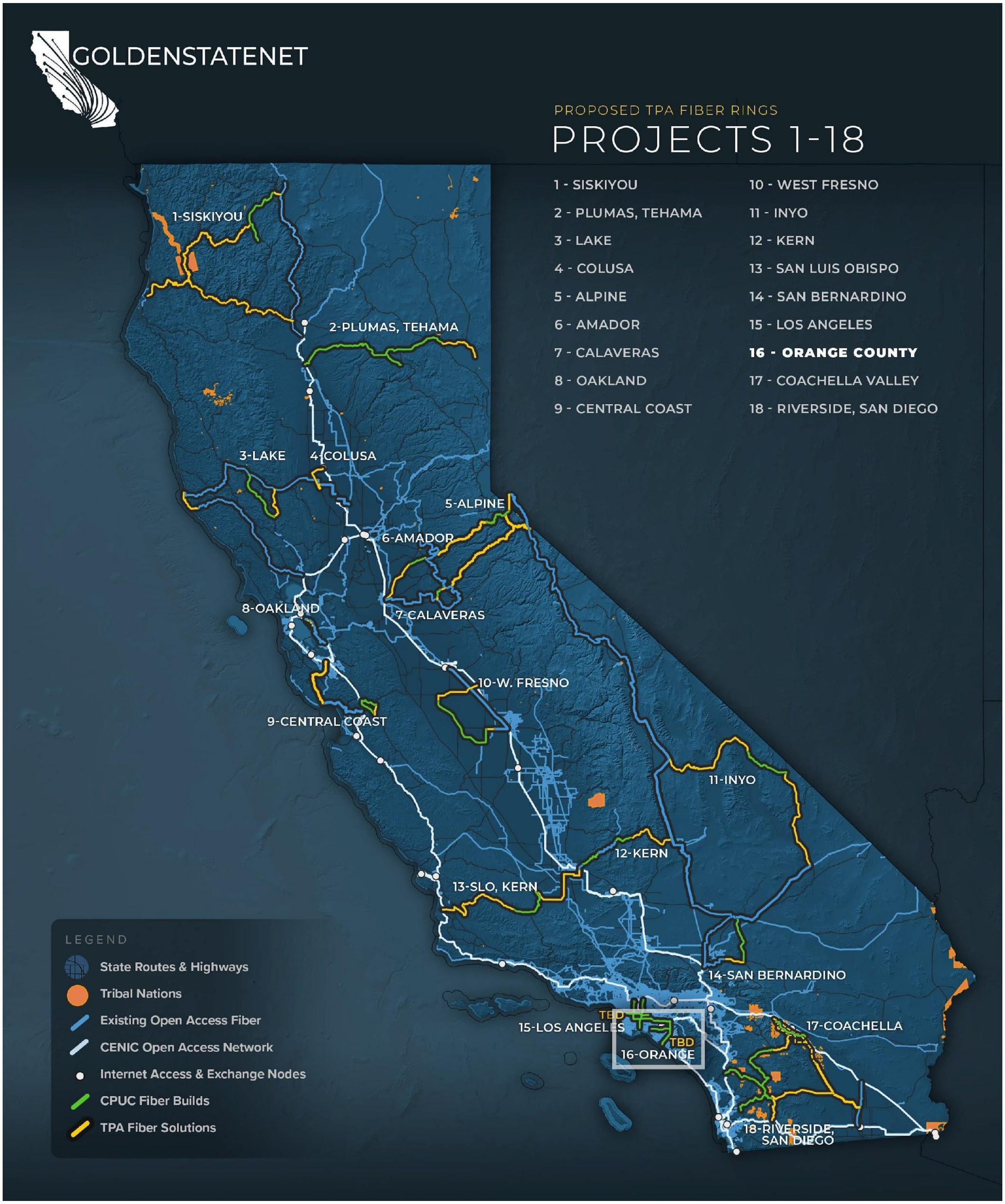
GOLDENSTATENET

Project 16 | Orange County Overview Packet

January 31, 2022

This map identifies the initial 18 broadband project areas and the network solutions proposed by the Third Party Administrator (TPA), GoldenStateNet, which build upon the California Public Utilities Commission (CPUC) recommended routes. Highlighted in this packet are the solutions identified for the Orange County Project and other geospatially registered data sets which influenced them.


GOLDENSTATENET
PROPOSED TPA FIBER RINGS
PROJECTS 1-18
1 - SISKIYOU
2 - PLUMAS, TEHAMA
3 - LAKE
4 - COLUSA
5 - ALPINE
6 - AMADOR
7 - CALAVERAS
8 - OAKLAND
9 - CENTRAL COAST
10 - WEST FRESNO
11 - INYO
12 - KERN
13 - SAN LUIS OBISPO
14 - SAN BERNARDINO
15 - LOS ANGELES
16 - ORANGE COUNTY
17 - COACHELLA VALLEY
18 - RIVERSIDE, SAN DIEGO
1-SISKIYOU
2-PLUMAS, TEHAMA
3-LAKE
4-COLUSA
5-ALPINE
6-AMADOR
8-OAKLAND
7-CALAVERAS
10-W. FRESNO
9-CENTRAL COAST
11-INYO
12-KERN
13-SLO, KERN
14-SAN BERNARDINO
TBD
15-LOS ANGELES
TBD
16-ORANGE
17-COACHELLA
18-RIVERSIDE, SAN DIEGO
LEGEND
State Routes & Highways
Tribal Nations
Existing Open Access Fiber
CENIC Open Access Network
Internet Access & Exchange Nodes
CPUC Fiber Builds
TPA Fiber Solutions

Project 16 | Orange County Summary

While Orange County currently has sufficient open-access broadband infrastructure available in many places, the region still lacks affordable services which have created a significant amount of underserved areas. The California Public Utilities Commission has proposed a middle-mile link for neighborhoods south of Fullerton and Buena Park, west through Garden Grove, and south from Tustin to Newport Beach.

To achieve this, GoldenStateNet proposes to procure an Indefeasible Right of Use (IRU) dark fiber lease. This leased infrastructure will provide an opportunity for a cadre of small, last-mile urban providers to access underserved neighborhoods.

