

# WASTELINE INC.

P.O. Box 3471 Rapid City, SD 57709-3471 (605)939-0650 - P.O. Box 88 Cortez, CO 81321-0088  
3201 Latham Ave Evans, CO 80620  
E-mail:WASTELINE.84532@gmail.com



05 November 2018

SUBJECT: Technical Revision Application and Exhibits, M-2011-014 Schmidt Site

Mr. Lucas West, Environmental Protection Specialist  
Colorado Division of Reclamation Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

**RECEIVED**

**NOV 06 2018**

**DIVISION OF RECLAMATION  
MINING AND SAFETY**

Dear Mr. Lucas:

I am submitting this on behalf of Dale and Ellen Schmidt, owners and operators of the Site.

Enclosed is the completed form for the Technical Revision and the complete exhibits supporting the request. As discussed, another copy of the form and the fee check was mailed to the Denver Office from Lafayette, where the Schmidts are currently while Ellen's father is in the hospital.

The exhibits include:

- Exhibit 1: Introduction
- Exhibit 2: Cover page for map (Map in electronic version is 11x17; this map is 8.5x11 and so at a scale of 1"=80', as we do not have the capability of printing 11x17 at this time.
- Exhibit 3: Tire bale wall information (from approved application to CDPHE)
- Exhibit 4: Package for LPEA and indemnity agreements as drafted
- Exhibit 5: Photos and other images

Each of the two copies will also have a CD containing the entire package, including the 11x17 map as discussed above.

We look forward to your review and approval, so that we can continue working with Archuleta County to get the reclamation approved as proposed.

If you have any questions, please contact the undersigned at WASTELINE, Inc. at 970-564-1380 or 605-939-0650 email: [Wasteline.84532@gmail.com](mailto:Wasteline.84532@gmail.com).

Sincerely,

Nathan A. Barton, CE, PE, DEE,  
Environmental and Permitting Compliance Engineer

Enclosures

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## EXHIBITS TO TECHNICAL REVISION FOR M2011-014 SCHMIDT SITE

### EXHIBIT 1 INTRODUCTION

Reference: Consent Order.

This exhibit provides additional and more detailed information on the actions taken and proposed to ensure compliance with regulations and to clarify the original application.

1. Storm water control measures (best management practices) are shown on Exhibit 2. These include regrading and seeding areas on both the east and west permit boundaries (property lines), to provide a combination of small berms, swales (both armored with rock and in soil), rock check dams, and detention and retention sedimentation basins, to control runoff, prevent runoff of water off the property, and prevent run-on of water from adjacent properties. Due to the small area and the steep slopes, the control measures are intentionally oversized. Standard inspections after rainfall and during snowmelt will be done, followed by necessary repair and maintenance. In addition to care taken to prevent any off-site impacts, care is taken to ensure that erosion and sediment do not impact on the electrical pole located on-site. The exact shape and size of water control measures will change in response to inspections.
2. Seeding of areas disturbed in road-building and removing soil which had been pushed across the property/permit boundary was completed by September to take advantage of Fall rains. This work is documented by photos and videos, which are available upon request. Additional areas where there were bare slopes not planned for future disturbance were also seeded.
3. The information submitted in the original application regarding construction of retaining walls using tires and rocks remains current, and is now supplemented by information submitted to CDPHE for use of tire-bales, as a retaining wall along the northeast edge of the property. The wall will initially be about 70 feet long, within 15 feet of the property/permit boundary, and range from 2.5 to 20 feet in height, using tire bales, backfilled with placed rock, with water drainage through the placed rock protected by geofabric. This is being reviewed by the County, which has not yet made a decision regarding their approval of the site plan for mining and reclamation performed in 2014. Any work on this must be delayed until county issues are resolved. If the County does not allow the retaining wall to be built within 25 feet of the property boundary (as measured from the back of the tires/tire-bales, the entire alignment of the existing (and pre-existing) access road onto the property, and location of other retaining walls will be required to be changed, although the changes (though expensive, are relatively minor). Otherwise mining and reclamation will proceed as originally planned.
4. Requests for indemnity agreements were given to both the neighbor to the east (the neighbors to the north, west and south have no significant manmade structures) and to La Plata Electric Association, which owns the power pylon ("pole") located on the property in a non-exclusive right-of-way. The eastern neighbor (Susan Moak) has refused to sign any agreement (the County also requested she sign an agreement regarding the retaining walls within 25 feet of her property). La Plata Electric Company provided information, requiring that there be no excavation within 15 feet of the power structure and ensuring access to the structure is constantly maintained, but has not agreed to sign an indemnity agreement or other letter. Negotiations continue.

## EXHIBIT 2 MAP (showing storm water, seeding, and retaining walls on site)

1. The information provided in response to the enforcement action earlier this year is incorporated by reference, and the base map provided at the request of the county and DRMS is annotated to show actions and planned actions.
2. Seeding was done by broadcasting after seedbed preparation, in accordance with Natural Resources Conservation District instructions. Areas will be reseeded if necessary next spring (2019).
3. In addition to the initial 70 foot tirebale retaining wall (parallel to the property line), the bale wall may be extended up to an additional 50 feet, moving away from the property line and with height dropping from 20 feet to 2.5 feet, to allow the slope to the south to be graded at 2:1 for final configurations.
4. Although the map is drawn for 11x17 paper, and the PDF version is provided in that format, at a scale of 1"=40', the hardcopy package delivered to DRMS is a version reduced to a scale of 1"=80' to fit on an 8.5 x 11 sheet.

# Gibbons - NBQ Inc.

Frank Engineering Company, Inc.

Frank Gibson, Professional Engineer

Survey Station, 175457773

P.O. Box 2178  
Aspen, CO 81602  
Phone (970) 921-4001  
Fax (970) 921-4003



Disturbed Ground Illustration of  
A portion of Lot 6, Block 5  
Aspen Springs Subdivision No. 3  
Sections 1 and 12 of T34N, R3W, NMPM  
Archuleta County Colorado

M2011-014 Schmidt Site

Found 1" plastic cap  
on #5 rebar  
PLS #26973

Approximate location  
of safety/privacy fence  
~50 ft long by 6 ft high,  
located less than 1 foot  
inside Schmidt property

S16°37'00"E  
316'±

River Run Drive

edge of gravel road

N67°06'20"E

150.26

Found 1" plastic  
cap on #5 rebar  
PLS #26973

Approximate location  
of borrow area  
SEDIMENT RETENTION  
BASIN

Swale

Sediment  
Basin

Approximate location  
of borrow area  
Sediment  
Basin

N016°45'00"W  
226'±

Swale

Check Dam

Existing dirt road

18'±

overhead power line

limits of  
disturbed ground  
REMOVED

Swale

Check Dam

Swale

Seeded

limits of  
disturbed ground  
REMOVED

25'±

3.1'±

21'±

557.17'

Seeded

Berm

Swale

Existing dirt road

Swale

Check Dam

Check Dam

Check Dam cabin

property line based upon found monuments.

0 20 40 80

1 Inch = 40 US Survey Feet

Bearings and distances are  
from the record plat.

Revised 6-14-18, 7-10-18, and 8-10-18  
May 21, 2018 for Dale Schmidt

## LEGEND

Seeded areas - Green  
Storm water features  
(BMP) in blue

Retaining Walls in magenta

## SURVEYORS STATEMENT:

This survey is subject to any facts that may be  
disclosed by a title search and abstract.

I hereby state this plat is based on a field survey  
made by me or under my direct supervision and that  
to the best of my professional knowledge, information,  
and belief, it correctly represents the facts found at  
the time of survey.

NOTICE: According to Colorado law you must commence  
any legal action based upon any defect in this survey  
within three years after you receive or are covered such  
defect. In no event, may any action be based upon any  
defect in this survey beyond the third anniversary  
ten years from the date of the certification of this survey.

Frank Gibson, P.E. (Reg. L.S. #1334)

This document was prepared by Nathan A. Barton, PE #CO-27342, 11AUG18

M2011-014 Schmidt Site

Found #6  
rebar

Found #5 rebar w/aluminum tag  
PLS #4679  
(original subdividing surveyor)

Found #6  
rebar

N90°00'00"W 231.58'

S60°00'00"W 23.56'

This version prepared by Nathan A.  
Barton, PE #CO-27342, 11AUG18

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### EXHIBIT 3. TIRE BALE WALL (Details and Approval by CDPHE)

In addition to this information, technical data and research can be furnished if needed.

The tire bale configuration is a mass or gravity retaining wall, maximum 20 feet in height on a stable soil foundation and protected from runoff and erosion, and uses a design used by Colorado DOT and other government agencies. This matches information provided in 2011 regarding other methods of constructing retaining walls using tires.

The exhibit is separately numbered.



## Application for a Solid Waste Beneficial Use Determination

This form should be used to request a Beneficial Use Determination (BUD) in compliance with Section 8.6 of the Regulations Pertaining to Solid Waste Sites and Facilities, 6 CCR 1007-2. Please consult with the Division at (303) 692-3320 prior to beginning the beneficial use process outlined below.

### A. Applicant Information

Applicant Name: Nathan A. Barton

Business Name (if different than applicant name): Wasteline, Inc.

Mailing Address: PO Box 3471

City: Rapid City State: SD Zip Code: 57709-3471

Billing Address: Same as aboveX

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Consultant Name (if applicable): \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

### B. Type of Beneficial Use Requested

Application Type: New ☒ Re-characterization ☐ Modify Existing Determination ☐

Does the beneficial use proposal involve the land application of any material? Yes ☐ No ☒

Application Category: Category 1 ☐ Category 2 ☐ Category 3 ☐ Case-by-Case ☒

**Category 1:** Wastes that have been characterized according to the methods established in Section 8.6.5 and test results indicate the material contains the constituents in Tables 1A and 1B at or below the specified standards or at or below the levels contained in the raw materials being replaced. Category 1 beneficial use materials may be used for those uses identified under Waste Category column 1 on Table 2.

**Category 2:** Wastes that have been characterized according to the methods established in Section 8.6.5 and test results indicate the material or *final product containing the material* contains the constituents in Table 1B at or below the specified standards or at or below the levels contained in the raw materials being replaced. Category 2 beneficial use materials may be used for those uses identified under Waste Category column 2 on Table 2.

**Category 3:** Wastes that have been determined to not be a hazardous waste may be used in solid and hazardous waste disposal areas that are approved to accept the beneficial use material for those uses identified under Waste Category 3 on Table 2.

**Case-by-Case** determinations apply to those solid wastes to be beneficially used, but not identified at the top of Tables 1 and 2.



### C. Signature

This document must be signed by the applicant or a legally authorized representative of the applicant.

I certify under penalty of law that this document and all attachments contained in this application are true and correct to the best of my knowledge and belief.

Signature:  Printed Name: Nathan A. Barton Date: 20JUN2018

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### D. Required Attachments to the Application

For an application to be complete, you must provide the required information for each listed item as it applies to the application category.

- ☒ A description of the material and the generation process, including initial characterization or re-characterization test results, if applicable.
- ☒ A description of the proposed beneficial use and methods for storing the materials.
- ☒ A comparison of the chemical and physical characteristics of the material proposed for beneficial use and the material it will replace.
- ☒ An estimate of the quantity of material to be beneficially used.
- ☐ Documentation that the proposed use is acceptable by the local governing authority, if applicable. See information in the attachments.
- ☒ Any other information that may be required to evaluate the proposal.

### E. Performance Criteria

For all categories - An application for beneficial use determination must demonstrate satisfactory compliance with the following performance criteria.

The use is beneficial, including:

- There is an identified or reasonably likely use for the material that is not speculative;
- The use is a valuable part of a manufacturing process, an effective substitute for a valuable raw material or commercial product, or it is authorized by the Department and does not constitute disposal;
- The use is in accordance with applicable engineering standards, commercial standards, and agricultural or horticultural practices.

The use will not create an adverse impact on public health and the environment, including:

- The material is not hazardous waste under the rules developed by the Solid and Hazardous Waste Commission in compliance with § 25-15-302 C.R.S.;
- The material will be managed to prevent nuisance odors or ground water contamination;
- Contaminants in the material do not exceed the unrestricted use levels, naturally occurring background concentrations, acceptable risk levels, or those levels present in a comparable raw material or commercial product.

The use shall comply with all applicable federal, state and local regulations.

### F. Fees

Fees will be invoiced the calendar quarter following the issuance of the beneficial use determination.



**COLORADO**

**Hazardous Materials  
& Waste Management Division**  
Department of Public Health & Environment

[Back to CDPHE Recycling and Beneficial Use](#)

A review fee of \$125 per hour will be assessed to beneficial use applicants regardless of the approval status. The fee covers professional staff time spent reviewing, evaluating and responding to documents submitted. Complete and well-organized attachments to this application can help minimize your costs.

