

Technical Memo 5

Date: Monday, July 10, 2017

Project: Northeast Pierre Transportation Plan

To: Steve Gramm, Study Advisory Team

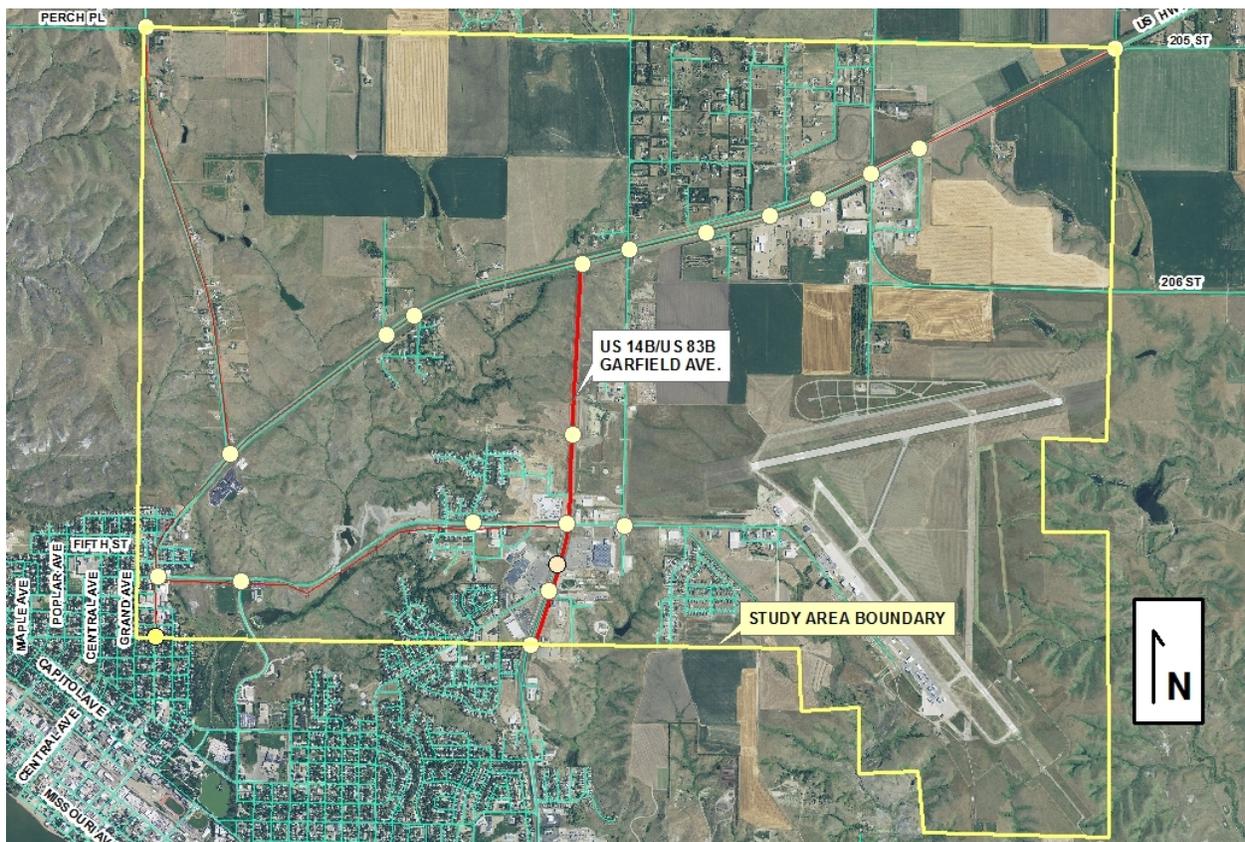
From: Rick Laughlin

Subject: Access Plan, US 14B/Garfield Ave. corridor

This Technical Memo describes the analysis of access points in the US 14B/Garfield Ave. corridor in northeast Pierre, SD. The analysis is being performed as part of the Northeast Pierre Transportation Plan and compares the existing access points to standards currently in State administrative rules and Local standards being proposed for the City of Pierre.

Study Area

The study area for the Northeast Pierre Transportation Plan has been defined as the northern part of the City of Pierre and the adjacent land suitable for development. The study area and US 14B/Garfield Ave. corridor are shown in the map below.



The US 14B/Garfield Ave. corridor transitions from an urban 5-lane cross-section within the current Pierre urbanized area to a rural two-lane cross-section outside of the urbanized area. Major intersections exist at the following locations:

- Elizabeth Street
- Harrison Street
- Fourth Street
- Brookstone Drive
- US 14/US 83

Minor intersections occur at several other locations.

All major intersections in the corridor are currently controlled by traffic signals; while the minor street intersections are controlled by stop signs on the minor approaches.

