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September 8, 2015

SoCal Metroplex EA
Federal Aviation Administration
Western Service Center - Operations Support Group
1601 Lind Avenue SW
Renton, WA 98057

Re: City of Santa Monica Comments to the Southern California Metroplex Draft Environmental Assessment

To whom it may concern:

On June 10, 2015 the Federal Aviation Administration (FAA) released for public review a Draft Environmental Assessment (Draft EA) of the potential environmental impacts of the implementation for the Southern California Metroplex project including Santa Monica Airport (SMO) which falls within this project area.

This Draft EA is a complex document that is frequently difficult to understand and entirely insufficient for the purposes for which it is intended. While Chapter 1 is a good description of the nationwide program to upgrade and modernize the nation's air traffic system, it is so broad and non-specific in its description of the proposed Southern California Metroplex project that the true impact of the Metroplex project is inadequately described. The City believes this document is inadequate in the Purpose and Need section (Chapter 2), the Description of the Alternatives (Chapter 3), and Environmental Consequences (Chapter 5).

Document Format

This document is an Environmental Assessment (EA) required under the National Environmental Policy Act (NEPA). It is both a legal document prepared under the NEPA guidelines developed by the FAA (FAA Order 1050.1E) and the primary means of public disclosure. NEPA intended environmental documents like this EA to be a public disclosure document. The way the new proposed routes are presented and a lack of a clear comparison with the existing routes makes it nearly impossible for an individual to know what is being proposed and to identify potential impacts. In viewing the document on-line Exhibit 3-7 and Exhibit 3-8 purport to show the No Action Alternative and the Proposed Actions. Yet these exhibits appear blank unless the reader has sufficient

working knowledge of Adobe Acrobat to know how to turn on layers, select layers and view the layers in question. There is no appendix or web location that illustrates the routes. Even the routes shown in Exhibits 3-7 and 3-8 are broad outlines of areas on a map of useless scale. In reality a layperson has no idea what is being proposed, and even to the knowledgeable person, the scale of the maps is essentially useless. As a public disclosure document this EA fails to adequately show the current procedures and how the proposed procedures will change in the future in contrast to the intent of NEPA.

Purpose and Need

This EA fails to address residential noise impacts in any meaningful way and it appears the process used by the FAA to develop the proposed procedure neglected entirely any attempt to use this opportunity to utilize NextGen technology to provide noise relief to communities near airports. The following quote is in essence the purpose and need stated in the EA:

“2.1 The Need for the Proposed Action

In the context of an EA, “need” refers to the problem that the Proposed Action is intended to resolve. The problem in this case is the inefficiency of the existing aircraft flight procedures in the Southern California Metroplex.”

There is no mention of noise relief as a need in Southern California and it does not speak to the 40 years of controversy over aviation noise issues in Southern California in general and Santa Monica in particular. As stated in the Purpose and Need, the sole goal of the project is aviation efficiency improvement. The EA describes the air quality and greenhouse gas reduction benefits that may be achieved by some NextGen procedures (i.e., short cuts) as an environmental benefit of NextGen. Clearly this represents a trade-off between emissions, noise, and efficiency and that compromise was not presented to or discussed with the communities affected. There is no discussion in the EA of how this decision was arrived at and the amount of emissions benefit versus the noise impact. The EA contains virtually no discussion or analysis concerning why it may be worth saving a few pounds of fuel by repositioning flight tracks over populated areas, and are the fuel and emission savings large or trivial for the noise impact and disruption created? It appears that this decision was made entirely within the FAA and there was no attempt to evaluate if these NextGen procedures could have been used to alleviate aircraft noise through improved routes over less populated areas. This is counter to how NextGen was proposed to the public and to Congress. The FAA states on its website that NextGen procedures could be used to alleviate noise.

“NextGen's Role in Reducing Aviation Noise”

“July 14 — A generation’s worth of gains in aerodynamics and aircraft engine technology have dramatically reduced the number of people exposed to high noise levels near U.S. airports, but future noise reductions will depend largely on advances being developed through the Next Generation Air Transportation System (NextGen). That’s why the Noise Division continues to investigate ways to keep aviation quiet, notably through the

CLEEN (Continuous Lower Energy Emissions and Noise) program, which provides incentives for manufacturers to develop lower-noise aircraft. NextGen initiatives being fielded now offer additional gains. New Optimum Profile Descents (OPDs) enable pilots to reduce power, nearly to a glide, as they land their aircraft. This eliminates the noise from throttling the engines during step-down approaches near the airport. Additionally, Required Navigation Performance allows pilots flying OPDs to maneuver in areas around the airports to avoid congested housing areas on the ground.”

(Source: <https://www.faa.gov/news/updates/?newsId=58910>)

This EA and the design process used to create the proposed routes is not quantified or documented on the evaluation of trade-offs of emissions, noise, and efficiency and any process to advance the Southern California Metroplex Project should identify those tradeoffs and include an effort to engage the public in the with the information about design the procedures and evaluation of the compromises between emissions, noise and efficiency.

Metrics Used for the Noise Analysis

The noise analysis centers its entire study solely on the noise metric Day Night Average Noise Level (DNL). There are many issues with using this approach. The first is that the State of California, in its Airport Noise Regulations, adopted a stricter standard in terms of the metric Community Noise Equivalent Level, CNEL. And historically the FAA has deferred to using CNEL in California and, in fact, permits CNEL within its own NEPA guidelines. Here is a direct quote from FAA Order 1050.1E:

“**14.1a.** For aviation noise analysis, the FAA has determined that the cumulative noise energy exposure of individuals to noise resulting from aviation activities must be established in terms of yearly day/night average sound level (DNL) as FAA's primary metric. **The FAA recognizes CNEL (community noise equivalent level) as an alternative metric for California.** An initial noise analysis during the environmental assessment process should be accomplished to determine whether further, more detailed analysis is necessary.”

While this FAA Order is not clear as to whether it is a requirement to use CNEL in California, at a minimum the EA should have stated that it was not utilizing CNEL standards and instead opting for a less rigorous standard. Failing to do so makes the EA deceptive and misleading in analyzing noise impacts. Ignoring the State’s method indicates the FAA has no intent to take noise impact seriously in this EA. Moreover, Section 14.1a from FAA Order 1050.1E indicates that an initial noise analysis during the EA process should be accomplished. We can find no documentation that this was done per this Order, nor has there been an indication that such required initial analysis was documented in this EA.

The EA relies on the FAA policy of defining a significant impact as any change that causes an increase of 1.5 dB for any noise sensitive land use within the 65 DNL noise contour. That is an FAA policy that was formalized in the Carter Administration but has its roots in

the Nixon Administration. Few remember the origins of this policy or recognize its proper use. The 65 DNL guideline was a compromise based on economic considerations. The meaning of the 1.5 dB threshold of significance is commonly misinterpreted in presentation to the public and in particular in its representation in this EA. The misperception, which this EA makes no attempt to correct, is that any change that does not exceed this threshold will be perceived as trivial by the public, if perceived at all. Nothing could be further from the truth and the EA is deficient for not pointing this out. There have been communities exposed to noise level changes below this threshold that have protested and these have been recently documented in the media. And yet this EA is silent on the community response that may occur with the proposed action even though the changes are below the 1.5 dB of the 65 DNL threshold. The FAA recognized the limitations of DNL as an explanatory metric and that it is often misunderstood by the public. The FAA, in its Order 1050.1E addresses this problem by allowing the use of so-called supplemental metrics, such as single event metrics or number of events above a threshold metric, so that the public can better understand what is being proposed, and not coincidentally, that decision makers will better understand the nature of the change in noise being proposed.

FAA Order 1050.1E "14.5 SUPPLEMENTAL NOISE ANALYSIS".

14.5a. The Federal Interagency Committee on Noise (FICON) report, "Federal Agency Review of Selected Airport Noise Analysis Issues," dated August 1992, concluded that the Day- Night Average Sound Level (DNL) is the recommended metric and should continue to be used as the primary metric for aircraft noise exposure. However, DNL analysis may optionally be supplemented on a case-by-case basis to characterize specific noise effects. Because of the diversity of situations, the variety of supplemental metrics available, and the limitations of 1050.1E individual supplemental metrics, the FICON report concluded that the use of supplemental metrics to analyze noise should remain at the discretion of individual agencies.

