MANDAN BICYCLE FRIENDLINESS ASSESSMENT

FINAL REPORT

OCTOBER 2025

PREPARED FOR:
BMMPO BICYCLE-PEDESTRIAN SUBCOMMITTEE

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INTRODUCTION

What does is a bicycle friendly community? There is no single answer, but the League of American Bicyclists looks at five attributes (the 5 E's) to determine bicycle friendliness. Of particular relevance for this report is Engineering (having appropriate speed limits, bicycle facilities, and roadway connections, designing safe and convenient intersections, etc.) and Evaluation/Planning (following a Bicycle/Pedestrian Plan, promoting a Bicycle Advisory Committee, studying bicycle use and safety incidents, etc.). Bismarck-Mandan has been designated as a Bronze-Level Bicycle Friendly Community by the League, and it is in the interests of the Bismarck-Mandan MPO (BMMPO) Bike-Ped Subcommittee (as well as the community at-large) to continue to build and promote bicycle friendliness, including through walk and bike audits conducted to identify potential deficiencies in bicycle-pedestrian infrastructure.

This report documents a bicycle friendliness assessment of a portion of Mandan, ND, completed in September 2025 by members of the BMMPO Bicycle & Pedestrian Subcommittee and other community stakeholders. The goal of the assessment is to identify strengths and deficiencies of the area selected for audit.

SITE SELECTION

The route was selected for 2025 through discussion with participants in the May 2025 Bicycle Friendly Community Workshop and Bike Audit, highlighting a portion of the May Audit route for closer examination. The audit site runs along McKenzie Drive SE from Marina Road SE west to Bay Shore Bend SE, south along Bay Shore Bend to 31st Street SE, and north up 46th Avenue SE back to McKenzie. The larger area is near the Missouri River to the east, I-94 to the north, and the Heart River to the west. I-194/Expressway crosses McKenzie as an interchange and feeds into the Memorial Bridge to the north and the Expressway Bridge to the south. The Memorial Bridge and Expressway Bridge are both significant traffic generators in this area. The area north of McKenzie Drive features a number of different businesses, including some very near the riverfront (such as the Paddle Trap and Moritz Sport and Marine), along with Raging Rivers Waterpark. There are also some large apartment complexes in this region. South of McKenzie is primarily comprised of single-family homes. The McKenzie region has potential for further development and receives significant traffic from both Mandan and Bismarck.

The point of beginning for the bike audit route was at the intersection of McKenzie and Marina Road. The route included approximately 1.5 miles to assess, which was divided into three segments (including 5 intersections). (*See map, page 1.*)

ASSESSMENT TOOLS

An assessment tool was developed using materials incorporated into the *Bismarck-Mandan MPO Bicycle & Pedestrian Plan*, as well as materials obtained from AARP's *Bike Audit Tool Kit*. Packets containing all bike audit materials were sent to potential participants in advance of the assessment date. (*See Appendix A*.) A brief group discussion to provide an overview of the materials, including the checklist and rating methodology, was held prior to beginning the assessment.

Elements to be considered throughout the assessment include:

- Sidewalk presence, condition, and width
- Accessibility
- Driveway slopes and design
- Bicycle facilities
- Lighting
- Medians
- Street Trees & Vegetation
- Roadway condition, width, & visibility
- Crossing Controls, traffic signals, & signage
- Vehicle Speeds

The elements were to be evaluated relative to the applicable areas of streets, mid-block crossings, and intersections along the route.

In addition to assessing the existing physical conditions along the route, participants were encouraged to consider who was using the route at the time of the assessment, along with where and how they were using it. This can further help identify gaps in the network which may prevent its use in one capacity or another or by specific user groups.

Assessment sheets were provided for the following segments of the route:

- Marina Road SE & McKenzie Drive SE Intersection to the ARCO station west of 46th Avenue SE & McKenzie Intersection
- ARCO station along McKenzie to Bayshore Bend SE, Bayshore south to 31st Street SE & 46th Avenue Intersection
- 31st Street & 46th Avenue Intersection north to McKenzie and east on McKenzie back to Marina Road.

