

Transportation Inventory and Analysis

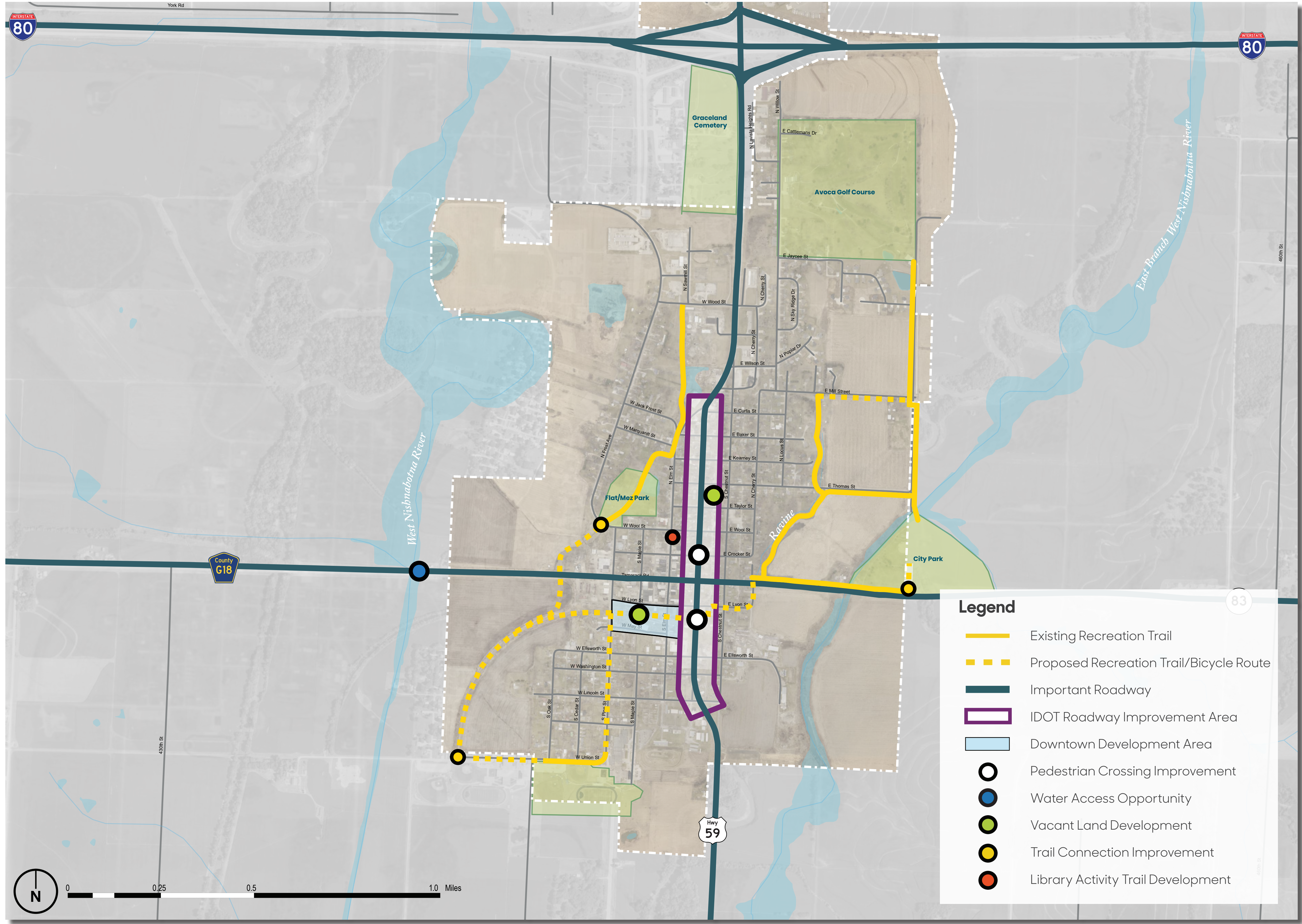
Knowledge of the transportation systems in and around a community is critical for sustainable transportation enhancement planning. Avoca's transportation system includes paved and unpaved roadways, sidewalks, and pedestrian and bike trails.

Iowa Highway 59 bisects Avoca as a north/south thoroughfare, and creates several pedestrian and vehicular conflicts. Along the curve south of Highway 83, better sight distancing is needed for pedestrian crossing. Along northern curve, traffic accidents occur and large trucks infringe on nearby residences. Vehicles do not slow down after exiting Highway 59 onto N Elm Street. There are planned sidewalks improvements along Highway 59.

Interstate 80 is a major highway that connects the east and west coasts of the United States and intersects Iowa Highway 59 in the northern portion of Avoca. The interstate separates businesses from the downtown area of Avoca, requiring visitors to drive to access those areas.

There are opportunities to revitalize the old rail lines for future trail connections throughout the southern portion of the city and into the existing trail infrastructure. There is the potential to create a safe pedestrian passage between the east and west sides of town under Iowa Highway 59 where the old viaduct was.

Avoca has flooding and stormwater issues. At City Park, flood damage and bank erosion are present along the east branch of the West Nishnabotna River from March 2019. Additional flood damage occurred at Mez Buttermilk Flat Park, which caused the basketball court to float away. Stormwater maintenance is desired at the old school property.



Community Concept Overview

Avoca utilized the results of mapping efforts, survey results, and a transportation inventory to identify a list of goals and opportunities to create a vision for the community. Drawing on this vision, the design team developed preliminary concept plans at a design workshop that was open to the public. The concept plan is based on the priorities of the community with guidance from the Avoca visioning committee. The improvements illustrated on this plan and in more detail on the following boards are intended to reinforce pedestrian connectivity and make Avoca more enjoyable for all residents and visitors. The goals that the visioning committee ranked as the highest priority and that the design team has addressed in this plan include:

