

The following information was extracted from Appendix A of the Oregon Department of Transportation Research Unit Study #98-SRS-522 entitled **Modern Roundabouts for Oregon**, dated June 1998.

It details the public of a neighborhood survey conducted regarding the Montpelier's Modern Roundabout at Keck Circle in January 1997.

**MONTPELIER'S MODERN ROUNDABOUT AT KECK CIRCLE
NEIGHBORHOOD OPINION SURVEY: JANUARY 1997**

EXECUTIVE SUMMARY

This report contains the results of a public opinion survey of 111 persons who live and work near the first modern roundabout in the northeast, Keck Circle, at Montpelier, Vermont, about five blocks from the State Capitol.

Conducted during the summer and early fall of 1996, it followed by about a year the August 16, 1995 project completion at Main and Spring Streets. The five-question survey included two open response questions so each respondent could contribute "likes," "dislikes," and what they "miss about the old intersection." Comments totaled 214 from the respondents, and every response is contained in this report.

All told, 85.5% respondents had a favorable or neutral opinion of the roundabout, 14.4% held an unfavorable opinion. By a four-to-one margin, 64-16, favorable opinions outnumbered unfavorable responses. By a 30-7 margin, "very favorable" responses outnumbered "very unfavorable" responses.

About a third of respondents were interviewed by telephone, a third door-to-door, and the final third represented surveys filled out at nearby workplaces--mostly the Main Street Middle School staff, home businesses, and professional offices. The survey intent was to obtain the opinions of those most familiar in their daily comings and goings with the intersection, both before and after it became a roundabout. All told 80.2% of respondents reported they had walked through the roundabout, 93.7% had driven through the roundabout and 17.1% had bicycled through it.

Positive comments stressed the smooth flow of traffic, the increased ease of accessing businesses adjacent to the intersection, the attractiveness of the roundabout and its safety. Dislikes centered on driver behavior--failure to yield, drivers not following the rules, and need for education of drivers. Some suggested there were more important priorities for the expenditure than a roundabout, and another frequent comment was the need to improve the appearance of the mountable apron both for operational as well as aesthetic reasons.

Half the comments on what was missed about the old intersection amounted to simply "nothing" or an equivalent response. Specific comments included: (1) the loss of two former pedestrian crossings; and (2) the sense the old intersection was safer for cars and pedestrians.

BACKGROUND--THE MODERN ROUNDABOUT

The first modern roundabout in the northeast began operation the evening of August 16, 1995 at Spring and Main Streets in Montpelier. The site, about five blocks from the Vermont State Capitol building, is surrounded by residential, institutional, professional office and lodging uses.

The modern roundabout, which dates from 1963 in England, finally arrived in the United States in 1990 in a major Las Vegas residential subdivision. When the first snow country roundabouts in the nation were built in 1995-- the Montpelier roundabout and two at the in I 70 exit in Vail, Colorado--roundabouts then numbered about a dozen nationally. Today, about a year later, the number jumped to 28. In Vermont, four new roundabouts are entering or in final design with

construction likely in 1997 and 1998. In the November 1996 election, Avon, Colorado, the next exit after Vail, approved a \$3.5 million, 20-year bond issue for five roundabouts from the I 70 interchange to the Beaver Creek Mountain ski resort. The roundabout community anticipates that roundabouts will be built in the United States annually by the hundreds in a year or so and by the thousands annually early in the next century, duplicating the trends first in Britain and Australia during the 1970s and 1980s and now being repeated throughout western Europe. For example, the Paris newspaper Le Monde (October 3, 1996) reported France with over 12,000 roundabouts. Most have been built since the mid-1970s.

A roundabout has three major characteristics compared to its predecessors, traffic circles and rotaries. First, the roundabout gives vehicles in the circular travel way the right-of-way. This change on a national basis in England in 1963 marked the roundabout era beginning. Second, roundabouts are small, generally from 70 to 160 feet in diameter compared to 300 to 400 feet and more for traffic circles and rotaries. Third, roundabouts have a entry "splitter" island that slows down or constrains speed just before entry, duplicating in a way the curvature the driver will experience within the roundabout itself.

