

# **HYDRAULIC COMPUTATIONS SHOPPES AT WINGHAVEN 15YR/20MIN**

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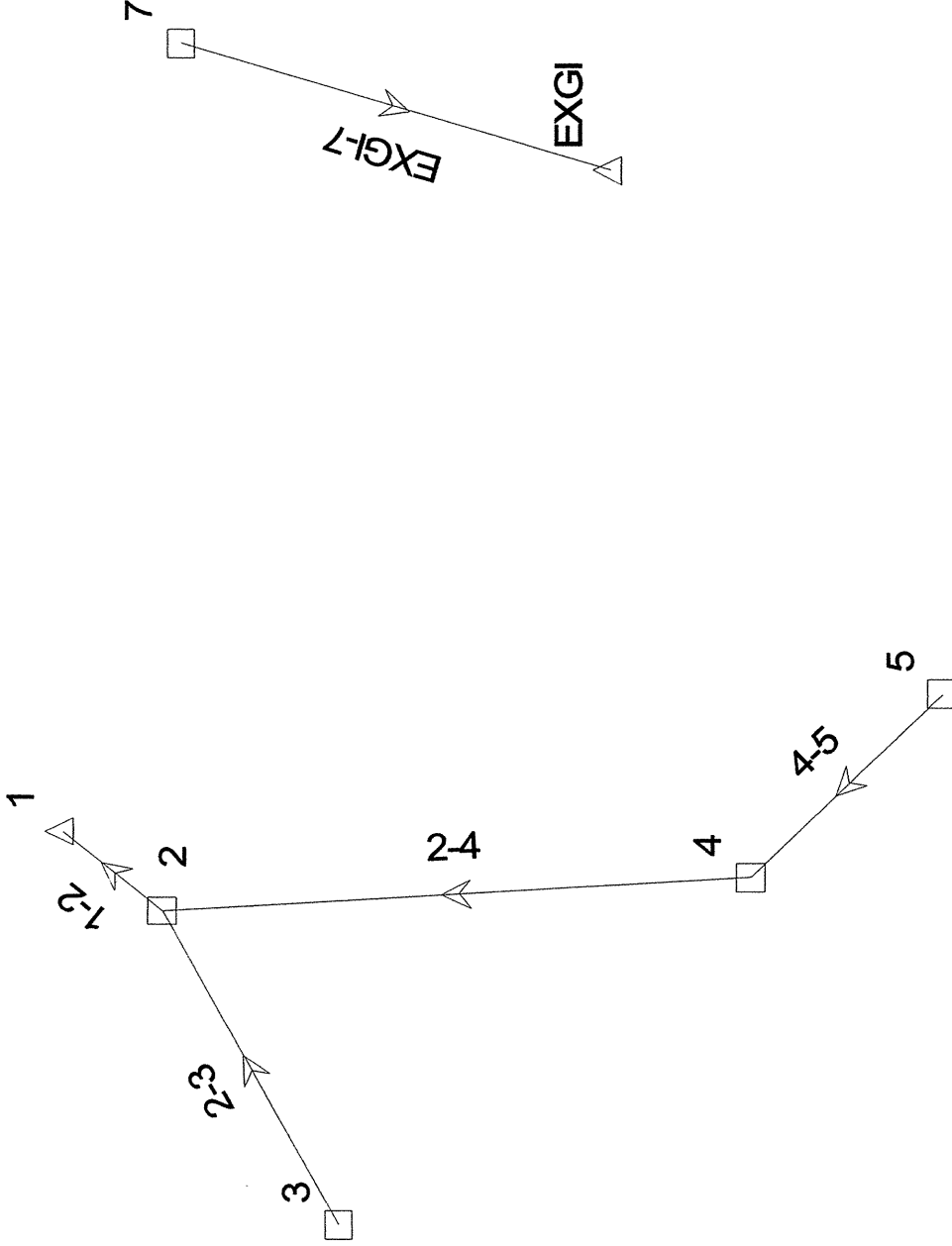
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**AS-BUILT 2/15/05  
REV. 7/12/04  
4/12/04**

**03-303**

Scenario: 15YR/20MIN.



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HYD. COMPUTATIONS (As-Built)

Label	Size	Manning's n	L (ft)	Bend Angle (degrees)	System Q (cfs)	Dn. Invert (ft)	Up. Invert (ft)	S (ft/ft)	Dn. Gr. Elev. (ft)	Energy Slope (ft/ft)	Excess Full Cap. (cfs)	Q Full (cfs)	V Head In (ft)	V Head Out (ft)	V In (ft/s)	V Out (ft/s)	Dn. HGL (ft)	Hyd. Slope (ft/ft)	HGL Out (ft)	HGL In (ft)	Rim (ft)	Gr. Elev. (ft)
7 EXGI-7	12 inch	0.013	46.20	0.00	1.70	582.71	583.42	0.015368	589.21	0.009012	2.72	4.42	0.22	0.22	3.80	3.80	583.71	0.005721	583.97	583.97	587.12	587.12
5					1.70								0.00	0.07	3.80	2.16	583.71		583.71	583.71	589.21	589.21
4-5	12 inch	0.013	71.00	47.72	0.86	591.83	592.80	0.013662	596.84	0.004927	3.30	4.16	0.14	0.14	3.05	3.05	592.96	0.003153	593.19	593.19	596.76	596.76
3					0.86								0.14	0.02	3.05	1.09	592.96		592.96	593.19	596.76	596.76
2-3	12 inch	0.013	54.80	8.15	1.41	585.66	587.81	0.039234	590.10	0.032533	5.65	7.06	0.20	0.20	3.57	3.57	588.31	0.042874	588.31	588.31	592.71	592.71
4					1.41								0.48	0.48	5.56	5.56	588.31		588.31	588.31	592.71	592.71
1-4	12 inch	0.013	217.60	43.05	3.92	585.66	591.83	0.028365	590.10	0.026986	2.08	6.00	0.42	1.03	5.56	8.14	585.75	0.029509	586.25	585.75	590.10	590.10
2					3.92								0.42	0.42	5.21	5.21	585.75		585.61	585.75	590.10	590.10
1-2	15 inch	0.013	18.40	0.00	6.39	583.43	583.62	0.010326	589.73	0.009786	0.17	6.56	0.00	0.42	5.21	5.21	585.43	0.009786	585.43	585.61	589.73	589.73
1					6.39								0.00	0.00	0.00	0.00	585.43		585.43	585.43	589.73	589.73

*Handwritten notes:*  
 8.15  
 5.50  
 3.57  
 4.40  
 3.88  
 4.35  
 4.30