- A) Pedestrian Safety
- B) Downtown Development
- C) Trail Improvements

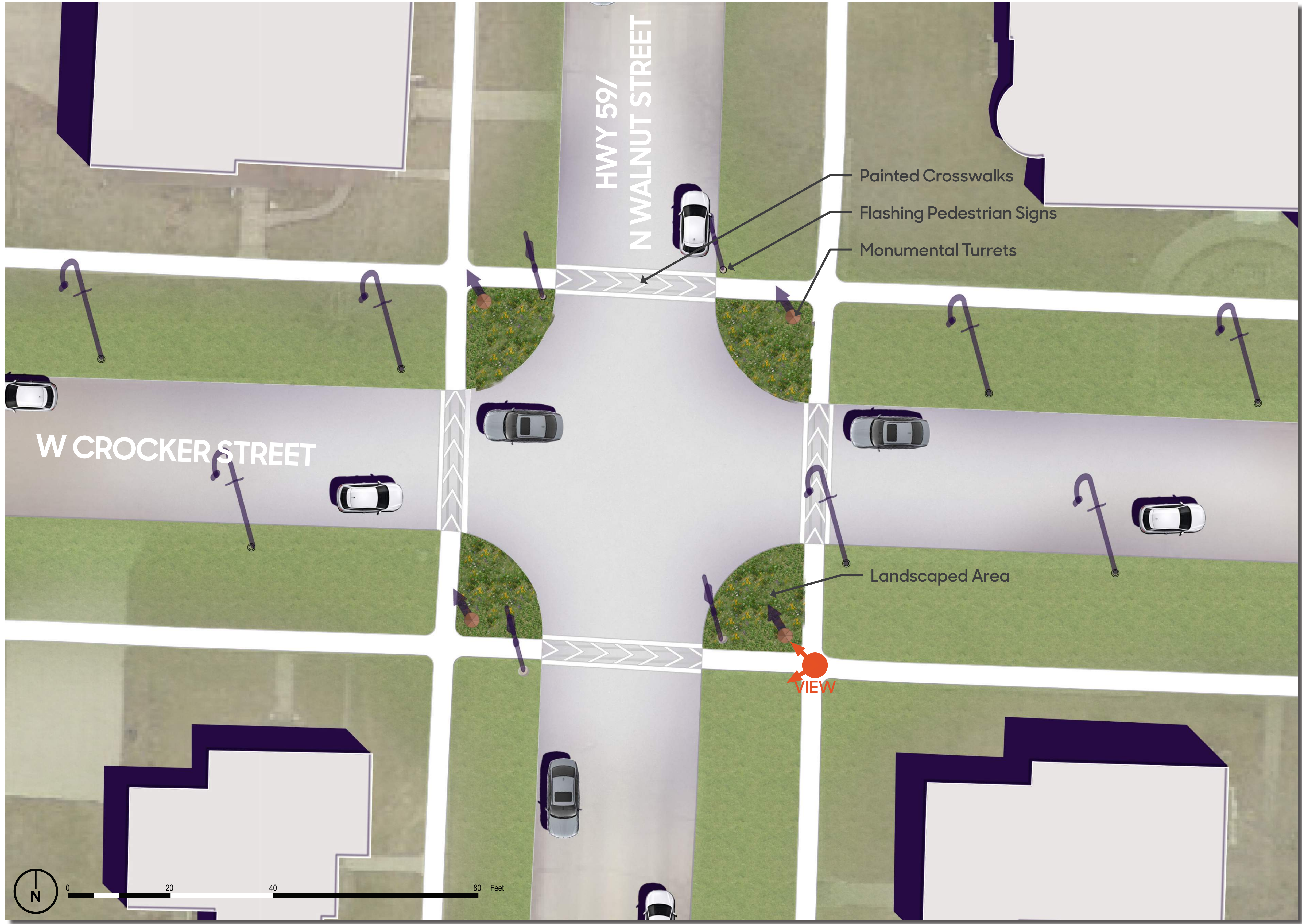
The concept plan promotes improvements in three different areas of interest that will increase pedestrian connectivity, activate underutilized areas, and enhance the community assets Avoca already provides for residents and visitors.



Concept Overview

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Walnut Street & Crocker Street

The Avoca visioning committee identified improved pedestrian safety as a key goal for the community. Survey respondents revealed Highway 59 (Walnut Street) to be the primary commuting corridor through town, due to the connection to Interstate 80 to the north and AHSTW Community Schools to the south. The highway challenges safe routes to school and bisects the community making it complicated for residents to safely access community assets, including parks and the swimming pool. By creating a designated intersection for safe pedestrian crossings, the walkability of Avoca can be significantly improved.

While evaluating viable intersections for pedestrian safety enhancements, it became apparent that the Highway 59/ Highway 83 crossing is a major commuter intersection, but the topography of the hill sloping to the south makes for poor visibility of pedestrians in a crosswalk. The unique angle of Highway 59's intersection with Highway 83 creates vehicular conflicts and does not connect directly to Avoca's downtown along Elm Street.

continued on Board 6b



Walnut St. & Crocker St.

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Both Wool Street and Crocker Street were identified as existing routes for pedestrians to cross Highway 59 to access the downtown, though Wool Street does not have sidewalks in all directions and is situated at the crest of a hill. Crocker Street has generous rights-of-way and better visibility for both vehicles and pedestrians. Therefore, the intersection of Highway 59 (Walnut Street) and Crocker Street was determined to be a prime candidate for both pedestrian safety improvements and establishment of gateway monuments that will invite passersby to enter Avoca's downtown, just one block west of Highway 59.

Proposed improvements include flashing pedestrian crosswalk signage, painted crosswalks, and monumental gateway features. On the north and southbound lanes of the intersection, a Rectangular Rapid Flashing Beacon (RRFB) Pedestrian Crosswalk system is a Manual on Uniform Traffic Control Devices (MUTCD) compliant solution that would alert vehicular traffic to pedestrians in the intersection. The crosswalk, painted to designate the pedestrian zone, could use patterning iconic to Avoca's character, and the installation of Avoca's turret monuments would direct people to the heart of downtown, along Elm Street. The painted crosswalk would be the first phase of implementation and could be considered a pilot project with the goal of later replacing the crosswalks with more permanent stamped concrete through collaboration with Iowa DOT. The stamped concrete would emulate the brick pattern that is prominent in Avoca and would create visual connectivity with the existing downtown aesthetic.



EXISTING VIEW FROM THE SOUTHEAST CORNER OF THE INTERSECTION



Walnut St. & Crocker St.

