

EC-25-373

CITY OF ALBUQUERQUE  
Albuquerque, New Mexico  
Office of the Mayor



Mayor Timothy M. Keller

INTER-OFFICE MEMORANDUM

March 26, 2025

**TO:** Brook Bassan, President, City Council

**FROM:** Timothy M. Keller, Mayor



**SUBJECT:** Executive Communication Transmitting the Status Report on Fiscal Year 2025 Objectives

Pursuant to the City Charter and Budget Ordinance, attached is a report on the progress made toward implementation of the one-year objectives, defined in C/S R-24-40. The report has the status provided by the Department responsible.

Approved:

Approved as to Legal Form:

  
Samantha Sengel, EdD Date  
Chief Administrative Officer

  
Lauren Keefe Date  
City Attorney

Recommended:

  
Joshua Anderson Date  
Government Affairs Official

## **Cover Analysis**

**1. What is it?**

This is a response to Council's FY25 Objectives bill, CS R-24-40

**2. What will this piece of legislation do?**

It will provide updates on FY25 Objectives

**3. Why is this project needed?**

For informational purposes regarding FY25 Objectives

**4. How much will it cost and what is the funding source?**

There is no cost associated

**5. Is there a revenue source associated with this? If so, what level of income is projected?**

N/A

**6. What will happen if the project is not approved?**

N/A Executive Communication is for informational purposes

**7. Is this service already provided by another entity?**

No

Obj.	Objective Statement	Update	Dept.
<b>GOAL: Human and Family Development - People of all ages have the opportunity to participate in the community and economy and are well sheltered, safe, healthy,</b>			
1	The Gateway Medical Sobering Center will be operational in Fiscal Year 2025	The contract with the provider was terminated on January 24, 2025. A request for proposal to select another provider closed on February 21, 2025, and proposals are currently under review.	HHH
2	The Gateway Medical Respite Center will be operational in Fiscal Year 2025	Gateway Medical Respite opened on Feb. 24. The site is utilizing a phased in approach and at the time of this update, there are 12 clients in the facility.	HHH
3	Convert a minimum of 250 additional hotel rooms into safe affordable rental units in FY25	HHH completed the conversion of the 104 hotel rooms into 90 safe affordable rental units. We partnered with MRA to release a commercial conversion RFP which provided \$4million towards converting commercial properties into affordable Housing. There were two awards made in the amount of \$2million dollars each. There are still plans to release an RFI to investigate hotel acquisition, conversion or leases.	HHH
4	House a minimum of 250 unsheltered individuals using wrap-around encampment response teams in FY25	In FY25 there are currently 490 households housed as of March 2025. Showing an increase of 66 households housed.	HHH
5	Renovate and furnish the community room at the Westside Emergency Housing Center (WEHC) to provide classes, and workshops and construct improvements to provide shaded outdoor seating areas for WEHC clients	The focus is on getting sleeping dorms completed first. The community room is scheduled to undergo renovation later this year.	HHH
6	The Gateway Emergency Housing program will be operational in FY25 and will provide low-barrier, trauma informed overnight beds and case management to navigate individuals into housing	Additional beds were added to Gateway West to help with winter numbers. Emergency overflow shelter was opened at Gateway Center on the coldest nights when Gateway West was full.	HHH
7	Complete the design phase for Brillante Early Education Center at the Explora Science Center & Children's Museum by June 30, 2025	The design phase for Brillante Early Education Center is 100% complete. The project is fully funded and currently in permitting review. Construction is anticipated to begin in April 2025.	Arts & Culture
8	In a collaborative effort between the Transit Department, Rio Metro, Bernalillo County, transit stakeholders, and members of the community, conduct a network study through a series of public engagements to gather fundamental choices for choosing the transit network. From the public input, the goals and priorities for the future transit network will be designed with network alternatives and improvements. New network concept decision to be completed and reported by the end of the second quarter of FY25. Include an implementation plan in the report	Three phases of the study including three phases of public engagement have been completed. In September 2024, Transit completed the third phase of public engagement for this effort to get feedback on a proposed draft "Recovery Network" that would establish the plan for ABQ RIDE to return to nearly full pre-pandemic levels of service but with a re-imagined network of routes, including where bus routes go, at what times they run, and how frequently. Public response to the proposed Recovery Network was positive but also contained detailed comments and requests for adjustment to the proposal. Where possible within the budget for service, ABQ RIDE staff worked on small modifications to the network to address these concerns. These adjustments have been completed. Transit will convey the final network to City Council along with a required Title VI equity analysis by the end of Q3 FY25. The resolution for the equity analysis is currently being drafted and the department expects it to be introduced to council in April for review and approval. Once the final network and accompanying equity analysis are approved by council, Transit will develop a phased implementation plan taking into account anticipated staffing levels over the next several years. (ABQ RIDE Forward)	Transit

Obj.	Objective Statement	Update	Dept.
9	Study and implement individualized ParaTransit for employment seekers and individuals traveling to medical appointments. The Transit Department shall consult with outside providers about the need for adding complementary individualized services to SunVan. The Department shall include possible funding partners such as the New Mexico Division of Vocational Rehabilitation and Turquoise Care Managed Care Organizations	Transit met on June 13th, 2024 with a representative from the Independent Living Resource Center – Chris Love and discussed that using Sun Van to find a job is difficult due to various factors including on time performance, reservation system, pickup window and excessively long trips. During the discussion, we talked about ways to make Sun Van service better for employment seekers and medical appointments. On September 12th, an email was sent to Chris Love discussing improvements that have been made to Sun Van including: improved Sun Van call wait times, a new call tree, the hiring of additional drivers, and new vans that will come on-line prior to the end of the year. We also met with two representatives from the Department of Vocational Rehab to discuss educational opportunities to inform individuals on how to use sunvan services as well as advocate for their clientele. We are reaching out to Turquoise Care Managed Care to schedule a meeting with them. To date, the major concern has been inconsistencies with drop off times. ABQ Ride is currently in the process of going out to RFP to secure a new scheduling software that, based on modeling, we expect will create efficiencies leading to more availability of service and more consistency in drop off times for our clients which should have an impact on consistency for employment seekers and those traveling to medical appointments. (As a reminder, SunVan service is limited to only those individuals that have a disability that prevents them from using fixed route.)	Transit
10	Identify and purchase a location for the Youth Assistance and Housing Navigation Campus and complete the design in FY25	The Young Adult Housing Navigation Center will be operated at the San Mateo Inn. It has been purchased and is in the process of being renovated with a planned completion and open date of a portion in September 2025.	HHH
11	Hire the appropriate staff for the Early Head Start program to open all EHS sites for the '24-'25 school year. Provide a plan to increase the number of Early Head Start program sites to seven in the next two fiscal years. In the report, include the number of children participating in the program for the previous five fiscal years and the expected number for FY25. If the goal of achieving seven sites is not achievable, provide a plan to contract with providers to achieve the objective	In order to increase Early Head Start program sites to seven in the next two fiscal years, the Office of Head Start would have to issue a Request for Applications-EHS expansion opportunity. We can only serve what we are funded for under the EHS program option, which are the three sites that are open and the two Home Visitor caseloads. That said, we could increase sites that serve birth-three year olds to seven, they just would not/could not be EHS sites without an EHS expansion opportunity. - FY25 55 are currently participating with the expected number for FY25 being 64. The goal to increase to (7) sites is achievable if we shift our thinking away from Early Head Start unless an expansion opportunity presents. Otherwise a true viable option for us would be to apply for Early Pre-K slots, converting our former (4) EHS sites to Early Pre-K sites or preschool general funded sites. To contract with another provider(s) to get the classrooms re-opened as EHS classrooms would require the contracted provider to have EHS slots of their own that they have not filled because they need space that they lack. This would be providers contracting with us to use our vacant classrooms to deliver the services that they are funded for, it would not translate to another provider being contracted to serve children on behalf of the City.	YFS
12	Initiate the Built for Zero Program in collaboration with the County, UNM, Veterans Affairs, and all other relevant partners	HHH (Homeless Programs & Initiatives Division and Homeless Innovations Division) continues to meet with Built for Zero on a regular basis for monthly case conferencing with all of the listed representatives.	HHH
13	Conduct an assessment to identify barriers hindering access to City services for economically disadvantaged children by January 1, 2025	Youth & Family Services will work with a contractor to conduct an assessment to identify barriers hindering access to City services for economically disadvantaged children. The assessment will be developed and administered to youth and families in the spring of 2025 through a variety of modalities, including online and telephone.  Youth & Family Services will also work with Albuquerque Public Schools to conduct in-person focus groups with families and youth at schools in the most economically disadvantaged parts of the city. We will conduct these in a variety of languages based on the needs of those families. These will also occur in the spring of 2025.	YFS
14	Develop a plan to create youth sports and performance arts programming with an emphasis on hard-to-reach youth and the elimination of barriers. Review charges at City facilities for youth sports and performance arts programing	PRD worked with Albuquerque Public Schools (APS) to develop a robust middle school sports initiative that would expand sports programming at all 29 APS middle schools. This initiative focused on building several existing sports (soccer, basketball) and adding 4-5 additional afterschool sports for both boys and girls (such as running, flag football, cheer, dance), and is projected to engage about 5,000 middle school youth. These sports would be offered free of charge and have low barriers of entry for APS families. Funding for the initiative (approximate cost of \$1.5 million/year) now must be secured.  STATUS: Some disruption Progress: 25%	PRD, YFS

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15	Conduct a comprehensive study to evaluate the effectiveness of the Albuquerque Housing Authority and the Department of Health Housing and Homelessness in addressing the housing needs of the City, with the goal of identifying strengths, weaknesses, and areas for improvement in their respective approaches by January 1, 2025	All of the information provided in the October 2024 response still applies. The only update is that Council asked Community Development to submit scopes to evaluate the effectiveness of the Department of HHH in addressing the housing needs of the City.	HHH
16	All new or expiring Social Service contracts must contain language to provide outreach services to meet the needs of people where they are at	This language has been added to the social service contract scope templates with the instruction to include for those contracts that include outreach services. Will continue to utilize the scope for contract renewals and new project contract executions for social service agreements.	HHH
17	Develop programs and policies for rental assistance and tenant protections to reduce the number of precariously housed people becoming homeless in our community	The established policies and procedures for these two programs are continuing to be utilized in ongoing implementation of these programs.	HHH
18	Support the creation of a joint City/County plan for the use of the Opioid settlement funds and implement the resulting recommendations beginning in FY25	The LGCC created and approved an implementation plan on March 4, 2025 for the use of opioid settlement funds.	HHH
19	Support and seek funding for the Middle Rio Grande Housing Collaborative's work to create new affordable housing units	The City submitted a capital outlay funding request during the 2025 legislation session, LCS # 3863. <a href="https://www.nmlegis.gov/CapitalOutlayWeb/Summary?ID=3863">https://www.nmlegis.gov/CapitalOutlayWeb/Summary?ID=3863</a>	HHH
<b>GOAL: Public Safety - The public is safe and secure, and shares responsibility for maintaining a safe environment.</b>			
1	In cooperation and coordination with Parks & Recreation, design and construct a public park of at least one-half acre as part of the construction, renovation or reconstruction of Fire Station 4 and adjoining training facilities at Coronado Park. If necessary to accomplish this and meet training facility standards, purchase additional property adjoining or across the street from the Fire facilities for the park	AFR is still trying to fully fund this project to get started on the construction of Fire Station 4. The design team is aware to reserve space for a park on the property.	AFR
2	Complete design and begin construction of Fire Station 12 by the end of FY25	Fire Station 12 is scheduled for completion by the end of 2025.	AFR
3	Improve and maintain EMS service delivery through EMS transport revenue by implementing progressive, smart dispatching software technology to divert certain low acuity EMS calls out of the 911 system so that the right resources are dispatched at the right time	Albuquerque Fire Rescue EMS division is preparing the first round of training for dispatchers in the technology. We're doing this through a phased approach by incorporating the use of the two-way video to provide pre-arrival instructions for patients in cardiac arrest, and other high acuity medical emergencies. It will also be utilized to provide initial responders the opportunity to capture video from the caller for other low frequency, high acuity events like structure fires, and hazardous materials response. The next phase will be to incorporate training for dispatchers to be able to use the platform for low acuity medical calls in the hopes of diverting many of these non-emergent situations away from the 911 system and help provide transportation to urgent cares or self-care in some cases. The goal with the clinical Dispatch diversion phase program will be to reduce the number of responses from Frontline units to keep them available for more critical calls. While freeing up transport Ambulance resources as well as the emergency room department.	AFR

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4	Improve the operational efficiency, management, and effectiveness of AFR's ADAPT program by having its own training program and increasing the number of trained inspectors and their capabilities	AFR added two additional firefighters to the ADAPT team after the graduation of the 103rd cadet class. Over the past year AFR and APD have better coordinated to increase the efficiency of ADAPT through support from APD.	AFR
5	Develop a communication process and standard operating procedure (SOP) for after-hour emergencies in collaboration with AFR, APD, ACS and EHD when it involves pets. This will provide AFR, APD and ACS officers with the support they will need for them to focus on the emergency at hand	A communication process has been implemented for after-hours emergencies involving pets, in collaboration with AFR, APD, ACS, and EHD. All emergency responders have been provided with AWD's dispatch contact information and the supervisor's contact schedule to ensure prompt attention to emergencies. While the communication process is in place, AWD will revise the current SOP to ensure alignment with this objective.	AWD
6	Create a tracking system for 911, 311 and 242-COPS calls received by APD, AFR, and ACS, which monitors the number of agencies responding to each call for service	Motorola CAD tracks all 911 and 242-COPS calls received by APD and monitors each responding call for service.	APD
7	Develop an "adopt in place" virtual system that will allow potential owner surrenders to participate virtually in collaboration with AWD to get their pet adopted from the comfort of their own home, in lieu of bringing them to the shelter. This program will increase the pet's chances of getting adopted, reduce kennel stress associated with shelter pets and reduce risk of contagious disease	AWD is currently offering resources through the city's website for pet owners looking to re-home their pets. By encouraging the use of the Adopt-A-Pet re-homing tool, which gives pet owners the ability to be more involved, and is user-friendly. They can create a pet profile, and prospective adopters can submit applications. Adopt-A-Pet employs staff to review posts to prevent misuse, such as unauthorized breeding sales, making it a safer option than other online marketplaces like Craigslist	AWD
8	Improve the safety and security infrastructure at Senior Affairs facilities to provide an environment that enhances participants' well-being while engaging in our activities and services	<p>The Department of Senior Affairs has diligently worked to improve the safety and security infrastructure of our facilities, which was only made possible by a special appropriation of security dollars by City Council and Administration. This strategic investment, led by DSA's Systems Analyst II, has overseen the administration and implementation of multiple projects in this fiscal year.</p> <p>Significant safety and security improvements range from senior and multigenerational centers upgrade of camera systems that are now linked to the Real Time Crime Center. Further, center management now has the ability to assess the safety of their buildings after hours. These improvements include new cameras placed within all centers including the four that provide rented space to Share Your Care, a respite service provider. Additional security enhancements were made at DSA's First Street facility which houses, a 7,480 square foot warehouse containing construction equipment and tools needed to perform repairs, maintenance and chore services to our older adult population. DSA has jointly partnered with APD on a security trailer placement trial at the First Street facility that is now connected to the Genetic system. The System Analyst II continues to make recommendations of project priorities based on age of system and infrastructure to support these improvements as well as the frequency of break-ins and incidents regarding participants.</p> <p>An additional gain for the DSA's transportation fleet, was the activation of a distress button for drivers. This mechanism alerts the Metro Security Division or needed law enforcement when a driver needs assistance. The driver's location can now be pinpointed because of our recent upgrade to a new transportation software program.</p>	Senior Affairs

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9	<p>Hire and implement necessary personnel to achieve 24/7 coverage citywide including expanded supervisory hierarchy and capacity for the Albuquerque Community Safety Department (ACS). The expansion strategy will be based on data from the first two years of operations and will include streamlining communications with the emergency dispatch center</p>	<p>Since successfully launching continuous citywide 24/7 operations, ACS has provided trauma-informed, community-centered services without interruption for over a year. This milestone reflects the department's commitment to delivering critical public safety services to Albuquerque residents day and night. ACS intends to continue this valuable service indefinitely. The Department remains fully committed to maintaining 24/7 operations to meet the needs of our community and provide essential public safety services without interruption.</p> <p>Last year, ACS created three new Field Operations Program Manager positions, all of which are now filled. The creation of these roles has strengthened the department's chain of command, increased capacity, enhanced the supervisory hierarchy, and further improved the efficiency of 24/7 operations. Looking forward, ACS remains dedicated to optimizing operations, enhancing internal systems, and fostering partnerships across city departments to better serve our community.</p> <p>We are proud of this achievement and will continue to prioritize excellence and innovation in delivering compassionate and responsive services to Albuquerque residents.</p>	ACS
10	<p>Recruit, develop, and retain a highly effective workforce for the Albuquerque Community Safety Department (ACS). Transition the ACS Academy to a 3-month program to include classroom, on-the-job training and partnerships with local universities to create a pipeline of recruits for ACS</p>	<p>Launch of 12-Week Academy: ACS officially launched its 12-week Academy in January 2025. Currently, 12 new employees are attending the Academy, where they receive comprehensive training to prepare them for field response work. The Academy includes integrated field observation, allowing trainees to observe ACS teams actively working in the field. This valuable experience helps trainees apply the material they learn in the Academy and gain insight into how responders handle real-world situations.</p> <p>Fully Staffed Training Academy: The ACS Academy is fully staffed, ensuring that attendees receive the best possible training experience, including expert-led classroom instruction, scenario-based exercises, and on-the-job training.</p> <p>Robust Curriculum: The Academy curriculum spans a total of 12 weeks, combining classroom instruction, field observation, and work with local ACS partners and service providers. Training topics include motivational interviewing, situational awareness, first aid, narrative writing, and partnerships with Albuquerque Fire Rescue and Albuquerque Police.</p> <p>Enhanced Recruitment Efforts: ACS continues to ramp up recruitment efforts by hosting hiring events, reaching out to local universities, and partnering with organizations such as NM Workforce Connections to build a strong pipeline of potential recruits.</p> <p>ACS remains dedicated to developing and retaining a highly effective workforce to better serve the Albuquerque community. The structured Academy program, supported by continued recruitment efforts and expanded training, will ensure that ACS continues to grow and meet the evolving needs of residents.</p>	ACS
11	<p>Conduct a minimum of 20 community outreach and engagement through the Community Emergency Response Team (CERT) program using a proactive approach in engaging non-governmental community partners</p>	<p>The department held 5 in-person meetings with the Community Emergency Response Team and 1 email notification sent to CERT members, notifying of program restructuring.</p> <p>OEM is actively collaborating with Sandoval County CERT to rebuild and enhance the program, using their model as a framework for improvement.</p>	OEM
12	<p>The Chief of Police and the Deputy Chief of Field Services will each attend 6 Community Policing Council meetings for a total of 12, to continue gathering citizen input on public safety needs</p>	<p>The Chief continued his tradition of visiting the CPC's twice yearly in the Spring and the Fall with visits on following evenings: Sept. 9th, 2024; FH, Sept. 10th, 2024; NE, Nov. 4th, 2024; SW, Nov. 20th, 2024; NW, Nov. 21st, 2024; SE, Nov. 26th, 2024; VLY</p> <p>We have a tentative plan for the Chief to make Spring addresses on the following dates: March 20th, 2024, NW, March 21st, 2024, SE, March 27th 2024, VLY, April 2nd, 2024; SW, April 3rd, 2024; University, April 8th, 2024; NE, April 14th, 2024; FH</p>	APD

Obj.	Objective Statement	Update	Dept.
13	APD will continue to encumber and utilize the most advanced technologies to assist in the apprehension of violent offenders, and case solvability to further efforts in reducing violent crime	<p>The APD is currently using various technologies to assist in the apprehension of violent offenders, and case solvability to further efforts in reducing violent crime. The current technologies being utilized at the Real Time Crime Center include Shotspotter, Automatic License Plate Readers (ALPR), Bait-Car, Star Chase, and Mutual Link. Shotspotter coverage was expanded in FY25, covering an additional 10 square miles bringing the total coverage to 40 square miles. We do not anticipate additional expansions in FY26 but will continue to deploy additional cameras to the Shotspotter coverage areas as a complimenting technology to aid in violent crime investigations. Funding for additional Genetec VMS cameras will be requested in FY26 to aid in this expansion. Approximately 180 additional Clouddriver ALPRs have been deployed throughout the Albuquerque Area during FY25. The main deployments have occurred predominantly on the I-25 and I-40 corridor. In FY26, funding will be requested to complete the ALPR project to deploy an additional 400 ALPRs. We currently have 250 ALPRs deployed throughout the city.</p> <p>Bait-Car and Star Chase activations are now being monitored by the RTCC. This change was implemented in FY25 in an effort to gather information in "real time" and provide additional assistance to the Field Services Bureau and APD investigative units. The monitoring function of these activations will continue in FY26 to further efforts in reducing property and violent crimes.</p> <p>The Crime Analysis Unit utilizes the Peregrine database. This is a system that aggregates Albuquerque Police Department data into one pane of glass. Records Management System (RMS), Computer Aided Dispatch (CAD), ShotSpotter, ALPR, Evidence.com, and other sources of data are combined into one easily searchable system. It allows users the ability to view records and report information by date, time, location, area command and beat while also drawing automated connections between sources of data. Peregrine is used demonstrably to facilitate Duke City Stats (CompStat) meetings internally and to hold commanders accountable for crime trends in their areas of responsibility. Peregrine informs command staff, field services personnel, and investigators of the latest crime data and trends so that they may make better deployment decisions. Recently, the CAU facilitated the integration of department crime bulletins into Peregrine enabling easy access to the information while also connecting to specific cases. This initiative has proven to help solve crimes and will continue into FY26.</p>	APD
14	APD will increase recruitment and retention of police officers through outreach, regionally competitive pay, and retention incentives. APD shall actively pursue strategies to reach a staffing level of at least 1,000 officers by the end of FY25	(Please see Attachment A)	APD
15	The Police department shall conduct a minimum of 10 recruitment events annually, specifically targeting and located in underrepresented communities, in order to promote diversity within the department	<p>During the attendance at career and job fairs, it has been observed that more than 50% of the attendees are from culturally diverse backgrounds, particularly those interested in careers in law enforcement.</p> <p>We wanted to highlight several events that stand out</p> <ul style="list-style-type: none"> <li>•Gilbert Sena Charter School: This school provides a supportive environment for students who may be struggling in traditional public school settings, offering more hands-on teaching and individualized support.</li> <li>•West Mesa High School: A school with a predominantly Hispanic student body, known for its commitment to serving the community.</li> <li>-Mark Armijo Academy: Located in the heart of Albuquerque's South Valley, this school has a predominantly Hispanic student population, many of whom speak English as a second language.</li> <li>-Alamo High Navajo School: This school serves an all-Navajo student body and is located in a rural area, providing important educational opportunities for Indigenous students.</li> <li>-New America Charter School: Situated in the South Valley of Albuquerque, this school offers valuable resources like a food pantry and clothing donations for students in need. Approximately 40% of the students require translation services due to English being their second language.</li> <li>-Highland High School &amp; Albuquerque High School: Both of these schools are notable for their diverse student populations, with Albuquerque High in particular being home to the most diverse community in the area.</li> </ul> <p>Recruiters also attended an event at Fort Bliss with the goal of recruiting individuals who are transitioning out of the military or are veterans, offering them opportunities for career advancement and support.</p> <p>Fiscal Year 2025</p> <ul style="list-style-type: none"> <li>11/16/24 College and Career Fair for Black Youth- targeting black youth</li> <li>10/23/24 New Futures College and Career Fair – young Hispanics who are parents many don't speak English</li> <li>09/07/24 Women in Blue Event / Rapid hiring event – targeting women</li> <li>07/20/24 SW Crime Prevention pop up - Hispanics</li> <li>07/19/24 Coffee with a Cop Indian/ Cultural Center – Indigenous</li> <li>06/22/24 Women in Law Enforcement Recruiting event</li> </ul>	APD

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16	<p>The Metro Security division of the General Services Department (GSD) shall implement measures to recruit, develop, and retain a highly effective security workforce and reduce its vacancy rate to 15% or lower by the conclusion of the next fiscal year, fully staff the division to provide safe and secure facilities and grounds for the entire City. Support a retention program that includes continuous training and vocational growth opportunities</p>	<p>The Division has 138 FTE and currently has 13 positions in the process of being filled. We have had an ample number of applicants for our vacancies and feel that we can continue to fill our them as they occur. Many of our vacancies occur when our Metro Security officers began their careers with APD, BSCO, and other law enforcement agencies.</p> <p>Metro Security has developed a retention program that includes a formal training program (See Objective 24), and an employee recognition program. GSD Deputy Director Duran is in the process of developing an internal 3-day first line supervisor class that will be offered initially to all current Sergeants and then to any Security Officer that may be considering becoming a Sergeant. Deputy Director Duran will also develop a two-day Middle Managers course that will be offered initially to all current Lieutenants and then to any Sergeant that may be considering becoming a Lieutenant. Both courses will become part of the Division's formal training program.</p>	GSD
17	<p>Develop unique and separate Standard Operating Procedures (SOPs) for security officers providing support to Transit, Parks and Recreation, and other City facilities (including contracted security officers). This involves researching how other municipalities are addressing security issues specifically on buses, at parks, outside of brick-and-mortar businesses, etc.</p>	<p>The Metro Security Division has an existing set of Standard Operating Procedures (SOP) that is currently being reviewed and updated. GSD Deputy William Director Duran and Metro Security have created an SOP Review Committee made up of Metro Security leadership, the M-series Union, with representation of at least one Metro Security Sergeant, the J-Series Union, with representation of at least one Metro Security Officer, one Metro Security Lieutenant and the assigned AFSCME Representative. The Committee has a standing monthly meeting to review and update Metro Security's existing SOPs. The Committee began meeting on June 18th, 2024 to establish the Committee's function and begin the process of reviewing existing SOPs. The SOPs will be reviewed one at a time to ensure that the each is fully reviewed and appropriate revisions are made. Once the review for each is complete and revisions made, each SOP revision will be submitted for approval. Once approved, Metro Security staff will be advised of the revisions and any necessary training will be provided.</p>	GSD
18	<p>APD will continue to implement annual COP/POP in-service training in the manner agreed upon and approved by the Independent Monitor to meet the requirements outlined in the Court-Approved Settlement Agreement</p>	<p>In December 2023, the Albuquerque Police Department (APD) provided the Independent Monitor with a three-year rotational plan to meet the requirements outlined in paragraph 258 of the CASA regarding COP POP training. As part of this plan, the training for Fiscal Year 2025 will consist of a 4-hour online course through the COPS Training Portal. This training will focus on Problem-Oriented Policing (POP), with particular emphasis on the SARA model. It will be delivered during the 2025 Maintenance of Effort training cycle.</p>	APD
19	<p>The Albuquerque Police Department shall systematically track Shot Spotter data to evaluate the efficacy of the program</p>	<p>In FY25, the Real Time Crime Center tracked Shotspotter data to include a month comparison to same month previous year. Shotspotter data is also compared month to month and we are able to identify our top geographical district and beat with the highest amount of gunfire. In addition, we are tracking our peak hours and peak days for gunfire. With this data tracking effort, we are able to determine with a high degree of accuracy where gunfire may occur. This information is used for tactical operation plans and aids Field Services Officers in determining "Hot Spot" locations for proactive enforcement and monitoring. The attached map demonstrates how we evaluate the efficacy of the program by connecting collected casings from Shotspotter activations to other crimes. In FY26, this endeavor will be enhanced with the deployment of the Drone as a First Responder (DFR) to most Shotspotter activations. By deploying a drone to these locations we will be able to have a quicker response time and the ability to observe criminal action in real time. (See Attachment F)</p>	APD

