

**U.S. Route 1 Reconstruction in Warren, Maine:
A Survey of Community Response to the
Department of Transportation's Application
of Context Sensitive Solutions**

Submitted to
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For

PAA 615: Advanced Methods of Analysis in
Public Administration and Public Policy

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May 15, 2006

Prepared for the
MAINE DEPARTMENT OF TRANSPORTATION
State of Maine

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ACKNOWLEDGEMENTS

We would like to extend our thanks to the following people:

Bill Thompson and Dale Peabody at the Maine Department of Transportation for their patience and assistance throughout this project. Bill's humor, and especially his envelope stuffing abilities, helped carry us through this project.

Cindy D'Angelo for her assistance with setting up the return mail process and ordering envelopes.

Gayle Anderson for her guidance in navigating the HSRB process.

Ken Nichols for his guidance, understanding and humor in getting us through both semesters.

EXECUTIVE SUMMARY

The purpose of this research project is to assess public response to the Maine Department of Transportation's application of context sensitive solutions to a road reconstruction project.

The Maine Department of Transportation (MDOT) made accommodations to their initial reconstruction plan for U.S. Route 1 in Warren, Maine, based on concerns from the citizens of Warren and other interested parties. The Department included a context sensitive model into the planning phase of the reconstruction project. This model includes the pursuit, evaluation, and incorporation (when applicable) of input by area citizens potentially impacted by a proposed reconstruction project, as well as the input from other interested parties. Where conflicts exist, this model can potentially be flexible enough to weigh citizen concerns against Federal highway standards, and accommodate those concerns through requested waivers from the U.S.

Department of Transportation.

This context-sensitive model used for the Warren project resulted in the MDOT's requesting design modifications from the U.S. Department of Transportation, which were granted. The MDOT then wanted to assess the extent to which flexible design solutions were successful from the public impact perspective in the Town of Warren's reconstruction project.

The researchers developed two hypotheses: one addressed public perceptions, before and after, the road reconstruction project. The second hypothesis addressed the consistency of the respondent's expectations during the project's planning stage vs. after the project's completion.

The researchers developed and sent a voluntary, mailed survey to the entire Warren voter

registration list and to a list of people identified by the MDOT as abutters to the reconstructed section of Route 1 in Warren.

Results from 486 completed surveys indicate a favorable view of the project. Examples:

- 1) Regarding the survey questions addressing perceived space for utility vehicles, emergency vehicles, and people walking: public opinion changed from 47 percent responding that they believed the section of highway provided enough space for utility and emergency vehicles and 37 percent for people walking; to an increase of 74 percent in the percentage of positive responses for utility vehicles, 75 percent for emergency vehicles and 66 percent for people walking.
- 2) Regarding the survey question addressing worthwhile improvements: a notable proportion of responses (86 percent) were positive.
- 3) Regarding the survey question addressing a future reconstruction project for Warren: a notable proportion (76 percent) of responses were positive.

Essentially, the findings support both hypotheses. With regard to the first hypothesis, a substantial majority of respondents found the completed project an improvement over the preconstruction design and condition for this section of Route 1 in Warren. With regard to the second hypothesis, the majority of respondents report that they either ended up with the result they expected, or a better result.

GLOSSARY

The following definitions apply within this report:

Maine Department of Transportation (MDOT) - A cabinet-level department within Maine State Government that is responsible for road design, creation and maintenance. MDOT is also responsible for road construction standards at both the State and Federal levels.

Town of Warren - A Maine community located on the Route 1 corridor in the mid-coast area. This community has been the first site involving Context Sensitive Design solutions implemented by Maine DOT as part of its Gateway One highway improvement project for the U.S. Route 1 corridor.

Arterial highway – According to the MDOT website, this “provides longer through travel between major trip generators (larger cities, recreational areas, etc.)”. (2)

Context Sensitive Design – A new model for “transportation decision-making through new policies on project development, staff training, conferences, research, and community outreach”.(1) This model encourages community input prior to design implementation and allows for design accommodation via waivers from the U.S. Dept. of Transportation, where appropriate.

INTRODUCTION

The purpose of this research project is to assess public response to the Maine Department of Transportation's application of context sensitive solutions. The Maine Department of Transportation (MDOT) made accommodations to their initial reconstruction plan for U.S. Route 1 in Warren, Maine, based on concerns from the citizens of Warren and other interested parties. The Department subsequently made accommodations for the reconstruction project in Camden, Maine, and they are presently in the design phase for their Lincolnville, Maine, project. The MDOT wanted to assess the extent to which flexible design solutions were successful in the Town of Warren in terms of public impact. MDOT officials requested the researchers survey stakeholders in the Town of Warren, evaluate the level of customer satisfaction, and, in the process, develop a survey model that could be applied to future reconstruction projects.

This project was a qualitative study, and as O'Sullivan points out in Chapter 2, “. . . the researcher looks for themes and concepts in the analysis of qualitative data” (page 39). The Maine DOT could use this project's results as one indicator of potential impacts the context sensitive design model may have on road reconstruction projects. The Maine DOT may choose to incorporate elements of this study's structure to future analysis of road reconstruction on Route 1.