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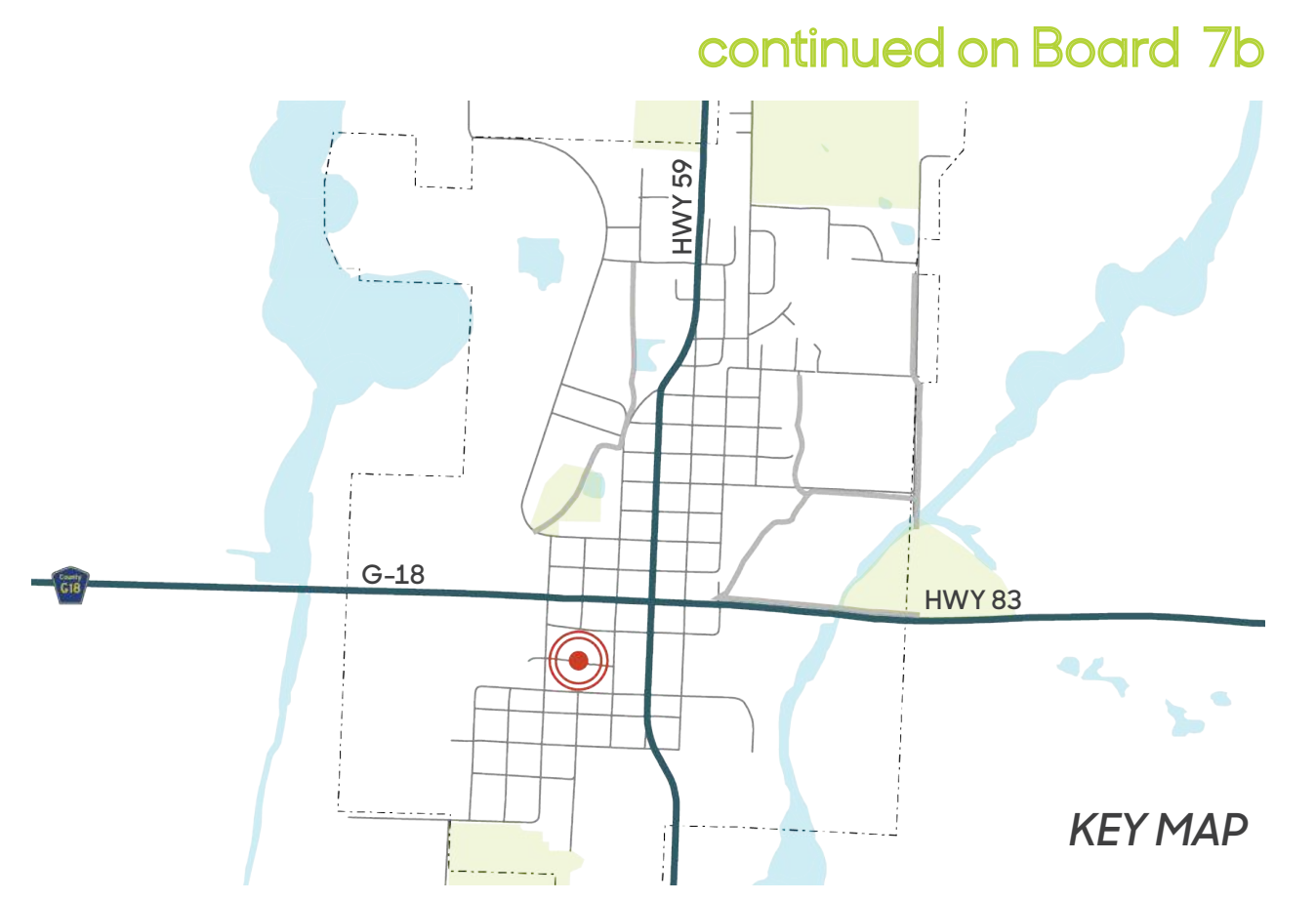
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Former Grain Elevator Site

The former grain elevator property, located at the southwest corner of Avoca's historic business district, is currently vacant and provides a prime opportunity for expanded downtown development. The Avoca visioning committee expressed a need for expansion of downtown business storefront opportunities, as well as varied housing options. The development of mixed-use buildings with commercial storefront opportunities on the ground level and apartments above would attract more businesses to move from their homes to downtown. The committee also mentioned that people want to live downtown, but there are not enough available units. These new buildings could attract talent to downtown, as well as keep the workforce within Avoca rather than surrounding communities. The streetscape character of Elm Street could be continued south and west with a similar pedestrian experience, street trees, and angled parking. Within the site, an opportunity for a greenway park would serve as both a public venue for downtown Avoca and an attractive amenity for downtown residents. South Maple Street would be extended into the park with a turnaround at a public plaza featuring a potential bandshell/pavilion and drive-in theater screen utilizing the foundations of the former grain elevators. This central area is envisioned to become a community hub, with an outdoor amphitheater, drive-in movies, an accessible playground, and opportunities for additional programming of community events.



Avoca
Former Grain Elevator Site

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The implementation of the project can be explored through the development of public/private partnerships. A private developer could see this space as an investment in the area and sell off portions to private owners. An easement or agreement could be created with the City of Avoca to developed the public space. If the City of Avoca is able to acquire the land that is privately owned, it can then partner with developers to craft an area that supports commercial and residential growth, while also creating a community greenspace. This land is currently privately owned and this design makes no assumptions that this land will be sold or acquired by the City of Avoca. The design team sees an opportunity for future development in this space due to its proximity to downtown, the potential for trail connectivity, and a perceived demand for such development, as heard from visioning committee members.

continued on Board 7c



EXISTING VIEW OF SILO FOUNDATIONS LOOKING NORTHEAST



DRIVE-IN THEATER EXAMPLE



Former Grain Elevator Site

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Another key element to the development of this site is the connection to the expanded trail network of Avoca. The abandoned railroad corridor terminates to the west of the site. Bringing the trail into the downtown would create additional safe routes through the community and would create the opportunity to provide a trailhead for bike activities in Avoca. The trailhead would include bike parking, with additional features such as a repair station and rest area to create a productive hub for cycling activity. The new trail would meander through the greenway, crossing South Elm Street and could pass beneath Highway 59 at the old viaduct site. Easements or property acquisition would be necessary to create this safe pedestrian crossing for the community closer to the school grounds and connecting the east and west neighborhoods of Avoca without vehicular conflict.