## INSTRUCTIONS

Complete all sections of the form, make a copy for your files and send the completed form and all attachments to:

[cdphe.hmrecycling@state.co.us](mailto:cdphe.hmrecycling@state.co.us) or

Colorado Department of Public Health and Environment  
c/o Beneficial Use Determination  
HMWMD-SW-B2  
4300 Cherry Creek Drive South  
Denver, CO 80246-1530



## ATTACHMENTS TO APPLICATION FOR BENEFICIAL USE – TIRE BALES

SITE: Schmidt Site, M2011-013, 355 River Run Drive, Pagosa Springs, CO 81147 (outside city limits)  
Parcel No. 569312101003 (owned by Dale & Ellen Schmidt)

Legal Description:

Subdivision: ASPEN SPRINGS SUB 3 Block: 5 Lot: 6 AS 3 Sec: 12 Twn: 34 Rng: 3W (2.7 acres)

GOVERNING JURISDICTION: Archuleta County, Planning Office (John Shepard) Pagosa Springs, CO 81147

A description of the material and the generation process, including initial characterization or re-characterization test results, if applicable:

*Waste tires generated by consumer and business use of tires, are accepted by tire dealers, transported to a processing site, and compressed into 1-ton tire bales, 5x5x2.5 feet, with stainless steel bale wire. There is no formal characterization testing performed. Bales are produced at Ace in Your Pocket, Alamosa, Colorado (certificate of registration ID 2829). Bales will be hauled to this project site by Just Like the Master, Inc., Pagosa Springs, Colorado (certificate of registration ID 31).*

A description of the proposed beneficial use and methods for storing the materials:

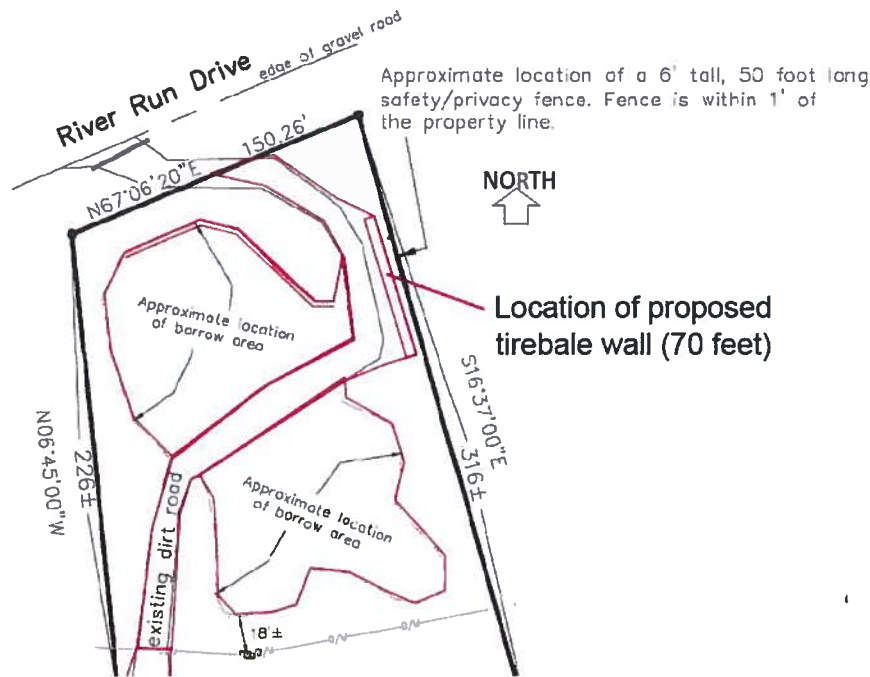
*CONCEPT: Use tire bales as a portion of a retaining wall for an excavated highwall, 70 feet long and up to 19.5 feet high. The wall will include 2 to 4 layers (5 to 10 feet high) of 1-ton, 5x5x2.5, tire bales, with dry-laid rock wall above, 2- to 8-feet tall with a face of 1/2h:1v, and a cap of 2h:1v sloped soil, with geo-grid reinforcement, per engineered design. The space between the bales and the face of the highwall, and between the rock wall, will be filled with either compacted earth or tire chips/earth-filled tires (for use as lightweight, free-draining, aggregate). The bales will be placed on competent shale bedrock. Initially, 48 bales will be used. The wall may eventually be extended upslope to greater than 70 foot in length, at 19.5 feet or less height, and in piers to support decks and roof for underground equipment storage, with potential use of 150-200 bales. These are all permanent structures.*

*Bales may be stored on affected land on the site or on a semi-trailer until placed into the wall.*

General Site Map showing location of proposed retaining wall



Close-up showing location of retaining wall.



A comparison of the chemical and physical characteristics of the material proposed for beneficial use and the material it will replace.

*The tire bales will be used instead of earth (at a 2h:1v or flatter slope), dry laid or mortared stone masonry, and/or poured concrete for constructing the retaining wall. Tire bales are chemically stable, especially as compared to uncured concrete. Tire bales are lighter weight and therefore require less foundation/footing work than either earth, stone, or concrete. Tire bales are easily moved by loader or crane and therefore less costly than placement of earth, poured or pre-cast concrete, or hand/machine-laid masonry walls. They are also significantly less vulnerable to erosion than earth.*

An estimate of the quantity of material to be beneficially used.

*Initially 48 tire bales will be used for the lower 5 to 10 feet of the 19.5-foot (maximum height) retaining wall. Extension of the retaining wall to the south (uphill) may be done in the future, using an additional 150-200 bales. Total initial use: 96,000 pounds (4800 PTE); potential total use: 496,000 pounds (24800 PTE)*

*If the entire backfill behind the 70-foot-long wall (1172 SF = 3516 CF (130.07 CY) uses tire chips and earth-filled tires as free-draining, lightweight fill, at 40 lb/CF (FHMA data) will use approximately 140,640 pounds of tires (7032 PTE).*

*Documentation that the proposed use is acceptable by the local governing authority, if applicable. NOT APPLICABLE. Mining reclamation is regulated by DRMS, not local counties or other entities. However, the use of tires for retaining walls for reclamation of this site was identified in the original DRMS application for M2011-014, which was provided to Archuleta County for review and comment, and the County did not object to the proposed uses. (That application and related documentation is available at [www.mining.state.co.us/](http://www.mining.state.co.us/))*

## DETAILS FOR BENEFICIAL USE OF TIRE BALES

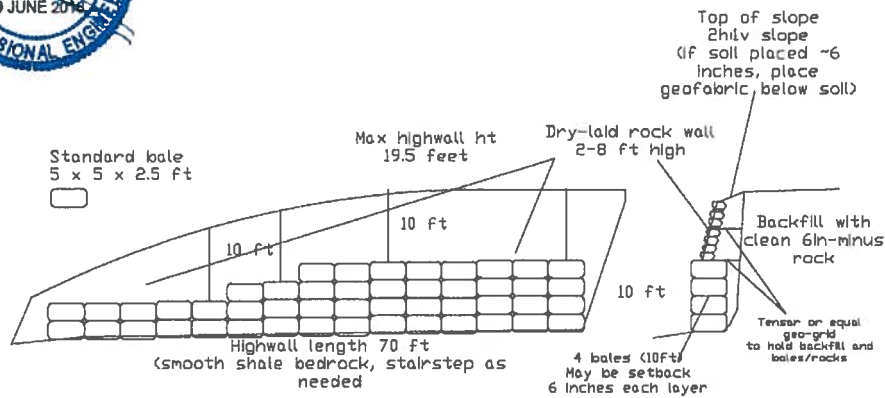
Tire bales are 5 x 5 x 2.5 feet, with stainless steel baling wire, and are produced by "Ace in Your Pocket," a registered waste tire processor, registration number 2829.

Although tire bales are a product, manufactured using recycled used/waste tires, they will be transported to the site and installed by Just Like the Master, Inc. Certificate of Registration ID # 31.

### TIREBALE WALL PLAN, PROFILE, AND CROSS-SECTION



Concept for Retaining wall on highwall by entrance to Schmltd Site (48 standard bales)



Concept drawing for review and approval  
Prepared by Nathan A. Barton, CE, PE,  
PE, DEE CO #27342 (18JUN18) V2

This retaining wall  
may be extended to  
the south (uphill)  
(to right in drawing)

Engineered design by Nathan A. Barton, CE, PE, DEE, of DC Gravel, LLC, and WASTELINE Inc. Mr. Barton will also be the project engineer and oversee the installation of the wall.



## COLORADO

Department of Public  
Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

July 2, 2018

Mr. and Mrs. Dale and Ellen Schmidt  
372 Meadows Drive  
Pagosa Springs, CO 81147

RE: Beneficial Use Determination for the Use of Tire Bales in a Retaining Wall - Approved

SW/ARC/GEN 7.1

Mr. and Mrs. Schmidt,

The Colorado Department of Public Health and Environment's Hazardous Materials and Waste Management Division ("the Division") has reviewed the beneficial use plan ("the BU Plan") for the use of waste tire bales in a retaining wall at the property at 355 River Run Drive in Pagosa Springs, CO 81147. The application for a beneficial use determination and the BU Plan were received by the Division on June 21, 2018. Section 8.6 and Section 10 of the Regulations Pertaining to Solid Waste Sites and Facilities, 6 CCR 1007-2, Part 1 ("the Solid Waste Regulations") contain the regulatory requirements for beneficial use of solid waste and waste tires. Based upon the Division's review of the BU Plan, the Division has determined that the BU Plan meets the criteria of Section 8.6 and Section 10 of the Regulations Pertaining to Solid Waste Sites and Facilities, 6 CCR 1007-2, Part 1 ("the Solid Waste Regulations").

The Schmidt property currently has a reclamation permit from the Colorado Division of Reclamation, Mining and Safety that includes the installation of a retaining wall on the property. The waste tire bales to be used in the retaining wall are to be processed by the registered waste tire processor "Ace in Your Pocket" of Alamosa, CO. The waste tire bales will be transported and installed by the registered waste tire hauler "Just Like the Master, Inc." of Pagosa Springs, CO. The initial wall construction will use 48 tire bales, and a possible extension to the wall could potentially use an additional 150-200 bales. Backfill behind the wall is planned to use compacted earth, tire chips, and earth-filled tires.

The beneficial use approval is contingent on adherence to the following conditions:

- The beneficial use of the waste tire bales must be in accordance with the engineered design in the approved BU Plan;
- The integrity of tire bales must be maintained while in use;
- The storage of loose waste tires on the property must not exceed 500 tires;



- The storage of all waste tires and tire products must be in compliance with local and state fire codes;
- The storage of all waste tires and tire products must be in a manner which prevents the breeding and harborage of mosquitoes, rodents and other vectors.
- The beneficial use must meet local construction requirements.
- The beneficial use may not negatively impact groundwater or surface water;
- The beneficial use will meet all other federal, state, and local laws and regulations.

In closing, the Division is authorized to bill for its review of technical submittals at \$125 per hour, pursuant to section 1.7 of the Solid Waste Regulations. An invoice for the Division's review of the above referenced document will be sent under separate cover.

If you have any questions regarding this letter, you may contact Michael Bankoff at (303) 692-3438 or David Snapp at (303) 692-3425.

Sincerely,



Michael Bankoff  
Environmental Protection Specialist  
Materials Management Unit  
Hazardous Materials and Waste  
Management Division



David Snapp  
Unit Leader  
Materials Management Unit  
Hazardous Materials and Waste  
Management Division

EC: Nathan Barton, Wasteline, Inc.  
John Shepard, Archuleta County Planning  
Shana Baker, Colorado Department of Public Health and Environment  
Anna Maylett, Colorado Department of Public Health and Environment

## EXHIBIT 4. PACKAGE GIVEN TO SUSAN MOAK AND LA PLATA ELECTRIC ASSOCIATION

This contains copies of the information provided when requesting indemnity agreements and attempting to resolve issues of the fence along part of the boundary.

The information was hand-delivered to Mrs. Moak, who refused to sign for it.

This exhibit has separately numbered pages.

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p>		<p>A. Signature  <i>Jackie Doyle</i> YES Agent <input type="checkbox"/> Address <input type="checkbox"/></p>	
<p>1. Article Addressed to:  <i>La Plata Electric Association  P.O. Box 2250  Durango CO 81302</i></p>		<p>B. Received by (Printed Name)  <i>Jackie Doyle</i></p> <p>C. Date of Delivery  <i>10-11-11</i></p>	
		<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes  If YES, enter delivery address below: <input type="checkbox"/> No</p>	
		<p>3. Service Type  <input type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail  <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise  <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>	
		<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>	
<p>2. Article Number  (Transfer from service label)</p>		<p>7010 3090 0002 8661 2201</p>	
PR Form 3811, February 2004		Domestic Return Receipt 102505-09-M-1543	

### Structure (Indemnity) Agreement

Whereas, Sue Smith Moak, 425 River Run Drive, Pagosa Springs, Colorado ("Structure Owner") is the owner (in whole or part) of a significant manmade structure on or within two hundred (200) feet of the affected area and/or permit boundary of the Schmidt Site, File Number M-2011-014, ("Operation"), located on County Parcel 569312101003 ("Schmidt Property"), specifically:

1. Any permanent, significant, manmade structures located on Parcel 569312101067 ("Moak Property"), as identified in writing by the Structure Owner to the Applicant/Operator on or before the date of this agreement. (None identified by satellite/aerial and ground reconnaissance.
2. A six (6)-foot high, wooden fence, approximately 50 feet long), located approximately one foot inside Parcel 569312101003, jointly installed in 2018 by the Structure Owner and Applicant/Operator.

Whereas, the State of Colorado, Division of Reclamation, Mining and Safety ("Division") requires that where a mining operation may adversely affect the stability of any significant, valuable and permanent man-made structure located within two hundred (200) feet of the affected land, the Applicant shall either:

- a) Provide a notarized agreement between the Applicant and the Person(s) having an interest in the structure, that the Applicant is to provide compensation for any damage to the structure; or
- b) Where such an agreement cannot be reached, the Applicant shall provide an appropriate engineering evaluation that demonstrates that such structure shall not be damaged by activities occurring at the mining operation; or
- c) Where such structure is a utility, the Applicant may supply a notarized letter, on utility letterhead, from the owner(s) of the utility that the mining and reclamation activities, as proposed, will have "no negative effect" on their utility. (Construction Materials Rule 6.3.12 and Rule 6.4.19);

Whereas, the Colorado Mined Land Reclamation Board ("Board") has determined that no agreement, even though executed properly and in compliance with Construction Materials Rule 6.3.12(a), Rule 6.4.19(a), and C.R.S. § 34-32.5-115(4)(e), shall make the Board or Division a necessary party to any private civil lawsuit to enforce the terms of the agreement or create any enforcement obligations in the Board or the Division; and

Whereas, the Structure Owner owns, wholly or in part, a structure (ITEM #) which is wholly or in part located on the property of the Applicant/Operator (the above-identified parcel),

Therefore, Dale & Ellen Schmidt, (the "Applicant/Operator"), represented by Ellen Schmidt, as joint-owner, who are also the owners of the property (Parcel 569312101003) on which the affected area is located, does hereby certify that the Structure Owner shall be compensated for any damage from the mining operation to the above listed structure(s) located on or within 200 feet of the proposed affected area described within Exhibit A, of the Reclamation Permit Application for the Operation; based on the condition of those structure(s) as established at or before the date of this agreement by photography or an written evaluation and report by a qualified professional, and

Therefore, the Structure Owner acknowledges that the presence of any and all structures which are located on the Applicant/Operator's property and which the Structure Owner owns in whole or in part,

including Item #1 above, does not establish any property rights on any part of the above-identified parcel, or any right to enter the above-identified parcel for any purpose, unless those rights are established in a legal agreement (such as an easement agreement) separate from this agreement.

Effective this \_\_\_\_ day of July, 2018.

ACKNOWLEDGED BY: \_\_\_\_\_ Signature

Applicant/Operator Dale & Ellen Schmidt by its Representative Name Ellen Schmidt, co-owner

STATE OF COLORADO )  
 ) ss.  
COUNTY OF ARCHULETA )

The foregoing was acknowledged before me this \_\_\_\_ day of July, 2018, by Ellen Schmidt as co-owner of Parcel 569312101003 and as Applicant/Operator of the Schmidt Site, M-2011-014.

