



July 8, 2026

The Honorable Richard Hudson
Chairman, Subcommittee on Communications and Technology
House Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20515-6115

Dear Chairman Hudson:

This letter is in response to your letter of June 24, 2026, to NextNav Board Chair and CEO Mariam Sorond regarding additional questions for the record submitted by members of the Subcommittee. NextNav's responses to these questions are enclosed.

Sincerely,

/s/ Edward Mortimer

Edward Mortimer
NextNav Inc.
11911 Freedom Drive, Suite 200
Reston, VA 20190

CC: The Honorable Doris Matsui, Ranking Member
Subcommittee on Communications and Technology

The Honorable Neal Dunn, M.D. (R-FL)

1. *I have learned that NextNav is the only commercial vertical-location provider serving the federally authorized network for first responders, including all three national wireless carriers and FirstNet through AT&T. That network has characterized Z-axis capability as a "key capability." Could you explain the role that Z-axis technology plays in emergency responses and why it is viewed as such an important capability?*

Accurate location information is critical for emergency response, and NextNav's commercial Pinnacle vertical location service is already delivering Z-axis capabilities to first responders nationwide. When first responders have accurate location information from 911 calls, including vertical or "Z-axis" location information, they can reach people in need faster and ultimately save more lives. Z-axis technology also plays a role in keeping first responders safe by providing incident commanders with the location of their own emergency personnel. That intelligence allows for enhanced first responder safety and the improvement of resource allocation and response at an incident.

Accurate vertical location information is critical for emergency medical services responding to victims in multi-story buildings; for law enforcement responding to an active shooter in a multi-story environment; for crisis counselors responding to mental health emergencies in urban areas; and for firefighters seeking to effect rescues of trapped occupants who do not know where in a building they're located.

The real-world importance of this capability was demonstrated on July 4, 2024, when the Arlington County Fire Department, Arlington County Emergency Communications, and DC Homeland Security conducted a comprehensive test at the Washington Monument. The thick stone walls of the Monument rendered GPS signals inconsistent and unreliable. Yet inside this same GPS-challenged environment, and even amidst an Independence Day celebration with over 200,000 people taxing local cellular networks, first responders successfully used Pinnacle to track personnel and pinpoint 911 caller locations with accuracy. In fact, Pinnacle's performance exceeded the Federal Communications Commission's ("FCC") ± 3 -meter vertical location mandate—proof of Z-axis capabilities and its incredible value to emergency response.¹

Today, NextNav is making its vertical location service available to first responders and E911 services across the nation. Pinnacle operates in more than 4,400 U.S. cities, powering millions of devices across all three national wireless carriers and FirstNet, which has called out Z-axis as a "key capability."

Expanding first responder awareness to include reliable horizontal location information is also a key priority for NextNav. Retired Fire Commissioner and Chief of Department for the Boston Fire Department, Joe Finn, recently wrote that "dependable indoor 3D location tracking represents the

¹ Rob Clark, *Red, White, and Blueprints: NextNav Delivers Pinpoint Z-Axis Accuracy in July 4th Public Safety Test at Washington Monument*, NEXTNAV (Jul. 21, 2025), <https://nextnav.com/nextnav-delivers-pinpoint-z-axis-accuracy-in-test-at-washington-monument/>.

Attachment —NextNav Responses to Additional Questions for the Record

most significant advancement in fire ground safety in the history of modern firefighting.”² We welcome the opportunity to be part of the solution.

² Joe Finn, *A Firefighter’s Mayday on the Urgent Need for 3D Tracking on the Fireground*, BROADBANDBREAKFAST (June 3, 2026), <https://broadbandbreakfast.com/joe-finn-a-firefighters-mayday-on-the-urgent-need-for-3d-tracking-on-the-fireground/>.

The Honorable Russ Fulcher (R-ID)

1. *If NextNav's 900 MHz petition is not approved by the FCC, will NextNav remain a viable company? Are these analyst reports accurate?*
"Negative shareholder equity. Currently unprofitable and not forecast to become profitable over the next 3 years. Does not have meaningful revenue (\$4M) Volatile share price over the past 3 months compared to the US market." - Simply Wall St. June 23, 2026
"The dominating force weighing on NextNav stock is the anticipated removal from a key equity index, a development that triggers mandatory selling by passive investment funds and index-tracking ETFs that are required to positions no longer represented in their benchmark" - Kalkin June 15, 2026
"Hundreds of millions of unlicensed devices (from baby monitors and garage door openers to IoT sensors) rely heavily on the 900 MHz. Upgrading or replacing the equipment to tolerate NextNav's stronger, licensed signals carries massive costs" - Electronic Frontier Foundation, September 13, 2024

NextNav is a market leader in delivering resilient, next generation, complementary positioning, navigation and timing ("PNT") solutions designed to serve as a backup and complement to existing space-based Global Navigation Satellite Systems ("GNSS"), including the Global Positioning System ("GPS"). NextNav has operated successfully for more than two decades and continues to be in a position of financial strength, with a strong cash position and spectrum assets.

NextNav's financial soundness is not dependent on the FCC rulemaking outcome. NextNav's public market valuation of \$2–3 billion reflects its license portfolio of scarce, low-band spectrum assets, differentiated PNT technology, and multiple monetization pathways. Such spectrum assets are inherently valuable and have historically found productive commercial use regardless of any specific regulatory approvals.

NextNav ended Q1 2026 with approximately \$143 million in liquidity and has recently received approximately \$170 million from its completed redemption of its public warrants, providing multiple years of runway at its current cash burn rate. Additionally, NextNav has converted its debt, leaving the Company debt-free and increasing the Company's long-term financial flexibility.

In terms of current operations, NextNav maintains commercial relationships with all three national wireless carriers and FirstNet, with its commercial Pinnacle vertical location technology already serving their networks. NextNav is also advancing commercialization in parallel with the regulatory process, operating a live 5G PNT Network in Santa Clara County, California. NextNav has also executed a technology licensing agreement with Japan's MetCom to deploy terrestrial timing services in major metropolitan markets, which demonstrates third-party demand and independent revenue opportunities.

Finally, it is important to point out that one of the claims cited in this question regarding NextNav's alleged removal from a "key equity index" is factually inaccurate, possibly as the result of confusing NextNav's stock ticker with a completely different and unrelated company.

Attachment —NextNav Responses to Additional Questions for the Record

2. *During the hearing you stated: “We currently have a live network in Santa Clara. We also have an existing network across the country, and we have not heard a single complaint of interference.” While you have an experimental authorization in Santa Clara and one in Colorado your “existing network across the country” is not a 5G system, correct?*
 - a. *Assuming I am correct that your “existing network across the country is not a 5G system, is it disingenuous to make the statement that you “have not heard a single complaint of interference?” This statement seems to imply that you operate at 5G power levels across the country, which NexNav does not.*

As I stated at other points throughout the hearing, and as I discussed with other Subcommittee Members during their questioning, NextNav is currently operating a live 5G PNT Network only in Santa Clara County, California.³ My statement regarding the lack of a “single complaint of interference” from NextNav’s live 5G operations was in reference to our 5G PNT Network in Santa Clara County, California, though it is also true that we have not received validated complaints of interference regarding our existing national network, which began transmitting under current rules in 2012.

3. *Would you care to revise your statement to make it more accurate? In particular, please include in your revised statement an acknowledgement that your “existing network across the country” does not operate at 5G power levels and, under the FCC’s current rules, had to be field tested to demonstrate that it would not cause harmful interference to unlicensed devices in the Lower 900 MHz band.*

Please see the response to Question 2 above. My statement was in reference to the Santa Clara County, California deployment. Given your reference to “harmful interference,” it is important to note that the field-test reference in 47 CFR § 90.353 concerns “unacceptable interference” to Part 15 devices. The FCC has previously stated that, “In assessing ‘unacceptable levels of interference’ for the field test requirement, we seek consistency with the Commission’s clear and repeated pronouncements that unlicensed devices in the 902-928 MHz band operate under the Part 15 rules that offer no protection from harmful interference.”⁴

³ Tr., at 26 (Rep. Pallone) (“We also have a [5]G system up in Santa Clara today ... that we’d love to have you all see on how amazing the current new innovation is ...”); Tr., at 80 (Rep. Goldman) (“I do have a map here of our Santa Clara market that we are transmitting live on [5]G today in this area. ...”); Tr., at 83 (Rep. Cammack) (“We’re transmitting [5]G in Santa Clara with no reported interference.”); *see also* Elizabeth Jeffs, *NextNav to Begin Operating World’s First 5G-Powered PNT Network, Marking Major Step Toward Commercialization*, NEXTNAV (Dec. 11, 2025), <https://nextnav.com/begin-operating-worlds-first-5g-powered-pnt-network/>.

⁴ Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules, WT Docket No. 11-49, Order, 28 FCC Rcd 8555, 8564 (2013).

The Honorable Doris Matsui (D-CA)

1. *Ms. Sorond, at the hearing you stated that NextNav’s testing in San Jose is not causing interference. Specifically, you said: “We do not see an impact, but that’s why we have the FCC, so that they could actually look at everybody’s technical data. I do have a map here of our Santa Clara market that we are transmitting live on 5G today in this area, many of the operations you just mentioned, retailers, airports, they all exist here, they’re all within this map, and not a single one has reported interference.” I’d like to learn more about your testing. Could you answer the following technical questions:*
 - a. *When and where is the network running?*
 - b. *Which of the eight base stations are live, when did each one start transmitting, and do they run continuously or on an intermittent schedule?*
 - c. *Does NextNav plan to make this rollout information publicly available, and if so, on what timeline?*

On November 20, 2025, the FCC authorized NextNav to use and operate radio transmitting facilities supporting NextNav’s experimental operations, which provide real-world testing data to evaluate performance in a representative urban environment. The FCC authorized this use at the following locations:

- (1) San Jose (SANTA CLARA), CA - NL 37-21-47; WL 121-53-00
- (2) San Jose (SANTA CLARA), CA - NL 37-20-34; WL 121-52-40
- (3) San Jose (SANTA CLARA), CA - NL 37-20-54; WL 121-54-00
- (4) San Jose (SANTA CLARA), CA - NL 37-20-02; WL 121-53-39
- (5) San Jose (SANTA CLARA), CA - NL 37-20-08; WL 121-55-03
- (6) San Jose (SANTA CLARA), CA - NL 37-20-22; WL 121-53-22
- (7) San Jose (SANTA CLARA), CA - NL 37-21-54; WL 121-54-53
- (8) San Jose (SANTA CLARA), CA - NL 37-20-07; WL 121-52-39
- (9) MOBILE: Mobile units of user equipment, San Jose, CA, within 6 km, centered around NL 37-20-54; WL 121-54-00

Following the FCC’s authorization, NextNav filed a public notice with the FCC that it would commence authorized operations as early as December 11, 2025.

NextNav requested to modify its authorization to relocate one of the eight authorized fixed base stations due to lease-related constraints. The new site that it requested is approximately 1,400 feet northwest of the original and the revised operational area largely overlaps with the original proposed area. On June 25, 2026, the FCC issued a modified license authorizing NextNav to use and operate transmitting facilities at the following locations:

- (1) San Jose (SANTA CLARA), CA - NL 37-21-47; WL 121-53-00
- (2) San Jose (SANTA CLARA), CA - NL 37-20-34; WL 121-52-40
- (3) San Jose (SANTA CLARA), CA - NL 37-20-54; WL 121-54-00
- (4) San Jose (SANTA CLARA), CA - NL 37-20-02; WL 121-53-39
- (5) San Jose (SANTA CLARA), CA - NL 37-20-08; WL 121-55-03
- (6) San Jose (SANTA CLARA), CA - NL 37-20-22; WL 121-53-22
- (7) San Jose (SANTA CLARA), CA - NL 37-22-04; WL 121-55-05
- (8) San Jose (SANTA CLARA), CA - NL 37-20-07; WL 121-52-39

Attachment—NextNav Responses to Additional Questions for the Record

(9) MOBILE: Mobile units of user equipment, San Jose, CA, within 6 km, centered around NL 37-20-54; WL 121-54-00

(10) San Jose (SANTA CLARA), CA - NL 37-22-04; WL 121-55-05

On June 25, 2026, NextNav filed a public notice with the FCC that it would commence authorized operations based on this modified license as early as June 26, 2026, with operations running through December 1, 2027. The testing has periods of continuous operation as well as periods of episodic operation depending on several variables, including experimental need, staffing, and site maintenance and availability.

NextNav's applications for the experimental licenses, the FCC's grant of the experimental licenses, and NextNav's notices of the commencement of operations are all publicly available and have been appended to this document for convenience.

2. *How powerful are the signals, and can the public verify it? Will you maintain a public log of transmission settings including channel configuration and signal parameters so independent parties can check them?*

NextNav is committed to conducting its experimental operations in compliance with all aspects of the FCC's authorization. The base stations transmit in the 918-928 MHz sub-band and the effective radiated power ("ERP") does not, and will not, exceed 1,000 W. Mobile units operate, and will operate, in the 902-907 MHz sub-band at a radiated power of no more than 61 mW ERP.

3. *Did you survey existing 902–928 MHz users in San Jose before launch, have you notified anyone who might be affected, and will you allow quiet periods with no transmission so independent researchers can measure the before-and-after difference?*

NextNav conducted comprehensive pre-launch notification and stakeholder engagement, demonstrating our commitment to collaborative spectrum sharing. Prior to commencing its authorized operations in the 902-907 MHz and 918-928 MHz bands, NextNav notified and provided a "Stop Buzzer" contact to all licensees who are authorized for operation in these sub-bands of Location & Monitoring Service (902-928 MHz) and who are located within 50 miles of the contours of the testing area. NextNav has also made good faith efforts to inform the lower 900 MHz user community including: (1) multiple FCC filings in FCC dockets with details about NextNav's proposed operations and technical parameters; (2) display advertisements in the print edition of the *San Jose Mercury News*, which circulates throughout San Jose, Campbell, Cupertino, Milpitas, Mountain View, Palo Alto, Santa Clara, Saratoga, Sunnyvale, and surrounding communities; (3) online public notices through the California News Publishers Association's CAPublicNotices.com, a statewide legal notice platform backed by more than 700 California newspapers and accessible to the public free of charge; (4) a press release distributed through Business Wire to thousands of media outlets worldwide; and (5) a dedicated website at www.progenylms.com providing testing details and a contact for any party with questions or concerns. These outreach efforts informed the community of the potential for interference, the types of devices that could be affected, and the contact available to address any issues.

Independent measurement of NextNav's operations is straightforward because the test is confined to a single, small geographic area that is publicly known.

Attachment—NextNav Responses to Additional Questions for the Record

4. *Is this test simulating real-world conditions?*
 - a. *Are the radios only collecting data or are they also sending it, will that data be made public, and is the network carrying realistic traffic loads?*

NextNav’s experimental operations are generating real-world empirical evidence in a representative urban environment. As detailed in NextNav’s FCC filings, the authorized experimental operations serve to field test a 5G-based terrestrial Positioning, Navigation, and Timing (“PNT”) solution that provides both PNT information and 5G data services. The experiment will evaluate the performance and accuracy of 5G New Radio Positioning Reference Signal (“PRS”) positioning information in real-world fixed and mobile scenarios. The radios are both transmitting and receiving, and the network is capable of simulating various traffic loading conditions. The network’s authorized technical parameters are consistent with typical low-band 5G macro deployments and align with NextNav’s proposal to optimize the lower 900 MHz band to enable a terrestrial, widescale complement and backup to GPS that is broadly available to critical infrastructure, public safety, and American consumers.

In May 2026, NextNav publicly announced real-world field validation of timing accuracy of approximately 20 nanoseconds (billionths of a second) using PRS transmitted by its 5G PNT Network in Santa Clara County, California. The field validation was conducted over-the-air in both outdoor and indoor environments, including GPS-denied locations. NextNav also presented these results at the Workshop on Synchronization and Timing Systems (“WSTS”), hosted by the Alliance for Telecommunications Industry Solutions.

5. *The FCC docket reflects interference concerns raised by a broad range of industries currently operating in the lower 900 MHz band, including electric and gas utilities, pipeline operators, freight railroads, the trucking sector, the aviation industry, the retail sector, and home security providers. Has NextNav conducted interference testing with each of these sectors? Please provide a comprehensive list of all interference tests conducted to date, including the sectors tested, the methodology employed, and the results obtained.*
 - a. *If interference testing has not been conducted for one of the industries listed above, please explain why no such interference testing has been conducted.*

NextNav’s approach—combining rigorous engineering analysis with hands-on, collaborative testing—reflects our commitment to resolving technical questions through evidence-based study and sound engineering. NextNav has conducted extensive outreach to stakeholders, including both licensed and unlicensed operators in the lower 900 MHz band. In addition to the outreach described in the response to question 3 above, over the past more than two years, NextNav has proactively engaged hundreds of entities through email correspondence, virtual and in-person meetings, webinars, and presentations and workshops conducted at major industry conferences and summits. These efforts reached stakeholders representing a diverse range of interests in the band’s current and future uses. Our outreach has extended to: the electronic tolling and turnpike industry; utilities and the utility telecommunication technology sector; the retail and connected-device sector; the alarm and security industry; the GPS and satellite navigation industry; the broadcast industry; competitive broadband providers; wireless internet service providers; the wireless infrastructure sector; the telecommunications, information technology, consumer electronics, and app-developer community; national security and technology policy organizations; unlicensed-spectrum advocacy organizations; municipal government organizations; and groups advancing the interests of unlicensed and Internet of

Attachment—NextNav Responses to Additional Questions for the Record

Things technologies, including RFID, LoRaWAN, and Z-Wave. In particular, we have also made extensive efforts to engage with the public safety community to understand its needs for indoor 3D location and any concerns related to band use.

NextNav recently completed joint coexistence testing of licensed railroad operations at the Association of American Railroads' ("AAR") dedicated test facility in Pueblo, Colorado. NextNav's application to perform this coexistence testing, as well as the FCC's authorization of this testing, is appended to this document.

NextNav has also undertaken targeted engagement with other industry sectors to establish collaborative coexistence testing and evaluation initiatives. For example, NextNav has engaged electric utilities, utility telecommunications organizations, and other stakeholders on laboratory and real-world testing methodologies, deployment scenarios, and technical validation approaches, including conducting a dedicated workshop session at the June 2026 Utilities Technology Council ("UTC") Technology & Telecom Conference. Similarly, NextNav has participated in the International Bridge, Tunnel and Turnpike Association ("IBTTA") Technology Summit for three straight years, most recently in May 2026, to engage tolling agencies, industry associations, and technology vendors regarding their operational considerations and to establish a collaborative framework for fact-based, real-world coexistence testing and validation. These engagements reflect NextNav's commitment to understanding the operational requirements and concerns of the broad range of industries operating in the lower 900 MHz band and to working collaboratively with stakeholders through transparent, data-driven coexistence evaluation.

As a result of this outreach, NextNav has established constructive dialogue and coexistence testing initiatives with multiple representatives of current lower 900 MHz band users. While some parties have not yet accepted NextNav's invitations to discuss their concerns and operational considerations, or participate in coexistence testing, NextNav remains committed to working collaboratively to address questions and concerns through open dialogue and transparent, fact-based evaluation and validation. NextNav welcomes any additional industries who wish to partner in performing collaborative sector-specific testing.

Prior to commencing its authorized operations in the 902-907 MHz and 918-928 MHz bands, NextNav notified and provided a "Stop Buzzer" contact to all licensees who are authorized for operation in these sub-bands of Location & Monitoring Service (902-928 MHz) and who are located within 50 miles of the contours of the testing area. And, as detailed in a June letter to the FCC (a copy of which is appended to this document), NextNav has established an email address, Engagement@nextnav.com, to facilitate general engagement from any stakeholders not already in direct contact with a NextNav representative.

6. *For each interference test conducted, does the analysis assess both (a) the interference NextNav's system would cause to existing operations in the band, and (b) the interference existing operations would cause to NextNav's system? Please describe the methodology used to evaluate interference in both directions.*

As noted in response to Question 4, the experimental operations in Santa Clara County, California, serve to field test, in real-world fixed and mobile scenarios, a 5G-based PNT solution that provides both PNT information and 5G data services. The testing with the railroad industry in Pueblo, Colorado, is similarly designed to test real-world scenarios.

Attachment—NextNav Responses to Additional Questions for the Record

NextNav has also submitted coexistence studies as part of the ongoing FCC proceedings. Below are links to some of the technical studies, test results, and responses to studies commissioned by other parties that NextNav has filed with the FCC.

- [5G NR and Unlicensed Part 15 Technologies in the Lower 900 MHz Band](#) (Feb. 27, 2025). This technical study includes a real-world San Francisco case study, system-level simulations, and detailed analysis of five major unlicensed technologies (LoRaWAN, RAIN RFID, Wi-Fi HaLow, Wi-SUN, and Z-Wave). It concludes that 5G operations would produce emissions no greater than authorized M-LMS systems and can coexist with Part 15 devices in the 902–928 MHz band.
- [Review of NextNav’s Coexistence Analysis on 5G NR and Unlicensed Part 15 Technologies in the Lower 900 MHz Band](#) (May 22, 2025). This slide presentation walks through the key technical assumptions, simulation methodology, and 5G/Part 15 coexistence findings in the February study and provides FCC staff with additional detail on modeling choices.
- [Supplement to NextNav’s Engineering Study on 5G NR and Unlicensed Part 15 Technologies in the Lower 900 MHz Band](#) (July 9, 2025). This supplemental report responds to commenters’ critiques, clarifies assumptions, and includes new simulations. It reaffirms that 5G operations will not cause unacceptable levels of interference to Part 15 technologies—even under modified assumptions advanced by critics.
- [Licensed Tolling Coexistence Study](#) (Aug. 1, 2025). This study evaluates coexistence between 5G operations and licensed tolling systems (TDM, SeGo, and 6C). It finds no impact from downlink operations and near-zero probability of uplink impact, even with conservative assumptions. The results show that existing tolling systems can continue operating with only limited retuning for some SeGo/6C readers. Optimization of the band would not require retuning or replacement of consumer toll transponders.
- [NextNav 5G-Powered 3D PNT](#) (Sept. 8, 2025). This presentation provides an overview of the public-interest case, technical feasibility, and 3GPP support for PRS-based PNT operations, along with the broader system-of-systems rationale for a terrestrial complement to GPS.
- [NextNav Response to Pericle Submission](#) (Nov. 19, 2025). This technical response identifies foundational flaws in the assumptions in a paper sponsored by the Security Industry Association (“SIA”), including impossible propagation results, mischaracterizations of 5G PRS operation, and errors in Pericle’s simulation methodology. It also contrasts Pericle’s treatment of Part 15 capabilities with the actual design characteristics of these technologies.
- [Unlicensed UHF RFID and 5G Coexistence Study](#) (Nov. 24, 2025). This empirical submission presents lab measurements using actual RAIN RFID readers and tags. It confirms that—even under extreme, unrealistic 5G signal levels—RAIN systems continue operating normally. The study validates earlier analytical findings on RAIN/5G coexistence.
- [Technical Response to Neology and IBTTA / E-ZPass December 2025 Technical Submissions](#) (Jan. 15, 2026). This technical analysis identifies critical flaws in Neology’s 5G PRS cell radius calculations—including incorrect processing gain assumptions that understated achievable cell radii by approximately a factor of seven—and demonstrates that the Neology and IBTTA / E-ZPass submissions rely on unrealistic assumptions such as a 90% base station loading factor.

Attachment—NextNav Responses to Additional Questions for the Record

Even using these worst-case assumptions and combinations, Neology’s own interference-to-signal data validates NextNav’s finding that tolling operations can coexist with 5G, and Neology’s confirmation of toll reader frequency agility and wideband transponder operation supports a smooth transition to an optimized band plan.

- [Technical Response to Security Industry Association December 2025 Technical Submission](#) (Jan. 29, 2026). This technical analysis demonstrates that the issues NextNav identified with the Pericle study—including propagation predictions that exceed even free-space path loss—remain unresolved, and subsequent disclosures by SIA revealed additional analytical deficiencies. Using Pericle’s own stated assumptions and a step-by-step replication of Pericle’s Monte Carlo simulation, this analysis reveals that Pericle overstated the median carrier-to-interference power by a factor of 10,000.
- [NextNav Response to RAIN Alliance Filing](#) (June 2, 2026). This technical response identifies critical flaws in the LS telecom study commissioned by the RAIN Alliance, including its failure to account for frequency hopping spread spectrum—the key coexistence mechanism of RAIN RFID—its use of unrealistic free space propagation models, and its inflation of RFID reader estimates by a factor of more than 50.

Also included for reference are:

- Three economic reports from the Brattle Group—[Public Benefits of Reconfiguring the Lower 900 MHz Band](#) (Oct. 2024), [Brattle Supplemental Report](#) (Mar. 2025), and [Brattle Second Supplemental Report](#) (July 17, 2025).
- A [letter](#) (Feb. 3, 2026) from RKF Engineering Solutions, LLC, which independently reviews NextNav’s Feb. 27, 2025, study and concurs with NextNav’s methodology and conclusion that 5G-based PNT operations can coexist with RAIN RFID systems with no operational impact in typical deployments.
- [Overview of the Lower 900 MHz Band, Roberson and Associates, LLC](#) (Feb. 6, 2026). This independent technical study, prepared by four engineers with decades of wireless industry experience, describes the coexistence mechanisms that Part 15 technologies (RAIN RFID, LoRaWAN, Wi-Fi HaLow, Wi-SUN, and Z-Wave) already use to share the band, sets out coexistence assessment best practices, and evaluates the Pericle Communications and Plum Consulting studies against those practices. It finds that both opposition studies depart from accepted methodology by relying on worst-case rather than realistic assumptions, including 50 percent cell loading where 10 to 20 percent reflects actual network behavior, and concludes that proper analysis demonstrates 5G operations should not cause unacceptable interference to Part 15 devices and that the two can coexist in the 902–928 MHz band.