EXISTING VIEW OF SITE LOOKING EAST



GREENWAY TRAIL EXAMPLE



PEDESTRIAN TRAIL UNDERPASS EXAMPLE



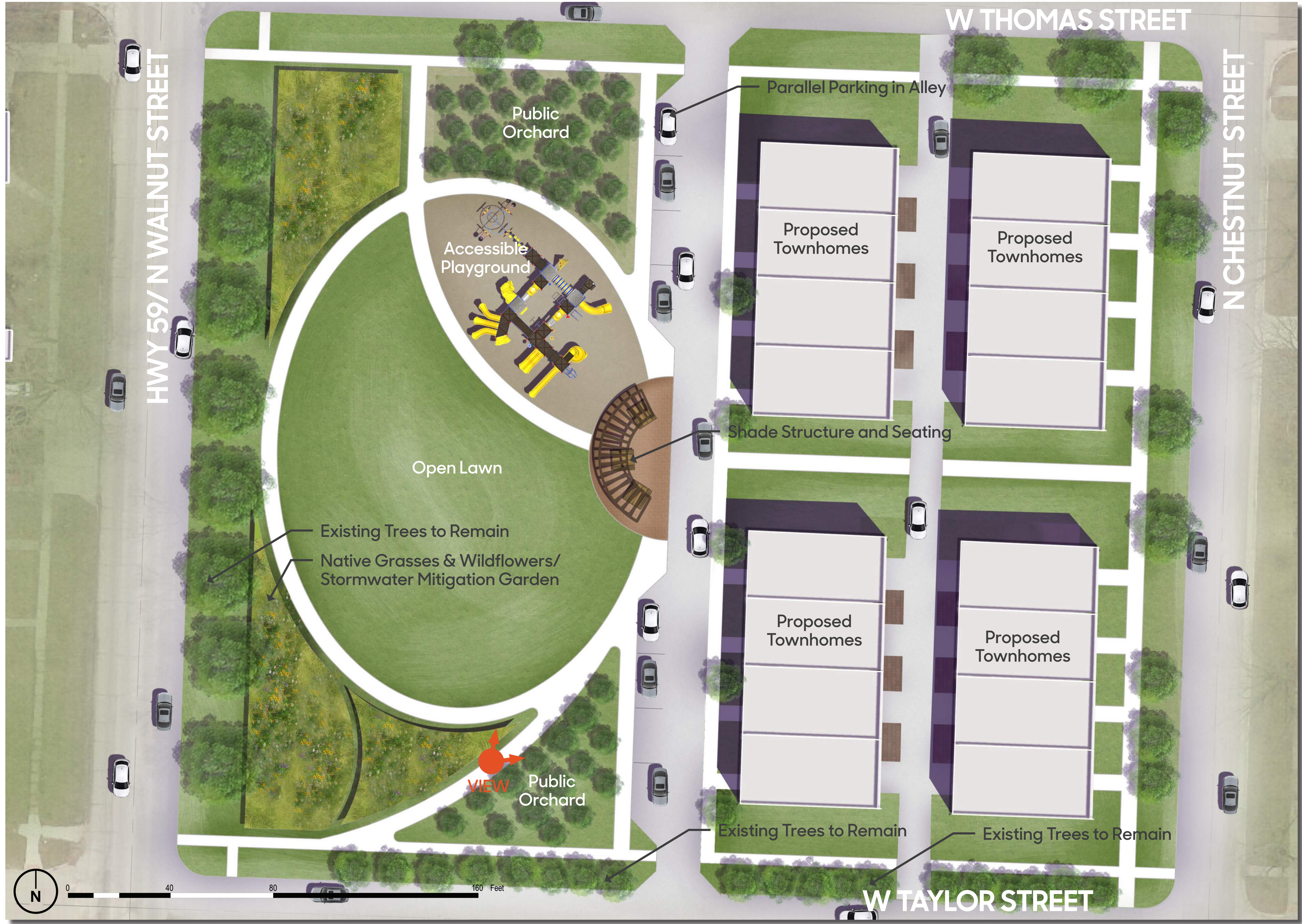
Former Grain Elevator Site

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Former School Site

The former school site is located along Highway 59 between W Thomas and W Taylor Streets bordering on the north and south, respectively. By developing townhomes on the east half of the site, facing both Chestnut Street and the proposed alley, this vacant lot would be able to accommodate more housing opportunities for residents of Avoca. This site also slopes steeply down to the highway where the existing tree canopy shades the sidewalk along the street. By designating the western half of the site as a neighborhood park—complete with a walking loop, shade structure and seating area, open lawn, and both formal and natural areas—this amenity will become a great attraction to the city and surrounding neighborhood. There is currently no park or playground space close to this neighborhood, so adding this amenity will support equitable access to outdoor space for more families.

continued on Board 8b



EXISTING VIEW LOOKING NORTHWEST FROM CHESTNUT & TAYLOR STREETS



KEY MAP



Former School Site

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The play area will include an accessible playground and adult fitness equipment to encourage full utilization of the park. One feature of this park includes a "food forest"—an orchard of fruit-bearing trees that citizens can harvest and enjoy—as well as native planting areas with grasses and wildflowers that will slow stormwater runoff and attract both pollinators and wildlife to the heart of Avoca. This area has the potential to impact much of the community with its close proximity to downtown, which is within a five-minute walking radius of the site.