In technical and non-technical performance of the roundabout as an intersection control device far surpasses traditional stop sign and yield techniques, and the traffic signal. Data reveals traffic signals actually result in higher accident and injury rates over stop signs and yield controls (1). One Netherlands study of 181 new modern roundabout installations before and after performance shows roundabouts cut car occupant injuries by 95%, pedestrian injuries 89%, and bicycle injuries 30% (2). When injuries do occur at roundabouts they tend to be less severe than those at traffic lights and signed intersections. The roundabout accident performance in the study was uniformly superior in urban, suburban and rural locations. The most conservative estimate from reviewing data from several nations concludes roundabouts cut collisions by 50 percent (3, 4).

Roundabouts self-police vehicle speeds and traffic calm about 100 yards in each direction, unlike signal systems require no electricity, cost less, use less land, enable U-turns, save energy, reduce pollution, and introduce beauty to intersections. Roundabouts feature approximately half the collisions and a third of the injuries of signalized or unsignalized intersections. In terms of peak hour, delay per car at the Montpelier roundabout is 2.7 seconds compared to 6.3 seconds for the old signed intersection (5). At moderately high volume four-way intersections, roundabouts cut average delay of signalized intersections by two thirds.

KECK CIRCLE: HISTORY

In 1991 the Towne Hill neighborhood held informal discussions about a basic approach to improving their 0.8 mile street, currently without sidewalks. Residents expressed concerns about frequent accidents, injuries to young people, increasing speeds, and the increased traffic from the upcoming connection of Montpelier's end of Towne Hill Road with US 2 following reconstruction of the dirt portion in neighboring East Montpelier (completed in 1993).

The neighborhood expressed a desire for an approach that promised a narrow, slow, pedestrian and bicycle friendly road--not the wider faster smoother highway being built next door in East Montpelier connecting the neighborhood to US 2. The neighborhood decision came at an early meeting in 1992 attended by about 60 persons. But one problem remained, what techniques could be used to traffic calm--a term common in Europe but brand new to Vermont in 1991?

Montpelier is in the Green Mountains snowbelt with about a hundred inches of snow and plenty of freeze/thaw cycles. What traffic calming techniques could slow down traffic to the 20-25 mph desired by the Towne Hill citizens? What was appropriate from the European experience--speed tables? chokers? chicanes? roundabouts? Clearly speed humps and bumps, the only techniques most were familiar with, were not particularly popular choices.

A few months later the Vermont Agency of Transportation and Vermont Trails and Greenways Council sponsored bicycle and pedestrian training that included a day on "traffic calming" techniques. A Florida State Department of Transportation two-person team taught the sessions. On team member, Michael J. Wallwork, P.E., a noted former district engineer from Melbourne, Australia and leading proponent of roundabouts in the United States, used Towne Hill Road as a case study for the use of traffic calming techniques, including roundabouts. Wallwork along with a California engineer, Lief Ourston, of Santa Barbara, are the Johnny Appleseeds of roundabouts in America.

As a result of this presentation, the Towne Hill citizens and the City of Montpelier became very interested in roundabouts as a possible traffic calming device for any Towne Hill reconstruction and as a remedy for other poorly functioning intersections in the City. Consequently, the City Council in the fall of 1992 authorized a citizens committee, the Montpelier Roundabout Demonstration Committee, to begin exploring the possibility of locating a demonstration roundabout in Montpelier. Peter Meyer, co-chair of the Towne Hill Committee and Tony Redington, a state employee with interest in traffic calming, were co-chairs. Other members of the Committee were, initially, Police Chief Doug Hoyt, Public Works Director Steve Gray, City Planning Director Joseph Zehnder who was succeeded by Valerie Capels, Planning Commissioner Alan Lendway, and citizens Andy Keck, and Dona Bate. Keck, a Montpelier activist and businessman, was a key supporter throughout the project. He died just after the roundabout construction began, and the City Council named the roundabout Keck Circle in his honor later in 1995. Wallwork essentially volunteered technical assistance to the City of Montpelier throughout most of the three years of the project development.

