

ENG-PUDSP21005-R1-PDR-MDDP.pdf Markup Summary

1 (2)

Job No. 1715.00

Add text:
PCD Filing No.:
PUDSP-21-005

1

Subject: SW - Text Box
Page Index: 1
Date: 5/25/2021 3:39:33 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
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Page Label: 1

Add text:
PCD Filing No.:
PUDSP-21-005

 Preliminary
TER DEVELOPMENT DRAINAGE PLAN
AND FINAL DRAINAGE REPORT FOR
WATERBURY PLINGS NO. 1 & 2
EL PASO COUNTY, COLORADO

Subject: Callout
Page Index: 1
Date: 6/11/2021 12:51:29 PM
Author: dsdrice
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Preliminary

4 (4)

TER DEVEL
ND FINAL DE
WATERBU

Subject:
Page Index: 4
Date: 6/11/2021 12:51:15 PM
Author: dsdrice
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FINAL

exception of the BOW for Northbank Road from Virginia to
about 0.50' to 0.60' from the centerline of the Road. The
of their to submit a new Preliminary Plan and the associated
will have to be developed as 2 Plans, Plan 1 & Plan 2. With the
and finally into the Preliminary Plan for the Final Drainage Report
to submit. The report prepared during the process is not
= clearly. If pre-development site grading is proposed,
the report needs to add sections and plans
addressing that specifically.

Subject: Callout
Page Index: 4
Date: 6/14/2021 1:47:59 PM
Author: dsdrice
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If pre-development site grading is proposed, the report needs to add sections and plans addressing that specifically.

ADDP for the station. The ADDP is defined as 100% of the
combined drainage from the station and the station. The
ADDP is 1.00 cfs. The ADDP is 1.00 cfs. The ADDP is 1.00 cfs.
The ADDP is 1.00 cfs. The ADDP is 1.00 cfs. The ADDP is 1.00 cfs.

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Page Index: 4
Date: 6/14/2021 3:24:23 PM
Author: dsdrice
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Page Label: 4

State that there is no approved DBPS or fees in this basin. Address the portion in the Haegler basin and the Haegler-Geick diversion.

Geich Ra

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Author: dsdrice
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Subject: Cloud+
Page Index: 5
Date: 6/14/2021 1:51:55 PM
Author: dsdrice
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Page Label: 5

reword to address each quarter section

reich Ra

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nd prepre

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pre

(see appendix
the FEAM Fir
e outside of th

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FEAM



Subject: Callout
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Date: 6/14/2021 3:25:29 PM
Author: dsdrice
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State that FEMA-approved (LOMR) floodplain elevations are required to be shown on the final plats.

reich Ra

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Page Index: 6
Date: 6/14/2021 3:02:01 PM
Author: dsdrice
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Page Label: 6

h

is the Geich Ranch Drainage Basin, storm runoff
from the site is piped into Fountain Creek. "Geich Ranch
Drainage Basin Planning Study" dated February 2010
and prepared by Drexel Jarrell & Co. is the

DCM1 dated May 1994 was the resource used

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Page Index: 6
Date: 6/14/2021 3:03:09 PM
Author: dsdrice
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k

INVADE BASIN
y Filing 1 & 2 site lic
ly to Sand Creek via:
n Planning Study" d

Subject:
Page Index: 6
Date: 6/14/2021 3:02:26 PM
Author: dsdrice
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Sand Creek

al 4' x 8" box culverts at Stapleton Drive
revise

**HYDROLOGIC ANALYSIS FOR
WATERBURY FILING 1 & 2**
Waterbury Filing 1 & 2 site lies within
the Geich Ranch Drainage Basin Planning Study" dated Febr

Subject: Callout
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revise

Geich Ranch

Subject:
Page Index: 6
Date: 6/14/2021 3:02:54 PM
Author: dsdrice
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Page Label: 6

h

INVADE BASIN
y Filing 1 & 2 site lies within the Geich Ranch Drainage B
and Creek via a public piped system and then into Fountain Cr
using Storm Drainage Study" dated February 2010 and prepared by Drexel
Jarrell & Co. is the

