

# ENG-SF21020-R1-GEC.pdf Markup Summary

1 (5)

Add text:  
PCD Filing No.:  
SF-21-020

**Subject:** SW - Text Box  
**Page Index:** 1  
**Date:** 5/24/2021 12:08:13 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [5] 5 GRADING & EROSION CONTROL INITIAL  
PLAN

Add text:  
PCD Filing No.:  
SF-21-020

EPC STORMWATER REVIEW COMMENTS  
IN BLUE BOXES WITH BLUE TEXT

**Subject:** Stormwater Comment Legend  
**Page Index:** 1  
**Date:** 5/24/2021 12:23:57 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [5] 5 GRADING & EROSION CONTROL INITIAL  
PLAN

Reviewed by:  
Glenn Reese, P.E.  
Stormwater Engineer I  
glennreese@elpasoco.com  
719-475-2654

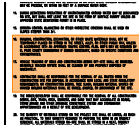
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**Page Index:** 1  
**Date:** 5/24/2021 12:24:05 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
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**Space:**  
**Page Label:** [5] 5 GRADING & EROSION CONTROL INITIAL  
PLAN

Engineering Review  
06/21/2021 10:24:06 PM  
dsdrice  
Jdsdrice@elpasoco.com  
(719) 530-7877  
EPC Planning & Community  
Development Department

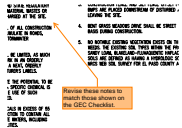
**Subject:** EPC ENG Review  
**Page Index:** 1  
**Date:** 6/21/2021 10:24:14 PM  
**Author:** dsdrice  
**Color:** ■  
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**Page Label:** [5] 5 GRADING & EROSION CONTROL INITIAL  
PLAN

EPC-ENGINEERING REVIEW COMMENTS  
IN BLUE BOXES WITH BLUE TEXT

**Subject:** PCD Comment Legend  
**Page Index:** 1  
**Date:** 6/21/2021 10:24:43 PM  
**Author:** dsdrice  
**Color:** □  
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**Page Label:** [5] 5 GRADING & EROSION CONTROL INITIAL  
PLAN

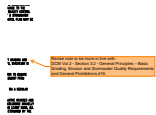


**Subject:** SW - Rectangle  
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**Date:** 5/24/2021 2:57:17 PM  
**Author:** EPC Stormwater - Glenn Reese  
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**Space:**  
**Page Label:** [7] 7 GRADING & EROSION CONTROL INITIAL PLAN



**Subject:** SW - Comment  
**Page Index:** 2  
**Date:** 5/24/2021 2:57:44 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
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**Space:**  
**Page Label:** [7] 7 GRADING & EROSION CONTROL INITIAL PLAN

Revise these notes to match those shown on the GEC Checklist.



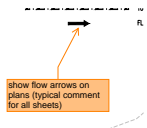
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**Date:** 5/24/2021 3:01:43 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [7] 7 GRADING & EROSION CONTROL INITIAL PLAN

Revise note to be more in line with:  
DCM Vol 2 - Section 3.2 - General Principles –  
Basic Grading, Erosion and Stormwater Quality  
Requirements and General Prohibitions #16.



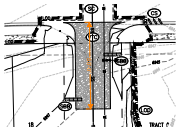
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**Date:** 5/24/2021 12:40:33 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [9] 9 GRADING & EROSION CONTROL INTERIM PLAN

Checklist Item "b" - label adjacent  
subdivision/property names (typical comment all  
subsequent sheets)



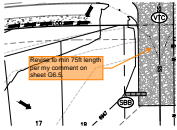
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**Date:** 5/25/2021 11:48:43 AM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [10] 10 GRADING & EROSION CONTROL INTERIM PLAN

show flow arrows on plans (typical comment for all  
sheets)



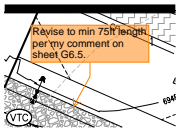
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**Page Index:** 8  
**Date:** 5/24/2021 2:20:38 PM  
**Author:** EPC Stormwater - Glenn Reese  
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**Space:**  
**Page Label:** [13] 13 GRADING & EROSION CONTROL  
 FINAL PLAN

50'-0"



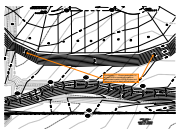
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**Date:** 5/24/2021 2:21:18 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [13] 13 GRADING & EROSION CONTROL  
 FINAL PLAN

Revise to min 75ft length per my comment on sheet G6.5.



**Subject:** SW - Comment  
**Page Index:** 9  
**Date:** 5/24/2021 2:21:30 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [14] 14 WATER QUALITY DETENTION POND

Revise to min 75ft length per my comment on sheet G6.5.



