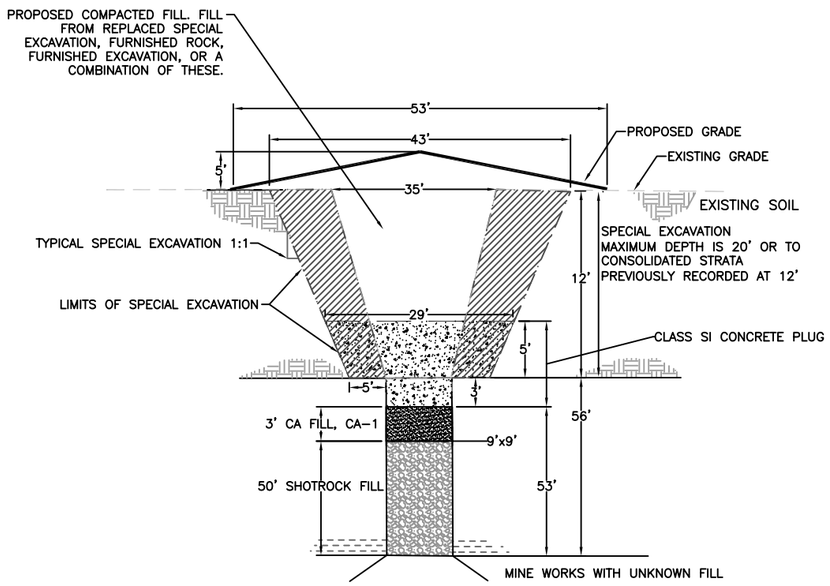
State of Illinois
Department of Natural Resources

Fluorspar Mine Group 2014
Reclamation Project
AML-Fluo-1408
Hardin County

Drawn By: TBL Date: 09-30-14
Checked By:

Existing and Proposed Conditions
Blue Diggings Mine
Sheet 3 of 7

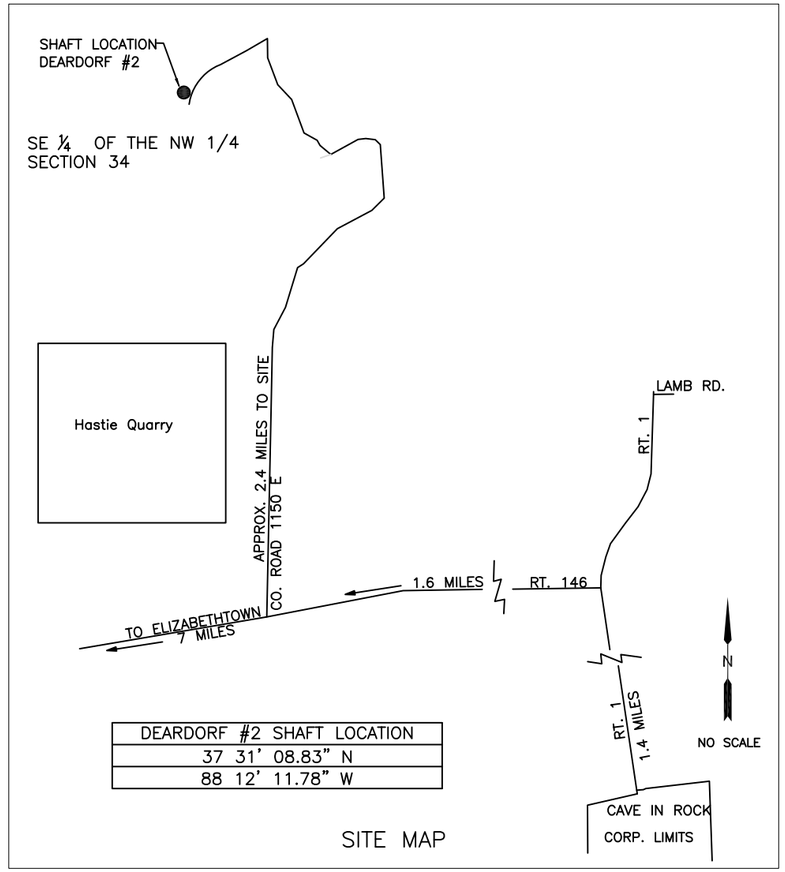
THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN THE AREA OF THE SHAFTS DUE TO THE UNKNOWN STABILITY OF THE AREA AROUND THE SHAFTS AND THE POSSIBILITY OF MINE GASES. THE ENGINEER WILL VERIFY THE NATURE AND EXTENT OF THE OPEN VOIDS, IF ANY, IN THE STRATA AS SPECIAL EXCAVATION PROGRESSES. THE ENGINEER WILL MAKE THE DETERMINATION WHETHER TO INCREASE OR DECREASE VOLUMES OF MATERIALS REQUIRED DURING CONSTRUCTION BASED UPON THE EXACT CONDITIONS ENCOUNTERED DURING SPECIAL EXCAVATION PROCESS.



