Project: Colbern Road Investments
Commercial Development
NE Quadrant Colbern and Rice Roads
Sanitary Sewer Capacity Memorandum

The proposed Commercial Development consists of 24.06 acres. The proposed Development breaks down based on land usage as follows:

Commercial: 17.05 acres

Detention: 7.01 acres

The Development will connect to existing sanitary mains/manholes in two locations. The southwest portion of the development (5.23 acres) will connect to an existing manhole on Rice Road. The remainder of the Development (11.82 acres) will connect to the terminating sanitary sewer segment servicing the Public Library. The land is currently zoned CP2 and CS which is the intended use for the Development therefore the existing sewers should have adequate capacity at both tie in points. Following are calculations to determine required sewer capacity at each point.

COMMERCIAL PROPERTY						
Area (ac)	5.23					
Tc (min)	**28.18**					
Interpolate (50 yr)						
Tc	i (iph)					
30	4.98					
28.18	5.21					
15	6.91					
						Active
						Scenario
Commercial		Const.	K	i	A	5.23
Peak Base Flow, EDU (gpd)		50190				50190
Peak Infiltration (gpd/ac)		250				1307.5
Peak Inflow Q = KiA (cfs)		0.081812	0.003	5.21	5.23	52873
		52873				104370.4
						0.161

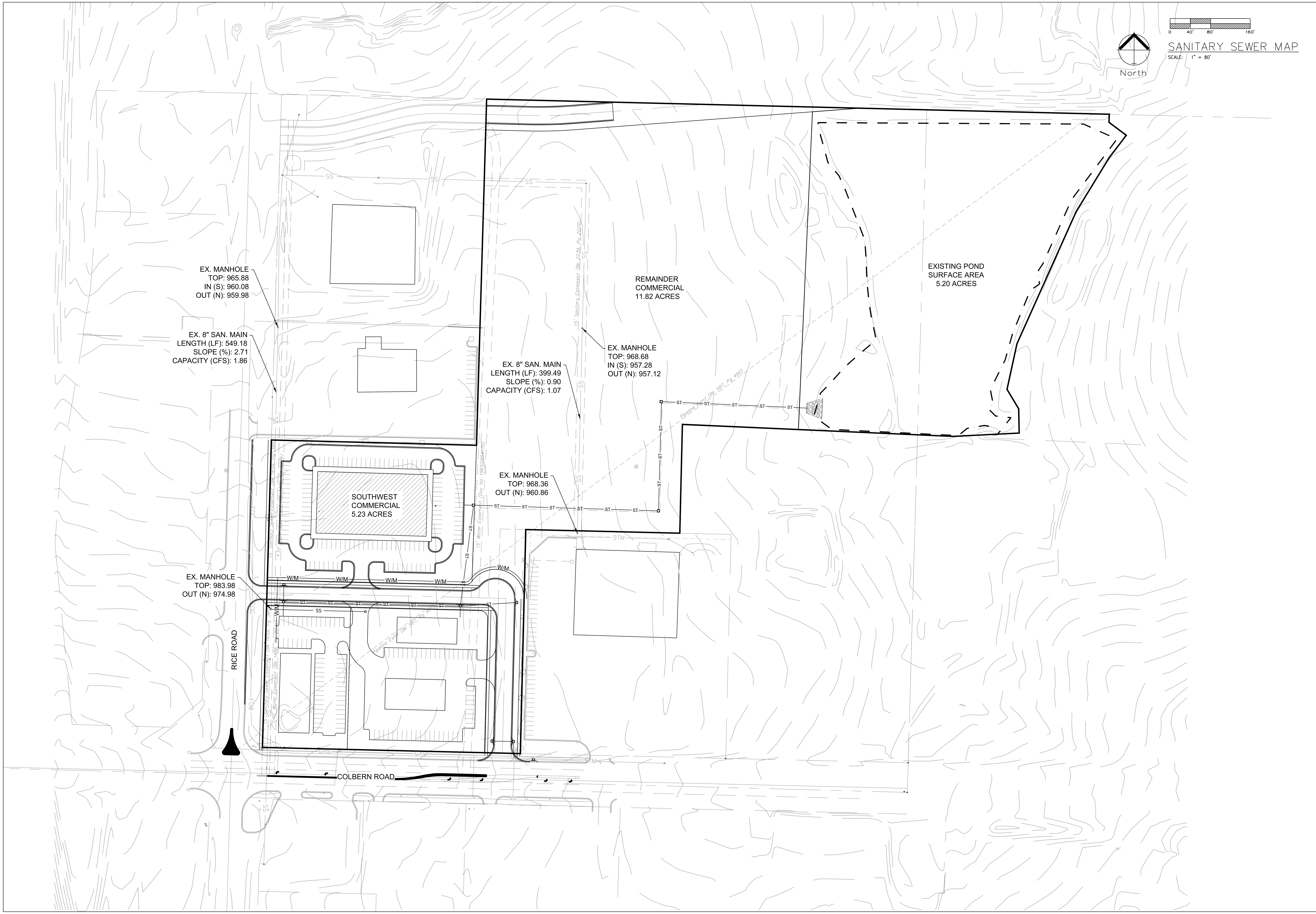
The EDUs for the 5.23 acre area along Rice and Colbern Roads (47,800 sf) were assumed to be full service restaurant which is set at 3.5 EDU per 1,000 sf of gross building area. This value was chosen to be conservative. The required sewer capacity is 0.161 cfs. The sewer capacity for the proposed receiving sewer segment is 1.86 cfs. The receiving sewer has more than adequate capacity.

COMMERCIAL PROPERTY						
Area (ac)	11.82					
Tc (min)	**34.62**					
Interpolate (50 yr)						
Tc	i (iph)					
60	3.26					
34.62	4.72					
30	4.98					
						Active
						Scenario
Commercial		Const.	K	i	A	11.82
Peak Base Flow, EDU (gpd)		113400				113400
Peak Infiltration (gpd/ac)		250				2955
Peak Inflow Q = KiA (cfs)		0.167201	0.003	4.72	11.82	108058
		108058				224412.6
						0.347

The EDUs for the remaining 11.82 acres of commercial were based on a ratio with the 5.23 acre portion of the Development. Again all of the commercial building square footage was assumed to be full service restaurant which is set at 3.5 EDU per 1,000 sf of gross building area. The required sewer capacity is 0.347 cfs. The sewer capacity for the proposed receiving sewer segment is 1.07 cfs. The receiving sewer has more than adequate capacity.

Based on the information detailed in this report the existing sanitary sewer system has more than adequate capacity to service the proposed Development.

Please forward all comments or concerns to Matthew Schlicht.



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COLBERN ROAD INVESTMENTS
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

Project: Colbern Road Investments
Issue Date: September, 2021

Sanitary Sewer Map
Construction Plans for:
Colbern Road Investments
Lee's Summit, Jackson County, Missouri

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226
NE PE E-14335

REVISIONS

Exhibit