

Wisconsin Department of Transportation



April 10, 1998

TRANSPORTATION DISTRICT 3

944 Vanderperren Way • P.O. Box 28080

Green Bay, WI 54324-0080

Telephone(920) 492-5643

FAX(920) 492-5640

MARK ROHLOFF, ADMINISTRATOR
TOWN OF GRAND CHUTE
502 WEST WISCONSIN AVENUE
APPLETON WI 54911

Project I.D. 1123-09-00
Appleton - Green Bay Road
CTH A Overpass and Approaches
USH 41
Outagamie County

I received your letter dated March 20, 1998 regarding the Town of Grand Chute's request for consideration of a partial interchange at CTH A and USH 41.

At the request of the Town and County, we will be including a study in the consultant design contract for replacing the overpass to determine the feasibility, impacts, and cost of a partial and full interchange at this location. In addition, we will ask East Central Wisconsin Regional Planning Commission to conduct a land use study and to work with our traffic forecasting personnel to predict the future traffic volumes and impacts to USH 41 and adjacent roadways with the introduction of a partial or full interchange.

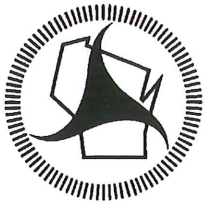
The Department's participation policy requires a minimum 50% cost share for the construction of a new interchange requested by a local government unit. An agreement was previously prepared with Outagamie County for the overhead replacement. I will work with the Town and County to revise the agreement to include a 50% local share for the added design to study the need and impacts for a potential interchange. If a decision is made to proceed with the construction of an interchange, a revised agreement will be further negotiated with the Town and County.

If you have any questions regarding this information, please contact me at (929) 492-5662.

Jim Lamers, P.E.
Project Development Supervisor

JCL/tjg03301

cc: Al Geurts, Outagamie County Director of Public Works
Omni Associates
Don Uelman, Central Office, Planning and Forecasting
Walt Raith, East Central Regional Planning Commission



Wisconsin Department of Transportation

October 24, 2002

E. Central WI Regional Planning
Mr. Walt Raith
132 Main St
Menasha, WI 54952

TRANSPORTATION DISTRICT 3
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**Subject: Public Information Meeting
 Project 1123-09-02
 US 41 & County A Interchange
 Appleton to Green Bay
 Outagamie County
 OMNNI Project E1582A02**

Dear Mr. Raith:

On behalf of the Wisconsin Department of Transportation (WisDOT), Outagamie County and the Town of Grand Chute, you are invited to attend a public information meeting. WisDOT and their consulting firm OMNNI will present the design concepts for the reconstruction of County A including a new bridge over US 41, a partial interchange and reconstruction of Rifle Range Road.

The meeting is scheduled for Wednesday, November 6, 2002 at 5:30 p.m. at the Grand Chute Town Hall, 1900 W. Grand Chute Boulevard, Grand Chute. There will be a formal presentation at 6 p.m. Personnel from WisDOT and their consultants will be available prior to and following the presentation to discuss the project on an individual basis. We encourage your attendance to review the design and to provide comments.

The project will be constructed in two phases. The first phase will include the new bridge on County A over US 41 and the reconstruction of County A from 800' south of Capitol Drive to 800' north of Grand Chute Boulevard. This work is scheduled for construction in 2004. By November 1 the proposed right-of-way and easements along County A will be marked with a long wooden stake known as a lath. Please review the location of the lath and bring any questions or concerns you have to the meeting.

The second phase of the project will be the construction of a partial interchange. The partial interchange will include ramps in the northwest and southwest quadrants. A third lane will be added for southbound USH 41 traffic from the proposed new on-ramp to the STH 15 off-ramp. Rifle Range Road will also be reconstructed. The partial interchange is awaiting funding approval. A construction schedule cannot be established for this phase until the funding process has been completed.