(SEAL)

\_\_\_\_\_, Notary Public

ACKNOWLEDGED BY: \_\_\_\_\_ Signature

Structure Owner Sue Smith Moak as owner of Parcel 569312101067 ("Moak Property").

STATE OF COLORADO )  
 ) ss.  
COUNTY OF ARCHULETA )

The foregoing was acknowledged before me this \_\_\_\_ day of July, 2018, by Sue Smith Moak as owner of Parcel 569312101067 ("Moak Property").

(SEAL)

\_\_\_\_\_, Notary Public



### Structure (Indemnity) Agreement

Whereas, La Plata Electric Association (LPEA), 45 Stewart Street, Durango, Colorado ("Structure Owner") is the owner (in whole or part) of a significant manmade structure on or within two hundred (200) feet of the affected area and/or permit boundary of the Schmidt Site, File Number M-2011-014, ("Operation"), located on County Parcel 569312101003 ("Schmidt Property", specifically:

1. An electrical power line, including a pole;

Whereas, the State of Colorado, Division of Reclamation, Mining and Safety ("Division") requires that where a mining operation may adversely affect the stability of any significant, valuable and permanent man-made structure located within two hundred (200) feet of the affected land, the Applicant shall either:

- a) Provide a notarized agreement between the Applicant and the Person(s) having an interest in the structure, that the Applicant is to provide compensation for any damage to the structure; or
- b) Where such an agreement cannot be reached, the Applicant shall provide an appropriate engineering evaluation that demonstrates that such structure shall not be damaged by activities occurring at the mining operation; or
- c) Where such structure is a utility, the Applicant may supply a notarized letter, on utility letterhead, from the owner(s) of the utility that the mining and reclamation activities, as proposed, will have "no negative effect" on their utility. (Construction Materials Rule 6.3.12 and Rule 6.4.19);

Whereas, the Colorado Mined Land Reclamation Board ("Board") has determined that no agreement, even though executed properly and in compliance with Construction Materials Rule 6.3.12(a), Rule 6.4.19(a), and C.R.S. § 34-32.5-115(4)(e), shall make the Board or Division a necessary party to any private civil lawsuit to enforce the terms of the agreement or create any enforcement obligations in the Board or the Division; and

Whereas, the Structure Owner owns, wholly or in part, a structure (ITEM #) which is wholly or in part located on the property of the Applicant/Operator (the above-identified parcel),

Therefore, Dale & Ellen Schmidt, (the "Applicant/Operator"), represented by Ellen Schmidt, as joint-owner, who are also the owners of the property (Parcel 569312101003) on which the affected area is located, does hereby certify that the Structure Owner shall be compensated for any damage from the mining operation to the above listed structure(s) located on or within 200 feet of the proposed affected area described within Exhibit A, of the Reclamation Permit Application for the Operation; based on the condition of those structure(s) as established at or before the date of this agreement by photography or an written evaluation and report by a qualified professional, and

Therefore, the Applicant/Operator agreed that there shall be:

- a) No excavation of any type beyond cultivation to establish and maintain vegetation, within fifteen (15) feet of the power pole,
- b) No permanent construction of any structure which would be within fifteen (15) feet, vertical or horizontal, of the power lines and which would prevent the Structure Owner from maintaining and servicing the power line,

c) No excavation or other operations on the site which would prevent the Structure Owner from access to the power pole with reasonable notice to the Applicant/Operator.

Structure Owner acknowledges that the presence of any and all structures which are located on the Applicant/Operator's property and which the Structure Owner owns in whole or in part, including Item #1 above, does not establish any property rights on any part of the above-identified parcel, or any right to enter the above-identified parcel for any purpose, unless those rights are established in a legal agreement (such as an easement agreement) separate from this agreement.

Effective this \_\_\_\_ day of July, 2018.

ACKNOWLEDGED BY: \_\_\_\_\_ Signature

Applicant/Operator Dale & Ellen Schmidt by its Representative Name Ellen Schmidt, co-owner

STATE OF COLORADO )  
 ) ss.

COUNTY OF ARCHULETA )

The foregoing was acknowledged before me this \_\_\_\_ day of July, 2018, by Ellen Schmidt as co-owner of Parcel 569312101003 and as Applicant/Operator of the Schmidt Site, M-2011-014.

(SEAL)

\_\_\_\_\_, Notary Public

ACKNOWLEDGED BY: \_\_\_\_\_ Signature

Structure Owner by \_\_\_\_\_ (name) as \_\_\_\_\_ (title) of La Plata Electric Association.

STATE OF COLORADO )  
 ) ss.

COUNTY OF LA PLATA )

The foregoing was acknowledged before me this \_\_\_\_ day of July, 2018, by \_\_\_\_\_ (name) as \_\_\_\_\_ (title) of La Plata Electric Association.

(SEAL)

\_\_\_\_\_, Notary Public

18

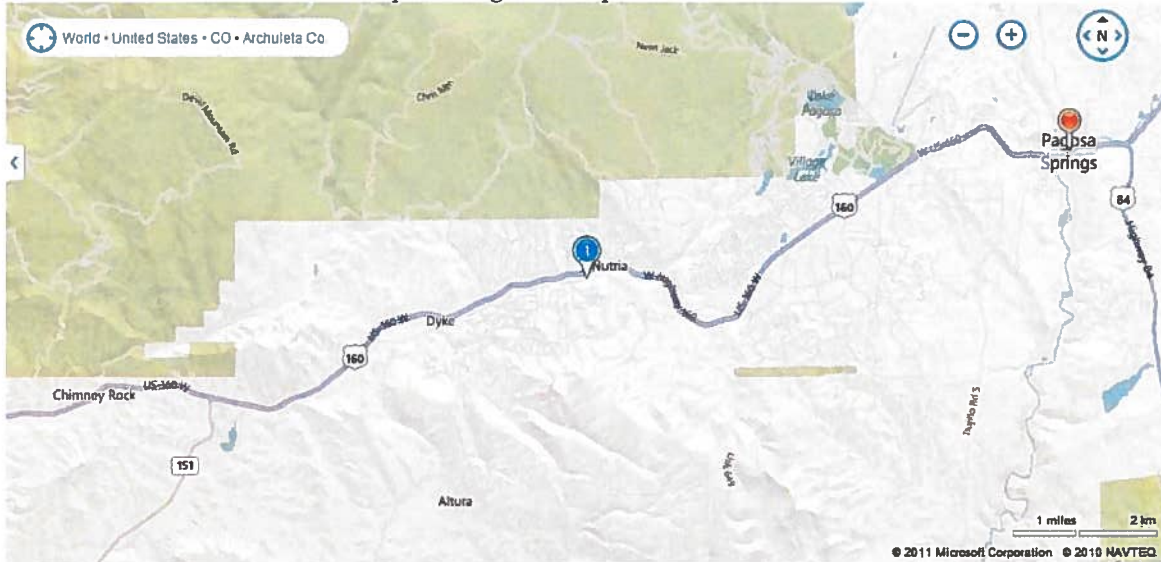
### 6.3.1 EXHIBIT A - Legal Description and Location Map

Subdivision AS 3 – Aspen Springs Subdivision 3 Block: 5 Lot: 6, Sec 12-T34N-R3W #20801382, Archuleta County, Colorado.

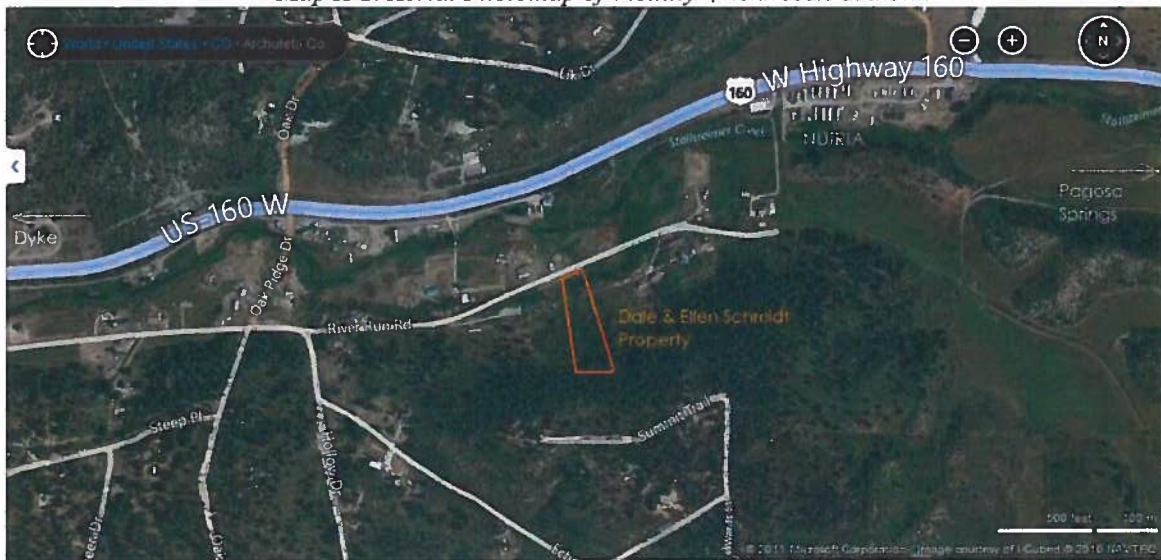
NOTE: The site (lot) is actually located partially in the NE ¼ of NE ¼ of Sec 12 and SE ¼ of SE ¼ of Sec 1, both in T34N, R3W. Site is 2.7 acres, per plat.

Legal Address: 355 River Run Drive, Pagosa Springs, CO 81147, actually located in the unincorporated community of Nutria, and in the Aspen Springs Metropolitan District.

Map A-1 Regional Map ↑North Scale as shown



Map A-2. Aerial Photomap of Vicinity ↑North Scale as shown



THIS PAGE AND THE NEXT 17 PAGES WERE PROVIDED TO LPEA TOGETHER WITH THE DRAFT STRUCTURES AGREEMENT, AND WERE PART OF THE 2011 DRMS APPLICATION.  
For questions, call Nathan Barton at 605-390-7255.

### 6.3.5 EXHIBIT E - Maps, to include the location of any recorded easements

Map E1: Schmidt Property Photo Map of site and surrounding area, including:

- Permit boundary (same as property line for lot)
- Boundaries of adjacent properties within 500 feet (tied to legend for ownership)
- 200- and 500-foot radii from permit boundary
- Satellite photo showing features (including disturbance) of site and adjacent areas as of late Summer 2010

Map E2: Schmidt Property Map of site and surrounding area, including:

- Landowners within 200 feet of permit boundary (letters shown on map)

A	Holcomb	Lindsey R & Samantha M Et al
B	Snow	Daniel M
C	Mo's Rentals LLC	
D	Johnson	Matthew G
E	Johnson?	Matthew G ?
F	Bennett	Robert S & Alice M
G	Snow	Daniel M
H	Simonson	Steve & Madden Joy
J	Peffer	Kris M
K	Pettit	Ronald W
L	Nation	Thomas Joseph
M	Kersten	Thomas H & Sandra J
N	Parker	Bradley E & Kelly L
P	Archuleta County	(County Road ROW)
X1	La Plata Electric Association	
X2	Unknown	– may be abandoned easement
X3	Unknown	– may be abandoned easement
- Easements on property:
  - Standard 20-foot easement for utilities on all property lines (not shown; only centerline is shown)
  - La Plata Electric Association power line easement (including tower, which is the only permanent manmade structure now on site) (centerline and tower shown)
  - Two unknown easements indicated on plat map but not identified in county records; Title company providing Title Policy for property has now gone out of business and we have not been able to determine who has their records
  - Structures within 200 feet of permit boundary: See Exhibit L for detailed information on the identified permanent manmade structures.

Map E3: Existing conditions of site (Equivalent of the "mining map")

- This map is provided on both sheets, with slightly different versions, to allow better reading and direct comparison with the two alternate final conditions
- First sheet shows existing excavation and disturbance and maximum extent of future disturbance, and general dimensions of disturbance.
- Second shows key features of site, including permanent structures on-site, and 10-foot contours

Map E4: Final conditions of site (Alternate A)

- Map shows proposed features for Alternate A (Structures as proposed)
- Map shows key features of the completed construction

Map E5: Final conditions of site (Alternate B) (Equivalent of the "reclamation map")

- Map shows proposed features for Alternate B (No shelter)
- Map shows key features of site except existing culvert at entrance on River Run Drive, omitted for clarity.
- Map shows sloped areas of site with hatching, berms with cross-hatching.