The scope of the research project was limited to those people identified by the Maine Department of Transportation as abutters to the reconstruction project, as well as the 2005 voter registration list for the Town of Warren. The sample size consisted of 2,537 names and

associated addresses. The town itself, according to the 2000 census, has 3,800 residents, of whom three out of four are ages 18 and above.

BACKGROUND

The Maine Department of Transportation has incorporated a new context sensitive model in approaching reconstruction projects on the mid-coast region of U.S. Route 1. U.S. Route 1 is part of the National Highway System and is an arterial route, which makes it subject to national highway design standards. This model includes the pursuit, evaluation, and incorporation (when applicable) of input by area citizens potentially impacted by a proposed reconstruction project, as well as the input of other interested parties. Where conflicts exist, this model can potentially be flexible enough to weigh citizen concerns against Federal highway standards and accommodate those concerns through requested waivers from the Federal Department of Transportation.

This model was used on both the Town of Warren and Town of Camden reconstruction projects. It resulted in the Maine DOT's requesting design modifications from the Federal Department of Transportation, which were granted. The Maine DOT is interested in assessing how those requested modifications were perceived by the citizens who requested them, as well as others who live on or near U.S. Route 1, or travel the route on a regular basis.

The research project solicited the opinions of people listed on the 2005 Warren voter registration list, as well as a smaller list of abutters to the reconstruction area. The survey of this sample population gave the Maine Department of Transportation a broad opinion base relating to the design accommodations, requested of the U.S. DOT, for the Town of Warren reconstruction project.

RESEARCH QUESTION AND HYPOTHESES

The study asked one main research question: "What do the registered voters of Warren think of the road reconstruction project in Warren?"

The study developed two hypotheses from the research question to evaluate for this study. The first hypothesis is that respondent's perceptions of the reconstructed section of road in Warren, after the project's completion, are likely to be more favorable than their perceptions before the reconstruction project. The second hypothesis is that respondent's expectations during the project's planning stage, and after the project, stayed consistent.

LITERATURE SURVEY

Context sensitive design is a relatively recent phenomena in the world of road reconstruction and planning. According to the U.S. Department of Transportation's Context Sensitive Design History webpage, the National Highway System Designation Act was enacted in 1995. (3) This Act allowed road designs to include such factors as; environmental, scenic, and access issues. (3) Department of Transportation agencies in five pilot states began implementing context sensitive design shortly afterward; those states included Connecticut, Maryland, Kentucky, Minnesota, and Utah. (3)

A search of databases and web pages revealed the pilot states, as well as some other states around the country, are: holding context sensitive design workshops, involving communities in road design, publishing guidance and training documents, and conducting reconstruction projects. However, the researchers found no published literature on studies, administered to local communities, which were developed to capture public perceptions after reconstruction projects involving context sensitive design.

As a result, this survey project may provide valuable information not only to the Maine DOT, but also to other transportation agencies around the country. Beyond the research project's findings, the survey templates and project methods involved with this project may provide a basis for future surveys on transportation projects.

METHODS

The basis for this research project is a voluntary survey questionnaire, the design of which is described in **Research Design and Pretesting**. The section titled **Data Sources** describes the list of registered voters in Warren. The **Data Gathering** section describes, in detail, research project steps to ensure respondent anonymity and neutrality. The **Data Capture and Structuring** section refers to the coding decisions involved with data entry, as well as the decision to cancel the second survey mailing. **Strengths and Weaknesses** discusses these areas of the project. The data is reviewed and closely studied in the 'RESULTS ANALYSIS' section.

Research Design and Pretesting

The purpose of this research project has been to gather and analyze qualitative data about the perceptions and opinions of people who interact with the reconstructed portion of Route 1 in Warren, Maine. The study gathered data via voluntary, anonymous, mailed surveys to participants. The study used a voluntary, mailed survey questionnaire to obtain the largest number of useful responses practical in the shortest amount of time. Survey questions were closed ended: either in a Yes/No/Not Sure format, or a range of qualified answer options. Questions appeared twice on each survey, in "Before the Reconstruction Project" and "After the Reconstruction Project" designs. The study used two formats of the survey instrument; one

format listed the “Before the Reconstruction Project” questions first, and the second format listed the “After the Reconstruction Project” questions first. Eight questions at the end of the survey instrument could be answered Yes/No, with an opportunity for the participant to add open-ended comments. A copy of a survey instrument, with data results in the form of respondent percentages, can be found in Appendix C.

Due to time constraints in the fall of 2005, the survey instrument was not able to be fully pre-tested, as initially intended, by sending it to the Warren town selectmen. The researchers met with officials from Maine DOT and the Gateway 1 project in January 2006 for their input regarding question content and survey design.

Data Sources

The Maine DOT provided the researchers with a list of abutters and a list of 2005 registered voters in Warren, along with their associated addresses. The study incorporated a combined, total list as the target population.

Data Gathering

A total of 2,537 surveys were mailed in the last week of March 2006. The combined list of voter registration and abutter addresses was housed in an Excel spreadsheet. Of these, 486 useable responses were returned in time for tabulation – a response rate of 19 percent.