However, unlike most other current projects, the challenge is not technical in nature but socioeconomic. The ability to afford Internet services is particularly challenging in the underprivileged neighborhoods of Orange County. To help address these issues, GoldenStateNet recommends that last-mile providers, metropolitan planning organizations, local governments, community groups, and other stakeholders work together to address barriers to service adoption in these neighborhoods. Similar challenges are outlined in the proposed plan for Los Angeles (see Project Report #15) and Oakland (see Project Report #8).

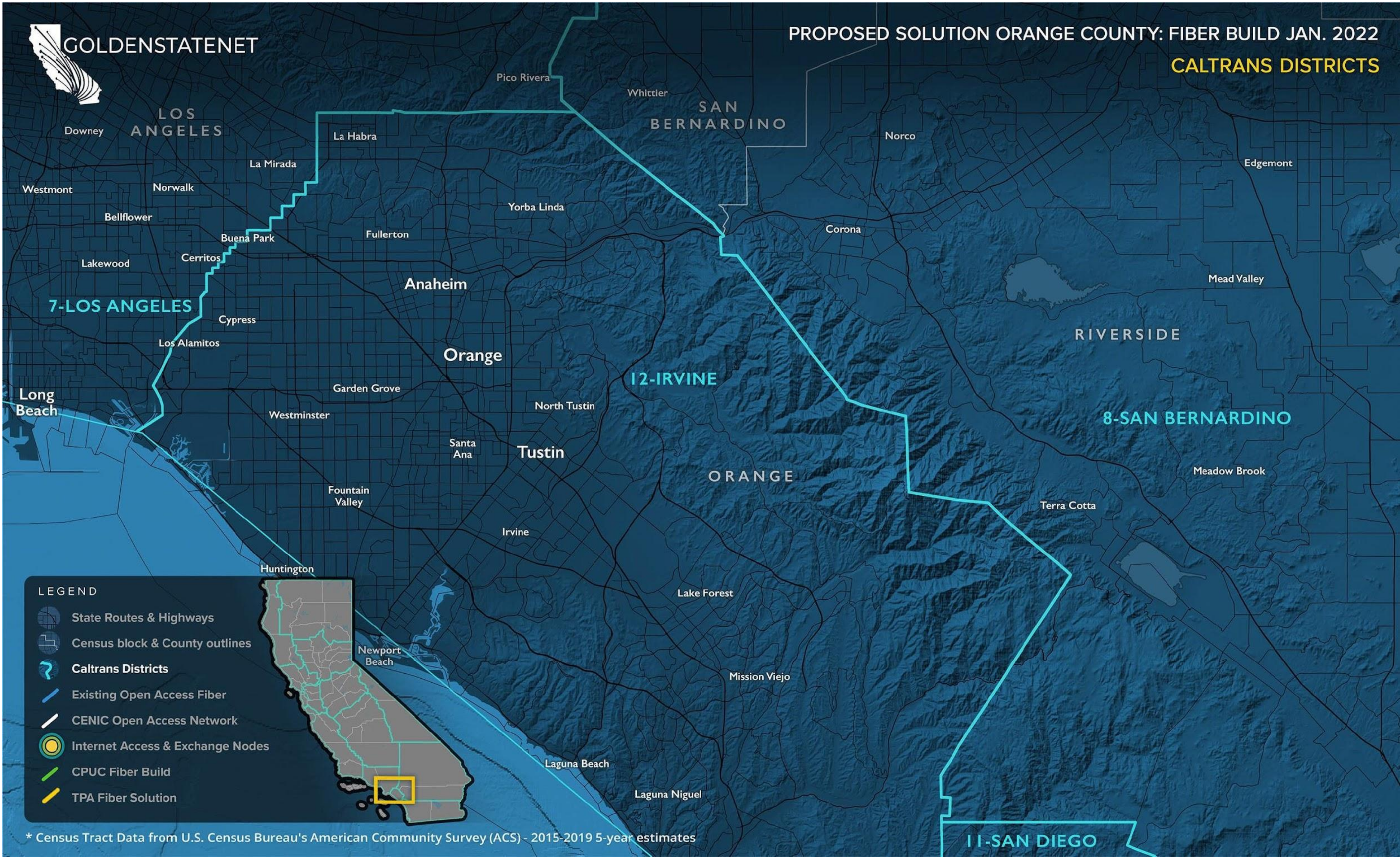
Project 16 | Orange County Highlights

Type of Solution:	Indefeasible Right of Use (IRU) dark fiber lease
Highways/Routes:	HWY 22, 55, 91
Start and End Points or Cities connected:	Tustin
Approximate Fiber Miles:	80
Quantity of Fibers:	4
Approximate Start Date:	2022
Regional Transportation Planning Agency (RTPA) & Metropolitan Planning Organizations (MPO):	Orange County Transportation Authority, Southern California Association of Governments

GoldenStateNet Maps

The appended maps share detailed visualizations of the GoldenStateNet (TPA) recommended middle-mile network solutions. The maps illustrate the complex geographical, topological, technological, and socioeconomic landscape of California.

In combination with available network assets and regional partnerships, the map data has helped to directly inform GoldenStateNet's well-considered proposals.