DEARDORF #2 SHAFT FILLING DETAIL

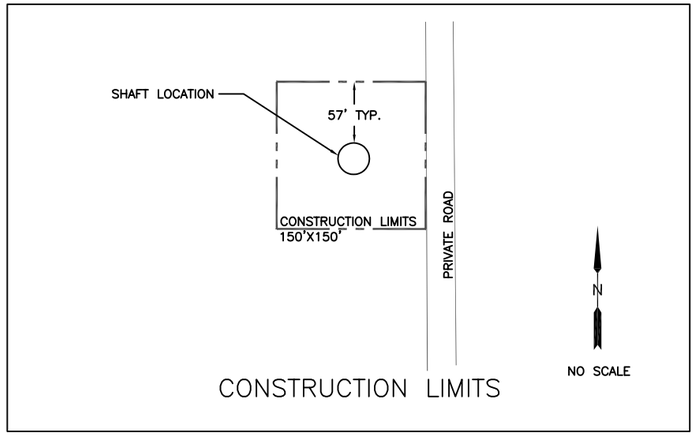
NO SCALE, TYPICAL SECTION

DEARDORF #2 QUANTITIES				
#	ITEM	SECTION	QUANTITY	UNIT
2	FURNISHED EXCAVATION	204	273	CU YD
3	SPECIAL EXCAVATION	215	260	CU YD
4	CA FILL, CA-1	216	11.7	TON
5	SHOT ROCK FILL	216	195.0	TON
6	CLASS SI CONCRETE PLUG	216	117	CU YD



DEARDORF #2 SHAFT LOCATION
37 31' 08.83" N
88 12' 11.78" W

SITE MAP



CONSTRUCTION LIMITS

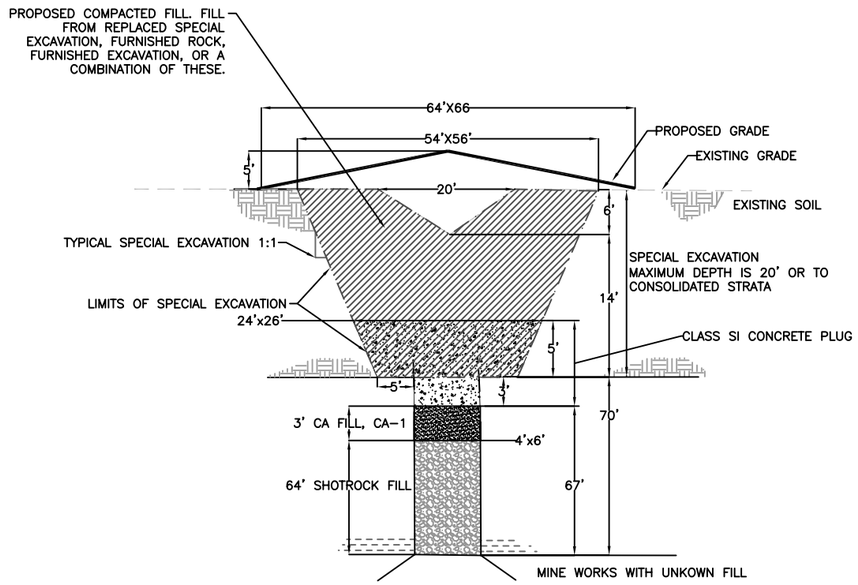
State of Illinois
Department of Natural Resources