DCM1 dated May 1994 was
the exception for calculating the 5-year and 100-year des
ignity of Colorado Springs Drainage Criteria Manual (CSDCM)
1 and 2000 for the resource used. "Geich Ranch

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Page Index: 6
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Author: dsdrice
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drafted but not accepted by EPC

Drainage Criteria Manual (CSDCM) was referenced in
the site drainage system. Runoff was calculated using the
method (see appendix). Runoff coefficients were calculated using
the method based upon Table 6.5 of the CSDCM. Table 6.5
method.

per the EPC
DCM1 Update
resolution

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Author: dsdrice
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per the EPC DCM1 Update resolution

Haegler also
anch Drainage Basin, storm
nto Fountain Creek. "Geich

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Page Index: 6
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Haegler also

7 (2)

ge 

Subject: Highlight
Page Index: 7
Date: 6/14/2021 3:23:07 PM
Author: dsdrice
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Page Label: 7

Hydrology sections not reviewed in detail.
If 88.021 (2021) 88.021 (2021) (2021) 88.021 (2021)
use that sheet covering sheet 2021. The first sheet under 88.021 (2021)
There is also a separate sheet for the proposed 88.021 (2021) (2021)
ng volume of 4.7' RCP that comes out of from a temporary sediment pond

Subject: Text Box
Page Index: 7
Date: 6/14/2021 3:26:11 PM
Author: dsdrice
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Page Label: 7

Hydrology sections not reviewed in detail.

12 (8)

These do not match what is shown on the drainage
map on Page 301. Basins trib to Pond 1 appear to
be A, B1, B2, part of C, D, E, F, H, K

Subject: SW - Comment
Page Index: 12
Date: 5/25/2021 3:50:07 PM
Author: EPC Stormwater - Glenn Reese
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Page Label: 12

These do not match what is shown on the drainage
map on Page 301. Basins trib to Pond 1 appear to
be A, B1, B2, part of C, D, E, F, H, K

Basins H, I, J,
S, R & 60% of L

Subject: SW - Highlight
Page Index: 12
Date: 5/25/2021 3:25:31 PM
Author: EPC Stormwater - Glenn Reese
Color: 
Layer:
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Page Label: 12

Basins H, I, J,
S, R & 60% of L

Basins F, G, K,
& M

Subject: SW - Highlight
Page Index: 12
Date: 5/25/2021 3:30:38 PM
Author: EPC Stormwater - Glenn Reese
Color: 
Layer:
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Page Label: 12

Basins F, G, K,
& M

Where can I find this?
Slybrook Drive, Runoff (Q₁ = 5 cfs, Q₁₀₀ = 12 cfs) onto Stapleton Drive the channel and then is managed Report for Waterbury Filing No. 27 the pervious area. El Paso County reviewers at El Paso Water Purveyor.

Subject: SW - Comment
Page Index: 13
Date: 5/25/2021 3:42:09 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
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Page Label: 13

Where can I find this?

this area not treated for Wat
Basin M2's 0.47 acres is ex
Runoff (Q₁ = 1 cfs, Q₁₀₀ = 2 cfs)
not treated for water quality

Subject: SW - Highlight
Page Index: 13
Date: 5/25/2021 4:42:14 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
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Page Label: 13

Basin M2's 0.47 acre

see tract onto Stapleton Drive the channel and then is not
1 Drainage Report for Waterbury Filing No. 27 the ar
one over pervious area. El Paso County reviewers can
treated for Water Quality.
See comment on Page 19
0.47 acres is comprised of the rear yards adjacent to
= 1 cfs, Q₁₀₀ = 2 cfs) sheet flows from the back yard c
or water quality but is pervious area.