Auditors were asked to assess the route by segment, using this two-part methodology:

1. First, indicate whether certain elements exist pertaining to the street, the crossing signals, and the riding surface (as applicable) with a simple yes or no checked for each element listed.
2. Secondly, at the completion of each route segment, assign a score to the overall condition of the segment. The scoring was suggested to be as follows:
    a. Great (+3 points)
    b. Acceptable (+1 point)
    c. Mixed (-1+ points)

d. Poor/Gap in bicycle infrastructure (-3+ points)

SITE VISIT ASSESSMENT

The assessment training, site visit, and assessment were completed on September 9, 2025, beginning at 1:00pm. The checklists were completed as observations were made and discussed by the participants throughout the course of the bike audit. Participants also provided valuable written comments which covered issues identified during the assessment. Participants varied in age, levels of fitness, and daily biking habits.

OBSERVATIONS

The assessment began at the entrance to Moritz Sport and Marine to review audit materials and processes. The weather was sunny, around 75˚ with a light wind. Each segment of the audit route varied from the others regarding land use, adjacent roadways, and pedestrian facilities; therefore, observations will be provided for each of the segments assessed.

Intersection of Marina & McKenzie, riding west on McKenzie (north side) passing Bismarck Expressway and crossing 46th Avenue to arrive at the ARCO station on the north side of McKenzie

The roadway comprising this segment is bi-directional with two driving lanes. The speed limit is 25mph (one auditor noted drivers seemed not to be following the limit). Traffic exiting Expressway via the interchange from either the north or south is governed by stop signs. The intersection of McKenzie and 46th is governed by an all-way stop sign. There is no sidewalk on the north side of McKenzie from Marina Road until 46th Avenue. There is sidewalk on the south side of McKenzie from the west entrance to Moritz Sport and Marine until the western leg of the interchange and connects into a shared-use path running from Expressway to 46th. There is no sidewalk on either side of the street between the western and eastern entrances to Moritz Sport and Marine on McKenzie.

ADA ramps and marked crossings are provided on the south side of McKenzie for both legs of the interchange, but not on the north side. There are also ADA ramps and marked crossings on all four sides of the McKenzie and 46th Avenue intersection. However, there are no bicycle lanes provided on McKenzie, and the roadway/shoulder is narrow, particularly near the interchange (*photo, above*). The pedestrian crossings at McKenzie and 46th have significantly faded (*photo, page 4*). Auditors noted this segment is uncomfortable for cyclists and would be especially so during peak traffic times.

Considerations for bicycle-pedestrian improvements for this segment should include, at minimum, new crosswalk markings at McKenzie and 46th, and pedestrian infrastructure installation along the north side of McKenzie (a shared-use path would likely be the best utilization of the limited space).

The percentage of AARP recommended bicycle-pedestrian elements provided by the street and the riding surface along this segment, based on participant feedback, is **39%.**

The bicycle friendliness of the segment, based on participant scoring: Mixed (-0.33)

Intersection of McKenzie and 46th Ave, riding west to Bayshore Bend SE, riding south on Bayshore to 31st St SE, then east to the intersection of 31st and 46th

The roadway comprising this segment is bi-directional with two driving lanes and a speed limit of 25mph throughout. There are sidewalks on both sides of the street on McKenzie from 46th to Bayshore, and on Bayshore throughout the audited segment. This segment of McKenzie has a comfortable roadway width, and traffic coming out of Bayshore onto McKenzie is governed by a stop sign. Bayshore is a residential street running through a residential neighborhood with few bicycle-pedestrian amenities, but auditors generally expressed that it felt comfortable for cyclists given the level of traffic. The Bayshore and 31st Street 3-way intersection is uncontrolled, and the 3-way intersection of 31st and 46th is governed by a stop sign stopping traffic turning onto 46th. This segment's pavement is in overall good repair.

Minimal bicycle-pedestrian improvements are needed for this segment, particularly on Bayshore. However, McKenzie Drive in this area is wide enough to consider adding bike lanes (with a design appropriate to the speed and traffic volume of the roadway). This would increase the comfort level and connectivity for cyclists traveling in this area.

The percentage of AARP recommended bicycle-pedestrian elements provided by the street and the riding surface on this segment, based on participant feedback, is **18%.**

The bicycle friendliness of this segment, based on participant scoring: Acceptable (1.00).

