

ENG-SF21021-R1-FDR.pdf Markup Summary

1 (3)



Subject: EPC ENG Review
Page Index: 1
Date: 7/6/2021 8:29:53 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 1



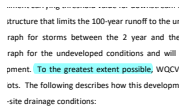
Subject: Text Box
Page Index: 1
Date: 7/6/2021 8:30:24 PM
Author: dsdrice
Color: ■
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Page Label: 1

See comment letter also



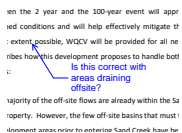
Subject: PCD Comment Legend
Page Index: 1
Date: 7/6/2021 8:42:08 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 1

8 (2)



Subject:
Page Index: 8
Date: 6/29/2021 5:37:19 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 8

To the greatest extent possible



Subject: Callout
Page Index: 8
Date: 6/30/2021 11:47:10 AM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 8

Is this correct with areas draining offsite?

10 (1)



Subject: Callout
Page Index: 10
Date: 6/30/2021 12:17:25 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 10

See comment letter regarding location of the pond



Subject:
Page Index: 11
Date: 6/30/2021 5:36:30 PM
Author: dsdrice
Color: ■
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Page Label: 11

As previously accounted for in the Filing No. 1 report, these developed flows will sheet flow directly off-site and into the open space tract in Filing No. 1.



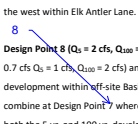
Subject: Callout
Page Index: 11
Date: 6/30/2021 6:04:01 PM
Author: dsdrice
Color: ■
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Page Label: 11

How will this flow get to the inlet - is gutter capacity adequate? If developed flow is detained to this value a pipe is needed.

oint 7 wh

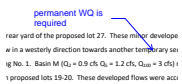
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Page Index: 11
Date: 6/30/2021 6:04:14 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 11

7



Subject: Callout
Page Index: 11
Date: 7/1/2021 11:03:59 AM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 11

8



Subject: Callout
Page Index: 12
Date: 7/2/2021 2:32:56 PM
Author: dsdrice
Color: ■
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Page Label: 12

permanent WQ is required



Subject: Callout
Page Index: 12
Date: 7/2/2021 2:34:21 PM
Author: dsdrice
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Page Label: 12


south of Elk Antler Lane (?)

tly into th

Subject:
Page Index: 12
Date: 7/2/2021 2:34:36 PM
Author: dsdrice
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into


13 (3)

Design Point 11 (Q₁ = 2 cfs, Q₁₀ = 4 cfs) represents development
station, a proposed 5' Type R Sump Inlet will be installed to
and 100 yr. developed flows. The emergency overflow will be
lip point  of Owl Perch Loop

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Author: dsdrice
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of Owl Perch Loop

Design Point 12 (Q₁ = 4 cfs, Q₁₀ = 9 cfs) represents the develop
station, a proposed 10' Type R At-grade Inlet will be installed
5% of the 100 yr. developed flows. The flow-by (Q_b) = 0 cfs. C
own the street towards Design Point 13. (See Appendix for c

Point 12 (Q₁ = 4 cfs, Q₁₀ = 9 cfs) represents the develop
station, a proposed 10' Type R At-grade Inlet will be instal
he 100 yr. developed flows. The flow-by (Q_b) = 0 cfs. C
e street towards Design Point 13. (See Appendix for c
to the west 

Subject: Callout
Page Index: 13
Date: 7/2/2021 2:42:51 PM
Author: dsdrice
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to the west


Point 13 (Q₁ = 8 cfs, Q₁₀ = 23 cfs) represents flows
mentioned above. At this location, a proposed 15'
ely intercept both the 5 yr. and 100 yr. developed

Design Point 14 (Q₁ = 8 cfs, Q₁₀ = 23 cfs) represents flows
mentioned above. At this location, a proposed 15'
ely intercept both the 5 yr. and 100 yr. developed

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Author: dsdrice
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of Bison Valley Trail? Why not into Pond 2 with a
curb chase?

14 (1)

Various grading and drainage easements along the eastern
drainage condition. Basin W (Q₁ = 1 cfs, Q₁₀ = 2 cfs, Q₁₀₀
proposed lots 54-56. While this Basin exceeds the all
ed area, we are coordinating with the Sterling Ranch pr
And a permanent
drainage
easement(s) 

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Author: dsdrice
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And a permanent drainage easement(s)


15 (3)

grading and drainage easements along the eastern
a watershed basin in the eastern portion of the site. Alternately, this
area prior to entering Sterling Ranch.
YACD/CDC
measures will be utilized in order to reduce the amount of
re allowed to enter Sand Creek. These features include but


Subject: Callout
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Author: dsdrice
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See comment letter.