Subject: SW - Comment
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Author: EPC Stormwater - Glenn Reese
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Page Label: 13

See comment on Page 19

14 (1)

table 4' (D10) using side located opposite of DP 14 in Beach Creek
= 7.4cfs from Basin OS-1, 0.94 acres consisting of roadway, parking,
Basin to the east location of Beach Creek Drive and to the proposed
to Side Pipe on 14. Pipe on 17 route the combined flow (Q₁ = 17
17 and 40 any runoff was offset via a private 36" diameter RCP in
one temporary EDR. This is the PSD Pond 2.
Determine nature of the pond being temporary. It
that information is provided in the report.
approved permit for the proposed construction of Pond 2. Design
and treated for Water Quality and Detention along with the Basin
of the EDR area and undeveloped open space within area. Runoff (Q₁
area 0.64 acre flows into the EDR. The water volume to Design
1.4 with a total area of 21.93 acres. The 100-year effective impervious
using US-BMP Version 3.07 RFP spreadsheet. This information was

Subject: SW - Comment
Page Index: 14
Date: 5/25/2021 3:58:01 PM
Author: EPC Stormwater - Glenn Reese
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Discuss nature of this pond being temporary. Is there an estimated lifespan for it?

18 (2)

150' x 11.80 acres consists of historic three based upon up
through the future Waterbury Filings and into PSD Pond 3.
Design Point 29 is a proposed private Full Spectrum Deten
5.25 ac. **Subject: SW - Highlight**
pond and treated for Water Quality and Detention. The 100
was calculated using US-BMP Version 3.07 RFP spreadsheet
10-Detention, v4.03 spreadsheet and the calculation yields
3,81V of 2,000 ac-ft and a 100-year detention volume of

Subject: SW - Highlight
Page Index: 18
Date: 5/25/2021 3:35:33 PM
Author: EPC Stormwater - Glenn Reese
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Offsite Basins OS-1, 2, 3A, 3B, 7, & 9

Area Design Point 9 is an existing 36" RCP culvert under Eastville Road
5.9 acreage area (Basin OS-2). Runoff (Q₁ = 8 cfs, Q₁₀₀ = 17 cfs) to
the pervious area. El Paso County reviewers can
as Waterbury Filings and into PSD Pond 3.
Determine nature of the pond being temporary. It
that information is provided in the report.
approved permit for the proposed construction of Pond 3. Design
and treated for Water Quality and Detention along with the Basin
of the EDR area and undeveloped open space within area. Runoff (Q₁
area 0.64 acre flows into the EDR. The water volume to Design
1.4 with a total area of 21.93 acres. The 100-year effective impervious
using US-BMP Version 3.07 RFP spreadsheet. This information was

Subject: SW - Comment
Page Index: 18
Date: 5/25/2021 3:36:56 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
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Page Label: 18

These do not match what is shown on the drainage map on Page 301. Revise.



Subject: SW - Highlight
Page Index: 19
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Author: EPC Stormwater - Glenn Reese
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This area is not treated for water quality but is pervious area that does not need water quality.

nder Sunken Meadow Road. Off natural channel. Runoff (Q₅ = **Basin V's 1.32 acres** is collecting the west side of the site. Runoff undeveloped. This area is not treated

Subject: SW - Highlight
Page Index: 19
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Author: EPC Stormwater - Glenn Reese
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Basin V's 1.32 acres

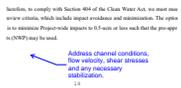


Subject: SW - Comment
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Author: EPC Stormwater - Glenn Reese
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Page Label: 19

Note that page 29 of the MS4 permit states:

100% of the applicable development site is captured, except the permittee may exclude up to 20 percent, not to exceed 1 acre, of the applicable development site area when the permittee has determined that it is not practicable to capture runoff from portions of the site that will not drain towards control measures. In addition, the permittee must also determine that the implementation of a separate control measure for that portion of the site is not practicable (e.g., driveway access that drains directly to street).

The area of Basin V plus Basin M2 exceeds 1ac. So consider utilizing Runoff Reduction for these areas until the untreated area is below 1ac.



Subject: Callout
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Author: dsdrice
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Address channel conditions, flow velocity, shear stresses and any necessary stabilization.



Subject: Highlight
Page Index: 20
Date: 6/14/2021 3:10:23 PM
Author: dsdrice
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Page Label: 20

Subject: Text Box
Page Index: 20
Date: 6/14/2021 3:10:52 PM
Author: dsdrice
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Page Label: 20

See comment letter.