Intersection of 31st and 46th, going north on 46th to McKenzie, going east on McKenzie (south side) to Marina

The roadway comprising this segment is bi-directional with two driving lanes. The speed limit is 25mph. There are sidewalks on both sides of 46th Avenue up to McKenzie, although the narrowness of the sidewalks was observed by auditors. The street along 46th is also narrow, so that vehicles driving by the auditors had to cross the centerline to give them space (something that would be difficult during peak traffic times). The intersection of McKenzie and 46th is governed by an all-way stop sign and has pedestrian crossings (although these are significantly

faded, as noted under the first segment). A shared-use path (in good condition) runs on the south side of McKenzie from 46th to the western leg of the Expressway interchange (where it then turns south to the Expressway Bridge), allowing cyclists to comfortably ride off-road (*photo, left*). Traffic exiting Expressway from either the north or south is governed by stop signs. There is sidewalk on the south side of McKenzie from the west leg of the interchange until the western entrance into Moritz Sport and Marine, near to Marina Road, where it abruptly ends. There is no sidewalk provided along the rest of McKenzie until it restarts at Marina Road going south; as mentioned under the first segment, the roadway is narrow.

Considerations for bicycle-pedestrian improvements for this segment should include, at minimum, the improvements noted along the first segment, along with considerations for a wider sidewalk on one or both sides of 46th Avenue, pedestrian lighting at the Expressway interchange (where auditors noted nighttime riding would be an issue), and an extension of the shared-used path on the south side of McKenzie past the interchange up to Marina (which would also close the sidewalk gap). Bike lanes could also be considered here, but a path extension may be more appropriate to address the gaps in infrastructure in this area, especially given the existing trail.

The percentage of AARP recommended bicycle-pedestrian elements provided by the street and riding surface on this segment, based on participant feedback, is **28%.**

The walkability of this segment, based on participant scoring: Acceptable (1.33).

SUMMARY & RECOMMENDATIONS

Auditor notes suggest this area of Mandan is generally accessible to cyclists but falls short of being bicycle friendly. All but the most avid cyclists would struggle during peak traffic hours. Narrow streets, gaps in the pedestrian infrastructure, and deteriorated crossings are a concern.

Positive Observations, Route-Wide

- The shared-use path on the south side of McKenzie is a great feature and a valuable connection between 46th Avenue and the Expressway Bridge.
- Most intersections have ADA ramps.
- Crossings are typically narrow, and intersections are controlled.
- There is a sign along McKenzie going west warning drivers of potential cyclists.
- Pavement and sidewalk conditions in this area are generally acceptable.

Potential Hazards Observed, Route-Wide

- Sidewalk gaps at several points along McKenzie.
- Narrow sidewalks along 46th Avenue.

- Stretches of narrow roadway with no supporting pedestrian infrastructure (such as shared-use paths).
- Faded pedestrian crossings at McKenzie and 46th.
- Lack of pedestrian lighting at the interchange.

Recommendations Route-Wide

- Installation of sidewalks or shared-use pathway along gaps in the network in this area would improve pedestrian access to Marina Road to the east and to businesses on the north side of McKenzie.
- The extension of the existing shared-use path on the south side of McKenzie should be considered to improve connectivity and access for cyclists in this area.
- If on-street infrastructure is preferred to off-street, appropriately protected bike lanes should be considered on McKenzie, particularly west of 46th Avenue.
- Widening the sidewalks along at least one side of 46th Avenue would improve pedestrian safety along this roadway.
- The pedestrian crossings at 46th and McKenzie should be repainted, and any other applicable improvements considered.
- Consider installing pedestrian lighting at the interchange to improve both the safety and character of the area.
- Pedestrian crossings should be included with any roadway construction or improvement and inclusion of the following design elements should be considered for applicability:
    - Raised curb bulb outs
    - Colored concrete indicating the crossing and bulb out areas and/or painted crossing markings to make the crossing highly visible to motorists
    - ADA compliant curb cut ramps with tactile indicators/truncated dome pedestrian tiles, appropriately oriented within the intersection to facilitate perpendicular crossing paths
    - Parking restrictions at pedestrian crossings to promote visibility for both pedestrians and drivers
    - Pedestrian scaled illumination
    - Adequate signage to alert motorists in advance of pedestrian crossings
    - Pedestrian actuated crossing signals, including Rectangular Rapid Flashing Beacon, or HAWK signal, with audible prompts that are loud enough to be heard easily

  NOTE: Any roadway improvements or reconstruction should include opportunities for enhanced sidewalk/pedestrian crossing improvements.