acquisition of appropriate
property line to facilitate
basin will be treated furth

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Author: dsdrice
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will be treated


CHANNEL IMPROVEMENTS
1. Based on CDM's final Reach SC-9 is recommended as a foundation pro
2. Given the fact of the current requirements for detention/DFC facilities
3. With designed release at or below pre-treatment flows, the exist
4. Work is required to retain water. Existing FEMA-15C channel character
5. DESIGN team to exceed recommended allowable velocities. Although
6. From the CDM's Consultants, Inc. Impact Identification Report, no a
7. and regulations through this property currently exist at this time. Se
8. ational structures (See Appendix) were specified in the DMR through this


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seem to exceed recommended allowable velocitie

16 (1)

consultants, has been developed based on these p
submitted directly to the U.S. Army Corps of Engineers w
satisfy for their review and approval. This report and
appendix for El Paso County staff review.
[update for this filing](#)


Subject: Callout
Page Index: 16
Date: 7/6/2021 8:38:49 PM
Author: dsdrice
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update for this filing

EC-RAS MODELING
EC-RAS ver. 5.0.6 was used to perform a one-dimensi
sion of Reach SC-9 from Arroya Lane to approx

19 (1)

of two ad
only depicts

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Page Index: 19
Date: 7/6/2021 8:40:18 PM
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two

20 (1)

IAS model calculations shows no stations with Fr
within Filing No. 2. Thus, the Froude No. at all
flow characteristics.

[Describe channel and pond
maintenance access.](#)

E CRITERIA
: calculations were performed using the City c
Criteria Manual, as revised in November 1991 and

Subject: Text Box
Page Index: 20
Date: 7/6/2021 8:41:19 PM
Author: dsdrice
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Describe channel and pond maintenance access.

24 (6)



Subject: Highlight
Page Index: 24
Date: 7/6/2021 12:06:03 PM
Author: dsdrice
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Page Label: 24

38



Subject: Highlight
Page Index: 24
Date: 7/6/2021 12:06:12 PM
Author: dsdrice
Color:
Layer:
Space:
Page Label: 24

36



Subject: Highlight
Page Index: 24
Date: 7/6/2021 12:12:53 PM
Author: dsdrice
Color:
Layer:
Space:
Page Label: 24

0



Subject: Highlight
Page Index: 24
Date: 7/6/2021 12:14:30 PM
Author: dsdrice
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Page Label: 24

acceptance by County. Any credit
approved
it guarantee that the construction c
etc. These opinions represent our b

Subject: Callout
Page Index: 24
Date: 7/6/2021 12:14:46 PM
Author: dsdrice
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approved



Subject: Cloud+
Page Index: 24
Date: 7/6/2021 1:52:49 PM
Author: dsdrice
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Layer:
Space:
Page Label: 24

See comment letter


26 (2)

Report for Retreat at Sand Creek Filing No. 1
2021, 2020.
Timberidge

Subject: Callout
Page Index: 26
Date: 7/6/2021 12:15:53 PM
Author: dsdrice
Color:
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Page Label: 26

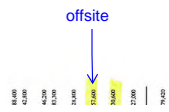
Timberidge


ivil Consultants, Inc.,
at Sand Creek Filing

Subject:
Page Index: 26
Date: 7/6/2021 12:15:57 PM
Author: dsdrice
Color: 
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Space:
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Sand Creek


56 (2)



Subject: Callout
Page Index: 56
Date: 7/6/2021 1:19:50 PM
Author: dsdrice
Color: 
Layer:
Space:
Page Label: 56

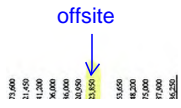
offsite




Subject: Callout
Page Index: 56
Date: 7/6/2021 1:20:15 PM
Author: dsdrice
Color: 
Layer:
Space:
Page Label: 56

Claimed in Filing 1?

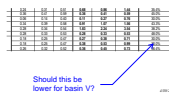
57 (1)




Subject: Callout
Page Index: 57
Date: 7/6/2021 1:19:33 PM
Author: dsdrice
Color: 
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offsite

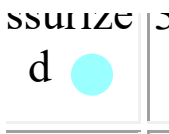
70 (1)




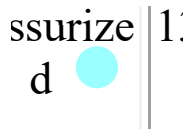
Subject: Callout
Page Index: 70
Date: 7/6/2021 2:51:45 PM
Author: dsdrice
Color: 
Layer:
Space:
Page Label: 70


Should this be lower for basin V?