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22	Conduct a staffing analysis for the Albuquerque Fire Rescue to assess and address ongoing staffing issues with a focus on paramedic recruitment and retention	<p>Fire Administration worked over the past year to address Objective 22 with the staffing changes that we planned to implement in March 2025. With the passage of R-25-122, this plan to increase recruitment and retention of paramedics was blocked. After responses to a department-wide survey in 2021, members detailed that the overwhelming issues with internal recruitment of paramedics included pay and opportunities off the Rescue. Administration worked to address these over the past two years, with specific attention this year. Pay was addressed in the most recent CBA with 15% pay added for paramedics and 5% added for intermediates. The second issue with recruitment and retention involved staffing changes to allow paramedics to work off the Rescues. The staffing changes made by Fire Administration increased career longevity through job sharing for our members. With these changes, members who desired more flexibility and job sharing would have had the chance to bid to one these expanded service stations. Other members whose seniority afforded them the option could have bid to station that still had the traditional model of two paramedics on the Rescue if that was their preference.</p> <p>Fire Administration spent a tremendous amount of time and effort to address Objective 22 with the proposed staffing changes that cannot be implemented under R-25-122.</p> <p>Over the past year, Fire Administration has added another opportunity to train paramedics at Santa Fe community college given us three options for training. EMS leadership continues to attend meetings with the leadership from the colleges to strategize on expansion of training opportunities.</p>	AFR
23	Implement the open space unit at APD by fully staffing and funding the group's activities	<p>Open space is currently staffed with the following:</p> <ul style="list-style-type: none"> <li>1 Sergeant</li> <li>2 Open-Space officers</li> <li>1 Conservation officer (3 currently on OJT) for a total of 4</li> <li>4 Conservation officer currently attending the Academy</li> <li>10 total expected by the end of the fiscal year</li> </ul> <p>In addition to these officers, the current staffing of 4 Police Service Aides with plans to add 2 shortly.</p>	APD
24	Directing GSD to provide documented training specific to situations encountered by Metro Security including, but not limited to: Fentanyl exposure, identification of the presence of drugs and other narcotics, Narcan administration, CPR, tourniquet administration, verbal de-escalation, violent altercations and citations	Metro Security recently hired an Organizational Trainer. This position is be responsible for the creation and implementation of formalized training program which will include the Basic Officer Training and all mandatory recurring training such as first aid, AED, CPR, Fentanyl Exposure, identification of the presence of illicit drugs, Narcan administration, tourniquet administration, verbal de-escalation, defensive tactics, and citations. The trainer is also helping Deputy Director Duran formalize and AED/CPR course that will be offered to all City Employees as part of the City's AED Program.	GSD
<b>GOAL: Public Infrastructure - The community is adequately and efficiently served with well planned, coordinated, and maintained infrastructure.</b>			
1	Analyze and complete a full infrastructure needs assessment at all City facilities, and develop a comprehensive five-year plan to invest in their upkeep and maintenance	<p>The facilities management division has used facility condition assessments that were prepared in previous years as an input to begin to develop a strategic plan for the next three and five years for the facilities in the General Services Portfolio.</p> <p>Our intent is to continue to have facility condition assessments performed on our facilities to prioritize limited resources for the sustainment of GSD managed facilities for the next five years. In FY 2024/25 the Facility Management/Facility Assets division has also worked to implement the new workorder system LIMBLE which will serve as an additional resource in the next five years for data driven decision making. Currently we have begun entering building information into the LIMBLE workorder system that will help in filtering work requests and offer better reporting.</p>	GSD
<b>GOAL: Sustainable Community Development - Communities throughout Albuquerque are livable, sustainable and vital.</b>			
1	Revitalize metropolitan redevelopment areas city-wide through community-based planning, innovative finance techniques and public private partnerships	<p>During the last year, MRA undertook a rewrite of the Downtown MRA bill which involved a number of community meetings. Public private partnerships were forged through the approval of four new tax abatements (Somos, Highland Food Hall, Park Central, and Garfield Townhomes). We have improved and streamlined the tax abatement application to make it more accessible and to help ensure that MRA supports projects that align with community needs. MRA is working on two new development agreements currently (Park Central and Wells Fargo), with four new RFPs slated for release by the end of the fiscal year. MRA worked with Council to pass Tax Increment Financing legislation in the Downtown and West Central MRA's.</p> <p>We closed out our façade improvement grant program, continued the Route 66 neon sign grants, and launched two new small business grants that are designed to meet the need for security and capital improvements requested by area businesses.</p>	MRA

Obj.	Objective Statement	Update	Dept.
2	Increase the number of publicly accessible bathrooms throughout the City	The Department will present and update to City Council on the number of public restrooms at the City Council meeting on April 7, 2025.	EHD
3	Provide increased access to multi-modal transportation through Vision Zero projects, multi-modal vehicle access for all citizens, and maintenance of bike lanes and paths citywide	<p>The City of Albuquerque updated its Bikeway and Trail Facilities Plan (BTFFP), which identifies and prioritizes on and off street bikeway projects to serve people of all ages, abilities, and backgrounds. The BTFFP also identifies and prioritizes enhanced crossing projects where paved multi-use trails and bike boulevards cross major roadways, which improves safety and access for both people walking and biking. Implementing the BTFFP will enhance first and last mile connectivity to/from transit. Transit served on the Technical Advisory Group who guided the development of the plan. City Council unanimously approved the BTFFP in December 2024.</p> <p>The Department of Municipal Development (DMD) vision zero staff received federal funding to add three midblock crossings with pedestrian hybrid beacons on Louisiana Blvd. between Gibson Blvd. and Central Ave. This project is in design, with anticipated implementation in FY25 or FY26. Transit provided key input to identify the midblock crossing locations, which are located at existing transit stops. This project will make it easier for people to cross the street to reach destinations and also to reach transit.</p> <p>DMD vision zero staff are working with an engineering consultant to design business access &amp; transit (BAT) lanes on Central Ave. between Louisiana Blvd. and Juan Tabo Blvd, with two midblock crossings with pedestrian hybrid beacons near Britt and Dorothy. This project is at 100% design, with final DRC soon and the consultant is working on the contract book. DMD anticipates bidding this project soon. This project will enhance multimodal transportation – particularly for transit, pedestrians, and bicyclists. Transit provided key input and feedback throughout the development of this project. The midblock crossings are near existing transit stops.</p> <p>DMD Transportation Planning is working with an engineering consultant to design the Buena Vista Bike Blvd. The City's recently adopted Bikeway and Trail Facilities Plan identifies and prioritizes on and off-street bikeway projects. The proposed Buena Vista Bike Boulevard from Gibson to Central is a very high-priority project. This project will design a bike boulevard, including prioritizing bicycle travel, traffic calming, and three mid-block crossings with pedestrian hybrid beacons (PHBs) at Gibson, Avenida Cesar Chavez, and Central. A public open house is anticipated to share 30% plan and receive community input in April 2025. When implemented, this project will enhance active transportation options.</p> <p>Transit will not be maintaining bike lanes of city paths as this is not a function of the department.</p>	Transit
<b>GOAL: Environmental Protection - Protect Albuquerque's natural environments - its mountains, river, bosque, volcanoes, arroyos, air and water.</b>			
1	As the City works to preserve, protect and enhance the Bosque at any location on either side of the river. The City shall create a comprehensive plan delivered to Council in the form of an Executive Communication from the Mayor to the City Council and adopted by the City Council before any action is taken. The City shall conduct outreach to neighborhoods during the planning process	<p>The Open Space Division completed a "Bosque Assessment &amp; Update Prioritization," a five-year plan identifying priority projects and overall management strategies focused on protecting and enhancing the current ecosystem while supporting sustainable public use and education. The BAUP assesses current conditions and identifies desired future conditions of the Bosque; ranks and identifies priority projects; specifies seasonal and annual operations and management; outlines actions related to restoration, education, and public recreation; and identifies the OSD's current resources and what is needed to manage the Bosque. The OSD has made significant progress on implementing the Bosque Assessment &amp; Update Prioritization (BAUP) plan. The Parks &amp; Recreation Department/OSD will transmit the BAUP to Council as an Executive Communication in Spring 2025.</p> <p>Status: ON TRACK Progress: 75%</p> <p>The BAUP identified priority projects and ranked them from highest to lowest, (See Attachment E)</p>	PRD
2	Establish and promote environmental sustainability as an essential element to creating a healthy community that protects the environment, defends environmental and social injustices, and encourages responsible economic development that considers the needs of all citizens	<p>The Sustainability Office of Environmental Health is conducting a city-wide climate planning effort to update the 2021 Climate Action Plan. The project, to create a Comprehensive Climate Action Plan by December 2025, is funded by the U.S. Environmental Protection Agency's Climate Pollution Reduction Grant. The City just completed a Greenhouse Gas Inventory—providing a current picture of climate pollution sources and mitigation opportunities; and a Workforce Analysis, to understand the landscape of green jobs in the region.</p> <p>The Sustainability Office is now working with an appointed Community Task Force to develop an equity-based pollution reduction plan for the Greater Albuquerque Area. The initial meeting of the Community Task Force is March 20th, 2025.</p> <p>The Air Quality Division of the Environmental Health Department has completed public consultations and posted the mandatory Health, Environment, and Equity Impacts Overburdened Area Map on January 1st. In addition to the map, EHD has implemented additional actions mandated by the HEEI Rule.</p>	EHD
3	Report on the Transit Department's efforts to transition to all zero emission buses by 2040. This will include an analysis of current electric buses. Update to be provided by the end of FY25	Please see Attachment D, transition study (believe this has been previously transmitted from January 2023), analysis of current electric buses.	Transit

Obj.	Objective Statement	Update	Dept.
4	Develop a plan to have 30% of all new EV stations located in underserved areas and provide a report that identifies the location and source of funding for all existing EV stations built by the City	<p>The City of Albuquerque is committed to ensuring equitable access to electric vehicle (EV) charging infrastructure by developing a plan to allocate 30% of all new EV stations in underserved areas.</p> <p>Existing EV Charging Infrastructure &amp; Funding Sources.</p> <p>The city has already established a robust EV charging network, with publicly accessible and fleet-only stations funded through the U.S. EPA Volkswagen Clean Air Act Civil Settlement:</p> <p>Existing-</p> <ul style="list-style-type: none"> <li>-16 publicly accessible Level 2 charging stations (32 ports) across 11 sites</li> <li>-6 fleet-only Level 2 charging stations (8 ports) at the Civic Plaza Parking Garage</li> </ul> <p>Coming soon-</p> <ul style="list-style-type: none"> <li>-Future EV Charging Stations – Prioritizing Equity</li> <li>-The city is actively expanding its network with funding from the New Mexico Department of Transportation (NMDOT) Carbon Reduction Program (FFY 2024-2026 Grant Award). Planned installations include: <ul style="list-style-type: none"> <li>-18 Level 2 charging stations (36 ports) at 18 public sites</li> <li>-11 Level 2 charging stations and 7 Level 3 DCFC stations at the Albuquerque Sunport, totaling 36 new ports</li> </ul> </li> <li>-To align with Objective 4, the city will ensure at least 30% of these new installations are placed in historically underserved communities, helping to bridge infrastructure gaps and support equitable EV adoption.</li> </ul> <p>Proposed Expansion – Increasing Accessibility</p> <p>Pending approval through NMDOT grant programs, Albuquerque aims to further expand EV access in key locations, including:</p> <ul style="list-style-type: none"> <li>-4 Level 3 DCFC stations (8 ports) at 2 sites (2025 EV Infrastructure Grant Program)</li> <li>-16 Level 2 charging stations (32 ports) at 8 sites (FFY 2026-2028 Carbon Reduction Program)</li> <li>-Tracking &amp; Reporting Progress</li> <li>-To ensure transparency and strategic planning.</li> </ul>	GSD
5	Improve documentation and tracking of tree planting on both public and private lands in Albuquerque. Increased tree planting on private lands, and accurate tracking of those efforts is key to achieving the goal of the Let's Plant Albuquerque campaign, which is an important component of the City's efforts on environmental/climate resilience	<p>PRD/Urban Forestry Program continues to make progress on this Objective, especially regarding counting and tracking trees planted in private developments. Forestry is completing a comprehensive review of files related to nearly 18,500 development projects in order to count, field verify, and inventory trees that were planted in these developments. PRD has prioritized projects from 2018 to the present. To date, 12,446 projects have been processed, which has resulted in 12,109 trees counted, and 6,284 trees verified and/or entered into the city's digital tree inventory system (Tree Plotter). In FY25 to date, PRD and its closest partners, such as Tree New Mexico, have planted approximately 1,400 trees and an additional 910 trees have been given out to community members through community engagement events. Tree planting and care sheets accompanied each tree, along with a link to a digital planting location survey so that the planting locations of these trees can be tracked. Progress toward the 100,000 tree planting goal is at approximately 34,000. The busiest tree planting season for PRD and its partners is Winter-Spring, and more trees will be planted through the end of FY25.</p> <p>Status: On Track Progress 66%</p>	PRD
6	Expand and enhance our energy sustainability efforts through continued work on the Balanced Resource Acquisition and Information Network (B.R.A.I.N.) to produce energy efficiencies and loss controls through real-time analysis, system-wide monitoring and improvement	<p>The Energy and Sustainability Management Division (ESMD) is actively installing smart metering across city facilities to enable real-time monitoring of energy consumption and peak demand loads. This technology supports peak load shedding strategies, optimizing energy use, reducing costs, and minimizing carbon emissions.</p> <p>Additionally, ESMD is developing a city-owned energy management portal through the Balanced Resource Acquisition and Information Network (B.R.A.I.N.). This platform will provide comprehensive data analytics, system-wide insights, and enhanced decision-making tools to improve energy efficiency, sustainability, and resource planning across Albuquerque's facilities, ultimately contributing to the city's climate action goals.</p>	GSD

Obj.	Objective Statement	Update	Dept.
7	Improve the City's refuse system by evaluating the Department of Solid Waste's cost and efficiency to collect, recollect, and dispose of recyclables and non-recyclables. Identify and research additional recycling opportunities, including but not limited to plastic to fuel, and glass to fiberglass, that would be beneficial towards reaching the goals set forth in the City's Climate Action Plan. Provide an update in the form of an Executive Communication from the Mayor to the City Council including a detailed report in December 2024 and June 2025	The full report on this objective will be completed in June 2025.	Solid Waste
8	Implement a small-scale curbside glass recycling pilot project	Solid Waste is currently reviewing the implementation a small scale Glass Curbside Pilot Recycle Program. We are currently in the process of implementing a Residential rebalance once the rebalance is complete we will have a better understanding of how will be able allocate labor and equipment to this Pilot Program	Solid Waste
9	Continue the implementation of Climate Action Plan projects, with focus on projects for community members	<p>The work of the Sustainability Office is guided by the 50 goals in the Climate Action Plan (CAP). Each year the Sustainability Office publishes a Climate Action Plan Implementation Report, which outlines the key progress on implementing the CAP. Please see the 2024 Report at <a href="https://www.cabq.gov/sustainability/documents/cap-ir-2024-digital.pdf">https://www.cabq.gov/sustainability/documents/cap-ir-2024-digital.pdf</a></p> <p>Highlights of the report include the following:</p> <ul style="list-style-type: none"> <li>• We're on track to power the City Government with 100% renewable energy by 2025</li> <li>• A pledge to upgrade energy efficiency in all City buildings</li> <li>• Energy savings and a reduction of 52 metric tons of CO2 through new lighting upgrades</li> <li>• Food separation and composting programs that in 2024 diverted 7.5 tons of food scraps from our landfill equating to 5.23 MTCO2e metric tons of carbon dioxide equivalent.</li> <li>• 15,000 new trees towards our goal of 100,000 trees by 2030.</li> <li>• A study analyzing how best to transition the fleet vehicles to low and zero-emission vehicles</li> <li>• Purchasing five new electric vans and 20 electric buses</li> <li>• Adding a new affordable car-share program</li> </ul> <p>Sustainable Transportation: The Sustainability Office launched Albuquerque's first EV rideshare program, the Affordable Mobility Platform (AMP), in partnership with Forth, a national non-profit organization focused on equitable transportation, and PAH! Hiland Plaza, a multi-family affordable housing community in the International District. The AMP project provides residents, staff, and the general public access to two shared EVs for a small hourly or daily rate.</p>	EHD
10	Continue human feces clean-up project to minimize exposure to biohazards	The Biowaste program is approaching the one-year mark in April. Due to the increased costs of contracted labor, EHD partnered with Solid Waste to create an internal biowaste team. This internal team's focus was to be proactive in the high-frequency areas as well as to service 311 complaints promptly. The contractor is being utilized to address needs that exceed normal call volume.	EHD

Obj.	Objective Statement	Update	Dept.
11	Expand the use of Green Stormwater Infrastructure city-wide to reduce storm water flooding, improve water quality, and decrease urban heat island impacts	<p>GSI is being incorporated into the following projects:  Hahn Arroyo  Pueblo Alto  Zuni Penn Flood Control Pond  Morningside bump-out</p> <p>GSI has been added as a review item for all new DMD Engineering projects to determine if it is feasible. All DMD Engineering project managers have received training on how to incorporate effective GSI in the planning process for projects. The City of Albuquerque Development Process Manual has been amended to incorporate GSI standards. We have contracted with a GSI consultant to assist with the following:</p> <ol style="list-style-type: none"> <li>1. Collaborate with the City to identify changes to existing and draft additional policies needed to support city-wide adoption of GSI;</li> <li>2. Support interdepartmental workflows that propagate GSI policy changes through departmental processes;</li> <li>3. Support the proper installation of GSI in existing projects such as Pueblo Alto/Mile High;</li> <li>4. Support the design and implementation of small-scale distributed demonstration projects;</li> <li>5. GSI education and outreach to policy makers, decision makers, and professional community engaged with city projects;</li> <li>6. Explore and support the development of a cross-jurisdictional maintenance team;</li> <li>7. Explore and support the development training/certification mechanisms for city staff and contractors; and</li> <li>8. Dedicated time of SIGNAL staff for operational and leadership support of the Arid LID Coalition.</li> </ol>	DMD
<b>GOAL: Economic Vitality - The economy is vital, diverse, inclusive, equitable, sustainable, and works for all people.</b>			
1	Through its advocacy, education and service delivery, the Senior Affairs Department will create a platform to elevate the discussion of aging and the impact on the vibrancy of the community	<p>Through this objective, the Department of Senior Affairs has used local and state advocacy platforms to raise awareness of how community issues impact all ages. The Department successfully hosted the second annual Age-Friendly Action Summit: Housing Equity at the Veterans' Memorial and Museum in October 2024 with nearly 80 participants from the community, City departments and City Council attending. Further, DSA staff and Age-Friendly Action Committee members connected with various organizations to elevate and highlight actionable items from the age-friendly action plan. This included presenting on state-wide platforms such as the American Planning Association New Mexico State Conference, AARP's "She's the Difference" Townhall, Area Agency on Aging provider training, and to the Albuquerque Affordable Housing Coalition. These relationships engage other potential stakeholders on collaborative efforts under the plan including housing, and transportation. Tackling ageism is also a cornerstone of the Age-Friendly movement for Albuquerque. The Department has been purposeful in ways to promote inclusion such as the planned renovation of the Manzano Mesa Multigenerational Center Splash Pad. This project is a prime example of built environments that incorporate inclusion and all ages and abilities into rethinking the splash pad's use for the public after nearly twenty years of use. Lastly, the Department held its 4th annual Ageless Artisan Craft Fair in November of 2024 to highlight our vibrant artisan community with learned skills at senior and multigenerational centers. This event also provided a small economic boost to our sixty-two participating older adult vendors. DSA additionally had four sponsors who underwrote the event held at Manzano Mesa and more than 1100 attendees came to purchase handmade artisan works.</p>	Senior Affairs
2	The Economic Development Department shall organize three events for local businesses in collaboration with the Federal Reserve Bank of Kansas City, the Commerce Department, and the Small Business Administration, aimed at identifying opportunities for exporting with a minimum of one targeting and in an underserved community. The Department shall compile and track data related to the events organized for local businesses, ensuring comprehensive documentation of participation, outcomes, and any subsequent actions taken	<p>Objective Update: EDD is currently supporting local businesses by providing education, resources, and networking opportunities for exporting, with a focus on underserved communities. EDD has organized two of the three objective events for local businesses in collaboration with partners within the small business resource ecosystem, though these events have yet to take place.</p> <p>Summary Update: EDD has successfully partnered and confirmed two events with the Small Business Administration and the U.S. Department of Commerce to offer export education tailored to underserved communities and the resources these entities offer. We have scheduled both events to take place within underserved areas and ensured they are accessible to those living in these communities. Marketing and community-centered outreach is underway for these two events. EDD is working with the Federal Reserve Bank of Kansas City as they do not currently have a specific program or discussion topics aimed at exporting within their system. However, we are actively exploring solutions to address this gap, including the potential development of a program or speaker series focused on export opportunities for local businesses. EDD remains at 66% of the overall objective of organizing three events for local businesses in collaboration with these entities.</p>	EDD

Obj.	Objective Statement	Update	Dept.
3	Train a minimum 300 employees and 100 businesses through the Job Training Albuquerque (JTA) program in FY25	Objective Update: JTA has enrolled 729 employees from 132 small businesses, achieving 243% of the employee goal and 132% of the small business participation goal. EDD has reached 187.5% of the overall Objective. Summary Update: EDD continues its partnership with CNM Ingenuity, the administrator of the Job Training Albuquerque (JTA) program. JTA has added additional in-demand trainings this fiscal year, enhancing opportunities for small businesses. EDD has performed direct outreach and targeted marketing campaigns, hosted JTA information sessions, and participated in various events to raise awareness and increase enrollments among small businesses and their employees. Additional initiatives are planned for the remainder of FY25. So far, this fiscal year, JTA has successfully enrolled 729 employees from 132 small businesses, achieving 243% of the employee goal and 132% of the small business participation goal. EDD has reached 187.5% of the overall Objective.	EDD
<b>GOAL: Community and Cultural Engagement - Residents are engaged in Albuquerque's community and culture.</b>			
1	Enhance the City's cultural gateway of New Mexico by prioritizing New Mexican businesses as commercial vendors within the Albuquerque International Sunport	(See Attachment B)	Aviation
2	Open the BioPark Heritage Farm expansion by August 30, 2024	The BioPark Heritage Farm expansion is 100% complete. The public opening is scheduled for April 22, 2025.	Arts & Culture
3	Make City government more inclusive and responsive by providing training and technical assistance to City departments, and by providing public information, inclusive community outreach, and engagement of diverse populations using language services, data, tool kits, community events, workshops and other strategies. The Department shall compile, and track data related to the events organized	The Office of Equity & Inclusion (OEI) has been actively engaging with the community to foster connections and enhance inclusivity in Albuquerque. With a goal of leading or participating in 75 community engagements by March, OEI successfully held strategic meetings aimed at deepening their understanding of community needs. Additionally, efforts to reach diverse populations were prioritized through external communications, with the first all-CABQ equity newsletter being distributed to update stakeholders and the public on OEI initiatives. A critical focus of OEI's efforts has been equity training and professional development, designed to create culture change within the workforce and promote diversity. In Q3, OEI conducted fourteen trainings, with each session hosting around 50 attendees, an average increase of 20-attendees per training from Q2. These trainings contribute to an inclusive environment by empowering staff members with tools and knowledge to better serve Albuquerque's diverse community. Language access has also been a significant area of progress, with OEI working to ensure that CABQ services are accessible to all, regardless of primary language or national origin. By developing and implementing Language Access Plans (LAPs), OEI seeks to guarantee equitable communication across city departments. By March, OEI's target was to implement two LAPs to advance this goal, which one LAP was implemented. In terms of racial equity, OEI has provided technical assistance to 12 departments for developing Racial Equity Action Plans (REAPs). These plans are multi-year strategies designed to embed equity within departmental functions and operations. To support this initiative, OEI delivered five racial equity training sessions throughout Q3, each averaging 25 participants, thereby equipping city staff with strategies to foster equitable norms and behaviors. Lastly, OEI continued to offer internal technical assistance to integrate its support within CABQ work units, further embedding equity-focused practices throughout the organization. This initiative ensures that equity considerations are foundational in city operations, promoting consistent and inclusive service delivery across departments. OEI's Culture Change Leader is working with twelve (12) departments who have designated Racial Equity Liaisons. The liaisons in these departments are prioritized for training opportunities so that they can be inspired and well equipped to lead racial equity assessments and racial equity action planning in their respective departments. In Q3, OEI offered fourteen (14) learning opportunities and representatives from twelve (12) departments participated. Of the twelve (12) departments who participated in the trainings, five (5) departments have completed their racial equity action plans, and additional departments will be identified for Q4. There were 700 attendees that participated in these training and learning events.	OEI
4	Make significant progress on place-making park projects: (1) Complete expansion of Wells Park, (2) launch renovation of Phil Chacon Park, (3) Initiate construction on the Rail Trail/Spurline section, (4) Complete Phase 1 expansion of Manzano Mesa Pickleball Complex, (5) Crestview Park, (6) Chelwood Park, (7) North Domingo Aquatic Center, (8) Finalize site location and requirements for construction of the USS Albuquerque monument	Status: 1. Wells Park: on track for construction completion by May/June 2025. 2. Phil Chacon: on track for construction completion by May 2025. 3. Rail Trail: DMD is the lead for RT. Construction is underway at the Central Ave crossing and on the Sawmill section. 4. Manzano Mesa Pickleball Complex: Phase 1 of the expansion is complete. 5. Crestview Park: design consultant under contract; draft designs for public input expected by Fall 2025. 6. Chelwood Park: this project should have been labeled Crestview Heights Park. PRD working on estimates and quotes. This project is not fully funded, but will receive additional funds from a 2025 state capital outlay grant. 7. North Domingo Baca Park Aquatic Center: Construction underway on Phase 1 (\$13 million project to build the base infrastructure for the indoor Olympic pool). 8. USS Albuquerque: Tingley Beach (northwest pond) selected as location for the monument. The submarine sail is undergoing restoration at a metal fabrication facility; landscape design and engineering plans are being completed. Status: Some Disruption ON TRACK Progress 80%	PRD