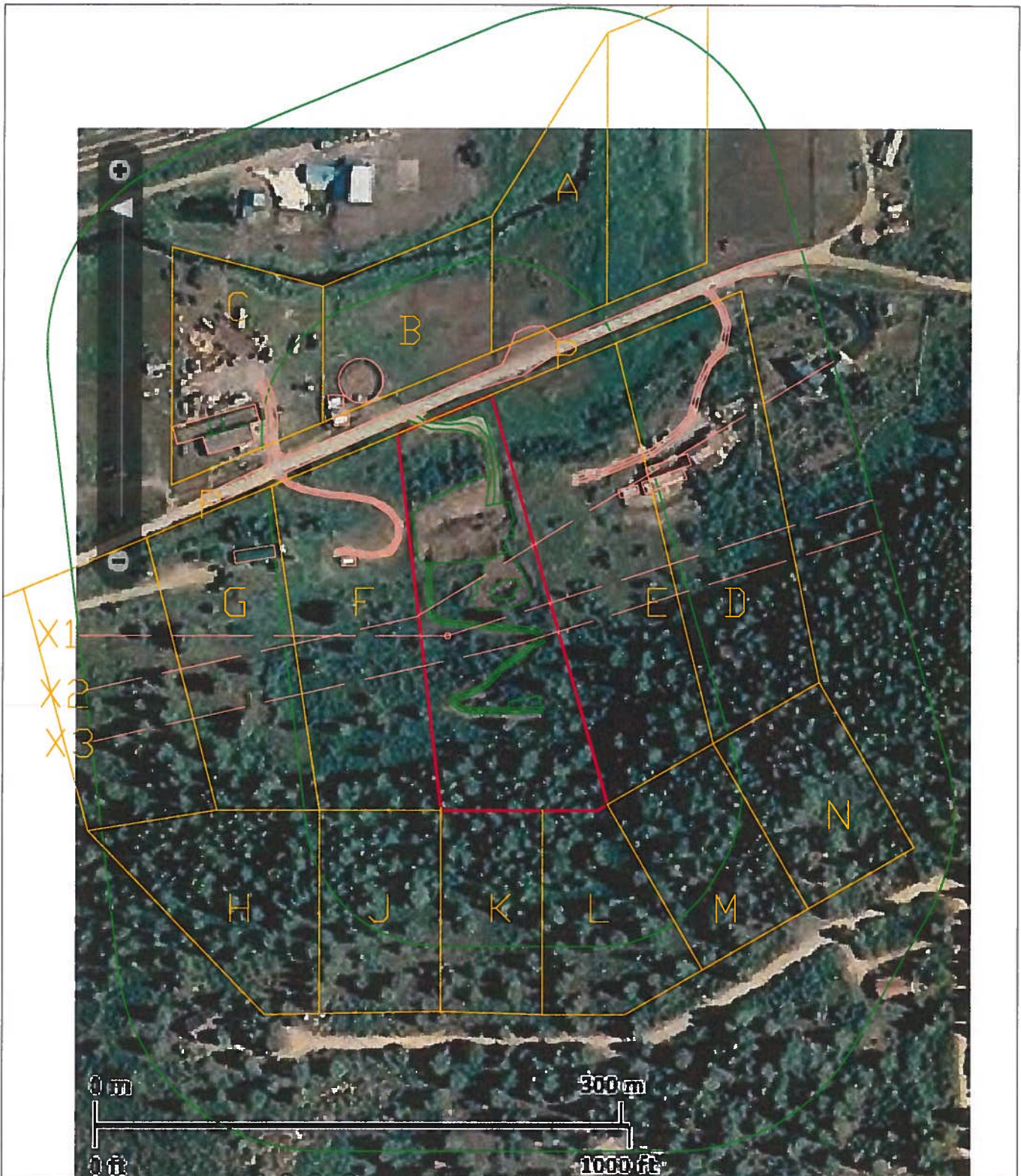
Map E6: Cross-sections (3 sheets)

- North-south profile, with close-up of storage shelter
- Plan and profile of house pad
- East-west profiles at various locations

Notes for maps:

- a. There are no section corners adjacent to the proposed operation.*
- b. Scale of maps and north is indicated on each map or sheet; normally 1 inch = 100 feet (1:1,200). Cross-sections and plan views associated with cross-sections are separately scaled.*
- c. Date of map preparation is indicated on each map/sheet.*
- d. There are no overburden stockpiles, product stockpiles, waste rock fills, stream channels, processing plants, underground openings, ponds impoundments, dewatering pumps, diversions or waste disposal areas proposed.*
- e. There is no specific or general direction for continued excavation to proceed.*
- f. Narrative description of permanent man-made structures is provided in Exhibit B, detailed information and analysis in chart form is provided in Exhibit L.*
- g. There is no existing disturbance noted within or adjacent to the permit boundary except for:*
  - Existing excavations on the site, conducted in the last several years.*
  - Cut and fill areas for roads and structures as shown on Map E2.*
  - Evidence of possible former alignment of River Run Drive, about 150 feet south of the current alignment (probably pre-1975) as indicated by changes in slope, changes in vegetation, and alignment of driveways on adjacent properties visible in Map E1.*
- h. Existing disturbances outside the permit boundary are not addressed; further disturbance of previously disturbed areas in the permit boundary is addressed in Exhibit D.*
- i. Gradients are shown in cross-sections, Map E6 (3 sheets).*
- j. Areas where vegetation is not to be established are listed in Exhibit D, and include gravel areas (driving, parking, and storage) and the house site on house pad.*
- k. There are no ponds existing or as part of reclamation.*
- l. There is no overburden to be replaced.*
- m. The thickness of soil replaced is provided in Exhibit D.*





Heavy red line: is site and permit boundary.  
 Orange lines: adjacent property lines.  
 Brown dashed lines: easement centerlines.  
 Green: 200- and 500-foot radii from site.

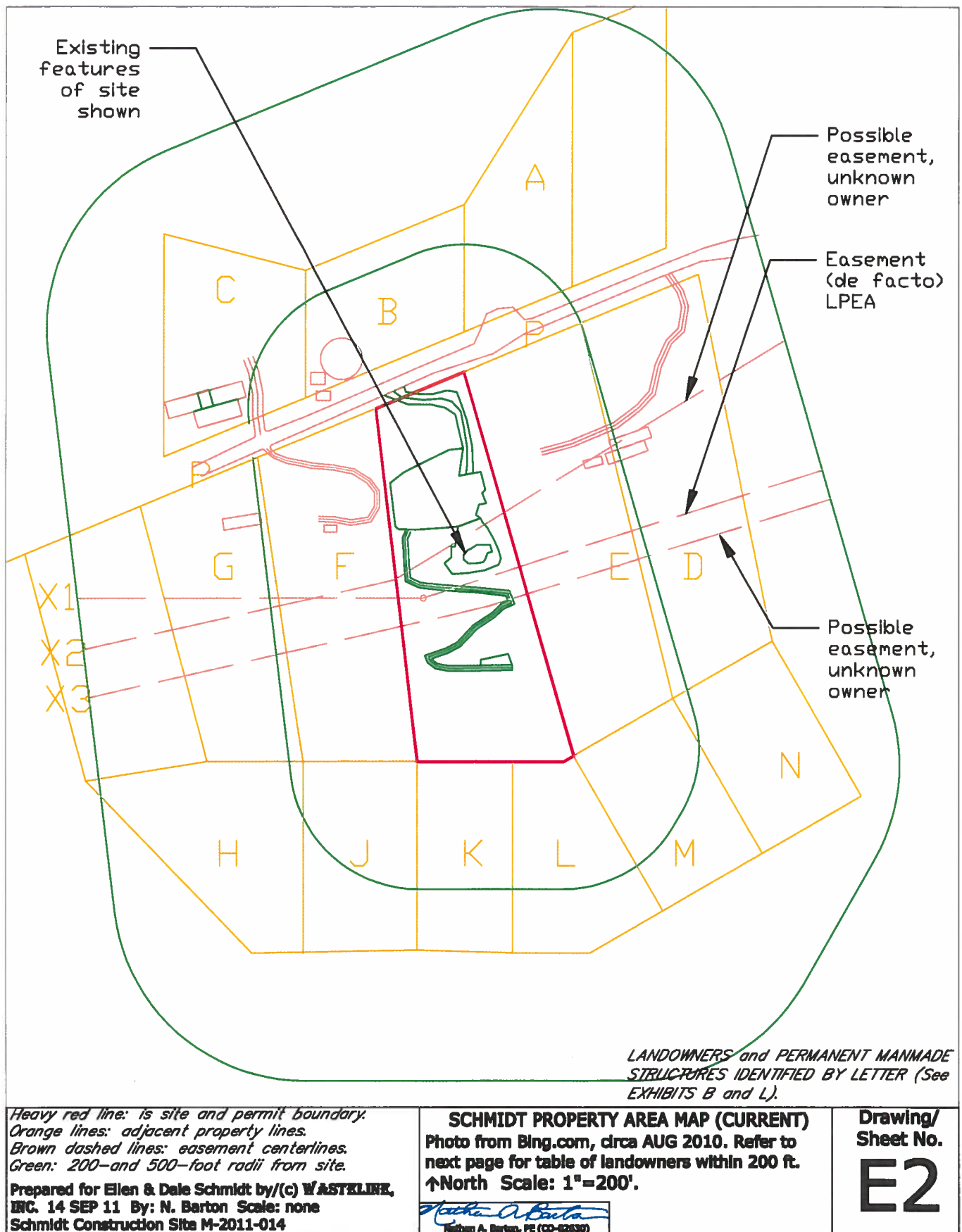
Prepared for Ellen & Dale Schmidt by/(c) WASTE LINE,  
 INC. 14 SEP 11 By: N. Barton Scale: none  
 Schmidt Construction Site M-2011-014

**SCHMIDT PROPERTY PHOTO MAP (CURRENT)**  
 Photo from Bing.com, circa AUG 2010. Refer to  
 Map E2 for map without photo.  
 ↑North Scale: 1"=200'.

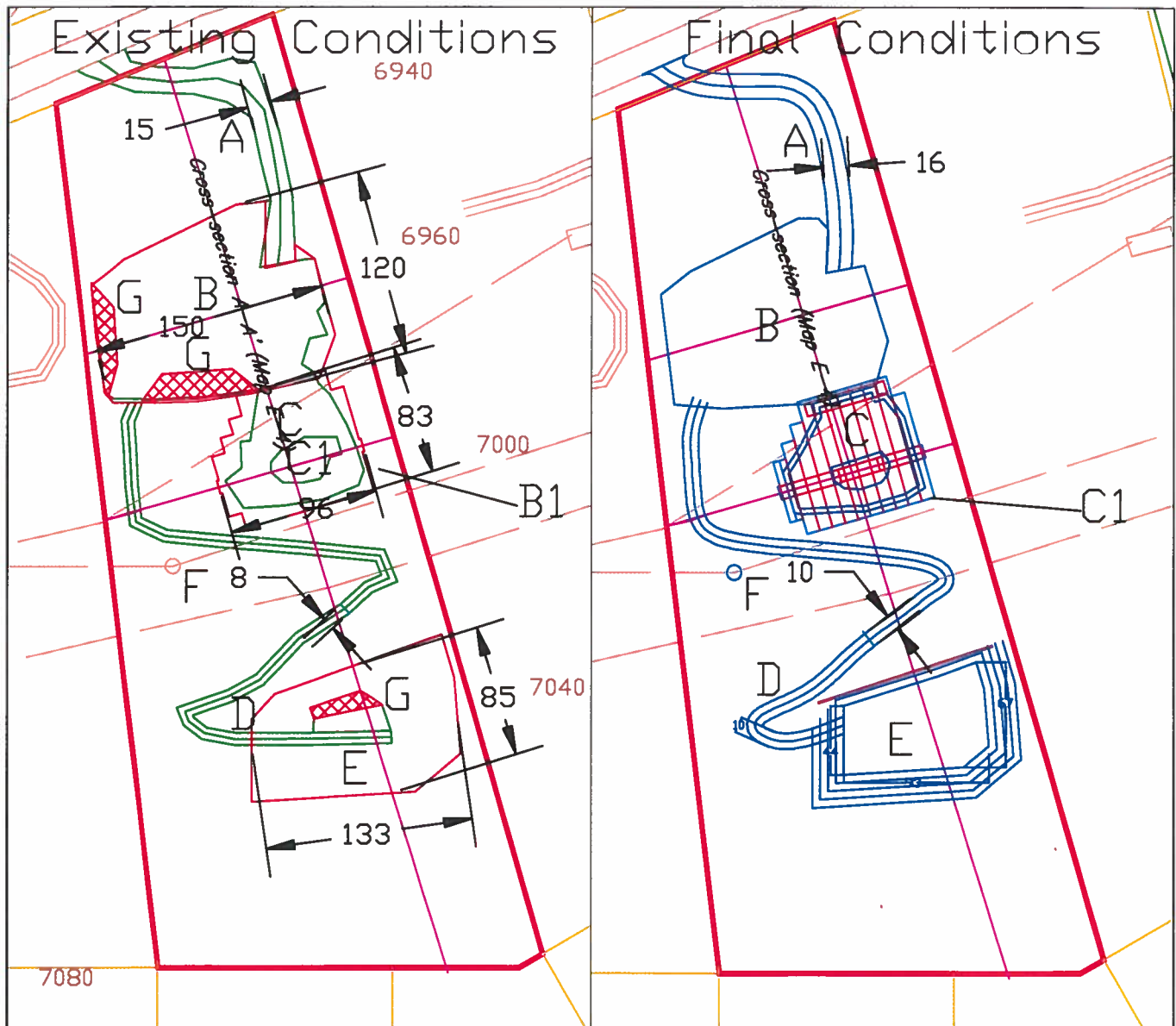
*Nathan A. Barton*  
 Nathan A. Barton, PE (CO-62630)

Drawing/  
 Sheet No.

**E1**







A: Access road  
 B: Parking/Loading Pad  
 B1: Expected max disturbance (red)  
 C: Storage Shelter  
 C1: Island (core) unexcavated  
 D: Access road (upper)  
 E: House Pad (partial excavation)  
 F: LPEA Power Pole (existing)  
 G: Soil stockpiles (now/future)  
 10-ft contours shown on next sheet

A: Access road  
 B: Parking/Loading Pad  
 C: Storage Shelter  
 C1: Edge of roof and panels  
 D: Access road (upper)  
 E: House Pad (w/retaining walls)  
 F: LPEA Power Pole (no change)

Heavy red line: is site and permit boundary.  
 Brown dashed lines: easement centerlines.  
 Dark brown: contours. Black: existing. Blue: proposed.