A major report recommending a demonstration was completed and delivered by the Committee to the City Council in January 1993. The Council authorized the Committee to proceed to choose a site and undertake a feasibility study. The Committee considered several intersections for a demonstration and initially settled on State Street and Bailey Avenue, wanting to choose a location where a traffic signal could be replaced. A simulation at the intersection with large trucks, buses, and emergency vehicles was held in summer 1993. This included examining the design requirements of Montpelier's fire and emergency vehicles, requirements incorporated in the Keck Circle final design.

Public meetings on a State/Bailey demonstration uncovered public concerns, particularly over a roundabout without a walk signal light in place of the signal with the walk phase. Further, the intersection as is cannot, as a demonstration site, fully accommodate buses--and tour buses and school busses are a staple of the Capitol building located a few hundred feet down State Street. Further discussion led to consideration Keck Circle, a Y intersection with a triangular island containing a tree, that still graces the center island today. One block from Middle School with an accident rate about triple that of an average Y intersection, the intersection contained a single crossing exposing pedestrians to 100 feet of roadway carrying traffic. The roundabout cuts

pedestrian exposure to the traffic travelway by 60% and permits the pedestrian to cross one lane at a time.

The City Council approved design funding in early 1994 and a construction start was targeted for summer 1994. A number of public meetings were held during the engineering consultant selection and preliminary planning stages. Several firms bid on the design, and Pinkham Engineering of Burlington, low bidder, was selected. Pinkham had provided early assistance and recommended a permanent installation for Keck Circle because it was most cost efficient. The Committee and City staff had learned a great deal during 1992-1993 about roundabouts and were increasingly confident of the practicality of the roundabout and the high likelihood of success. In late spring 1994, the Committee learned the estimated costs, about \$50,000 had been assumed, was about \$100,000 too low. The sidewalk (900 feet) and landscaping alone cost about \$50,000 (eventual total roundabout costs, about \$162,000).

The Committee took a step back to look at alternatives. The Committee after considerable discussion decided to attempt to do some fund raising, plus further the information and education throughout the community on the project. A state enhancements grant application for \$60,000 was prepared and submitted for the sidewalks and landscaping. A small amount of funds were raised and all citizens were given a chance to participate through small contributions. In the budget cycle of the City Council in December 1994 and early 1995, the Council following input from the Public Works Department, added to funds from the 1995 and 1996 Capital Budget to those already reserved for the roundabout. The Budget was passed at Town Meeting in March 1995, and the project moved quickly to construction in mid-June 1995.

As part of the startup, the Committee prepared a brochure on how to walk, bike, and drive through a roundabout. News releases and Public Service Announcements were prepared and provided the local media. A lot of construction occurred in Montpelier in the summer of 1995 including practically all of Main Street from the roundabout to the Winooski River. There was considerable negative public reaction at the time of construction of the roundabout, including negative commentary from local morning radio personalities. The experience where other roundabouts were introduced (Lisbon, Maryland and Santa Barbara, California, for examples) was also initially negative from the media and some of the public followed by support. The Vail press, for example, opposed roundabout construction but are now staunch supporters. As the survey here shows, Montpelier's roundabout is now very popular.

KECK CIRCLE: FACTS AND FIGURES

DATE OPENED--August 16, 1995 at 7:45 p.m. (first users, two young bicyclists).

NORTHEAST FIRST--Keck Circle is the first modern roundabout built in the northeast (north of Maryland and east of the Mississippi). Also, Keck Circle and two roundabouts in Vail, Colorado, were the first built in U.S. snowbelt areas. Keck Circle is reportedly the first built in a U.S. urban setting that is used by substantial numbers of pedestrians.

