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Subject: Documents for review and request for comments - IS No. 7878; CUP No. 3681 (The proposed continuation of an existing surface mining operation (granite quarry beyond January 2021)
Importance: High



CUP 3682 Op Stat.
(Updated 1-1...



CUP 3681
Operation Plan (...)

All,

The subject application (CUP 3681) was routed to agencies for comments on June 18, 2020 (click the link below to review the application) to allow continuation of mining operation for 25 years (from 2021 to 2046). The Application has been modified. The Applicant is now requesting to allow continuation of mining operation for 50 years (from 2021 to 2071). No other changes are proposed to the project.

Please review the attached documents in conjunction with the link below and provide this office with your comments on the project – either revised or new. If your prior comments on the project do not change, please say so in your comments to this request. Please send your comments to Ejaz Ahmad at eahmad@co.fresno.ca.us by September 2, 2022 or sooner.



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[Your input matters! Customer Service Survey](#)

From: Ahmad, Ejaz
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Subject: Documents for review and request for comments - IS No. 7878; CUP No. 3681 (The proposed continuation of an
existing surface mining operation (granite quarry beyond January 2021)
Importance: High

The Department of Public Works and Planning, Development Services Division is reviewing the subject application proposing to allow the continuation of an existing surface mining operation (granite quarry) on two contiguous parcels totaling 142 acres. CUP No. 2928 that approved the existing operation is due to expire on January 18, 2021. Please utilize the following link to access information regarding this proposal.

<http://www.co.fresno.ca.us/departments/public-works-planning/divisions-of-public-works-and-planning/development-services-division/planning-and-land-use/land-use-applications/pro>

Please review the proposal and send your comments to Ejaz Ahmad at eahmad@co.fresno.ca.us by July 2, 2020.



Ejaz Ahmad | Planner

**Department of Public Works and Planning | Development Services and Capital
Projects Division/Current Planning**

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Main Office: (559) 600-4497 Direct: (559) 600-4204

Your input matters! Customer Service Survey

Fresno County Guidelines
Operational Statement

Academy Quarry Project

Fresno County, California

June, 2020

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1. Nature of the Operation

Nature of the operation--what do you propose to do? Describe in detail.

The nature of the mining operation is an existing operation on a 142-acre property comprised of two parcels. This mining operations proposal is to allow additional time to continue the quarry operation for an additional 50 years beyond year 2021. With no changes proposed in the volume, intensity, hours of operation, or others of the existing operation than what was permitted by previously approved CUP No. 2477 and CUP No. 2928.

The Academy quarry is what the industry calls a boulder quarry. The Granite was initially deposited as a large intrusive mass of molten Rock. From there is cooled to a solid. Sometime later it was fractured and intruded by quartz and feldspar dikes that exist today. Millions of years of weathering caused some of the granite adjacent to the joints and cracks to decompose into a crumbly material with the consistency of very coarse sand and gravel. Today some of the granite, in the form of large boulders, remains virtually as it was deposited initially. These boulders are surrounded by the decomposed material.

This operation removes the overburden and decomposed granite to isolate the boulders. This work is done using a large front-end loader and back-hoe. If the decomposed granite is packed too tight for the Back-hoe to remove, explosives will be used to dislodge it. The first step is to drill a 10 to 12 feet hole into the decomposed granite. Then a ½ stick of dynamite is dropped into the hole. This small piece of dynamite makes a small pocket in the ground. Then this small pocket is filled with Ammonium Nitrate and it is ignited and loosens a large amount overburden. After that the rest of the overburden is removed with the back-hoe and front-end loader. The boulders are then needed to be cut into manageable pieces. Large boulders get a hole drilled in the center and a small amount of black powder is added to the hole. The black powder is then ignited and the small explosion causes a crack in the boulder. The 2 pieces of boulder are then moved around so the Trim Drill can come and drill holes into the boulder pieces and that breaks the boulder into even smaller pieces. These smaller pieces are then hauled down to the Plant saws. The saws then slab out each of the blocks and these pieces are ready for shipment.

Good usable blocks shipped from the site are relatively free of impurities, undesirable inclusions, hairline fractures, color inconsistencies, discolored lines, etc. Currently all blocks which do not meet the criteria for color or soundness are disposed of at the site in the waste rock pile (grout pile). Cold Spring Granite continues an aggressive program in search of markets for non-dimension stone type uses (i.e. jetty stone, rip rap, crushed aggregate, etc.). We would appreciate input from Fresno County in developing this market and to be better capable of fully utilizing a natural resource.

The operations and equipment presented below are based on current operations. Changing equipment technology, as well as possible unique characteristics within the quarry which are yet to be discovered, may necessitate equipment and procedural modifications. To address these issues and remain competitive in an ever-changing world market the need may arise in the future

to amend this operation plan with the approval of Fresno County to incorporate technological advancements.

2. Operational Time Limits

Presently the quarry operates year round. The operating hours are currently 7 AM to 3:30 PM Monday through Friday for a total of 40 hours per week. The major controlling factor that regulates operation and production is the demand dictated by the customer. No special activities take place at the site and most of the operations take place in the outdoors.

3. Number of Customers or Visitors

- Average number per day: 1.
- Maximum number per day: 5.
- Hours (when they will be there): Variable

4. Number of Employees

- Current: 7
- Hours they work: Daylight hours, 7:00am to 3:30 pm, Monday through Friday. 40 hours.
- Future Depends on Market demand: 9
- Hours they might work: Same as Current hours they work.
- Do any live on-site as a caretaker: No.

5. Service and Delivery Vehicles

25 service or delivery trucks on a daily basis is average. 24 material hauling trucks and 1 service or delivery truck a day is common.

6. Site Access

Private Road: Gravel.

7. Parking Spaces

Number of parking spaces for employees, customers, and service/delivery vehicles.
Type of surfacing on parking area.

15 Parking Spots on Gravel

8. Goods to be Sold Onsite

Are any goods to be sold on-site? If so, are these goods grown or produced on-site or at some other location.

No grown or produced goods are sold on-site.

9. Equipment

What equipment is used? If appropriate provide pictures or brochure.

Primary Drill, Trimmer Drill, Diamond Wire Saws, Wedging tractors, Front-end loader, Grout Truck, Crawler Back Hoe, Water Truck, Air Compressor, and Pickup Trucks.

10. Supplies and Materials

What Supplies or Materials are used and how are they stored.

Consumable supplies used at the site include: drill rods and bits, stone dust bags, hole caps, diamond wire, mechanical parts for equipment, equipment filters, greases, hoses and fittings, etc. All of these supplies are stored in the shop.

11. Use and Unsightly Appearance

Does the use cause any unsightly appearance? If so, explain how this will be reduced or eliminated

Noise:

The quarry is located in a rural area with many homes nearby. There are inhabited structures within a .25 mile radius of the site. There are 5 homes within about a .5 mile radius of the center of the site and over 20 homes within a 1 mile radius of the center of the site.

The operation generates some noises from the following equipment and operations:

- Heavy diesel powered front-end loader and off road haul truck produce noise typical of heavy mobile equipment used in the construction and farming industries.
- Diesel engine powered back-hoe and drill rig tractor produce noise typical of any similar construction or farm equipment.
- Blasting produces noise which ranges from a much muffled thud to a fairly sharp bang. Even though it may be loud the duration is very minimal.
- Pneumatic jack hammers produce noise typical of rapid cycling air piston equipment.
- Drill rig produces a unique vibration type sound resulting from rapid blows of a hydraulic hammer beating against steel drill rods. At a distance this sounds like a buzzing noise.
- The diesel powered air compressor produces engine noise typical of similar equipment used in the construction industry.
- Compressed air is used to clean dirt from the surface of the stone. This produces a hissing sound.
- Backup alarms on all mobile equipment produce a beeping sound.

- The generator produces a noise typical of any engine.

All factory installed and custom made sound suppression attachments to the equipment are kept in proper maintenance in an effort to keep noise levels as low as possible.

Several practices are maintained to minimize the amount of noise generated by blasting.

Different applications of explosives are used as tools in the quarry operation. They are used to blast a boulder free of the decomposed granite, to subdivide the boulders into blocks, and to break waste rock (grout) into more manageable piece sizes. In all cases, special attention is given to minimize the frequency and size of blasts so as to not damage the stone product.

The lightest grain truck line cord which achieves complete detonation of the down line is used. This results in initiating a clean break without damaging the surrounding stone. The explosive trunk line cord, being that it is not contained within the stone, is the source of much of the blasting noise.

The noise generated within the quarry does not cause and issue with the current neighbors.

Dust:

Dust is generated by the movement of equipment and the removal of boulders from the ground. When the weather is hot and dry the water truck is used to spray the roads to keep the dust down. During the driest times of the year the water truck will spray the roads down multiple times a week. Being that no residential home is within .25 miles of the quarry dust does not become an issue with the neighbors. Glare and odor are not an issue when it comes to the quarrying process.

12. Liquid or Solid Waste

List any solid or liquid wastes to be produced.

Solid Waste:

Garbage generated at the site consists of empty containers from lubricants and supplies as well as lunchroom waste. Total volume of general garbage generated is estimated to be approximately 3 cubic yards per week and is removed by a commercial hauler. Scrap equipment, steel, rubber tires, batteries and used oil is disposed of or recycled through the use of salvage or recycling firms in the area.

Liquid Waste:

No liquid waste leaves the site. Water is recycled on site and is used for diamond wires saws. Saw Mud from the recycle tanks is drained and goes to a sediment settling pond and in the pond the sediment is allowed to settle out.

13. Water Usage

Estimated volume of water to be used (gallons per day). Source of Water.

Annually the quarry will use approximately 2,084,544 gallons of water, or an average of 8,017 gallons per working day. The source of water is a Fresh Water Well.

14. Proposed Advertising

Describe any proposed advertising including size" appearance/ and placement

A small sign identifying the Company's operation is placed at the entrance to the property off of Tollhouse Road. No other advertising is present at the site to alert people to the work being completed.

15. Use of Existing Building or Construction of New Building:

Will existing buildings be used or will new buildings be constructed?

Existing Buildings are used for quarry operations. There are no plans on building any other structures at the site.

16. Buildings or Portions of Buildings to be used in the Operation:

Explain which buildings or what part/on of buildings will be used in the operation.

Structures:

Building structures at the site include the following: The Buildings can be seen on OP-MAP-3 Plant Area Map.

1. Restroom—this is a 140 sq. ft. shed connected to the Lunchroom/office and Shop. This building is used as the employee restroom.
2. Lunchroom/office—this is a 415 sq. ft. building and is connected to the Shop. This building is used as a lunchroom, training room and office for quarry employees.
3. Air Compressor & Hoist House—this is a 670 sq. ft. building located near the derrick. Equipment is stored in this shed.
4. Saw #58 Cover—the cover is 370 sq. ft. and is located to the southeast of the shop. It only covers the saw from the elements
5. Saw #61 Cover—the cover is 645 Sq. ft. and is located south west corner of the building area. This building helps cover Saw #61 from the elements.
6. Power boxes cover—this shed is 195 sq. ft. and covers the power controls. This building is located near the southwest of the shop.
7. Maintenance Shop—the shop is 1730 sq. ft. and contains lubricants and other shop tools. This building is where most of the equipment repair takes place.
8. Two explosive magazines, each constructed of steel, barricaded by substantial granite blocks, inspected and approved by the Bureau of Alcohol Tobacco and Firearms. The primary magazine is located 88 ft. northeast of the fuel containment area and 1,500 ft. from the closest home. The secondary magazine is located against the back wall of the second quarry

ledge and 1,250 ft. from the closets home. These locations can be seen on the site map. These structures are used for storing explosive materials.

9. The Fuel Tank Storage area is located 270 ft. northeast of the shop. The storage area is 850 sq. ft. and contains 9 tanks with oil, fuel and grease in.

17. Outdoor Lighting or Sound Amplification:

Will any outdoor lighting or Sound Amplification system be used?

Outdoor lights are located at the site, but are not used at Night. No sound amplification system is used on the site.

18. Landscaping or Fencing

Landscaping or fencing proposed? Describe type and location.

No Landscaping is proposed for the Site.

Access to the property is restricted by the placement of a gate on the access road just east of the intersection of Newark Rd. and Tollhouse Rd. The gate is located and is connected to a fence that does not allow for vehicle passage around the gate. The gate is be locked with a Cold Spring Granite Company padlock during all non-operating hours. Proper warning signs indicate that only authorized personnel are allowed on the property are posted at the gate location. The fence that is used for livestock goes around the entire property. The fencing is basic Barb Wire.

19. Additional information

Any other information that will provide a clear understanding of the project or operation.

More information on the project can be found in the Operations Plan.

20. Owners, Officers, and Board Members

Identify all Owners, Officers and/or Board Members for each application submitted. This may be accomplished by submitting a cover letter in addition to the information provided on the signed application forms.

Property Owner(s):

Cold Spring Granite Co.

Chairmen of the Board---Pat Alexander

CEO/President---Greg Flint

CFO---George Schnepf

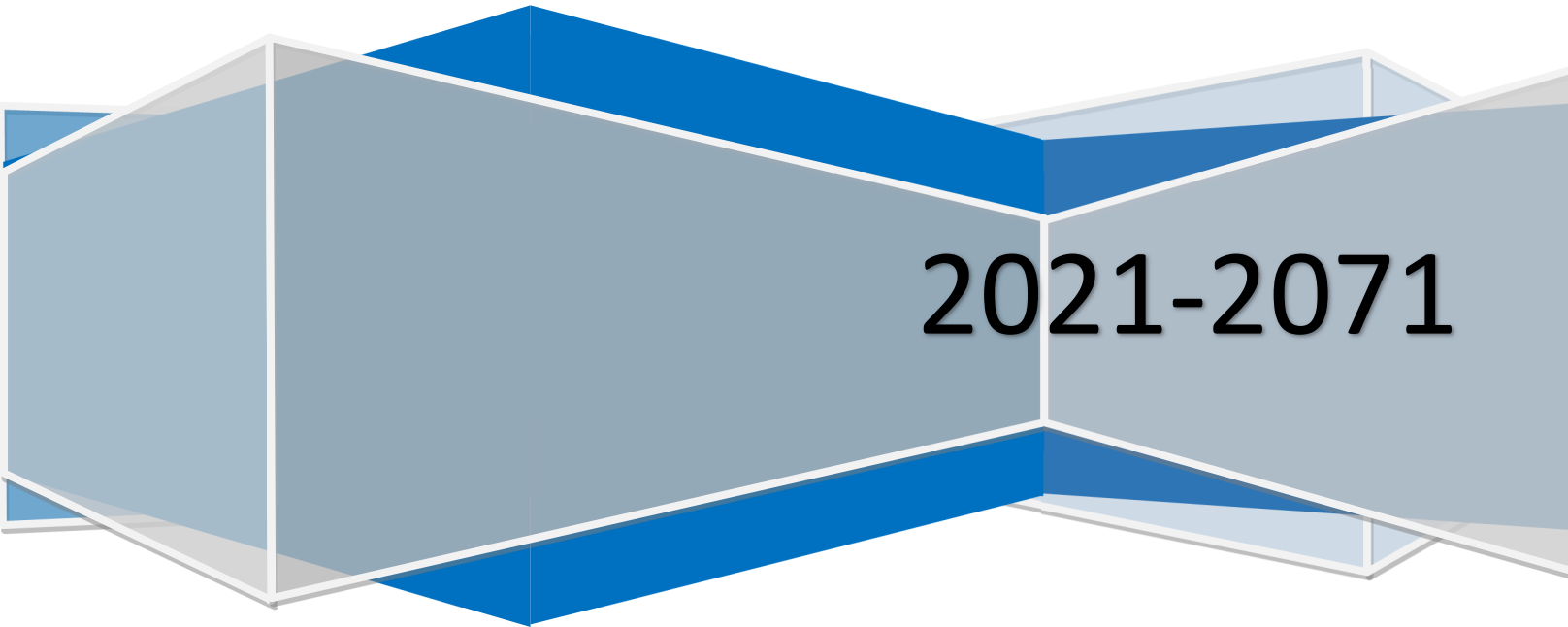
Academy Quarry Operations:

Quarry Operations Manager—Steve Konop
California Operations Manager---Robert Nelson II
Academy Quarry Supervisor---Larry McDonald
Environmental Engineer---Steve Chouanard

Cold Spring Granite

Academy Quarry Operations Plan

Steve Chouanard



2021-2071

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Cold Spring Granite Company

17482 Granite West Road
Cold Spring, MN 56320

Academy Quarry Operating Plan 2021-2071

Contact Personal for Coldspring

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Steve Konop – General Quarry Manager
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Larry McDonald – Quarry Site Supervisor
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Today, the intention of the quarry operation is to continue to remove dimension granite in block form from the quarry and prepare it for shipment to the fabrication facility in central Minnesota. If sold to customers in block form, the blocks are shipped to other facilities located throughout the world.

Description of Property:

The quarry area is located on top of a ridge consisting of 2 parcels contained entirely within the 141.99 acres owned by the Cold Spring Granite Company. This site is located in the Western Sierra Nevada foothills Northeast of Fresno, California. The quarry site is located on the southeast side of Tollhouse Road (State highway 168) between Newmark Avenue and Sample Road, approximately ten miles northeast of the City of Clovis, in Fresno County. The different parcels can be seen on [OP-MAP-1, Property Parcel Map](#). This map shows current quarry site and surrounding area.

The proposed 2021-2071 area legal descriptions:

- 1) 40.33 ACS IN SECS 13 &14 T12R22
- 2) 101.66 AC IN N7/8 OF E3/4 OF NW1/4 SEC 13 12/22

Total of 2 unit parcels containing 141.99 acres make up the whole site.

The current total affected acres is estimated at 48.4 acres. Of that area there are 3 main areas of use. The plant area consists of a maintenance shop, lunchroom, employee parking, fuel storage, block storage and wire saws. This area is estimated to be around 4.5 acres. The active quarry area is around 14.64 acres. This is the area where granite is removed from the ground and sorted. The high quality granite blocks are hauled down to the storage area or wire saws for processing. All unusable material is hauled to the grout pile. The grout pile area is estimated to be around 7.2 acres. The quarry also has 5.5 acres currently under reclamation. All of these different areas of the granite quarry can be seen on [OP-MAP-2, Quarry Work Areas](#).

The surrounding area is made up of a farmlands and residential homes.

Access:

The quarry is located 6.5 miles northwest of Clovis on Tollhouse Road (Hwy 168). The access road is on the East side of Tollhouse Road and is gated. It is the only access to the Quarry site. The access road is a private road that is unpaved. The access road is maintained by the quarry staff.

Description of Product being quarried:

The Academy is located within the “Quartz Norite Unit” that is part of the Academy Pluton that is one of a number of Jurassic and Early Cretaceous Plutons which have intruded and Metamorphosed the Ophiolitic rocks. The Academy Pluton is located in the western Sierra Nevada foothills northeast of Fresno, California.

Quartz Norite Unit: the rocks within this unit have a medium-grained hydriomorphic granular texture. Hornblende quartz norite is the most abundant rock type, but Lesser amounts of hypersthene-hornblende quartz diorite, hornblende norite, and hypersthene-hornblende diorite are also present.

The Geological designation for Academy Granite is Igneous Granite. The primary make up is Pyroxene-Hornblende Diorite. The mineral content is 60-70% Andesine, 15-20% Hornblende, 4-6% Hypersthene-4-6% Augite, 1-2% Quartz and trace amounts of Biotite, Magnetite, Apatite, Zircon, Spinel, and Orthoclase. The age of this granite is estimated to be 110 million years.

Note, the above contains excerpts from a paper on the Academy Pluton by Dr. Seymor Mack, Mr. Jason B. Saleeby and Mr. John E. Farrell. The paper was published in April, 1979.

Samples taken from the site have displayed excellent characteristics for the application of the polish and thermal finish. These are the two most popular finishes for dimensional stone products. The general description of the granite is a fine grain, light gray to black. Blue ropes and light black knots are common.

Final Product:

Once the product has been quarried (freed from the earth, selected per quality specification and sized for a specific usage), it is shipped in block form to the fabrication plant in Raymond California or Cold Spring, Minnesota for further processing, i.e. slabbing, finishing, jointing, hand cutting, anchoring, etc. The typical granite end products generally fall into the following categories:

1. Building Stone
 - a. Interior and exterior facing,
 - b. Paving and curbing,
 - c. Tile,
 - d. Counter tops and furniture
2. Memorialization
 - a. Markers,
 - b. Monuments,

- c. Mausoleums and crypt fronts
- 3. Industrial
 - a. Surface plates,
 - b. Acid tanks,
- 4. Finished slabs
- 5. Rough blocks (no processing beyond the quarry)

Raw granite from this quarry would be suited for products which would fall into some or all of the above categories.

Rate of Production:

Product demand controls quarry production rates. There is no way to accurately predict what our future consumer demands or trends may be. We do know that a quality product combined with a competitive pricing is what makes us competitive in today’s market.

The physical makeup of the quarry affects production rates. Fractures, undesirable inclusions, discoloration, etc. are all conditions that affect the yield or percent of usable product removed from the quarry.

Academy Quarry Yield											
Cube	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Average
Gross	476,327	345,798	290,286	333,970	314,165	359,076	449,167	330,667	293,121	285,100	347,758
Block	95,265	69,160	58,057	66,794	62,833	71,815	89,833	66,133	58,624	57,020	69,553
Grout	381,062	276,638	232,229	267,176	251,332	287,261	359,334	264,534	234,497	228,080	278,214
Yield	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%

Future production rate estimate – 60,000 to 70,000 net usable cube of stone per year
 Net quarry yield 20%
 Grout estimation: 240,000 to 280,000 cube per year.

These production estimates are used as a basis for preparing the maps showing grout pile growth and quarry development. Actual rates vary from year to year due to unpredictable market demand.

Operation Statement:

The nature of the operation is to continue to quarry dimensional stone granite and cut some of it into slabs. The Academy quarry is what the industry calls a boulder quarry. The Granite was initially deposited as a large intrusive mass of molten Rock. From there is cooled to a solid. Sometime later it was fractured and intruded by quartz and feldspar dikes that exist today. Millions of years of weathering caused some of the granite adjacent to the joints and cracks to decompose into a crumbly material with the consistency of very coarse sand and gravel. Today some of the granite, in the form of large boulders, remains virtually as it was deposited initially. These boulders are surrounded by the decomposed material.

This operation removes the overburden and decomposed granite to isolate the boulders. This work is done using a large front-end loader and back-hoe. If the decomposed granite is packed too tight for the Back-hoe to remove, explosives will be used to dislodge it. The first step is to drill a 10 to 12 feet hole into the decomposed granite. Then a ½ stick of dynamite is dropped into the hole. This small piece of dynamite makes a small pocket in the ground. Then this small pocket is filled with Ammonium Nitrate and it is ignited and loosens a large amount of overburden. After that the rest of the overburden is removed with the back-hoe and front-end loader. The boulders are then needed to be cut into manageable pieces. Large boulders get a hole drilled in the center and a small amount of black powder is added to the hole. The black powder is then ignited and the small explosion causes a crack in the boulder. The 2 pieces of boulder are then moved around so the Trimmer Drill can come and drill holes into the boulder pieces and that breaks the boulder into even smaller pieces. These smaller pieces are then hauled down to the Plant saws. The saws then slab out each of the blocks and these pieces are ready for shipment.

Good usable blocks shipped from the site are relatively free of impurities, undesirable inclusions, hairline fractures, color inconsistencies, discolored lines, etc. Currently all blocks which do not meet the criteria for color or soundness are disposed of at the site in the waste rock pile (grout pile). Cold Spring Granite continues an aggressive program in search of markets for non-dimension stone type uses (i.e. jetty stone, rip rap, crushed aggregate, etc.). We would appreciate input from Fresno County in developing this market and to be better capable of fully utilizing a natural resource.

The operations and equipment presented below are based on current operations. Changing equipment technology, as well as possible unique characteristics within the quarry which are yet to be discovered, may necessitate equipment and procedural modifications. To address these issues and remain competitive in an ever-changing world market the need may arise in the future to amend this operation plan with the approval of Fresno County to incorporate technological advancements.

Quarry Layout:

The current layout covers a relatively large area roughly 14.4 acres. Ramps between levels are constructed to occupy an area where less desirable stone rests, and usually have a 15% grade. Natural terrain has been used whenever practical to work into the quarry. The stone being quarried is generally in boulder form with loose decomposed granite around the boulders. This makes the quarry walls unstable and caution needs to be used around the different quarry ledges.

Dimensional granite deposits typically have a mix of good stone and undesirable stone. From an economic standpoint, each quarry needs multiple areas to be available to work at any given time, so that a profitable mix can be continually maintained. A quarry is typically worked in layers or benches of approximately 20 feet high each. Having several areas available to work at any time provides the means necessary to ensure constant production of good stone. As one area runs into poor stone, another can produce the needed quantity while the poor stone is being removed. Lack of consistency in color also adds to reasoning that several areas must be available to work, thereby requiring a large area to be opened.

Based on speculation, given the information known about the deposit, current anticipated rates of production, the ultimate limit should provide 75 years of future operation.

The overburden and decomposed granite that is removed from new areas, is be stockpiled for usage later based on quality. If the overburden has a good amount of topsoil in it, it is saved and stored in multiple locations. One large topsoil stockpile is located on the upper grout pile. Three topsoil stockpiles are also located near the saw water pond. If the overburden has some gravel and small decomposed granite in it, it is saved for road maintenance and other uses. Most of these Stockpiles are located on the main level of the quarry. The locations of both stockpiles can be seen on [OP-MAP-4, Quarry Site Map](#). All overburden with large pieces of decomposed granite and grout are randomly cast over the side of the grout waste pile. To enhance vegetative growth in areas of the grout pile that have reached their final design, topsoil is dumped over the side of the grout pile.

Quarrying Dimensional Stone:

Our goal is to make mill blocks with as little damage to the formation as possible. In comparison, the aggregate industry breaks the formation into small pieces to fit their customer's needs. These are two completely different styles of operation and should never be compared just because both are referred to as "quarries." Dimensional stone quarries require a "sound / consistent" deposit to fit their needs. Whereas, an aggregate operation can better utilize a formation with extensive natural breaks. The surface is then further cleaned with an air hose to expose any imperfections that may exist.

Subdividing a Slab:

Once the boulders are freed and made to a movable size, they are moved from the quarry area by the front end loader to the plant Saw Area. Then the boulder is cut into slabs or made into blocks. The blocks are then moved to the block yard where they are scaled, marked and stored to await shipment to the fabrication facility or the customer. The block storage yard is shown on [OP-MAP-3, Plant Area](#).

Throughout the process, the granite is carefully examined by trained quarry personnel to detect any flaws that may not be acceptable. This granite deposit displays spots and white lines as a characteristics. Depending on which direction the stone is cut the white lines and cracks are removed. These conditions must also be taken into consideration when deciding on the acceptability of a block. Highway haul-trucks are utilized to transfer the material to the fabrication facility or final customer

Grout:

Non-usable stone (waste material), called grout, is removed from the active quarry area and placed in a pile located on the south end of the quarry area. Grout varies in size from 20 ton blocks to small broken particles similar in size to gravel. The front-end loader, using the bucket or forks, loads the grout into the off-road haul truck for transport to the grout pile. For larger pieces, the loader will haul the grout directly to the pile. Other waste material disposed of with the grout includes fine granite particles from the drilling operations. No artificial materials or material from off-site are disposed of at this location.

The grout pile is occupying land to the south of the Mountain and will continue to grow the south. The grout pile is growing in 2 levels. The top level is at 902 ft. and is growing out to the south. The distance from the top of the grout pile to the toe is 280 ft. The elevation at the bottom of the pile 790 ft. The second level of the grout pile is west of the top level and is at an

elevation of 860 ft. The top of this grout area to the toe of the grout pile is 200 ft. The toe Elevation is 780 ft. and is in a natural depression.

The toe of the pile will extend into this natural depression. The depression will act as a natural containment and serve as a visual screen of the rocky side slopes of the grout pile. As the grout pile grows to the south the toe will grow further into the depression. This area will be the primary grout growth area for the life of the CUP.

The pile was located, and its height limited such that, upon closure, it can blend into the surrounding terrain as best as possible. The height limitations generally take into consideration the height and the elevation of surrounding hilltops.

The grout pile will begin and progress level from the side of the hill at an approximate elevation of 907'. The pile will grow to the south and southwest. Once the lower level fills in the natural depression the top level is to be pushed over the lower level to the southwest. The grout pile continues to grow out at the top level over the life of the CUP.

The side-slopes of the pile are made up of predominantly of the larger pieces of broken rock material covered by decomposed granite from the active quarry area. The natural angle of repose of the rocky side-slopes of the grout pile is approximately a 25% angle.

The top surface must be filled with fine material to provide a working/driving surface for heavy equipment. This material is provided from the decomposed granite stripped from the quarry area.

Driving surface construction material is stockpiled around the quarry site. It is composed of small decomposed granite and gravel that is removed well freeing boulders. These material stockpile locations can be seen on the [OP-MAP-4, Quarry Site Map](#).

The ultimate height of the grout pile, approximately 907', will be able to blend with the surrounding area. The grout pile elevation is below the 1050 ft. of the mountain adjacent to the pile to the northwest. Thus the grout pile will not create a landscape feature uncommonly high for the area. During reclamation of the grout pile native plants which naturally regenerate along the slopes and around the flanks of the grout pile to have it blend in naturally with the surrounding country side.

To limit the growth of grout piles and the prospect of throwing away a resource of some value, Cold Spring Granite continues to search for markets for the waste rock material. Some possible uses of this material are jetty stone, rip-rap, and crushed aggregate. If a market can be found for the grout generated from this quarry, the rate of grout pile growth would be reduce significantly. Cold Spring Granite would be extremely interested in a partnership developing and producing a product to meet those customer demands.

Wetlands:

The Wetlands Conservation Act addresses the need to avoid wetland area if at all possible to minimize the operation's impact on the natural resources. Areas of wetlands will be avoided unless they are located in an area essential for the continuation of the quarry operation within the

contract area. According to the National Wetland Inventory there are three wetland areas potentially in conflict with the quarry operation.

There is one wetland that is located about 380 ft. to the southwest of the grout pile. This is an intermittent streambed that is labeled R4SBC by the National Wetland Inventory. The grout pile would not have a chance to affect this wetland in the 50 year CUP term with the current production projections. This location also has never actually seen flow that would indicate that it is an intermittent streambed.

The other 2 wetlands on the National Wetland Inventory are located 500 ft. west of the maintenance shed. The two wetlands are actually connected and a Man-made holding pond. The wetland on the east is approximately .86 acres and has a Classification Code of PEM1A. This is actually a Man-made pond and is used as a settling pond for the saw mud. The low end of the pond has water in it only when the water from the saws is present. There are no plans to dump grout near this location so it will not be affected by 50 years of the CUP term.

The other wetland is .41 acres and is classified PUBFx by the National Wetland Inventory. This is also a Man-Made holding pond that is used for the settling of Saw mud. The saw mud flows into the holding pond is allowed to dry and the water settles out. The ponds can be seen on **OP-MAP-4**.

Structures:

Building structures at the site include the following: The Buildings can be seen on the **OP-MAP-3, Plant Area**.