Individuals unable to attend this meeting and wanting information regarding this project are invited to contact any of the individuals listed below:

James C. Lamers, P.E.
Project Development Supervisor
Wisconsin Department of Transportation
District 3
Phone: (920) 492-5662

Lee Ringblom, P.E.
Design Project Manager
Wisconsin Department of Transportation
District 3
Phone: (920) 492-5990

Margaret A. Hawley, P.E.
Project Manager
OMNNI Associates, Inc.
Phone: (920) 830-6176

Steve M. Seymour, E.I.T.
Project Engineer
OMNNI Associates, Inc.
Phone: (920) 735-6900

cc: Jim Lamers, WisDOT #3
Lee Ringblom, WisDOT #3
Al Geurts, Outagamie County
Mark Rohloff, Grand Chute

**Public Information Meeting
For
Project ID 1123-09-02
US 41 and County A Interchange
Appleton – Green Bay
Outagamie County**

November 6, 2002

Walt
Seems pretty straight-
forward. No great controversy.
CTH A portion - 2004
1/2 interchange - I not yet programmed
This is a good summary.
-Ann

Need for project

The County A bridge over US 41 was built in 1960. The existing structure does not meet today's standards for vehicle under clearance. The bridge girders have been struck several times in recent years by cargo exceeding the bridge clearance. Due to the bridges deteriorating condition it will be replaced with a new structure that will provide the required clearance.

An interchange study was performed to determine the future needs of US 41 at County A. One of the objectives of the local municipalities was to provide an alternate route for passenger and heavy truck traffic using County A and the local system to reach destinations south and west of Appleton. The study evaluated the no interchange, partial interchange and the full interchange options. The partial interchange option included a southbound US 41 on-ramp and a northbound US 41 off-ramp. The full interchange option included on and off-ramps for both directions of US 41. The recommendation of the study was to construct a partial interchange at County A. The proposed preliminary design of the partial interchange is shown on the exhibits at today's meeting.

Traffic data

The average daily traffic (ADT) on County Highway A in 2000 was 11,000 vehicles per day (vpd) north and south of US 41. If the partial interchange opened today it is projected the traffic on County A would drop to 8,500 vpd south of US 41 and increase to 13,900 vpd north of US 41.

The projected traffic volume for the year 2020 on County A is 17,000. With a partial interchange the projected traffic would be 13,000 vpd south of US 41 and 22,000 vpd north of US 41.

Truck traffic on County A comprises 9.6% of the total traffic volume.

Proposed improvement

The proposed improvements are divided into two construction phases. The first phase is the proposed construction on County A. This includes a new bridge over US 41, widening to two through lanes in each direction. A ten foot paved trail is proposed along the east side of County A from Capitol Drive to Grand Chute Boulevard. Grading will be completed to accommodate a future five-foot sidewalk on the west side of County A from 400 feet north of Capitol Drive to Grand Chute Boulevard. The existing box culvert under US 41 is proposed to be extended. The work in phase one is scheduled for construction in 2004.

A second construction phase is proposed to construct the partial interchange. The proposed improvements in this phase include construction of the northbound off ramp and southbound on ramp, auxiliary lane on southbound US 41 from the proposed on-ramp to the off-ramp at WIS 15, and reconstruct of Rifle Range Road. Rifle Range Road is proposed to be widened to 37 feet including curb and gutter. Funding for construction of the partial interchange is waiting for approval. A construction schedule cannot be established for this phase until funding has been approved.

