

DISCUSSION PAPER
Preview of Integrated Noise Model (INM) Runs for Meeting #5
July 31, 2001

CHRONOLOGY:

- 14 Feb 2000: Study Group memo lays out 3 alternatives for analysis
- 1 Nov 2000: preliminary model runs briefed on Alternatives 1-3
- 6 Nov 2000: revised preliminary runs, to correct runway distribution of exceptions to contraflow
- 13 Jul 2001: advance charts of 'final' runs on Alternatives 1-3
- 23 Aug 2001: scheduled presentation of model results in Meeting #5

THE ALTERNATIVES:

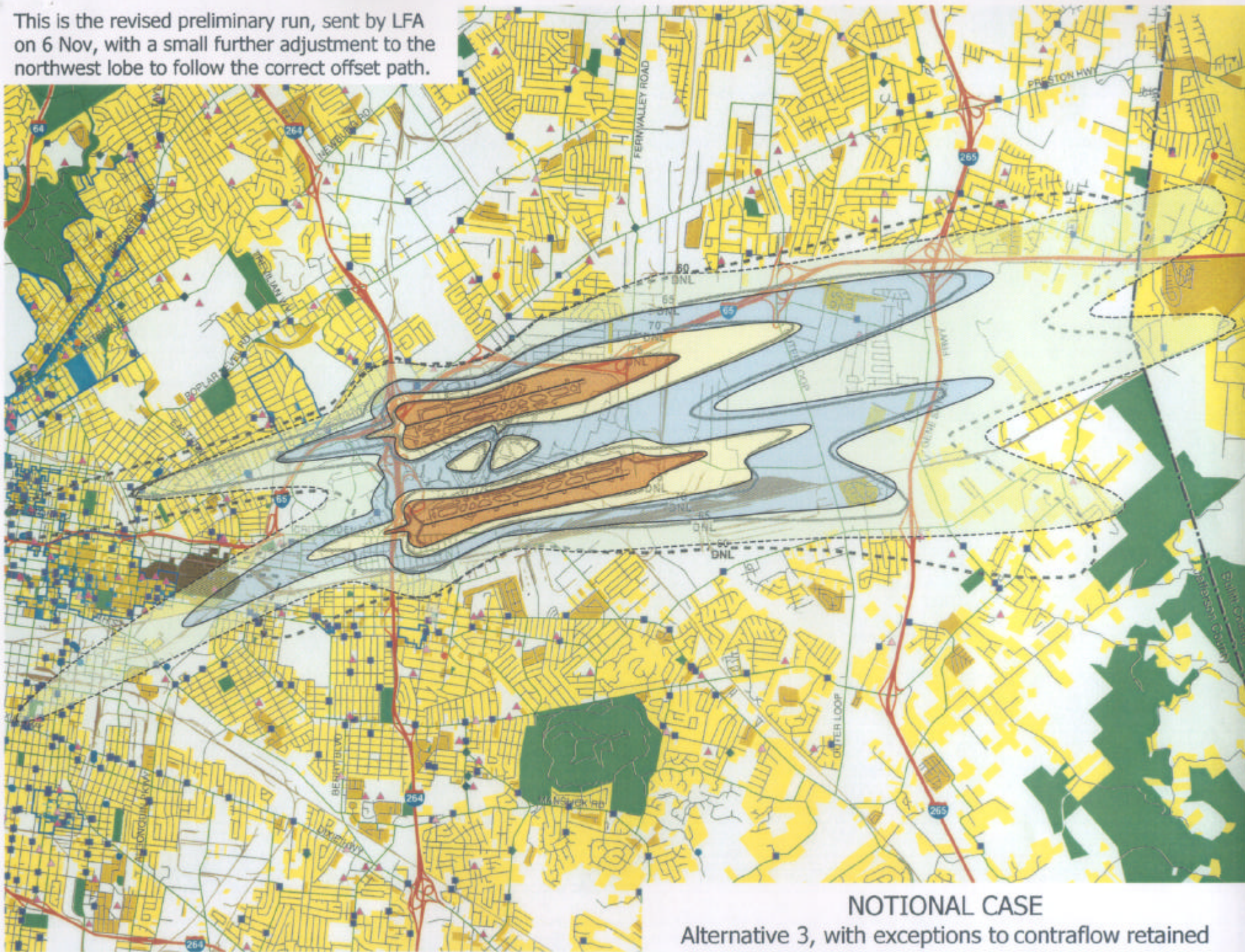
<i>Case</i>	<i>North component</i>	<i>South component</i>
0	east runway preference	diverge by destination
1	eliminate runway preference at night	no change (diverge by destination)
2	eliminate runway preference entirely	maximum divergence
3	west runway preference	minimum divergence

OBJECTIVES FOR 'FINAL' MODEL RUNS:

- correct offset path
- reduce exceptions to contraflow by half
- apply reduced dispersion parameters
- correct local geography (sensitive/historic)



This is the revised preliminary run, sent by LFA on 6 Nov, with a small further adjustment to the northwest lobe to follow the correct offset path.