Obj.	Objective Statement	Update	Dept.
5	Complete Phase III of the Education Center at the Albuquerque Museum by June 2025	The design phase of the Education Center at the Albuquerque Museum is complete with approximately 75% of the funding in place that is needed to proceed with the construction of the first phase of the facility. Currently, we anticipate construction to begin in May 2026.	Arts and Culture
<b>GOAL: Governmental Excellence and Effectiveness - Government is ethical, transparent, and responsive to its citizens. Every element of</b>			
1	Establish a Grants Division tasked with serving as a centralized clearinghouse for grants, as well as managing, administering, and tracking grant activities within the City. The division shall be responsive to both the City Council and Administration	<p>The DFAS has a Grants Management Section within the Accounting Division, the section has been in place for several years. The Grants Management Section supports city department in the following areas:</p> <ul style="list-style-type: none"> <li>grantor site visits, reviews, monitoring, desk audits and/or audits</li> <li>-Provide training on city processes, policies and procedures</li> <li>-Provide training on and give access to PeopleSoft Project Costing and related modules</li> <li>-Review financial reports</li> <li>-Perform federal drawdowns</li> <li>-Coordinate the city's annual Single Audit</li> <li>-Coordinate with city departments to prepare the Schedule of Expenditures of Federal Awards (SEFA)</li> </ul>	DFAS
2	Loss Prevention (LP) will provide Safety Incentive Program information, along with the annual OSHA report, to department directors and identify sedentary light duty placements throughout the City	<p>The Safety Incentive Program Winners for FY25:</p> <p>1st quarter, September 13, 2024 Senior Affairs: Terri Clark DMD: Emilio Pinon, Anthony Tijerina, Humberto Hernandez, Joseph Armenta</p> <p>-2nd quarter, December 17th, 2024 Solid Waste: William Garcia, Adrian Jaramillo, Steven Walker</p> <p>-3rd quarter No nominations</p> <p>-4th quarter. April 3rd, 2025 Senior Affairs: America Bencomo, Michael Berry</p> <p>Total to date FY25: 10</p> <p>The most recent OSHA report, 2024 can be found at this here: <a href="https://sfftp.cabq.gov/f/c79f65193b2e0501">https://sfftp.cabq.gov/f/c79f65193b2e0501</a></p> <p>Loss Prevention has been working with departments to identify light duty for injured workers, throughout the City. The Light Duty program has continued to develop, as Loss Prevention works hand in hand with Workers' Comp, to place injured workers in a position that fits their current restrictions. This is not only beneficial to the Department, but also benefits the employee. When an injured worker can maintain some form of activity and normalcy, they often can have a better recovery outcome. Light Duty Program Instructions are attached.</p>	DFAS/Risk
3	Loss Prevention will implement new advanced video/interactive classes for employee safety training to increase staff engagement and safety awareness	<p>Loss Prevention lost their ability to create videos when they turned in their obsolete iPads. They have created trainings using Power Point presentations and voiceovers, with the assistance of the Employee Learning Center. The trainings can be found in the Knowledge City platform.</p> <p>DFAS Risk Management has provided in-person, safety training to departments throughout the City. The safety trainings included CPR, de-escalation, fentanyl, BBP, ladder safety, forklift and fire drill and more.</p>	DFAS/Risk
4	Create a systematic data tracking and planning process to align priority objectives, performance measures and budget requests for the Senior Affairs Department	<p>The Department of Senior Affairs' Data Analyst II, Strategic Program Manager and Fiscal Manager developed a fiscal and performance dashboard that provides a month-to-month, side-by-side comparison tracking care coordination, information and assistance, transportation, home services, meal programs, recreation and physical fitness. The data compiled includes the measurements of units required for programs funded by the Area Agency on Aging grant against the expenses incurred to support that work. This allows the leadership team to review strategies related to performance improvement, while working to comply with the grant's requirements.</p> <p>As the department strives to meet the evolving demand for services, it has worked to find innovative approaches to providing timely and needed services. In order to accomplish this, DSA determined that it needed to acquire its own transportation system, rather than continue to borrow the Trapeze transportation system from the Transit Department. DSA completed the competitive bid process in the Spring of 2024, and the Ecolane Transportation Software program was launched. This software system allows for data tracking and reporting with independent client program activity data. Prior to this innovation, client data and activity data were co-mingled with Transit and not able to be isolated for trend analysis. DSA will now be able to collect reliable data, track and improve on-time performance of scheduled trips, and identify where there is room to grow. With improved on-time performance services, ride sharing opportunities can increase the numbers of clients and therefore the overall number of trips.</p>	Senior Affairs

Obj.	Objective Statement	Update	Dept.
5	Issue policy recommendations within Albuquerque and New Mexico for instituting anti-sexual harassment training within film training programs	<p>Objective Update:            -The Albuquerque Film Office (AFO) has completed a survey to select film training institutions and organizations to help inform policy recommendations. Survey responses have been compiled.</p> <p>Summary:            -The AFO has identified 4 major, national programs that provide training, informational material, and reporting processes for the subject matter. These programs offer resources, including posters and online materials, to help define sexual harassment and provide guidance on prevention and response. These resources will be shared with NM Film Training programs with the objective to have resources and reporting processes clearly available in training programs and throughout the workplace. This will start with the AFO participating at an in-person 'Wellness + Health Fair' table-ing event directly to the film workforce at the IATSE Training Center on March 2nd, 2025. The AFO is at 100% of our goal in regards to outreach to training programs and at 100% in regards to survey responses from our film training institutions.</p>	EDD
6	Develop and implement training programs for Human Resource Coordinators (HRC's) within all Human Resources Centers of Excellence, such as employment, talent acquisition, classification & compensation, etc. Update to be provided by the end of FY25	<p>Designed a comprehensive 12-month strategy for the HR Business Partner to foster alignment and collaboration with key stakeholders, including Central HR and City Departments, ensuring the development of an effective and efficient training program.</p> <p>-The HR Coordinator training schedule for the calendar year is nearing completion, with a needs assessment underway to refine the curriculum and address critical training requirements.</p> <p>-Actively developing a structured onboarding process for new HR Coordinators to enhance their integration and effectiveness within the organization.</p> <p>-Currently providing or provided training for the following in FY25 FMLA training, creating a new position, reclassification, temporary upgrades, desk audits, and FLSA to stakeholders to enhance understanding and compliance to policies.</p>	HR
7	The Human Resources Employment Testing Division and Albuquerque Fire Rescue (AFR) Subject-Matter Experts, as selected by the Fire Chief, will work collaboratively in the revision of the Fire Rescue Promotional Procedures. Update to be provided by the end of FY25	This has been completed.	HR
8	Create a comprehensive benefit strategy to attract and retain a multi-generational population of employees. Update to be provided by the end of FY25	Human Resources is in the process of finalizing three active Benefits RFPs and is collaborating with Animal Welfare to implement a pet/veterinary donation program beginning next fiscal year. Medici, our onsite and mobile clinic provider, is hiring a third provider to expand clinic services to City employees starting next fiscal year.	HR
9	Continue to implement R-21-205 (4-H Park as Sacred Burial Site); R-21-231 (Language Access); R-21-229 (Denouncing Anti-Asian Hate); R-20-75 (Racial Equity); R-20-85 (Equity Criterion in CIP); R-18-7 (Promoting Public Safety); 0-18-45 (Commission on American Indian Affairs); R-20-84 (Supported Employment for People with Disabilities); and the City's Minority and Women's Business Enterprises Ordinance	(See Attachment C)	OEI

Obj.	Objective Statement	Update	Dept.
10	R-20-84 stated, "The Mayor and City Council shall work with the Office of Equity and Inclusion, the Human Resources Department, the Economic Development Department, and other relevant City departments to work with local disability employment providers to explore opportunities for creating supported employment opportunities among persons with disabilities." Develop and implement a program to hire a minimum of 25 people with disabilities. A report outlining the program shall be delivered by January 1, 2025 and 25 people shall be hired by the end of FY25	Objective Update: The Human Resources Department is working with the Economic Development Department and the Office of Equity and Inclusion to design a program that supports hiring of individuals with disabilities. The goals of the program have been outlined and partners have been identified. Human Resources will continue to support the hiring of individuals with disabilities by creating job access through internships, volunteer opportunities, recruitment efforts, review of current open positions, and partnering with local service providers to find opportunities to be more inclusive. Human Resources will also continue to facilitate disability accommodation processes for applicants and current employees as appropriate. OEI played a minor supporting role with respect to the initial planning or R-20-84, advocating for job sharing and other create ways of making city employment opportunities more obtainable for people with different abilities. OEI connects community organizations directly to HR to support conversations regarding employment for people with different abilities. In Q3, OEI received one (1) recorded constituent requests regarding ADA.	OEI/HR/ED D
11	Achieve the Fiscal Year 2025 milestones required for conversion from the Posse software system to Tyler Tech to meet the scheduled go-live in September 2024	The POSSE system data was converted to the Tyler Tech (ABQ-PLAN) system in late January 2025. The Department is working to integrate all data, ensure that the new system is working smoothly for users, and made fully operational during the next several months.	Planning
12	Identify and implement process improvements to expedite plan reviews and approval of developments	The Department implemented processes to (1) ensure that re-reviews are assigned to the original reviewer, (2) avoid unnecessary reviews depending on the type of permit (for example, a residential interior remodel project does not need to be reviewed by the Solid Waste Department), and (3) utilize a third-party reviewing vendor to help reduce backlogs. The Department is continuing to study new process improvements; however, the large volume of permit applications of approximately 30,000 will continue to be a major challenge unless more plan review staff positions are added to the Department.	Planning
13	Identify barriers to recruitment and retention within the Planning Department related to the significant vacancy rate. Propose a recruitment and retention strategy for Planning Department employees including but not limited to appropriate salaries for positions, highlighting fringe benefits, and identifying positions that are no longer needed due to long-term vacancy rates or positions that should be added to increase customer service and efficiency of the department	The current vacancy rate is not significant. The current rate is a total of 13.8%, and that total includes approximately 8% intentional vacancies that are being held open for prudent program savings. The largest barrier that currently exists is a shortage of staff for plan review functions.	Planning
14	Identify barriers to recruitment and retention of engineers and develop a plan to fill engineer positions	Through the Classification and Compensation study it was determined that every engineer position is above the 50 percentile of the market, which means that as a City we are competitive within our market. We continue to advertise our Engineer positions through a combined posting, this applies to the Engineer, Engineer Assistant, and Engineer Associate. This opens up the ability for these levels of Engineers to apply to just one posting and HR determines what level they qualify at. We also continue to use the career ladder for this positions, making it possible to promote to the next level based on credentials and experience. Central HR has added hiring incentives to these positions along with boosting recruiting efforts with Recruiters we have added to our staff. These recruiters have pushed hiring initiatives with Universities and external job boards along with the departmental HRC's related to Engineers specifically in effort to gain qualified candidates. In July 2024, the vacancy rate for Engineers was 29%, as of March 2025, the vacancy rate has improved and we are now at 16%.	HR

Obj.	Objective Statement	Update	Dept.
15	The Office of Equity and Inclusion shall establish performance attributes and measures as part of the annual budget process. Performance attributes and measurements should be consistent with the mission of OEI to increase local purchasing, increase doing business with companies owned by people of color, invest in areas of the City that have been under invested, and ensuring the City delivers services in an equitable and inclusive manner. OEI shall provide the attributes and measurements to City Council by first quarter ending FY25. The office shall also provide quarterly updates to City Council going forward	OEI's Race and Equity Data Insights Analyst worked with CIP to map and analyze seven years of city capital investments (2013-2021). This map is published on our website. OEI will continue to participate in the staff review process of the city's CIP process, to assist with the implementation of R-20-85 by applying the Social Vulnerability Index score as one of the 15 criteria that staff take into consideration when scoring proposed projects. OEI will continue to analyze the outcomes of the CIP investment decisions that are made.	DFAS/OEI
16	Implement the findings of the class and compensation study throughout all departments of the City of Albuquerque. This initiative aims to establish equitable and competitive salary structures, aligning them with market standards to enhance efforts in retaining employees. Updates will be provided mid-year FY25 and at the end of year FY25	Phase I of the Classification & Compensation implementation began in July 2024. In July 2024, union employee increases were applied based on negotiated rates for each union. Also non-union employees received the Council determined percentile increases, this increase ranged from 2% to 5% dependent on the annual salary. By this point, the Administration has approved and adopted the classification structure yielded by the study, replacing the prior 32 pay plans with one. This structure as a whole is reflected in Human Resources' slotting file that is available on the City's website. This file has been provided to our Local Unions' leadership, and to our general employee population. Initial implementation includes that the City has almost completed negotiating changes to its compensation rules based on the study with its local unions. Study implementation will continue as funding allows. With that said, we adjusted all Classified Non-Union positions which fell below the minimum rate of the salary grade to the minimum rate in January 2025. Classified, Non-Union priority jobs were also be adjusted to the 15th percentile of the salary structure in January 2025. The Administration has also invited our local Unions to begin negotiations like the salary changes indicated in Phase I. This may allow union positions which fall below the minimum rate of their grade to be adjusted the minimum rate as well as adjusting priority job to the 15th percentile of their grade(s).	HR
17	Engage diverse teams on the ground to foster connections, collect insights, and collaborate with allied organizations to link individuals in need with available resources, with an emphasis on maintenance, upkeep and cleanup efforts on Central Avenue from approximately 114th street to Tramway Boulevard, and on Louisiana around the Coronado, Winrock, and Uptown Centers, excluding the areas currently serviced by the successful block by block providers	Solid Waste currently utilizing supervisor to assess the Central corridor for noticeable maintenance or clean-ups required, we also have dedicate Clean City staff to clean the Art corridor on Central. We are currently utilizing Better Way Forward staff for the Louisiana, Coronado, Winrock, and Uptown Center areas. This program falls under the Clean City umbrella which has a contract with My Datt also know as Block by Block which oversees the Better Way Forward Program.	Solid Waste
18	The Administration shall include the additional Gas Tax Road Fund subsidy in the mid-year clean-up	R-24-106 reduced the Gas Tax Road Fund appropriation by \$1,762,000 to align with budgeted revenue for FY/25. The department will manage within the available resources for FY/25.	DFAS
19	Identify revenue generated by Internet Sales Tax as a separate line in the GRT Report. Provide an update to the Council about the progress for accurate GRT reporting from the State	There is no internet sales tax that the City can track. Existing tax rates have been applied to internet sales. According to the State Taxation and Revenue Department: " Simply put, unfortunately there is no box that taxpayers check when they make an internet sale and the taxpayers that are large internet sellers have complex tax returns that have significant commingling between what could be internet sales and other activity (Amazon delivery/retail versus Amazon Web Services as an example, another example of the difficulty in parsing data is a company like Walmart is likely a significant internet seller but also has significant brick and mortar sales)."	DFAS

## Attachment A

### **OBJECTIVE 14. APD will increase recruitment and retention of police officers through outreach, regionally competitive pay, and retention incentives. (Police)**

#### **Fiscal Year 2025 Plan**

##### **Advertising**

In Fiscal Year 2025, the Recruiting Unit plans to maintain a strong emphasis on utilizing web-based advertising and will regularly evaluate its effectiveness. Furthermore, the unit intends to continue collaborating closely with Mood advertising until the conclusion of their contract to cultivate a positive brand image for APD and enhance its presence on social media platforms. We aim to publicize our testing dates and promote recruiting events through our social media channels. It is our goal that our recruiting advertisements can be complemented by positive narratives about APD and its personnel.

##### **Engagement**

Engaging with applicants will continue to be a fundamental pillar of our recruitment strategy, as we recognize the importance of fostering meaningful connections with potential candidates. Our proven success in this area stems from the unique opportunity we offer applicants to utilize our facility for workouts, with guidance provided by our recruiters who have received training from the National Academy of Sports Medicine.

The impact of this approach has been overwhelmingly positive, as evidenced by the enthusiastic feedback from applicants who initially faced challenges meeting the physical entry requirements, but who have achieved success after engaging in our tailored fitness program. This not only showcases our commitment to supporting applicants in reaching their full potential but also highlights the effectiveness of our approach to recruitment.

Looking ahead, we are dedicated to actively participate in job fairs specifically focused on college students and military personnel. By targeting these key demographics, we aim to further enhance our recruitment efforts and attract highly qualified applicants who align with our organization's values and objectives.

##### **Law Enforcement Aide Program**

We are expanding the Law Enforcement Aide program (LEAP) to police service aide applicants in 2025. By broadening the scope of participants in the program, the initiative will not only build on the success of the previous year, but will also attract a wider pool of candidates.

Overall, the decision to extend the LEAP program to police service aide applicants in 2025 reflects a forward-thinking and inclusive approach to talent development and capacity-building in the field of law enforcement. By harnessing the potential of a diverse range of participants, the program has the opportunity to make an even greater impact in enhancing public safety, promoting community trust, and advancing the mission of law enforcement agencies.

## **Diverse Recruitment**

Moving forward, the Recruiting Unit plans to continue its efforts to attract individuals from diverse backgrounds to careers in law enforcement. This includes participating in career fairs sponsored by county and state representatives, which provide valuable opportunities to engage with potential recruits from minority communities. Additionally, the unit is considering exploring recruiting events in areas with more diverse populations, recognizing the importance of reaching out to a wide range of individuals who may be interested in pursuing a career in law enforcement.

By emphasizing that this will be an ongoing effort, the Recruiting Unit is committing to sustained and proactive engagement with minority communities in order to build a more diverse and inclusive police force. This approach not only benefits the department by bringing in a wider range of perspectives and experiences but also strengthens trust and relationships with the communities it serves. Through these continued efforts, the Recruiting Unit is working to create a more representative and responsive law enforcement agency that better reflects the diversity of the population it serves.

## **Increased Academies Per Year**

Our objective for FY 2025 is to establish 5 cadet academies and 2 Lateral Officers Classes, enabling a consistent graduation of officers throughout the year as opposed to two larger classes annually. We expect this approach to reduce the strain on the Field Training Officer Program due to a shortage of trainers.

## **Fiscal 2025 Training Schedule**

CNM 12- July 2024

Cadet Class 131-October 2024

CNM 13- December 2024

Lateral Class 33- December 2024

Cadet Class 132- February 2025

Cadet Class 133- April 2025

Lateral Class 34- June 2025

CNM 14- July 2025

## **Competitive Pay**

The Albuquerque Police Department is presently among the highest-paid departments in the state. Recently, APD's cadet salary was over \$8 per hour higher than that of the next highest-paid entry-level cadet in the state. APD's longevity pay is designed to retain experienced officers. As of July 1, 2024, the department began its last year under the Collective Bargaining Agreement. The pay structure is outlined below:

## Pay Chart July 2024

Title	Years of service	Hourly**	Base Annual Salary	Longevity	Total Salary***
Cadet	(Academy)	\$30.00	\$62,400.00	0	\$62,400.00
Officer 2 <sup>nd</sup> Class	One year probation	\$31.49	\$65,499.20	0	\$65,499.20
Officer 1 <sup>st</sup> Class	1 to 3	\$35.91	\$74,692.80	0	\$74,692.80
Officer 1 <sup>st</sup> Class	4	\$35.91	\$74,692.80	\$3,900	\$78,592.80
Sr. Officer	5	\$37.15	\$77,272.00	\$6,630	\$83,902.00
Sr. Officer	6	\$37.15	\$77,272.00	\$7,306	\$84,578.00
Sr. Officer	7 thru 9	\$37.15	\$77,272.00	\$10,036	\$87,308.00
Sr. Officer	10 thru 12	\$37.15	\$77,272.00	\$12,090	\$89,362.00
Sr. Officer	13 thru 14	\$37.15	\$77,272.00	\$13,468	\$90,740.00
Master Officer	15	\$39.01	\$81,140.80	\$13,468	\$94,608.80
Master Officer	16 thru 17	\$39.01	\$81,140.80	\$16,198	\$97,338.80
Master Officer	18+	\$39.01	\$81,140.80	\$20,280	\$101,420.80

In addition, the department provides sign-on bonuses to further incentivize applicants to apply with APD.

\$15,000 Bonus for new hire Lateral and Conservation Officers  
\$10,000 Bonus for new hire Cadets



## COMMUNITY AND CULTURAL ENGAGEMENT

OBJECTIVE 1. Enhance the City's cultural gateway of New Mexico by prioritizing New Mexican businesses as commercial vendors within the Albuquerque International Sunport. (Aviation)

### INITIATIVES

In 2023, Sunport facilitated three (3) RFP solicitation initiatives, all designed to increase participation of small, local and minority businesses into the airport's concession program. The results of these RFP projects resulted in a high percentage of participation by small, local and minority business owners as follows:

#### **Food/Beverages RFP Solicitation**

Sunport awarded 15 restaurants among two concessionaires, Fresquez Companies and Tailwind Concessions, both companies proposed local restaurant concepts which achieved a local participation ratio of 80%.

- **Fresquez Companies, Inc.:** a local business owner was awarded 12 restaurants, representing 80% of total restaurant count. Fresquez's restaurant mix will include the following participation ratios:
  - Fifty-eight percent (58%) Local restaurants (**Rush a Prana, Cheese & Coffee, New Mexico Pinon Coffee, Black Mesa, Sadie's, Steel Bender, Teller**)
  - Sixteen percent (16%) Proprietary restaurants owned by Fresquez that includes, **Flavor of New Mexico & Burque Brewery**
  - Twenty-five percent (25%) National Brands under franchise agreement with Fresquez - **Dunkin Donuts, Panda Express and Taos Peaks/Buffalo Wings**
- **Tailwind Concessions, LLC** – Regional company was awarded 3 Restaurants, all of which are locally restaurants, who will become JV partners with Tailwind Concessions in operating the restaurants. These restaurants include **Laguna Burger, Frank's Chicken and Waffles and Indian Pueblo Kitchen.**



## Retail RFP Solicitation

Sunport awarded 10 retail shops to three business owners, of which two were local business professionals. The company Marshall Retail Group, a leading prime concession program operator partnered with three local business owners, making them 10% equity partners operating 8 of the retail shops awarded in the RFP.

The remaining two retail shops are 100% owned and operated by local business owners. In total, 50% of the retail units are exclusive, Albuquerque, New Mexico concepts.

The new retail units listed below confirm that a mission and vision of local participation has been achieved, in not exceeded:

### Local Retail Shops

- Los Poblanos
- New Mexico Museum Foundation Shops
- Mountain Standard Time
- Yucca Outpost

### Prime National Shops

- Zocolo Market
- Roadrunner Express
- Globo Mercado Market
- Duke City Market
- InMotion
- Nob Hill

## Retail Kiosk Program RFP Solicitation

In fall 2023 Sunport received approval from the Mayor to proceed with the launch of a new concession program division titled “**Ascend ABQ**”. This initiative was created to provide local, small and minority retail business owners access to participation within the airport’s concession program.

Ascend ABQ program will provide evolving and established small businesses with a short-term internship operating experience, selling from retail kiosk units located throughout the airport. There will be a total of six kiosks, housing a total of nine retail merchants. The Ascend ABQ program removes financial and resource barriers which prohibit small business from entering an airport concession program, by providing at no cost a retail kiosk unit and business development support.

The nine small business owners will receive a significant level of preliminary and on-going training and development, supervised by a dedicated program manager and aviation staff.



## **NEXT STEPS**

While the three (3) RFP Solicitations have been fully executed, the airport is underway building out the new commercial spaces. Over the next 10 months, the airport will fully complete the projects. The goal of giving priority to New Mexican businesses as commercial vendors is on a solid track for accomplishment by January 1, 2026.

### **(L) Local Business**

#### **New Restaurants**

- Black Mesa Coffee Shop **(L)**
- Dunkin Donuts
- Rush a Prana **(L)**
- Teller Vodka Bar **(L)**
- Panda Express

#### **New Restaurants Opening Soon**

- Cheese & Coffee **(L)**
- Indian Pueblo Kitchen **(L)**
- Laguna Burger **(L)**
- Frank's Chicken & Waffles **(L)**
- Steel Bender Micro Brewery **(L)**
- Burque Brewery **(L)**
- Taos Peaks/Buffalo Wings
- Sadie's **(L)**

#### **New Retail Shops Opening Soon**

- Zocolo Market (Local JV Equity Owner Participation)
- Mountain Standard Time **(L)**
- New Mexico Museum Foundation Shops **(L)**
- Los Poblanos (L)
- InMotion (Local JV Equity Owner Participation)
- Nob Hill (Local JV Equity Owner Participation)
- Globo Mercado (Local JV Equity Owner Participation)
- Yucca Outpost (Local JV Equity Owner Participation)
- Roadrunner Express (Local JV Equity Owner Participation)
- Duke City Market (Local JV Equity Owner Participation)

#### **Retail Kiosks Program "Ascend ABQ" – Opening Soon (July '25)**

- This program will feature 9 local businesses **(L)**

## **R-20-75 Strengthening Racial Equity**

The Office of Equity & Inclusion (OEI) has been actively engaging with the community to foster connections and enhance inclusivity in Albuquerque. With a goal of leading or participating in 75 community engagements by March, OEI successfully held strategic meetings aimed at deepening their understanding of community needs. Additionally, efforts to reach diverse populations were prioritized through external communications, with the first all-CABQ equity newsletter being distributed to update stakeholders and the public on OEI initiatives.

