Kennedy Space Center Lift Plan for Construction Contractors

This document is for use by construction contractors performing work for Kennedy Space Center. It is recommended for all lifts and will satisfy the lift planning requirements in accordance with OSHA and NASA regulations and contract requirements. A lift plan is mandatory when: 1) lifting personnel with a crane, 2) the load exceeds 75% of the crane's capacity in a given configuration, 3) the lift requires more than one crane, 4) during demolition when the actual weight or structural integrity of the load are in doubt, 5) when the operation is within a boom length of power lines, 6) when lifting over active work areas, occupied buildings, or public roadways, or 7) lifts of submerged or partially submerged objects. For further assistance, please contact the KSC Institutional Safety Office at 867-SAFE.

1. Company Name	Name and Signature of Person Preparing this Lift Plan	2. Date

3. Project Name and Job Location

4. Load Description

5. Crane Description - Type, Manufacturer, Model # *(multiple crane lifts require separate plan for each crane)*

6. Lift Description *(attach diagram of lift and load placement)*

LOAD			**CRANE** (continued)		
7. Load Condition *(describe)*			27. Radius at Set-down		ft
8. Known Center of Gravity? *(Attach diagram)*			28. Capacity at minimum boom angle / maximum radius (Attach copy of actual load chart used)		lbs
9. Source of Load Weight *(attach a copy of drawings, calculations, bill of lading, etc.)*			29. Maximum load on crane for this lift (Gross Load from Block 20)		lbs
10. Load Weight Empty		lbs	30. Percentage of the crane's rated capacity in this configuration		%
11. Weight of Load Contents / Fluids		lbs	**JIB/FLY**		
12. Weight of Auxillary Block		lbs	31. Erected _____ Stowed _____ Stored _____		
13. Weight of Main Block		lbs	32. If jib / fly is used: Length = _____ Angle = _____		
14. Weight of Lifting Beam (See Block 50)		lbs	33. Rated capacity of jib / fly from chart = _____		
15. Weight of Slings / Shackles / Other Rigging (See Blocks 42 thru 52)		lbs	34. Weight of Jib if installed but not in use		lbs
16. Deduction for Jib / Fly (if applicable) (See Block 34)		lbs	**CRANE SETUP/OTHER CONSIDERATIONS**		
17. Weight of Hoist Rope (if applicable)		lbs	35. Soil conditions / level / underground hazards / Crane mat required?		
18. Weight of Auxillary Head/Rope (if applicable)		lbs	36. Outriggers (full / partial) / pads / matting / on rubber? ☐ Yes ☐ No		
19. Additional Deductions (list if applicable)		lbs	37. Buildings, equipment, or structure to lift / swing over?		
20. Gross Load (Add Block 10 thru 19)		**lbs**	38. Travel required? ☐ Yes ☐ No		
CRANE			39. Working quadrants / swing restrictions?		
21. Boom Configuration			40. High voltage / electrical hazards/other hazards?		
22. Boom Length		ft	41. Other Considerations? (Head room, winds, taglines, traffic, etc.) Add to Block 6		
23. Counterweight		lbs	**RIGGING**		
24. Boom angle at Pick-up		o	42. Slings (number, size, type)		
25. Radius at Pick-up		ft	43. Slings rated capacity per configuration (See Block 45)		
26. Boom angle at Set-down		o	44. Total Weight of slings		lbs

RIGGING (continued)			REQUIRED ATTACHMENTS	
45. Hitch (vertical, basket, choker) Sling Configuration Angle _____		° deg	53. Load placement diagram showing location of pick & final place points	❑
46. Shackles (number, size)			54. Rigging diagram with sling angles, expected loads, & load CG	❑
47. Shackles rated capacity			55. Photocopy of actual load charts used to calculate crane capacity	❑
48. Total Weight of Shackles		lbs	56. Rigging certifications	❑
49. Spreader Beam/Other rigging required? (Type, Size, Capacity)			57. Rigging load limit charts (Safe Working Load Limit)	❑
50. Weight of Spreader Beam/other rigging		lbs	58. Crane certification (Annual/Daily Checklist)	❑
51. Connection to Load capacity each (lugs, bollards, pad eyes, none)			59. Operators certification	❑
52. Total Weight of all rigging (Add lines 44, 48, 50 and 51		lbs	60. Rigger qualification document(s)	❑
			61. Narrative of lift procedures (See item 6)	❑
			62. Source of load weight (See Items 8 & 9)	❑
			63. Others _____	

I certify that all information contained herein has been reviewed for accuracy and correctness.

