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THOMAS L JUDGE
GOVERNOR



STATE OF MONTANA
DEPARTMENT OF HIGHWAYS

HELENA, MONTANA 59601

H J ANDERSON
DIRECTOR OF HIGHWAYS

October 15, 1975

IN REPLY REFER TO:

BRF 224 (14)
First Avenue North Bridge
and Approaches -
Great Falls

QUALITY

*OK
Jury
AID*

Environmental Quality Council
Capitol Station
Helena, Montana 59601

Gentlemen:

Attached, for your information, are two (2) copies of the Draft Environmental Statement Negative Declaration for the above project, as approved by the Federal Highway Administration.

Very truly yours,

H. J. ANDERSON
DIRECTOR OF HIGHWAYS

By *Stephen C. Kologi*
Stephen C. Kologi, P. E., Chief
Preconstruction Bureau

32-SCK:mg
Attachments

cc: K. F. Skoog

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DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

Prepared by

STATE OF MONTANA
DEPARTMENT OF HIGHWAYS
PRECONSTRUCTION BUREAU

QUALITY

DRAFT
ENVIRONMENTAL STATEMENT
NEGATIVE DECLARATION

BRF 224 (14)
FIRST AVENUE NORTH BRIDGE
AND APPROACHES
GREAT FALLS

R. C. JOHNSON, DIRECTOR OF HIGHWAYS

By Stephen C. Kologi Date October 2, 1974
Stephen C. Kologi, P. E. Chief
Preconstruction Bureau

Reviewed by H. N. Stewart
H. N. Stewart, Division Engineer
Federal Highway Administration

Date 10/7/75

I. DESCRIPTION OF THE PROPOSED PROJECT AND ITS SURROUNDINGS

A. LOCATION - This project is located in north-central Montana in the northern part of Cascade County. It is situated in the west-central portion of Great Falls and connects the central business districts on each side of the Missouri River. The maps at the back of this declaration show the location of the project in relation to both Great Falls and the entire state.

The project will involve approximately 1900 feet of one of the major arterials in Great Falls. Approximately 925 feet will be a new bridge and the remainder approaches to the bridge. The majority of the approach work will be on the west side of the river.

The existing First Avenue North Bridge crosses the Missouri River in a northwest to southeast direction. The bridge is about 1.5 miles upstream from the 10th Street Bridge and about 1.0 miles downstream from the Warden Bridge on 10th Avenue South. The entire project is within the Great Falls City Limits.

PURPOSE - The First Avenue North Bridge across the Missouri River is the main connection between the east and west sections of Great Falls. There are three other bridges across the river, however, they all carry less traffic. Also, the First Avenue North Bridge is the most convenient and fastest connection between Interstate 15 and the central business district.

The present bridge is in dire need of repair. Spalling and cracking is occurring on much of the deck, sidewalks, and main arches. The sidewalks on the south side of the structure were replaced with precast slabs but they are now in need of additional maintenance. The concrete railing has deteriorated to such an extent that it would not keep a vehicle from leaving the structure. Because of the deterioration of the sidewalks and deck, there is no way to attach new, adequate railing. Sandfilled 55 gallon drums with guardrail attached have been placed along the curb line on the north side of the structure to act as a barrier and thus prevent traffic from driving onto the sidewalk and falling through the concrete or driving off the edge of the structure.

The bridge presently carries 4 lanes of traffic on a 42 foot roadway (10.5 foot lanes). The roadway to the east is 68 feet wide and carries 6 lanes of traffic. The roadway for about 600 feet west of the bridge is 42 feet wide and carries 4 lanes of traffic, however, it then changes into a 60 foot wide roadway. So at the east end of the structure, a bottleneck occurs right at the bridge end and west of the bridge, the bottleneck occurs about 600 feet from the bridge end.

Also of significance is the poor approach alignment on the east end of structure. Traffic has to make a 25 degree angle change on a sharp curve to either get on or off the bridge. Much of the westbound traffic thus short cuts across the northerly edge of the roadway and across the sidewalk.

With the above information in mind, it appears that the complete replacement of the structure and approaches would provide the greatest public benefit.

- C. HISTORY - The First Avenue North Bridge was designed in 1919 by architect George H. Shanley and structural engineer Ralph Adams. Besides carrying vehicular traffic, the bridge also originally carried a street car or trolley. The reinforced concrete, arch type structure, which is very similar to the 10th Street Bridge, was built in 1920 for Cascade County under the direction of the Montana State Highway Commission.

The bridge has now been in continuous service for about 54 years and as discussed in the previous section, it has sustained extensive deterioration. Inspections of the bridge were made by personnel of the Montana Department of Highways and the Federal Highway Administration to determine the course of remedial action that should be taken. It was agreed that due to the presence of good foundation material and the low finished grade line required for the replacement structure, that in the interests of economy a new structure should be designed and constructed instead of trying to renovate the existing one.

A preliminary engineering program for the project was approved by the Federal Highway Administration in June, 1973, granting authority to proceed with the engineering necessary for the location studies and public hearing. The project has been approved by the Great Falls Technical Advisory Committee

and Policy Coordinating Committee and the Great Falls City-County Planning Board.

TRAFFIC - The First Avenue North Bridge is the most heavily used bridge of the four bridges across the Missouri River in Great Falls. It presently carries an average of 20,000 vehicles per day. By 1977, when it is planned that the new structure will be built, the average daily traffic is expected to reach 21,000 vehicles.

Assuming that no other bridges are built across the river in Great Falls in the next 20 years, the 1995 traffic is expected to increase to about 28,000 vehicles per day. However, if the Squaw Island Bridge, which has been under consideration for several years and would be located about 0.8 miles downstream, is built, it will pull some of the traffic away from the First Avenue North Bridge and then the 1995 traffic would amount to only 18,800 vehicles per day. However, this would still be a substantial volume of traffic.

SCOPE OF WORK - The work to be performed on this project will consist of the construction of a new bridge across the Missouri River and revision of the approaches at each end of the bridge. The new bridge will be approximately 925 feet long which will essentially match the length of the existing bridge. The work on the approaches will involve about 750 feet of roadway west of the bridge and about 250 feet east of the bridge.

The centerline of the new bridge will be located approximately 10 to 15 feet upstream from the existing centerline.

This is due to the fact that the new bridge will be wider and there is a C. M. St. P. & P. Railroad bridge located just downstream from the existing bridge. Therefore, in order to maintain adequate horizontal clearance between the railroad bridge and the new highway bridge, all the widening has to occur in an upstream direction. The approach west of the river will also be shifted upstream or southerly the same amount as the new bridge. The curve near the east end of the existing bridge will be revised so that the centerline of the new approach will be almost the same as the existing approach.

The proposed typical section of the new bridge and roadway will provide a 68 foot roadway with four 12-foot driving lanes and 10-foot shoulders. An 8-foot wide combination bicycle path-sidewalk will be provided on each side of the structure.

The approach work on the east end of the bridge will consist of revising and widening the roadway to match the new bridge and the existing roadway to the east. On the west side of the river, the approach work will consist of rebuilding approximately 700 feet of roadway to provide the same width as the new bridge. An appropriate transition from the new 68 foot wide roadway to the existing 60 foot wide roadway will be made in the vicinity of 3rd Street. Curb and gutter and sidewalks will be provided on each side of the river in conjunction with the roadway.

No channel clearing is anticipated for the project. Structure excavation will be necessary for construction of the new pier footings. Although it has not been fully determined at this time, riprap may be required to protect the river bank in the vicinity of the end bents.

The existing structure will have to completely removed to provide room for the new structure. Whether or not it will all be removed initially has not yet been determined as the possibility exists that only a portion of it will be removed with the remainder being left to maintain traffic until half of the new bridge is complete. Then traffic would be switched to the new bridge and the remainder of the old one removed.

The possibility exists that a temporary bridge may be built to maintain traffic while the new bridge is under construction. If the temporary bridge is built, it will undoubtedly be placed upstream from the existing structure. In order to tie this bridge into the existing roadway it would also be necessary to construct temporary approaches. West of the river, there should not be any major problems in doing this, however, it would probably involve the relocation of one building that would not otherwise be affected. East of the river, whatever temporary approach work is done would be on park land. The amount of land involved would depend mainly on the grade line of temporary bridge. If it is very high, more land would be involved to make an appropriate connection and if it is low, the amount would be minimal.

