APPENDIX A.

Public Involvement Compendium

PUBLIC INVOLVEMENT COMPENDIUM

MADRID STORMWATER AND EROSION CONTROL PROJECT

Prepared for

ABANDONED MINE LAND PROGRAM

Mining and Minerals Division

New Mexico Energy, Minerals, and Natural Resources Department

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Prepared by

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July 2022

This Public Meeting Compendium provides a summary of the public outreach processes utilized for the proposed Madrid Road Improvement, Stormwater, Erosion Control, and Fire Suppression Project. The New Mexico Energy, Minerals, and Natural Resources Department Abandoned Mine Land Program (AML), in partnership with the U.S. Department of Interior (USDI), Office of Surface Mining Reclamation and Enforcement (OSMRE) and the Bureau of Land Management (BLM), is proposing to establish stormwater conveyances, fire prevention improvements, and erosion control measures within the village of Madrid, New Mexico located approximately 22 miles southwest of Santa Fe, New Mexico along state highway 14 . The project is proposed on 117 acres comprised of:

- 84.18 acres of privately owned land
- 20.65 acres of Santa Fe County owned land
- 6.84 acres of New Mexico Department of Transportation (NMDOT) owned land
- 2.37 acres of Madrid Landowners Association owned land

The project has been designed to protect the public from hazards associated with road insufficiencies, erosion around existing gob piles, flooding in and around Madrid, and improve the fire suppression capabilities while preserving the historical integrity of the village and maintaining its tourism-reliant economy.

In developing the proposed action, AML desired to address mining issues using a more holistic approach and hired a planning team to conduct a community-based planning effort. Objectives of the planning team for community outreach included:

1. Determine the range of stakeholders in developing a community based plan.
2. Meet and begin forming relationships with many of the stakeholders.
3. Understand the community's social and historical context, and the key issues to deal with in the plan.
4. Work jointly with Madrid community members and stakeholders to design an effective planning process.

These objectives were kept in mind and work towards throughout the community outreach process, which included informal interviews with individuals, presentations to civic groups, community meetings, posting projects updates and information on a community story board and website, and consulting members of a community advisory board.

A public meeting was held on December 13, 2017, at the Madrid Fire Station, 5 Firehouse Lane, Madrid, New Mexico. The purpose of the public meeting was to provide an overview of the project and to accept comments and answer questions from the public. Public meeting notices were published in the *Santa Fe New Mexican* on November 29, and December 12, 2017. Public notices were also published in the *Mountain View Telegraph* on November 30, and December 7, 2017. The meeting notice was also mailed to 120 local addresses on November 27, 2017. Seventeen (17) community members and several AML Program representatives attended the public meeting. Due to the number of claimants and public response to the first public meeting, a second public meeting was held on June 20, 2018, at the Madrid Fire Station. Notice was published in the *Mountain View Telegraph* and the *Santa Fe New Mexican* on May 31, and June 14, 2018. Notices were also mailed to 137 addresses. Ten (10) community members attended the public meeting, as well as AML Program representatives.

A final public meeting was held on September 24, 2018, at the Mine Shaft Indoor Theater in Madrid. Public notice was published in the *Santa Fe New Mexican* on September 17, 2018. A notice was also mailed to 161 addresses. Seventeen (17) people attended the meeting, as well as AML Program representatives.

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ATTACHMENT A

Schedule of Planning Process Activities

Strategy	*February Task 3 Authorization*	*March Communications Set-up*	*April Community Meetings*	*May Draft Plan*	*June Final Plan*
Community Meetings					
Indiviual Interviews					
Civic Group Reports					
Community Advisory Board					
Community Story Board					
Project Website					

Figure 1.16 Schedule of Planning Activities

ATTACHMENT B

Project Area Designs

MADRID STORMWATER AND EROSION CONTROL PROJECT

60% Design Narrative

August 2021 Draft

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

The Madrid Stormwater and Erosion Control Project is an Abandoned Mine Land (AML) program that addresses stormwater and erosion associated with the legacy of coal mining in Madrid. This design effort emerged from the Mining Landscape Community based plan where the following two project areas were identified as priorities.

- The East Slope Catchment Area
- Madrid Arroyo Restoration Area.

Over the course of eight years the AML program has progressively addressed Madrid's stormwater and erosion conditions by responding to emergencies involving the most impacted landowners. The Madrid Stormwater and Erosion Control Project represents a private-landowner based design and public outreach effort designed to holistically improve the perennial stormwater and sedimentation issues that impact residents and businesses. The East slope catchment project evolved into two design projects - the Ice House Road area and Firehouse Lane area which address the uncontrolled stormwater runoff and erosion of gob (coal waste) piles from the disturbed east slope that has periodically led to substantial sediment being transported onto residents' property, homes and basements.

Where space allows, the goals of the east slope restoration design effort are to naturalize the channel, restore stormwater flow to the historic valley section, improve flood water conveyance, and protect nearby properties from stormwater damage. Stormwater conveyance structures are designed with sediment collection features.

Additional considerations for Madrid Arroyo include the improvement of the Cave Road vehicle crossing (which has been subject to stormwater damage) to meet Santa Fe County road standards and provide landscape and trail improvements.

The project includes evaluation of improvements to the storage and conveyance capacity of the Madrid fire suppression system. A new system will replace an old leaking concrete tank and an undersized gravity pipeline that crosses the arroyo with a new storage tank and transmission pipeline.

1.2 PROJECT GOALS

Project Goals Include:

- Address the legacy of coal mining in Madrid that has resulted in uncontrolled stormwater runoff and excessive erosion/deposition of sediment on private property.
- Satisfy community and National Environmental Policy Act (NEPA) requirements.

1.3 Conceptual Designs

Conceptual design alternatives for each project area were developed prior to preparation of the 60% design for the Ice House Road/ Madrid Arroyo area, the Firehouse Lane area, and the fire suppression project. Alternative concepts for each of these areas were developed to address the project goals. These concepts were grouped together into two alternatives for both the Ice House/ Madrid Arroyo Road and Firehouse Lane areas. Alternative 1 (Ice House Road and Firehouse Land) represents a more hardened infrastructure approach that includes paved roads and pipeline storm water conveyances. Alternative 2 for both areas represent softer infrastructure characteristic of Madrid such gravel roads and open channel storm water conveyances.

Evaluation by AML and members of Madrid agreed to eliminate most of the features of Alternative 1 ("hardened" infrastructure) except for Madrid Arroyo. Therefore, the Alternative 2 features for Ice House Road and Firehouse Lane area have been advanced for the 60% design. Two of the Alternative 1 Madrid Arroyo/ Cave Road crossing options were included in the 60% design. Note that the fire suppression tank design will be prepared by others.

2. ALTERNATIVES ANALYSIS

The conceptual design alternatives that were developed for each project area were analyzed prior to preparation of the 60% design for the Ice House Road/ Arroyo area, Firehouse Lane, and fire suppression tank project. The following paragraphs summarize the rationale for selection of the preferred alternative that has been advanced.

2.1 ICE HOUSE ROAD AREA

Alternative 1

The stormwater and erosion control features proposed for Alternative 1 are characterized by paved standard and inverted crown road improvements, storm-drain pipes, large detention pond, rock-lined storm water diversions, and Madrid Arroyo improvements that include a primary outlet (Option 1) and overflow weir (Option 2) comprised of four concrete box culverts.

The Alternative 1 improvements will generally provide the highest level of service since maintenance of paved roads and storm drains is expected to occur infrequently.

Alternative 2

The stormwater and erosion control features proposed for Alternative 2 are characterized by improved gravel roads, open channel storm drains, rock-lined storm water diversions, and sediment basins. In the conceptual designs, a diversion channel along Cave Road was the only improvement proposed for Madrid Arroyo.

The Alternative 2 improvements generally provide a medium level of service and will require periodic maintenance to repair gravel roads and channels, especially after large storms.

Alternative 3 – No Action

A no action alternative is presented for consideration whereby none of the improvements proposed for stormwater and erosion control would be implemented. Alternative 3 would provide the lowest level of service whereby flooding and erosion issues would continue to impact properties.

Preferred Alternative

Following review by AML with input from members of the Madrid community, Alternative 2 is the preferred alternative. This conclusion is based upon elimination of the following Alternative 1 concepts from further consideration leaving only Alternative 2 concepts to move forward to the 60% design:

- The paved inverted crown road improvements for Ice House Road, Bridge, and Cave Roads.
- Subsurface storm-drain pipes.

Note: Although the Alternative 2 improvements are the preferred alternative, the improvements to Madrid Arroyo proposed in Alternative 1 were not eliminated from consideration and have been advanced to the 60% design (see Section 5).

2.2 FIREHOUSE LANE AREA

Alternative 1

The stormwater and erosion control features proposed for Alternative 1 are characterized by paved standard and inverted crown road improvements, storm-drain pipes, large detention pond, and rock-lined storm water diversions.

The Alternative 1 improvements will generally provide the highest level of service since maintenance of paved roads and storm drains is expected to occur infrequently.

Alternative 2

The stormwater and erosion control features proposed for Alternative 2 are characterized by improved gravel roads, open channel storm drains, rock-lined storm water diversions, and sediment basins.

The Alternative 2 improvements generally provide a medium level of service and will require periodic maintenance to repair gravel roads and channels, especially after large storms.

Alternative 3 – No Action

A no action alternative is presented for consideration whereby none of the improvements proposed for stormwater and erosion control would be implemented. Alternative 3 would provide the lowest level of service whereby flooding and erosion issues would continue to impact properties.

Preferred Alternative

Following review by AML with input from members of the Madrid community, Alternative 2 is the preferred alternative. This conclusion is based upon elimination of the following Alternative 1 concepts from further consideration leaving only Alternative 2 concepts to move forward to the 60% design:

- The paved inverted crown road improvements for Firehouse Lane.
- Subsurface storm-drain pipes.
- The upper and lower diversion ditches and the detention pond in the Firehouse Lane area.

2.3 FIRE SUPPRESSION SYSTEM

The following alternatives address improvements to the operation of the fire suppression system including water storage and conveyance. Although rehabilitation of the existing concrete water storage tank was considered, it has been eliminated from consideration primarily due to its age, Madrid arroyo bank erosion, and requirements for operation.

Alternative 1 – Southern Crossing

Alternative 1 is characterized by installation of a new 125,000-gallon tank with a transmission pipeline that crosses NM-14 and the Madrid Arroyo south of Madrid and across from the existing potable water tank. The waterline crossing would be placed in a casing installed by horizontal directional drilling under the highway and Madrid Arroyo then routed to a connection to the existing fire suppression pipeline near the fire house. The new pipeline would be placed mostly in Madrid Water and NMDOT land except for one private property crossing. Underground utility interferences are expected to be minimal.

Alternative 2 –Northern Crossing

Alternative 2 is characterized by installation of a new 125,000-gallon tank with a transmission pipeline that is routed on the west side of NM-14 and crosses under highway at the bend. The waterline crossing would be placed in a casing installed by horizontal directional drilling under the highway and routed to a connection to the existing fire suppression pipeline near the Madrid fire house. The new pipeline would be placed entirely in the NM-14 right-of way. Several underground utility interferences are expected.

Preferred Alternative

Alternative 1 that features crossing NM-14 south of Madrid is the preferred alternative for the following reasons:

- Less disruption to Madrid residents and visitors since the construction will occur south of town.
- Less potential for underground utility interference.

3. ICE HOUSE ROAD AREA PREFERED ALTERNATIVE

3.1 BETHLEHEM HILL TREATMENT

Construct earthen rolling dips, cobble rock rundowns and cobble swales.

- Design Strategies – Grade earthen drive to direct stormwater off driveway into cobble swales.
- Design Challenges - Possible rock outcrop Relative Value and Level of Service

  -Comparison to concrete crossings or piped water crossings; rolling dips are efficient though do not last as long. Capital costs for rolling dips are negligible compared to piped crossings and provide a lower level of service because water will flow across the dip during storms. Rolling dips are easier and cheaper to maintain.
- Construction phasing – Not applicable (N/A).
- Maintenance Actions- Inspect rolling dips after significant storm events, regrade/reshape rolling dips every year.

3.2 BETHLEHEM ARROYO TREATMENT

Construct Plunge Pools/Zuni Bowls and one rock dam.

- Design Strategies – Construct erosion control features by hand.
- Design Challenges- Identification of appropriate locations for low impact development (LID) features Identification of rock construction laydown area.
- Relative Value and Level of Service- These LID improvements blend into the landscape compared to other hardened features such as concrete plunge pools. Level of service and longevity of these well-built LID features are similar to concrete construction.
- Construction phasing- N/A.
- Maintenance Actions- Inspect features after significant rain events. Yearly sediment removal with hand-held tools.

3.3 ICE HOUSE ROAD SLOPE TREATMENTS

Construct three channel intercepts (currently labelled as upper, lower, and missing link intercepts, and sediment pond at southeast corner of the intersection of Ice House Road and Bethlehem Hill Road). The upper intercept changes to an underground piped system at the intersection of Yurt Road.

- Design Strategies – Construct intercept channels with a concrete channel that will capture and direct the stormwater away from private property. Intercept channels are upslope from the village and any concrete structures will, therefore, be hidden from view from the village.
- Design Challenges- possible rock outcrops may be encountered in grading operations, significant grading up and down slope needs private landowner coordination and can create hillside scarring. Solution includes retaining structures and concentrated stabilization strategies such as rock armoring, erosion control fabrics or small gravity walls of graded hillsides.