1. Restroom—this is a 140 sq. ft. shed connected to the Lunchroom/office and Shop. This building is used as the employee restroom.
2. Lunchroom/office—this is a 415 sq. ft. building and is connected to the Shop. This building is used as a lunchroom, training room and office for quarry employees.
3. Air Compressor & Hoist House—this is a 670 sq. ft. building located near the derrick. Equipment is stored in this shed.
4. Saw #58 Cover—the cover is 370 sq. ft. and is located to the southeast of the shop. It only covers the saw from the elements
5. Saw #61 Cover—the cover is 645 Sq. ft. and is located south west corner of the building area. This building helps cover Saw #61 from the elements.
6. Power boxes cover—this shed is 195 sq. ft. and covers the power controls. This building is located near the southwest of the shop.
7. Maintenance Shop—the shop is 1730 sq. ft. and contains lubricants and other shop tools. This building is where most of the equipment repair takes place.
8. Two explosive magazines, each constructed of steel, barricaded by substantial granite blocks, inspected and approved by the Bureau of Alcohol Tobacco and Firearms. The Primary magazine is located 88 ft. northeast of the fuel containment area and 1,500 ft. from the closest home. The secondary magazine is located against the back wall of the second quarry ledge and 1,250 ft. from the closets home. These locations can be seen on the site map. These structures are used for storing explosive materials.
9. The Fuel Tank Storage area is located 270 ft. northeast of the shop. The Storage area is 850 sq. ft. and contains 9 tanks with oil, fuel and grease in.

Water Recycle Design System:

With the changes in quarrying technology, specifically the diamond wire saws, we have a continuous need for water at the Academy quarry during a year of operation. The current system was designed by the Cold Spring Granite engineering department. We have taken steps to improve the retention and recycle water systems at the quarry. The water supply is dependent upon rainwater and well water. All of our water needs are adequately obtained first from this water recycling system and water is added to the system from the Well when needed.

What is the water used for?

- Diamond wire sawing in the slab area, lubrication and coolant on the diamond wire.
- Flushing of the saw mud from the slab area.
- Washing granite blocks for inspection.
- Power washing quarry equipment.
- Dust Control

The water system is very simple and basic. The breakdown of the water flow system can be seen on the flow Design map. The waste water from Saw #58 and Saw # 61 flows from the saws to trenches that flows to the first tank in the system. Tank #1 holds 3.63 cubic yards of waste water. As tank #1 fills up sediment from the saws is allowed to settle out. When this tank gets full the water is allowed to flow into tank #2 and tank #3. Waste Water is allowed to fill tank #2, than that valve is closed and water is than diverted to tank #3 through another valve. Both of these tanks are 14.12 cubic yards. As these tanks fill the sediment settles out and the water than flows to Tank #4. Tank #4 is 38.89 cubic yards and fills to capacity and more sediment is allowed to settle out. The waste water than flows to Tank #5 that is 38.89 cubic yards. The same process happens and water than flows to Tank #6 that is 11.48 cubic yards. Tank #6 is the final tank and by than the water is clean enough to be reused in the saws. A pump in tank #6 pumps water back to the saws for reuse. This system can be seen on the drawing [Schematic 1](#).

This closed loop system recycles water multiple times and water is only lost due to evaporation or spillage. When the water gets low in the system well water is added to make up for the water loss. Due to the buildup of sediment in the tanks, the tanks need to be cleaned of sediment throughout the year. Since Tank # 1 is the primary settle tank this tank need to be cleaned of sediment monthly. All of the other tanks are cleaned of sediment once a year. The total amount of waste sediment slurry is estimated to be around 161 cubic yards a year. This mix is pumped from the tanks and allowed to flow to the holding ponds down below the Quarry. The flow of saw waste sediment to the holding ponds can be seen on [OP-MAP-5](#).

The diamond wire saws consumes the most water for operations in the Quarry. Gang wire saws with 5 wires Average 20 GPM. Single wire 3500 Pell uses 8 GPM. Onsite year round these saws run about 6 hours a day, 5 days a week. With 2 saws running they use as much as 8,098 gallons/day. Do to maintenance and breakdowns the saws do not run every day. Because of the water recycling system the water used by the saws is not taken completely from the well. Water is lost in the process do to evaporation and spillage. Also when the tanks have the sediment removed water is used in the process. That comes to about 33,612gallons per year. Washing blocks and equipment takes about 100 gallons a day. Water for Dust control depends on how dry the weather is. The water truck is 1,000 gallons and is filled up as needed for 6 months of the year on average. That averages out for the whole year to about 500 gallons per working day.

Annually the quarry will use approximately 2,084,544 gallons of water, or an average of 8,017 gal/day. This is estimated off of the Well Meter that tracks the amount of hours the pump runs. The following is a breakdown of those gallons.

The quarry operates 260 days/year and the saws will be running most of those days.

234 days running 2 saws:	8,098 gallons/day	$234 \times 8,098 =$	1,894,932 gal.
Sediment tank cleaning:	33,612 gallons per year	$=$	33,612 gal.
Washing blocks & equipment:	100 gallons/day	$260 \times 100 =$	26,000 gal.
Water for Dust Control:	500 gallons/day	$260 \times 500 =$	130,000 gal
		Total	$= 2,084,544$ gal.

The following is the major equipment to be used in this quarry operation:

Primary drill:

This drilling equipment consists of a drill rig with one hydraulic hammer mounted on a horizontal frame. The configuration can be set to drill either horizontal or vertical. This unit drills holes into the decomposed granite to blast the granite free. It also drill holes in large boulders to break them free from the ground and subdividing of the boulder can also be done with these units. The hydraulic power is provided by a pump powered from the engine of a 55 HP motor. The Academy Quarry has 2 single hole drills, a Sandvik Commando Drill and a Tamrock Commando Drill. Each drilling unit has its own individual stone dust collection system. The fines are gathered in a tank or plastic bag and disposed of in the grout pile.

Trimmer drill:

This drilling equipment consists of a Perfora single drill manufactured drill rig. This drill rig is also called the Rock Buggy. It is used primarily to segregate the large boulders into manageable sizes and shapes. The typical drill depth for these rigs is under 8-feet. This drill makes multiple holes a few inches apart along a straight line across the boulder. This allows the boulder to be split along this line. These pieces are than sent to the saws by the plant to be cut into slabs, or sent out in block form. The hydraulic operating system for both styles of drills is powered by their diesel engines. Each drilling unit has its own individual stone dust collection system. The fines are gathered in a tank or plastic bag and disposed of in the grout pile.

Diamond Wire Saws:

Saw #58 and Saw #61 are used to trim the boulders to the correct size and slab size. Saw #61 trims the blocks to size for shipping. This is a single wire saw that cuts the boulder to correct sizes for shipping. This has less material wasted compared to the drill and wedge method. Saw #58 cuts the blocks into slabs. This is a gang wire saw with 5 wires cuts the boulder into individual slabs. This saves on waste and shipping cost as the slabs are than sent to the plants in California and Minnesota for processing. Water is used to flush the stone particles from the cut and cool the wire. Water plays a critical role in costs and efficiency.

Wedging of stone:

Wedging occurs after the driller has outlined the shape of the block with a series of appropriately spaced holes. This procedure involves three pieces of steel, two half rounds and a single wedge. The tapered half rounds of appropriate length are placed into the drill hole and the matching

angled wedge is driven in between the two pieces of steel. The wedge can be driven either manually with a jackhammer or with a hydraulic cylinder. This procedure will create enough pressure to achieve a straight break between the drill holes. Wedging tractors for the manual process are basically a self-contained unit consisting of an 80 to 100 horse power farm tractor with a PTO driven air compressor mounted on the 3-point hitch with the hydraulic bucket holding the wedging tools. These units are also utilized to transport explosives to the blast site and support the blasters needs. The Academy Quarry has 2 small tractors used for this process. The wedging tractor is a Case Model #885 and the drill tractor is also a Case Model #885.

Front-end wheel loader:

The wheel loader is the key to the entire operation. At Academy the loader is a Komastu WA-600-6 loader. This fact is illustrated by the many different attachments utilized by the loader. A standard 8 yard bucket, an open-sided spade nosed bucket, a heavy set of loading forks, a huge pushing boom, and a long steel tipping boom. This machine is used for cleaning the area prior to drilling, moving the drills into place, preparing the tipping bed, hauling equipment to the slab for tipping, physically tipping the slab over, hauling the block and grout away, maintaining quarry haul roads, pushing the grout over the edge, and loading the trucks that haul the stone to the fabrication facilities.

Grout truck:

The truck is used to haul waste rock and overburden which has been loaded by the front end loader to the grout pile. It is also used to haul gravel which may be required for roads, ramps, quarry floor, etc. The grout truck is a CAT 796C.

Crawler back hoe:

The major use for the back-hoe is for the removal of glacial overburden, especially in areas with limited accessibility. This unit also removes decomposed granite around the Boulders. The Back Hoe also assists in the actual removal of stone boulders. This piece of equipment is at the site full time. The excavator is an SK480.

Water Truck:

The water truck is used to wet down the roads to keep the dust down during dry times of the year. The water truck is also used to supply water to the pressure washer to clean equipment and blocks. The water truck is an International S1900 company number VE0038.

Air compressor:

The compressor is 100HP and is located in the shop. It is in the shop for maintenance and airing up tires. It only runs when needed and has a company number of AC0701

1/2 ton 4 wheel drive pickup:

The pickup is generally used as a utility vehicle to haul miscellaneous supplies within the site, as well as running errands off site. The Company number on the truck is VE5895 and it is a 2014 GMC Sierra 1500.

3/4 ton 4 wheel drive pickup:

The pickup is generally used as a utility vehicle to haul miscellaneous supplies within the site, as well as running errands off site. The Company number on the truck is VE3080 and it is a Ford F350.

Road maintenance equipment:

All road maintenance is done with the Front-end loader and one of the wedging tractors with a box scrapper. The maintenance is done by the quarry workers.

Storage

Supplies: Consumable supplies used at the site include: drill rods and bits, stone dust bags, hole caps, diamond wire, mechanical parts for equipment, equipment filters, greases, hoses and fittings, etc. All of these supplies are stored in the shop.

Explosive Material: All practices at the quarry operation regarding the use and storage of explosive material follow the rules and guidelines established by the BATF and MSHA regulatory agencies, combined with the best practices established by Cold Spring Granite Company. Specifically with regard to explosive magazine construction and location. The location of the explosive magazines is shown on **OP-MAP-4**. These locations observe the rules for distance as barricaded magazines. Only the amounts and types of explosive material which can be legally stored will be on site.

Hazardous Material: The lubricants and fuels used at the site have the potential to spill thus potentially causing a contaminated environment condition. All free flowing lubricants and fuels (diesel & gasoline) are stored in tank within the secondary containment, or in racks with in secondary containment systems. This does not apply to transfer containers used on a daily basis. Used oil is also stored in the building. All containment is properly sized and constructed to restrain the flow of 110% of the largest container stored in the area. The characteristics of the quarry floor make the containment of a spill very workable. Thus, the chance of any environmental damage as a result of a leak is minimal.

Minor spills during handling and use will be cleaned up immediately. Ample amounts of absorbent material (floor dry) and cleanup materials will be stored at locations where free flowing hazardous materials are handled. The waste material and dirt, if any, is disposed of in closed drums, and properly labeled. When drums become full, the material will be disposed of properly as defined under the guidelines by the Department of Toxic Substance Control and for transportation (by Cal DMV).

Oil spills greater than 5-gallons to an environmental surface will be reported to the Cal OES 1-800-852-7550. Cleanup measures would be conducted as per the direction of the Cal OES and coordinated with Fresno County.

Quarry personnel are trained as per MSHA Part 47 regulations and internal company policies, to be able to recognize the importance of how to properly handle hazardous materials relative to PPE, and how to obtain MSDS information.

Personal Water use:

Potable water is brought to the site in bottles and dispensed via a commercial water cooler. Very little personal water is required for the operation.

Security:

Access to the property is restricted by the placement of a gate on the access road just east of the intersection of Newark Rd. and Tollhouse Rd. The gate is located and is connected to a fence that does not allow for vehicle passage around the gate. The gate is locked with a Cold Spring Granite Company padlock during all non-operating hours. Proper warning signs indicate that only authorized personnel are allowed on the property are posted at the gate location. The fence that is used for livestock goes around the entire property.

Explosive magazines are kept locked at all times when their usage is not required. Granite blocks are used to barricade the magazines, making it very difficult to remove the explosives or magazine without the use of heavy equipment. Any buildings containing valuables are to be locked during non-operating hours. The main shop area does have outdoor lighting, but it is not used at night. No sound amplification system is used on the site.

Safety

All quarrying activity is governed under the Cold Spring Granite Company's policies and procedures for safety and health. Further, the company is mandated to follow all procedures under federal regulations in Title 30 CFR which is the Mine Safety and Health Administration (MSHA) relating to the safety and health of miners.

Access to emergency services is maintained through the use of office phones and cellular phones.

Drainage and Erosion Control

Measures are taken to minimize any surface erosion at the operation. Roads were constructed to divert water run-off from the working surface into adjacent low-lying areas located away from the operation. Embankments, which are seen to be susceptible to erosion, are covered with topsoil and seeded.

The grout pile sides consist mostly of rock. Fines typically wash into the pile further and are filtered out as the water leaves through the toe of the pile. The grout pile is constructed in such a way that runoff from the top working surface is diverted to low settling out areas on the grout pile. Thus any runoff of fine material would be retained before the water continues into grassy adjacent low-lying areas.

Stockpiles of topsoil are seeded with vegetation; it is anticipated soil is not to be consumed in a short period of time or if the immediate need dictates. Noxious weeds are controlled.

Runoff water from the site is set up so that it runs naturally down the driveway from the quarry area and saw area. The water flows down the south side of the entrance road and then passes through a culvert under the roadway and goes down to the settling pond. No storm water runoff leaves the site.

A settling pond has been constructed in a lower are west of the plant are and north of the entrance road. The purpose of the pond is to allow for the settling out of fine material. Overflow from the pond does not happen because the pond is large enough to handle most storm events. The berm keeps any overflow from the pond from happening.

A NPDES Storm Water Discharge general permit is not required for this site. The reason a storm water general permit is not needed is because of the settling pond. The settling pond was designed to handle all storm water from the active quarry area and not allow the water to leave the site.

Excess water is not an issue in the active quarry. Surface water run-off is diverted from the quarry to the settling pond. No ground water is encountered within the quarry. The quarry operation is completely surrounded by natural grasses which will be left alone wherever possible. The grasses help to limit wind erosion. When noxious weeds become evident during the natural re-growth process the County will be contacted to develop the best plan of action.

Public Safety at the Site:

Visitors are regulated under Part 46 of MSHA regulations and Cold Spring Granite Company policy. This insures that caution is taken to avoid non-miner exposure to mining hazards, and that all safety rules are followed. Public Safety Closure Order R9-0-003-03 prohibits the general public from going into the Cold Spring Granite Quarry Site.

Signage placed at the entrance gate states that safety equipment such as protective eyewear and hard hats are required within the premises. Visitors are supplied with such safety equipment as needed. There are signs that warn against trespass and of company policies. The gate is closed and locked during all non-operating hours.

Noise

The quarry is located in a rural area with many homes nearby. There are inhabited structures within a .25 mile radius of the site. There are 5 homes with in about a .5 mile radius of the center of the site and over 20 homes within a 1 mile radius of the center of the site.

The operation generates some noises from the following equipment and operations:

- Heavy diesel powered front-end loader and off road haul truck produce noise typical of heavy mobile equipment used in the construction and farming industries.
- Diesel engine powered back-hoe and drill rig tractor produce noise typical of any similar construction or farm equipment.
- Blasting produces noise which ranges from a much muffled thud to a fairly sharp bang. Even though it may be loud the duration is very minimal.
- Pneumatic jack hammers produce noise typical of rapid cycling air piston equipment.
- Drill rig produces a unique vibration type sound resulting from rapid blows of a hydraulic hammer beating against steel drill rods. At a distance this sounds like a buzzing noise.

- The diesel powered air compressor produces engine noise typical of similar equipment used in the construction industry.
- Compressed air is used to clean dirt from the surface of the stone. This produces a hissing sound.
- Backup alarms on all mobile equipment produce a beeping sound.
- The generator produces a noise typical of any engine.

All factory installed and custom made sound suppression attachments to the equipment are kept in proper maintenance in an effort to keep noise levels as low as possible.

Several practices are maintained to minimize the amount of noise generated by blasting.

Different applications of explosives are used as tools in the quarry operation. They are used to blast a boulder free of the decomposed granite, to subdivide the boulders into blocks, and to break waste rock (grout) into more manageable piece sizes. In all cases, special attention is given to minimize the frequency and size of blasts so as to not damage the stone product.

The lightest grain truck line cord which achieves complete detonation of the down line is used. This results in initiating a clean break without damaging the surrounding stone. The explosive trunk line cord, being that it is not contained within the stone, is the source of much of the blasting noise.

Dust:

Dust is generated by the movement of equipment and the removal of boulders from the ground. When the weather is hot and dry the water truck is used to spray the roads to keep the dust down. During the driest times of the year the water truck will spray the roads down multiple times a week. Being that no residential home is within .25 miles of the quarry dust does not become an issue with the neighbors

Weigh Station

No weigh station is to be located at the site. All load weights are calculated by scaling the block being shipped with the scale on the front-end loader. Production records in cubic feet shipped are kept and are the basis for which any reporting to the state or county is to be calculated from.

Garbage:

Garbage generated at the site consists of empty containers from lubricants and supplies as well as lunchroom waste. Total volume of general garbage generated is estimated to be approximately 3 cubic yards per week and is removed by a commercial hauler.

Scrap equipment, steel, rubber tires, batteries and used oil will be disposed of or recycled through the use of salvage or recycling firms in the area.

Reclamation Plan

In the case of the Boulder stone quarry, a large portion of the land is disturbed early on in the operation. This large area of land will remain in the production area for the life of the quarry. Once the outer limits of the quarry are reached the quarry grows in depth only. Essentially, no areas of the quarry are available for reclamation until closure of the operation. If natural reclamation does occur in areas of in-activity nothing will be done to harm or enhance that

process. This reclamation plan has been developed based on current quarrying technologies and practices. Changes may take place in the operation, which have the potential to enhance the reclamation goals. Utilizing such enhancements will be considered. Discoveries of different procedures and opportunities that show potential for increased product utilization will be incorporated in any reclamation efforts.

It is anticipated that the quarry will exist as long as good marketable stone can be economically mined from the operation area. For exemplary purposes, this reclamation plan is based on the premise that the operation would cease approximately 50 years in the future. In the next 50 years we see minimal final reclamation goals achieved, as the quarry operation would still be considered in the middle of the overall life of the quarry. We continue with our current preparatory practices of storing material for future usage. Plans further into the future would only add to the relative inaccuracies due to the unpredictable nature of a quarry operation.

The intended use of the land beyond the life of the operation is that of a wildlife area or cattle grazing area. The ultimate goal of the reclamation plan is to blend the site, as much as can be done practically, into the surrounding landscape. To accomplish this we are prepared upon closing to cover the yards and haul way areas with the stored topsoil and naturally re-vegetate the areas with natural grasses, forbs, shrubs and trees. The storm water retention pond and the grout pile will be the remaining obvious changes to the original topography of the land. The pond will be allowed to grow in to a natural state. The grout pile will have any excess topsoil dumped over the side and be seeded. The grout pile will be allowed to then grow into a natural state. All other evidence of our operation will be removed.

Structures

All buildings will be tore down and removed from the site. Any concrete slabs will be broken apart and hauled off site. All equipment and moorings will be removed from the site. Any wells or septic systems will be properly abandoned according to all local, state, and federal ordinances of that time. Petroleum products used for maintenance purposes at the site total will be hauled off site. The equipment fuel tanks hold at maximum 1,000 gallons and will be removed from the site.

Quarry Edges

At the top of the currently quarry ledges, granite blocks of sufficient size and spacing will be provided as barricades, should any recreational vehicles venture into the abandoned site. Taking into consideration the visual aspect of these barrier blocks, they will be placed in a somewhat random nature. Barrier blocks will also be placed at the top of the ramps into the different ledges. This will hopefully help prevent recreational vehicle from ripping up the site.

Grout pile

The grout piles are designed to be tall. This minimizes the area of land disturbed and the amount of material needed to construct the top driving surface. Until the grout pile flattens out on top, none of the surface area is available for reclamation.

The slope of the rocky sides of the grout piles will be left as they are constructed with an approximate slope of 1.25:1. Trees in the area grow to sufficient heights to provide some cover of the sloped areas. Further, rocky cliffs and outcrops are quite common throughout the area

surrounding the operation site. Though there is little fine material within the grout pile below 15 feet from its top, sparse native vegetation has proven to grow upon the rocky side slopes. The rocky exposures with sparse vegetation will blend quite well with the native terrain.

The pile is constructed as one large pile forming out from the mountain top and spreading out to the south. When reclamation of the grout pile starts, reclamation of the slopes will occur first. Glacial overburden from the quarry development will be dumped on the grout pile over the life of the grout pile to add a soil base for vegetation. Topsoil and Gravel from the stockpiles will also be dumped over the grout pile at reclamation to add material for plant growth. A noxious weed free seed mix will then be broadcasted over the reclaimed areas to enhance natural vegetation re-establishment and prevent erosion. This technique has been used in other quarries on grout piles with good results. The combination of topsoil and natural re-vegetation will prevent any erosion on the slopes as they begin to blend with the surrounding area.

Due to the construction of the driving surface on top of the grout pile, the top 5 to 15 feet of the grout pile contains fine material made up of gravel or glacial overburden. The top few inches will need to be “loosened” and covered with the available topsoil to enhance vegetative growth. This layer of driving surface material, will serve as the vegetative material.

If sufficient material exists at the time of reclamation additional material will be placed in appropriate locations so as to assist in the achievement of the final reclamation goals. One such location may be over the side of the grout pile to add to the vegetative base on the upper portion of the pile.

Yards and haulways

All steep dirt banks, piles, ditches, etc., will be contoured to minimize their aesthetic impact on the area and to match the rolling terrain of the area with slopes no greater than 2:1. These areas will already be covered with gravel since they are the working surfaces of the site. These areas will be covered with a minimum of 4 inches of topsoil to provide a vegetative base and any compacted areas will be loosened prior to seeding. Once topsoil has been laid down, natural trees, scrubs and grasses will be planted.

Topsoil and Gravel Stockpiles

Topsoil stockpiles for reclamation are located around the quarry and will continue to grow when good soil is found. Gravel Stockpiles are also located around the Quarry site and will be used as needed for Road repair and site development. These locations can be seen on the **OP-MAP-4**.

Access Reclamation

Prior to reclamation of the access road to the quarry, Fresno County will be contacted to determine if there is a future need for the access road once operations at the quarry have permanently ceased. If no future need exists the access road to the quarry and grout pile will be reclaimed as the final step in the reclamation process.

This reclamation will consist of removing, as much as practical, gravel from the road bed and the area contoured to blend with the terrain. Once this is completed, the surface will be loosened or scarified in any area where the soil is compacted. Available remaining topsoil will then be spread evenly over the area and native grass seeds will be spread evenly to create a more natural

appearance. Once these activities have been completed, the intersection of the access road will be closed where it meets Tollhouse Road. This will be accomplished by placing barrier blocks across the access road.

Re-vegetation

It is intended that the area will be naturally re-vegetated with native species of grasses, forbs, shrubs and trees. Any seeding or planting will be completed at the discretion of the Fresno County. This will best lend the area to its intended use after closure which will be to serve as a wildlife habitat area or cattle grazing area.

The re-vegetated areas will soon blend with the native terrain and vegetation to provide habitat for native woodland creatures. The area will be monitored for three subsequent years (after final closure) to determine success of re-vegetation and any presence of noxious weed growth. Re-planting will be done during this time, if required. The pond created by the sediment pond will provide habitat for aquatic creatures and waterfowl. The rocky side slopes of the grout pile will provide habitat to birds and upland cave dwelling creatures.

Contract

Cold Spring Granite shall carry on operations under this plan and in conjunction with all other governing agencies with reasonable diligence. Operation of this quarry is also subject to the rules and stipulations of all applicable Conditional Use Permits Cold Spring Granite Company has entered with Fresno County. The mining operating plan is renewable at the end of the 50 year CUP. Cold Spring Granite will submit one-year prior to expiration of the CUP their proposed Operation Plan for review by Fresno County. Maps will be supplied showing existing conditions at that time regarding quarry size, grout pile size, yards, haul-ways, elevations, etc.

Any changes in operations shall be submitted as an amendment to the operating plan and must be submitted and approved in writing by Fresno County before any such operations commence. Amendments shall include statements of the reason for the changes, detailed description of the proposed changes, maps and diagrams.

Subcontractors

Should Cold Spring Granite Co. contract the services of a third party contractor (subcontractor) to perform duties relative to the quarry operation, that contractor shall perform such duties within the guidelines set forth in this operating plan. Cold Spring Granite shall be responsible in assuring that any such contractors perform their duties in an acceptable manner relative to the operating plan and/or related Forest Service requirements.

Cold Spring Granite will not be held responsible for the performance of contractors which do not have a contract or subcontract with Cold Spring Granite Co.

Drawings

The following drawings accompany this operating plan package.

OP-MAP-1	Property Parcel Map
OP-MAP-2	Quarry Work Areas
OP-MAP-3	Plant Area Map

OP-MAP-4	Quarry Site Map
OP-MAP-5	Saw Waste Water Flow Map
Schematic 1	Recycle Water System Design

Permits

The following documents accompany this operating plan package.



County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STEVEN E. WHITE, DIRECTOR

DATE: June 18, 2020

TO: Development Services and Capital Projects, Attn: William M. Kettler, Division Manager
Development Services and Capital Projects, Attn: Chris Motta, Principal Planner
Development Services and Capital Projects, Current Planning, Attn: David A. Randall, Senior Planner
Development Services and Capital Projects, Policy Planning, ALCC, Attn: Mohammad Khorsand, Senior Planner
Development Services and Capital Projects, Zoning & Permit Review, Attn: Daniel Gutierrez; James Anders
Development Services and Capital Projects, Site Plan Review, Attn: Hector Luna
Development Services and Capital Projects, Building & Safety/Plan Check, Attn: Dan Mather
Development Engineering, Attn: Laurie Kennedy, Grading/Mapping
Road Maintenance and Operations, Attn: Wendy Nakagawa; Nadia Lopez
Design Division, Transportation Planning, Attn: Brian Spaunhurst
Water and Natural Resources Division, Attn: Glenn Allen, Division Manager
Department of Public Health, Environmental Health Division, Attn: Deep Sidhu/ Steven Rhodes
Resource Division, Solid Waste, Attn: Amina Flores-Becker
Agricultural Commissioner, Attn: Rusty Lantsberger
CA Regional Water Quality Control Board, Attn: centralvalleyfresno@waterboards.ca.gov
CA Department of Transportation (CALTRANS), Attn: Dave Padilla
CA Department of Fish and Wildlife, Attn: R4CEQA@wildlife.ca.gov
US Fish & Wildlife Service, Attn: Mathew Nelson
State Department of Health Services, Office of Drinking Water, Fresno District, Attn: Caitlin Juarez
Army Corps of Engineers, Attn: Kathy Norton
U.S. Bureau of Reclamation, Attn: Michael Inthavong; Darren Williams; Sheryl Carter
CA Division of Mines and Geology, Attn: Beth Hindrickson; Leah Gardener
CA Geological Survey, Mineral Resources and Mineral Hazards, Attn: John Clinkenbeard
State Reclamation Board, Attn: Chief Engineer
Dumna Wo Wah Tribal Government, Attn: Robert Ledger, Tribal Chairman/Eric Smith, Cultural Resources Manager/Chris Acree, Cultural Resources Analyst
Picayune Rancheria of the Chuckchansi Indians, Attn: Heather Hairey, THPO/Cultural Resources Director
Santa Rosa Rancheria Tachi Yokut Tribe, Attn: Ruben Barrios, Tribal Chairman/Shana Powers, Cultural Specialist II
Table Mountain Rancheria, Attn: Robert Pennell, Cultural Resources Director
San Joaquin Valley Unified Air Pollution Control District (PIC-CEQA Division), Attn: PIC Supervisor
North King GSA, Attn: Kassy D. Chauhan
Sierra Resource Conservation District, Attn: Steve Haze
Fresno County Fire Protection District, Attn: Jim McDougald, Division Chief

FROM: Ejaz Ahmad, Planner 
Development Services and Capital Projects Division

SUBJECT: Initial Study Application No. 7878; Unclassified Conditional Use Permit Application
No. 3681

APPLICANT: Cold Spring Granite Company

DUE DATE: July 2, 2020

The Department of Public Works and Planning, Development Services and Capital Projects Division is reviewing the subject application proposing to allow the continuation of an existing surface mining operation (granite quarry) on two contiguous parcels totaling 142 acres. CUP No. 2928 that approved the existing operation is due to expire on January 18, 2021.

The Department is also reviewing for environmental effects, as mandated by the California Environmental Quality Act (CEQA) and for conformity with plans and policies of the County.

Based upon this review, a determination will be made regarding conditions to be imposed on the project, including necessary on-site and off-site improvements.

We must have your comments by **July 2, 2020**. Any comments received after this date may not be used.

NOTE - THIS WILL BE OUR ONLY REQUEST FOR WRITTEN COMMENTS. If you do not have comments, please provide a "NO COMMENT" response to our office by the above deadline (e-mail is also acceptable; see email address below).

Please address any correspondence or questions related to environmental and/or policy/design issues to me, Ejaz Ahmad, Planner, Development Services and Capital Projects Division, Fresno County Department of Public Works and Planning, 2220 Tulare Street, Sixth Floor, Fresno, CA 93721, or call (559) 600-4204, or email eahmad@fresnocountyca.gov.

EA:
G:\4360Devs&PIn\PROJSEC\PROJDOCS\CUP\3600-3699\3681\ROUTING\CUP 3681 Routing Ltr.doc

Activity Code (Internal Review): 2381

Enclosures



Fresno County Department of Public Works and Planning

Date Received: 06/10/20

CUP3681

MAILING ADDRESS: Department of Public Works and Planning, Development Services and Capital Projects Division, 2220 Tulare St., 6th Floor, Fresno, Ca. 93721

LOCATION: Southwest corner of Tulare & "M" Streets, Suite A, Street Level, Fresno Phone: (559) 600-4497

APPLICATION FOR:

- Pre-Application (Type), Amendment Application, Amendment to Text, Conditional Use Permit, Variance, Site Plan Review/Occupancy Permit, No Shoot/Dog Leash Law Boundary, General Plan Amendment, Time Extension for, Director Review and Approval, for 2nd Residence, Determination of Merger, Agreements, ALCC/RLCC, Other

DESCRIPTION OF PROPOSED USE OR REQUEST:

The project is a continuation of current operations. The site removes dimensional stone granite from the quarry area and cuts the stone into useful sizes. The granite is then hauled off site for to be manufactured into usable product and sold.

CEQA DOCUMENTATION: Initial Study, PER, N/A

PLEASE USE FILL-IN FORM OR PRINT IN BLACK INK. Answer all questions completely. Attach required site plans, forms, statements, and deeds as specified on the Pre-Application Review. Attach Copy of Deed, including Legal Description.

LOCATION OF PROPERTY: East side of Tollhouse Road (Hwy 168) between the city of Clovis and the City of Prather, Street address: 14147 Tollhouse Rd. Clovis, CA 96319

APN: 150-141-33 Parcel size: 141.99 Acres total Section(s)-Twp/Rg: S 13 T 12S 5/R 22E E

ADDITIONAL APN(s): 150-141-35, 1

I, Steve Chouanard (signature), declare that I am the owner, or authorized representative of the owner, of the above described property and that the application and attached documents are in all respects true and correct to the best of my knowledge. The foregoing declaration is made under penalty of perjury.

