Mike Bramlett

From: McCormick - DNR, Brian <brian.c.mccormick@state.co.us>
Sent: Thursday, March 9, 2023 11:50 AM
To: Mike Bramlett
Subject: Re: SRMD Ponds 1 and 2 (NPH), Acceptance of Plans for Filing | 100600, C-2128; 100601 - C-2129 |

Mike,

Thanks for checking in. There are no additional approvals required for Dam Safety prior to construction. Please keep me informed of construction schedule. I will attend your pre-construction meeting with your contractor if schedule permits.

Brian McCormick, PE
Dam Safety Engineer
COLORADO
Division of Water Resources
Department of Natural Resources
719.248.3876
4255 Sinton Road, Colorado Springs, CO 80907
brian.c.mccormick@state.co.us
https://dwr.colorado.gov/services/dam-safety

On Thu, Mar 9, 2023 at 10:50 AM Mike Bramlett <mbramlett@jrengineering.com> wrote:

> Brian,
>
> I saw on the Dam safety website that the two Sterling Ranch ponds are in the database with a “design approved” listing. Is there any other approvals we need from your office prior to starting construction?
>
> Thanks
>
> Mike Bramlett, PE
> Client Manager
> JR Engineering, LLC
> 5475 Tech Center Drive, Suite 235, Colorado Springs, CO 80919
> Phone: (719) 593-2593 Cell: (719) 659-7679
>
> mbramlett@jrengineering.com

From: McCormick - DNR, Brian <brian.c.mccormick@state.co.us>
Sent: Tuesday, December 13, 2022 1:46 PM
To: Mike Bramlett <mbramlett@jrengineering.com>
Cc: Daniel Vaught <DVaught@jrengineering.com>; Tristan Bonser <tbonser@jrengineering.com>; jmorley3870@aol.com; Kyle Campbell (kcampbell@classicconsulting.net) <kcampbell@classicconsulting.net>; Loren Moreland <lmoreland@classichomes.com>; Jacob Olson - DNR <jacob.olson@state.co.us>
Subject: Re: SRMD Ponds 1 and 2 (NPH), Acceptance of Plans for Filing | 100600, C-2128; 100601 - C-2129 |

Mike,

Thank you - that's everything I need at this time. I appreciate your work in getting all the pieces aligned on this project.

Brian McCormick, PE

Dam Safety Engineer

719.248.3876

4255 Sinton Road, Colorado Springs, CO 80907

brian.c.mccormick@state.co.us

https://dwr.colorado.gov/services/dam-safety

On Tue, Dec 13, 2022 at 1:31 PM Mike Bramlett <mbramlett@jrengineering.com> wrote:

> Brian,
>
> Loren forwarded the invoices to me to pay as part of my reimbursable line item in the design contract. Here are the receipts showing payment.

Thanks

Mike Bramlett, PE
Client Manager
JR Engineering, LLC
5475 Tech Center Drive, Suite 235, Colorado Springs, CO 80919
Phone: (719) 593-2593 Cell: (719) 659-7679

mbramlett@jrengineering.com

From: McCormick - DNR, Brian <brian.c.mccormick@state.co.us>
Sent: Tuesday, December 13, 2022 10:58 AM
To: Mike Bramlett <mbramlett@jrengineering.com>
Cc: Daniel Vaught <DVaught@jrengineering.com>; Tristan Bonser <tbonser@jrengineering.com>; jmorley3870@aol.com; Kyle Campbell (kcampbell@classicconsulting.net) <kcampbell@classicconsulting.net>; Loren Moreland <lmoreland@classichomes.com>; Jacob Olson - DNR <jacob.olson@state.co.us>
Subject: SRMD Ponds 1 and 2 (NPH), Acceptance of Plans for Filing | 100600, C-2128; 100601 - C-2129 |

Mike,

Thanks for revising these applications and providing the clarification on ownership. I have filed these and requested invoices. This email serves as acceptance of these applications and plan sets for filing, contingent on payment of invoices.

As Engineer of Record, you are responsible for Construction Observation and Records per Rule 8.2.1, and 8.2.2 of the Rules and Regulations for Dam Safety and Dam Construction, available at:

https://dnrweblink.state.co.us/dwr/ElectronicFile.aspx?docid=3552784&dbid=0

Following construction completion please provide the following:

Record Drawings - refer to rule 8.3.1.3

CompletionReport - refer to rule 8.3.1.4

Please right size your efforts given that these are minor size, No Public Hazard Structures. Anything you provide however may turn out to be very valuable for our successors in the future. Pictures, material test results, and a summary narrative are always valuable.

Please do not hesitate to contact me if I can be of further assistance as these dams are constructed.

Brian McCormick, PE

Dam Safety Engineer

719.248.3876

4255 Sinton Road, Colorado Springs, CO 80907

brian.c.mccormick@state.co.us

https://dwr.colorado.gov/services/dam-safety

On Mon, Dec 12, 2022 at 8:09 AM Mike Bramlett <mbramlett@jrengineering.com> wrote:

> Brian,
>
> I have attached the updated applications with signatures by Sterling Ranch Metro District along with the design documents. The design documents had minor updates based upon our meeting in September. I have also attached a letter requesting the dam ownership be assigned to Sterling Ranch Metro District #3 and the letter is signed by the Metro District and the two land owners; SR Land, LLC and Classic SRJ Land, LLC.
>
> Please review and let me know if you have any questions or concerns.
>
> Thanks
>
> Mike Bramlett, PE
> Client Manager
> JR Engineering, LLC
> 5475 Tech Center Drive, Suite 235, Colorado Springs, CO 80919
> Phone: (719) 593-2593 Cell: (719) 659-7679
>
> mbramlett@jrengineering.com

From: McCormick - DNR, Brian <brian.c.mccormick@state.co.us>
Sent: Tuesday, November 29, 2022 10:28 AM
To: Mike Bramlett <mbramlett@jrengineering.com>
Cc: John.Hunyadi@state.co.us; Daniel Vaught <DVaught@jrengineering.com>; Tristan Bonser <tbonser@jrengineering.com>; jmorley3870@aol.com; Kyle Campbell (kcampbell@classicconsulting.net) <kcampbell@classicconsulting.net>; Loren Moreland <lmoreland@classichomes.com>
Subject: Re: Sterling Ranch - Sand Creek Channel Improvements - Application for plan review of jurisdictional dams - no public hazard

Mike,

I apologize for how long it has taken to get this follow up correspondence to you. Thanks for meeting with me in October to discuss the project. We have assigned the following DAMIDs and Construction file numbers (C numbers) for these jurisdictional size dams. Please use these on future correspondence and documents (plans, specs, reports).