14.5b. Supplemental noise analyses are most often used to describe aircraft noise impacts for specific noise-sensitive locations or situations and to assist in the public's understanding of the noise impact. Accordingly, the description should be tailored to enhance understanding of the pertinent facts surrounding the changes. The FAA's selection of supplemental analyses will depend upon the circumstances of each particular case. In some cases, this may be accomplished with a more complete narrative description of the noise events contributing to the DNL contours with additional tables, charts, maps, or metrics. In other cases, supplemental analyses may include the use of metrics other than DNL. Use of supplemental metrics selected should fit the circumstances. There is no single supplemental methodology that is preferable for all situations and these metrics often do not reflect the magnitude, duration, or frequency of the noise events under study."

This project is complex enough and far reaching enough to warrant the use of supplemental metrics. This EA is deficient in not providing additional supplemental noise metric analysis so that all, including the public and the decision makers, will understand just what the consequences of these changes will mean.

The DNL analysis presented in the EA is inadequate for predicting which, if any, of the route changes will illicit widespread community complaints. There are metrics that could be used for that purpose and this EA is deficient for not exploring such supplemental analyses. It does not require exotic analyses to perform these supplemental studies and the FAA has developed noise models that have the capability to perform these analyses easily, but the document does not appear to contain this information.

Routes Changes Affecting SMO

In this EA, Tables 3-2 lists the following proposed Standard Instrument Departures (SIDs) and Standard Terminal Arrival Routes (STARs) and Table 3-3 lists the following the proposed Required Navigation Performance (RNP) procedures.

Proposed SIDs and STARs

BOGET ONE
BONJO ONE
CHOII ONE
CTRUS ONE
FERNANDO FIVE
KIMMO FOUR
PEVEE THREE
SANTA MONICA ONE
THRNE ONE
WAYVE ONE

Proposed RNP Procedures

SMO RWY 03 LPV GPS SMO
SMO RWY 21 LPV GPS SMO

This list includes ten conventional SIDs and STARs and two RNP procedures.

Exhibit 3-8 shows, for readers that are proficient in using Adobe Acrobat layers (and is blank for most users), that there are 15 procedures that affect SMO. Appendix 1 shows the 15 procedures proposed for SMO (these are screen shots from Exhibit 3-8). There is no explanation for the discrepancy between Tables 3-2, 3-3 and Exhibit 3-8 where Exhibit 3-8 shows 15 procedures for SMO, but Tables 3-2 and 3-3 only list 12 such procedures. And, the proposed RNP procedures listed in Table 3-3 are not shown, or incorrectly labeled in Exhibit 3-8.

The route descriptions provided in Exhibit 3-8 (screenshot copied directly in Appendix 1) are entirely inadequate for purposes of the EA. The scale of the map has insufficient resolution to identify the locations of any of the procedures proposed for any of the airports. A reader cannot determine if a proposed route affects his or her home or not. This exhibit does not inform the reader and it is the only place where the reader has any hope of figuring out what the FAA is actually proposing.

The route descriptions shown in Exhibit 3-8 (Appendix 1) are shown as very wide corridors and not shown as the SID, STAR, or RNP route that would be published as a result of this project. While it is true that a SID or a STAR will have more dispersion than an RNP route, the broad overly wide corridors shown in Exhibit 3-8 make it impossible for the reader to know where the proposed route actually is located. More importantly, since this is the only place in the EA where the routes are mapped and they are shown as such broad areas, the EA could conceivably be used now or in the future to provide environmental clearance for any route that falls within these broad areas.

It should be noted that the FAA has provided presentation materials that show actual flight tracks shown as actual aircraft paths. One such presentation from the FAA for SMO is provided in Appendix 2. The FAA presentation only provides useable mapping for 8 of the proposed procedures and not to the 15 procedures presented as Exhibit 3-8 of the EA document. The relation of the tracks depicted in the FAA presentation and to the EA (Exhibit 3-8) is unclear.

Although the City supports the goal of saving fuel and reducing idling time while aircraft await clearance, which would be beneficial to the environment and to aviation efficiency, a major concern to the City of Santa Monica is the location of the right turn for SMO departures from Runway 21 to the west. The current procedure requires that aircraft fly straight off the runway heading to the west and begin turning at the shoreline. The proposed procedure suggests a turn half way between the runway end and the shoreline. The new early turn will repurpose aircraft north from the current departure path, thereby significantly affecting residences that currently have a small number of overflights to experience the majority of the instrument departures out of SMO. The FAA presentation is misleading in that the legend identifies the flight tracks as only for small turboprops and large turboprops, but it is silent regarding piston driven and turbine aircraft that represent the largest portion of the SMO aircraft fleet. The FAA has implied, but has not stated in this EA that these procedures apply to all aircraft.

As mentioned above, this EA relies on the DNL metric threshold of an increase of 1.5 dB within the 65 DNL contour as the definition of a significant impact. This proposed early turn is well outside the 65 DNL contour so no matter what the noise increase, the finding is of no significance. What the EA importantly does not address is what the community response will be, and the information provided in the EA is insufficient to make that determination. The EA relies solely on the DNL 1.5 dB change threshold even though the FAA knows that even in places where this threshold has been met the community response has been highly negative.

In fact, a recent federal court decision and federal legislation provide insight on the inadequacy of the FAA sole reliance on 65 DNL contour. In July 2013, the Court of Appeals for the District of Columbia found that helicopter noise could adversely affect a residential population at a level more than 20 dB lower than FAA's customary criterion of "significant" noise impact ($L_{dn} = 65$ dB). The Court ruled in *Helicopter Association International, Inc. v. Federal Aviation Administration*, Case No. 12-1335 (C.A. D.C., Jul.

12, 2013) that FAA was justified in mandating compulsory compliance with an offshore flight route for helicopters, even when the noise created by helicopter operations did not exceed $L_{dn} = 45$ dB at affected residences. The ruling raises fundamental questions about the adequacy of current methods for predicting, interpreting, and regulating the annoyance of aircraft noise. The court ruling relied largely on the abundance of noise complaints as a justification for instituting a noise abatement helicopter flight track raising the threshold of significance to not only the change in DNL but also the extent of noise complaints. Per the DC Court of Appeals ruling:

(the plaintiff) "...has not identified any statutory or regulatory provision that sets 65 dB as the minimum noise level that must be reached before the FAA can regulate the impact of aircraft noise on residential populations. Neither has it shown that the area addressed in the Final Rule is near an airport. The FAA's Airport Noise Compatibility Program, where the 65 dB level appears, states that "[t]he designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law." 14 C.F.R. pt. 150, app. A, tbl. 1 n.. That level was established for use in mapping noise exposure within the vicinity of airports, not residential areas far removed from an airport environment. See id., app. A, pt. A § A150.1(a). It serves as a reference point from which the FAA can reasonably deviate when determining whether a particular noise reduction intervention is in the public interest." Environmental Impacts: Policies and Procedures, 69 Fed. Reg. 33,778, 33,780–81 (June 16, 2004). Here, based on its evaluation of the complaints and the results of the Volpe study, the FAA concluded that noise levels below DNL 45 dB were adversely impacting the north shore's residential population to a degree that further control was warranted, at least on a provisional basis. The FAA explained that maximizing the use of the existing North Shore Route would "secure and improve upon the decreased levels of noise that have been voluntarily achieved." Final Rule, 77 Fed. Reg. at 39,914.*

The case clearly shows that FAA may, and if fact has, considered noise levels as low as 45 DNL in considering a noise abatement flight routes and successfully defended that policy in face of industry challenges. The City of Santa Monica would expect no less in the consideration of the right turn that is proposed before the coastline to a point after the coastline.

Conclusion

This EA and the process used to develop the proposed actions should be reevaluated and proposed recommendations much more clearly documented. In addition, the FAA should engage the public in the discussions by providing a public process to evaluate the tradeoffs between airspace efficiency, emissions and noise; including the goal of using NextGen to reduce noise impacts on the community; providing supplemental noise metric analyses that provides a meaningful description to the common reader, of what to expect from the changes, and to provide mapping for each community that is of sufficient scale

for the reader to identify their locations and show clearly the before and after location of flight paths.

On September 1, 2015, during the FAA's informational briefing to government officials the FAA introduced new material including maps layered on Google Earth in the hopes of providing additional clarity to the Exhibits portrait in the form of Adobe maps in the draft EA. The City of Santa Monica respectfully request an extension to the deadline to submit comments as part of this draft EA in order to allow time for the City to analyze the new material.

The City appreciates the opportunity to comment on the Metroplex Draft Environmental Assessment and believes it has offered a reasonable alternative consistent with the goals and aspirations of the Metroplex Project, while containing the impact of aircraft departing SMO to the same footprint that currently exists.