Prepared for Ellen & Dale Schmidt by/(c) WASTE LINE, INC. 14 SEP 11 By: N. Barton Scale: none  
 Schmidt Construction Site M-2011-014

# SCHMIDT PROPERTY "MINING/RECLAMATION" ALTERNATE A. STRUCTURES

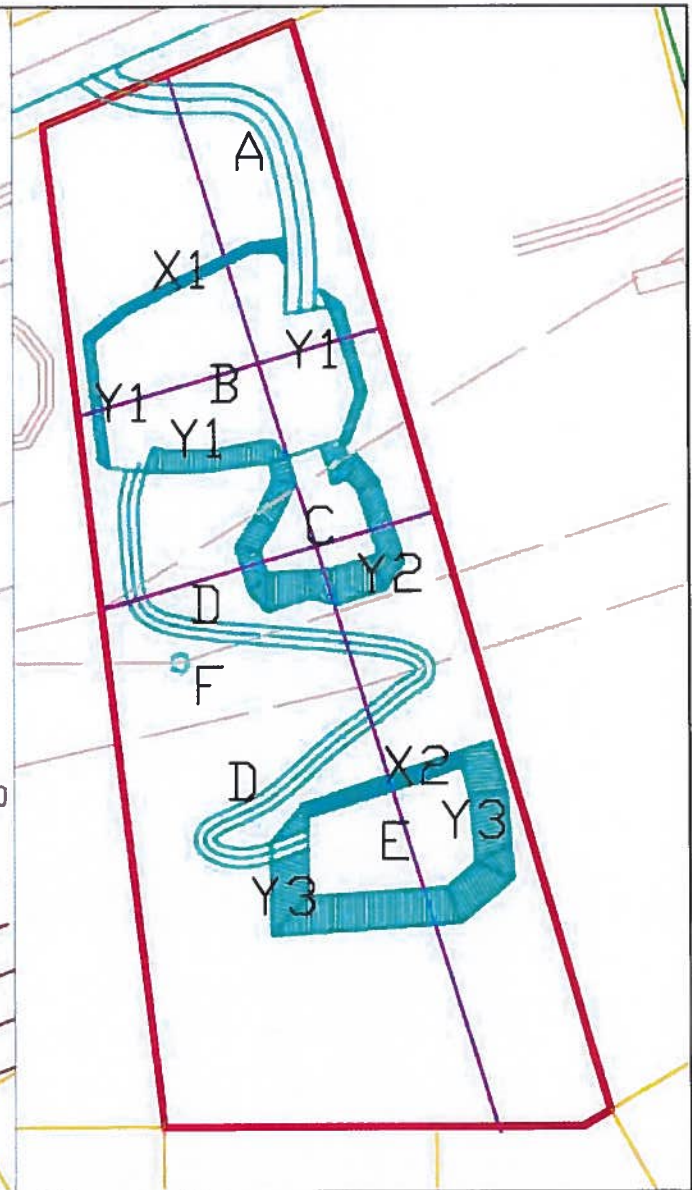
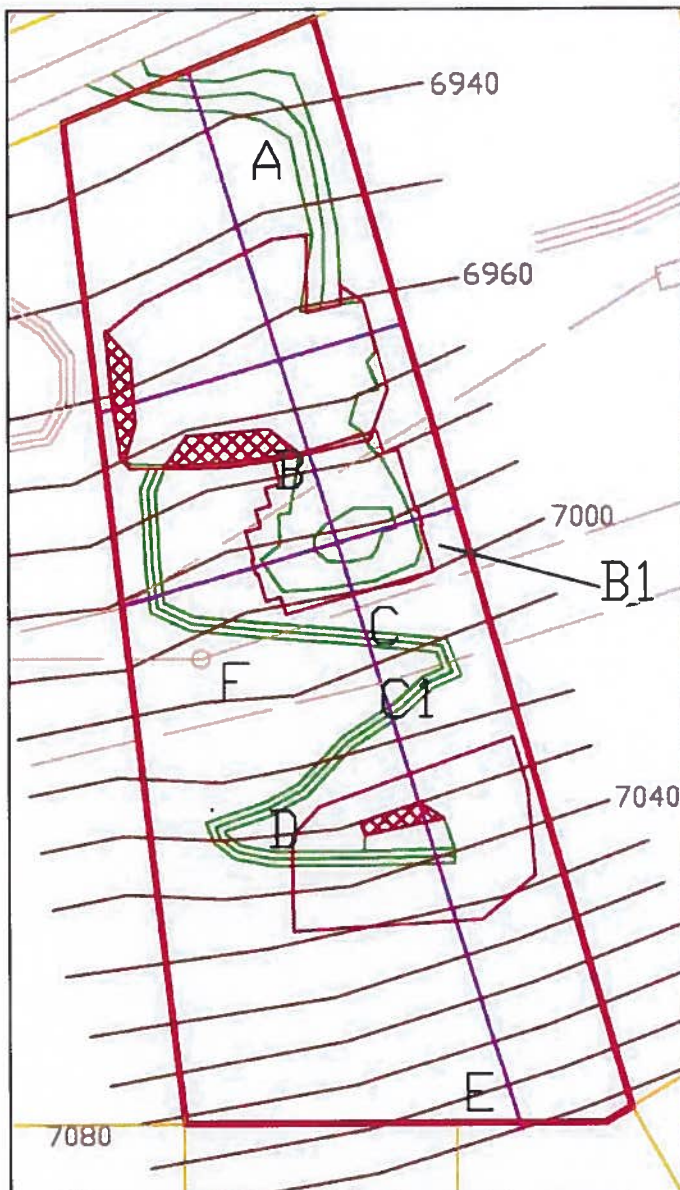
Photo from Bing.com, circa AUG 2010. ↑North  
 Scale: 1"=100' Contours 10-foot.

Nathan A. Barton  
 Nathan A. Barton, PE (CO-62630)

Drawing/  
 Sheet No.

E3-4





## Existing Conditions

- A: Access road
- B: Parking/Loading Pad
- B1: Expected max disturbance (red)
- C: Storage Shelter
- C1: Island (core) unexcavated
- D: Access road (upper)
- E: House Pad (partial excavation)
- F: Power pole (LPEA)
- 10-foot contours (pre-disturbance)

## Final Conditions

- A: Access road
- B: Parking/Loading Pad
- C: Storage Cove
- D: Access road (upper)
- E: House Pad
- F: Power pole (LPEA)
- X1, X2: berms (crosshatch)
- Y1, Y2, Y3: cut slopes (hatch)

Heavy red line: is site and permit boundary.  
Brown dashed lines: easement centerlines.  
Dark brown: contours. Black: existing. Cyan  
(light blue): proposed.

Prepared for Ellen & Dale Schmidt by/(c) WASTELINE  
INC. 14 SEP 11 By: N. Barton Scale: none  
Schmidt Construction Site M-2011-014

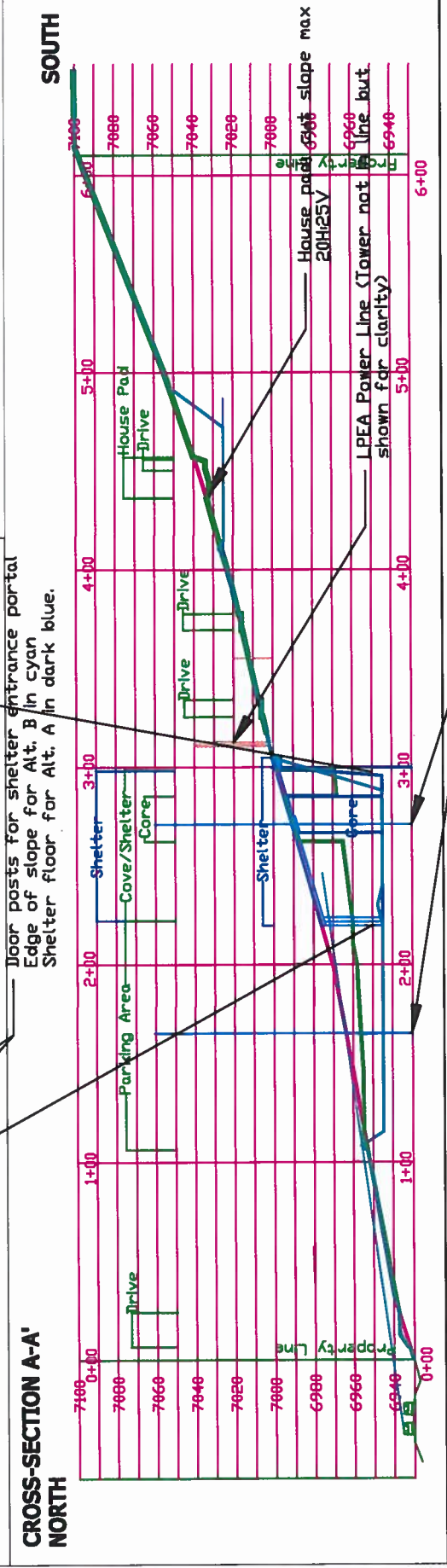
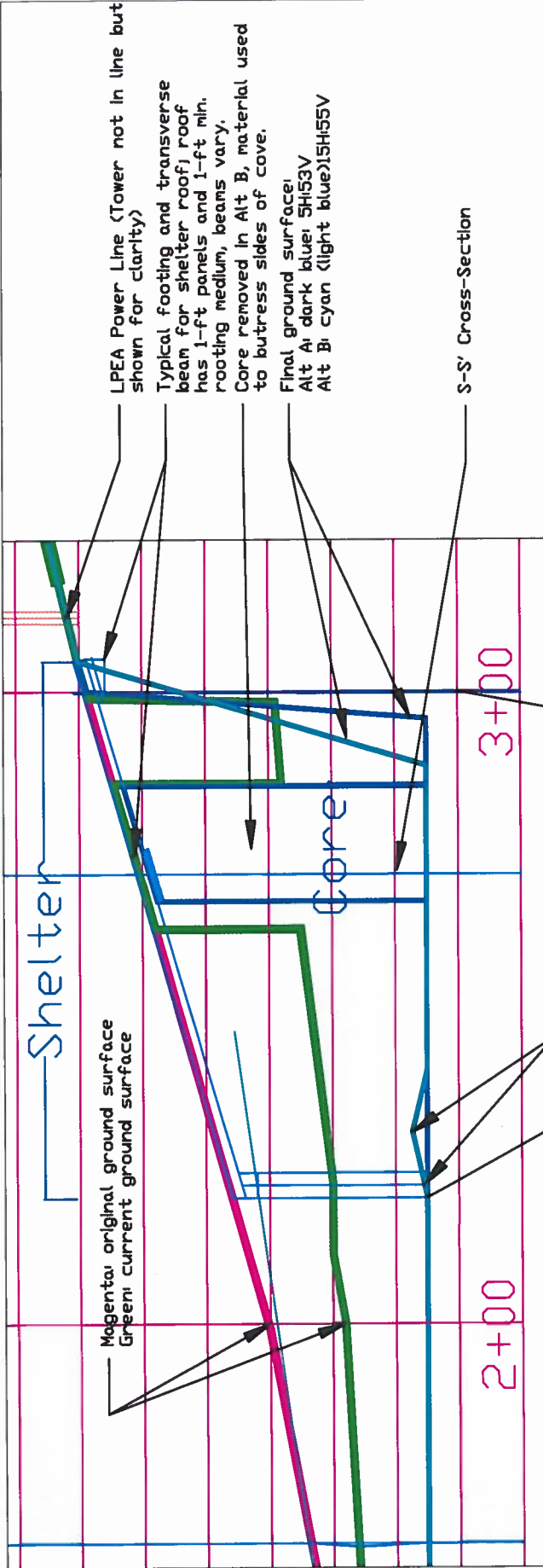
### SCHMIDT PROPERTY "MINING/RECLAMATION" ALTERNATE B (NO STRUCTURES)

Photo from Bing.com, circa AUG 2010. ↑North  
Scale: 1"=100' Contours 10-foot.

*N. Barton*  
Nathan A. Barton, PE (CO-02833)

Drawing/  
Sheet No.

# E3-5



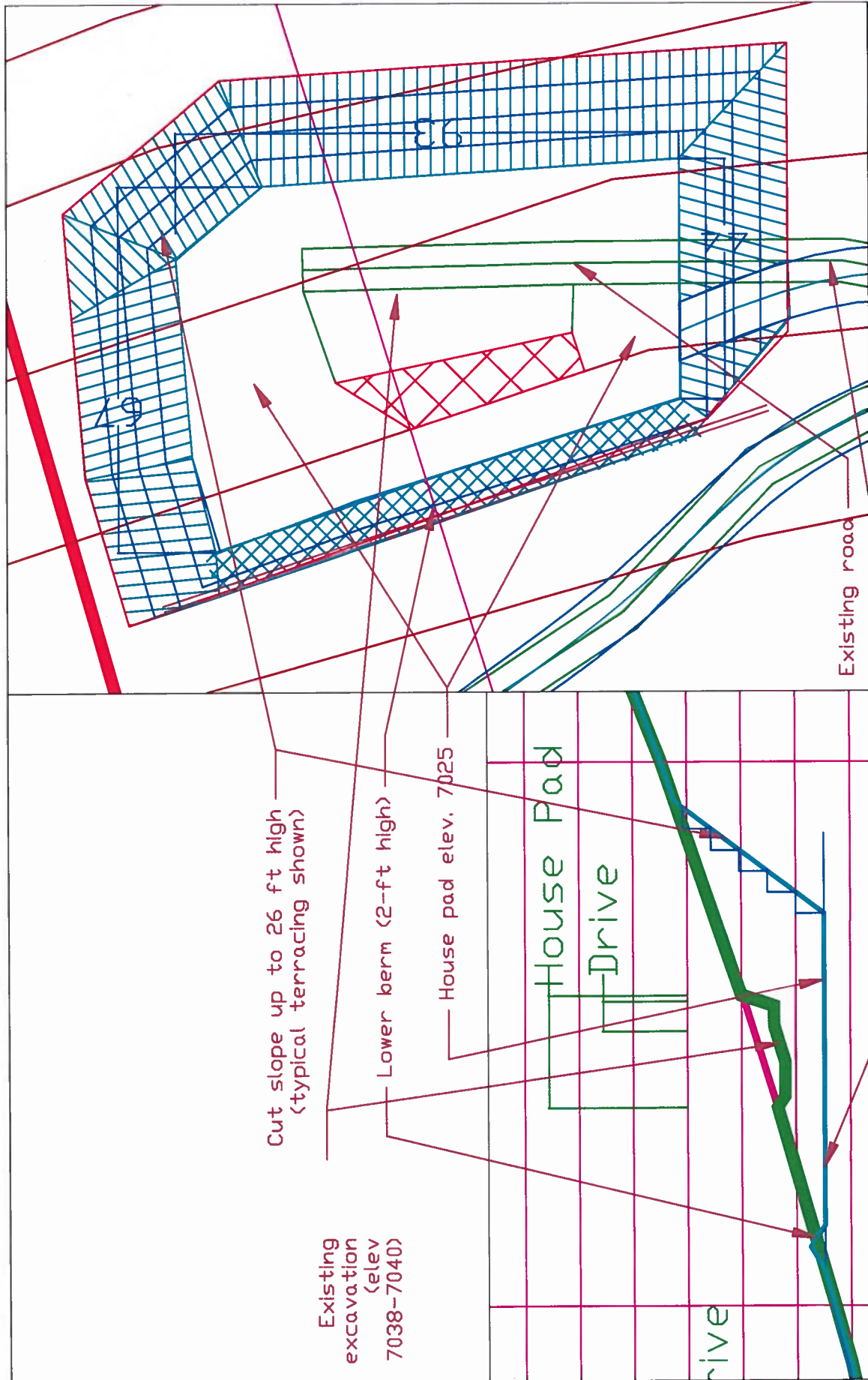
Cross-Sections N-N', S-S'

**LEGEND:** Magenta: pre-existing slope. Green: current profile. Blue: Alt 1 proposed final profile. Cyan (lt. blue): Alt 2 proposed final profile. Red: roof vertical supports, stringers and deck.  
Prepared for Ellen & Dale Schmidt by (c) WASTLING, INC. 14 SEP 11 By: N. Barton Scale: none  
Schmidt Construction Site M-2011-014

**SCHMIDT PROPERTY Cross-Sections (1 of 3)**  
Scale 1H - 1V. Upper portion is expanded view of storage shelter. Dimensions in feet. Cross-section from north to south (see Map E-2).