While assessing the bicycle friendliness of the selected route, participating auditors observed two adults out biking on the shared-used path (one of which was carrying packages), and one adult out walking on the sidewalk.

In conclusion, it should be noted that the City of Mandan continues to make strides in addressing sidewalk gaps in its community and making the community more friendly to pedestrians overall.

Bismarck-Mandan
METROPOLITAN PLANNING ORGANIZATION

THE LEAGUE OF AMERICAN BICYCLISTS since 1880

MANDAN BIKE AUDIT

September 9, 2025

The bike audit process:

Bike audits serve an important role in evaluating current pedestrian infrastructure to raise awareness, identify gaps and evaluate potential project opportunities for municipalities and neighborhood groups. Many times, this activity serves as a measurable exercise to complete at the onset of a project, in response to public concerns, or in conjunction with other planning studies. The process of a bike audit can be led by city engineering or planning staff and includes the following:

- Gather with invited stakeholders (recommended size of 3 to 12 participants) to review the biking corridor and audit materials.
- Complete the pre-determined biking route, pausing to review each segment according to the criteria provided in the AARP Bike Audit Worksheets. Each auditor should complete one set of evaluation questions for each segment of the route, and there are two other route-wide worksheets provided for use.
- Bike audit routes are recommended to be contiguous, but do not necessarily need to follow a direct linear path—it is expected that evaluation corridors can turn and take detours as necessary.
- Photos of the audit route are valuable to support and enhance findings and recommendations.
- Once the group has completed the biking route, it is important to reconvene to review the existing conditions as observed during the exercise. This recap discussion provides an important opportunity to identify areas of most concern, record general observations, and facilitate group discussion of how potential improvements could be addressed. Some questions which should be included within this reflection time are:
    - What did you see?
    - As a person biking, did you feel like you were of importance to other road users?
    - What other feelings did you have while performing the audit?
    - What needs to change? (in the short, medium, long-term timeframe)
    - How did the roadway and intersection segments rank?

Bike audit evaluation criteria:

The primary value of a bike audit rests on the evaluation criteria. As part of this exercise a packet of AARP Bike Audit Tool Kit materials, including checklists and questions, has been developed to evaluate the audit route for bicycle friendliness. The route is broken down into segments, and auditors should assess each segment of the route using the following three-part methodology:

1. First, at the completion of each route segment, indicate whether certain elements exist on the street, the crossing signals, and the riding surface along the segment with a simple yes or no checked, as applicable, for each element listed in the provided AARP Worksheet.

2. Secondly, assign a score to the overall condition of the street, crossing signals, and the riding surface along the segment, using the following scale: **Great (+3 points), Acceptable (+1 points), Mixed (-1+ points), or Poor/Gap in pedestrian infrastructure (-3 points).**
3. Finally, assign a score to indicate the overall "bicycle friendliness" of the segment/area based on the findings from the two previous steps, utilizing the same scoring mechanism provided for step 2.

It should be noted that the cumulative score of a bike audit is important, but not the ultimate indicator for how a corridor should be evaluated. In many instances, the scoring system provides an opportunity to specifically measure the efficacy of each element, rather than the overall performance of the bike route itself. The scoring aspect of the bike audit process has been provided to help stakeholders prioritize areas of improvement along corridors where numerous challenges may exist.

The following is a (not exhaustive) list of elements auditors should be aware of as the audit is conducted.

Intersections

- Vehicle Speed
- Visibility & Lighting
- Crossing Controls
- Traffic Signals
- Signage

Street

- Sidewalk Presence
- Sidewalk Width
- Driveway slopes & Design
- Sidewalk Condition
- Vehicle Speed
- Street Trees & Vegetation
- Lighting
- Median
- Accessibility
- Bike Lanes
- Road Condition
- Road Width

Summary of bike audit for the City of Mandan:

The Mandan bike audit will be held from **1:00-3:30pm** on **Tuesday, September 9, 2025**. The audit group will meet outside Moritz Sport and Marine (2540 Marina Road SE), Mandan, to audit the following route:

- Start at intersection of Marina Road SE and McKenzie Drive SE, drive west, passing Bismarck Expressway and crossing 46th Avenue SE to arrive at the Arco Station on the north side of McKenzie. Stop to evaluate McKenzie, and the intersection of McKenzie and 46th.
- Ride west on McKenzie to Bayshore Bend SE, turn left onto Bayshore and ride top 31st Street SE. Turn onto 31st Street and ride east to intersection of 31st and 46th Avenue SE. Stop to evaluate the intersection of Bayshore and McKenzie, and Bayshore Bend up to 46th.
- Turn left and ride north up 46th back to McKenzie Drive. Turn right onto McKenzie and ride east, passing Bismarck Expressway, and returning to the intersection of Marina and McKenzie. Stop to evaluate the intersection of 46th and 31st, 46th Avenue up to McKenzie, and note any differences going east on McKenzie.