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Name _____

Address _____

City _____ State _____

Zip _____

TRAFFIC FORECAST REPORT

PROJECT ID(S): 6240-12-00
ROUTE(S): STH 47

DISTRICT/COUNTY(IES): #3 OUTAGAMIE

LOCATION: CTH A Intersection w/ new CTH A Interchange @ USH 41
DATE: October 16, 2001

Traffic Forecasting Section; Bureau of State Highway Programs; Division of Transportation Investment Management

Developed by: Lang Spicer
E-Mail ID: lang.spicer@dot.state.wi.us
Phone: (608) 266-7401
FAX #: (608) 267-0294

Design Values (%'s)

ROUTE(S):	CTH A	STH 47	
Design Volume(s):			--
K250	9.6	9.6	--
K100	10.6	10.6	--
K30	11.7	11.7	--
P(PHV)	15.2	15.3	--
T(DHV)	4.4	7.4	--
T(PHV)	2.5	4.2	--
D (Dsgn hr)	62/38	62/38	--
K8(ADT)	--	--	--
T(A8HV)	--	--	--

Truck Class %'s

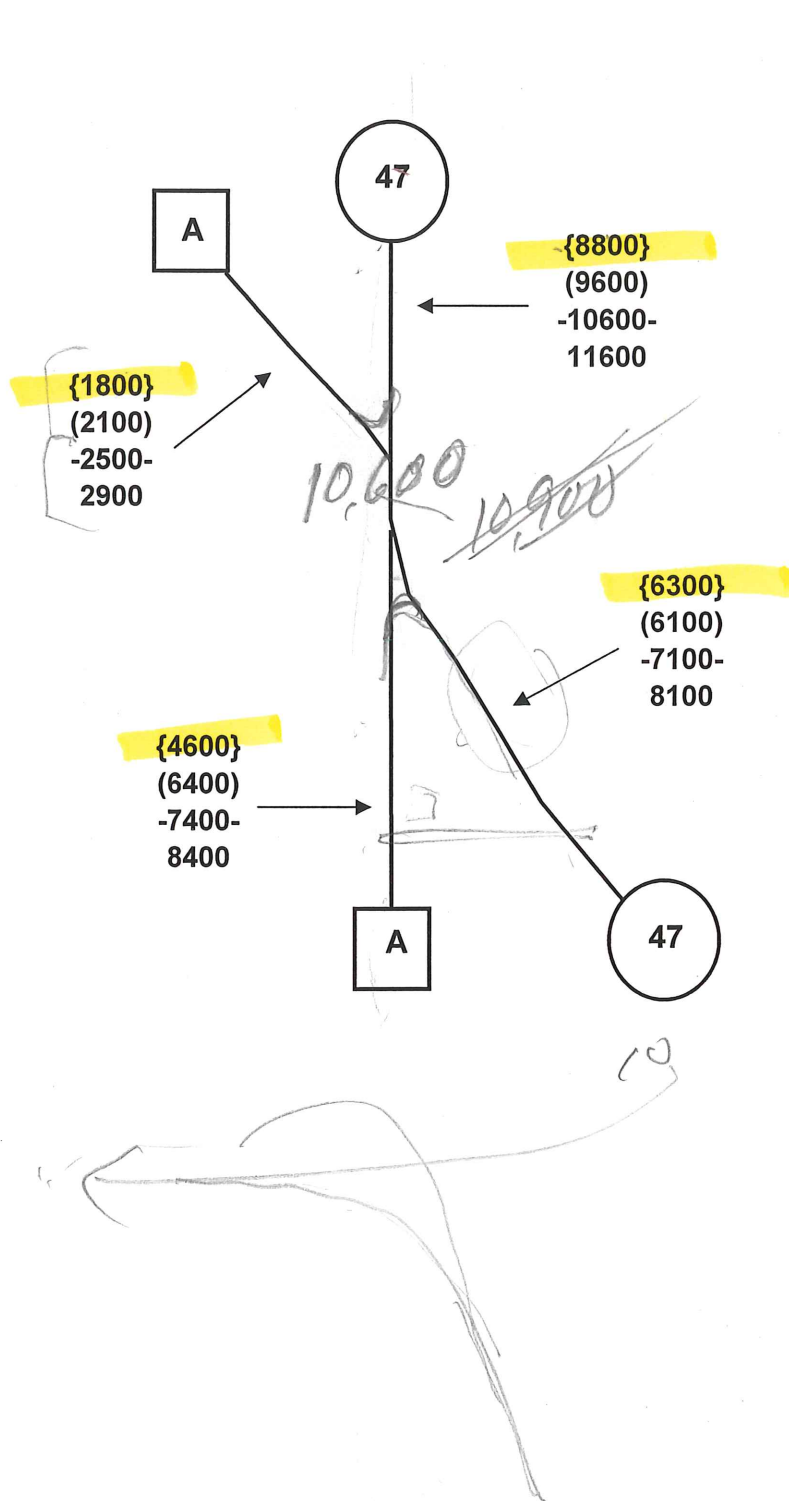
Truck Class	Seg. 1	Seg. 2	Seg. 3
2D	1.9	2.2	--
3AX	1.4	1.3	--
2S1+2S2	0.9	1.4	--
3-S2	1.2	4.0	--
DBL-BTM	0.1	0.2	--
TOTAL	5.6%	9.3%	--