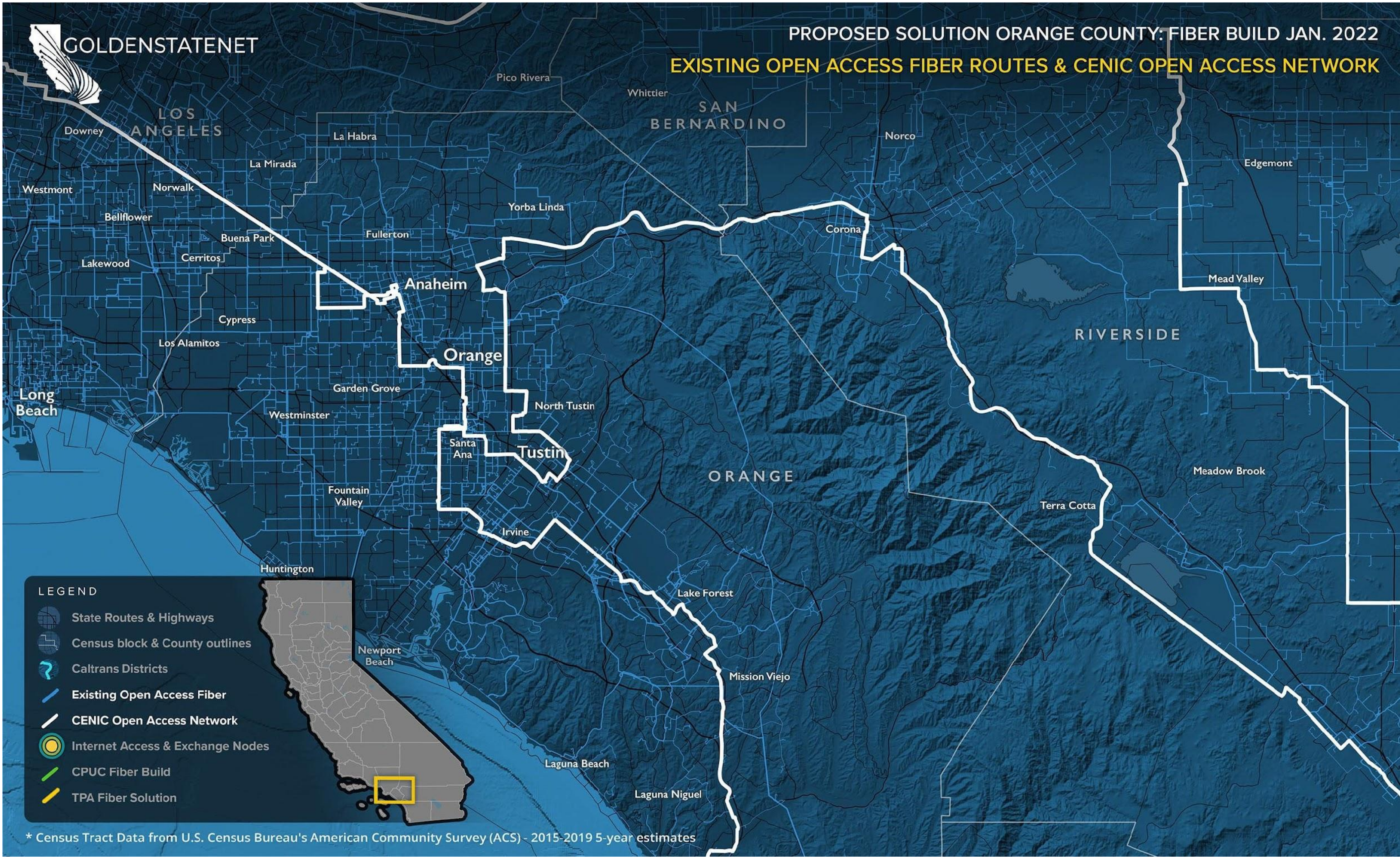


PROPOSED SOLUTION ORANGE COUNTY: FIBER BUILD JAN. 2022

CALTRANS DISTRICTS

GOLDENSTATENET
LEGEND
State Routes & Highways
Census block & County outlines
Caltrans Districts
Existing Open Access Fiber
CENIC Open Access Network
Internet Access & Exchange Nodes
CPUC Fiber Build
TPA Fiber Solution
7-LOS ANGELES
12-IRVINE
8-SAN BERNARDINO
11-SAN DIEGO
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
ORANGE
Pico Rivera
Whittier
Downey
La Habra
Norco
Edgemont
La Mirada
Westmont
Norwalk
Yorba Linda
Bellflower
Buena Park
Fullerton
Corona
Lakewood
Cerritos
Anaheim
Mead Valley
Cypress
Los Alamitos
Orange
Long Beach
Garden Grove
North Tustin
Westminster
Santa Ana
Tustin
Meadow Brook
Fountain Valley
Terra Cotta
Irvine
Huntington
Lake Forest
Newport Beach
Mission Viejo
Laguna Beach
Laguna Niguel

* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year estimates



PROPOSED SOLUTION ORANGE COUNTY: FIBER BUILD JAN. 2022

EXISTING OPEN ACCESS FIBER ROUTES & CENIC OPEN ACCESS NETWORK

* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year estimates

GOLDENSTATENET
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
ORANGE
Pico Rivera
Whittier
Downey
La Habra
Norco
La Mirada
Edgemont
Westmont
Norwalk
Bellflower
Yorba Linda
Buena Park
Fullerton
Corona
Lakewood
Cerritos
Anaheim
Mead Valley
Cypress
Los Alamitos
Orange
Long Beach
Garden Grove
North Tustin
Westminster
Santa Ana
Tustin
Meadow Brook
Fountain Valley
Terra Cotta
Irvine
Huntington
Lake Forest
Newport Beach
Mission Viejo
Laguna Beach
Laguna Niguel
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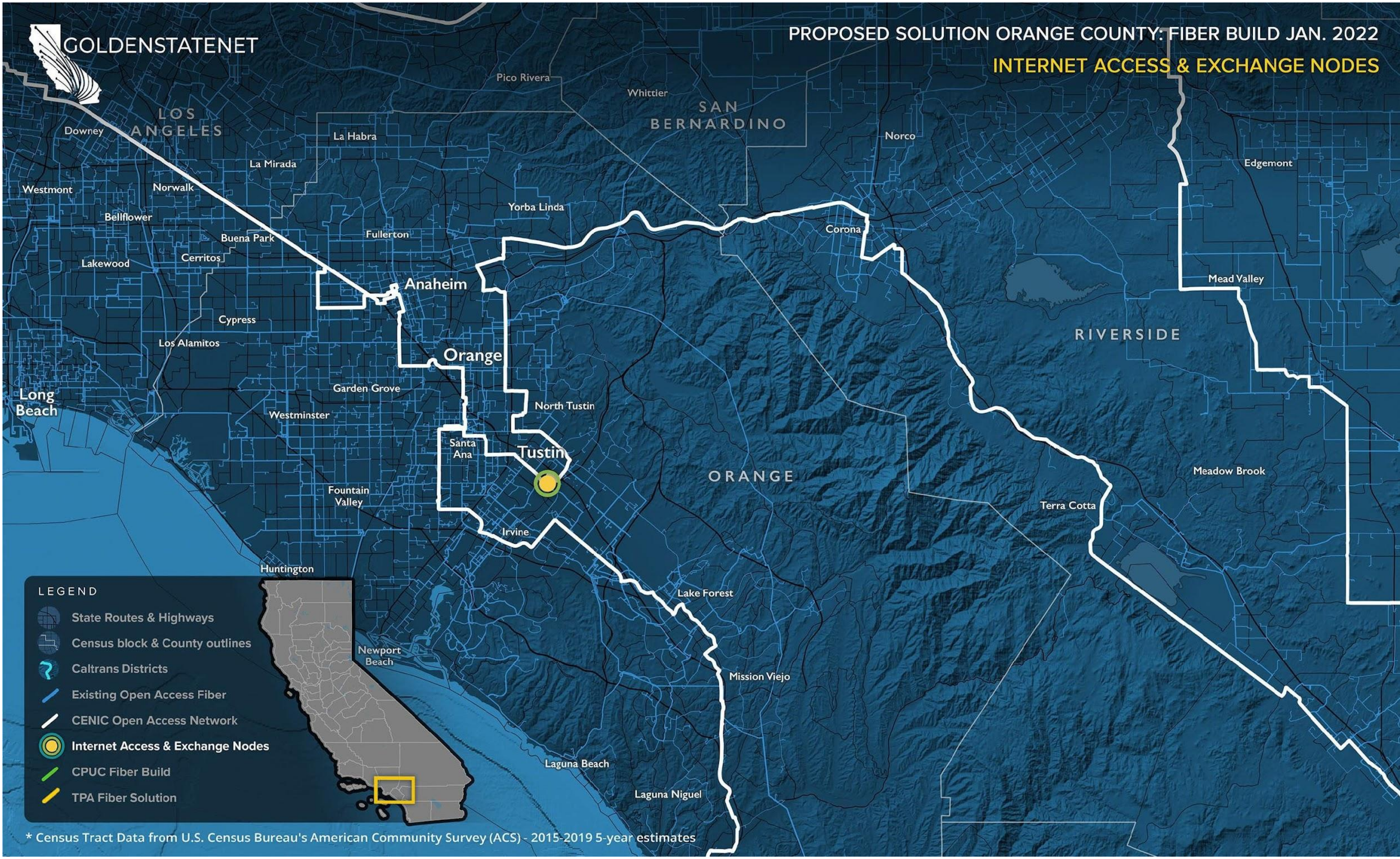
TPA Fiber Solution



