

**NCSX June 2007 ETC
TABLE II - Materials and Subcontracts**

Materials and Subcontracts (M&S)																					
TASK DESCRIPTION	Estimate									Basis of Estimate											
	41MS (\$)	48MS (\$)	STK (\$)	EMEM (Hrs)	EMSM (Hrs)	EMTB (Hrs)	EAEM (Hrs)	EASB (Hrs)													
1 Shim Blocks	104,956																				
2 Total SS material Required: 24 in sq x 800 pcs + 50 sq ft for nose																					
3 Raw Material @ \$8 / # (per verbal Ludlum steel quote)	60,556																				
4																					
5 Qty of 2' x 2' shts=162/4																					
6 Drum Finish \$50/side (both sides)	5,600																				
7 Waterjet cutting @ 8 Hr/sheet										448											
8 Alumina Application per quote from A&A Coating = (both Sides)	38,800																				
Inboard Weld Joint																					
Weld wire for inboard joint (12 cu. In /joint * 15 joints * .3 #/cu. In.)+ 10% was	2,400																				
9																					
G-11 Bushing Estimate																					
11 Price \$0.45/cu. In ---- Quantity Required																					
12 2" dia. Convolution Roll G-11CR	8,050																				
13 PPPL Machining Roll										554											
Stud Kits	389,885																				
15 10.5 Studs	48,375																				
16 7.5 studs	95,088																				
17 Washers	116,220																				
18 Sphercial Sets	127,140																				
19 Nuts	3,062																				
Bladders Estimate																					
22 Quantity Required= 50	9,050																				
23 Engineering Charge	3,800																				
24 Price per piece \$180																					
Supernuts	123,750																				
26																					
Stud Kits for C-C Joints, and Weld Clamping																					
28 10.5 Studs	13,438																				
29 Washers	16,300																				
30 Sphercial Sets	14,900																				
31 Nuts	1,100																				
32																					
Sliding Shims for C-C inboard leg																					
34 G-11 Shims	1,440																				
35 Machining Labor										48											
36 Misc Tech Shop Support @ 1/2 mm/mo. Through FPA sta 2 12 mo.										960											
TOTAL	689,069									2010											
Notes: Table V has the detailed backup, including actual quotes	689.0685																				
	2699.0685																				

162.5	sq ft	Includes allowance for 25% for wastage
60	sq ft (nose shims)	Basis Of Estimate: Verbal Price quote from Ludlum Steel (see Table V)
7569.45	# 310SS	
56	plates (2' x 2')	
		Basis of Estimate: Past procurements
		Basis of Estimate: Recent experience
		Basis of Estimate: Quote from A&A Coatings (see Table V)
		Basis of Estimate: Quote from MetalTEK (actual Cost) see Table V
166	\$ / 4 ft. length (based on recent price for round stock)	
813	Pcs	See Table V for Backup
1626	linear Inches	See Table V for Backup
135.5	Ft	See Table V for Backup
33.875	4' Lengths	See Table V for Backup
		60 studs x \$268.75) x 3 FPA => See Table V for Backup
		140 studs x \$226.40) x 3 FPA => See Table for Backup
		260 spherical sets x \$149 x 3 FPA => See Table V for Backup
		260 washers x \$163 x 3 FPA => See Table V for Backup
		Assume 116 nuts needed with 20% wastage => see McMaster Carr quote in Table V
		See American Flouroseal Quote (Table V)
		See American Flouroseal Quote (Table V)
		See Superbolt Quote (Table V)
		(Revised 6/6/07 to add 50 Supernuts for Line 27 below)
		50 Studs x \$268.75
		100 Washers x \$163
		100 Sets x \$149
		50 Nuts cost per McMaster Carr Quote in Table V
		480 cubic inches/joint x 3 joints x \$1 per cu. In See Quote table V
		Estimate 16 hours per piece x 3 pieces Basis of estimate is Engineering Judgement detailed design does not exist
		Engineering estimates based on recent experience on NCSX