Specify Last Count & Forecast Year:

. {000} 2000 AADT
. {000} 2007 AADT
. -000- 2017 AADT
. 000 2027 AADT

Notes on the Forecast:

1. The forecast assumes that no significant new traffic generators will be developed in the area for the foreseeable future.
2. STH 47 and CTH A are factor group IV highways indicating low to moderate fluctuation in traffic throughout the year. CTH A is considered a rural major collector highway while STH 47 is considered a rural principal arterial highway for count purposes.
3. Truck type percentages were derived from formulas incorporating similar type highways throughout the state.
4. 2000 was the most recent year traffic count data was collected in Outagamie County.



NOV. 22. 1999 2:45PM

NO. 2223 P. 1/7

WisDOT D-3

PO Box 28080, 944 Vanderperren Way, Green Bay, WI 54324-0080

FAX

Date: 11/22/99

Number of pages including cover sheet: 7

To:

Walt Raith

132 North Main Street

Menasha WI 54952-3100

Phone: (920) 751-4770

Fax phone: (920) 751-4771

CC:

From:

Jeanette Cavanaugh

Phone: 920/492-5986

Fax phone: 920/492-5640

REMARKS:

☐ Urgent

☐ For your review

☐ Reply ASAP

☐ Please comment

Latest comments for the USH 41 and A interchange study.

SUMMARY

The purpose of this study is to investigate the feasibility impacts, and costs associated with building a full or a partial diamond interchange at the intersection of CTH A and USH 41 in Outagamie County. There is no interchange currently at this location, however right-of-way was acquired for a full diamond interchange at this location in approximately 1960.

CTH A will be rebuilt in the near future from a rural two lane facility to a four lane urban section from Capitol Drive on the South side of USH 41 to about one forth mile north of USH 41. At or near the same time, Outagamie County will upgrade the contiguous three miles of CTH A to the north from the present 2 lanes to 4 lanes. The STH 47 interchange with USH 41 will be rebuilt within 5 years along with 8 miles of STH 47 North of USH 41.

The Town of Grand Chute is in favor of a partial interchange at CTH A and USH 41 and has requested that this interchange study be made at this time.

A full or partial interchange will have significant impacts not only on CTH A and USH 41 but also STH 47, CTH OO, and Capitol Drive and will have impact on intersections along these streets and highways. Tables 1 through 5 summarize the costs and impacts to these roadways. The costs and impacts of the full and partial interchange alternates are analyzed relative to the no interchange alternate because the no interchange alternate will be built in the near future if the interchange alternates are not accepted due to financial and other considerations.

In the tables, roadways that will not be reconstructed to a facility with greater number of lanes the impact on level of service (LOS) is based on changes in the alphabetic designation for that level of service. For roadways that will be reconstructed to more lanes within the next 20 years the impact is based on change in the design class. The cost due to differences in placement structure assume uniform soil conditions throughout the area. Costs associated with the timing of reconstruction assume a 1.5% inflation rate and 5% value of money.