A critical focus of OEI's efforts has been equity training and professional development, designed to create culture change within the workforce and promote diversity. In Q3, OEI conducted fourteen trainings, with each session hosting around 50 attendees, an average increase of 20-attendees per training from Q2. These trainings contribute to an inclusive environment by empowering staff members with tools and knowledge to better serve Albuquerque's diverse community.

Language access has also been a significant area of progress, with OEI working to ensure that CABQ services are accessible to all, regardless of primary language or national origin. By developing and implementing Language Access Plans (LAPs), OEI seeks to guarantee equitable communication across city departments. By March, OEI's target was to implement two LAPs to advance this goal, which one LAP was implemented.

In terms of racial equity, OEI has provided technical assistance to 12 departments for developing Racial Equity Action Plans (REAPs). These plans are multi-year strategies designed to embed equity within departmental functions and operations. To support this initiative, OEI delivered five racial equity training sessions throughout Q3, each averaging 25 participants, thereby equipping city staff with strategies to foster equitable norms and behaviors.

Lastly, OEI continued to offer internal technical assistance to integrate its support within CABQ work units, further embedding equity-focused practices throughout the organization. This initiative ensures that equity considerations are foundational in city operations, promoting consistent and inclusive service delivery across departments.

OEI's Culture Change Leader is working with twelve (12) departments who have designated Racial Equity Liaisons. The liaisons in these departments are prioritized for training opportunities so that they can be inspired and well equipped to lead racial equity assessments and racial equity action planning in their respective departments. In Q3, OEI offered fourteen (14) learning opportunities and representatives from twelve (12) departments participated. Of the twelve (12) departments who participated in the trainings, five (5) departments have completed their racial equity action plans, and additional departments will be identified for Q4. There were 700 attendees that participated in these training and learning events.

### **R-21-205 4-H Park Sacred Site**

- Since January, six (6) Work Group Memorial Meetings have taken place regarding R-21-204, dedicated to transforming part of the 4-H Park into a sacred memorial site. Collaborating with our Intergovernmental Tribal Liaison, we conducted formal tribal consultations with Tribal Leaders, ensuring a respectful and inclusive process. This initiative honors those who tragically passed during the boarding school era, commemorating their memory within the park. Parks and Recreation has initiated dialogue with the Indian Pueblo Cultural Center and the All Pueblo Council of Governors to discuss constructing a pedestrian bridge over I-40, allowing visitors to access and appreciate the site's significance. Additionally, discussions are underway to finalize the memento on-site location. Commission of American Indian and Alaska Native Affairs has been involved and actively engaged throughout the process, providing valuable recommendations and guidance at each stage.

### **R-21-231 Language Access**

- The Office of Immigrant and Refugee Affairs continued to implement Language Access Policy R-21-231, by providing technical assistance, continued distribution of the language access tool kit with templates for language access plan and guidance on contracting with language service providers. OIRA Liaison continues to work on topics connected with workforce development, housing with rent to a refugee 2.0 subcommittee for immigrant and refugees. Committee is creating better systems of addressing the barriers of entry to the job market inside the City and outside with the support of partners such as NM Workforce Connections.

One (1) department is in advanced stages of developing and adopting language access plans, joining Albuquerque Community Safety Department, Animal Welfare, APD, Aviation, Economic Development, Environmental Health, Equity and Inclusion, Human Resources, Municipal Development, Legal, and Planning. For Q3, city-wide, about \$11,339.88 has been spent on language services i.e., oral interpretation and written translations.

The Office of Immigrant and Refugee Affairs is on track to have a representative in every city department trained in language access by the end of the third quarter. Currently, there are 25 departments trained in language access by the OIRA liaison. OEI worked closely with the Office of Emergency Management (OEM), Aviation, ACS, the grants team, and other partners in the implementation of R-18-7 providing assistance to migrants including onward travel, meals, and overnight shelter.

### **R-20-84 Supported Employment**

- OEI played a minor supporting role with respect to the initial planning of R-20-84, advocating for job sharing and other creative ways of making city employment opportunities more obtainable for people with different abilities. OEI connects community organizations directly to HR to support conversations regarding employment for people with different abilities. In Q3, OEI received one (1) recorded constituent requests regarding ADA.

### **R-20-85 Equity Criterion in CIP**

- OEI's Race and Equity Data Insights Analyst worked with CIP to map and analyze seven years of city capital investments (2013-2021). This map is published on our website. OEI will continue to participate in the staff review process of the city's CIP process, to assist with the implementation of R-20-85 by applying the Social Vulnerability Index score as one of the 15 criteria that staff take into consideration when scoring proposed projects. OEI will continue to analyze the outcomes of the CIP investment decisions that are made.

### **O-22-49 Domestic Violence Commission**

- The Domestic Violence Commission meets monthly and includes two subcommittees – Policy and Funding, and Training – as well as a working group. The Subcommittees meet every two months and twice monthly, respectively. A total of ten (10) meetings during Q3. OIRA attended the State Bar of New Mexico Domestic Violence Summit, and Technical Assistance training for Restraining Orders. The commission continues to collaborate across departments, particularly with APD.

### **R-18-7 Immigrant Friendly City**

- The OIRA liaison serves as the OEI representative on the Domestic Violence and Sexual Assault Commission to advocate for the rights and well-being of survivors, including immigrants, and work collaborate with the city officials, community organizations, and stakeholders to address the root causes of domestic and sexual violence and ensure access to support services for all survivors. In Q3, the Commission held three (3) meetings. The OIRA liaison receives calls and inquiries on a daily basis regarding immigration needs and refers to appropriate organizations or departments to assist with constituent matters.

### **R-21-229 Anti-Asian Hate Policy**

- Related to R-21-229 Denouncing Anti-Asian Hate, the Office of Immigrant and Refugee Affairs is leading the Stronger Cities Network participation for the City of Albuquerque which includes more than 225 cities, municipalities and other sub-national governments committed to advocating for, implementing and sharing local approaches to address all forms of hate, extremism and polarization and collaborated with the Department of Justice on the United Against Hate program. Additionally, the OIRA liaison has been a city representative on the planning committee for the Asian Pacific Islander Native Hawaiian (APINH) Center which is aimed at creating a central space for APINH community members to feel safe and increase belonging in the city of Albuquerque. In Q3, OEI attended three (3) convenings for knowledge share that incorporated methods for the Anti-Asian hate policy. Additionally, the recruitment and interview process is ongoing to secure a highly qualified candidate for the APINH role.

### **O-18-45 Commission on American Indian and Alaska Native Affairs (CAIANA)**

- The Office of Native American Affairs, through its Inter-governmental Tribal Liaison, has actively supported both regular and special meetings of the Commission on American Indian and Alaska Native Affairs (O-18-45). In Q3, the Commission held a total of one (1) meeting, where Commissioners contributed insights and recommendations from their respective sectors to the Mayor. In January, the City of Albuquerque's Administration and Environmental Health Department conducted an official Tribal Consultation with the Pueblo of Isleta regarding the City's overburdened Areas Maps determination, and addressing Tribal and Native Constituent crisis over the Trump Administration suspension of federal funding. In February, OEI in collaboration with Navajo Nation Human Rights Council convened for a "Know Your Rights" hybrid event at the Berna Facio Professional Development Center, addressing the Immigration and ICE issues for Navajo Nation members and other ABQ Tribal members, which received attention by local news stations. In March, CAIANA convened to further discuss solutions regarding the Albuquerque Indian Center closure and ways to revitalize the organization under different leadership and ensure ABQ area indigenous members have the resources they need. The Mayor's Integrated Development Ordinance (IDO) included four (4) meetings. During this quarter, there were also 43 total Tribal Engagements and 11 Formal Tribal Consultations.

OFFICE OF EQUITY AND INCLUSION FY25 PERFORMANCE PLAN						
OEI's Mission is to Inspire and Equip City Government to make ABQ a national role model of racial equity and social justice						
DEPARTMENT BY THE NUMBERS						
Key Performance Indicators						
WHO WE HIRE AS A CITY: Workforce Demographics are Reflective of Population						
WHO WE DO BUSINESS WITH AS A CITY: Local and Minority Spend Increasing year over year						
WHERE AND IN WHOM WE INVEST: CIP investments in areas of SVI >65% or for underserved populations						
HOW WE SERVE: City services are responsive and program participation rates are reflective of population						
CORE SERVICES						
The Office of Equity & Inclusion provides five core internal and external services:						
1. Training/ Technical Assistance and Collaborations with City Departments to Inspire and Equip						
2. Engaging Community and Providing Community and Constituent Specific Support						
3. Inter-governmental Relations and Tribal Consultation						
4. Building Community Capacity, Awareness and Access						
5. Implementing, Advancing and Monitoring of City Ordinances						
PERFORMANCE MEASURES						
The performance measures in the following tables capture OEI's ability to perform these services at a high level. Narrative reports describe the process and quality.						
Training and Technical Assistance to Departments and Cross-Departmental Collaborations						
Attribute	Measures	Q1 FY/25	Q2 FY/25	Q3 FY/25	Q4 FY/25	Notes
Language Access	# departments with language access plans	1	TBD	1		
	# department language access coordinators designated by department and trained by OEI	25		25*		
	# dollars spent on language services (both oral interpretation and written translations)	\$25,114.64	\$20,412.64	\$11,339.88		
Technical Assistance	# internal consultations provided	30	27	189*		Includes calls to front desk
	# internal supports produced (data, guides, reports, story maps, handbooks)	6	8	3		
Culture Change	# Legislated planning processes OEI involved in i.e. Transit, Open Space, Aging, HR, Arts	0	0	1*		Natural Hair Braiding (SB 281)
	# Interns and Americorps mentored/placed	0	0	0		
	# learning opportunities and trainings offered	10	11	14		
	# attendees	180	285	700		5 REAP retreats
	# Racial Equity Liaisons designated by departments and trained by OEI	15	15	12		
	# Departments with Racial Equity Action Plans	0	TBD (Tim)	5		6 Departments in progress. Four (4) Departments namely Planning, AFR, HHH, and Art & Culture, have completed
Community Engagment -Community and Constituent Specific Support						
Attribute	Measures	Q1 FY/25	Q2 FY/25	Q3 FY/25	Q4 FY/25	
Unique Engagements and Supports for specific underserved communities	# summits, fairs, events sponsored financially, co-hosted, co-organized or tabled by OEI	36	25 (ask Neema)	73		
	# constituent calls received by OEI	109	132	42*		
	# constituent calls referred out	0	302			
	# of community-based meetings attended (not organized by CABQ, only as a participant)	*2	-	*3		
Commission or Working Group Participation	# Commission meetings	3	3			
	# Commission on American Indian Alaska Native Affairs (CAIANA)	5	3	2		
	# Human Rights Board Meetings	5	3	4		
	# Black Community Engagement strategy team meetings	10	508	311		
	# Immigrant and Refugee Affairs advisory group meetings	3	33	13		
	# Other community-based working group participation (4-H Park, MMIWR, Tribal/Metro Law Enforcement, DOJ, Cannabis Equity, Justice 40 Oversight Coordinating Committee, NMBLC, SW Housing Justice, Domestic Violence, Native Leadership Council, Bank On Burque Coalition)	42	11	49		
Convenings Between Departments	# RFP input, review and participation in selection processes to promote local & MBE spend	0	0	0		
	# Inter-department Working Groups OEI participates in (Transit Security, Thriving Communities, Zero Fares, HR Immigrant Hiring, HR Bilingual Pay, HR Supported Employment, Open Space Community Engagement, HUD grant planning, EHD and Sustainability Office planning efforts, purchasing, hiring committees, CFPB, GBI)	19	27**	15		
	Mayors Institute on Creative Design (MICD)	4	0	0		
	# CIP Staff Review Process Participation to promote equity in infrastructure investment	0	0	0		
Intergovernmental Relations and Tribal Consultations						
Attribute	Measures	Q1 FY/25	Q2 FY/25	Q3 FY/25	Q4 (Estimates) FY/25	
Tribal Consultation	# Formal Tribal Consultations	4		11		
	Mayor's Integrated Development Ordinance (IDO)	5	0	4		
	Navajo Nation Human Rights Commission	3	2	2		
	Tribal Engagements	33		43		
Implementing, Advancing and Monitoring of City Ordinances						
Attribute	Measures	Q1 FY/25	Q2 FY/25	Q3 FY/25	Q4 (Estimates) FY/25	
R-20-75 Strengthening Racial Equity	See narrative updates on Envisio for all policy implementation updates	3	6*	+		
R-21-205 4-H Park Sacred Site	See narrative updates on Envisio for all policy implementation updates	5		6		
R-21-231 Language Access	See narrative updates on Envisio for all policy implementation updates		8	3		
R-20-84 Supported Employment	See narrative updates on Envisio for all policy implementation updates			+		
R-20-85 Equity Criterion in CIP	See narrative updates on Envisio for all policy implementation updates			+		
O-22-49 Domestic Violence Commission	See narrative updates on Envisio for all policy implementation updates			+		
MBE Ordinance	No activity while await disparity study		0	0		
			0	0		
R-18-7 Immigrant Friendly City	See narrative updates on Envisio for all policy implementation updates	3		+		
R-21-229 Anti-Asian Hate Policy		1		+		
	See narrative updates on Envisio for all policy implementation updates	1		0		
Building Community Capacity, Awareness, Access						
Attribute	Measures	Q1 FY/25	Q2 FY/25	Q3 FY/25		
Community Safety	LGBTQ+ ,Muslim, Jewish community, and similar supports to vulnerable groups	8		3		
Partnerships and Contracts	# letters of support or commitment for community groups to obtain grant funding	4	-	0		
	# grant funds awarded to OEI	<i>Note: Joycelyn to be updated by accounting on grants.</i>	\$25,000.00	Ongoing from previous awards. None new this Quarter*		
Grant Dollars Spent/Distributed	# funds spent or distributed	<i>Note: Joycelyn to be updated by accounting on grants.</i>	\$121,000 (NP)	Ongoing from previous awards. None new this Quarter*		



# *Zero-Emission Bus Transition Study*

January 2023

Prepared by:



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## Executive Summary

The City of Albuquerque contracted the Center for Transportation and the Environment (CTE) to conduct a study to evaluate transitioning ABQ RIDE's entire fixed-route service to zero-emission technology by 2040. Zero-emission technologies considered in this study include both battery electric buses (BEBs) and hydrogen fuel cell-electric buses (FCEBs). BEBs and FCEBs have similar electric drive systems that feature a traction motor powered by a battery. The primary difference between BEBs and FCEBs, however, is the amount of battery storage and how the batteries are recharged. The energy supply in a BEB comes from electricity provided by an external source, typically the local utility grid, which is used to recharge the batteries. The energy supply for an FCEB is completely on-board, where hydrogen is converted to electricity using a fuel cell. The electricity from the fuel cell is used to recharge the batteries.

CTE worked closely with ABQ Ride staff throughout the project to develop the approach, define the assumptions, and confirm the results. The approach for the study is based on the development and analysis of three transition scenarios:

- **Baseline:** The baseline scenario represents ABQ RIDE's current fleet consisting of diesel, diesel-hybrid, CNG, and BEB vehicles used as a baseline of comparison for the scenarios below.
- **BEB Depot Only** – Transition to BEBs where feasible to complete block requirements with BEBs only charging at the depot.
- **Mixed Fleet** – Transition to a mixed fleet of BEB and FCEBs.
- **FCEB Only** – Transition to FCEB only fleet.

The Baseline scenario assumes that no change is made from currently planned technologies and is used to compare the incremental costs of deploying additional ZEBs in the other scenarios. ABQ RIDE was awarded a grant under the Federal Transit Administration's Low or No Emissions Vehicle Deployment (Low-No) Program for the purchase and deployment of five zero emission battery electric buses, five depot chargers, and installation. Therefore, the five BEBs were included in the baseline scenario. Each scenario uses a set of assumptions for improvements in battery storage capacity and efficiency, ultimately yielding improvements in bus range.

The underlying basis for the assessment is CTE's ZEB Transition Planning Methodology, including route, charge, and rate modeling. This methodology allows CTE to assess energy efficiency and energy consumption. This information can then be used to project the range of given vehicle technologies. Strenuous efficiency was estimated using Pennsylvania Transportation Institute's Altoona bus testing data, CTE data, and ABQ RIDE's key performance indicator (KPI) data from their existing route operations.

Once estimates for vehicle efficiency, range, and energy consumption were established, CTE completed the following assessments to develop cost estimates for each transition scenario.

1. Service Assessment
2. Fleet Assessment
3. Fuel Assessment
4. Maintenance Assessment

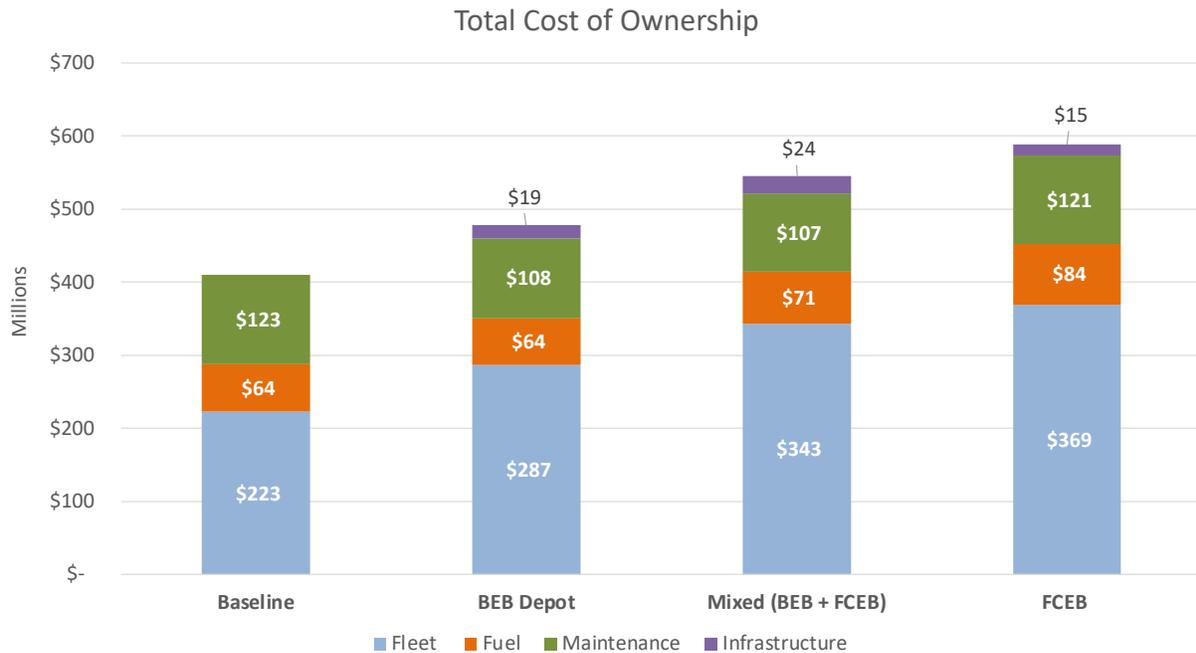
## 5. Facilities Assessment

These assessment results yield a total cost of ownership for each transition scenario. The total cost of ownership over the transition period (2023 – 2040) is summarized in the table and figure below.

**Total Cost of Ownership for ZEB Transition (2023-2040)**

Category	Baseline	BEB Depot Only	Mixed Fleet	FCEB Only
Fleet	\$223,053,140	\$286,791,339	\$343,182,291	\$368,618,530
Fuel	\$64,358,978	\$64,357,503	\$70,881,484	\$83,958,199
Maintenance	\$122,827,936	\$108,406,738	\$106,911,141	\$121,234,677
Infrastructure	--	\$18,535,000	\$23,777,028	\$15,250,000
<b>Total</b>	<b>\$410,240,053</b>	<b>\$478,090,580</b>	<b>\$544,751,944</b>	<b>\$589,061,546</b>
Compared to Baseline	--	+\$67,850,527	+\$134,511,891	+\$178,821,493
% Compared to Baseline	--	117%	133%	123%
% ZEB Fleet	3%	54%	100%	100%

**Total Cost of Ownership for ZEB Transition (2023-2040)**



## Section 1 - Introduction

ABQ RIDE was founded when the city of Albuquerque acquired the Albuquerque Bus Company and Suburban Lines on January 1, 1965. ABQ RIDE offers 40 fixed route services and curb-to-curb services via the Sun Van program which is compliant with the Americans with Disabilities Act. The city of Albuquerque has a population of approximately 562,599 and is 187 square miles<sup>1</sup>. In June 2021, the City of Albuquerque Transit Department introduced a Zero Fares Pilot Program and according to their most recent monthly information report published in November 2022, total ridership in 2022 was 5,400,017 showing a 29.2% increase from November 2021<sup>2</sup>.

The City of Albuquerque contracted the Center for Transportation and the Environment (CTE) to conduct a study to evaluate transitioning ABQ RIDE's fixed-route service to zero-emission technology. This study was completed to understand the transition lifecycle costs required to achieve a zero-emission fleet, including evaluation of the total cost of ownership as well as to help ABQ RIDE staff understand the challenge and manage the constraints associated with a full-fleet transition to zero-emission buses (ZEBs). The analysis considered both operational and financial impacts of ZEB technologies that were considered commercially available during the time period of the study (through 2040).

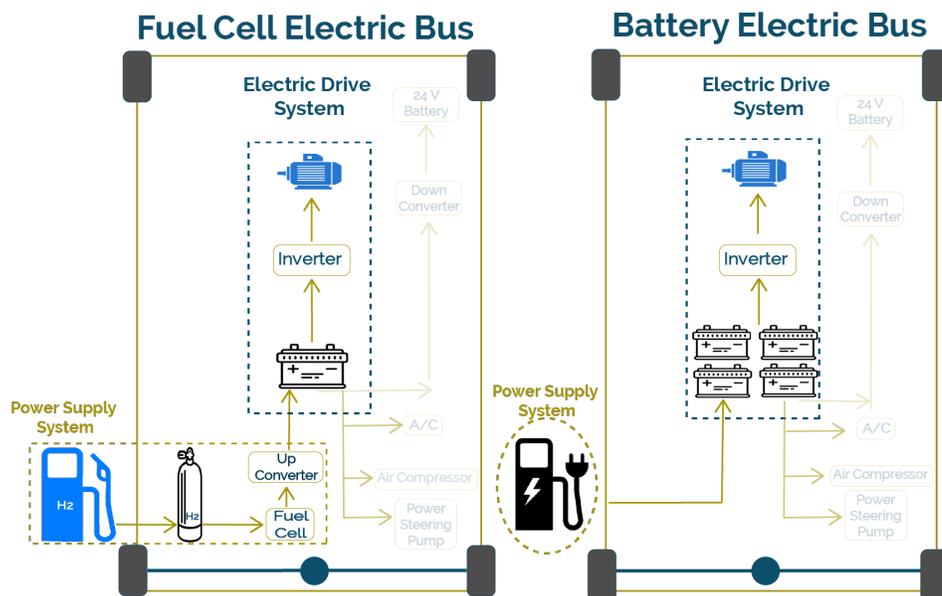
Zero-emission technologies considered in this study include both battery electric buses (BEBs) and hydrogen fuel cell-electric buses (FCEBs). BEBs and FCEBs have similar electric drive systems that feature a traction motor powered by a battery. The primary difference between BEBs and FCEBs, however, is the amount of battery storage and how the batteries are recharged. The energy supply in a BEB comes from electricity provided by an external source, typically the local utility grid, which is used to recharge the batteries. The energy supply for an FCEB is completely on-board, where hydrogen is converted to electricity using a fuel cell. The electricity from the fuel cell is used to recharge the batteries. Illustrated below is the electric drive components and energy source for a BEB and FCEB.

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<sup>1</sup><https://www.census.gov/quickfacts/albuquerquecitynewmexico>

<sup>2</sup><https://www.cabq.gov/transit/documents/november-zf-report-2022.pdf>

Figure 1: Schematic of ZEB Technologies



There are considerations and limitations associated with each technology. One of the primary limitations of BEBs is overall energy storage capacity. Although BEBs are approximately four times more efficient than diesel vehicles, the total amount of energy that can be stored on board without adding excessive weight is still considerably less than diesel. That means that using current technology, the overall BEB range on one charge is less than the range of a diesel vehicle on one tank of fuel. Range limitations can be mitigated by the use of the appropriate charging technologies and strategies, and this is a very important element in the planning for any BEB deployment, especially when considering a full fleet transition.

Furthermore, battery and charging technologies are changing at a rapid pace. The trends toward higher battery energy densities and increasingly sophisticated software-based charge management methodologies are expected to improve the range of BEBs to levels more comparable with traditional diesel vehicles over time. New charging vendors continue to enter the marketplace, offering various charger configurations and charge rates that help agencies customize a charging strategy and reduce operational risk associated with BEB deployments. Regardless of which battery technology or chemistry is utilized, all high voltage vehicle batteries in the market today degrade over time. Therefore, the impact on performance over time and associated battery warranties should be reviewed to optimize operations and further reduce risk.

Finally, lifecycle costs of electricity and overall infrastructure represent significant investments. Charging an entire fleet of buses can require a substantial real estate footprint and associated upfront cost to purchase and install the required equipment, not to mention the appropriate training and ongoing operational requirements.

There are similar considerations in FCEB deployment in that the infrastructure footprint can be substantial and since battery technology is also utilized there are similar concerns with degradation and end-of-life performance. Current FCEBs do have a range that is longer than BEBs and more similar to traditional diesel or CNG buses, so theoretically there will be less operational risk due to fueling strategies when incorporating FCEBs into a fleet. However, both the upfront cost of FCEB vehicles and the cost of fuel are currently higher than with their BEB counterparts (hydrogen vs. electricity). Finally, there are still a limited number of demonstrations of FCEBs to learn from partly because BEB charging technology is easier to scale and deploy to small fleets (which has been a large part of BEB deployment activity to date).