A column was added to the spreadsheet, which randomly assigned the number 1 or 0 to each row. The survey formats were represented by either a 1 or a zero. This allowed the researchers to randomly assign each voter address to one of two survey formats, offsetting possible bias associated with question sequence inherent in the survey. Additionally,

consecutive numbers were assigned to the complete alphabetized address list. These numbers, added to the lower left corner of response envelopes contained in the survey mailing; enabled the confirmation of responses and tracking of those needing follow-up letters. As completed surveys were returned, the response envelope numbers were matched to the consecutive number in the Excel spreadsheet. Codes for responses and returned letters were assigned to relevant addresses in the Excel spreadsheet to track mail and response status. The researchers separated the surveys from the response envelopes; the surveys were mixed with other surveys of the same type, so a given survey response could not be traced to an specific individual. The cover letter for the surveys carried letterhead from the University of Maine to emphasize the project's neutrality to the survey recipient; a copy of the letter is in Appendix B. Post-paid return envelopes were addressed to the University of Maine's Department of Public Policy and Administration, further underscoring, for survey recipients, the project's neutrality.

Data Capture and Structuring

As surveys were entered into the database, a consecutive number assigned to the survey was written on the top of the survey cover page to enable cross-reference between database entries and paper surveys. (These input sequence numbers are unrelated to tracking numbers used on response envelopes).

Because of time constraints, only responses received by April 20, 2006, were included in this report's analysis. The Maine DOT cancelled an intended second mailing to non-respondents on April 24, 2006, due to time constraints.

Close-ended survey answers that were in a range of qualified answers (e.g., the respondent encircled both "Essentially Preserved" and "Largely Preserved") were coded as

suggested in Fowler's Chapter 8: In the event that two answers were marked in one question, the researchers coded the most extreme response or, where that would have been inappropriate, coded it as a non-response. The number of surveys that contained double answers was minimal. If there was no answer or an illogical answer was given for a close-ended question, it was coded as a "No answer". Questions that could contain multiple answers were coded as follows: if at least one option was chosen, the remaining options were coded as zeros, if no options were marked, all options were coded with the number nine, meaning "No answer".

Strengths and Weaknesses

Strengths of the project include the development of a survey instrument that the Maine DOT could use in future surveys of road reconstruction projects. Participant's opinions before the reconstruction project were asked in the survey, which enabled the capture of a "before/after" participant viewpoint for the Maine DOT. Another strength of the project included the use of two survey formats; one with "Before" questions asked first, and the other with "After" questions asked first. This reduced threats to internal validity of the survey. The use of University of Maine's letterhead for the survey, and mailing address for responses, enabled the project to maintain both actual and perceived neutrality. An additional project strength included a survey response of approximately nineteen percent.

Weaknesses of the project include the possibility the survey responses may not be representative of the whole population of people who live, drive, and do business along the reconstructed section of Route 1 in Warren. The project utilized a Warren voter registration list, which omitted adults who lived in Warren but were not registered to vote. Even so, the Maine DOT will receive opinion indicators from this project, which they can use as one aspect of

investigation into the success of the road reconstruction. Due to the researcher's short time frame, the project sent out one survey mailing, which is contained in this report's statistics. A follow-up mailing would likely have secured more responses. There were two instances where surveys were shuffled for data entry, and then discovered to be incomplete. This data was coded as "No Answer", and may have affected the summarization of this code for survey answers.

A weakness of the analysis is that, because of time constraints, it does not pursue the basic research basic research hypotheses with respect to potential response differences based on respondent age, gender, property ownership, abutters versus voters, which version of the survey the responded completed, or other factors of potential relevance and interest.

RESULTS ANALYSIS

Percentages of responses were calculated for each survey question. Response percentages were compared across selected sample groups, and patterns of responses were noted. Also noted were numerical totals of non-responses to questions; these are listed in material found in Appendix C. A summary of answer patterns will be provided to the Maine DOT. Samples of open-ended comments made by participants will be organized by survey group and the specific question asked. The researchers will provide Maine DOT with a compact disc (CD) containing the Access database and an Excel spreadsheet, a data dictionary for the spreadsheet, a cover letter sample, and templates for both versions of the survey instrument. The MDOT will also receive the returned paper surveys and envelopes containing addresses that were to be updated for the cancelled second survey mailing.

The First Hypothesis

The first hypothesis is that respondents' perceptions of the reconstructed road are likely to be more favorable after the project than before the reconstruction project. Survey questions concerning the physical structure and layout of the road were assessed. Displayed in Table 1 is the resulting data, when perceptions of road visibility before and after the project were compared.

Table 1. Visibility before and after the project

	Before Reconstruction	After Reconstruction
Poor	63%	3%
Good	34%	61%
Excellent	3%	36%

N=486

Clearly, there is a shift in perception of visibility from an unfavorable to favorable view in Table 1. For discussion purposes, favorable includes both "good" and "excellent" categories, whereas unfavorable includes "poor". Percentages are rounded to whole numbers.

Before the reconstruction, 63 percent indicated visibility as being "poor", whereas a combined total of 37 percent indicated it was "good" or "excellent". After the reconstruction, only 3 percent maintained a view that visibility was "poor", whereas, a combined total of 97 percent indicated a view of "good" or "excellent". This supports the first hypothesis of a more favorable perception after the project.