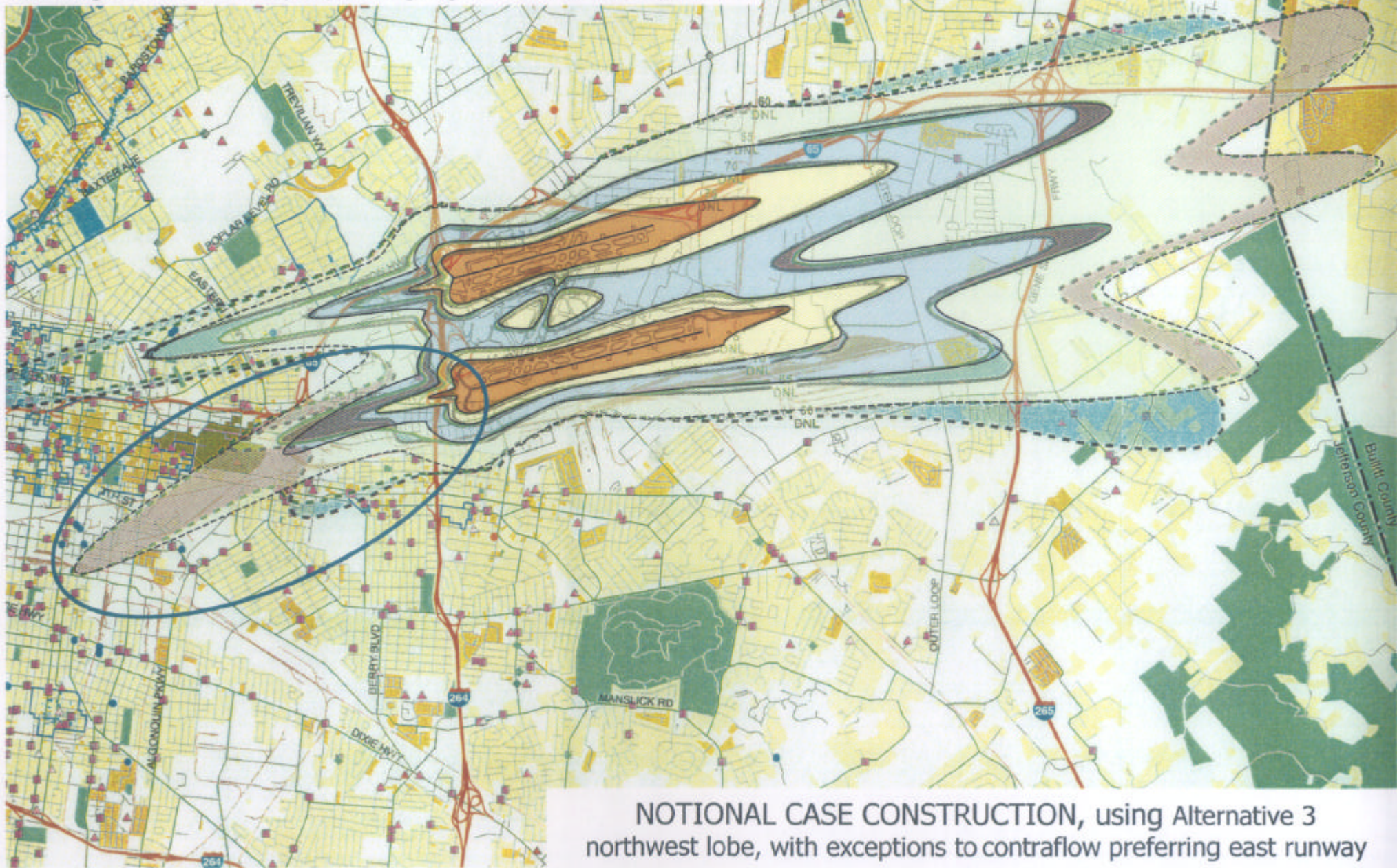


NOTIONAL CASE

Alternative 3, with exceptions to contraflow retained

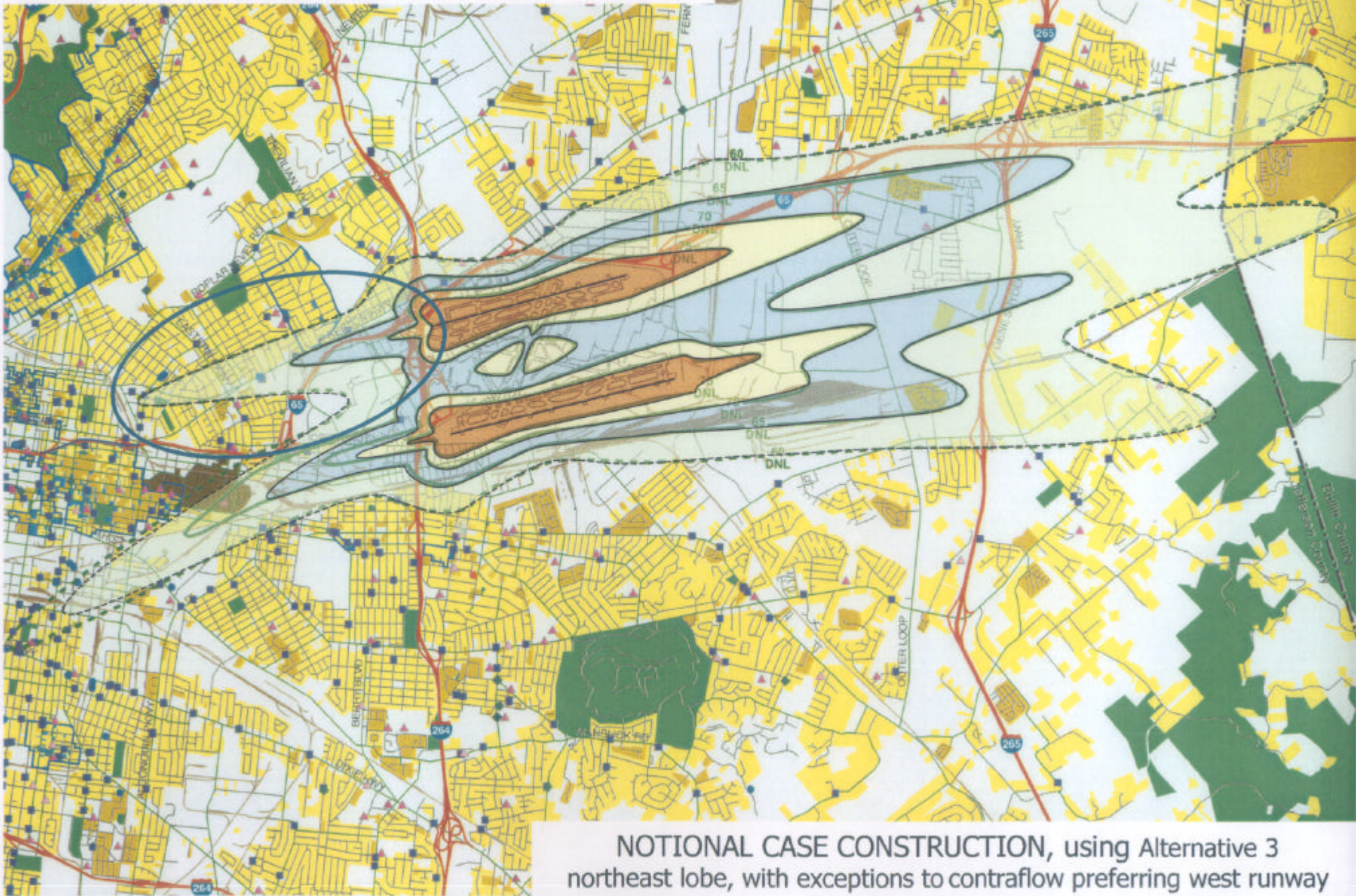
This is the original preliminary run, briefed by LFA on 1 Nov. This run had contraflow exceptions preferring the east runway. We don't know the exact split of these operations, but generally, our runway preference yields about an 80-20 split. So, we might estimate this run to include about 20% of contraflow exceptions on the west runway.