FIGURE 1. ***Potential Improvements to Ice House Road***

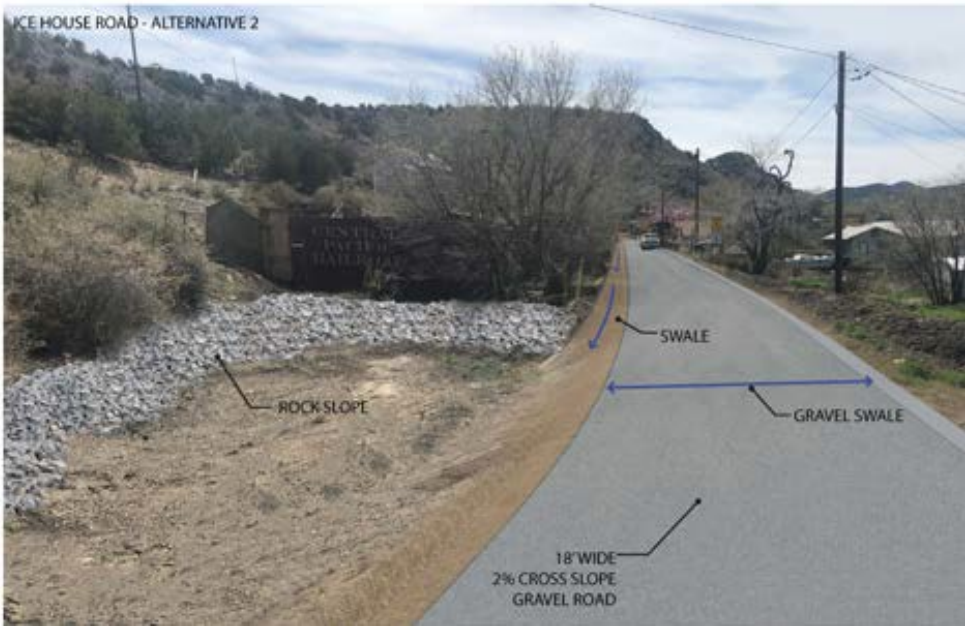


FIGURE 2. ***Ice House Road Before***

- Relative Value and Level of Service- Although rock channels will be more natural, concrete will have longer life, is easier to maintain and will have increased stormwater capacity.

- Construction phasing- If construction of all intercept channels cannot be completed concurrently, it is recommended that the order of priority would be: 1) lower intercept and sediment pond (see next section), 2) upper intercept, and 3) "missing link" channel.

- Maintenance Actions- Regularly inspect channels to assure debris is cleared. Check after significant rain events. Shovel debris from channels and flush debris out of piping as necessary.

3.4 ICE HOUSE ROAD TREATMENT

Regrade roadway to a crowned roadway section, providing for a sediment pond area on the east side of the intersection of Ice House and Bethlehem Hill Roads which accepts stormwater from the lower intercept and from Bethlehem arroyo. Provide a concrete overflow weir adjacent to the sediment settlement pond area for potential stormwater overflow conditions. Provide retaining walls on the west side, and a cobble swale on the east side of Ice House Road.

- Design Strategies – Grade to drain roadway, construct retaining walls to assure positive drainage.
- Design Challenges- Regrading the roadway will require 8' tall retaining walls (see image
- below), coordination with landowners and traffic rerouting.
- Relative Value and Level of Service- Stormwater and sediment will be addressed adequately for residents and emergency vehicles. Roadway capacity will not be diminished, and the longevity of roadway surface will be greatly improved.
- Construction phasing- Access to homes will have to be managed during construction.
- Maintenance Actions- Regrade and shape roadway and swales after significant rain events. Excavate/shovel debris and sediment from conveyance structures and settlement pond. Patch/bring to grade potholes with base course materials.

3.5 ICE HOUSE ROAD TO ARROYO ALIGNMENT/ TREATMENT

Construct a rectangular channel with drop structures west from Ice House Road- through private property to the NM-14 right of way. Construct a piped underground crossing under NM-14 and return the flow to a rectangular channel. Stormwater will travel through a drainage easement between two private properties to Cave Road.

- Design Strategies – Convey stormwater from Ice House Road to Cave Road in an open rectangular channel. Convey water underneath NM-14 with a piped storm drain system.
- Design Challenges- Coordination of improvements and easements with New Mexico Department of Transportation (NMDOT) and private landowners. Construction of the open channel between landowner properties will require the moving/replacement/modification of existing storage structures and fencing. Drop structures or a chute will need to be designed on private property to convey water from the elevation of Ice House Road down to the elevation of NM-14.
- Relative Value and Level of Service- The rectangular conveyance structure approximates the historic conveyance structures of Madrid without sacrificing a high level of service.
- Comparison to a piped conveyance between the properties requires a long length of costly stormwater piping.
- Construction phasing-Coordination is required with residents and NMDOT to close and construct the storm drain under NM-14.
- Maintenance Actions- Inspect channel often (1 mo.) and after large rain events to assure channel is free of debris. Shovel or flush debris from the channel and piping as necessary.

FIGURE 3. *Potential Retaining Wall Aesthetic*

FIGURE 4. ***Channel to the Arroyo***

ROCK LINED DRAINAGE CHANNEL TO MATCH LOCAL GEOLOGY

BEFORE PHOTO

4. FIREHOUSE LANE AREA PREFERED ALTERNATIVE

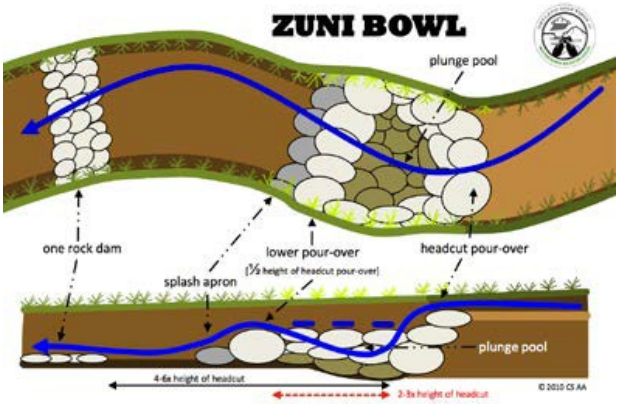
4.1 FIREHOUSE LANE/ RED DOG ROAD AREAS

- Design Strategies – Regrade Firehouse Lane and Red Dog Road to drain into Madrid Arroyo.
- Design Challenges- Firehouse Lane and Red Dog Road may be closed to traffic during grading operations. Coordination of improvements and easements with private landowners.
- Relative Value and Level of Service- Stormwater and sediment will be addressed adequately for residents and emergency vehicles. Roadway capacity will not be diminished, and the longevity of roadway surface will be greatly improved.
- Construction phasing- Manage access to homes during grading and construction operations.
- Maintenance Actions- Regrade and shape roadway after significant rain events. Patch/ bring to grade potholes with base course materials.

4.2 EAST GOB PILE AREAS

- Design Strategies – Construct Zuni Bowls/ plunge pools, one rock dams and rock rundowns in the higher elevations of the drainages. Construct trapezoidal channels at the toes of gob piles to capture and convey stormwater and sediment.
- Design Challenges- Significant grading up and down slope needs private landowner coordination and can create hillside scarring.

FIGURE 5. *Zuni Bowl Concept*



- Coordination of improvements and easements with NMDOT and private landowners.
- Relative Value and Level of Service - LID constructs have proven to be resilient and, though labor intensive, are cost effective. Although rock channels will be more natural, concrete will have longer life than rock and will have more stormwater capacity.

  Construction phasing-To provide a conveyance path for drainage to safely reach Madrid Arroyo, before any intercept channels are constructed, the water crossing of Firehouse Lane and discharge channel to the arroyo will need to be constructed. Beyond that, construction phasing of each of the individual features is not required.
- Maintenance Actions- Inspect channel often (1 month) and after large rain events to assure channel is free of debris. Shovel or flush debris from the channel as necessary.

FIGURE 6. *Water Restoration Features*

5. MADRID ARROYO PREFERRED OPTIONS

The following paragraphs describe the options that have been advanced to the 60% design for Madrid Arroyo and the related Cave Road drainage system. The conceptual designs presented these actions in Alternative 1, however, the 60% designs present two options for the Cave Road/Madrid Arroyo crossing which have been advance as Alternative 2.

5.1 OPTION 1 – BASE DESIGN

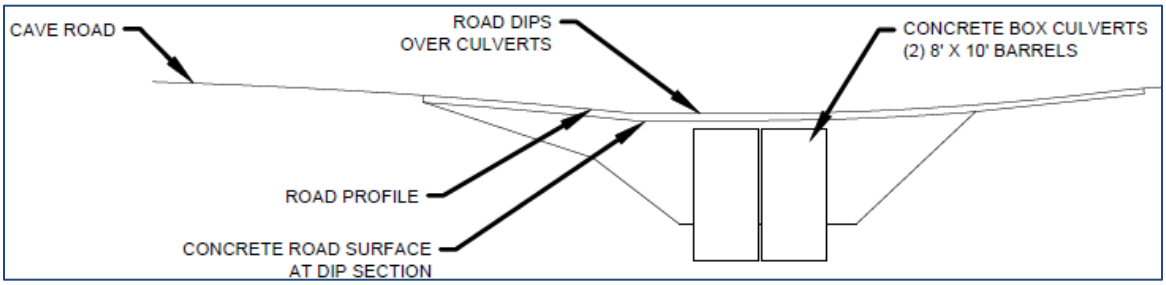
CAVEROAD

- Design Strategies– Regrade Cave Road and construct a rock lined swale gravel roadway to convey stormwater. Add of fill on top of the old railroad grade between Cave Road and arroyo to prevent Madrid Arroyo from flooding homes along Cave Road. Construct arroyo crossing comprised of two concrete box culverts designed to county standards for public safety and emergency access. Seed arroyo with native seed mix to stabilize areas disturbed by grading.
- Design Challenges- Finish grade of homes on the east side of Cave Road are lower than arroyo grade, requiring arroyo channel regrading and lowering.
- Relative Value and Level of Service-The proposed actions reduce flood hazards and increase public safety.
- Construction phasing-Cave Road must be closed to traffic during construction. Temporary arroyo crossing may have to be constructed during construction.
- Maintenance Actions- Monitor berms and swales for erosion and debris accumulation. Repair berms and remove debris from swales with hand tools after large rain events.

MADRID ARROYO

- Design Strategies – Regrade floodplain and provide rock and soil deflectors preventing lateral erosion and direct stormwater into the west channel. Note that the west channel is not the original Madrid Arroyo.
- Design Challenges- Largest challenge is to remove sediment from the channel to improve arroyo stormwater capacity.
- Relative Value and Level of Service- Designed level of service will pass the 100-year (1% chance) flood event under Cave Road, provided that flood debris does not plug the box culverts. Arroyo crossing is designed in the most efficient fashion to maximize safety and minimize cost. Arroyo alignment and minimal seed stabilization does not create significant habitat opportunity.
- Construction phasing- Access to homes along Cave Road must be managed, traffic to the west side of Madrid Arroyo will be periodically disrupted.
- Maintenance Actions- Monitor and remove debris after large rain events. Monitor arroyo crossing for erosion and water damage regularly.

FIGURE 6. Option 1 - Cave Road Arroyo Crossing



5.2 OPTION 2 – DESIGN ADDITIVE ALTERNATE

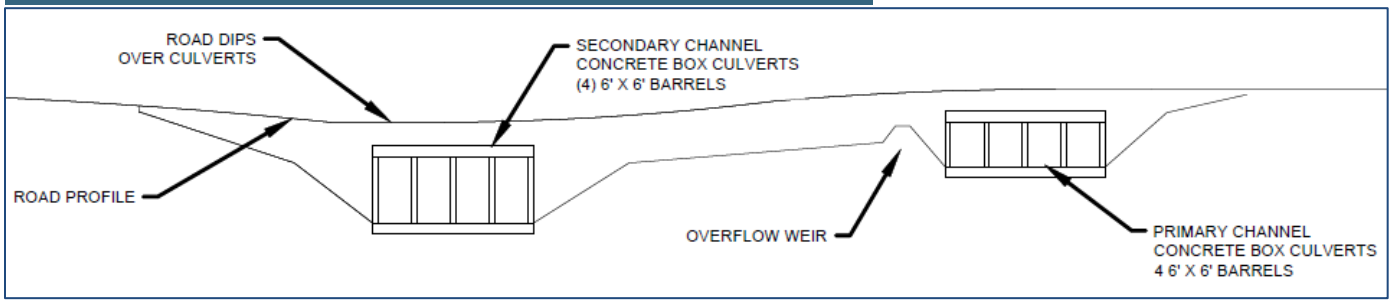
CAVE ROAD

- Design Strategies– Regrade and construct Cave Road to county standards. Realign Cave Road into two bifurcated roadways (east and west). Construct low berm on old railroad grade.
- Construct a piped drainage system on north Cave Road to enter the Madrid arroyo to the north of proposed Cave Road crossing.
- Design Challenges- Largest challenge is to remove sediment from the channel to improve arroyo stormwater capacity.
- Relative Value and Level of Service- Cave Road will be constructed to Santa Fe County standards providing a higher level of service than Alternative 1.
- Construction phasing-Cave Road must be closed to traffic during construction. Temporary arroyo crossing may have to be constructed during construction.
- Maintenance Actions- Monitor berms and swales for erosion and debris accumulation. Repair berms and remove debris from swales with hand tools after large rain events. Flush drainage piping as necessary.