Perceptions of the amount of emergency space were compared, and the results were tabulated in Table 2.

Table 2. Emergency space before and after the project

	Before Reconstruction	After Reconstruction
Poor	86%	20%
Good	12%	56%
Excellent	2%	25%

N=486

Table 2 shows there is a demonstrated change in perception from an unfavorable to favorable view. As stated for Table 1, the terms “unfavorable” and “favorable” will remain as defined.

Before the reconstruction, 86 percent indicated emergency space as being “poor”, whereas a combined total of 14 percent indicated it was “good” or “excellent”. After the reconstruction, 20 percent maintained a perception of “poor”, whereas a combined total of approximately 81 percent indicated emergency space was “good” or “excellent”. This shift in perception supports the hypothesis of a more favorable perception after the project. Examples of comments provided by respondents include:

#1. Shoulders were not completely paved so breakdown lane is mostly gravel and not wide enough but road is in better shape ex: not potholes”

#2. ”Should have paved shoulders for entire distance, can't pass a tractor or other slow vehicles”

Question # 20 on the survey asked, “Do you think the project resulted in worthwhile improvements?” Percentages are listed in Table 3.

Table 3.

Yes	No
86%	14%

N=486

These results indicate the majority of respondents perceive the reconstruction project as worthwhile, which supports the first hypothesis of a favorable view of the reconstruction project.

Question # 23 on the survey asked, “Would you be in favor of another section of Route 1 in Warren to be reconstructed in the same manner?” Percentages are listed in Table 4.

Table 4.

Yes	No
76%	24%

N=486

Here, too, the results indicate a majority of respondents are in favor of another section of Route 1 in Warren to be reconstructed in the same manner; again, this supports the first hypothesis of a favorable post-reconstruction opinion.

The Second Hypothesis

The second hypothesis theorized that respondent’s expectations stayed consistent during the project’s planning stage and after the project’s completion. “Before” and “After” survey

questions, asking for perceptions about the DOT's proposed reconstruction plan, were compared as a means of supporting or refuting this hypothesis.

The study compared response data for opinions on how respondents felt the section of Route 1 that was reconstructed would lose, or had lost, its rural character. Of the 241 respondents who returned "Before" surveys, 28 percent thought, before the reconstruction was started, that Route 1 in Warren would lose its rural character. That number fell to 20 percent when asked if they thought the reconstructed section of highway had lost its rural character after the project was completed. Those respondents who did not think, before the project, that Route 1 would lose its rural character totaled 72 percent. The number rose to 80 percent of respondents who thought the reconstructed section of Route 1 did not lose its rural character after the project was completed. A comparison of respondent opinions from those receiving "After" surveys showed that 26 percent thought, before the reconstruction was started, that Route 1 in Warren would lose its rural character. That number fell to 14 percent when asked if they thought the reconstructed section of highway had lost its rural character after the project was completed. Those respondents who did not think, before the project, that Route 1 would lose its rural character totaled 74 percent. The number rose to 86 percent of respondents who thought the reconstructed section of Route 1 did not lose its rural character after the project was completed.

The above comparison does not show any drastic difference in the opinions of respondents receiving either the "Before" or "After" survey when responding to the questions regarding the loss of rural character. It does show that the majority of respondents did not think the proposed section of reconstruction would lose its rural character before the project and still did not think it lost its rural character after the project was completed. Their expectations were confirmed by their responses to the survey questions. Of those respondents who did think the

reconstructed section would lose its rural character, a small percentage changed their minds after the project was actually completed.

Additional examples supporting the second hypotheses include the following: survey question #18 asked respondents, “Do you think the DOT responded to opinions expressed by citizens at public meetings, and in letters to the Department?” There were 392 respondents who answered the question, and 73 percent said “Yes”. Only 27 percent thought the DOT didn’t respond to citizen’s opinions or letters.

Survey question #19 asked respondents, “Do you think the DOT incorporated citizen input into the design?” A total of 384 respondents answered the question, and 71 percent agreed that citizen input was incorporated into the design.

These two questions concern the planning stage of the project. Question # 20 asked if the project resulted in worthwhile improvements (see Table 3). A comparison of results for these three questions show the majority of respondent’s expectations stayed consistent during the planning phase, and after the project’s completion. Therefore, survey responses for questions #18 and #19 supports the study’s second hypothesis, concerning consistent expectations.

The study compared response data regarding the proposed reconstruction plan’s impact on space for utility vehicles, emergency vehicles, and people walking. Specifically, the questions ask respondents whether, in their view, enough space was available *before* reconstruction and *after* reconstruction for emergency vehicles, utility vehicles, and pedestrians. Results are summarized in Table 5.

Table 5. Reconstruction plan space before and after the project

	Before Project			After Project		
	Yes	No	Not sure	Yes	No	Not sure
Utility vehicles	47%	36%	16%	74%	19%	7%
Emergency vehicles	47%	37%	16%	75%	18%	7%
People walking	37%	45%	18%	66%	24%	10%

N=486

With regard to the perception of adequate space for utility and emergency vehicles, plus people walking, Table 3 shows there was a positive change in the “yes” opinions for all three categories; specifically, a 27 percent, 28 percent and 29 percent increase for each category, respectively.