TYPE OF INTERSECTION--A "Y" intersection composed of north to south Main Street intersecting with Spring Street to the west. State route VT 12 travels on Spring Street and the south leg of Main Street.

ANNUAL AVERAGE DAILY TRAFFIC (AADT) VOLUME--Approximately 11,000 daily; approximately 7,300 AADT each leg. During a typical weekday, about 40 heavy trucks (five axle-or-more) have been counted, about one every 20 minutes.

ADJACENT LAND USES--land uses within 500 feet include Main Street Middle School (about 400 students), single family and apartment housing, a considerable number of professional and service business offices, a Masonic Temple, historic buildings, the Inn at Montpelier, and a senior housing complex. The roundabout is two blocks from the center of the community.

THE KECK CIRCLE NAME--Named in fall 1995 by the Montpelier City Council for a citizen activist, Andy Keck of Montpelier, a member of the Montpelier Roundabout Committee, who died shortly after roundabout construction began.

ACCIDENTS--For the period 1991 to May 1996, 1.4 accidents per year (all), 0.7 injury accidents per year. Accidents August 16, 1996 through January 1, 1997 (16 months): one, a pedestrian who received bumps and bruises when hit on a roundabout crosswalk early in the afternoon.

PEDESTRIAN TRAFFIC--Pedestrian counts vary, but intersection counts show volumes up to 260 for the a.m. period on school days (p.m. counts are similar).

TRUCK ACCOMMODATION--accommodates all trucks including interstate tractor trailers.

STRAIGHT "A" "LEVEL OF SERVICE" (LOS)--Before peak hour delay (legs A, B, and C) was 6.3 seconds for the average vehicle, LOS B overall. All legs and the intersection overall were LOS A, 2.7 average, for the roundabout.

RADIUS OF KECK CIRCLE--Not a perfect circle, the Keck Circle radius (to the outside curb) ranges from 52.7 feet to 54.2 feet.

SURVEY METHODOLOGY

The Committee considered a public survey as important for two reasons: (1) to determine the public opinion approximately one year after the opening of the roundabout; and (2) to determine the likes and dislikes of the roundabout that could assist the Public Works Department and the City Council on steps to add some finishing touches to improve Keck Circle.

Before the survey, it was known that many people were concerned about the appearance of the mountable ramp or apron that serves to accommodate the larger tractor trailer trucks. This apron was expanded by about 10 feet in width and changed from simple concrete (whitish) to asphalt (black) as part of the only significant design adjustment identified after the start of construction. Further, there were concerns about drivers failing to yield sometimes to people in the circular travelway. The survey was designed for those who, both before and after construction, lived in neighborhoods nearby Keck Circle or worked within a block or two of the intersection. The area surveyed was roughly from Montpelier Inn north to the end of Main Street, the Meadow, Spring Street, the Franklins, lower Liberty and Loomis Streets. Other streets with respondents were

Cross, Jay, Harrison, St. Paul, Brown and North Street. Workers surveyed included those in home-based concerns, the Gary Home, Pioneer Apartments (Montpelier Housing Authority), Main Street Middle School, and professional offices, mostly on Main and Spring Streets.

There were three ways in which questionnaire responses were obtained. About one-third of the respondents were interviewed by telephone, a second third of the completed questionnaires came from leaving questionnaires at work places for later pick up, and the last third were obtained through door-to-door interviews. Telephone and those left and later picked up provided slightly more favorable results versus the door-to-door interviews. However, all three were strongly favorable to the roundabout.

The sample was carefully chosen to include primarily those who lived and worked nearby and used the roundabout on a daily basis, a group sure to use the roundabout almost daily and also familiar with the pre-roundabout intersection. Of the three interviews rejected, one was a person who in answer to the question "what do you miss about the old intersection, " who replied, "I did not live here then."

SUMMARY OF RESPONSES

Of the total 111 interviewed, 95 or 85.5% were "Favorable" or "Neutral" toward the roundabout, and 14.4% "Unfavorable." By a four-to-one margin, 64-16, "Favorable" outnumbered "Unfavorable" responses. "Very Favorable," again, outnumbered "Very Unfavorable," 30 to 7.