Table with 5 columns: Name, Address, City, Zip, Phone. Rows include Cold Spring Granite Company (Owner and Applicant) and Steve Chouanard (Representative).

CONTACT EMAIL: schouanard@coldspringusa.com

OFFICE USE ONLY (PRINT FORM ON GREEN PAPER)

Application Type / No.: U(CUP) NO. 3681 Fee: \$ 9,123.00
Application Type / No.: Fee: \$
Application Type / No.: Fee: \$
Application Type / No.: Fee: \$
PER/Initial Study No.: IS 7078 Fee: \$ 5,151.00
Ag Department Review: Fee: \$ 93.00
Health Department Review: Fee: \$ 992.00
Received By: EIAZ Invoice No.: TOTAL: \$ 15,359.00

UTILITIES AVAILABLE:

WATER: Yes [] / No [X] Agency:
SEWER: Yes [] / No [X] Agency:

STAFF DETERMINATION: This permit is sought under Ordinance Section:

Sect-Twp/Rg: - T S/R E

Related Application(s): CUP 2928
Zone District: AL-40
Parcel Size: 141.99 ACRES

APN #
APN #
APN #
APN # over.....



**Development Services
and
Capital Projects
Division**

Mail to:
Cold Spring Granite Company
17482 Granite West Road
Cold Spring, MN 56320-4578

Pre-Application Review

Department of Public Works and Planning

NUMBER: 39732
APPLICANT: Steve Chouanard
PHONE: (320) 685-4808
Email: schouanard@goldspringusa.com

PROPERTY LOCATION: 14478 Tollhouse Rd.
APN: 150 - 141 - 33.35 ALCC: No Yes # VIOLATION NO. None
CNEL: No Yes (level) LOW WATER: No Yes X WITHIN 1/4 MILE OF CITY: No Yes _____
ZONE DISTRICT: AL-40; SRA: No Yes X HOMESITE DECLARATION REQ'D.: No Yes _____
LOT STATUS:

Zoning: Conforms; () Legal Non-Conforming lot; () Deed Review Req'd (see Form #236)

Merger: May be subject to merger: No Yes _____ ZM# _____ Initiated _____ In process _____

Map Act: () Lot of Rec. Map; () On '72 rolls; Other Hist; () Deeds Req'd (see Form #236)

SCHOOL FEES: No Yes X DISTRICT: Clovis USD PERMIT JACKET: No Yes X

FMFCD FEE AREA: Outside () District No.: _____ FLOOD PRONE: No Yes X

PROPOSAL: Un-CUP to allow an existing mining operation to continue operating. CUP2928 that approved the existing operation is due to expire in 2021 which is 20 years after the effective date of approval as per Resolution No. 11557 Exhibit "B" item 1.

COMMENTS: CUP 2928 includes parcels 150-141-33 & 35.

ORD. SECTION(S): 853.B-5, 858, 817.5 BY: Daniel Gutierrez DATE: June 2, 2020 Revised

GENERAL PLAN POLICIES:

LAND USE DESIGNATION: AGRICULTURE () JGPA: _____
COMMUNITY PLAN: _____ () JAA: _____
REGIONAL PLAN: _____ () CUP: \$ 9,123.00
SPECIFIC PLAN: _____ () JRA: _____
SPECIAL POLICIES: _____ () JVA: _____
SPHERE OF INFLUENCE: _____ () JAT: _____
ANNEX REFERRAL (LU-G17/MOU): _____ () JTT: _____

PROCEDURES AND FEES:

() MINOR VA: _____
() HD: \$ 992.00
() AG COMM: \$ 93.00
() ALCC: _____
() IS/PER*: \$ 5,151.00
() Viol. (35%): _____
() Other: _____
Filing Fee: \$ _____
Pre-Application Fee: \$247.00
Total County Filing Fee: \$ 15,359.00

COMMENTS: LOW WATER AREA

FILING REQUIREMENTS:

- Land Use Applications and Fees
- This Pre-Application Review form
- Copy of Deed / Legal Description
- Photographs
- Letter Verifying Deed Review
- IS Application and Fees* * Upon review of project materials, an Initial Study (IS) with fees may be required.
- Site Plans - 4 copies (folded to 8.5"x11") + 1 - 8.5"x11" reduction
- Floor Plan & Elevations - 4 copies (folded to 8.5"x11") + 1 - 8.5"x11" reduction
- Project Description / Operational Statement (Typed)
- Statement of Variance Findings
- Statement of Intended Use (ALCC)
- Dependency Relationship Statement
- Resolution/Letter of Release from City of _____

OTHER FILING FEES:

- Archaeological Inventory Fee: \$75 at time of filing
(Separate check to Southern San Joaquin Valley Info. Center)
- CA Dept. of Fish & Wildlife (CDFW): (\$50) (\$50+\$2,406.75)
(Separate check to Fresno County Clerk for pass-thru to CDFW. Must be paid prior to IS closure and prior to settling hearing date.)

BY: Ejaz Ahmad DATE: 06/12/2020
PHONE NUMBER: (559) 600-4204

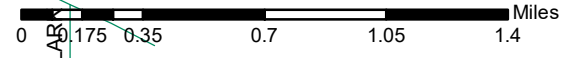
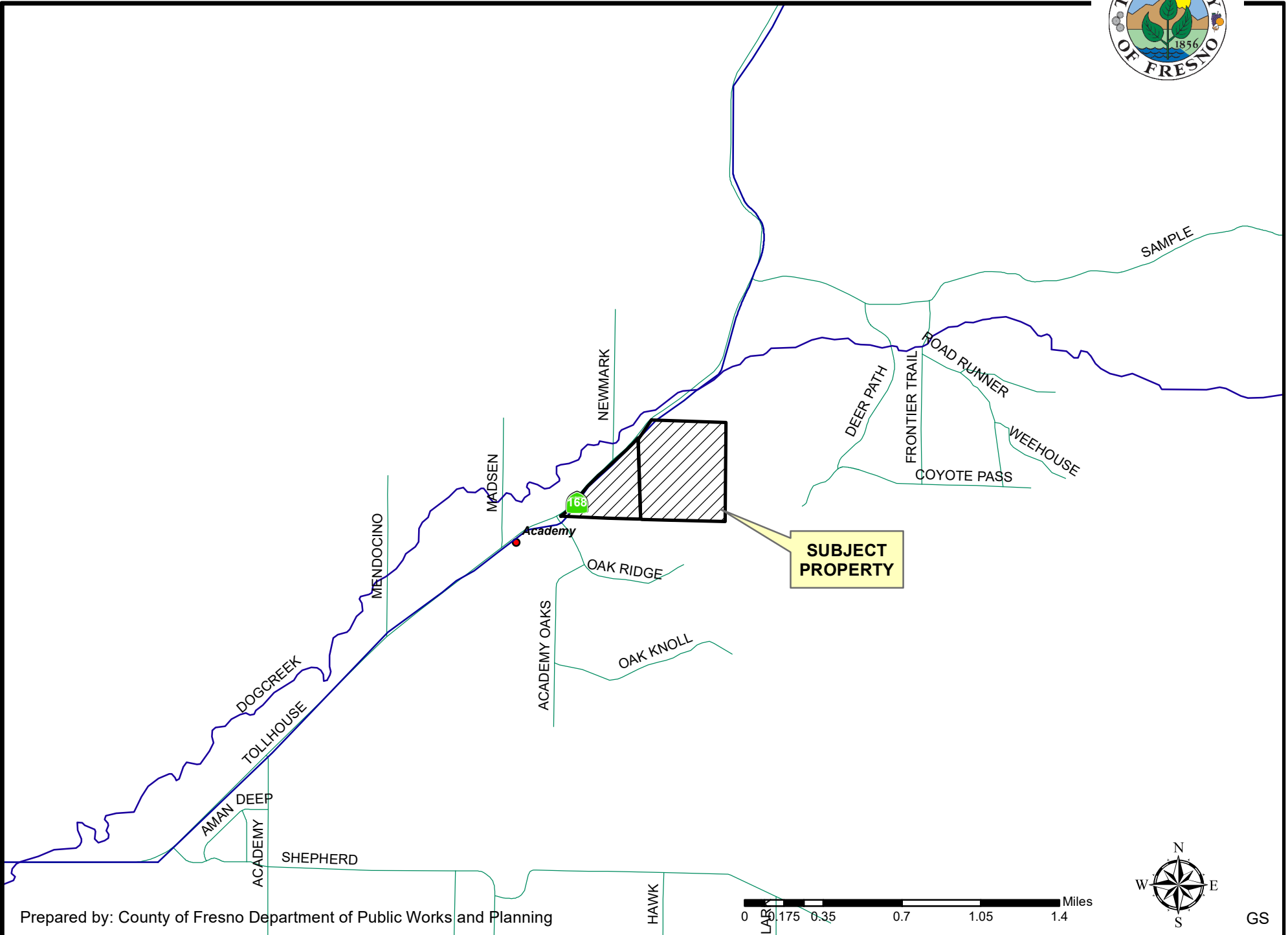
NOTE: THE FOLLOWING REQUIREMENTS MAY ALSO APPLY:

- COVENANT
- MAP CERTIFICATE
- PARCEL MAP
- FINAL MAP
- FMFCD FEES
- ALUC or ALCC
- SITE PLAN REVIEW
- BUILDING PLANS
- BUILDING PERMITS
- WASTE FACILITIES PERMIT
- SCHOOL FEES
- OTHER (see reverse side)

PLU # 113 Fee: \$247.00
Note: This fee will apply to the application fee if the application is submitted within six (6) months of the date on this receipt.

OVER.....

LOCATION MAP

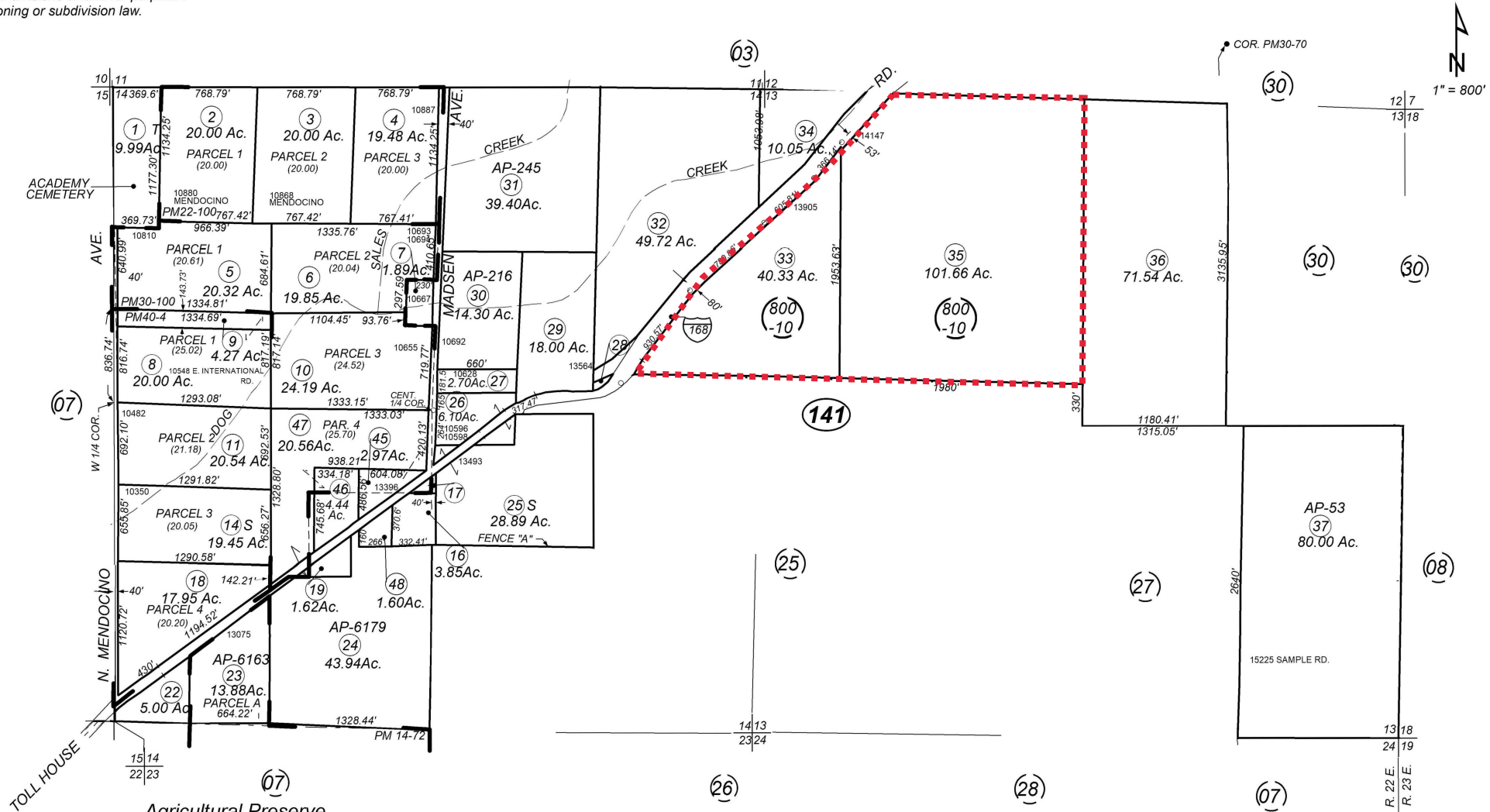


-NOTE-
This map is for Assessment purposes only.
It is not to be construed as portraying legal
ownership or divisions of land for purposes
of zoning or subdivision law.

SUBDIVIDED LAND IN POR. SEC'S. 13 & 14, T.12S., R.22E., M.D.B.& M.

Tax Rate Area
76-035

150-14



Agricultural Preserve
Parcel Map No. 2176 - Bk. 14, Pg. 72
Parcel Map No. 3351 - Bk. 22, Pg. 100
Parcel Map No. 4821 - Bk. 30, Pg. 100
Parcel Map No. 5918 - Bk. 40, Pgs. 4 & 5

Assessor's Map Bk. 150 - Pg. 14
County of Fresno, Calif.

Note - Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles



County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STEVEN E. WHITE, DIRECTOR

INITIAL STUDY APPLICATION

INSTRUCTIONS

Answer all questions completely. An incomplete form may delay processing of your application. Use additional paper if necessary and attach any supplemental information to this form. Attach an operational statement if appropriate. This application will be distributed to several agencies and persons to determine the potential environmental effects of your proposal. Please complete the form in a legible and reproducible manner (i.e., USE BLACK INK OR TYPE).

OFFICE USE ONLY	
IS No.	_____
Project No(s).	_____
Application Rec'd.:	_____

GENERAL INFORMATION

1. **Property Owner :** Cold Spring Granite Company **Phone/Fax** 320-685-3621

Mailing Address: 17482 Granite West Road Cold Spring MN 56320

Street City State/Zip
2. **Applicant :** Cold Spring Granite Company **Phone/Fax:** 320-685-3621

Mailing Address: 17482 Granite West Road Cold Spring MN 56320

Street City State/Zip
3. **Representative:** Steve Chouanard **Phone/Fax:** 320-685-4808

Mailing Address: 17482 Granite West Road Cold Spring MN 56320

Street City State/Zip
4. **Proposed Project:** Continued use of the current site as a granite quarry. The operation takes granite out of the current quarry site. After the granite is removed from the ground it is cut into usable sizes using diamond wire saws. After that the granite is shipped off site to a manufacturing facility were is is processed and sold to customers.
5. **Project Location:** The quarry is located North East of the city of Clovis on Tollhouse Road(Hwy 168). This is located on the east side of Tollhouse road.
6. **Project Address:** 14147 Tollhouse Rd. Clovis, CA 96319
7. **Section/Township/Range:** 13 / 125 / 22E 8. **Parcel Size:** 141.99 Acres
9. **Assessor's Parcel No.** 150-141-33, 150-141-35, OVER.....

10. Land Conservation Contract No. (If applicable): NO

11. What other agencies will you need to get permits or authorization from:

<u> </u> LAFCo (annexation or extension of services)	<u> </u> SJVUAPCD (Air Pollution Control District)
<u> </u> CALTRANS	<u> </u> Reclamation Board
<u> </u> Division of Aeronautics	<u> </u> Department of Energy
<u> </u> Water Quality Control Board	<u> </u> Airport Land Use Commission
<u> </u> Other _____	

12. Will the project utilize Federal funds or require other Federal authorization subject to the provisions of the National Environmental Policy Act (NEPA) of 1969? Yes X No

If so, please provide a copy of all related grant and/or funding documents, related information and environmental review requirements.

13. Existing Zone District¹: Zoning District AL40

14. Existing General Plan Land Use Designation¹: Agriculture

ENVIRONMENTAL INFORMATION

15. Present land use: The current use of the property is for a granite quarry.

Describe existing physical improvements including buildings, water (wells) and sewage facilities, roads, and lighting. Include a site plan or map showing these improvements:

 The site has a shop, office/lunchroom, rest room, Compressor shed, 2 wires saws with canopies, and power box shed. There is also a fuel containment area.

 There is a well near the entrance and roads throughout the site. There is a light on the shed, entrance signs a gate and fencing around the property.

Describe the major vegetative cover: Grassland

Any perennial or intermittent water courses? If so, show on map: NO

Is property in a flood-prone area? Describe:
 NO

16. Describe surrounding land uses (e.g., commercial, agricultural, residential, school, etc.):

North: Grazing and Residential

South: Residential

East: Grazing and Residential

West: Residential and Commercial (Polofield) Township of Academy

17. What land use(s) in the area may be impacted by your Project?: Residential. The noise from the Heavy Equipment use and back up alarms. Also noise from blasting.

18. What land use(s) in the area may impact your project?: None, Area is mostly residential and farmland.

19. Transportation:

NOTE: The information below will be used in determining traffic impacts from this project. The data may also show the need for a Traffic Impact Study (TIS) for the project.

A. Will additional driveways from the proposed project site be necessary to access public roads?
 Yes X No

B. Daily traffic generation:

I. Residential - Number of Units	<u>0</u>
Lot Size	<u>0</u>
Single Family	<u>0</u>
Apartments	<u>0</u>

II. Commercial - Number of Employees	<u>7</u>
Number of Salesmen	<u>0</u>
Number of Delivery Trucks	<u>1</u>
Total Square Footage of Building	<u>Current Building</u>

III. Describe and quantify other traffic generation activities: Semi- Trucks come into quarry to haul out blocks of Granite. The max semi traffic per day would be 25 Trucks

20. Describe any source(s) of noise from your project that may affect the surrounding area: The noise from the Heavy Equipment use and back up alarms. Also noise from blasting.

21. Describe any source(s) of noise in the area that may affect your project: None

22. Describe the probable source(s) of air pollution from your project: Dust from equipment movement and blasting

23. Proposed source of water:

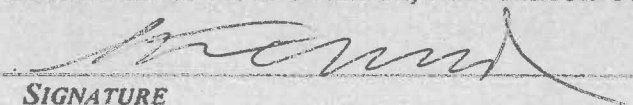
() private well

() community system³—name: _____

OVER.....

24. Anticipated volume of water to be used (gallons per day)²: 8,015 gallons
25. Proposed method of liquid waste disposal:
 septic system/individual
 community system³-name Porta Pottie and Septic tank
26. Estimated volume of liquid waste (gallons per day)²: 6.5 gallons
27. Anticipated type(s) of liquid waste: Septic sewage.
28. Anticipated type(s) of hazardous wastes²: Used Oil and Antifreeze
29. Anticipated volume of hazardous wastes²: 250 gallons per year or 1 gallons per working day.
30. Proposed method of hazardous waste disposal²: Visa Petroleum--Picks up our waste oil.
31. Anticipated type(s) of solid waste: Garbage
32. Anticipated amount of solid waste (tons or cubic yards per day): .21 Cubic yards Per Day
33. Anticipated amount of waste that will be recycled (tons or cubic yards per day): .07 Cubic yards per day
34. Proposed method of solid waste disposal: Hauled Off site
35. Fire protection district(s) serving this area: Mid Valley Fire District--Calfire
36. Has a previous application been processed on this site? If so, list title and date: CUP 2477 12-19-91
CUP 2928 12-19-91 SPR 6438
37. Do you have any underground storage tanks (except septic tanks)? Yes _____ No X
38. If yes, are they currently in use? Yes _____ No _____

TO THE BEST OF MY KNOWLEDGE, THE FOREGOING INFORMATION IS TRUE.


 SIGNATURE

6-9-2020
 DATE

¹Refer to Development Services and Capital Projects Conference Checklist

²For assistance, contact Environmental Health System, (559) 600-3357

³For County Service Areas or Waterworks Districts, contact the Resources Division, (559) 600-4259

NOTICE AND ACKNOWLEDGMENT

INDEMNIFICATION AND DEFENSE

The Board of Supervisors has adopted a policy that applicants should be made aware that they may be responsible for participating in the defense of the County in the event a lawsuit is filed resulting from the County's action on your project. You may be required to enter into an agreement to indemnify and defend the County if it appears likely that litigation could result from the County's action. The agreement would require that you deposit an appropriate security upon notice that a lawsuit has been filed. In the event that you fail to comply with the provisions of the agreement, the County may rescind its approval of the project.

STATE FISH AND WILDLIFE FEE

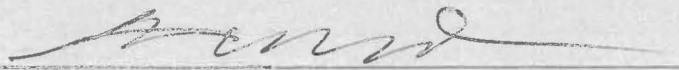
State law requires that specified fees (effective January 1, 2019: \$3,271.00 for an EIR; \$2,354.75 for a Mitigated/Negative Declaration) be paid to the California Department of Fish and Wildlife (CDFW) for projects which must be reviewed for potential adverse effect on wildlife resources. The County is required to collect the fees on behalf of CDFW. A \$50.00 handling fee will also be charged, as provided for in the legislation, to defray a portion of the County's costs for collecting the fees.

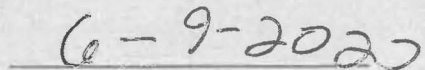
The following projects are exempt from the fees:

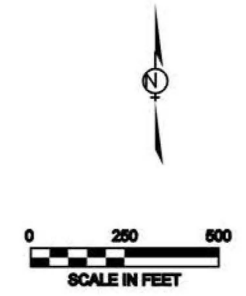
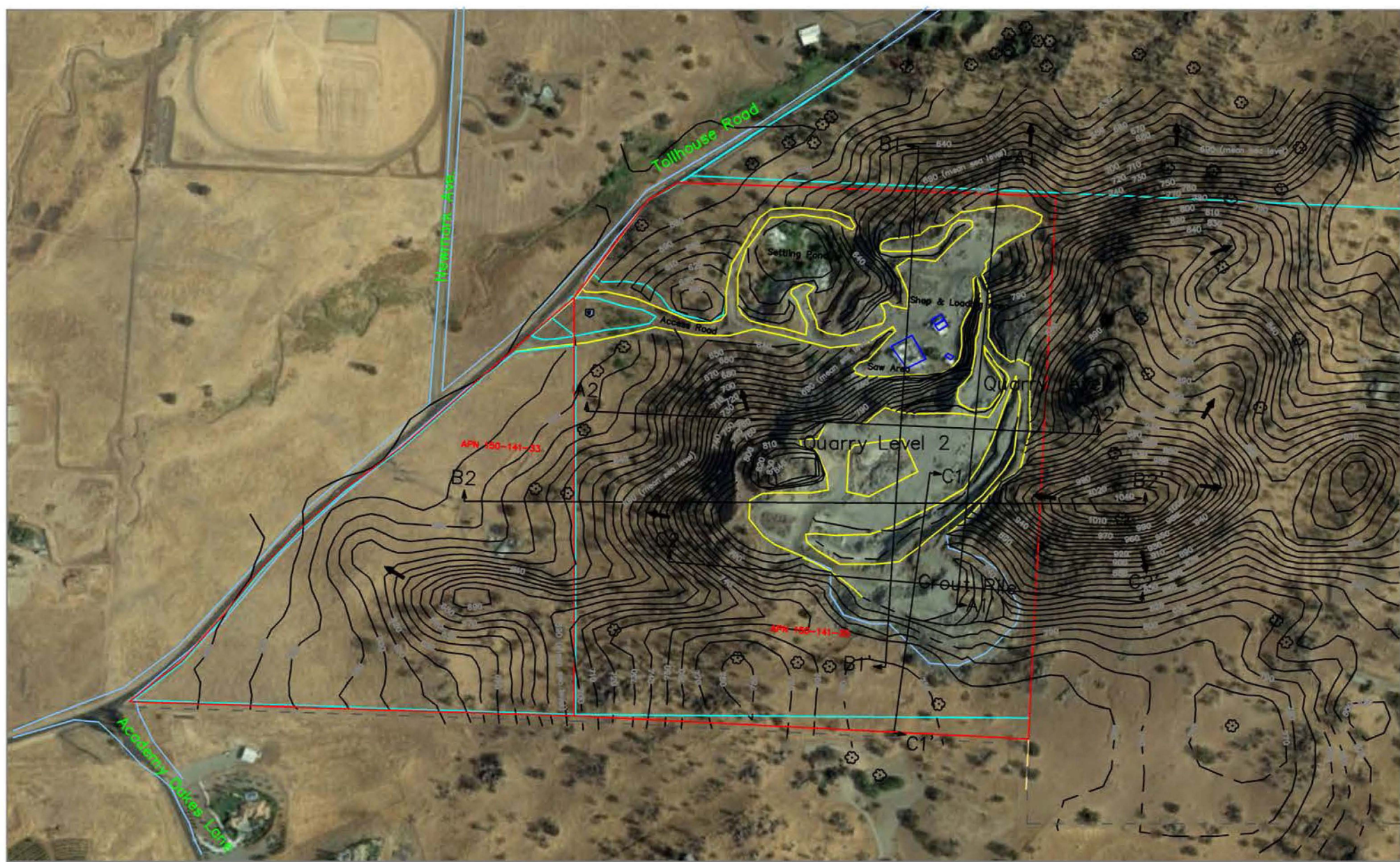
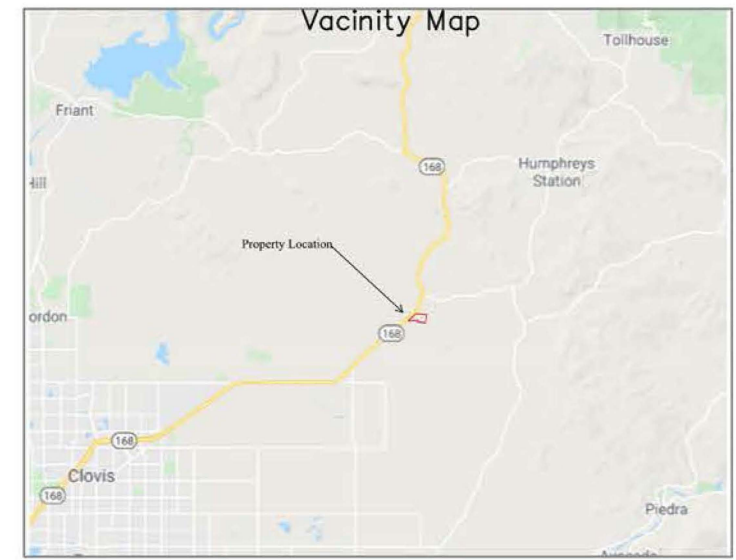
- 1. All projects statutorily exempt from the provisions of CEQA (California Environmental Quality Act).*
- 2. All projects categorically exempt by regulations of the Secretary of Resources (State of California) from the requirement to prepare environmental documents.*

A fee exemption may be issued by CDFW for eligible projects determined by that agency to have "no effect on wildlife." That determination must be provided in advance from CDFW to the County at the request of the applicant. You may wish to call the local office of CDFW at (559) 222-3761 if you need more information.

Upon completion of the Initial Study you will be notified of the applicable fee. Payment of the fee will be required before your project will be forwarded to the project analyst for scheduling of any required hearings and final processing. The fee will be refunded if the project should be denied by the County.