This does not appear to support the second hypothesis concerning respondent expectations remaining consistent before and after the project. But, as responses to these and other survey questions show, the completed reconstruction project in most cases exceeded expectations rather than fell short of them. If the second hypothesis were reframed to anticipate that reconstruction would “meet *or exceed*” resident expectations, the analysis presented in Table 3 would support the revised hypothesis.

The study also analyzed expectations regarding the reconstruction plan’s impact on trees, property and views, examining the results for consistency before and after the project. Results are tabulated in Table 6.

Table 6. Reconstruction plan impact on trees, property and views, before and after the project

	Before Project			After Project		
	Trees	Property	Views	Trees	Property	Views
Essentially preserved	25%	35%	45%	29%	42%	53%
Largely preserved	41%	46%	42%	40%	42%	37%
Largely gone	26%	15%	10%	21%	13%	8%
Essentially gone	8%	4%	3%	10%	3%	2%

N=486

Considering the second hypothesis regarding the impact on trees, property and views, Table 4 shows minimal change in respondents’ opinions. For comparison purposes, we grouped “essentially preserved” and “largely preserved” responses regarding trees before the project of 66 percent and compared those to after the project responses of 69 percent, resulting in only a 3 percent difference. When comparing those response categories relating to property, the before the project responses of 81 percent compared to the after the project responses of 84 percent, again resulted in only a 3 percent difference. Comparisons of responses for views of 87 percent to 90 percent resulted once again in only a 3 percent difference. This minimal 3 percent change appears to support the second hypothesis that respondents’ expectations of these categories would stay consistent.

CONCLUSION

The nature of this study has been to identify patterns of public opinion on road reconstruction at the request of the Maine Department of Transportation and for this class. Our goal has been to identify apparent patterns MDOT can use in drawing its own conclusions as it evaluates the effectiveness of context sensitive design solutions.

The MDOT will be able to further analyze this data, with respect to still-unanswered questions concerning perceptions of abutters versus other respondents of the survey. Future research could investigate people's driving patterns; age and gender of respondents; and influence of survey versions on response, as a measure of potential bias.

We would suggest that political differences are resolved before survey projects are developed and implemented.

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APPENDIX B: SURVEY COVER LETTER

Dear Resident of Warren:

The Maine Department of Transportation (MaineDOT) would like your opinions regarding a recent highway project in Warren.

In 2003, a 1 ¾ mile section of U.S. Route 1 in Warren was reconstructed. The project began near the intersection with Route 90 and extended easterly. The enclosed questionnaire is a chance for you to share your thoughts and concerns. This survey is an important part of the evaluation process and will provide MaineDOT and the Federal Highway Administration with vital information.

The enclosed survey is being conducted independently by graduate students of the University of Maine's Public Administration program. Your household was chosen from a list of Warren residents. Your responses are completely confidential. Other than the time it takes to answer the questions (about 10 minutes), and possibly the inconvenience to you, there are no foreseeable risks to you in participating in this survey. You do not need to identify yourself on this survey in any way. Completing the survey is voluntary and you may skip any questions you do not wish to answer. Your return of the survey implies your consent to participate in this research project. Once all the results are tabulated, the report will go to MaineDOT and the Federal Highway Administration. Results from the survey will be available from MaineDOT.

MaineDOT has asked us to determine how people viewed the project before the reconstruction, and how they currently feel about the project. **Your opinions are important, and can help shape policies for future highway projects in Maine. We would like to know your opinion!**

We would like you to know that your surveys will be kept anonymous. We have marked the return envelope with a small number in the corner, which will enable us to do a second mailing. When you return the completed survey, we will separate the envelope from the survey, and throw away the envelope. We will mix the surveys when they are returned, so there will be no way to trace a survey back to you. If you don't return the survey within a certain time, we may send a second survey. We would really like to have as many people respond as possible!


Please return the enclosed questionnaire in the attached envelope within the next two weeks.

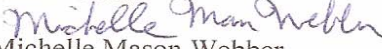
For questions about this research project, please contact Kenneth Nichols, Associate Professor, Department of Public Administration, University of Maine, (207) 581-1875 or ken.nichols@umit.maine.edu, or any of the graduate students: Karen.Curtis@umit.maine.edu; Michelle.Webber@umit.maine.edu; or, Kathy.Weymouth@umit.maine.edu. If you have questions about your rights as a research participant, please contact: Gayle Anderson, Assistant to the Protection of Human Subjects Review Board, University of Maine, (207) 581-1498 or, gayle.anderson@umit.maine.edu.

If you have any questions about this survey you may contact Carol Morris, MaineDOT communications consultant, at 329-6502. Thank you for your help.

Sincerely,


Kathy Weymouth


Karen Curtis


Michelle Mason Webber

APPENDIX C: SURVEY INSTRUMENT

(This survey instrument combines response results from both survey formats)

A Survey about the Reconstruction of Route 1 in Warren, Maine

The survey questions will be given in two sections. The first section asks questions about your views now that the reconstruction project in Warren is complete. The second section asks questions about your views before the reconstruction project. Either circle the response that fits the best, or check the appropriate box.