Submitting Official Signature	Name & Title	Date

FOR NASA USE ONLY (please initial)

Institutional Safety:	Accept:	Accept with Changes:	Not Accepted:
Lifting Device's Equipment Manager:	Accept:	Accept with Changes:	Not Accepted:
Contracting Officer:	Approve:	Disapprove:	

Instructions for Kennedy Space Center Lift Plan for Construction Contractors

1. Name of contractor performing the lift. Include name of person preparing this lift plan.
2. Date lift plan was prepared.
3. Project name and actual location of lift.
4. Describe the load and any special considerations.
5. Self-explanatory.
6. Brief description of pickup and placement of load. Attach diagrams as necessary.
7. Describe the load and any special considerations (e.g., dry, solid, filled with liquid, empty, stable, unstable, etc.).
8. Is the load's center of gravity known? If so where is it documented? Attach diagram. **(On Lift Plan Worksheet)**
9. Document the source of load weight (e.g., drawings, calculations, bill of lading, etc.).

10. - 18. Self-explanatory. **(On Lift Plan Worksheet)**

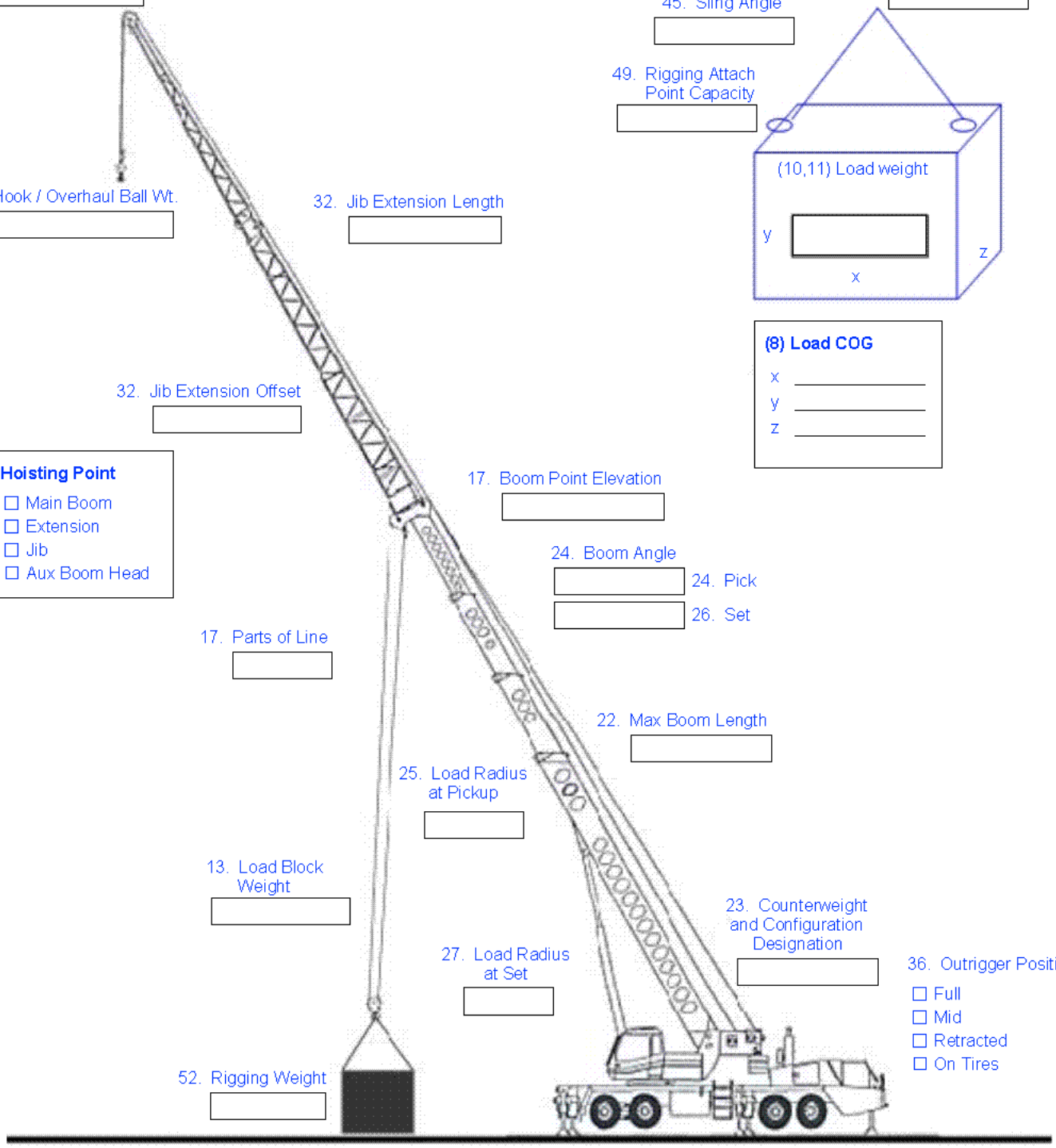
19. List all additional deductions and weights.
20. Add Block 10 through Block 19. **(On Lift Plan Worksheet)**
21. Describe boom configuration. Refer to manufacturer's terminology.