Applicant's Signature

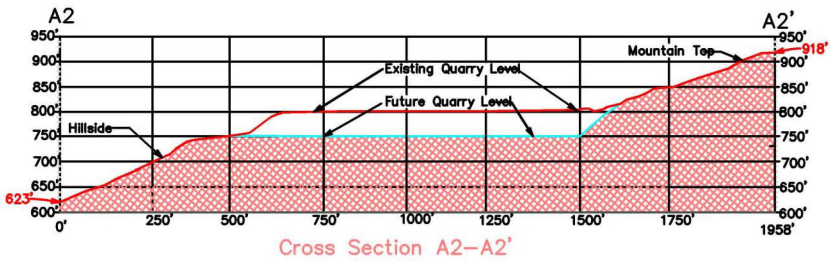
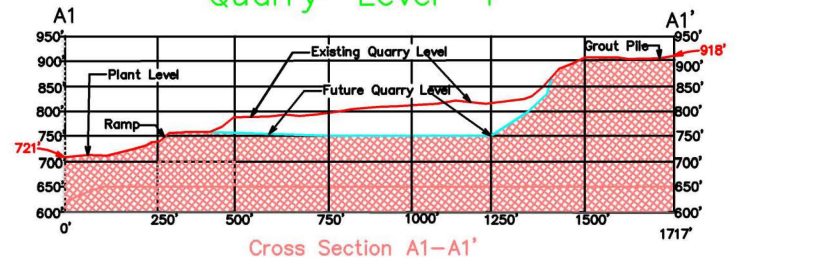

Date



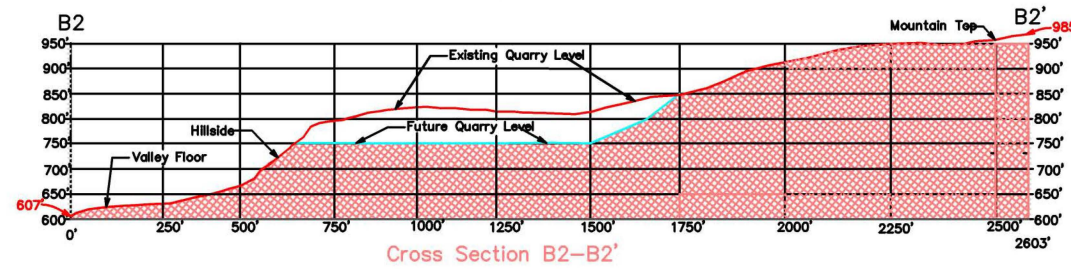
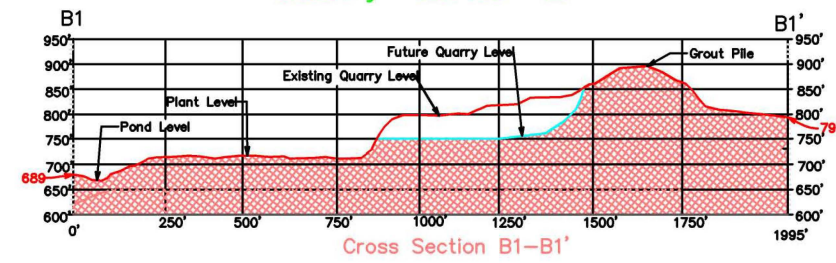
MAPPING LEGEND

WELL	
SURFACE DRAINAGE ARROW	
TREE	
PARCEL LINES	
BARB WIRE FENCE	
QUARRY ROAD	
PROPERTY LINE SETBACK	
CONTOURS	
CONTOUR MEAN SEA LEVEL	

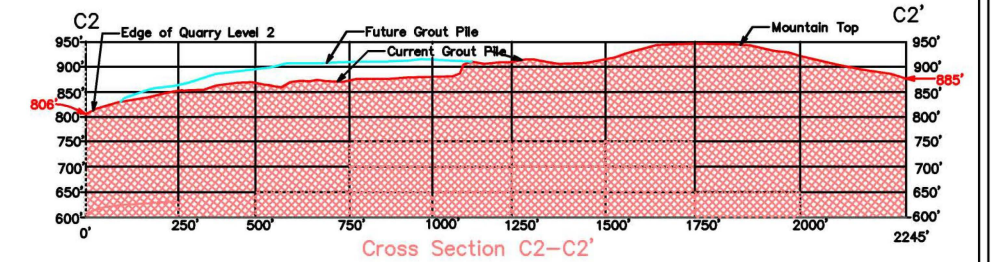
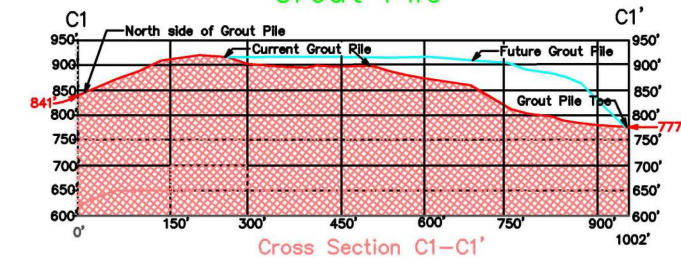
Quarry Level 1



Quarry Level 2

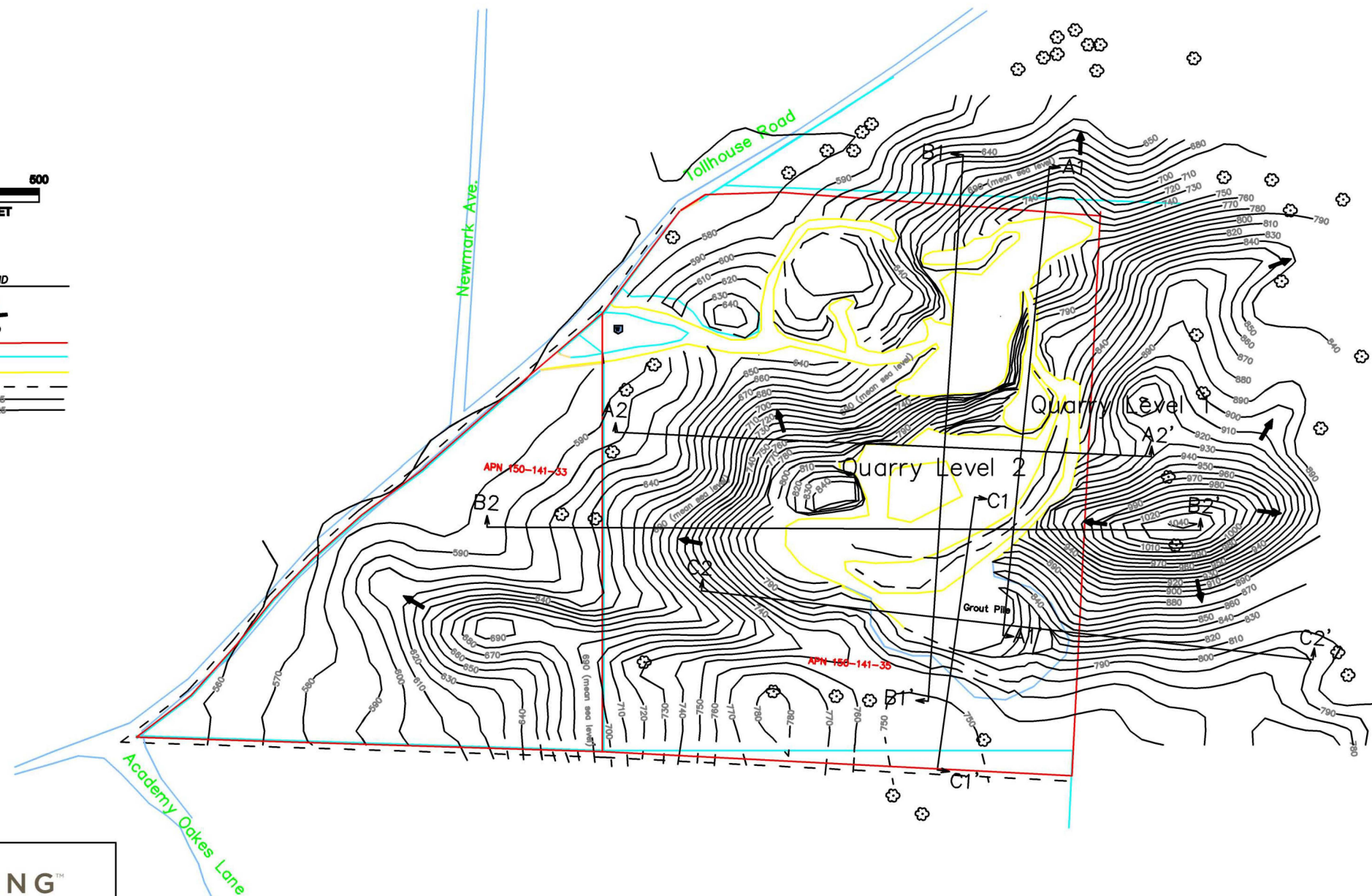


Grout Pile



MAPPING LEGEND

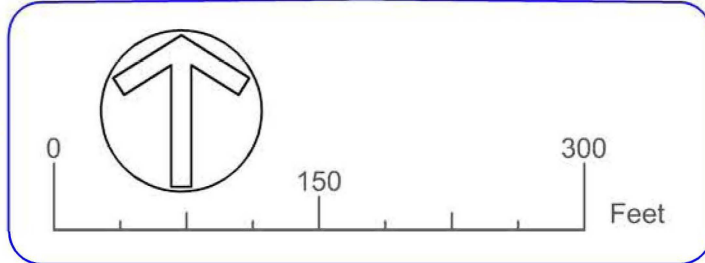
- WELL
- SURFACE DRAINAGE ARROW
- TREE
- PARCEL LINES
- BARB WIRE FENCE
- QUARRY ROAD
- PROPERTY LINE SETBACK
- CONTOURS
- CONTOUR MEAN SEA LEVEL





Map Legend	
	Roads
	Fence
	Gate
	County Roads
	Gate
	Fresh Water Well
	Property Access

DRAWING NO:	SP-MAP-3
SCALE:	1/2 Scale=150 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20

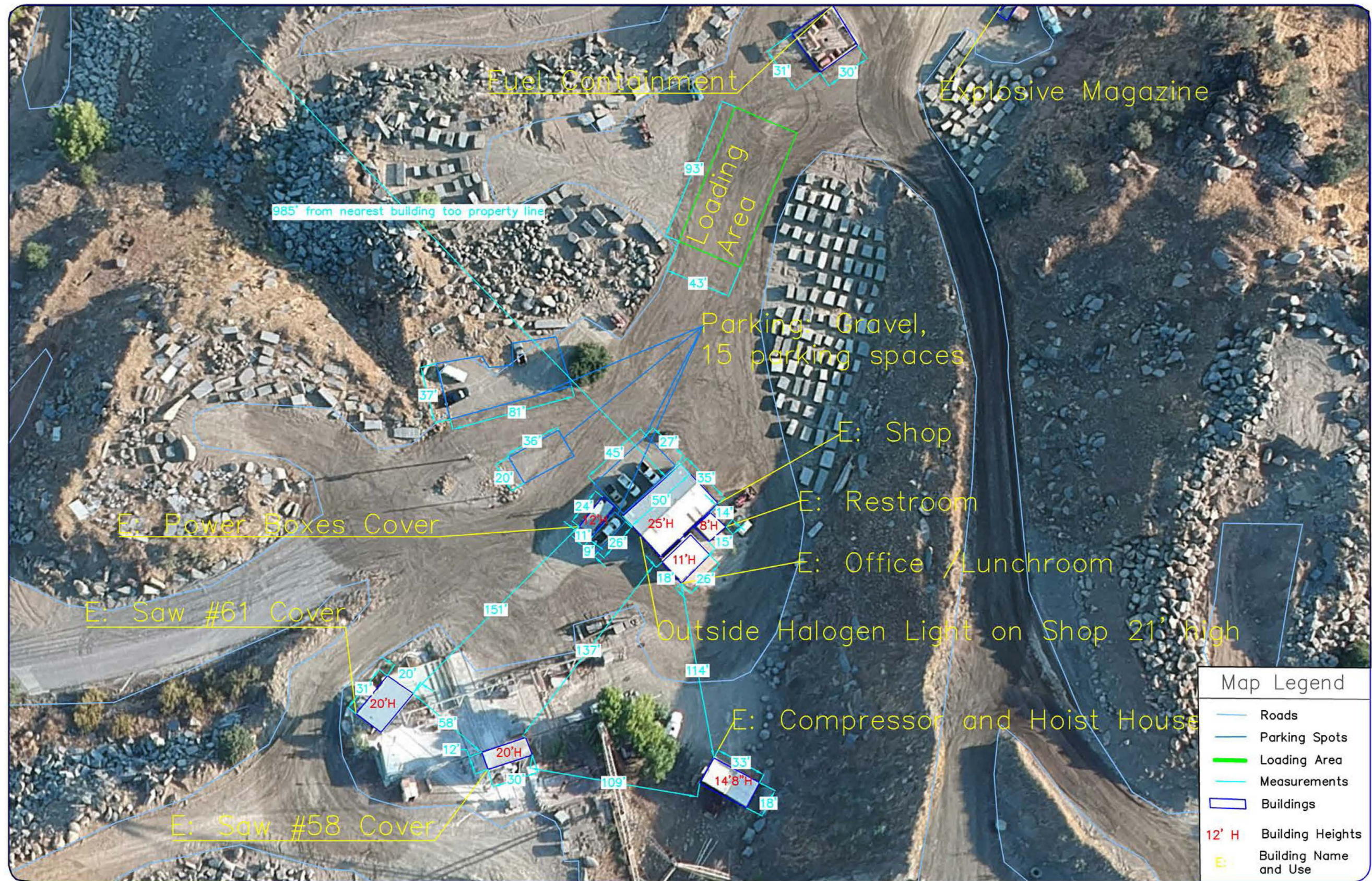


DESCRIPTION: Academy Quarry Conditional Use Permit Entrance Area Map	
SHEET:	FIGURE:



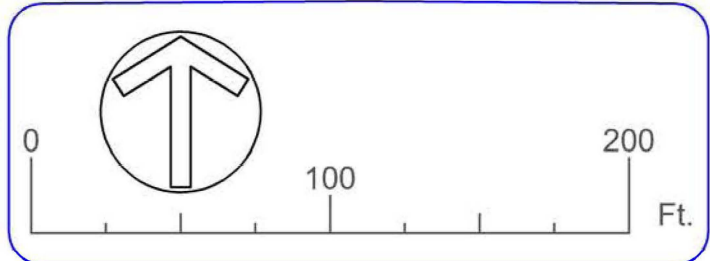
COLDSPRING™

17482 GRANITE WEST ROAD, COLD SPRING, MN 56320-4578
 PHONE (320) 685-3621, FAX (320) 685-8490
 WWW.COLDSPRINGUSA.COM



Map Legend	
	Roads
	Parking Spots
	Loading Area
	Measurements
	Buildings
	12' H Building Heights
	E: Building Name and Use

DRAWING NO:	SP-MAP-2
SCALE:	1/2 Scale=100 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20

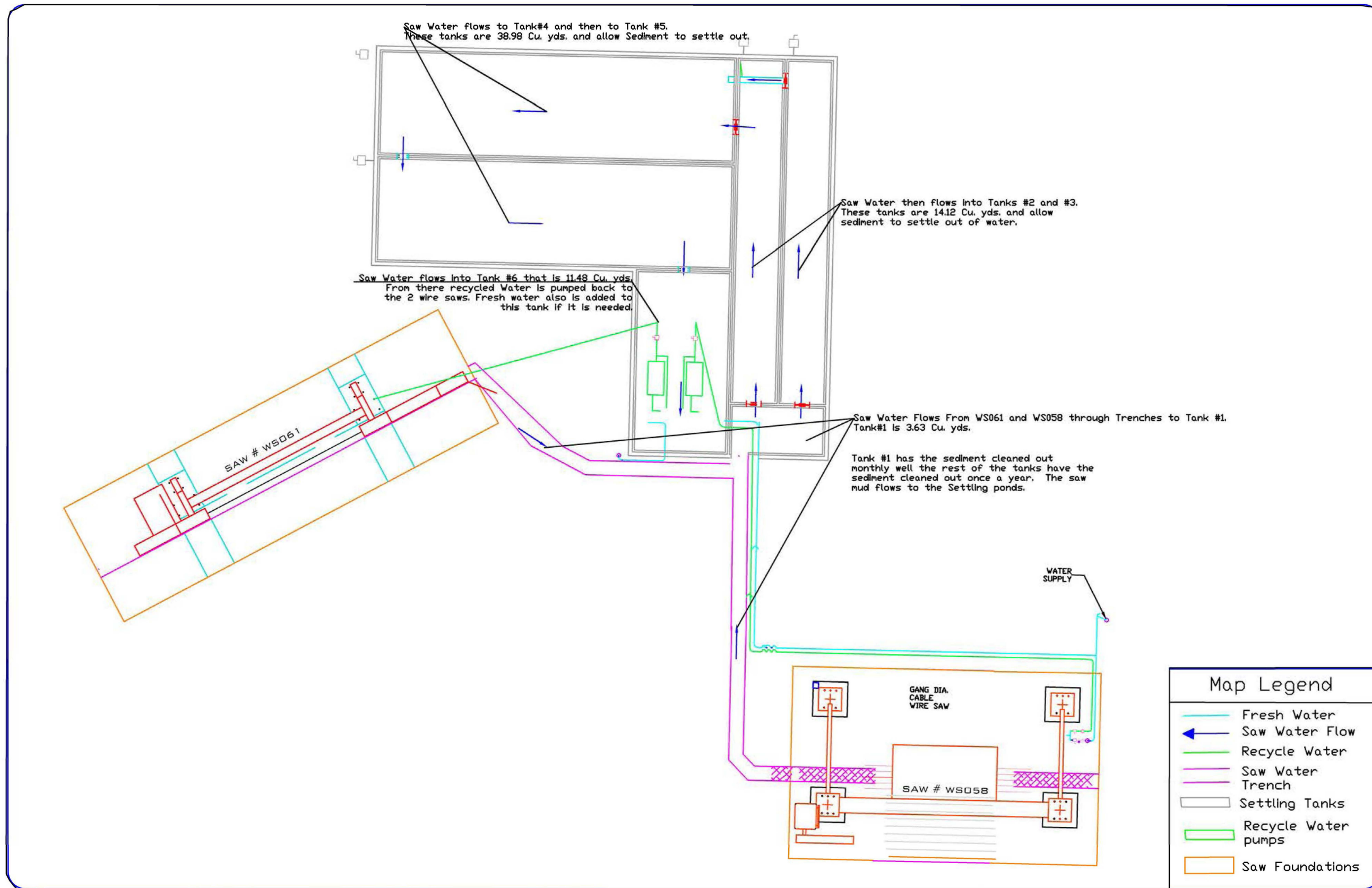


DESCRIPTION: Academy Quarry Conditional Use Permit Building Area Map	
SHEET:	FIGURE:

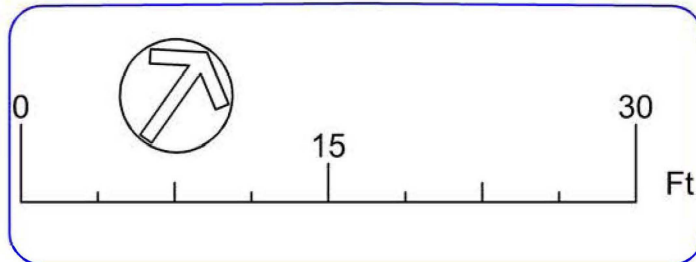


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DRAWING NO: Schematic 1
 SCALE: 1/2 scale=15ft.
 DRAWN BY: SC
 DATE DRAWN: 6/8/20



DESCRIPTION: Academy Quarry
 Operational Plan
 Recycle Water System Design

SHEET: FIGURE:

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Fresno County Guidelines
Operational Statement

Academy Quarry Project

Fresno County, California

June, 2020

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1. Nature of the Operation

Nature of the operation--what do you propose to do? Describe in detail.

The nature of the operation is to quarry dimensional stone granite and cut some of it into slabs.

The Academy quarry is what the industry calls a boulder quarry. The Granite was initially deposited as a large intrusive mass of molten Rock. From there is cooled to a solid. Sometime later it was fractured and intruded by quartz and feldspar dikes that exist today. Millions of years of weathering caused some of the granite adjacent to the joints and cracks to decompose into a crumbly material with the consistency of very coarse sand and gravel. Today some of the granite, in the form of large boulders, remains virtually as it was deposited initially. These boulders are surrounded by the decomposed material.

This operation removes the overburden and decomposed granite to isolate the boulders. This work is done using a large front-end loader and back-hoe. If the decomposed granite is packed too tight for the Back-hoe to remove, explosives will be used to dislodge it. The first step is to drill a 10 to 12 foot hole into the decomposed granite. Then a ½ stick of dynamite is dropped into the hole. This small piece of dynamite makes a small pocket in the ground. Then this small pocket is filled with Ammonium Nitrate and it is ignited and loosens a large amount overburden. After that the rest of the overburden is removed with the back-hoe and front-end loader. The boulders are then needed to be cut into manageable pieces. Large boulders get a hole drilled in the center and a small amount of black powder is added to the hole. The black powder is then ignited and the small explosion causes a crack in the boulder. The 2 pieces of boulder are then moved around so the Trim Drill can come and drill holes into the boulder pieces and that breaks the boulder into even smaller pieces. These smaller pieces are then hauled down to the Plant saws. The saws then slab out each of the blocks and these pieces are ready for shipment.

Good usable blocks shipped from the site are relatively free of impurities, undesirable inclusions, hairline fractures, color inconsistencies, discolored lines, etc. Currently all blocks which do not meet the criteria for color or soundness are disposed of at the site in the waste rock pile (grout pile). Cold Spring Granite continues an aggressive program in search of markets for non-dimension stone type uses (i.e. jetty stone, rip rap, crushed aggregate, etc.). We would appreciate input from Fresno County in developing this market and to be better capable of fully utilizing a natural resource.

The operations and equipment presented below are based on current operations. Changing equipment technology, as well as possible unique characteristics within the quarry which are yet to be discovered, may necessitate equipment and procedural modifications. To address these issues and remain competitive in an ever-changing world market the need may arise in the future to amend this operation plan with the approval of Fresno County to incorporate technological advancements.

2. Operational Time Limits

Presently the quarry operates year round. The operating hours are currently 7 AM to 3:30 PM Monday through Friday for a total of 40 hours per week. It is possible if the market increases that we would operate 6 AM to 5:30 PM, 6 days a week. The major controlling factor that regulates operation and production is the demand dictated by the customer. No special activities take place at the site and most of the operations take place in the outdoors.

3. Number of Customers or Visitors

- Average number per day: 1.
- Maximum number per day: 5.
- Hours (when they will be there): Variable

4. Number of Employees

- Current: 7
- Hours they work: Daylight hours, 7:00am to 3:30 pm, Monday through Friday. 40 hours.
- Future Depends on Market demand: 9
- Hours they might work: Daylight Hours 6 AM to 6 PM Monday through Saturday.
- Do any live on-site as a caretaker: No.

5. Service and Delivery Vehicles

25 service or delivery trucks on a daily basis is average. 24 material hauling trucks and 1 service or delivery truck a day is common.

6. Site Access

Private Road: Gravel.

7. Parking Spaces

*Number of parking spaces for employees, customers, and service/delivery vehicles.
Type of surfacing on parking area.*

15 Parking Spots on Gravel

8. Goods to be Sold Onsite

Are any goods to be sold on-site? If so, are these goods grown or produced on-site or at some other location.

No grown or produced goods will be sold on-site.

9. Equipment

What equipment is used? If appropriate provide pictures or brochure.

Primary Drill, Trimmer Drill, Diamond Wire Saws, Wedging tractors, Front-end loader, Grout Truck, Crawler Back Hoe, Water Truck, Air Compressor, and Pickup Trucks.

10. Supplies and Materials

What Supplies or Materials are used and how are they stored.

Consumable supplies used at the site include: drill rods and bits, stone dust bags, hole caps, diamond wire, mechanical parts for equipment, equipment filters, greases, hoses and fittings, etc. All of these supplies are stored in the shop.

11. Use and Unsightly Appearance

Does the use cause any unsightly appearance? If so, explain how this will be reduced or eliminated

Noise:

The quarry is located in a rural area with many homes nearby. There are inhabited structures within a .25 mile radius of the site. There are 5 homes within about a .5 mile radius of the center of the site and over 20 homes within a 1 mile radius of the center of the site.

The operation generates some noises from the following equipment and operations:

- Heavy diesel powered front-end loader and off road haul truck produce noise typical of heavy mobile equipment used in the construction and farming industries.
- Diesel engine powered back-hoe and drill rig tractor produce noise typical of any similar construction or farm equipment.
- Blasting produces noise which ranges from a much muffled thud to a fairly sharp bang. Even though it may be loud the duration is very minimal.
- Pneumatic jack hammers produce noise typical of rapid cycling air piston equipment.
- Drill rig produces a unique vibration type sound resulting from rapid blows of a hydraulic hammer beating against steel drill rods. At a distance this sounds like a buzzing noise.
- The diesel powered air compressor produces engine noise typical of similar equipment used in the construction industry.
- Compressed air is used to clean dirt from the surface of the stone. This produces a hissing sound.
- Backup alarms on all mobile equipment produce a beeping sound.
- The generator produces a noise typical of any engine.

All factory installed and custom made sound suppression attachments to the equipment are kept in proper maintenance in an effort to keep noise levels as low as possible.

Several practices are maintained to minimize the amount of noise generated by blasting. Different applications of explosives are used as tools in the quarry operation. They are used to blast a boulder free of the decomposed granite, to subdivide the boulders into blocks, and to break waste rock (grout) into more manageable piece sizes. In all cases, special attention is given to minimize the frequency and size of blasts so as to not damage the stone product.

The lightest grain truck line cord which achieves complete detonation of the down line is used. This results in initiating a clean break without damaging the surrounding stone. The explosive trunk line cord, being that it is not contained within the stone, is the source of much of the blasting noise.

The noise generated within the quarry does not cause an issue with the current neighbors.

Dust:

Dust is generated by the movement of equipment and the removal of boulders from the ground. When the weather is hot and dry the water truck is used to spray the roads to keep the dust down. During the driest times of the year the water truck will spray the roads down multiple times a week. Being that no residential home is within .25 miles of the quarry dust does not become an issue with the neighbors. Glare and odor are not an issue when it comes to the quarrying process.

12. Liquid or Solid Waste

List any solid or liquid wastes to be produced.

Solid Waste:

Garbage generated at the site consists of empty containers from lubricants and supplies as well as lunchroom waste. Total volume of general garbage generated is estimated to be approximately 3 cubic yards per week and is removed by a commercial hauler. Scrap equipment, steel, rubber tires, batteries and used oil will be disposed of or recycled through the use of salvage or recycling firms in the area.

Liquid Waste:

No liquid waste leaves the site. Water is recycled on site and is used for diamond wires saws. Saw Mud from the recycle tanks is drained and goes to a sediment settling pond and in the pond the sediment is allowed to settle out.

13. Water Usage

Estimated volume of water to be used (gallons per day). Source of Water.

Annually the quarry will use approximately 2,084,544 gallons of water, or an average of 8,017 gallons per working day. The source of water is a Fresh Water Well.

14. Proposed Advertising

Describe any proposed advertising including size" appearance/ and placement

A small sign identifying the Company's operation is placed at the entrance to the property off of Tollhouse Road. No other advertising is present at the site to alert people to the work being completed.

15. Use of Existing Building or Construction of New Building:

Will existing buildings be used or will new buildings be constructed?

Existing Buildings will be used for quarry operations. There are no plans on building any other structures at the site.

16. Buildings or Portions of Buildings to be used in the Operation:

Explain which buildings or what port/on of buildings will be used in the operation.

Structures:

Building structures at the site include the following: The Buildings can be seen on [OP-MAP-3 Plant Area Map](#).

1. Restroom—this is a 140 sq. ft. shed connected to the Lunchroom/office and Shop. This building is used as the employee restroom.
2. Lunchroom/office—this is a 415 sq. ft. building and is connected to the Shop. This building is used as a lunchroom, training room and office for quarry employees.
3. Air Compressor & Hoist House—this is a 670 sq. ft. building located near the derrick. Equipment is stored in this shed.
4. Saw #58 Cover—the cover is 370 sq. ft. and is located to the southeast of the shop. It only covers the saw from the elements
5. Saw #61 Cover—the cover is 645 Sq. ft. and is located south west corner of the building area. This building helps cover Saw #61 from the elements.
6. Power boxes cover—this shed is 195 sq. ft. and covers the power controls. This building is located near the southwest of the shop.
7. Maintenance Shop—the shop is 1730 sq. ft. and contains lubricants and other shop tools. This building is where most of the equipment repair takes place.
8. Two explosive magazines, each constructed of steel, barricaded by substantial granite blocks, inspected and approved by the Bureau of Alcohol Tobacco and Firearms. The primary magazine is located 88 ft. northeast of the fuel containment area and 1,500 ft. from the closest home. The secondary magazine is located against the back wall of the second quarry ledge and 1,250 ft. from the closets home. These locations can be seen on the site map. These structures are used for storing explosive materials.
9. The Fuel Tank Storage area is located 270 ft. northeast of the shop. The storage area is 850 sq. ft. and contains 9 tanks with oil, fuel and grease in.

17. Outdoor Lighting or Sound Amplification:

Will any outdoor lighting or Sound Amplification system be used?

Outdoor lights are located at the site, but are not used at Night. No sound amplification system will be used on the site.

18. Landscaping or Fencing

Landscaping or fencing proposed? Describe type and location.

No Landscaping is proposed for the Site.

Access to the property is restricted by the placement of a gate on the access road just east of the intersection of Newark Rd. and Tollhouse Rd. The gate is located and is connected to a fence that will not allow for vehicle passage around the gate. The gate will be locked with a Cold Spring Granite Company padlock during all non-operating hours. Proper warning signs indicate that only authorized personnel are allowed on the property are posted at the gate location. The fence that is used for livestock goes around the entire property. The fencing is basic Barb Wire.

19. Additional information

Any other information that will provide a clear understanding of the project or operation.

More information on the project can be found in the Operations Plan.

20. Owners, Officers, and Board Members

Identify all Owners, Officers and/or Board Members for each application submitted. This may be accomplished by submitting a cover letter in addition to the information provided on the signed application forms.

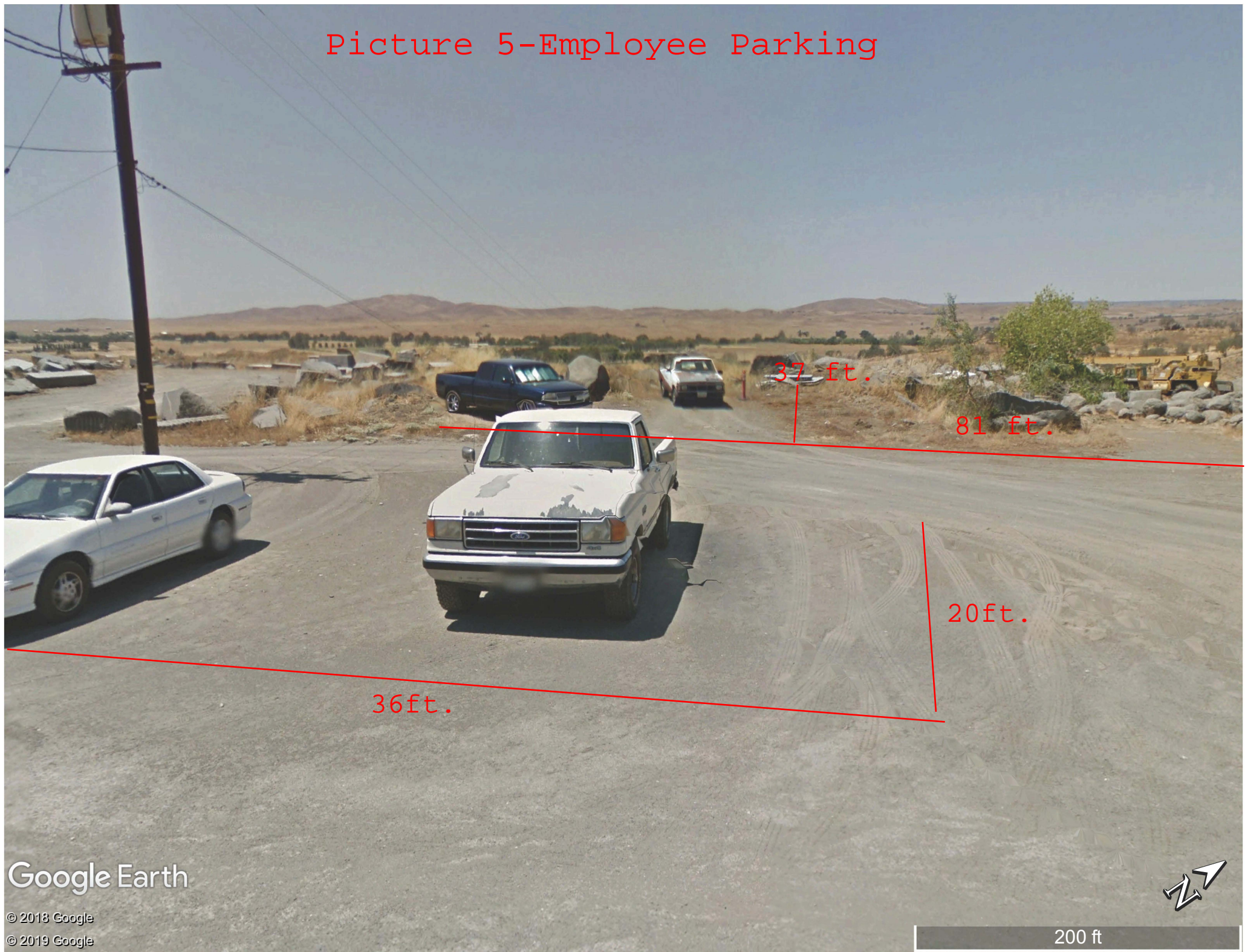
Property Owner(s):

Cold Spring Granite Co.
Chairmen of the Board---Pat Alexander
CEO/President---Greg Flint
CFO---George Schnepf

Academy Quarry Operations:

Quarry Operations Manager—Steve Konop
California Operations Manager---Robert Nelson II
Academy Quarry Supervisor---Larry McDonald
Environmental Engineer---Steve Chouanard

Picture 5-Employee Parking



Google Earth

© 2018 Google
© 2019 Google



200 ft

Picture 4-Saw Covers



31 ft.

20 ft.

18ft. H

ALL TRUCKS
←

DRIVER
STAY WITH TRUCK
UNTIL NOTIFIED

CAUTION
EQUIPMENT

20 ft



Picture 3-Shop Area




Untitled Map

Write a description for your map.