Please fill out the form and mail it back to us in the enclosed envelope within the next two weeks. We need to have surveys returned as soon as possible, so we can complete our report for the MaineDOT. Thank you for your help!

After the Reconstruction Project

N = 486

1) After the project, do you think that the Route 1 reconstruction, completed by the DOT, provides enough space for:

Utility vehicles?	YES	74%	NO	19%	NOT SURE	7%	n: 471
Emergency vehicles?	YES	75%	NO	18%	NOT SURE	7%	n: 468
People walking?	YES	66%	NO	24%	NOT SURE	10%	n: 467

2) After the project, do you think the Route 1 reconstruction plan changed the look of the road, in terms of:

Trees? n: 468	Essentially Preserved	29%	Largely Preserved	40%	Largely Gone	21%	Essentially Gone	10%
Property? n: 463	Essentially Preserved	42%	Largely Preserved	42%	Largely Gone	13%	Essentially Gone	3%
Views? n: 464	Essentially Preserved	53%	Largely Preserved	37%	Largely Gone	8%	Essentially Gone	2%

3) After the project, how many times a week do you drive through the section of Route 1 in Warren that has been reconstructed?

- Less than once a week **19%**
 - 1 to 10 times a week **51%**
 - 11 to 15 times a week **15%**
 - 16 or more times a week **14%**
 - I do not drive through the section **1%**
 - I walk along the section **0%**
- n: 483**

4) If you drive through the section of Route 1 that has been reconstructed, how would you rate the following aspects of the road:

Visibility:

n: 474

- | | |
|--|------------|
| <input type="checkbox"/> Poor - includes blind and hilly areas | 3% |
| <input type="checkbox"/> Good – am able to see cars and people at a reasonable distance | 61% |
| <input type="checkbox"/> Excellent – am able to see cars and people from a long distance | 36% |

Emergency Space:

n: 469

- | | |
|--|------------|
| <input type="checkbox"/> Poor – Vehicles can't park completely off the travel lanes | 20% |
| <input type="checkbox"/> Good – Vehicles can park out of the travel lanes | 56% |
| <input type="checkbox"/> Excellent – Vehicles can park out of the travel lanes with space separating them from traffic | 25% |

5) Do you own any of the following in Warren? (Check all that apply)

- | | | |
|--|------------|---------------|
| <input type="checkbox"/> A business located in Warren | 17% | n: 465 |
| <input type="checkbox"/> A business located along the reconstructed section of Route 1 | 3% | n: 465 |
| <input type="checkbox"/> A single-family home located in Warren | 89% | n: 465 |
| <input type="checkbox"/> A single-family home located along the reconstructed section of Route 1 | 2% | n: 465 |
| <input type="checkbox"/> An apartment house located in Warren | 2% | n: 465 |
| <input type="checkbox"/> An apartment house located along the reconstructed section of Route 1 | 1% | n: 465 |
| <input type="checkbox"/> Undeveloped land in Warren | 25% | n: 465 |
| <input type="checkbox"/> Undeveloped land located along the reconstructed section of Route 1 | 3% | n: 465 |

6) If you own a business, home or land in Warren, do you think that the value has increased due to the project?

- | | | |
|--|------------|---------------|
| <input type="checkbox"/> Strongly agree | 6% | n: 425 |
| <input type="checkbox"/> Agree | 15% | |
| <input type="checkbox"/> Disagree | 23% | |
| <input type="checkbox"/> Strongly disagree | 13% | |
| <input type="checkbox"/> Don't know | 40% | |
| <input type="checkbox"/> Do not own business, home or land | 4% | |

Before the Reconstruction Project

7) Were you in favor of the proposed reconstruction of Route 1 in Warren?

- | | | |
|--|------------|---------------|
| <input type="checkbox"/> Strongly agree | 54% | n: 475 |
| <input type="checkbox"/> Agree | 25% | |
| <input type="checkbox"/> Disagree | 9% | |
| <input type="checkbox"/> Strongly disagree | 7% | |
| <input type="checkbox"/> Don't know | 4% | |

8) Before the project, did you think that the Route 1 reconstruction plan, proposed by the DOT, provided enough space for:

Utility vehicles?	YES	47%	NO	36%	NOT SURE	16%	n: 471
Emergency vehicles?	YES	47%	NO	37%	NOT SURE	16%	n: 468
People walking?	YES	37%	NO	45%	NOT SURE	18%	n: 467

9) Before the project, did you think that the Route 1 reconstruction plan would change the look of the road, in terms of:

Trees? n: 453	Essentially Preserved	25%	Largely Preserved	41%	Largely Gone	26%	Essentially Gone	8%
Property? n: 446	Essentially Preserved	36%	Largely Preserved	46%	Largely Gone	15%	Essentially Gone	4%
Views? n: 452	Essentially Preserved	45%	Largely Preserved	42%	Largely Gone	10%	Essentially Gone	3%

10) If you expressed your views about the project, did you do any of the following activities? (Mark all that apply)

- Wrote letters **5%** **n: 457**
- Attended DOT public meetings **16%** **n: 457**
- Spoke at DOT public meetings **5%** **n: 457**
- Called town officials **9%** **n: 457**
- Called DOT employees **3%** **n: 457**
- Did not do activities **73%** **n: 458**

11) If you did any of the activities listed in question # 10, do you think your actions made a difference in the outcome of the project?