The *Zero-Emission Bus Transition Study* is arranged in the following sections:

- Section 1 – Introduction
- Section 2 – Transition Planning Methodology
- Section 3 – Transition Scenarios and Assumptions
- Section 4 – Baseline Data
- Section 5 – Service Assessment
- Section 6 – Fleet Assessment
- Section 7 – Fuel Assessment
- Section 8 – Maintenance Assessment
- Section 9 – Facilities Assessment
- Section 10 – Total Cost of Ownership
- Section 11 – Conclusions and Recommendations
- Section 12 - References

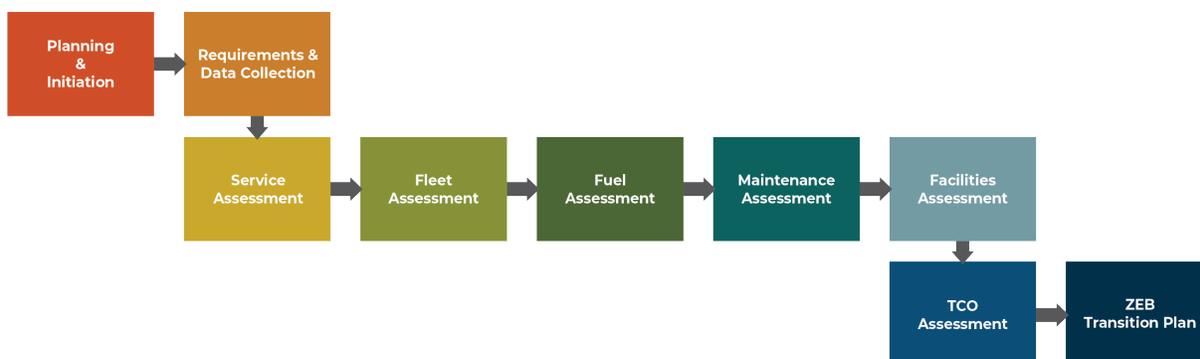
This study reflects the state of technology at the time that it was prepared whereas the transition to a full zero-emission bus fleet is expected to take over 20 years to complete. CTE recommends that the study be reviewed and updated periodically to reflect the latest state of technology development, costs, regulatory environment, service requirements, and supply chain to ensure that ABQ RIDE continues to meet their mission in the most effective and efficient way possible.

## Section 2 - Transition Planning Methodology

This study was completed using CTE’s Transition Planning Methodology, which is a complete set of analyses used to inform agencies in converting their fleets to zero-emission. The methodology consists of data collection, analysis and assessment stages; these stages are sequential and build upon findings in previous steps. Steps specific to this study are outlined below:

1. Planning and Initiation
2. Service Assessment
3. Fleet Assessment
4. Fuel Assessment
5. Maintenance Assessment
6. Facilities Assessment
7. Total Cost of Ownership Assessment

*Figure 2: ZEB Transition Study Methodology*



The **Planning and Initiation** phase builds the administrative framework for the transition study. During this phase, the project team drafted the scope, approach, tasks, assignments and timeline for the project. CTE worked with ABQ RIDE staff to plan the overall project scope and all deliverables throughout the full life of the study. During the kickoff meeting CTE met with stakeholders and collected route, block, fleet, operational, maintenance, and facilities information from ABQ RIDE staff to form the baseline scenario. CTE conducted a route modeling workshop to determine the blocks that were used as the basis for the Service Assessment.

The **Service Assessment** phase evaluated the expected energy needs for each bus to determine if zero-emission technologies have sufficient range to replace current buses on a 1:1 basis and complete every scheduled service day or route assignment. During the Planning and Initiation phase, CTE met with ABQ RIDE to define assumptions and requirements used throughout the study and to collect operational data. CTE collected GPS data on selected ABQ RIDE routes and utilized software models to estimate ZEB performance. Results from modeling were used to

estimate achievability of every block in ABQ RIDE's network using BEBs and FCEBs. The results from the Service Assessment were used to guide ZEB procurements in the Fleet Assessment and determine energy requirements for the Fuel Assessment.

The **Fleet Assessment** analyzed the capabilities of current ZEB technologies to meet ABQ RIDE's service requirements. The analysis projected the timeline for replacement of diesel, diesel-hybrid, and CNG buses with BEBs and FCEBs. The Fleet Assessment also includes an assessment of projected fleet procurement costs over the transition lifetime.

The **Fuel Assessment** used the outputs from the Fleet Assessment to create a projected timeline for replacement of current vehicles consistent with ABQ RIDE's existing fleet replacement plan. Technology constraints and alternative fleet compositions determined by the Service Assessment were considered in the creation of this projected timeline and CTE ensured the timeline was in alignment with ABQ RIDE's sustainability and transition goals.

The **Maintenance Assessment** analyzed labor and materials costs for zero-emission vehicle maintenance over the transition period as well as major component replacements for each technology type.

The **Facilities Assessment** defined the requirements for charging and hydrogen fueling infrastructure including operational impact and utility service requirements. CTE developed estimates for equipment and infrastructure, design, construction, and installation costs, space and siting requirements. CTE evaluated the requirements for upgrading ABQ RIDE's facilities to be compatible with hydrogen and determine the requirements for any hydrogen refueling stations needed to support the fleet.

The **Total Cost of Ownership Assessment** summarizes the costs of annual bus procurements, annual fuel cost, annual maintenance costs, as well as the costs of charging equipment, supporting infrastructure, facility upgrades, and design, construction and installation over the vehicle.

## Section 3 - Transition Scenarios and Assumptions

### Transition Scenarios

The following scenarios were assumed for the transition assessment:

- Baseline: Current Technology – No change in technology from current bus procurements (diesel, diesel-hybrid, and CNG), except for the five 35' BEBs that were deployed in June 2022.
- BEB Depot Only – Transition to BEBs where feasible to complete block requirements with BEBs only charging at the depot.
- Mixed Fleet – Transition to a mixed fleet of BEB and FCEBs.
- FCEB Only – Transition to a FCEB only fleet.

### Assumptions

Due to the inherent nature of varying conditions over the period of a long-term fleet transition, it is necessary to establish a number of simplifying assumptions in a study such as this. These assumptions were developed based on discussions between CTE and ABQ RIDE during the **Planning & Initiation** stage of this project and include the following:

- Transition to a 100% ZEB fleet by 2040
- Current fleet composition (as of the time of this study) used for the baseline scenario
- Currently planned fleet replacement cycles
- 14-year lifespan assumed for heavy duty buses
- Current battery sizes for BEBs and fuel tank sizes for FCEBs are based on existing specifications for vehicles that have completed Altoona testing
- A 5% improvement in battery capacity (for BEB) and efficiency (FCEB) every two years
- A battery warranty is purchased at the time of vehicle purchase that guarantees that the battery will maintain greater than 80% useable energy or be replaced by the manufacturer.
- A fuel-cell overhaul will occur at the mid-life of each heavy-duty transit FCEB (7 years)
- 35' and 40' BEB efficiencies from ABQ modeling
- Hydrogen efficiency comes from CTE data sources (OCTA and AC Transit operations)

Current BEB technologies have range limitations relative to diesel vehicles, and as a result, it is not always possible to replace an agency's current fleet one to one using BEBs. Improvements are expected to be made over time, but there are significant challenges to overcome, and the timeline to achieve the goal is uncertain. In addition to the uncertainty of technology improvements, there are other risks to consider. Although current BEB range limitations may be remedied over time as a result of advancements in battery energy density and more efficient components, battery degradation may re-introduce range limitations as a risk to an all-BEB fleet over time. In emergency scenarios that require use of BEBs, agencies may face challenges supporting long-range evacuations and providing temporary shelters in support of fire and police operations. Furthermore, fleetwide energy service requirements and power redundancy and resiliency may be difficult to achieve at any given depot in an all-BEB scenario. Higher capital equipment costs and availability of hydrogen may constrain FCEB solutions.

## Section 4- Baseline Data

It is essential to understand the key elements of ABQ RIDE’s service to evaluate the costs associated with a full-ZEB transition. Key data elements of the existing ABQ RIDE service were provided by ABQ RIDE staff and include the following:

- Fleet composition
- Routes and blocks
- Mileage and fuel consumption
- Maintenance costs

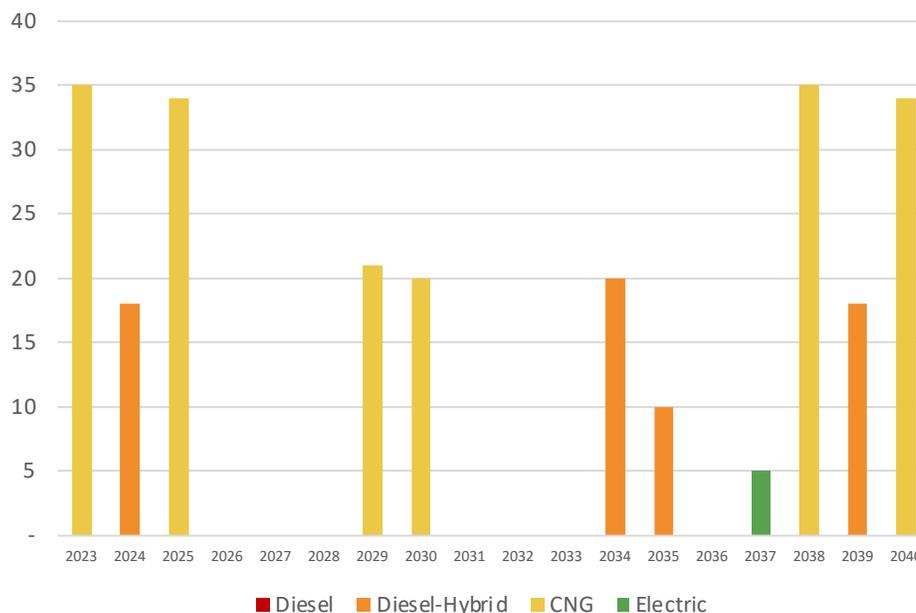
### Fleet

At the time of this study, ABQ RIDE’s bus fleet consisted of 163 vehicles of various lengths and fuel types that provide service for 40 fixed-routes. The following table provides a breakdown of the existing fleet vehicles by length and fuel type.

**Table 1: Current Bus Quantity by Length and Fuel Type**

Vehicle Length	Fuel Type	Total Vehicles
40'	Diesel-Hybrid	87
60'	Diesel	30
40'	CNG	41
35'	Battery Electric	5
<b>TOTAL</b>		<b>163</b>

Although ABQ RIDE has two storage and maintenance facilities, all in-service vehicles currently operate out of the Daytona Transit Facility, located at 8001 Dayton Road NW in Albuquerque, New Mexico. ABQ RIDE’s goal is to maintain buses for 14 years before retirement. **Figure 3** depicts the annual bus replacement schedule throughout the transition period, regardless of scenario or technology type.

**Figure 3: Bus Replacement Schedule**

### Routes and Blocks

ABQ RIDE's service currently consists of 40 routes that run on 498 blocks with 288 weekday blocks (blocks operating Monday through Friday), 122 Saturday blocks, and 88 Sunday blocks.

**Table 2: Number of Blocks by Bus Length and Weekday**

Vehicle Length	Weekdays	Saturday	Sunday
Van	35	8	5
35'/40'	210	84	65
60'	43	30	18
<b>TOTAL</b>	<b>288</b>	<b>122</b>	<b>88</b>

### Fuel

ABQ RIDE's current fuel use was collected and used to estimate energy costs throughout the study life. All fuel costs were escalated using the 2023-2040 average percent change from the 2022 EIA Annual Energy Outlook<sup>3</sup> for each fuel type. When vehicles are added to the fleet, all vehicles of the same length that are acquired in that year to replace retiring vehicles are assumed to operate the average annual mileage of that vehicle size and, for diesels, are assumed to consume the same amount of fuel as other vehicles of the same length and fuel type.

<sup>3</sup><https://www.eia.gov/outlooks/aeo/>

**Table 3: Annual Mileage by Bus Length**

Vehicle Length	Average Annual Mileage per Vehicle
35'	23,622
40'	42,389
60'	36,985

Baseline fuel economy based on historical operations is provided below.

**Table 4: Fuel Economy by Bus Length and Fuel Type**

Vehicle Length	Diesel (mpg)	Diesel-Hybrid (mpg)	CNG (mgdge)	BEB (kwh/mi)
35'	—	—	—	1.8
40'	—	5.8	3.3	—
60'	3.3	—	—	—

mpg = miles per gallon

mpgdge = miles per gallon diesel gallon

kWh/mi = kilowatt-hour per mile

### Maintenance

Historical maintenance costs are used to project future maintenance costs for all legacy fuel types.

**Table 5: Average Maintenance Cost per Mile by Vehicle Length and Fuel Type**

Vehicle Length	Diesel (\$/mi)	Diesel-Hybrid (\$/mi)	CNG (\$/mi)	BEB (\$/mi)
35'	—	—	—	TBD
40'	—	1.19	1.02	—
60'	1.05	—	—	—

TBD = To Be Determined

It should be noted that the average maintenance costs per mile are affected by the age of the vehicle or fleet, as older fleets typically experience higher maintenance costs per mile. The average major services costs that include midlife overhaul of the engine and transmission were estimated to be between \$40,000 (CNG) and \$99,000 (diesel).

## Section 5 - Service Assessment

Bus efficiency and range are primarily driven by vehicle specifications; however, it can be impacted by a number of variables including the route profile (i.e., distance, dwell time, acceleration, sustained top speed over distance, average speed, traffic conditions, etc.), topography (i.e., grades), climate (i.e., temperature), driver behavior, and operational conditions such as passenger loads and auxiliary loads. As such, ZEB efficiency and range can vary dramatically from one agency to another. Therefore, it is critical to determine efficiency and range estimates that are based on an accurate representation of the operating conditions associated with ABQ RIDE's system to complete the assessment.

The first task in the Service Assessment is to develop a model to run operating simulations for representative ABQ RIDE routes. CTE uses Autonomie, a powertrain simulation software program developed by Argonne National Labs for the heavy-duty trucking and automotive industry. CTE has modified software parameters specifically for electric buses to assess energy efficiencies, energy consumption, and range projections. GPS data was collected from fifteen (15) of the forty (40) ABQ RIDE routes for analysis. GPS data includes time, distance, vehicle speed, vehicle acceleration, GPS coordinates, and roadway grade that is used to develop the route model. CTE used component-level specifications and the collected route data to develop a baseline performance model by simulating the operation of BEB on each of the fifteen (15) routes.

Ideally it would be best to collect data and model every route in ABQ RIDE's network; however, this is impractical due to the amount of time and labor this approach would require. Instead, a sampling approach was used where sample routes were identified with respect to topography and operating profile (e.g. average speeds, etc.). The modeling results of the sample routes were then applied to the routes and blocks that share similar characteristics.

The data from the routes, as well as the specifications for each of the bus types selected, was used to simulate operation of each type of bus on each type of route. The models were run with varying loads to represent "nominal" and "strenuous" loading conditions. Nominal loading conditions assume average passenger loads and moderate temperature over the course of the day, which places marginal demands on the motor and heating, ventilation, and air conditions (HVAC) system. Strenuous loading conditions assume high or maximum passenger loading and either very low or very high temperature (based on agency's latitude) that requires near maximum output of the HVAC system. This Nominal/Strenuous approach offers a range of operating efficiencies to use in estimating average annual energy use (Nominal) or planning minimum service demands (Strenuous). Additional details for the assumptions used to complete the Service Assessment are included in **Table 6** below.

**Table 6: Service Assessment Assumptions**

Vehicle Class	Nominal Energy Capacity	Reference	Tractive Efficiency (nominal)	Strenuous Auxiliary Power [kW]
Van	118 kWh	Greenpower	0.9 kWh/mi	10
35' BEB	450 kWh	Average		
40' BEB	580 kWh	Average	1.8 kWh/mi	19.2
60' BEB	580 kWh	Average	2.3 kWh/mi	39
40' FCEB	37.5 kg	New Flyer	8 mi/kg	Included
40' FCEB	60 kg	New Flyer	4 mi/kg	Included

The nominal energy capacity for each vehicle class was an average capacity of the currently available vehicles on the market that have completed Altoona Testing and are available for purchase using Federal funding. In the case that there was only one vehicle available or tested, then that vehicle was used to provide the baseline assumption. As this is an average, there are currently vehicles with larger nominal energy capacities available in several of the vehicle classes (e.g. 40' BEB); however, because this analysis does not assume a specific vehicle manufacturer, these average capacities were utilized as the current available on the market. Research suggests that battery density for electric vehicles has improved by an average of 5% each year<sup>4</sup>. For the purposes of this study, considering the extended period of a complete fleet transition (e.g., through 2040 being the goal for ABQ RIDE), CTE assumed a more conservative 5% improvement every two years. If the trend continues, it is expected that buses may continue to improve their ability to carry more energy without a weight penalty or reduction in passenger capacity. Over time, BEBs are expected to approach the capability to replace all of an agency's fossil-fuel buses one-for-one. For FCEBs, improvements in hydrogen compression and storage technologies are expected to occur over the course of the transition period. As a result, CTE assumed a 5% improvement in efficiency for FCEBs every other year. Vehicle OEMs are currently developing energy systems with higher storage capacity and energy density. As such, these projections should be considered conservative for the purposes of planning.

Projected battery capacity was based on the assumption that useable battery capacity is 80% of nameplate capacity with 10% degradation, effectively 72% of nominal capacity. **Tables 7 and 8** below show the projected usable battery capacity and tank capacity for BEBs and FCEBs, respectively. At the time of the development of this report, there are multiple BEB manufacturers that are moving towards allowing a larger percentage of the battery (90% or more) to be available for use; however, the 80% represents a conservative assumption.

<sup>4</sup><https://arpa-e.energy.gov/technologies/publications/long-range-low-cost-electric-vehicles-enabled-robust-energy-storage>

**Table 7: Usable Battery Capacity Projection [kWh]**

Bus Size [ft]	2023	2025	2027	2029	2031	2033	2035	2037	2039
Van	95	100	105	110	115	120	130	135	140
40'	470	495	520	545	570	600	630	660	695
60'	470	495	520	545	570	600	630	660	695

**Table 8: Tank Capacity Projection [kg] – Useable Fuel Capacity**

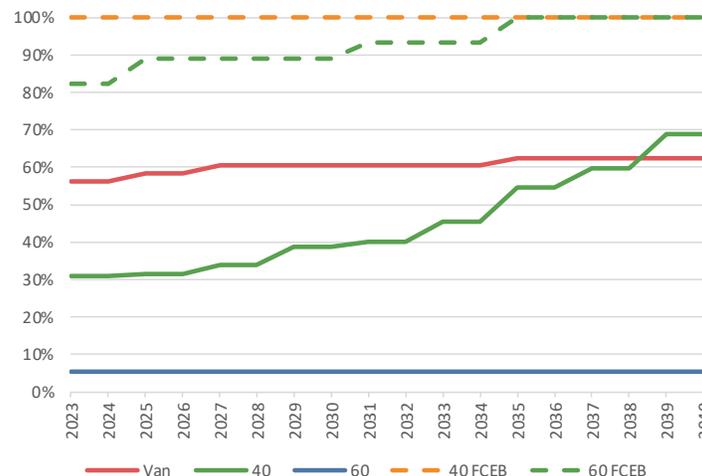
Bus Size [ft]	2023	2025	2027	2029	2031	2033	2035	2037	2039
40'	36	36	37.8	37.8	39.7	39.7	41.7	41.7	43.8
60'	57.5	57.5	60.5	60.5	63.5	63.5	66.7	66.7	70.0

The block analysis, with the assumption of 5% improvement in battery capacity or improvement in hydrogen storage capacity every other year, is used to determine the timeline for when routes and blocks become achievable for BEBs and FCEBs, respectively, to replace diesel, diesel-hybrid, or CNG buses one to one. This information is used to then inform ZEB procurements in the Fleet Assessment.

The results from the block analysis are used to determine when/if a full transition to BEBs or FCEBs may be feasible. Results from this analysis are also used to determine the specific energy requirements and develop the estimated costs to operate the ZEBs in the Fuel Assessment.

Results from the block analysis that indicate the yearly block achievability by bus length throughout the transition period for BEBs are included on **Figure 4**.

**Figure 4: Projected Block Achievability**



As depicted in **Figure 4**, the block evaluation indicates that under strenuous conditions at least 30% of ABQ RIDE's blocks are achievable based on the average nominal battery capacity of a 40' BEB in 2023, and are expected to improve to at least 69% by the end of the transition period in 2040. Under strenuous conditions, only 5% of ABQ RIDE's blocks are achievable using the 60' BEBs with no improvements expected despite the increase in energy storage. Approximately 55% of ABQ RIDE's van blocks are achievable using battery electric vans and by 2040 vans are expected to be able to achieve at least 62%, under strenuous conditions. Although block achievability was assessed for the vans, only heavy duty vehicles were evaluated in the transition analysis.

Based on currently available specifications for 40' FCEBs, all of ABQ RIDE's blocks are estimated to be achievable under strenuous conditions from 2023 through the end of the transition period. Approximately 82% of ABQ RIDE's blocks are achievable using a 60' FCEB and assuming technological improvements that achievability percentage is expected to reach 100% by 2035.

While routes and block schedules are unlikely to remain the same over the course of the transition period, this projection assumes the blocks will retain a similar structure to what is in place today. Despite changes over time, this analysis assumes blocks will maintain a similar distribution of distance, relative speeds, and elevation changes by covering similar locations within the city and using similar roads to get to these destinations. This core assumption affects energy use estimates as well as block achievability in each year.

It should be noted that BEB range is negatively impacted by battery degradation over time. A BEB may be placed in service on a given block with beginning-of-life batteries; however, it may not be able to complete the entire block at some point in the future before the batteries are at end-of-life (typically considered 80% of available service energy). Conceptually, older buses can be moved to shorter, less demanding blocks and newer buses can be assigned to longer, more demanding blocks. ABQ RIDE can rotate the fleet to meet the demand assuming there is a steady procurement of BEBs each year to match service requirements. This could also be said for FCEBs, although the impact of degradation is assumed to be less.

## Section 6 - Fleet Assessment

The goal of the Fleet Assessment is to determine the type and quantity of ZEBs, as well as the schedule and cost to transition a transit fleet to zero-emission. Results from the Service Assessment are integrated with the ABQ RIDE's current fleet replacement plan and purchase schedule to produce the projected bus replacement timeline and the associated total capital cost.

### Cost Assumptions

CTE created cost assumptions for this analysis for 40' and 60' bus lengths from each technology type (CNG, diesel, diesel-hybrid, BEB, and FCEB). CTE produced the annual procurement scenario for 2023 through 2040 and annual capital costs for buses.

Key assumptions for the bus cost estimate are as follows:

- Bus costs are based on both ABQ RIDE procurements and average costs available from state procurement contracts (California and Washington)
- Fuel costs are indexed against U.S. EIA projections.
- Bus and maintenance costs indexed against the Consumer Price Index (CPI)

Conventional wisdom dictates that the costs of BEBs will decrease over time due to higher production volume and competition from new vendors entering the market. While initially this was true, costs appear to have stabilized and begun to increase in recent years. However, it should also be noted that OEMs have added more battery storage over the same time period without significantly increasing base costs. FCEB prices are expected to decrease over time as vehicle orders increase (e.g. California transit agencies have committed to purchasing over 1,300 FCEBs by 2035); however, CTE does not currently have an adequate basis to reduce the costs over time for the purchase of FCEBs.

**Table 9** provides cost estimates for new vehicle purchases used in the analysis. The costs for internal combustion engine vehicles were provided by ABQ RIDE. The price used for the 40' BEB comes from the figure used by the City of Albuquerque in its application for the Federal Transit Administration's 2022 Low-No grant application. The other electric bus costs came from California statewide contract pricing and options.