The contractor will probably also build a work bridge to provide a means for getting his equipment out to the portions of bridge over the water. Exactly what type of bridge he will use is unknown to us, however, it will require approval by the Department of Highways before it is built.

There are natural gas and telephone lines attached to the existing structure that will have to be moved or rerouted before removal of the structure begins. These utilities will have to remain in use during the construction period although there may be some disruption during the moving or rerouting operation. It is assumed that the lines will be attached to the new structure when it is complete. Some utility adjustment will also be necessary for the approach work.

New right-of-way will have to be acquired for this project on both sides of the river. The largest amount of acquisition will be on the west side and will require some relocation. This is discussed in more detail elsewhere in this statement. East of the river, the acquisition will involve city park land. This is also discussed elsewhere in this declaration.

F. EXISTING ENVIRONMENT

1. Land Use - On the west side of the river, the land on the south side of the project is all devoted to commercial use. Five buildings are located adjacent to the project. North of the highway, the land adjacent to the project is Milwaukee Railroad right-of-way. East of the river, the land south of the roadway is city park beginning at the river's edge and extending eastward past

the end of the project. North of the roadway, the land adjacent to the project that is not highway right-of-way is commercial.

2. Terrain - Great Falls is situated east of the Continental Divide along the Missouri River at an elevation of about 3333. The surrounding area is relatively flat land that was at one time open prairie. To the north and east the land remains flat, however, to the south and west, mountains are encountered within about 50 miles. In the immediate vicinity of the project, the ground is very flat on each side of the river.
3. Missouri River - Great Falls is located in the area that Lewis and Clark referred to as the Great Falls of the Missouri River. However, the actual falls are located downstream a considerable distance and will not be affected by this project.

The Montana Power Company has built 5 hydro-electric dams on the Missouri in the Great Falls area. These are Black Eagle, Rainbow, Cochrane, Ryan, and Morony. Black Eagle Dam is the nearest to the subject project and is located about 3 miles downstream, however, the dam does not influence the water level at the bridge site.

The confluence of the Missouri and Sun Rivers is located about 1 mile upstream from the subject project.

The river passes directly through Great Falls and is a natural barrier separating the portions of the city on each side of the river.

4. Geology - Bedrock in the area of the project consists of the Kootenai Formation and Colorado Shale, both of the lower Cretaceous Age. The Kootenai Formation is expected to be relatively shallow in this area. Alluvial sand, gravel, and silt overlie the bedrock in the vicinity of this project and in general along the Missouri River Valley and associated flood plain.
5. Climate - The average January temperature in the Great Falls area is 23.6°F and the average July temperature is 69°F. Summertime is generally quite pleasant with cool nights, warm and sunny days and very little humid weather. An average year has only 15 days over 90°F. Freezing temperatures do not occur in July or August and only on 2 or 3 days in the normal June and September. Winters are not as cold as would be expected at this northern latitude due to the frequent chinook winds that come from the southwest and produce temperature rises of 40° or more within a few hours.

The annual precipitation for the area amounts to about 17 inches and the majority of this occurs during the April-September period. The growing season lasts about 139 days in an average year.

The atmosphere in the area is virtually smog free. The average windspeed is relatively high, but extremely strong winds are seldom observed.

6. Population - Great Falls is one of the largest cities in Montana. According to the 1970 census, the population of the city proper is 60,091 while the population of the metropolitan area is about 75,000. The city accounts for the majority of the people in the county, as the entire population of Cascade County amounts to only 81,804.

Great Falls is a growing city and experienced a 33% gain in population in the 1950-1970 period.

7. Economic Activity - The main economic base of Great Falls is the agriculture and livestock industry that exists in the surrounding area. Another very important factor in Malmstrom Air Force Base which is located just east of the city. This base is the center of the largest intercontinental Ballistic Missile complex in the world and is one of the key Strategic Air Command Bases in the northwest. There are also several other industries located in and around Great Falls such as the Anaconda Company, General Mills, Con-Agra, and Phillips Petroleum which are a boost to the economy. Major gas and oil fields located to the north also stimulate the economy as many large oil companies maintain sales and storage facilities in the city.
8. Fish and Wildlife - Game fish found in the Missouri River in the vicinity of Great Falls include rainbow trout, brook trout, brown trout, whitefish, and perch. Other fish inhabiting the area are stonecats, carp, two species of sucker, and various minnow species.

Waterfowl are the only game animals found near the proposed project. There are also several types of small birds and mammals found in the vicinity of the river near the project.

9. Transportation Facilities - Great Falls lies at the junction of several major highways in Montana: Interstate 15 (North-South), U. S. 87, 89, and 91, and State 200. Four scheduled airlines: Western, Northwest, Frontier, and Hughes Air West also serve the city. The Burlington Northern and Milwaukee Railroads pass through the city and 5 bus lines and 9 truck lines augment this service.
10. Utilities - There are presently two telephone cables, two TV cables, and one 6" natural gas line attached to the existing structure. These utilities serve the area of Great Falls located west of the river.

On the approaches to the bridge, the telephone cables are buried, however, there are overhead power lines. There are also buried sanitary sewer lines in the immediate area of the approaches on each side of the river.

11. City Park - The park land lying near the southeast end of the 1st Avenue North Bridge was deeded to the City of Great Falls by the Great Falls Water Power and Townsite Company on October 18, 1909. There are 8 acres, more or less, in the park, however nothing could be found in the records of the city offices to substantiate this acreage.

Nothing has been found in the city's records where the park has been officially named. The Abstract Company has no data regarding the filing of this particular piece of land and none can be found in the office of the Cascade County Clerk and Recorder.

After the land was deeded to the city, it became known in the early days as "Tourist Park" and after 1932 it became known as "Mitchell Park".

"Tourist Park" in the earlier days was only to be used for park purposes. Facilities were installed then to accommodate campers and travelers for which a small fee per night was charged.

On August 12, 1933, the Mitchell Swimming Pool was dedicated. It was named in honor of William E. Mitchell, who had been director of relief work for the citizen's emergency relief committee and for his leadership in promoting the pool and wading pool. The official name is the "Bill Mitchell Pool".

The Park name then became known, not officially, as "Mitchell Park" and "Mitchell Pool Park" and other names pertaining to the Mitchell name. The park still remains to be officially named.

The Bill Mitchell Pool and the Park area are all in one park and the Great Falls Recreation Department conducts activities at the mentioned pool as they do in many Great Falls Parks. In 1973, 23,485 persons were in attendance

at the Mitchell Swimming pool. Up to August 8, 1974, 22,541 persons had used the swimming facilities of the pool.

Across the road to the west of the pool, between Riverside Drive and the Missouri River, the Park Department has installed four sets of picnic shelters equipped with barbecue grills and benches. In the same area there is one set of horse swings and one unit of Tut-the-Turtle climbing bars to accommodate the park patrons.

There are two buildings in the park used only as storage place for park equipment, such as tables, benches, etc.

II. PROBABLE ENVIRONMENTAL IMPACT OF THE PROPOSED PROJECT

A. BROAD IMPACTS - Since this project involves the reconstruction of an existing roadway and bridge, and essentially follows the same alignment, the broad impacts on the area are expected to be of very little consequence.

The major impact of the project will be to provide a safe and efficient facility for the traveling public. Traffic flow across the Missouri River will be greatly improved by providing a new, wider structure and upgrading the approaches.

Since this project will improve the flow of traffic over the river, it will help to tie together the sections of Great Falls located on opposite sides of the Missouri. Both sides of the river are already heavily developed, especially in the vicinity of this project, so we do not expect any significant changes in land use or land values as a result of the project.

No wildlife or waterfowl areas, historic sites or natural landmarks will be affected by this project. Access to religious, educational, cultural, recreational, and employment opportunities will be improved.

Since the project area is highly populated, resident ducks would be accustomed to human activity and no significant impacts on populations are foreseen as a result of construction activities. Loss of habitat would be very minor and of short duration. Little impact on migrating waterfowl is likely since the project would disturb a relatively small area along the river. Bird and small mammal populations would suffer minor loss of habitat until areas bared during construction could be revegetated. Sedimentation from the Sun River presently has an adverse effect on fish populations in the area. The proposed construction would add to the sedimentation but the effect on fish populations would be negligible.

Economic activity at those businesses near the project will probably be affected by the traffic disruption and construction process. However, the overall economic pattern should not be significantly affected. It actually could be improved as an increase in employment in the area could occur as a result of the project.