The data in the tables is based on traffic projections that assume normal development of the area in accordance with the Town's comprehensive plan. The worst case scenario traffic projections made for this study and their impacts are not included in the tables to avoid confusion. In general, the worst case scenario shows major adverse impacts on local road system but only a minor impact on USH 41.

ALTERNATE EVALUATION
Table 1

USH 41	Impacts and Costs	No Interchange	Partial Interchange	Full Interchange
West of A	Traffic Increase 2000 (2020) %	-	+12(+11)	+10(+6)
	LOS 2000 4-Lane (6-lane)	D (C)	D (C)	D (C)
	LOS 2020 4-Lane (6-lane)	F (D)	F (D)	F (D)
	*Year 6-Lane Conversion Warranted	2019	2011	2014
	*Conversion Costs Differential	-	+200,000	+120,000
	Traffic Impacts	-	Negative	Negative
	LOS Impacts	-	None	None
East of A	Traffic Increase 2000 (2020) %	-	-5(-8)	+11(+7)
	LOS 2000 4-Lane (6-lane)	D (C)	D (C)	D (C)
	LOS 2020 4-Lane (6-lane)	F (D)	E (C)	F (D)
	*Year 6-Lane Conversion Warranted	2019	2026	2013
	Conversion Costs Differential	-	-140,000	+140,000
	Traffic Impacts	-	Positive	Negative
	LOS Impacts	-	Positive	None
East of STH 47	Traffic Increase 2020 %	-	0	+5
	Traffic Impacts	-	None	Negligible
CTH 15 Interchange	*** Traffic Impacts	-	Positive	Positive
STH 15- STH 47	**Noise Impacts	Severe	Severe	Severe
	****Impact on Safety	-	Negative	Negative

* For the purpose of comparison of alternates only. Actual conversion would be dictated by segments of USH 41 beyond this interchange.

** Noise mitigation for the no interchange alternate would not have to be made at this time. It would take place at time of conversion to 6-lanes.

*** Positive impact due to considerable reduction in traffic on southbound USH 41 "on-ramp" and reduction in associated left turn on CTH 15.

**** The addition of ramp terminals creates new points of friction for USH 41 traffic.

ALTERNATE EVALUATION
Table 2

CTH A	Impacts and Costs	No Interchange	Partial Interchange	Full Interchange
South of CTH OO	Traffic Increase 2000 (2020) %	-	0 (0)	+11 (+17)
	Urban Design Class	5	5	5
	Traffic Impacts	-	None	Negative
	LOS Impacts	-	None	None
CTH OO to Capitol	Traffic Increase 2000 (2020) %	-	-35 (-33)	+3 (0)
	Urban Design Class	4	4	4
	Year Conversion 2-4 lanes warranted	2001	2021	2000
	Cost of Timing of Conversion	-	-400,000	+60,000
	Traffic Impact	-	Very Positive	Negligable
	LOS Impact	-	None	None
Capitol to USH 41	Traffic Increase 2000 (2020) %	-	-23 (-24)	+43 (+35)
	Urban Design Class	4	3	4
	Year of Reconstruction	2000	2000	2000
	Traffic Impact	-	Positive	Severe
	LOS Impacts	-	Positive	None
USH 41 - JJ East	Traffic Increase 2000 (2020) %	-	+25 (+29)	+42 (+46)
	Urban Design Class	4	4	4
	Year of Reconstruction	2000	2000	2000
	Traffic Impacts	-	Negative	Severe
	LOS Impacts	-	None	None
JJ East - JJ West	Traffic Increase 2000 (2020) %	-	+11 (+12)	+18 (+18)
	Year of Conversion 2-4 Lanes	-	2000	2000
	Traffic Impacts	-	Negative	More Negative
	LOS Impacts	-	None	None
JJ West - CTH O	Traffic Increase 2000 (2020) %	-	+14 (+15)	+23 (+23)
	Level of Service 2000 (2020)	C (D)	C (D)	C (D)
	Traffic Impacts	-	Negative	More Negative
	LOS Impacts	-	None	None
CTH S to STH 47	Traffic Increase 2000 (2020) %	-	+18 (+20)	+29 (+31)
	Level of Service 2000 (2020)	B (C)	C (C)	C (D)
	Traffic Impacts	-	Negative	Negative
	LOS Impacts	-	Negative	More Negative
USH 96 - STH 47	* Road User Costs	2,500,000	0	0
	Pavement Structure Costs South of USH 41	-	-40,000	+60,000
	Pavement Structure Cost USH 41 to JJ West	-	+50,000	+90,000
	** Overlay Cost North 5 miles	-	+350,000	+350,000
	Construction Costs 41/A Intersection	1,500,000	2,500,000	3,500,000
	Accidents South of 41 20 years	-	-120	-120
	*** Safety Impact South of USH 41	-	Very Positive	Somewhat Neg.
	Safety Impacts North of USH 41	-	Negative	Negative