PROPOSED SOLUTION ORANGE COUNTY: FIBER BUILD JAN. 2022

INTERNET ACCESS & EXCHANGE NODES

GOLDENSTATENET
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
ORANGE
Pico Rivera
Whittier
Downey
La Habra
Norco
La Mirada
Edgemont
Westmont
Norwalk
Yorba Linda
Bellflower
Buena Park
Fullerton
Corona
Lakewood
Cerritos
Anaheim
Mead Valley
Cypress
Los Alamitos
Orange
Long Beach
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Westminster
Santa Ana
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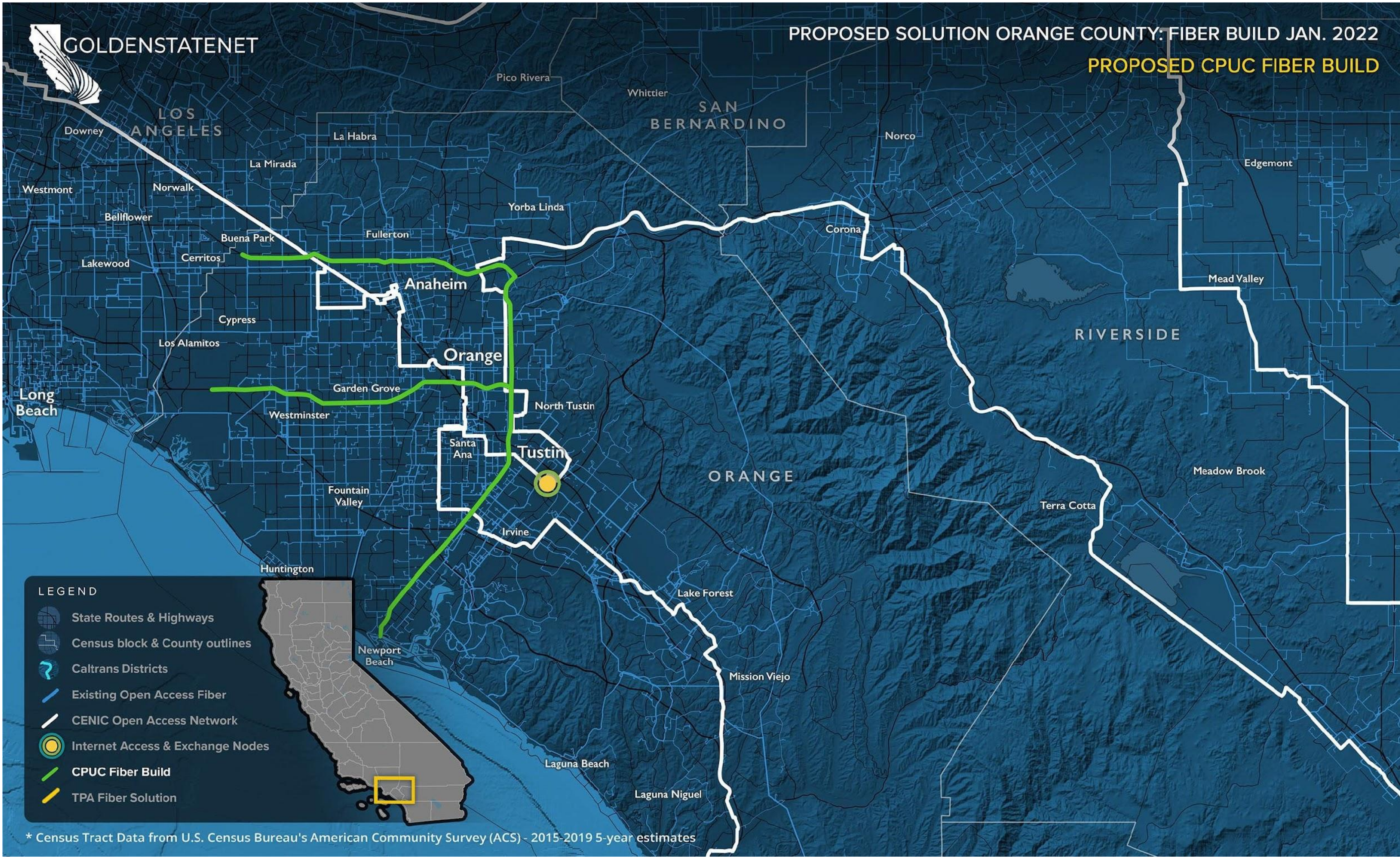
GOLDENSTATENET
PROPOSED SOLUTION ORANGE COUNTY: FIBER BUILD JAN. 2022
PROPOSED CPUC FIBER BUILD
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
ORANGE
Pico Rivera
Whittier
Downey
La Habra
Norco
La Mirada
Edgemont
Westmont
Norwalk
Yorba Linda
Bellflower
Buena Park
Fullerton
Corona
Lakewood
Cerritos
Anaheim
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Cypress
Los Alamitos
Orange
Long Beach
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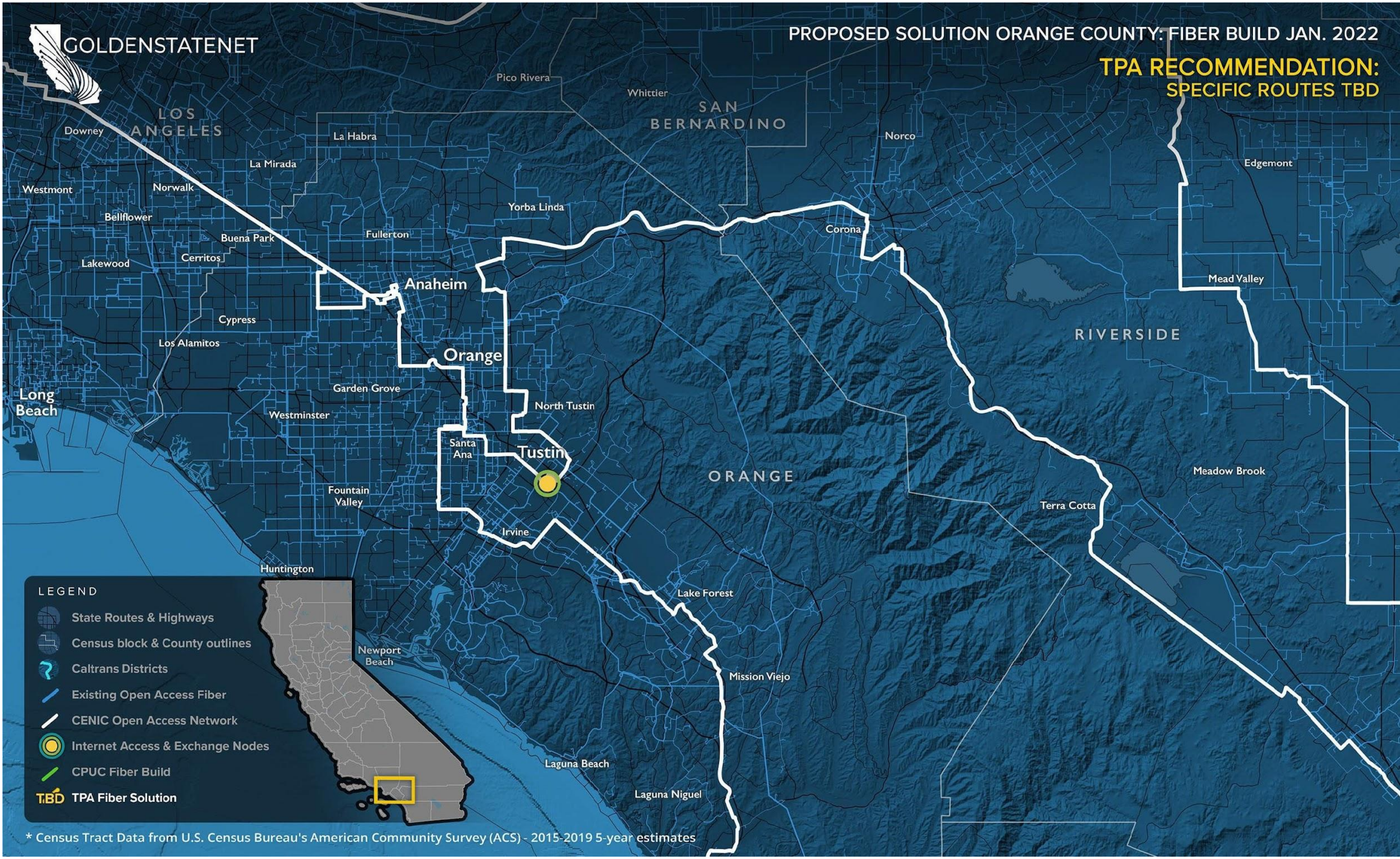

GOLDENSTATENET

PROPOSED SOLUTION ORANGE COUNTY: FIBER BUILD JAN. 2022

TPA RECOMMENDATION:
SPECIFIC ROUTES TBD

LEGEND
- State Routes & Highways
- Census block & County outlines
- Caltrans Districts
- Existing Open Access Fiber
- CENIC Open Access Network
- Internet Access & Exchange Nodes
- CPUC Fiber Build
- T.BD TPA Fiber Solution