EXISTING VIEW LOOKING NORTHEAST



FIVE-MINUTE WALKING RADIUS AROUND SCHOOL SITE REDEVELOPMENT



Former School Site

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Mez Buttermilk Flat Park

The City of Avoca has had several plans and studies for Mez Buttermilk Flat Park developed in the past, and amenities such as a playground, community garden, and park shelter are desired in addition to the existing basketball court and trail. This park has flooded several times, so any further development will need to take stormwater management into consideration. The existing trail has two identified areas where stormwater overtops the trail before entering the drainage ditch that runs north-south through the park. A bioretention rain garden in combination with a culvert underneath the trail would prevent runoff from flooding the path. Rain gardens and culverts placed strategically in areas where water currently overtops the trail will reduce trail flooding and allow for greater and safer usage of the park. In addition to absorbing and filtering stormwater, the rain garden will provide habitat for pollinators that benefit the local ecosystem and support the health of the community garden. Survey respondents and the visioning committee also noted that this trail would be better utilized if it had lighting. Solar pathway lights would be a low impact, cost-effective way to increase the comfort of visitors to the park, and the additions of shade, seating, and play opportunities would encourage more community members to visit this park and take advantage of what it has to offer.

continued on Board 9b



Mez Buttermilk Flat Park

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The addition of shade trees and solar lighting along the length of Mez Buttermilk Flat Park's trail will make the park more hospitable, increasing shade during sunny days and extending the use of the trail into the twilight and evening hours. These improvements could spur more use of the park and encourage active lifestyles in the surrounding neighborhood and throughout the community of Avoca.



EXISTING VIEW LOOKING SOUTH FROM TRAIL AT STORMWATER SWALE



TRAIL PATHWAY LIGHTS EXAMPLE



KEY MAP



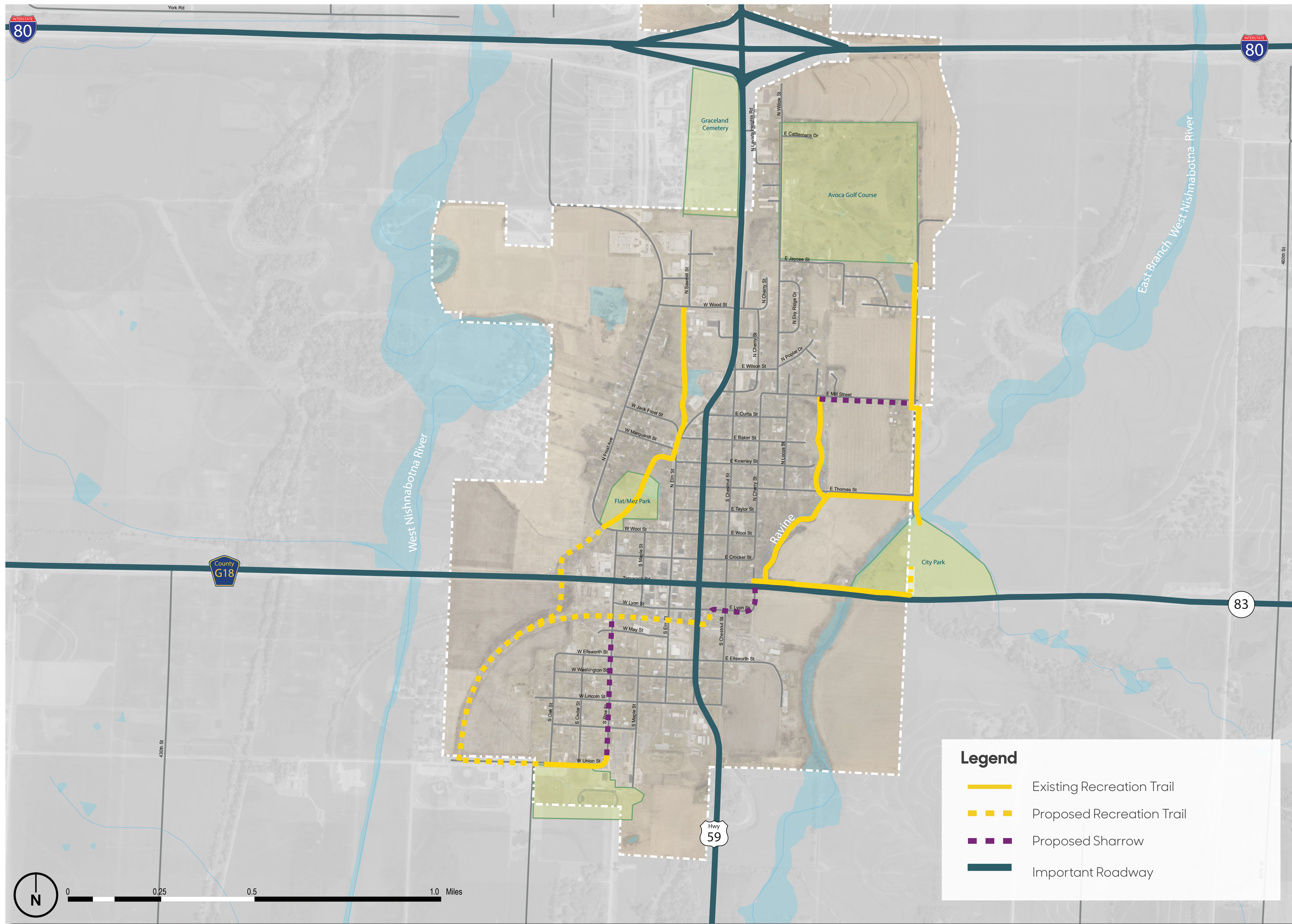
Mez Buttermilk Flat Park

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Trail Improvements

Improving trail connections throughout the city of Avoca will not only create additional safe pedestrian routes, but also enhance opportunities for improved wellness, recreation, and sustainable modes of transportation to the community's parks, businesses, and other amenities. A cohesive trail system could take the existing trail fragments and develop them into a complete network of on-street and dedicated trails.

Creating an on-street trail system with pavement markings indicating sharrows—dedicated bicycle routes where vehicles must share the road with bicyclists—will connect to the existing off-street recreational trails as well as proposed expansions. In addition to pavement markings, sharrows would need to have associated pole-mounted way-finding signage, indicating the proposed roads as designated bicycle routes. All signs on trail routes and vehicular roadways should display reflective finishes to increase visibility during any time of day.

The former railroad corridor in southwest Avoca is a prime opportunity for expanded recreational trails. After clearing overhanging vegetation, the city can use the level route of the old railroad line for an asphalt trail. This route would connect the old grain elevator site and Mez Buttermilk Flat Park to the existing sidewalk at Union Street and Oak Street, leading to AHSTW Community Schools. This map shows the different designations of existing trails, proposed trail expansions, and designated bike routes. To complete safe and accessible loops, some easements or property acquisition may be required.