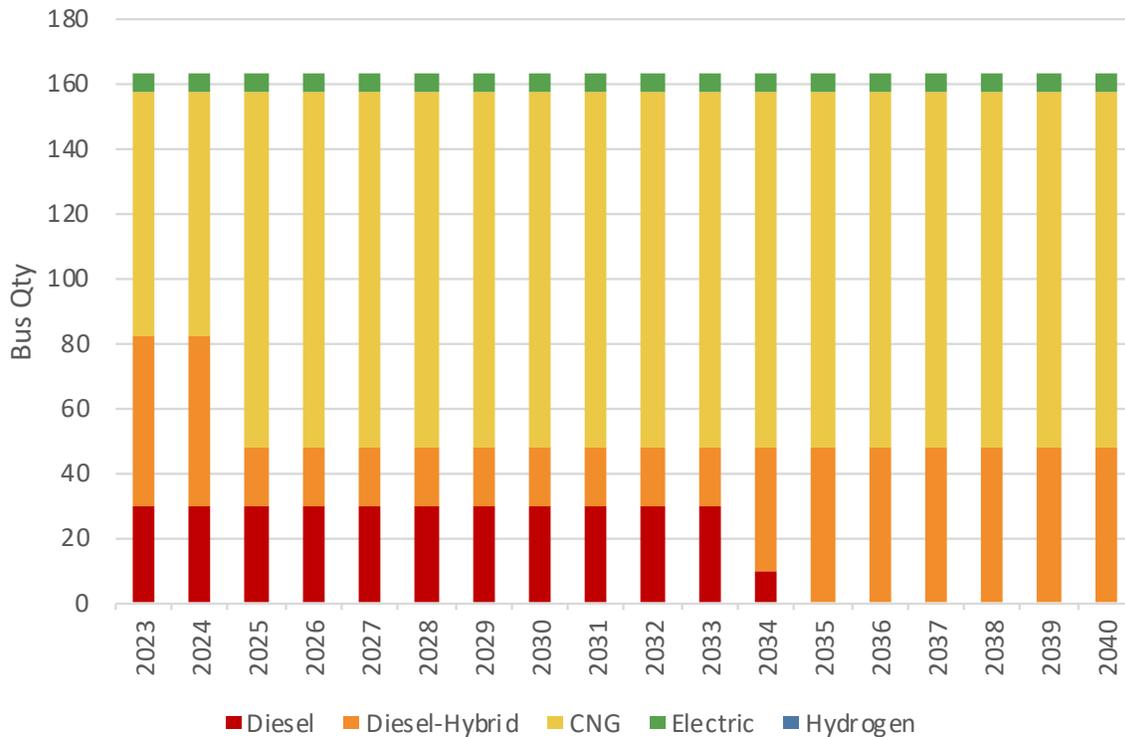
**Table 9: Cost Estimates Used in Fleet Assessment**

Vehicle Type	40'	60'
CNG	\$673,000	-
Diesel	-	\$889,000
Battery Electric	\$1,060,000	\$1,476,000
Diesel-Hybrid	\$815,000	\$1,178,000
Hydrogen	\$1,382,000	\$1,770,000

**ZEB Fleet Transition Schedule and Composition**

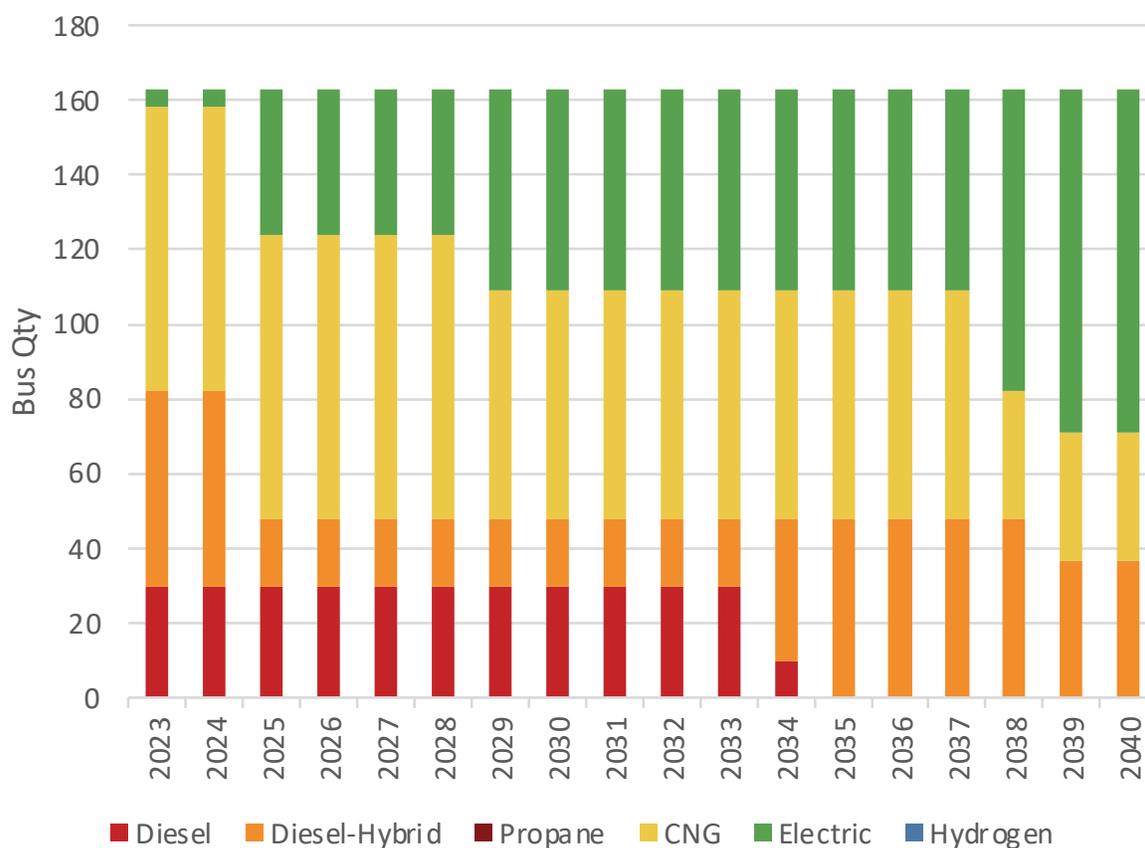
Given the block analysis and ABQ RIDE’s fleet replacement schedule and currently planned procurements, a transition timeline was developed. **Figure 5** depicts the annual baseline fleet composition through the transition period.

**Figure 5: Baseline Fleet Composition**



Despite recent increases in energy storage, BEBs are still subject to range limitations and cannot be placed into service on every block on a 1:1 replacement basis for diesel or CNG. As discussed in the Service Assessment section, BEBs can currently be operated on at least 30% of ABQ RIDE's blocks, improving to at least 69% by the end of the transition period. If ABQ RIDE desires to place BEBs on routes where the estimated vehicle range is less than the block distance, they must (1) modify the block distance and duration; (2) use multiple BEBs to replace a single diesel vehicle; or (3) utilize on-route charging. As there is no regulatory driver for full-scale BEB replacement, CTE assumes that ABQ RIDE would replace the vehicles that could be replaced with BEBs on a 1:1 basis as technology allows. The annual fleet composition through the transition period, assuming 1:1 replacement with depot only charging is depicted in **Figure 6**.

**Figure 6: BEB Depot Only Fleet Composition**

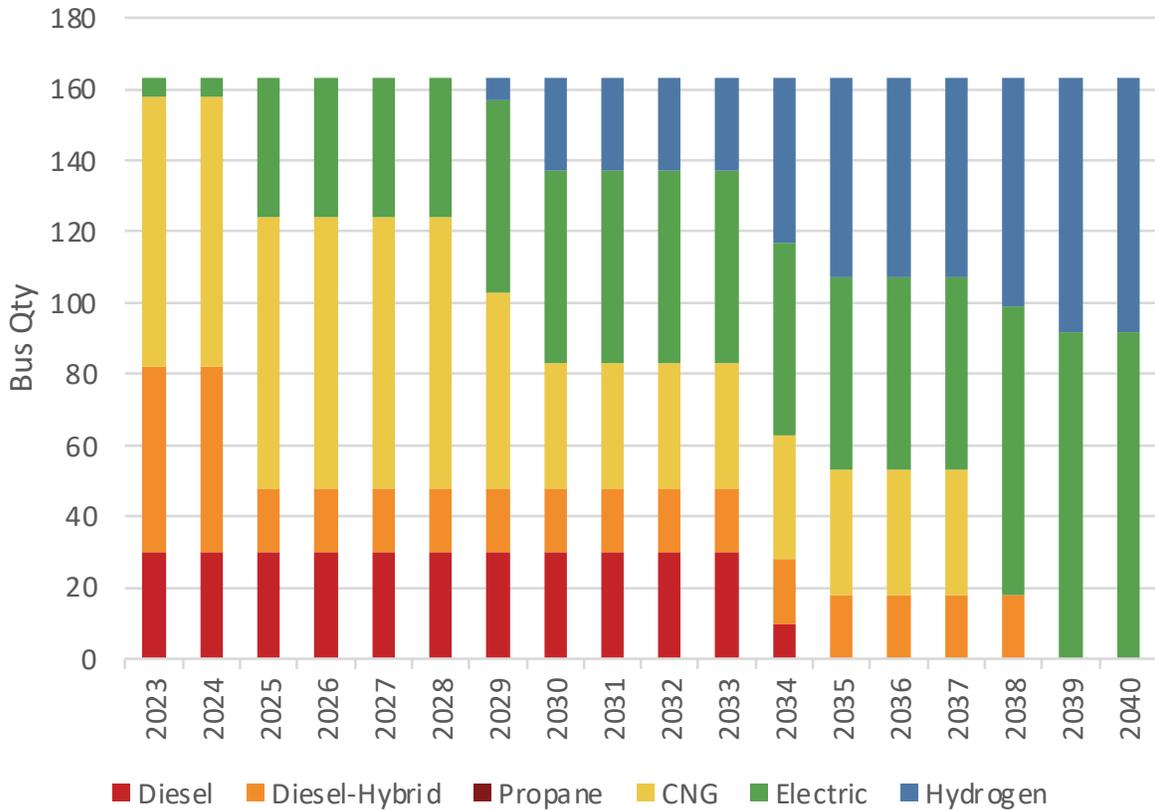


In the BEB Depot Only scenario, which only include heavy-duty buses (no vans), ABQ RIDE reaches a 30% zero emission fleet by 2030 and 54% zero emission fleet by 2040. **Figure 6** shows approximately 60% heavy duty blocks available by 2040 however, 60% of ABQ RIDE's fleet is not battery electric by 2040 due to the purchase schedule. For ABQ RIDE to reach a 100% ZEB fleet, additional technology such as on-route charging, would be needed; however, on-route charging was not evaluated in this transition plan. Further detailed evaluation of the route structure and potential locations for on-route charging infrastructure (e.g. transit centers) would be required to complete the on-route charging evaluation. It is expected that on-route charging would allow ABQ RIDE to approach a 100% zero-emission transition but it would come at increased capital

costs for infrastructure and electricity. On-route charging infrastructure is typically more expensive than depot charging and increases the electrical costs due to high demand charges at each on-route charging location.

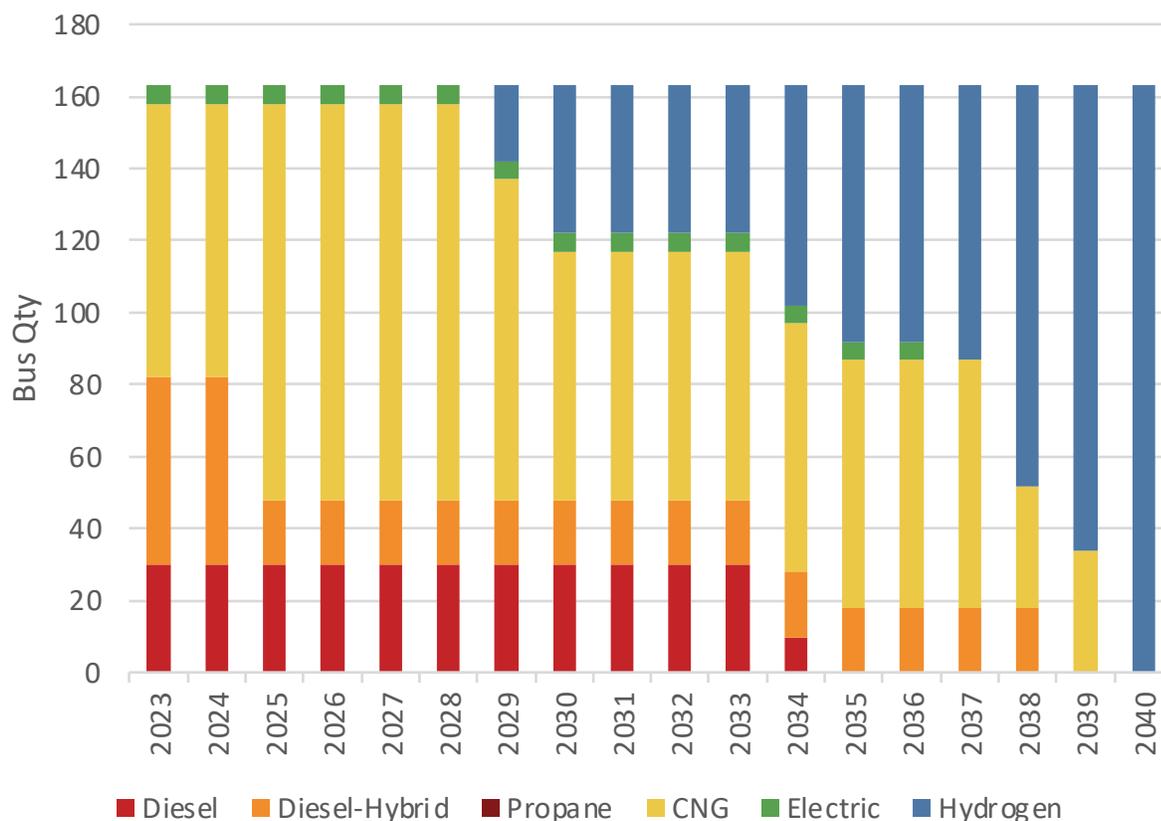
In **Figure 7**, results from the Mixed Fleet scenario are shown. In this scenario, ABQ RIDE purchases a mixed fleet of BEBs and FCEBs and is able to achieve a 60% zero emission fleet by 2030 and 100% zero emission fleet by 2039.

**Figure 7: Mixed Fleet Composition**



**Figure 8** below shows results from the FCEB Only scenario, in which ABQ RIDE replaces fossil fuel vehicles with only FCEBs beginning in 2029.

**Figure 8: FCEB Only Fleet Composition**



In the FCEB Only scenario, ABQ RIDE is able to achieve a fleet of 60% zero emission buses by 2030 and 100% zero emission buses by 2040. This scenario assumes that the hydrogen fueling infrastructure needed to support the deployment of FCEBs is not required until 2029 when the first FCEBs enter service.

### **BEB Fleet Transition Cost Comparison**

The transition and fleet composition schedules were used to develop the total capital cost for vehicle purchases throughout the transition period. Costs for the vehicles were assumed to increase with the rate of inflation, at an average rate between 2% and 4% throughout the transition period. The baseline costs were reflective of 2022 actual costs. By the end of the transition period, the cumulative vehicle costs vary substantially according to the technology selected.

**Table 10** below shows the total vehicle capital costs compared to baseline and the percent of blocks achievable by 2040 in each scenario.

**Table 10: Fleet Evaluation Summary**

	Baseline	BEB Depot Only	Mixed Fleet	FCEB Only
Total Vehicle Capital Costs	\$223,053,140	\$286,791,339	\$343,182,291	\$368,618,670
Cost Compared to Baseline	--	\$63,738,199	\$120,129,151	\$145,565,530
% of Baseline	--	124%	154%	165%
% ZEB by 2040	3%	54%	100%	100%

## Section 7 - Fuel Assessment

CTE conducted a fuel assessment to determine the projected annual cost of fuel during the transition period by fuel type (i.e., diesel, CNG, electricity, or hydrogen).

The terms “fuel” and “energy” are used interchangeably in this analysis, as ZEB technologies do not always require traditional liquid fuel. For clarity, in the case of BEBs, “fuel” is electricity, and costs include energy, demand and other utility charges. The primary source of energy for a BEB comes from the local electrical grid. Utility companies charge separate rates for total electrical energy used and the maximum electrical demand on a monthly basis. As more buses, and chargers, are added to a system, both the energy used and the demand increase. Rates also vary throughout the year and throughout the day (also called time of day rates); this makes costs highly variable. Costs not only depend on seasonal differences like temperature or local school schedules, but also the time of day that buses are charged.

FCEBs are more similar to diesel vehicles as they are fueled by a gaseous or liquid hydrogen fuel. In addition to the cost of the fuel itself, however, there are additional operational costs associated with the hydrogen fueling station that must be considered. Operation and maintenance costs to maintain fueling infrastructure are built into the Fuel Assessment.

### Fuel Assessment Assumptions

For the purpose of this fuel assessment, annual mileage and associated fuel use is constant for all vehicles through the transition period and is based on ABQ RIDE’s current fleet averages. BEB and FCEB fuel use is calculated from ABQ’s current sub-fleet mileage and efficiency assumptions were taken from either ABQ RIDE operations or CTE operational results. BEB and FCEB efficiency assumptions are based on a nominal estimate (i.e., an annual in-service average, and does not represent a strenuous estimate used for planning as in the previous Service Assessment).

Fuel cost estimates are based on the assumptions listed in **Table 11**. **Table 12** shows the fuel efficiency assumptions used for the fuel assessment, arranged by vehicle type. **Table 13** provides the fuel cost escalation applied during the transition period. The fuel cost escalation was prepared using the 2022 EIA *Annual Energy Outlook*<sup>5</sup>.

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<sup>5</sup><https://www.eia.gov/outlooks/aeo/>

**Table 11: Fuel Assessment Assumptions**

Fuel	Cost	Reference
Diesel	\$3.88/gallon	ABQ RIDE actual
CNG	\$1.01/therm	ABQ RIDE actual
Electric	\$0.17 kWh	ABQ RIDE actual
Hydrogen (trucked)	\$8.00/kilogram (kg)	Air Liquide estimated cost for delivery from Las Vegas, NV

**Table 12: Fuel Efficiency (Nominal)**

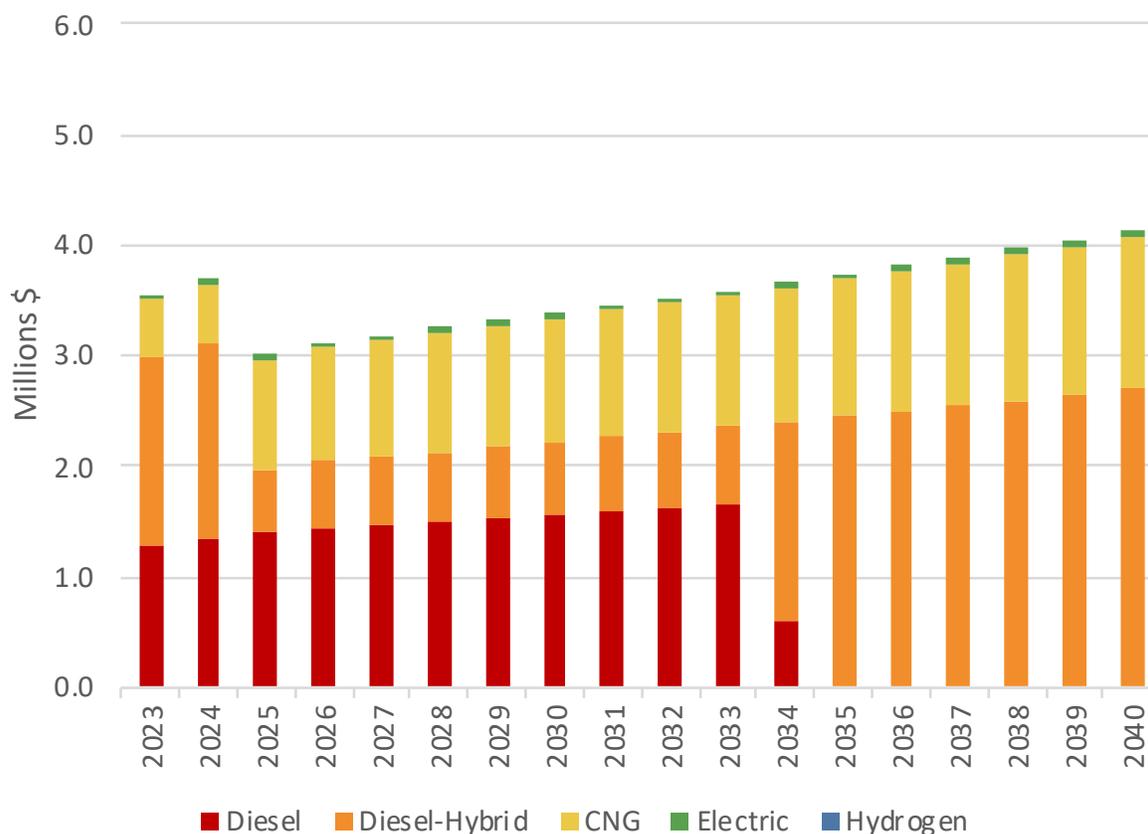
Vehicle Type	BEB [kWh/mi]	FCEB [kg/mi]
Van	1.1	0.06
35'	1.8	0.12
40'	1.8	0.12
60'	2.3	0.15

**Table 13: Cost Escalation**

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Fossil Fuels Multiplier	1.00	1.00	1.05	1.08	1.11	1.14	1.17	1.20	1.23	1.26	1.29	1.33	1.36	1.40	1.43	1.47	1.51	1.55
Electricity/H2 Multiplier	1.00	1.00	1.04	1.05	1.07	1.09	1.11	1.13	1.15	1.17	1.20	1.22	1.24	1.26	1.28	1.31	1.33	1.35

**Figure 9**, below, shows the baseline annual fuel costs by fuel type based on the ABQ RIDE planned replacement schedule. Expenditures during the transition period in the baseline scenario are approximately \$64 million. The Baseline scenario is for comparative purposes only and assumes that the vehicles follow the planned ABQ RIDE replacement schedule throughout the life of the study. The Baseline scenario helps create context for incremental costs incurred or benefits accrued by transitioning the fleet to zero-emission.

**Figure 9: Baseline - Annual Fuel Costs by Fuel Type**



### Annual Fuel Costs

Diesel and CNG costs are based on current ABQ data (2022 actual cost) and BEB fuel costs are calculated using utility bills from Public Service Company of New Mexico (PNM) for current BEB operations (~\$0.17/kWh average). PNM is ABQ RIDE's electrical utility provider.

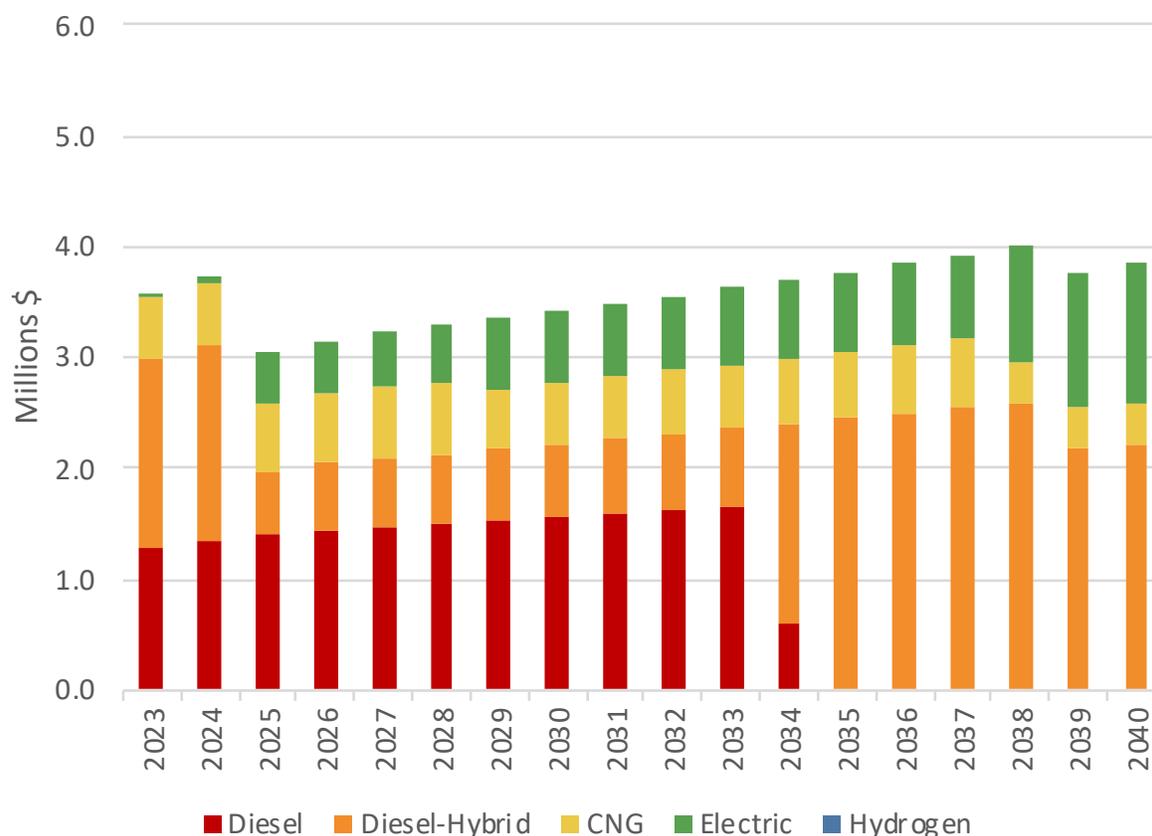
FCEB fuel costs are calculated using best available regional costs for trucked-in hydrogen (\$8.00/kg) estimated from Air Liquide. All fuel costs are escalated using the 2023-2040 average percent change from the 2022 EIA Annual Energy Outlook<sup>6</sup> (see **Table 13** above for more detail). A sensitivity analysis was also conducted assuming hydrogen costs were reduced by 3% each year beginning in 2025 as a result of new hydrogen production capacity expected to be constructed.

As done in the Fleet Assessment, three scenarios were evaluated as part of the Fuel Assessment. The first scenario, shown in **Figure 10**, provides the annual fuel costs if ABQ RIDE purchases only BEBs to replace fossil fuel vehicles during the transition period and charges BEBs only at the depot. In this scenario, expenditures total approximately \$64 million from 2023 –

<sup>6</sup><https://www.eia.gov/outlooks/aeo/>

2040. Reductions in cost in the years 2025 and 2039 are due to the replacement of diesel hybrid vehicles with BEBs.

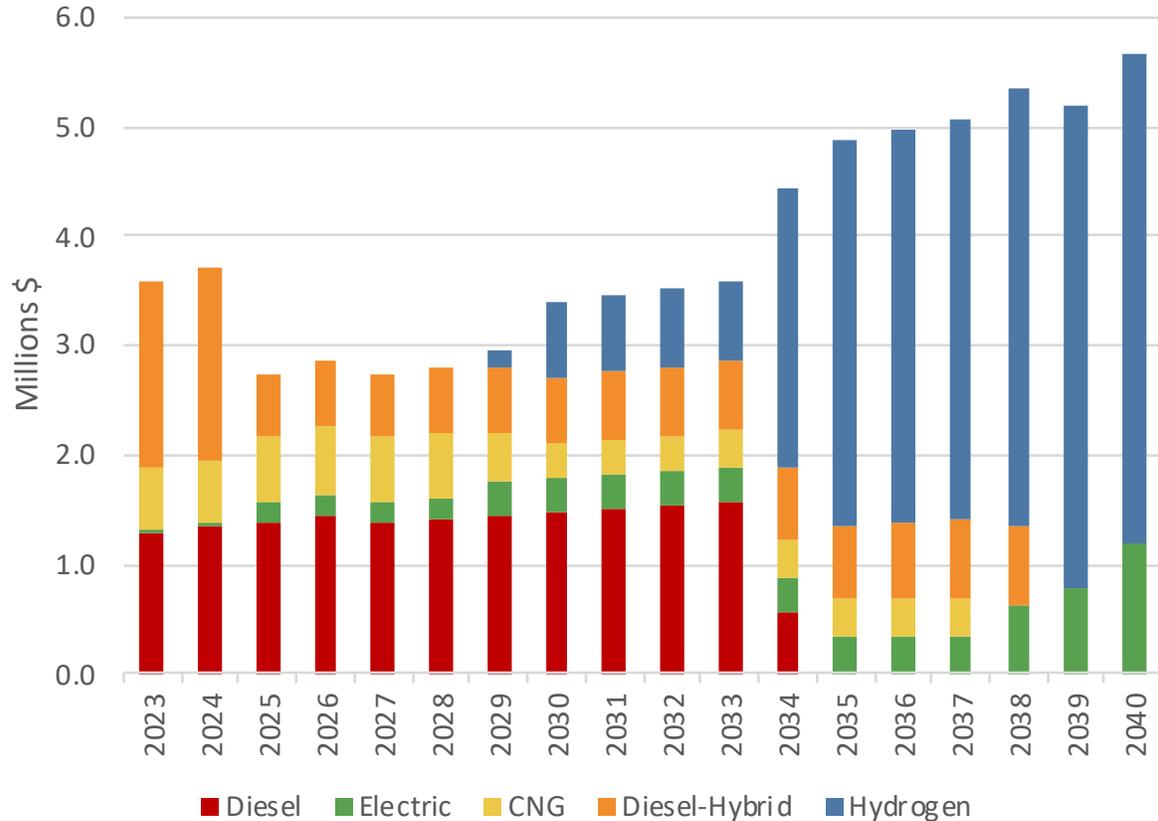
**Figure 10: BEB Depot Only – Annual Fuel Costs by Fuel Type**



The second scenario, shown in **Figure 11**, depicts the annual fuel costs in a mixed fleet scenario where ABQ RIDE purchases both BEBs and FCEBs to replace fossil fuel vehicles. In this scenario, expenditures total approximately \$71 million from 2023 – 2040 with annual costs increasing to more than \$5 million annually by 2040 due to the projected cost of hydrogen. It is worth noting that significant investment from the federal government in hydrogen production such as the U.S. Department of Energy’s Regional Clean Hydrogen Hubs Program<sup>7</sup> investment of \$8B are expected to increase supply and reduce the cost of hydrogen over time.