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Pico Rivera
Whittier
SAN BERNARDINO
LOS ANGELES
Downey
La Habra
Norco
Edgemont
La Mirada
Westmont
Norwalk
Yorba Linda
Bellflower
Buena Park
Fullerton
Corona
Lakewood
Cerritos
Anaheim
Mead Valley
Cypress
RIVERSIDE
Los Alamitos
Orange
Long Beach
Garden Grove
North Tustin
Westminster
Santa Ana
Tustin
ORANGE
Meadow Brook
Fountain Valley
Terra Cotta
Irvine
Huntington
Lake Forest
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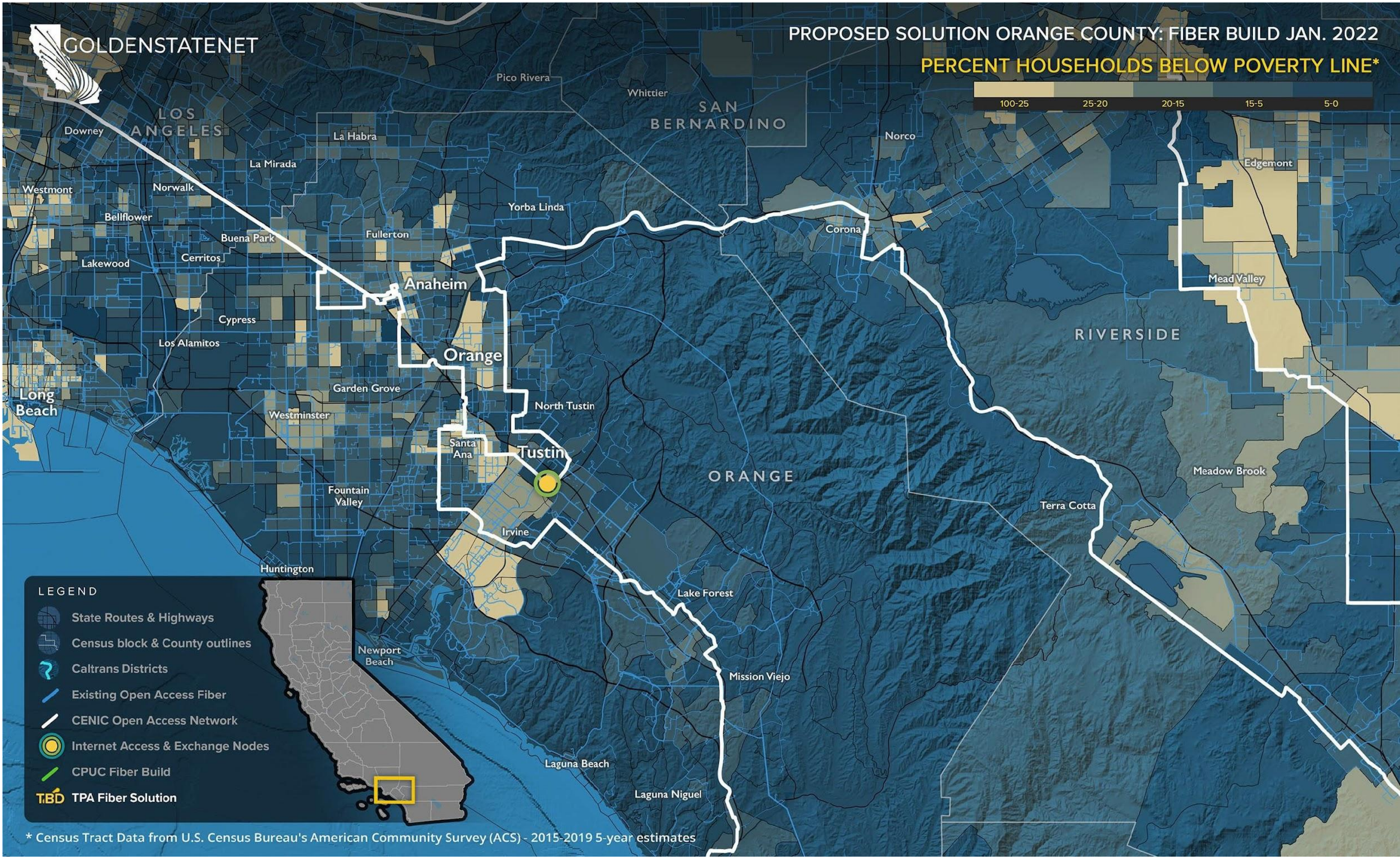
Mission Viejo
Laguna Beach
Laguna Niguel