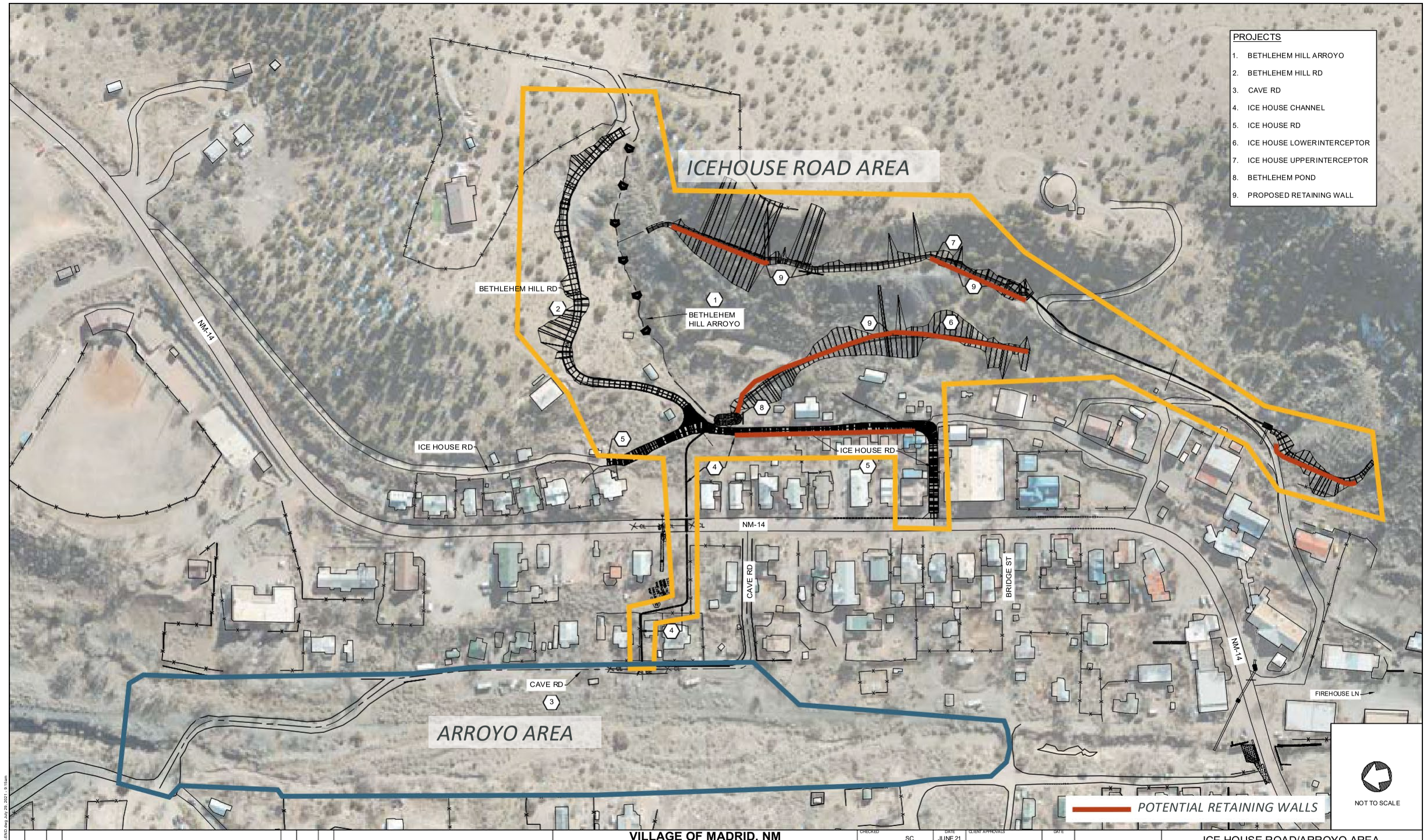
FIGURE 7. Proposed *Madrid Arroyo Debris Feature*

- Design Strategies – Regrade floodplain with boulder deflectors, weirs and debris catchment. Construct two channels with box culverts at Cave Road crossing to direct small stormwater flows to the original Madrid Arroyo alignment and, secondarily, to direct higher flows into the west channel. Landscape and irrigate plantings in the arroyo to better stabilize the soils and create habitat.
- Design Challenges- Finish grade of homes on the east side of Cave Road are lower than arroyo grade, requiring significant sediment removal from the arroyo and berm construction.
- Relative Value and Level of Service- Relative to Alternative 1, Alternate 2 provides more arroyo capacity and ecological restoration. Maintenance of debris can occur in multiple locations.
- Construction phasing- Access to homes along Cave Road must be managed, traffic to the west side of Madrid Arroyo will be periodically disrupted.
- Maintenance Actions- Monitor debris accumulation and remove debris after large storm events.

FIGURE 6. Option 2 (Additive Alternate) - Cave Road Arroyo Crossing



6. GRAPHICS APPENDIX



NO.	DATE	APPR.	REVISION	NO.	DATE	APPR.	REVISION

VILLAGE OF MADRID, NM
STORM WATER DAMAGE REDUCTION PROJECT
MADRID NEW MEXICO

WESTON
ALBUQUERQUE NEW MEXICO

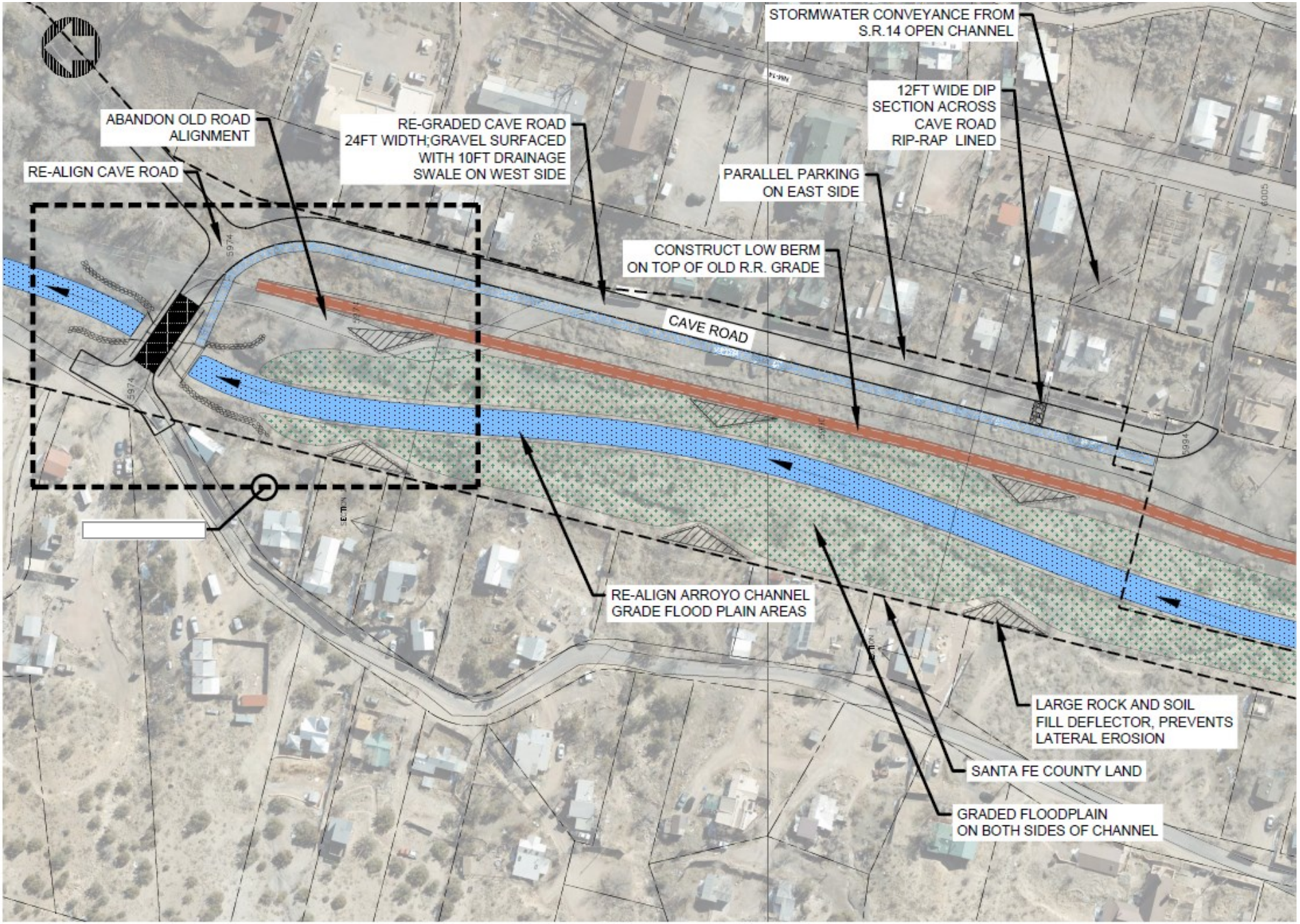
CHECKED	SC	JUNE 21	CLIENT APPROVALS	DATE
DES. ENG.	SC/RGE	JUNE 21		
PROJ. ENG.	RGE	JUNE 21		
PROJ. MGR.	SC	JUNE 21		
APPROVED				
APPROVED				

DRAFT
NOT FOR CONSTRUCTION

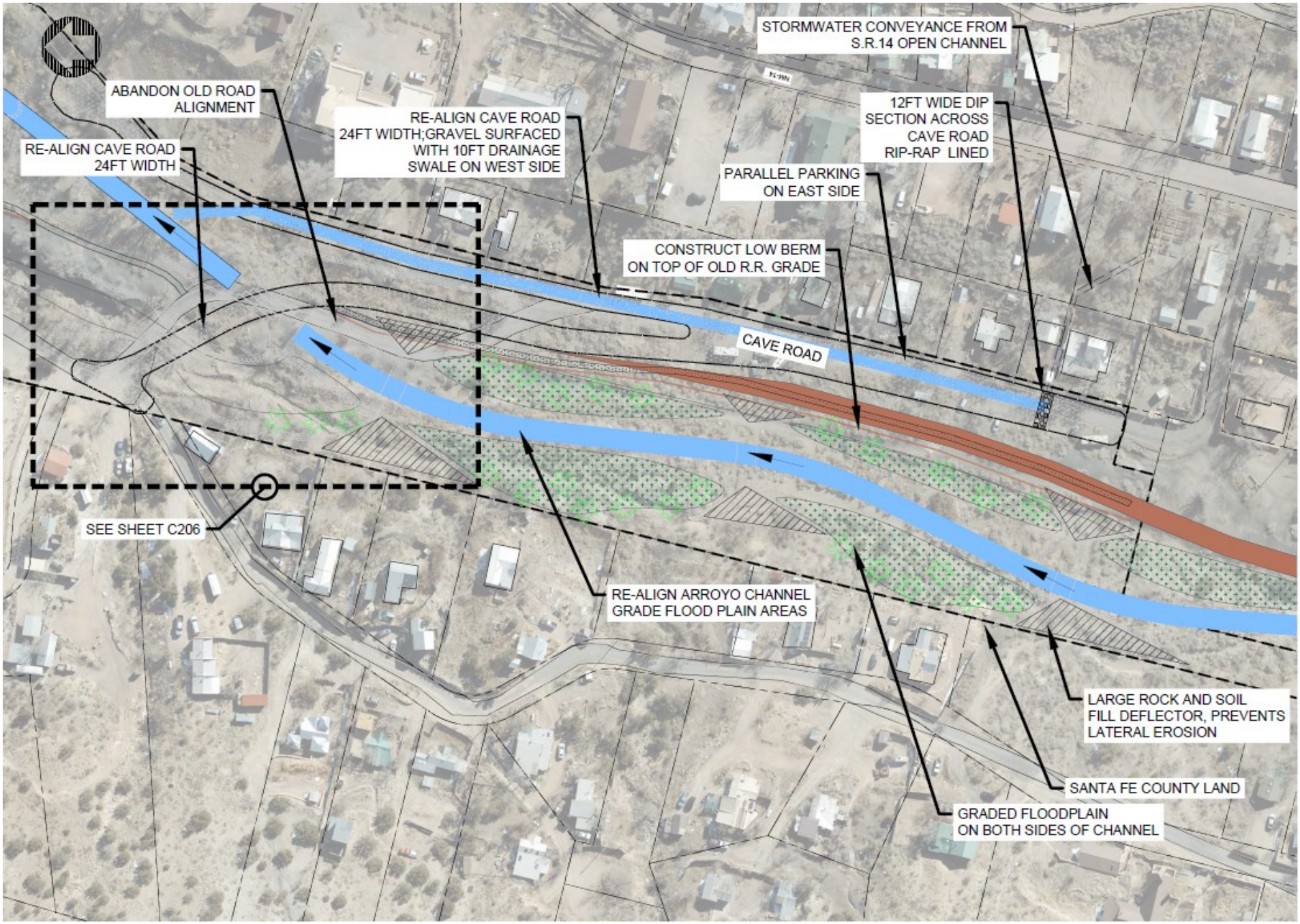
FIREHOUSE LANE/RED DOG ROAD AREA
(EAST SLOPE SOUTH)
SITE LAYOUT

DRAWN	DATE	DWG. NO.	REV. NO.
RW	JUNE 21	G005	A
SCALE	W.O. NO.	SHT. 5 51	
	15740.001.003		

MADRID ARROYO/ CAVE ROAD—OPTION 1 BASE DESIGN



MADRID ARROYO/ CAVE ROAD—OPTION 2. DESIGN ADDITIVE ALTERNATIVE



ATTACHMENT C

Meeting and Workshop Summaries

Public Information Meeting Summary
New Mexico Abandoned Mine Land (AML) Program
Bethlehem Hill Adit and Gob Reclamation Project
December 13, 2017
Madrid Fire Station, Madrid NM

Meeting Announced in: Santa Fe New Mexican (Legal ad) 11/29/17 & 12/12/17
Mountain View Telegraph (Legal ad) 11/30/17 & 12/7/17
Mail outs sent: November 27, 2017 to 120 addresses

Meeting Attendees

Seventeen people attended the meeting:

	Name	Address
1	Clinton Anderson	PO Box 872, Madrid, NM 87010 clint.anderson.10622@gmail.com
2	Rudy Garcia	2 Ya Callete Ln, Santa Fe, NM 87507 rgarcia@santafecountynm.gov
3	Maria Lohmann	malohmann@santafecountynm.gov
4	Jacob Stock	jlstock@santafecountynm.gov
5	Gavin Strathdee	2857 St. Hwy 14N, Madrid, NM 87010
6	Gwendolyn Zuxus	PO Box 4, Cerrillos, NM 87010 zaxusg@gmail.com
7	Diana Johnson	
8	Trevor Burrowes	
9	Erik Johnson	2843 Turquoise Trail, Madrid, NM 87010
10	Rebecca	PO Box 622, Cerrillos, NM 87010 areba51@gmail.com
11	Ellen Dietrich	51 Goldmine Rd., Cerrillos, NM 87010 dietrichej@gmail.com
12	Jean Pike	PO Box 218, Cerrillos, NM 87010 jp@jeanpike.com
13	Mark Bremer	3 Opera House Road, Madrid, NM 87010 markdb_2001@yahoo.com
14	Peter Christensen	PO Box 29, Cerrillos, NM 87010 prc6955@gmail.com
15	Lisa Conley	PO Box 147, Cerrillos, NM 87010 lisaconley@q.com
16	Andrea Fiegel	14 Opera House Rd. Madrid, NM 87010 andrea@Fiegel.org
17	Matt French	24 Bethlehem Hill Road, Madrid, NM 87505

The following project team member were present:

- Jacob Pederson, New Mexico AML Program
- Erin Marynak, New Mexico AML Program
- John Kretzmann, New Mexico AML Program
- Lloyd Moiola, New Mexico AML Program
- Richard Wessel, New Mexico AML Program
- Eric Johnson, NV5 Marron and Associates

Presentation

Eric Johnson gave the meeting purpose and introduced AML Program representatives. Eric discussed AML priorities, Madrid community, project purpose, project location, project activities, and project commitments.

