

From: Jon Lee <jonrlee@cdgcolorado.com>
Sent: Tuesday, August 2, 2022 2:34 PM
To: Shannon Moeller <smoeller@erieco.gov>
Cc: Malcolm Fleming <mflaming@erieco.gov>
Subject: Sewer line reimbursement from Erie Highlands

Shannon,

I see on the August 3rd agenda for Planning Commission a preliminary plat for Erie Highlands No. 5. In review of this preliminary plat, I see notations that they plan to use the sewer line originally paid for by the Colliers Hill Metropolitan District #1 who is also entitled to reimbursement when and if others connect onto this line. You may recall this issue surfaced with a recent plat at Westerly. I have attached three documents related to the agreement with Westerly which also established the capacity used by Erie Highlands as well as others. I am also attaching the second page of the Erie Highlands engineering documents which indicates this planning area as well as two others does in fact use this sewer line. As President of the Colliers Hill Metro District #1, I am requesting a condition be added to require Erie Highlands to reimburse the Metro District for its 7.5% share of the sewer line which based on the attached documentation would amount to \$28,132.50. The Metro District was not notified of this application previously which is why this issue was not requested earlier. I am not asking to delay this plat in anyway. I am asking that the payment be made prior to a Final Plat approval and recordation. Please enter this email into the record at tomorrows hearing.

Jon Lee
Office – 303-442-2299
Cell – 303-588-4102
jonrlee@cdgcolorado.com

Memo

TO: Town of Erie BOT, Malcolm Fleming
FROM: Colliers Hill Metro District No.1 and Erie Land Company
CC: Kendra Carberry, Scott Ross, Deborah Bachelder, Shannon Moeller, David Pasic, David Bracht
DATE: November 8, 2021
RE: Westerly Sewer Line Reimbursement to Colliers Hill Metro District No. 1

Resolution to the public comment made on 10/26/21 on items 21-493 (Westerly Filing No.1 First Amendment), 21-492 (Westerly PUD), and 21-491 (Westerly Rezoning) on the 11/9/21 BOT has been reached. Erie Land Company agrees to pay the Colliers Hill Metro District No.1 (CHMD1), \$67,893.10 for reimbursement of the upsizing of the SVVSD sewer main paid to the SVVSD by the CHMD1 on May 24, 2013. Both parties agree on the amount of this payment. Calculations from Hurst Engineering, as agent of the CHMD1 and the current approved Westerly utility report, are the basis of determining the amount of the payment. Both documents are attached. By way of the Town's involvement in this issue we agree that no other entity, including the SVVSD, or Cross Lake Partners (the current landowner of Colliers Hill) or any of its subsidiaries is entitled to this reimbursement from Erie Land Company. The CHMD1 is the rightful party of interest and any potential future claims that could be made by other entities by way of public comment, or any other form of communication will not be considered by either party and should not be considered by the Town. Further, the CHMD1 fully reserves it's right to reimbursement for the upsizing of the sewer line from Erie Highlands and the State Land Board property as outlined in the 10/26/21 public comment on the above referenced applications. Both parties agree that this matter is resolved between the CHMD1 and the Erie Land Company and trusts that it is also resolved for the Town.

18-inch sewer main Contributors

	Peak Flow Rate (cfs)	% of Total Flows	% of 18" S/L Capacity	
Westerly	1.502	25.5%	18.1%	*From Westerly Utility Report
Erie Highlands	0.62	10.5%	7.5%	*From Erie Highlands Utility Report
Erie High School (Assumed 2200 students)	0.34	5.8%	4.1%	*From Westerly Utility Report
Soaring Heights (Assumes 1200 students)	0.19	3.1%	2.2%	*Assumes 1220 students at same flow rate as Erie High
East of Erie High	1.842	31.3%	22.2%	*From Westerly Utility Report
Colliers Hill	1.4	23.8%	16.9%	*Colliers Hill Utility Report
Total Flows	5.89	100.0%	71.0%	

*Note 18-inch S/L capacity =

8.3 cfs



707 17th Street, Suite 3150
Denver, Colorado 80202
303.572.0200 (p)
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matrixdesigngroup.com

November 4, 2021

Heidi Majerik - Vice President & General Manager
Southern Land Company
1601 Blake Street, Suite 200
Denver, CO 80202

**RE: Westerly Project in Town of Erie
Sanitary Sewer Reimbursement Request by Mr. Jon Lee**

Dear Heidi:

Matrix has evaluated the request by Mr. Jon Lee for sanitary sewer reimbursement for the downstream system of the Westerly project located at CR-5 and Erie Parkway. The intent of the letter from Mr. Lee was to define how much the Westerly project owed for improvements that were installed by the School District.