The route was identified for selection after conversations with participants in the May 21, 2025 Bicycle Friendly Community Workshop Bike Audit. The League of American Bicyclists led this audit and workshop for the MPO and its jurisdictions. The audit route was too large to perform a complete analysis, but the MPO Bike-Ped Subcommittee determined discussions with audit participants would allow smaller segments to be identified for future walk and bike audits. This segment of Mandan was selected through this process.

Mandan Bike Audit Route, September 2025.
There is Street parking on Marina Rd just south of Moritz Sport and Marine. We will meet on foot at the south entrance of Moritz to prepare for the audit.

START

Start at Marina Road SE, ride west on McKenzie Drive SE to ARCO Station just past 46th Ave SE. After pause, resume riding west on McKenzie to Bay Shore Bend SE, ride on Bay Shore south to 31st Street SE, and east on 31st to 46th Ave. Pause, then ride north on 46th, and east on McKenzie until you reach your starting point again at Marina Road.

Streets and Crossings RIDING AUDIT (ON-BIKE)

Community Name: MANDAN

Starting Location: MARINA ROAD SE AND MCKENZIE DRIVE SE INTERSECTION **Ending Location:** ARCO WEST OF 46TH AVE SE & MCKENZIE INTERSECTION

Route Description: RIDING WEST ON MCKENZIE DRIVE PAST 46TH AVE AND MCKENZIE INTERSECTION TO ARCO STATION **Mileage:** Approximately 1,800 Feet

Audit Date: _____ **Start Time:** _____ AM | PM **End Time:** _____ AM | PM

Posted speed limit(s): _____ **Do the motorists appear to be obeying the speed limit(s)?** Yes ☐ No ☐

Number of vehicle lanes: _____ **The street is:** one-way ☐ | two-way ☐

If more than one lane: The roadway has a median ☐ | a pedestrian island ☐

Does the street have a sidewalk? No ☐ | Yes, on one side of the street ☐ | Yes, on both sides of the street ☐

Is a sidewalk needed? No ☐ | Yes, on one side of the street ☐ | Yes, on both sides of the street ☐

Does the street have a bike lane? No ☐ | Yes, on one side of the street ☐ | Yes, on both sides of the street ☐

Is a bike lane needed? No ☐ | Yes, on one side of the street ☐ | Yes, on both sides of the street ☐

If yes, describe the existing bike lane(s) and any needed improvements. If no, describe the desired bike lanes(s) and note whether the location has a vehicle lane, shoulder or other space that could become a bike lane. For both, include details such as the type and number of bike lanes, direction(s), length from start to finish, etc. (See page 12 of the ***AARP Bike Audit Tool Kit*** for reference.)

YES | NO | OTHER **Skip any statements that don't apply.**

THE STREET ...

☐ ☐ ☐ 1. Has traffic lights and/or stop signs at intersections and crossings
☐ ☐ ☐ 2. Has traffic lights and/or stop signs that are clearly visible to drivers and other roadway users
☐ ☐ ☐ 3. Has dedicated traffic lights for bicyclists
☐ ☐ ☐ 4. Allows motorists to make a right turn on red
☐ ☐ ☐ 5. Has crosswalks
☐ ☐ ☐ 6. The crosswalks are well marked and clearly visible to drivers and pedestrians
☐ ☐ ☐ 7. Has signage alerting drivers to the presence of pedestrians
☐ ☐ ☐ 8. Has signage alerting drivers to the presence of bicyclists
☐ ☐ ☐ 9. Has signage and road markings that help users navigate
☐ ☐ ☐ 10. Has a crossing signal (if yes, complete the next section)

THE CROSSING SIGNALS ...

