

VALUE ENGINEERING TEAM STUDY
APPENDIX B:

SPECULATION LIST

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√=Develop Idea ?=Investigation X=Deleted C=Comment BD=Being Done

1. √ Eliminate emergency bulkheads
2. √ Same as 1, but borrow from another lock
3. √ [4] Move lock South, align more parallel to existing levee
4. √ [3] Align new lock close to existing lock, align channel to optimize in/out
5. C [6] Restate the NED plan to justify a 110' lock
6. C [5] Identify risk-based benefits spills/environmental
7. √ [8,9,10] Reduce the number of control houses
8. √ [7,9,10] One control house
9. √ [7,8,10] Modular control house
10. √ [7,8,9] Move control house off lock wall, reduce lock wall thickness
11. √ Reduce lock wall thickness from 23', cantilever control house if necessary
12. C Segregate material in disposal area for reuse
13. √ Fire monitor system in-lieu of hose reels, there are too many hose reels
14. √ Reduce guide wall length from 1200' (based on 110' wide lock)
15. √ Spare gates to swap out (75' lock or larger)
16. √ Use Floating guide wall
17. √ Use concrete pile for guide wall
18. √ Use modular guide wall
19. √ Use composite piles (corrugated material) piles for foundation
20. √ Precast concrete starpile
21. √ Reduce dolphin size (~35')
22. X Float in lock chamber
23. X Float in gate bays
24. X Float in gates (pontoon gate)
25. C Revisit levee section (lock chamber fill)
26. C Concrete cut-off in North-South bulkhead slot in-lieu of levee section cut-off.
27. √ Use 4' walkway across
28. C Non-metal walkway across gates
29. C Reuse motors on gates
30. X Buoyant gates to reduce pintle loads
31. C Salvage motors for re-use
32. √ Elim. Backfill next to chamber walls
33. X Lock chamber walls buttress supported

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APPENDIX B: SPECULATION LIST (continued)

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| 34. | C | Use 2 pile founded T-walls for lock chamber, with struts, grade beam |
| 35. | X | RCC structure |
| 36. | C | Precast panels for wall clad |
| 37. | C | Eliminate dewater condition from design requirement |
| 38. | C | Create wetlands in North disposal site, add to a mitigation bank. |
| 39. | √ | Electrical/generator house next to or with operator house |
| 40. | √ | Incorporate chemical clean-up facilities for workers in maintenance area |
| 41. | C | Lower needle beam (support for needles) recess from 42' to mid-wall height (about 20' off bottom) |
| 42. | √ | Temporary filler in needle girders slot from damage |
| 43. | √ | Plastic timbers or wear surface lining on gate fender system |
| 44. | X | Steel corners on needle beam slot |
| 45. | √ | Steel corner (rounded) on all opening and edges |
| 46. | C | Setup motor drive unit so it can slide in and out (adjustable) from gear drive. |
| 47. | C | Make upper hinge section (gate mount) a bolt on and adjustable unit, not fixed |
| 48. | BD | Use PLC switches and system |
| 49. | C | 3-D model in construct, for bidders to view |
| 50. | √ | Combine all functions into one large building |
| 51. | C | Use vertical lift gates |
| 52. | C | Site adapt Calcaseu multi-purpose building |
| 53. | √ | Install multi-video system to eliminate multiple gates houses |
| 54. | √ | Shorten all guide walls |
| 55. | √ | [56] Use same length guide walls as existing lock |
| 56. | √ | [55] Evaluate shortening 1200 and 600' guide walls independently |
| 57. | C | Add lifting eyes to gates |
| 58. | C | Eliminate buoyancy design for gates |
| 59. | C | Review the construction sequencing and schedule |
| 60. | C | Formulate a well defined (Primavera) scheduling program |
| 61. | C | Hydraulic model to shorten the guide wall length |