Previous Access Plan

An access plan for the corridor from SD 34 to US 14/US 83 was prepared in 2003 by SDDOT and the City of Pierre. That study is being updated through preparation of this technical memorandum. The update addresses access changes that have occurred since the 2003 study and aligns the corridor access plan with the area-wide transportation plan.

Land Use and Zoning

Land use within the urbanized area is characterized by commercial functions. Outside of the urbanized area, land use is generally agricultural. The agricultural land adjacent to the corridor is zoned for future commercial development. A new elementary school has been built west of the corridor on Brookstone Drive.

Access Criteria

The US 14B/Garfield Ave corridor within the study area has been classified in two sections under the South Dakota Administrative Rules. The sections are:

- South of 4th Street – Intermediate Urban classification
- North of 4th Street – Urban Fringe classification

A copy of the classification map is attached to this memorandum. No changes to the existing access classifications are recommended at this time. Any changes will require consultation with the City of Pierre and formal adoption by the South Dakota Transportation Commission.

Access criteria for each classification are specified in the South Dakota Administrative Rules. The criteria are shown below:

ACCESS CLASS	SIGNAL SPACING DISTANCE (MILE)	MEDIAN OPENING SPACING (MILE)	MINIMUM UNSIGNALIZED ACCESS SPACING (FEET)	ACCESS DENSITY INCREMENT	DENIAL OF DIRECT ACCESS WHEN OTHER AVAILABLE
Interstate	N/A	N/A	N/A	N/A	Yes
Expressway	½	½	2640	½ mile	Yes
Free Flow Urban	½	½ F, ¼ D	1320	¼ mile	Yes
Intermediate Urban	½	½ F, ¼ D	660	660 feet	Yes
Urban Developed	¼	¼	100	2/block face	Yes
Urban Fringe	¼	½ F, ¼ D	1000	5/side/mile	Yes
Rural	N/A	N/A	1000	5/side/mile	Yes

NOTES:

1. Access to the Interstate system is governed by SDDOT interchange policy. No new access shall be provided on non-interstate routes within 1/8 mile of interstate ramp terminals.
2. N/A = Not Applicable, F = Full Movement – all turns and through movements provided, D = Directional Only – certain turning and through movements not provided.
3. SDDOT may defer to stricter local standards.
4. SDDOT will seek opportunities to reduce access density wherever possible.
5. Rural class minimum unsignalized access spacing may be reduced to 660' by the Area Engineer, based on results of an engineering study as described in § 70:09:02:01.

Physical Constraints

The corridor exists in the rolling terrain of the Missouri River breaks. Areas of steep grades exist affect the ability to develop the property adjacent to the roadway and will also affect the ability to build roads to provide access. The approach zone for the Pierre airport also affects development in the corridor.

These physical constraints and the location of existing access points will have to be considered when planning future access points in the corridor.

Planned Access Points

One of the goals of the Northeast Pierre Transportation Plan is providing roadway facilities in the US 14B/Garfield Ave. corridor that meet future transportation needs in terms of capacity and safety. Analysis for the plan includes:

- Evaluation of the size of the roadways to meet future needs
- Evaluation of the feasibility of providing roadways in relation to the physical constraints
- Evaluation of the existing and future roadway facilities in relation to pertinent standards

The scope of this analysis allows the detailed planning of access locations throughout the corridor and constitutes an access plan which supersedes the normal access criteria, as defined in South Dakota Administrative Rule.

Access Inventory and Recommendations

An inventory of existing corridor access points and recommended actions for existing and future access points are provided in spreadsheets attached to this memo, indexed by mile reference marker. Maps of the access locations are also attached.