The sketch shows a lobe about the same size as produced by the run, but following the correct offset path, and aligning both arrivals and departures.



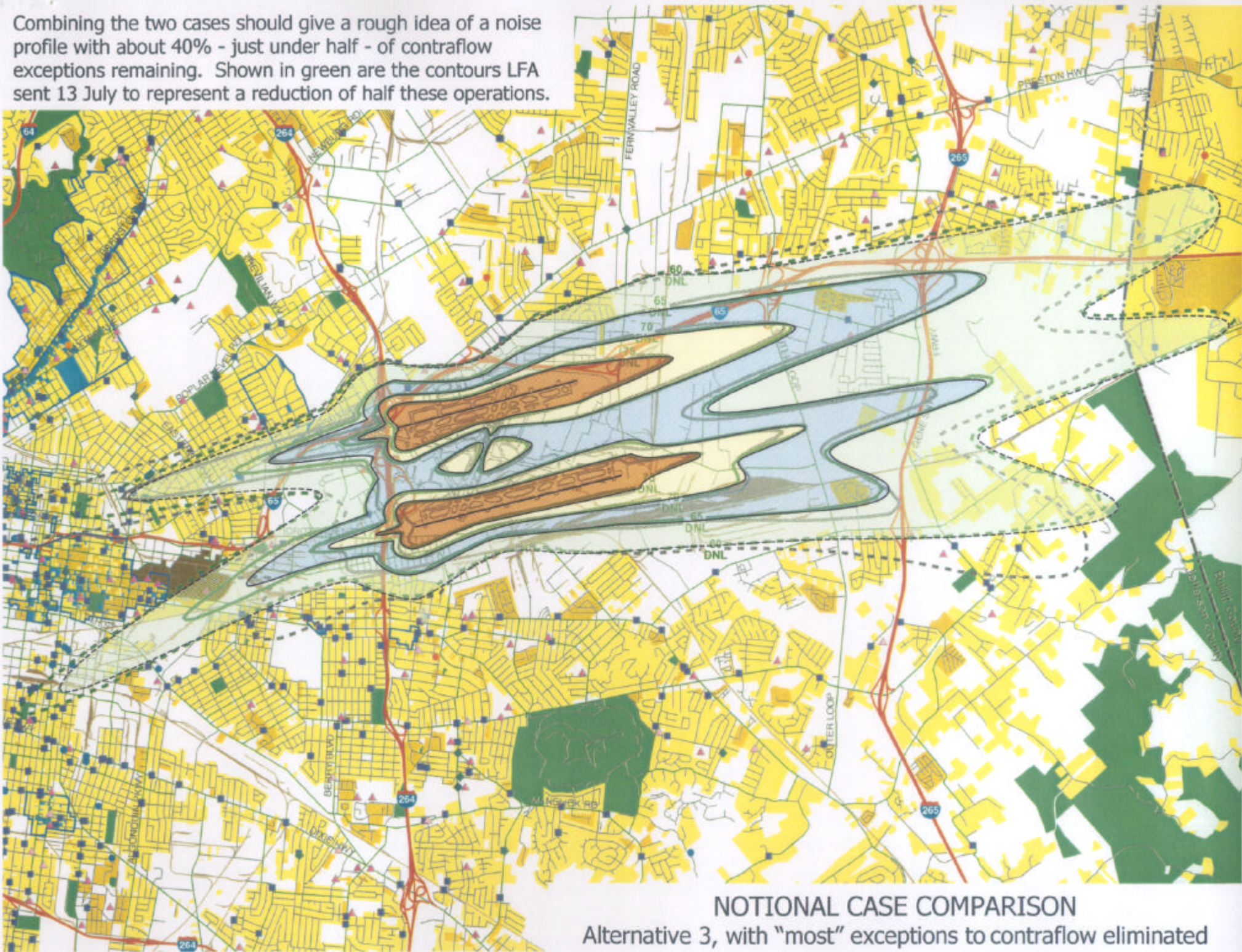
NOTIONAL CASE CONSTRUCTION, using Alternative 3 northwest lobe, with exceptions to contraflow preferring east runway

This is the revised preliminary run again, which changes the preference for contraflow exceptions to the west runway (note the change in the northwest lobe constructed from the previous run). Using the same general assumption as before, the northeast lobe taken from this run should include only about 20% of these operations.