Picture 2-MSHA Sign

Legend

 Academy Quarry

Sign is 9.5 Ft long by 4 ft. high. Granite Block is 16 ft. long by 6 ft. high



Google Earth

© 2018 Google
© 2019 Google



8.02 ft

Picture 1-Entrance Sign

Granite Sign is 10ft. long by 5 ft high.

Gates are 4ft. high by 10ft long

4ft. high barb wire fence

Google Earth

© 2018 Google
© 2019 Google

9.05 ft



Landscape 4 - West View



Landscape 3 - South View



Landscape 2 - East View



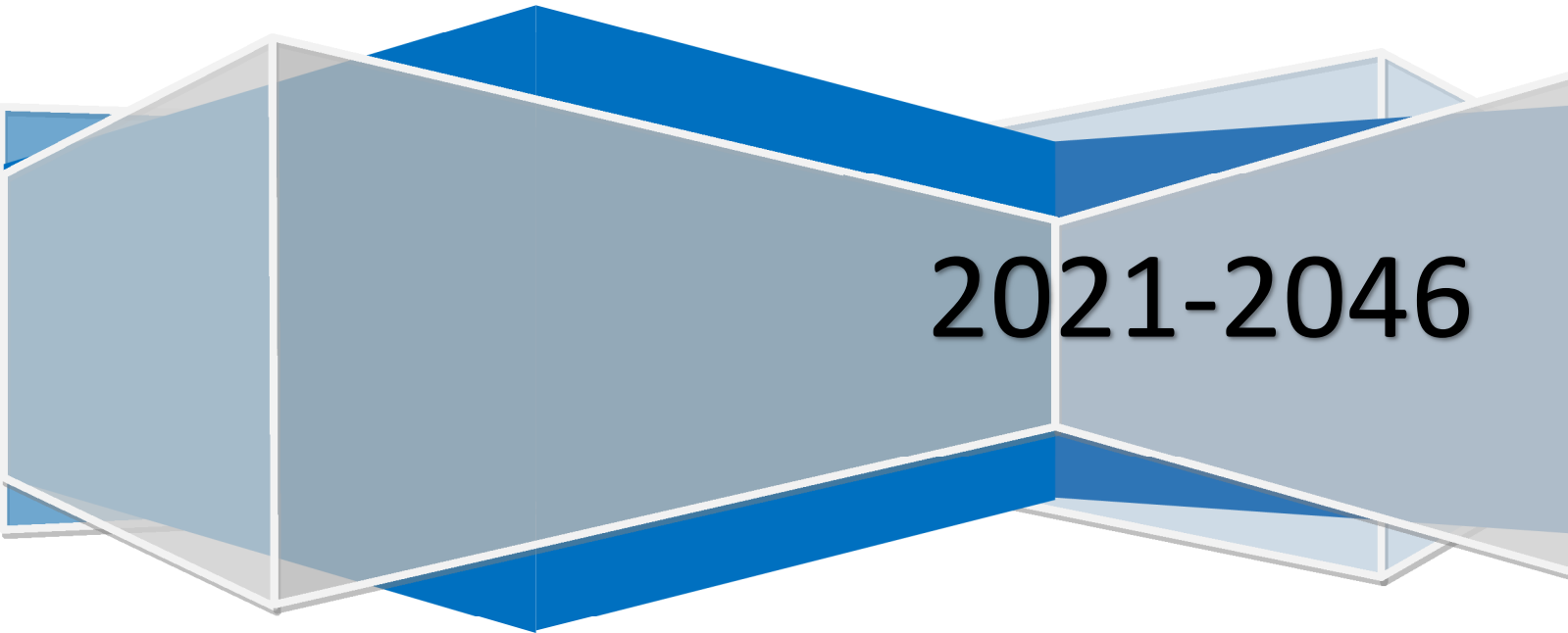
Landscape 1 - North View



Cold Spring Granite

Academy Quarry Operations Plan

Steve Chouanard



2021-2046

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Cold Spring Granite Company

17482 Granite West Road
Cold Spring, MN 56320

Academy Quarry Operating Plan 2021-2046

Contact Personal for Coldspring

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Phone: (320) 685-4808 schouanard@coldspringusa.com
Steve Konop – General Quarry Manager
Phone: (320) 685-5133 skonop@coldspringusa.com
Larry McDonald – Quarry Site Supervisor
Phone: (559) 299-7379 lmcdonald@coldspringusa.com

Today, the intention of the quarry operation is to remove dimension granite in block form from the quarry and prepare it for shipment to the fabrication facility in central Minnesota. If sold to customers in block form, the blocks are shipped to other facilities located throughout the world.

Description of Property:

The quarry area is located on top of a ridge consisting of 2 parcels contained entirely within the 141.99 acres owned by the Cold Spring Granite Company. This site is located in the Western Sierra Nevada foothills Northeast of Fresno, California. The quarry site is located on the southeast side of Tollhouse Road (State highway 168) between Newmark Avenue and Sample Road, approximately ten miles northeast of the City of Clovis, in Fresno County. The different parcels can be seen on [OP-MAP-1, Property Parcel Map](#). This map shows current quarry site and surrounding area.

The proposed 2021-2046 area legal descriptions:

- 1) 40.33 ACS IN SECS 13 &14 T12R22
- 2) 101.66 AC IN N7/8 OF E3/4 OF NW1/4 SEC 13 12/22

Total of 2 unit parcels containing 141.99 acres make up the whole site.

The current total affected acres is estimated at 48.4 acres. Of that area there are 3 main areas of use. The plant area consists of a maintenance shop, lunchroom, employee parking, fuel storage, block storage and wire saws. This area is estimated to be around 4.5 acres. The active quarry area is around 14.64 acres. This is the area is where granite is removed from the ground and sorted. The high quality granite blocks are hauled down to the storage area or wire saws for processing. All unusable material is hauled to the grout pile. The grout pile area is estimated to be around 7.2 acres. The quarry also has 5.5 acres currently under reclamation. All of these different areas of the granite quarry can be seen on [OP-MAP-2, Quarry Work Areas](#).

The surrounding area is made up of a farmlands and residential homes.

Access:

The quarry is located 6.5 miles northwest of Clovis on Tollhouse Road (Hwy 168). The access road is on the East side of Tollhouse Road and is gated. It is the only access to the Quarry site. The access road is a private road that is unpaved. The access road is maintained by the quarry staff.

Description of Product being quarried:

The Academy is located within the “Quartz Norite Unit” that is part of the Academy Pluton that is one of a number of Jurassic and Early Cretaceous Plutons which have intruded and Metamorphosed the Ophiolitic rocks. The Academy Pluton is located in the western Sierra Nevada foothills northeast of Fresno, California.

Quartz Norite Unit: the rocks within this unit have a medium-grained hydriomorphic granular texture. Hornblende quartz norite is the most abundant rock type, but Lesser amounts of hypersthene-hornblende quartz diorite, hornblende norite, and hypersthene-hornblende diorite are also present.

The Geological designation for Academy Granite is Igneous Granite. The primary make up is Pyroxene-Hornblende Diorite. The mineral content is 60-70% Andesine, 15-20% Hornblende, 4-6% Hypersthene-4-6% Augite, 1-2% Quartz and trace amounts of Biotite, Magnetite, Apatite, Zircon, Spinel, and Orthoclase. The age of this granite is estimated to be 110 million years.

Note, the above contains excerpts from a paper on the Academy Pluton by Dr. Seymor Mack, Mr. Jason B. Saleeby and Mr. John E. Farrell. The paper was published in April, 1979.

Samples taken from the site have displayed excellent characteristics for the application of the polish and thermal finish. These are the two most popular finishes for dimensional stone products. The general description of the granite is a fine grain, light gray to black. Blue ropes and light black knots are common.

Final Product:

Once the product has been quarried (freed from the earth, selected per quality specification and sized for a specific usage), it is shipped in block form to the fabrication plant in Raymond California or Cold Spring, Minnesota for further processing, i.e. slabbing, finishing, jointing, hand cutting, anchoring, etc. The typical granite end products generally fall into the following categories:

1. Building Stone
 - a. Interior and exterior facing,
 - b. Paving and curbing,
 - c. Tile,
 - d. Counter tops and furniture
2. Memorialization
 - a. Markers,
 - b. Monuments,

- c. Mausoleums and crypt fronts
- 3. Industrial
 - a. Surface plates,
 - b. Acid tanks,
- 4. Finished slabs
- 5. Rough blocks (no processing beyond the quarry)

Raw granite from this quarry would be suited for products which would fall into some or all of the above categories.

Rate of Production:

Product demand controls quarry production rates. There is no way to accurately predict what our future consumer demands or trends may be. We do know that a quality product combined with a competitive pricing is what makes us competitive in today’s market.

The physical makeup of the quarry affects production rates. Fractures, undesirable inclusions, discoloration, etc. are all conditions that affect the yield or percent of usable product removed from the quarry.

Academy Quarry Yield											
Cube	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Average
Gross	476,327	345,798	290,286	333,970	314,165	359,076	449,167	330,667	293,121	285,100	347,758
Block	95,265	69,160	58,057	66,794	62,833	71,815	89,833	66,133	58,624	57,020	69,553
Grout	381,062	276,638	232,229	267,176	251,332	287,261	359,334	264,534	234,497	228,080	278,214
Yield	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%

Future production rate estimate – 60,000 to 70,000 net usable cube of stone per year
 Net quarry yield 20%
 Grout estimation: 240,000 to 280,000 cube per year.

These production estimates are used as a basis for preparing the maps showing grout pile growth and quarry development. Actual rates vary from year to year due to unpredictable market demand.

Operation Statement:

The nature of the operation is to quarry dimensional stone granite and cut some of it into slabs.

The Academy quarry is what the industry calls a boulder quarry. The Granite was initially deposited as a large intrusive mass of molten Rock. From there is cooled to a solid. Sometime later it was fractured and intruded by quartz and feldspar dikes that exist today. Millions of years of weathering caused some of the granite adjacent to the joints and cracks to decompose into a crumbly material with the consistency of very coarse sand and gravel. Today some of the granite, in the form of large boulders, remains virtually as it was deposited initially. These boulders are surrounded by the decomposed material.

This operation removes the overburden and decomposed granite to isolate the boulders. This work is done using a large front-end loader and back-hoe. If the decomposed granite is packed too tight for the Back-hoe to remove, explosives will be used to dislodge it. The first step is to drill a 10 to 12 feet hole into the decomposed granite. Then a ½ stick of dynamite is dropped into the hole. This small piece of dynamite makes a small pocket in the ground. Then this small pocket is filled with Ammonium Nitrate and it is ignited and loosens a large amount of overburden. After that the rest of the overburden is removed with the back-hoe and front-end loader. The boulders are then needed to be cut into manageable pieces. Large boulders get a hole drilled in the center and a small amount of black powder is added to the hole. The black powder is then ignited and the small explosion causes a crack in the boulder. The 2 pieces of boulder are then moved around so the Trimmer Drill can come and drill holes into the boulder pieces and that breaks the boulder into even smaller pieces. These smaller pieces are then hauled down to the Plant saws. The saws then slab out each of the blocks and these pieces are ready for shipment.

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The operations and equipment presented below are based on current operations. Changing equipment technology, as well as possible unique characteristics within the quarry which are yet to be discovered, may necessitate equipment and procedural modifications. To address these issues and remain competitive in an ever-changing world market the need may arise in the future to amend this operation plan with the approval of Fresno County to incorporate technological advancements.

Quarry Layout:

The current layout covers a relatively large area roughly 14.4 acres. Ramps between levels are constructed to occupy an area where less desirable stone rests, and usually have a 15% grade. Natural terrain has been used whenever practical to work into the quarry. The stone being quarried is generally in boulder form with loose decomposed granite around the boulders. This makes the quarry walls unstable and caution needs to be used around the different quarry ledges.

Dimensional granite deposits typically have a mix of good stone and undesirable stone. From an economic standpoint, each quarry needs multiple areas to be available to work at any given time, so that a profitable mix can be continually maintained. A quarry is typically worked in layers or benches of approximately 20 feet high each. Having several areas available to work at any time provides the means necessary to ensure constant production of good stone. As one area runs into poor stone, another can produce the needed quantity while the poor stone is being removed. Lack of consistency in color also adds to reasoning that several areas must be available to work, thereby requiring a large area to be opened.

Based on speculation, given the information known about the deposit, current anticipated rates of production, the ultimate limit should provide 75 years of future operation.

The overburden and decomposed granite that is removed from new areas, will be stockpiled for usage later based on quality. If the overburden has a good amount of topsoil in it, it is saved and stored in multiple locations. One large topsoil stockpile is located on the upper grout pile. Three topsoil stockpiles are also located near the saw water pond. If the overburden has some gravel and small decomposed granite in it, it will be saved for road maintenance and other uses. Most of these Stockpiles are located on the main level of the quarry. The locations of both stockpiles can be seen on **OP-MAP-4, Quarry Site Map**. All overburden with large pieces of decomposed granite and grout will be randomly cast over the side of the grout waste pile. To enhance vegetative growth in areas of the grout pile that have reached their final design, topsoil will be dumper over the side of the grout pile.

Quarrying Dimensional Stone:

Our goal is to make mill blocks with as little damage to the formation as possible. In comparison, the aggregate industry breaks the formation into small pieces to fit their customer's needs. These are two completely different styles of operation and should never be compared just because both are referred to as "quarries." Dimensional stone quarries require a "sound / consistent" deposit to fit their needs. Whereas, an aggregate operation can better utilize a formation with extensive natural breaks. The surface is then further cleaned with an air hose to expose any imperfections that may exist.

Subdividing a Slab:

Once the boulders are freed and made to a movable size, they are moved from the quarry area by the front end loader to the plant Saw Area. Then the boulder is cut into slabs or made into blocks. The blocks are then moved to the block yard where they are scaled, marked and stored to await shipment to the fabrication facility or the customer. The block storage yard is shown on **OP-MAP-3, Plant Area**.

Throughout the process, the granite is carefully examined by trained quarry personnel to detect any flaws that may not be acceptable. This granite deposit displays spots and white lines as a characteristics. Depending on which direction the stone is cut the white lines and cracks are removed. These conditions must also be taken into consideration when deciding on the acceptability of a block. Highway haul-trucks are utilized to transfer the material to the fabrication facility or final customer

Grout:

Non-usable stone (waste material), called grout, is removed from the active quarry area and placed in a pile located on the south end of the quarry area. Grout varies in size from 20 ton blocks to small broken particles similar in size to gravel. The front-end loader, using the bucket or forks, loads the grout into the off-road haul truck for transport to the grout pile. For larger pieces, the loader will haul the grout directly to the pile. Other waste material disposed of with the grout includes fine granite particles from the drilling operations. No artificial materials or material from off-site are disposed of at this location.

The grout pile is occupying land to the south of the Mountain and will continue to grow the south. The grout pile is growing in 2 levels. The top level is at 902 ft. and is growing out to the south. The distance from the top of the grout pile to the toe is 280 ft. The elevation at the bottom of the pile 790 ft. The second level of the grout pile is west of the top level and is at an

elevation of 860 ft. The top of this grout area to the toe of the grout pile is 200 ft. The toe Elevation is 780 ft. and is in a natural depression.

The toe of the pile will extend into this natural depression. The depression will act as a natural containment and serve as a visual screen of the rocky side slopes of the grout pile. As the grout pile grows to the south the toe will grow further into the depression. This area will be the primary grout growth area for the life of the CUP.

The pile was located, and its height limited such that, upon closure, it can blend into the surrounding terrain as best as possible. The height limitations generally take into consideration the height and the elevation of surrounding hilltops.

The grout pile will begin and progress level from the side of the hill at an approximate elevation of 907'. The pile will grow to the south and southwest. Once the lower level fills in the natural depression the top level will be pushed over the lower level to the southwest. The grout pile will continue to grow out at the top level over the life of the CUP.

The side-slopes of the pile are made up of predominantly of the larger pieces of broken rock material covered by decomposed granite from the active quarry area. The natural angle of repose of the rocky side-slopes of the grout pile is approximately a 25% angle.

The top surface must be filled with fine material to provide a working/driving surface for heavy equipment. This material is provided from the decomposed granite stripped from the quarry area.

Driving surface construction material will be stockpiled around the quarry site. It is composed of small decomposed granite and gravel that is removed well freeing boulders. These material stockpile locations can be seen on the [OP-MAP-4, Quarry Site Map](#).

The ultimate height of the grout pile, approximately 907', will be able to blend with the surrounding area. The grout pile elevation is below the 1050 ft. of the mountain adjacent to the pile to the northwest. Thus the grout pile will not create a landscape feature uncommonly high for the area. During reclamation of the grout pile native plants which naturally regenerate along the slopes and around the flanks of the grout pile to have in blend in naturally with the surrounding country side.

To limit the growth of grout piles and the prospect of throwing away a resource of some value, Cold Spring Granite continues to search for markets for the waste rock material. Some possible uses of this material are jetty stone, rip-rap, and crushed aggregate. If a market can be found for the grout generated from this quarry, the rate of grout pile growth would be reduce significantly. Cold Spring Granite would be extremely interested in a partnership developing and producing a product to meet those customer demands.

Wetlands:

The Wetlands Conservation Act addresses the need to avoid wetland area if at all possible to minimize the operation's impact on the natural resources. Areas of wetlands will be avoided unless they are located in an area essential for the continuation of the quarry operation within the

contract area. According to the National Wetland Inventory there are three wetland areas potentially in conflict with the quarry operation.

There is one wetland that is located about 380 ft. to the southwest of the grout pile. This is an intermittent streambed that is labeled R4SBC by the National Wetland Inventory. The grout pile would not have a chance to affect this wetland in the 25 year CUP term with the current production projections. This location also has never actually seen flow that would indicate that it is an intermittent streambed.

The other 2 wetlands on the National Wetland Inventory are located 500 ft. west of the maintenance shed. The two wetlands are actually connected and a Man-made holding pond. The wetland on the east is approximately .86 acres and has a Classification Code of PEM1A. This is actually a Man-made pond and is used as a settling pond for the saw mud. The low end of the pond has water in it only when the water from the saws is present. There are no plans to dump grout near this location so it will not be affected by 25 years of the CUP term.

The other wetland is .41 acres and is classified PUBFx by the National Wetland Inventory. This is also a Man-Made holding pond that is used for the settling of Saw mud. The saw mud flows into the holding pond is allowed to dry and the water settles out. The ponds can be seen on **OP-MAP-4**.

Structures:

Building structures at the site include the following: The Buildings can be seen on the **OP-MAP-3, Plant Area**.

1. Restroom—this is a 140 sq. ft. shed connected to the Lunchroom/office and Shop. This building is used as the employee restroom.
2. Lunchroom/office—this is a 415 sq. ft. building and is connected to the Shop. This building is used as a lunchroom, training room and office for quarry employees.
3. Air Compressor & Hoist House—this is a 670 sq. ft. building located near the derrick. Equipment is stored in this shed.
4. Saw #58 Cover—the cover is 370 sq. ft. and is located to the southeast of the shop. It only covers the saw from the elements
5. Saw #61 Cover—the cover is 645 Sq. ft. and is located south west corner of the building area. This building helps cover Saw #61 from the elements.
6. Power boxes cover—this shed is 195 sq. ft. and covers the power controls. This building is located near the southwest of the shop.
7. Maintenance Shop—the shop is 1730 sq. ft. and contains lubricants and other shop tools. This building is where most of the equipment repair takes place.
8. Two explosive magazines, each constructed of steel, barricaded by substantial granite blocks, inspected and approved by the Bureau of Alcohol Tobacco and Firearms. The Primary magazine is located 88 ft. northeast of the fuel containment area and 1,500 ft. from the closest home. The secondary magazine is located against the back wall of the second quarry ledge and 1,250 ft. from the closets home. These locations can be seen on the site map. These structures are used for storing explosive materials.
9. The Fuel Tank Storage area is located 270 ft. northeast of the shop. The Storage area is 850 sq. ft. and contains 9 tanks with oil, fuel and grease in.

Water Recycle Design System:

With the changes in quarrying technology, specifically the diamond wire saws, we have a continuous need for water at the Academy quarry during a year of operation. The current system was designed by the Cold Spring Granite engineering department. We have taken steps to improve the retention and recycle water systems at the quarry. The water supply is dependent upon rainwater and well water. All of our water needs are adequately obtained first from this water recycling system and water is added to the system from the Well when needed.

What is the water used for?

- Diamond wire sawing in the slab area, lubrication and coolant on the diamond wire.
- Flushing of the saw mud from the slab area.
- Washing granite blocks for inspection.
- Power washing quarry equipment.
- Dust Control

The water system is very simple and basic. The breakdown of the water flow system can be seen on the flow Design map. The waste water from Saw #58 and Saw # 61 flows from the saws to trenches that flows to the first tank in the system. Tank #1 holds 3.63 cubic yards of waste water. As tank #1 fills up sediment from the saws is allowed to settle out. When this tank gets full the water is allowed to flow into tank #2 and tank #3. Waste Water is allowed to fill tank #2, than that valve is closed and water is than diverted to tank #3 through another valve. Both of these tanks are 14.12 cubic yards. As these tanks fill the sediment settles out and the water than flows to Tank #4. Tank #4 is 38.89 cubic yards and fills to capacity and more sediment is allowed to settle out. The waste water than flows to Tank #5 that is 38.89 cubic yards. The same process happens and water than flows to Tank #6 that is 11.48 cubic yards. Tank #6 is the final tank and by than the water is clean enough to be reused in the saws. A pump in tank #6 pumps water back to the saws for reuse. This system can be seen on the drawing [Schematic 1](#).

This closed loop system recycles water multiple times and water is only lost due to evaporation or spillage. When the water gets low in the system well water is added to make up for the water loss. Due to the buildup of sediment in the tanks, the tanks need to be cleaned of sediment throughout the year. Since Tank # 1 is the primary settle tank this tank need to be cleaned of sediment monthly. All of the other tanks are cleaned of sediment once a year. The total amount of waste sediment slurry is estimated to be around 161 cubic yards a year. This mix is pumped from the tanks and allowed to flow to the holding ponds down below the Quarry. The flow of saw waste sediment to the holding ponds can be seen on [OP-MAP-5](#).

The diamond wire saws consumes the most water for operations in the Quarry. Gang wire saws with 5 wires Average 20 GPM. Single wire 3500 Pell uses 8 GPM. Onsite year round these saws run about 6 hours a day, 5 days a week. With 2 saws running they use as much as 8,098 gallons/day. Do to maintenance and breakdowns the saws do not run every day. Because of the water recycling system the water used by the saws is not taken completely from the well. Water is lost in the process do to evaporation and spillage. Also when the tanks have the sediment removed water is used in the process. That comes to about 33,612gallons per year. Washing blocks and equipment takes about 100 gallons a day. Water for Dust control depends on how dry the weather is. The water truck is 1,000 gallons and is filled up as needed for 6 months of the year on average. That averages out for the whole year to about 500 gallons per working day.

Annually the quarry will use approximately 2,084,544 gallons of water, or an average of 8,017 gal/day. This is estimated off of the Well Meter that tracks the amount of hours the pump runs. The following is a breakdown of those gallons.

The quarry operates 260 days/year and the saws will be running most of those days.

234 days running 2 saws:	8,098 gallons/day	$234 \times 8,098 =$	1,894,932 gal.
Sediment tank cleaning:	33,612 gallons per year	$=$	33,612 gal.
Washing blocks & equipment:	100 gallons/day	$260 \times 100 =$	26,000 gal.
Water for Dust Control:	500 gallons/day	$260 \times 500 =$	130,000 gal
		Total	$= 2,084,544$ gal.

The following is the major equipment to be used in this quarry operation:

Primary drill:

This drilling equipment consists of a drill rig with one hydraulic hammer mounted on a horizontal frame. The configuration can be set to drill either horizontal or vertical. This unit drills holes into the decomposed granite to blast the granite free. It also drill holes in large boulders to break them free from the ground and subdividing of the boulder can also be done with these units. The hydraulic power is provided by a pump powered from the engine of a 55 HP motor. The Academy Quarry has 2 single hole drills, a Sandvik Commando Drill and a Tamrock Commando Drill. Each drilling unit has its own individual stone dust collection system. The fines are gathered in a tank or plastic bag and disposed of in the grout pile.

Trimmer drill:

This drilling equipment consists of a Perfora single drill manufactured drill rig. This drill rig is also called the Rock Buggy. It is used primarily to segregate the large boulders into manageable sizes and shapes. The typical drill depth for these rigs is under 8-feet. This drill makes multiple holes a few inches apart along a straight line across the boulder. This allows the boulder to be split along this line. These pieces are than sent to the saws by the plant to be cut into slabs, or sent out in block form. The hydraulic operating system for both styles of drills is powered by their diesel engines. Each drilling unit has its own individual stone dust collection system. The fines are gathered in a tank or plastic bag and disposed of in the grout pile.

Diamond Wire Saws:

Saw #58 and Saw #61 are used to trim the boulders to the correct size and slab size. Saw #61 trims the blocks to size for shipping. This is a single wire saw that cuts the boulder to correct sizes for shipping. This has less material wasted compared to the drill and wedge method. Saw #58 cuts the blocks into slabs. This is a gang wire saw with 5 wires cuts the boulder into individual slabs. This saves on waste and shipping cost as the slabs are than sent to the plants in California and Minnesota for processing. Water is used to flush the stone particles from the cut and cool the wire. Water plays a critical role in costs and efficiency.

Wedging of stone:

Wedging occurs after the driller has outlined the shape of the block with a series of appropriately spaced holes. This procedure involves three pieces of steel, two half rounds and a single wedge. The tapered half rounds of appropriate length are placed into the drill hole and the matching

angled wedge is driven in between the two pieces of steel. The wedge can be driven either manually with a jackhammer or with a hydraulic cylinder. This procedure will create enough pressure to achieve a straight break between the drill holes. Wedging tractors for the manual process are basically a self-contained unit consisting of an 80 to 100 horse power farm tractor with a PTO driven air compressor mounted on the 3-point hitch with the hydraulic bucket holding the wedging tools. These units are also utilized to transport explosives to the blast site and support the blasters needs. The Academy Quarry has 2 small tractors used for this process. The wedging tractor is a Case Model #885 and the drill tractor is also a Case Model #885.

Front-end wheel loader:

The wheel loader is the key to the entire operation. At Academy the loader is a Komastu WA-600-6 loader. This fact is illustrated by the many different attachments utilized by the loader. A standard 8 yard bucket, an open-sided spade nosed bucket, a heavy set of loading forks, a huge pushing boom, and a long steel tipping boom. This machine is used for cleaning the area prior to drilling, moving the drills into place, preparing the tipping bed, hauling equipment to the slab for tipping, physically tipping the slab over, hauling the block and grout away, maintaining quarry haul roads, pushing the grout over the edge, and loading the trucks that haul the stone to the fabrication facilities.

Grout truck:

The truck is used to haul waste rock and overburden which has been loaded by the front end loader to the grout pile. It is also used to haul gravel which may be required for roads, ramps, quarry floor, etc. The grout truck is a CAT 796C.

Crawler back hoe:

The major use for the back-hoe is for the removal of glacial overburden, especially in areas with limited accessibility. This unit also removes decomposed granite around the Boulders. The Back Hoe also assists in the actual removal of stone boulders. This piece of equipment is at the site full time. The excavator is an SK480.

Water Truck:

The water truck is used to wet down the roads to keep the dust down during dry times of the year. The water truck is also used to supply water to the pressure washer to clean equipment and blocks. The water truck is an International S1900 company number VE0038.

Air compressor:

The compressor is 100HP and is located in the shop. It is in the shop for maintenance and airing up tires. It only runs when needed and has a company number of AC0701

1/2 ton 4 wheel drive pickup:

The pickup is generally used as a utility vehicle to haul miscellaneous supplies within the site, as well as running errands off site. The Company number on the truck is VE5895 and it is a 2014 GMC Sierra 1500.

3/4 ton 4 wheel drive pickup:

The pickup is generally used as a utility vehicle to haul miscellaneous supplies within the site, as well as running errands off site. The Company number on the truck is VE3080 and it is a Ford F350.

Road maintenance equipment:

All road maintenance is done with the Front-end loader and one of the wedging tractors with a box scrapper. The maintenance is done by the quarry workers.

Storage

Supplies: Consumable supplies used at the site include: drill rods and bits, stone dust bags, hole caps, diamond wire, mechanical parts for equipment, equipment filters, greases, hoses and fittings, etc. All of these supplies are stored in the shop.

Explosive Material: All practices at the quarry operation regarding the use and storage of explosive material follow the rules and guidelines established by the BATF and MSHA regulatory agencies, combined with the best practices established by Cold Spring Granite Company. Specifically with regard to explosive magazine construction and location. The location of the explosive magazines is shown on **OP-MAP-4**. These locations observe the rules for distance as barricaded magazines. Only the amounts and types of explosive material which can be legally stored will be on site.

Hazardous Material: The lubricants and fuels used at the site have the potential to spill thus potentially causing a contaminated environment condition. All free flowing lubricants and fuels (diesel & gasoline) are stored in tank within the secondary containment, or in racks with in secondary containment systems. This does not apply to transfer containers used on a daily basis. Used oil is also stored in the building. All containment is properly sized and constructed to restrain the flow of 110% of the largest container stored in the area. The characteristics of the quarry floor make the containment of a spill very workable. Thus, the chance of any environmental damage as a result of a leak is minimal.

Minor spills during handling and use will be cleaned up immediately. Ample amounts of absorbent material (floor dry) and cleanup materials will be stored at locations where free flowing hazardous materials are handled. The waste material and dirt, if any, will be disposed of in closed drums, and properly labeled. When drums become full, the material will be disposed of properly as defined under the guidelines by the Department of Toxic Substance Control and for transportation (by Cal DMV).

Oil spills greater than 5-gallons to an environmental surface will would be reported to the Cal OES 1-800-852-7550. Cleanup measures would be conducted as per the direction of the Cal OES and coordinated with Fresno County.

Quarry personnel are trained as per MSHA Part 47 regulations and internal company policies, to be able to recognize the importance of how to properly handle hazardous materials relative to PPE, and how to obtain MSDS information.

Personal Water use:

Potable water will be brought to the site in bottles and dispensed via a commercial water cooler. Very little personal water is required for the operation.

Security:

Access to the property is restricted by the placement of a gate on the access road just east of the intersection of Newark Rd. and Tollhouse Rd. The gate is located and is connected to a fence that will not allow for vehicle passage around the gate. The gate will be locked with a Cold Spring Granite Company padlock during all non-operating hours. Proper warning signs indicate that only authorized personnel are allowed on the property are posted at the gate location. The fence that is used for livestock goes around the entire property.

Explosive magazines will be kept locked at all times when their usage is not required. Granite blocks will be used to barricade the magazines, making it very difficult to remove the explosives or magazine without the use of heavy equipment. Any buildings containing valuables are to be locked during non-operating hours. The main shop area does have outdoor lighting, but it is not used at night. No sound amplification system is used on the site.

Safety

All quarrying activity is governed under the Cold Spring Granite Company's policies and procedures for safety and health. Further, the company is mandated to follow all procedures under federal regulations in Title 30 CFR which is the Mine Safety and Health Administration (MSHA) relating to the safety and health of miners.

Access to emergency services will be maintained through the use of office phones and cellular phones.

Drainage and Erosion Control

Measures will be taken to minimize any surface erosion at the operation. Roads will be constructed to divert water run-off from the working surface into adjacent low-lying areas located away from the operation. Embankments, which are seen to be susceptible to erosion, will be covered with topsoil and seeded.