101 (2)

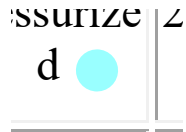



Subject:
Page Index: 101
Date: 7/6/2021 3:00:19 PM
Author: dsdrice
Color: 
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Page Label: 101



1: **Subject:**
Page Index: 101
Date: 7/6/2021 3:00:33 PM
Author: dsdrice
Color: 
Layer:
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Page Label: 101


102 (1)



Subject:
Page Index: 102
Date: 7/6/2021 3:00:42 PM
Author: dsdrice
Color: 
Layer:
Space:
Page Label: 102

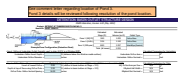
115 (1)




Subject: Callout
Page Index: 115
Date: 7/6/2021 3:03:00 PM
Author: dsdrice
Color: 
Layer:
Space:
Page Label: 115

Is this duplicate?

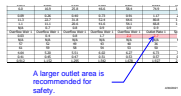
121 (1)




Subject: Engineer
Page Index: 121
Date: 7/6/2021 2:47:49 PM
Author: CFurchak
Color: 
Layer:
Space:
Page Label: 121

See comment letter regarding location of Pond 3. Pond 3 details will be reviewed following resolution of the pond location.

127 (1)




Subject: Callout
Page Index: 127
Date: 7/6/2021 3:05:00 PM
Author: dsdrice
Color: 
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Page Label: 127

A larger outlet area is recommended for safety.

132 (1)



Subject: Callout
Page Index: 132
Date: 7/6/2021 3:09:03 PM
Author: dsdrice
Color: 
Layer:
Space:
Page Label: 132

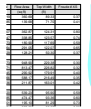
Please add the FEMA water surface elevation lines

153 (1)



Subject:
Page Index: 153
Date: 7/6/2021 3:09:56 PM
Author: dsdrice
Color: ■
Layer:
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Page Label: 153

154 (4)



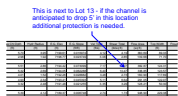
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Page Index: 154
Date: 7/6/2021 3:09:35 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 154

13.07	
10.47	

Subject: 13.07
Page Index: 154
Date: 7/6/2021 3:10:46 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 154

13.07	
10.47	
2.73	

Subject: 10.47
Page Index: 154
Date: 7/6/2021 3:23:03 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 154

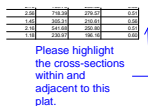


This is next to Lot 13 - if the channel is anticipated to drop 5' in this location additional protection is needed.

Subject: Callout
Page Index: 154
Date: 7/6/2021 3:24:44 PM
Author: dsdrice
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This is next to Lot 13 - if the channel is anticipated to drop 5' in this location additional protection is needed.

155 (1)

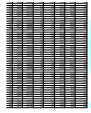


Please highlight the cross-sections within and adjacent to this plat.

Subject: Callout
Page Index: 155
Date: 7/6/2021 3:08:11 PM
Author: dsdrice
Color: ■
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Space:
Page Label: 155

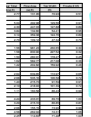
Please highlight the cross-sections within and adjacent to this plat.

165 (1)

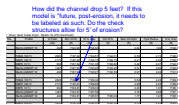


Subject:
Page Index: 165
Date: 7/6/2021 3:15:36 PM
Author: dsdrice
Color: ■
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Space:
Page Label: 165

166 (2)



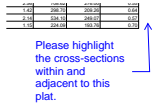
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Page Index: 166
Date: 7/6/2021 3:15:06 PM
Author: dsdrice
Color: ■
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Space:
Page Label: 166



Subject: Callout
Page Index: 166
Date: 7/6/2021 3:22:26 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 166

How did the channel drop 5 feet? If this model is "future, post-erosion, it needs to be labeled as such. Do the check structures allow for 5' of erosion?

167 (1)



Subject: Callout
Page Index: 167
Date: 7/6/2021 3:13:57 PM
Author: dsdrice
Color: ■
Layer:
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Page Label: 167

Please highlight the cross-sections within and adjacent to this plat.

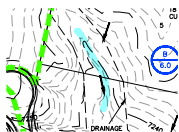
169 (1)



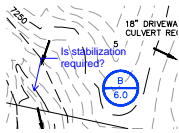
Subject: Text Box
Page Index: 169
Date: 6/29/2021 5:02:15 PM
Author: dsdrice
Color: ■
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Page Label: 169

Move drainage plans to end of report pdf

171 (11)

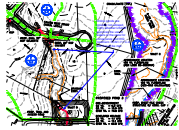


Subject:
Page Index: 171
Date: 6/29/2021 5:44:04 PM
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Color: ■
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Page Label: [1] Layout1



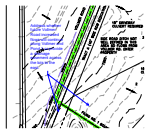
Subject: Callout
Page Index: 171
Date: 6/29/2021 5:44:25 PM
Author: dsdrice
Color: ■
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Space:
Page Label: [1] Layout1

Is stabilization required?