* Road user costs are due to indirection and lower speed using CTH A and CTH OO to go south and west as compared to using USH 41.

** Overlay cost to compensate for added traffic on new pavement. Actual overlay would take place when conditions warrant.

*** For the partial interchange alternate, safety not only improved by reduction of traffic, but also substantial reduction of trucks in a school zone.

ALTERNATE EVALUATION
Table 3

STH 47	Impacts and Costs	No Interchange	Partial Interchange	Full Interchange
South of USH 41	Traffic Increase 2020 %	-	(-1)	-26
	Urban Design Class	5	5	4
	Traffic Impact	-	Negligible	Very Positive
	LOS Impact	-	None	Positive
USH 41 to CTH JJ	Traffic Increase 2000 (2020) %	-	-17 (-19)	-29 (-28)
	Urban Design Class	5	4	4
	Traffic Impact	-	Positive	Very Positive
	LOS Impact	-	Positive	Positive
CTH JJ to CTH O	Traffic Increase 2000 (2020) %	-	-11 (-11)	-17 (-17)
	LOS 2-lanes 2000 (2020)	D (D)	C (D)	C (D)
	Traffic Impact	-	Positive	Positive
	LOS Impact	-	Positive	Positive
CTH S to CTH A	Traffic Increase 2000 (2020) %	-	-15 (-16)	-23 (224)
	LOS 2-lanes 2000 (2020)	C (D)	C (C)	B (C)
Capitol Dr. to A	Traffic Impact	-	Positive	Positive
	LOS Impact	-	Positive	Positive
	STH 47 & A Intersection	-	No Impact	No Impact
	*Road User Costs	7,000,000	0	0
	** Pavement Structure Costs *	-	-180,000	-340,000
	Turning Lanes STH 47/41 Interchange (Cost)	-	-20,000	-40,000
	Accidents (20 years)	-	-50	-50
	Safety Impact	-	Positive	Positive

* Road user costs are due to the 2-mile indirection of traffic from the north wishing to travel west on USH 41.

** Costs associated with the changes in design class are not included.

ALTERNATE EVALUATION

Table 4

Capitol Drive	Impacts and Costs	No Interchange	Partial Interchange	Full Interchange
West of CTH A	Traffic Increase 2000 (2020) %	-	0 (0)	+19 (+24)
	Level of Service 2000 (2020)	A (B)	A (B)	B (B)
	Traffic Impact	-	None	Negative
	LOS Impact	-	None	Negative
East of CTH A	Traffic Increase 2000 (2020) %	-	0 (0)	-14 (-7)
	Level of Service 2000 (2020)	B (B)	B (B)	B (B)
	Traffic Impact	-	None	Positive
	LOS Impact	-	None	None