Question and Answer Session
(Project team responses are in italics)

Anonymous: It doesn't have a good reputation, does it?

It is really inert. It doesn't decompose.

Ellen Dietrich: Are you hauling in soil?

No, there will be no brought in fill material.

Ellen Dietrich: So, you're going to try to use what's there?

Yes, we will be seeding the disturbed soils.

Andrea Fiegel: When you talk about mulching, seeding, and developing the gob piles, is that primarily for storm water control? You keep calling them eyesores, and they are our landscape. So, if the purpose of doing that is to make them disappear, I'm not interested. I am interested in controlling the water runoff. Growing things on it to facilitate that, great.

That is the storm water management. If you have a mulch in the soil, vegetation is going to hold on. Now the rain just splashes on down.

Anonymous: Did you on this other project bring in soil?

Rebecca: You're just doing the adits? You're not slowing the water down? You're not putting in any features to slow the water down?

No, this isn't flood control.

Peter Christensen: What is the starting date on the project?

Late winter, early spring.

Peter Christensen: I have the archival papers from AML dated 2013, Madrid Storm water Improvement Project. It has maps and diagrams of features that were to be installed, mission statement, and other information. Could some of the money been used on check dams or something? Nothing has happened. The town has allocated $2,000 to work at the junction where all the water pours out. That's where the town could really benefit. It floods the whole town. Something could be done.

Erik Johnson: Last time funding just didn't happen. Do we have to worry about that this time?

The AML programs funding has gone down in the past three years. However, Madrid is a high priority. We are funded primarily to take care of coal-related problems, and we are moving forward to address some of the larger scale issues. We have environmental and cultural

resources clearance at this point to work on this project. To do a larger, more community-scaled projects elsewhere in the community, because we are federally funded program, will take additional cultural and environmental studies.

Anonymous: So there's more projects coming up?

That's the plan.

Anonymous: For storm water, you don't have any funding for it yet though?

Yes, we have lower funding levels, but we still have money.

Erik Johnson: It looks like at least two of those adits are relatively low elevation. It looks to me like they are taking drain water off the hill, if you plug them up, that will just make more of a problem.

Anonymous: Exactly!

Is there a way that this polyurethane foam can be designed to be permeable?

I think we want to increase infiltration with the mulch and everything. I don't think we want the adit designed as an infiltration device, because it could get contaminated.

Erik Johnson: It's contaminated now, so it wouldn't get worse.

That's not a good practice.

Erik Johnson: I can't take that on your authority. It seems like a way to get rid of extra water.

To my knowledge, no storm water runoff is going into those adits.

Erik Johnson: It's not? But you could make it go in. Use them as dumping hole.

We would have to get a permit for that. And it would be hard to explain to New Mexico Environment Department why we are using these as an infiltration device.

Erik Johnson: Where are the gobs that you are talking about?

At the bottom side of Bethlehem road is the gob seeding area.

Erik Johnson: Are you planning to break the surface of those gobs when you reseed them?

Yes, in order to get plant material to grow, they need to be rendered. Bringing the ph level down so seeds can grow in them.

Erik Johnson: My dad read it is important to seal the gob piles, so that what toxins are in there don't get out.

We have studied the gob piles in Madrid, and there are no high levels of toxic material in them.

Erik Johnson: The studies of our air quality shows that there is an enormous amount of stuff just in the air from their current state.

I am sure there are high levels of dust in Madrid because of these waste piles. However, getting vegetation to grow on them should help reduce that.

Peter Chistensen: My feeling on the gob piles is they are historic. They are not an eyesore to the town, and over all the years of weather, they have formed their own crust. And they are pretty stable. Loosening them up, to plant on there in the chance they will take, the crust will be loosened and cause more erosion.

We agree it's stable. We are trying to get more water to be held in there and vegetation.

Peter Christensen: If you spray seed, it will wash away. But it you do raking, then the rains are going to come, and the crust will be gone. And then the erosion will happen.

Trevor Burrows: This gentleman lives right there. I would like to thank you for what you are doing. The entire east hill is bit of history. The gob piles are cultural history. I don't think we know enough about a plan. I think you need to include the mine shaft, preserve the piles in some way.

The history is important. There are surveys for historic to pre-historic.

Preserving the historic landscape is one of the goals. The bulk of the community does not want us to disturb the gob piles. We were planning on working on just the toes of the gob piles. This is a follow-up of what was done in 2014. This issue has not gone away, and most people want to keep the gob piles intact. Hydroseeding will cause a brown discoloration for a few years, but the gob formations will still be there. Madrid is on the National Register of Historic Places, so we must be careful about changing the shape.

Hydroseeding has a very low chance of success because it only addresses the surface. Amendments addresses the lace of vegetation at the root. This is experimental, one of the reasons we are thinking it in this location is because it is the least visible from the town, so it is like a pilot project. And will give us an idea of what is possible, or not possible for the other gob piles.

Erik Johnson: Your idea of distinguishing between the toes and the rest is a very good idea, but I think the majority of the people would prefer to keep the gob piles, except for the toes, in as close to the current condition as possible.

Rudy Garcia: I am Rudy, I have worked in Santa Fe county for 26 years. Is this public or private land?

Private.

Rudy Garcia: What is the budget for the project? Has it been budgeted for?

Approximately $70,000.00. It has already been budgeted.

Rebecca: Why are you even considering this when you left us in the lurch several years ago without finishing the Zuni bowls? You ran out of money or something? What is the motivation?

We do have clearance to work on this site. There are federally required clearances to work on this site. We are still in the process of gaining the clearances that are outlined in earlier meetings for the conceptual plans.

Rebecca: We were really looking forward to that two years ago. And instead we are getting this, which may help in the flooding. Where did this come from? Why fix the adits again when they've already been fixed?

They've only been sort of fixed. We want to put a permanent closure in there. They erode, and open up again. We have closed them about two or three times over the years. That is the motivation for this project.

Rebecca: So, it really doesn't effect what we are really concerned about, which is storm water erosion and storm water damage?

It addresses it in one way. If we can use this as a gob pile pilot project, we can see what's possible. That may or may not be important to you but may be important in the long run.

Andrea Fiegel: I am skeptical of what you are saying. You are calling the gob piles eyesores. We are all telling you that we like the gob piles. You are talking about revegetating them, but they've never been vegetated, they are gob piles.

Jean Pike: Why is the urethane a better material for filling the adits than the material used before?

One is bringing earth in heavy trucks is what we are trying to avoid, to minimize damage.

Jean Pike: Is there already erosion going through the gob piles? Is it possible to do drainage work in the areas already eroded?

Lisa Conley: The gob piles are not a problem with us. The problem is the drainage. Las Vegas and other locations got the money that was allocated for Madrid. Our money went to investigating what could happen in our town. Did you ask for this project? Why are we doing this now? Why mess with it at all? We don't get much rain here. If you are trying to reseed stuff, it won't go well.

Matt French: I've had dreams of doing development and improving the town. Most of the ideas are not going to happen. This is like an eighth of what was talked about at previous meetings. Whatever is best for the gob piles, and getting those adits plugged, is a positive thing for me.

Gwendolyn Zaxus: I hope the AML doesn't disappoint again. What's important to use is our storm water. That is an issue. When you come back again, come back dealing with storm water. That is a priority.

Ellen Dietrich: The way to handle storm water is to start at the top. This is just a start.

Rebecca: I'll bet in most towns around the country, the legacy of irresponsible mining was adit holes, eyesores. Our legacy is drainage that is completely screwed up. That's what we inherited from the mining company. They worked to maintain the drainage so the mines wouldn't flood, and when they left, all that work left with them.

Gavin Strathdee: We need to recognize the fact that closing the adits is a safety factor. The primary reason to do that work is so that no one else falls down there and joins the skeletons that are currently there. There should be no question about the adits being closed. Maybe question the material, but it is not going to be coming out like an ice cream cone. It will be in the hole. Putting a plug in the hole low enough to get them safe. The money from AML comes from taxes on the coal mine. Weather the state decides to give the money to the towns, it is up to the politicians to decide. With the seeding on the gob pile, I would ask how the work done above the mine shop tavern has succeeded? Is this similar to that? If so, then it has already been accepted by the community.

If AML is going to do the storm water remediation, what's the project that is going to do that? Mine period storm water drains, they were done and effective. Reclaim them, put them back in place. The old drain is buried. That is all in the 2013 projection, which was based on the fact that we do not want them to get rid of the gob piles.

Jean Pike: What we understood about the AML is when we had our flood, everyone around the state had their floods, and that's why the money got diverted, not that you dropped the ball. Is that true?

That's not true as far as AML.

Jean Pike: We had our flood. You guys were gone, and half the people quit their jobs is what we understood. All the people working on the project disappeared. If that's not true that the money didn't get spent anywhere else, then why did the ball drop on our projects?

We did have a lot of people leave the AML, retired, etc.

Jean Pike: Then why are we back on the gob piles, when we have said for years no.

This would be an experiment, if it's possible, and what reclamation would look like. We have had some success behind the tavern. The idea is not to erase the gob pile, but to reclaim. We can take it out of the specifications, and I am hearing it loud and clear that is not wanted. The landscape and drainage are intimately connected.

Mark Bremer: On the gobs, what is the runoff coefficient now, and what is the runoff expected? How much reduction we are expected to see? What are those values.

I am a civil engineer, and my guess is about 70-80 percent now, and I think we can lower that to 40-50 percent.

Mark Bremer: So we should see a significant change?

I think that is possible. Once again, this is experimental. I can't guarantee.

Mark Bremer: So if it works, I am in full support of these gob seeding areas.

Gwendolyn Zaxus: I am for the adits being filled.

Trevor Burrowes: Maintaining the gob piles is important to the town. That the tourist don't see it, maybe it can change. That has been missing, an economic opportunity that has been missing. There is a value to using the gob piles for drainage but also the cultural aspect of the gob piles.

Peter Christensen: The toes of the piles, are not visible from the town, but is a popular area for recreation. The trail is right up against the toes. When you work on the toes, be aware that it is a popular trail.

Matt French: I am encouraged that they can decrease the rainwater runoff and that you feel they are on the right track. As far as tourists coming back and hiking through our gob piles? I think there is plenty for them to do in our town without worrying what they think of that area back there. I would suggest us not going in the direction of highlighting a trailhead.

Erik Johnson: We are not all complaining. We appreciate you coming down and putting in the work.

Written Comments

Comment 1: Erik Johnson

A casual opinion that using adit as a storm drain is a bad idea simply isn't adequate. If anything is to be an experiment in Madrid, trying out adit-drains would be the best thing to find out about.

The notion of experimentation with the "toes" of the gob piles seems reasonable, but any other alteration of the piles is reasonable only as a last resort.

The appearance of the gob piles is important.

Public Involvement Workshop Summary
Madrid Stormwater Improvement Project
Date: June 20, 2018
Location: Madrid Fire Station
Meeting Announced in: Mountain View Telegraph and Santa Fe New Mexican
Dates announced: Both publications ran on 05/31/18 and 6/14/18
Mailouts sent: June 5, 2018 to 167 addresses
Banner sent: Two banners hung on the north and south sides of Madrid on NM 14

Meeting Attendees

Ten people attended the meeting

	Name	Address
1	Maria Lohmann	102 Grant Ave., Santa Fe, NM 87504 melohmann@santafecountynm.gov
2	Chris Philips	cphilips@riverrestoration.com
3	Gavin Strathdee	2857 St. Hwy 14N., Madrid, NM 87010
4	Clinton Anderson	PO Box 872, Madrid, NM 87010 clint.anderson.10622@gmail.com
5	Glen Bawden	
6	Clifford Kitzrow	02 B Firehouse Ln., Madrid, NM 87010 cliffkitzrow@gmail.com
7	Carl Hansen	57 Tipple Way, Madrid, NM 87010 solarwks@cybermesa.com
8	Matt French	24 Bethlehem, Madrid, NM 87010
9	Anonymous	
10	Anonymous	

The following project team member were present:

- Lloyd Moiola, Abandoned Mine Land Program
- Erin Marynak, Abandoned Mine Land Program
- Rick Wessel, Abandoned Mine Land Program
- Jacob Pederson, Abandoned Mine Land Program
- Yeny Maestas, Abandoned Mine Land Program
- Linda Delay, Abandoned Mine Land Program
- Mark Murphy, NV5
- Eric Johnson, Marron - NV5

Presentation

Jacob Peterson, Rick Wessel, and Eric Johnson gave a presentation on the Madrid Stormwater Project. The presentation covered workshop purpose, overall workshop organization, project history, stormwater design concepts review, National Environmental Policy Act (NEPA), cultural and historic resources, and stormwater design concepts for the Slope Drainage Zone, Icehouse Drainage Zone, Firehouse Drainage Zone, North Drainage Zone, and Arroyo Drainage Zone. AML spending guidelines were discussed. After the presentation, instructions were provided on the table activity.

Flip-chart Comments

The following comments were recorded on the flip charts.