Sterling Ranch Municipal District Pond 1, DAMID 100600, C-2128

Sterling Ranch Municipal District Pond 2, DAMID 100601, C-2129

These both appear to have been originally constructed as Livestock Water Tanks: (Pond 1, T.M. Dines #1, receipt 9078; Pond 2, T.M. Dines #2, receipt 9052).

It is understood that SR Land is the Owner of these dams and that ownership and maintenance is intended to be transferred to a special district in the future. Per Rule 13.2, please advise this office when the change in ownership occurs and provide complete contact information for the special district and representative.

Here are the next steps needed to process these:

Please revise the applications per the attached markups. These need to be signed and submitted to me with design documents. The plans (dated 9/27/22) previously submitted will suffice unless there have been changes to these.

When work is completed I will need as-constructed plans including:

As-constructed topography

Storage - Elevation Curve per Rule 6.6.1.6

Elevation - Outflow Curves (outlet capacity and spillway capacity) per Rule 6.6.1.5

A location or key map to allow me to verify dam location.

I'll invoice these at $100 each (filing only). The invoice will come by email to the email address on the application form.

Let me know if you have any questions about the path forward. Thanks,

Brian McCormick, PE

Dam Safety Engineer

719.248.3876

4255 Sinton Road, Colorado Springs, CO 80907

brian.c.mccormick@state.co.us

https://dwr.colorado.gov/services/dam-safety

On Wed, Sep 28, 2022 at 1:42 PM Mike Bramlett <mbramlett@jrengineering.com> wrote:

> Brian,
>
> I have attached the applications review applications and design exhibits for two stock pond embankments that became jurisdictional once we incorporated them into the overall Sand Creek Channel Improvements project in El Paso County. I would be happy to set up a meeting with you and our design team to go over the background of the project and walk you through the design.

The Sand Creek Channel improvement project is part of the overall Sterling Ranch Master Plan Residential Development, east of Vollmer Rd. and approximately 1 mile north of Woodmen Road and I have attached a marketing map that may help give you an overview. The objective of the channel improvements will be to utilize a blended (naturalized channel design and periodic engineered drop/check structures) to stabilize the Sand Creek channel. The stock ponds are existing and currently adjacent to the creek thalwag but since we are widening the creek bottom substantially, these two ponds have been incorporated into the channel design. Incorporating them makes for a large downslope on the back of the existing dam berms, making them jurisdictional. We have placed a vertical stormwater control outlet structure in each pond at the stored water level with an outlet stilling basin near the toe of slope. Since the ponds were part of the augmentation plan approved last year for Sterling Ranch, they will also have an "agridrain" control structure for adherence to the augmentation plan. The "agridrain" control structure will tie into our stormwater control outlet structure so only one discharge is at the bottom of each downslope berm. The stormwater control structure structural design/detailing is being done by SAM Engineering and should complete in October. If you wish to also review those drawings, let me know.

We had met with John Hunyadi in December of last year to go over this project and get his feedback before he moved to his new position on the path forward. At that meeting it was discussed that while these ponds would become jurisdictional dam embankments, there is no public hazard in the event of dam failure as the pond stored water volumes (~ 7 ac-ft and 5 ac-ft) just flow down the stabilized channel.

We now gotten far enough in the design reviews with El Paso county to be comfortable the design elements will not change and are detailed sufficiently to request a formal review from your agency.

Looking forward to working through this with you. If you are interested in a review meeting, just let me know some times that work for you in the upcoming weeks.

Thanks

Mike Bramlett, PE
Client Manager
JR Engineering, LLC
5475 Tech Center Drive, Suite 235, Colorado Springs, CO 80919
Phone: (719) 593-2593 Cell: (719) 659-7679

mbramlett@jrengineering.com

DIVISION OF WATER RESOURCES
OFFICE OF THE STATE ENGINEER
DAM SAFETY BRANCH
1313 Sherman Street, Room 818
Denver, Colorado 80203

OFFICE USE ONLY

NAME OF DAM_____, **WATER DIV**____, **DAMID**_____, **C-**_____

DATE RECEIVED_____ **APP. COMPLETE? YES** ☐ **NO** ☐, **DATE RETURNED**_____

APPLICATION FOR REVIEW OF PLANS AND SPECIFICATIONS FOR THE CONSTRUCTION OR ENLARGEMENT OF A DAM AND RESERVOIR

Applications must be computer generated online, typewritten, or printed in black or blue ink.
Original or electronic signature required.

CHECK ONE: New Dam [X] Enlargement [ ]
(SEE C.R.S. 37-87-101, et al., and Rules & Regulations for Dam Safety and Dam Construction)

I, STERLING RANCH METROPOLITAN DISTRICT NO. 3 (Name of Owner), owner, hereby accept and approve the enclosed plans and specifications for submittal to the State Engineer in accordance with § 37-87-105, C.R.S.

_____ (Signature of Owner/Agent) 12/6/2022 (Date)

Address: 2138 Flying Horse Club Drive (Street or P.O. Box) Colorado Springs (City) CO (State) 80921 (Zip Code)

Phone Number: (719) 499-3125 Email (mandatory): lmorland@classichomes.com

Owner Code:(CHECK ONE): [ ] Federal [ ] State [ ] Local Government [ ] Utility [X] Private

NAME OF DAM (ON FILE WITH THE STATE ENG): _____

Also known as: _____

RESERVOIR NAME: Sterling Ranch Metropolitan District Pond 1

STATE ENGINEER'S FILE NO. C-nnnnx: C-2128 (if known) DAMID: 100600 (if known)

Location: County El Paso Section 33 Township 12 N [ ] S [X] Range 65 E [ ] W [X] Principle Meridian 6

Latitude 38.9591 Longitude: -104.6733

OR

Utilizing GPS (UTM format, Datum must set to NAD83):

[ ] Zone 12 or [ ] Zone 13 Northing: _____m, Easting _____m

Stream Name: Sand Creek, Tributary to: Fountain Creek

Description of Work: Stream restoration project along Sand Creek within the Sterling Ranch development. Existing stock pond will be modified with an outlet structure that will outfall into proposed regional detention pond W-3. Emergency spillway will be reinforced with a sheetpile into bedrock and riprap armoring down the slope.