Sincerely,



Martin Pastucha
Director of Public Works/Airport Director

Cc: Rick Cole, City Manager
Marsha Moutrie, City Attorney
Stelios Makrides, Airport Manager

Appendix 1
Proposed SMO Alternatives Shown in EA Exhibit 3-8

Appendix 2
Proposed SMO Alternatives Shown in FAA Presentation Materials

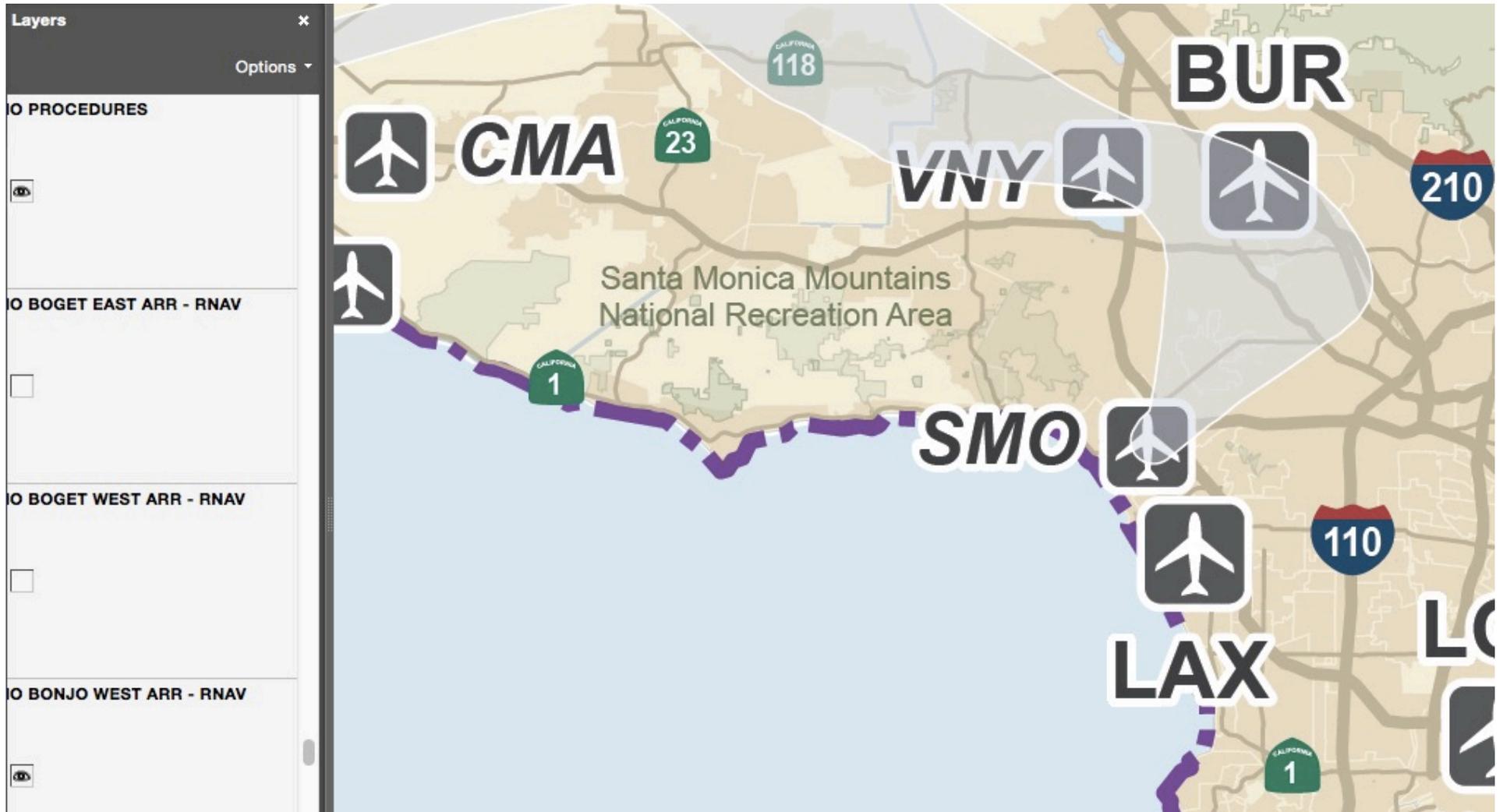
APPENDIX 1

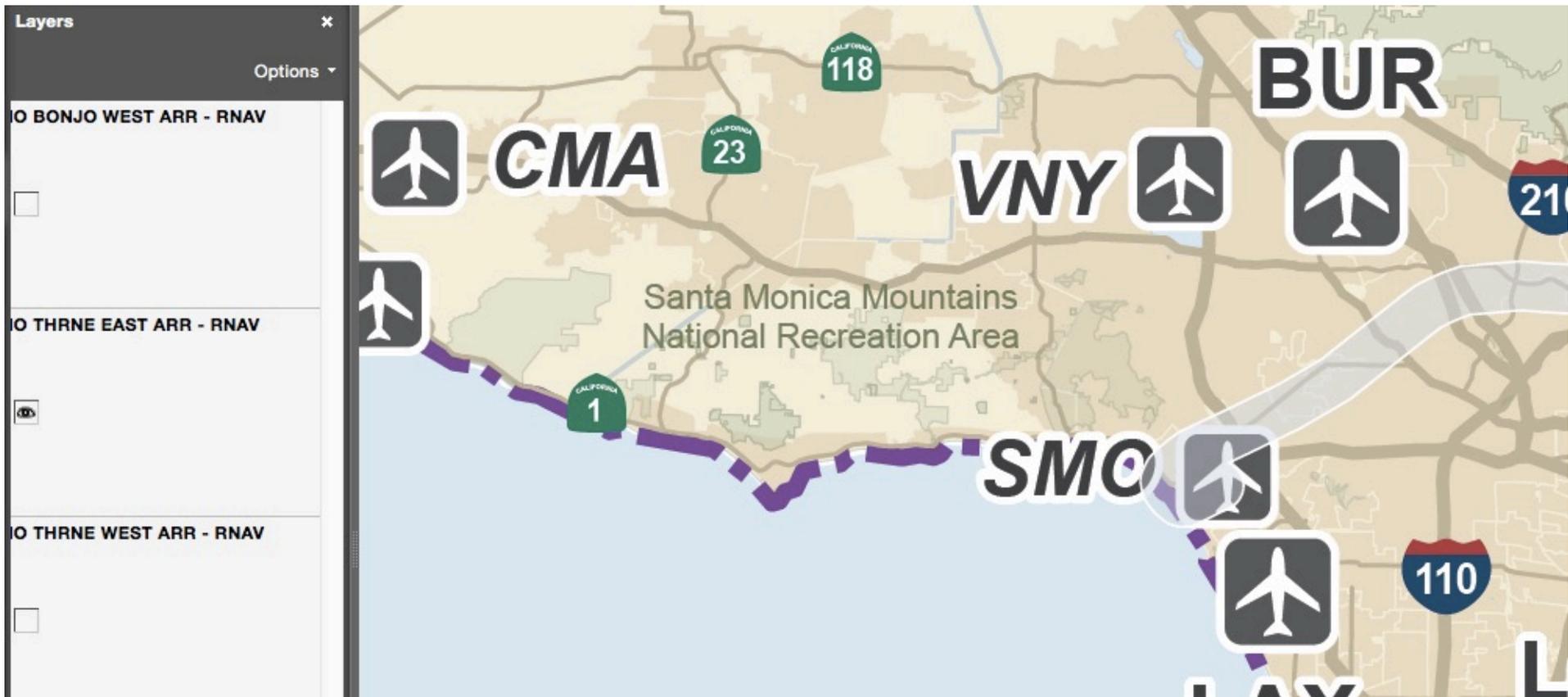
Plots of SMO Proposed Procedures From Exhibit 3-8

