

Pursuant to due call and notice thereof, a Council Work Session of the North Mankato City Council was held in the Council Chambers on July 11, 2022. Mayor Dehen called the meeting to order at 12:00 pm. The following were present for roll call: Council Members Norland, Oachs, and Whitlock, City Administrator McCann, Community Development Director Fischer, City Planner Lassonde, and Public Information Officer Brown. Absent: Council Member Steiner.

### **Receive North Mankato Future Transportation Preparedness Study**

City Planner Lassonde reported in 2021, a group of students and professors from the Minnesota State University, Mankato Urban and Regional Studies Institute (URSI) reached out to City Staff to inquire if the City had transportation ideas that could serve as a capstone project for students. City staff requested a survey and report be developed regarding trends and citizen interest in Autonomous Vehicles (AVs) and Electric Vehicles (EVs). This presentation to the Council completes their project.

Professor Russell J. Fricano, AICP, and Professor Raymond Asomani-Boateng, AICP, appeared before Council and reported the capstone criteria: a real-world project with special significance that would work to preserve the environment, resources, and technology. The students were to summarize the survey and provide a holistic assessment of autonomous vehicles and trends. Students Ian Cochran ('22 Graduate and City Planner at Prior Lake, MN), Conor Callahan (Class of '23), Olivia Adomabea (Class of '23), and Connor LaPointe ('22 Graduate and City Administrator in Wells, MN) introduced themselves and thanked the City for the opportunity.

Mr. Cochran stated that the purpose of the presentation would be to discuss an overview of EVs and AVs, themes found in the survey, how North Mankato can prepare for the future of EV and AVs, and a suggested implementation plan. He reported the goal of the project was to prepare North Mankato for the future modes and growing presence of Electric & Autonomous Vehicles on Minnesota Roadways, and develop a Future Transportation Preparedness Study & Phased Implementation Plan. Mr. Cochran reviewed the different types of EVs: HEV (Hybrid Electric Vehicle), PHEV (Plug-In Hybrid Electric Vehicle), and BEV (Battery Electric Vehicle). He reported the leading factors driving demand for EVs: fast progressing technology, Federal & State Legislation, increased production and sales in leading car manufacturers, and more value in EVs for private businesses. Mr. Cochran stated that EV sales doubled from 2020 to 2021, and while EVs account for about 5% of 2022 Q1 automotive sales, there are twice as many EV models to choose from in 2022 than in 2021.

Mr. Callahan discussed the types of EV chargers: Level 1 (120V for residential use), Level 2 (240V for residential & commercial use), and Level 3 (480V for commercial use). He shared that for EV usage to increase, charging infrastructure will need to be accessible, easy to use, relatively inexpensive, and the public will need to receive education on the charging process. Mr. Callahan reported that the group believes that charging infrastructure will convert to the private sector, once the industry is more profitable. They recommended the public sector encourage the private sector to engage by driving competition, frequent bids for EV charging projects to provoke more interest and familiarity with the process, and provide incentives for businesses to participate including tax breaks or deals with new developments. Mr. Callahan noted that included in the report was a recommendation to consider resources from the Great Plains Institute which provides EV ordinance templates, examples, and other EV standards. The group recommended the following optimal charging locations in North Mankato: Benson Park, Caswell North Soccer Complex, Dakota Meadows Middle School, Commerce Dr. & Lor Ray Dr., Taylor Library, and the Public Parking Lot next to the Circle Inn. Mr. Callahan suggested that the City review DOT EV Funding & Financing Programs available that may provide the City, businesses, and residents access to grants.

Mr. Callahan provided information regarding E-Bikes and Electric Scooters, noting that the City of Mankato is currently partnering with BIRD shared electric scooters. E-Bikes and E-Scooters

are regulated by MN State Statute and treated like bikes. The primary benefit to these modes of transportation is that they solve the “First Mile/Last Mile” problem, however, their immediate concerns are the level of management these vehicles require and possible conflict with existing infrastructure.

Mr. Callahan stated another perspective to consider is the equity level in North Mankato. He reported that 30% of North Mankato residents are renters, and EV and AV ownership is higher in more affluent income brackets. He recommended the City educate multi-family property owners on incentives and benefits to installing EV chargers on their properties, and consider integrating the installation standards into city code.

Mr. Callahan proposed City staff prepare for the increase in EV and AV use by consistently gathering public input on EV readiness and educating residents and business/property owners on EVs and AVs, identifying grant opportunities, considering if or how the city would like to approach future building code and zoning ordinance updates, and consider EVs for future city vehicle purchases.

Mr. LaPointe reviewed the types of AVs: the first type uses sensors and cameras to monitor vehicles independently and only certain human interactions are needed. The second type is connected to a network that gathers real time information from other vehicles on the road. He noted these vehicles are farther out than EV options. Mr. LaPointe discussed the impact AVs have on roadway infrastructure and stated that as AVs usage increases, roadways will need to adapt road lanes, shoulder widths, and thicker pavement in wheel tracks that better accommodate AVs.