The Honorable Troy Carter (D-LA)

1. *What evaluations have been conducted in your proposal to understand how potential interference with grid communication systems might affect storm monitoring, wildfire detection, outage management, and natural gas safety operations?*

NextNav recognizes the critical importance of electric grid resilience and is committed to collaborative, fact-based technical evaluation with utility stakeholders. NextNav has conducted extensive outreach to the utilities and electric power sector, including the Utilities Technology Council (“UTC”), through email correspondence, virtual and in-person meetings, and presentations at major industry conferences. As part of this collaborative effort, NextNav held a dedicated workshop at the June 2026 UTC Technology & Telecom Conference to present its proposed 900 MHz band plan, discuss its coexistence testing framework, and solicit industry input on utility applications and operational requirements, which may include storm monitoring, wildfire detection, outage management, distribution automation, and natural gas safety operations. NextNav welcomes the opportunity to work with any additional stakeholders who wish to partner in performing sector-specific laboratory and real-world testing.

NextNav remains committed to working collaboratively with utilities through open dialogue and transparent, fact-based technical evaluation and validation to ensure grid resilience and operational continuity.

2. *How will you ensure that there aren't longer outages that would disproportionately affect seniors, medically vulnerable populations, and low-income households during extreme heat or winter storms?*

NextNav has been operating a 5G PNT Network in Santa Clara County, California, since early 2026, pursuant to an experimental license granted by the FCC on November 20, 2025. NextNav commenced testing earlier this year and has not received any complaints regarding interference arising from these tests to date, nor does it anticipate any impact on other users’ operations in the band, based on the extensive technical analyses it has filed in the FCC’s record. At the same time, NextNav welcomes additional analysis and feedback as the FCC process continues. NextNav supports a process guided by facts, sound engineering, and rigorous technical analysis—and welcomes the FCC’s independent evaluation of the evidence on its merits.

The Honorable Rob Menendez (D-NJ)

1. *Ms. Sorond, can NextNav clarify whether one purpose of operating this experimental PNT system is to assess interference effects between the 5G wireless system and other wireless systems in the lower 900 MHz band?*

NextNav's experimental operations are designed to generate empirical evidence on network performance in real-world conditions, supported by proactive stakeholder notification and dedicated communications mechanisms. As detailed in NextNav's FCC filings, the experimental operations in Santa Clara County, California will field test a 5G-based terrestrial Positioning, Navigation, and Timing ("PNT") solution that provides both PNT information and 5G data services. The experiment will evaluate the performance and accuracy of 5G New Radio Positioning Reference Signal positioning information in real-world fixed and mobile scenarios. The radios are both transmitting and receiving, and the network is capable of simulating various traffic loading conditions. The network's authorized technical parameters are consistent with typical low-band 5G macro deployments and align with NextNav's proposal to optimize the lower 900 MHz band to enable a terrestrial, widescale complement and backup to GPS that is broadly available to critical infrastructure, public safety, and American consumers.

Prior to commencing its authorized operations in the 902-907 MHz and 918-928 MHz bands, NextNav notified and provided a "Stop Buzzer" contact to all licensees who are authorized for operation in these sub-bands of Location & Monitoring Service (902-928 MHz) and are located within 50 miles of the contours of the testing area. NextNav has also made good faith efforts to inform the unlicensed device user community about the test, including through direct outreach to unlicensed providers and the dedicated website, but also through filings in FCC dockets; newspaper advertisements; online public notices; and a press release, and provided a contact in case there are issues that need to be addressed. To date, NextNav has received no complaints of interference through the Stop Buzzer contact or any other channel.

2. *Ms. Sorond, how are NextNav's current and/or future 5G PNT systems being coordinated with all of the various licensed or unlicensed users in the lower 900 MHz band?*

NextNav is committed to spectrum coexistence, and that commitment is reflected in its coordination with both licensed and unlicensed users. NextNav has conducted extensive outreach to stakeholders, including both licensed and unlicensed operators in the lower 900 MHz band. Over the past more than two years, NextNav has proactively engaged hundreds of entities through email correspondence, virtual and in-person meetings, webinars, and presentations and workshops conducted at major industry conferences and summits. These efforts reached stakeholders representing a diverse range of interests in the band's current and future uses. Our outreach has extended to: the electronic tolling and turnpike industry; utilities and the utility telecommunications sector; the retail and connected-device sector; the alarm and security industry; the GPS and satellite navigation industry; the broadcast industry; competitive broadband providers; wireless internet service providers; the wireless infrastructure sector; the telecommunications, information technology, consumer electronics, and app-developer community; national security and technology policy organizations; unlicensed-spectrum advocacy organizations; municipal government organizations; and groups advancing the interests of unlicensed and Internet of Things technologies, including RFID, LoRaWAN, and Z-Wave. In

Attachment—NextNav Responses to Additional Questions for the Record

particular, we have made an effort to engage with the public safety community to understand its needs for indoor 3D location and any concerns related to band use.

NextNav has repeatedly and publicly committed to reasonable accommodations for licensees, including financial and technical support, that contribute to a smooth transition to an optimized Lower 900 MHz band plan.

As a result of this outreach, NextNav has established constructive dialogue and coexistence testing initiatives with representatives of certain current lower 900 MHz band users. While some parties have not yet accepted NextNav’s invitations to discuss their concerns and operational considerations, or participate in coexistence testing, NextNav recently conducted joint coexistence testing with the Association of American Railroads at their Facility for Accelerated Service Testing in Pueblo, Colorado, examining real-world compatibility between 5G PNT operations and railroad Automatic Equipment Identification (“AEI”) systems. NextNav remains committed to working collaboratively to address questions and concerns through open dialogue and transparent, fact-based evaluation and validation.

As detailed in a June letter to the FCC (a copy of which is appended to this document), NextNav has also established a dedicated email address, Engagement@nextnav.com, to further support stakeholder engagement and ensure that interested parties—particularly those not yet in direct contact with a NextNav representative—have a clear path to meaningful dialogue with NextNav representatives.

Additionally, prior to commencing its authorized operations in the 902-907 MHz and 918-928 MHz bands in Santa Clara County, California, NextNav notified and provided a “Stop Buzzer” contact to all licensees who are authorized for operation in these sub-bands of Location & Monitoring Service (902-928 MHz) and are located within 50 miles of the contours of the testing area. NextNav has also made good faith efforts to inform the unlicensed device user community about the test, including through direct outreach to unlicensed providers and the dedicated website, but also through filings in FCC dockets; newspaper advertisements; online public notices; and a press release, and provided a contact in case there are issues that need to be addressed. To date, NextNav has received no complaints of interference through the Stop Buzzer contact or any other channel.

NextNav continues to welcome all stakeholder engagement as the FCC’s rigorous and fact-based process continues.

3. *Ms. Sorond, what specific mechanisms are used to notify unlicensed users about the operation of NextNav’s current and/or future 5G PNT systems including experimental systems, and does NextNav have any information regarding the effectiveness of those communications?*

Please see the response to Question 2 above.

4. *Ms. Sorond, how would an incumbent user, should they have observed anomalies in their systems, correlate those events to NextNav system activity without coordinated activity?*

Prior to commencing its authorized operations in the 902-907 MHz and 918-928 MHz bands in Santa Clara County, California, NextNav notified and provided a “Stop Buzzer” contact to all licensees who

Attachment—NextNav Responses to Additional Questions for the Record

are authorized for operation in these sub-bands of Location & Monitoring Service (902-928 MHz) and are located within 50 miles of the contours of the testing area. In addition, NextNav has made good faith efforts to inform the unlicensed device user community about the test, including through filings in FCC dockets; direct correspondence to industry stakeholders; newspaper advertisements; online public notices; a press release; and a dedicated website.

Moreover, NextNav is conducting testing in one county—Santa Clara County, California—which is authorized to continue through late 2027. Existing users operate across the country and can compare any anomalies in Santa Clara County with those nationwide or with their operations prior to the commencement of NextNav’s testing.

NextNav has received no reports of interference in connection with these tests and ultimately trusts the FCC to rigorously evaluate the evidence in the record with respect to claims about coexistence in the lower 900 MHz band.

5. *Ms. Sorond, can NextNav explain the operational differences in a NextNav 5G PNT system performing in commercial operations versus experimental operations?*

NextNav’s experimental operations serve to field test a 5G-based terrestrial PNT solution that provides both PNT information and 5G data services. The experiment will evaluate the performance and accuracy of 5G New Radio (“NR”) Positioning Reference Signal (“PRS”) positioning information in real-world fixed and mobile scenarios. Experimental operations differ from commercial operations in scope, duration, and purpose, but are designed so the technical outputs, such as RF emissions and performance behavior at the relevant operational parameters, are representative of wide-scale commercial performance. NextNav’s experimental design is intended to generate field-validated performance data representative of wide-scale commercial deployment, ensuring that experimental findings will be operationally relevant.

6. *Ms. Sorond, has the NextNav system operation been continuous use or is the operation periodic in nature? Are base station-to-handset communications limited to specific times of the day?*

NextNav’s experimental FCC license permits testing over a two-year period, during which testing will occur both continuously and on a periodic basis, depending on a variety of factors including experimental need, staffing, and site maintenance and availability. Some test campaigns call for sustained transmission to characterize performance over time, while others involve discrete, short-duration measurements, so the operating pattern reflects the testing objective at any given point rather than a fixed schedule. Base station-and-user equipment communications are likewise tied to periods of active testing rather than confined to particular times of day. This flexible, purpose-driven testing schedule allows NextNav to characterize system performance comprehensively across diverse conditions and scenarios, supporting rigorous technical analysis.

Attachment —NextNav Responses to Additional Questions for the Record

7. *Ms. Sorond, what is the operational loading of the NextNav 5G base stations during different periods of the day? How does this compare to a commercial 5G system operating in the same geographic area during those same time periods?*

NextNav will test a variety of configurations over the duration of its experimental license, including a range of loading scenarios. Because the purpose of the experimental operations is to characterize system performance behavior rather than to serve live user traffic, the loading during testing is set to gather meaningful data rather than to mirror the exact time-bounded demand profile of a commercial network. NextNav expects to test loading levels at and above the levels a commercial system would experience, so that the resulting measurements bound the range of real-world commercial operation rather than reflect a single point within it.

###

Materials Related to NextNav's Santa Clara County, California, 5G PNT Network



June 25, 2026

VIA ECFS

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
45 L Street NE
Washington, DC 20554

Re: NextNav Petition for Rulemaking, Enabling Next-Generation Terrestrial Positioning, Navigation, and Timing and 5G: A Plan for the Lower 900 MHz Band (902-928 MHz), Public Notice (WT Docket No. 24-240); OET Changes *Ex Parte* Status from “Restricted” to “Permit-But-Disclose” for NextNav Experimental Licensing Matters, Public Notice (ET Docket No. 26-84)

Dear Ms. Dortch:

NextNav Inc. (NextNav) will commence authorized experimental operations as early as June 26, 2026, under call sign WP2XYS to field test a 5G-based terrestrial Positioning, Navigation, and Timing (PNT) solution that provides both PNT information and 5G data services.¹ The experiment will evaluate the performance and accuracy of 5G New Radio Positioning Reference Signal positioning information in real-world fixed and mobile scenarios such as outdoors, indoors, and in-vehicle.

The testing will involve eight fixed base stations located in Santa Clara County, California. The base stations will transmit in the 918-928 MHz sub-band and the effective radiated power (ERP) will not exceed 60 dBm. Mobile units will operate in the 902-907 MHz sub-band at a radiated power of no more than 61 mW ERP. The operations will run through December 1, 2027, consistent with the license terms for WP2XYS and part 5 of the Commission’s rules.² Copies of NextNav’s experimental license application and the Commission authorization are attached.

The technical and “stop buzzer” point of contact with authority to direct the termination of operations is JongHak Jung, phone: (408) 400-7850, e-mail: 5GPNTNetwork@nextnav.com.

¹ FCC Experimental License, File No. 0094-EX-CM-2026, Call Sign WP2XYS (granted June 25, 2026).

² 47 C.F.R. part 5.

Sincerely,

/s/ Renee Gregory

NextNav Inc.
11911 Freedom Drive
Suite 200
Reston, VA 20190

Attachments:

Experimental License for Call Sign WP2XYS

FCC Form 442 File No. 0094-EX-CM-2026

Narrative in Support of Modification Application File No. 0094-EX-CM-2026

Antenna Data Sheet

Frequency Information

San Jose (SANTA CLARA), CA - NL 37-20-34; WL 121-52-40

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

San Jose (SANTA CLARA), CA - NL 37-20-54; WL 121-54-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

San Jose (SANTA CLARA), CA - NL 37-20-02; WL 121-53-39

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

San Jose (SANTA CLARA), CA - NL 37-20-08; WL 121-55-03

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

Frequency Information

San Jose (SANTA CLARA), CA - NL 37-20-22; WL 121-53-22

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

San Jose (SANTA CLARA), CA - NL 37-20-07; WL 121-52-39

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

MOBILE: Mobile units of user equipment, San Jose, CA, within 6 km, centered around NL 37-20-54; WL 121-54-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
902-907 MHz	MO	5M00D7W	61 mW (ERP)	0.0001 %
902-907 MHz	MO	5M00D7W	1.22 mW (ERP)	0.0002 %

San Jose (SANTA CLARA), CA - NL 37-22-04; WL 121-55-05

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %
923 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

Special Conditions:

- (1) The occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (2) Prior to commencing any operations in the 902-907 MHz and 918-928 MHz bands, the experimental licensee must notify and provide the Stop Buzzer contact to all licensees who are authorized for operation in these sub-bands of Location & Monitoring Service (902-928 MHz) and are located within 50 miles of the contours of the testing area.
- (3) The power of experimental operation must be limited to 60 dBm ERP.
- (4) Experimental operations must be limited to metropolitan San Jose, CA.
- (5) The experimental licensee should make a good faith effort to inform the "unlicensed device user" community about the test including the dates of operation, frequencies used and locations of transmitters. The community should be informed of the potential for interference and the types of devices that may be impacted (e.g., wireless cameras, home smart devices, baby monitors, inventory monitoring and theft mitigation systems...); and the experimental licensee should provide the community a contact in case there are issues that need to be addressed.
- (6) The experimental licensee must place notice of the experimental parameters, and the stop buzzer contact in the record of the NextNav proceeding (Docket 24-240).
- (7) If NextNav must terminate operations due to any interference concerns, the technical and "stop buzzer" point of contact with authority to direct the termination of operations is as follows:
JongHak Jung
1191 Freedom Drive, Suite 200
Reston, VA 20190 Telephone: (571) 233-2477
Email: jjung@nextnav.com
- (8) Experimental licensee must
 - a. set an antenna height at a value where TOWAIR indicates that FAA notification is not required at that given location; or
 - b. file an FAA notification (and seek a determination of no hazard) where TOWAIR indicates that FAA notification is required at the given location and height.

**FCC FORM 442 - FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR NEW OR MODIFIED RADIO STATION UNDER PART 5 OF FCC RULES -
EXPERIMENTAL RADIO SERVICE (OTHER THAN BROADCAST)**

**Approved by
OMB
3060 - 0065**

Applicant's Name (company): Ne tNav **File No.:** 0094 EX CM 2026

Mailing Address

Attention: Renee Gregory
Street Address: 11911 Freedom Dr., te. 200
P.O. Box:
City: Reston
State: VA
Country:
Zip Code: 20190
E Mail Address: rgregory@ne tnav.com

Application Purpose

Application is for: MODIFICATION OF LICEN E

For Modification indicate below

File No.: 0622-EX-CN-2025 **Callsign:** WP2XYS

Government Contract

Is this authorization to be used for fulfilling the requirement of a government contract with an agency of the United States Government? If "YES", include as an exhibit a narrative statement describing the government project, agency and contract number. No

Foreign Government Use

Is this authorization to be used for the exclusive purpose of developing radio equipment for export to be employed by stations under the jurisdiction of a foreign government? If "YES", include the contract number and the name of the foreign government concerned as an exhibit. No

Research Project

Is this authorization to be used for providing communications essential to a research project? (The radio communication is not the objective of the research project)? If "YES", include as an exhibit the following information:

- a. A description of the nature of the research project being conducted.
- b. A showing that the communications facilities requested are necessary for the research project involved.
- c. A showing that existing communications facilities are inadequate.

0

Exhibit Information

If all the answers to Items 4, 5, 6 are "NO", include as an exhibit a narrative statement describing in detail the following items:

- a. The complete program of research and experimentation proposed including description of equipment and theory of operation.
- b. The specific objectives sought to be accomplished.
- c. How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion or utilization of the radio art, or is along line not already investigated.

Estimated Duration

Give an estimate of the length of time that will be required to complete the program of experimentation proposed in this application: 24 Months

Environmental Impact

Would a commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact? If "YES", include as an exhibit an Environmental Assessment as required by Section 1.1311. No

Manufacturer

List below transmitting equipment to be installed (if experimental, so state) if additional rows are required, please submit equipment list as an exhibit :

Manufacturer	Model Number	No. Of Units	Experimental
ekha Wireless	MARUT6461	24	Yes
ime RF	LM 7002M	20	Yes
Qorvo	QPA9908	20	Yes
Amarisoft	UE B 2025032800	1	Yes

Station ID

Is the equipment listed in Item 10 capable of station identification pursuant to Section 5.115? No

Applicant Type

Applicant is: Corporation

Foreign Government

Is applicant a foreign government or a representative of a foreign government? No

License Denied or Revoked

Has applicant or any party to this application had any FCC station license or permit revoked or any application for permit, license or renewal denied by this Commission?

If "YES", include as an exhibit a statement giving call sign of license or permit revoked and relate circumstances. No

Owner and Operator

Will applicant be owner and operator of the station? Yes

Contact Information

Give the following information of person who can best handle inquiries pertaining to this application: First Name: Trey
Last Name: Hanbury
Title: Regulatory Counsel
Phone Number: 2026376387
E-Mail Address: thanbury@jenner.com

Drug Abuse Question

APPLICANT ANTI-DRUG ABUSE CERTIFICATION: By checking "YES", the individual applicant certifies that he or she is eligible for this license. This requires that he or she is not subject to a denial of federal benefits, including FCC benefits, as a result of a drug offense conviction pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862. A non-individual applicant, e.g., corporation, partnership or other unincorporated association, certifies that no party to the application is subject to a denial of federal benefits, pursuant to that section. For definition of a "party" for these purposes, see 47CFR 1.2002(b). Yes

Certification

THE APPLICANT CERTIFIES THAT:

- a. Copies of the FCC Rule Parts 2 and 5 are on hand; and
- b. Adequate financial appropriations have been made to carry on the program of experimentation which will be conducted by qualified personnel; and
- c. All operations will be on an experimental basis in accordance with Part 5 and other applicable rules, and will be conducted in such a manner and at such a time as to preclude harmful interference to any authorized station; and
- d. Grant of the authorization requested herein will not be construed as a finding on the part of the Commission:
 1. that the frequencies and other technical parameters specified in the authorization are the best suited for the proposed program of experimentation, and
 2. that the applicant will be authorized to operate on any basis other than experimental, and
 3. that the Commission is obligated by the results of the experimental program to make provision in its rules including its table of frequency allocations for applicant's type of operation on a regularly licensed basis.

THE APPLICANT FURTHER CERTIFIES THAT:

- e. All the statements in the application and attached exhibits are true, complete and correct to the best of the applicant's knowledge; and
- f. The applicant is willing to finance and conduct the experimental program with full knowledge and understanding of the above limitations; and
- g. The applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the USA.

Name of Applicant: Ne tNav

Signature (Authorized person filing form): Renee Gregory

Signature Date (Authorized person filing form): 04/14/2026

Title of Person Signing Application: Vice President of Regulatory Affairs

Classification: Authorized employee

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(A)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

NOTIFICATION TO INDIVIDUALS UNDER PRIVACY ACT OF 1974 AND THE PAPERWORK REDUCTION ACT OF 1980

Information requested through this form is authorized by the Communications Act of 1934, as amended, and specified by Section 308 therein. The information will be used by Federal Communications Commission staff to determine eligibility for issuing authorizations in the use of the frequency spectrum and to effect the provisions of regulatory responsibilities rendered by the Commission by the Act. Information requested by this form will be available to the public unless otherwise requested pursuant to 47 CFR 0.459 of the FCC Rules and Regulations. Your response is required to obtain this authorization.

Public reporting burden for this collection of information is estimated to average four (4) hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to the Federal Communications Commission, Records Management Branch, Paperwork Reduction Project (3060-0065), Washington DC 20554. DO NOT send completed applications to this address. Individuals are not required to respond to this collection unless it displays a currently valid OMD control number.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e) (3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

Station Location

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
San Jose	California	North 37 21 47	West 121 53 0			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters: 14.10

(b) Elevation of ground at antenna site above mean sea level in meters: 26.00

(c) Distance to nearest aircraft landing area in kilometers: 2.80

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	918.00000000-928.00000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 34	West 121 52 40			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters: 39.80

(b) Elevation of ground at antenna site above mean sea level in meters: 25.00

(c) Distance to nearest aircraft landing area in kilometers: 3.50

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	918.00000000-928.00000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 54	West 121 54 0			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters: 49.40

(b) Elevation of ground at antenna site above mean sea level in meters: 20.00

(c) Distance to nearest aircraft landing area in kilometers: 1.40

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
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New 918.00000000 928.00000000 MH FX 80.000000 W 1000.000000 W M 0.00010000 % 10M0D7W OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	an Jose	California	North 37 20 2	West 121 53 39			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: No

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters: 65.90

(b) Elevation of ground at antenna site above mean sea level in meters: 26.00

(c) Distance to nearest aircraft landing area in kilometers: 2.90

(d) List any natural formations of existing man made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New	918.00000000 928.00000000 MH	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	an Jose	California	North 37 20 8	West 121 55 3			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: No

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters: 35.20

(b) Elevation of ground at antenna site above mean sea level in meters: 29.00

(c) Distance to nearest aircraft landing area in kilometers: 1.80

(d) List any natural formations of existing man made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New	918.00000000 928.00000000 MH	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	an Jose	California	North 37 20 22	West 121 53 22			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters: 46.00

(b) Elevation of ground at antenna site above mean sea level in meters: 25.00

(c) Distance to nearest aircraft landing area in kilometers: 2.80

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	918.00000000-928.00000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 22 4	West 121 55 5			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters:

(b) Elevation of ground at antenna site above mean sea level in meters:

(c) Distance to nearest aircraft landing area in kilometers:

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	918.00000000-928.00000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 7	West 121 52 39			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters: 56.50

(b) Elevation of ground at antenna site above mean sea level in meters: 15.00

(c) Distance to nearest aircraft landing area in kilometers: 3.90

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New 918.00000000 928.00000000 MH	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0 an Jose	California	North 37 20 54	West 121 54 0	Mobile units of user equipment, an Jose, CA		ANTA CLARA	6.00 km

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters:

(b) Elevation of ground at antenna site above mean sea level in meters:

(c) Distance to nearest aircraft landing area in kilometers:

(d) List any natural formations of existing man made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New 902.00000000 907.00000000 MH	MO	200.000000 mW 61.000000 mW	M	0.00010000 %	5M00D7W	OFDM

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New 902.00000000 907.00000000 MH	MO	4.000000 mW 1.220000 mW	M	0.00020000 %	5M00D7W	OFDM

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0 an Jose	California	North 37 22 4 55 5	West 121 55 5			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters:

(b) Elevation of ground at antenna site above mean sea level in meters:

(c) Distance to nearest aircraft landing area in kilometers:

(d) List any natural formations of existing man made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New 918.00000000 928.00000000 MH	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

Action Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
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New	923.00000000 MH	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM
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APPLICATION FOR MODIFICATION OF EXPERIMENTAL AUTHORITY

NextNav Inc. (NextNav) seeks modification of its experimental authority under call sign WP2XYS to relocate one of the eight authorized fixed base stations in Santa Clara County, California.¹ The new site, located approximately 1,400 feet northwest of the original, will replace the prior site due to lease-related constraints. The relocated base station will operate only one sector with the directional antenna, oriented towards the southeastern direction. The revised operational area will largely overlap with the original area. The base station will transmit in the 918–928 MHz sub-band at a radiated power of up to 1000 watts ERP per sector, with the antenna mounted at a fixed azimuth and the beamwidth and downtilt values specified below.

The proposed modified site will be located on an existing building rooftop in the same manner as the original site. These rooftop facilities involve antennas mounted below the building rooftop line and therefore do not create new obstructions requiring FAA notification or clearance. Because the rooftop site will be mounted at or below the rooftop line, this application introduces no new structures or obstructions.