B. IMPACTS ON THE NARROW BAND ADJACENT TO THE HIGHWAY

There will be numerous impacts on the narrow band adjacent to the highway. These will occur before, during, and after construction.

Before construction can be started, it will be necessary to acquire additional right-of-way. The majority of the extra right-of-way will be needed on the west side of the river, however, a small amount will also be required on the east side.

We expect that all the right-of-way west of the river will be taken from the south side of the highway and will be about 0.3 acres. Three different owners will be involved in this area with one ownership being split up and leased to 3 different individuals. All of the affected property is used for commercial purposes and no homes or families will be affected. Relocation of several of the businesses will be required. This will be handled in accordance with the Montana Department of Highways right-of-way procedures which will provide relocation assistance for the displaced businesses. Also, no one would be moved until adequate replacement facilities had been secured. East of the river, the right-of-way take will amount to about 0.1 acres or less. It appears that most of this land will be taken from the north side of the highway. South of the highway the land belongs to the City of Great Falls and is part of the Mitchell Swimming Pool Park. No park land will be taken by the bridge or its approaches. Assuming that a detour is required, there will probably be some temporary detour encroachment onto park property. However, as soon as traffic is routed over the new bridge the park will be restored to as good or better condition than it was before the detour use. North of the highway the land immediately adjacent to the project is commercial. There are no businesses or buildings in the area that will be affected except possibly a small pump house.

It will also be necessary to have all existing conflicting utilities moved before construction can be started. This will probably result in a short time interference with these services until the necessary adjustments can be made.

The existing bridge will be removed and disposed of in a suitable manner in accordance with the Department of Highways Standard Specifications. Exactly what method will be used to remove the existing structure is not known as the contractor will be allowed to use the method that is most suitable to him, as long as he follows the specifications in regard to disposal of waste materials, water pollution, etc.

If a temporary bridge is built, there will be some temporary water pollution caused by the construction and removal of the bridge. The contractor will have to adhere to the same rules for this work as he does for the construction of the rest of the project. The construction of the west approach to the temporary bridge could involve the relocation of one building that would otherwise not be affected. East of the river, the temporary approach would have to be built on park land. Efforts would be made to place this approach so that it would do the least amount of damage and cause the least disruption to the area.

The contractor's work bridge, assuming he builds one, will also cause impacts very similar to those mentioned above except that the building that would be affected by the temporary bridge may not be affected by the work bridge.

The impacts of both the work bridge and the bridge used to maintain traffic will be short-lived as they would last only as long as it takes to complete the project.

The construction of the new bridge will cause a short time increase in water pollution, however, efforts will be made to keep this to a minimum. The Department of Highways Standard Specifications contain certain provisions pertaining to water pollution that the contractor will have to follow. Interim erosion control measures will be incorporated, if necessary, into the project during construction. The contractor will also be required to adhere to all local state, and national laws regarding this matter.

Air pollution will not be a major problem on this project although some will no doubt occur during the construction process. The contractor will have to follow all laws regarding this type of pollution and the Department of Highways Standard Specifications also contain provisions concerning this matter.

Probably the major impact that will occur during the construction phase of this project concerns the maintenance of traffic. Four possible alternatives of maintaining traffic are presently being considered and these are discussed in detail in the alternates section of this statement. No matter which one is used, the roadway will at times have to be completely closed off and traffic routed to other bridges in the area. If a temporary bridge or stage construction is used to maintain traffic, there will be a considerable amount of con-

gestion and traffic problems in the vicinity of the bridge sites. If all traffic is routed to other bridges for the duration of the construction process, there will be congestion problems at the other bridges and probably on some streets that will be heavily used. However, these problems will last only as long as it takes to complete the new bridge, probably about 1½ to 2 years.

Future air pollution levels are not expected to be significantly affected by this project. It is an accepted fact that better traffic flow characteristics help to reduce air pollution levels since both carbon monoxide and hydrocarbon emissions are drastically reduced as a vehicles average speed increases and braking and acceleration movements are reduced. Another reason concerns the amount of exhaust emissions coming from today's vehicles as compared to the amount that is expected to be emitted by vehicles of the future. Assuming that the current internal combustion engines are retained for future use, the higher traffic volumes will actually produce less air pollution than an equal amount of today's vehicles. This is due to the fact that there will be more newer cars with the more sophisticated emission control systems built into them. Also, since the traffic volumes are expected to increase even if the project is not built, no significant long-term adverse impact on air quality would be expected as a direct result of the project.

In the opinion of the Department of Health and Environmental Sciences, Montana does not have a serious air quality

problem caused by vehicular traffic, therefore, the State Implementation plan does not contain a section on transportation control. Thus this project is not in conflict with the State's plan for achieving federal ambient air quality standards.

Future noise levels were calculated at various locations along this project and it was determined that an exception to the design noise levels would be required. A copy of the request for the exception, the approval and all pertinent data is attached as a part of this statement.

III. PROBABLE ADVERSE ENVIRONMENTAL IMPACTS WHICH CANNOT BE AVOIDED

The water and air pollution which will occur during the construction of this project cannot be avoided, however, it will last only as long as work is in progress.

New right-of-way will have to be purchased and some relocation of businesses will be required.

Some short time utility disruption will be necessary while removing the present utility systems from the existing bridge and while attaching them to the new bridge.

During the construction process, existing traffic patterns will be disrupted by detours and re-routing of traffic to other bridges in the area.

Due to increased traffic expected on the project, noise levels will be higher than now exist.

IV. ALTERNATES

Only 3 alternates were considered for this project and they are as follows:

- 1) Build a new bridge in approximately the same location as the existing bridge.
- 2) Continue to use the existing bridge.
- 3) Continue Central Avenue West due east on across the Missouri River until it connects in with 2nd Avenue North. The new bridge would then be located downstream from the existing bridge and would cross the river at slight skew.

The advantages and disadvantages of each alternate are as follows:

Alternate No. 1 Advantages -

- 1) The flow of traffic across the Missouri River would be greatly improved.
- 2) The new bridge would be built to up-to-date standards with wide shoulders and a combination bicycle path - sidewalk would be provided.
- 3) The new bridge would be much safer than the existing bridge.
- 4) The approaches to new bridge would be wider and safer.
- 5) The intersections of 3rd St. N. W. and Central Ave. West and 1st Ave. No. and River Drive would be improved.

Alternate No. 1 Disadvantages -

- 1) New right-of-way would have to be purchased.
- 2) Some relocation of businesses would be necessary.
- 3) The construction process would cause a certain amount of disruption in the area.
- 4) Traffic would be disrupted for the life of the project.
- 5) A small amount of park land might be required.

Alternate No. 2 Advantages -

- 1) Would not require any right-of-way take or relocation.
- 2) No money, material, labor, etc. would have to be expended.
- 3) There would be no disruption of the area or traffic by the construction process.

Alternate No. 2 Disadvantages -

- 1) Traffic is expected to increase in the future and, therefore, the existing problems will become worse.
- 2) The existing, unsafe bridge would remain and eventually fail with potential property damage and loss of lives.
- 3) No bicycle paths would be provided.
- 4) A significant segment of the public in the Great Falls area would like to see this project built.

Alternate No. 3 Advantages -

- 1) Refer to items 1 through 4 listed under Alternate No. 1 - Advantages.
- 2) The intersection of 3rd St. N. W. and Central Ave. would be improved.
- 3) Traffic maintenance would not be a major problem.

Alternate No. 3 Disadvantages -

- 1) Refer to items 1, 3, and 4 listed under Alternate No. 1 - Disadvantages
- 2) A considerable amount of R/W would have to be taken from 2 different parks.
- 3) Existing traffic patterns would have to be adjusted.
- 4) The existing railroad underpass on 1st Avenue North would be useless.
- 5) The possibility exists that all the train tracks east of the river would be removed and all train traffic would then be on the tracks west of the river. This would either require a railroad separation or cause a very hazardous at-grade crossing.
- 6) If a separation were to be provided west of the river, it would seriously complicate the 3rd Street-Central Avenue West intersection. It would also require a great deal of extra Right-of-Way acquisition.
- 7) One business on the east side of the river would be effected and could possibly require relocation.
- 8) Would require a considerable amount of new right-of-way west of the river.
- 9) Any railroad relocation would be very costly.