(add additional sheet as page 5 if necessary)

CONSTRUCTION OR ENLARGEMENT FORM

GENERAL INFORMATION

Purpose(s) of Dam and Reservoir IRRIGATION STOCK POND
(Augmentation, Diversion, Domestic, Erosion Control, Evaporation, Flood Control, Fire Control, Fish, Hydroelectric, Industrial, Irrigation, Mining, Municipal, Pollution Control, Recreation, Stockwater, Settling Ponds, Tailings, Waste Disposal)

Engineer: Mike Bramlett

Company or Organization: JR Engineering

Address: 5475 Tech Center Drive, Suite 235 (Street or P.O. Box) Colorado Springs (City) CO (State) 80919 (Zip Code)

Phone Number: (719) 593-2593 Colorado P.E. Registration Number: 32314

Estimated costs of construction (including engineering): _____ Filing Fee: $100, filing only

Type of Dam – (e.g., Earthfill, Homogeneous):

Concrete	☐	Gravity	☐	Arch	☐
Earthfill	☒	Zoned	☐	Homogeneous	☐
Rockfill	☐	Zoned	☐	Impervious Membrane	☐
Masonry	☐				

Other _____

Hazard Classification: ☐ High ☐ Significant ☐ Low ☒ No Public Hazard (NPH)

DAM AND RESERVOIR STRUCTURAL DATA

Jurisdictional Height 28' ft. (Natural surface of ground up to crest of emergency spillway at longitudinal centerline)

Embankment Height 32' ft. (Jurisdictional height plus emergency spillway freeboard)

Structural Height 32' ft. (Bottom of cutoff trench to crest of dam at longitudinal centerline)

Crest Length 300 ft. Crest Width 15 ft. Crest Elevation 7040.0 ft., M.S.L.

Maximum Impoundment Capacity 41.55 Acre-Feet (to crest of dam)

Normal Reservoir Capacity 19.73 Acre-Feet (at high water line)

Reservoir Surface Area 6.691 Acres

Embankment Slopes:	Upstream H	Upstream V	Downstream H	Downstream V
	4	1	4	1

Embankment Facing Material:

Concrete	☐	Riprap	☒	Natural	☐	Gravel	☐
Rockfill	☐	Masonry	☐	Clay	☐	Planted	☐
Gabions	☐	Soil Cement	☐	Steel	☐	Wood	☐

Other (Describe)

OUTLET STRUCTURAL DATA

Description: Size 25'x25' Type Grated overflow orifice Capacity 2106 CFS

Other Discharges flows between HWL and spillway in order to maintain water right

Maximum Discharge Capacity: 0 cfs (at high water line)

SPILLWAY STRUCTURAL DATA

1. Type: Emergency Overflow Spillway (i.e. Emergency, Principal)

   Material: Soil Riprap (i.e. Natural, Riprap, Concrete, etc.)

   Width: 300 ft. Freeboard: 2 ft. Capacity: 4 ft

2. Type: _____ (i.e. Emergency, Principal)

   Material: _____ (i.e. Natural, Riprap, Concrete, etc.)

   Width: _____ ft. Freeboard: _____ ft. Capacity: _____ ft

Total Spillway Capacity: 8149 cfs (to crest of the dam)

HYDROLOGIC DATA (Inflow Design Flood)

Drainage Basin Area: 2313.1 Acres, or _____ Sq. Miles

Inflow Design Flood 100-YR (i.e. 100-yr. %PMP, etc.) Duration 24 Hrs.

Type: II (i.e. Thunderstorm, General Storm, Snowmelt, Combination)

Data Source Reference(s): NOAA Atlas 14

Peak Discharge from Drainage Basin 1853 cfs Runoff Volume: 236 Acre-Feet

Basin Lag time (Lg): 13.13 Hrs.

Method of determination: (Describe variable and indicate values, i.e., USBR lag, L, Lc, Kn, S, etc.):

CUHP-SWMM, time of maximum inflow into SRMD Pond 1

Inflow Design Flood routes through reservoir with 4.71 ft. residual freeboard

COLORADO DAM SAFETY BRANCH
2-CCR-402-1
RULE 6.5 ENGINEER'S QUALIFICATION STATEMENT AND AFFIDAVIT

Dam Name Sterling Ranch Metro District Pond 1
DAMID 100600
Construction File No. C-2128
Project Name Sand Creek Restoration

I, Mike Bramlett, am a registered Professional Engineer in the State of Colorado (Registration No. 32314). I am qualified in the field of dam design and construction to prepare and develop, or to lead a team to prepare and develop, the designs, plans, and specifications for the project, and to provide supervision throughout the subject project. Attached please find my resume, which demonstrates my qualifications in accordance with Rule 4.10 of the Colorado Rules and Regulations for Dam Safety and Dam Construction, 2-CCR-402-1, 2020.

This affidavit is to serve as written certification of my qualification to act as engineer in "Responsible Charge" of the project.