In terms of those who drove, walked, or bicycled through the roundabout, 93.7% had driven, 80.2% had walked, and 17.1% had bicycled through the roundabout. These figures help to confirm the fact that the respondents were familiar with the roundabout. One surprise was that tabulation of those who walked versus non-walkers, bicyclists versus non-bicyclists, and drivers only (non-walkers, non-bicyclists) showing practically no variation at all among three groups in terms of their overall Favorable versus Unfavorable opinions. The figures for nearby neighborhood residences were as follows:

- 69.4% (77) resident of nearby neighborhood
- 8.1% (9) Meadow
- 4.5% (5) Cross Street/Franklins
- 16.2% (18) Liberty Street
- 21.6% (24) Loomis Street
- 18.9% (21) Main and Spring Streets

QUESTIONNAIRE DETAILS

PLEASE ANSWER THE FOLLOWING QUESTIONS ABOUT THE ROUNDABOUT AT KECK CIRCLE, SPRING/MAIN STREETS. WE WOULD LIKE YOUR OPINIONS ON HOW THE ROUNDABOUT OPERATES, CONCERNS ABOUT COSTS AND OTHER ISSUES CAN BE PLACED IN THE COMMENTS SECTION.

1. WOULD YOU SAY YOUR OPINION OF THE KECK CIRCLE ROUNDABOUT IS:
--27.0% (30)--VERY FAVORABLE

- 30.6% (34)--FAVORABLE
- 27.9% (31)--NEUTRAL
- 8.1% (9)--UNFAVORABLE
- 6.3% (7)--VERY UNFAVORABLE
- 0.0% (0)—OTHER

2. IS THERE ANYTHING YOU LIKE OR DISLIKE ABOUT THE ROUNDABOUT?

3. PLEASE CHECK ALL THAT APPLY: I HAVE:

- 93.7% (104)--DRIVEN THROUGH THE ROUNDABOUT
- 80.2% (89)--WALKED THROUGH THE ROUNDABOUT
- 17.1% (19)--BICYCLED THROUGH THE ROUNDABOUT
- 0.9% (1)--OTHER (PLEASE EXPLAIN)

4. WHAT DO YOU MISS ABOUT THE OLD INTERSECTION

5. PLEASE CHECK RESIDENCE AREA AND/OR EMPLOYMENT IN AREA:

- 69.4% (77) RESIDENT OF NEARBY NEIGHBORHOOD
- 8.1% (9) MEADOW
- 4.5% (5) CROSS STREET/FRANKLINS
- 16.2% (18) LIBERTY
- 21.6% (24) LOOMIS
- 18.9% (21) MAIN/SPRING
- 44.5% (49) WORK IN AREA
- 82.7% (91) FROM MONTPELIER
- 17.2% (19) FROM ANOTHER

By town of residence, the respondents were (sample 110): 82.7% (91) Montpelier and 17.2% (19) Another Town. Workers in the area totaled 44.5% (49).

TABULATION OF COMMENTS

Responses to the three comment questions totaled 214, about two per respondent. "Likes" totaled 65 responses (58.6% of respondents), "Dislikes" 56 (50.5% of respondents), and "What Do You Miss About the Old Intersection" 82 (73.9% of respondents). A category of "Miscellaneous" totaled 11 and represented comments respondents clearly wanted relayed to the City.

Likes:

The responses, "flow of traffic" and "keeps traffic moving" typify the most frequent comments regarding smooth and better traffic movement. There were several comments specifying easier access to businesses at the Circle: "it's easier to get in and out of our parking lot--we only have to look one way," said one respondent. Not having to stop, the ease of entry into the intersection, and no stop signs were among other traffic comments. Several referred to improved conditions for pedestrians. "Great for pedestrians! Before it was very dangerous," was one comment. Some said they did not like the roundabout at first but do now, like the appearance, and revised their previous route because the roundabout and associated intersections were much safer than the intersections they were using before.