The grout pile sides consist mostly of rock. Fines typically wash into the pile further and are filtered out as the water leaves through the toe of the pile. The grout pile will be constructed in such a way that runoff from the top working surface is diverted to low settling out areas on the grout pile. Thus any runoff of fine material would be retained before the water continues into grassy adjacent low-lying areas.

Stockpiles of topsoil will be seeded with vegetation if it is anticipated they will not be consumed in a short period of time or if the immediate need dictates. Noxious weeds will be controlled.

Runoff water from the site is set up so that it will run naturally down the driveway from the quarry area and saw area. The water flows down the south side of the entrance road and then passes through a culvert under the roadway and goes down to the settling pond. No storm water runoff leaves the site.

A settling pond has been constructed in a lower are west of the plant are and north of the entrance road. The purpose of the pond is to allow for the settling out of fine material. Overflow from the pond does not happen because the pond is large enough to handle most storm events. The berm keeps any overflow from the pond from happening.

A NPDES Storm Water Discharge general permit is not required for this site. The reason a storm water general permit is not needed is because of the settling pond. The settling pond was designed to handle all storm water from the active quarry area and not allow the water to leave the site.

Excess water is not an issue in the active quarry. Surface water run-off is diverted from the quarry to the settling pond. No ground water is encountered within the quarry. The quarry operation is completely surrounded by natural grasses which will be left alone wherever possible. The grasses will help to limit wind erosion. If noxious weeds become evident during the natural re-growth process the County will be contacted to develop the best plan of action.

Public Safety at the Site:

Visitors are regulated under Part 46 of MSHA regulations and Cold Spring Granite Company policy. This insures that caution is taken to avoid non-miner exposure to mining hazards, and that all safety rules are followed. Public Safety Closure Order R9-0-003-03 prohibits the general public from going into the Cold Spring Granite Quarry Site.

Signage placed at the entrance gate states that safety equipment such as protective eyewear and hard hats are required within the premises. Visitors are supplied with such safety equipment as needed. There are signs that warn against trespass and of company policies. The gate is to be closed and locked during all non-operating hours.

Noise

The quarry is located in a rural area with many homes nearby. There are inhabited structures within a .25 mile radius of the site. There are 5 homes with in about a .5 mile radius of the center of the site and over 20 homes within a 1 mile radius of the center of the site.

The operation generates some noises from the following equipment and operations:

- Heavy diesel powered front-end loader and off road haul truck produce noise typical of heavy mobile equipment used in the construction and farming industries.
- Diesel engine powered back-hoe and drill rig tractor produce noise typical of any similar construction or farm equipment.
- Blasting produces noise which ranges from a much muffled thud to a fairly sharp bang. Even though it may be loud the duration is very minimal.
- Pneumatic jack hammers produce noise typical of rapid cycling air piston equipment.
- Drill rig produces a unique vibration type sound resulting from rapid blows of a hydraulic hammer beating against steel drill rods. At a distance this sounds like a buzzing noise.

- The diesel powered air compressor produces engine noise typical of similar equipment used in the construction industry.
- Compressed air is used to clean dirt from the surface of the stone. This produces a hissing sound.
- Backup alarms on all mobile equipment produce a beeping sound.
- The generator produces a noise typical of any engine.

All factory installed and custom made sound suppression attachments to the equipment are kept in proper maintenance in an effort to keep noise levels as low as possible.

Several practices are maintained to minimize the amount of noise generated by blasting.

Different applications of explosives are used as tools in the quarry operation. They are used to blast a boulder free of the decomposed granite, to subdivide the boulders into blocks, and to break waste rock (grout) into more manageable piece sizes. In all cases, special attention is given to minimize the frequency and size of blasts so as to not damage the stone product.

The lightest grain truck line cord which achieves complete detonation of the down line is used. This results in initiating a clean break without damaging the surrounding stone. The explosive trunk line cord, being that it is not contained within the stone, is the source of much of the blasting noise.

Dust:

Dust is generated by the movement of equipment and the removal of boulders from the ground. When the weather is hot and dry the water truck is used to spray the roads to keep the dust down. During the driest times of the year the water truck will spray the roads down multiple times a week. Being that no residential home is within .25 miles of the quarry dust does not become an issue with the neighbors

Weigh Station

No weigh station is to be located at the site. All load weights are calculated by scaling the block being shipped with the scale on the front-end loader. Production records in cubic feet shipped are kept and are the basis for which any reporting to the state or county is to be calculated from.

Garbage:

Garbage generated at the site consists of empty containers from lubricants and supplies as well as lunchroom waste. Total volume of general garbage generated is estimated to be approximately 3 cubic yards per week and is removed by a commercial hauler.

Scrap equipment, steel, rubber tires, batteries and used oil will be disposed of or recycled through the use of salvage or recycling firms in the area.

Reclamation Plan

In the case of the Boulder stone quarry, a large portion of the land is disturbed early on in the operation. This large area of land will remain in the production area for the life of the quarry. Once the outer limits of the quarry are reached the quarry grows in depth only. Essentially, no areas of the quarry are available for reclamation until closure of the operation. If natural

reclamation does occur in areas of in-activity nothing will be done to harm or enhance that process.

This reclamation plan has been developed based on current quarrying technologies and practices. Changes may take place in the operation, which have the potential to enhance the reclamation goals. Utilizing such enhancements will be considered. Discoveries of different procedures and opportunities that show potential for increased product utilization will be incorporated in any reclamation efforts.

It is anticipated that the quarry will exist as long as good marketable stone can be economically mined from the operation area. For exemplary purposes, this reclamation plan is based on the premise that the operation would cease approximately 25 years in the future. In the next 25 years we see minimal final reclamation goals achieved, as the quarry operation would still be considered in the middle of the overall life of the quarry. We will however continue with our current preparatory practices of storing material for future usage. Plans further into the future would only add to the relative inaccuracies due to the unpredictable nature of a quarry operation.

The intended use of the land beyond the life of the operation is that of a wildlife area or cattle grazing area. The ultimate goal of the reclamation plan is to blend the site, as much as can be done practically, into the surrounding landscape. To accomplish this we are prepared upon closing to cover the yards and haul way areas with the stored topsoil and naturally re-vegetate the areas with natural grasses, forbs, shrubs and trees. The storm water retention pond and the grout pile will be the remaining obvious changes to the original topography of the land. The pond will be allowed to grow in to a natural state. The grout pile will have any excess topsoil dumped over the side and be seeded. The grout pile will be allowed to then grow into a natural state. All other evidence of our operation will be removed.

Structures

All buildings will be tore down and removed from the site. Any concrete slabs will be broken apart and hauled off site. All equipment and moorings will be removed from the site. Any wells or septic systems will be properly abandoned according to all local, state, and federal ordinances of that time. Petroleum products used for maintenance purposes at the site total will be hauled off site. The equipment fuel tanks hold at maximum 1,000 gallons and will be removed from the site.

Quarry Edges

At the top of the currently quarry ledges, granite blocks of sufficient size and spacing will be provided as barricades, should any recreational vehicles venture into the abandoned site. Taking into consideration the visual aspect of these barrier blocks, they will be placed in a somewhat random nature. Barrier blocks will also be placed at the top of the ramps into the different ledges. This will hopefully help prevent recreational vehicle from ripping up the site.

Grout pile

The grout piles are designed to be tall. This minimizes the area of land disturbed and the amount of material needed to construct the top driving surface. Until the grout pile flattens out on top, none of the surface area is available for reclamation.

The slope of the rocky sides of the grout piles will be left as they are constructed with an approximate slope of 1.25:1. Trees in the area grow to sufficient heights to provide some cover of the sloped areas. Further, rocky cliffs and outcrops are quite common throughout the area surrounding the operation site. Though there is little fine material within the grout pile below 15 feet from its top, sparse native vegetation has proven to grow upon the rocky side slopes. The rocky exposures with sparse vegetation will blend quite well with the native terrain.

The pile is constructed as one large pile forming out from the mountain top and spreading out to the south. When reclamation of the grout pile starts, reclamation of the slopes will occur first. Glacial overburden from the quarry development will be dumped on the grout pile over the life of the grout pile to add a soil base for vegetation. Topsoil and Gravel from the stockpiles will also be dumped over the grout pile at reclamation to add material for plant growth. A noxious weed free seed mix will then be broadcasted over the reclaimed areas to enhance natural vegetation re-establishment and prevent erosion. This technique has been used in other quarries on grout piles with good results. The combination of topsoil and natural re-vegetation will prevent any erosion on the slopes as they begin to blend with the surrounding area.

Due to the construction of the driving surface on top of the grout pile, the top 5 to 15 feet of the grout pile contains fine material made up of gravel or glacial overburden. The top few inches will need to be “loosened” and covered with the available topsoil to enhance vegetative growth. This layer of driving surface material, will serve as the vegetative material.

If sufficient material exists at the time of reclamation additional material will be placed in appropriate locations so as to assist in the achievement of the final reclamation goals. One such location may be over the side of the grout pile to add to the vegetative base on the upper portion of the pile.

Yards and haulways

All steep dirt banks, piles, ditches, etc., will be contoured to minimize their aesthetic impact on the area and to match the rolling terrain of the area with slopes no greater than 2:1. These areas will already be covered with gravel since they are the working surfaces of the site. These areas will be covered with a minimum of 4 inches of topsoil to provide a vegetative base and any compacted areas will be loosened prior to seeding. Once topsoil has been laid down, natural trees, scrubs and grasses will be planted.

Topsoil and Gravel Stockpiles

Topsoil stockpiles for reclamation are located around the quarry and will continue to grow when good soil is found. Gravel Stockpiles are also located around the Quarry site and will be used as needed for Road repair and site development. These locations can be seen on the **OP-MAP-4**.

Access Reclamation

Prior to reclamation of the access road to the quarry, Fresno County will be contacted to determine if there is a future need for the access road once operations at the quarry have permanently ceased. If no future need exists the access road to the quarry and grout pile will be reclaimed as the final step in the reclamation process.

This reclamation will consist of removing, as much as practical, gravel from the road bed and the area contoured to blend with the terrain. Once this is completed, the surface will be loosened or scarified in any area where the soil is compacted. Available remaining topsoil will then be spread evenly over the area and native grass seeds will be spread evenly to create a more natural appearance. Once these activities have been completed, the intersection of the access road will be closed where it meets Tollhouse Road. This will be accomplished by placing barrier blocks across the access road.

Re-vegetation

It is intended that the area will be naturally re-vegetated with native species of grasses, forbs, shrubs and trees. Any seeding or planting will be completed at the discretion of the Fresno County. This will best lend the area to its intended use after closure which will be to serve as a wildlife habitat area or cattle grazing area.

The re-vegetated areas will soon blend with the native terrain and vegetation to provide habitat for native woodland creatures. The area will be monitored for three subsequent years (after final closure) to determine success of re-vegetation and any presence of noxious weed growth. Re-planting will be done during this time, if required. The pond created by the sediment pond will provide habitat for aquatic creatures and waterfowl. The rocky side slopes of the grout pile will provide habitat to birds and upland cave dwelling creatures.

Contract

Cold Spring Granite shall carry on operations under this plan and in conjunction with all other governing agencies with reasonable diligence. Operation of this quarry is also subject to the rules and stipulations of all applicable Conditional Use Permits Cold Spring Granite Company has entered with Fresno County. The mining operating plan is renewable at the end of every 25 year CUP. Cold Spring Granite will submit one-year prior to expiration of the CUP their proposed Operation Plan for review by Fresno County. Maps will be supplied showing existing conditions at that time regarding quarry size, grout pile size, yards, haul-ways, elevations, etc.

Any changes in operations shall be submitted as an amendment to the operating plan and must be submitted and approved in writing by Fresno County before any such operations commence. Amendments shall include statements of the reason for the changes, detailed description of the proposed changes, maps and diagrams.

Subcontractors

Should Cold Spring Granite Co. contract the services of a third party contractor (subcontractor) to perform duties relative to the quarry operation, that contractor shall perform such duties within the guidelines set forth in this operating plan. Cold Spring Granite shall be responsible in assuring that any such contractors perform their duties in an acceptable manner relative to the operating plan and/or related Forest Service requirements.

Cold Spring Granite will not be held responsible for the performance of contractors which do not have a contract or subcontract with Cold Spring Granite Co.

Drawings

The following drawings accompany this operating plan package.

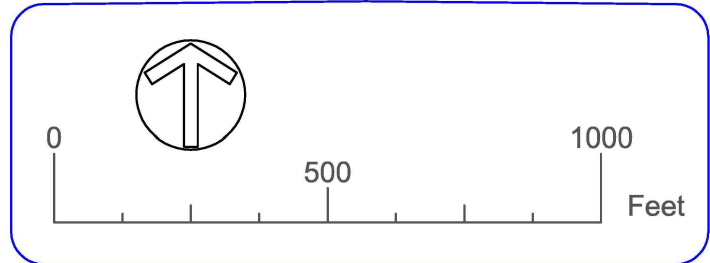
OP-MAP-1	Property Parcel Map
OP-MAP-2	Quarry Work Areas
OP-MAP-3	Plant Area Map
OP-MAP-4	Quarry Site Map
OP-MAP-5	Saw Waste Water Flow Map
Schematic 1	Recycle Water System Design

Permits

The following documents accompany this operating plan package.



DRAWING NO:	OP-MAP 1
SCALE:	1/2 scale=500 ft.
DRAWN BY:	SC
DATE DRAWN:	6/9/20

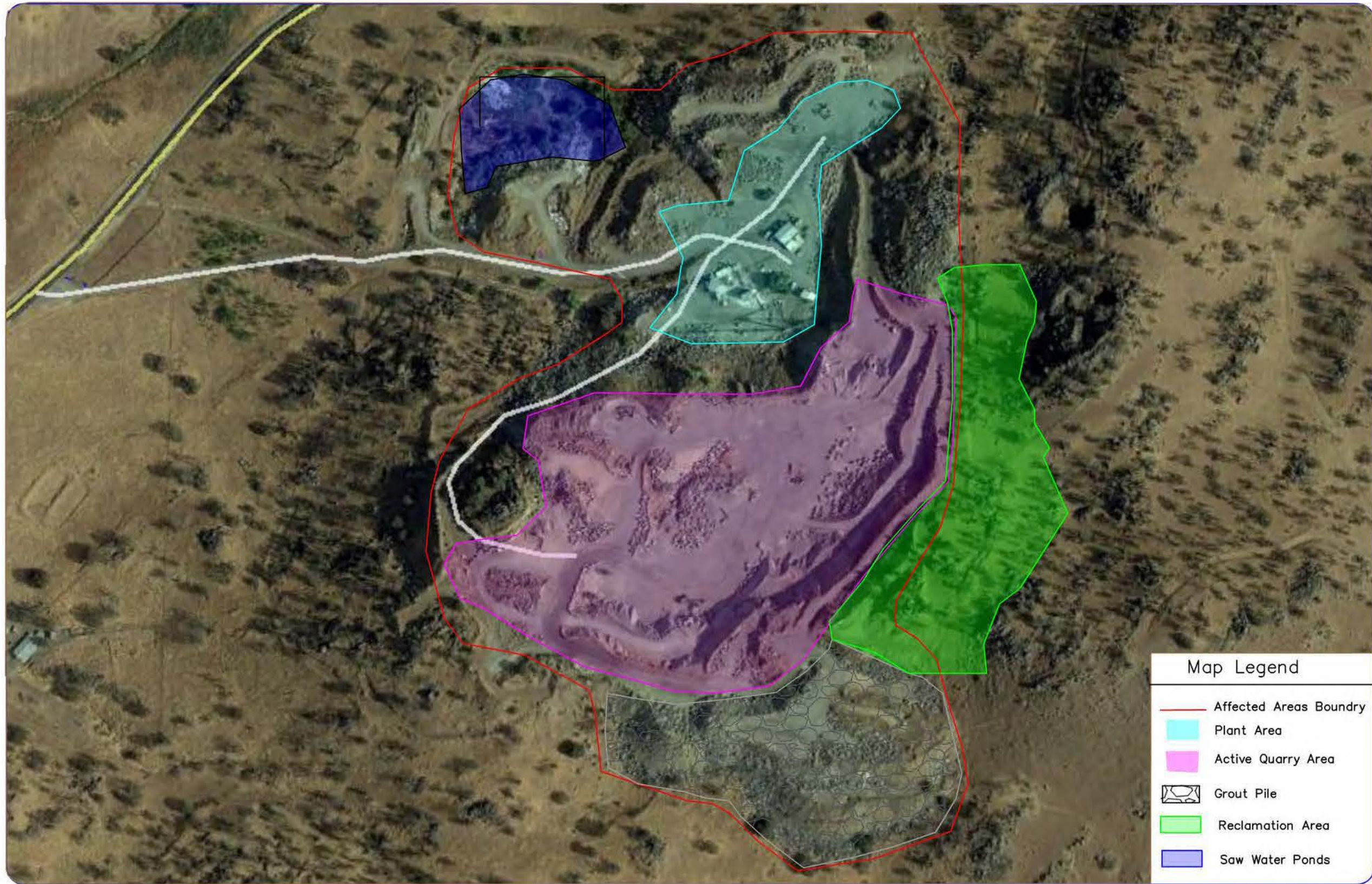


DESCRIPTION: Academy Quarry Operational Plan Map Property Parcel Map	
SHEET:	FIGURE:

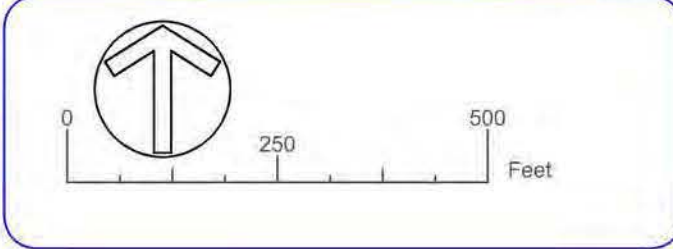


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DRAWING NO:	OP-MAP 2
SCALE:	1 inch=250 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20



DESCRIPTION: Academy Quarry Operational Plan Map Quarry Work Areas	
SHEET:	FIGURE:

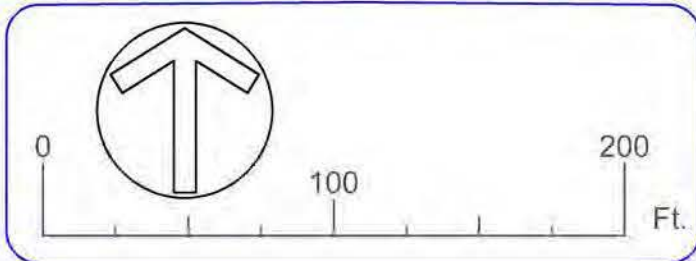


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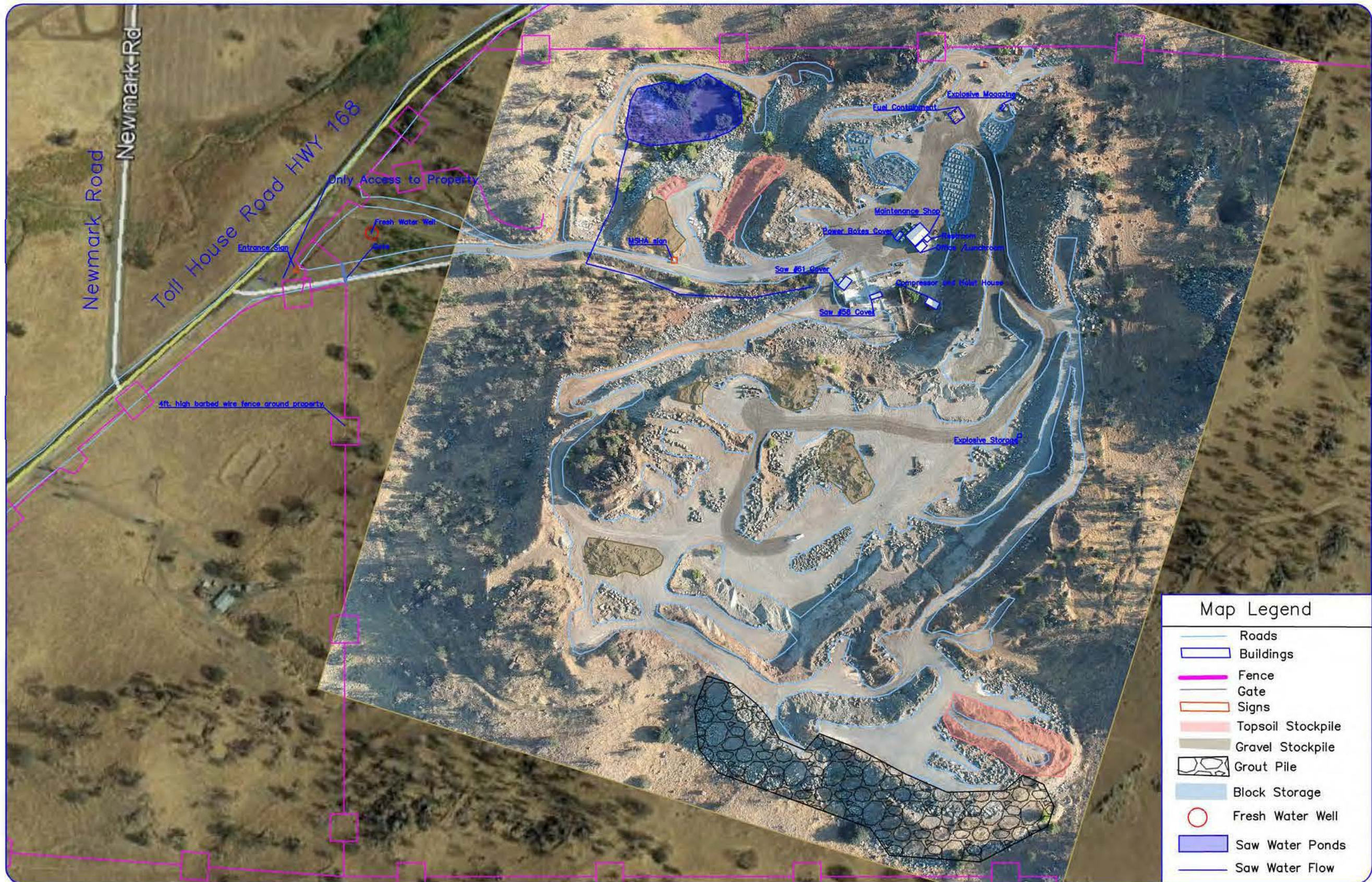


DRAWING NO:	OP-MAP-3
SCALE:	1/2 Scale=100 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20



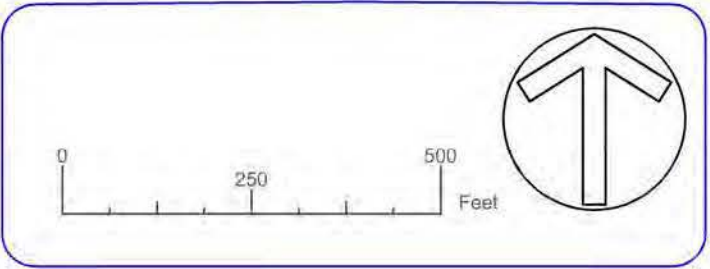
DESCRIPTION: Academy Quarry Operational Plan Map Plant Area	
SHEET:	FIGURE:


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Map Legend	
	Roads
	Buildings
	Fence
	Gate
	Signs
	Topsoil Stockpile
	Gravel Stockpile
	Grout Pile
	Block Storage
	Fresh Water Well
	Saw Water Ponds
	Saw Water Flow

DRAWING NO:	OP-MAP-4
SCALE:	1/2 Scale=250 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20



DESCRIPTION: Academy Quarry
Operational Plan Map
Quarry Site Map

SHEET: FIGURE:



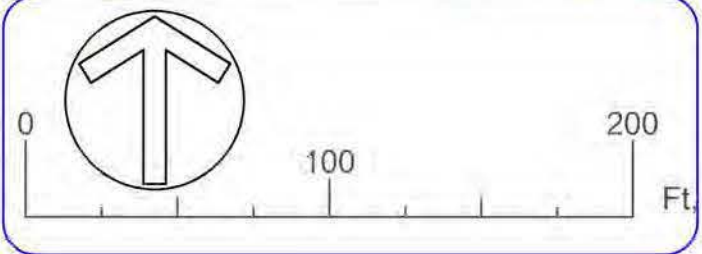
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Map Legend	
	Fresh Water
	Saw Water Flow
	Recycle Water
	Saw Water Trench
	Settling Tanks
	Recycle Water pumps
	Saw Foundations
	Sediment Ponds
	Sediment Flow

DRAWING NO: 0P-MAP-5
 SCALE: 1/2 Scale=100 ft.
 DRAWN BY: SC
 DATE DRAWN: 6/8/20



DESCRIPTION: Academy Quarry
 Operational Plan Map
 Saw Waste Water Flow Map

SHEET: FIGURE:



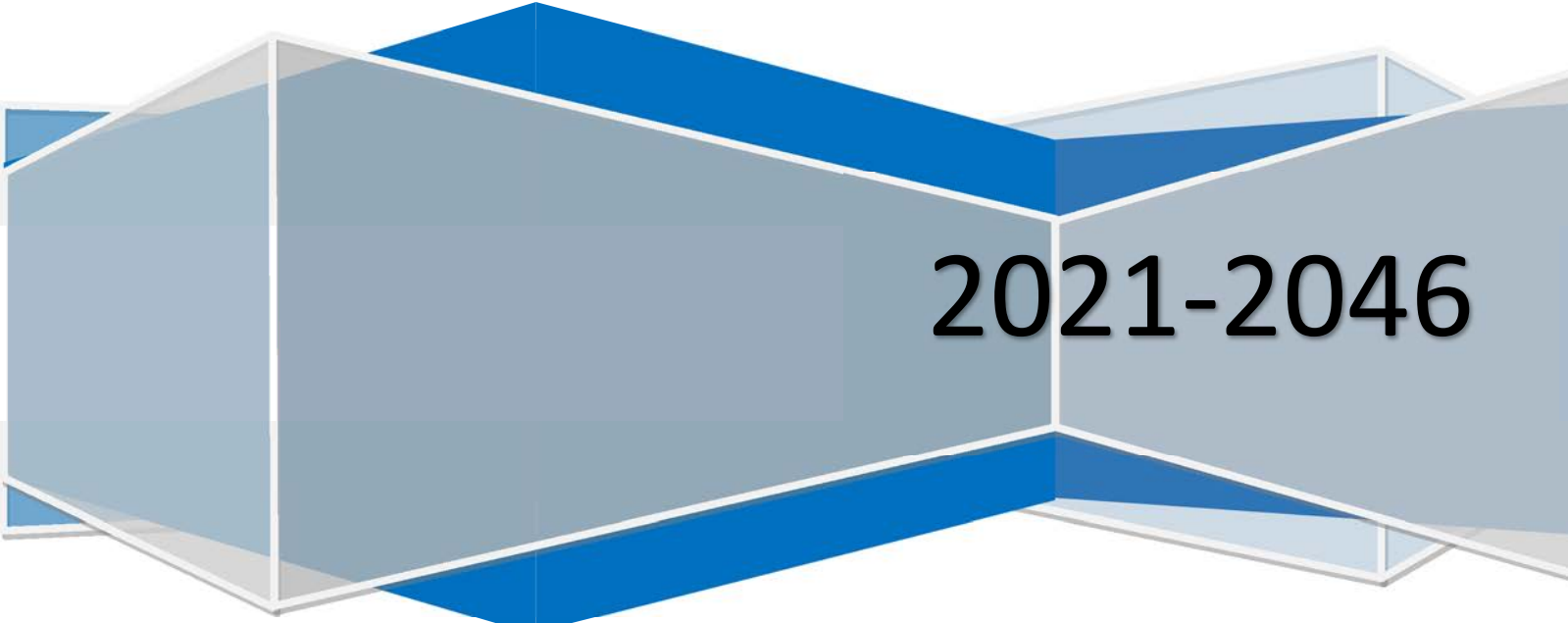
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Cold Spring Granite

Academy Quarry Reclamation Plan

Steve Chouanard



2021-2046

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Cold Spring Granite Company

17482 Granite West Road
Cold Spring, MN 56320

Academy Quarry Reclamation Plan 2021-2046

Contact Personnel for Coldspring

Steve Chouanard – Environmental Engineer
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Phone: (320) 685-5133 skonop@coldspringusa.com
Larry McDonald – Quarry Site Supervisor
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Today, the intention of the quarry operation is to remove dimension granite in block form from the quarry and prepare it for shipment to the fabrication facility in central Minnesota. If sold to customers in block form, the blocks are shipped to other facilities located throughout the world.

Description of Property

The quarry area is located on top of a ridge consisting of 2 parcels contained entirely within the 141.99 acres owned by the Cold Spring Granite Company. This site is located in the Western Sierra Nevada foothills Northeast of Fresno, California. The quarry site is located on the southeast side of Tollhouse Road (State highway 168) between Newmark Avenue and Sample Road, approximately ten miles northeast of the City of Clovis, in Fresno County. Reference map [OP-MAP-1, Property Parcel Map](#) for a view of the current quarry site and surrounding area.

The proposed 2021-2046 area legal descriptions:

- 1) 40.33 ACS IN SECS 13 &14 T12R22
- 2) 101.66 AC IN N7/8 OF E3/4 OF NW1/4 SEC 13 12/22

Total of 2 unit parcels containing 141.99 acres make up the whole site.

The current total affected acres is estimated at 48.4 acres. Of that area there are 3 main areas of use. The plant area consists of a maintenance shop, lunchroom, employee parking, fuel storage, block storage and wire saws. This area is estimated to be around 4.5 acres. The active quarry area is around 14.64 acres. This is the area is where granite is removed from the ground and sorted. The high quality granite blocks are hauled down to the storage area or wire saws for processing. All unusable material is hauled to the grout pile. The grout pile area is estimated to be around 7.2 acres. The quarry also has 5.5 acres currently under reclamation. All of these different areas of the granite quarry can be seen on [OP-MAP 2, Quarry Work Areas](#).

Reclamation Plan Goals

The first thing to be done in the reclamation process will be to have all buildings and other structures removed in the clean-up process. Flat concrete slabs will be removed and those areas will be covered with decomposed granite and soil. The water wells will be sealed according to prevailing state regulations. All man-made structures will be removed from the site.

After all structures are removed, all rock piles will be dumped over the grout pile or spread out throughout the site to give it a more natural look. All roads will be ripped up starting from the grout pile and working down the quarry to the Entrance gate. Decomposed granite will be spread out to fill in areas and give the site a more natural look.

To reclaim the area as a natural area suitable for wildlife habitat. Appearance of the site subsequent to reclamation is an important aspect. Architecture and re-vegetation of the cut slopes has been designed to bring the reclaimed site back to a habitat similar to that prior to mining. Geometric landscapes, cut slopes, and fills will be avoided, and existing, natural topographic highs will be incorporated into the final reclamation design when practical.

The use of randomly placed unusable boulders or natural-looking rough backs on the flat terraces will help to blend the engineered terraces into the surrounding terrain and help to warn and/or slow down off-road vehicles that may enter the property.

The settling pond area will be leveled out and seeded with native grasses. The settling pond area will be allowed to have the vegetation grow up and change the area back into the natural state it was before the settling ponds were constructed.