Fluorspar Mine Group 2014
Reclamation Project
AML-Fluo-1408
Hardin County

Drawn By: TBL Date: 09-20-14
Checked By:

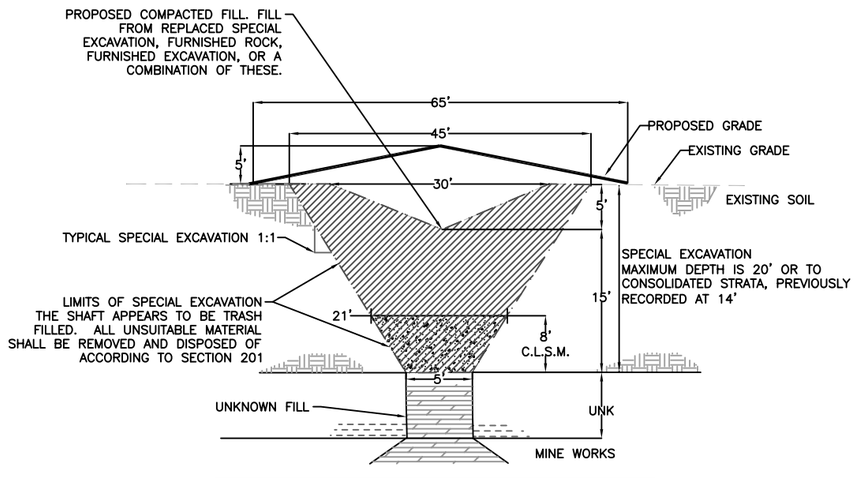
Existing and Proposed Conditions
Deardorf #2 Mine
Sheet 4 of 7

THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN THE AREA OF THE SHAFTS DUE TO THE UNKNOWN STABILITY OF THE AREA AROUND THE SHAFTS AND THE POSSIBILITY OF MINE GASES. THE ENGINEER WILL VERIFY THE NATURE AND EXTENT OF THE OPEN VOIDS, IF ANY, IN THE STRATA AS SPECIAL EXCAVATION PROGRESSES. THE ENGINEER WILL MAKE THE DETERMINATION WHETHER TO INCREASE OR DECREASE VOLUMES OF MATERIALS REQUIRED DURING CONSTRUCTION BASED UPON THE EXACT CONDITIONS ENCOUNTERED DURING SPECIAL EXCAVATION PROCESS.