PROPOSED SMO ARRIVALS





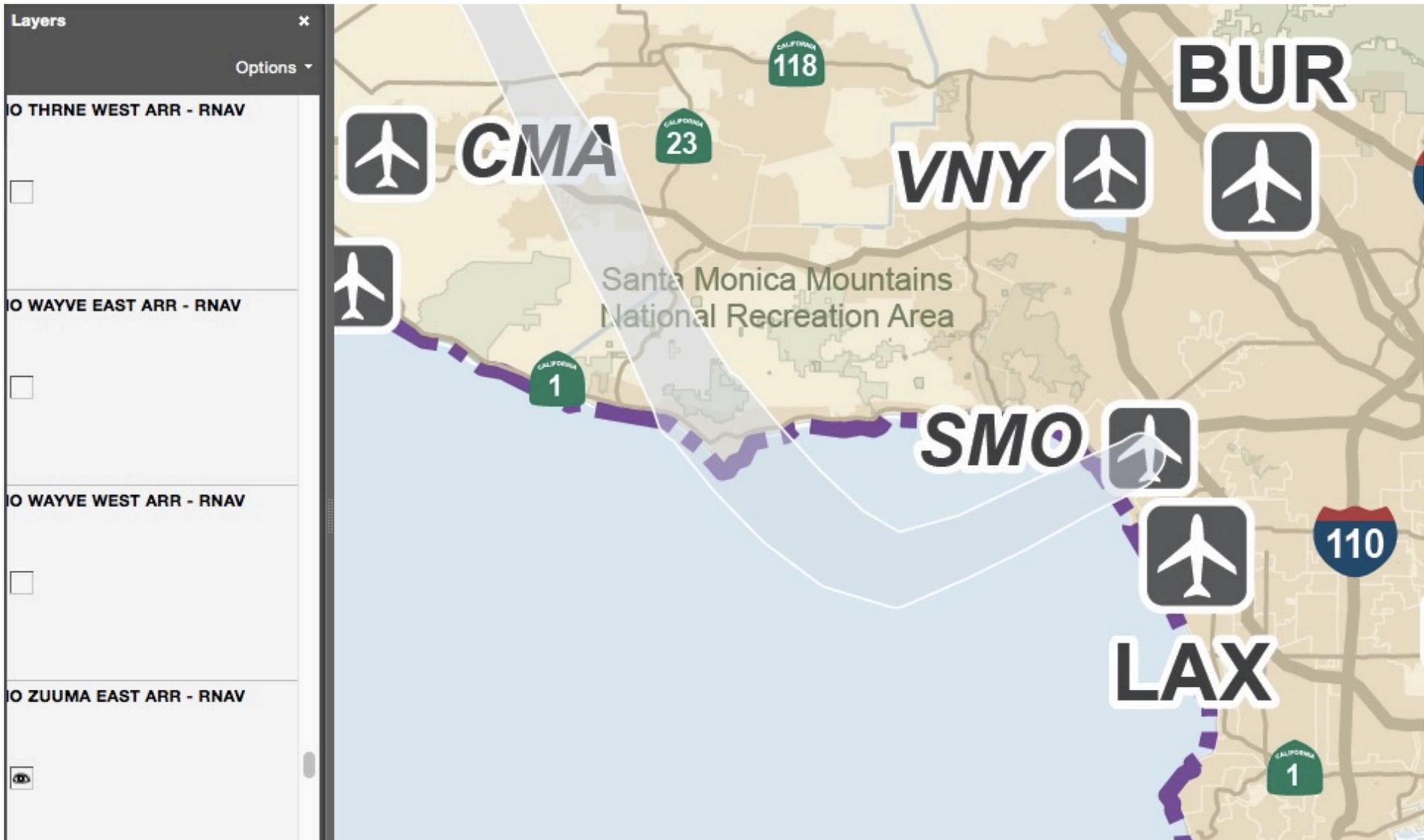




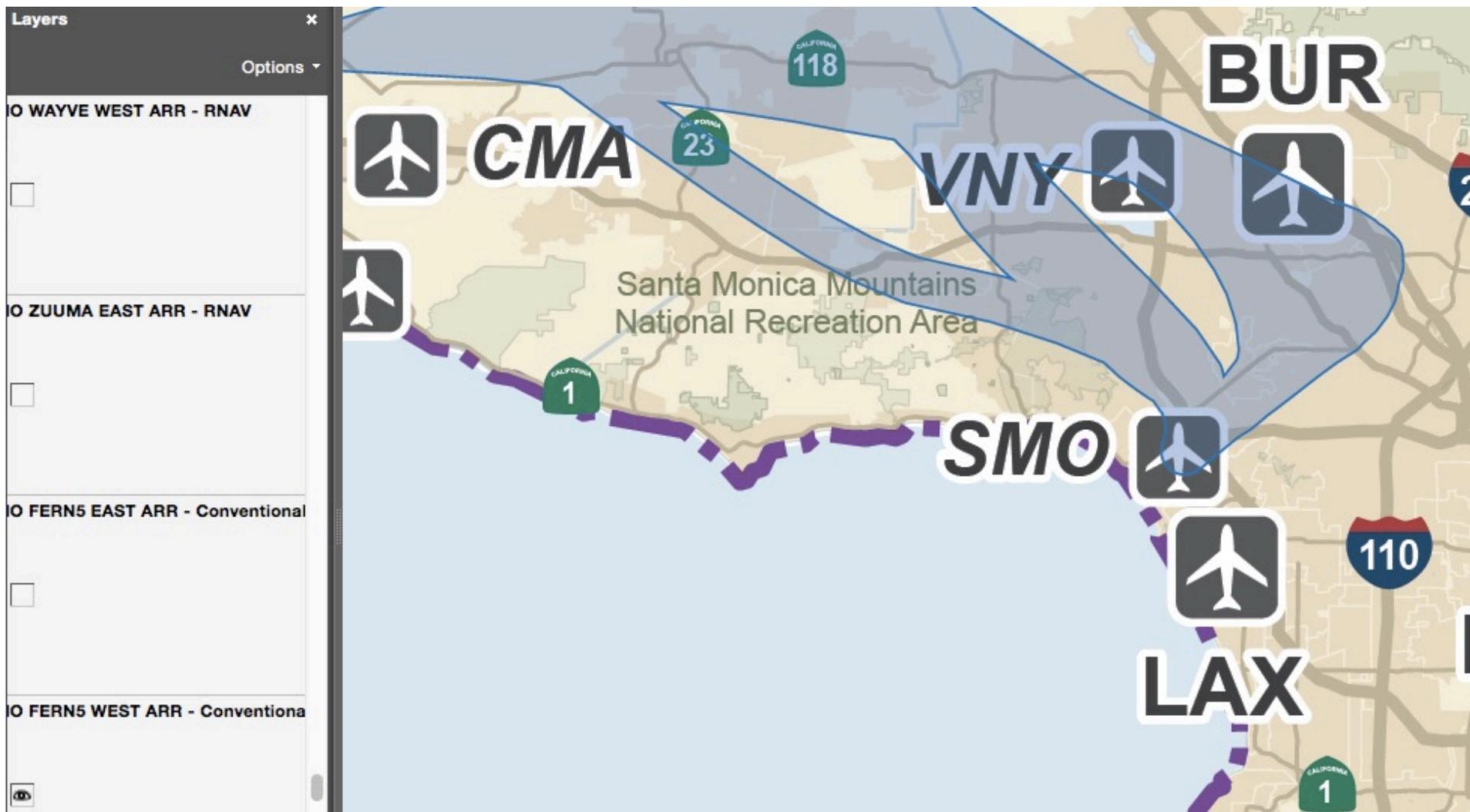




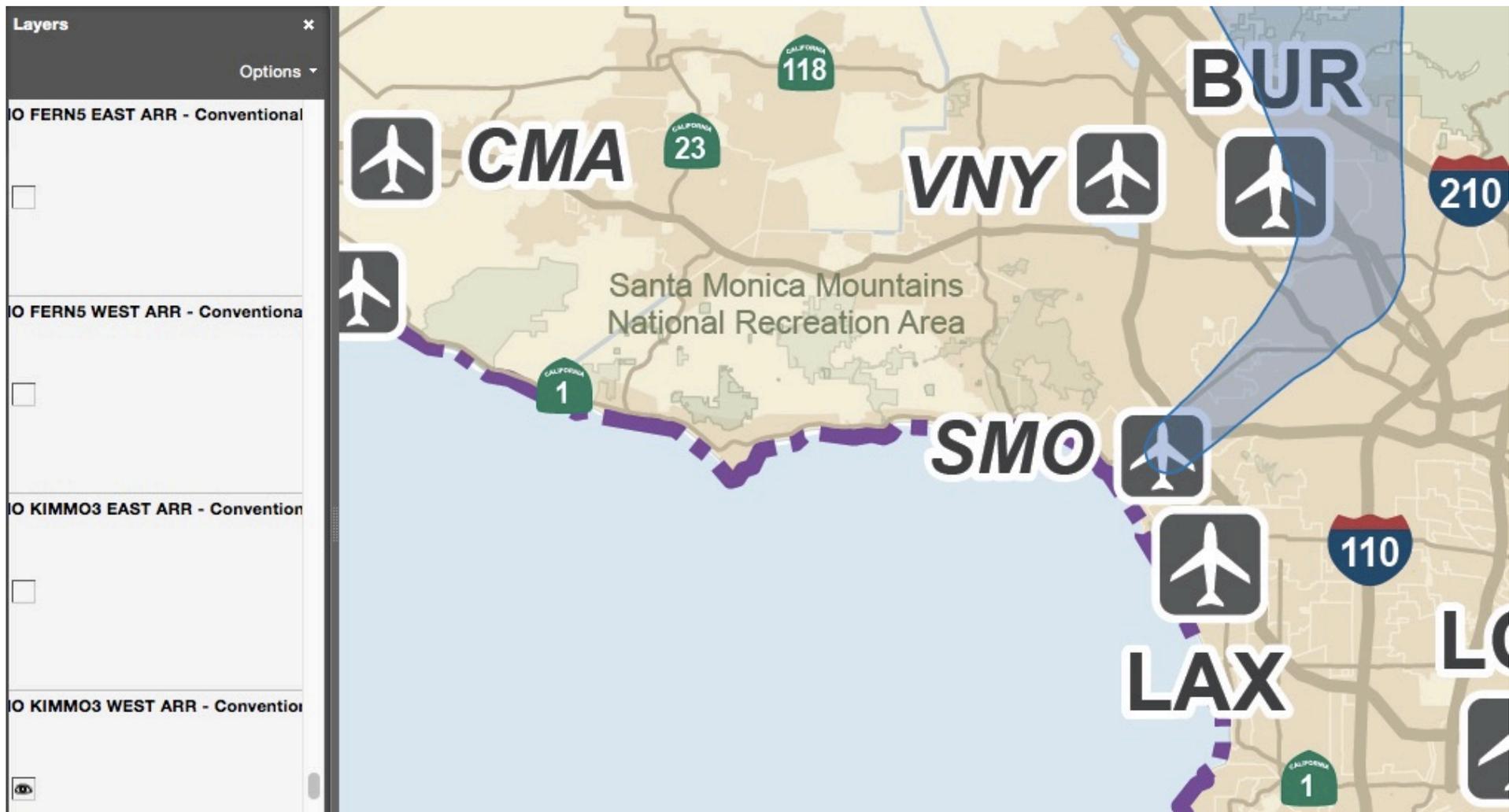










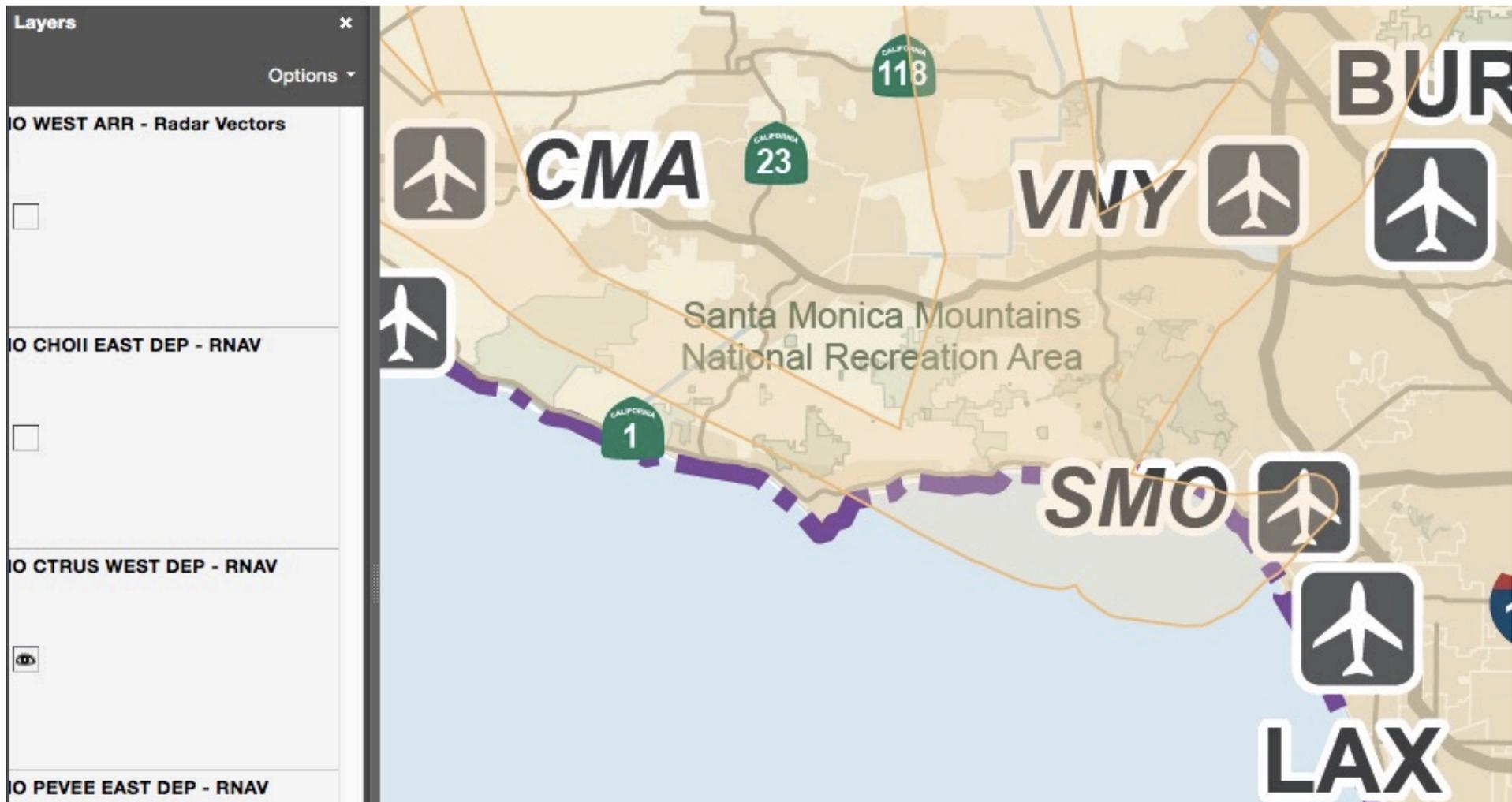






SMO PROPOSED DEPARTURES