In the request, Hurst Engineers provided an evaluation in email dated October 26, 2021 and unfortunately used dated information from a Matrix draft reported dated July 2020.

The flow rates have been updated in the approved report attached by the Town and are shown on the attached spreadsheet.

As you'll read, the expected flow from Westerly is 1.502-cfs and using the information from the Hurst email noted above, translates to 18% of the capacity of the 18-inch pipe. Using the same metrics applied in Mr. Lee's letter, this means that Westerly is responsible for 18.1% or \$67,879.54.

Please let me know if you have any questions or need further information.

Very truly yours,
MATRIX DESIGN GROUP

A handwritten signature in blue ink that reads "Patrick Chelin".

Patrick Chelin, PE
Vice President

Chart from Jon Lee letter received 10-26-21

18-inch sewer main Contributors

	Peak Flow Rate (cfs)	% of Total Flows	% of 18" S/L Capacity	Dollars requested	Total Cost
Westerly	2.287	34.3%	27.6%	\$ 103,527.60	\$ 375,100.00
Erie Highlands	0.62	9.3%	7.5%		
Erie High School (Assumes 2200 students)	0.34	5.1%	4.1%		
Soaring Heights (Assumes 1200 students)	0.19	2.8%	2.2%		
East of Erie High	1.842	27.6%	22.2%		
Colliers Hill	1.4	21.0%	16.9%		
Total Flows	6.67	100.0%	80.4%		

*Note 18-inch S/L capacity = 8.3 cfs

Adjusted Flows by Matrix Design Group 11-4-21 (adjusting Westerly Flows only)

	Peak Flow Rate (cfs)	% of Total Flows	% of 18" S/L Capacity	Dollars requested	Total Cost
Westerly	1.502	25.5%	18.1%	\$ 67,879.54	\$ 375,100.00
Erie Highlands	0.62	10.5%	7.5%		
Erie High School	0.34	5.8%	4.1%		
Soaring Heights	0.19	3.2%	2.3%		
East of Erie High	1.842	31.3%	22.2%		
Colliers High	1.4	23.8%	16.9%		
Total Flows	5.894	100%	71%		

* Note 18-inch S/L capacity = 8.3 cfs





Matrix Design Group, Inc.
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July 30, 2021

Town of Erie
Town Hall
645 Holbrook Street
Erie, CO 80516

RE: Westerly Filing 2 Final Utility Compliance Letter

Dear Sir/Madam:

Matrix Design Group is submitting this Utility Compliance Letter on behalf of the Erie Land Company, LLC for the proposed Westerly Filing No. 2 development.

Westerly is a 418-acre development being planned on two contiguous parcels in the Town of Erie. The Dearmin parcel is 266.66 acres and the Swink parcel is 151.53 acres. The site is bounded by Erie Parkway on the north, Weld County Road 6 (WCR 6) on the south, Weld County Road (WCR 5) on the west, and Weld County 7 (WCR 7) on the east.

The entire Westerly development consists of 1,200 residential units in a variety of product types including 18 live/work units, 35,000 square feet of commercial space, 6,000 square feet of community space, and both dedicated open space and parks. In addition, the St. Vrain Valley School District is planning to build a middle school (grades six through eight) on 26 acres within the development. It is anticipated this school will have 750 students and 70 to 80 staff members. Westerly will be built in five phases with build-out expected to occur in 2025.

Filing 2 Description

Filing 2 consists of 224 residential units. Access to Filing 2 is provided through Erie Parkway and WCR 5 in addition to the access points provided by the existing Filing No. 1. This phase is expected to be complete in early 2022.

Filing 2 is located completely within the Town of Erie Zone 3 water pressure. There are existing mains located in CR-5 and Erie Parkway that will be the connection points for the development. As part of the Final Utility Report a WaterCAD model analyzed the full buildout of Zone 3 which includes Filing 2. A series of 8-inch mains are proposed within the development and each home will have a ¾-inch service and water meter. Average daily flow from the 224 homes in Filing 2 equates to 0.165 cfs of the 0.346 cfs anticipated in the Zone 3 pressure zone of the Westerly development. Filing 2 calculations are attached. An additional WaterCAD model analyzed only the Filing 2 area to verify that requirements are met without the full buildout of Zone 3. Results are attached and do verify conformance with requirements.

Currently there are existing 8" sewer mains that terminate within Filing 1. Average daily flow from the 224 homes in Filing 2 equates to 0.44 cfs of the 1.5 cfs anticipated in the overall Westerly development. Filing 2 calculations are attached.