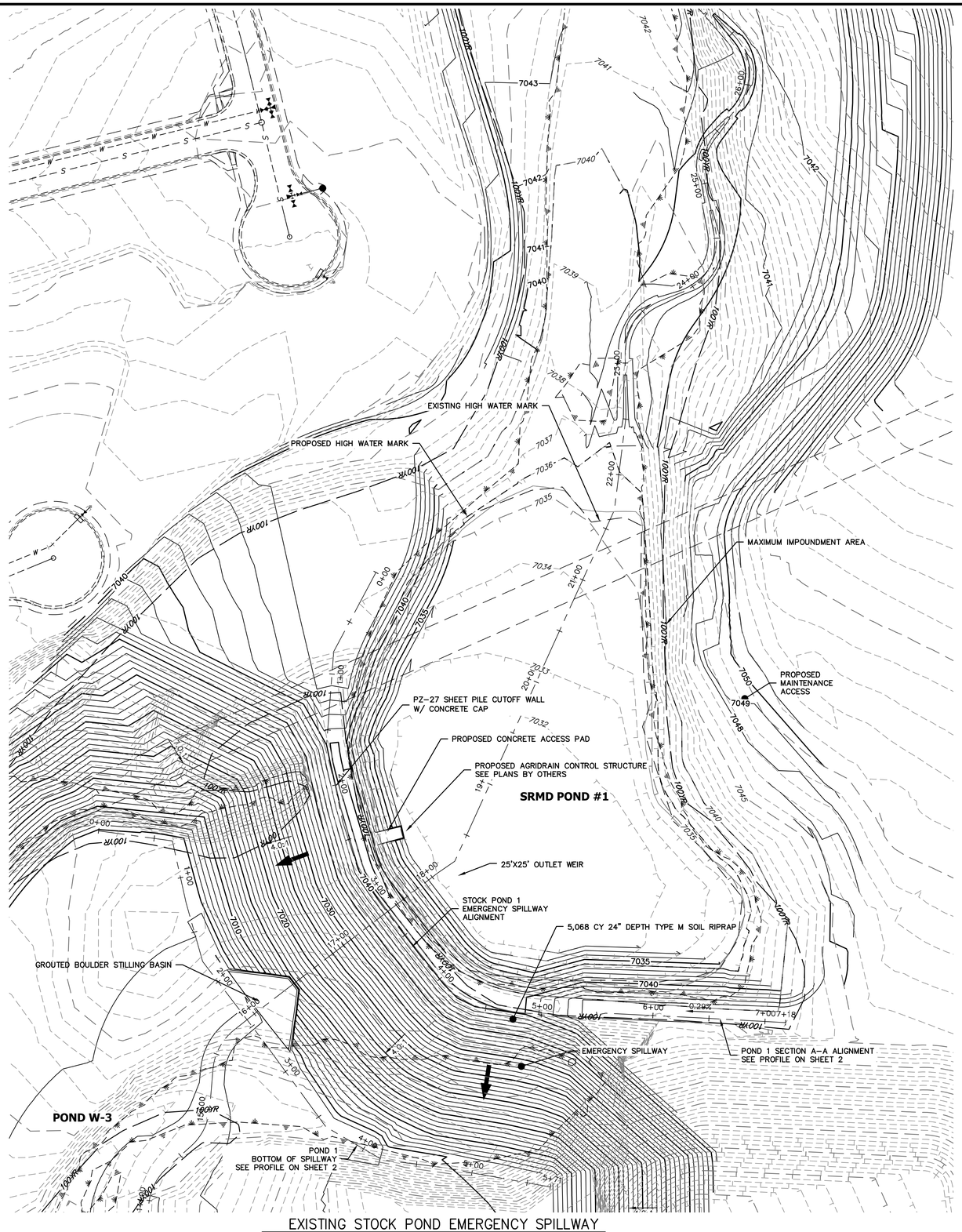
I, Mike Bramlett, hereby declare that all information contained in this affidavit, including in the attached resume, is true to the best of my knowledge.

Date: 12/9/2022

Mike Bramlett
(Signature)

Mike Bramlett
(Print Name Here)

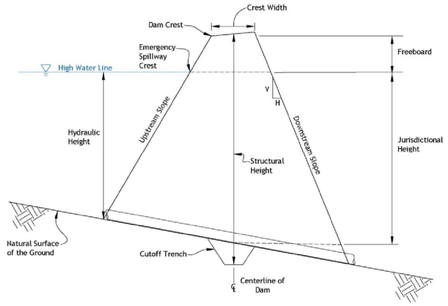
Affix wet PE stamp here



EXISTING STOCK POND EMERGENCY SPILLWAY

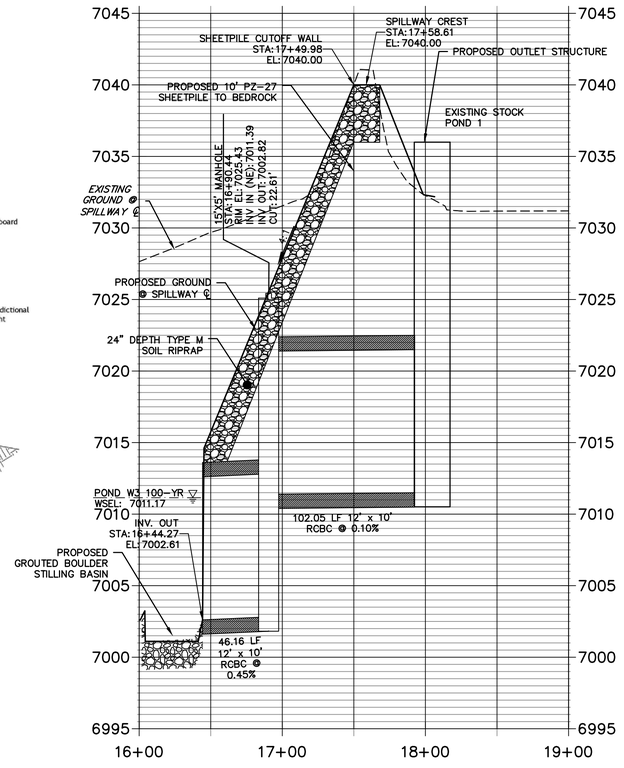
SCALE: 1"=50'