An antenna data sheet, and typical deployment configurations on preexisting structures appear in the attached exhibit. The following chart provides detailed technical specifications for the original and relocated base station sites in the San Jose area. Each row includes the NextNav site identifier, geographic coordinates (latitude and longitude), antenna height above ground level, estimated structure height (AGL), and the azimuth and downtilt values for up to three antenna sectors (Alpha, Beta, and Gamma).² Testing from zero to up to 10 degrees downtilt allows NextNav to study the variation in group delay of the antenna due to nulls in the vertical antenna pattern on PNT performance.

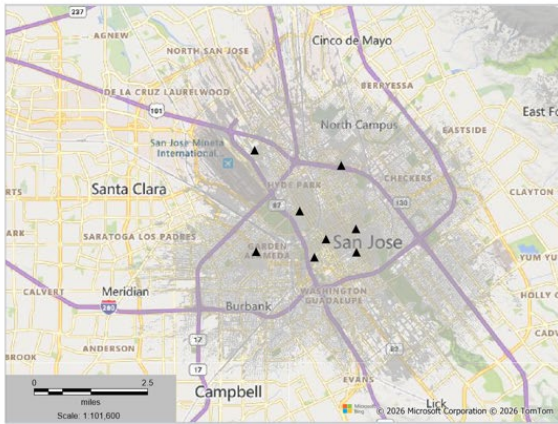
Site ID	Latitude	Longitude	NN Antenna Height AGL (m)	Est. Bldg. Height (m)	Alpha sector Az (Deg)	Beta sector Az (Deg)	Gamma sector Az (Deg)	Alpha sector Down- tilt (Deg)	Beta sector Down- tilt (Deg)	Gamma sector Down- tilt (Deg)
CASFO0502 (original)	37° 21' 53.8" N	121° 54' 52.8" W	39	39	110	200	N/A	0-10	0-10	0-10
CASFO0503 (relocated)	37° 22' 3.66" N	121° 55' 5.04" W	29.9	29.9	140	N/A	N/A	0-10	N/A	N/A

The maps below show the revised experimental coverage area incorporating the relocated site. Because the downtilt angle may range from 0 degrees to 10 degrees, coverage plots are shown for both 0 degrees downtilt and 10 degrees downtilt.

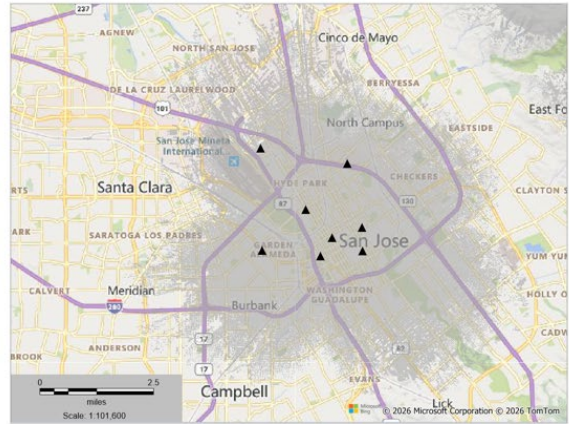
¹ The mailing address provided for the applicant in the original application for File No. 0622-EX-CN-2025 contained an incorrect ZIP code. The correct ZIP code is reflected in the applicant's mailing address as submitted with this modification application.

² As noted, the relocated site will operate only one sector.

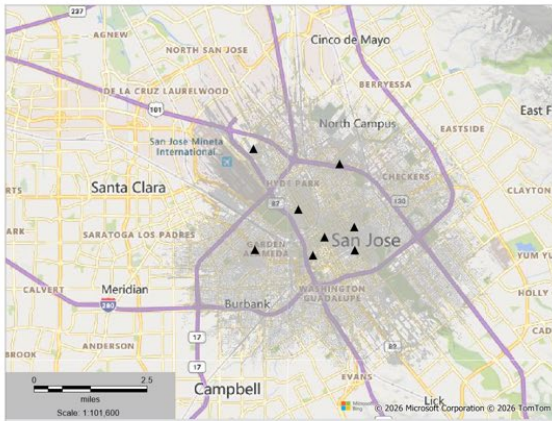
Outdoor + Indoor Coverage – 0° tilt



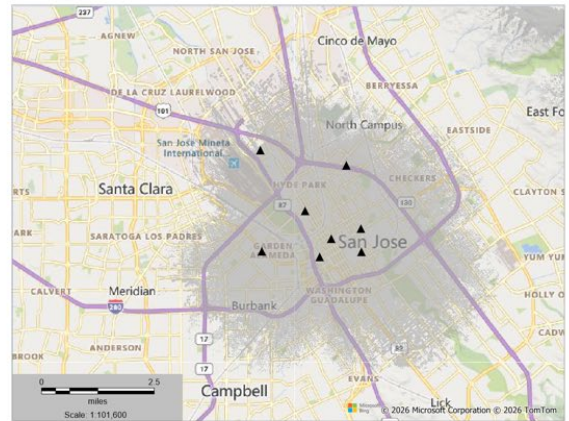
Outdoor Coverage Only – 0° tilt



Outdoor + Indoor Coverage – 10° tilt



Outdoor Coverage Only – 10° tilt



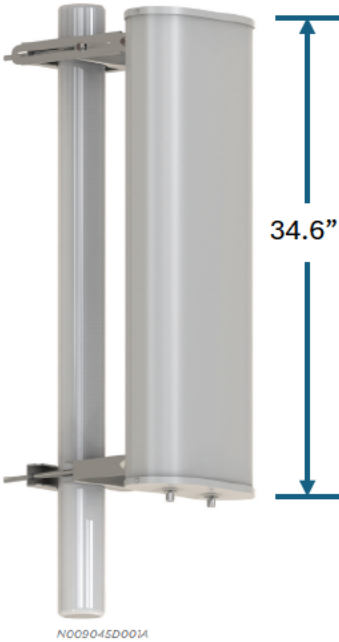
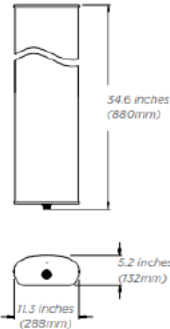
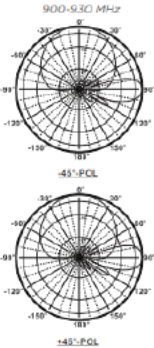
Antenna Data Sheet



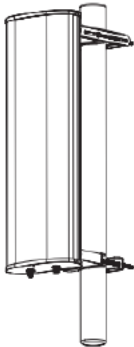
900 MHz 60 Degree Sector Antenna SPECIFICATION SHEET

900 MHz 60 Degree Sector Antenna

The Sector Antenna is compatible with the PMP 450I 900 MHz.



N009045D001A



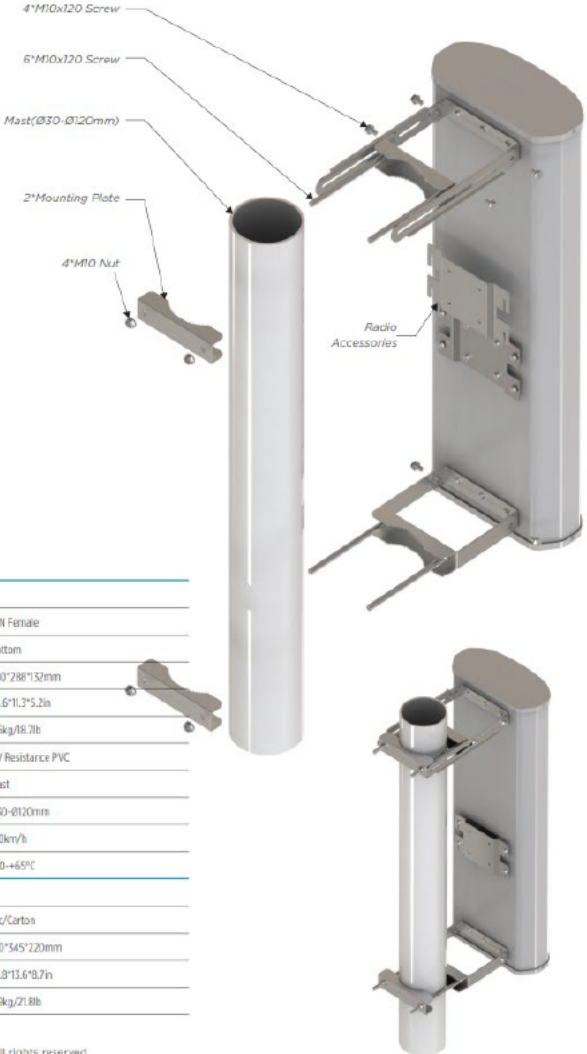
ELECTRICAL DATA

Frequency	900-930 MHz
Gain	15 dBi
VSWR	<1.71
Polarization	Dual slant, ±45°
Horizontal Beamwidth	65°
Vertical Beamwidth	23°
Front-to-back ratio	>30dB
Isolation	>30dB
Cross-polar ratio	>15dB (±60°±10)
Impedance	50 Ohms
Max Input Power	100W
Lightning Protection	DC Ground

900 MHz 60 Degree Sector Antenna SS 10122015

Specifications

900 MHz 60 Degree Sector Antenna SPECIFICATION SHEET



MECHANICAL DATA

Connector	2\"/>
Connector Position	Bottom
Dimensions	880*298*132mm
Length / Width / Height	34.6\"/>
Weight	6.5kg/18.7lb
Random Material	UV Resistance PVC
Mounting Method	Mast
Mast Size	Ø30-Ø120mm
Rated Wind Velocity	26km/h
Operating Temperature	-40~+65°C

SHIPMENT DATA

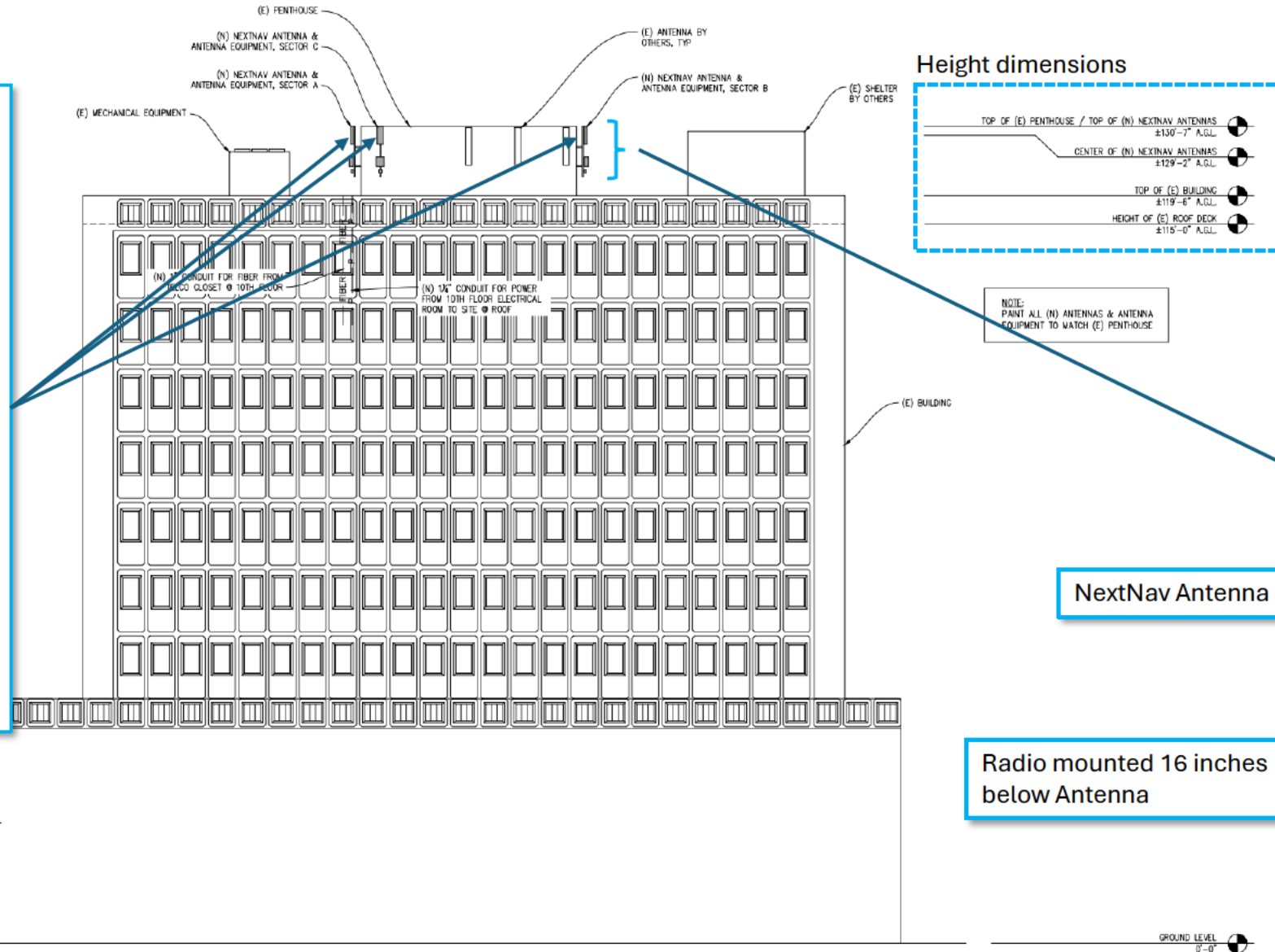
Packaging Quantity	1pc/Carton
Carton Size	910*545*120mm
(Length / Width / Height)	35.8\"/>
Packaging Weight	9.9kg/21.8lb

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900 MHz 60 Degree Sector Antenna SS 10122015

Example Antenna Deployment on Building

NextNav antenna typically attached on Penthouse facade such that top of the antenna is not above the roofline of the existing Penthouse. None of the building locations used require or have existing aviation obstruction lighting.

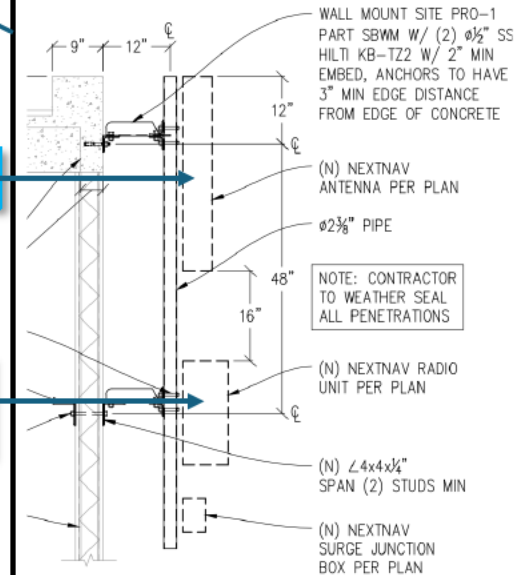


Antenna Attachment

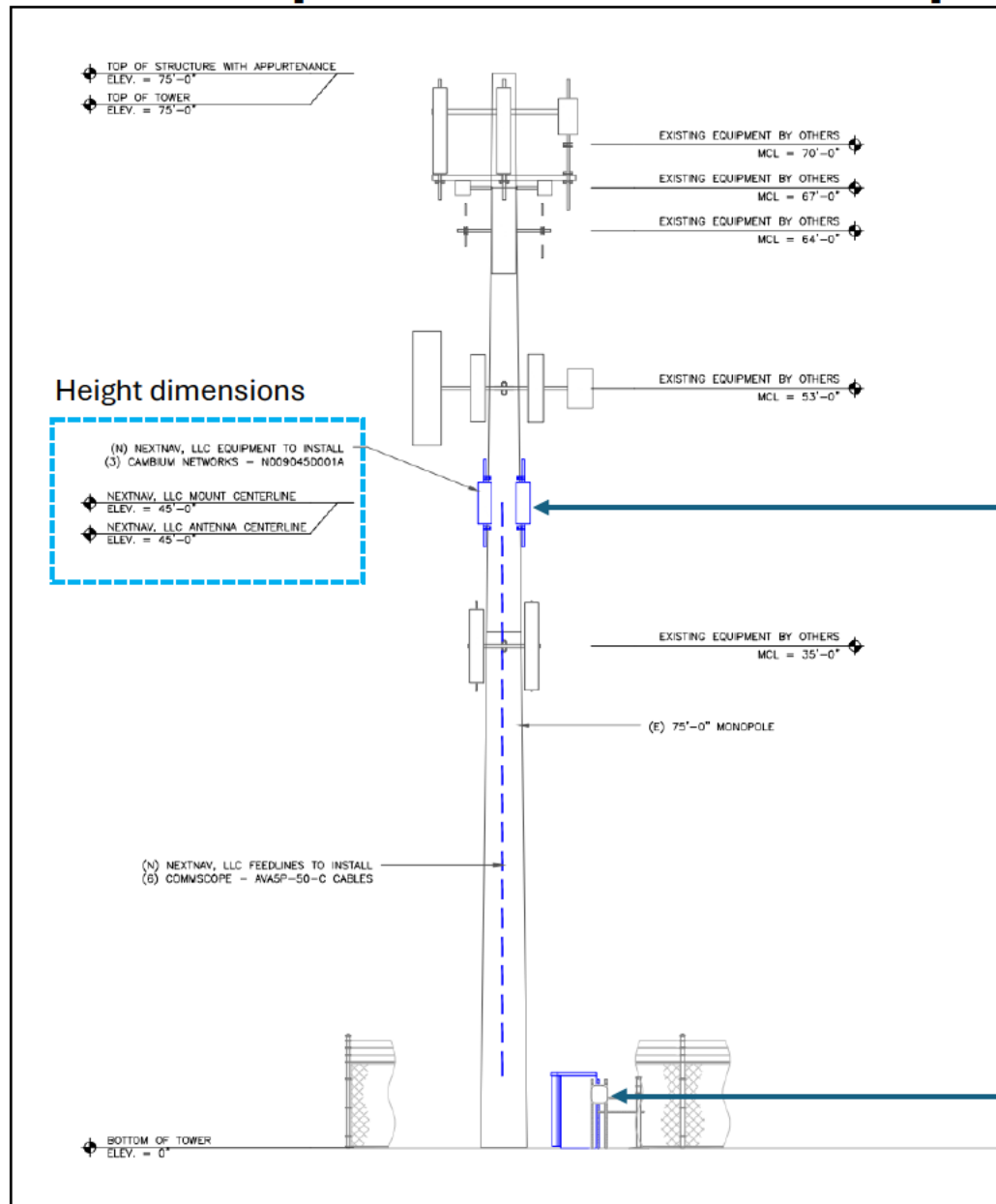


NextNav Antenna

Radio mounted 16 inches below Antenna



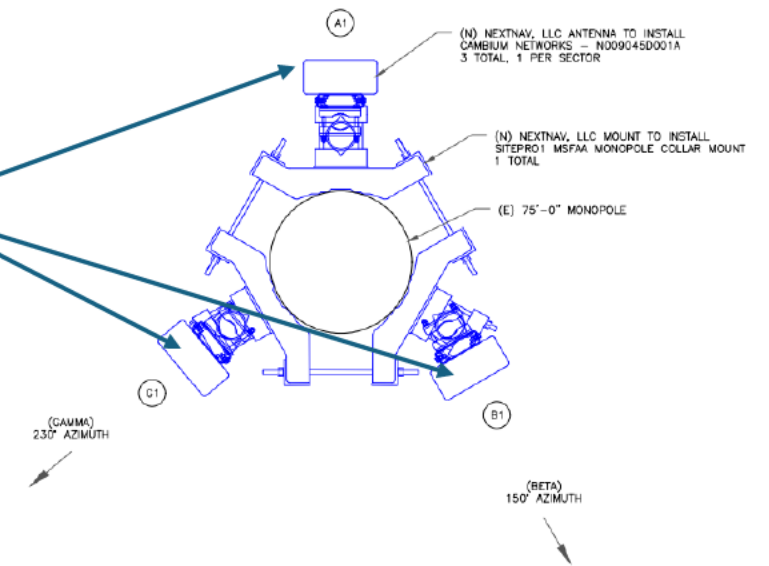
Example Antenna Deployment on Tower



NextNav
Antenna
typically
attached on
side arm,
attached to
structure at
available Rad
center.

Radio Unit on H-Frame near
the shelter on the ground
~ 40 feet below the antenna

Top View of Antenna attachment



**FCC FORM 442 - FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR NEW OR MODIFIED RADIO STATION UNDER PART 5 OF FCC RULES -
EXPERIMENTAL RADIO SERVICE (OTHER THAN BROADCAST)**

**Approved by
OMB
3060 - 0065
Expires
09/30/98**

Applicant's Name (company): Ne tNav **File No.:** 0622 EX CN 2025

Mailing Address

Attention: Renee Gregory
Street Address: 11911 Freedom Dr., te. 200
P.O. Box:
City: Reston
State: VA
Country:
Zip Code: 94085
E Mail Address: rgregory@ne tnav.com

Application Purpose

Application is for: NEW LICEN E

For Modification indicate below

File No.: **Callsign:**

Government Contract

Is this authorization to be used for fulfilling the requirement of a government contract with an agency of the United States Government? If "YES", include as an exhibit a narrative statement describing the government project, agency and contract number. No

Foreign Government Use

Is this authorization to be used for the exclusive purpose of developing radio equipment for export to be employed by stations under the jurisdiction of a foreign government? If "YES", include the contract number and the name of the foreign government concerned as an exhibit. No

Research Project

Is this authorization to be used for providing communications essential to a research project? (The radio communication is not the objective of the research project)? If "YES", include as an exhibit the following information:

- a. A description of the nature of the research project being conducted.
- b. A showing that the communications facilities requested are necessary for the research project involved.
- c. A showing that existing communications facilities are inadequate.

o

Exhibit Information

If all the answers to Items 4, 5, 6 are "NO", include as an exhibit a narrative statement describing in detail the following items:

- a. The complete program of research and experimentation proposed including description of equipment and theory of operation.
- b. The specific objectives sought to be accomplished.
- c. How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion or utilization of the radio art, or is along line not already investigated.

Estimated Duration

Give an estimate of the length of time that will be required to complete the program of experimentation proposed in this application: 24 Months

Environmental Impact

Would a commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact? If "YES", include as an exhibit an Environmental Assessment as required by Section 1.1311. No

Manufacturer

List below transmitting equipment to be installed (if experimental, so state) if additional rows are required, please submit equipment list as an exhibit :

Manufacturer	Model Number	No. Of Units	Experimental
ekha Wireless	MARUT6461	24	Yes
ime RF	LM 7002M	40	Yes
Qorvo	TQP7M9105	20	Yes
Skyworks	KY65017 70LF	20	Yes

Station ID

Is the equipment listed in Item 10 capable of station identification pursuant to Section 5.115? No

Applicant Type

Applicant is: Corporation

Foreign Government

Is applicant a foreign government or a representative of a foreign government? No

License Denied or Revoked

Has applicant or any party to this application had any FCC station license or permit revoked or any application for permit, license or renewal denied by this Commission?

If "YES", include as an exhibit a statement giving call sign of license or permit revoked and relate circumstances. No

Owner and Operator

Will applicant be owner and operator of the station? Yes

Contact Information

Give the following information of person who can best handle inquiries pertaining to this application: **First Name:** Trey
Last Name: Hanbury
Title: Regulatory Counsel
Phone Number: 2026376387
E-Mail Address: thanbury@jenner.com

Drug Abuse Question

APPLICANT ANTI-DRUG ABUSE CERTIFICATION: By checking "YES", the individual applicant certifies that he or she is eligible for this license. This requires that he or she is not subject to a denial of federal benefits, including FCC benefits, as a result of a drug offense conviction pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862. A non-individual applicant, e.g., corporation, partnership or other unincorporated association, certifies that no party to the application is subject to a denial of federal benefits, pursuant to that section. For definition of a "party" for these purposes, see 47CFR 1.2002(b). Yes

Certification**THE APPLICANT CERTIFIES THAT:**

- a. Copies of the FCC Rule Parts 2 and 5 are on hand; and
- b. Adequate financial appropriations have been made to carry on the program of experimentation which will be conducted by qualified personnel; and
- c. All operations will be on an experimental basis in accordance with Part 5 and other applicable rules, and will be conducted in such a manner and at such a time as to preclude harmful interference to any authorized station; and
- d. Grant of the authorization requested herein will not be construed as a finding on the part of the Commission:
 1. that the frequencies and other technical parameters specified in the authorization are the best suited for the proposed program of experimentation, and
 2. that the applicant will be authorized to operate on any basis other than experimental, and
 3. that the Commission is obligated by the results of the experimental program to make provision in its rules including its table of frequency allocations for applicant's type of operation on a regularly licensed basis.

THE APPLICANT FURTHER CERTIFIES THAT:

- e. All the statements in the application and attached exhibits are true, complete and correct to the best of the applicant's knowledge; and
- f. The applicant is willing to finance and conduct the experimental program with full knowledge and understanding of the above limitations; and
- g. The applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the USA.

Name of Applicant: Ne tNav

Signature (Authorized person filing form): Renee Gregory

Signature Date (Authorized person filing form): 05/30/2025

Title of Person Signing Application: Vice President of Regulatory Affairs

Classification: Authorized employee

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(A)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

NOTIFICATION TO INDIVIDUALS UNDER PRIVACY ACT OF 1974 AND THE PAPERWORK REDUCTION ACT OF 1980

Information requested through this form is authorized by the Communications Act of 1934, as amended, and specified by Section 308 therein. The information will be used by Federal Communications Commission staff to determine eligibility for issuing authorizations in the use of the frequency spectrum and to effect the provisions of regulatory responsibilities rendered by the Commission by the Act. Information requested by this form will be available to the public unless otherwise requested pursuant to 47 CFR 0.459 of the FCC Rules and Regulations. Your response is required to obtain this authorization.