NOTIONAL CASE CONSTRUCTION, using Alternative 3 northeast lobe, with exceptions to contraflow preferring west runway

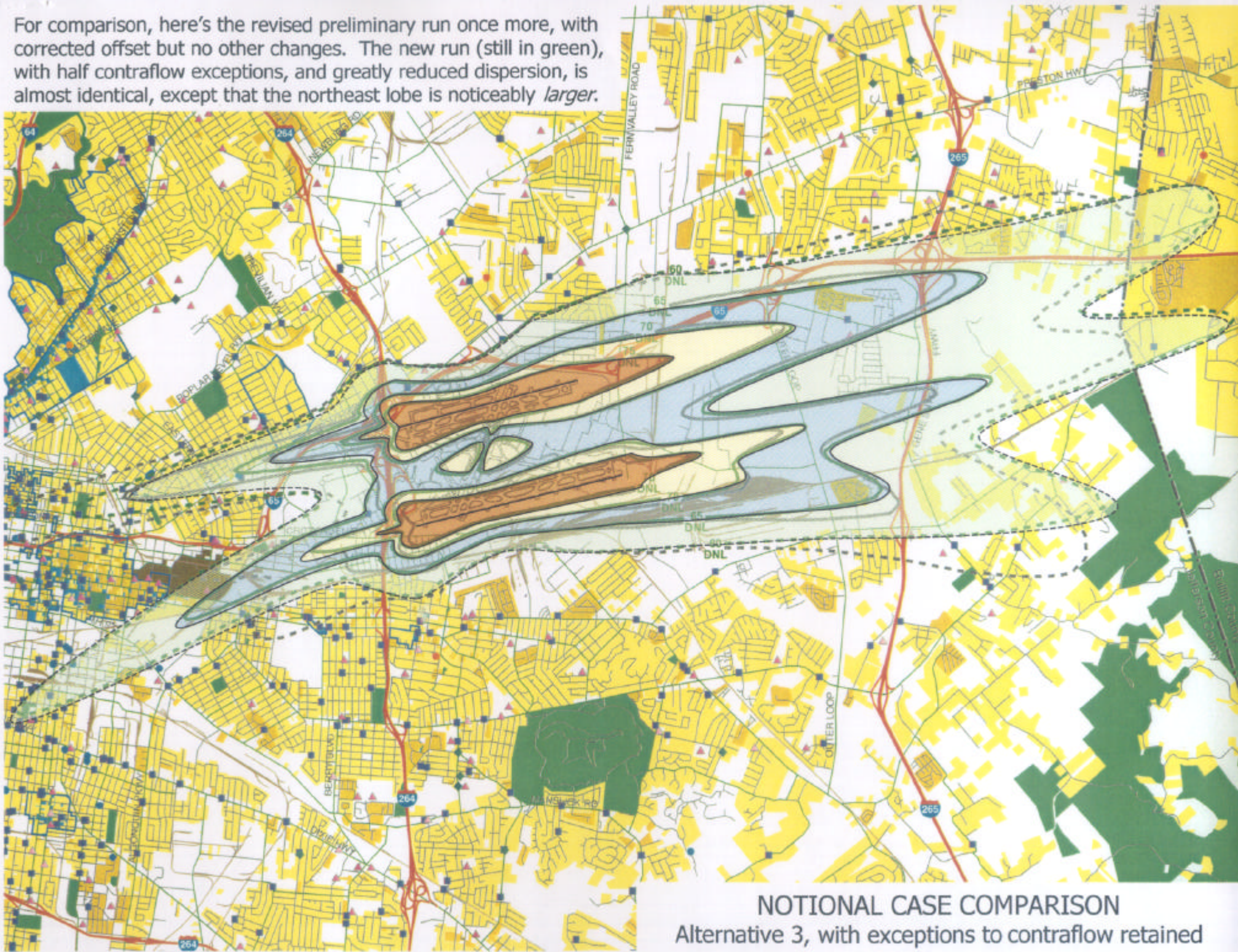
Combining the two cases should give a rough idea of a noise profile with about 40% - just under half - of contraflow exceptions remaining. Shown in green are the contours LFA sent 13 July to represent a reduction of half these operations.