RECREATION TRAIL EXAMPLE



SHARROW EXAMPLE



Trail Improvements

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Eddington Memorial Park

Eddington Memorial Park holds many of the Avoca’s park amenities, such as the Avoca Family Aquatic Center, fields and courts, a disc golf course, dog park, park shelters and water access to the East Branch of the West Nishnabotna River. While the park is a huge attraction for residents, it is located east of town along Highway 83. An existing trail leads to the park’s entry, but bicyclists and other trail users must then compete with vehicles parking at the aquatic center or soccer field for a traversable route.

Proposed improvements include extending the trail into the park to connect with the existing park trails. Street trees and lighting would make this a friendlier pedestrian environment and would signal to drivers to reduce their speeds in this area. Bump-outs at the northwest intersection from the aquatic center would also create a safer experience for pedestrians crossing to the concessions stand on the west side of the main park entry drive.

continued on Board 11b



Avoca
Eddington Memorial Park

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With a grade-separated trail extending into the park, vehicle and pedestrian traffic have clear zones of use, improving both safety and comfort at the park entrance. The incorporation of shade trees and lighting increase pedestrian comfort throughout the day on the trail and the adjacent soccer field, and also serve as a traffic-calming device for vehicles entering the park.



EXISTING VIEW LOOKING NORTH TOWARDS CONCESSIONS STAND



EXISTING VIEW LOOKING NORTH FROM PARK ENTRY DRIVE

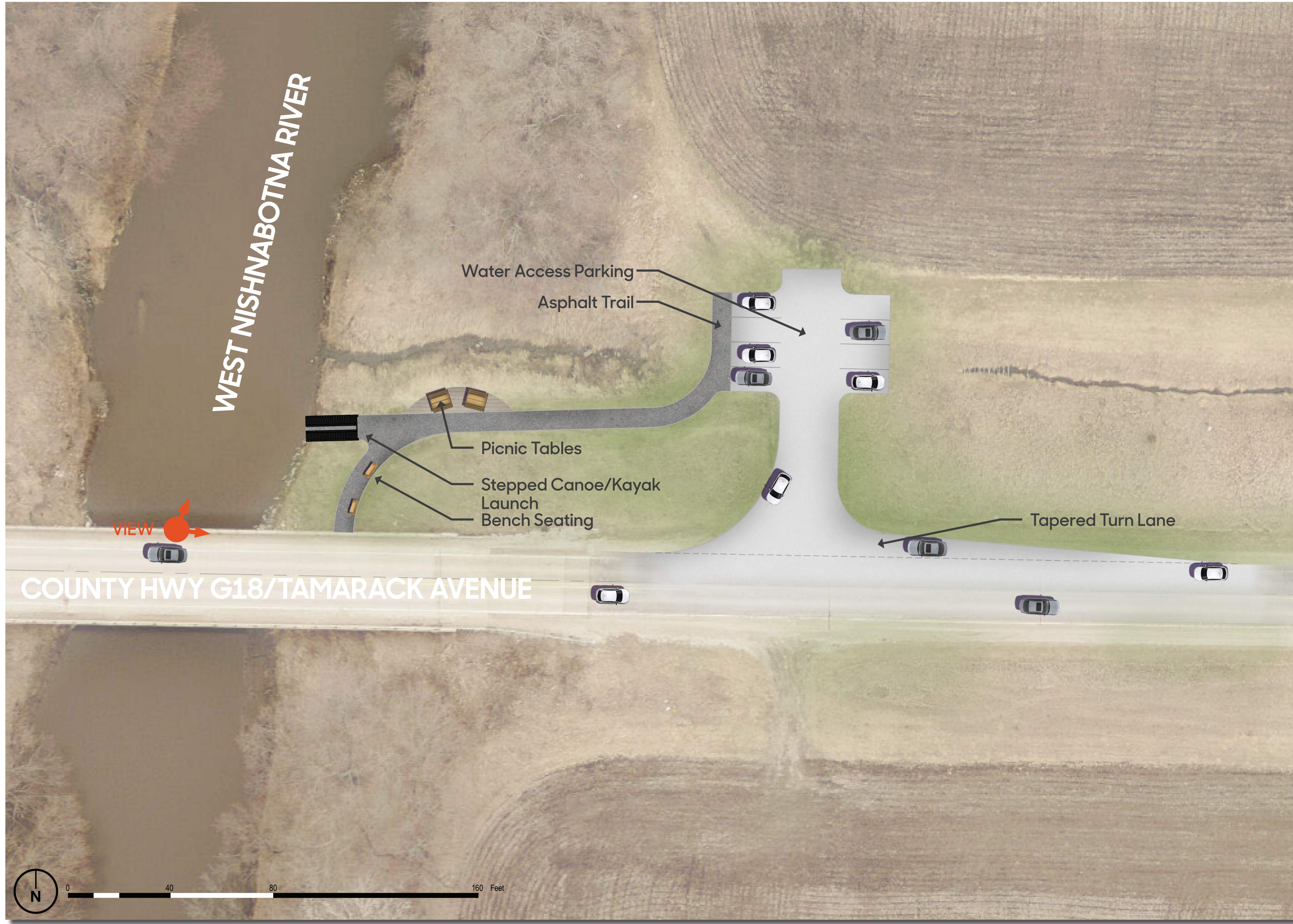


Avoca

Eddington Memorial Park

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G18 Water Access

While the East Branch of the West Nishnabotna River is accessible from Eddington Memorial Park, the West Branch does not have a designated water access point. The Avoca visioning committee described this stretch of the river as a unique recreation experience north of the confluence of the East and West Branches. An existing pull-off on the northeast side of the intersection of the West Branch and County Highway G18 (Tamarack Avenue) is a prime location for a water access point. The existing pull-off from the highway slopes steeply down to a level gravel turnaround, and seems to double as a farm field access drive. Proposed improvements include paving a tapered turn-lane and access drive down to a small parking area. An asphalt trail would lead to a small picnic and seating area adjacent to a stair-stepped canoe/kayak launch point. The launch point would be constructed with 6x6-inch plastic timbers and gravel per the Iowa DNR's Stair-Step Launch design. Necessary agreements would need to be acquired for the parking area within the adjacent farmland.