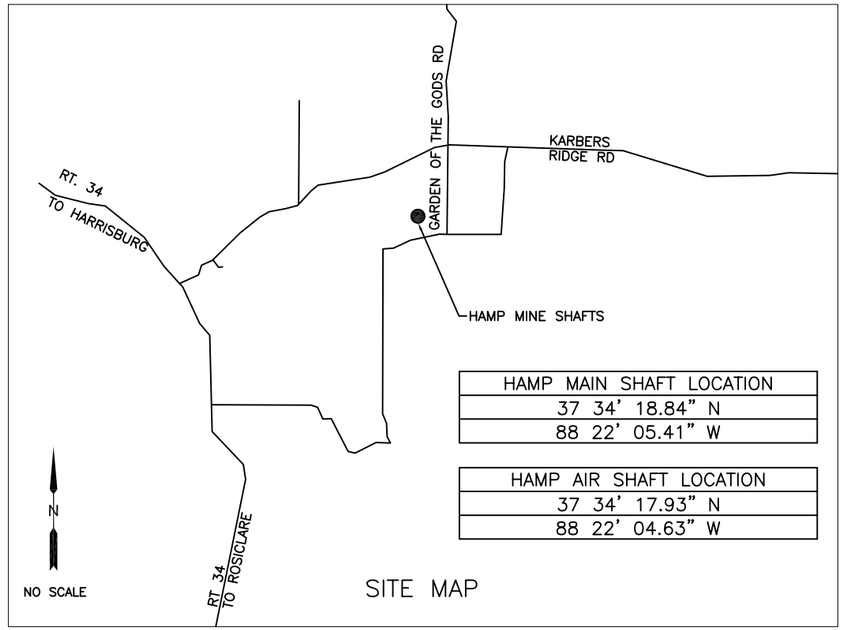
HAMP MAIN SHAFT FILLING DETAIL

NO SCALE, TYPICAL SECTION



HAMP AIR SHAFT FILLING DETAIL

NO SCALE, TYPICAL SECTION



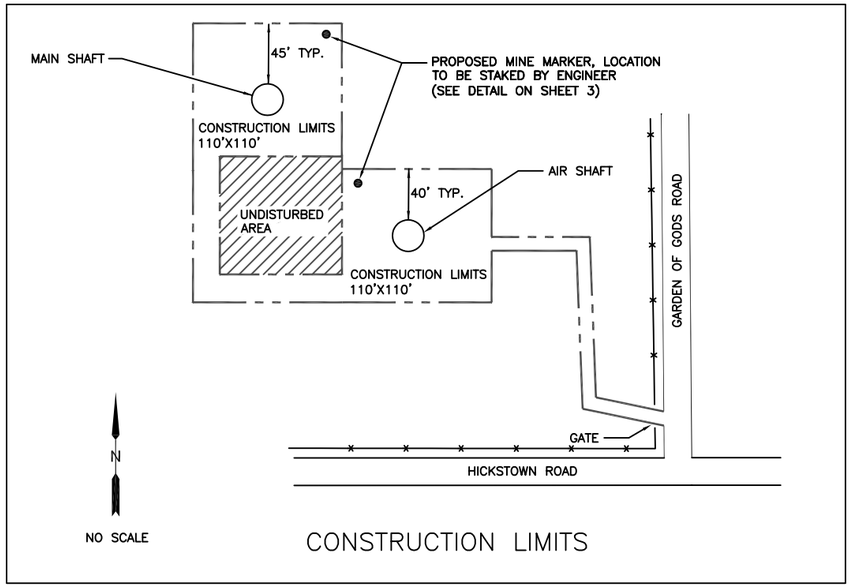
HAMP MAIN SHAFT LOCATION
37 34' 18.84" N
88 22' 05.41" W

HAMP AIR SHAFT LOCATION
37 34' 17.93" N
88 22' 04.63" W

SITE MAP

HAMP MINE QUANTITIES

#	ITEM	SECTION	QUANTITY	UNIT
2	FURNISHED EXCAVATION	204	1146	CU YD
3	SPECIAL EXCAVATION	215	1332	CU YD
4	CA FILL, CA-1	216	3.4	TON
5	SHOT ROCK FILL	216	74.0	TON
6	CLASS SI CONCRETE PLUG	216	134	CU YD
16	CONTROLLED LOW-STRENGTH MATERIAL	593	56	CU YD
19	MINE OPENING MARKER	666	2	EACH