Although the "no build" alternate certainly warrants consideration for this project due to the high cost and the problems involved in building a new bridge and maintaining traffic, it had to be eliminated because of the continually

deteriorating condition of the existing bridge and the drastic need for a new, wider bridge to carry the expected traffic volumes. If a new bridge is not provided, the old one must either be closed or it will fail.

Alternate No. 3 was considered, however, it was not studied in detail for the reasons listed under Alternate No. 3 Disadvantages, and was eliminated from further consideration.

There are no other feasible and prudent alternatives for providing a new structure on 1st Avenue N. Any other crossing site would involve considerable park land. Also, a new railroad separation structure would be required at any other location and traffic patterns would have to be extensively revised.

In conjunction with Alternate No. 1, we are presently considering four possible methods of maintaining traffic while the project is under construction. At this time it is now known which alternative will be used as more study concerning this matter will be needed. The four alternates and their approximate costs are as follows:

- 1) Completely close off the existing roadway, remove the existing bridge, and build the new one while routing traffic to other bridges in the area. The estimated cost of the alternate including construction, right-of-way, relocation, and maintenance of traffic is \$4,218,000.
- 2) Remove enough of the existing bridge so that at least half of the new bridge could be built while maintaining at least 2 lanes of traffic on the

remainder of the old bridge. Then switch traffic to the half of the new bridge, remove the rest of the old bridge and complete the new structure. Estimated cost = \$4,647,000.

3) Build a temporary bridge to maintain at least 2 lanes of traffic while removing the old bridge and building the new one. Estimated cost = \$4,970,000.

4) The same as Alternate No. 2 except maintain 2 more lanes of traffic on a temporary bridge.
Estimated cost = \$5,226,000.

V. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The short-term uses of the environment for this project are expected to be insignificant. The construction process will disrupt the area for a short time and cause some minor air and water pollution, however, this will last only as long as it takes to complete the necessary work. Traffic patterns will no doubt change during the construction period due to the detours and other restrictions that will be in use, however, upon completion of the project, the normal pattern should return. We do not expect the completed project to cause any significant change in overall traffic patterns in the Great Falls area. Several buildings will have to be moved or torn down to provide ample room to build the project. The natural features that will be involved are insignificant.

This project will be in accordance with the Great Falls Transportation Plan and the 1968 Update thereto.

VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

No resources other than money, labor, and road and bridge building materials will be irretrievably committed to this project. The land needed for right-of-way will not be available for other use unless a demand greater than the structure or roadway requires some change in land use. The commitment of social and cultural resources will be insignificant. The use of money, materials, land, etc., is considered to be justified as it will provide a much needed highway facility to serve the traveling public.

There does not appear to be any major irreversible commitment of resources that would significantly affect the environment in the area of the project.

This project should not cause any significant change in energy requirements.

VII. COORDINATION WITH OTHERS

The attached letter of intent was sent to all persons and agencies that were considered to have a vital interest in the project. The mailing list is included in the letter. Following the letter of intent are all the comments that were received.

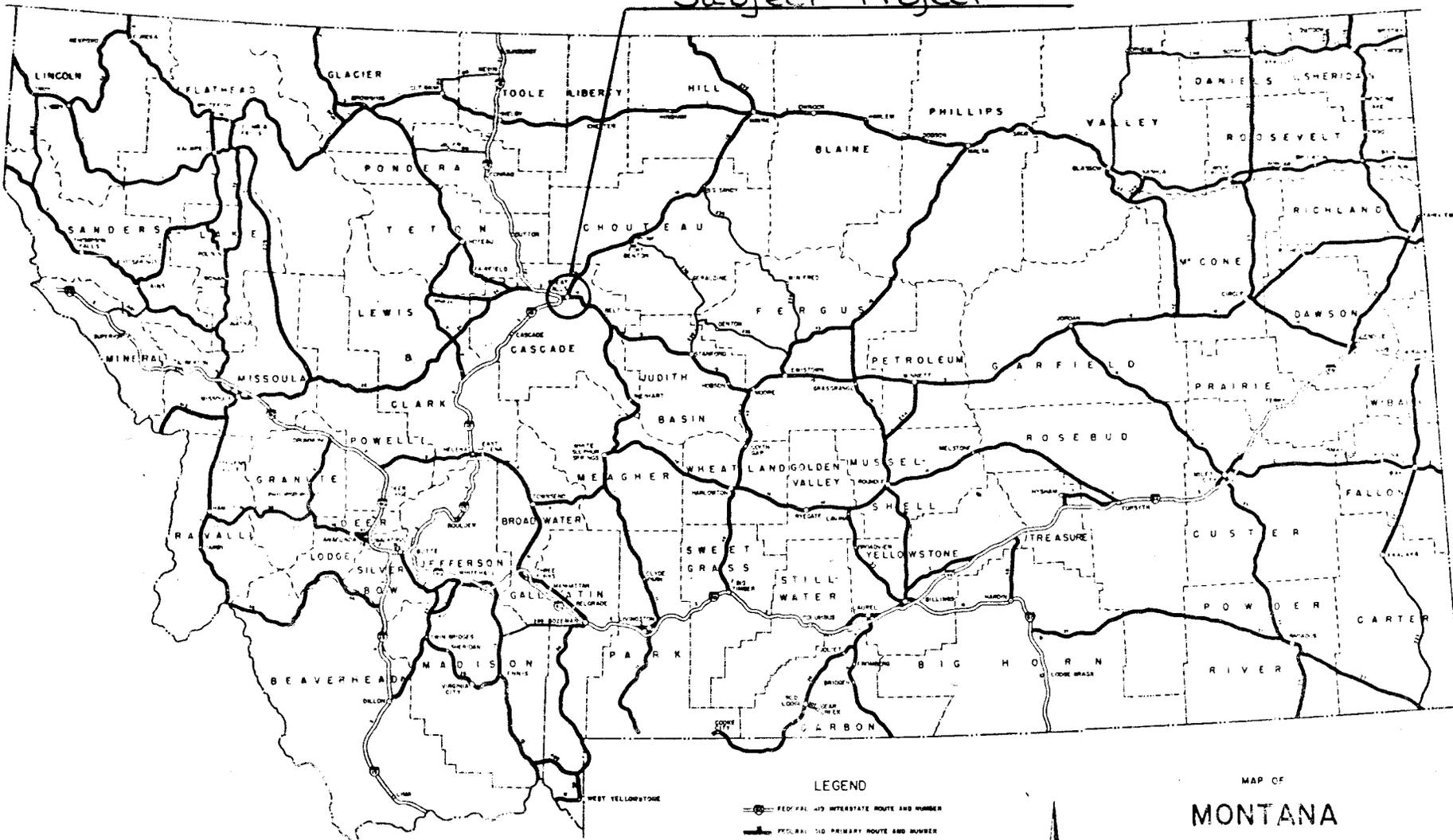
Other pertinent correspondence is also attached.

VIII. BASIS FOR NEGATIVE DECLARATION

Based on the foregoing, it is felt that the proposed action will not significantly affect the environment and that a negative declaration is appropriate.

