

**Structure Specification Sheet**

Phil Balch, 2002 - revised 3/2006

<b>Project Name</b>		<b>Stream</b>		<b>County</b>		<b>State</b>		<b>Bank</b>			
City of Marysville		BBR 42		Big Blue River		Marshall		Kansas			
								<b>Length</b>		<b>Height</b>	
								<b>Shaped</b>		<b>Total</b>	
								1,720		2,300	
										20	
<b>Structures</b>								<b>Key</b>			
<b>#</b>	<b>Type</b>	<b>Spacing</b>	<b>Angle</b>	<b>Area</b>	<b>Height</b>	<b>Length</b>	<b>Key Length</b>	<b>Yards3</b>	<b>yds3</b>	<b>Tons</b>	<b>Material Specifications</b>
		<b>ft.</b>	<b>(Degrees)</b>	<b>sq. ft.</b>	<b>ft.</b>	<b>ft.</b>	<b>ft.</b>				
1	LPSTP	N/A	N/A	2,700.0	3	300	100	150	100	375.0	Poorly Sorted Limestone Rock D50 = 18"
1	Weir	200	20	880.0	4	40	15	95	15	165.0	Poorly Sorted Limestone Rock D50 = 24"
2	Weir	200	20	1,250.0	5	50	15	163	15	267.0	Poorly Sorted Limestone Rock D50 = 24"
2	LPSTP	N/A	N/A	10,000.0	5	400	0	552	0	828.0	Poorly Sorted Limestone Rock D50 = 18"
3	Weir	200	20	1,680.0	6	60	20	253	20	409.5	Poorly Sorted Limestone Rock D50 = 24"
4	Weir	180	15	1,960.0	6	70	20	296	20	474.0	Poorly Sorted Limestone Rock D50 = 24"
5	Weir	230	20	1,500.0	5	60	25	207	25	348.0	Poorly Sorted Limestone Rock D50 = 24"
6	Weir	180	20	2,000.0	5	80	25	261	25	429.0	Poorly Sorted Limestone Rock D50 = 24"
2	LPSTP	N/A	N/A	11,780.0	3	620	0	310	0	465.0	Poorly Sorted Limestone Rock D50 = 18"
7	Weir	200	20	1,750.0	5	70	25	228	25	379.5	Poorly Sorted Limestone Rock D50 = 24"
8	Weir	200	20	1,960.0	6	70	25	296	25	481.5	Poorly Sorted Limestone Rock D50 = 24"
9	Weir	N/A	20	1,540.0	4	70	25	166	25	286.5	Poorly Sorted Limestone Rock D50 = 24"
<b>Geo Textile Materials</b>								<b>Rolls</b>		<b>Material Specifications</b>	
1						500				18.3	BXG 110 Geogrid or Equivalent (6,493 sq.yds. )
1						500				80.4	NAG C125 BN or Equivalent (8,035 sq. yds.)
								<b>39,000</b>	<b>0.90</b>		
								<b>2,977</b>	<b>295</b>	<b>4,908</b>	
								<b>Total yds3</b>	<b>3,272</b>		

<b>Site Information</b>			
Structure Height / ft.	Variable	Cord Length / ft.	1850
Crest Width / ft.	10	Mid Ord / ft.	473
Finished Slope Grade/H:V	3:1	BkF Elev	1130 12+00
Schumm Channel Stage	4	Rosgen Classification	C5c-
Radius of Curvature / ft.	1,140.97	Channel Width / ft.	205.00
Max. Structure Spacing/ ft.	365.12	Tortuosity	5.6
Reg. Structure Spacing / ft.	245.80	Critical Shear Stress	0.331 lbs./sq.ft.
Hydraulic Radius / ft.	8.880	Slope = ft./ ft.	0.0006553 3.46 ft./mile
Cross Sectional Area / sq. ft.	2,291.00	Wetted Perimeter / ft.	258
Bank Full Discharge / cfs	12,847	Manning's n	0.029
		Mean Velocity / fps.	5.61

<b>Quantities List</b>	
Rock / Cubic Yards	3,272
Shotrock D50 = 18" / Tons	1,668
Shotrock D50 = 24" / Tons	3,240
Soil moving/ Cubic Yds.	4,972
Bare Root Trees	1,725
Live Stakes	4,040
Native Grass Seeding / acres	1.39
Mulching / acres	1.39
Geogrid sq. yds.	6,493.00
Coir / sq.yds.	8,035.00

<b>Channel Bank Vegetation - Practice Code 322</b>		<b>Five Year Flood Frequency -</b>	
<b>Vegetation Type</b>	<b>Quantity</b>	<b>Discharge / cfs</b>	33,150
Bare Root Seedlings / ea.	1,725.00	4,930.47 Sq. Mi.	
Live Stakes / ea.	4,040.00		
Seeding/ acres	1.39		
<b>Mulching - Practice Code 484</b>			
Mulching / acres	1.39		

Landowner	City of Marysville
C/O	Austin St. John
Address	210 N 8th St
City, State Zip	Marysville, Kansas 66509
Phone	785-562-5332
Legal	SW1/4, Sec. 33, T2S, R7E
Date	12/10/2020