[See comment letter.](#)

: FILING 1 & 2 FDR
OR FDR)

23 (3)

IMAGE FEES
site Haegler Dra

Subject:
Page Index: 23
Date: 6/14/2021 3:11:05 PM
Author: dsdrice
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Haegler

the three-note outlet, thereby allowing solids to
Consider Need for Industrial and Commercial
family site; therefore, no Industrial and Comm
NAGE FEES  revise
the Haegler Drainage Fee Basin. El Paso County
Waterbury Filing No. 1 has a total acreage of:

Subject: Callout
Page Index: 23
Date: 6/14/2021 3:11:16 PM
Author: dsdrice
Color: 
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Page Label: 23

revise



Subject: Cloud+
Page Index: 23
Date: 6/14/2021 3:11:46 PM
Author: dsdrice
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Space:
Page Label: 23

delete

24 (1)



Subject: Cloud+
Page Index: 24
Date: 6/14/2021 3:20:54 PM
Author: dsdrice
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Page Label: 24

Delete. Address in respective FDRs.

26 (1)



Subject: Callout
Page Index: 26
Date: 6/14/2021 2:52:16 PM
Author: dsdrice
Color: 
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Page Label: 26

reference County criteria (4 parts):
https://library.municode.com/co/el_paso_county/codes/drainage_criteria_manual

34 (1)

FEMA FIRM MAP

Provide FEMA "Firmette" or map from their website

Subject: Text Box
Page Index: 34
Date: 6/14/2021 2:46:47 PM
Author: dsdrice
Color: ■
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Page Label: 34

Provide FEMA "Firmette" or map from their website

61 (1)

INLET CALCULATIONS

(Not checked with this review)

Subject: Text Box
Page Index: 61
Date: 6/14/2021 2:39:13 PM
Author: dsdrice
Color: ■
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(Not checked with this review)

83 (1)

LWATER EFFECTS

Also provide for DP11

Subject: Text Box
Page Index: 83
Date: 6/14/2021 2:37:19 PM
Author: dsdrice
Color: ■
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Page Label: 83

Also provide for DP11

85 (1)

These sheets are fine for normal depth calculations, but system HGL calculations are needed as well.

Subject: Text Box
Page Index: 85
Date: 6/14/2021 2:10:40 PM
Author: dsdrice
Color: ■
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Page Label: 85

These sheets are fine for normal depth calculations, but system HGL calculations are needed as well.

122 (1)

No pond details were provided on Plans and these calcs are not reviewed at this overlot grading review stage. So these calcs were not reviewed at this time, but will be at the final plat review stage.

FULL SPECTRUM DETENTION & WATER Q

Subject: SW - Text Box
Page Index: 122
Date: 5/26/2021 10:12:50 AM
Author: EPC Stormwater - Glenn Reese
Color: ■
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Page Label: 122

No pond details were provided on Plans and these calcs are not reviewed at this overlot grading review stage. So these calcs were not reviewed at this time, but will be at the final plat review stage.

125 (1)

SDI Treatment Method - General Denier

Submit SDI worksheets separately from this report.

Subject: Text Box
Page Index: 125
Date: 6/14/2021 2:07:23 PM
Author: dsdrice
Color: ■
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Page Label: 125

Submit SDI worksheets separately from this report.

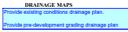
129 (1)



Subject: Cloud+
Page Index: 129
Date: 6/14/2021 2:05:02 PM
Author: dsdrice
Color: ■
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Page Label: 129

This should be <1

298 (1)



Subject: Text Box
Page Index: 298
Date: 6/14/2021 3:06:12 PM
Author: dsdrice
Color: ■
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Page Label: 298

Provide existing conditions drainage plan.

Provide pre-development grading drainage plan

299 (1)



Subject: Callout
Page Index: 299
Date: 6/11/2021 2:32:41 PM
Author: dsdrice
Color: ■
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Page Label: [1] Layoutt1

Water line to be relocated?

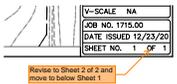
300 (1)



Subject: Callout
Page Index: 300
Date: 6/11/2021 4:08:38 PM
Author: dsdrice
Color: ■
Layer:
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Page Label: [1] Layoutt2

Is there going to be a groundwater issue in this pond? Label proposed options if there could be.