Public reporting burden for this collection of information is estimated to average four (4) hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to the Federal Communications Commission, Records Management Branch, Paperwork Reduction Project (3060-0065), Washington DC 20554. DO NOT send completed applications to this address. Individuals are not required to respond to this collection unless it displays a currently valid OMD control number.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e) (3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

Station Location

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
San Jose	California	North 37 21 47	West 121 53 0			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 13.70

(b) Elevation of ground at antenna site above mean sea level in meters: 26.00

(c) Distance to nearest aircraft landing area in kilometers: 2.80

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
Modified	918.00000000-928.00000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 34	West 121 52 40			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 40.50

(b) Elevation of ground at antenna site above mean sea level in meters: 25.00

(c) Distance to nearest aircraft landing area in kilometers: 3.50

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
Modified	918.00000000-928.00000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 54	West 121 54 0			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 53.30

(b) Elevation of ground at antenna site above mean sea level in meters: 20.00

(c) Distance to nearest aircraft landing area in kilometers: 1.40

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
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Modified 918.00000000 928.00000000 MH FX 80.000000 W 1000.000000 W M 0.00010000 % 10M0D7W OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 2	West 121 53 39			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 72.70

(b) Elevation of ground at antenna site above mean sea level in meters: 26.00

(c) Distance to nearest aircraft landing area in kilometers: 2.90

(d) List any natural formations of existing man made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
Modified	918.00000000 928.00000000 MH	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 8	West 121 55 3			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 36.60

(b) Elevation of ground at antenna site above mean sea level in meters: 29.00

(c) Distance to nearest aircraft landing area in kilometers: 1.80

(d) List any natural formations of existing man made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
Modified	918.00000000 928.00000000 MH	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 22	West 121 53 22			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 47.20

(b) Elevation of ground at antenna site above mean sea level in meters: 25.00

(c) Distance to nearest aircraft landing area in kilometers: 2.80

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
Modified	918.00000000-928.00000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 21 54	West 121 54 53			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 39.30

(b) Elevation of ground at antenna site above mean sea level in meters: 15.00

(c) Distance to nearest aircraft landing area in kilometers: 0.70

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
Modified	918.00000000-928.00000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 7	West 121 52 39			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 61.00

(b) Elevation of ground at antenna site above mean sea level in meters: 15.00

(c) Distance to nearest aircraft landing area in kilometers: 3.90

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
Modified	918.00000000 928.00000000 MH	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 54	West 121 54 0	Mobile units of user equipment		ANTA CLARA	6.00 km

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters:

(b) Elevation of ground at antenna site above mean sea level in meters:

(c) Distance to nearest aircraft landing area in kilometers:

(d) List any natural formations of existing man made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
Modified	902.00000000 907.00000000 MH	MO	200.000000 mW 61.000000 mW	M	0.00010000 %	5M00D7W	OFDM

APPLICATION FOR EXPERIMENTAL AUTHORITY

NextNav Inc. (NextNav) seeks experimental authority to field test a 5G-based terrestrial Positioning, Navigation, and Timing (PNT) solution that provides both PNT information and 5G data services. The proposed experiment will evaluate the performance and accuracy of 5G New Radio (NR) Positioning Reference Signal (PRS) positioning information in real-world fixed and mobile scenarios such as outdoors, indoors and in-vehicle. The testing will involve eight fixed base stations located in Santa Clara County, California, each of which will operate three sectorized, directional antennas to provide coverage across the defined area. The base stations will transmit in the 918–928 MHz sub-band at a radiated power of up to 1000 watts ERP per sector, with each antenna mounted with a fixed azimuth and the beamwidth and downtilt values specified in the attached antenna exhibit. Mobile units will operate in the 902–907 MHz sub-band at a radiated power of no more than 61 milliwatts ERP.

The requested authority is limited in duration and geography and will comply with all applicable emission mask, spurious emission, and interference mitigation requirements. This experiment will support continued development of a terrestrial complement and backup to satellite-based PNT systems and support the objectives of the U.S. PNT policy.¹

1) Company Background

NextNav is headquartered in Reston, Virginia. Its address and FCC Registration Number (FRN) are as follows:

NextNav Inc.
11911 Freedom Drive, Suite 200
Reston, VA 20190
FRN: 0018136267

NextNav is a US-based leader in next-generation 3D PNT solutions. Its mission is to protect national security, public safety, and the economy by providing a terrestrial complement and backup to GPS. NextNav currently delivers accurate, reliable location services to support PSAPs and first responders via its vertical positioning (z-axis) service, Pinnacle.

2) Station Location

The chart below provides information concerning the eight base stations for this application.² All site locations for this experimental application are based on licensed Part 90 sites; therefore, there are no new obstructions for FAA consideration. An antenna data sheet, and typical deployment configurations on preexisting structures appear in the attached exhibit. The following chart provides

¹ See Exec Order No. 13905 § 4(h), 85 Fed. Reg 9359, 9360 (Feb. 12, 2020) (directing the development of a national PNT plan including testing services that “are not dependent on global navigation satellite systems” and “include[s] approaches to integrate and use multiple PNT services to enhance the resilience of critical infrastructure.”)

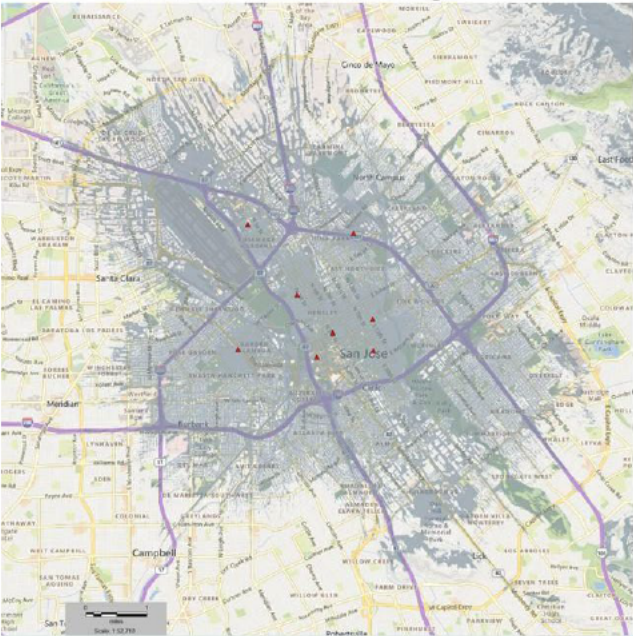
² For all eight base stations, the alpha sector downtilt, beta sector downtilt, and gamma sector downtilt are 0 degrees.

detailed technical specifications for the proposed base station sites in the San Jose area. Each row includes the NextNav site identifier, geographic coordinates (latitude and longitude), antenna height above ground level, estimated structure height, and the azimuth and downtilt values for up to three antenna sectors (Alpha, Beta, and Gamma).

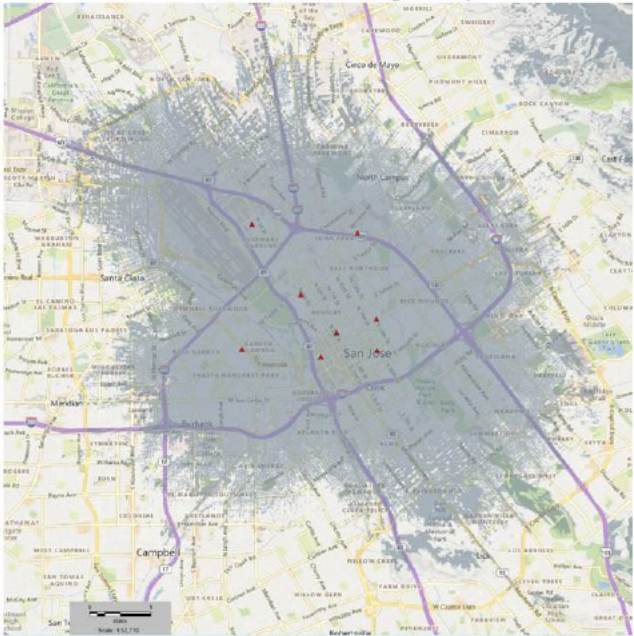
Site ID	Latitude	Longitude	Height above ground level (m)	Est. Structure Height (m)	Alpha sector – Azimuth (Deg)	Beta sector – Azimuth (Deg)	Gamma sector – Azimuth (Deg)	Alpha sector – Downtilt (Deg)	Beta sector – Downtilt (Deg)	Gamma sector – Downtilt (Deg)
CASFO0500A	37° 21' 46.5" N	121° 53' 00.2" W	13.7	23	0	150	230	0	0	0
CASFO0078	37° 20' 33.7914" N	121° 52' 39.576" W	40.5	40	0	180	270	0	0	0
CASFO0082	37° 20' 54.3834" N	121° 54' 0.2154" W	53.3	53	0	120	220	0	0	0
CASFO0083	37° 20' 1.752" N	21° 53' 39.1194" W	72.7	70	340	120	240	0	0	0
CASFO0270	37° 20' 8.016" N	121° 55' 3.2514" W	36.6	36	40	135	220	0	0	0
CASFO0271	37° 20' 22.2354" N	21° 53' 22.3074" W	47.2	45	20	120	240	0	0	0
CASFO0502	37° 21' 53.8" N	121° 54' 52.8" W	39.3	38	110	200	290	0	0	0
CASFO0239	37° 20' 07.0" N	121° 52' 38.8" W	61.0	60	30	120	280	0	0	0

NextNav will conduct the proposed experiments in metropolitan San Jose, California. Maps of the experimental coverage area appear below.

Outdoor + Indoor Coverage



Outdoor Coverage only



3) Equipment and Frequencies

NextNav will use the base station and user equipment (UE) radios and the associated frequencies listed in the chart below. NextNav will comply with any limitations applied to licensees in these bands pursuant to the FCC Table of Frequency Allocations found at 47 C.F.R. § 2.106. NextNav will operate with the minimum necessary power to conduct its operations and will not exceed the power levels specified in this application. NextNav intends to operate using the eight base stations listed above and 40 UEs.

The UE is a software defined radio user equipment platform built by RFNM. The Platform includes the NXP Layerscape® Access LA9310 programmable baseband processor, a Lime RF LMS7002M daughterboard transceiver, either the Qorvo TQP7M9105 or the Skyworks SKY65017-70LF PA power amplifier, and Vicinity's 5G software stack. The RF transmitting components of the user equipment are outlined in the chart below.

Transmitter	Manufacturer	Frequencies	Modulation/Coding
MARUT6461 (base station radio unit)	Lekha Wireless Solutions Pvt. Ltd.	918-928 MHz	OFDM
LMS7002M (transceiver)	Lime RF	902-907 MHz	OFDM
TQP7M9105 (power amplifier)	Qorvo	902-907 MHz	N/A
SKY65017-70LF (power amplifier)	Skyworks	902-907 MHz	N/A

Of the 40 Lime RF boards, 20 will use the Skyworks power amplifier, and 20 will use the Qorvo power amplifier. This division ensures a balanced configuration across the deployed UE radios.

4) Safety

NextNav will comply with FCC rules relating to human exposure to radiofrequency radiation. In addition, all personnel who will operate the equipment are knowledgeable about the effects of radiofrequency energy and will have the ability to control their exposure.

5) Interference Protection

NextNav recognizes that the operation of any equipment under experimental authority must not cause harmful interference to authorized stations.³ Should harmful interference to federal users or non-Federal licensees occur, NextNav will take immediate steps to resolve the interference or discontinue operation.

³ 47 C.F.R. § 5.84.

6) Restrictions on Operation

NextNav recognizes that permission to operate under FCC experimental authority confers no long-term rights. NextNav does not propose to market, sell, or lease equipment to end users or conduct a market trial in conjunction with these operations.

7) Request for Waiver of Station Identification Requirements

NextNav requests a waiver of the station-identification requirements in section 5.115 of the FCC's rules.⁴ Grant of the requested waiver will promote the public interest by allowing NextNav to determine the most effective operating capabilities of the equipment as part of this operation.

8) Technical and "Stop Buzzer" Contact Information

If NextNav must terminate operations due to any interference concerns, the technical and "stop buzzer" point of contact with authority to direct the termination of operations is as follows:

JongHak Jung
1191 Freedom Drive, Suite 200
Reston, VA 20190
Telephone: (571) 233-2477
Email: jjung@nextnav.com

9) Public Interest Statement

NextNav's 5G-based 3D PNT solution promises to strengthen national security, public safety, and the economy throughout the United States.⁵ The FCC has expressly identified its focus on incentivizing and supporting industry efforts to develop complementary PNT technologies and solutions for civil use that may be used in conjunction with GPS to form a resilient and secure PNT system of systems.⁶ The experiment NextNav has proposed will further validate state-of-the-art radiofrequency techniques for 5G-based PNT to deliver accurate location data, improved timing synchronization, and enhanced PNT resilience in conjunction with 5G data services. This additional validation of NextNav's 5G PNT capabilities through controlled field testing will support U.S. leadership in next-generation PNT technologies.

⁴ See 47 C.F.R. § 5.115.

⁵ See *NextNav Petition for Rulemaking, Enabling Next-Generation Terrestrial Positioning, Navigation, and Timing and 5G: A Plan for the Lower 900 MHz Band (902-928 MHz)*, RM-11989 (filed Apr. 16, 2024); *Wireless Telecommunications Bureau and Office of Engineering and Technology Seek Comment on NextNav Petition for Rulemaking*, Public Notice, 39 FCC Rcd 8695 (rel. Aug. 6, 2024).

⁶ *Promoting the Development of Positioning, Navigation, and Timing Technologies and Solutions*, Notice of Inquiry, WT Docket No. 25-110, FCC 25-20, ¶ 3 (rel. Mar 28, 2025).

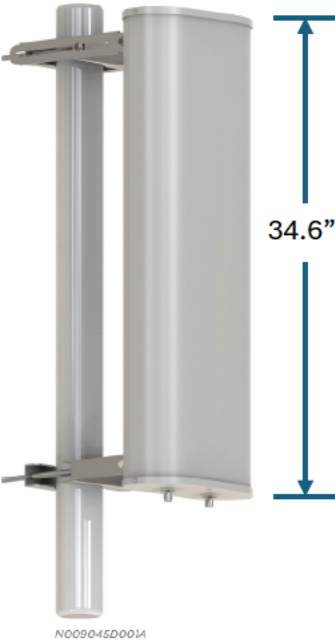
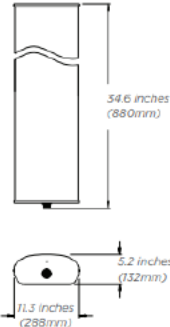
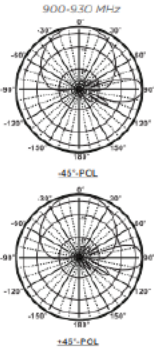
Antenna Data Sheet



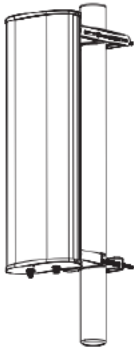
900 MHz 60 Degree Sector Antenna SPECIFICATION SHEET

900 MHz 60 Degree Sector Antenna

The Sector Antenna is compatible with the PMP 450I 900 MHz.



N009045D001A



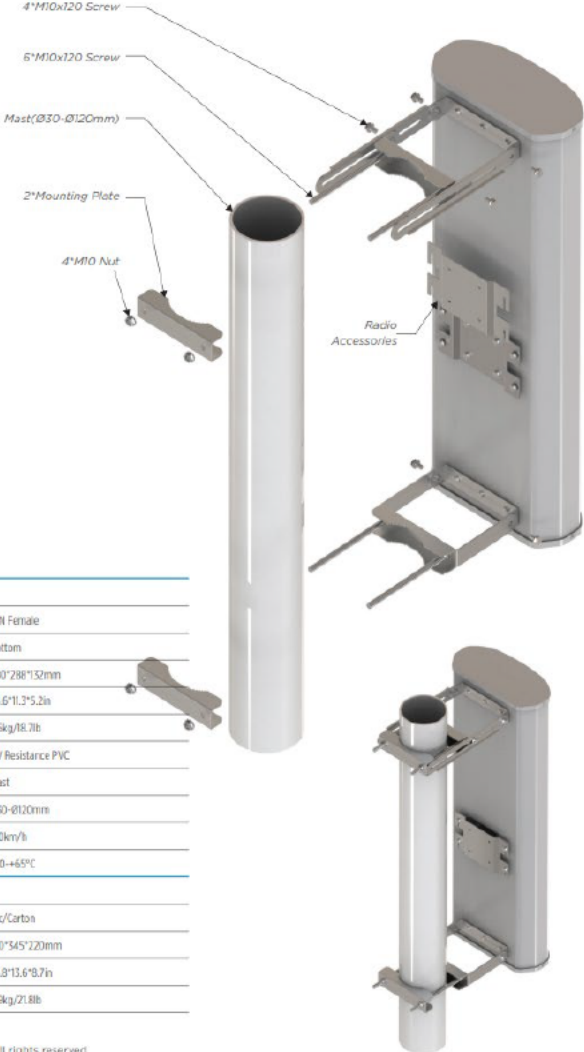
ELECTRICAL DATA

Frequency	900-930 MHz
Gain	15 dBi
VSWR	<1.7:1
Polarization	Dual slant, ±45°
Horizontal Beamwidth	65°
Vertical Beamwidth	23°
Front-to-back ratio	>30dB
Isolation	>30dB
Cross-polar ratio	>15dB (±60°±10)
Impedance	50 Ohms
Max Input Power	100W
Lightning Protection	DC Ground

900 MHz 60 Degree Sector Antenna SS 10122015

Specifications

900 MHz 60 Degree Sector Antenna SPECIFICATION SHEET



MECHANICAL DATA

Connector	2\"/>
Connector Position	Bottom
Dimensions	880*298*132mm
Length / Width / Height	34.6\"/>
Weight	6.5kg/18.7lb
Random Material	UV Resistance PVC
Mounting Method	Mast
Mast Size	Ø30-Ø120mm
Rated Wind Velocity	26km/h
Operating Temperature	-40~+65°C

SHIPMENT DATA

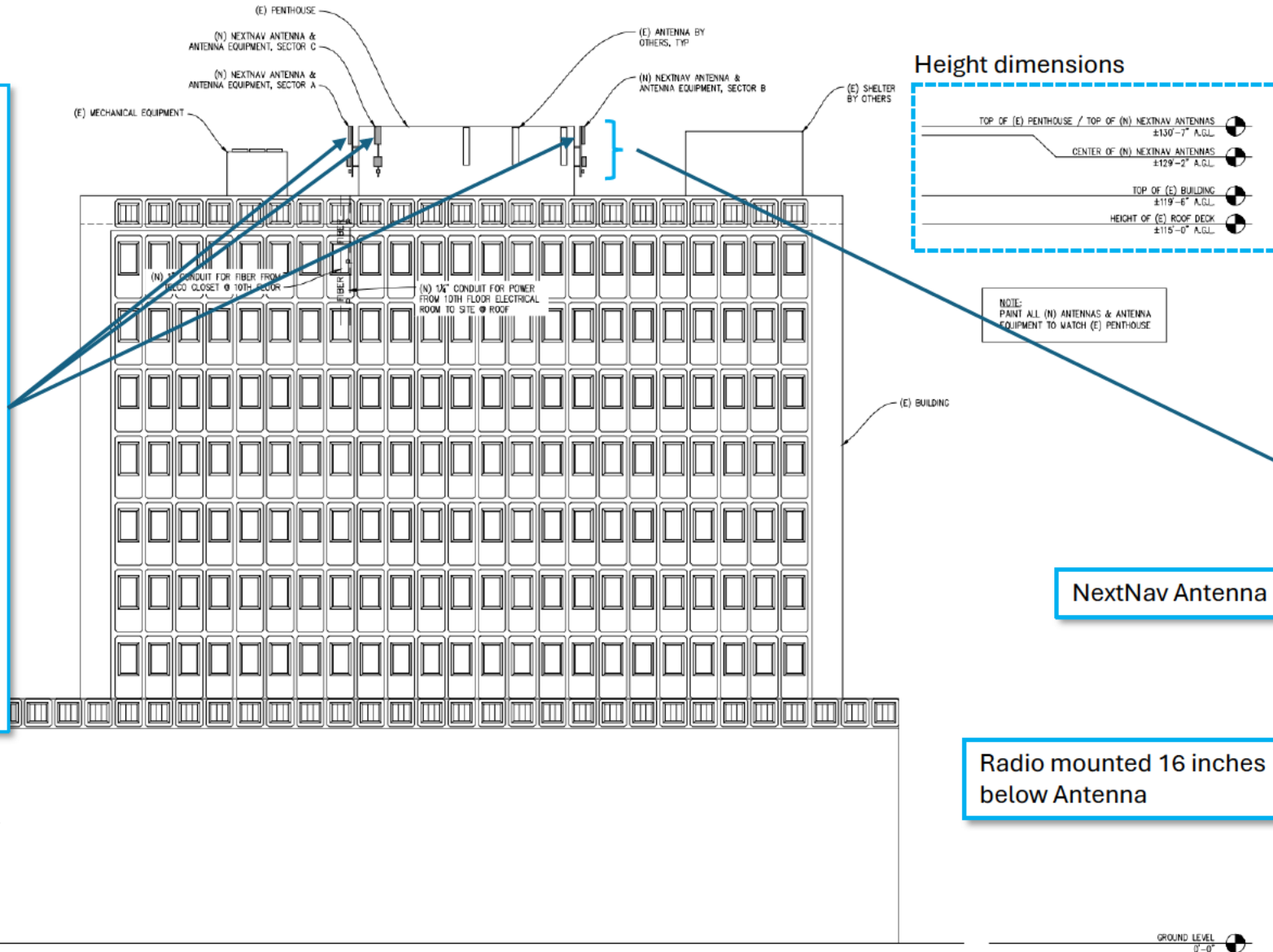
Packaging Quantity	1pc/Carton
Carton Size	910*545*120mm
(Length / Width / Height)	35.8\"/>
Packaging Weight	6.9kg/21.8lb

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900 MHz 60 Degree Sector Antenna SS 10122015

Example Antenna Deployment on Building

NextNav antenna typically attached on Penthouse facade such that top of the antenna is not above the roofline of the existing Penthouse. None of the building locations used require or have existing aviation obstruction lighting.