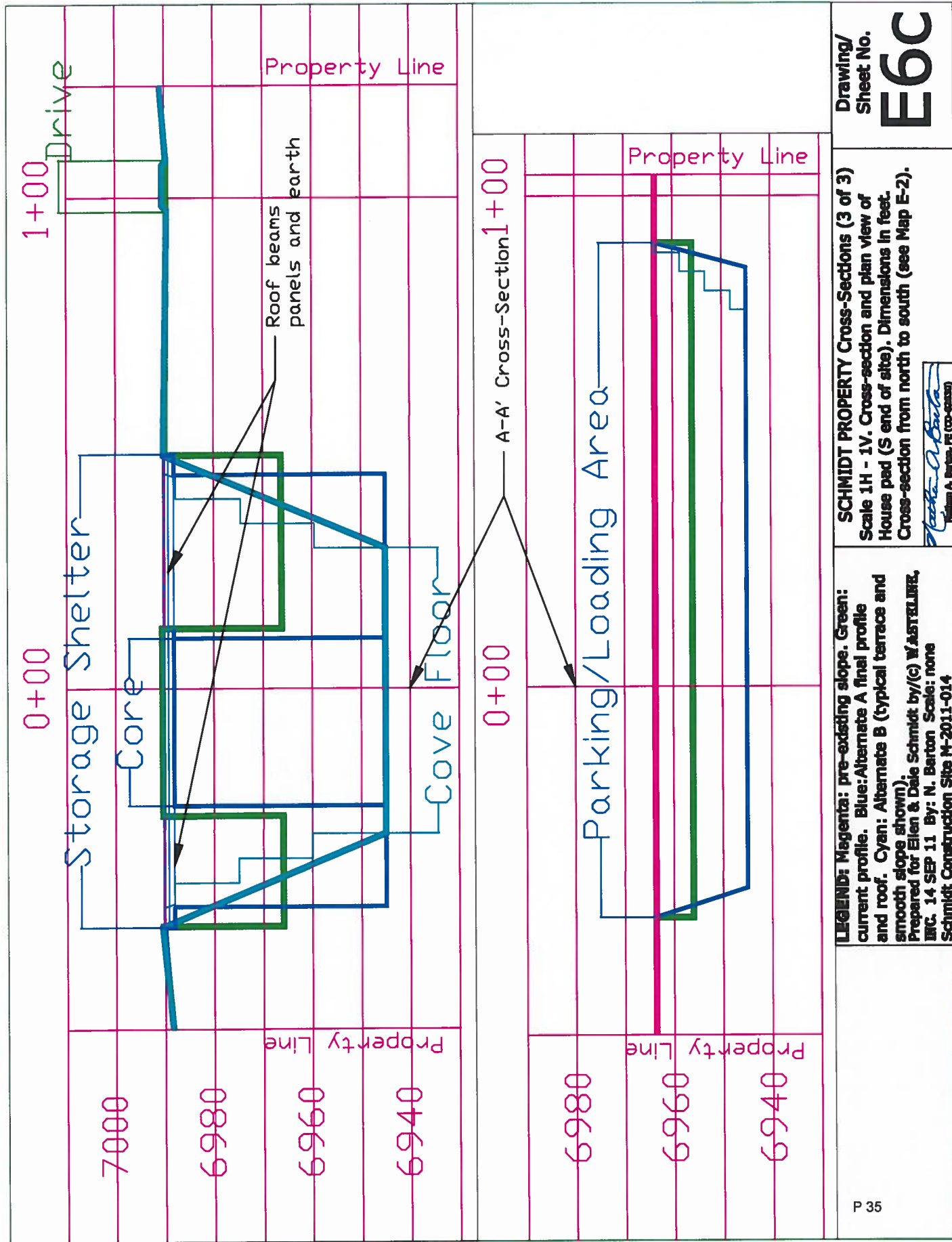
*Nathan A. Barton*  
Nathan A. Barton, PE (CD-60333)

**Drawing/Sheet No.**  
**E6a**



<p>Drawing/ Sheet No. <b>E6b</b></p>	<p><b>SCHMIDT PROPERTY Cross-Sections (2 of 3)</b> Scale 1H - 1V. Cross-section and plan view of House pad (S end of site). Dimensions in feet. Cross-section from north to south (see Map E-2).</p> <p><i>Nathan A. Barton</i> Nathan A. Barton, PE (CD-000000)</p>	<p><b>LEGEND:</b> Magenta: pre-existing slope. Green: current profile. Blue: proposed final profile. Red: roof vertical supports, stringers and deck.</p> <p>Prepared for Elen &amp; Dale Schmidt by/(c) WASTELINE, INC. 14 SEP 11 By: N. Barton Scale: none Schmidt Construction Site M-2011-014</p>
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## (C) NOTICES TO UTILITIES AND OTHER OWNERS OF MANMADE STRUCTURES

DALE AND ELLEN SCHMIDT  
472 Meadows Drive  
Pagosa Springs, CO 81147  
(970) 946-6262

30<sup>th</sup> September, 2011

Mailed to: See attached notary statement and information below

Dear Neighbor:

Structure Agreement

This letter has been provided to you as the owner of a structure on or within two hundred (200) feet of the Schmidt Site, a construction site, considered to be a proposed mine site in accordance with state law. The State of Colorado, Division of Reclamation, Mining and Safety ("Division") requires that where a mining operation will adversely affect the stability of any significant, valuable and permanent man-made structure located within two hundred (200) feet of the affected land, the Applicant shall either:

- Provide a notarized agreement between the Applicant and the Person(s) having an interest in the structure, that the Applicant is to provide compensation for any damage to the structure; or
- Where such an agreement cannot be reached, the Applicant shall provide an appropriate engineering evaluation that demonstrates that such structure shall not be damaged by activities occurring at the mining operation; or
- Where such structure is a utility, the Applicant may supply a notarized letter, on utility letterhead, from the owner(s) of the utility that the mining and reclamation activities, as proposed, will have "no negative effect" on their utility. (Construction Materials Rule 6.3.12 and Rule 6.4.19 & Hard Rock/Metal Mining Rule 6.3.12 and Rule 6.4.20)

The Colorado Mined Land Reclamation Board ("Board") has determined that this form, if properly executed, represents an agreement that complies with Construction Materials Rule 6.3.12(a), Rule 6.4.19(a), and C.R.S. § 34-32.5-115(4)(e) and with Hard Rock/Metal Mining Rule 6.3.12(a), Rule 6.4.20(a), and C.R.S. § 34-32-115(4)(d). This form is for the sole purpose of ensuring compliance with the Rules and Regulations and shall not make the Board or Division a necessary party to any private civil lawsuit to enforce the terms of the agreement or create any enforcement obligations in the Board or the Division.

The following structures are located on or within 200 feet of the proposed affected area:

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

LAST ITEM.

INITIALS: Applicant \_\_\_\_\_ Structure owner \_\_\_\_\_ Structure Agreement, Page 1 of 2

Structure Agreement, Page 2 of 2CERTIFICATION

The Applicant, Dale and Ellen Schmidt, by Dale Schmidt, as owner of the Schmidt Site and representative, does hereby certify that \_\_\_\_\_ (structure owner) shall be compensated for any damage from the proposed mining operation to the above listed structure(s) located on or within 200 feet of the proposed affected area described within Exhibit A, of the Reclamation Permit Application for the Schmidt Site (operation name), File Number M-2011-014.

This form has been approved by the Colorado Mined Land Reclamation Board pursuant to its authority under the Colorado Land Reclamation Act for the Extraction of Construction Materials and the Colorado Mined Land Reclamation Act for Hard Rock, Metal, and Designated Mining Operations. Any alteration or modification to this form shall result in voiding this form.

NOTARY FOR PERMIT APPLICANT

ACKNOWLEDGED BY:

Applicant Dale and Ellen Schmidt Representative Name Dale Schmidt  
Date \_\_\_\_\_ Title owner of the site and representative

STATE OF \_\_\_\_\_ } ss.

COUNTY OF \_\_\_\_\_ }  
The foregoing was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2011, by Dale Schmidt as owner of the Schmidt site and representative of Dale and Ellen Schmidt of Pagosa Springs, Colorado.

My Commission Expires: \_\_\_\_\_  
Notary Public \_\_\_\_\_

NOTARY FOR STRUCTURE OWNER

ACKNOWLEDGED BY:

Structure Owner \_\_\_\_\_ Name \_\_\_\_\_  
Date \_\_\_\_\_ Title \_\_\_\_\_

STATE OF \_\_\_\_\_ } ss.

COUNTY OF \_\_\_\_\_ }  
The foregoing was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2011, by \_\_\_\_\_ as \_\_\_\_\_ of \_\_\_\_\_.

My Commission Expires: \_\_\_\_\_  
Notary Public \_\_\_\_\_

Distribution: (Owners of record of significant permanent man-made structures within 200 feet of the property line of Schmidt Site (Lot 6, Block 5, Aspen Springs #3):

Last name	First name(s)	Mailing Add 1	City	State	Zip	Lot	Situs Add	Structures
B	Snow	Daniel M	PO Box 521	Pagosa Spgs	CO	81147	AS3 B3 L7 River Run Dr 346	1. Riding Ring 2. Sheds 3. Fences/Gates
C	Mo's Rentals LLC		PO Box 1761	Pagosa Spgs	CO	81147	AS3 B3 L8 River Run Dr 298	1. Building (House) 2. Driveway
D	Johnson	Matthew G	425 E River Run Dr	Pagosa Spgs	CO	81147	AS3 B5 L4 River Run Dr 425	1. Building (House) 2. Patio 3. Driveway
E	Johnson?	Matthew G ?	425 E River Run Dr	Pagosa Spgs	CO	81147	AS3 B5 L5 River Run Dr 435?	1. Shed/Carport 2. Driveway
F	Bennett	Robert S & Alice M	14848 Kingston	El Paso	TX	79928	AS3 B5 L7 River Run Dr 321	1. Driveway w/cutvert 2. Water well 3. Portable shed
G	Snow	Daniel M	PO Box 521	Pagosa Spgs	CO	81147	AS3 B5 L8 River Run Dr 245	1. Building (House)
P	Archuleta County Road and Bridge Department		PO Box 1507	Pagosa Spgs	CO	81147	River Run Drive Right-of-way	1. Road (River Run Drive)
X1	La Plata Electric Association (LPEA)		PO Box 2750	Durango	CO	81302	Power line, tower and easement	1. Power Line Tower, Cables

### 6.3.12 EXHIBIT L - Permanent Man-Made Structures

REFER TO MAPS E1 and E2. Letters identify specific properties and therefore owners of the structures in those properties. Addresses of owners are provided in the letter to structure owners in Exhibit J. Details of slope stability measures are designed are provided in Exhibit for 6.5.

Map	Description	Owner(s)	Potential Impact of proposed work in permit area
B	Structures N of River Run Drive: Riding Rings, Sheds, and Fences/Gates (Corrals)	Owner: Daniel M. Snow.	No significant impact. Excavation is minimal within 100 feet of the ROW, and structures are located about 160 feet from nearest excavation except for driveway (already built).
C	Structures N of River Run Drive: Building (house) and driveway	Owner: Mo's Rentals LLC	No significant impact. Excavation is minimal within 100 feet of the ROW, and structures are located about 250 feet from nearest excavation except for driveway (already built). Only one corner of the building is within 200 feet.
D/E	Structures E of Site: Building (house), shed/carport, patio, driveway	Owner: Matthew G. Johnson (both properties)	No significant impact. Excavation has been underway within 200 feet of the structures and has apparently caused no significant problems. Excavation will be no closer, and is at approximately same elevation as structures, which are located mostly in an excavated bench on the Johnson property. Driveway and several structures are partially on both lots, one structure on just a single lot; only portions are within 200 feet. is minimal within 100 feet of the ROW, and structures are located about 160 feet from nearest excavation except for driveway (already built).
F	Structures W of Site: driveway (gravel/semi-improved) with culvert, water well, and shed	Owner: Robert S. and Alice M. Bennett	No significant impact. Though driveway is within 50 feet of permit boundary and 75 feet of excavation, excavation has been underway for some time and apparently has caused no problems to the semi-improved road (really a trail). Deeper excavation is not expected to result in any damage, provided stabilization is provided as proposed. Water well depth is significantly greater than depth of excavation planned, and no blasting is planned; no impact expected. Shed is portable and therefore not a permanent structure.
G	Structures W of Site: building (house)	Owner: Daniel M. Snow.	No significant impact. Only one end of the building (apparently a modular unit) is within 200 feet of the Site and is more than 200 feet from planned excavation.
P	River Run Drive (Gravel road with drainage features (ditches) in Right of Way	Owner: Archuleta County Road and Bridge	No significant impact. Culverts for driveways are addressed with landowners (above). Road is well below planned depth of excavation, and there is minimal excavation proposed within 100 feet of the ROW. Excavation within that distance is limited to that needed for driveway improvements at the entrance. Site drainage is designed to minimize storm water discharge into ditches or onto road. Road maintenance is assigned to the Aspen Springs Metropolitan Services District.
X1	Utilities (electrical power) lines and tower	La Plata Electric Association	LPEA will provide requirements to protect powerline tower and access to powerline from construction on-site. Based on existing excavation, no problem is expected but landowner will have to indemnify LPEA for any damage.
	Fencing		No fencing on-site or on permit boundary
	Currently-existing road (driveway) w/ drainage	Ellen and Dale Schmidt	Existing culvert and road is to be improved as part of the construction project. No significant negative impact.

Prepared by Nathan A. Barton, PE, 26 SEP 2011, based on site inspections July and September 2011.