General Comments:

- Do you have Ice House easement – Town and Water Coop
- Way too much engineering and not enough construction
- 100,000-gallon storage tank – need improvements in area, rip-rap
- Has work been completed behind Mineshaft?
- Need to clean out culvert: discussion with NMDOT; culvert is caved in
- In Ice House drainage, pattern affected by resurfacing
- Ice House Road – need to lower areas to get drainage
- Ice House area is a priority in community
- Ice House area has flooding
- Upper part of stone drain open
- Lower part of stone drain buried
- Serranin Drainage needs to be moved over
- Ice Road – priority problem
- Cave Road crossing – priority problem
- It would be good for county open space and town to coordinate on Cave Road
- County Open Space is looking at large and small projects
- Arroyo lost bank along Cave Road
- Consider lot for wastewater near concept drainage pond
- How do you prevent retention pond from silting up?
- Bodei lots – potential for drainage
- Water coop and MLA easements go through Brian's property

Ice House Drainage Zone:

1. Height of road – too high
2. How will 3 retention ponds work if silted up?
3. Water line and height of road cause water to overtop retaining walls at houses
4. Drainage needs to kept along road, ideally west side
5. There is standing water in blue areas (on map)
6. Mud and silt clogs structures
7. Either infiltrate water upstream or get water to exit
8. Looking for upslope solutions

Firehouse Drainage:

1. Good idea – rolling dips and divert water to arroyo

North Drainage Zone:

1. Flooding in gallery – 2891 Hwy. 14
2. Drain is a good idea
3. Watch out for drainage across driveways

4. Instead of rolling dips – consider a cattleguard that can be cleaned out, but people with dogs may object
5. Need to control silt and runoff on slope

Slope Zone:

1. Consider mulch logs
2. Good with projects in this area
3. Jail area floods and other area to south
4. Just a headache
5. Large storms can cause blowouts and slumping down the hill

Arroyo:

1. Pond near wastewater treatment and silt is a concern

We have good intentions to do something better

Workshop Discussion Session
(Project team responses are in italics)

What about the firehouse drainage area, the icehouse drainage area and the north drainage area?

Yeah, and the slope zone, and the arroyo zone. I wanted to simplify. Knowing that some people will be concerned primarily about what is happening on the slope.

I'm good with all of it. I just wanted to add my little part.

Why don't we spend some time getting our thoughts down, on the record? Then we can have a discussion about it.

The raising of K road two feet. From Highway 14 down to the corner. How can you raise that two feet? That's why I wrote a sticky, people are living along that. Do you raise their driveways two feet?

It would have to be raised on one end, and sloped. The idea originally was to get water running. There's two old stone drop inlets. With no slope on the road, without raising it, you're not going to guide the water. We don't have an engineering design for that road yet, but those are just some of the preliminary ideas.

We've talked to the highway department about cleaning out this box culvert. It looks like it's plugged.

It is. We'll be hoping to partner with the highway department and county when we can, on parts of these projects. Really that culvert needs to be replaced. The culvert is very damaged as well and it just needs to be replaced.

We've brought up the situation with the tank (see written comment below) You said to get in touch with US Army Corps of Engineers because it's an arroyo. We contacted the US Army Corps of Engineers. They wanted $150,000.00 to do a study and for us to pay $75,000.00. What I want you to do is put together a little rip-rap. The dirt was removed from the floods. The arroyo cut into it. It wasn't the arroyo originally. It was our property. So, view it as our property. Get the US Army Corps of Engineers to do a rip-rap repair. There have been other homeowners on the same arroyo that have had rip-rap put in, and it's still there today. There is concern for the integrity of the concrete tank, which provides 100,000-gallons of non-potable water for fire protection, which is critical for the town. They need to revisit their "no" that they gave us awhile back, and see our point of view.

Near Icehouse Road and Cave, there is a tremendous amount of water that comes off here, right where the culvert is. The water co-op owns water right away, and storm drain easement owns right of way. The right of way is roughly on the property line. The drainage is messed up largely because over the years it has been resurfaced, and the road is higher than it was originally. That creates a problem for the people below it. Even with the retaining walls some people have built.

Have you guys gotten in and dug out around the culverts near Icehouse Road?

We weren't able to get them cleared out. It is like concrete. We got the sediment pond done, and went back in and did some hand touch up to it.

Conflict on "proposed retention pond location" with area allotted to waste water retention area.

With the one rain we had this year, it filled the one retention pond that we have.

Easements for the MLA and the water company goes through the Brian Bodei property.

Problem with Icehouse is the height of the road, and it needs to be grated. The concept of having those three retention ponds is how are they going to work if they get silted up? The problem with the waterline/utilities going through there, and the height of the present road. It is already overtopping retaining walls built to hold it back from the houses below.

Would you say that if we grated Icehouse road? We would end up with some older retaining walls that would be impacted by that construction, and probably the need to construct new ones to keep water on the road.

Yes, it has to be kept on the road, and it has to be brought all the way down here. Right-now, pretty much all the drainage is on the east side. Ideally, it should be on the west side, but that creates more of a problem for the people down below.

I have the same concerns. Where it is blue now (on the map) is where we get standing water if there is an inch of rain. Muck and silt comes with it, which clogs any of the facilities now standing. I am concerned about keeping all this water there with an emphasis on slowing it down, and maybe having it infiltrating it up into here? Maybe have some of these structures up in the Mayat Arroyo area? Coming around Madra, when this is all soaking in. It gets full of

mosquitos, and it mucks up quick. I feel the water should exit and go into there. And if we want to slow down more of it, move these ponds up away from the driving area.

The original drain was on the other side of the road. I agree this is better done up the gully.

So, you are looking for upslope solutions?

Yes, it makes David Baca's land unusable at this point, and I think expanding the pond on his property is going to be a hard ask. As it stands now, it is a continual maintenance problem. The little rain we had this year was enough to fill that pond.

And now Firehouse drainage zone:

When it rains heavily there is quite a bit of water. Diverting the water and getting it to the arroyo before it comes to the roadway is a good idea.

North drainage zone:

You need to watch for driveway drainage when thinking of where to put the rolling dips. Can you do a cattle guard/drainage instead of a culvert? Something to easily pull off the grate and clean out when the run off builds up. We have one that has bars, and it is totally full.

Cattle guard would be difficult for people walking pets.

The idea of having a rolling dip is that you are working with the grade. As opposed to a drop structure that is cutting into the grade, by installing a channel, it will accumulate, and you will have to clean it out.

These concept locations are not exact. We would have people out to locate these ponds in more strategic areas.

The section near the jail area gets really washed out, and over by the Tavern.

Here was the blowout. This dark area at the top is what slumped off and went down the hill. That was from a storm and there is a steeper slope, with more watershed.

I would suggest getting right to work on properties affected, and not seek town-wide consensus. As a hurdle, that's go or no go for the project. You're never going to get full agreement from everyone. Don't let that stop you.

The message I am working on is we have landowners that agree we should move them out (blowouts). We are going to do the work, to minimize individual impact, and still eliminate the danger of the blowout.

Was that ever a thought to just remove all of it?

Yes, to take it back to a natural slope essentially. It would be difficult to pull off. But reclaiming in places, getting to grow vegetation, re grading. We've learned a lot about reclamation, so there is a good chance treatment would be more effective.

Written Comments

Comment 1: Glen "Jethro" Bawden

I am commenting as President of the Madrid Water Cooperative. Across the arroyo from our 30,000-gallon, tan colored, above ground, potable, water tank on the south end of Madrid, is a 100,000-gallon underground concrete fire protection water storage tank. In the 30's, 40's, and 50's the tank was used for potable water, but is now only for fire protection water and is piped to fire hydrants.

During the "flood" in 2013 the arroyo eroded 10 to 15 feet of dirt away from the west side of the underground tank, as well as exposing the 8" main. The main was relocated back into dirt, but the concreted tank itself has only about 10 feet of dirt left between the west side of the tank and air. The tank contains approximately 360 tons of water. One more gully-washer storm may take the remaining dirt and the west side of the tank may blow-out with a major leak, leaving Madrid with no fire protection. We are requesting the AML construct rip-rap and backfill on our community property to replace the eroded 15 feet of dirt.

Comment 2: Trevor Burrowes

I am not sure yet whether I can attend the June 20 meeting, so I'll share some thoughts about the Stormwater Improvement Project. Fortunately, there are people in town with much better technical knowledge than mine about stormwater hazard and opportunity throughout the village of Madrid. My entire interest, despite very little factual information, is broadly in the material cultural heritage of coal mining in Madrid. For this reason, it is centered on the Mineshaft, yard and structures.

The Mineshaft owner has pointed to the very severe damage caused by mud damage from the eastern hillside. She has pointed to what seems like feet of sediment burying foundations and lower sections of buildings. I am almost certain that this damage has not been documented in writing or recorded in photographs or drawings. Given the importance of the Mineshaft to the industrial heritage of the Southwest, I almost wonder if it could qualify as some sort of monument that garners oversight from some higher, more appropriate organization.

The original sin in the Mineshaft was the former owners' selling it to a private interest with no museum experience, and whose main concern is the Mineshaft Tavern that is a source of tourism, taxes and employment.

As can be expected, the Mineshaft is very popular, especially among the younger and more dominant segment of the local population. There are therefore social pressures to overlook the Mineshaft grounds and how it is managed. The level of historical sensibility and exposure is also not very advanced in Madrid.

I should add that there is the possibility (if not certainty) that a very large water catchment tank, 100,000-gallon capacity, is buried on the grounds. If help can be offered to the owner to assist with an investigation into its existence or condition, it would open up the possibility for a more public role for the Mineshaft in as how it can serve water catchment and storage to help the village.

It isn't a good use of my very limited time and energy to be single handedly pushing against the tide of public indifference to rescue the Mineshaft from what I interpret as mishandling. I hope you can use your experience, information and public regard to help nudge the needling in regard to better Mineshaft management.

Less emphasis than I would like, private ownership is inappropriate, given the site's importance to industrial culture of the Southwest.

Public Information Meeting Summary
Madrid Stormwater Improvement Project
Date: September 24, 2018
Location: Mine Shaft Indoor Theater
Meeting Announced in: Legal ad placed in Santa Fe New Mexican
Dates announced: September 17, 2018
Mail outs sent: September 12, 2018 to 161 addresses

Meeting Attendees

Seventeen people attended the meeting.

	Name	Address
1	Cliff Kitzrow	2B Firehouse Ln., Madrid, NM 87010 cliffkitzrow@gmail.com
2	Clinton Anderson	PO Box 872, Madrid, NM 87010 clint.anderson.10622@gmail.com
3	Ellen Dietrich	51 Gold Mine Rd., Cerrillos, NM 87010 dietrichej@gmail.com
4	Rebecca Nafey	PO Box 622, Cerrillos, NM 87010 areba51@gmail.com
5	Maria Lohmann	melohmann@santafecountynm.gov
6	William Hogrebe	2 Ice House Rd., Cerrillos, NM 871010
7	Amanda Branbe	PO Box 773, Cerrillos, NM 87010 amanda@amperssandproject.org
8	Dave Heath	
9	Sue Nordman	2878 Highway 14, Madrid, NM 87010 email@weaselandfitz.com
10	Jethro Bawden	129 Camino Los Abuelos, Santa Fe, NM 87508
11	Cathasha Cabrille	2851 St. Hwy 14, Madrid, NM 87010 cathasha@earthlink.net
12	Mike Hogrebe	2868 Hwy 14, Madrid, NM 87010
13	Patty McPhillips	2874 Hwy 14, Madrid, NM 87010 10pmstudio@gmail.com
14	Rebecca “Gertie” Perry-Piper	PO Box 27172, Albuquerque, NM 87125 rebeccaperrypiper@yahoo.com
15	Lori Lindson	2865/2846 Hwy 14, Madrid, NM 87010 lori@themineshafttavern.com
16	Mark Bremer	3 Opera House Rd., Madrid, NM 87010 markdb_2001@yahoo.com
17	Stella Linder Byrne	PO Box 196, Cerrillos, NM 87010 stellalinderbyrne@gmail.com

The following project team members were present:

- Lloyd Moiola, Abandoned Mine Land Program
- Erin Marynak, Abandoned Mine Land Program
- Richard Wessel, Abandoned Mine Land Program
- Jacob Pederson, Abandoned Mine Land Program
- Eric Johnson, NV5 Company

Presentation

The meeting began with a presentation. Topics covered included workshop purpose, history, current conditions, and scope-of-work. Discussion then focused on goals and potential alternatives for the Water Storage Area, Firehouse Area, and Ice House Area.

Flip Chart Notes

- Keep water from creating erosion.
- Make water beneficial.

- Rolling dips on firehouse lane were somewhat successful, but now dried out. Berms not feasible for getting up or down, or for diverting water.
- Gob is unstable material.
- Who is maintaining Firehouse Arroyo?
- Was forested several years above pile, but has not slowed runoff.
- Where will diverted water go?
- Some people are attached to gob piles, but it is ok to remove coal to have a better functioning drainage and infiltration.
- In 2013, lightning strikes on gob pile and rain destabilized gob pile. It cost me $300,000 to deal with storm.
- Coal piles OK if not destabilized.
- Gob makes good cover for roads.
- We just gravel landslide instead of removing material. The road gets higher. Need to remove erosion.
- I built retaining wall in 1986, but now road is higher than retaining wall.
- Hillside and roads repeatedly filled-in at some locations.
- Old railroad is below street level now.
- Input could provide other alternatives.
- Can we have separate meetings for separate areas?
- How long will process take? Need to expedite.
- Direct flow off mountain, through community, to arroyo.
- 100,000-gallon tank, much research has been done on new tank across Nm 14 and higher up. We would like new tank.
- Landowner association is already doing maintenance.
- If you do something on our property, we will maintain it.
- Within gobs, have stormwater infiltration. I want more green spaces, carbon sequestration, and water in soil.
- I am downstream and do restoration, but high up in watershed is best.
- I am putting channels on my property, already considering that.
- My house has retaining wall (14).
- Patty's house has dirt pile.
- Are we going to lower road? Or accept current elevation?
- Preserving visual state of gob pile, but if we keep gob piles unprotected, we will spend time taking eroded gob pile and stick it somewhere-will take forever.
- Removing gob sediment downstream not preferred. Best to reclaim gob piles-better to revegetate and reclaim gob piles.
- Need to develop cost estimate to not reclaim versus reclaim gob piles.