- YES **17%** **n: 152**
- NO **60%**
- UNSURE **23%**

12) Before the project, how many times a week did you drive through the section of Route 1 in Warren that was going to be reconstructed?

- Less than once a week **20%** **n: 474**
- 1 to 10 times a week **52%**
- 11 to 15 times a week **14%**
- 16 or more times a week **13%**
- I did not drive through the section **2%**
- I walked along the section **0%**

13) If you drove through the section of Route 1 that was going to be reconstructed, how would you rate the following aspects of the road:

Visibility:

n: 459

- Poor - included blind and hilly areas **63%**
- Good – was able to see cars and people from a reasonable distance **34%**
- Excellent – was able to see cars and people from a long distance **3%**

Emergency Space:

n: 458

- Poor – Vehicles couldn't park completely off the travel lanes **86%**
- Good – Vehicles could park out of the travel lanes **12%**
- Excellent – Vehicles could park out of the travel lanes with space separating them from traffic **2%**

14) Please mark your gender:

- Male **50%** **n: 473**
- Female **50%**

15) What was your age on your last birthday?

18-35: 12%, 36-53: 39%, 54-71: 37%, 72-90: 12% **n: 466**

Opinions



The Maine DOT would like opinions about how they handled the project, and impacts of the project.

16) Did you think, before the project, that the section of Route 1 in Warren would lose its rural character if it was reconstructed? **n: 248**

YES **50%** NO **50%** Comments: _____

17) Do you think, after the project, that the reconstructed section of Route 1 in Warren has lost its rural character?

n: 461
YES **17%** NO **83%** Comments: _____

18) Do you think the DOT responded to opinions expressed by citizens at public meetings, and in letters to the Department?

n: 392
YES **73%** NO **27%** Comments: _____

19) Do you think the DOT incorporated citizen input into the design? **n: 384**

YES **71%** NO **27%** Comments: _____

20) Do you think the project resulted in worthwhile improvements? **n: 446**

YES **86%** NO **14%** Comments: _____

21) Do you think there have been any changes in highway safety since the project's completion? **n: 425**

YES **82%** NO **18%** Comments: _____

22) Overall, do you think that vehicle speeds along Route 1 have changed significantly since the project's completion?

n: 438
YES **33%** NO **67%** Comments: _____

23) Would you be in favor of another section of Route 1 in Warren to be reconstructed in the same manner?

n: 451
YES **76%** No **24%** Comments: _____

APPENDIX D: PROFESSIONAL CREDENTIALS

Karen Curtis is a graduate student in the University of Maine's Public Administration Program. She earned her Bachelor's degree in Public Administration from the University of Maine and University of Maine at Augusta. Karen supervises eligibility staff at the State of Maine Department of Health and Human Services.

Michelle Mason Webber is a graduate student in the University of Maine's Public Administration Program. She earned her Bachelor's degree in Environmental Studies from the University of Maine at Machias. She is interested in agency planning and development. She is also interested in agency communication systems, and how they influence personnel productivity and moral. Michelle works for the Maine Department of Marine Resources.

Kathy Weymouth is a graduate student in the University of Maine's Public Administration Program. She earned her Bachelor's degree in Public Administration from the University of Maine at Augusta. Kathy is an Employee Relations Specialist in Human Resources for the State of Maine Department of Administrative and Financial Services, Service Center B.

APPENDIX E: HUMAN SUBJECTS REVIEW BOARD APPLICATION

1. Summary of Proposal. The Maine Department of Transportation is interested in knowing how the reconstruction of Route 1 in Warren, Maine has been perceived by the people who abut the construction zone, travel the reconstructed length of highway, have businesses on or near the reconstruction zone, and/or simply live in the Town of Warren. Surveys will be mailed to targeted groups, followed up with phone calls and/or a second survey being mailed. Survey questions will target perceptions of the reconstruction project and how it was handled prior to and during the construction, concerns both pre and post construction, the safety factor of the new construction, and whether newly placed islands help or hinder consumers frequenting area businesses along the construction zone.

2. Personnel. Primary Investigator: Karen Curtis, Supervisor, Office of Integrated Access and Support , Maine Department of Health and Human Services. Duties involve University of Maine Graduate student, MPA program. Co-Investigators: Michelle Mason Webber, , Maine Department of Marine Resources. Duties involve University of Maine Graduate student, MPA program, and Kathy Weymouth, Employee Relations Specialist, Office of Human Resources, Maine Department of Labor. Duties involve dealing with confidential and/or sensitive information on a daily basis. University of Maine Graduate student, MPA program.

3. Subject recruitment. Subject population will be taken from a list of abutters which the Maine Department of Transportation contacted prior to the reconstruction project; names from out-of-town concerned citizens who attended public hearings regarding the reconstruction project; business owners on or near the reconstruction zone; and a random sample of people, living in the Town of Warren. We estimate a survey population of approximately 200 people.