IX. MAPS

Subject Project

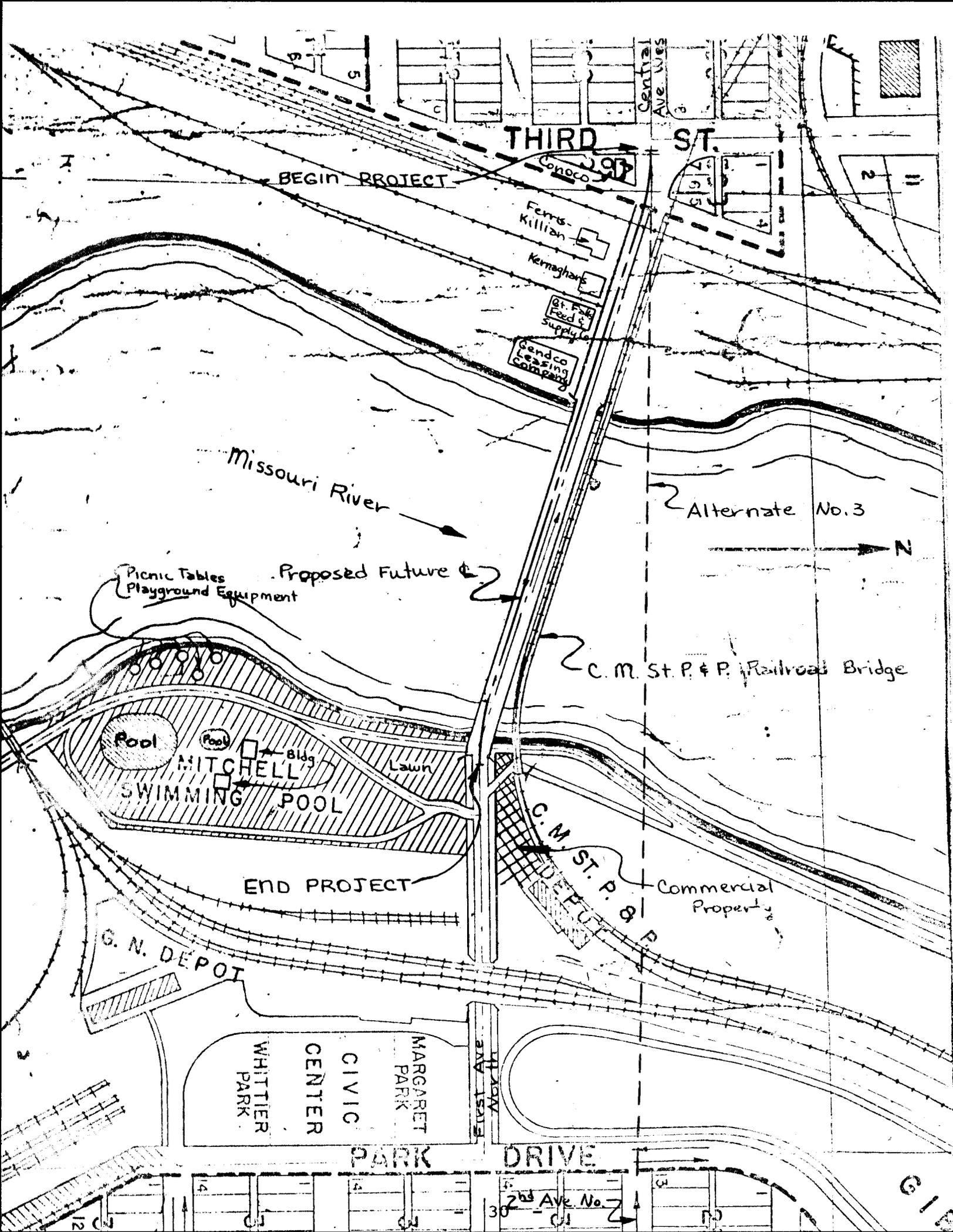


- 28 -

- LEGEND
- FEDERAL AID INTERSTATE ROUTE AND NUMBER
 - FEDERAL AID PRIMARY ROUTE AND NUMBER
 - FEDERAL AID SECONDARY ROUTE AND NUMBER
 - ★ STATE CAPITAL
 - COUNTY SEAT
 - OTHER INCORPORATED CITIES

MAP OF
MONTANA





THIRD ST.