Mr. LaPointe reported that more than 1,400 self-driving vehicles are currently in testing by more than 80 companies across 36 U.S. states including Minnesota. The program “Med City Mover” is being tested in Rochester, MN, which consists of residents using AV shuttles in the downtown area. He stated that the market for AVs in the U.S. is valued at \$3 billion, but is projected to reach over \$8 billion by 2026. Mr. LaPointe reported that in 2020, close to 11.2 million cars were sold with level 2 autonomy features, which include cruise control and blind spot assist. Mr. LaPointe noted one AV opportunity being explored is transportation assistance in freight and commerce sectors in rural areas. MnDOT is working with farmers to develop AV routes to help move produce and materials.

Ms. Adomabea reviewed the survey conducted with North Mankato residents. She reported the survey ran from April 15-28, 2022, and received 225 responses. The results showed that most residents do not own an EV, and 40% of residents are not interested in purchasing an EV, 27% said they may eventually purchase an EV, but do not have plans to now, 17% are planning to purchase an EV in the next 5 years, and 5% are planning to purchase an EV within the next year. The main reasons cited for lack of interest in EVs included the cost, environmental concerns (manufacturing of batteries), and travel range concerns (is there assurance of other charging stations along their route).

Ms. Adomabea shared that most residents indicated they prefer to have their own vehicles or would not participate in a shared program for EVs. Those interested in participating in a shared program stated that they would utilize the service occasionally. Ms. Adomabea reported that most residents interested in purchasing an EV would prefer to charge at home, which could cause the city code to be updated in residential areas. Most respondents shared that autonomous features would be unimportant to their decision if they were to purchase a vehicle today.

Mr. Callahan reported that 55% of respondents may eventually purchase a vehicle with autonomous features but don't have plans to now, 29% will never purchase an AV, and 14% are planning for their next vehicle to have autonomous features. He noted that there may be misconceptions regarding autonomous features, as some features (including blind spot assist, driving assist, and parking assist) are commonly found in vehicles now. Mr. Callahan reported the results “Yes,” “No,” and “Not Sure” were equally split when respondents were asked if they would be interested in owning a full AV as technology improves and they become more available. He shared

that although only 35 respondents identified themselves as business owners, 97 responses were received for the question, “If you own a business, how likely are you to use an AV for freight transport?” and most respondents shared they would never use an AV or may eventually, but don’t have plans to now. Mr. Callahan reported that in order for respondents to consider purchasing an AV, the level of safety assurance, reliability, and trust in AVs would need to increase, AVs would need to be more available and at a lower cost, and their benefit would need to be better understood.

Mr. Cochran reviewed the recommended Implementation Plan for the City. He explained this is a three phase approach, and Phase 1 (2023-2026) entails providing ongoing community engagement and education, looking for grants and funding opportunities, exploring e-bike and e-scooter possibilities before purchasing more chargers, and beginning conversations about what possible future ordinances should look like. He noted that the survey results were encouraging and showed a substantial range of strong opinions and education is important at this stage. Mr. Cochran reported that Phase 2 (2027-2030) includes installing a Level 3 Charging Station at the Wheeler Ave. and Wall St. intersection, updating infrastructure and ordinances to reflect EV trends, and exploring subsidized partnerships with e-bike and e-scooter companies. He stated that Phase 3 (2030-beyond) would consist of converting city vehicles to EVs where applicable, implementing EV-related ordinances, and completing infrastructure analyses and planning. Mr. Cochran also acknowledged the group did not provide an in-depth analysis of the business owners’ responses, but could provide that upon request.

City Planner Lassonde thanked the students for being committed to the project and for presenting their findings.

Council Member Oachs thanked the students for their work and noted it will be helpful as they plan future infrastructure.

Council Member Norland thanked the students for their in-depth analysis and for noting lesser known perspectives, such as e-scooter maintenance.

Council Member Whitlock noted he has experienced e-scooters and an AV bus tour during conferences in other cities.

Mayor Dehen thanked the students, especially for identifying opportunities regarding city code and the first mile/last mile significance. He stated Caswell Park might benefit from shared EVs. He requested information on the e-scooter program at MSU and how the geo-fencing feature operated. Mr. Callahan responded that it does limit users, but the geo-fenced hours and locations work well for their situation. He suggested future shared EVs could give warnings or disclose the geo-fencing and limitations before a rider uses the vehicle.

City Administrator McCann thanked the students for the document and noted the implementation plan and phases will be helpful to his future planning.

Mayor Dehen stated that previous rationale for EV Charger placement relied on where users should land (off of Hwy 14 or Hwy 169 by restaurants and tourism locations). He suggested the Council may need to revisit the rationale from the residents’ perspective and pointed out future surveys could be targeted to business owners. Mayor Dehen noted he hoped the City could partner again with the URSI program.

Council Member Oachs thanked the North Mankato Activities & Business Fun Days Committee, City Staff, and the North Mankato Fire Department for their work on Fun Days.

Mayor Dehen thanked all who participated in Fun Days.

Council Member Norland thanked the Boy Scouts for cleaning up after the Parade and Fun Days festivities.

Council Member Oachs requested information on the food truck parked on Center St. during Fun Days. City Administrator McCann responded staff would look into the issue.

Council Member Norland moved, seconded by Council Member Oachs, to adjourn the Council Work Session at 12:54 pm.

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Mayor

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City Clerk