☐ ☐ ☐ 1. Are working
☐ ☐ ☐ 2. Have a mechanism that allows users to stop the vehicle traffic
☐ ☐ ☐ 3. Are placed in appropriate locations (if not, make note of where more are needed)
☐ ☐ ☐ 4. Provide audible as well as visual prompts
☐ ☐ ☐ 5. Provide enough time to walk or ride a bicycle from one side of the street to the other (indicate the amount of time: _____ minutes _____ seconds)
☐ ☐ ☐ 6. Provide suitable opportunities to cross (indicate the amount of time pedestrians/ cyclists must wait for a traffic light change in order to cross: _____ minutes _____ seconds)

THE RIDING SURFACE ...

☐ ☐ ☐ 1. Is good or adequate
☐ ☐ ☐ 2. Has potholes, cracks, gaps or uneven spots
☐ ☐ ☐ 3. Has debris (trash, broken glass, etc.)
☐ ☐ ☐ 4. Has dangerous obstructions (drain gates, utility covers, metal plates, rumble strips, etc.)
☐ ☐ ☐ 5. Is very slippery when wet

NOTES OR OTHER OBSERVATIONS *Use the back of this worksheet.*

Visit ***AARP.org/BikeAudit*** to download, print, copy and/or share additional worksheets.

The ***AARP Bike Audit Tool Kit*** was created with the League of American Bicyclists (***BikeLeague.org***).

Streets and Crossings RIDING AUDIT (ON-BIKE)

Community Name: MANDAN

Starting Location: MCKENZIE DRIVE SE FROM ARCO STATION WEST OF 46TH AVE SE **Ending Location:** 31ST STREET SE AND 46TH AVENUE SE INTERSECTION

Route Description: RIDING WEST ON MCKENZIE TO BAYSHORE BEND SE, RIDING BAYSHORE TO 31ST ST, 31ST ST TO 46TH **Mileage:** Approximately 2,800 Feet

Audit Date: _____ **Start Time:** _____ AM | PM **End Time:** _____ AM | PM

Posted speed limit(s): _____ **Do the motorists appear to be obeying the speed limit(s)?** Yes ☐ No ☐

Number of vehicle lanes: _____ **The street is:** one-way ☐ | two-way ☐

If more than one lane: The roadway has a median ☐ | a pedestrian island ☐

Does the street have a sidewalk? No ☐ | Yes, on one side of the street ☐ | Yes, on both sides of the street ☐

Is a sidewalk needed? No ☐ | Yes, on one side of the street ☐ | Yes, on both sides of the street ☐

Does the street have a bike lane? No ☐ | Yes, on one side of the street ☐ | Yes, on both sides of the street ☐

Is a bike lane needed? No ☐ | Yes, on one side of the street ☐ | Yes, on both sides of the street ☐

If yes, describe the existing bike lane(s) and any needed improvements. If no, describe the desired bike lanes(s) and note whether the location has a vehicle lane, shoulder or other space that could become a bike lane. For both, include details such as the type and number of bike lanes, direction(s), length from start to finish, etc. (See page 12 of the ***AARP Bike Audit Tool Kit*** for reference.)

YES | NO | OTHER **Skip any statements that don't apply.**

THE STREET ...

☐ ☐ ☐ 1. Has traffic lights and/or stop signs at intersections and crossings
☐ ☐ ☐ 2. Has traffic lights and/or stop signs that are clearly visible to drivers and other roadway users
☐ ☐ ☐ 3. Has dedicated traffic lights for bicyclists
☐ ☐ ☐ 4. Allows motorists to make a right turn on red
☐ ☐ ☐ 5. Has crosswalks
☐ ☐ ☐ 6. The crosswalks are well marked and clearly visible to drivers and pedestrians
☐ ☐ ☐ 7. Has signage alerting drivers to the presence of pedestrians
☐ ☐ ☐ 8. Has signage alerting drivers to the presence of bicyclists
☐ ☐ ☐ 9. Has signage and road markings that help users navigate
☐ ☐ ☐ 10. Has a crossing signal (if yes, complete the next section)

THE CROSSING SIGNALS ...