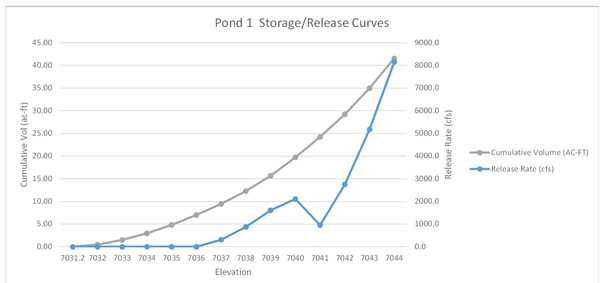
STOCK POND 1		
DRAINAGE AREA (AC)	2313.1	
AVERAGE % IMP.	9%	
	5-YR	100-YR
Q_{IN} (CFS)	511.84	1977.60
Q_{OUT} (CFS)	499.73	1819.90
STATIC WSEL (FT)	7036.00	7036.00
MAX WSEL (FT)	7040.00	7040.00
DEPTH (FT)	6.17	8.09
VOLUME (AC-FT)	10.43	16.77
SURFACE AREA (AC)	2.7	4.40



SRMD Pond 1 Storage Curve				
Description	Depth	Elev. (ft)	Surface Area (AC)	Cumulative Volume (AC-FT)
Pond Bottom	0	7031.2	0.311	0.00
	0.8	7032	0.848	0.46
	1.8	7033	1.250	1.51
	2.8	7034	1.672	2.97
	3.8	7035	2.049	4.83
Static WSEL	4.8	7036	2.320	7.02
	5.8	7037	2.567	9.46
	6.8	7038	3.059	12.27
	7.8	7039	3.722	15.66
Spillway Crest	8.8	7040	4.401	19.73
	9.8	7041	4.600	24.23
	10.8	7042	5.367	29.21
	11.8	7043	6.164	34.97
Dam Crest	12.8	7044	6.991	41.55

STOCK POND 1 EMERGENCY SPILLWAY PROFILE
STA 16+00.00 TO 19+00.00





SRMD Pond 1 Ratings Curve			
Description	Depth	Elev. (ft)	Release Rate (cfs)
Pond Bottom	0	7031.2	0.0
	1	7032	0.0
	2	7033	0.0
	3	7034	0.0
	4	7035	0.0
Outlet Weir	4.8	7036	0.0
	5.8	7037	310.0
	6.8	7038	876.8
	7.8	7039	1610.8
Emergency Spillway	8.8	7040	2106.6
	9.8	7041	950.0
	10.8	7042	2751.0
	11.8	7043	5174.0
Dam Crest	12.8	7044	8149.0

Know what's below. Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION.

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

DATE

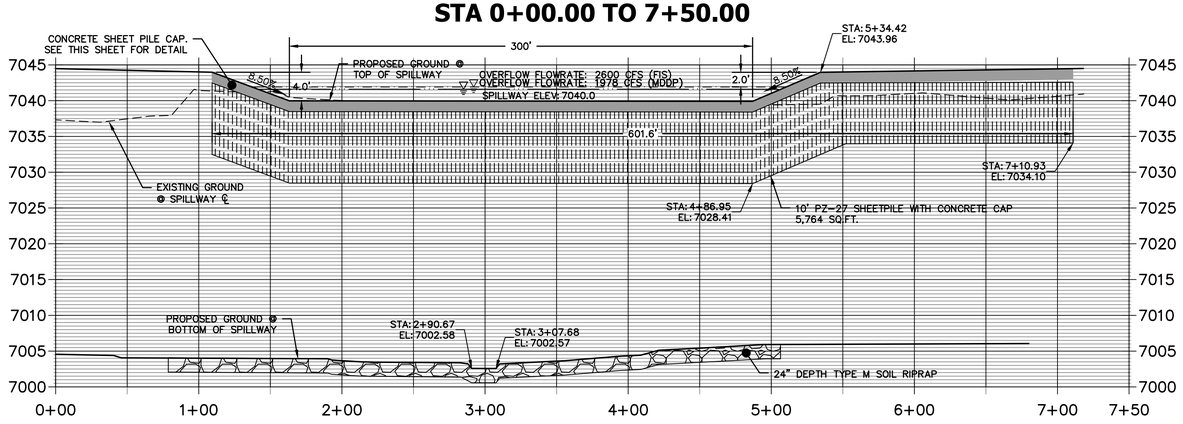
50 25 0 50

HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

SRMD POND #1 DAM EXHIBIT
SAND CREEK RESTORATION
JOB NO. 25188.04
10/12/22
SHEET 1 OF 2

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

POND 1 SECTION A-A PROFILE
STA 0+00.00 TO 7+50.00



STOCK POND 1 SECTION A-A PROFILE

HORZ SCALE: 1"=50'
VERT SCALE: 1"=10'

Know what's **below.**
Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

SRMD POND #1 DAM EXHIBIT
SAND CREEK RESTORATION
JOB NO. 25188.04
10/12/22
SHEET 2 OF 2

J·R ENGINEERING
A Westrian Company

Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

DIVISION OF WATER RESOURCES
OFFICE OF THE STATE ENGINEER
DAM SAFETY BRANCH
1313 Sherman Street, Room 818
Denver, Colorado 80203

OFFICE USE ONLY

NAME OF DAM_____, **WATER DIV**____, **DAMID**_____, **C-**_____

DATE RECEIVED_____ **APP. COMPLETE? YES** ☐ **NO** ☐, **DATE RETURNED**_____

APPLICATION FOR REVIEW OF PLANS AND SPECIFICATIONS FOR THE CONSTRUCTION OR ENLARGEMENT OF A DAM AND RESERVOIR

Applications must be computer generated online, typewritten, or printed in black or blue ink.
Original or electronic signature required.

CHECK ONE: New Dam [x] Enlargement [ ]
(SEE C.R.S. 37-87-101, et al., and Rules & Regulations for Dam Safety and Dam Construction)

I, STERLING RANCH METROPOLITAN DISTRICT NO. 3 (Name of Owner), owner, hereby accept and approve the enclosed plans and specifications for submittal to the State Engineer in accordance with § 37-87-105, C.R.S.