22. - 27. Self explanatory. **(On Lift Plan Worksheet)**

28. Crane's rated capacity at minimum boom angle / maximum radius. Figure worst case between pick and place.
29. Copy Gross Load from Block #20.
30. Block #29 divided by Block #28.
31. Check to indicate jib / fly erected, stowed, or stored off the crane.
32. If the Jib is used, enter the length of the boom in feet and the angle in degrees. **(On Lift Plan Worksheet)**
33. List the Jib capacity from the Fly from chart.
34. The weight of the jib if it is installed on the boom but is not being used during the lift. **(On Lift Plan Worksheet)**
35. Describe site, soil, stability conditions and any underground hazards or concerns.
36. Describe outrigger setup and required matting if applicable. **(On Lift Plan Worksheet)**
37. Describe considerations for buildings, structures, or equipment which will be under the load during the lift.
38. Describe crane travel with load on the hook if required.
39. Describe planned crane working quadrant(s) and any swing restrictions.
40. Describe any electrical hazards or concerns in close proximity to the crane.
41. Describe other considerations of note such as restricted head room, use of taglines, reduced wind limitations, traffic control, etc.
42. Describe slings to be used.
43. In the planned configuration, list the maximum rated capacity the sling can lift in lbs. **(On Lift Plan Worksheet)**
44. The weight of the sling to be used.
45. The type of hitch to be used and its sling configuration angle (choker, vertical, basket). **(On Lift Plan Worksheet)**
46. Describe shackles to be used, number and size.
47. The maximum rated capacity each shackle can lift in lbs.
48. The total weight of all shackles used.
49. List Spreader beam / other rigging used. State type, size, and capacity.
50. Self explanatory.
51. Self explanatory. **(On Lift Plan Worksheet)**
52. The total weight of all rigging that will be used.

53. - 63. Self explanatory.

Lift Planning Worksheet



Refer to operator's manual and all notes and warnings for crane-specific information

Load Weight Field Verification

Lift	Equipment Item	Weight	Crane Operator's Verification (Name & Initials)
1			
	Total Weight:		
	Maximum Radius:		
2			
	Total Weight:		
	Maximum Radius:		
3			
	Total Weight:		
	Maximum Radius:		
4			
	Total Weight:		
	Maximum Radius:		
5			
	Total Weight:		
	Maximum Radius:		