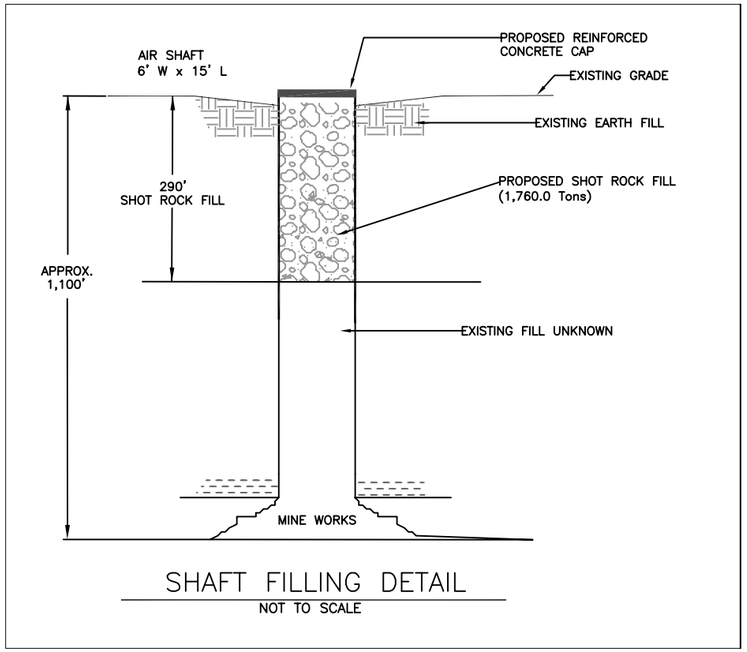
CONSTRUCTION LIMITS

State of Illinois
Department of Natural Resources

Fluorspar Mine Group 2014
Reclamation Project
AML-Fluo-1408
Hardin County

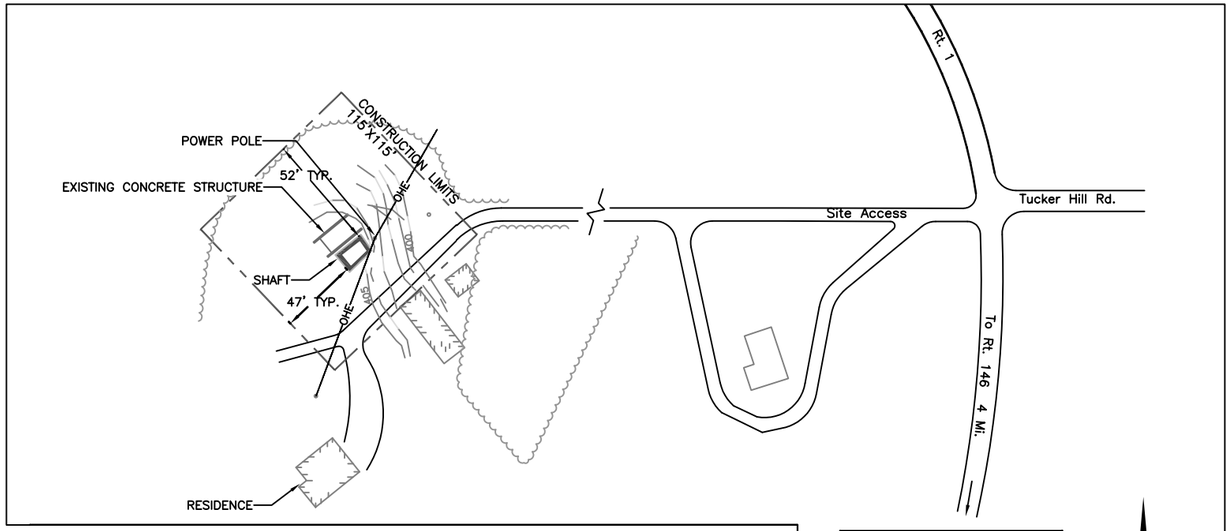
Drawn By: TBL Date: 09-30-14
Checked By:

Existing and Proposed Conditions
Hamp Mine
Sheet 5 of 7



SHAFT FILLING DETAIL

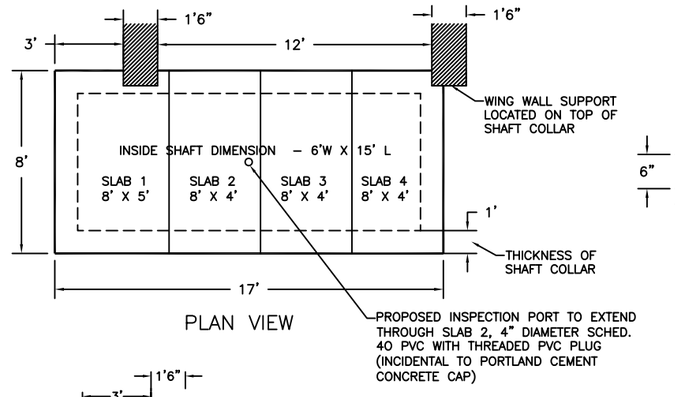
NOT TO SCALE



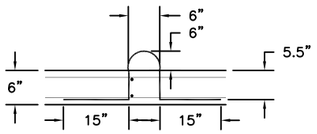
SITE MAP

HILL MINE QUANTITIES

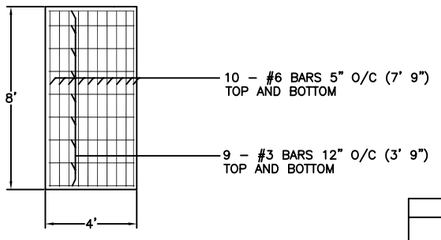
#	ITEM	SECTION	QUANTITY	UNIT
5	SHOT ROCK FILL	216	1760.0	TON
14	PORTLAND CEMENT CONCRETE CAP	425	2.5	CU YD
15	REINFORCEMENT BARS	IDOT 508	1141	POUND