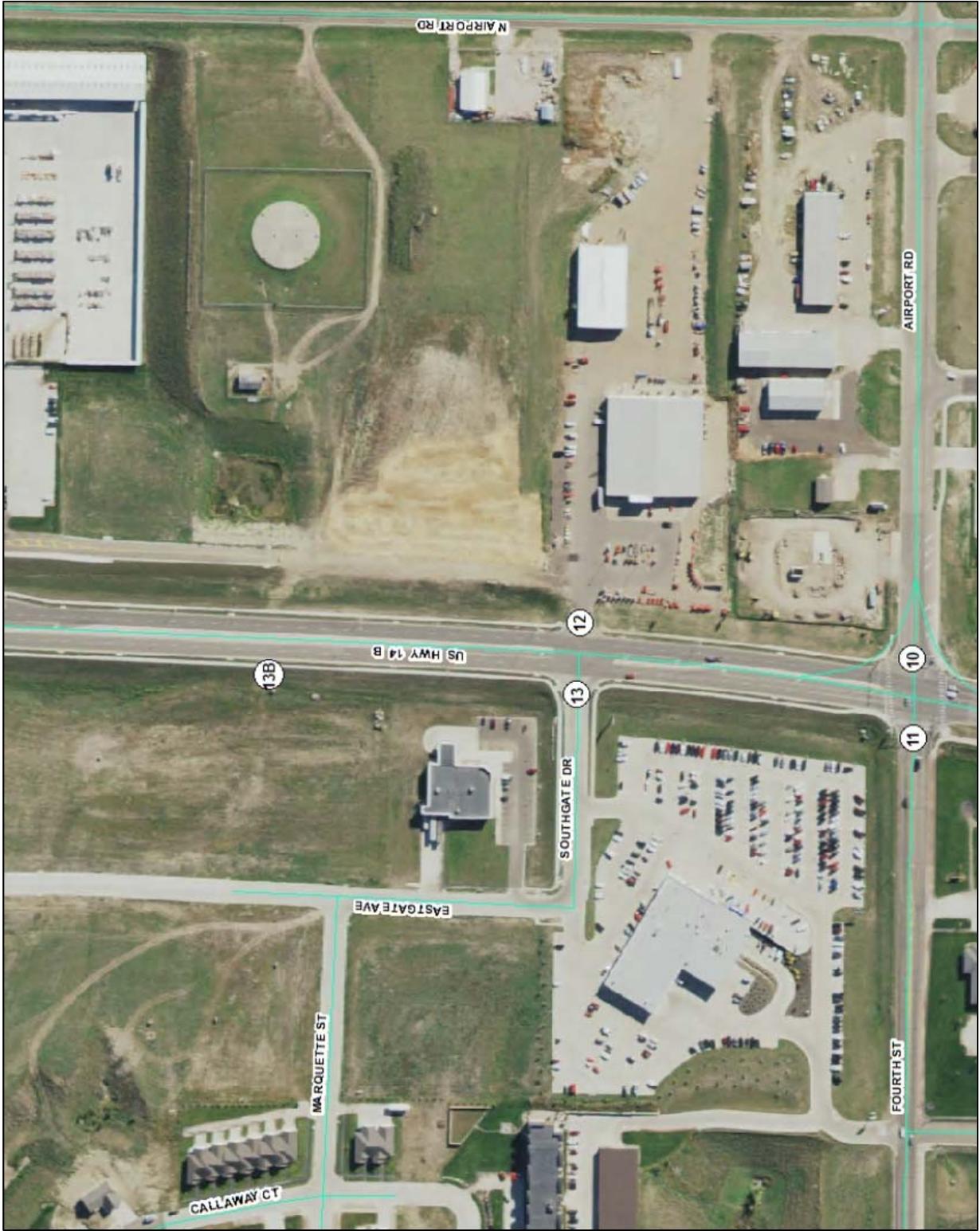
ACCESS INVENTORY AND RECOMMENDATION

US 14B/GARFIELD AVENUE

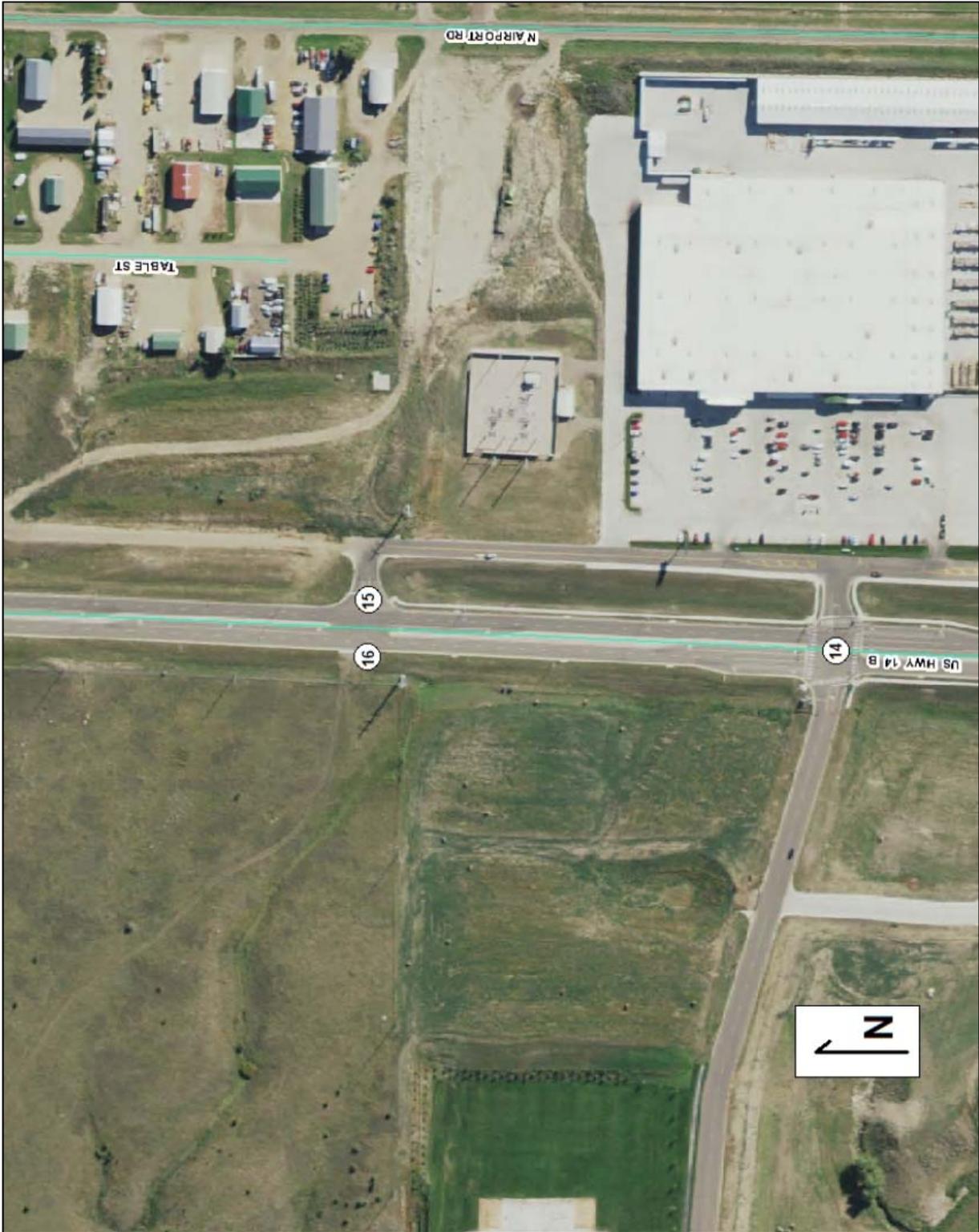
ACCESS NUMBER	MRM	OFFSET	SIDE	ACCESS IDENTIFICATION	RECOMMENDATION
1	237.4	--	LEFT	FLAG MOUNTAIN DRIVE	RETAIN EXISTING INTERSECTION
2		--	RIGHT	ELIZABETH STREET	RETAIN EXISTING INTERSECTION
3		0.07	LEFT	COMMERCIAL DRIVEWAY	RETAIN FOR EXISTING USE ONLY
4		0.17	RIGHT	COMMERCIAL DRIVEWAY	RETAIN FOR EXISTING USE ONLY
5	232.6	--	BOTH	HARRISON AVENUE	RETAIN EXISTING INTERSECTION
6		0.02	LEFT	COMMERCIAL DRIVEWAY	RETAIN FOR EXISTING USE ONLY - CONSTRUCT MEDIAN
7		0.06	RIGHT	BLACK HILLS DRIVE	RETAIN EXISTING INTERSECTION - CONSTRUCT MEDIAN
8		0.11	RIGHT	WAL-MART DRIVEWAY	RETAIN FOR EXISTING USE ONLY - CONSTRUCT MEDIAN
9		0.11	LEFT	MALL DRIVEWAY	RETAIN FOR EXISTING USE ONLY - CONSTRUCT MEDIAN