Layers ✕

Options ▾

IO CTRUS WEST DEP - RNAV

IO PEVEE EAST DEP - RNAV

IO PEVEE WEST DEP - RNAV

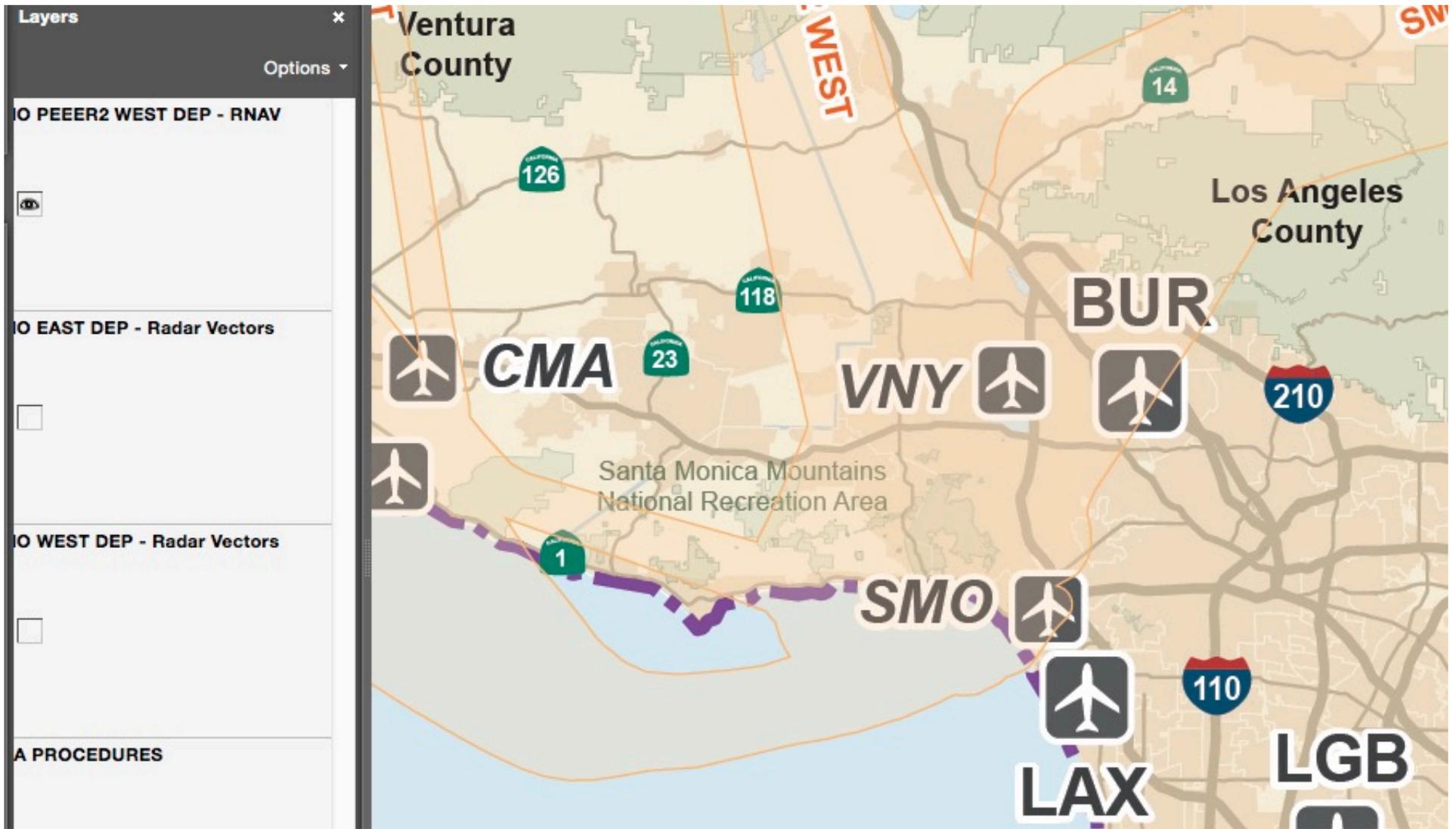
IO PEER2 WEST DEP - RNAV







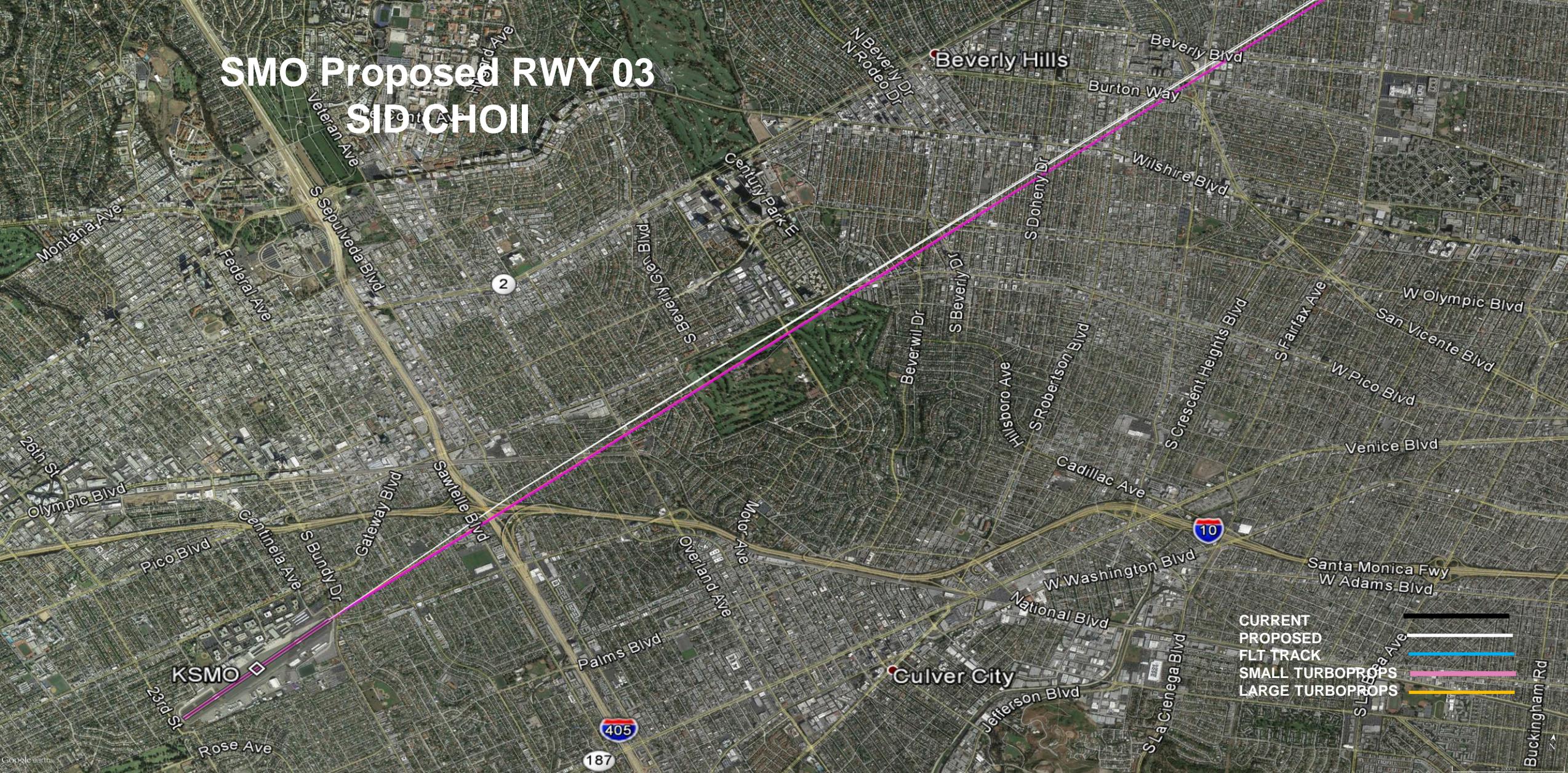