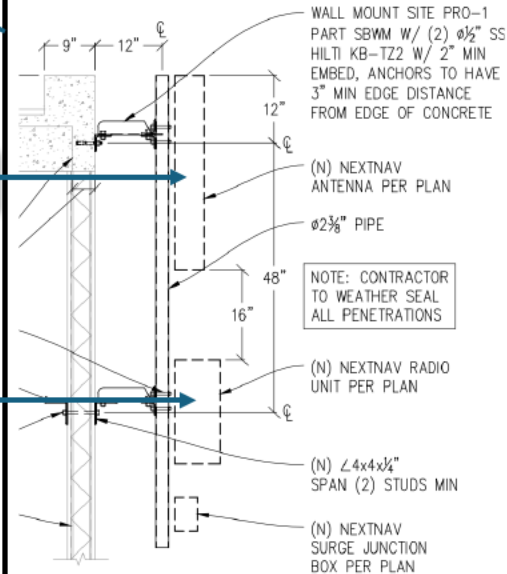


Antenna Attachment

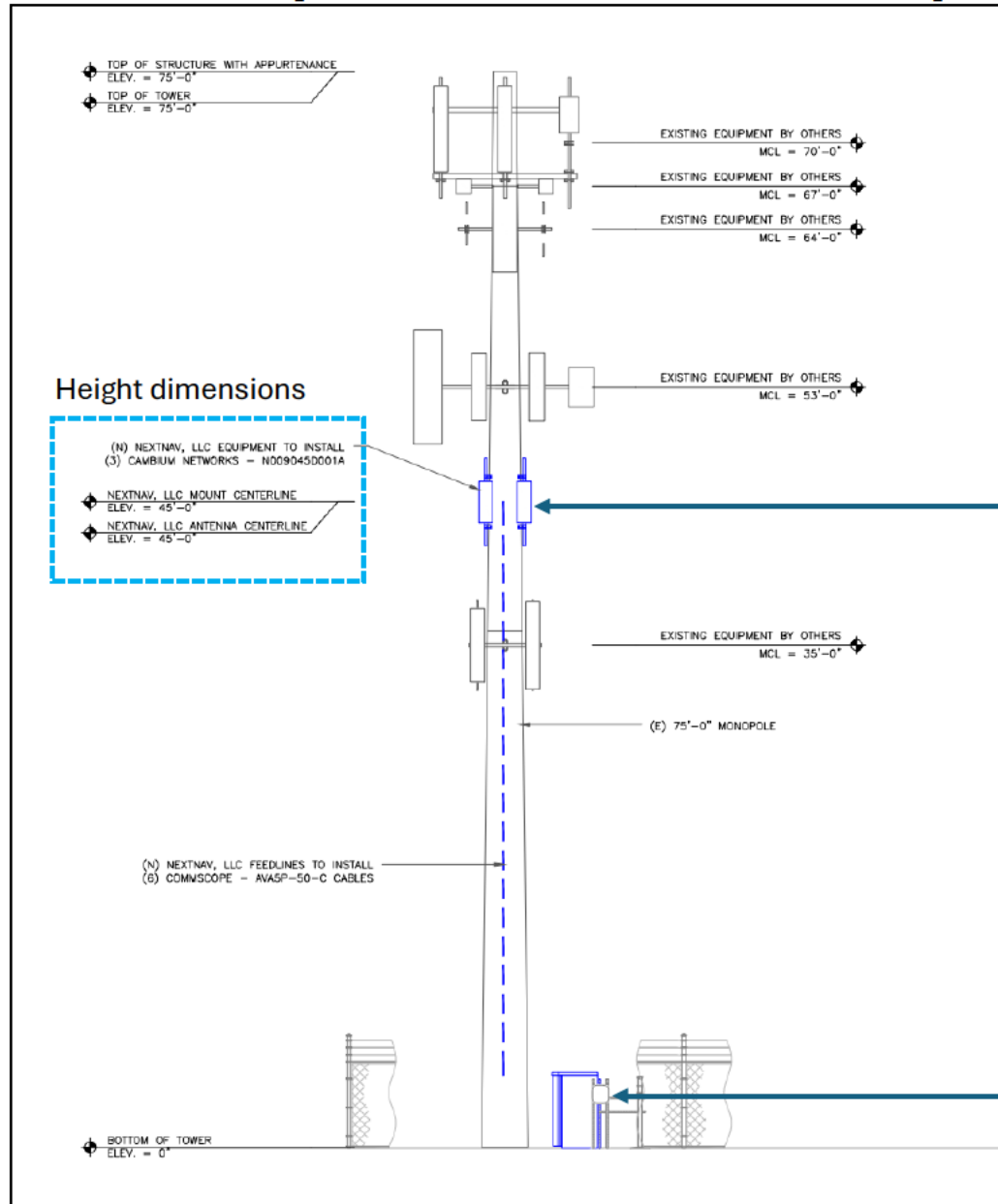


NextNav Antenna

Radio mounted 16 inches below Antenna



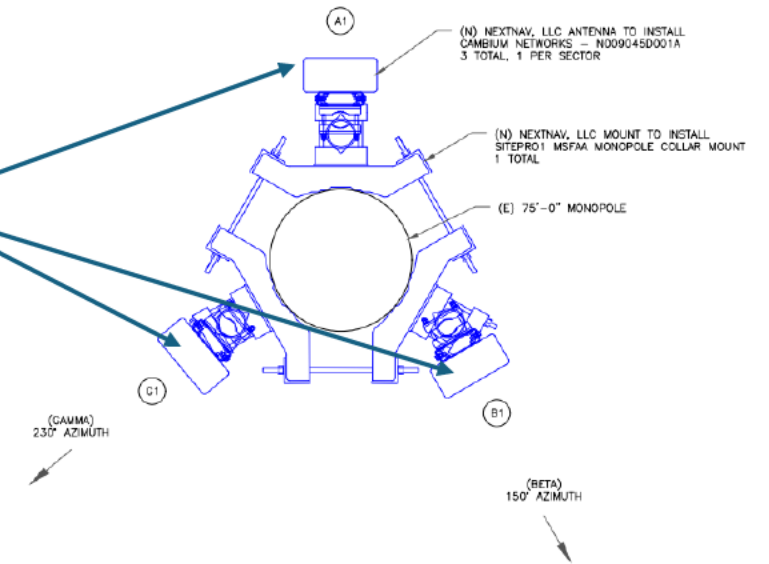
Example Antenna Deployment on Tower



NextNav
Antenna
typically
attached on
side arm,
attached to
structure at
available Rad
center.

Radio Unit on H-Frame near
the shelter on the ground
~ 40 feet below the antenna

Top View of Antenna attachment



**FCC FORM 442 - FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR NEW OR MODIFIED RADIO STATION UNDER PART 5 OF FCC RULES -
EXPERIMENTAL RADIO SERVICE (OTHER THAN BROADCAST)**

**Approved by
OMB
3060 - 0065**

Applicant's Name (company): Ne tNav **File No.:** 0622 EX CN 2025

Mailing Address

Attention: Renee Gregory
Street Address: 11911 Freedom Dr., te. 200
P.O. Box:
City: Reston
State: VA
Country:
Zip Code: 94085
E Mail Address: rgregory@ne tnav.com

Application Purpose

Application is for: NEW LICEN E

For Modification indicate below

File No.: Callsign:

Government Contract

Is this authorization to be used for fulfilling the requirement of a government contract with an agency of the United States Government? If "YES", include as an exhibit a narrative statement describing the government project, agency and contract number. No

Foreign Government Use

Is this authorization to be used for the exclusive purpose of developing radio equipment for export to be employed by stations under the jurisdiction of a foreign government? If "YES", include the contract number and the name of the foreign government concerned as an exhibit. No

Research Project

Is this authorization to be used for providing communications essential to a research project? (The radio communication is not the objective of the research project)? If "YES", include as an exhibit the following information:

- a. A description of the nature of the research project being conducted.
- b. A showing that the communications facilities requested are necessary for the research project involved.
- c. A showing that existing communications facilities are inadequate.

0

Exhibit Information

If all the answers to Items 4, 5, 6 are "NO", include as an exhibit a narrative statement describing in detail the following items:

- a. The complete program of research and experimentation proposed including description of equipment and theory of operation.
- b. The specific objectives sought to be accomplished.
- c. How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion or utilization of the radio art, or is along line not already investigated.

Estimated Duration

Give an estimate of the length of time that will be required to complete the program of experimentation proposed in this application: 24 Months

Environmental Impact

Would a commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact? If "YES", include as an exhibit an Environmental Assessment as required by Section 1.1311. No

Manufacturer

List below transmitting equipment to be installed (if experimental, so state) if additional rows are required, please submit equipment list as an exhibit :

Manufacturer	Model Number	No. Of Units	Experimental
ekha Wireless	MARUT6461	24	Yes
ime RF	LM 7002M	40	Yes
Qorvo	TQP7M9105	20	Yes
Skyworks	KY65017 70LF	20	Yes

Station ID

Is the equipment listed in Item 10 capable of station identification pursuant to Section 5.115? No

Applicant Type

Applicant is: Corporation

Foreign Government

Is applicant a foreign government or a representative of a foreign government? No

License Denied or Revoked

Has applicant or any party to this application had any FCC station license or permit revoked or any application for permit, license or renewal denied by this Commission?

If "YES", include as an exhibit a statement giving call sign of license or permit revoked and relate circumstances. No

Owner and Operator

Will applicant be owner and operator of the station? Yes

Contact Information

Give the following information of person who can best handle inquiries pertaining to this application: First Name: Trey
Last Name: Hanbury
Title: Regulatory Counsel
Phone Number: 2026376387
E-Mail Address: thanbury@jenner.com

Drug Abuse Question

APPLICANT ANTI-DRUG ABUSE CERTIFICATION: By checking "YES", the individual applicant certifies that he or she is eligible for this license. This requires that he or she is not subject to a denial of federal benefits, including FCC benefits, as a result of a drug offense conviction pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862. A non-individual applicant, e.g., corporation, partnership or other unincorporated association, certifies that no party to the application is subject to a denial of federal benefits, pursuant to that section. For definition of a "party" for these purposes, see 47CFR 1.2002(b). Yes

Certification

THE APPLICANT CERTIFIES THAT:

- a. Copies of the FCC Rule Parts 2 and 5 are on hand; and
- b. Adequate financial appropriations have been made to carry on the program of experimentation which will be conducted by qualified personnel; and
- c. All operations will be on an experimental basis in accordance with Part 5 and other applicable rules, and will be conducted in such a manner and at such a time as to preclude harmful interference to any authorized station; and
- d. Grant of the authorization requested herein will not be construed as a finding on the part of the Commission:
 1. that the frequencies and other technical parameters specified in the authorization are the best suited for the proposed program of experimentation, and
 2. that the applicant will be authorized to operate on any basis other than experimental, and
 3. that the Commission is obligated by the results of the experimental program to make provision in its rules including its table of frequency allocations for applicant's type of operation on a regularly licensed basis.

THE APPLICANT FURTHER CERTIFIES THAT:

- e. All the statements in the application and attached exhibits are true, complete and correct to the best of the applicant's knowledge; and
- f. The applicant is willing to finance and conduct the experimental program with full knowledge and understanding of the above limitations; and
- g. The applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the USA.

Name of Applicant: Ne tNav

Signature (Authorized person filing form): Renee Gregory

Signature Date (Authorized person filing form): 05/30/2025

Title of Person Signing Application: Vice President of Regulatory Affairs

Classification: Authorized employee

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(A)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

NOTIFICATION TO INDIVIDUALS UNDER PRIVACY ACT OF 1974 AND THE PAPERWORK REDUCTION ACT OF 1980

Information requested through this form is authorized by the Communications Act of 1934, as amended, and specified by Section 308 therein. The information will be used by Federal Communications Commission staff to determine eligibility for issuing authorizations in the use of the frequency spectrum and to effect the provisions of regulatory responsibilities rendered by the Commission by the Act. Information requested by this form will be available to the public unless otherwise requested pursuant to 47 CFR 0.459 of the FCC Rules and Regulations. Your response is required to obtain this authorization.

Public reporting burden for this collection of information is estimated to average four (4) hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to the Federal Communications Commission, Records Management Branch, Paperwork Reduction Project (3060-0065), Washington DC 20554. DO NOT send completed applications to this address. Individuals are not required to respond to this collection unless it displays a currently valid OMD control number.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e) (3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

Station Location

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
San Jose	California	North 37 21 47	West 121 53 0			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 13.70

(b) Elevation of ground at antenna site above mean sea level in meters: 26.00

(c) Distance to nearest aircraft landing area in kilometers: 2.80

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	918.000000000-928.000000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 34	West 121 52 40			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 40.50

(b) Elevation of ground at antenna site above mean sea level in meters: 25.00

(c) Distance to nearest aircraft landing area in kilometers: 3.50

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	918.000000000-928.000000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 54	West 121 54 0			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 53.30

(b) Elevation of ground at antenna site above mean sea level in meters: 20.00

(c) Distance to nearest aircraft landing area in kilometers: 1.40

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
--------	-----------	---------------	------------------	-----------	---------------------------	---------------------	-------------------

New 918.00000000 928.00000000 MH FX 80.000000 W 1000.000000 W M 0.00010000 % 10M0D7W OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	an Jose	California	North 37 20 2	West 121 53 39			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 72.70

(b) Elevation of ground at antenna site above mean sea level in meters: 26.00

(c) Distance to nearest aircraft landing area in kilometers: 2.90

(d) List any natural formations of existing man made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New	918.00000000 928.00000000 MH	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	an Jose	California	North 37 20 8	West 121 55 3			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 36.60

(b) Elevation of ground at antenna site above mean sea level in meters: 29.00

(c) Distance to nearest aircraft landing area in kilometers: 1.80

(d) List any natural formations of existing man made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New	918.00000000 928.00000000 MH	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	an Jose	California	North 37 20 22	West 121 53 22			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 47.20

(b) Elevation of ground at antenna site above mean sea level in meters: 25.00

(c) Distance to nearest aircraft landing area in kilometers: 2.80

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	918.00000000-928.00000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 21 54	West 121 54 53			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 39.30

(b) Elevation of ground at antenna site above mean sea level in meters: 15.00

(c) Distance to nearest aircraft landing area in kilometers: 0.70

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	918.00000000-928.00000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 7	West 121 52 39			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 61.00

(b) Elevation of ground at antenna site above mean sea level in meters: 15.00

(c) Distance to nearest aircraft landing area in kilometers: 3.90

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action Frequency		Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New	918.00000000 928.00000000 MH	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 54	West 121 54 0	Mobile units of user equipment	ANTA CLARA	6.00 km

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters:

(b) Elevation of ground at antenna site above mean sea level in meters:

(c) Distance to nearest aircraft landing area in kilometers:

(d) List any natural formations of existing man made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:

Action Frequency		Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New	902.00000000 907.00000000 MH	MO	200.000000 mW 61.000000 mW	M	0.00010000 %	5M00D7W	OFDM



September 2, 2025

VIA ELS

Chief, Experimental Licensing Branch
Office of Engineering and Technology
Federal Communications Commission
45 L Street NE
Washington, DC 20554

Re: Amendment of Application; File Number 0622-EX-CN-2025

To Whom It May Concern:

NextNav Inc. (NextNav) amends its pending experimental license application, file no. 0622-EX-CN-2025.¹ These minor amendments are intended to broaden the range of experiments that can be conducted under the license, while at the same time further mitigating any potential for harmful interference.

The amended application makes four primary changes:

- **User Equipment.** The revised application specifies two categories of user equipment (UE): (1) up to 20 software-defined radio platforms using the NXP LA9310 baseband processor, Lime RF transceiver, and Qorvo amplifier, and (2) an Amarisoft UE emulator test box capable of emulating up to 20 UEs.
- **Antenna Height and Downtilt.** The revised application reflects a lower height above ground level for one base station antenna, eliminates a sector at another, and introduces downtilt values of up to 10° for all base station antennas. Incorporating a 10-degree range of downtilts will enable NextNav to study the impact of antenna vertical patterns on positioning performance.
- **Power Levels.** The Amarisoft UE emulator produces a total maximum power for all 20 UEs combined at output connector of no more than 2 mW (3dBm).
- **Height Adjustments.** The revised application updates certain antenna and structure heights to reflect more accurate measurements obtained during the later stages of the design process. These adjustments ensure that the application reflects the most

¹ Application of NextNav Inc., ELS File No. 0622-EX-CN-2025 (filed June 17, 2025).

precise and reliable engineering data available, but do not alter the fundamental nature or scope of the proposed operations.

Together, these amendments will enable NextNav to conduct a broader set of experiments involving both real-world and emulated devices, while simultaneously lowering radiated energy from mobile devices. The result is an experimental design that will both enhance the value of the testing and further reduce the likelihood of harmful interference to incumbent licensees.

Respectfully submitted,

/s/ Renee Gregory

Renee Gregory
Vice President of Regulatory Affairs
NextNav Inc.
11911 Freedom Drive, Suite 200
Reston, VA 20190
rgregory@nextnav.com

APPLICATION FOR EXPERIMENTAL AUTHORITY

NextNav Inc. (NextNav) seeks experimental authority to field test a 5G-based terrestrial Positioning, Navigation, and Timing (PNT) solution that provides both PNT information and 5G data services. The proposed experiment will evaluate the performance and accuracy of 5G New Radio (NR) Positioning Reference Signal (PRS) positioning information in real-world fixed and mobile scenarios such as outdoors, indoors, and in-vehicle. The test will involve eight fixed base stations located in Santa Clara County, California, each of which will operate up to three sectorized, directional antennas to provide coverage across the defined area. The base stations will transmit in the 918–928 MHz sub-band at a radiated power of up to 1000 watts ERP per sector, with each antenna mounted with a fixed azimuth and the beamwidth and downtilt values specified below. Mobile units will operate in the 902–907 MHz sub-band at a radiated power of no more than 61 milliwatts ERP.

The requested authority is limited in duration and geography and will comply with all applicable emission mask, spurious emission, and interference mitigation requirements. This experiment will support continued development of a terrestrial complement and backup to satellite-based PNT systems and support the objectives of the U.S. PNT policy.¹

1) Company Background

NextNav is headquartered in Reston, Virginia. Its address and FCC Registration Number (FRN) are as follows:

NextNav Inc.
11911 Freedom Drive, Suite 200
Reston, VA 20190
FRN: 0018136267

NextNav is a U.S.-based leader in next-generation 3D PNT solutions. Its mission is to protect national security, public safety, and the economy by providing a terrestrial complement and backup to GPS. NextNav currently delivers accurate, reliable location services to support PSAPs and first responders via its vertical positioning (z-axis) service, Pinnacle.

2) Station Location

The chart below provides information concerning the eight base stations for this application.

Of the eight sites included in this amendment, seven are located on existing building rooftops. These rooftop facilities involve antennas mounted below the building rooftop line and therefore do not create new obstructions requiring FAA notification or clearance. Site CASFO0500A, located at 855 Mabury Road in San Jose, California (37° 21' 46.5" N, 121° 53' 0.2" W) is attached to a monopole antenna structure owned by Crown Castle GT Company LLC and registered with the FCC under Antenna Structure Registration (ASR) No. 1015296. The

¹ See Exec Order No. 13905 § 4(h), 85 Fed. Reg 9359, 9360 (Feb. 12, 2020) (directing the development of a national PNT plan, including testing services that “are not dependent on global navigation satellite systems” and “include[s] approaches to integrate and use multiple PNT services to enhance the resilience of critical infrastructure.”).

structure has a registered overall height of 23.8 meters above ground level (AGL), with a total overall height of 48.5 meters above mean sea level. NextNav's antennas will be mounted at 14.1 meters above ground level, well within the registered envelope of the tower and below its cleared maximum height. Because all rooftop sites are mounted at or below the rooftop line and the single tower site is already registered and cleared through the ASR process, this application introduces no new structures or obstructions.

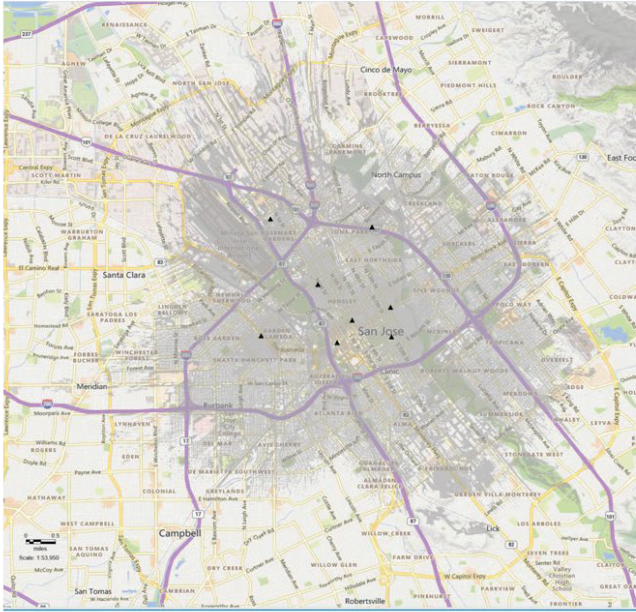
An antenna data sheet, and typical deployment configurations on preexisting structures appear in the attached exhibit. The following chart provides detailed technical specifications for the proposed base station sites in the San Jose area. Each row includes the NextNav site identifier, geographic coordinates (latitude and longitude), antenna height above ground level, estimated structure height (AGL), and the azimuth and downtilt values for up to three antenna sectors (Alpha, Beta, and Gamma).² Testing from zero to up to 10 degrees downtilt allows NextNav to study the variation in group delay of the antenna due to nulls in the vertical antenna pattern on PNT performance.

Site ID	Latitude	Longitude	NN Antenna Height AGL (m)	Est. Structure Height (m)	Alpha sector – Azimuth (Deg)	Beta sector – Azimuth (Deg)	Gamma sector – Azimuth (Deg)	Alpha sector – Downtilt (Deg)	Beta sector – Downtilt (Deg)	Gamma sector – Downtilt (Deg)
CASFO0500A	37° 21' 46.5" N	121° 53' 0.2" W	14.1	23.8	45	150	230	0-10	0-10	0-10
CASFO0078	37° 20' 33.7914" N	121° 52' 39.576" W	39.8	39.8	0	180	270	0-10	0-10	0-10
CASFO0082	37° 20' 54.3834" N	121° 54' 0.2154" W	49.4	53.3	0	120	220	0-10	0-10	0-10
CASFO0083	37° 20' 1.752" N	121° 53' 39.1194" W	65.9	66	340	120	240	0-10	0-10	0-10
CASFO0270	37° 20' 8.016" N	121° 55' 3.2514" W	35.2	37.6	40	135	220	0-10	0-10	0-10
CASFO0271	37° 20' 22.2354" N	121° 53' 22.3074" W	46	46	20	120	240	0-10	0-10	0-10
CASFO0502	37° 21' 53.8" N	121° 54' 52.8" W	39	39	110	200	N/A	0-10	0-10	0-10
CASFO0239	37° 20' 7.0" N	121° 52' 38.8" W	56.5	63.8	30	120	280	0-10	0-10	0-10

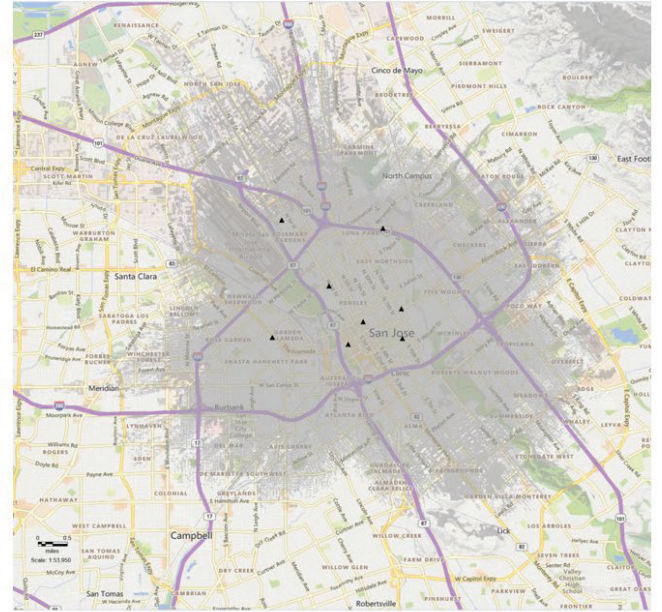
NextNav will conduct the proposed experiments in metropolitan San Jose, California. Maps of the experimental coverage area appear below. Because the downtilt angle may range from 0 degrees to 10 degrees, coverage plots are shown for both 0 degrees downtilt and 10 degrees downtilt.

² NextNav notes that some of the values in this chart have been updated since the initial application was filed as more accurate site data has become available.

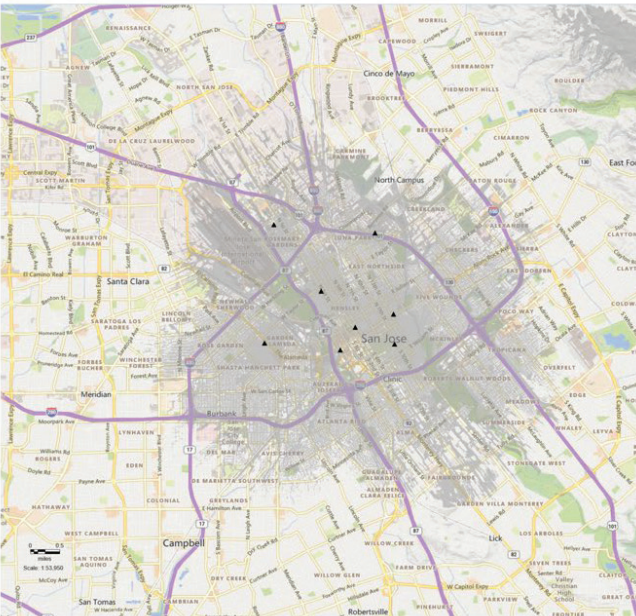
Outdoor + Indoor Coverage – 0° tilt



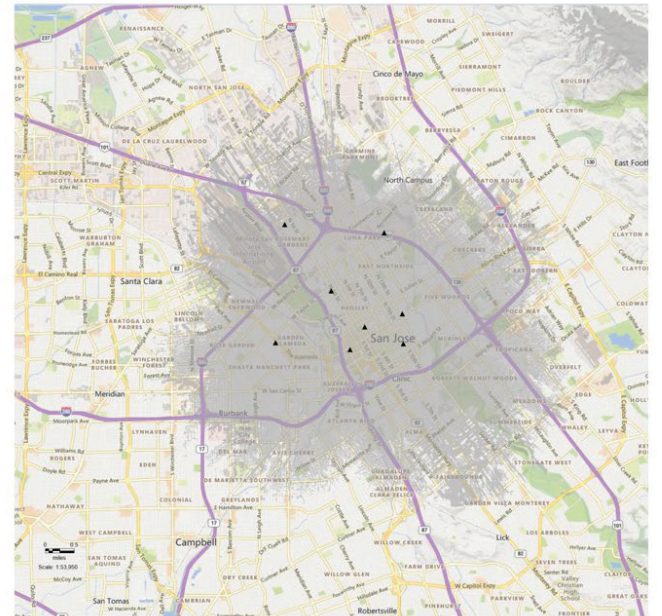
Outdoor Coverage Only – 0° tilt



Outdoor + Indoor Coverage – 10° tilt



Outdoor Coverage Only – 10° tilt



3) Equipment and Frequencies

NextNav will use the base station and user equipment (UE) radios and the associated frequencies listed in the chart below. NextNav will comply with any limitations applied to licensees in these bands pursuant to the FCC Table of Frequency Allocations found at 47 C.F.R. § 2.106. NextNav will operate with the minimum necessary power to conduct its operations and

will not exceed the power levels specified in this application. NextNav intends to operate using the eight base stations listed above and 40 UEs.

NextNav will test using two different types of UEs. The first UE type is a software-defined radio user equipment platform built by RFNM. The platform includes an NXP Layerscape® Access LA9310 programmable baseband processor, a Lime RF LMS7002M daughterboard transceiver, a Qorvo QPA9908 power amplifier, and Vicinity's 5G software stack. There will be a maximum of 20 UEs of this type. The second UE type is an Amarisoft UE emulator test box UESB-2025032800. This emulator test box is capable of emulating from one to 64 UEs. NextNav will use this to emulate a maximum of 20 UEs with the total maximum power of all UE's combined at the box output connector being 2mW (3dBm).