Conclusion

The Westerly Final Utility Report includes the analysis for the overall development. After discussion with the St. Vrain Valley School District it was determined that the middle school is now anticipated to receive an additional 250 students. Updated sanitary sewer calculations have been provided to show that the increase in students will not cause an increase in pipe size for the development or for the 12" main crossing Erie Parkway. Due to keeping the same land use and basin delineations, Filing 2 development is in compliance with the Westerly Final Utility Report and pipes are sized accordingly.

Should you either require additional information or have any questions, please do not hesitate to contact me.

Sincerely,

MATRIX DESIGN GROUP, INC.

A handwritten signature in blue ink, appearing to read "Patrick Chelin".

Patrick D. Chelin, P.E.
Vice President
cc: 18.994.001

Westerly Master Plan Sanitary Sewer Calculations

PIPE RUN		LAND USE				FLOW CALCULATIONS					
		Residential	Commercial	Park/Recreation	Elementary School	High School	Average Daily Flow	Average Daily Flow	Peaking Factor*	Peak Flow	
		Gal/capita/day (DU)	Gal/acre/day (acre)	Gal/acre/day (acre)	Gal/student/day (# of students)	Gal/student/day (# of students)	(MGD)	(cfs)	(MGD)	(cfs)	
Westerly		90	1000	50	13	20	0.336	0.520	2.9	1.502	
2.89 capita per residence was assumed		1,230				1,000				MGD	0.970
Erie Highlands		224	25.00				0.083	0.129	3.6	0.465	

2.76 capita per residence was assumed by Core for the Erie Highlands Development

TOTAL CROSSING ERIE PARKWAY	1,454	28.28	-	1,000	-	0.419	0.649	2.8	1.808
								MGD	1.169

Erie High School	980			2,200		0.044	0.068	4.0	0.272
East of Erie High School						0.255	0.394	3.0	1.190

East of Erie High School is assumed to be high-density residential per 2015 Town Master Plan and utilizes the maximum density of 20du/acre for the ~49 acres

<i>Coal Creek Interceptor Extension</i>		2,434	28.28	-	1,000	0.718	1.111	2.6	2.841
Total								MGD	1.836

*All peaking factors are based upon 2021 Town of Erie Sanitary Criteria Section 712.00

Worksheet for 10in Westerly

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data	
Roughness Coefficient	0.012
Channel Slope	0.500 %
Normal Depth	8.0 in
Diameter	10.0 in

Results	
Discharge	1.64 cfs
Flow Area	0.5 ft ²
Wetted Perimeter	1.8 ft
Hydraulic Radius	3.0 in
Top Width	0.67 ft
Critical Depth	6.9 in
Percent Full	80.0 %
Critical Slope	0.709 %
Velocity	3.51 ft/s
Velocity Head	0.19 ft
Specific Energy	0.86 ft
Froude Number	0.738
Maximum Discharge	1.81 cfs
Discharge Full	1.68 cfs
Slope Full	0.478 %
Flow Type	Subcritical