Question and Answer Session
(Project team responses are in italics)

Anonymous: I think you were saying this is a funded project once you get passed the permit process. I just want to be clear, that this is something that is project ready? We are going to move forward, correct?

Once everything gets through the compliance phase, what you are seeing now is the preliminary, proposed project. We are going to have alternatives, we are going to be able to flush out what it really becomes. Once we get the OK from OSM (Office of Surface Mining) that we have authorization to proceed, and we can spend federal dollars

on this, then we will go to construction. But, what you're seeing right now, right here, might not be what you see.

OSM approval is a big thing for us. That is the only way we can spend any money. When we get into this process a little more, and I have already met with Madrid landowner association and started this conversation. We need to be full partners on this project at the detail level. Because our program is not going to be here forever. We can project ourselves out maybe ten years, beyond that; it gets more uncertain for us. We are hoping the storm water systems that we install for you, are infrastructure that can exist sustainably in Madrid. We know that OSM also wants, they are aware of that risk, and so they want to know that to be true as well. We are talking about this process. This is our guidebook, together we want to get to the point where nobody is surprised by anything, everybody understands what the designs are, and how they need to be maintained? And how much investment it's going to take long term to maintain them? We are here for as long as we exist as a program to help you with the construction. Those are details that need to be figured out and will really increase the certainty of yes. It will get built.

Cliff Kitzrow: I have a problem that there seems to be a lack of communication and coordination with DOT and BLM. Everybody gets their hand into the pot and nobody gets anything done properly. We just had a wonderful drain put in, just above the low point on Highway 14, Wesel and 5th. The storm drain, they cleaned it out. However, it has nothing to do with the low point in the highway that when we get the runoff there's a nice little lake we could stock with trout. What I am asking is, is there any coordination? Between the three departments?

Yes there is. BLM is not involved with this project. The highway department, we've worked well with them in the past. They are the ones who did the construction for the drop in lid in front of the tavern that takes the water under the highway. They will be involved in construction if we get to that point.

Anonymous: If we get to..?

Maria Lohmann from the county is also here today. She is very consistent about attending our meetings. So there is coordination with the county.

Anonymous: I think that is what Cliff is bringing up, is the state, county, federal coordination so we're all on the same page. It sounds like you guys are covering that as well.

We are doing our best. Through this process, we will try to keep you with us.

Just want to point out the OSM is US Department of the Interior Office of Service Mining.

Amanda Branbe: On the last slide, it said stormwater collection basins.

That was just a concept that, coming down the arroyo there is a draw there, and top Gob area. Those are areas we are calling stormwater basins, and actually the town has already dug one out. That is a concept that existed before, and it's one way to slow water down, and try to trap some sediment before it gets in the system.

Amanda Branbe: I understand the need to get the water from a place that's flooding to a place that's safer. A lot of time, these ideas are brought from places where its more wet, and it's on the east coast for example, you want to get it out because you have a lot of rain already, but it is a newer way of doing things, but adopted in many places, and instead of just treating it like a waste product. Actually, use that storm water and get it in the ground before it gets to it's final, getting out of town place, so that we can have more green, and have more shade, and have a livelier environment.

That is a great comment. That is one of those ideas that I expect will be represented in the alternatives development process. Also, the designs that we currently have here, aren't just about getting the water through town. Infiltration is a big part of that soaking into the soil. That can only go so far when it's raining really hard and so water's got to have a place to go. So, we are trying to figure out solutions for both. And those collection basins are a way for it to settle, it also takes energy out of the water before it gets down to the next spot. Which takes the erosive force out of the water. And hopefully makes it a little more free of sediment. Once the water gets into town, if it's carrying sediment, it's going to end up in culverts, and the ditches.

Amanda Branbe: Yes, it has to have a way out of town, but along the way, it could water a lot of things that is beneficial to our town.

Lora Lindsey: I think the important thing is, keep the water from creating the erosion. Slow it down, which is what you have been talking to us about, and try to create it so there are green spaces. Let the water be beneficial. Instead of just pushing it out of town. And if it's not rushing fast, the higher you go, if you start slowing the water down, we can actually use it.

Cliff Kitzrow: I am at the top of Firehouse Lane. The rolling dips down my access road have been somewhat successful. In fact, we haven't had a really heavy rain since they were put in. However, now that everything has dried out, the berms aren't feasible to get up and down Firehouse Lane, let alone diverting any water that would be coming down there. I'm looking at all your programs are just outside of Icehouse Road. My house is just on the outside corner of Ice House Road situation. All the gob piles are unstable material. Any heavy rain is washing right across everything. At the lower corner is the box culvert drain under the Mine Shaft Tavern, and the arroyo, who's maintaining that? Right now I see cardboard boxes, weed piles, blocking that particular drain.

Maintenance, we will get to this conversation, once we get to the next part of our discussion. But maintenance of anything will build is a serious concern to us, not just because we think it's smart to have a stable plan on how these things will be preserved and functioning in the future, beyond our program. But also because that is also important to the people who can determine whether or not this program, these plans actually get money funded. We do want to work those details out, and talk about how we want to do that.

Cliff Kitzrow: The coal pile above that particular drain was forested several years ago. It has not really slowed down any heavy rain coming down. Its a 30 percent grade. Its coming down no matter what. What I am wondering is, where are the diversions actually going to happen, and where's when we have one like we had in 2007? Which flooded everything downtown.

Lori Lindsey: I think we are talking about different things guys. Talking about different scenarios. Just to be clear, Cliff, are you talking about the location that is on the road? Or are you talking about, Icehouse Road is one thing. Firehouse lane goes to the firehouse, and your road is a driveway.

I would like to raise that question with everybody. We've got some areas with very loose gob. Low visibility from the town. And where we might just want to really reclaim that and make sure that it's not going to fall downhill. Especially, if it's right below a road that could be in water. That is something we are willing to address in all our alternatives. We are also aware that doing this full scale reclamation of gob isn't the most popular option in the town. We are trying to balance this, and help everybody balance perspective on this issue.

Lori Lindsey: Do you want to have this discussion now?

This is one of the things that will come up in developing the alternatives.

Amanda Branbe: I hear people are very attached to the gob pile, and I don't live there so I am just speaking ecologically, logistically, practically. I think that I am not the only one that thinks it is ok to remove some of the coal in order to have a better functioning drainage. Not just drainage, but infiltration to create green spaces.

William Hogrebe: He said 2007 for the flood. Wasn't it 2013? So in 2013 there was a gob pile that was left from the 1980's reclamation. We had a huge series of lightning strikes on that gob pile, and the amount of water that rained at the time, was enough to make it move. It was destabilized. So that gob pile that was left for posterity became, and is still in building number 2. It has cost me over $300,000.00 to try to fill from the storm of that time period. I don't think you realize that, but that's ok. But I think the real issue is, the coal piles are really great it they are not destabilized. Once they are destabilized, they are rocks coming down the mountain. When we are talking about the areas that still have piles is what you are wanting to work on, I just want to make sure that we all understand that those people who want to hold on to gob piles are creating a futuristic issue.

Cathasha Cabrille: To add to the ecological, it's been my experience that stuff makes fabulous coverings for our road. Crushed down into the asphalt, so we could actually put it to some use.

In general, any comments about the scope of work as a whole?

Mike Hogrebe: One of the things I've noticed through the years, when everybody is cleaning, is unlike other places like California, when mudslides come down. They are getting a loader, a dump truck, they clear the roads and everything. Here, it seems we just gravel it. It just keeps going up, and up and up. We need to do something to establish a base of the roads, maintain that level. Even Highway 14, if you look at the pavement, and you look at old pictures, the pavement is like 6 feet above where the old picture was. We just keep paving and graveling erosion. We should think about just removing erosion like California does.

William Hogrebe: I have a suggestion, Mike, can you tell them where you live, and your relationship to Icehouse Road, because I think that is really important. I was talking to Jacob, I was saying that you keep raising your retaining walls.

Mike Hogrebe: Well somebody suggested making them 40-60 feet tall. Well then the road would be that high, too. I just think we need to stop, and if it would be ok with you, I would like to present something right now that you could look at. In about 1986, the MLA decided to level the road behind my house. And of course, about a week later, we had one of those washes, and it all ended up in my garage. I built this in 1986. Now the road is about 2 to 2.5 feet above my retaining wall and people say, just make your retaining wall higher.

So he's got a photo of Icehouse Road as it was in 1986.

William Hogrebe: Is it possible to dig it down? To dig it back to it's natural level?

Mike Hogrebe: I'd love my retaining wall to be a fence. That would be wonderful. The locomotive right here came right past my garage about 6 foot further down. When Baca came and dug it out to make the retaining wall, you could see this road, and this road.

When we get into all the alternatives, what I hear you saying is that we need to start maintaining things differently. One of the things we've discussed internally as a program is if we can build a storm water system that is connecting the hill slope to the roads to the culverts. Command channels to get through town, can we hand them a document that it's a maintenance manual for that entire thing. That specifies levels of maintenance. Even triggers, when it gets this much siltation, you do this treatment on it. Every time you see this is exceeded, you perform this treatment. We can do that as a program. We can develop a document with you that reflects our preferred plan, for all of our alternatives. So we are able to judge between the alternatives what we think will be a maintainable system. And together we can present our preferred alternative that represents both the system we think will balance what's possible and the benefit it can provide. But also be the thing that you can long term handle and maintain.

William Hogrebe: The thing Mike is bringing up that I totally agree with in this particular area, we are talking about a hillside erosion, but also the hillsides been filled in, and filled in. And Icehouse Road has been filled in, to the point now, where my property ends, and his brothers property ends and other properties, and it's like you doing, shew, and it shouldn't be like that. Because the road level is always like 4 feet above the ground level. And the railroad level, is below the street level. I'm not sure we want the road leveled 6 feet, 8 feet down, I'm not sure we want that at this point. My point is we need to find some kind of medium at this point. There is a real issue in both things, the fill coming up the road, and the fill still coming down from the hillside. So to figure those two things out, obviously that's what you are trying to do, but there should be a balance in those two things.

Ellen Dietrich: It might be worth pointing out, and it's a process, you are presenting a scope of work. It is essentially covering what your proposal is in these three areas, and that is one alternative. Then the input from everybody here, this meeting and maybe others could potentially be other alternatives. So, if you could go further up, I could

process, because people are jumping into the details now and it might be easier if they understood the process.

You are almost spot on. Right now, we talking about things, in a general sense, Jacob is identifying areas with problems we've all discussed over the years. Throughout this NEPA process, National Environmental Policy Act, we discuss and flush out alternatives we can throw as many against the wall as we can, but ultimately we come down to one better for the people. If we go down 6 feet, how do we address another part? It might not be the most feasible option, at the end of the process, we all agree, this is the best option, let's take that to the federal government, and say, this is what we propose, and if they agree, then they will give us the authorization to proceed, then we get funding, we spend money, and we go to construction. But right now, Jacob is identifying areas, we are trying to get your support that these are the ideas that we move forward with. Then the program will expend funds to really study these alternatives with the community.

Ellen Dietrich: Based on that, I will save my comments for a separate meeting. But are we able to have separate meetings to discuss the alternatives? I am one of the main key players here.

I love to hear comments from people as to what is the process that you want us to do to make sure we are giving to weight to your input. And I will do my best to accommodate those. If you are an individual landowner in the project area, then it is your right to give us opposition, you also have a lot of power. If we are not on the right side of your needs as a landowner, then you can stop us from doing it.

Ellen Dietrich: My comment was I'll table all my comments for now, if we can make another time when this neighborhood can get together.

That is definitely in the plan. We are always going to have meetings like this because it is a required part of the process. We're always going to go full public. There will be a lot of review, landowners, going through the details. It's also going to be important to work with the Madrid Landowners Association to develop it. Same thing with the coop as it relates to the water. There will definitely be smaller focus meetings.

Cliff Kitzrow: How long is this process going to take at this rate? How long has it been from the last one, discussing the same thing? We need to expedite, move forward with the programs. We are going at a snail's pace.

We would really like confirmation from you that these are three good project areas to be looking at. That we've got the right issues we are trying to solve in these areas, let's go do it. Once we feel good there, I am going to be out talking to lots of landowners. To set up how we are going to be working together once we have designs for each alternative. Our goal is to do that next year and then 2020 at some point be ready for construction.

Clinton Anderson: I hope you're aware with the Firehouse Road project, and saving that 100,000 gallon water tank that considerable research and some work has already been done on putting a new one at a higher altitude on the other side of Highway 14, to increase the pressure in the pipes to the fire hydrants, as well as provide a new water supply. In fact, Madrid Water Coop recently purchased a parcel of land to put a new tank

on when the time comes. Not that preserving the old one isn't a bad idea, but if you could help us with the process of putting up a new one, we would be very happy.

We were aware of the engineering document that was put together. It's great, it provides costs, proposed actions, really helpful.

Clinton Anderson: I just want to make sure anything you put on our property we will maintain.

Yes, it does not mean the MLA will maintain everything we do, but they are a really important link in the chain, and we don't want it to break.

Amanda Branbe: So you want agreement on the areas and the goals you have for those areas?

Yes.

Amanda Branbe: Is there a slide that says specifically what they goals are? What I would really like to see is to have stormwater infiltration be actually put in there. I realize there are limitations and all kinds of details. You have to deal with sedimentation and space issues, but I would like to see it within the goals. Partly it is because I am interested in more green spaces, more carbon sequestration, more water in our soil, so we can have garden's or wildlife areas. This year, we had not even 2" inches of rain, between the end of October last year, until July. So, whatever we can get in the soil, the soil could absorb a lot of water, and it could really help our land over those periods of drought. The other reason is because I am downstream. I do watershed restoration at place, and I know that when you are looking at watershed restoration as high up in the landscape as you can go is really the place to start. We're talking about high up in my watershed, and so I would like to see infiltration. My watershed happens as high up as it can go, that's here, within this project. This water comes down into the arroyo, I understand there would be a lot less coal and sediment when it gets to the arroyo, but once it gets to the arroyo then it carves through these big gob piles that are in the arroyo on the way to my place. It just takes that all to my place and the water is completely black. These are the reasons I would like to have that be an explicit part of the project.