BEGIN PROJECT

Conoco

Ferre-Killian

Kernaghan

St. Paul Feed & Supply

Gendco Leasing Company

Missouri River

Alternate No. 3

N

Picnic Tables
Playground Equipment

Proposed Future

C. M. St. P. & P. Railroad Bridge

Pool

Pool

MITCHELL SWIMMING POOL

Bldg

Lawn

END PROJECT

C. M. ST. P. & P. DEPOT

Commercial Property

G. N. DEPOT

WHITTIER PARK

CIVIC CENTER

CIVIC

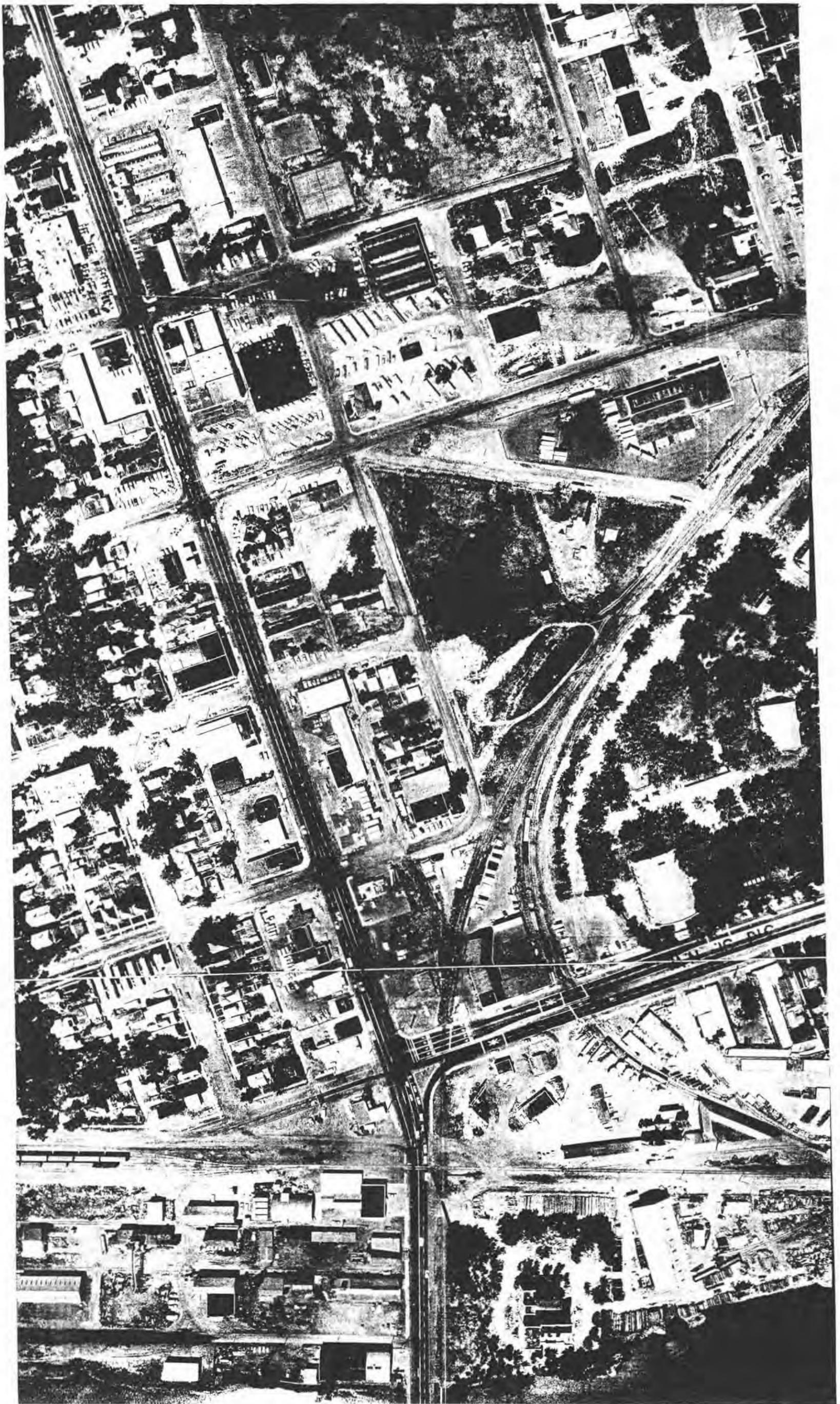
MARGARET PARK

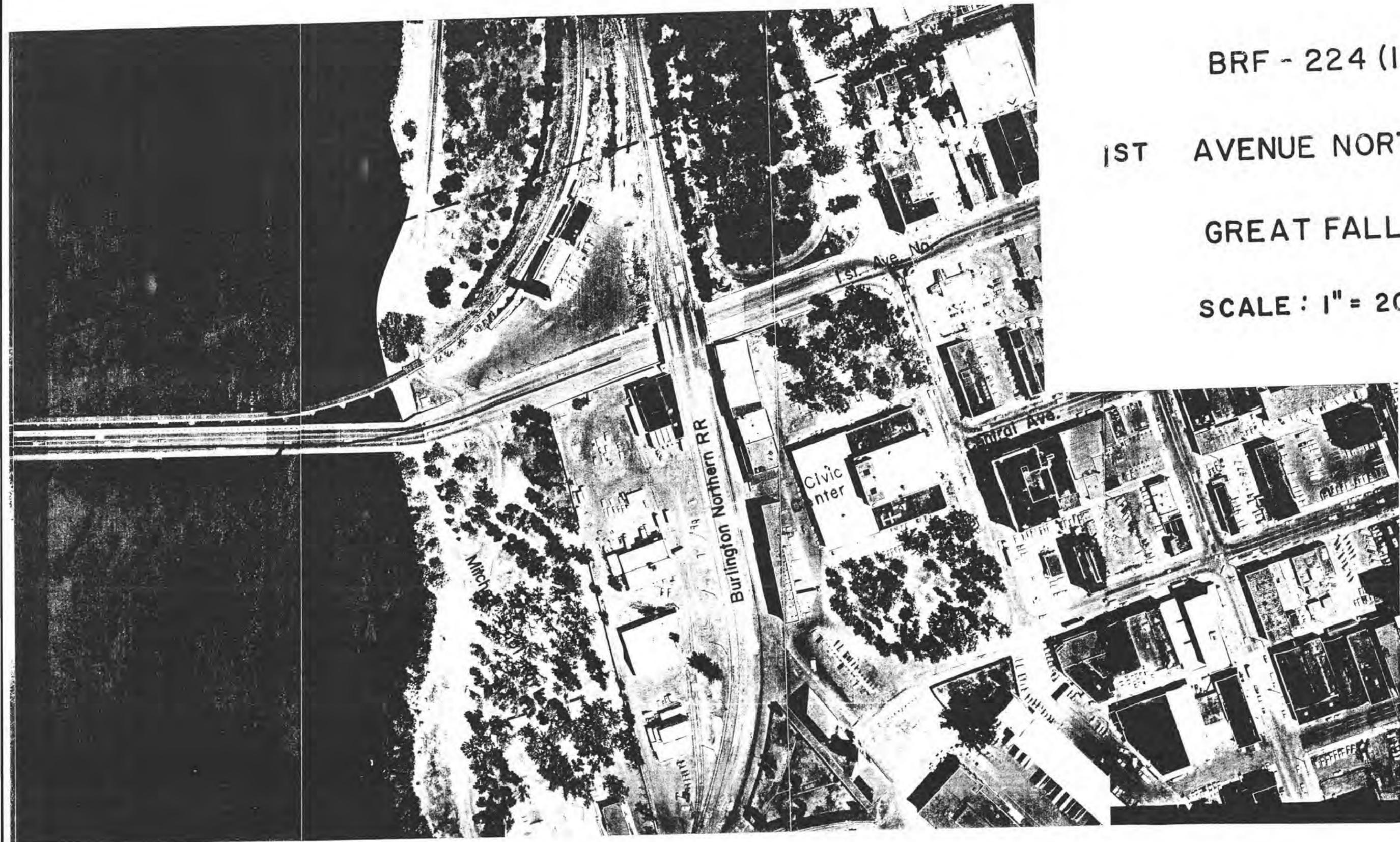
FIRST AVE. NORTH

PARK DRIVE

2nd Ave. No.

G I E





BRF - 224 (14)

1ST AVENUE NORTH BRIDGE

GREAT FALLS

SCALE : 1" = 200'

X. LETTER OF INTENT, COMMENTS ON LETTER OF INTENT, AND
OTHER CORRESPONDENCE

K. F. Skoog

STATE OF MONTANA
DEPARTMENT OF HIGHWAYS

HELENA, MONTANA 59601

H. V. ANDERSON
DIRECTOR OF HIGHWAYS

August 10, 1973

IN REPLY REFER TO:

BRF - 224 (14)
1st Ave. No. Bridge
Great Falls

Letter Mailed to Those on Attached List

Gentlemen:

This letter is to inform you of the proposed intention of the Montana Department of Highways to replace the existing 1st Ave. No. Bridge with an entirely new structure. The location of the bridge is indicated on the attached City plat of Great Falls.

The present bridge was built in 1920 and has now deteriorated to such an extent that it is becoming unsafe for public use. Also, the width of the bridge is not adequate for the heavy volumes of traffic as the lanes are only 10½' wide and there are no shoulders. The average daily traffic using the bridge in 1971 was 21,300 vehicles per day and by 1990 the average daily traffic is expected to reach 25,800.

Our current plans are to build a new prestressed beam type structure in approximately the same location as the existing bridge. The proposed width of the new bridge will be 68' plus 6' sidewalks on each side. Four 12' driving lanes with 16 foot shoulders will be provided. The approaches to the bridge will be revised accordingly to match the new width and any slight changes in alignment. We expect that it will take roughly two years to complete the project, however, actual construction is not expected to start for several years.

-- 33 --

GEORGE ZUCANOVICH, CHAIRMAN
HELENAWILLIAM KESSENER, VICE CHAIRMAN
HELENAG. R. COONEY
BOTTEP. L. BACHELLER
BILLINGSJAY LA LONTE
SIGNIFYJOHN D. ANDERSON, SECRETARY
HELENA

Page 2

One of the major problems that will be encountered on this project will be in regard to maintenance of traffic. Of course the easiest way to handle this would be to block off the road and reroute traffic to other bridges. This would be by far the best method as far as the contractor would be concerned as he could work without any traffic interference, however, due to the heavy traffic volumes and the distances to other bridges, we do not feel that this is an acceptable solution. So along with this possibility, we are also considering some method by which traffic can be maintained at the present site. The following alternatives are now being considered: 1) Remove enough of the existing structure so that 2 lanes of the new bridge could be built while maintaining at least 2 lanes of traffic on the existing bridge. Then switch traffic to the 2 new lanes, remove the rest of the existing bridge and build the other 2 new lanes. 2) Completely remove the existing bridge and build the new bridge while maintaining traffic on a temporary structure. 3) Proceeding the same as alternate 1 except that 2 more lanes of traffic would be maintained on a temporary bridge.

No final decision has been made on the exact method that will be used as further study and investigation is necessary.

The utilities presently attached to the bridge will be perpetuated and provisions will be made so that the facilities will remain in use during demolition of the existing bridge and construction of the new one.

From information presently available it appears that it will be necessary to prepare an environmental/section 4(f) statement for the project. The main reason for this is because of the fact that the land on both sides of the present bridge at the east end is presently park land. Therefore, any new R/W that may be necessary will have to be taken from this park land.

When the project reaches an appropriate stage of development, a public hearing will be held to provide an opportunity for the public to voice their opinions.

Any information that you care to furnish us regarding environmental matters, detour problems, views or opinions for or against the project, or any other matter that you feel might be appropriate will certainly be appreciated.

The following list indicates those agencies and people to which this letter is being sent. If you are aware of any other agencies, groups, or individuals that might be concerned and are not on the list, please let us know and we will contact them.

Montana Stockgrowers Association
First National Bank Building
Helena, Montana 59601

Department of Anthropology
University of Montana
Missoula, Montana 59801

Ashley C. Roberts
State Liaison Officer for the
Preservation of Historic Sites
Dept. of Fish and Game
Helena, Montana 59601

Mr. Ralph Boland
Department of Fish & Game
Sam W. Mitchell Building
Helena, Montana 59601

U. S. Coast Guard
Commander (dpa)
Thirteenth Coast Guard District
618 Second Avenue
Seattle, Washington 98104

Director, Department of Natural
Resources & Conservation
Attention: Lawrence M. Jakub
Sam W. Mitchell Building
Helena, Montana 59601

Fletcher E. Newby, Executive Director
Environmental Quality Council
Capitol Station
Helena, Montana 59601

Mr. Jack Stimpflig, Chairman
Forward Great Falls
3921 - 7th Ave. South
Great Falls, Montana 59401

Board of County Commissioners
Cascade County
Great Falls, Montana 59401

Board of Park Commissioners
City Park Department
Great Falls, Montana 59401

Department of Anthropology
Montana State University
Bozeman, Montana 59715

Assistant Secretary - Program Policy
Attention: Director -
Environmental Project Review
Department of the Interior
Washington, D. C. 20240 (12 copies)

Environmental Protection Agency
Room 916, Lincoln Tower
1860 Lincoln Street
Denver, Colorado 80203

Department of the Army
Omaha District
Corps of Engineers
7410 U. S. Postoffice & Courthouse
Omaha, Nebraska 68102

Department of Intergovernmental
Relations - Planning & Economic
Development Division
Capitol Post Office
Helena, Montana 59601

U. S. Department of Transportation
Federal Highway Administration
501 North Fee Street
Helena, Montana 59601

Mr. F. L. Striebel
Division Engineer
Milwaukee Railroad
Deer Lodge, Montana 59832

Mr. John Kelly, City Engineer
Civic Center
Great Falls, Montana 59401

Dept. of Health, Education, & Welfare
9017 Federal Office Building
19th and Stout Streets
Denver, Colorado 80202