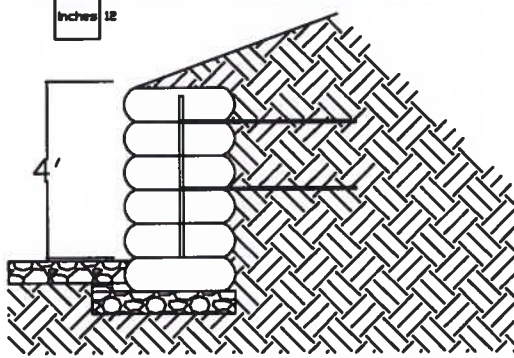
## **6.5 Geotechnical Stability Exhibit**

The following three sheets (drawings S3a, b, and c) show details of the slope and cutbank stabilization to be used in the construction on the Schmidt Site. Various techniques, as shown, will be used, based on materials available and exact nature of the slopes and soils, including height, bearing strength, materials available, and potential risk of damage, slope failure, and erosion. Key elements include preventing ANY slumping, slope failure, erosion, or sediment from occurring off-site or in areas with no disturbance planned on-site, use of as much on-site material (such as cobbles and boulders) as possible, use of recycled materials, and aesthetics. The precise type of wall to be used will be determined at the time excavation is completed. Based on past excavation and current slope and soil conditions, there is some actions necessary to ensure long-term stability and protection from damage by weather and human action. In addition, County regulations related to environmental health and safety, and sound engineering and construction, must be followed. The techniques shown on the following drawings are in use in many other locations with similar soil and climate conditions and have been demonstrated to be successful for periods of 20 years and more. Selection and construction of the specific alternatives will be reviewed, approved, and as necessary supervised by a licensed professional engineer.

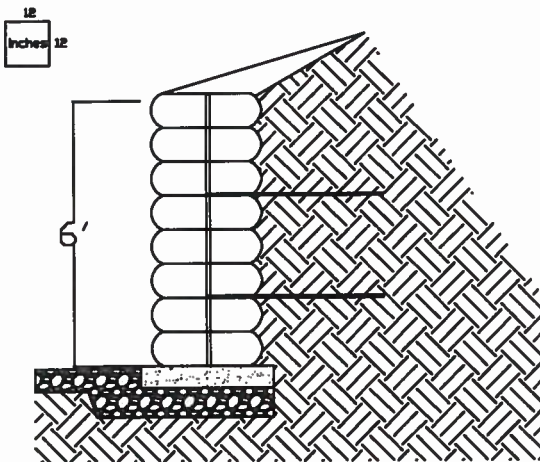
*Prepared by Nathan A. Barton, PE, 26 September 2011.*



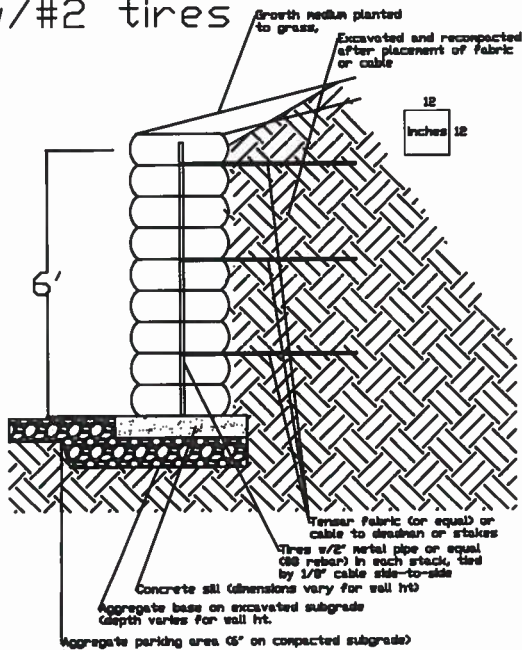
# A. 2-5-ft height walls



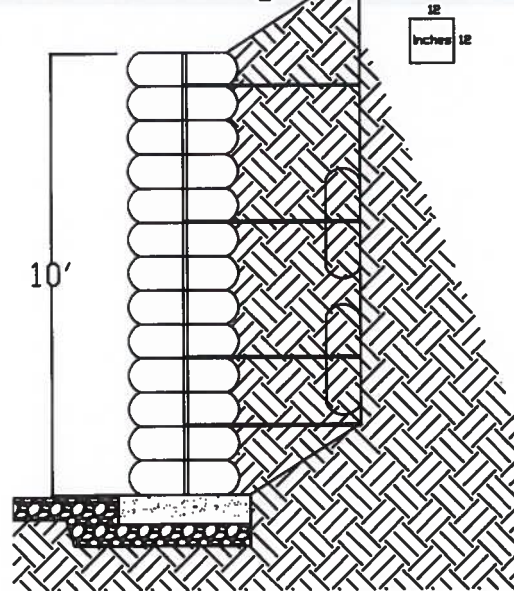
# B. 5-10-ft height walls



# C. 5-10-ft height walls w/#2 tires



# D. 10-ft+ height walls



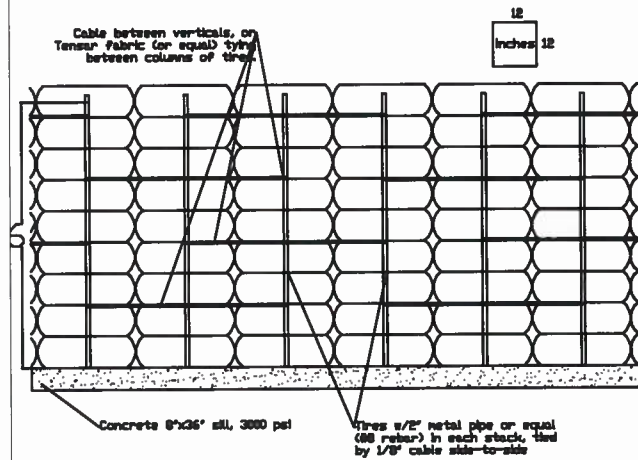
# Typical Tires Typ. Geogrid

TYPE #1 TIRE  
215/70R15  
8.5" high  
27" diameter

TYPE #2 TIRE  
235/70R17  
9.25" high  
30" diameter



# E. Face of 6-ft wall



Walls may have fence, hedge, or short drylaid stone wall at top of wall for safety protection (not shown). See sheet C.

*Robert A. Barton*  
Robert A. Barton, PE (20-02882)

Prepared for Eileen & Dale Schmidt by B. (c) WASTELINE, INC. 14 SEP 11 By: N. Barton Scale: none  
Schmidt Construction Site M-2011-014

DRAWING BY N. BARTON 27 SEP 2011  
FOR PERMITTING PURPOSES

# SIGNIFICANT MANMADE STRUCTURES TYPICAL ROCK RETAINING WALL

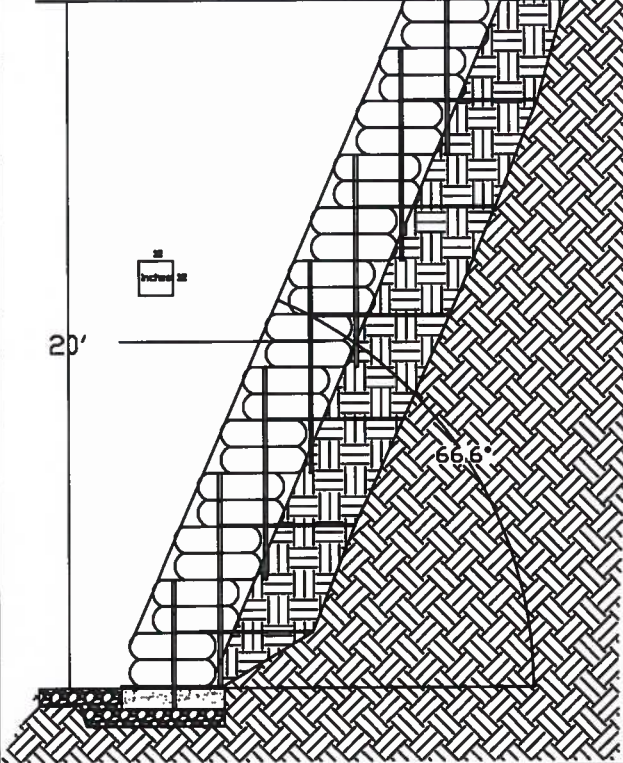
Typical design as shown, to be built as indicated on reclamation maps, as required.

Drawing/  
Sheet No.

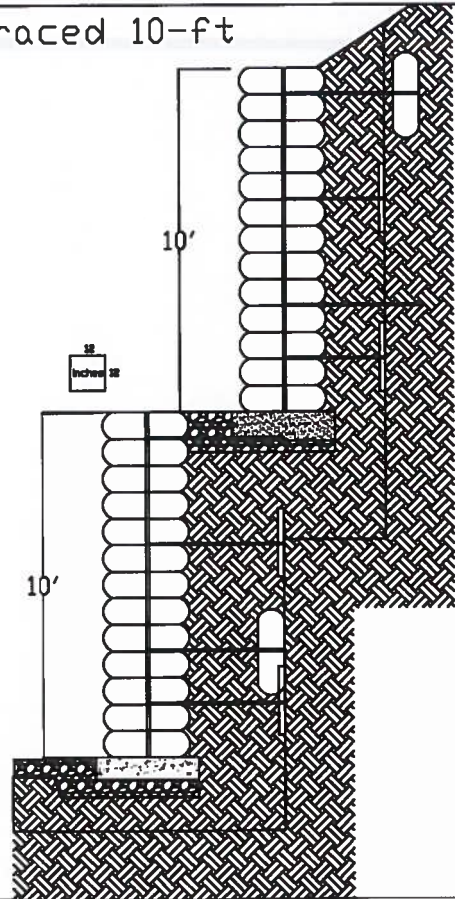
S3a



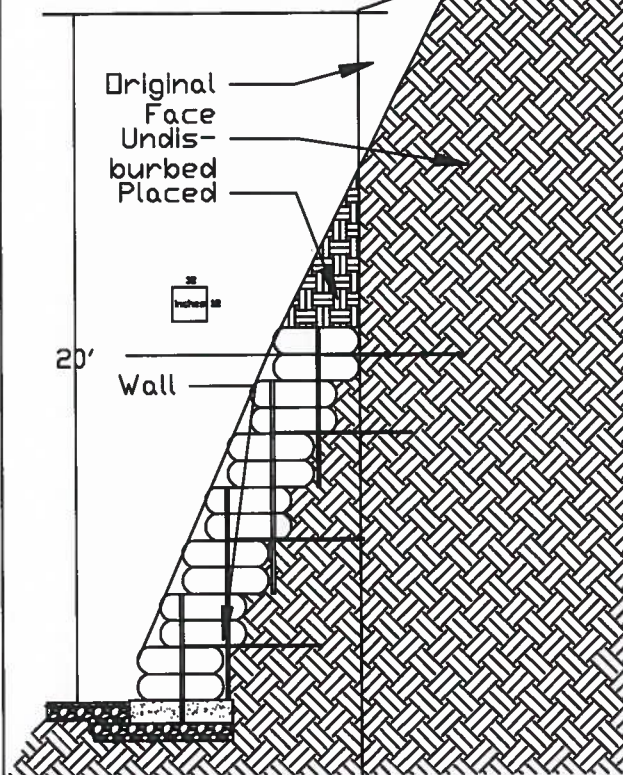
F. 20-ft height tilted walls



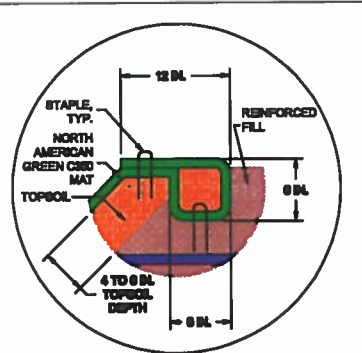
H. Terraced 10-ft walls



G. 10-ft height tilted walls with stabilized upper slope



Walls may have fence, hedge, or short drylaid stone wall at top of wall for safety protection (not shown). See sheet C.



ANCHOR TRENCH DETAIL

Prepared for Ellen & Dale Schmidt by & (c) WASTELINE, INC. 14 SEP 11 By: N. Barton Scale: none Schmidt Construction Site M-2011-014

DRAWING BY N. BARTON 27 SEP 2011 FOR PERMITTING PURPOSES

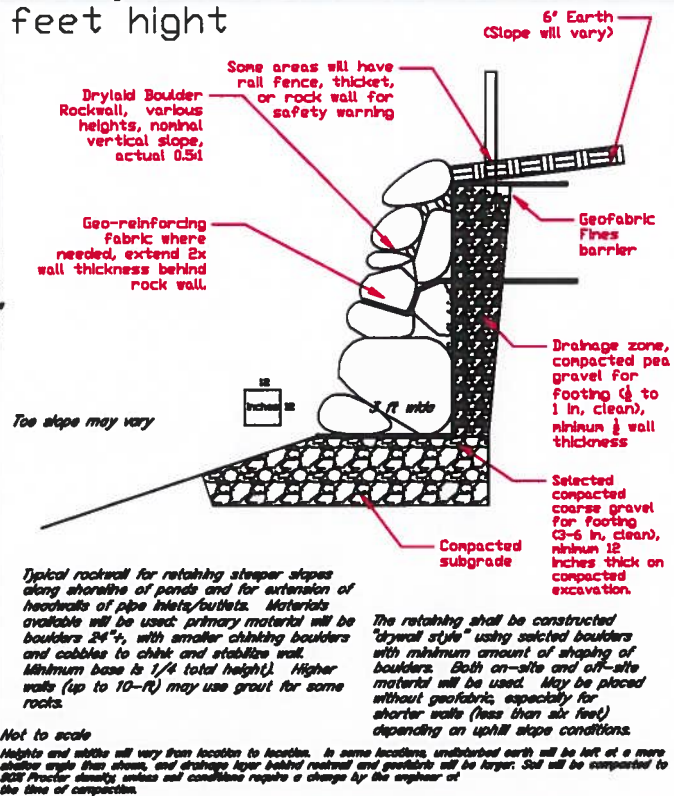
### SIGNIFICANT MANMADE STRUCTURES TYPICAL ROCK RETAINING WALL

Typical design as shown, to be built as indicated on reclamation maps, as required.

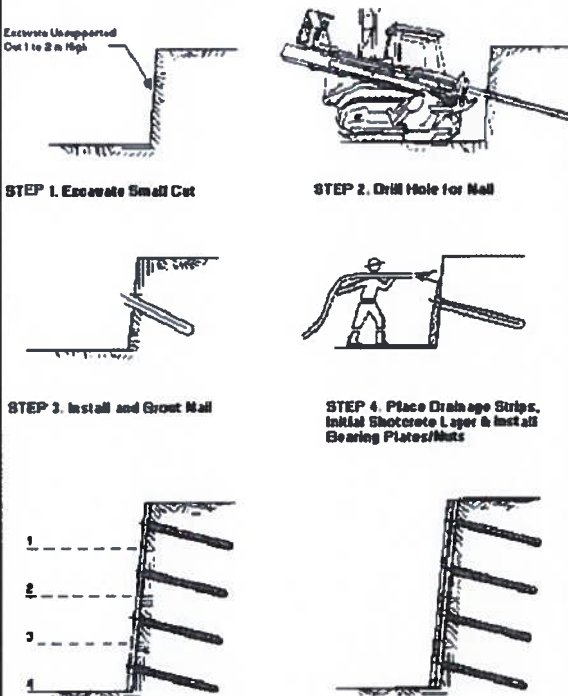
Drawing/  
Sheet No.