_____ (Signature of Owner/Agent) 12/6/2022 (Date)

Address: 2138 Flying Horse Club Drive (Street or P.O. Box) Colorado Springs (City) CO (State) 80921 (Zip Code)

Phone Number: (719) 499-3125 Email (mandatory): lmorland@classichomes.com

Owner Code:(CHECK ONE): [ ] Federal [ ] State [ ] Local Government [ ] Utility [x] Private

NAME OF DAM (ON FILE WITH THE STATE ENG): _____

Also known as: _____

RESERVOIR NAME: Sterling Ranch Metropolitan District Pond 2

STATE ENGINEER'S FILE NO. C-nnnnx: C-2129 (if known) DAMID: 100601 (if known)

Location: County El Paso Section 28 Township 12 N [ ] S [x] Range 65 E [ ] W [x] Principle Meridian 6

Latitude 38.9697 Longitude: -104.6672

OR

Utilizing GPS (UTM format, Datum must set to NAD83):

[ ] Zone 12 or [ ] Zone 13 Northing: _____ m, Easting _____ m

Stream Name: Sand Creek , Tributary to: Fountain Creek

Description of Work: Stream restoration project along Sand Creek within the Sterling Ranch development. Existing stock pond will be modified with an outlet structure that will outfall into downstream reach of Sand Creek.

(add additional sheet as page 5 if necessary)

CONSTRUCTION OR ENLARGEMENT FORM

GENERAL INFORMATION

Purpose(s) of Dam and Reservoir: IRRIGATION STOCK POND
(Augmentation, Diversion, Domestic, Erosion Control, Evaporation, Flood Control, Fire Control, Fish, Hydroelectric, Industrial, Irrigation, Mining, Municipal, Pollution Control, Recreation, Stockwater, Settling Ponds, Tailings, Waste Disposal)

Engineer: Mike Bramlett

Company or Organization: JR Engineering

Address: 5475 Tech Center Drive, Suite 235 (Street or P.O. Box) | Colorado Springs (City) | CO (State) | 80919 (Zip Code)

Phone Number: (719) 593-2593 Colorado P.E. Registration Number: 32314

Estimated costs of construction (including engineering): _____ Filing Fee: $100, filing only

Type of Dam – (e.g., Earthfill, Homogeneous):

Concrete	☐	Gravity	☐	Arch	☐
Earthfill	☒	Zoned	☐	Homogeneous	☐
Rockfill	☐	Zoned	☐	Impervious Membrane	☐
Masonry	☐				

Other _____

Hazard Classification: ☐ High ☐ Significant ☐ Low ☒ No Public Hazard (NPH)

DAM AND RESERVOIR STRUCTURAL DATA

Jurisdictional Height 17.4 ft. (Natural surface of ground up to crest of emergency spillway at longitudinal centerline)

Embankment Height 20.4 ft. (Jurisdictional height plus emergency spillway freeboard)

Structural Height 27 ft. (Bottom of cutoff trench to crest of dam at longitudinal centerline)

Crest Length 206 ft. Crest Width 15 ft. Crest Elevation 7121.0 ft., M.S.L.

Maximum Impoundment Capacity 9.74 Acre-Feet (to crest of dam)

Normal Reservoir Capacity 4.42 Acre-Feet (at high water line)

Reservoir Surface Area 2.10 Acres

Embankment Slopes: Upstream H 4 V 1 Downstream H 4 V 1

Embankment Facing Material:

Concrete	☐	Riprap	☒	Natural	☐	Gravel	☐
Rockfill	☐	Masonry	☐	Clay	☐	Planted	☐
Gabions	☐	Soil Cement	☐	Steel	☐	Wood	☐

Other (Describe)

OUTLET STRUCTURAL DATA

Description: Size 25'x25' Type Grated overflow orifice Capacity 2106 CFS

Other Discharges flows between HWL and spillway in order to maintain water right

Maximum Discharge Capacity: 0 cfs (at high water line)

SPILLWAY STRUCTURAL DATA

1. Type: Emergency Overflow Spillway (i.e. Emergency, Principal)

   Material: Soil Riprap (i.e. Natural, Riprap, Concrete, etc.)

   Width: 200 ft. Freeboard: 1.46 ft. Capacity: 4 ft

2. Type: _____ (i.e. Emergency, Principal)

   Material: _____ (i.e. Natural, Riprap, Concrete, etc.)

   Width: _____ ft. Freeboard: _____ ft. Capacity: _____ ft

Total Spillway Capacity: 5720 cfs (to crest of the dam)

HYDROLOGIC DATA (Inflow Design Flood)

Drainage Basin Area: 2003.2 Acres, or _____ Sq. Miles

Inflow Design Flood 100-YR (i.e. 100-yr. %PMP, etc.) Duration 24 Hrs.

Type: II (i.e. Thunderstorm, General Storm, Snowmelt, Combination)

Data Source Reference(s): NOAA Atlas 14

Peak Discharge from Drainage Basin 1666 cfs Runoff Volume: 191 Acre-Feet

Basin Lag time (Lg): 12.88 Hrs.

Method of determination: (Describe variable and indicate values, i.e., USBR lag, L, Lc, Kn, S, etc.):

CUHP-SWMM, time of maximum inflow into SRMD Pond 2

Inflow Design Flood routes through reservoir with 4.19 ft. residual freeboard

COLORADO DAM SAFETY BRANCH
2-CCR-402-1
RULE 6.5 ENGINEER'S QUALIFICATION STATEMENT AND AFFIDAVIT

Dam Name Sterling Ranch Metro District Pond 2
DAMID 100601
Construction File No. C-2129
Project Name Sand Creek Restoration

I, Mike Bramlett, am a registered Professional Engineer in the State of Colorado (Registration No. 32314). I am qualified in the field of dam design and construction to prepare and develop, or to lead a team to prepare and develop, the designs, plans, and specifications for the project, and to provide supervision throughout the subject project. Attached please find my resume, which demonstrates my qualifications in accordance with Rule 4.10 of the Colorado Rules and Regulations for Dam Safety and Dam Construction, 2-CCR-402-1, 2020.

