

APPENDIX M

ENVIRONMENTAL ASSESSMENT UPDATE MEMO
- ALIGNMENT

To: Watertown South Connector Process Team Members:
SDDOT - Terry Keller (Office of Project Development)
- Jeff Senst (Aberdeen Region Engineer)
- Ron Sherman (Watertown Area Engineer)
Watertown - Dave Peterson, City Engineer
- Herb Blomquist, Director of Public Works
FHWA - Ginger Massie

From: HDR

Project: Watertown South Connector – EM 4411(01) PCN 00RV

Date: January 16, 2008; rev 1/29/08

Job No: 39319

RE: Environmental Assessment Update

Public Meeting Comments

The public meeting for the Environmental Assessment was held on October 23, 2007. The only written or verbal comments received related to the proposed alignment of 20th Avenue from Willow Creek to 29th Street. The comments were from the owners of the land on the north and south side of 20th Avenue, Matt Kranz and Gene Kingslien, respectively. Both requested that a revised alignment be developed that minimizes the impact to the existing residences on both sides of 20th Avenue.

Landowner Meetings

A modified 20th Avenue alignment was developed and is shown in attached Figure 1. The modified alignment was shown to Matt Kranz and Gene Kingslien at the November 15, 2007 landowner meetings. Both were in favor of the modified alignment. Also in attendance at the landowner meetings were Bill and Laurie Ortmeier, the tenants of the mobile home on the Matt Kranz property, and Ron and Kaye Wickard (also legal representatives of the Kingslien property).

Noise Analysis Update

HDR re-calculated the noise levels at 2 receptors based on the **revised** roadway alignment.

Figure C-1 from the EA noise report is attached to this memo. The figure illustrates receptor locations 6 (north side of road) and 7 (south side of road). Existing noise levels at each receptor were measured to be 46 dBA (noted on pages 6 and 7 of the noise impact report, also attached to this memo).

The future predicted noise level at receptor 6 with the revised alignment remains at 65 dBA since the roadway alignment changed less than 10' at this location. The future predicted noise level at receptor 7 with the revised alignment will be 65 dBA instead of 69 dBA shown in the noise report since the roadway alignment was adjusted at this location. Each of these noise levels is below the state standard of 67 dBA. However, there is more than a 15 dBA increase from existing noise levels, therefore each receptor experiences a "noise impact" according to SDDOT guidelines.

Mitigation of the noise impacts will not be cost-effective for either of these receptors since relocation, acquisition, or screening of the residences will exceed \$15,000. This is the SDDOT threshold for cost-feasible mitigation per receptor location. At the landowner meetings, the residents on the north side of the roadway requested relocation of their trailer house. The owners of the residence on the south side of the roadway do not want the house relocated. Their preferences were noted but no promises were made at the meetings.

Farmland and Right-of-way Impacts Update

Farmland and right-of-way impacts have been re-measured based on the revised roadway alignment. Attached Figures 2-4 (Right-of-Way Impacts) and 2-5 (Farmland Impacts) have been updated accordingly. Total areas of impact have not changed significantly.



Date of Aerial Photography: 2005

Filename: Revised - Segment 1 (300 scale).dgn

Drawn by: B. Miller
 Date: 11-09-07
 Checked by: J. Unruh
 Date: 11-09-07
 Revision Date:



Revised 20th Avenue S Alignment - Willow Creek to 29th Street SE
 Watertown South Connector, SD Project EM 4411(01) PCN 00RV

Figure 1



Date of Aerial Photography: 2005

Drawn by: B. Miller
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Noise Monitoring and Receptor Locations
 Watertown South Connector, Codington County, SD
 Project EM 4411(01) PCN 00RV

Figure
C-1

7.4 FIELD MEASUREMENT LOCATIONS AND RESULTS

Monitoring locations are shown on Figure 1 (page 2) and are as follows:

Site M1 – Residence: 1808 5th Street SE

Site M2 – Residence: 922 20th Avenue SE

Site M3 – Residence: Trailer home north of 20th Ave, just east of Willow Creek

Table 4 identifies the locations of each of the monitoring sites relative to the nearest roadway centerline and the respective noise levels measured at each location.

**Table 4
Noise Monitoring Results**

Measurement Location	Duration	Distance to Centerline (feet)	NAC (dBA)	Measured L _{eq} During Peak Hour
M1 (R)	15 min.	≈ 75	66	53 dBA
M2 (R)	15 min.	≈ 120	66	51 dBA
M3 (R)	15 min.	≈ 85	66	46 dBA

Note: (R) is residential receptor.

8.0 Traffic Noise Prediction

HDR used the FHWA Traffic Noise Model (TNM) Version 2.5 to evaluate future traffic noise levels at noise sensitive receptors within the limits of this Project. The predicted traffic noise levels reflect the elevation differences and the proposed roadway alignment in relation to the noise sensitive sites. Table 5 lists the NAC, existing Leq, and the future (2030) predicted Leq for both the “Build” and “No-build” alternatives.

