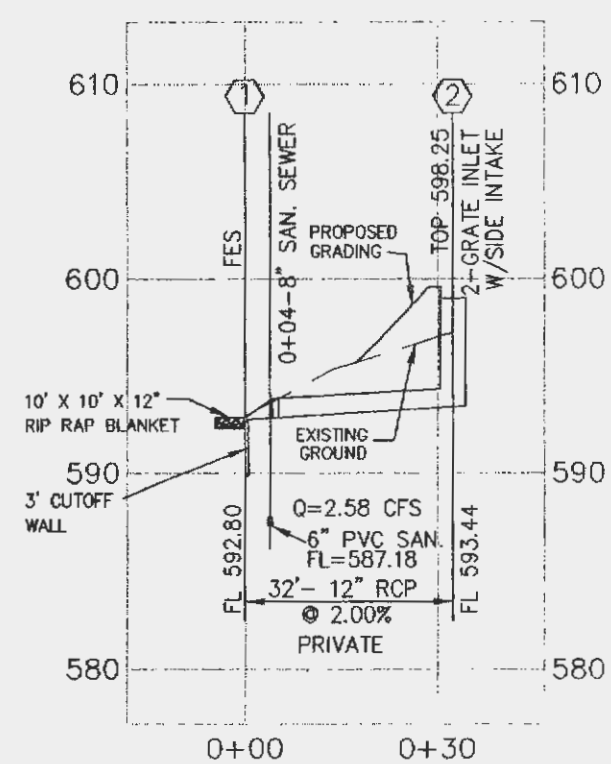
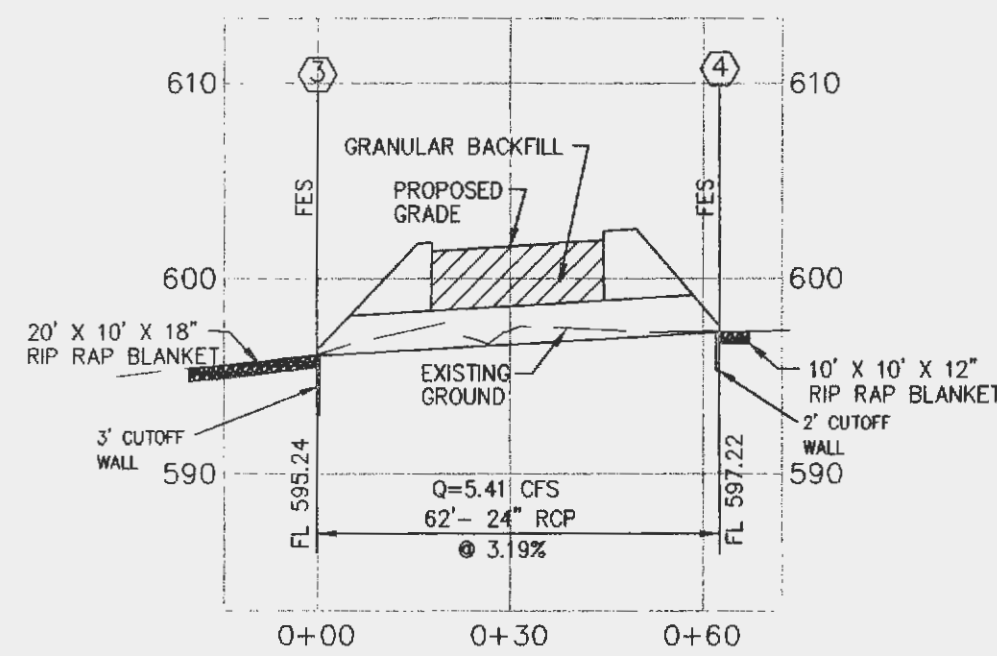