William Hogrebe: I am independently already wrestling with this on my own property making channels that will filter water, because I am in an area where most of that water comes down and affects everybody down the line. I am already considering.

Mike Hogrebe: My house has retaining walls to hold back the 5 feet of new dirt next to my garage door that's not there any longer. Patty's house on the other hand if you go behind Patty's house, you'll see five-six feet of dirt above where the gate used to be. Other things you see all over town, is one-two feet extenders on the water meters. I think there is one meter where you have to have a miner go down and read it, it's pretty deep. Are we going to build retaining walls along these places with five feet of dirt with nowhere to go? Or are we going to lower the road down to where it used to be?

We need to figure out what is sustainable. We need to figure out which options are going to address specific goals. Road passage is one of our goals. Reducing sedimentation is one of our goals. That is what the alternative development is all about. The answer to

"what are we going to do"? We have to figure that out. There is work to be done this coming year.

Would you say in 30 years you could raise the soil five feet?

Mike Hogrebe: Once upon a time, the MLA actually raised the soil five feet to the level of the road, and that was a big mistake. They did not think it out before they did it. Now when you go down the road, back behind 14 is almost like a cliff. You can look down, for example behind Patty, you can see into the trees that would be right next to the road. Now the road is five feet taller. There has just been no engineering at all. It has just been graveling the roads.

There are no culverts under the road?

Anonymous: There is one.

Mark Bremer: I understand that the people at the last meeting, maybe the meeting before that, were talking about preserving the visual state of the gob pile. It is hard for me to understand that if we keep them unprotected, if we don't do anything about those gob piles, then maybe this plan will be funded by the MLA to slowly remove everything that comes off those every time we have rain. So, every year, when it rains, we are going to take a little bit of that gob pile that got eroded, and we are going to stick it somewhere. And we are going to do that forever. If we hold to the idea that the visual of that black has, it is worth the cost is what it comes down to. Because the consequence of keeping those things exposed, is that dedicated that has to go into every year moving it out of these sediment basins, out of the culverts, out of the downstream areas. And what happened? Every year we lose a little bit of that gob pile. So if we really want to preserve those gob piles, the best thing to do is reclaim them. Then when people come to town, they will see those reclaimed, smoothed areas on hillsides, you can say those are our gob piles, those are our coal piles, now they are covered in wildflowers, native grasses. We create a habitat up there. You can still see the gob pile; still see the smooth effect, not a rough landslide of rock. So, I am thinking the best thing we can do to those gob piles is reclaim them. That way, we preserve that indefinitely for future generations. And we drastically reduce the cost of maintenance of this complex system that we're proposing. I think reclamation of the gob piles needs to come back up. And a cost estimate for the maintenance needs to be developed with the two alternatives. People could see what they are actually purchasing when they say no, don't touch my gob piles. They need to know what the cost is going to be for not touching them. For not reclaiming them, for not protecting them. And the cost of eventually losing it over 10, 20, 30 years. Because eventually that is what will happen. If we do not reclaim them, the gob piles will be gone.

Thank you, very well said.

ATTACHMENT D

Meeting Presentation Materials

ATTACHMENT E

Community Comments

Madrid Stormwater & Erosion Project: Pre-final conceptual designs community feedback

The following comments were sent to jacob.pederson@state.nm.us prior to Aug 26, 2020. In addition to these comments, I also received verbal feedback from several property owners and Amanda Bramble (after we recorded an interview for her radio show). Amanda and a few others asked whether it was possible to design an “Arroyo light” project, that minimized destruction of existing vegetation in the arroyo.

An additional PDF document with extensive comments was received from Ellen Dietrich. This document will be provided in a separate attachment.

-Jacob

Hi Jacob,

The term "walk-down diversion channel" has us a little concerned that it means a footpath down the hill, that would invite anyone to use it as a means to get up and down the hill. We would not be happy about that.

Please note that the septic tank and leach field already exist at 02 Red Dog, and are situated pretty close to the property line with Gig. You would really need to consult with a septic expert on whether your proposed diversion channel / ditch would be a problem, but my gut feeling is that generally one should aim to keep water away from a leach field. The location of the tank is still staked out, so a site survey should inform you of how close it is to the property line. The leach field extends backward away from the road and toward the hill. We do not have a specific location in mind yet for a new house - could be a little way up the hill, or down at the same level as the workshop, we'd just like to keep options open if possible.

Figure 10 seems like the better option of the two here, but we're concerned about the proximity of the ditch to the casita. I understand the drawings are not entirely accurate, but here it looks like the ditch actually cuts in to the structure. I'm sure that's not what is planned, but still the proximity of the ditch to the structure is a concern. Have you considered placing the ditch on the other side of Red Dog? I should point out that there is a water line that runs from the pump house along the west side of Red Dog, up to the 2nd house, with tees that cross the street to both houses. Maybe a channel down the center of the road would be best? Either way, please consider the water lines. I imagine that if the ditches would be shallow enough to cross with a vehicle, they will not be anywhere near the depth of the water lines, but care should be taken during construction so as not to disturb the pipes.

One other consideration with this plan (whatever side of the road the ditch would be on) is that we may decide in the near future to run an underground pipe from our pump house to the casita. I would like to get that done before any improvements are made to the road, or any channel placed that would be difficult to dig through.

On a positive note for Fig 10, we would certainly appreciate improvements to the road surface, and any dips that might have a dual purpose as speed bumps would be great :-) Thanks for all your work on this. If you want to have a socially distant meeting on site some time, let me know. As I'm working from home 4/5 days a week, it would be relatively easy to meet you there any time.

(Matt Zwager)

I assume you know that the arroyo all this water is going into was filled in with silt in the 2013 flood. Are you going to do something about that? Are you going to do any work north of Cave Road? (Elizabeth Davis)

I can see my roof in one of those images. I have the Ice cream parlor on the boardwalk; units A & B. Let me know if your plan will fix the flooding in my back yard. I don't know how i could tell about that. But, I just put new sod down that was destroyed years ago in that last major land-slide flood. (Jezebel)

Hi Jacob, I have reviewed plans and respect the amount of work that has gone into this project. I just have a couple of questions. Interestingly, I just hiked the hill yesterday.
When you do Ice House Rd I am requesting that the road start at my property as erosion has greatly impacted the areas in front and behind ---14 Railyard Ln. I prefer the paved solution.

I appreciate the missing link part of the project. I also request that if paths are made for the project that they stay for future walking or driving paths on the hillside.
Thanks so much, Lori

Hello Jacob

The Board of Directors of Madrid Water recommend or favor the New Pipe crossing at the optional South route.

Thank you,
Board of directors
Madrid Water

I personally recommend or favor these three options:
Icehouse Rd. plan Alternative #1 with paved road with water main moved to edge of road.

Typical inverted crown road Alternative #1.
Firehouse lane Alternative #1 with paved road with water main moved to edge of road.

Thank you
Jethro Bawden

Hi Jacob, thanks for taking the time to show me some of the finished projects in my area and providing the drawings for proposed projects. The finished work that I saw impressed me as well as proposed work for the future. I'm thinking about my driveway that travels uphill to the East, I have 28' that could be filled in with the precast concrete block that now lines part of my road and the Mine Shaft road, this would join the two. Also my road in this area washes out during a big rain and you had mentioned doing a base course with larger rocks to stabilize this area. As to the two Concept Designs the drawings are very nice and I think the build-out would be a good functional aesthetic for the town. If choosing one I like the "Alternative 1" for Firehouse Lane, I like the idea of paving this area and locking in a grade, I think the Firehouse would like this also. The big catch-drain at Hwy.14 and the Mine Shaft Tavern is eroded now and pavement in this area will help lock in a grade. I have shot elevations between my storefronts and the road, and there are areas where the road drains toward my shops, could be corrected and locked in with pavement. I plan on work in this area but I can't change the elevations at shop doors/floors. Also I'm not sure a paved area needs to extend beyond the Firestation if budget was an issue. I don't know enough about other parts of town to make a choice on other projects, any erosion control is good and will be appreciated.

You had mentioned an old photo that showed the Arroyo passing through where my building now sits, if you have time I would enjoy seeing it.

(Mike Sharber)

Thank you for your time in this... Best, Mike Sharber

Hi Jacob,
From here, I'd like to see the minimum done for water erosion control. We are being gentrified enough, asphalt just adds to that, imho.
Not a fan of asphalt. So the proposal with the least amount of asphalt gets my vote.
Upkeep, who gets to pay for asphalt upkeep, yikes, we have it hard enough just keeping the dirt going.
Thanks for your time.
Gwendolyn Zaxus
3 Grasshopper
Madrid, NM 87010

I wanted to let you know that i support the South end hook-up to the water tank. I also prefer gravel to asphalt on all of our roads. I know some people are against making the arroyo thru town returned to a meander but i think in the long run it is the best idea to slow the rushing water.

Thanks and take care,
Rebecca

Hello Jacob,

I have reviewed the Madrid Stormwater & Erosion Control Project documents and have the following review comments for your consideration:

Figure 6: Ice House Road is proposed for asphalt paving. Without sufficient vehicle speed control devices (speed bump/hump) it will look incredibly inviting for those who wish to want to use it as a drag strip or simply drive fast on an assumedly un-patrolled road. A lot of folks use this as a hiking path and is also the backyard to many business homes. We already have a speeding problem on the dirt road Back Road which I personally am witness to and suspect nothing will be different on Ice House Road. A few folks use these two roads as motocross speedways on motorcycles which impact residents with undue noise and increased dust. Please consider some type of speed control devices on Ice House Road.
Figure 6: The Ice House Road detention pond and drop inlet/curb cut in the east shoulder may require a hardened (i.e. rock lined) overflow path to the east down the steep slope to Highway 14. A lot of earthen and vegetation debris (i.e. tree fall) is possible in this watershed and may easily overwhelm the inlet structures intended for conveyance. Please consider a hardened overflow path from the inlet/curb cut on Ice House Road to the highway.
Figure 6: As Ice House Road is a dedicated fire access lane, signage prohibiting parking on either side of the narrow 12 wide roadway may be necessary as the shoulders are inadequate to accommodate parking without encroachment in the road. Currently the road is host to many infrequently used/unregistered vehicles parked indefinitely.
Figure 11: The existing trail to be improved to the Trail and Conveyance Diversion Channel is host to prohibited off-road motorcycle traffic. Can signage prohibiting such use be provided at each end of the channel to discourage such traffic and extend the useful life of this improvement?
Figure 13: Under the Typical Sedimentation Basin Outlet Structure a corrugated metal drain pipe sloped to drain is specified. As the existing metal drain pipe on Ice House Road is subject to crushing and has an increased friction coefficient, can a reinforced concrete pipe be used to both eliminate potential future loss of section and reduced friction for greater capacity conveyance? Please note that there are no posted weight restrictions on Ice House Road. Also during the filming of “Wild Hogs” in 2005 Ice House Road was improved (surface course only) and all highway traffic in both directions was routed on this road during filming for limited periods of time.
Figure 13: Under the Typical Detention Pond/Sedimentation Basin should the conveyance structure be labeled Inlet as opposed to Outlet?
Figures 1-15: The title sheet differs from many of the other sheets listed as Madrid Stormwater & Erosion Safety Project. Is it Control of Safety? Also Design and Designs is also used interchangeably throughout the package.

Please note that is drawing set is heavily laden with images (which is a good device) and yet it took a long time (>1 hour) and several attempts for my connection to loaded in the browser. Can the pages be made available to be loaded separately or a hard copy provided to the address below (preferred)?

This looks like a well thought out project and I look forward to the next town meeting to learn of the continued progress on the design package and updated schedule.

Respectfully,

Mark Bremer
3 Opera House Road
Madrid, NM 87010

I believe you mentioned that AML was not going to replant along the green belt after the arroyo gets rerouted, I would like to know why but if its because it can be hard to keep plants alive and required watering I feel like Madrid residents could step up and help maintain plants until they get established.

I would like to see the gravel roads throughout the town, it looks better, smells better and I've noticed that new paved roads don't hold up very long I believe its because they don't have a solid base that has settled over time, a newly compacted road will settle more and the pavement will fall apart giving Madrid a road maintenance issue. Pavement produces a lot of heat and the smell of it is horrible. I know of one resident on the west end of Bridge Rd who is super sensitive to the smells of things, rarely going out of the house now, her 19 yo daughter seems to have the same issue, they would probably have to move if pavement went down on Bridge Rd. Having a truck load of gravel spread on the roads seems more affordable than hiring a paving company to resurface.

There is an error on the drawing "storage tank area" shows the existing hydrant line going down the side of Hwy 14, it actually runs down the full length of Fire House Ln and crosses the street on the south end of the Johnson's Gallery, the Fire House Ln line is going to be reused, we are tapping back into it where the new hydrant is shown (in light blue) on the drawing.

Per our discussion recently, on my property B1B there are two diversion ditches shown intersecting near Fire House Ln, I will need to cross the one diversion ditch that runs along the road to access my property.

Thanks,

Carl Hansen

We just now got a chance to look this over - the files are huge and take a very very long time to load. Plus we have been busy with the new baby! Anyway it looks like the issue we told you about the last time we met in person was not considered in the newest plan for Firehouse Lane. The drainage flow path through our property crosses our septic leach field as well as a section of land we hope to someday build a house on. This isn't going to work for us.