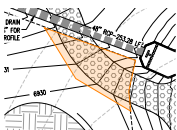
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**Date:** 5/24/2021 2:35:08 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
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**Space:**  
**Page Label:** [14] 14 WATER QUALITY DETENTION POND

Checklist Item "r" - Slopes greater than 3:1 will need ECB or equivalent protection. Show/notate location of ECM on plans and Legend, as well as detail on final sheets.

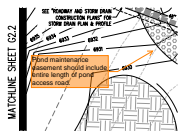


**Subject:** SW - Comment  
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**Date:** 5/24/2021 2:18:01 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [15] 15 POND DETAILS

Temp SB should be shown/notated on this drawing and/or on sheet G1.3

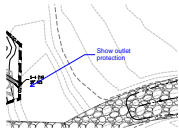


**Subject:** Polygon  
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**Date:** 5/24/2021 2:49:44 PM  
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**Page Label:** [15] 15 POND DETAILS



**Subject:** SW - Comment  
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**Date:** 5/24/2021 2:50:26 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
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**Space:**  
**Page Label:** [15] 15 POND DETAILS

Pond maintenance easement should include entire length of pond access road.



**Subject:** Callout  
**Page Index:** 10  
**Date:** 6/21/2021 10:11:16 PM  
**Author:** dsdrice  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [15] 15 POND DETAILS

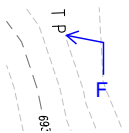
Show outlet protection

---

11 (3)



**Subject:**  
**Page Index:** 11  
**Date:** 6/21/2021 10:11:53 PM  
**Author:** dsdrice  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [16] 16 POND DETAILS



**Subject:** Callout  
**Page Index:** 11  
**Date:** 6/21/2021 10:12:06 PM  
**Author:** dsdrice  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [16] 16 POND DETAILS

F

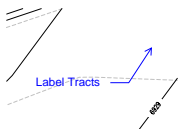


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**Date:** 6/21/2021 10:12:49 PM  
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**Color:** ■  
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**Page Label:** [16] 16 POND DETAILS

Label Tract C

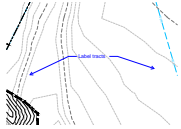
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12 (1)



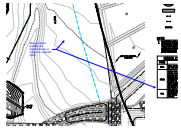
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**Page Label:** [17] 17 SWALE CROSS SECTIONS

Label Tracts



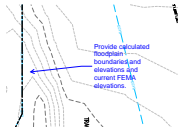
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**Page Label:** [18] 18 GEC DETAILS

Label tracts



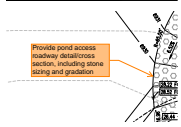
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**Layer:**  
**Space:**  
**Page Label:** [18] 18 GEC DETAILS

Show channel grading and improvements or  
 reference separate plans



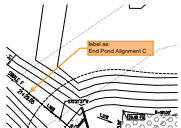
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**Page Index:** 13  
**Date:** 6/21/2021 10:20:49 PM  
**Author:** dsdrice  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [18] 18 GEC DETAILS

Provide calculated floodplain boundaries and  
 elevations and current FEMA elevations.



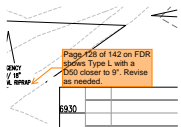
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**Page Index:** 14  
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**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
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**Space:**  
**Page Label:** [19] 19 GEC DETAILS

Provide pond access roadway detail/cross section,  
 including stone sizing and gradation



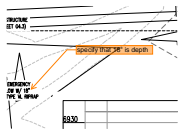
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**Color:** ■  
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**Space:**  
**Page Label:** [19] 19 GEC DETAILS

label as:  
 End Pond Alignment C



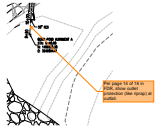
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**Page Label:** [19] 19 GEC DETAILS

Page 128 of 142 on FDR shows Type L with a D50  
 closer to 9". Revise as needed.



**Subject:** SW - Comment  
**Page Index:** 14  
**Date:** 5/24/2021 5:03:43 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
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**Space:**  
**Page Label:** [19] 19 GEC DETAILS

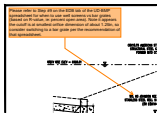
specify that 18" is depth



**Subject:** SW - Comment  
**Page Index:** 14  
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**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
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**Page Label:** [19] 19 GEC DETAILS

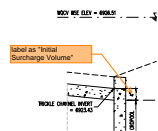
Per page 14 of 16 in FDR, show outlet protection (like riprap) at outfall.

15 (11)



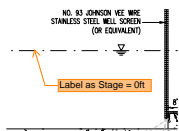
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Please refer to Step #9 on the EDB tab of the UD-BMP spreadsheet for when to use well screens vs bar grates (based on R-value, ie: percent open area). Note it appears the cutoff is at smallest orifice dimension of about 1.25in, so consider switching to a bar grate per the recommendation of that spreadsheet.