After all the site prep is complete topsoil will be spread and the site will be planted with Native plants and trees. All the vegetation of the site will follow the re-vegetation plan. All planting will be under the supervision of a professional Botanist. The proper planting of native plants and trees is the most important part of the reclamation plan. If the site gets good vegetative growth it will help control erosion and make sure the site blends into the existing native background. The vegetative plan will talk about what will be seeded and how it will be seeded. The vegetative plan was completed by a local botanists

After the re-vegetation is complete the site will be reviewed by site management and the county to make sure that everything has been done up to the goals of the reclamation plan. The ultimate goal of the site reclamation plan is to make sure the site blends into the natural background and is not a problem for the neighbors.

Re-vegetation Plan

The information and planning reflect the recommendations of Mr. John Stebbins, a Consulting Botanist.

Only native California trees and shrubs will be utilized as identified in Table 1 from John Stebbins' recommendations. These specific plants will be planted at a rate of 845 units per acres for a 30% cover on the flats and moderate slopes. This allows for a mortality rate of up to 30% of the trees and shrubs.

Only native and nonnative grasses and forbs existing in the area will be used as identified in Table 2 from John Stebbins' recommendations. These specific plants will be mixed by the supplier at the time of use and will be applied at the rate of 7 to 8 pounds per acre. This application rate was supplied by Mr. Stebbins.

The Plant Cover Standard for this plan shall be an 80% coverage with no bare areas larger than 10 feet by 10 feet.

Reclamation will be monitored by a professional botanist/horticulturist every six months for the first three seasons at the end of operation, with a summary report provided to the operator. Reports shall include analysis of on-site observations as well as recommendations for achieving the stated goals.

The soil depth for all plantings will be at least 24 inches deep. This soil will consist of decomposed granite and topsoil.

All plantings will be done in the period October through March to achieve maximum establishment success.

All perennial plantings will be placed in sites that organic amendments (forest humus, peat moss) has been incorporated at a ratio of at least 1:1 with the existing soil. These plantings will be mulched with organic material at the time of planting to prevent excess water loss and reduced competition from aggressive annual weeds. The mulch will extend at least 18 inches out from the base of each planting.

The perennial plantings will be irrigated with an automatic drip irrigation system for a minimum of three years after planting. The system will incorporate low volume drip emitters for each planting and be hooked to an automatic valve system and time clock(s). Thorough irrigation will occur at least once a week during the period of March-October for the first three seasons. Physical inspection of the above system and manual weed control will occur during the initial three seasons.

The annual plantings (forbs and grasses) will be done by hydro seeding the approved seed mix during the fall months of October through December. The planting ratio shall be 20 pounds per acre.

Any significant deviation from the re-vegetation plan will require the consultation and approval of the botanist/horticulturist charged with monitoring the plan.

Our species richness standard for the entire property will be 9 species. Those listed in Table 1, Native Trees and Shrubs and the perennials listed in Table 2, Native Grasses and Forbs (Hydroseed Mixture).

Table 1. Native Trees and Shrubs	
COMMON NAME	SCIENTIFIC NAME
Blue Oak	<i>Quercus douglasii</i>
Bush Lupine	<i>Lupinus albifrons</i>
Foothill Honeysuckle	<i>Lonicera interrupta</i>
Buckeye	<i>Aesculus californica</i>
Coffeeberry	<i>Rhamnus californica</i>
Wedgeleaf Ceanothus	<i>Ceanothus cuneatus</i>

Table 2. Native Grasses and Forbs (Hydroseed Mixture)	
COMMON NAME	SCIENTIFIC NAME
California Poppy	<i>Eschscholzia californica</i>
Popcorn Flower	<i>Plagiobothrys nothofulvus</i>
Foxtail barley	<i>Hordeum jubatum</i>
California melic	<i>Melica californica</i> , <i>Panicum acuminatum</i> var. <i>acuminatum</i> (= <i>Panicum occidentale</i>)
One-sided blue grass	<i>Poa secunda</i> ssp. <i>secunda</i> = <i>Poa scabrella</i>
Annual lupines	<i>Lupinus bicolor</i> , (<i>Lupinus microcapus</i> ssp. <i>densiflorus</i>)
Gilias	<i>Gilia capitata</i> , <i>G. Tricolor</i>
Baby blue eyes	<i>Nemophila menziesii</i>
Phacelias	<i>Phacelia cicutaria</i> , <i>P. imbricata</i>
Chia	<i>Salvia columbariae</i>

Access to Reclaimed Quarry

Prior to reclamation of the access road to the quarry, Fresno County will be contacted to determine if there is a future need for the access road once operations at the quarry have permanently ceased. If no future need exists the access road to the quarry will be reclaimed as the final step in the reclamation process.

The reclamation of the access to the quarry will consist of removing as much as practical of the gravel from the road bed and then the area are contoured to blend with the terrain. Once this is completed, the surface will be loosened or scarified in any area where the soil is compacted. Available remaining topsoil will then be spread evenly over the area and native grass seeds will be spread evenly to create a more natural appearance. Once these activities have been completed, the intersection of the access road will be closed where it meets Tollhouse Road. This will be accomplished by placing barrier blocks across the access road.

Reclamation Plan Overview

This reclamation plan will be designed to show the quarry site being reclaimed in its current state. With the yearly changes taken place in the quarry the reclamation plan can never reflect exactly the current state of the quarry. The reclamation plan will concentrate on the 3 Levels of the Quarry. The Shop Area, the Main Quarry level and the Grout pile Area. The Buildings and Equipment being removed will be the first step in the reclamation process. The second step will be to remove and separate the different rock piles on the main quarry level and grout pile. After that these areas will be leveled and prepped for planting. After that the roads will be broken up and have topsoil spread over and seeded. The Re-vegetative plan will be used throughout the quarry on all levels and roads.

The rest of this reclamation plan will go through different areas of the Quarry and what will be done during reclamation process. It will go through the size of the area, what equipment will be used and the cost of the work. The Reclamation Plan Areas and Cost will start at the bottom of the quarry by the entrance and work its way up through the quarry to the top of the grout pile. This is only done to show the reclamation up through the quarry. The actual reclamation will be done in different phases with work being done on different levels at the same time. The final stage of the reclamation plan will be the spreading of the topsoil and seeded. This stage will start at the top of the grout pile and work done through the quarry and the roads and ending at the current access gate. Final reclamation of the site can be seen on **R-MAP-17**.

Reclamation Plan Areas and Costs

Use the maps in conjunction with this portion. Each map shows a different area of the reclamation plan. All areas can be seen together on Map- **R-MAP-1, Reclamation Areas**.

01. Road 1 - Area 1

This area contains the current entrance and the old entrance to the site. Both roads have asphalt pavement on them which needs to be removed. In addition, the area has one well that-- need to be sealed. A small dirt road runs between the two roads and is made of dirt. So it will need to be loosened a bit and then hydro-seeded. The two road beds will need topsoil and hydro-seeding. The balance of the area is covered with grass and a few native trees and needs no further attention. The Total acreage in this area is 2.76 acres and can be seen on Road 1-Area 1 map. A loader, a grout truck and a grader would need to be used for this. It is estimated that 1 day at 3 hours per day could get this job complete. This area can be seen on **R-MAP-2**.

Grout Truck rental rate	\$ 41.91	Per Hour	at	3 hours	=	\$ 125.73
Loader rental rate	\$ 195.35	Per Hour	at	3 hours	=	\$ 550.80
Grader rental rate	\$ 92.22	Per Hour	at	3 hours	=	\$ 276.66
Operator rate	\$ 60.77	Per Hour	at	3 hours	=	\$ 182.31
Operator rate	\$ 73.41	Per Hour	at	3 hours	=	\$ 220.23
Operator rate	\$ 74.79	Per Hour	at	3 hours	=	\$ 224.37
Total for Road 1 - Area 1 of Reclamation Plan						\$ 1,580.10

02. Road 2 - Area 2

This area contains a continuation of the current access road and the remains of the original access road. The asphalt pavement needs to be removed on the current access road and any portions of the original access road that is not covered with rock and Decomposed granite (DG). In addition to the roads, this area includes the western edge of the grout piles on the level of the shop and saws.

The plan is to use a steel dozer (D-8 or equivalent) to push off a significant amount of this grout material to flatten the side of the grout pile to approximately a 3:1 slope. Part of this leveling process will be to level the area of the current access road to match the old access road to the south. The entire area needs to be covered with 12 inches of DG and 12 inches of topsoil, hydro-seeded and planted with trees. 7.5 acres is contained in this area. This area can be seen on [R-MAP-3](#).

Cat D8R Bulldozer rental rate	\$ 161.84	Per Hour	at	37.14 hours	=	\$ 6,010.39
Operator rate	\$ 73.41	Per Hour	at	37.14 hours	=	\$ 2,726.29
Total for Road 2 – Area 2 of Reclamation Plan						\$ 8,736.67

03. Road 2 - Area 2-Topsoil

The second task for this area is to apply topsoil. The area will use 3 scrapers to move the topsoil from the stockpile area to the Road 2 area. A road grader will be used to level the area once the material is in place.

Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	18.87 hours	=	\$ 3,686.25
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	18.87 hours	=	\$ 3,686.25
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	18.87 hours	=	\$ 3,686.25
Cat 160 H Grader rental rate	\$ 92.22	Per Hour	at	18.87 hours	=	\$ 1,740.19
Operator rate	\$ 73.41	Per Hour	at	18.87 hours	=	\$ 1,385.25
Operator rate	\$ 73.41	Per Hour	at	18.87 hours	=	\$ 1,385.25
Operator rate	\$ 73.41	Per Hour	at	18.87 hours	=	\$ 1,385.25
Operator rate	\$ 74.79	Per Hour	at	18.87 hours	=	\$ 1,411.29
Total for Road 2 - Area 2 - Topsoil of Reclamation Plan						\$ 18,365.98

04. Pond 1-Area 3

This area has been disturbed on the northwest side of the property and contains a storm water basin and a sediment pond basin for the saws. There is very little if any grout in this area and all the subsoil will be in place. It needs to be smoothed out with a grader and topsoil will be brought in with a scraper. It will be hydro-seeded, and planted with trees. The area contains 3.05 acres. This area can be seen on [R-MAP-4](#).

Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	14.61 hours	=	\$ 2,854.06
Cat 160 H Grader rental rate	\$ 92.22	Per Hour	at	14.61 hours	=	\$ 1,347.33
Operator rate	\$ 73.41	Per Hour	at	14.61 hours	=	\$ 1,072.52
Operator rate	\$ 74.79	Per Hour	at	14.61 hours	=	\$ 1,092.68
Total for Basin 1 – Area 3 of Reclamation Plan						\$ 6,366.60

05. Shop 1 - Area 4 - Plant Structures & Equipment Removal Costs

All Buildings and other structures will be removed in the clean-up process. All steel building will be taken down and recycled. All equipment that can be sold will be and anything that can be reused will be. Concrete floor slabs will be broken up and removed from the site. A contractor will demo the buildings and remove all debris to an off-site landfill. The area covered is about 3.23 acres. This area can be seen on [R-MAP-5](#)

Demolition of Structures	=	\$ 80,355.60
(Salvage Value)	=	\$ (10,636.80)
Total for Shop 1 - Area 4 - Demolition of Reclamation Plan		\$ 69,718.80

06. Shop 1 - Area 4 - Topsoil

The majority of the area where the shop and saws reside, is flat. There will be three rock piles placed in this area that will reduce the area needing DG and topsoil by 942 square feet. It is expected that there is no material left on this surface that needs to be moved. Just add DG and topsoil and that will be accomplished with 3 Scrapers and a Grader.

Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	11.75 hours	=	\$ 2,295.36
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	11.75 hours	=	\$ 2,295.36
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	11.75 hours	=	\$ 2,295.36
Cat 160 H Grader rental rate	\$ 92.22	Per Hour	at	11.75 hours	=	\$ 1,083.59
Operator rate	\$ 73.41	Per Hour	at	11.75 hours	=	\$ 862.57
Operator rate	\$ 73.41	Per Hour	at	11.75 hours	=	\$ 862.57
Operator rate	\$ 73.41	Per Hour	at	11.75 hours	=	\$ 862.57
Operator rate	\$ 74.79	Per Hour	at	11.75 hours	=	\$ 878.78
Total for Shop 1 - Area 4 - Topsoil of Reclamation Plan						\$ 11,436.16

07. Road 3 - Area 5

This area includes the east ramp from the shop/saw elevation up to the quarry area, the west road/ramp up to the quarry area, and the high sloped wall along the east ramp and on to the west. It consists of rock and DG. The plan would be to push as much of this material from the top towards the lower level as possible. The pushed material will then be sorted and screened to obtain the DG for reclamation. There will also be material in the roads to the west and up around the corner into the quarry. It is estimated that there will be an average of

20 feet over this entire area to be sorted and screened. The area equals 7.50 acres. The DG will amount to an estimated 116,500 cubic yards. The large rocks will be piled against the bank to flatten the slope of the wall that is buried by much of this material. It is estimated that much of the area will have a 3:1 slope to the north-northwest. The plan is to use a Caterpillar D8-R bulldozer to push this material to the lower level where the buildings and saws area. This area can be seen on **R-MAP-6**

Cat D8R Bulldozer rental rate	\$ 161.84	Per Hour	at	248.61 hours	=	\$ 40,235.04
Operator rate	\$ 73.41	Per Hour	at	248.61 hours	=	\$ 18,250.46
Total for Road 3 - Area 5 of Reclamation Plan						\$ 58,485.50

08. Road 3 - Area 5 - Rock Sorting

After the Dozer pushes the material over the edge to make a 3:1 slope. The rock needs to be separated from the DG for reclamation in other areas. The sorting of these two materials will be completed 3 front end loaders and the rented grizzly screener.

2 Cat 7 yard loader rental rate	\$ 183.60	Per Hour	at	151.69 hrs.	=	\$ 55,700.57
Cat 10 yard loader rental rate	\$ 183.60	Per Hour	at	151.69 hrs.	=	\$ 27,850.28
2 Operator rate	\$ 74.79	Per Hour	at	151.69 hrs.	=	\$ 22,689.79
Operator rate	\$ 74.79	Per Hour	at	151.69 hrs.	=	\$ 11,344.90
Total for Road 3 - Area 5 - Rock Sorting of Reclamation Plan						\$ 117,585.54

09. Road 3 - Area 5 - Topsoil

Topsoil will be spread in this area using 3 scappers to haul it from the stockpile area. A road grader will then be used to spread the topsoil evenly throughout the location.

Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	15.45 hours	=	\$ 3,018.16
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	15.45 hours	=	\$ 3,018.16
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	15.45 hours	=	\$ 3,018.16
Cat 160 H Grader rental rate	\$ 92.22	Per Hour	at	15.45 hours	=	\$ 1,424.80
Operator rate	\$ 73.41	Per Hour	at	15.45 hours	=	\$ 1,134.18
Operator rate	\$ 73.41	Per Hour	at	15.45 hours	=	\$ 1,134.18
Operator rate	\$ 73.41	Per Hour	at	15.45 hours	=	\$ 1,134.18
Operator rate	\$ 74.79	Per Hour	at	15.45 hours	=	\$ 1,155.51
Total for Road 3 - Area 5 - Topsoil of Reclamation Plan						\$ 15,037.33

10. Quarry Level - Area 6 - Rock Sorting

This area has a pile of decomposed granite (DG) and grout on it today. It needs to be screened to obtain the DG for use in reclamation and to make it suitable to reclaim. The area equals 1.50 acres. It is estimated that the rock pile is approximately 10 feet deep and that the DG amounts to 50% of the pile. The large rocks will be placed against the wall to the south and east along with other large rocks from other areas. The plan is to use a grizzly rock

screen and 3 front end loaders to sort the Rock and move the material around. This area can be seen on [R-MAP-7](#)

2 Cat 7 yard loader rental rate	\$ 183.60	Per Hour	at	9.91 hours	=	\$ 3,638.95
Cat 10 yard loader rental rate	\$ 183.60	Per Hour	at	9.91 hours	=	\$ 1,819.48
2 Operator rate	\$ 74.79	Per Hour	at	9.91 hours	=	\$ 1,482.34
Operator rate	\$ 74.79	Per Hour	at	9.91 hours	=	\$ 741.17
Grizzly Rock Screen Rental Rate						\$ 19,975.00
Total for Quarry Level - Area 6 - Rock Sorting of Reclamation Plan						\$ 27,656.93

11. Quarry Level - Area 7 - Rock Sorting

This large area has a pile of DG and grout on it today. It needs to be sorted and screened to obtain the DG for use in reclamation and to make it suitable to reclaim. The area equals 5.59 acres. It is estimated that the rock pile is approximately 10 feet deep on the average and that the DG amounts to 50% of the pile. The large rocks will be placed against the wall to the northeast and east along with other large rocks to reduce steep wall. The plan is to use a grizzly rock screen and 3 front end loaders to sort the Rock and move the material around. This area can be seen on [R-MAP-8](#)

2 Cat 7 yard loader rental rate	\$ 183.60	Per Hour	at	91.2 hours	=	\$ 33,488.64
Cat 10 yard loader rental rate	\$ 183.60	Per Hour	at	91.2 hours	=	\$ 16,744.32
2 Operator rate	\$ 74.79	Per Hour	at	91.2 hours	=	\$ 13,641.70
Operator rate	\$ 74.79	Per Hour	at	91.2 hours	=	\$ 6,820.85
Total for Quarry Level - Area 7 - Rock Sorting of Reclamation Plan						\$ 70,695.50

12. Quarry Level - Area 8 - Topsoil

After the rock and DG is removed from these areas topsoil needs to cover the location. This total area is about 4.64 acres. The amount of topsoil used would be spread by Scrapers and a Grader would level the area. This area can be seen on [R-MAP-9](#)

Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	5.15 hours	=	\$ 1,006.05
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	5.15 hours	=	\$ 1,006.05
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	5.15 hours	=	\$ 1,006.05
Cat 160 H Grader rental rate	\$ 92.22	Per Hour	at	5.15 hours	=	\$ 474.93
Operator rate	\$ 73.41	Per Hour	at	5.15 hours	=	\$ 378.06
Operator rate	\$ 73.41	Per Hour	at	5.15 hours	=	\$ 378.06
Operator rate	\$ 73.41	Per Hour	at	5.15 hours	=	\$ 378.06
Operator rate	\$ 74.79	Per Hour	at	5.15 hours	=	\$ 385.17
Total for Quarry Level – Area 8 - Topsoil of Reclamation Plan						\$ 5,012.44

13. Quarry Level - Area 9 - Topsoil

This area covers the rest of Quarry Level 1. This area covers 6 acres with some the areas being at different elevations. This area will be covered in topsoil that will be hauled to the location by scrapers. A grader will be used to spread out and level off the topsoil. This area can be seen on **R-MAP-10**

Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	13.57 hours	=	\$ 2,650.90
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	13.57 hours	=	\$ 2,650.90
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	13.57 hours	=	\$ 2,650.90
Cat 160 H Grader rental rate	\$ 92.22	Per Hour	at	13.57 hours	=	\$ 1,251.43
Operator rate	\$ 73.41	Per Hour	at	13.57 hours	=	\$ 996.17
Operator rate	\$ 73.41	Per Hour	at	13.57 hours	=	\$ 996.17
Operator rate	\$ 73.41	Per Hour	at	13.57 hours	=	\$ 996.17
Operator rate	\$ 74.79	Per Hour	at	13.57 hours	=	\$ 1,014.90
Total for Quarry Level Area 9 Topsoil of Reclamation Plan						\$ 13,207.55

14. Road 4 - Area 10 - Rock Push

This area contains the road from Quarry level 1 to the top of the hill and the grout pile. A dozer will be used to push and separate the material in this area. The bulldozer will push some of the granite over the edge and slope the grout pile. Also some of the material will be pushed into a pile to screen and use as cover material. The plan is to push as much material off to the west as possible to obtain the DG and reduce the vertical wall areas. The area covers 5.44 acres. This area can be seen on **R-MAP-11**

Cat D8R Bulldozer rental rate	\$ 161.84	Per Hour	at	20.51 hours	=	\$ 3,319.34
Operator rate	\$ 73.41	Per Hour	at	20.51 hours	=	\$ 1,505.64
Total for Road-4 Area 10 Rock Push of Reclamation Plan						\$ 4,824.98

15. Road 4 - Area 11 - Rock Sorting

The Rock Sorting will be done in road area-4. The area covers 2.3 acres. Like the other rock sorting areas, 2-7 yard loaders and a 10 yard loader will be used to screen and move the material to the correct location. Large Boulders not pushed over the edge of the grout pile will be used as a natural barricade for safety after topsoil is spread and everything is seeded. This area can be seen on **R-MAP-12**

2 Cat 7 yard loader rental rate	\$ 183.60	Per Hour	at	23.36 hours	=	\$ 8,577.79
Cat 10 yard loader rental rate	\$ 183.60	Per Hour	at	23.36 hours	=	\$ 4,288.90
2 Operator rate	\$ 74.79	Per Hour	at	23.36 hours	=	\$ 3,494.19
Operator rate	\$ 74.79	Per Hour	at	23.36 hours	=	\$ 1,747.09
Total for Road 4 - Area 10 - Rock Sorting of Reclamation Plan						\$ 18,107.97

16. Road 4 - Area 12- Topsoil

This area contains the road from the Quarry level that goes up the ramp and the grout pile. This area is around 2.68 acres. The area consists of the road, parts of the quarry level 2, and the grout pile. This area will also use Cat Scrapers to spread the topsoil from stockpile locations and spread were need throughout the area. Topsoil will be spread with a grader were it is capable. Some soil will be pushed over the edge of the grout pile to help promote plant growth and to add a cover layer. This area can be seen on [R-MAP-13](#)

Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	7.76 hours	=	\$ 1,515.92
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	7.76 hours	=	\$ 1,515.92
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	7.76 hours	=	\$ 1,515.92
Cat 160 H Grader rental rate	\$ 92.22	Per Hour	at	7.76 hours	=	\$ 715.63
Operator rate	\$ 73.41	Per Hour	at	7.76 hours	=	\$ 569.66
Operator rate	\$ 73.41	Per Hour	at	7.76 hours	=	\$ 569.66
Operator rate	\$ 73.41	Per Hour	at	7.76 hours	=	\$ 569.66
Operator rate	\$ 74.79	Per Hour	at	7.76 hours	=	\$ 580.37
Total for Road 4 - Area 10 - Topsoil of Reclamation Plan						\$ 7,552.73

17. Grout Pile - Area 13 South - Topsoil

This area is the south side of the grout pile going up to the edge of the mountain. This area is 3 acres and will be mostly flat due to the dozer work and the rock sorting. A lot of the soil will be pushed over the grout pile edge to add cover for the grout pile. This area can be seen on [R-MAP-14](#)

Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	7.36 hours	=	\$ 1,437.78
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	7.36 hours	=	\$ 1,437.78
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	7.36 hours	=	\$ 1,437.78
Cat 160 H Grader rental rate	\$ 92.22	Per Hour	at	7.36 hours	=	\$ 678.74
Operator rate	\$ 73.41	Per Hour	at	7.36 hours	=	\$ 540.30
Operator rate	\$ 73.41	Per Hour	at	7.36 hours	=	\$ 540.30
Operator rate	\$ 73.41	Per Hour	at	7.36 hours	=	\$ 540.30
Operator rate	\$ 74.79	Per Hour	at	7.36 hours	=	\$ 550.45
Total for Grout Pile - Area 11 South - Topsoil of Reclamation Plan						\$ 7,163.41

18. Grout Pile - Area 14 North - Topsoil

This area is north of the Grout pile and also contains the access road on the South side of quarry level 1. This Road is another access point to the Grout pile Area. The total acreage is estimated to be around 2.93 acres. Topsoil is going to be spread and leveled like other areas with Scrapers and a grader. This area can be seen on [R-MAP-15](#)

Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	9.73 hours	=	\$ 1,900.76
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	9.73 hours	=	\$ 1,900.76
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	9.73 hours	=	\$ 1,900.76
Cat 160 H Grader rental rate	\$ 92.22	Per Hour	at	9.73 hours	=	\$ 897.30
Operator rate	\$ 73.41	Per Hour	at	9.73 hours	=	\$ 714.28
Operator rate	\$ 73.41	Per Hour	at	9.73 hours	=	\$ 714.28
Operator rate	\$ 73.41	Per Hour	at	9.73 hours	=	\$ 714.28
Operator rate	\$ 74.79	Per Hour	at	9.73 hours	=	\$ 727.71
Total for Grout Pile - Area 12 North - Topsoil of Reclamation Plan						\$ 9,470.11

19. Hill Top - Area 15 - Topsoil

This area is where trees were planted 20 years ago as an early reclamation project. The area is only .72 acres and minor work would need to be done to add to the area already reclaimed. The topsoil would be spread to promote more growth of smaller plants and bushes. This area can be seen on [R-MAP-16](#)

Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	2.43 hours	=	\$ 474.70
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	2.43 hours	=	\$ 474.70
Cat 631D Scraper rental rate	\$ 195.35	Per Hour	at	2.43 hours	=	\$ 474.70
Cat 160 H Grader rental rate	\$ 183.60	Per Hour	at	2.43 hours	=	\$ 446.15
Operator rate	\$ 73.41	Per Hour	at	2.43 hours	=	\$ 178.39
Operator rate	\$ 73.41	Per Hour	at	2.43 hours	=	\$ 178.39
Operator rate	\$ 73.41	Per Hour	at	2.43 hours	=	\$ 178.39
Operator rate	\$ 74.79	Per Hour	at	2.43 hours	=	\$ 181.74
Total for Hill Top - Area 13 - Topsoil of Reclamation Plan						\$ 2,587.15

20. Re-vegetation Cost

This task is to prepare and re-vegetate areas covered with topsoil on the whole site. These areas will be fertilized and reseeded with native grasses and forbes by hydro seeding. In addition, native trees and shrubs species will be planted over flat or mildly sloped areas at a density of 845 units per acre. A 30% mortality factor was included in the specified native tree and shrub planting density. Invasive plant species will be eradicated. Finally, a drip irrigation system will be installed to trickle irrigate new perennial plantings. The native grass and forbes mix, plus native trees and shrubs saplings will be obtained from a local nursery. The graded areas will be hydro seeded with native grasses and forbes. Tree and shrub saplings will be planted using a truck-mounted auger. An automatic, timer-controlled drip irrigation system will be installed to irrigate perennial plantings between March-October for the first least three seasons. The cost reflect the vegetation of the complete quarry site from the entrance road to the top of the grout pile.

a. Labor and Equipment Cost

Hughes EZ 112 Auger	\$ 58.18	Per Hour	at	320 hours	=	\$ 18,617.60
4 Operator rate	\$ 70.82	Per Hour	at	320 hours	=	\$ 90,649.60
Total for Re-vegetation Labor and Equipment Cost of Reclamation Plan						\$ 109,267.20

b. Material Cost

Item/Plant Species	UOM	# Units	\$ / Unit		Cost (\$)
Trees & Shrubs - 845 units/acre @\$8.00	Acres	21.43	\$ 6,760.00	=	\$ 169,494.16
Seed, Fertilize & Mulch (grass & forbes)	Acres	125.26	\$ 720.00	=	\$ 105,519.02
Drip Tubing (1/2" Mainline + Fittings)	Acres	42.86	\$ 76.35	=	\$ 3,828.66
Drip Tubing (1/4" + Fittings)	Acres	42.86	\$ 320.00	=	\$ 16,046.78
Drip Irrigation System Timer & Accessories	Acres	42.86	\$ 30.00	=	\$ 1,504.39
Total for Re-vegetation Material Cost of Reclamation Plan					\$ 296,393.01
Total for Re-vegetation of Reclamation Plan					\$ 405,660.21

21. Miscellaneous Cost

These cost include taking down Power lines and closing water supply wells. Septic tank removal and invasive species removal are included in these cost.

Item/Task	QTY	\$/Unit	Cost (\$)
Remove Electrical Transformers & Power lines (PG&E)	1	\$ -	\$ -
Close 2 water supply wells	2	\$ 5,265.00	\$ 10,530.00
Remove Septic Tanks	1	\$ 4,500.00	\$ 5,265.00
Remove Invasive Species	1	\$ 2,500.00	\$ 2,925.00
Total for Miscellaneous Costs of Reclamation Plan			\$ 18,720.00

22. Monitoring Cost

This is the cost to hire a Certified Botanist to monitoring the re-vegetation of the site.

Monitoring Task	\$/Visit	#Visits/Year	#Years	Cost (\$)
Re-vegetation by Certified Botanist/Horticulturalist	1	2	3	\$ 10,530.00
Total Cost of Monitoring for Reclamation Plan				\$ 10,530.00

23. SUMMARY OF COSTS

Total of all Primary Reclamation Activities Costs

Road 1 - Area 1	\$	1,580.10
Road 2 - Area 2	\$	8,736.67
Road 2 - Area 2 - Topsoil	\$	18,365.98
Pond 1 - Area 3	\$	6,366.60
Shop 1 - Area 4 - Plant Structures & Equipment Removal Costs	\$	69,718.80
Shop 1 - Area 4 - Topsoil	\$	11,436.16
Road 3 - Area 5	\$	58,485.50
Road 3 - Area 5 - Rock Pushing	\$	117,585.54
Road 3 - Area 5 - Topsoil	\$	15,037.33
Quarry level - Area 6 - Rock Sorting	\$	27,656.93
Quarry level - Area 7 - Rock Sorting	\$	70,695.50
Quarry level - Area 8 - Topsoil	\$	5,012.44
Quarry level - Area 9 - Topsoil	\$	13,207.55
Road 4 - Area 10 - Rock Push	\$	4,824.98
Road 4 - Area 10 - Rock Sorting	\$	18,107.97
Road 4 - Area 10 - Topsoil	\$	7,552.73
Grout Pile - Area 11 South - Topsoil	\$	7,163.41
Grout Pile - Area 12 North - Topsoil	\$	9,470.11
Hill Top - Area 13 - Topsoil	\$	2,587.55
Re-vegetation Costs	\$	405,660.21
Miscellaneous Costs	\$	18,720.00
Monitoring Costs	\$	10,530.00

Total of Direct Costs **\$ 908,501.68**

Supervision	4.3%	\$	39,065.57
Profit/Overhead	9.0%	\$	81,765.15
Contingencies	7.0%	\$	63,595.12
Mobilization	1.0%	\$	9,085.02

Total of Indirect Costs **\$ 193,510.86**

Total of Direct & Indirect Costs **\$ 1,102,012.53**

Lead Agency Administrative Cost* (Determined by the Lead Agency)	8.0%	\$	72,680.13
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Total Estimated Cost of Reclamation **\$ 1,174,692.67**

Attachments

Drawings

The following drawings accompany this reclamation plan package.

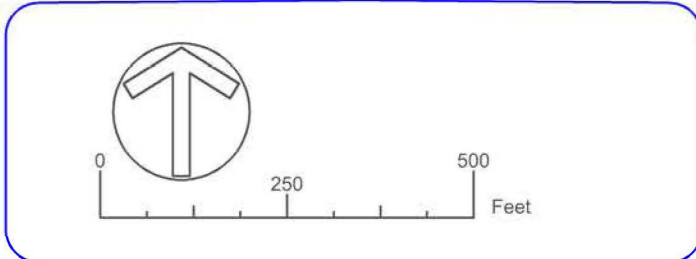
OP-MAP-1	Property Parcel Map
OP-MAP-2	Quarry Work Areas.
R-MAP-1	Reclamation Areas Map
R-MAP-2	Road 1-Area 1 Map
R-MAP-3	Road 2-Area 2 Map
R-MAP-4	Pond 1-Area 3 Map
R-MAP-5	Shop 1-Area 4 Map
R-MAP-6	Road 3-Area 5 Map
R-MAP-7	Quarry Level-Area 6 Map
R-MAP-8	Quarry Level-Area 7 Map
R-MAP-9	Quarry Level-Area 8 Map
R-MAP-10	Quarry Level-Area 9 Map
R-MAP-11	Road 4-Area 10 Map
R-MAP-12	Road 4-Area 11 Map
R-MAP-13	Road 4-Area 12 Map
R-MAP-14	Grout Pile-Area 13 South Map
R-MAP-15	Grout Pile-Area 14 North Map
R-MAP-16	Hill Top-Area 15 Map
R-MAP-17	Final Reclamation Map

Permits

The following documents accompany this operating plan package.