Subject: Callout
Page Index: 171
Date: 6/29/2021 6:00:18 PM
Author: dsdrice
Color: ■
Layer:
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Page Label: [1] Layout1

Online ponds are typically not allowed. Verify whether USACE approves the use of waters of the state for conveyance and WQ treatment. ECM I.7.1.C.4 and 5 must be met.



Subject: Callout
Page Index: 171
Date: 6/30/2021 5:14:46 PM
Author: dsdrice
Color: ■
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Page Label: [1] Layout1

Address whether future Vollmer Road increased flows will continue along Vollmer and Pond 1 or provide a drainage easement across the lots to the east.



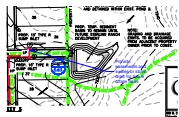
Subject: Callout
Page Index: 171
Date: 6/30/2021 1:27:31 PM
Author: dsdrice
Color: ■
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Page Label: [1] Layout1

Label stabilization



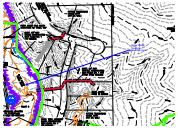
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Page Index: 171
Date: 6/30/2021 5:17:05 PM
Author: dsdrice
Color: ■
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Page Label: [1] Layout1

Label the Sand Creek Flows



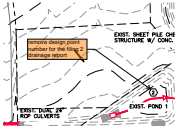
Subject: Callout
Page Index: 171
Date: 6/30/2021 5:51:20 PM
Author: dsdrice
Color: ■
Layer:
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Page Label: [1] Layout1

Provide easements and swales or storm drain for future offsite flows



Subject: Callout
Page Index: 171
Date: 7/6/2021 12:17:29 PM
Author: dsdrice
Color: ■
Layer:
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Page Label: [1] Layout1

Show FEMA floodplain elevation lines.



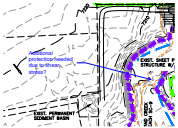
Subject: Engineer
Page Index: 171
Date: 7/6/2021 2:25:44 PM
Author: CFurchak
Color: ■
Layer:
Space:
Page Label: [1] Layout1

remove design point number for the filing 2 drainage report



Subject: Engineer
Page Index: 171
Date: 7/6/2021 2:32:23 PM
Author: CFurchak
Color: ■
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Page Label: [1] Layout1

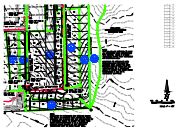
TSBs are temporary and can not remain in place. Permanent WQ is required



Subject: Callout
Page Index: 171
Date: 7/6/2021 3:25:44 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: [1] Layout1

Additional protection needed due to shear stress?

172 (10)



Subject:
Page Index: 172
Date: 6/30/2021 5:57:12 PM
Author: dsdrice
Color: ■
Layer:
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Page Label: [1] Layout2

Address conveyance and easements onsite and offsite.

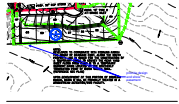


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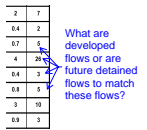
Subject: Callout
Page Index: 172
Date: 6/30/2021 5:45:19 PM
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Color: ■
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Page Label: [1] Layout2

Too much acreage to address in future pond - address WQ



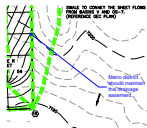
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Page Index: 172
Date: 6/30/2021 5:45:57 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: [1] Layout2

provide design and show easement



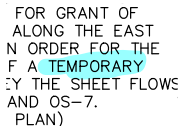
Subject: Callout
Page Index: 172
Date: 6/30/2021 5:55:22 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: [1] Layout2

What are developed flows or are future detained flows to match these flows?



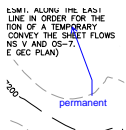
Subject: Callout
Page Index: 172
Date: 6/30/2021 5:56:54 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: [1] Layout2

Metro district should maintain this drainage easement.

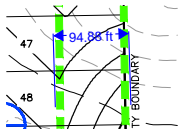


Subject:
Page Index: 172
Date: 6/30/2021 5:58:03 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: [1] Layout2

permanent



Subject: Callout
Page Index: 172
Date: 6/30/2021 6:02:57 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: [1] Layout2



Subject: Length Measurement
Page Index: 172
Date: 6/30/2021 6:01:25 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: [1] Layout2

94.88 ft



Subject: Callout
Page Index: 172
Date: 7/2/2021 2:40:37 PM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: [1] Layout2

Label as no-build, no impervious area (easement) on plat.

174 (2)

umber Ridge Residenti
Filing No. 1

El Paso County, CO

Subject:
Page Index: 174
Date: 7/6/2021 10:41:30 AM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 167

Filing No. 1



Subject: Callout
Page Index: 174
Date: 7/6/2021 10:41:45 AM
Author: dsdrice
Color: ■
Layer:
Space:
Page Label: 167

Update for Filing 2