4. Informed consent. **I have a question as to whether we have to get a consent form signed by each respondent on this survey.**

5. Confidentiality. Surveys will be numbered when they are mailed out. Those numbers will correspond to the mailing lists used. Once surveys are returned, the number on the return envelope will be checked off the list and the survey will be separated from the envelope and placed into a file folder. The surveys and the mailing list will be maintained in separate areas of the Central Maine area. We do not believe that any answer to our survey questions will have identifying information which could be related back to any individual respondent.

6. Risks to subjects. We do not believe there will be any risk to subjects. The survey will be voluntary and subjects will not be under any requirement to complete them.

7. Benefits. The benefit of having this information will enable the Maine Department of Transportation to more accurately assess their future reconstruction projects. The information obtained may alter their public hearing process (e.g. are more hearings

necessary, did people not feel that they were heard, etc.), have them better prepared for citizen concerns in the future, and give them a template from which to conduct future surveys.

Ken --

I haven't received the required revisions from your students on their human subjects applications. Just wanted to check in and remind everyone that they are not approved to start until revisions are received/reviewed. Thanks!
gayle

Gayle Anderson
Special Assistant for Research Administration Office of the Vice President for Research University of Maine
5717 Corbett Hall, Room 443
Orono, ME 04469-5717
207/581-1498
207/581-1446 (fax)
gayle.anderson@umit.maine.edu

One more time. The "final" final letter.

-----Original Message-----

From: Gayle Anderson [mailto:Gayle_Anderson@umit.maine.edu]
Sent: Friday, March 17, 2006 2:25 PM
To: Weymouth, Kathy R.
Cc: Kenneth Nichols; Thompson, William; Mason, Michelle; Curtis, Karen L.
Subject: Re: final cover letter, surveys and informed consent - Questions

Kathy,

The only thing I didn't see in the revised letter was the info about the survey being voluntary and that they may skip any questions they do not wish to answer. You could put that information right before the sentence stating that returnof the survey implies consent to participate. Thanks, gayle

Gayle Anderson
Special Assistant for Research Administration Office of the Vice President for Research University of Maine
5717 Corbett Hall, Room 443
Orono, ME 04469-5717
207/581-1498
207/581-1446 (fax)
gayle.anderson@umit.maine.edu

UNIVERSITY OF MAINE -- APPLICATION FOR APPROVAL OF RESEARCH WITH HUMAN SUBJECTS
(See instructions on reverse for completing application)

PRINCIPAL INVESTIGATOR: Karen L. Curtis email: Karen.L.Curtis@UMaine.edu
 CO-INVESTIGATOR(S): Michelle Mason Webber Kathy Weymouth
 FACULTY SPONSOR (if any): Kenneth Nichols
 TITLE OF PROJECT: us Route 1 Reconstruction: A Survey of Community Response
Dept of Transportation's Application of Context Sensitive Solution
 PROJECT START DATE: 2-1-06 PI DEPARTMENT: Public Administration
 MAILING ADDRESS: Po Box 11631 Waterville 04903 TELEPHONE: 872-7497
 FUNDING AGENCY (if any): MDOT CONTRACT/GRANT #: _____
 STATUS OF PI (circle one): _____

FACULTY/STAFF GRADUATE / UNDERGRADUATE / OTHER _____

- If PI is a student, is this research to be performed:
 - _____ for an honors thesis?
 - _____ for a doctoral dissertation?
 - _____ other (specify) _____
 - _____ for a master's thesis?
 - X for a course project?
- Does this application modify a previously approved project? No. If yes, please give assigned number (known) of previously approved project: _____
- Do you believe this project is exempt from further review requirements? Yes (Y/N, unsure). Information regarding exemption categories may be found on pages 4-5 of the Policies and Procedures (<http://orspdocs.umesp.maine.edu/Ethical/humanpolicy.pdf>).
- Is an expedited review requested? No (Y/N). Information regarding expedited review procedures may be found on pages 8-11 of the Policies and Procedures (<http://orspdocs.umesp.maine.edu/Ethical/humanpolicy.pdf>).
- Has everyone named in this application completed the mandatory training on the Protection of Human Subjects of Research? Yes (Y/N). Approval will not be granted until training has been completed. The tutorial is found at www.umaine.edu/irb.

SIGNATURES: All procedures performed under the project will be conducted by individuals qualified and legally entitled to do so. No deviation from the approved protocol will be undertaken without prior approval of the Board.

Faculty Sponsors are responsible for oversight of research conducted by their students. By signing this application page, the Faculty Sponsor ensures that the conduct of such research will be in accordance with the University of Maine's Policies and Procedures for the Protection of Human Subjects of Research.

12-15-05 _____
 Date Principal Investigator Faculty Sponsor
Michelle R. Mason Webber _____
 Co-Investigator Co-Investigator

 FOR BOARD USE ONLY Application # 2006-02-03 Date received 2/1/06 Review (F/E): E
 ACTION TAKEN:

- Judged Exempt; category 2. Modifications required? Y (Y/N) Accepted (date) 3/22/06
- _____ Approved as submitted. Date of next review: by _____
- _____ Approved pending modifications. Date of next review: by _____
- _____ Modifications accepted (date): _____
- _____ Not approved. (See attached statement.)

Date: 2/2/06 Chair's Signature: Nancy G. Fournier