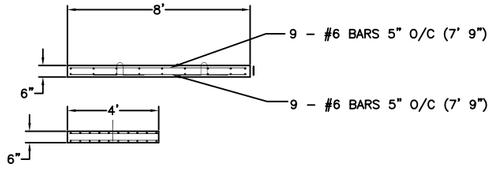
PLAN VIEW



LIFT HOOK DETAIL
(2 LIFT HOOKS PER SLAB)

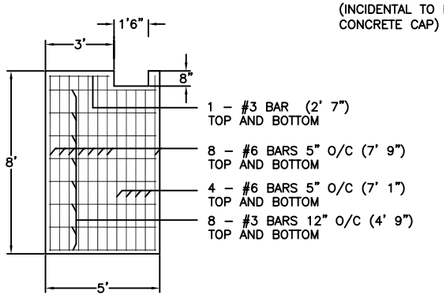


SLAB 2 & 3
8' X 4'

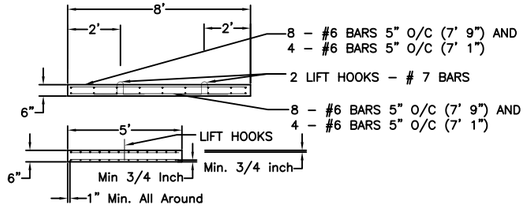


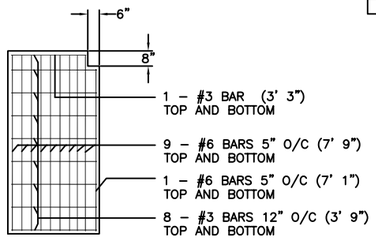
REINFORCEMENT BAR TABLE

REINFORCEMENT BARS	LENGTH (FOOT)	WEIGHT (POUNDS/L.F.)	WEIGHT (POUNDS)
74 – #6 BARS, 7'9" STRAIGHT	573.5	1.500	860.25
10 – #6 BARS, 7'1" STRAIGHT	70.8	1.500	106.20
16 – #3 BARS, 4'9" STRAIGHT	76.0	0.376	28.58
2 – #3 BARS, 2'7" STRAIGHT	5.2	0.376	1.96
52 – #3 BARS, 3'9" STRAIGHT	195.0	0.376	73.32
2 – #3 BARS, 3'3" STRAIGHT	6.5	0.376	2.44
8 – #7 BARS, HOOKS 4'2" (SEE DETAILS)	33.3	2.044	68.07
TOTAL WEIGHT			1141

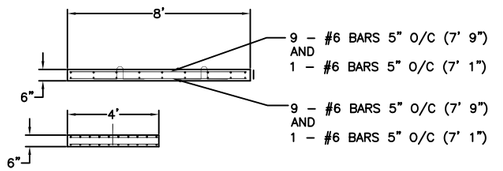


SLAB 1
8' X 5'





SLAB 4
8' X 4'



PORTLAND CEMENT CONCRETE CAP

NOT TO SCALE, ALL MEASUREMENTS NEED TO BE FIELD VERIFIED

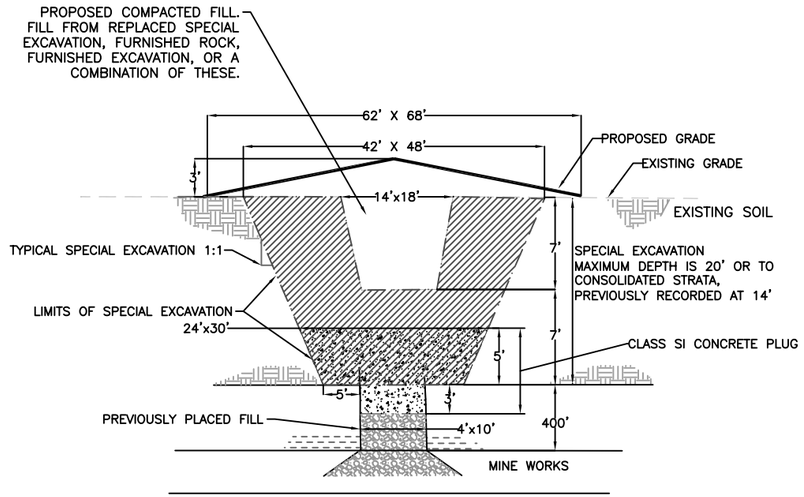
State of Illinois
Department of Natural Resources