301 (15)



Subject: SW - Comment
Page Index: 301
Date: 5/25/2021 3:11:45 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
Layer:
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Page Label: [1] Layout1

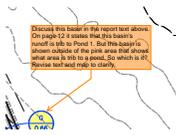
Revise to Sheet 2 of 2 and move to below Sheet 1



Subject: SW - Comment
Page Index: 301
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Author: EPC Stormwater - Glenn Reese
Color: ■
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Page Label: [1] Layout1

Does this pond have a number/name? Page 12 of the report above calls this Pond 3. But there is already a Pond 3 at DP29. Revise report and map as necessary to clarify.

Add a leader line that points from text box to pond.



Subject: SW - Comment
Page Index: 301
Date: 5/26/2021 10:20:23 AM
Author: EPC Stormwater - Glenn Reese
Color: ■
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Page Label: [1] Layout1

Discuss this basin in the report text above. On page 12 it states that this basin's runoff is trib to Pond 1. But this basin is shown outside of the pink area that shows what area is trib to a pond. So which is it? Revise text and map to clarify.



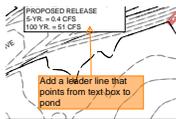
Subject: SW - Comment
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Date: 5/25/2021 3:46:50 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
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Page Label: [1] Layout1

Since this basin is trib to the Pond at DP 13, shouldn't it be inside of a pink linetype?



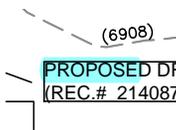
Subject: SW - Comment
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Date: 5/25/2021 3:52:46 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
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Page Label: [1] Layout1

Discussion of Basin P not seen in report text. Discuss in text.



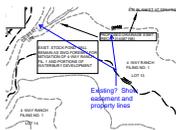
Subject: SW - Comment
Page Index: 301
Date: 5/25/2021 4:01:57 PM
Author: EPC Stormwater - Glenn Reese
Color: ■
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Page Label: [1] Layout1

Add a leader line that points from text box to pond



Subject:
Page Index: 301
Date: 6/9/2021 5:19:42 PM
Author: dsdrice
Color: ■
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Page Label: [1] Layout1

PROPOSE



Subject: Callout
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Date: 6/14/2021 2:23:26 PM
Author: dsdrice
Color: ■
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Page Label: [1] Layout1

Existing? Show easement and property lines



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Author: dsdrice
Color: ■
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Page Label: [1] Layout1

Show the improvements

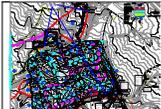


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Page Index: 301
Date: 6/11/2021 4:10:55 PM
Author: dsdrice
Color: ■
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Page Label: [1] Layout1



Subject: Callout
Page Index: 301
Date: 6/11/2021 4:16:48 PM
Author: dsdrice
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Show the entire maintenance road



Subject: Callout
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Date: 6/11/2021 4:19:23 PM
Author: dsdrice
Color: ■
Layer:
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Page Label: [1] Layout1

Consider moving the overflow spillways north (less drop to channels)



Subject: Callout
Page Index: 301
Date: 6/14/2021 2:23:29 PM
Author: dsdrice
Color: ■
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Page Label: [1] Layout1

This does not meet current requirements.



Subject:
Page Index: 301
Date: 6/14/2021 2:24:59 PM
Author: dsdrice
Color: ■
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Page Label: [1] Layout1

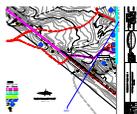
UAL 42" RCP
CULVERTS



Subject: Callout
Page Index: 301
Date: 6/14/2021 2:27:59 PM
Author: dsdrice
Color: ■
Layer:
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Page Label: [1] Layout1

Triple 36"?

302 (2)



Subject: Callout
Page Index: 302
Date: 6/9/2021 5:16:58 PM
Author: dsdrice
Color: ■
Layer:
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Page Label: [1] Layout2

Sheet 2 is missing?

0	to type n dump times
9	FSD POND
6	Triple 36" RCP Culverts

Subject:
Page Index: 302
Date: 6/14/2021 2:26:42 PM
Author: dsdrice
Color: ■
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Page Label: [1] Layout2