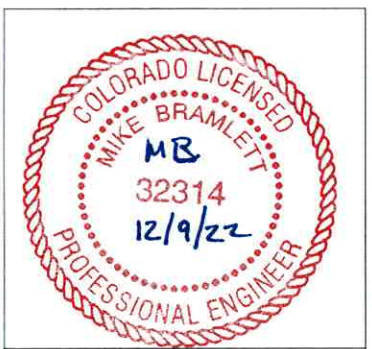
This affidavit is to serve as written certification of my qualification to act as engineer in "Responsible Charge" of the project.

I, Mike Bramlett, hereby declare that all information contained in this affidavit, including in the attached resume, is true to the best of my knowledge.

Date: 12/9/2022

Mike Bramlett
(Signature)

Mike Bramlett
(Print Name Here)



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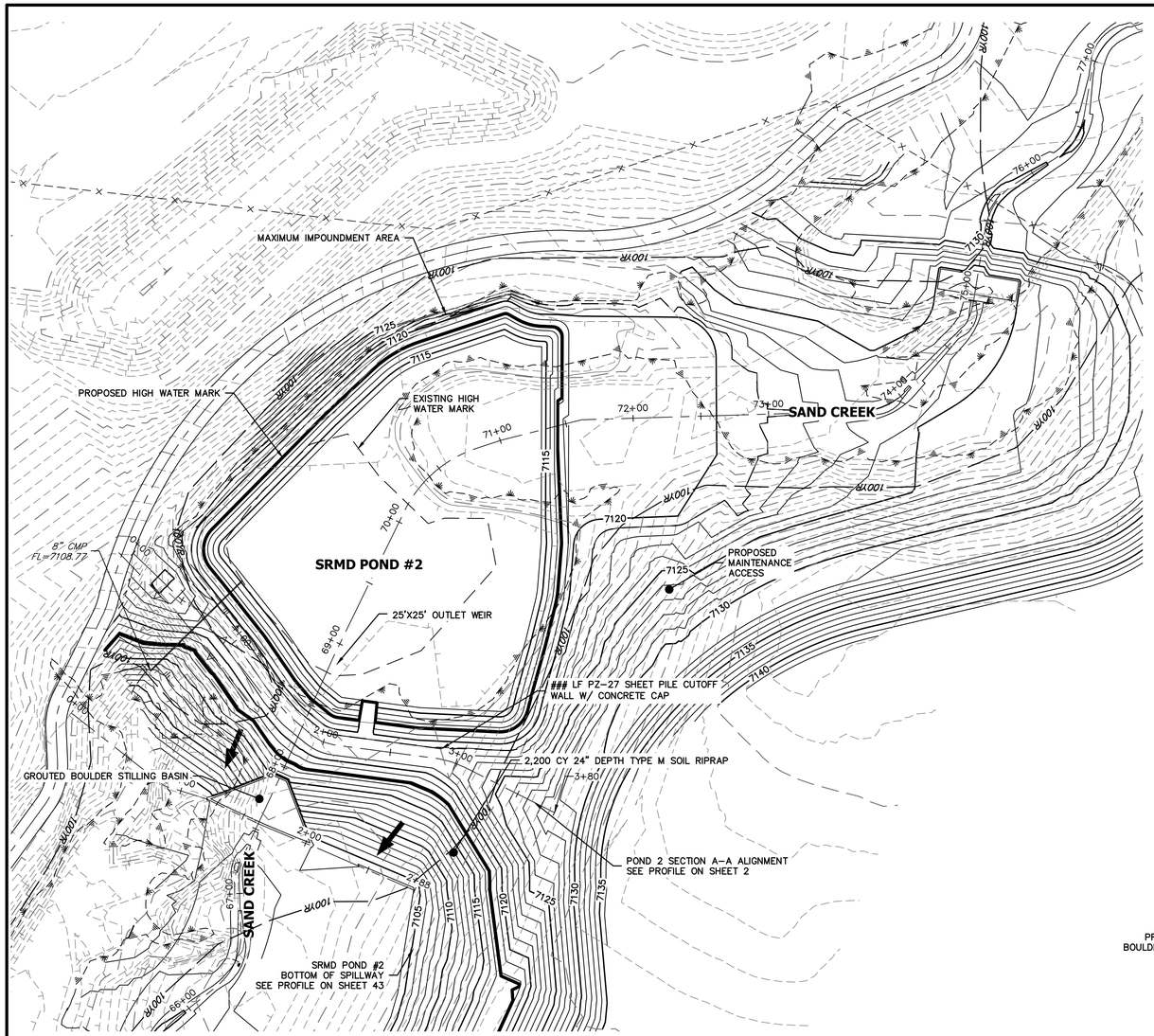
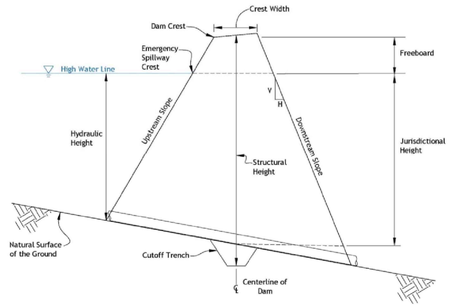
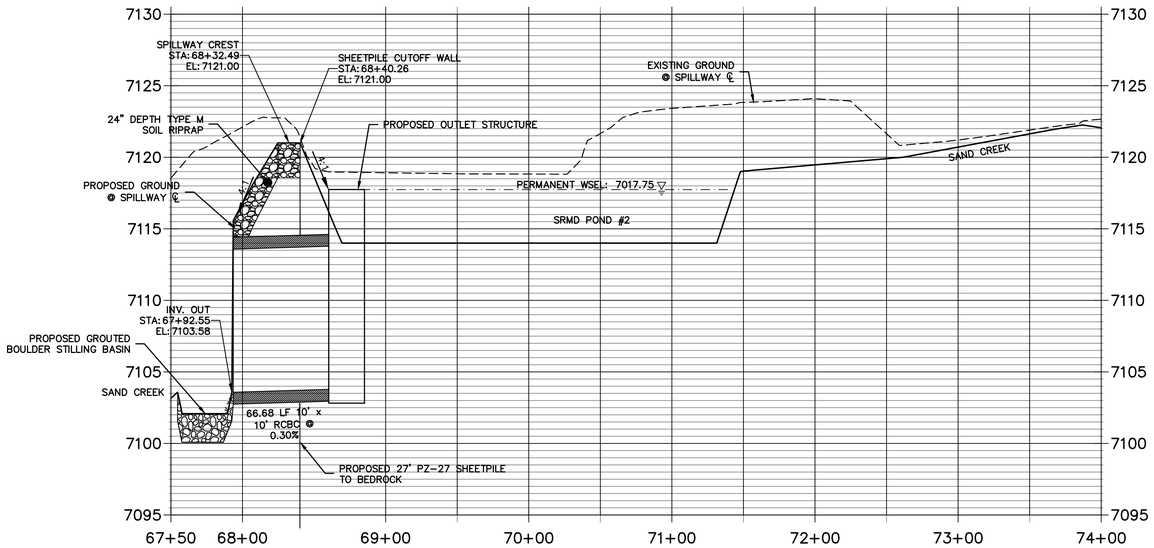
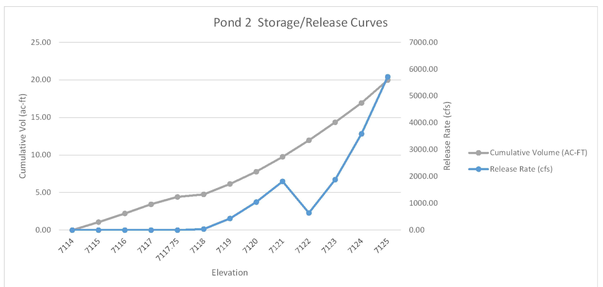