Thanks,

Kelly Ann

ATTACHMENT F

Memos

State of New Mexico
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico

SUSANA MARTINEZ
GOVERNOR

KEN McQUEEN
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July 31, 2018

MEMORANDUM

TO: Lloyd Moiola, Program Manager, AMLP

FROM: Jacob Pederson, Project Manager, AMLP

SUBJECT: Madrid Stormwater Improvement Project Update Memo

AML is currently developing community partnerships and refining a list of priority projects to address flooding and sedimentation issues caused by historic mining practices. This memo provides background on a workshop held in Madrid on June 20th, 2018, discusses how conceptual projects discussed at the workshop would be justified under AML-1 standard problem types and priority levels, and provides recommendations presenting a refined scope of work to partners in the community.

Modern-day Madrid features a highly modified landscape that continues to feel the effects of historic mining activities. As a company mining town, most commercial and residential buildings that exist today were installed by mining companies to accommodate mine workers and their families. They also installed a limited stormwater system that has not been replaced or upgraded since before the mines closed. Supported by photographic evidence, modifications included channelizing the Madrid Arroyo, which bisects the town and crosses under Highway 14 near the Mineshaft Tavern (Figure 1).

A community workshop was held in Madrid on June 20th, 2018 with the goals of renewing interest in and discussing stromwater improvement concepts developed in partnership with Madrid in the summer of 2013 (Johnson 2018). These plans focused on addressing the following ongoing problems in Madrid:

- Flooded/blocked highways and roads resulting from stormwater and sediment running through a historic mining landscape;
- Washed out or buried culverts, drop inlets, and conveyance channels; and
- Accumulations of coal waste and debris in residences, business, and historic buildings.

Although workshop attendance was much less than was anticipated by AML staff, those who did attend were highly engaged and knowledgeable about how the town works, stormwater/flooding issues, and previous AML activities in Madrid. Most conversations at the workshop focused on technical details of implementing stormwater conveyance projects along Icehouse Road. Conceptual plans, community input, rough projected costs, and anticipated AML-1 designations are summarized in Table 1.

One goal of the workshop was to ask the community if any types of projects were missing from the overall list of plans. The Chair of the Madrid Water Co-op, Mr. Glen “Jethro” Bawden,

submitted a comment requesting that a project protecting a water tank from bank destabilization in the Arroyo be added to the priority project list. The tank supplies non-potable water to fire hydrants in Madrid, and protecting it would increase fire safety and help maintain acceptable fire insurance rates for landowners. I met Mr. Bawden, as well as Carl Hansen, the Madrid Fire Chief, at the water tank the week following the Madrid workshop to document the issues at the site and discuss their preferred safeguarding methods (Pederson, 2018).

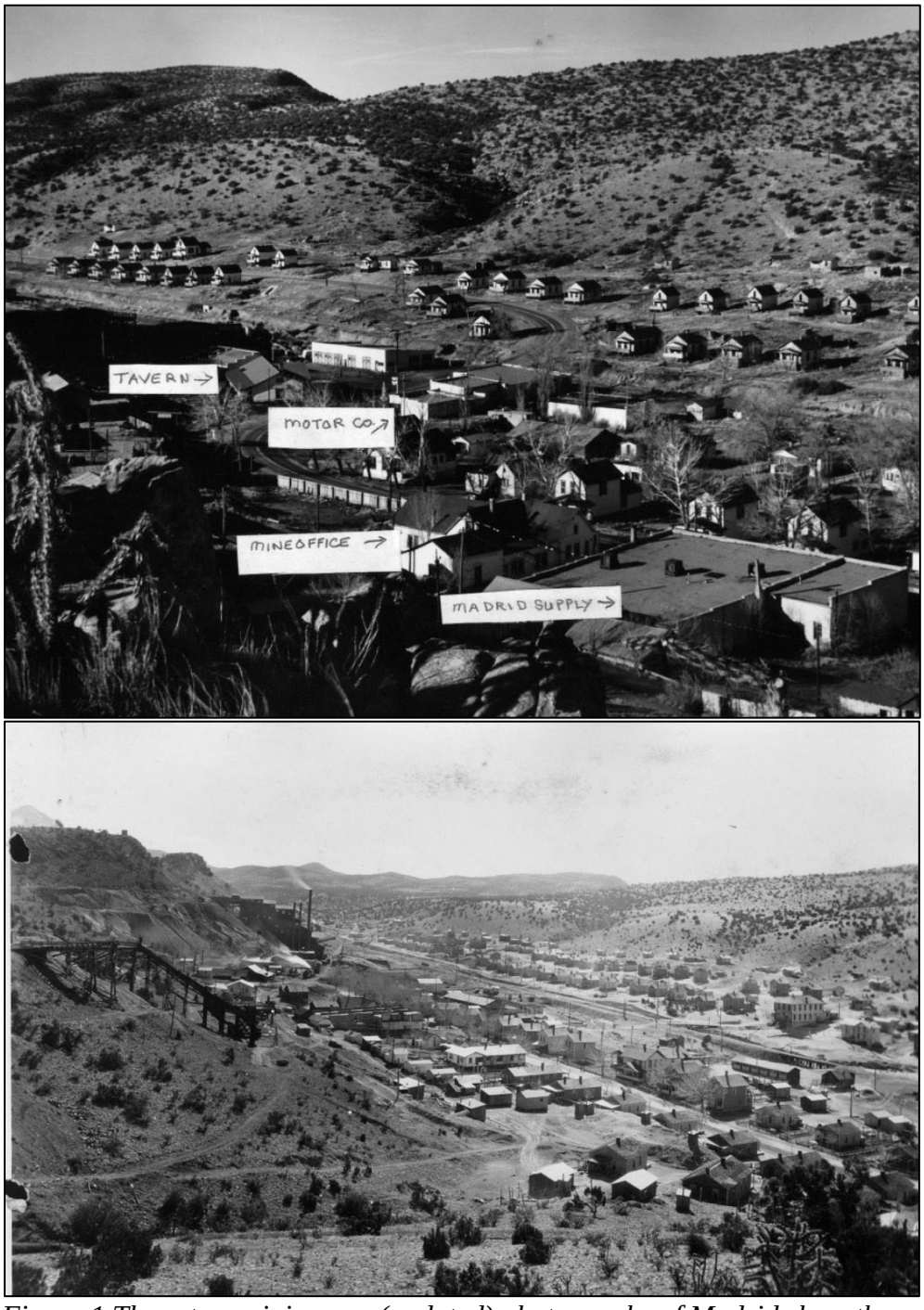

Figure 1 These two mining-era (undated) photographs of Madrid show the modified river channel running through the center of town.

Table 1 Madrid Stormwater Design Concepts and Associated AML Problem Types

Potential AML Work	Notes and Community Input	JK Estimate	AML-1 Problem Type and Priority Level
Icehouse Rd • Rebuild road with culvert and rundown • Hwy 14 culvert, lower conveyance channels, Cave Rd elevation/culvert • Detention ponds above Icehouse	• Broadly supported with strong technical interest; majority of general comments at the workshop related to Icehouse • Require maintenance agreement and MOU with town institutions • Challenging design but potential for innovative project	$2M	P1 Clogged Stream Lands (CSL) • Occupied structures, improved properties, roads, located in flood water path • High probability of occurrence of flooding caused by significant erosion carried downstream by surfaced water runoff from the unreclaimed AML area
Firehouse Drainage Zone • Rolling dips on Firehouse Lane • Rock rundown to Arroyo	Less of a priority, but relatively cheap	$150K	P2 Clogged Stream Lands (CSL) • Improvements located in flood water path • Potential danger of flooding caused by sediment carried downstream by surface water runoff from unreclaimed AML area
North Drainage Zone • Rolling dips • Rock rundowns • Ditch along Hwy 14 • Culvert under 14 • Conveyance channel and culvert under Cave Rd	General support from community	$750K	P2 Clogged Stream Lands (CSL) • Improvements located in flood water path • Potential danger of flooding caused by sediment carried downstream by surface water runoff from unreclaimed AML area
Slope Zone • LID treatments • Reclamation at sites • Reclamation of gob above Icehouse and jail building	• Best potential to reduce maintenance challenge at Icehouse as well as village zone on east side of arroyo • Gob reclamation is controversial in Madrid	$3M $1.5M If work does not include gob above firehouse and MST	P1 Dangerous Slide (DS) • Surface spoil in area • Occupied structures exist in area • Land mass is unstable and continually moving downhill into occupied area with each storm due to its own weight
Arroyo Zone • Cave Road Culverts @ Arroyo • Cave Road Detention Pond	Extent of cave road project depends on how much is included in Icehouse Rd project	$1M	Culverts: P1 Clogged Stream (CS) • Important access road located in flood path • Previous record of flooding and stream bed filled with AML sediments • High probability of occurrence of flooding caused by AML-related sediment-filled streambed Detention Pond: P3 Water (WA) • Poor drainage conditions causes water to leave area quickly in arroyo limiting plant growth and limiting stability in arroyo
Water Tank Safeguarding • Bank stabilization • Any necessary mitigation for in-stream fill	• This is a high priority for the community and can provide a strong incentive for participation and partnership from Water Co-op, MLA, and Merchant's Association • The water tank was previously rehabilitated by AML in 1984.	?	Priority B (PB) Water Supplies (WS) – Section 403(b) Specific water supplies adversely affected by mining in terms of water quantity; effects predominantly due to coal mining P1 CSL Improved public structure located in flood water path; high probability of occurrence of flooding caused by significant erosion carried downstream by surface water runoff from unreclaimed AML area.

Challenges and Recommendations

Implementing a stormwater improvement project in Madrid that will provide lasting benefit to the community faces several challenges.

Maintenance of installed projects
Most improvements would be installed on private property and private landowners have recently altered past AML projects. Projects would also cross multiple individual properties. AML proposes utilizing long-term stewardship management plans in ensure stakeholder ownership and reduce potential that projects would be manipulated or changed by individual landowners years after successful construction.

Upslope reclamation is controversial
Large historic coal waste piles are a major source of flood and erosion issues, but reclamation of these piled will be controversial with many residents in town. AML proposes developing multiple alternatives to analyze for feasibility.

Local Institutional Capacity is Limited
Local institutions have limited capacity to raise maintenance dollars. Long-term maintenance burden should be minimized during the design phase.

To address these challenging I provide the following recommendations:

- Seek partnerships with the existing Madrid institutions (Madrid Landowners Association, Water Co-op, Merchant's Association, and Madrid Cultural Projects) to negotiate a preliminary approach to ownership and long-term maintenance of installed stormwater facilities, including signed agreements, before presenting a scope of work to the broader community.
- Bring the same institutions into project design to ensure that long-term maintenance methods and costs are manageable before projects are built.
- Develop a list of compromises that we are requesting to limit maintenance needs on publicly-owned features. For example, reclaiming large gob piles above Icehouse Road will help protect the rebuilt road from sedimentation that exceeds maintenance capacity.

Documents Referenced

Goar, T, Lawrence, HP and M Hronich-Conner. 2013. A Site File and Archival Research Project for the Madrid Area, Santa Fe County, New Mexico. Marron and Associates, Albuquerque, New Mexico.

Johnson, E. 2018. Public Involvement Workshop Summary: Madrid Stormwater Improvement Project. Marron and Associates (an NV5 Company).

Pederson, J. 2018. Field Notes—Madrid Stormwater Improvement Project.

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Madrid Stormwater & Erosion Control Project: 2020 Conceptual Design and Community Feeback Report and Design Guidance Memo

Since 2010 the New Mexico Abandoned Mine Land (AML) Program has worked on developing solutions to stormwater, sedimentation, and flooding issues resulting from outdated and deteriorating stormwater infrastructure and large legacy coal waste (gob) piles on the east slope of Madrid, NM. This report provides

1) An FAQ based on of comments and questions received during the public comment period for conceptual designs held between August 7 and September 24, 2020.
2) A summary of changes that will be made to the project moving forward. These changes are based on public comments, direct outreach to potentially affected landowners, and input from project partners which include Santa Fe County, the Madrid Landowners Association, Madrid Water, and NMDOT.

Frequently Asked Questions

What is a "walk-down diversion channel?

1. Summary of Next Steps

Based on public comments received, direct communication with landowners, and consultation with project partners, AML is proposing to eliminate some design options from the project at this time. These decisions were made based on design guidelines established with the community, landowner considerations, and other concerns that govern all AML projects in New Mexico. These include cost of construction, maintenance costs, concerns of increased traffic speeds on improved roads, and the desire to maintain the character of the historic district—a value shared by all project stakeholders. The following actions would no longer be considered in project alternatives moving forward:

- The paved road (inverted crown) options for Icehouse, Bridge, and Cave Roads shown in Icehouse Alternative 1 (shown in Figure 2; illustrations in Figure 3 and 4).
- Subsurface storm drain channel options depticted in Icehouse Alternative 1 (Figure 2)
- The upper and lower diversion ditches and the detention pond shown in Firehouse Alternative 1 (Figure 9)

- The asphalt alternative for Firehouse Land shown in Firehouse Alternative 1 (Figure 9)

2. Design Organization

We are looking forward to catching up with everybody at this meeting. The main purpose of this meeting will be to discuss changes to the project moving forward. Here is a blurb of what AML is currently proposing:

Based on public comments received, direct communication with landowners, and consultation with project partners, AML is proposing to eliminate some design options from the project at this time. These decisions were made based on design guidelines established with the community, landowner considerations, and other concerns that govern all AML projects in New Mexico. These include cost of construction, maintenance costs, concerns of increased traffic speeds on improved roads, and the desire to maintain the character of the historic district—a value shared by all project stakeholders. The following actions would no longer be considered in project alternatives moving forward:

- The paved road (inverted crown) options for Icehouse, Bridge, and Cave Roads shown in Icehouse Alternative 1 (shown in Figure 2; illustrations in Figure 3 and 4).
- Subsurface storm drain channel options depticted in Icehouse Alternative 1 (Figure 2)
- The upper and lower diversion ditches and the detention pond shown in Firehouse Alternative 1 (Figure 9)
- The asphalt alternative for Firehouse Land shown in Firehouse Alternative 1 (Figure 9)
- The northern (“highway right-of-way”) route in the Water Tank Project Area will no longer be considered (Figure 14)

All remaining options would be carried forward, with all actions put in to one “bucket” from which we would draw to describe new project alternatives in narrative form in our EA.