continued on Board 12b



G18 Water Access

RDG Planning & Design

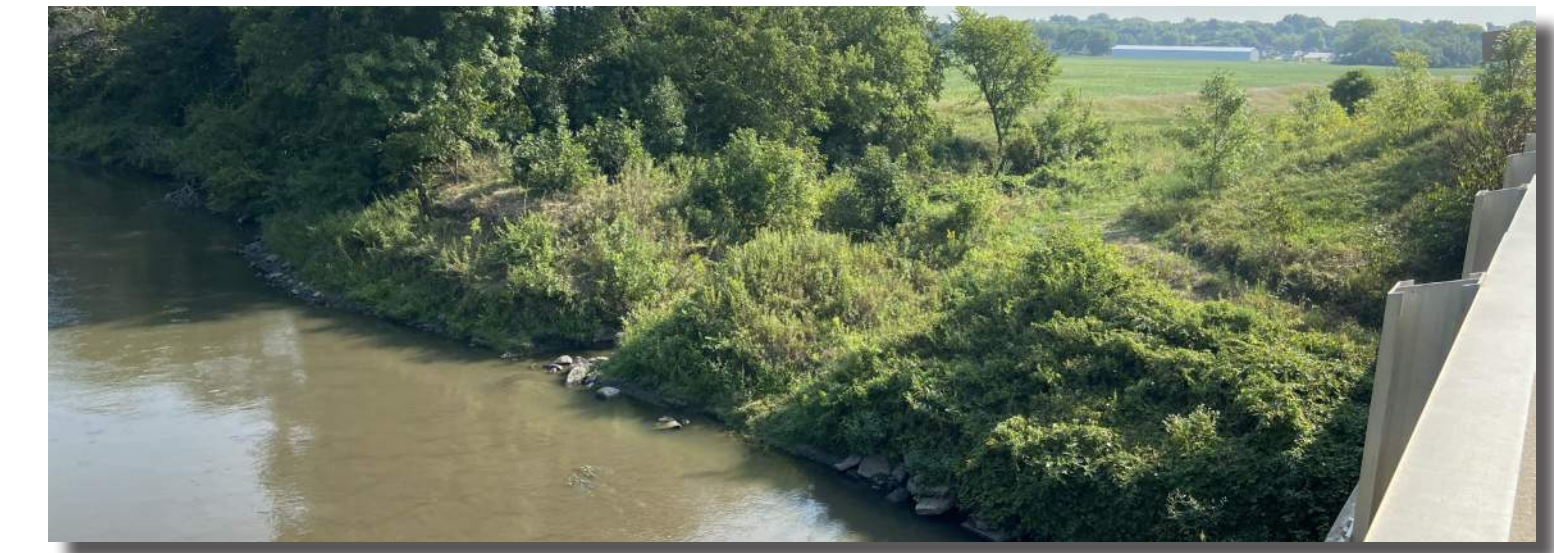
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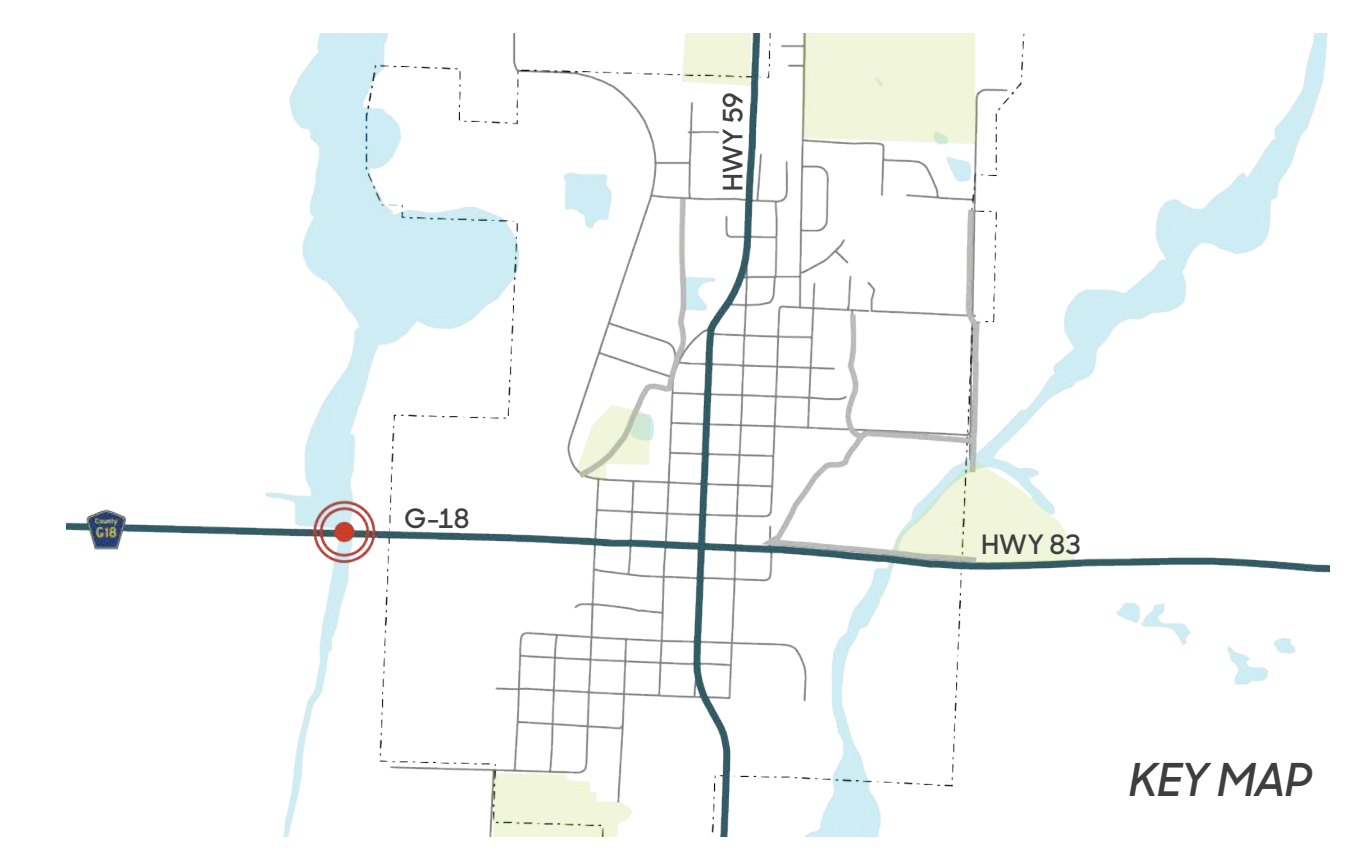
Solidifying this informal water access into an accessible amenity will help Avoca capitalize on its connection to the river. An additional launch point will encourage more residents to enjoy the natural landscape and give them the opportunity to support a healthier lifestyle. A greater focus on recreation along the Nishnabotna can create a draw for visitors and emphasize the identity of Avoca as hub for water access.