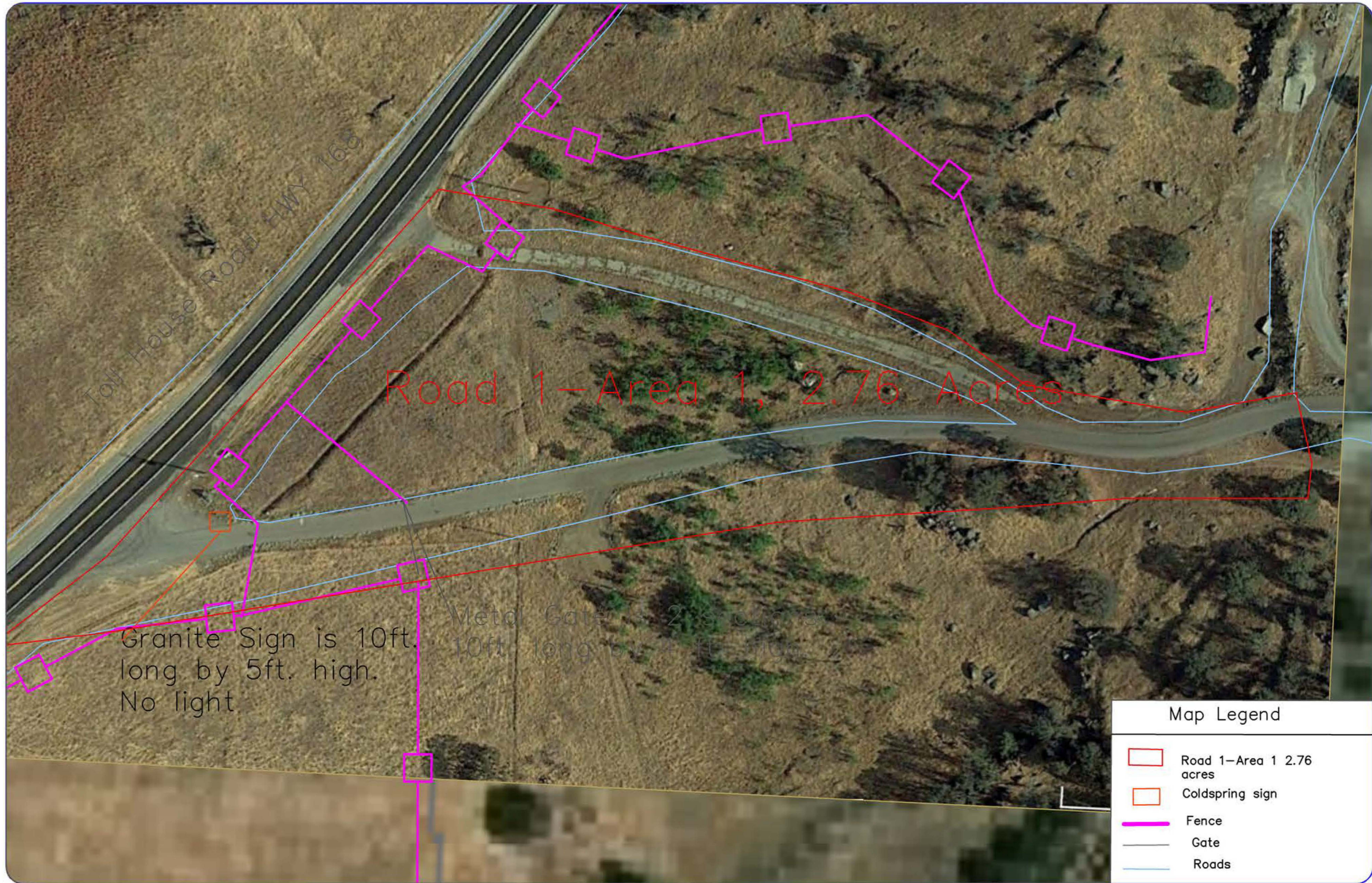


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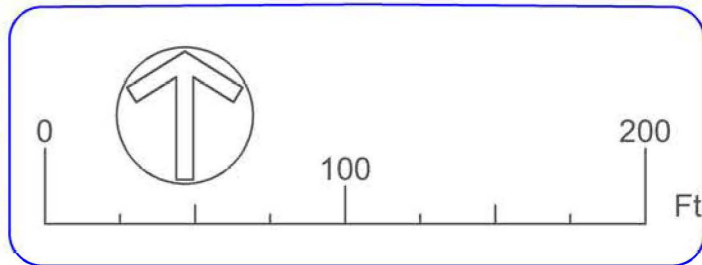


DESCRIPTION: Academy Quarry
 Reclamation Plan Map
 Reclamation Areas
 SHEET: FIGURE:

17482 GRANITE WEST ROAD, COLD SPRING, MN 56320-4578
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DRAWING NO:	R-MAP-2
SCALE:	1/2 scale=100 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20



DESCRIPTION: Academy Quarry Reclamation Plan Map Road 1–Area 1 Map	
SHEET:	FIGURE:

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Pond 1 - Area 3, 3.05 Acres

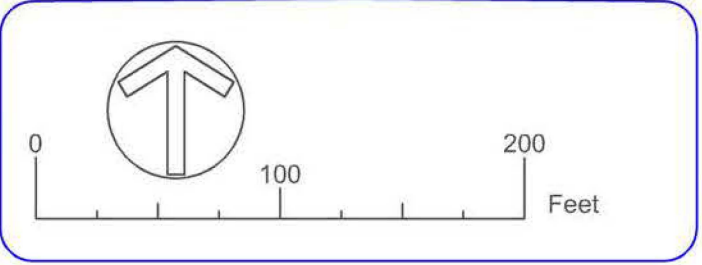
Road 2 - Area 2, 7.5 Acres

Sign Face 9.5ft. long
by 4ft. high,
Granite Block is 16ft.
long by 6ft. high, No
lights

Map Legend

- Road 2 - Area 2, 7.5 acres
- Buildings
- Coldspring sign
- Fence
- Gate
- Roads

DRAWING NO:	R-MAP-3
SCALE:	1/2 scale=100 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20



DESCRIPTION: Academy Quarry
Reclamation Plan Map
Road 2 - Area 2 Map

SHEET: FIGURE:







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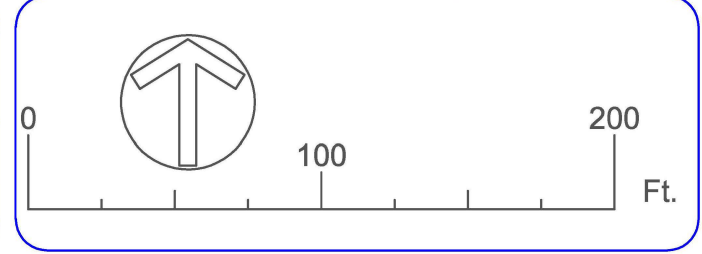


Pond 1—Area 3, 3.05 Acres

Road 2—Area 4, 7.5 Acres

Map Legend	
	Pond 1—Area 3, 3.05 Acres
	Fence
	Roads
	Gate

DRAWING NO:	R-MAP-4
SCALE:	1/2 scale=100 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20



DESCRIPTION: Academy Quarry Reclamation Plan Map Pond 1—Area 3 Map	
SHEET:	FIGURE:

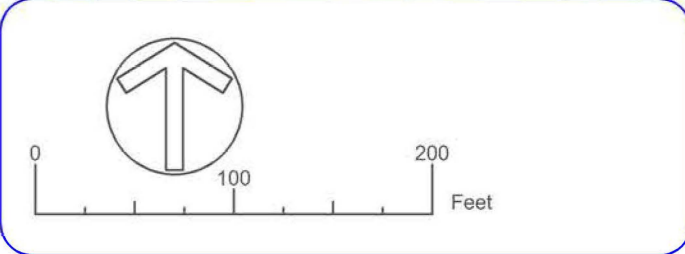


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DRAWING NO: R-MAP-5
 SCALE: 1/2" scale=100 ft.
 DRAWN BY: SC
 DATE DRAWN: 6/8/20



DESCRIPTION: Academy Quarry
 Reclamation Plan Map
 Shop 1-Area 4 Map

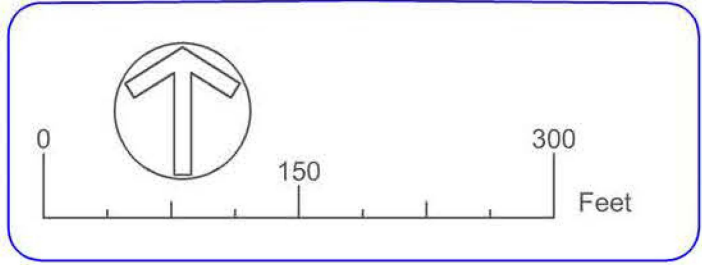
SHEET: FIGURE:

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DRAWING NO: R-MAP-6
 SCALE: 1/2 scale=150 ft.
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 DATE DRAWN: 6/8/20



DESCRIPTION: Academy Quarry Reclamation Plan Map Road 3-Area 5 Map
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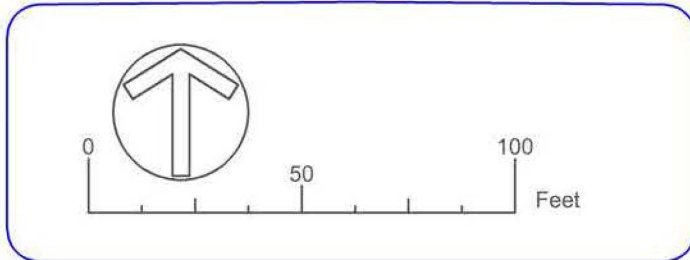


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Map Legend	
	Road 3-Area 5, 7.5 Acres
	Coldspring sign
	Buildings
	Gate
	Roads



DRAWING NO: R-MAP-7
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 DATE DRAWN: 6/8/20

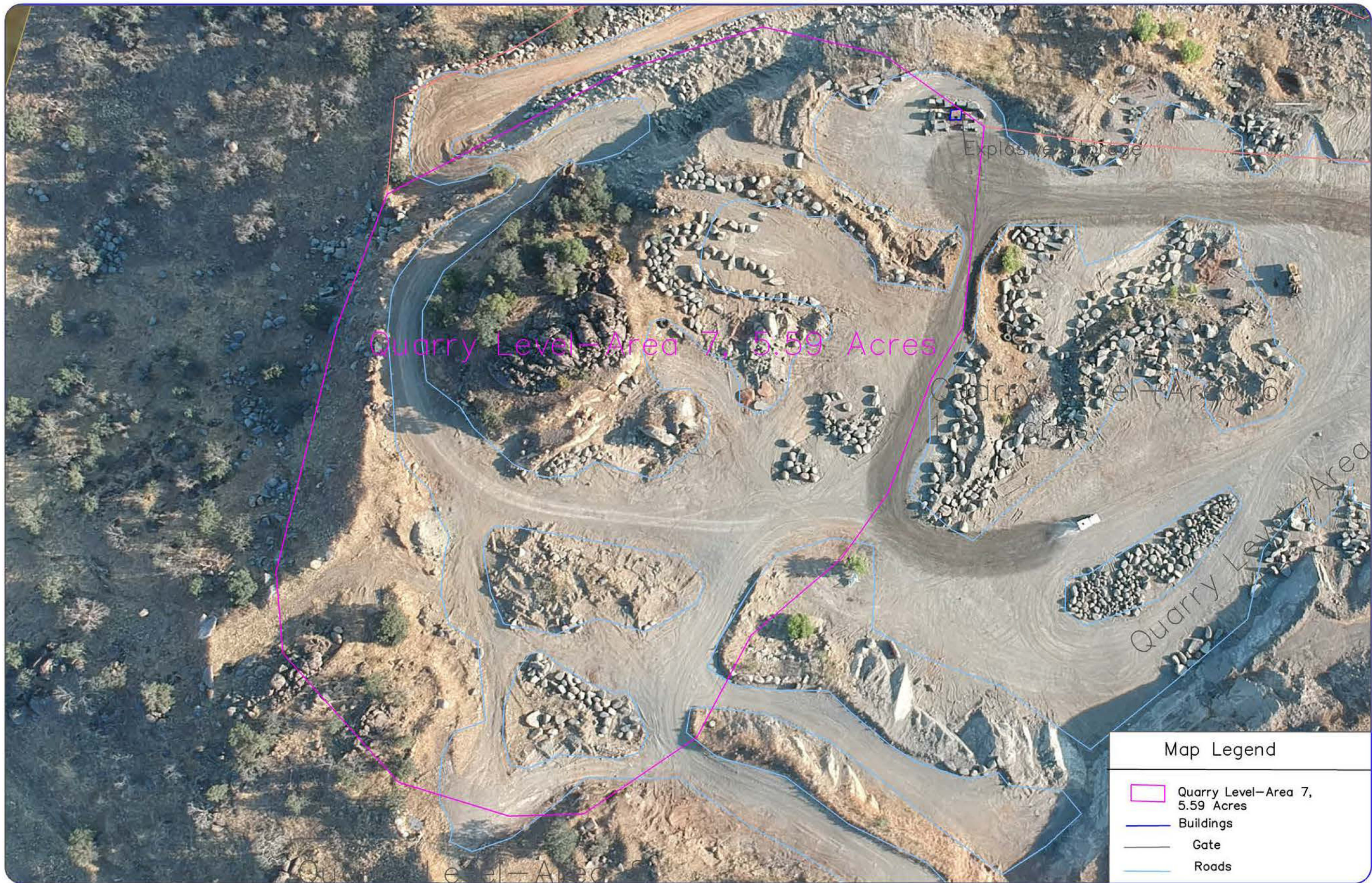


DESCRIPTION: Academy Quarry
 Reclamation Plan Map
 Quarry Level—Area 6 Map

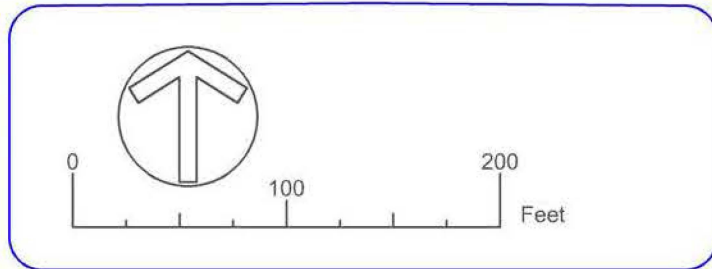
SHEET: FIGURE:

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DRAWING NO:	R-MAP-8
SCALE:	1/2 scale=100 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20

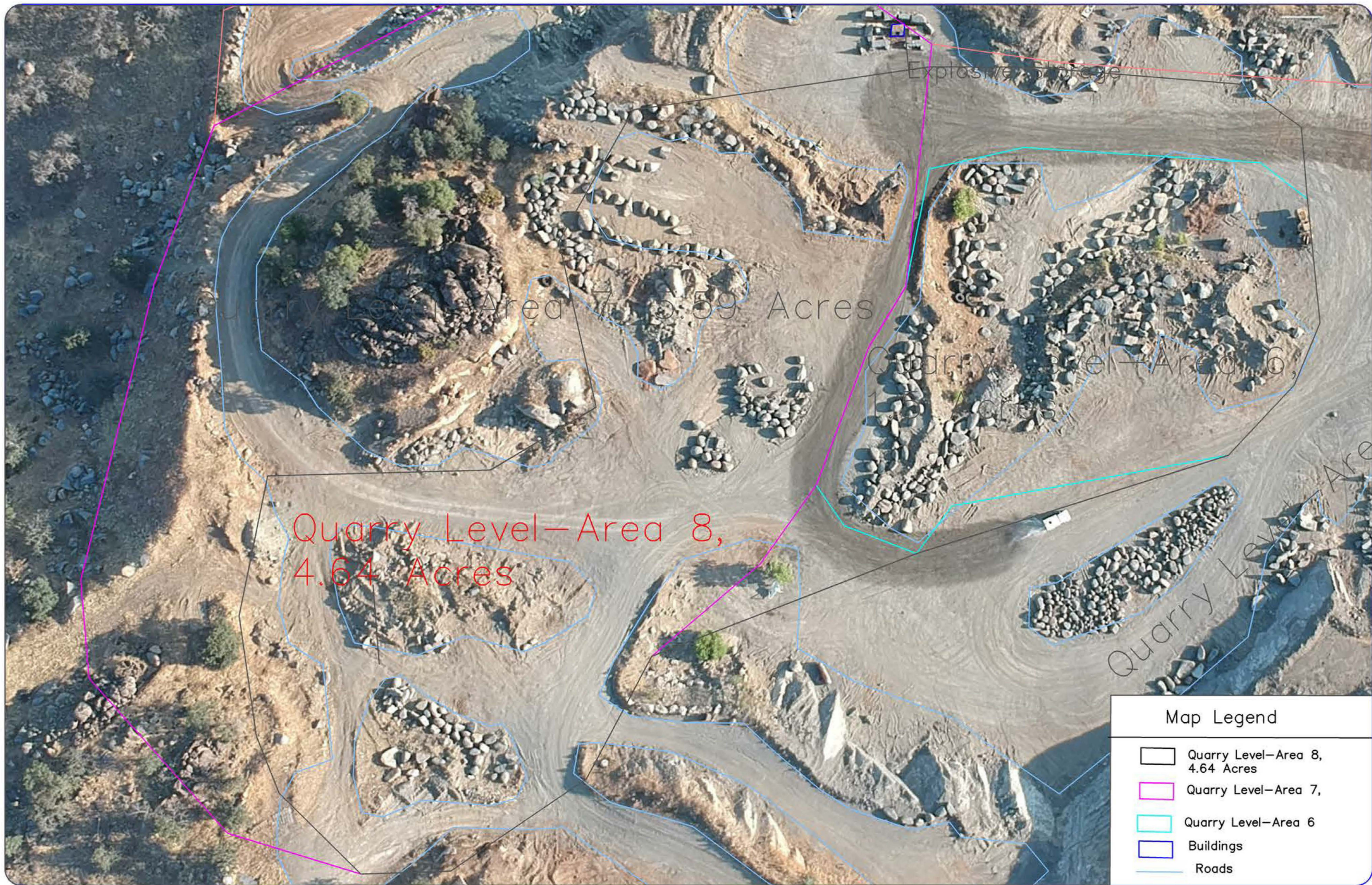


DESCRIPTION: Academy Quarry Reclamation Plan Map Quarry Level—Area 7 Map	
SHEET:	FIGURE:

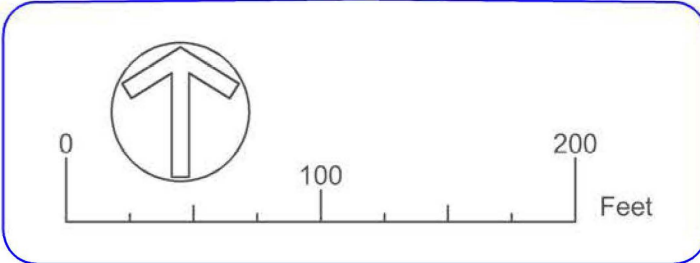


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DRAWING NO:	R-MAP-9
SCALE:	1/2 scale=100 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20



DESCRIPTION: Academy Quarry Reclamation Plan Map Quarry Level—Area 8 Map	
SHEET:	FIGURE:

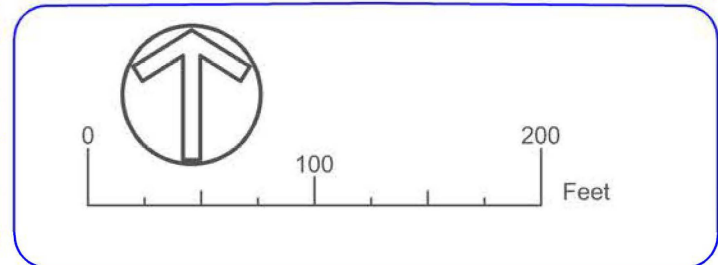


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DRAWING NO:	R-MAP-10
SCALE:	1/2 scale=100 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20



DESCRIPTION: Academy Quarry Reclamation Plan Map Quarry Level-Area 9 Map	
SHEET:	FIGURE:

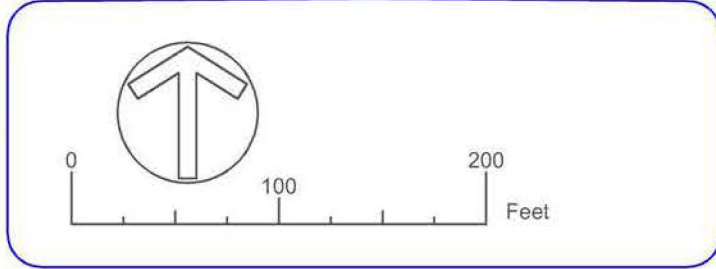
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Map Legend	
	Road 4—Area 10, 5.44 Acres
	Quarry Level—Area 7,
	Quarry Level—Area 6
	Quarry Level—Area 9
	Roads

DRAWING NO:	R-MAP-11
SCALE:	1/2 scale=100 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20

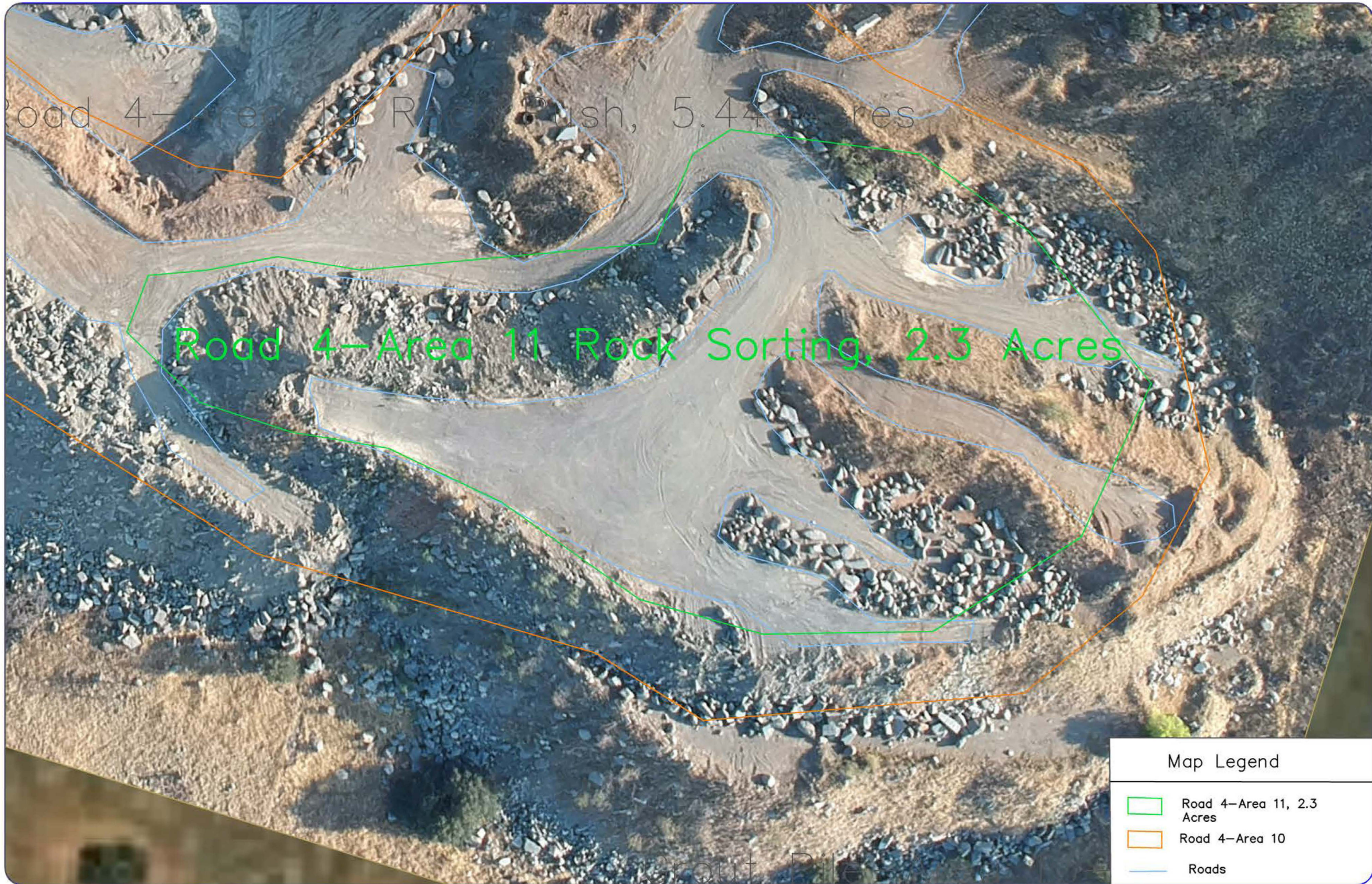





DESCRIPTION: Academy Quarry Reclamation Plan Map Road 4—Area 10 Map	
SHEET:	FIGURE:



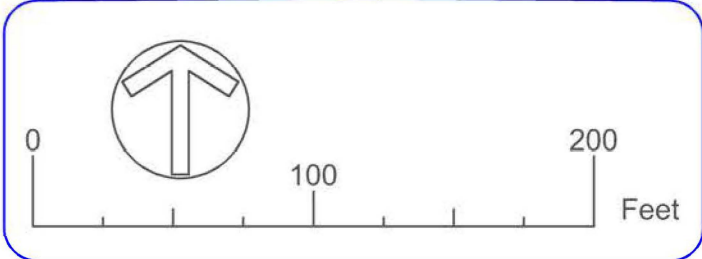
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Map Legend	
	Road 4—Area 11, 2.3 Acres
	Road 4—Area 10
	Roads

DRAWING NO:	R-MAP-12
SCALE:	1/2 scale=100 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20



DESCRIPTION: Academy Quarry Reclamation Plan Map Road 4—Area 11 Map	
SHEET:	FIGURE:



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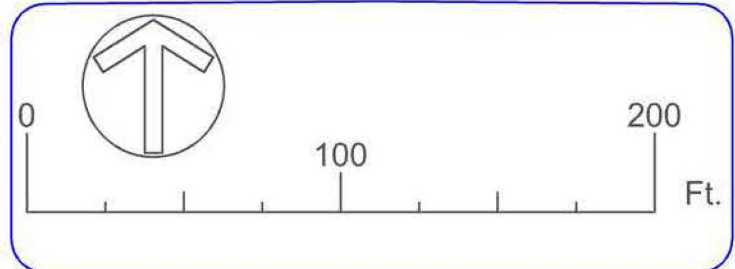
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Road 4—Area 12
Topsoil, 2.68 Acres

Map Legend	
	Road 4—Area 12, 2.68 Acres
	Road 4—Area 11
	Road 4—Area 10
	Quarry Level—Area 7
	Roads

DRAWING NO:	R-MAP-13
SCALE:	1/2 scale=100 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20



DESCRIPTION: Academy Quarry Reclamation Plan Map Road 4—Area 12 Map	
SHEET:	FIGURE:

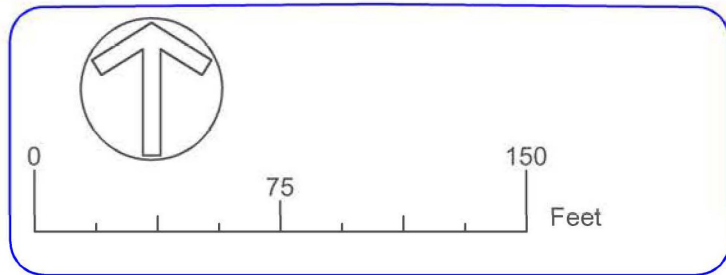


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DRAWING NO:	R-MAP-14
SCALE:	1/2 scale=75 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20



DESCRIPTION: Academy Quarry Reclamation Plan Map Grout Pile—Area 13 South	
SHEET:	FIGURE:

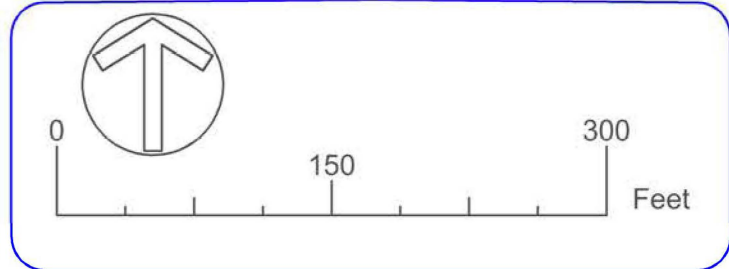
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Map Legend	
	Grout Pile—Area 14, 2.93 Acres
	Grout Pile—Area 13
	Road 4—Area 12
	Road 4—Area 11
	Road 4—Area 10
	Quarry Level—Area 9
	Quarry Level—Area 6
	Road 3—Area 5
	Roads

DRAWING NO: R-MAP-15
 SCALE: 1/2 scale=150 ft.
 DRAWN BY: SC
 DATE DRAWN: 6/8/20



DESCRIPTION: Academy Quarry
 Reclamation Plan Map
 Grout Pile—Area 14 North

SHEET: FIGURE:

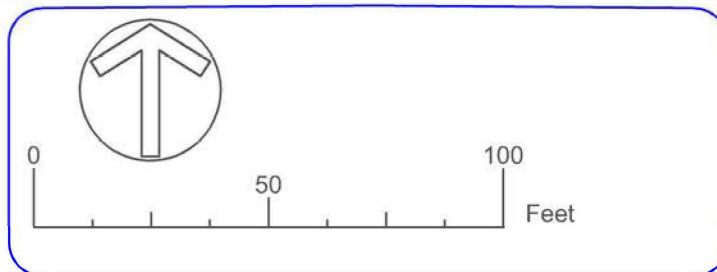


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DRAWING NO:	R-MAP-16
SCALE:	1/2 scale=150 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20









DESCRIPTION: Academy Quarry Reclamation Plan Map Hill Top—Area 15 Map	
SHEET:	FIGURE:

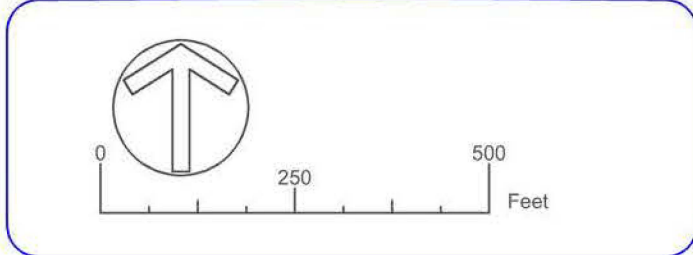
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Map Legend	
	Grass Area
	Bushes
	Small Trees
	Large Trees
	Granite Blocks
	Fence

DRAWING NO:	R-MAP-17
SCALE:	1/2 scale=250 ft.
DRAWN BY:	SC
DATE DRAWN:	6/8/20



DESCRIPTION: Academy Quarry Reclamation Plan Map Final Reclamation Map	
SHEET:	FIGURE:



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