10	232.9	--	RIGHT	AIRPORT ROAD	RETAIN EXISTING INTERSECTION
11		--	LEFT	4TH STREET	RETAIN EXISTING INTERSECTION
12	232.9	--	RIGHT	COMMERCIAL DRIVEWAY	RETAIN FOR EXISTING USE ONLY
13		--	LEFT	SOUTHGATE DRIVE	RETAIN EXISTING INTERSECTION
13B		--	LEFT	COMMERCIAL DRIVEWAY	POSSIBLE FUTURE ACCESS POINT
14	233.2	--	BOTH	BROOKSTONE DRIVE	RETAIN EXISTING INTERSECTION
15		0.15	RIGHT	FRONTAGE ROAD	RETAIN EXISTING INTERSECTION
16		0.15	LEFT	FIELD ENTRANCE	PLANNED ACCESS POINT
17		0.34	BOTH	FIELD ENTRANCE	PLANNED ACCESS POINT
18		0.54	BOTH	FIELD ENTRANCE	PLANNED ACCESS POINT
19	233.9	--	BOTH	US 14/US 83	RETAIN EXISTING INTERSECTION



Access Map 1 – US 14B/US 83B/Garfield Ave.



Access Map 3 – US 14B/US 83B/Garfield Ave.



Access Map 4 – US 14B/US 83B/Garfield Ave.



Access Map 5 – US 14B/US 83B/Garfield Ave.



Access Map 6 – US 14B/US 83B/Garfield Ave.