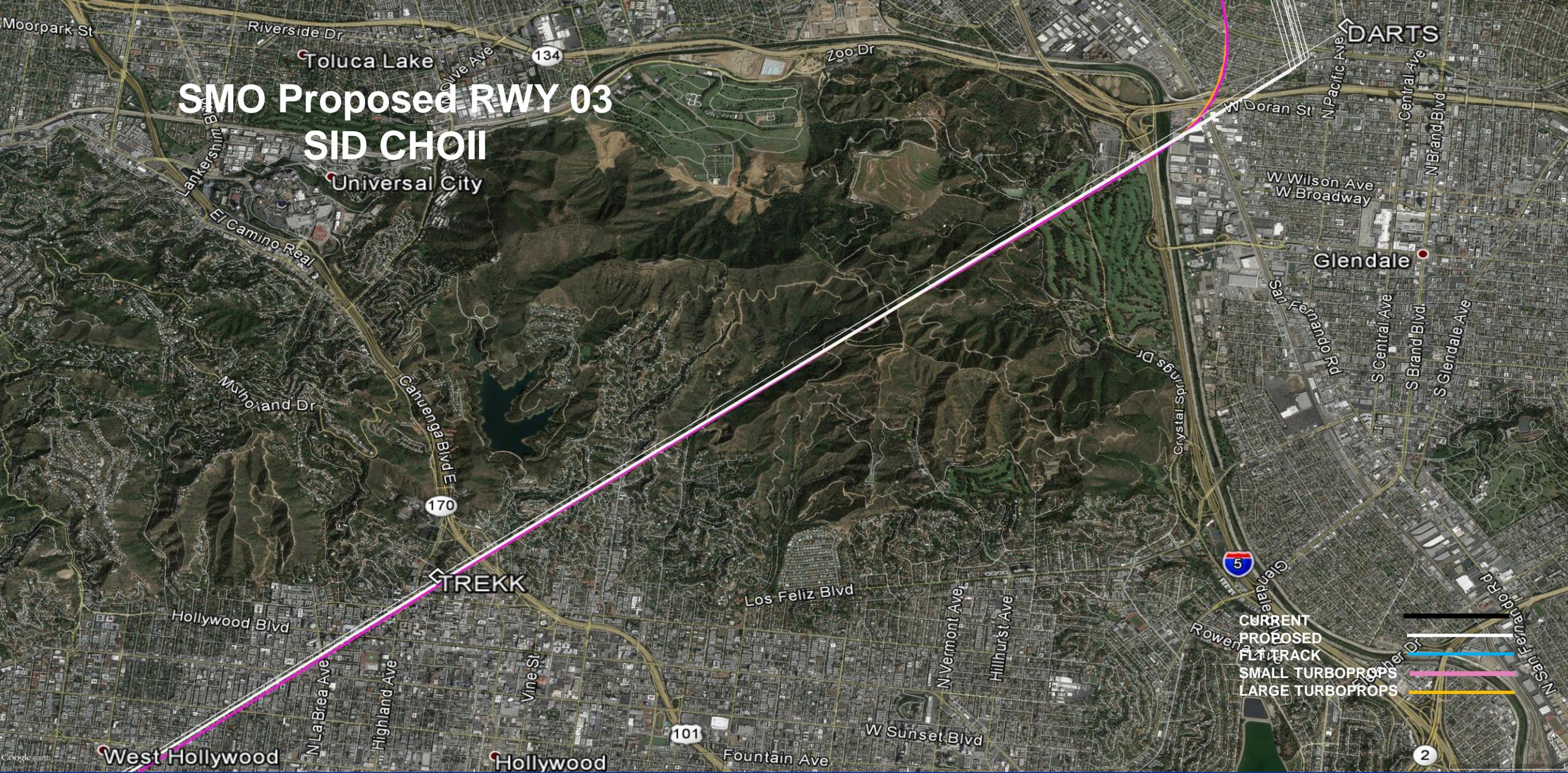
SMO SIDs



SMO Proposed RWY 03 SID CHOI



SMO Proposed RWY 03 SID CH011

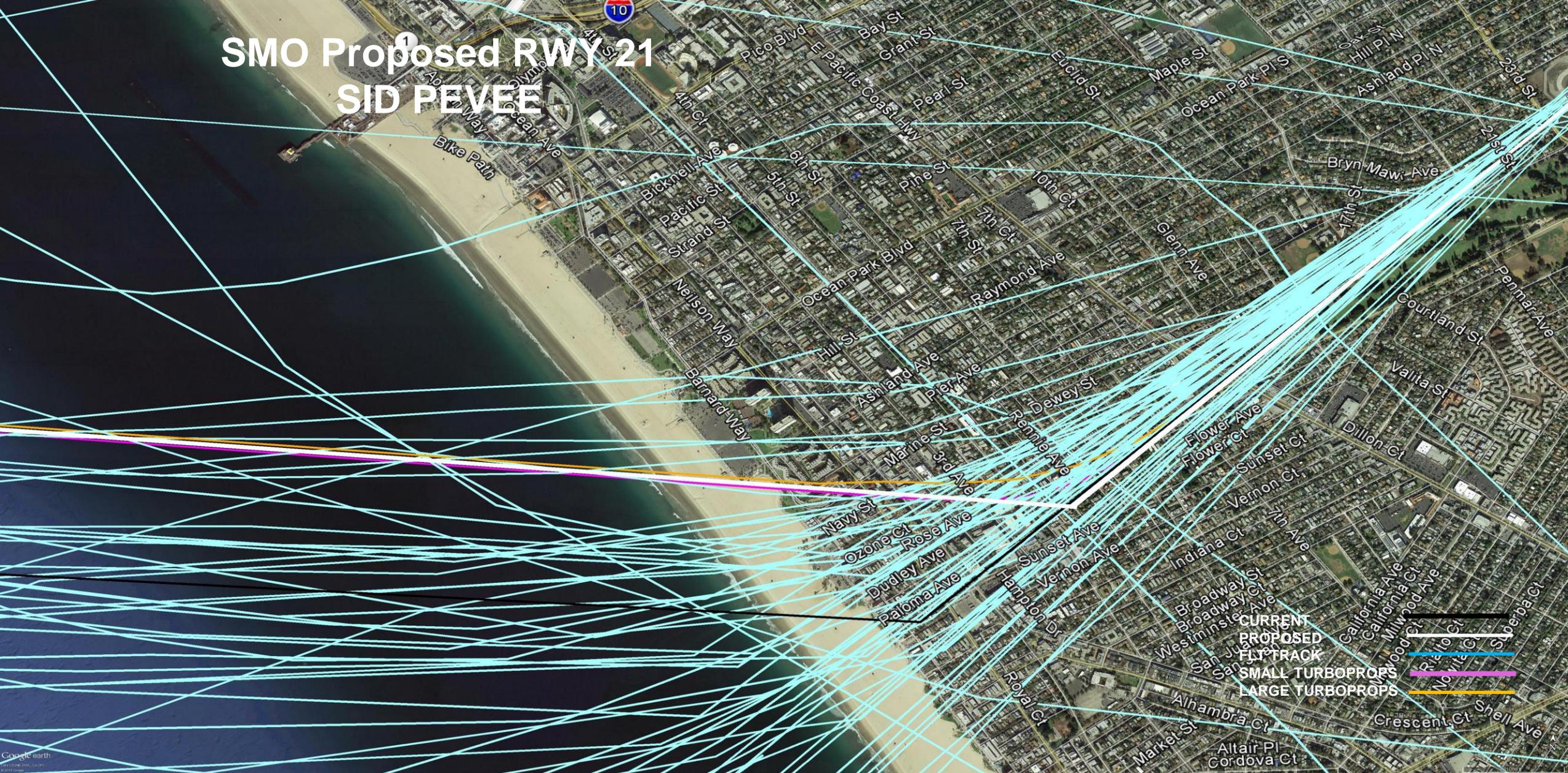


Proposed Procedure



Federal Aviation
Administration

SMO Proposed RWY 21 SID PEVEE