The RF transmitting components of the equipment are outlined in the chart below.

Transmitter	Manufacturer	Frequencies	Modulation/Coding
MARUT6461 (base station radio unit)	Lekha Wireless Solutions Pvt. Ltd.	918-928 MHz	OFDM
LMS7002M (transceiver)	Lime RF	902-907 MHz	OFDM
QPA9908 (power amplifier)	Qorvo	902-907 MHz	N/A
UESB-2025032800 (UE emulator test box)	Amarisoft	902-907 MHz	OFDM

4) Safety

NextNav will comply with FCC rules relating to human exposure to radiofrequency radiation. In addition, all personnel who will operate the equipment are knowledgeable about the effects of radiofrequency energy and will have the ability to control their exposure.

5) Interference Protection

NextNav recognizes that the operation of any equipment under experimental authority must not cause harmful interference to authorized stations.³ Should harmful interference to federal users or non-Federal licensees occur, NextNav will take immediate steps to resolve the interference or discontinue operation.

6) Restrictions on Operation

NextNav recognizes that permission to operate under FCC experimental authority confers no long-term rights. NextNav does not propose to market, sell, or lease equipment to end users or conduct a market trial in conjunction with these operations.

³ 47 C.F.R. § 5.84.

7) Request for Waiver of Station Identification Requirements

NextNav requests a waiver of the station-identification requirements in section 5.115 of the FCC's rules.⁴ Grant of the requested waiver will promote the public interest by allowing NextNav to determine the most effective operating capabilities of the equipment as part of this operation.

8) Technical and "Stop Buzzer" Contact Information

If NextNav must terminate operations due to any interference concerns, the technical and "stop buzzer" point of contact with authority to direct the termination of operations is as follows:

JongHak Jung
11911 Freedom Drive, Suite 200
Reston, VA 20190
Telephone: 913-219-9849
Email: jjung@nextnav.com

9) Public Interest Statement

NextNav's 5G-based 3D PNT solution promises to strengthen national security, public safety, and the economy throughout the United States.⁵ The FCC has expressly identified its focus on incentivizing and supporting industry efforts to develop complementary PNT technologies and solutions for civil use that may be used in conjunction with GPS to form a resilient and secure PNT system of systems.⁶ The experiment NextNav has proposed will further validate state-of-the-art radiofrequency techniques for 5G-based PNT to deliver accurate location data, improved timing synchronization, and enhanced PNT resilience in conjunction with 5G data services. This additional validation of NextNav's 5G PNT capabilities through controlled field testing will support U.S. leadership in next-generation PNT technologies.

⁴ See 47 C.F.R. § 5.115.

⁵ See *NextNav Petition for Rulemaking, Enabling Next-Generation Terrestrial Positioning, Navigation, and Timing and 5G: A Plan for the Lower 900 MHz Band (902-928 MHz)*, RM-11989 (filed Apr. 16, 2024); *Wireless Telecommunications Bureau and Office of Engineering and Technology Seek Comment on NextNav Petition for Rulemaking*, Public Notice, 39 FCC Rcd 8695 (rel. Aug. 6, 2024).

⁶ *Promoting the Development of Positioning, Navigation, and Timing Technologies and Solutions*, Notice of Inquiry, WT Docket No. 25-110, FCC 25-20, ¶ 3 (rel. Mar. 28, 2025).

Frequency Information

San Jose (SANTA CLARA), CA - NL 37-20-34; WL 121-52-40

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

San Jose (SANTA CLARA), CA - NL 37-20-54; WL 121-54-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

San Jose (SANTA CLARA), CA - NL 37-20-02; WL 121-53-39

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

San Jose (SANTA CLARA), CA - NL 37-20-08; WL 121-55-03

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

Frequency Information

San Jose (SANTA CLARA), CA - NL 37-20-22; WL 121-53-22

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

San Jose (SANTA CLARA), CA - NL 37-21-54; WL 121-54-53

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

San Jose (SANTA CLARA), CA - NL 37-20-07; WL 121-52-39

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

MOBILE: Mobile units of user equipment, San Jose, CA, within 6 km, centered around NL 37-20-54; WL 121-54-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
902-907 MHz	MO	5M00D7W	61 mW (ERP)	0.0001 %
902-907 MHz	MO	5M00D7W	1.22 mW (ERP)	0.0002 %

Special Conditions:

- (1) The occupied bandwidth of the emission shall not extend beyond the band limits set forth above.

Special Conditions:

- (2) Prior to commencing any operations in the 902-907 MHz and 918-928 MHz bands, the experimental licensee must notify and provide the Stop Buzzer contact to all licensees who are authorized for operation in these sub-bands of Location & Monitoring Service (902-928 MHz) and are located within 50 miles of the contours of the testing area.
- (3) The power of experimental operation must be limited to 60 dBm ERP.
- (4) Experimental operations must be limited to metropolitan San Jose, CA.
- (5) The experimental licensee should make a good faith effort to inform the "unlicensed device user" community about the test including the dates of operation, frequencies used and locations of transmitters. The community should be informed of the potential for interference and the types of devices that may be impacted (e.g., wireless cameras, home smart devices, baby monitors, inventory monitoring and theft mitigation systems...); and the experimental licensee should provide the community a contact in case there are issues that need to be addressed.
- (6) The experimental licensee must place notice of the experimental parameters, and the stop buzzer contact in the record of the NextNav proceeding (Docket 24-240).
- (7) If NextNav must terminate operations due to any interference concerns, the technical and "stop buzzer" point of contact with authority to direct the termination of operations is as follows:

JongHak Jung
1191 Freedom Drive, Suite 200
Reston, VA 20190 Telephone: (571) 233-2477
Email: jjung@nextnav.com



December 10, 2025

VIA ECFS

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
45 L Street NE
Washington, DC 20554

Re: NextNav Petition for Rulemaking, Enabling Next-Generation Terrestrial Positioning, Navigation, and Timing and 5G: A Plan for the Lower 900 MHz Band (902-928 MHz), Public Notice (WT Docket No. 24-240)

Dear Ms. Dortch:

NextNav Inc. (“NextNav”) will commence authorized operations of its 5G PNT Network in Santa Clara County, California, as early as December 11, 2025.¹ This real-world network deployment will enable demonstrations of NextNav’s 5G-based 3D PNT technology while simultaneously delivering broadband data. The network’s authorized technical parameters align with those in NextNav’s proposal to optimize the lower 900 MHz band to enable a terrestrial, widescale complement and backup to GPS that is broadly available to critical infrastructure, public safety, and American consumers.

NextNav’s 5G PNT Network will consist of eight 5G NR base stations at the following coordinates: (1) NL 37-21-47; WL 121-53-00; (2) NL 37-20-34; WL 121-52-40; (3) NL 37-20-54; WL 121-54-00; (4) NL 37-20-02; WL 121-53-39; (5) NL 37-20-08; WL 121-55-03; (6) NL 37-20-22; WL 121-53-22; (7) NL 37-21-54; WL 121-54-53; and (8) NL 37-20-07; WL 121-52-39. User equipment will operate within a six-kilometer radius of NL 37-20-54; WL 121-54-00. The authorized effective radiated power for base station transmissions will not exceed 60 dBm, and the operations will run through December 1, 2027, consistent with terms of WP2XYS and section 5.3(j) of the Commission’s rules.

¹ FCC Experimental Radio Station Construction Permit and License, File No. 0622-EX-CN-2025, Call Sign WP2XYS (granted Nov. 20, 2025).

In the unexpected event that other users of these frequencies experience harmful interference as a result of the network's operations, please contact the Stop Buzzer contact JongHak Jung at (408) 400-7850.

Respectfully Submitted,

/s/ *Renee Gregory*

Renee Gregory
Vice President of Regulatory Affairs
NextNav Inc.
11911 Freedom Drive, Suite 200
Reston, VA 20190
rgregory@nextnav.com

Frequency Information

San Jose (SANTA CLARA), CA - NL 37-20-34; WL 121-52-40

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

San Jose (SANTA CLARA), CA - NL 37-20-54; WL 121-54-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

San Jose (SANTA CLARA), CA - NL 37-20-02; WL 121-53-39

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

San Jose (SANTA CLARA), CA - NL 37-20-08; WL 121-55-03

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

Frequency Information

San Jose (SANTA CLARA), CA - NL 37-20-22; WL 121-53-22

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

San Jose (SANTA CLARA), CA - NL 37-20-07; WL 121-52-39

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

MOBILE: Mobile units of user equipment, San Jose, CA, within 6 km, centered around NL 37-20-54; WL 121-54-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
902-907 MHz	MO	5M00D7W	61 mW (ERP)	0.0001 %
902-907 MHz	MO	5M00D7W	1.22 mW (ERP)	0.0002 %

San Jose (SANTA CLARA), CA - NL 37-22-04; WL 121-55-05

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
918-928 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %
923 MHz	FX	10M0D7W	1000 W (ERP)	0.0001 %

Special Conditions:

- (1) The occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (2) Prior to commencing any operations in the 902-907 MHz and 918-928 MHz bands, the experimental licensee must notify and provide the Stop Buzzer contact to all licensees who are authorized for operation in these sub-bands of Location & Monitoring Service (902-928 MHz) and are located within 50 miles of the contours of the testing area.
- (3) The power of experimental operation must be limited to 60 dBm ERP.
- (4) Experimental operations must be limited to metropolitan San Jose, CA.
- (5) The experimental licensee should make a good faith effort to inform the "unlicensed device user" community about the test including the dates of operation, frequencies used and locations of transmitters. The community should be informed of the potential for interference and the types of devices that may be impacted (e.g., wireless cameras, home smart devices, baby monitors, inventory monitoring and theft mitigation systems...); and the experimental licensee should provide the community a contact in case there are issues that need to be addressed.
- (6) The experimental licensee must place notice of the experimental parameters, and the stop buzzer contact in the record of the NextNav proceeding (Docket 24-240).
- (7) Stop buzzer Point of Contact:
JongHak Jung - (408) 400-7850 - 5GPNTNetwork@nextnav.com
- (8) Experimental licensee must
 - a. set an antenna height at a value where TOWAIR indicates that FAA notification is not required at that given location; or
 - b. file an FAA notification (and seek a determination of no hazard) where TOWAIR indicates that FAA notification is required at the given location and height.
- (9) This authorization SUPERSEDES the previously issued authorization with the same call sign and file number: amended Stop Buzzer

**FCC FORM 442 - FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR NEW OR MODIFIED RADIO STATION UNDER PART 5 OF FCC RULES -
EXPERIMENTAL RADIO SERVICE (OTHER THAN BROADCAST)**

**Approved by
OMB
3060 - 0065**

Applicant's Name (company): Ne tNav **File No.:** 0094 EX CM 2026

Mailing Address

Attention: Renee Gregory
Street Address: 11911 Freedom Dr., te. 200
P.O. Box:
City: Reston
State: VA
Country:
Zip Code: 20190
E Mail Address: rgregory@ne tnav.com

Application Purpose

Application is for: MODIFICATION OF LICEN E

For Modification indicate below

File No.: 0622-EX-CN-2025 **Callsign:** WP2XYS

Government Contract

Is this authorization to be used for fulfilling the requirement of a government contract with an agency of the United States Government? If "YES", include as an exhibit a narrative statement describing the government project, agency and contract number. No

Foreign Government Use

Is this authorization to be used for the exclusive purpose of developing radio equipment for export to be employed by stations under the jurisdiction of a foreign government? If "YES", include the contract number and the name of the foreign government concerned as an exhibit. No

Research Project

Is this authorization to be used for providing communications essential to a research project? (The radio communication is not the objective of the research project)? If "YES", include as an exhibit the following information:

- a. A description of the nature of the research project being conducted.
- b. A showing that the communications facilities requested are necessary for the research project involved.
- c. A showing that existing communications facilities are inadequate.

0

Exhibit Information

If all the answers to Items 4, 5, 6 are "NO", include as an exhibit a narrative statement describing in detail the following items:

- a. The complete program of research and experimentation proposed including description of equipment and theory of operation.
- b. The specific objectives sought to be accomplished.
- c. How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion or utilization of the radio art, or is along line not already investigated.

Estimated Duration

Give an estimate of the length of time that will be required to complete the program of experimentation proposed in this application: 24 Months

Environmental Impact

Would a commission grant of this application come within Section 1.1307 of the FCC Rules, such that it may have a significant environmental impact? If "YES", include as an exhibit an Environmental Assessment as required by Section 1.1311. No

Manufacturer

List below transmitting equipment to be installed (if experimental, so state) if additional rows are required, please submit equipment list as an exhibit :

Manufacturer	Model Number	No. Of Units	Experimental
ekha Wireless	MARUT6461	24	Yes
ime RF	LM 7002M	20	Yes
Qorvo	QPA9908	20	Yes
Amarisoft	UE B 2025032800	1	Yes

Station ID

Is the equipment listed in Item 10 capable of station identification pursuant to Section 5.115? No

Applicant Type

Applicant is: Corporation

Foreign Government

Is applicant a foreign government or a representative of a foreign government? No

License Denied or Revoked

Has applicant or any party to this application had any FCC station license or permit revoked or any application for permit, license or renewal denied by this Commission?

If "YES", include as an exhibit a statement giving call sign of license or permit revoked and relate circumstances. No

Owner and Operator

Will applicant be owner and operator of the station? Yes

Contact Information

Give the following information of person who can best handle inquiries pertaining to this application: First Name: Trey
Last Name: Hanbury
Title: Regulatory Counsel
Phone Number: 2026376387
E-Mail Address: thanbury@jenner.com

Drug Abuse Question

APPLICANT ANTI-DRUG ABUSE CERTIFICATION: By checking "YES", the individual applicant certifies that he or she is eligible for this license. This requires that he or she is not subject to a denial of federal benefits, including FCC benefits, as a result of a drug offense conviction pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862. A non-individual applicant, e.g., corporation, partnership or other unincorporated association, certifies that no party to the application is subject to a denial of federal benefits, pursuant to that section. For definition of a "party" for these purposes, see 47CFR 1.2002(b). Yes

Certification

THE APPLICANT CERTIFIES THAT:

- a. Copies of the FCC Rule Parts 2 and 5 are on hand; and
- b. Adequate financial appropriations have been made to carry on the program of experimentation which will be conducted by qualified personnel; and
- c. All operations will be on an experimental basis in accordance with Part 5 and other applicable rules, and will be conducted in such a manner and at such a time as to preclude harmful interference to any authorized station; and
- d. Grant of the authorization requested herein will not be construed as a finding on the part of the Commission:
 1. that the frequencies and other technical parameters specified in the authorization are the best suited for the proposed program of experimentation, and
 2. that the applicant will be authorized to operate on any basis other than experimental, and
 3. that the Commission is obligated by the results of the experimental program to make provision in its rules including its table of frequency allocations for applicant's type of operation on a regularly licensed basis.

THE APPLICANT FURTHER CERTIFIES THAT:

- e. All the statements in the application and attached exhibits are true, complete and correct to the best of the applicant's knowledge; and
- f. The applicant is willing to finance and conduct the experimental program with full knowledge and understanding of the above limitations; and
- g. The applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the USA.

Name of Applicant: Ne tNav

Signature (Authorized person filing form): Renee Gregory

Signature Date (Authorized person filing form): 04/14/2026

Title of Person Signing Application: Vice President of Regulatory Affairs

Classification: Authorized employee

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(A)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

NOTIFICATION TO INDIVIDUALS UNDER PRIVACY ACT OF 1974 AND THE PAPERWORK REDUCTION ACT OF 1980

Information requested through this form is authorized by the Communications Act of 1934, as amended, and specified by Section 308 therein. The information will be used by Federal Communications Commission staff to determine eligibility for issuing authorizations in the use of the frequency spectrum and to effect the provisions of regulatory responsibilities rendered by the Commission by the Act. Information requested by this form will be available to the public unless otherwise requested pursuant to 47 CFR 0.459 of the FCC Rules and Regulations. Your response is required to obtain this authorization.

Public reporting burden for this collection of information is estimated to average four (4) hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to the Federal Communications Commission, Records Management Branch, Paperwork Reduction Project (3060-0065), Washington DC 20554. DO NOT send completed applications to this address. Individuals are not required to respond to this collection unless it displays a currently valid OMD control number.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e) (3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

Station Location

City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
San Jose	California	North 37 21 47	West 121 53 0			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters: 14.10

(b) Elevation of ground at antenna site above mean sea level in meters: 26.00

(c) Distance to nearest aircraft landing area in kilometers: 2.80

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	918.00000000-928.00000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 34	West 121 52 40			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters: 39.80

(b) Elevation of ground at antenna site above mean sea level in meters: 25.00

(c) Distance to nearest aircraft landing area in kilometers: 3.50

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	918.00000000-928.00000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 54	West 121 54 0			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters: 49.40

(b) Elevation of ground at antenna site above mean sea level in meters: 20.00

(c) Distance to nearest aircraft landing area in kilometers: 1.40

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
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New 918.00000000 928.00000000 MH FX 80.000000 W 1000.000000 W M 0.00010000 % 10M0D7W OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	an Jose	California	North 37 20 2	West 121 53 39			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: No

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters: 65.90

(b) Elevation of ground at antenna site above mean sea level in meters: 26.00

(c) Distance to nearest aircraft landing area in kilometers: 2.90

(d) List any natural formations of existing man made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New	918.00000000 928.00000000 MH	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	an Jose	California	North 37 20 8	West 121 55 3			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: No

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters: 35.20

(b) Elevation of ground at antenna site above mean sea level in meters: 29.00

(c) Distance to nearest aircraft landing area in kilometers: 1.80

(d) List any natural formations of existing man made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New	918.00000000 928.00000000 MH	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	an Jose	California	North 37 20 22	West 121 53 22			ANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters: 46.00

(b) Elevation of ground at antenna site above mean sea level in meters: 25.00

(c) Distance to nearest aircraft landing area in kilometers: 2.80

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	918.00000000-928.00000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 22 4	West 121 55 5			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters:

(b) Elevation of ground at antenna site above mean sea level in meters:

(c) Distance to nearest aircraft landing area in kilometers:

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	918.00000000-928.00000000 MHz	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM

	City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	San Jose	California	North 37 20 7	West 121 52 39			SANTA CLARA	1.30 km

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters: 56.50

(b) Elevation of ground at antenna site above mean sea level in meters: 15.00

(c) Distance to nearest aircraft landing area in kilometers: 3.90

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: Urban environment with buildings, towers, trees, etc.

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New	918.00000000 928.00000000 MH	FX	80.000000 W 1000.000000 W	M	0.00010000 %	10M0D7W	OFDM
City	State	Latitude	Longitude	Mobile	Street (or other indication of location)	County	Radius of Operation
0	an Jose	California	North 37 20 54	West 121 54 0	Mobile units of user equipment, an Jose, CA	ANTA CLARA	6.00 km

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half power point:

(b) Orientation in horizontal plane (degrees from True North):

(c) Orientation in vertical plane (degrees from horizontal):

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters:

(b) Elevation of ground at antenna site above mean sea level in meters:

(c) Distance to nearest aircraft landing area in kilometers:

(d) List any natural formations of existing man made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New	902.00000000 907.00000000 MH	MO	200.000000 mW 61.000000 mW	M	0.00010000 %	5M00D7W	OFDM
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New	902.00000000 907.00000000 MH	MO	4.000000 mW 1.220000 mW	M	0.00020000 %	5M00D7W	OFDM

APPLICATION FOR MODIFICATION OF EXPERIMENTAL AUTHORITY

NextNav Inc. (NextNav) seeks modification of its experimental authority under call sign WP2XYS to relocate one of the eight authorized fixed base stations in Santa Clara County, California.¹ The new site, located approximately 1,400 feet northwest of the original, will replace the prior site due to lease-related constraints. The relocated base station will operate only one sector with the directional antenna, oriented towards the southeastern direction. The revised operational area will largely overlap with the original area. The base station will transmit in the 918–928 MHz sub-band at a radiated power of up to 1000 watts ERP per sector, with the antenna mounted at a fixed azimuth and the beamwidth and downtilt values specified below.

The proposed modified site will be located on an existing building rooftop in the same manner as the original site. These rooftop facilities involve antennas mounted below the building rooftop line and therefore do not create new obstructions requiring FAA notification or clearance. Because the rooftop site will be mounted at or below the rooftop line, this application introduces no new structures or obstructions.

An antenna data sheet, and typical deployment configurations on preexisting structures appear in the attached exhibit. The following chart provides detailed technical specifications for the original and relocated base station sites in the San Jose area. Each row includes the NextNav site identifier, geographic coordinates (latitude and longitude), antenna height above ground level, estimated structure height (AGL), and the azimuth and downtilt values for up to three antenna sectors (Alpha, Beta, and Gamma).² Testing from zero to up to 10 degrees downtilt allows NextNav to study the variation in group delay of the antenna due to nulls in the vertical antenna pattern on PNT performance.

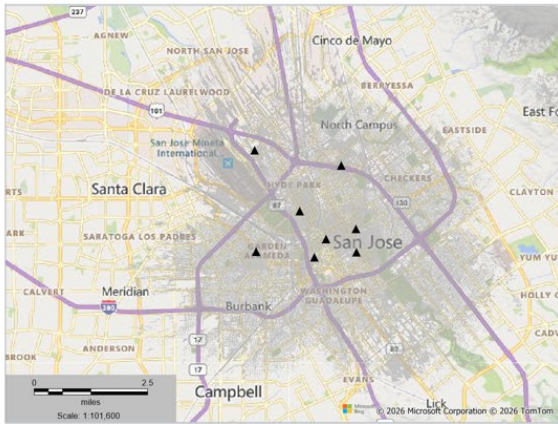
Site ID	Latitude	Longitude	NN Antenna Height AGL (m)	Est. Bldg. Height (m)	Alpha sector Az (Deg)	Beta sector Az (Deg)	Gamma sector Az (Deg)	Alpha sector Down- tilt (Deg)	Beta sector Down- tilt (Deg)	Gamma sector Down- tilt (Deg)
CASFO0502 (original)	37° 21' 53.8" N	121° 54' 52.8" W	39	39	110	200	N/A	0-10	0-10	0-10
CASFO0503 (relocated)	37° 22' 3.66" N	121° 55' 5.04" W	29.9	29.9	140	N/A	N/A	0-10	N/A	N/A

The maps below show the revised experimental coverage area incorporating the relocated site. Because the downtilt angle may range from 0 degrees to 10 degrees, coverage plots are shown for both 0 degrees downtilt and 10 degrees downtilt.

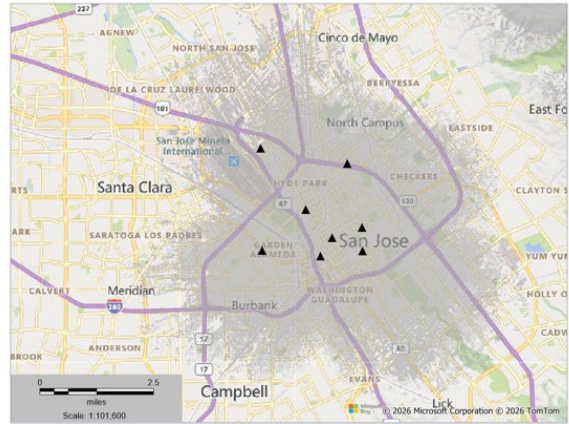
¹ The mailing address provided for the applicant in the original application for File No. 0622-EX-CN-2025 contained an incorrect ZIP code. The correct ZIP code is reflected in the applicant's mailing address as submitted with this modification application.

² As noted, the relocated site will operate only one sector.

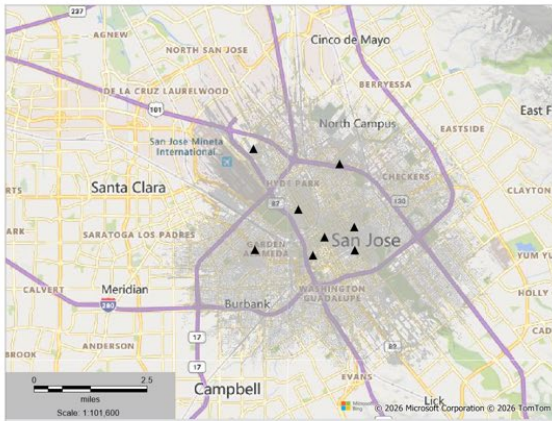
Outdoor + Indoor Coverage – 0° tilt



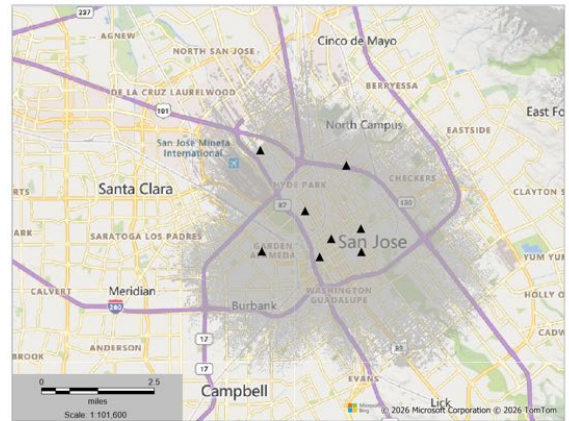
Outdoor Coverage Only – 0° tilt



Outdoor + Indoor Coverage – 10° tilt



Outdoor Coverage Only – 10° tilt



Materials Related to NextNav's Joint Testing in Pueblo, Colorado

**FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SPECIAL TEMPORARY AUTHORITY**

Applicant Name

Name of Applicant: NextNav Inc.