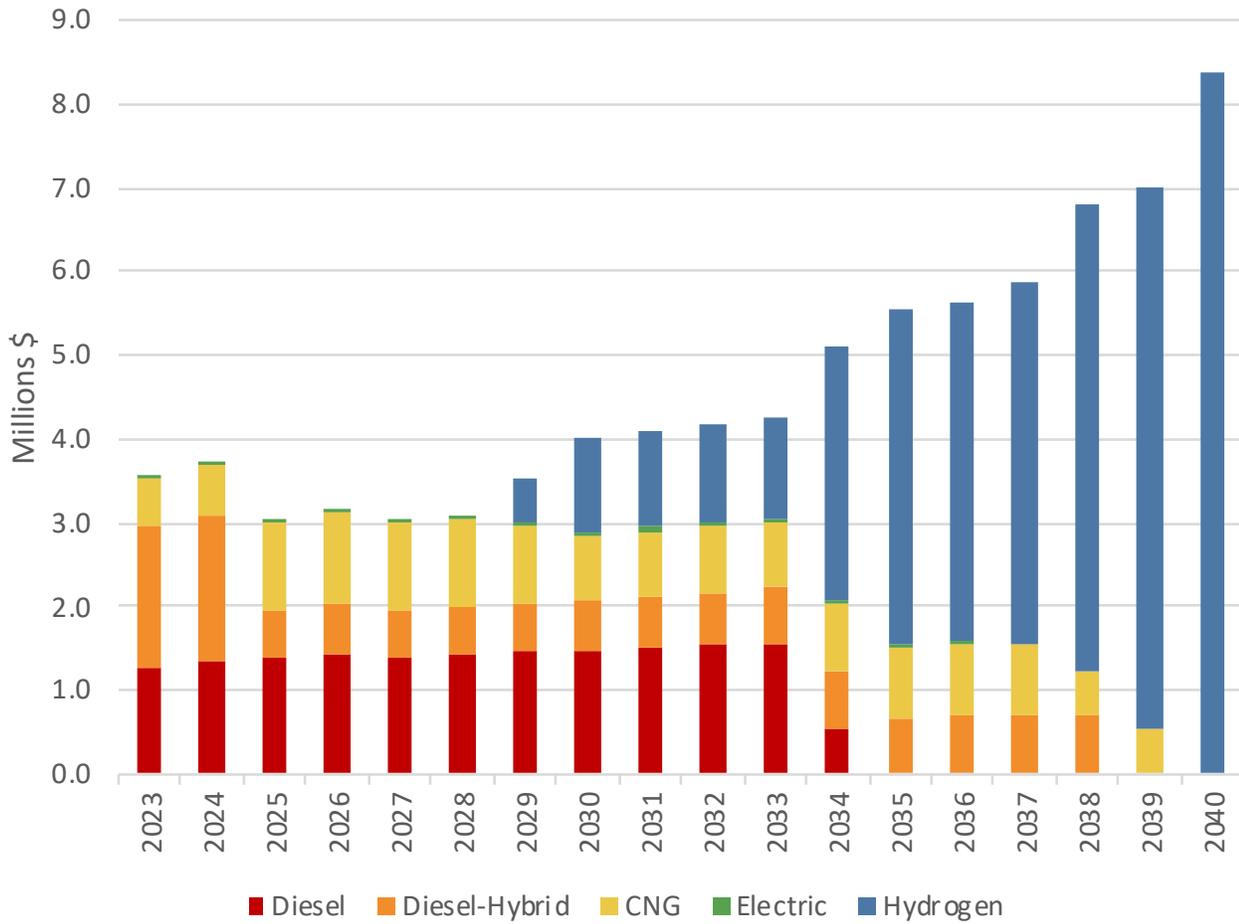
<sup>7</sup><https://www.energy.gov/oced/regional-clean-hydrogen-hubs>

**Figure 11: Mixed Fleet – Annual Fuel Cost by Fuel Type**



Lastly, the third scenario evaluated was assuming ABQ RIDE replaced fossil fuel vehicles with FCEBs. As shown in **Figure 12**, total expenditures during the transition period are estimated to be approximately \$84 million. The years 2030 and 2040 see cost increases due to the replacement of CNG vehicles with hydrogen. Inflation for hydrogen is estimated to be similar to that of electricity costs but lower than fossil fuels. If hydrogen pricing decreases by 3% per year beginning in 2025 then the projected cost of hydrogen in 2040 would be less than \$5/kg. This would reduce the total cost of the transition to zero emissions by approximately \$16 million and bring costs closer to parity with diesel fuel, though still more expensive than CNG.

**Figure 12: FCEB Only – Annual Fuel Cost by Fuel Type**



**Table 14** provides a comparison of the estimated fuel costs for each scenario through 2040 compared to baseline.

**Table 14: Fuel Evaluation Cost Summary**

	Baseline	BEB Depot Only	Mixed Fleet	FCEB Only
Fuel Costs	\$64,358,978	\$64,357,503	\$70,881,484	\$83,958,199
Cost Compared to Baseline	--	-\$1,474	\$6,522,506	\$19,599,221
% of Baseline	--	>99%	110%	130%
% ZEB by 2040	3%	54%	100%	100%

## Section 8 - Maintenance Assessment

One of the expected benefits of moving to a BEB or FCEB fleet is a reduction in maintenance costs. Conventional wisdom estimates that a transit agency may attain maintenance savings up to 30% by operating BEBs. This is due to the fact that there are fewer fluids to replace (no engine oil or transmission fluid), fewer brake changes due to regenerative braking, and far fewer moving parts than on a diesel bus. However, the savings in traditional maintenance costs may be offset by the cost of battery or fuel-cell replacements over the life of the vehicle. For this analysis, a battery warranty included with the vehicle purchase cost was assumed to mitigate the mid-life battery replacement.

There is limited data available on early deployments and many early deployments are from new manufacturers where production quality issues manifest as maintenance issues. Thus, assumptions used for calculating cost for labor and materials is based on current ABQ RIDE maintenance costs. BEB and FCEB labor and material costs are based on a percentage of costs associated with maintaining diesel buses or comparative analysis to maintenance of compressed natural gas (CNG) buses.

Percentages were derived from an analysis performed by the U.S. Department of Energy National Renewable Energy Laboratory (U.S. DOE NREL). There is limited information available regarding maintenance costs for FCEBs due to the limited number of vehicles in operation in the United States. Data from AC Transit, which operates the largest FCEB fleet and the county, and from the Orange County Transportation Authority (OCTA), that has been operating FCEBs since 2020, was used to estimate expected maintenance costs.

Maintenance cost assumptions are provided in **Tables 15** and **16**.

**Table 15: Maintenance Cost Assumptions**

Type	Labor & Materials Estimate	Source
CNG	\$1.02/mile (40')	ABQ RIDE Data
Diesel	\$1.05/mile (60')	ABQ RIDE Data
Diesel Hybrid	\$1.19/mile (40')	ABQ RIDE Data
BEB	\$0.74/mile	U.S. DOE NREL (~70% of diesel) <sup>1</sup>
FCEB	\$1.02/mile (40') \$1.16/mile (60')	OCTA – costs comparable to CNG operations

<sup>1</sup> Foothill Transit Battery Electric Bus Demonstration Results: Second Report, Leslie Eudy and Matthew Jeffers, US DOE NREL, June 2017

**Table 16: Mid Life Overhaul Cost Estimates**

Type	Overhaul Scope	Estimate	Source
CNG	Engine & transmission overhaul	\$40k per bus	ABQ RIDE Estimate
Diesel Hybrid	Engine & transmission overhaul	\$99k per bus	ABQ RIDE Estimate
BEB	Battery replacement [Not required with this estimate as battery warranty incorporated]	\$500 per kWh	Bus OEM
FCEB	Fuel cell overhaul	\$40k per bus	Fuel Cell OEM

The cumulative estimated costs of maintenance over the transition period are provided in **Table 17**.

**Table 17: Maintenance Evaluation Cost Summary**

	Baseline	BEB Depot Only	Mixed Fleet	FCEB Only
Maintenance Costs	\$122,827,936	\$108,406,738	\$106,911,141	\$121,234,677
Cost Compared to Baseline	--	-\$14,421,198	-\$15,916,795	-\$1,593,258
% of Baseline	--	88%	87%	99%
% ZEB by 2040	3%	54%	100%	100%

## Section 9 - Facilities Assessment

Once bus and fueling requirements are understood for the ZEB transition, the requirements for supporting infrastructure were determined including the charging equipment for BEBs and/or hydrogen fueling equipment for FCEBs. The Facilities Assessment determines the scale of charging and/or hydrogen infrastructure necessary to meet the demands of the projected fleet and energy use estimated in the Fleet and Fuel Assessments, as well as all associated costs with installation of this infrastructure.

### Current BEB Charging Infrastructure

With pilot BEB deployments, charging requirements are met relatively easily with a handful of plug-in pedestal chargers and minimal infrastructure investment. Scaling to a fleetwide BEB deployment requires a substantially different approach to charging and infrastructure upgrades. Plug-in charging is typically no longer practical as charger dispensers installed in the parking area may create a hazard. Instead, an alternative approach is to use overhead pantograph or reel dispensers attached to gantries or to existing overhead roof structures; however, ABQ RIDE currently has charging positions for up to 24 vehicles (but only 5 chargers) from previous work completed at the Daytona facility. The previous work included installation of up to 24 charging positions along concrete islands with transformers, switchgear, and conduit/conductors to support planned BYD buses. Due to performance issues with the BYD buses, the bus delivery was canceled and the buses were returned but the infrastructure (except for the chargers) remains in place.

ABQ RIDE installed temporary infrastructure (five 125-kW chargers) to charge five (5) Proterra BEBs in 2022. The temporary chargers are scheduled for replacement with five (5) 180-kW chargers each equipped with two (2) dispensers each in early 2023. The replacement of the chargers required upgrades to the existing switchgear and conductors. The approximate location of the charging area is shown in the blue box on **Figure 13**.

**Figure 13: BEB Charging Area Location**





### BEB Charging Infrastructure Assumptions

The BEB infrastructure cost estimate assumes that all charging takes place at ABQ RIDE's Daytona Transit Facility. This estimate also assumes that by 2040 there will be 89 buses (54% of ABQ RIDE's fleet) feasible for replacement with BEBs. Costs will be increased if more vehicles are actually feasible to operate as BEBs by 2040. Cost estimates were developed assuming 1) expansion of the current system that utilizes pedestal mounted dispensers in the bus parking area to accommodate charging of 89 buses by 2040, and 2) utilizing the existing infrastructure to charge the first 24 buses and a gantry mounted system for the expansion to accommodate up to 89 buses (65 more buses) charging at Daytona. The use of overhead charging structures such as gantry or a canopy allows for reduced underground conduit installation throughout the yard and may reduce the space needs to accommodate up to 89 vehicles but it is typically more costly than the pedestal mounted installation. It is expected that the gantry infrastructure may reduce the available bus parking by approximately 10% while the parking losses due to pedestal mounted infrastructure is expected to be higher. Examples of a gantry system that utilize overhead pantographs (Schiphol Airport, Amsterdam, Netherlands) and a rendering of a system utilizing a photovoltaic roof canopy (planned Proterra/Scale Microgrid solution for Valley Transportation Authority) are provided in **Figure 16**.

**Figure 16: Overhead Charging Solutions**



For cost estimating purposes, it was assumed that each charger would be equipped with two (2) dispensers. As such a total of 45 chargers would be required to support the bus deployment. In addition, it is recommended that spare charger capacity be incorporated at a rate of up to 10% to mitigate potential issues with malfunctioning equipment.

ABQ RIDE's existing electrical service is 5,200 kVA delivered by a total of three transformers. An additional approximately 3,000 kVA service may be required to support the build out of charging 89 buses (54% of fleet), however, charge management may be able to reduce the capacity requirement. As discussed previously, this estimate assumes 10% redundant charging capacity. The cost to supply an additional roughly 3,000 kVA is not included in these costs and further coordination with PNM is required to understand capacity and expected cost.

Additional switchgear and other electrical equipment would be installed in the existing fenced area where the current switchgear and transformers are located. Chargers could be installed

either in the electrical equipment enclosure or in the bus charging area, depending on a cost design and cost evaluation and selected charging alternative (pedestal mounted plug-in charging or overhead gantry). Direct-current chargers typically can be installed up to approximately 400 feet away from the dispenser locations.

Rough-order-magnitude (ROM) cost estimates developed to build out charging options were based on work completed to install the first five (5) permanent chargers for ABQ RIDE as well as costs to complete build out of similar facilities (Charleston Area Regional Transportation Authority, Spokane Transit Authority, San Diego Metropolitan Transit System, Broward County Transit). All cost estimates for BEB infrastructure should be considered a Class IV estimated with an accuracy range of -30% to +50%.

A rough-order-magnitude (ROM) estimate to build out the charging system to accommodate up to 89 buses with a gantry or canopy system is estimated at approximately \$19 million (see **Figure 17**). This cost is based on the cost of the recent construction costs for a gantry at San Diego Metropolitan Transit System as well as canopy construction at Broward County Transit. This estimate also includes costs to expand the existing charging infrastructure with pedestal mounted infrastructure to accommodate up to 24 vehicles at a capital cost (including procurement and installation of the necessary equipment) of approximately \$75,000 per bus. The average per bus capital cost to procure and install the gantry or canopy infrastructure is estimated at approximately \$210,000.

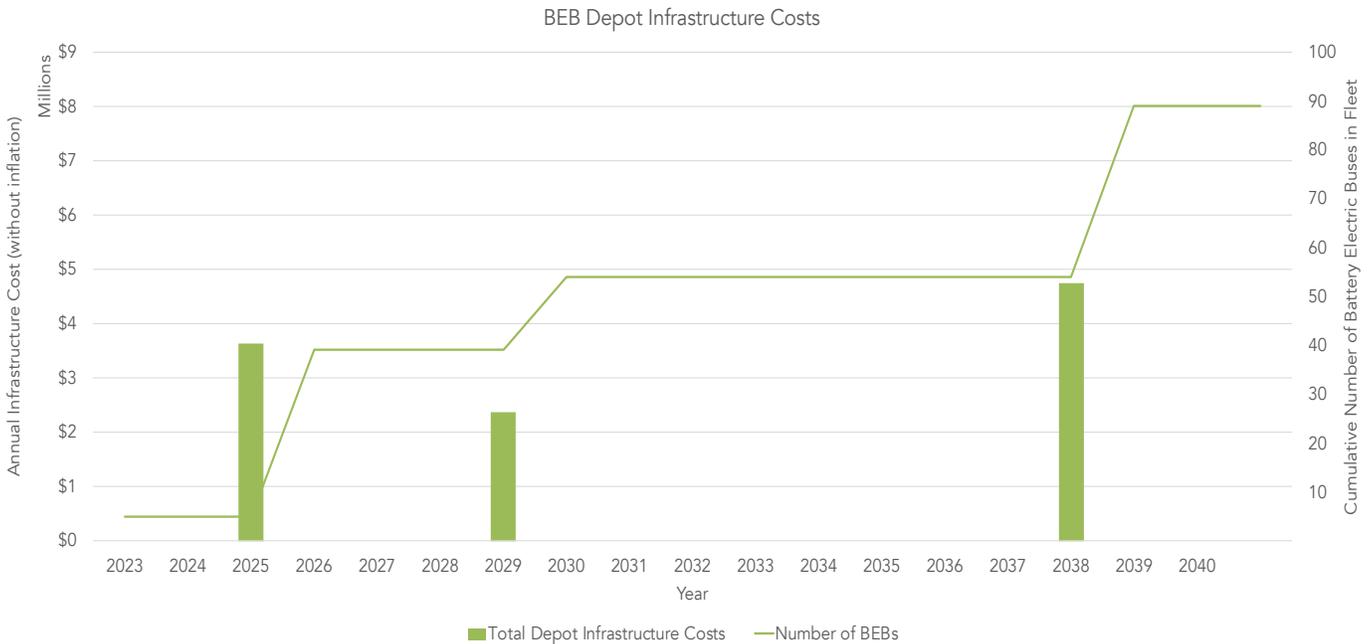
**Figure 17: Estimated Infrastructure Costs for BEB Depot Only - Gantry**



The ROM estimate to build out additional charging islands that utilize bulk charging rather than individual chargers (e.g. 1.5 megawatt charger that can support up to approximately 20 vehicles) is approximately \$11 million. This estimate is based on recent construction costs provided by Miller Electric for installation of a similar system at the Charleston Area Regional Transportation Authority that supports up to 40 vehicles (see **Figure 18**). The average per bus

capital cost to procure and install the additional pedestal mounted charging equipment (beyond the first 24 buses) is estimated at approximately \$120,000.

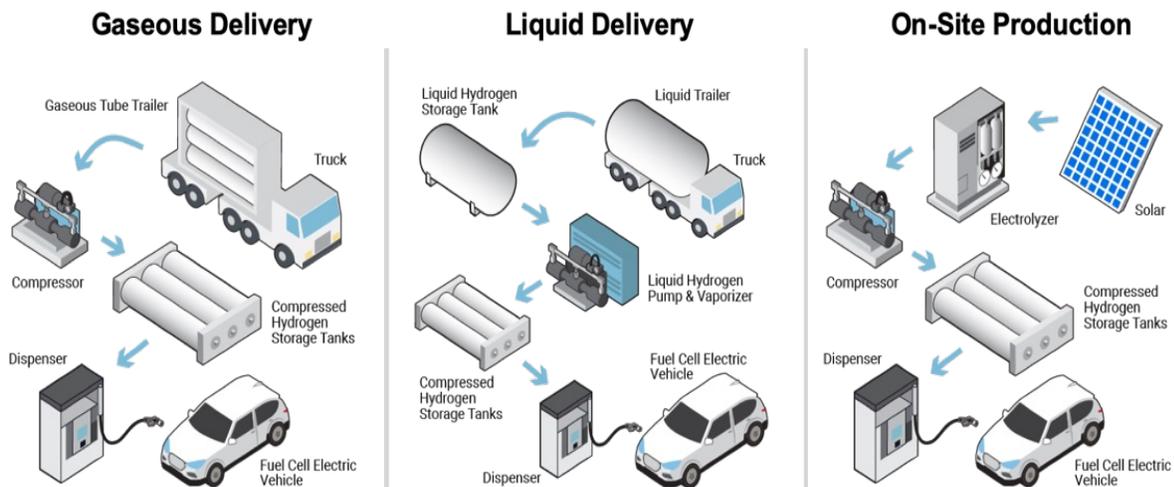
**Figure 18: Estimated Infrastructure Costs for BEB Depot Only – Direct Burial Installation**



**FCEB Infrastructure**

A primary advantage of FCEBs is that fueling operations with hydrogen are similar to diesel or CNG fueling operations. As with electric, rather than building out the infrastructure all at once, projects are sized and scheduled to meet the near-term fueling requirements. There are three primary ways that hydrogen can be delivered as depicted in **Figure 19**.

**Figure 19: Hydrogen Delivery**



*Figure 5. Summary of hydrogen fueling station delivery options (Image source: California Fuel Cell Partnership)*

Hydrogen can be delivered either as a gas or as a liquid. Although gaseous hydrogen is more readily available today, it is not generally available in quantities that would support a large scale deployment of buses. In addition, liquid hydrogen is much more energy dense, therefore more energy can be stored on-site to support operations. Photos provided in **Figure 19** depict liquid hydrogen storage and fueling infrastructure at the Orange County Transportation Authority (top) and AC Transit (bottom).

*Figure 20: Hydrogen Storage and Dispensing Examples*



A third option is the on-site production of hydrogen through steam methane reformation (SMR) or electrolysis. SMR, utilizing methane, water, and heat, is the cheapest and most common method for hydrogen production in the United States today; however, significant quantities of carbon dioxide are produced as a byproduct. Electrolysis utilizes water and energy to produce hydrogen with the only byproduct being oxygen. This is the preferred alternative for hydrogen production, particularly if it is produced using renewable energy sources. This is often referred to as green hydrogen and is 100% zero-emission. The United States government has made significant investment in building out hydrogen production infrastructure with \$8 billion in

funding for the Regional Hydrogen Hub program as well as providing tax incentives for producers/suppliers of green hydrogen.

Hydrogen fueling operations for ABQ RIDE assume trucking of liquid hydrogen to the depot, on-site storage at the depot, and the associated fueling equipment. Infrastructure costs were based on similar projects either completed to date or currently scoped.

A mobile fueler, provided by a third-party hydrogen supplier, could be used to support the deployment of the first approximately ten (10) FCEBs. A mobile fueler consists of the equipment to store, compress, chill, and dispense hydrogen fuel to the buses. The fuelers are typically zero emission and do not require utility hook ups. Liquid hydrogen can be delivered by truck to the fueler.

In order to support a growing FCEB fleet beyond ten (10) vehicles, Phase I of permanent hydrogen fueling infrastructure would include installing a 25,000-gallon liquid hydrogen tank, two vaporizers, two pumps, and one assembly of high-pressure gaseous hydrogen storage vessels. These assumptions were based on an assumed fueling time of 12 to 18 minutes per bus, depending on the hydrogen storage capacity of the bus, and approximately three (3) days of hydrogen storage. The footprint for this equipment is estimated to be approximately 30' x 90'. Two (2) dispensers would initially be installed at the existing CNG fueling area with the ability to add additional dispensers as the fleet grows. To improve resilience, the hydrogen design could include a backup generator to operate the fueling equipment. Phase II of the installation of the hydrogen fueling infrastructure would involve adding additional liquid hydrogen storage and accompanying vaporization, pumping, and dispensing equipment. The equipment compound size would approximately double. A maximum of six (6) dispensers are expected to be required to support the full fleet of 163 FCEBs. The hydrogen storage equipment could be installed in the area depicted in **Figure 21**.

**Figure 21: Hydrogen Infrastructure Potential Location**

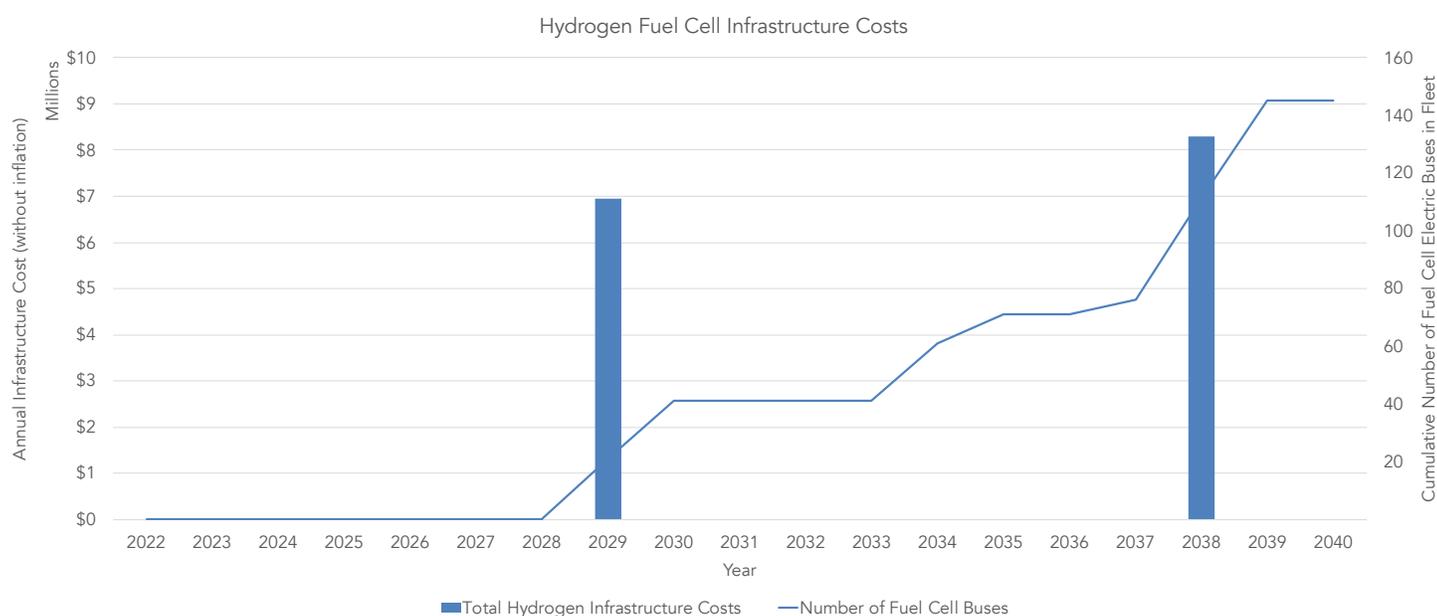


This analysis assumed that all fueling would occur at the Daytona facility; however, installation of fueling infrastructure at ABQ RIDE's Yale facility to replace the out of service CNG compressor is also feasible.

In addition to the hydrogen fueling infrastructure, upgrades to the maintenance building would be required to support conducting maintenance activities on hydrogen FCEBs. Typically these include improvements to ventilation, addressing electrical hazards, and adding hydrogen gas detection; however, because CNG buses are already serviced at the ABQ RIDE facility, it is likely that most of these requirements have been met other than the incorporation of hydrogen gas detection.