ALTERNATE EVALUATION

Table 5

CTH OO	Impacts and Costs	No Interchange	Partial Interchange	Full Interchange
West of CTH A	Traffic Increase 2000 (2020) %	-	-15 (-15)	-16 (-15)
	Level of Service 2000 (2020)	B (C)	B (B)	B (B)
	Traffic Impact	-	Positive	Positive
	LOS Impact	-	Positive	Positive
East of CTH A	Traffic Increase 2000 (2020) %	-	+1 (+1)	-12 (-12)
	Level of Service 2000 (2020)	B (C)	B (C)	B (B)
	Traffic Impact	-	Negligible	Positive
	LOS Impact	-	None	Positive

CONCLUSIONS

The partial and full interchange alternate eliminates indirection for traffic from north of USH 41 that wants to travel south on USH 41 or to points west of USH 41. Without an interchange at CTH A, motorists will travel on the average 5,500 extra miles per day over the next 20 years. The interchange alternates would eliminate about \$7,000,000 in user cost associated with the extra travel over the next 20 years. Based on state wide Crash Rate Tables the interchange alternates would also eliminate about 50 accidents associated with the extra 40 million miles traveled over the next 20 years.

Over the next 20 years an average of about 5,000 vehicles per day will use CTH A and CTH OO to reach USH 41 and points west if there is no interchange at CTH A and USH 41. This is a slower and longer route through a fully developed urban area as compared to the USH 41 route that would be available if there was access to USH 41 at CTH A. Access to USH 41 at CTH A would save about \$2,500,000 in user costs over the next 20 years and eliminate about 120 traffic accidents over the same period of time. The interchange alternated would eliminate much of the truck traffic from the urban street system south of USH 41 that originates from the quarries located along CTH A north of USH 41. As can be seen in the Tables located in the summary, the interchange alternates would have a positive impact on STH 47 and its interchange with USH 41.

They both would have a negative impact on CTH A north of USH 41. The partial interchange alternate would have a further negative impact on the intersections along CTH A due to the heavy left turn movements from the north created by traffic wishing to cut over to STH 47 in desire to travel east on USH 41. The partial interchange would have a very positive impact on CTH A south of USH 41 by postponing need for reconstruction beyond year 2020, whereas the full interchange alternate would require immediate action. The interchange alternates would have a positive or negligible effect on CTH OO and Capitol Drive as well a negligible effect on the STH 47 and CTH A intersection located 8 miles north of USH 41.

Under the interchange alternates the traffic on USH 41 would increase west of CTH A and the addition of ramps would create points of friction for the USH 41 traffic however the amount of traffic on ramps at CTH A would be offset by an equal traffic reduction on ramps at STH 47 and STH 15 interchanges with USH 41. East of CTH A, USH 41 traffic would be reduced under the partial interchange alternate and increased under the full interchange alternate. The increased in USH 41 traffic at CTH A should not be such as to dictate the time when conversion of USH 41 from 4 lanes to 6 lanes is warranted. This timing would be dictated by a segment of USH 41 further to the east.

In general, the fact is that the CTH A/USH 41 intersection will be rebuilt within the next five years. The question is whether or not ramps should be part of the reconstruction to create a full or partial interchange at this location. Is an interchange feasible at this location? The answer is yes, providing financing is available. The location is such that an interchange here would have no impact on adjacent interchanges other than to reduce the traffic on the adjacent interchange ramps. Right-of-way for an interchange at this location was acquired at approximately 1960.

Will an interchange promote safety? Both, the partial and full interchange would eliminate about 170 accidents over the next 20 years and would reduce the quantity of truck traffic from local streets south of USH 41. The partial interchange alternate would significantly reduce all traffic in this area that contains two school zones.

Are the interchange alternates cost effective? Savings in road user costs and costs associated with the reduction of accidents more than offset the increased construction costs.

Will the interchange alternates promote development that is currently not planned? The area south of USH 41 is fully developed, an interchange would likely hasten the planned development to the north. Worst case scenario traffic projections indicated that unplanned development would have a large impact on CTH A and local streets but that the impact on USH 41 would be minor.

The questions remaining are financial. Who will assume the added construction costs of the interchange alternates? Who will assume the added costs to the local and county roads that would be generated by the interchange alternates?