NOTIONAL CASE COMPARISON

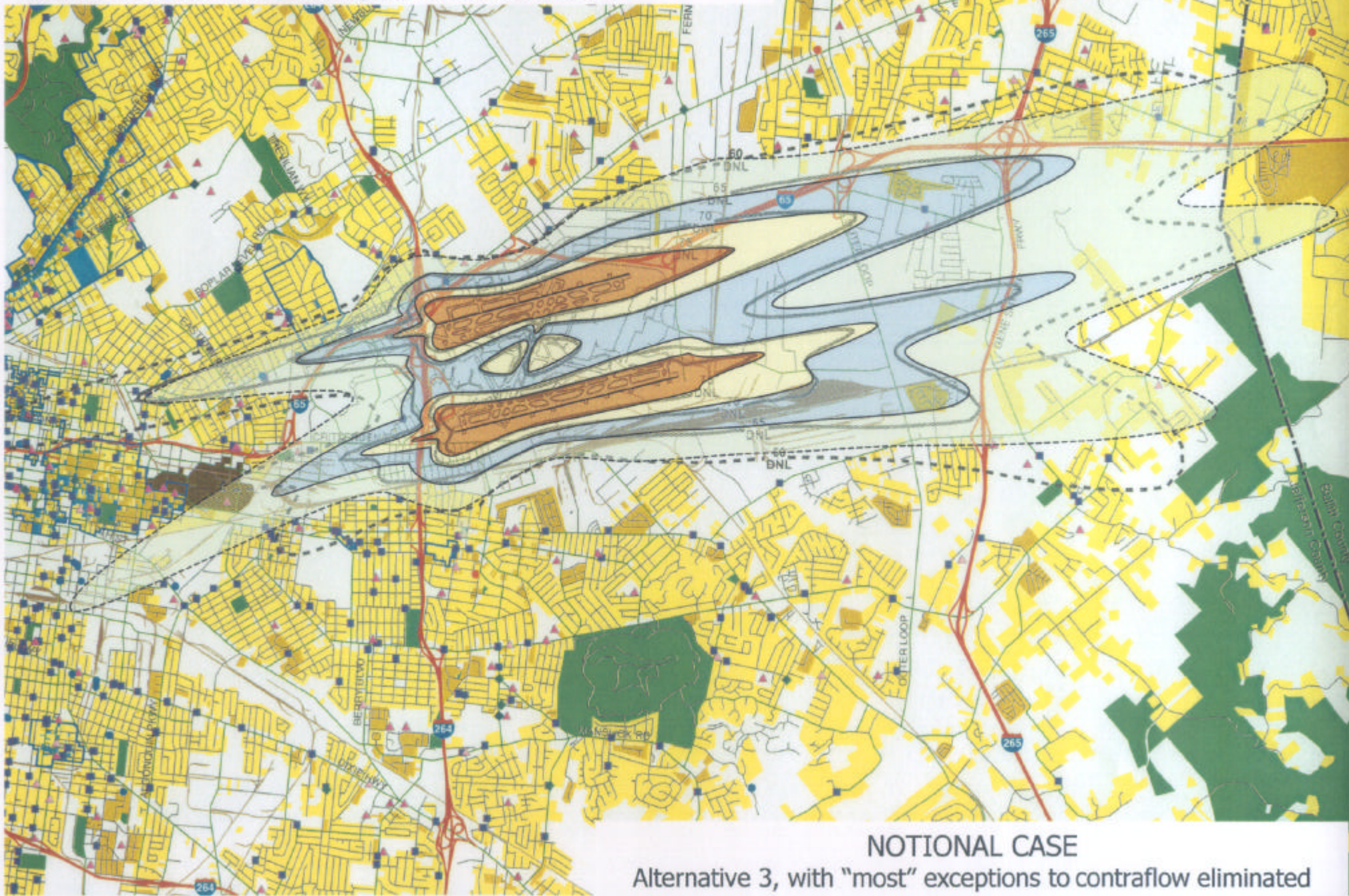
Alternative 3, with "most" exceptions to contraflow eliminated

For comparison, here's the revised preliminary run once more, with corrected offset but no other changes. The new run (still in green), with half contraflow exceptions, and greatly reduced dispersion, is almost identical, except that the northeast lobe is noticeably *larger*.



NOTIONAL CASE COMPARISON
Alternative 3, with exceptions to contraflow retained

In summary, this contour is a rough approximation of what a reduced-exceptions-to-contraflow run might have produced. With runway preference reapplied to these operations, the west might've been a little bigger, the east a little smaller. Reduced dispersion might have made all the lobes narrower. This provides a context for evaluating the new round of results.



NOTIONAL CASE

Alternative 3, with "most" exceptions to contraflow eliminated