

Proposed Ranking for 9/15/08 Working Group Meeting Review



		Consultant Team Ranking - Engineering														
		Bridge Types ("Many")														
		9/15/2008														
Code		1	2	3	4	5	6	7	8	9	10a	10b	11a	11b	12a	12b
		Stl. I-Girder	Stl. Box	Conc. Seg.	Wave frame	Sail Blade	Tied Arch	Thru Arch	Extrados ed	Cable Stay'd	Swing		Vert. Lift		Double Deck	
	Center-to-center Span Width	550 +	550 ++	550	680	420	750	680	600	882	Hi	Low	Hi	Low	Stl. I-Girder	Composite
		550 +	550 ++	550	680	420	750	680	600	882	420	420	420	420	420	420

Code	Engineering															
	<i>Fundamental-Cost</i>															
a ₁	Initial Cost*	8	8	8	8	7	8	8	8	8	6	5	4	3	2	1
a ₂	Cost Escalation Risk	8	9	15	10	7	11	12	13	14	6	5	4	3	2	1
b	Constructability/Schedule Risk	11	10	9	12	7	14	13	8	15	5	6	3	4	2	1
c	Lifecycle Cost/Maintenance	7	8	15	12	11	9	10	14	13	4	3	2	1	5	6
	<i>Fundamental-Performance</i>															
d	Location, and Size of Piers	13	12	7	14	11	10	8	9	15	5	6	3	4	2	1
f	Seismic Performance	9	10	7	13	11	12	8	14	15	5	6	3	4	2	1
g _w	Navigation Performance (Width)	9	10	8	13	7	14	12	11	15	2	1	4	3	5	6
g _h	Navigation Performance (Clearance)	4	5	3	8	7	9	10	6	11	14	12	15	13	1	2
	Transit Performance	11	10	13	7	9	8	12	6	5	3	1	4	2	15	14
	Total Engineering Score:	80.0	82.0	85.0	97.0	77.0	95.0	93.0	89.0	111.0	50.0	45.0	42.0	37.0	36.0	33.0
	Rank	8	7	6	2	9	3	4	5	1	10	11	12	13	14	15

Comments

- * Initial cost scoring was revised to reflect navigation span length increase for steel I-girder, steel box, concrete segmental, tied arch, thru arch, extradosed and wave frame bridge types. All of these options were ranked at 8, which is the original ranking of the cable-stayed bridge assigned at 8/28/08 TAC meeting.
- ** Flexibility scores were removed. Flexibility scoring was believed to be too fine-grained for this screening and did not change the recommendation for types to pass this screening.

Ranking from 8/28/08 Working Group Meeting



		Consultant Team Ranking - Engineering														
		Bridge Types ("Many")														
		8/28/2008														
Code		1	2	3	4	5	6	7	8	9	10a	10b	11a	11b	12a	12b
		Stl. I-Girder	Stl. Box	Conc. Seg.	Wave frame	Sail Blade	Tied Arch	Thru Arch	Extrados ed	Cable Stay'd	Swing		Vert. Lift		Double Deck	
	Center-to-center Span Width	420	420	420	420	420	420	680	420	882	Hi	Low	Hi	Low	Stl. I-Girder	Composite
	Center-to-center Span Width	420	420	420	420	420	420	680	420	882	420	420	420	420	420	420

Code	Engineering															
	<i>Fundamental</i>															
a ₁	Initial Cost	15	14	13	11	7	12	10	9	8	6	5	4	3	2	1
a ₂	Cost Escalation Risk	10	9	15	8	7	11	12	14	13	6	5	4	3	2	1
b	Constructability/Schedule Risk	15	14	13	11	7	12	8	9	10	5	6	3	4	2	1
c	Lifecycle Cost/Maintenance	7	8	15	12	11	9	10	14	13	4	3	2	1	5	6
d	Location, and Size of Piers	9	8	7	13	15	12	10	11	14	5	6	3	4	2	1
e	Flexibility **	9.0	11.5	13.9	7.6	7.4	9.5	9.3	6.3	6.8	9.0	9.3	8.2	8.5	5.2	4.9
f	Seismic Performance	9	12	7	13	11	8	10	14	15	5	6	3	4	2	1
g	Navigation Performance	4	5	3	9	8	10	6	7	11	14	12	15	13	2	1
	Total Engineering Score:	78.0	81.5	86.9	84.6	73.4	83.5	75.3	84.3	90.8	54.0	52.3	42.2	40.5	22.2	16.9
	Rank	7	6	2	3	9	5	8	4	1	10	11	12	13	14	15