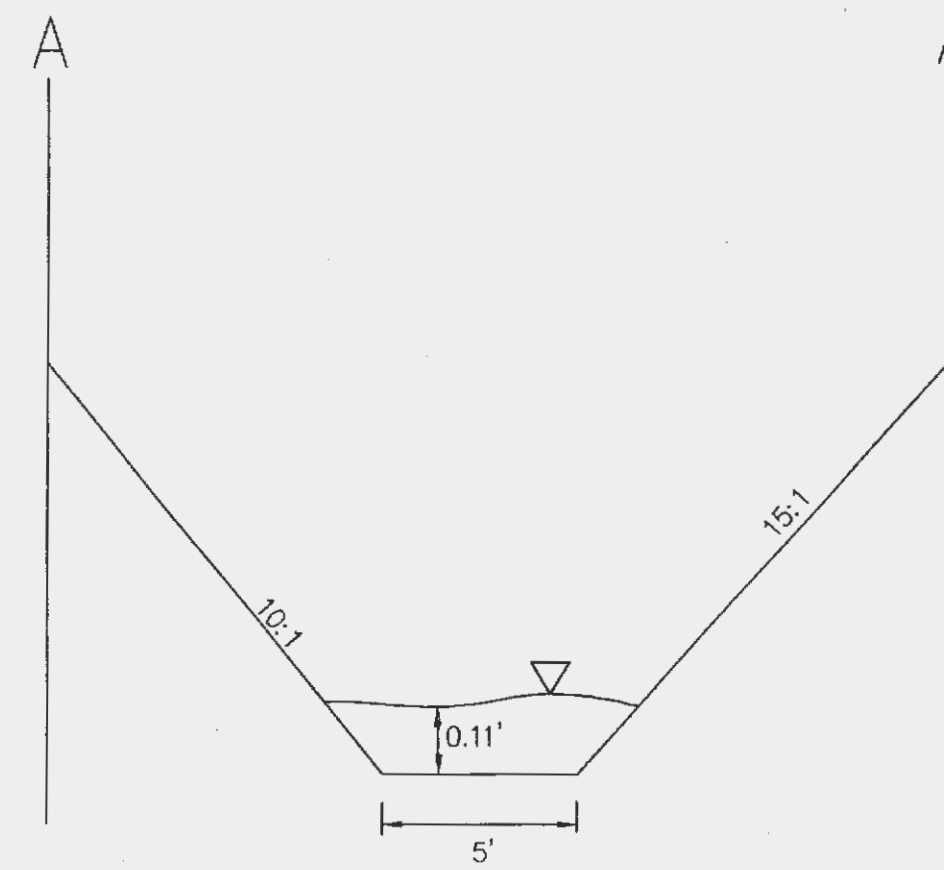
**SANITARY SEWER
LATERAL PROFILE**
SCALE: 1"=30' HORIZ.
1"=10' VERT.