☐ ☐ ☐ 1. Are working
☐ ☐ ☐ 2. Have a mechanism that allows users to stop the vehicle traffic
☐ ☐ ☐ 3. Are placed in appropriate locations (if not, make note of where more are needed)
☐ ☐ ☐ 4. Provide audible as well as visual prompts
☐ ☐ ☐ 5. Provide enough time to walk or ride a bicycle from one side of the street to the other (indicate the amount of time: _____ minutes _____ seconds)
☐ ☐ ☐ 6. Provide suitable opportunities to cross (indicate the amount of time pedestrians/ cyclists must wait for a traffic light change in order to cross: _____ minutes _____ seconds)

THE RIDING SURFACE ...

☐ ☐ ☐ 1. Is good or adequate
☐ ☐ ☐ 2. Has potholes, cracks, gaps or uneven spots
☐ ☐ ☐ 3. Has debris (trash, broken glass, etc.)
☐ ☐ ☐ 4. Has dangerous obstructions (drain gates, utility covers, metal plates, rumble strips, etc.)
☐ ☐ ☐ 5. Is very slippery when wet

NOTES OR OTHER OBSERVATIONS *Use the back of this worksheet.*

Visit ***AARP.org/BikeAudit*** to download, print, copy and/or share additional worksheets.
The ***AARP Bike Audit Tool Kit*** was created with the League of American Bicyclists (***BikeLeague.org***).

Streets and Crossings RIDING AUDIT (ON-BIKE)

Community Name: MANDAN

Starting Location: 31ST STREET AND 46TH AVENUE SE INTERSECTION **Ending Location:** MCKENZIE DRIVE SE AND MARINA ROAD SE INTERSECTION

Route Description: RIDING NORTH ON 46TH AVENUE SE, TURNING RIGHT ONTO MCKENZIE, RIDING EAST TO MARINA ROAD **Mileage:** Approximately 3,300 Feet

Audit Date: _____ **Start Time:** _____ **AM | PM** **End Time:** _____ **AM | PM**

Posted speed limit(s): _____ **Do the motorists appear to be obeying the speed limit(s)?** Yes ☐ No ☐

Number of vehicle lanes: _____ **The street is:** one-way ☐ | two-way ☐

If more than one lane: The roadway has a median ☐ | a pedestrian island ☐

Does the street have a sidewalk? No ☐ | Yes, on one side of the street ☐ | Yes, on both sides of the street ☐

Is a sidewalk needed? No ☐ | Yes, on one side of the street ☐ | Yes, on both sides of the street ☐

Does the street have a bike lane? No ☐ | Yes, on one side of the street ☐ | Yes, on both sides of the street ☐

Is a bike lane needed? No ☐ | Yes, on one side of the street ☐ | Yes, on both sides of the street ☐

If yes, describe the existing bike lane(s) and any needed improvements. If no, describe the desired bike lanes(s) and note whether the location has a vehicle lane, shoulder or other space that could become a bike lane. For both, include details such as the type and number of bike lanes, direction(s), length from start to finish, etc. (See page 12 of the ***AARP Bike Audit Tool Kit*** for reference.)

YES | NO | OTHER **Skip any statements that don't apply.**

THE STREET ...

☐ ☐ ☐ 1. Has traffic lights and/or stop signs at intersections and crossings
☐ ☐ ☐ 2. Has traffic lights and/or stop signs that are clearly visible to drivers and other roadway users
☐ ☐ ☐ 3. Has dedicated traffic lights for bicyclists
☐ ☐ ☐ 4. Allows motorists to make a right turn on red
☐ ☐ ☐ 5. Has crosswalks
☐ ☐ ☐ 6. The crosswalks are well marked and clearly visible to drivers and pedestrians
☐ ☐ ☐ 7. Has signage alerting drivers to the presence of pedestrians
☐ ☐ ☐ 8. Has signage alerting drivers to the presence of bicyclists
☐ ☐ ☐ 9. Has signage and road markings that help users navigate
☐ ☐ ☐ 10. Has a crossing signal (if yes, complete the next section)

THE CROSSING SIGNALS ...

☐ ☐ ☐ 1. Are working
☐ ☐ ☐ 2. Have a mechanism that allows users to stop the vehicle traffic
☐ ☐ ☐ 3. Are placed in appropriate locations (if not, make note of where more are needed)
☐ ☐ ☐ 4. Provide audible as well as visual prompts
☐ ☐ ☐ 5. Provide enough time to walk or ride a bicycle from one side of the street to the other (indicate the amount of time: _____ minutes _____ seconds)
☐ ☐ ☐ 6. Provide suitable opportunities to cross (indicate the amount of time pedestrians/ cyclists must wait for a traffic light change in order to cross: _____ minutes _____ seconds)

THE RIDING SURFACE ...