Installation of hydrogen fueling infrastructure is expected to cost approximately \$15 million, completed in two separate phases. **Figure 22** illustrates the estimated infrastructure costs for this scenario compared to the growth in FCEBs in ABQ RIDE's fleet. These estimates do not account for potential inflation. All cost estimates for hydrogen infrastructure should be considered a Class IV estimated with an accuracy range of -30% to +50%.

**Figure 22: Estimated Infrastructure Costs for FCEB Only**



### Mixed Fleet – BEB and FCEB Infrastructure

In a mixed fleet scenario BEB infrastructure could be utilized to support 89 BEBs and FCEB infrastructure to support the remaining 74 FCEBs that would compose the ABQ RIDE fleet in 2040 in this scenario.

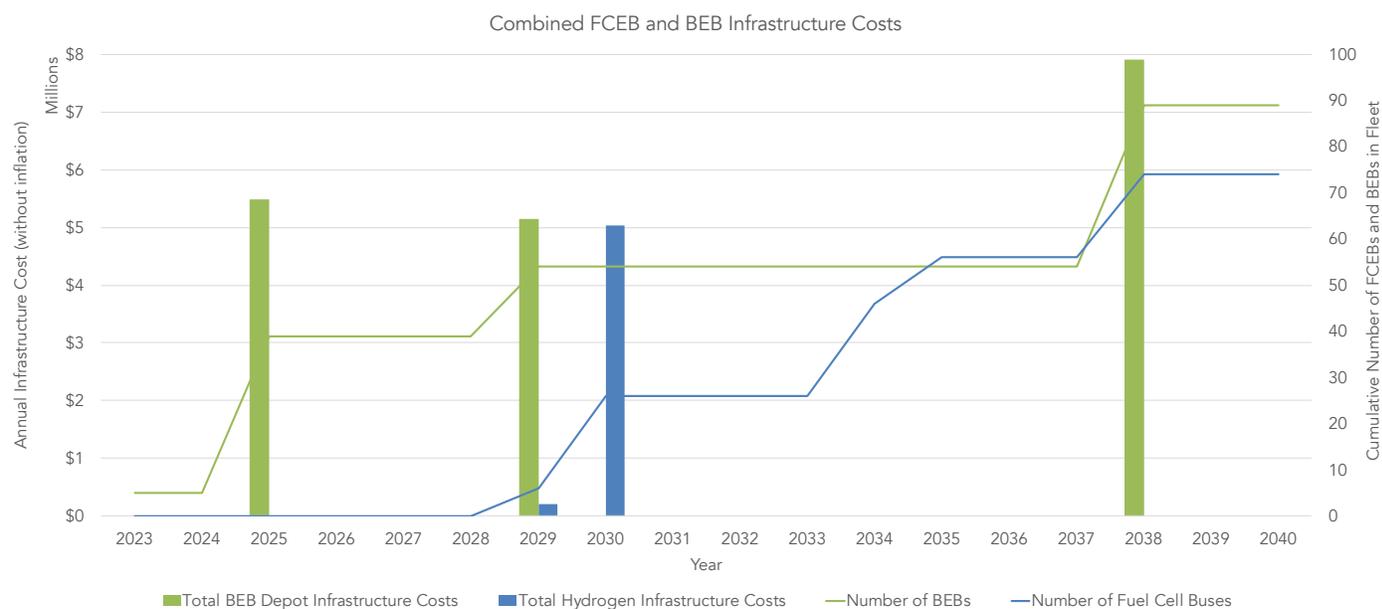
The BEB infrastructure in this scenario is the same as was previously detailed in the BEB Depot Only scenario. As discussed, this would include sufficient charging capacity to charge all 89 buses (two buses per charger). The first 24 buses would be charged with pedestal mounted plug in dispensers in the current area that was developed for BEB charging. The remaining 65

buses would either be charged by expanding the existing area include pedestal mounted charging or with a gantry or canopy system. Installation of charging infrastructure on gantries or canopies would cost approximately \$19 million, while expanding the BEB charging system utilizing pedestal mounted infrastructure is expected to cost approximately \$11 million.

FCEB infrastructure in a mixed fleet scenario would begin with a mobile fueler to support the deployment of the first six buses. The hydrogen fueling infrastructure associated with the Phase I deployment would be constructed to support the full 74 bus deployment, including installation of at least two (2) dispensers at the current CNG fueling rack. The total cost for the hydrogen fueling infrastructure is estimated at approximately \$7 million depending on the location at the facility.

As shown in **Figure 23**, total infrastructure cost in the mixed fleet scenario is approximately \$24 million, assuming a gantry or canopy BEB charging system installation or approximately \$19 million with expansion of the current charging approach in the bus parking area.

**Figure 23: Estimated Infrastructure Costs for FCEB Only**



Infrastructure upgrade costs for the Baseline, BEB Depot Only, Mixed Fleet, and FCEB Only scenarios are provided in **Table 18**. BEB infrastructure costs assume installation of gantry structure or canopy to support charging to reduce the potential for parking losses. Note that there are no capital costs associated with the Baseline as all of the infrastructure associated with baseline fueling (CNG, diesel, and charging for the current five BEBs) is already in place. On-going maintenance costs for fueling infrastructure are included in the fuel cost evaluation as a component of the fuel cost.

**Table 18: Infrastructure Cost Evaluation (ROM Estimates, -30% to +50% Range)**

	Baseline	BEB Depot Only	Mixed Fleet	FCEB Only
Infrastructure Costs	--	\$18,535,000	\$23,777,028	\$15,250,000
% ZEB by 2040	3%	54%	100%	100%

## Section 10 - Total Cost of Ownership

The Total Cost of Ownership compiles the results from the Service, Fleet, Fuel, Maintenance, and Facilities assessments to provide estimated costs throughout the transition period. It includes selected capital and operating costs of each transition scenario over the transition timeline. There may be other costs incurred (i.e., incremental operator and maintenance training); however, these four assessment categories are the key cost drivers in ZEB transition decision-making.

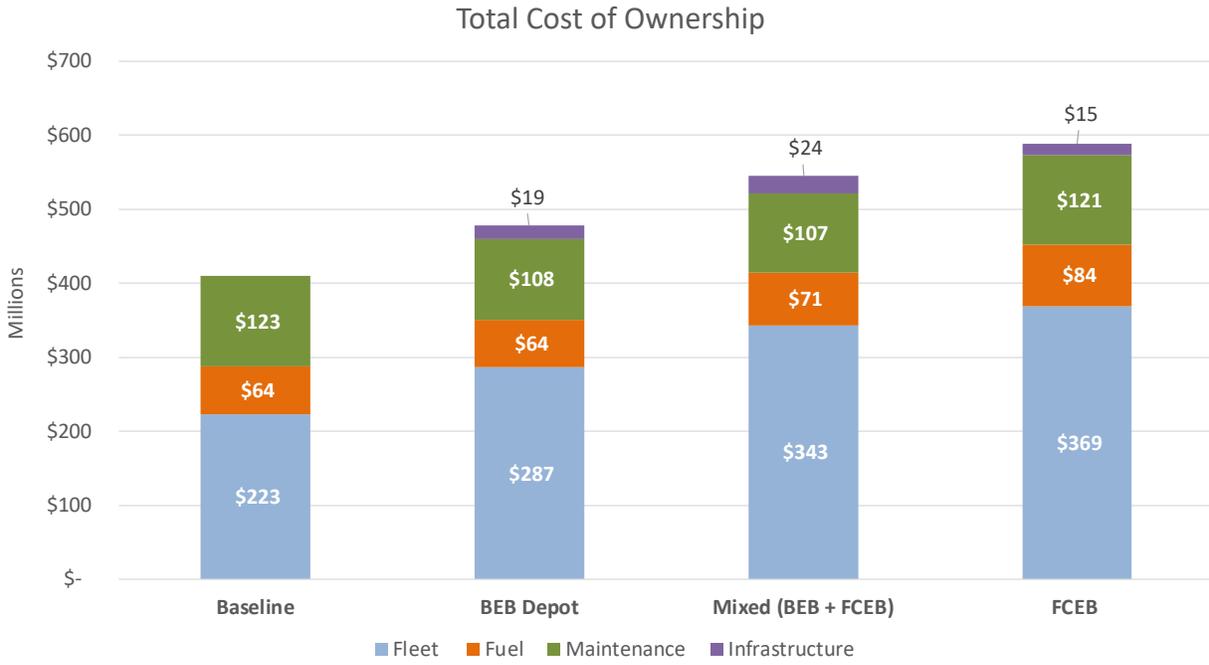
It is important to note that cost reductions are not considered for economies of scale related to ZEB technology growth because there is no historical context with which to estimate. Future changes to ABQ RIDE's service level, depot locations, route alignments, block scheduling, etc. are unknown. The provided costs are an estimate, informed by detailed analysis using assumptions explained throughout this study. The estimated Total Cost of Ownership for ABQ RIDE's ZEB transition as detailed in this analysis are provided in **Table 19** and **Figure 24**.

**Table 19: Total Cost of Ownership for ZEB Transition (2023-2040)**

Category	Baseline	BEB Depot Only	Mixed Fleet	FCEB Only
Fleet	\$223,053,140	\$286,791,339	\$343,182,291	\$368,618,530
Fuel	\$64,358,978	\$64,357,503	\$70,881,484	\$83,958,199
Maintenance	\$122,827,936	\$108,406,738	\$106,911,141	\$121,234,677
Infrastructure	--	\$18,535,000	\$23,777,028	\$15,250,000
<b>Total</b>	<b>\$410,240,053</b>	<b>\$478,090,580</b>	<b>\$544,751,944</b>	<b>\$589,061,546</b>
Compared to Baseline	--	+\$67,850,527	+\$134,511,891	+\$178,821,493
% Compared to Baseline	--	117%	133%	123%
% ZEB Fleet	3%	54%	100%	100%

Results from the total cost of ownership analysis indicates that additional costs, expected to be between \$67M to \$178M more than Baseline, will be required to support a transition to ZEBs, whether BEBs, FCEBs, or a Mixed Fleet are selected.

**Figure 24: Total Cumulative Capital & Operating Costs – All Scenarios (2023-2040)**



## Section 11 - Conclusions and Recommendations

ZEB technologies are in a period of rapid development and change. BEBs will require significant investment in facilities and infrastructure and may require changes to service and operations to manage their inherent constraints. On the other hand, FCEBs are believed to provide an approximate operational equivalent to diesel or CNG, however, the current incremental cost of buses, fueling infrastructure, and fuel places this technology at a disadvantage.

If ABQ RIDE selects BEBs with charging only at the depot as their transition strategy, this would allow for a transition of at least 54% of the fleet to BEBs by 2040. To reach a 100% zero emission fleet, other alternatives such as on-route charging or the purchase of FCEBs would need to be implemented. In a mixed fleet scenario, FCEB costs are adversely impacted by the currently high FCEB capital costs. The cost of an FCEB is approximately two times that of a comparable diesel vehicle and hydrogen costs are currently estimated at \$8/kg. Hydrogen costs would need to be reduced to less than approximately \$5/kg to be comparable to current diesel costs, while cost parity with CNG is even more challenging due to the low cost and subsidies available for CNG.

An initial deployment of up to 24 BEBs may be cost effective for ABQ RIDE, as a significant portion of the charging infrastructure is in place or provisioned for from the previous work conducted at the Daytona facility.

Recommendations for ABQ RIDE are as follows:

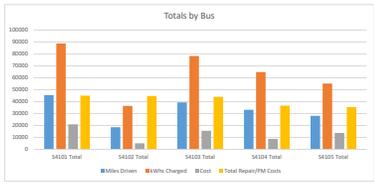
1. **Complete detailed evaluation of BEB charging potential at Daytona:** Engage the services of a qualified electrical or architecture and engineering firm to evaluate current service availability and future potential build out at the Daytona facility. Consider using this firm to evaluate other ABQ RIDE facilities such as transit centers for the suitability for on-route charging. Bus or charger OEMs that offer turnkey charger installation solutions could be considered to complete this evaluation.
2. **Evaluate Charging as a Service:** A long term contract (>20 years) may be required but the provider could be responsible for all interconnections with PNM, installation, maintenance, and ensuring reliability of all charging infrastructure. Energy would be typically be charged on a per kWh basis. This approach could also be used to incorporate design and installation of solutions that could add resilience such as a microgrid.
3. **Consider design/build/operate agreements with hydrogen suppliers for build out of hydrogen fueling.** If utilization of hydrogen FCEBs is selected, then consider agreements with a qualified firm to design, build, and operate (DBO) the hydrogen supply and fueling infrastructure. This typically requires an agreement to purchase fuel from the supplier at a set rate per kilogram of fuel delivered or dispensed. These agreements ensure consistent operation of the fueling equipment and supply.
4. **Future redevelopment plans at Yale Transit Facility:** If future redevelopment plans for ABQ RIDE's Yale facility include bus storage, hydrogen fueling or battery electric charging infrastructure to replace the CNG compressor that is past it's useful life and is out of service.

The transition to ZEB technologies represents a paradigm shift in bus procurement, operation, maintenance, and infrastructure. The technology requires significant development before it is ready to support fleetwide transitions. However, it is only through a continual process of deployment with specific goals for advancement that the industry can achieve the goal of economically sustainable, zero-emission public transit. Ultimately, the ZEB technology that is most efficient and sustainable to operate will evolve into either the majority ZEB solution or the only ZEB solution.

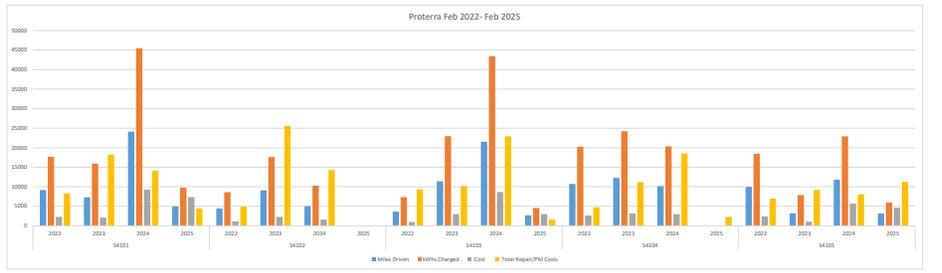
## Section 12 – References

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Equipment ID	Miles Driven	kWhs Charged	Cost	Total Repair/PM Costs
S4101 Total	45238	88833.25	\$ 20,980.88	\$ 45,038.50
S4102 Total	18578	36476.05	\$ 5,076.45	\$ 44,783.35
S4103 Total	39954	78323.23	\$ 15,605.58	\$ 44,018.64
S4104 Total	23212	64441.32	\$ 8,806.53	\$ 36,688.72
S4105 Total	28139	55204.53	\$ 13,763.30	\$ 35,455.53
Grand Total	164771	323680.4	\$ 64,233.14	\$ 205,964.60



Equipment ID	S4101				S4102				S4103				S4104				S4105			
	2022	2023	2024	2025	2022	2023	2024	2025	2022	2023	2024	2025	2022	2023	2024	2025	2022	2023	2024	2025
Miles Driven	9153	7224	5431	6940	4458	9025	5024	0	3676	11453	15542	7703	10726	12265	10171	1	9974	3165	11858	3162
kWhs Charged	17652.82	15912.99	45497.54	9769.904	8600.183	17611.26	10264.6	0	7359.433	22968.7	43428.66	4568.431	20271.29	24218.75	20351.29	0	18454.54	7867.235	22924.99	5957.771
Cost	\$ 2,297.62	\$ 2,090.29	\$ 9,226.19	\$ 1,246.39	\$ 1,123.43	\$ 2,262.23	\$ 1,098.97	\$ 42.71	\$ 864.87	\$ 2,892.59	\$ 6,048.85	\$ 1,999.36	\$ 2,624.49	\$ 3,156.91	\$ 2,973.37	\$ 42.32	\$ 2,400.00	\$ 1,050.44	\$ 2,702.99	\$ 4,607.97
Total Repair/PM Costs	\$ 6,291.37	\$ 18,227.65	\$ 14,077.93	\$ 4,441.35	\$ 4,470.87	\$ 25,579.27	\$ 14,333.11	\$	\$ 9,336.62	\$ 10,167.18	\$ 22,938.17	\$ 4,577.87	\$ 4,715.13	\$ 11,174.85	\$ 18,527.47	\$ 2,251.25	\$ 5,964.12	\$ 9,181.12	\$ 8,026.46	\$ 11,251.84



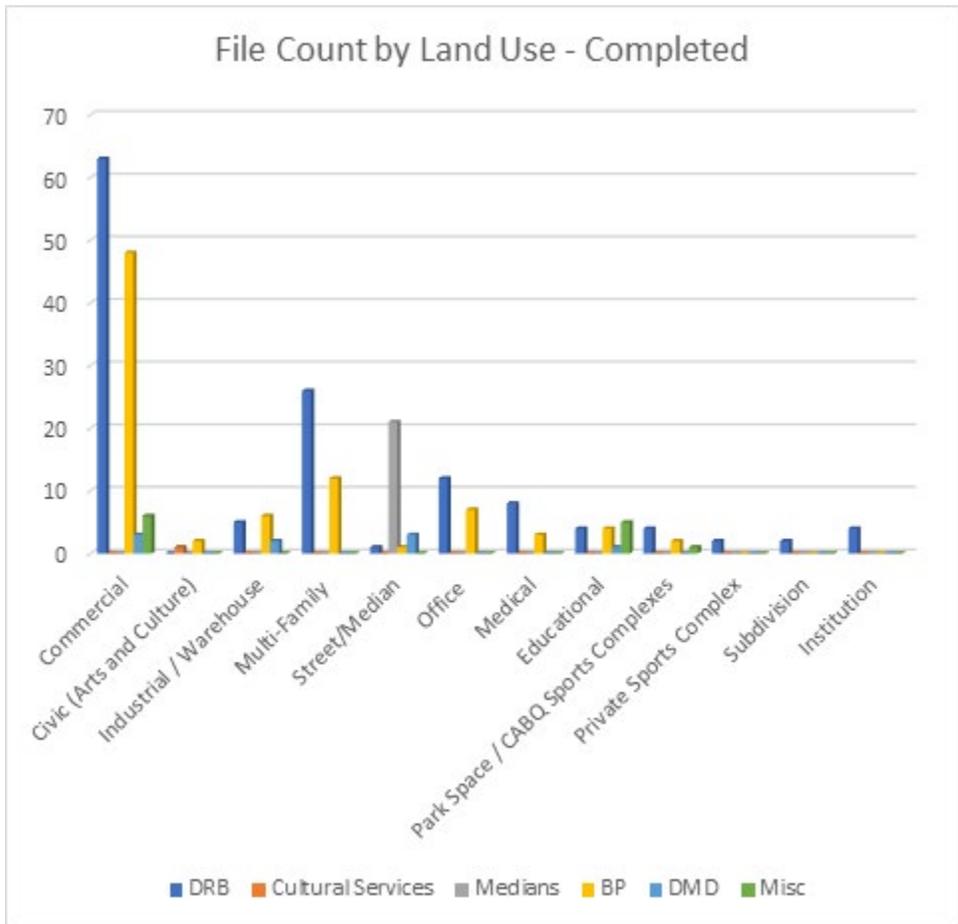
Priority Projects	
<b>San Antonio Oxbow and Oxbow Bluffs</b>	BAUP Action- Implement the site plan for the Oxbow Bluffs and ongoing management of the San Antonio Oxbow to improve flows and diversity of vegetation.
	Update- A site plan has been developed and approved by the Environmental Planning Commission. Construction for Phase 1 is slated to begin this spring. The property is anticipated to open to the public at the end of 2025. OSD also works on continued beaver mitigation to ensure water flows into the Oxbow.
<b>Atrisco Acequia Madre (Central NW-SW)</b>	BAUP Action- Develop a multi-agency site plan and implement Phase I of the plan. Implement a hazardous fuels reduction project funded by FEMA, treating up to 470 acres in the Bosque.
	Update- The site plan has been developed, and construction documents have been completed up to 65% for Phase 1. The FEMA Wildfire Mitigation Project was completed, treating 200 acres in the Bosque. The Open Space Division (OSD) is completing a Habitat Restoration Project in the area, building on the FEMA project. OSD is also improving the parking area off Sunset Blvd. (SW side of Central) and working with the U.S. Army Corps of Engineers to further reduce wildfire risks from the SW side of Central Ave. to Bridge Blvd. in the Bosque.
<b>Alameda SE</b>	BAUP Action- Implement a site plan for additional public recreation amenities and assist with ABCWUA's solar project. Develop and implement an interpretive signage plan for the area. Additionally, work with Bernalillo County on improving the Alameda stormwater outfall.
	Update- The ABCWUA completed a site plan for the solar project at Alameda Open Space, which was approved by the Environmental Planning Commission (EPC). The Parks and Recreation Department also completed a site plan for improved recreational amenities at Alameda Open Space, which the EPC also approved. Implementation of the site plans is expected to start in 2025. The OSD has also reviewed BernCo's stormwater outfall project.
<b>Montano SW (Pueblo Montano/Bosque School)</b>	BAUP Action- Work with Bosque School on ongoing monitoring and restoration projects. Coordinate with partners on post-wildfire recovery efforts. Review and provide input on ABCWUA's Bosque Non-Potable Reuse Project.
	Update- The OSD worked with the NM Forestry Division to develop a prescription for post-wildlife recovery in coordination with Bosque School. The OSD will implement that plan in 2025. The OSD continues working with the ABCWUA to review plans for the Bosque Non-Potable Reuse Project.
<b>Pat Baca</b>	BAUP Action- Review and provide input on the City's Department of Municipal Development (DMD) Loma Hermosa Outfall project. Work with partners to address major erosion and head cuts along the bluff and necessary trail reroutes.
	Update- The Open Space Division is working with contractors to develop a plan for erosion mitigation that will be implemented in 2025. The OSD is also reviewing the Loma Hermosa Outfall plans from DMD.
<b>SWRP Outfall Restoration Project</b>	BAUP Action- Review and provide input on the ABCWUA's Southside Water Reclamation Plant Outfall Restoration Project. Oversee trail reroute and construction.
	Update- Construction for the SWRP Outfall Restoration Project is underway. Once completed, the OSD will maintain the project. The ABCWUA is supporting the OSD's management of the project by providing funds for an Open Space Technician.

## Bosque Management

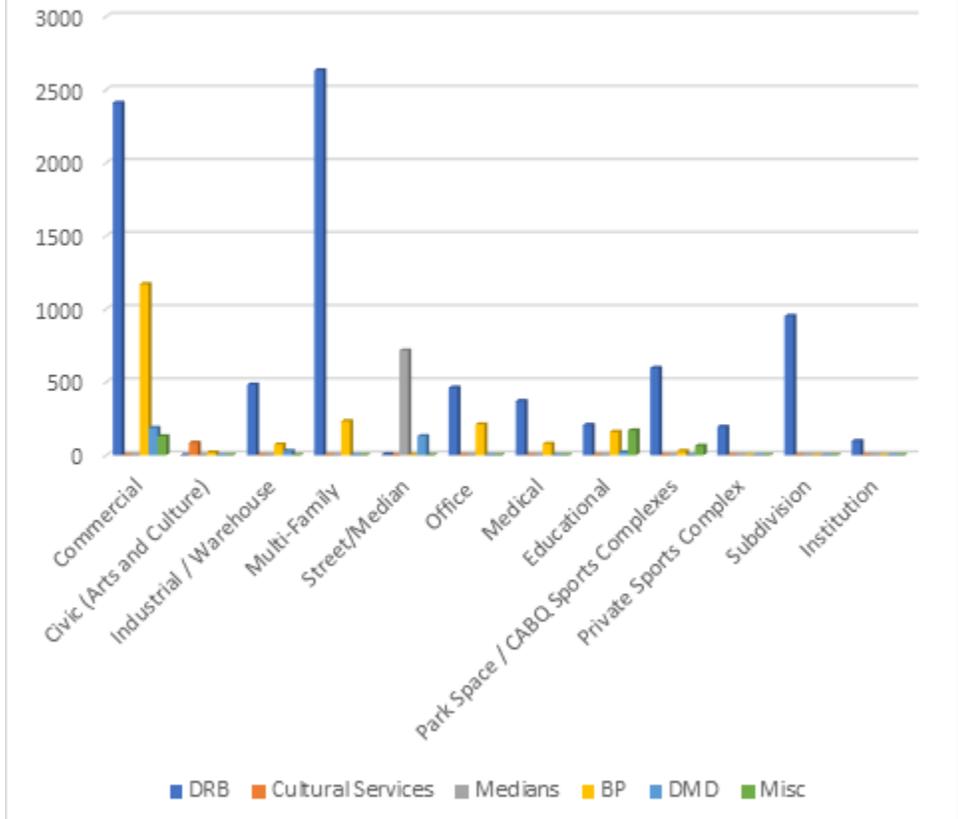
In addition to the priority projects, the Open Space Division is actively implementing the BAUP through ongoing management focused on restoration, recreation, and education.

**Education**—OSD continues to work with RiverXchange to bring hundreds of students to the Bosque every winter to plant trees, shrubs, and seeds. The OSD has also supported the Bosque Ecosystem Monitoring Program to pilot a 7<sup>th</sup>-grade program focused on bosque ecology. Additionally, the OSD offers guided hikes for adults and field trips for youth, organizes annual volunteer stewardship projects, and develops interpretive signs for main trailheads.

Additional data visualizations of the tree counting/tracking data can be seen in the graphs below.



### Tree Count by Land Use - Completed



## SHOTSPOTTER PER MONTH FY'25 TO DATE

Date & Time	ShotSpotter Total	NIBIN Connected	Percentage of Total
Jul 2024	874	107	12%
Aug 2024	849	111	13%
Sep 2024	1048	129	12%
Oct 2024	1206	209	17%
Nov 2024	1065	140	13%
Dec 2024	1034	191	18%
Jan 2025	1006	105	10%
Feb 2025	913	104	11%
Mar 2025	327	13	4%
<b>Average</b>	<b>925</b>	<b>123</b>	<b>12%</b>

**Disclaimers:** Based on ShotSpotter Activations, and cases associated to both ShotSpotter Activations and NIBIN Reports, pulled from Peregrine on 3/11/2025 @ 1300 hours. Fiscal Year 25 to Date is 7/1/2024 – 3/10/2025. Subject to change on further analysis. Produced by Crime Analysis Unit