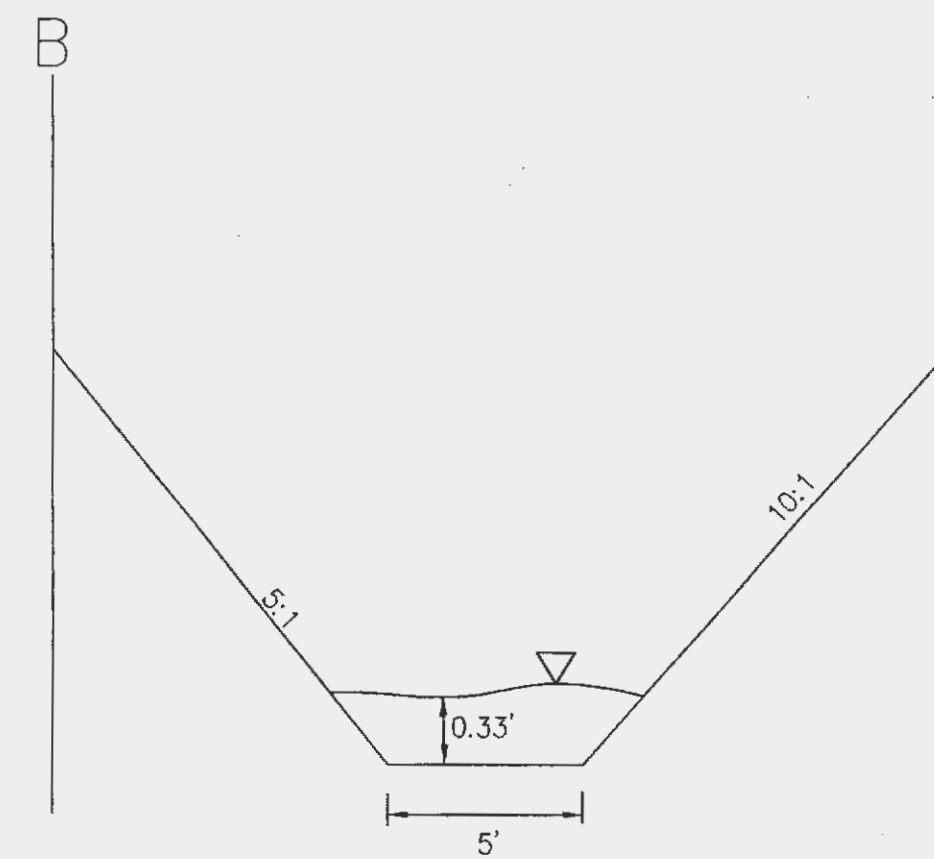
**STORM
SEWER PROFILE**
SCALE: 1"=30' HORIZ.
1"=10' VERT.



**STORM
SEWER PROFILE**
SCALE: 1"=30' HORIZ.
1"=10' VERT.



SECTION "A-A"
N.T.S.



SECTION "B-B"
N.T.S.

TRAPEZOIDAL CHANNEL ANALYSIS
NORMAL DEPTH COMPUTATION

March 10, 2003

PROGRAM INPUT DATA	
DESCRIPTION	VALUE
Flow Rate (cfs)	0.63
Channel Bottom Slope (ft/ft)	0.00658
Manning's Roughness Coefficient (n-value)	0.027
Channel Left Side Slope (horizontal/vertical)	10.0
Channel Right Side Slope (horizontal/vertical)	15.0
Channel Bottom Width (ft)	5.0

COMPUTATION RESULTS	
DESCRIPTION	VALUE
Normal Depth (ft)	0.11
Flow Velocity (fps)	0.90
Froude Number	0.526
Velocity Head (ft)	0.01
Energy Head (ft)	0.12
Cross-Sectional Area of Flow (sq ft)	0.70
Top Width of Flow (ft)	7.75

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TRAPEZOIDAL CHANNEL ANALYSIS
NORMAL DEPTH COMPUTATION

March 10, 2003

PROGRAM INPUT DATA	
DESCRIPTION	VALUE
Flow Rate (cfs)	9.18
Channel Bottom Slope (ft/ft)	0.0303
Manning's Roughness Coefficient (n-value)	0.027
Channel Left Side Slope (horizontal/vertical)	5.0
Channel Right Side Slope (horizontal/vertical)	10.0
Channel Bottom Width (ft)	5.0

COMPUTATION RESULTS	
DESCRIPTION	VALUE
Normal Depth (ft)	0.33
Flow Velocity (fps)	3.75
Froude Number	1.332
Velocity Head (ft)	0.22
Energy Head (ft)	0.55
Cross-Sectional Area of Flow (sq ft)	2.45
Top Width of Flow (ft)	9.92

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THE SPA AT WINGHAVEN

SEWER PROFILES

Cole & Associates Inc.

Planning - Civil Engineering - Land Surveying

10777 Sunset Office Drive, Suite 10

St. Louis, MO 63127 (314) 984-9887 FAX: 984-0587

Checked By	Drawn By	Project Number	Date	Sheet Number
JFH	BDG	02-245	02/25/03	C7

Revisions: Δ CITY REVIEW COMMENTS 4/10/03
& DUCKETT CREEK SAN. COMMENTS

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