Fluorspar Mine Group 2014
Reclamation Project
AML-Fluo-1408
Hardin County

Drawn By: TBL Date: 09-20-14
Checked By:

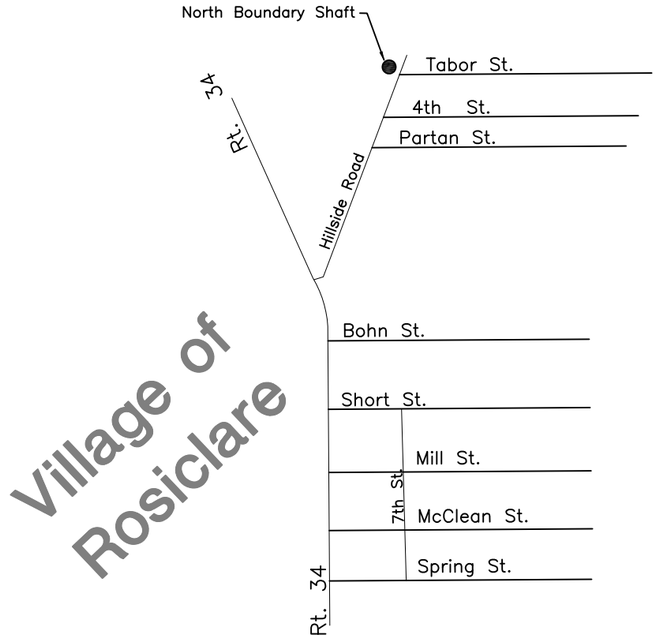
Existing and Proposed Conditions
Hill Mine
Sheet 6 of 7

THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN THE AREA OF THE SINKHOLES DUE TO THE UNKNOWN STABILITY OF THE AREA AROUND THE SINKHOLES AND THE POSSIBILITY OF MINE GASES. THE ENGINEER WILL VERIFY THE NATURE AND EXTENT OF THE OPEN VOIDS, IF ANY, IN THE STRATA AS SPECIAL EXCAVATION PROGRESSES. THE ENGINEER WILL MAKE THE DETERMINATION WHETHER TO INCREASE OR DECREASE VOLUMES OF MATERIALS REQUIRED DURING CONSTRUCTION BASED UPON THE EXACT CONDITIONS ENCOUNTERED DURING SPECIAL EXCAVATION PROCESS.

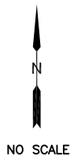


NORTH BOUNDARY SINKHOLE FILLING DETAIL

NO SCALE, TYPICAL SECTION



Village of Rosiclare



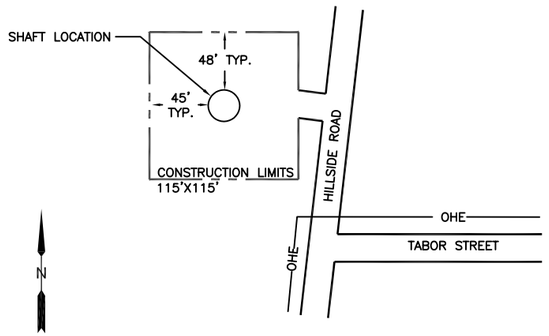
NO SCALE

NORTH BOUNDARY SHAFT
37 26' 00.16" N
88 20' 39.14" W

T13S R8E Sec 5

SITE MAP

NORTH BOUNDARY QUANTITIES				
#	ITEM	SECTION	QUANTITY	UNIT
2	FURNISHED EXCAVATION	204	68	CU YD
3	SPECIAL EXCAVATION	215	493	CU YD
6	CLASS SI CONCRETE PLUG	216	94	CU YD



NO SCALE

CONSTRUCTION LIMITS

State of Illinois
Department of Natural Resources

Fluorspar Mine Group 2014
Reclamation Project
AML-Fluo-1408
Hardin County

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Existing and Proposed Conditions
North Boundary Mine
Sheet 7 of 7