SRMD POND 2		
DRAINAGE AREA (AC)	2003.2	
AVERAGE % IMP.	8%	
	5-YR	100-YR
Q_{IN} (CFS)	477.23	1666.90
Q_{OUT} (CFS)	476.24	1661.20
STATIC WSEL (FT)	7117.75	7117.75
MAX WSEL (FT)	7019.27	7021.00
DEPTH (FT)	5.08	6.81
VOLUME (AC-FT)	6.26	8.70
SURFACE AREA (AC)	1.35	2.10



STOCK POND 2 EMERGENCY SPILLWAY PROFILE
STA 67+50.00 TO 74+00.00





SRMD Pond 2 Storage Curve				
Description	Depth	Elev. (ft)	Surface Area (AC)	Cumulative Volume (AC-FT)
Pond Bottom	0	7114	1.03	0.00
	1	7115	1.11	1.07
	2	7116	1.19	2.22
	3	7117	1.27	3.44
Static WSEL	3.75	7117.75	1.33	4.42
	4	7118	1.35	4.75
	5	7119	1.44	6.15
	6	7120	1.83	7.78
Spillway Crest	7	7121	2.11	9.76
	8	7122	2.30	11.96
	9	7123	2.51	14.37
	10	7124	2.62	16.94
Dam Crest	11	7125	3.10	19.98

SRMD Pond 2 Ratings Curve			
Description	Depth	Elev. (ft)	Release Rate (cfs)
Pond Bottom	0.00	7114.00	0.00
	1.00	7115.00	0.00
	2.00	7116.00	0.00
	3.00	7117.00	0.00
Outlet Weir	3.75	7117.75	0.00
	4.00	7118.00	38.75
	5.00	7119.00	433.24
	6.00	7120.00	1046.25
Emergency Spillway	7.00	7121.00	1816.30
	8.00	7122.00	642.00
	9.00	7123.00	1885.00
	10.00	7124.00	3589.00
Dam Crest	11.00	7125.00	5720.00

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER — DATE

N

50 25 0 50

HORIZONTAL
ORIGINAL SCALE: 1" = 50'
VERTICAL
ORIGINAL SCALE: 1" = 5'

Know what's **below.** **Call** before you dig.

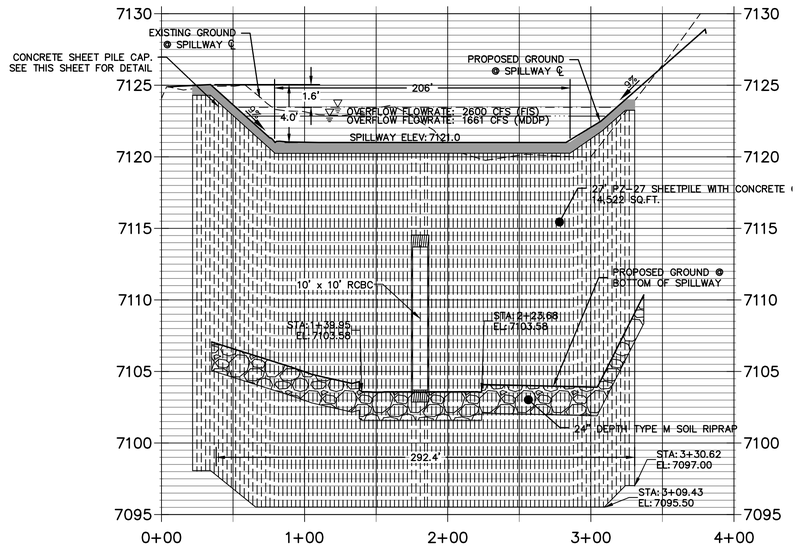
SRMD POND #2 DAM EXHIBIT
SAND CREEK RESTORATION
JOB NO. 25188.04
10/12/22
SHEET 1 OF 2

J·R ENGINEERING
A Westrian Company

Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

X:\25\10000.all\25188\04\Drawings\Presentation\2022\09-15-Dam Exhibits.dwg, 46 Stock Pond 2 P&P, 10/17/2022 2:30:32 PM, VaughtD

POND 2 SECTION A-A PROFILE
STA 0+00.00 TO 4+00.00



STOCK POND 2 SPILLWAY PROFILE

HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'

Know what's below.
Call before you dig.

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE

COLORADO REGISTERED MIKE A. BRAMLETT 32314 PROFESSIONAL ENGINEER

SRMD POND #2 DAM EXHIBIT
SAND CREEK RESTORATION
JOB NO. 25188.04
10/12/22
SHEET 2 OF 2

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