PROPOSED SOLUTION ORANGE COUNTY: FIBER BUILD JAN. 2022

PERCENT HOUSEHOLDS BELOW POVERTY LINE*

GOLDENSTATENET
100-25
25-20
20-15
15-5
5-0
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
ORANGE
Pico Rivera
Whittier
Downey
La Habra
Norco
La Mirada
Edgemont
Westmont
Norwalk
Yorba Linda
Bellflower
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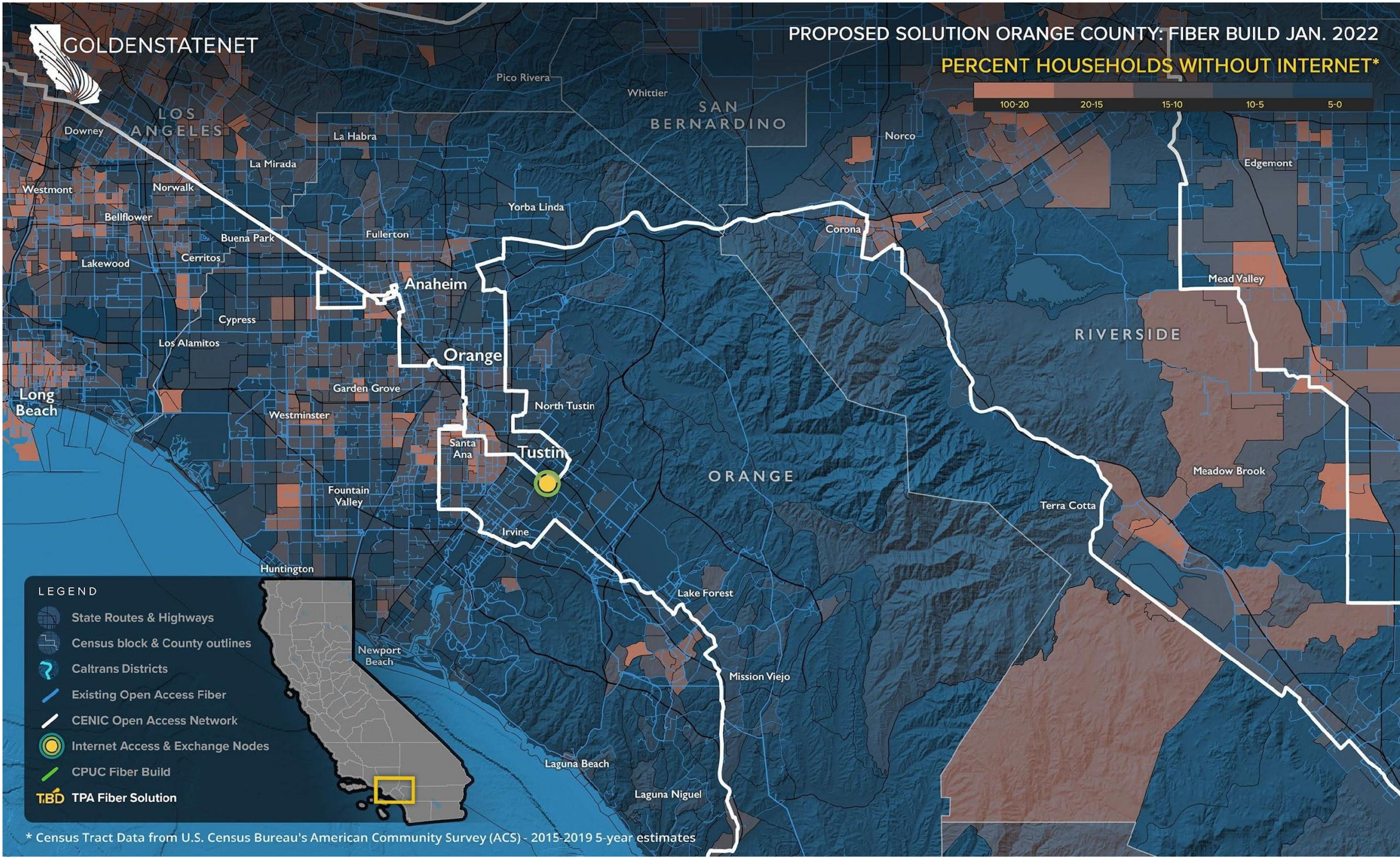