Table 5
Predicted Noise Levels (Leq) at Receptors

Receptor ID	Land Use	NAC (dBA)	Hourly Leq(h) dBA			Difference Between Existing/Build	Approaches or Exceeds Standards in 2030 Build
			2006	2030			
			Existing	“No-build”	“Build”		
RECEIVER1	Residential	67	53	58	64	11	No
RECEIVER2	Residential	67	53	57	63	10	No
RECEIVER3	Residential	67	53	53	59	6	No
RECEIVER4	Residential	67	53	56	65	12	No
RECEIVER5	Residential	67	51	54	60	9	No
RECEIVER6	Residential	67	46	58	65 ¹	19	Yes
RECEIVER7	Residential	67	46	57	69 ²	23	Yes

Notes: ¹ Trailer house to be relocated further from road

² Home will be acquired or relocated on property as part of project

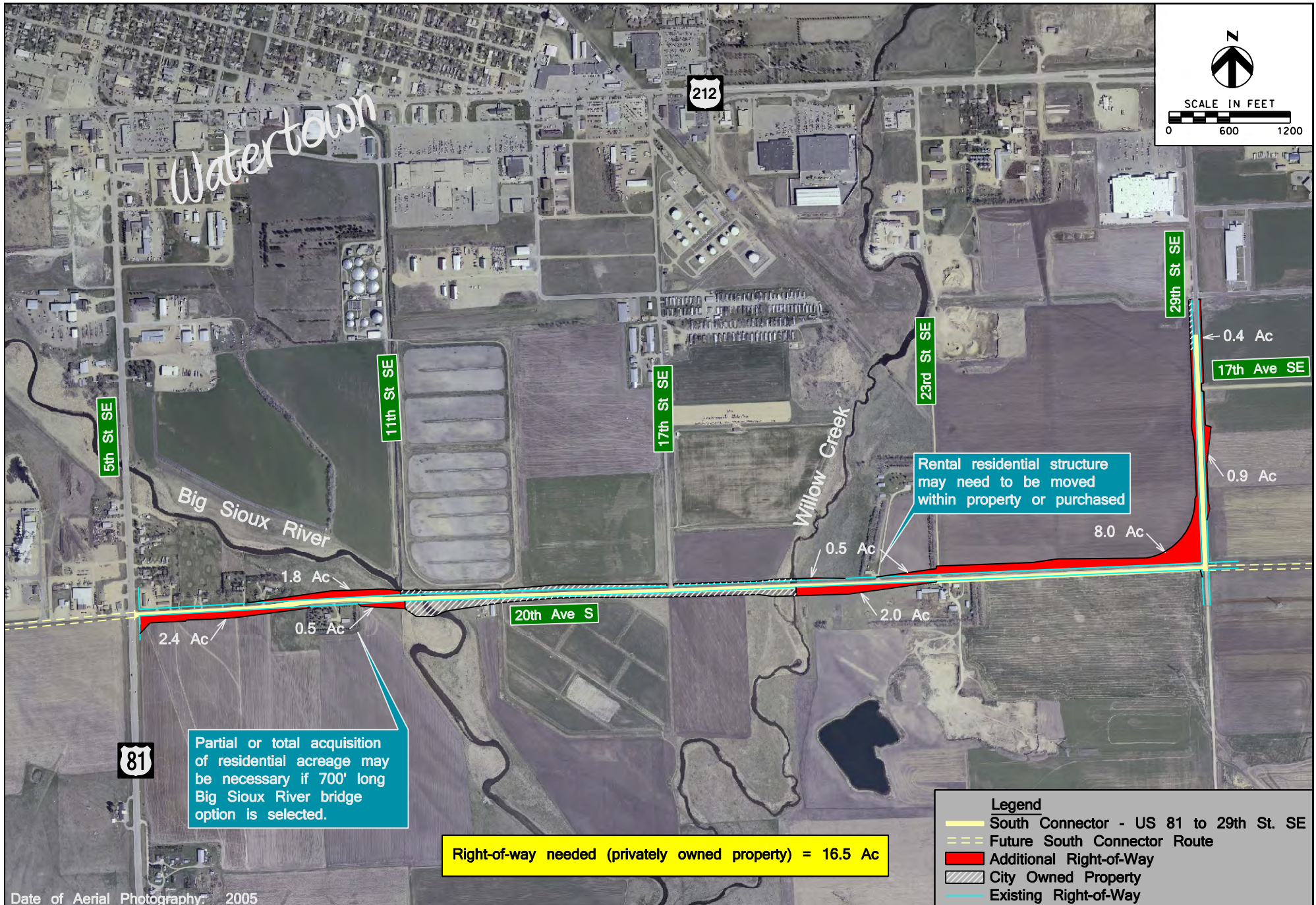
9.0 Noise Abatement Measures

Noise abatement measures are considered where predicted traffic noise levels approach or exceed the NAC or when the predicted traffic noise levels substantially exceed the existing noise levels. As shown in Table 6, two of the seven modeled receptors have predicted noise levels which exceed the NAC, however, one of the impacted receptors (Receiver 6) will be moved further from the roadway as part of the project and the other impacted receptor (Receiver 7) will be taken as part of the project. Therefore, noise abatement measures do not need to be evaluated.

10.0 Construction Noise and Vibration

Construction of the Project would result in temporary noise and vibration increases within the Project area. The evaluation and control of construction noise and vibration must be considered as well as traffic noise. This Project is bordered by scattered residential receptors and these receptors are also a concern for impacts caused by construction noise and vibration.

The following are basic categories for mitigation measures for construction noise. Due to the interrelatedness of construction noise and vibration, some of these measures will also apply for vibration resulting from construction activities.



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Right-of-Way Impacts

Watertown South Connector, Codington County, SD
Project EM 4411(01) PCN 00RV

Figure
2-4



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Farmland Impacts
 Watertown South Connector, Codington County, SD
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Figure
2-5