☐ ☐ ☐ 1. Is good or adequate
☐ ☐ ☐ 2. Has potholes, cracks, gaps or uneven spots
☐ ☐ ☐ 3. Has debris (trash, broken glass, etc.)
☐ ☐ ☐ 4. Has dangerous obstructions (drain gates, utility covers, metal plates, rumble strips, etc.)
☐ ☐ ☐ 5. Is very slippery when wet

NOTES OR OTHER OBSERVATIONS *Use the back of this worksheet.*

Visit ***AARP.org/BikeAudit*** to download, print, copy and/or share additional worksheets.
The ***AARP Bike Audit Tool Kit*** was created with the League of American Bicyclists (***BikeLeague.org***).

Who's Bicycling — and Why?

Community Name: MANDAN

Location/Street Name(s): AUDIT ROUTE (OVERALL) **Weather/Temperature:** _____

Audit Date: _____ **Start Time:** _____ AM | PM **End Time:** _____ AM | PM

WHO'S BICYCLING? Use your best guess to determine each person's age group.	**NUMBER OF PEOPLE** Use tally marks (𝍸) to count the number of people observed.
Children (e.g., elementary school students)	
Teens	
Adults	
Older Adults	
WHERE?	
Riding in the street	
Riding on the sidewalk	
Riding on a bike lane or path	
HOW?	
Riding in the same direction as traffic	
Riding in the opposite direction of traffic	
Riding with child passengers	
Riding with packages/cargo	
DESTINATIONS NEAR OR CONNECTED TO THIS ROUTE	
Schools/childcare	
Grocery stores	
Retail and restaurants	
Fitness and recreation	
Professional offices (including health care facilities)	
Public transit	
Other/unknown	

ALSO, WHO'S NOT BIKING? Do the observed cyclists represent the demographic composition of the neighborhood? If not, which members of the community appear to be missing? Why might that be? (Use a notebook or the back of this worksheet to record these answers and observations.)

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Build a Better Block

Would the safe bikeability and appeal of the bike audit location or route be improved by any of the following features? Select those you think could help:

- ☐ 1. Bike lane(s) — because there aren't any
- ☐ 2. A different type of bike lane(s) than what's present (See examples on page 12 of the ***AARP Bike Audit Tool Kit***. Explain below.)
- ☐ 3. Secure bike parking
- ☐ 4. A bike "fix-it" station
- ☐ 5. Sidewalks — because there aren't any
- ☐ 6. Sidewalk repairs
- ☐ 7. Wider sidewalks
- ☐ 8. Improved sidewalk continuity
- ☐ 9. Safety barriers between the sidewalk and street (landscaping, low walls, fencing, etc.)
- ☐ 10. Decorative sidewalk features (hanging flower baskets, planters, etc.)
- ☐ 11. Crosswalks— because there aren't any
- ☐ 12. Raised and/or artistic crosswalks
- ☐ 13. Pedestrian "bulb-outs" at intersections or crossings
- ☐ 14. Pedestrian island(s)
- ☐ 15. Pedestrian-friendly lighting
- ☐ 16. One-way rather than two-way traffic
- ☐ 17. Outdoor seating and furnishings for public use (benches, tables, parklets, etc.)
- ☐ 18. Decorative and/or directional (also called "wayfinding") signage
- ☐ 19. Public art (sculptures, wall murals, banners)
- ☐ 20. More street-level/street-facing shops and businesses
- ☐ 21. Shelter from the elements (awnings, outdoor umbrellas, etc.)
- ☐ 22. Green space (such as a small park)
- ☐ 23. Street trees and landscaping
- ☐ 24. Improved landscape maintenance
- ☐ 25. Drinking fountains
- ☐ 26. Public restrooms (or, if already present, better restrooms)
- ☐ 27. Litter removal
- ☐ 28. Graffiti removal
- ☐ 29. Trash receptacles
- ☐ 30. Security features (cameras, call boxes, etc.)
- ☐ 31. Management of off-leash dogs
- ☐ 32. Repair or removal of vacant or rundown buildings
- ☐ 33. Bike parking
- ☐ 34. Car parking
- ☐ 35. Lower speed limits
- ☐ 36. Other _____

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