Address

Attention: Renee Gregory
Street Address: 11911 Freedom Dr. Suite 200
P.O. Box:
City: Reston
State: VA
Zip Code: 20190
Country: United States
E-Mail Address: rgregory@nextnav.com

Best Contact

Give the following information of person who can best handle inquiries pertaining to this application:

Last Name: Hanbury
First Name: Trey
Title: Regulatory Counsel
Phone Number: 2026376387

Explanation

Please explain in the area below why an STA is necessary:

Testing will take place outdoors in Metrolink Rail premises with the aim of utilizing their Facility for Accelerated Service Testing (FAST) Loop train to simulate actual operational conditions.

Purpose of Operation

Please explain the purpose of operation: Conduct a field test to validate coexistence between proposed NextNav 5G operations and the licensed operations of railroad automatic equipment identification systems.

Information

Callsign:
Class of Station: MO
Nature of Service: Experimental

Requested Period of Operation

Operation Start Date: 04/01/2026
Operation End Date: 09/30/2026

Manufacturer

List below transmitting equipment to be installed (if experimental, so state) if additional rows are required, please submit equipment list as an exhibit:

Manufacturer	Model Number	No. Of Units	Experimental
Rohde & Schwarz	SMBV100B	1	Yes
Comba PA	PA-4750CGC1	1	Yes
Transcore	MPRX	1	Yes
Transcore	Smartpass	1	Yes
Thinkify	TR1000	1	Yes
Thinkify	T2000	1	Yes

Certification

Neither the applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. The applicant hereby waives any claim to the use of any particular frequency or electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.) The applicant acknowledges that all statements made in this application and attached exhibits are considered material representations, and that all the exhibits part hereof and are incorporated herein as if set out in full in this application; undersigned certifies that all statements in this application are true, complete and correct to the best of his/her knowledge and belief and are made in good faith. Applicant certifies that construction of the station would NOT be an action which is likely to have a significant environmental effect. See the Commission's Rules, 47 CFR1.1301-1.1319.

Signature of Applicant (Authorized person filing form): Renee Gregory

Title of Applicant (if any): Vice President of Regulatory Affairs

Date: 2026-01-21 00:00:00.0

Station Location

City	State	Latitude	Longitude	Mobile	Radius of Operation
		North 38 18 52	West 104 21 24	MxV Facility, Pueblo, Colorado	1.00

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters:

(b) Elevation of ground at antenna site above mean sea level in meters:

(c) Distance to nearest aircraft landing area in kilometers:

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	902.00000000-907.00000000 MHz	MO	11.620000 mW 121.620000 mW	M		180KD7W	OFDM
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	902.00000000-907.00000000 MHz	MO	11.620000 mW 121.620000 mW	M		5M00D7W	OFDM
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	902.00000000-928.00000000 MHz	MO	1.000000 W 11.000000 W	M		15K5N0N	CW
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	902.00000000-928.00000000 MHz	MO	1.000000 W 11.000000 W	M		33K0N0N	CW
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	902.00000000-928.00000000 MHz	MO	1.000000 W 11.000000 W	M		66K0N0N	CW
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	902.00000000-928.00000000 MHz	MO	1.000000 W 11.000000 W	M		14K4L1D	PWM
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	904.75000000-909.75000000 MHz	MO	11.620000 mW 121.620000 mW	M		180KD7W	OFDM

Action Frequency		Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New	904.75000000 909.75000000 MH	MO	11.620000 mW 121.620000 mW	M		5M00D7W	OFDM
Action Frequency		Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New	918.00000000 928.00000000 MH	MO	5.000000 W 52.500000 W	M		10M0D7W	OFDM
Action Frequency		Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New	918.00000000 928.00000000 MH	MO	5.000000 W 52.500000 W	M		180KD7W	OFDM
Action Frequency		Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+ /)	Emission Designator	Modulating Signal
New	918.00000000 928.00000000 MH	MO	5.000000 W 52.500000 W	M		5M00D7W	OFDM

APPLICATION FOR SPECIAL TEMPORARY AUTHORITY

NextNav Inc. (NextNav) requests special temporary authority to conduct a small-scale outdoor field test to evaluate coexistence between 5G operations and licensed automatic equipment identification (AEI) systems in the 902–928 MHz band. The test setup will use an off-the-shelf 5G signal generator paired with an external amplifier and directional antenna to generate a signal of 47.2 dBm EIRP.

The purpose of the experiment is for NextNav and Transportation Technology Center, Inc. dba MxV Rail (MxV) to conduct a joint field test to validate coexistence between NextNav's proposed 5G operations and the licensed operations of railroad AEI systems. Testing will take place outdoors at MxV's facility located in Pueblo, Colorado, including the use of the Facility for Accelerated Service Testing (FAST Loop) to simulate actual AEI equipment operational conditions. The testing location is a controlled remote area that provides the ability to simulate actual operational railroad and 5G conditions with little risk of interference to other existing operations. Images of the testing site location follow this narrative.

The directional Yagi antenna proposed for 5G signal use in this experiment exhibits excellent front-to-back ratio performance. This test geometry will mitigate any potential effect of the 5G signal on other users of the 902-928 MHz band by ensuring areas near the test location are placed in the back lobe of the antenna pattern, where signal strength is low. Both the 5G signal source and AEI readers will be portable, and their locations will be adjusted around a designated center point as needed, but within a 1,000 m radius of the center point coordinates.

Operating Parameters Requested Under 47 CFR § 5.61(b)(4)-(11) ¹

(4) Time and Dates of Proposed Operation

Test Period: April 2026 – September 2026

Schedule: Active transmissions will occur for a few hours per day, subject to weather and logistical constraints.

(5) Class(es) of Station

Station Class: Mobile

(6) Location(s) and Geographical Coordinates

Test Location: MxV Facility, Pueblo, CO

Coordinates (NAD83):

- Center Point Location:
 - 38°18'52"N, 104°21'24"W

¹ Numbers for each operating parameter in this list correspond to subsections of 47 CFR § 5.61(b).

Site Description:

- FAST Test facility: FAST (Facility for Accelerated Service Testing) is a controlled, full-scale rail test track operated by MxV Rail, a subsidiary of the Association of American Railroads. The facility is designed to accelerate the pace of real-world freight rail testing in a focused environment that mimics heavy commercial service but accumulates tonnage and wear far faster than typical revenue service.

(7) Equipment to Be Used

All 5G equipment identified below is experimental in nature and is either not authorized by the Federal Communications Commission for the operations described here or is being operated outside the scope of its existing equipment authorization. The equipment is used solely for controlled experimental testing as described in this application.

- 5G:
 - Signal Generator: Rohde & Schwarz SMBV100B (1423.1003.02) Vector Signal Generator
 - Comba PA external amplifier – Model: PA-4750CGC1
 - 47 dB amplification between 918 MHz - 928 MHz
 - Will only be used to amplify the 5G downlink band, not the 5G uplink band
 - Antenna: Telewave ANT930Y10-WR Yagi (Directional); see attached antenna datasheet
 - Antenna Gain: 10.2 dBd
 - Number of Units: 1 transmitter setup (1 generator, 1 antenna)

The AEI readers and tags identified below will generally operate consistent with their existing technical authorizations. The proposed testing of these devices includes operations in limited portions of the 902–928 MHz band that are allocated exclusively to the Multilateration LMS service, including the 907–909.75 MHz segment, which is outside the scope of part 90 authority for AEI systems. The Pueblo test site also is not authorized for part 90 site-based operations. Accordingly, the applicant seeks authority under part 5 to conduct the proposed tests.

- AEI:
 - Readers:
 - Transcore: MPRX, SmartPass
 - Thinkify: TR1000, T2000
 - Passive Antennas:
 - Transcore: AA3110 Parapanel, AA3140 Log Periodic
 - Tags/Transponders
 - Passive - Transcore: AT5118-AAR v5.1S, AT5133, AT5110-AAR v3.2A, AT5110-AAR V3.0N W1, AT5125- AAR V2.1N W1
 - Active - Transcore: AT5549

(8) Frequencies Requested

- 5G:
 - 902-907 MHz - Uplink Band
 - 904.75-909.75 MHz – Uplink Band (if it's not possible to retune one or more readers to support the 907-909.75 MHz band, the 5G uplink band will be shifted up 2.75 MHz so that 5G uplink transmissions can be

spectrally closer to AEI operations. Only one of the two 5G uplink bands will be used in a test at any given time.)

- 918-928 MHz - Downlink Band
- Channel Bandwidths: 180kHz, 5 MHz, and 10 MHz (per 5G signal)
- AEI Band:
 - 902- 928 MHz
 - Channel Bandwidth: 14.4 – 66 KHz

(9) Maximum Effective Radiated Power (ERP) or Equivalent Isotropically Radiated Power (EIRP)

- 5G:
 - 902-907 MHz and 904.75-909.75 MHz - Uplink Bands
 - Conducted Output Power: 10.65 dBm (11.62 mW) (mean)
 - Mean ERP: 20.85 dBm (121.62 mW)
 - 918-928 MHz - Downlink Band
 - Conducted Output Power: 37 dBm (5 W) (mean)
 - Mean ERP: 47.2 dBm (52.5 W)
 - Antenna Gain: 10.2 dBd
- AEI Band (902 MHz to 928 MHz - ISM Band)
 - Conducted Output Power: 0.5-1W (27-30dBm)
 - Maximum ERP: 11 W Mean ERP
 - Antenna Gain:
 - Parapanel antenna 12.5 dBi
 - Log Periodic antenna 8 dBi

(10) Emission Designator or Description

- 5G Emission: OFDM-based 5G NR
 - Modulation: OFDM
 - Bandwidth: 180kHz, 5 MHz, and 10 MHz
 - Emission Designators: 180KD7W, 5M00D7W, and 10M0D7W
- AEI Emission:

<u>Reader:</u>	<u>Necessary Bandwidth:</u>	<u>Emission Designator:</u>
MPRX (FIHMPRX)	66 kHz	66K0N0N
SmartPass (FIH162105272)	33 kHz	33K0N0N
T1000 (XE2TF6)	14.4 kHz	14K4L1D
T2000 (XE2TF8)	15.5 kHz	15K5N0N

- Modulation: CW or PWM

(11) Overall Antenna Height Above Ground

5G Height:

- Will vary from 2 to 18 ft

AEI Height:

- Trackside AEI reader antennas are installed so that their boresight intersects the AEI tag placement window. 3.5 to 5 feet
- AEI reader antennas between tracks are installed at a height of 1 to 5 feet and with boresight at an angle of 0 to 60 degrees above the horizon (i.e., 0 – 60 degrees uptilt)
- AEI tags will be mounted on the side of the equipment at 2-5 feet above the top of the rail with placement falling within the side clearance envelope (see AAR Field Manual Rule 63, Figures 63.1 & 63.2).

Structure Notification: Not required (below FAA part 17 threshold)

Stop Buzzer and Technical Contact

If NextNav must terminate operations due to any interference concerns, the technical and “stop buzzer” point of contact with authority to direct the termination of operations is as follows:

Name: Bivesh Paudyal
Address: 350 Keeler Pkwy
Pueblo, CO
Phone: 719-666-4011
Email Address: bivesh_paudyal@aar.com

All operations will operate on a secondary, non-interference basis relative to authorized services consistent with 47 C.F.R. § 5.85.

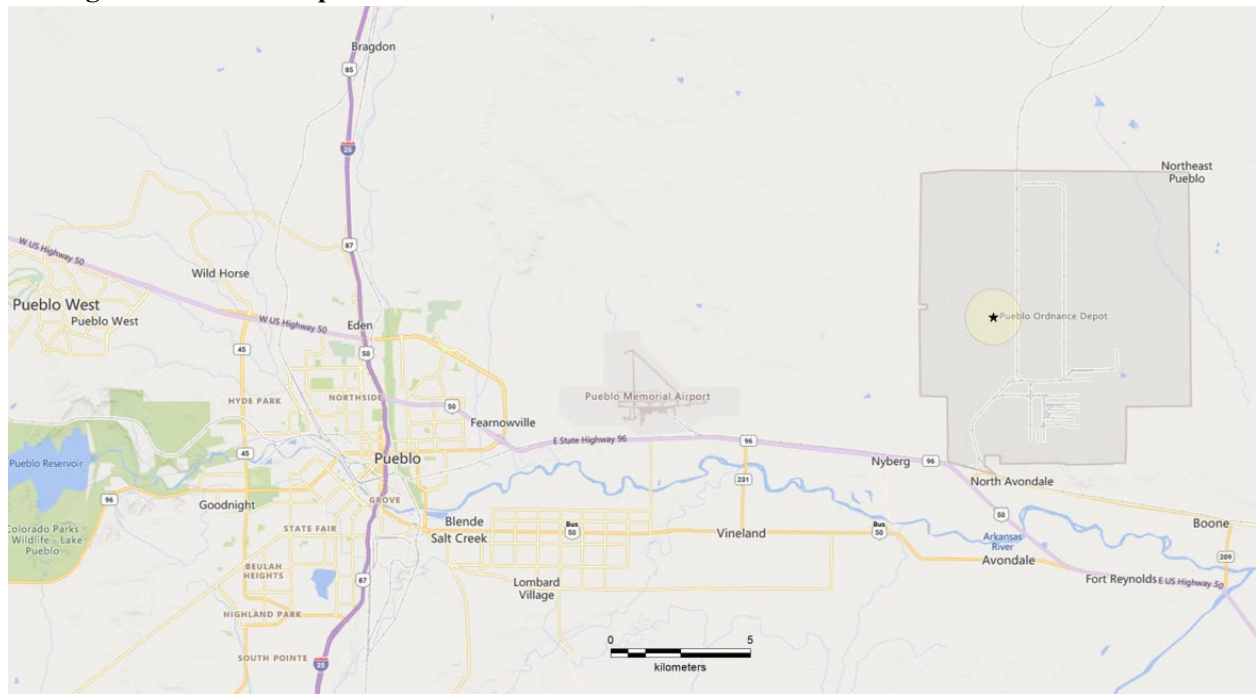
Public Interest Statement

NextNav’s 5G-based 3D PNT solution promises to strengthen national security, public safety, and the economy throughout the United States.² The FCC has expressly identified its focus on incentivizing and supporting industry efforts to develop complementary PNT technologies and solutions for civil use that may be used in conjunction with GPS to form a resilient and secure PNT system of systems.³ The purpose of the experiment is for NextNav and MxV to validate coexistence between NextNav’s proposed 5G operations and the licensed operations of railroad AEI systems. Testing will be narrowly focused, geographically remote, and time limited.

² See *NextNav Petition for Rulemaking, Enabling Next-Generation Terrestrial Positioning, Navigation, and Timing and 5G: A Plan for the Lower 900 MHz Band (902-928 MHz)*, RM-11989 (filed Apr. 16, 2024); *Wireless Telecommunications Bureau and Office of Engineering and Technology Seek Comment on NextNav Petition for Rulemaking*, Public Notice, 39 FCC Rcd 8695 (rel. Aug. 6, 2024).

³ *Promoting the Development of Positioning, Navigation, and Timing Technologies and Solutions*, Notice of Inquiry, WT Docket No. 25-110, FCC 25-20, ¶ 3 (rel. Mar 28, 2025).

Testing Site Location Map 1:

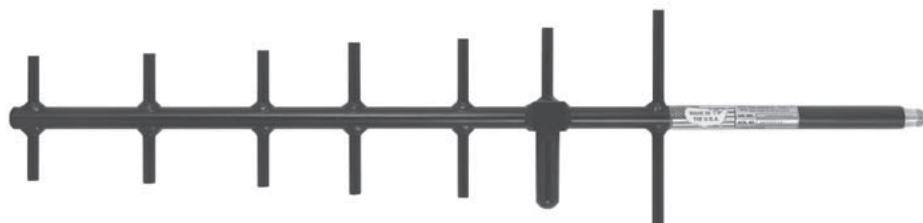


Testing Site Location Map 2:

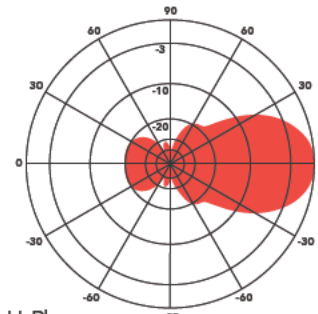


ANT930Y10-WR

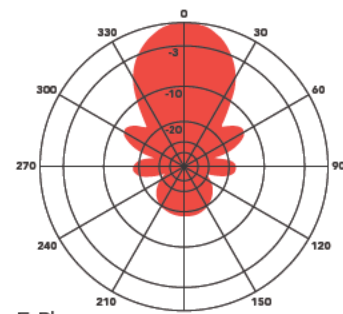
YAGI ANTENNA 10.2 dBd / 12.3 dBi



ANT930Y10-WR at 930 MHz



H-Plane
Gain: 10.5 dBd



E-Plane
Gain: 10.5 dBd

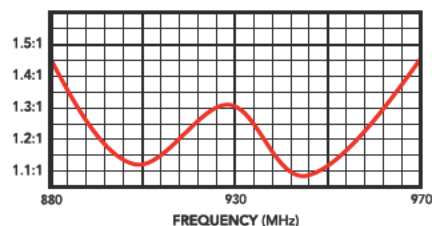
The Telewave ANT930Y10-WR Yagi is a high performance directional antenna, designed especially for point to point as well as point to multipoint control applications. Seven elements provide a minimum of 10.2 dBd (12.3 dBi) forward gain, excellent front-to-back performance, and coverage of the entire 900 MHz commercial band. The boom and elements are solid 360° welded aluminum to prevent intermodulation and provide exceptional strength.

All antenna components are completely protected with our high-tech Txylan™ coating, which seals the antenna against corrosive gases, ultraviolet radiation, salt spray, acid rain, and abrasives such as windblown

sand in desert environments. This coating also greatly reduces ice buildup. The active element and feed line are sealed within the antenna, eliminating a major cause of failure.

The ANT930Y10-WR includes a welded vertical plate and mast clamp set. A horizontal plate is optional. The clamp set secures the antenna to a vertical mast or tower support from 1.0" - 2.5" O.D. For installations on angled supports, the "U" mount allows mounting to virtually all angled supports up to 3.5" O.D., and continuously adjustable polarization with a 90° angle feed for hardline cable.

TYPICAL VSWR RESPONSE



SPECIFICATIONS

Frequency (continuous)	885-975 MHz	Elements	7
Gain (typ)	10.2 dBd	Dimensions (L x H)	28 x 7.5 in.
Power rating (typ)	500 watts	Antenna weight	3 lb.
Impedance / VSWR	50 ohms / 1.5:1 (max)	Shipping weight	8 lb.
Front to back ratio (min)	25 dB	Wind rating / with 0.5" ice	200 / 165 MPH
Beamwidth V / H	43° / 41°	Exposed area (flat plate equiv.)	0.25 ft. ²
Pattern / Polarization	Directional / Vertical	Lateral thrust at 100 MPH	10.0 lb.
Termination	N Female or 7-16 DIN (opt)	(40 psf - flat plate equiv.)	

**FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SPECIAL TEMPORARY AUTHORITY**

Applicant Name

Name of Applicant: NextNav Inc.

Address

Attention: Renee Gregory
Street Address: 11911 Freedom Dr. Suite 200
P.O. Box:
City: Reston
State: VA
Zip Code: 20190
Country: United States
E-Mail Address: rgregory@nextnav.com

Best Contact

Give the following information of person who can best handle inquiries pertaining to this application:

Last Name: Hanbury
First Name: Trey
Title: Regulatory Counsel
Phone Number: 2026376387

Explanation

Please explain in the area below why an STA is necessary:

to conduct static over the air outdoor field tests to measure AEI performance in the presence of 5G signals arriving at AEI tags and readers from various angles of incidence in a relatively controlled field environment in which the train is stationary.

Purpose of Operation

Please explain the purpose of operation: Conduct a field test to validate coexistence between proposed NextNav 5G operations and the licensed operations of railroad automatic equipment identification systems.

Information

Callsign:
Class of Station: MO
Nature of Service: Experimental

Requested Period of Operation

Operation Start Date: 04/01/2026
Operation End Date: 09/30/2026

Manufacturer

List below transmitting equipment to be installed (if experimental, so state) if additional rows are required, please submit equipment list as an exhibit:

Manufacturer	Model Number	No. Of Units	Experimental
Rohde & Schwarz	SMBV100B	2	Yes
Comba PA	PA-4750CGC1	2	Yes
Transcore	MPRX	1	Yes
Transcore	Smartpass	1	Yes
Thinkify	TR1000	1	Yes
Thinkify	T2000	1	Yes

Certification

Neither the applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. The applicant hereby waives any claim to the use of any particular frequency or electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.) The applicant acknowledges that all statements made in this application and attached exhibits are considered material representations, and that all the exhibits part hereof and are incorporated herein as if set out in full in this application; undersigned certifies that all statements in this application are true, complete and correct to the best of his/her knowledge and belief and are made in good faith. Applicant certifies that construction of the station would NOT be an action which is likely to have a significant environmental effect. See the Commission's Rules, 47 CFR1.1301-1.1319.

Signature of Applicant (Authorized person filing form): Renee Gregory

Title of Applicant (if any): Vice President of Regulatory Affairs

Date: 2026-03-04 00:00:00.0

Station Location

City	State	Latitude	Longitude	Mobile	Radius of Operation
		North 38 17 6	West 104 19 51	Office Training Center at Pueblo Chemical Depot	1.00

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters:

(b) Elevation of ground at antenna site above mean sea level in meters:

(c) Distance to nearest aircraft landing area in kilometers:

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
odified	902.00000000-907.00000000 MHz	MO	1.000000 W 10.500000 W	M		180KD7W	OFDM
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
odified	902.00000000-907.00000000 MHz	MO	1.000000 W 10.500000 W	M		5M00D7W	OFDM
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	902.00000000-928.00000000 MHz	MO	1.000000 W 11.000000 W	M		15K5N0N	CW
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	902.00000000-928.00000000 MHz	MO	1.000000 W 11.000000 W	M		33K0N0N	CW
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	902.00000000-928.00000000 MHz	MO	1.000000 W 11.000000 W	M		66K0N0N	CW
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
ew	902.00000000-928.00000000 MHz	MO	1.000000 W 11.000000 W	M		14K4L1D	PWM
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
odified	904.75000000-909.75000000 MHz	MO	1.000000 W 10.500000 W	M		180KD7W	OFDM

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/)	Emission Designator	Modulating Signal
Modified	904.75000000 909.75000000 MH	MO	1.000000 W 10.500000 W	M		5M00D7W	OFDM
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/)	Emission Designator	Modulating Signal
New	918.00000000 928.00000000 MH	MO	5.000000 W 52.500000 W	M		10M0D7W	OFDM
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/)	Emission Designator	Modulating Signal
New	918.00000000 928.00000000 MH	MO	5.000000 W 52.500000 W	M		180KD7W	OFDM
Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/)	Emission Designator	Modulating Signal
New	918.00000000 928.00000000 MH	MO	5.000000 W 52.500000 W	M		5M00D7W	OFDM

APPLICATION FOR SPECIAL TEMPORARY AUTHORITY

NextNav Inc. (NextNav) requests special temporary authority to conduct a small-scale outdoor field test to evaluate coexistence between 5G operations and licensed automatic equipment identification (AEI) systems in the 902–928 MHz band. The test setup will use an off-the-shelf 5G signal generator paired with an external amplifier and directional antenna to generate a signal of 47.2 dBm ERP (49.3 dBm EIRP).

The purpose of the experiment is for NextNav and Transportation Technology Center, Inc. d/b/a MxV Rail (MxV) to conduct a joint field test to validate coexistence between NextNav's proposed 5G operations and the licensed operations of railroad AEI systems. Testing will take place outdoors at the Office Training Center at the Pueblo Chemical Depot. The testing location is a controlled remote area that provides the ability to simulate actual operational railroad and 5G conditions with little risk of interference to other existing operations. This experiment will work in conjunction with the proposed experiment in File No. 0158-EX-ST-2026. The subject of this application is a static test to measure the AEI performance with different 5G signal angles of incidence upon both the readers and tags with a stationary train. Images of the testing site location follow this narrative.

The directional Yagi antenna proposed for 5G signal use in this experiment exhibits excellent front-to-back ratio performance. This test geometry will mitigate any potential effect of the 5G signal on other users of the 902-928 MHz band by ensuring areas near the test location are placed in the back lobe of the antenna pattern, where signal strength is low. Both the 5G signal source and AEI readers will be portable, and their locations will be adjusted around a designated center point as needed, but within a 1,000 m radius of the center point coordinates.

Operating Parameters Requested Under 47 CFR § 5.61(b)(4)-(11) ¹

(4) Time and Dates of Proposed Operation

Test Period: April 2026 – September 2026

Schedule: Active transmissions will occur for a few hours per day, subject to weather and logistical constraints.