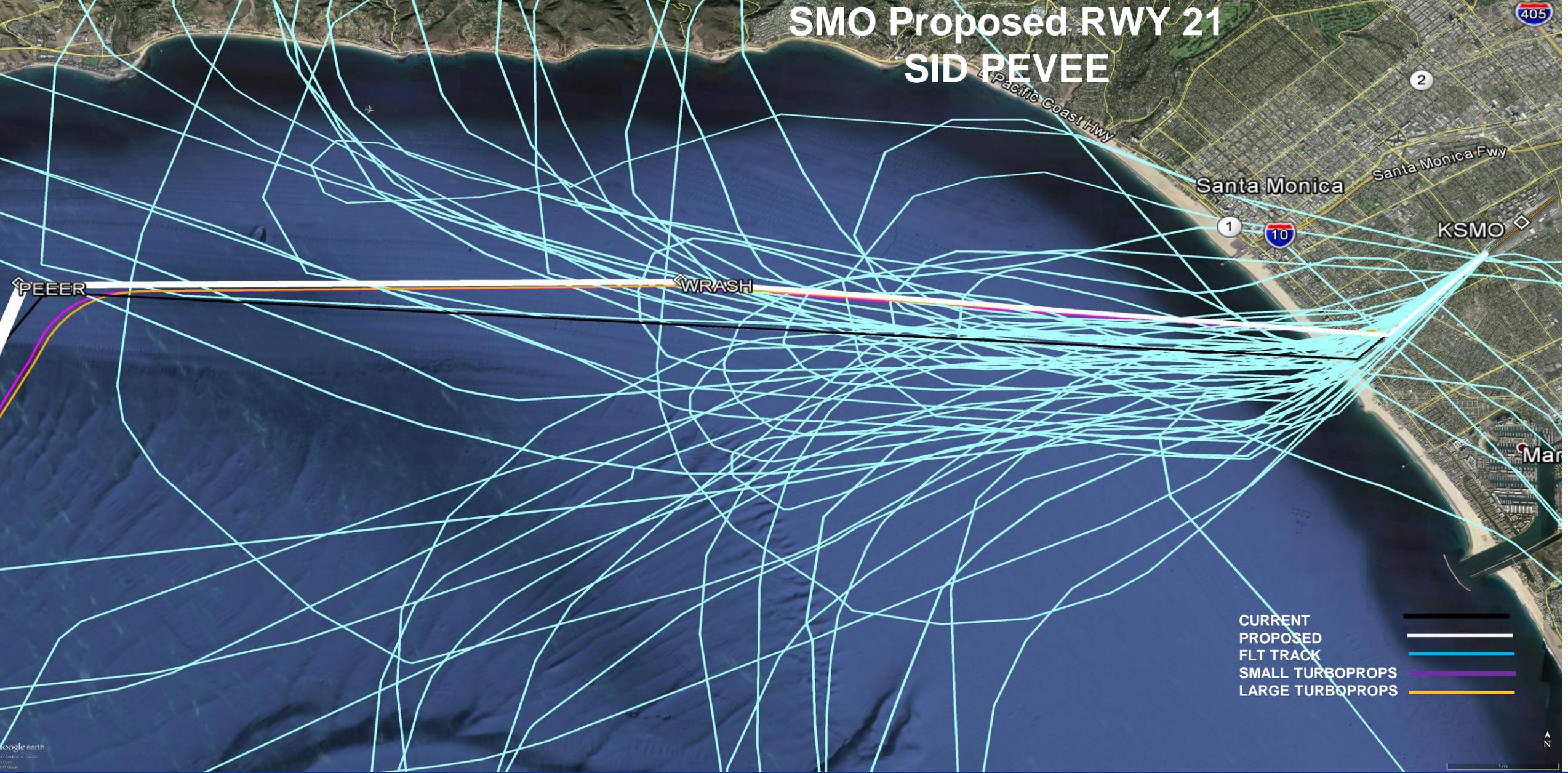


Proposed Procedure



Federal Aviation
Administration

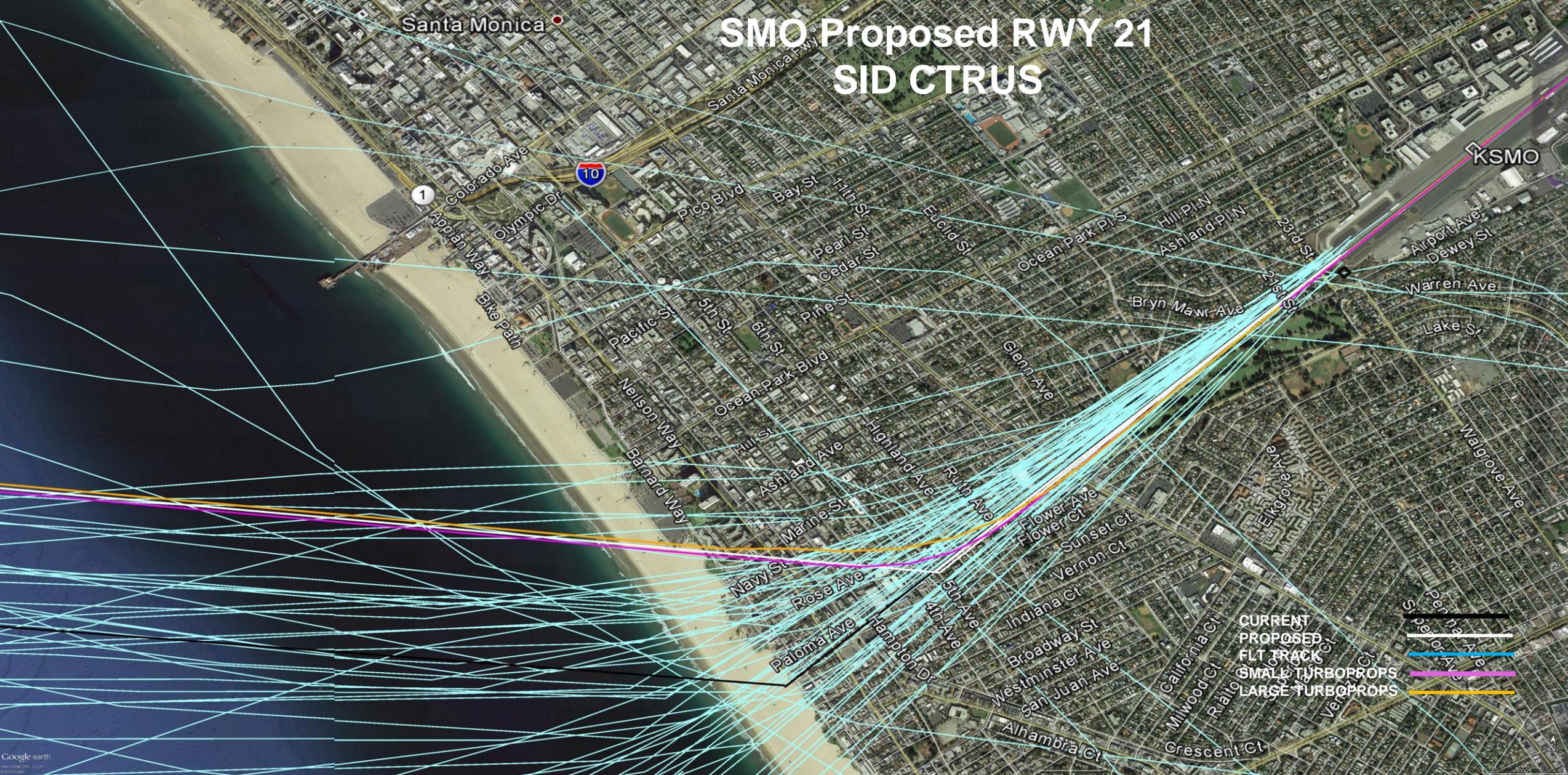
SMO Proposed RWY 21 SID PEVEE



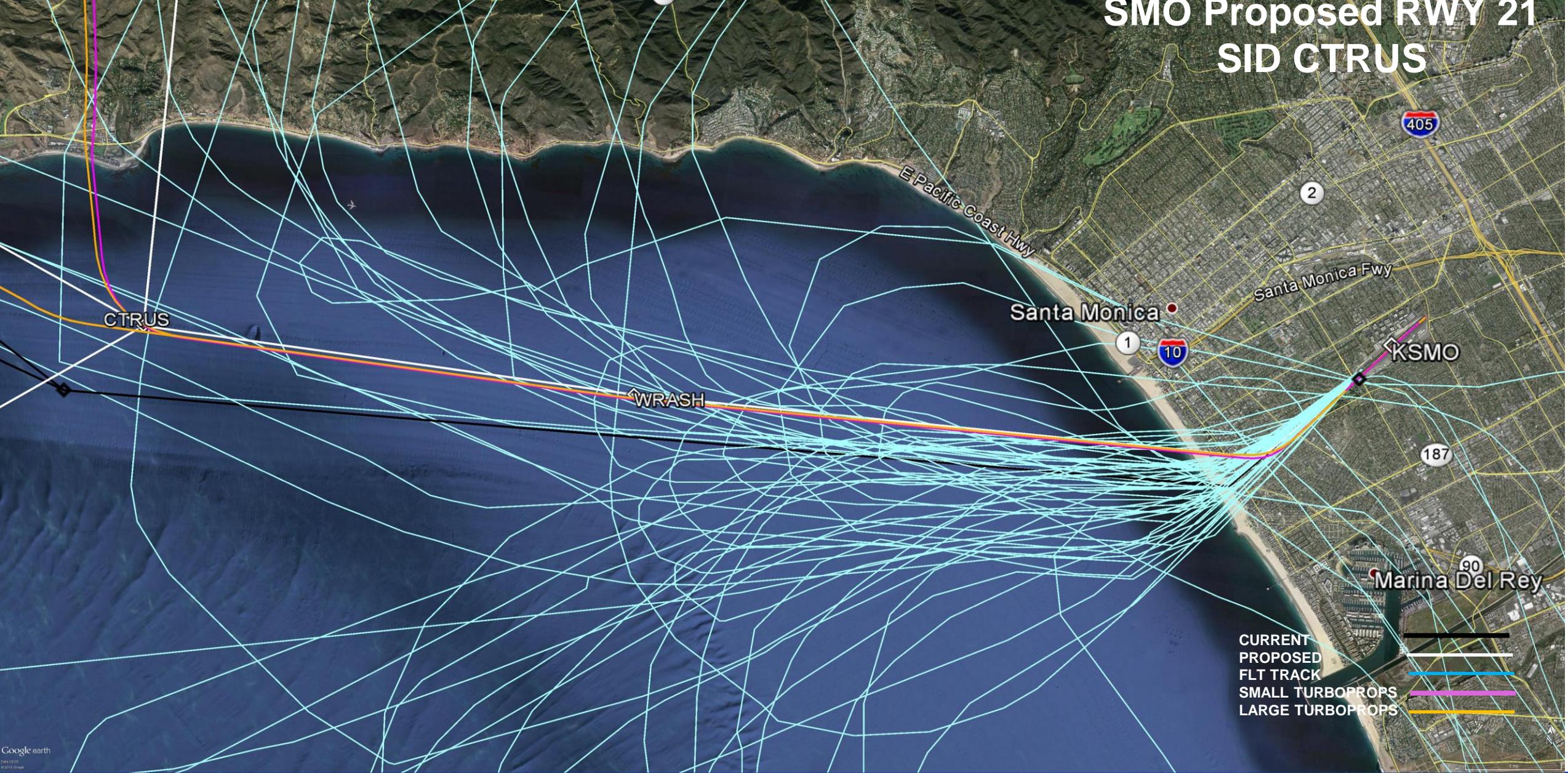
CURRENT
PROPOSED
FLT TRACK
SMALL TURBOPROPS
LARGE TURBOPROPS



SMO Proposed RWY 21 SID CTRUS



SMO Proposed RWY 21 SID CTRUS



Proposed Procedure



Federal Aviation
Administration

SMO Proposed RWY 21/03 SID SANTA MONICA





Proposed Procedure



Federal Aviation Administration