**S3b**

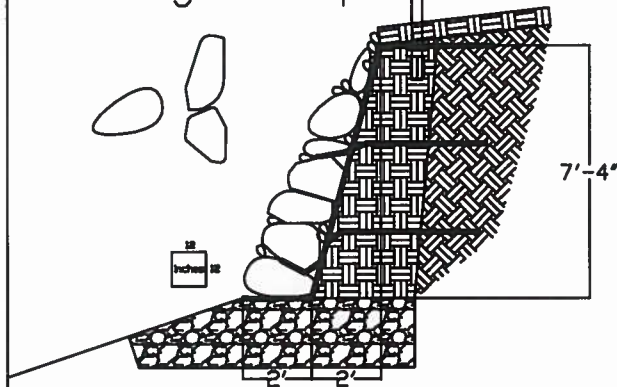
## J. drylaid stone walls to 10 feet high



## M. Soil Nail walls (may use drilling or percussion)



## K. drylaid stone walls to 10 feet high (sloped)



## L. Geogrid reinforced earth wall



Prepared for Ellen & Dale Schmidt by & (c) WASTELINE, INC. 14 SEP 11 By: N. Barton Scale: none  
Schmidt Construction Site M-2011-014

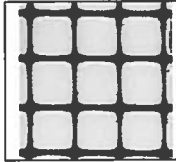
DRAWING BY N. BARTON 27 SEP 2011  
FOR PERMITTING PURPOSES

### SIGNIFICANT MANMADE STRUCTURES TYPICAL ROCK RETAINING WALL

Typical design as shown, to be built as indicated on reclamation maps, as required.

Drawing/  
Sheet No.

S3c



**SHEET S2d. NOTES AND DESIGN DATA FOR ENGINEERED, RECYCLED-TIRE RETAINING WALLS  
FOR PERMITTING PURPOSES**

*Prepared by © N. Barton, PE, Rev. 15 SEP 2011  
Refer to Sheets S3a, S3b, and S3c.*

Designs are shown using two standard and common tire sizes (shown on Sheet S3a inset), but additional tire sizes will be used. Generally, tires of the same exterior diameter (not interior diameter) are best used to construct columns, and can be placed adjacent to tires of different diameters. Tires must not be cut or sliced in any way, and fiberglass or steel belts may be exposed but may not be worn away or cut.

Installation of tires: whether installed directly on excavated and compacted soil, gravel base course, or 3,000 psi concrete footings, or tires (filled with earth, soilcrete, or concrete), the techniques of installing tires are the same. Vertical reinforcing (at least 2"-in steel pipe or #8 rebar (for wall height of 6 feet or higher), 1.5"/#6 for 4-6 feet) is placed in the footing to a minimum depth of 4" (6" preferred) and for vertical walls, centered on each column of tires. Tires are placed one row at a time, and backfilled with earth, mechanically tamped to 95% Proctor density, being careful to backfill fully in sidewalls. Whenever possible, all columns of tires in a single segment are filled one row at a time. Any excavated space behind the tire shall also be filled and compacted at the same rate. When soilcrete or concrete (except in tires) is used, lateral rebar reinforcement shall be used for footings of more than 10-feet length, or if there are changes in base elevation. When foot of retaining wall is on a slope, the footings shall be flat, and shall keep tire-rows level; and even for compacted soil and gravel base course, a concrete curb shall be used to change elevations.

Fill material shall be clean, root-free earth (including loam, clay-loam, sandy-loam, and clay) free from particles greater than 1-inch and at 2-6% moisture, placed in lifts of no more than 6 inches, or as directed by the engineer. Granular material (gravel, coarse sand) shall not be used.

Regardless of wall height, above the first two rows of tires, lateral cabling is placed connecting a minimum of three columns. This material can be cable (minimum ¼-inch steel or ½-inch aluminum) or braided wire (minimum 3 each #12) or #4 rebar. See Detail E.

Geogrid, if used, shall meet or exceed standards for Tensar UX1000HS (see typical in inset, Sheet 1). If geogrid is used, geogrid shall be placed to extend at least six inches to the front of the vertical reinforcing, and the full width of the column of tires. Overlap from side to side shall be a minimum of six inches, as measured at the line between verticals, and shall extend a minimum of 48 inches from the back of the tire, or as specified.

Cable, if used, shall be connected to anchor stakes or deadmen as specified. Tires, if used as deadmen, shall be filled and hand tamped with dirt and shall be attached to cables or rods as specified by the engineer, with a minimum of 72 square inches of contact between the cable or cable end-plate and the tire. Steel stakes, when used, shall have a minimum face surface of 72 square inches (for example, 36" x 2"). If wooden stakes or deadmen are used, they shall be pressure-treated (CCA or similar) and minimum nominal dimension of 4 inches.

Although shown as flat gravel, any pervious surface to the front of the retaining wall should slope away from the retaining wall at a minimum of 1% grade. If located in high-moisture areas, a geomembrane shall be placed in front of the wall to reduce moisture infiltration and freeze-thaw of the grade and subgrade.

To prevent infiltration of moisture into the compacted cores of the tire columns, the top of each column is protected either with a 40-mil or thicker HDPE geomembrane covering the entire tire and core, or a two-inch-thick concrete cap covering the entire core.

Detail A, Sheet S3a (Retaining wall, 2-5 feet high, uphill slope less than 66%)

Note: as a general rule, code does not require engineered design for retaining walls of 4 feet or lower height, with a minimum of four feet horizontal setback between wall faces. As shown, the tires are placed on a 48-inch wide, 6-inch deep compacted gravel (CDOT ABS #1 or #6) footing. In this case, one tire shall be placed so that the top of the tire is at

(continued)

the final grade of the ground in front of the retaining wall, but may be filled with earth and compacted.

For heights less than 3 feet, no geogrid is required; for 3-4 feet height, 1 geogrid or cable-deadman is required; a minimum of two geogrid layers is required for 4-5 feet height, as shown. The toe of the soil at the top of the retaining wall is at the widest part of the tire, as shown.

Detail B, Sheet S3a (Retaining wall, 5-10 feet high, uphill slope less than 66%, using Type 2 tires.)

As shown, the footing is a 6-inch thick poured mass concrete slab on 6-inch (minimum, 8-inch shown) compacted gravel (CDOT ABS #1 or #6) pad, minimum 6 inches wider than tire width used. This may be replaced by a tire filled with one-bag soilcrete or lime-stabilized soil, when approved by the engineer.

Geogrid or cable-deadman is required, at two, five, (and if applicable) eight and eleven rows, but not at the top of the column. As shown, two layers of geogrid/cable-deadman are used for 6-foot wall. At the discretion of the engineer, an additional geogrid layer may be required below the top tire, based on steepness and condition of the slope above the wall. The toe of the soil at the top of the retaining wall is at the widest part of the tire, as shown.

Detail C, Sheet S3a (Retaining wall, 5-10 feet high, uphill slope less than 66%, using Type 1 tires.) Refer to notes for Detail B above. This detail is identical except it uses Type 1 instead of Type 2 tires.

Detail D, Sheet S3a (Retaining wall, 10 feet high and more, uphill slope less than 66%, vertical.)

As shown, the footing is a 8-inch thick poured mass concrete slab on 6-inch (minimum, 8-inch shown) compacted gravel (CDOT ABS #1 or #6) pad, minimum 12 inches wider than tire width used. This may be replaced by a larger soilcrete footing (minimum 12-inch deep, minimum 16 inches wider than tires).

Geogrid or cable-deadman is required, at two, four, eight, twelve, (and if applicable) sixteen, twenty, and twenty-four rows, and a final geogrid layer below the top tire, if two or more tires are located above the last counted row. Based on steepness and condition of the slope above the wall, the engineer may require one or two deadmen even if geogrid is otherwise used, or require alternating layers of geogrid to be fastened to deadmen. The toe of the soil at the top of the retaining wall shall be placed at the widest part of the tire on the back side, as shown. Again based on steepness and condition of the slope above, the normal concrete water cap at the top of the column of tires shall be connected to a continuous, 3-inch minimum thickness cap the full width of the tires (not shown).

Detail E, Sheet S3a (Face view of 6-foot retaining wall)

This detail shows the spacing and placement of the lateral cables connecting the vertical reinforcement.

Sheet S3b:

Detail F. Sheet S3b. Tilted retaining wall (20 foot high) at 66% angle.

Detail G. Sheet S3b. Tilted retaining wall (10-foot high) with stabilized 1:2 slope for 10-feet above.

Geofabric, geogrid and/or dry-laid riprap (rock wall) used for stabilization.

Detail H. Sheet S3b. Terraced 20-foot retaining wall. When multiple walls of less than 12 feet individual height are used, setback shall be a minimum of four feet measured from the front of the lower wall. For walls of greater than 12 feet, setback shall be 1/3 the wall height of the lower wall.

Sheet S3c:

Detail J: Drylaid stone wall (to 10 feet high), vertical unexcavated slope, with or without geogrid.




Detail K: Drylaid stone wall (to 10 feet high), sloped recompacted slope with geogrid.

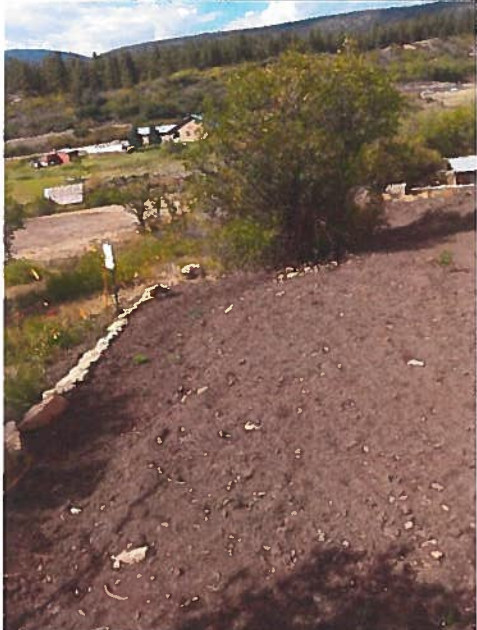


Detail L: Geogrid reinforced earth wall, with extensive recompacted slope: depth may vary, and slope may vary from that shown to vertical.

Detail M: Soil nail walls, using drilled or percussion nails (with or without grout). Nails may be plastic or metal or treated wood. Exterior grouting with fibermesh may be used for strength as well as appearance.



## EXHIBIT 5. PHOTOS

<p>1. 1st Switchback Across Road West Side Water Shed 1 (September 2018)</p>	
<p>2. 1st Switchback Across Road West Side Water Shed 2 (September 2018)</p>	
<p>3. 1st Switchback Along Property Line West Side Swale 1 (September 2018)</p>	

<p>4. 1st Switchback Along Property Line West Side Swale 2 (September 2018)</p>	
<p>5. 1st Switchback Along Property Line West Side Swail 3 (September 2018)</p>	
<p>6. 2nd Switchback Across Road East Side Water Shed 1 (September 2018)</p>	



7. 2nd Switchback Along  
Property Line East Side 1  
(September 2018)


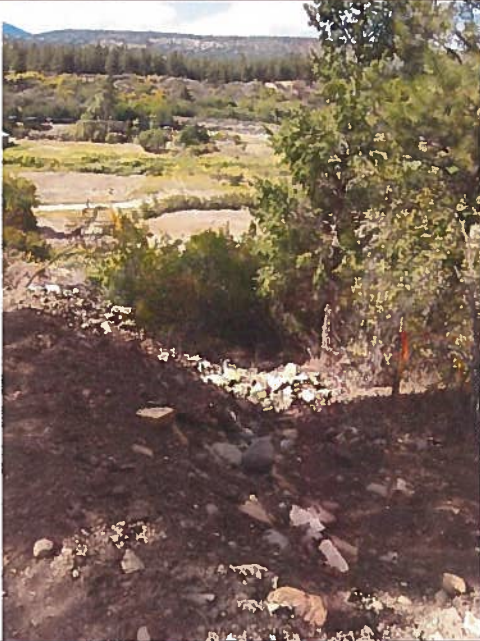



8. 2nd Switchback Across  
Road East Side Water  
Shed 2  
(September 2018)



9. 2nd Switchback Across  
Road East Side Water  
Shed-Drainage 3  
(September 2018)



<p>10. 2nd Switchback Along Property Line East Side 2 (September 2018)</p>	
<p>11. 2nd Switchback Along Property Line East Side (September 2018)</p>	
<p>12. 3rd Switchback Across Road West Side Berm 1 (September 2018)</p>	



<p>13. 3rd Switchback Across Road West Side Berm - Watershed (September 2018)</p>	
<p>14. 3rd Switchback Across Road West Side Water Shed 1 (September 2018)</p>	
<p>15. Between 2nd &amp; 3rd Switchback Across Road Water Shed 1</p>	

16. Seed Receipt  
(temporary stabilization)  
Done SEP 2018

**BASIN COOP (DURANGO)**  
POB 2996 CO163 HIGHWAY 160  
DURANGO CO. 81302  
WWW.BASINCOOP.COM  
PHONE: (970) 247-3808

RECEIPT MUST ACCOMPANY RETURNS & INQUIRY  
TO REDUCE RISK: DALLAS FISCAL (970) 247-3808

PAGE 100 1

Customer No.	Job No.	Hardware Order No.	Information	Name	Class	Item	Unit	Price	Ext
ORDER TO: ***** ORDER NO: *****			ORDER DATE: 6/21/18 ORDER NO: ***** ORDER BY: *****		ORDER NO: 100 ORDERED & LA PLATA CO				

QUANTITY	ORDERED	UNIT	DESCRIPTION	PRICE	UNIT	PRICE/UNIT	EXTENSION
1	1	LB	DRUM SEEDS	4.50	1	4.50 /LB	4.50 W
1	1	LB	PERMANENT AERIAL	1.50	1	1.50 /LB	1.50 W

NTD 111120245443

APP 111120245443

\*\* PAYMENT RECEIVED \*\*

\*\* PHOTO OF FILL \*\*

BANKCARD PAYMENT

ORDER#XXXXXXXXXXXX1111

1.10 TAX AMOUNT

1.10 TOTAL AMOUNT

Drive-Thru Window

17. Photo of seeding  
disturbed areas along  
the permit boundary  
(videos available of  
entire operation)



18. Additional Seeding