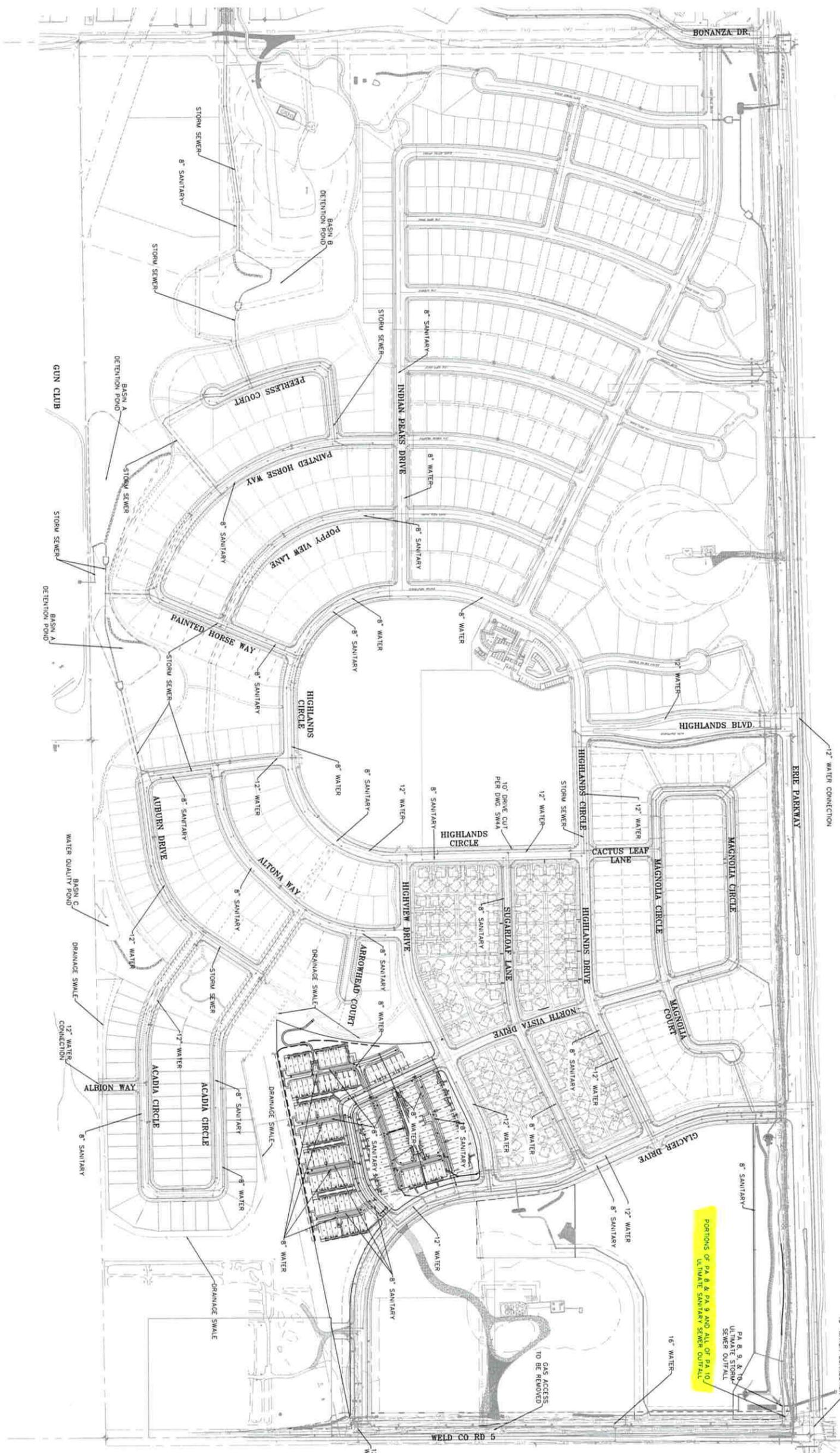
GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	82.0 %
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	8.0 in
Critical Depth	6.9 in
Channel Slope	0.500 %
Critical Slope	0.709 %

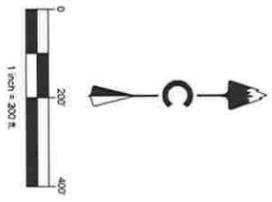
12in Crossing Erie Pkwy

Project Description	
Friction Method	Manning
	Formula
Solve For	Discharge
Input Data	
Roughness Coefficient	0.012
Channel Slope	0.280 %
Normal Depth	12.0 in
Diameter	12.0 in
Results	
Discharge	2.04 cfs
Flow Area	0.8 ft ²
Wetted Perimeter	3.1 ft
Hydraulic Radius	3.0 in
Top Width	0.00 ft
Critical Depth	7.3 in
Percent Full	100.0 %
Critical Slope	0.589 %
Velocity	2.60 ft/s
Velocity Head	0.11 ft
Specific Energy	1.11 ft
Froude Number	(N/A)
Maximum Discharge	2.20 cfs
Discharge Full	2.04 cfs
Slope Full	0.280 %
Flow Type	Subcritical
GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0
GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	82.0 %
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	12.0 in
Critical Depth	7.3 in
Channel Slope	0.280 %
Critical Slope	0.589 %

PP-001150-2020



- LEGEND**
- PROPOSED STORM SEWER
 - PROPOSED TYPE R INLET
 - PROPOSED FES
 - SANITARY MH W/ MAN
 - FIRE HYDRANT
 - GATE VALVE
 - TEE W/ TRUST BLOCK
 - BEND W/ TRUST BLOCK
 - WATER MAIN



PRELIMINARY GRADING AND UTILITY PLANS FOR
ERIE HIGHLANDS PRELIMINARY PLAT NO. 5

ERIE HIGHLANDS
PRELIMINARY PLAT NO. 5 - GRADING AND UTILITY
OVERALL SITE PLAN
OAKWOOD HOMES

REVISIONS			
#	DESCRIPTION	DATE	BY
7	7TH SUBMITTAL	2.4.2022	RS

811
Know what's below
Call before you dig

CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

CORE ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS (HORIZONTAL AND VERTICAL). THE EXISTING UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS HOWEVER THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.



CORE CONSULTANTS, INC.
3473 S. BROADWAY
ENGLEWOOD, CO 80113
303.703.4444
LIVEYOURCORE.COM

LAND DEVELOPMENT
ENERGY
PUBLIC INFRASTRUCTURE

INITIAL PLAN
RELEASE: 2.4.2022
DESIGNED BY: JRS
DRAWN BY: LHK
CHECKED BY: JRS

JOB NO.
17-027-001

SHEET
2 OF 8