Mr. Robert A. Wells
Executive Vice President
Great Falls Chamber of Commerce
P. O. Box 2127
Great Falls, Montana 59403

Great Falls Gas Company
Mr. Earle E. Garrison, President
P. O. Box 2229
Great Falls, Montana 59403

Sewer and Water Department
Civic Center
Great Falls, Montana 59401

Mr. Robert Myklebust
Traffic Engineer
Civic Center
Great Falls, Montana 59401

The Wilderness Society
4260 East Evans Avenue
Denver, Colorado 80222

Agricultural Stabilization and
Conservation Service
P. O. Box 670
Bozeman, Montana 59715

Montana League of Conservation
Voters - Box 80
Attention: Wm. Tomlinson
Missoula, Montana 59801

32-SCK:KFS:GLL:mj

cc: J. R. Beckert
J. T. Sullivan
R. E. Champion
H. E. Stratton
L. B. Fox
P. R. Devine
A. G. Zbitnoff
~~K. F. Skeog~~
D. D. Anderson

Mr. Ole Ueland
State Soil Conservation Bureau
Capitol Station
Helena, Montana 59601

Department of Health &
Environmental Sciences
Environmental Sciences Division
Mr. Benjamin Wake, Administrator
Cogswell Building
Helena, Montana 59601

Mountain Bell
401 - 1st Ave. North
Great Falls, Montana 59401

The Honorable Curtis Ammondson
Mayor of Great Falls
Great Falls, Montana 59401

Mr. Robert Roberts
City-County Planning Board
Great Falls, Montana 59401

Student Environmental Research
Center - Room 212, Venture Center
University of Montana
Missoula, Montana 59801

Montana Wildlife Federation
410 Woodworth Avenue
Attention: Donald Aldrich
Missoula, Montana 59801

The Great Falls Tribune
Tribune Building
Great Falls, Montana 59401

Dr. T. C. Byerly
Office of the Secretary of
Agriculture
Washington, D. C. 98109

Very truly yours,

H. J. ANDERSON
DIRECTOR OF HIGHWAYS

Montana Power Co.
191 Central Ave.
Great Falls

By *Stephen C. Kologi*
Stephen C. Kologi, P. E., Supervisor
Preconstruction Section



United States Department of the Interior/
 BUREAU OF OUTDOOR RECREATION
 MID-CONTINENT REGION

SEP - 4 1973
 IN REPLY REFER TO:
 ER-73/1151
 HELENA, MONTANA

MAILING ADDRESS:
 Post Office Box 25387
 Denver Federal Center
 Denver, Colorado 80225

STREET LOCATION:
 603 Miller Court
 Lakewood, Colorado
 Telephone 254-2634

AUG 30 1973

BRF-229
 1st Ave N.
 Bridge

Mr. H.J. Anderson
 Director of Highways
 State of Montana
 Department of Highways
 Helena, Montana 59601

Dear Mr. Anderson:

This is in response to your letter of August 10, 1973, requesting any assistance and related information in evaluating possible environmental effects for the proposed 1st Avenue Bridge replacement over the Missouri River in Great Falls, Cascade County, Montana. The following comments are forwarded on a technical assistance basis only and do not constitute comments on an environmental statement.

It appears that the proposed bridge replacement project will involve Section 4(f) lands. In this case, a Section 4(f) determination must be prepared. Other than the Section 4(f) issue, we are not aware of any conflicts between the proposed project and programs directly administered by this Bureau.

The limited information provided in your request prevents a more detailed analysis of the environmental impacts involved. However, if we can be of assistance in reviewing subsequent aspects of the proposed project, please do not hesitate to call on this office.

Sincerely,

Robert J. Arkins

Robert J. Arkins
 Assistant Regional Director
 Land Use Coordination

9-5-73

SEARCHED	INDEXED	SERIALIZED	FILED
OCT 1 1973			
FBI - DENVER			



RECEIVED
HIGHWAY COMMISSION

MROED-HD

SEP - 4 1973
HELENA, MONTANA

DEPARTMENT OF THE ARMY

OMAHA DISTRICT, CORPS OF ENGINEERS
7410 U. S. POST OFFICE AND COURTHOUSE
OMAHA, NEBRASKA 68102

31 August 1973

Mr. H. J. Anderson
Director of Highways
State of Montana
Department of Highways
Helena, Montana 59601

Dear Mr. Anderson:

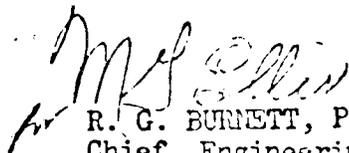
This is in reply to your letter dated 10 August 1973, in which you requested comments concerning your proposed replacement of the 1st Ave. No. Bridge over the Missouri River at Great Falls, Montana.

We are currently in the early stages of a flood plain information study on the Missouri River at Great Falls. Preliminary hydraulic information from this study, hydraulic data from past studies, and historical high water data in this vicinity indicate that an elevation of 3321.0 feet m.s.l. should be considered for the low point of the bridge superstructure. This elevation for the bridge low point will enable the bridge to convey discharges in excess of the 1st discharge while still maintaining adequate freeboard between the water surface and the bridge low point.

If the new bridge over the Missouri River at 1st Ave. No. is designed such that the area of the bridge opening normal to the flow beneath the bridge superstructure, excluding the pier area, is equal to or greater than that of the existing bridge, no adverse hydraulic effects should be encountered. This statement is based on the observation that the existing bridge appears to create little, if any, stage increases upstream.

If your new bridge design deviates from the above guidelines in such a way as to significantly decrease the hydraulic capability of the bridge, would you please inform us as to the degree of decreased hydraulic efficiency. Feel free to call on us if we can be of future assistance.

Sincerely yours,


R. G. BURNETT, P.E.
Chief, Engineering Division



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

In Reply Refer To

ES/1100:142

711 Central Avenue
Billings, Montana 59102

September 10, 1973

Your reference:
BRF-224 (14)
1st Ave. No. Bridge
Great Falls, MT

Mr. Stephen C. Kologi, Supervisor
Preconstruction Section
Department of Highways
Helena, Montana 59601

Dear Mr. Kologi:

Your letter of August 10, 1973, to the Assistant Secretary - Program Policy, USDI, concerning bridge construction at Great Falls, Montana, has been forwarded to this office. Comments in this letter are provided to assist in your environmental assessment of the project and aid in planning only. We will review and comment on the draft environmental impact statement for this project at a later date.

Game fish found in the Missouri River in the vicinity of Great Falls include several species of trout, plus sauger, northern pike, channel catfish and shovelnose sturgeon. Other important fish include goldeye, burbot, pallid sturgeon and smallmouth buffalo. Carp, river carpsucker, flathead chub, emerald shiner, longnose dace, shorthead redhorse, long-nose sucker and white sucker also inhabit this river reach. Prevalent amphibians include the leopard frog and snapper, softshell and painted turtles. Crayfish and many other invertebrates are common. Seasonally, shorebirds and wading birds feed along the muddy river banks and shallows. Several species of ducks and merganser rest on the river.

Bridge construction would disturb birds using the area. Footing emplacement would destroy small areas of the river bottom community. Water turbidities caused by bridge construction and associated streamside land disturbance would adversely affect some water organisms but if project associated turbidity is held to a minimum, these adverse effects would not be significant. Fishing success downstream may be somewhat reduced, at least temporarily.

One of the most common environmental degradations associated with bridge construction is through introduction of uncured concrete into downstream waters. Uncured concrete is toxic to some freshwater organisms and juvenile organisms are especially vulnerable to toxic substances. Generally,

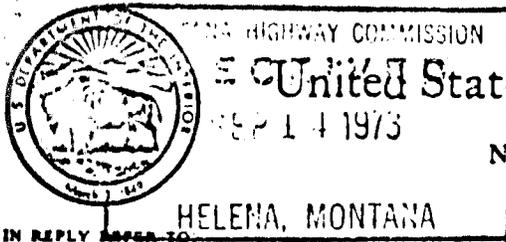
Juvenile populations are most common coincident with the spring and summer months, also ideal for construction activities.