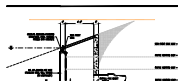
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**Page Label:** [20] 20 GEC DETAILS

label as "Initial Surcharge Volume"



**Subject:** SW - Comment  
**Page Index:** 15  
**Date:** 5/24/2021 4:51:53 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [20] 20 GEC DETAILS

Label as Stage = 0ft

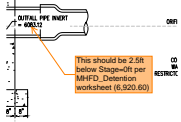


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**Page Label:** [20] 20 GEC DETAILS



**Subject:** SW - Comment  
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**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [20] 20 GEC DETAILS

Show 100-yr WSE too



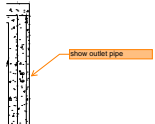
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**Author:** EPC Stormwater - Glenn Reese  
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**Page Label:** [20] 20 GEC DETAILS

This should be 2.5ft below Stage=0ft per MHFD\_Detention worksheet (6,920.60)

label trickle channel

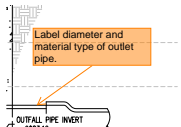
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**Date:** 5/24/2021 4:58:05 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
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**Space:**  
**Page Label:** [20] 20 GEC DETAILS

label trickle channel



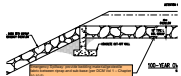
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**Page Index:** 15  
**Date:** 5/24/2021 4:58:18 PM  
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**Color:** ■  
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**Space:**  
**Page Label:** [20] 20 GEC DETAILS

show outlet pipe



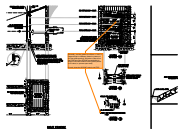
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**Author:** EPC Stormwater - Glenn Reese  
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**Page Label:** [20] 20 GEC DETAILS

Label diameter and material type of outlet pipe.



**Subject:** SW - Text Box  
**Page Index:** 15  
**Date:** 5/24/2021 5:13:04 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [20] 20 GEC DETAILS

Emergency Spillway: provide bedding material/geotextile fabric between riprap and sub-base (per DCM Vol 1 – Chapter 10.10.5)

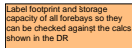


**Subject:** SW - Comment  
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**Date:** 5/25/2021 11:26:02 AM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [20] 20 GEC DETAILS

Generally, use bar grates for orifices  $>1 \frac{3}{16}$ " in largest length or diameter (based on nature of min bar grate spacing). But refer to Step #9 on the EDB tab of the UD-BMP spreadsheet for when to use well screens vs bar grates (based on R-value, ie: percent open area).

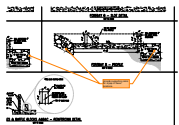
If used, show the UD-BMP calcs in the FDR.

16 (3)



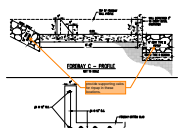
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**Date:** 5/24/2021 4:37:42 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [21] 21 GEC DETAILS

Label footprint and storage capacity of all forebays so they can be checked against the calcs shown in the DR



**Subject:** SW - Comment  
**Page Index:** 16  
**Date:** 5/24/2021 5:09:04 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [21] 21 GEC DETAILS

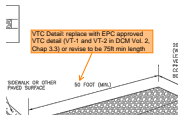
provide supporting calcs for rirpap in these locations.



**Subject:** SW - Comment  
**Page Index:** 16  
**Date:** 5/24/2021 5:08:58 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [21] 21 GEC DETAILS

provide supporting calcs for rirpap in these locations.

21 (1)



**Subject:** SW - Comment  
**Page Index:** 21  
**Date:** 5/24/2021 2:19:36 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [22] 22 GEC DETAILS

VTC Detail: replace with EPC approved VTC detail (VT-1 and VT-2 in DCM Vol. 2, Chap 3.3) or revise to be 75ft min length

22 (3)




**Subject:** SW - Text Box  
**Page Index:** 22  
**Date:** 5/24/2021 12:19:35 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:** ■  
**Layer:**  
**Space:**  
**Page Label:** [22] 22 GEC DETAILS

Include details for the following BMP's. Examples of acceptable details for each are provided:






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**Subject:** Image  
**Page Index:** 22  
**Date:** 5/24/2021 2:36:13 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:**   
**Layer:**  
**Space:**  
**Page Label:** [22] 22 GEC DETAILS

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Provide detail for ECB or equivalent protection as applicable per my comment on Sheet G2.2.

**Subject:** SW - Comment  
**Page Index:** 22  
**Date:** 5/24/2021 2:37:04 PM  
**Author:** EPC Stormwater - Glenn Reese  
**Color:**   
**Layer:**  
**Space:**  
**Page Label:** [22] 22 GEC DETAILS

Provide detail for ECB or equivalent protection as applicable per my comment on Sheet G2.2.