(5) Class(es) of Station

Station Class: Mobile

(6) Location(s) and Geographical Coordinates

Static testing will take place at the MxV Office Training Center at the Pueblo Chemical Depot, Pueblo, CO. MxV Rail, a subsidiary of the Association of American Railroads, operates full-scale rail test tracks in Pueblo, CO. The facility is designed to support well-controlled and instrumented testing of virtually every aspect of railroad vehicles, tracks, structures, electronics, communications, and other infrastructure aspects.

¹ Numbers for each operating parameter in this list correspond to subsections of 47 CFR § 5.61(b).

Coordinates (NAD83):

- Center Point Location:²
 - 38° 17' 5.65" N, 104° 19' 50.81" W

(7) Equipment to Be Used

All 5G equipment identified below is experimental in nature and is either not authorized by the Federal Communications Commission for the operations described here or is being operated outside the scope of its existing equipment authorization. The equipment is used solely for controlled experimental testing as described in this application.

- 5G:
 - Signal Generator: Rohde & Schwarz SMBV100B (1423.1003.02) Vector Signal Generator
 - Comba PA external amplifier – Model: PA-4750CGC1
 - 47 dB amplification between 902 MHz - 928 MHz
 - Will be used to amplify both the uplink and downlink 5G signals
 - In the static tests, the uplink power will be amplified to increase the probability that the test will determine the uplink power levels as which the AEI connection may experience harmful interference.
 - Antenna: Telewave ANT930Y10-WR Yagi (Directional); see attached antenna datasheet
 - Antenna Gain: 10.2 dBd
 - Multiple transmitting antennas including 2 signal generators

The AEI readers and tags identified below will operate consistent with their existing technical authorizations. The proposed testing of these devices includes operations in limited portions of the 902–928 MHz band that are allocated exclusively to the Multilateration LMS service, including the 907–909.75 MHz segment, which is outside the scope of part 90 authority for AEI systems. The Pueblo test site also is not authorized for part 90 site-based operations. Accordingly, the applicant seeks authority under part 5 to conduct the proposed tests.

- AEI:
 - Readers:
 - Transcore: MPRX, SmartPass
 - Thinkify: TR1000, T2000
 - Passive Antennas:
 - Transcore: AA3110 Parapanel, AA3140 Log Periodic
 - Tags/Transponders
 - Passive - Transcore: AT5118-AAR v5.1S, AT5133, AT5110-AAR v3.2A, AT5110-AAR V3.0N W1, AT5125- AAR V2.1N W1
 - Active - Transcore: AT5549

² Due to formatting limitations in the Experimental Licensing System, the coordinates reported in the application form are limited to whole seconds. The coordinates provided in this narrative reflect the precise site location, and any discrepancy results solely from rounding in the form.

(8) Frequencies Requested

- 5G:
 - 902-907 MHz - Uplink Band
 - 904.75-909.75 MHz – Uplink Band (Some tests during the experiment may use the 902-907 MHz band for uplink while other tests may use the 904.75-909.75 MHz band, depending on the tuning capabilities of the equipment. Only one uplink configuration will be used during any given test.)
 - 918-928 MHz - Downlink Band
 - Channel Bandwidths: 180kHz, 5 MHz, and 10 MHz (per 5G signal)
- AEI Band:
 - 902- 928 MHz
 - Channel Bandwidth: 14.4 – 66 kHz

(9) Maximum Effective Radiated Power (ERP) or Equivalent Isotropically Radiated Power (EIRP)

- 5G:
 - 902-907 MHz and 904.75-909.75 MHz - Uplink Bands
 - Conducted Output Power: 30 dBm (1 W) (mean)
 - Mean ERP: 40.2 dBm (10.5 W)
 - 918-928 MHz - Downlink Band
 - Conducted Output Power: 37 dBm (5 W) (mean)
 - Mean ERP: 47.2 dBm (52.5 W)
 - Antenna Gain: 10.2 dBd
- AEI Band (902 MHz to 928 MHz - ISM Band)
 - Conducted Output Power: 0.5-1W (27-30dBm)
 - Maximum ERP: 11 W Mean ERP
 - Antenna Gain:
 - Parapanel antenna 12.5 dBi
 - Log Periodic antenna 8 dBi
- Configuration: The transmitter power from the 5G transmitter may be split among up to four identical Yagi antennas to simulate 5G signals from different angles.

(10) Emission Designator or Description

- 5G Emission: OFDM-based 5G NR
 - Modulation: OFDM
 - Bandwidth: 180kHz, 5 MHz, and 10 MHz
 - Emission Designators: 180KD7W, 5M00D7W, and 10M0D7W
- AEI Emission:

<u>Reader:</u>	<u>Necessary Bandwidth:</u>	<u>Emission Designator:</u>
MPRX (FIHMPRX)	66 kHz	66K0N0N
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T2000 (XE2TF8)	15.5 kHz	15K5N0N

- Modulation: CW or PWM

(11) Overall Antenna Height Above Ground

5G Height:

- 2 to 18 feet above ground level (AGL)

AEI Height:

- Trackside AEI reader antennas are installed so that their boresight intersects the AEI tag placement window. 3.5 to 5 feet AGL
- AEI reader antennas between tracks are installed at a height of 1 to 5 feet AGL and with boresight at an angle of 0 to 60 degrees above the horizon (i.e., 0 – 60 degrees uptilt)
- AEI tags will be mounted on the side of the equipment at 2-5 feet above the top of the rail with placement falling within the side clearance envelope (see AAR Field Manual Rule 63, Figures 63.1 & 63.2).

Structure Notification: Not required (below FAA part 17 threshold)

Stop Buzzer and Technical Contact

If NextNav must terminate operations due to any interference concerns, the technical and “stop buzzer” point of contact with authority to direct the termination of operations is as follows:

Name:	Bivesh Paudyal
Address:	350 Keeler Pkwy Pueblo, CO
Phone:	719-666-4011
Email Address:	bivesh_paudyal@aar.com

All operations will operate on a secondary, non-interference basis relative to authorized services consistent with 47 C.F.R. § 5.85. Testing will be conducted under controlled conditions, and operations will immediately cease if any harmful interference to authorized services is observed.

Public Interest Statement

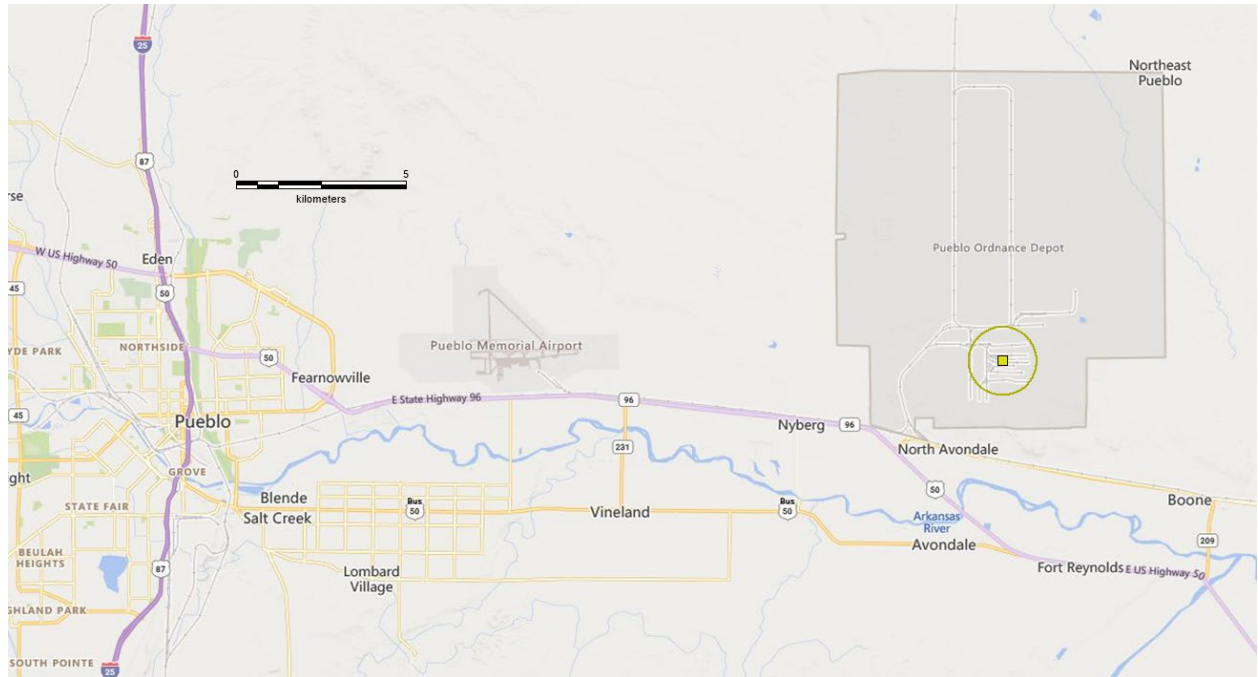
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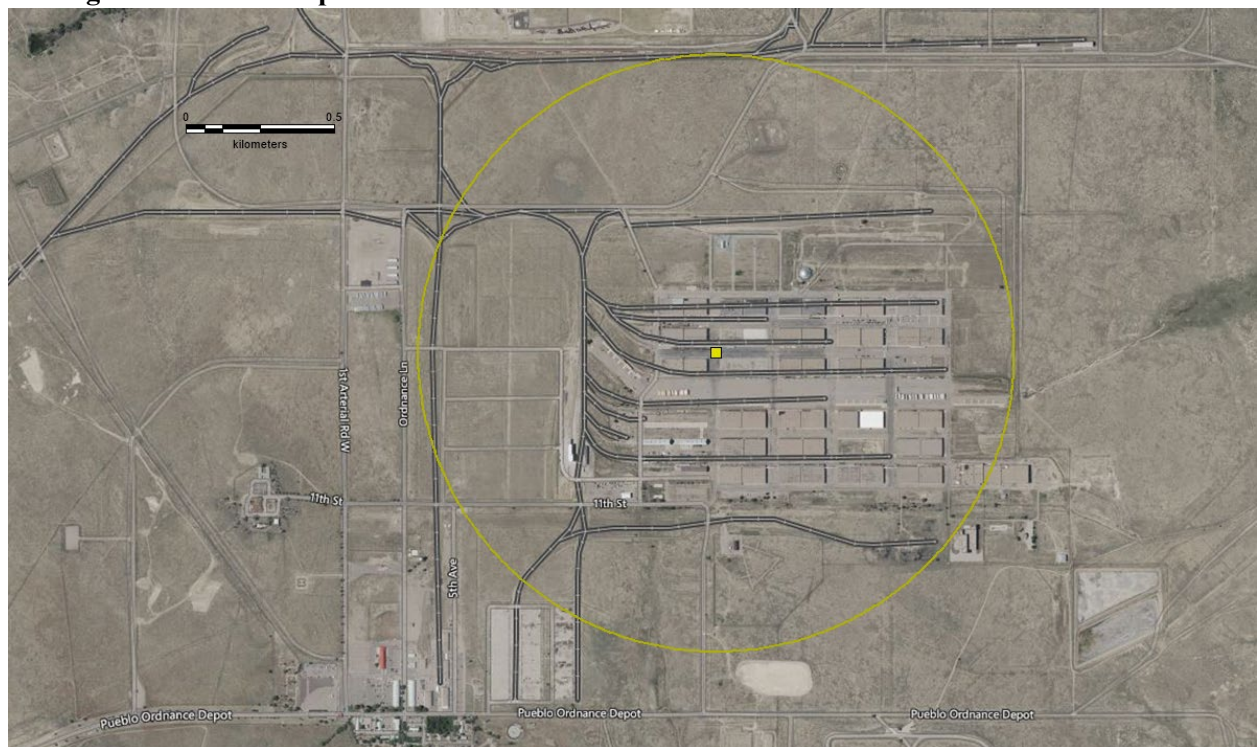
⁴ *Promoting the Development of Positioning, Navigation, and Timing Technologies and Solutions*, Notice of Inquiry, WT Docket No. 25-110, FCC 25-20, ¶ 3 (rel. Mar 28, 2025).

coexistence between NextNav's proposed 5G operations and the licensed operations of railroad AEI systems. Testing will be narrowly focused, geographically remote, and time limited.

Testing Site Location Map 1:

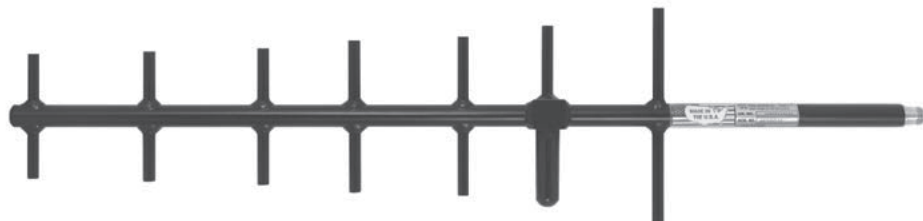


Testing Site Location Map 2:

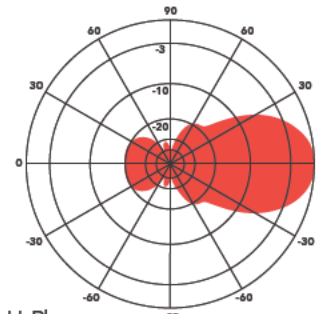


ANT930Y10-WR

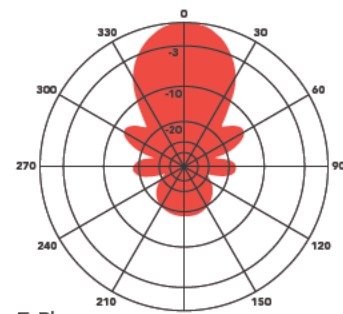
YAGI ANTENNA 10.2 dBd / 12.3 dBi



ANT930Y10-WR at 930 MHz



H-Plane
Gain: 10.5 dBd



E-Plane
Gain: 10.5 dBd

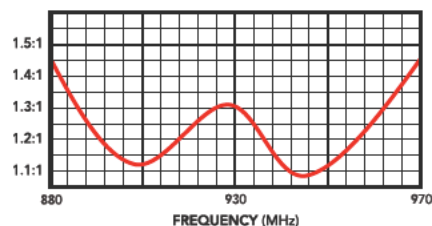
The Telewave ANT930Y10-WR Yagi is a high performance directional antenna, designed especially for point to point as well as point to multipoint control applications. Seven elements provide a minimum of 10.2 dBd (12.3 dBi) forward gain, excellent front-to-back performance, and coverage of the entire 900 MHz commercial band. The boom and elements are solid 360° welded aluminum to prevent intermodulation and provide exceptional strength.

All antenna components are completely protected with our high-tech Txylan™ coating, which seals the antenna against corrosive gases, ultraviolet radiation, salt spray, acid rain, and abrasives such as windblown

sand in desert environments. This coating also greatly reduces ice buildup. The active element and feed line are sealed within the antenna, eliminating a major cause of failure.

The ANT930Y10-WR includes a welded vertical plate and mast clamp set. A horizontal plate is optional. The clamp set secures the antenna to a vertical mast or tower support from 1.0" - 2.5" O.D. For installations on angled supports, the "U" mount allows mounting to virtually all angled supports up to 3.5" O.D., and continuously adjustable polarization with a 90° angle feed for hardline cable.

TYPICAL VSWR RESPONSE



SPECIFICATIONS

Frequency (continuous)	885-975 MHz	Elements	7
Gain (typ)	10.2 dBd	Dimensions (L x H)	28 x 7.5 in.
Power rating (typ)	500 watts	Antenna weight	3 lb.
Impedance / VSWR	50 ohms / 1.5:1 (max)	Shipping weight	8 lb.
Front to back ratio (min)	25 dB	Wind rating / with 0.5" ice	200 / 165 MPH
Beamwidth V / H	43° / 41°	Exposed area (flat plate equiv.)	0.25 ft. ²
Pattern / Polarization	Directional / Vertical	Lateral thrust at 100 MPH	10.0 lb.
Termination	N Female or 7-16 DIN (opt)	(40 psf - flat plate equiv.)	

**United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION**

EXPERIMENTAL

(Nature of Service)

WA9XSQ

(Call Sign)

XT MO

(Class of Station)

0158-EX-ST-2026

(File Number)

NAME NextNav Inc.

This Special Temporary Authorization is granted upon the express condition that it may be terminated by the Commission at any time without advance notice or hearing if in its discretion the need for such action arises. Nothing contained herein shall be construed as a finding by the Commission that the authority herein granted is or will be in the public interest beyond the express terms hereof.

This Special Temporary Authorization shall not vest in the grantee any right to operate the station nor any right in the use of the frequencies designated in the authorization beyond the term hereof, nor in any other manner than authorized herein. Neither the authorization nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This authorization is subject to the right of use of control the Government of the United States conferred by Section 706 of the Communications Act of 1934.

Special Temporary Authority is hereby granted to operate the apparatus described below:

Purpose Of Operation:

Conduct a field test to validate coexistence between proposed NextNav 5G operations and the licensed operations of railroad automatic equipment identification systems.

Station Locations

- (1) MOBILE: MxV Facility, Pueblo, Colorado, within 1 km, centered around NL 38-18-52;
WL 104-21-24

Frequency Information

MOBILE: MxV Facility, Pueblo, Colorado, within 1 km, centered around NL 38-18-52; WL 104-21-24

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
902-928 MHz	MO	66K0N0N 33K0N0N 14K4L1D 15K5N0N	11 W (ERP)	
902-907 MHz	MO	5M00D7W	121.62 mW (ERP)	

This authorization effective April 16, 2026 and
will expire 3:00 A.M. ET October 01, 2026

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: MxV Facility, Pueblo, Colorado, within 1 km, centered around NL 38-18-52; WL 104-21-24

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
902-907 MHz	MO	180KD7W	121.62 mW (ERP)	
904.75-909.75 MHz	MO	5M00D7W 180KD7W	121.62 mW (ERP)	
918-928 MHz	MO	5M00D7W 10M0D7W 180KD7W	52.5 W (ERP)	

Special Conditions:

- (1) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (2) Further requests for extension of the authority granted herein must be filed on Form 442, "Application for New or Modified Radio Station Authorization under Part 5 of FCC Rules - Experimental Radio Service." Future STA requests to extend this authorization will not be considered.
- (3) Prior to commencing any operations in the 902-907 MHz and 918-928 MHz bands, the experimental licensee must notify and provide the Stop Buzzer contact to all licensees who are authorized for operation in these sub-bands of Location & Monitoring Service (902-928 MHz) and are located within 50 miles of the contours of the testing area.
- (4) The experimental licensee must cease operations immediately upon receipt of a complaint and may resume after the issue is addressed.
- (5) The experimental licensee must limit experimentation during peak licensee usage period to an extent practical.
- (6) The power of experimental operation must be limited to 47.2 dBm ERP.
- (7) Experimental operations must be limited to 1 km radius of the following coordinates in Pueblo, Colorado: 38-18-52 N; 104-21-24 W
- (8) The experimental licensee must place notice of the experimental parameters, and the stop buzzer contact in the record of the NextNav proceeding (Docket 24-240).

Special Conditions:

(9) Stop Buzzer and Technical Contact

If NextNav must terminate operations due to any interference concerns, the technical and “stop buzzer” point of contact with authority to direct the termination of operations is as follows:

Name: Bivesh Paudyal

Address: 350 Keeler Pkwy

Pueblo, CO

Phone: 719-666-4011

Email Address: bivesh_paudyal@aar.com

(10) NexNav Inc. must coordinate with Department of Transportation (DoT) prior to testing:

a.DoT coordination contacts: Akinlolu Akinmboni (Akinlolu.akinmboni@dot.gov), Matthew Brewer (matthew.brewer@dot.gov), Luis Maal (luis.maal@dot.gov).

United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION

EXPERIMENTAL
(Nature of Service)

XT MO
(Class of Station)

WB9XCH
(Call Sign)

0468-EX-ST-2026
(File Number)

NAME NextNav Inc.

This Special Temporary Authorization is granted upon the express condition that it may be terminated by the Commission at any time without advance notice or hearing if in its discretion the need for such action arises. Nothing contained herein shall be construed as a finding by the Commission that the authority herein granted is or will be in the public interest beyond the express terms hereof.

This Special Temporary Authorization shall not vest in the grantee any right to operate the station nor any right in the use of the frequencies designated in the authorization beyond the term hereof, nor in any other manner than authorized herein. Neither the authorization nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This authorization is subject to the right of use of control the Government of the United States conferred by Section 706 of the Communications Act of 1934.

Special Temporary Authority is hereby granted to operate the apparatus described below:

Purpose Of Operation:

Conduct a field test to validate coexistence between proposed NextNav 5G operations and the licensed operations of railroad automatic equipment identification systems.

Station Locations

- (1) MOBILE: Office Training Center at Pueblo Chemical Depot, North Avondale, Colorado, within 1 km, centered around NL 38-17-06; WL 104-19-51

Frequency Information

MOBILE: Office Training Center at Pueblo Chemical Depot, North Avondale, Colorado, within 1 km, centered around NL 38-17-06; WL 104-19-51

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
902-907 MHz	MO	5M00D7W 180KD7W	10.5 W (ERP)	
902-928 MHz	MO	66K0N0N 33K0N0N 14K4L1D	11 W (ERP)	

This authorization effective April 17, 2026 and
will expire 3:00 A.M. ET October 01, 2026

FEDERAL
COMMUNICATIONS
COMMISSION



Frequency Information

MOBILE: Office Training Center at Pueblo Chemical Depot, North Avondale, Colorado, within 1 km, centered around NL 38-17-06; WL 104-19-51

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
902-928 MHz	MO	15K5N0N	11 W (ERP)	
904.75-909.75 MHz	MO	5M00D7W 180KD7W	10.5 W (ERP)	
918-928 MHz	MO	5M00D7W 10M0D7W 180KD7W	52.5 W (ERP)	

Special Conditions:

- (1) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (2) Further requests for extension of the authority granted herein must be filed on Form 442, "Application for New or Modified Radio Station Authorization under Part 5 of FCC Rules - Experimental Radio Service." Future STA requests to extend this authorization will not be considered.
- (3) Prior to commencing any operations in the 902-928 MHz band, the experimental licensee must notify and provide the Stop Buzzer contact to all licensees who are authorized for operation in the Location & Monitoring Service (902-928 MHz) and are located within 50 miles of the contours of the testing area.
- (4) The experimental licensee must cease operations immediately upon receipt of a complaint and may resume after the issue is addressed.
- (5) The experimental licensee must limit experimentation during peak licensee usage period to the extent practical.
- (6) The power of experimental operation must be limited to 47.2 dBm ERP.
- (7) Experimental operations must be limited to 1 km radius of the following coordinates in Pueblo, Colorado: 38-17-06 N; 104-19-51 W
- (8) The experimental licensee must place notice of the experimental parameters, and the stop buzzer contact in the record of the NextNav proceeding (Docket 24-240).
- (9) NexNav Inc. must coordinate with Department of Transportation (DoT) prior to testing:
 - a. DoT coordination contacts: Akinlolu Akinmboni (Akinlolu.akinmboni@dot.gov), Matthew Brewer (matthew.brewer@dot.gov), Luis Maal (luis.maal@dot.gov).

Special Conditions:

(10) Stop Buzzer and Technical Contact

If NextNav must terminate operations due to any interference concerns, the technical and "stop buzzer" point of contact with authority to direct the termination of operations is as follows:

Name: Bivesh Paudyal

Address: 350 Keeler Pkwy

Pueblo, CO

Phone: 719-666-4011

Email Address: bivesh_paudyal@aar.com

NextNav's June 11, 2026 Letter to the FCC



June 11, 2026

VIA ECFS

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
45 L Street NE
Washington, DC 20554

Re: Promoting the Development of Positioning, Navigation, and Timing Technologies and Solutions (WT Docket No. 25-110); NextNav Petition for Rulemaking, Enabling Next-Generation Terrestrial Positioning, Navigation, and Timing and 5G: A Plan for the Lower 900 MHz Band (902-928 MHz), Public Notice (WT Docket No. 24-240)

Dear Ms. Dortch:

Since NextNav filed its Petition for Rulemaking in April 2024, NextNav has undertaken extensive outreach to stakeholders who have expressed interest in, or concerns regarding its proposal to optimize the lower 900 MHz band to enable 5G-based 3D positioning, navigation, and timing (“PNT”). Over the past more than two years, NextNav has proactively engaged hundreds of entities through email correspondence, virtual and in-person meetings, webinars, and presentations and workshops conducted at major industry conferences and summits. These efforts reached stakeholders representing a diverse range of interests in the band’s current and future use.

As a result of this outreach, NextNav has been encouraged by ongoing constructive dialogue and coexistence testing initiatives with multiple representatives of current lower 900 MHz band users. While some parties have not yet accepted NextNav’s invitations to discuss their concerns and operational considerations, or participate in coexistence testing, NextNav remains committed to engaging with current users of the lower 900 MHz band and working collaboratively to address questions and concerns through open dialogue and transparent, fact-based evaluation and validation.

To further facilitate such conversations, NextNav has established a single email address, Engagement@nextnav.com, and encourages stakeholders who are not already in direct contact with a NextNav representative to direct inquiries to that mailbox so that a NextNav representative can respond accordingly.

NextNav looks forward to continuing to work with the FCC and all other interested stakeholders to take the next steps toward optimizing the Lower 900 MHz band to enable 5G-based 3D PNT.

Sincerely,

/s/ Renee Gregory

Renee Gregory
NextNav Inc.
11911 Freedom Drive, Suite 200
Reston, VA 20190