Sincerely,

John G. Wood
 John G. Wood
 Acting Area Manager

Date Recd. Present. 9-11-73

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United States Department of the Interior

SEP 14 1973

NATIONAL PARK SERVICE

MIDWEST REGION
1709 JACKSON STREET
OMAHA, NEBRASKA 68102

SEP 11 1973

D30 MWR CE

ER-73/1151

Mr. H. J. Anderson
Director of Highways
Department of Highways
Helena, Montana 59601

Dear Mr. Anderson:

In response to your request for technical assistance in the matter of the First Avenue Bridge at Great Falls, we have reviewed the proposal and do not feel that we can contribute significantly at this time. Since a Section 4(f) statement will apparently be involved, the Bureau of Outdoor Recreation will no doubt be your best source.

We perceive no adverse effects of the project on any established or studied unit of the National Park System, or upon programs and interests of this Bureau.

We are pleased to note the proposal is being coordinated with the Departments of Anthropology at the University of Montana and Montana State University and with the Montana State Historic Preservation Officer. The interest of your department in the preservation of cultural resources is most commendable and in accord with Public Laws 91-190 and 89-665.

Our informal comment on this proposal does not constitute our official view on any environmental impact statement which may derive from the proposal.

Sincerely yours,

for. Leonard Volz
Regional Director, Midwest Region





United States Department of the Interior

GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

September 7, 1973

Memorandum

To: District Chief, WRD, Helena, Montana

From: Deputy Chief for Engineering Geology
Office of Environmental Geology

Subject: Request by Department of Highways for Technical Assistance
on 1st Ave. No. Bridge, Cascade County, Montana (ER 73-1151)

Proposed is construction of a replacement highway bridge having four 12-foot lanes with 10-foot shoulders. Approaches to the bridge will be revised to match the new width and any change in alignment.

Information on the geology of the area of the highway construction and a discussion of any potential geologic hazards would be useful in a draft environmental statement.

Elmer H. Baltz

Elmer H. Baltz



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS:
COMMANDER (mep)
THIRTEENTH COAST GUARD DISTRICT
618 SECOND AVE.
SEATTLE, WASH. 98104
PHONE: (206) 624-2902

• 5922
Ser mep 1000
26 SEP 1973
BRF 224(14)

State of Montana
Department of Highways
Helena Montana 59601

Attn: Stephen C. Kologi

Dear Sir:

Thank you for your Action Plan notification regarding your intention to replace the existing 1st Avenue North Bridge in Great Falls with a new structure. The Missouri River at this point is considered navigable, but is an "advance approval" waterway at the proposed bridge site. A Coast Guard bridge permit will not be required for the proposed replacement bridge because of its location across an advance approval waterway.

Sincerely,

S. S. BECKWITH
Captain, U. S. Coast Guard
Chief, Marine Safety Division
By direction of the District Commander

Copy to:
CCGD13 (oan)

Date Recd. Preconst. 4-22-73

ACT	Info	MAIL ROUTE	Attach	Initial
		30		
		30 Photogrammetry		
		30 Surfacing Design		
		30 Environmental		
		31 Contract Plans		
		32 Loc. Road Design		
	✓	33 Eng. Specialties		
		34 Hydraulic		
		35 Traffic		
	✓	37 Pub. Hearing		
		38 Site Plan		
		39 Consultant Design		
	✓	File		

May 20, 1974

Mr. H. J. Anderson
Director of Highways
Montana Department of Highways
Helena, Montana

Attn: Mr. Ray G. Anderson, Manager
Project Control Unit

Mr. Stephen C. Kologi, P.E.,
Supervisor, Preconstruction Section

Gentlemen:

At its regular meeting held May 14, 1974, the Great Falls City-County Planning Board discussed your requests for A-95 Clearinghouse approval for the below listed projects:

RF 64(15) (PE) Great Falls - Armington (A-95 Rev. No. 144)

U 395(11) - traffic signals at 4th Avenue South and 14th and 15th
Streets in Great Falls (A-95 Rev. No. 145)

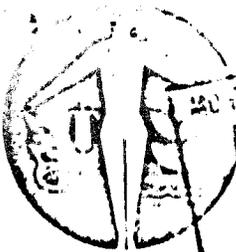
BRF - 224 (14) - 1st Avenue North Bridge (A-95 Rev. No. 146)

After due consideration, a motion was made and passed recommending Clearinghouse approval for the above named projects.

Sincerely yours,

R. P. Roberts
Planning Director

RPR/j



RECEIVED
 JUL 12 1974
 HELENA, MONTANA

Department of Health and Environmental Sciences
 STATE OF MONTANA HELENA, MONTANA 59601

John S. Anderson M.D.
 DIRECTOR

July 11, 1974

Stephen C. Kologi, P.E.
 Supervisor
 Preconstruction Section
 Department of Highways
 Sixth and Roberts Streets
 Helena, Montana 59601

Re: BRF - 224 (14)
 1st Ave. No.
 Bridge, Great Falls

Dear Mr. Kologi:

We have reviewed the plans of the referenced project and find there should be no adverse effects on air quality from the construction of this project. We know of nothing existing or planned that would adversely affect the project in air quality considerations.

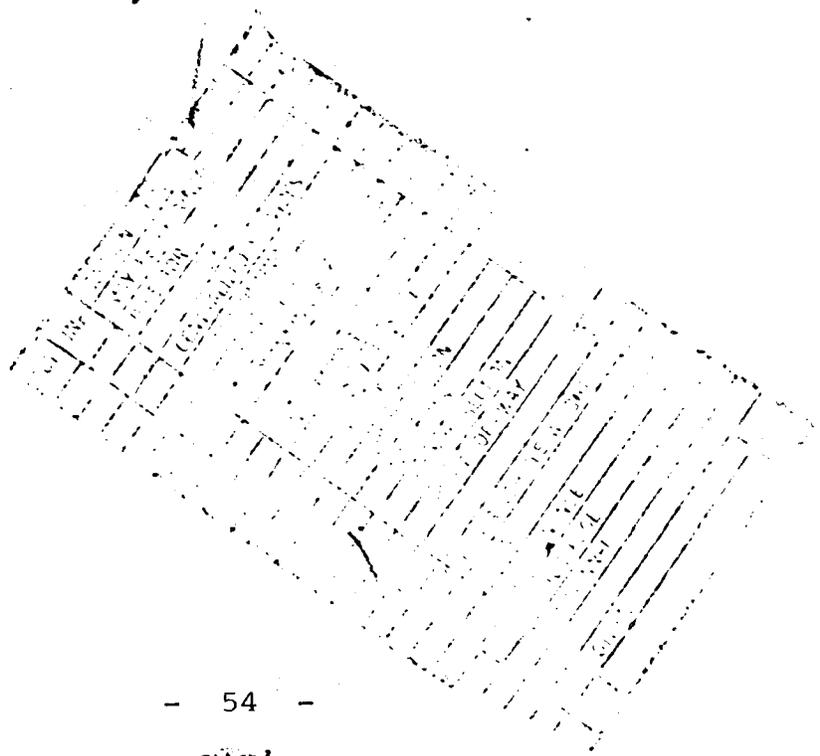
Sincerely,

R. Clark Neilson

R. Clark Neilson
 Air Pollution Control Specialist
 Air Quality Bureau

RCN:mrc

Date Recd. Preconst.		MAIL ROUTE	Attach	Initial
		30		
		31 Environmental		
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		33 Environmental		
		34 Hydraulic		
		35 Subsoil		
		36 Foundation		
		37 Traffic		
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MAIL FILE

STATE OF MONTANA



DEPARTMENT OF

FISH AND GAME

Helena, Montana

July 18, 1974

Ref: BRF - 224 (14)
1st Ave. No. Bridge
Great Falls

Mr. Stephen C. Kologi, P.E.
Chief, Preconstruction Bureau
Department of Highways
State Highway Building
Helena, Montana 59601

Dear Mr. Kologi:

We have examined the location of the proposed First Avenue North Bridge in Great Falls.

The location of the bridge will not disturb any sites on the National Register of Historic Places nor are there any sites located here that we feel are eligible for nomination to the National Register.

Sincerely,

Ashley C. Roberts, Administrator
Recreation and Parks Division

ACR/bd

Date Recd. Preconst. <u>7-19-74</u>		Act	Info	MAIL ROUTE	Attach	Initial
				30		
				30 Environmental		
				31 Hydraulic		
				32 Structural Design		
				33 Environmental		
				34 Hydraulic		
				35 Structural Design		
				35 Photogrammetry		
				36		
				37 PLS Working		
				37 Structural Design		
				37 Consultant Design		
				37		
				100		