EXISTING VIEW LOOKING EAST FROM THE G18 BRIDGE



EXISTING VIEW LOOKING WEST FROM THE NORTHEAST ACCESS PATH



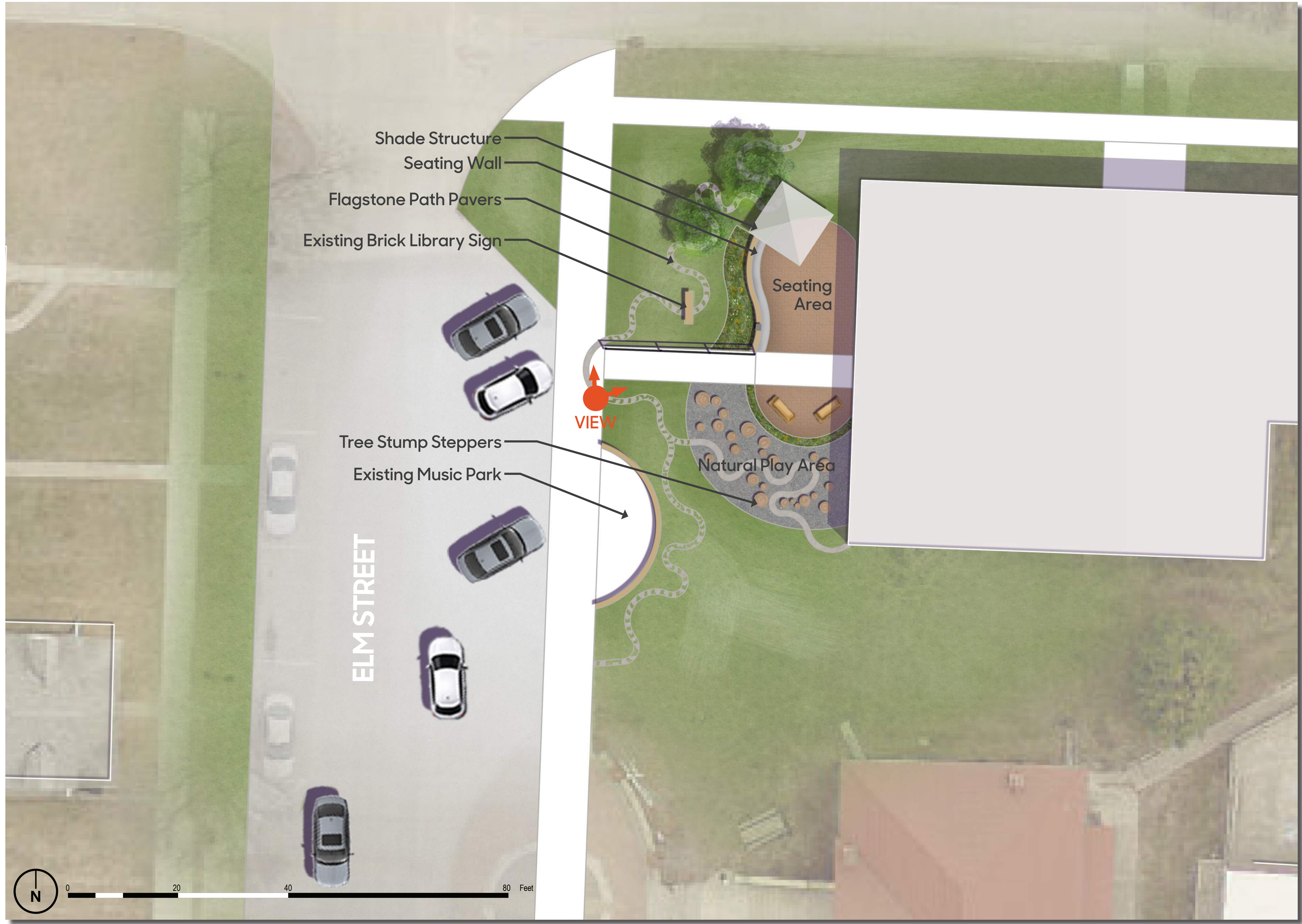
G18 Water Access

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Library Activity Trail

The Avoca Public Library is located at the north end of the town's heavily used business district, which is very active during the bi-weekly farmer's market. The space in front of the library could be used to engage children during the periods of heavy usage along Elm Street and throughout the year via educational and engaging activities. This proposed design offers both active and passive spaces to fully utilize the multi-use area. A seating area north of the existing path allows for outdoor learning opportunities and small gatherings. The west façade of the library can be used as a backdrop for a projector, which can encourage more utilization of this area as an entertainment space that showcases movies and other events. A flagstone path that weaves throughout the library's lawn connects the northern half to the southern, which is focused around natural play. The pathway not only serves as physical connection and play element, but is also a visual representation of the Nishnabotna River that plays a large role in shaping the geography of Avoca. The river path connects into a natural play area that uses tree stumps, steps, and sensory material to encourage children to interact with the environment.

continued on Board 13b



Library Activity Trail

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The existing masonry sign in front of the library can be integrated into the design and become an interactive element. Plantings along the west side of the seating wall can create a beautiful backdrop for photos taken by parents as they following the winding flagstone path through the sign. A shade structure can be implemented into the seating area to promote its usage during hot, sunny periods of the day. Creating an active and engaging space for children can encourage more traffic during the farmers market and other town-wide events, in addition to supporting education and greater utilization of the library.



EXISTING VIEW OF THE NORTH LAWN OF THE LIBRARY



Library Activity Trail

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