PROPOSED SOLUTION ORANGE COUNTY: FIBER BUILD JAN. 2022

PERCENT HOUSEHOLDS WITHOUT INTERNET*

GOLDENSTATENET
100-20
20-15
15-10
10-5
5-0
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
ORANGE
Pico Rivera
Whittier
Norco
Edgemont
Downey
La Habra
La Mirada
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Norwalk
Yorba Linda
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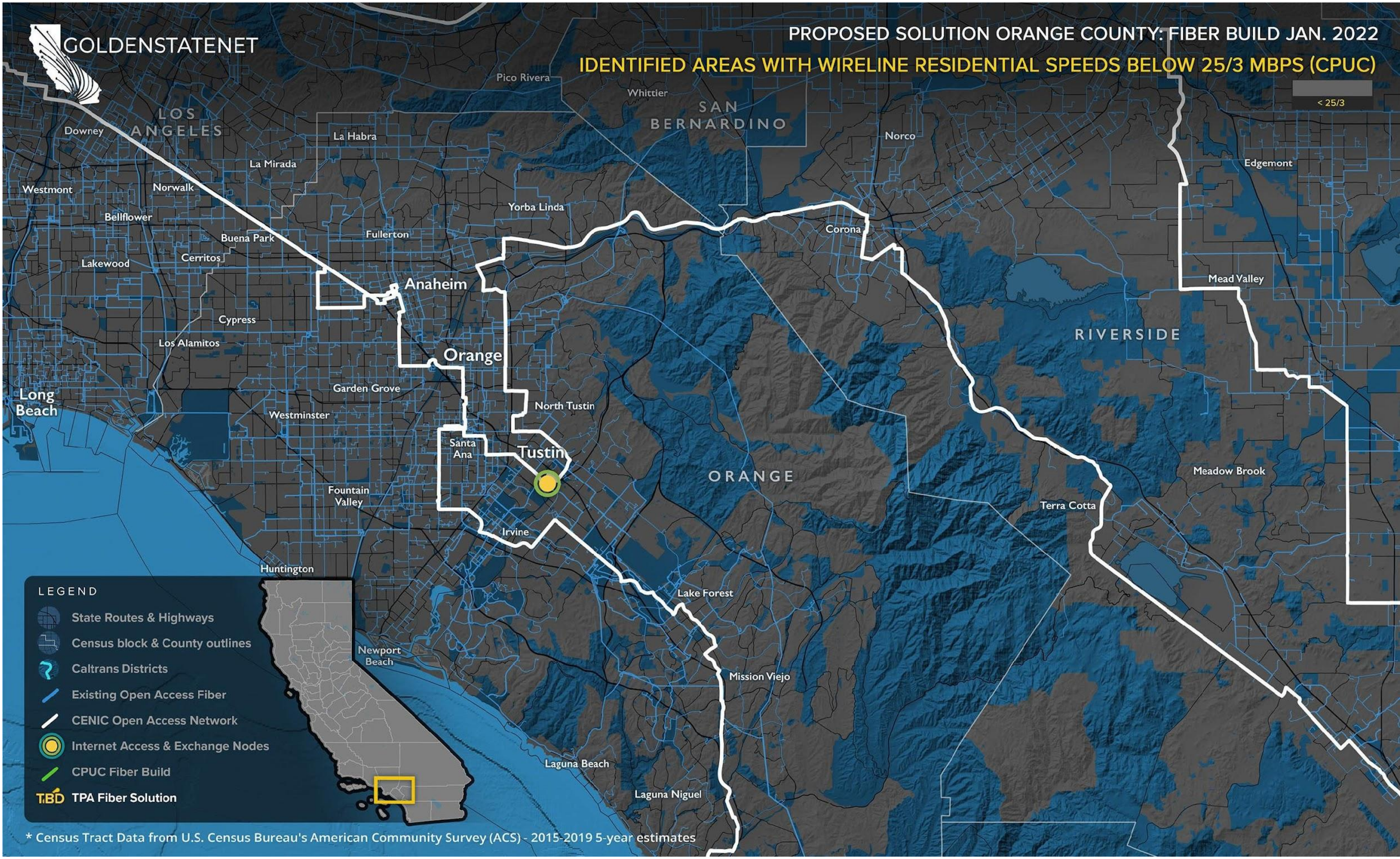
GOLDENSTATENET
PROPOSED SOLUTION ORANGE COUNTY: FIBER BUILD JAN. 2022
IDENTIFIED AREAS WITH WIRELINE RESIDENTIAL SPEEDS BELOW 25/3 MBPS (CPUC)
< 25/3
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
ORANGE
Pico Rivera
Whittier
Norco
Edgemont
Downey
La Habra
La Mirada
Westmont
Norwalk
Bellflower
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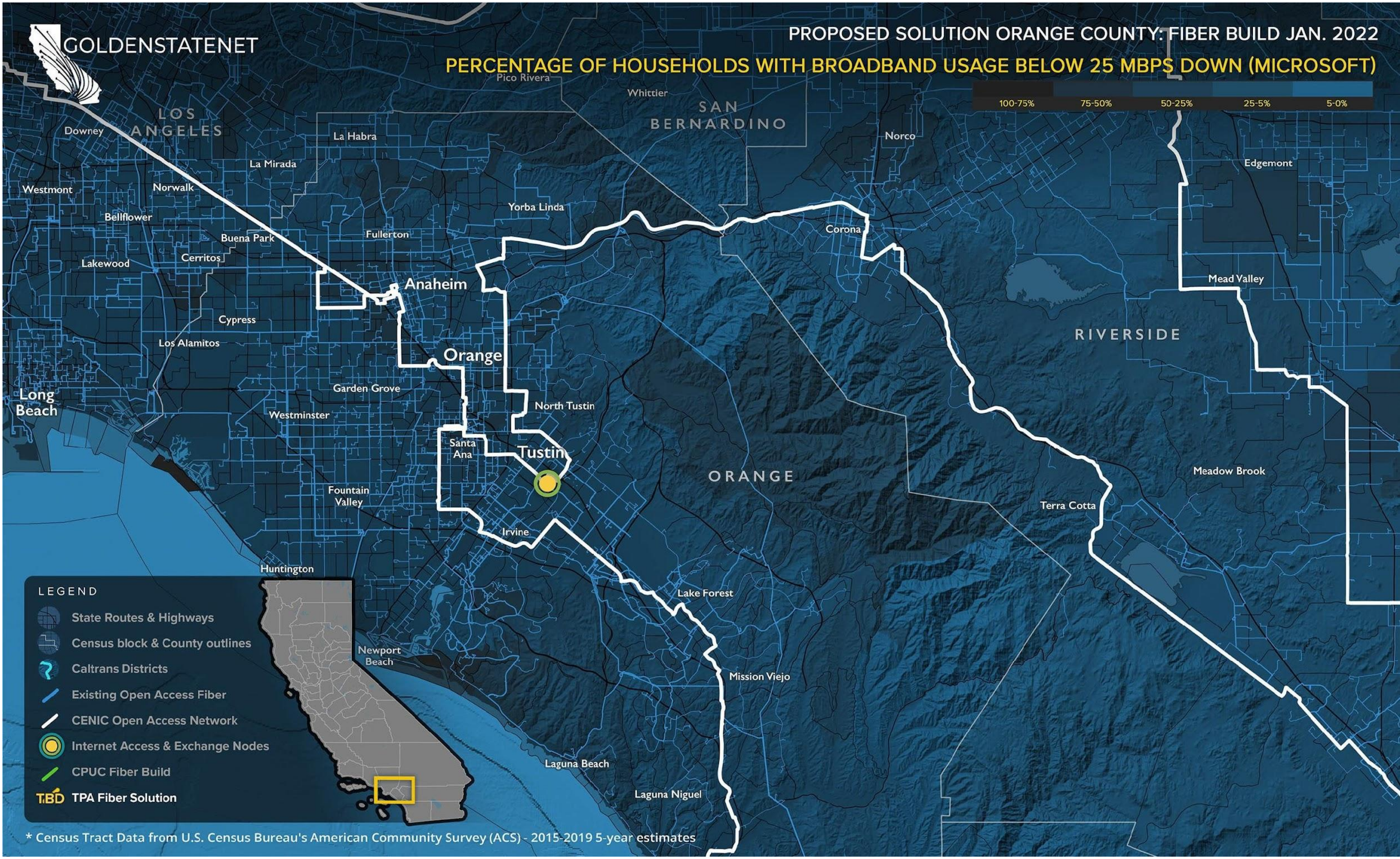

PROPOSED SOLUTION ORANGE COUNTY: FIBER BUILD JAN. 2022

PERCENTAGE OF HOUSEHOLDS WITH BROADBAND USAGE BELOW 25 MBPS DOWN (MICROSOFT)

GOLDENSTATENET
100-75%
75-50%
50-25%
25-5%
5-0%
Pico Rivera
Whittier
SAN BERNARDINO
LOS ANGELES
Downey
La Habra
Norco
La Mirada
Edgemont
Westmont
Norwalk
Bellflower
Yorba Linda
Buena Park
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Data Sources*

- American Community Survey - Internet Connectivity
- American Community Survey - Poverty Status
- California 2020 Legislative District Boundaries
- California Broadband Availability Maps and GIS Data
    - 20 Layers used from combined database
- California Census Blocks
- California Census Tracts
- California Counties
- California Fire Hazard Severity Zones
- California National Highway System
- California Major Lakes and Reservoirs
- California Parks Land
- California State Highway Network (SHN)
- California Tribal Lands
- CalTrans Juridictions
- CENIC Digital Fiber Segments
- CPUC Fixed Served Status
- Existing Open Access Networks - Under NDA
- FCC Fixed Consumer Deployment
- Microsoft Broadband Usage Percentages Dataset
- Ookla Test Data Results by Census Tract
- Technology Use Demographics (e.g. Internet use in home) by Census Tract

**All data was published between 2019 - 2021 and represents the most current data available. Not all layers are represented on the maps above. However, the data was utilized as a part of the development process.*

GOLDENSTATENET