Dislikes:

The bulk of the dislikes centered on comments on driver behavior--cars failing to yield, follow the rules, and failure to use directionals. Almost half the "Dislikes" comments centered on driver behavior issues. Failure of cars to yield north or southbound Main Street were mentioned several times. One young person commented: "kids know how to drive the roundabout--older people don't know how."

The appearance of the roundabout received particular notice, with negative opinions expressed about the appearance of the mountable ramp or apron, with strong suggestions that this aesthetic and operational concern be addressed. "Center plate," "Visually poor, ugly, too much blacktop," "appearance needs improving (the collar area), even green paint would help as a driving visual clue and color enhancement," were comments in this area.

Some considered the roundabout as unsafe for cars and pedestrians. One older citizen expressed a sense of fear while walking at the roundabout that a car would come over the curb. Another expressed unwillingness to let her daughter walk through the roundabout because of belief it is unsafe for pedestrians. "How it handles pedestrian traffic--think it is more dangerous," said one.

The cost of the roundabout and the higher priorities for expenditure of funds comprised a significant number of "Dislikes." "Am convinced money could have been spent more wisely on failing infrastructure elsewhere," said one respondent.

What Do You Miss About the Old Intersection?

There were about 45 negative or neutral comments about the old intersection and 35 positive comments about the past configuration.

Negative or Neutral Comments on the Old Intersection (Details):

The most frequent comment response to any question was to the "what do you miss" and that comment was "nothing," offered by 24 respondents (21.6% of all respondents). And another 16 respondents gave essentially the same response ranging from "hardly anything," to "I don't think I miss a thing" and "can't say I miss it at all."

A scattering of other comments included "lost tourists trying to turn around," "frustration," "watching semi's try to get through," and "insecurity of trying to dash across traffic, sitting and waiting for traffic, and speeders passing Main Street School."

Positive Comments about the Old Intersection (Details):

Positive comments varied. They included references to the trees taken down in front of Masonic Temple, the loss of crosswalks at Brown Street and in front of the Gary Home, the thought that it was safer and less confusing, that drivers knew better what to do, and "continuity of Main Street itself as a street rather than an intersection." Other comments referred to the cost of the new intersection, convenience, the simplicity, etc.

Miscellaneous Comments (Details):

There were 11 miscellaneous comments. One respondent said "we could use some of these [in Burlington]," while another said "no we do not want/need a roundabout in Morrisville." The spouse of one respondent was involved in a fender bender in the roundabout, another blew a tire

on the roundabout curb--neither respondent, incidentally, held an unfavorable opinion of the roundabout. Concern was expressed about other intersections, Elm and Spring Streets, School and Main Streets (even with the new bulbouts), and the pedestrian crossing on Main Street at Langdon Street.

LIKES

Traffic mover.

Traffic flows, green in middle.

Flow of traffic.

I love the way it flows!

Really keeps traffic moving.

Seems to keep traffic moving.

Traffic flows better than at the old intersection.

Things really move along so much better.

It's easier to get out of our parking lot--we only have to look one way.

I love it--I never have problems getting out of our drive way at night--I used to have to wait for the backed up traffic.

It has done away with cars from Spring Street not yielding to southbound Main Street traffic.

Works really good...it's cute.

It works--gets traffic through faster and safer than used to be the case.

Smooth and easy driving.

Just as good as before.

I like it a little better because it slows people down.

Does move traffic better...better for pedestrian traffic.

It works better as far as traffic is concerned.

Keeps traffic moving.

Keeps traffic moving. Small scale--seems to be less crazy than roundabouts in Massachusetts or Europe--one lane not two.

Ease of moving into traffic--no wait. East of crossing street for pedestrians.

Traffic is a little better--I was negative at first.

Easier access, less waiting.

Cars slow down in what was a bad intersection--I had fender bender (before) from car down Main Street--can't have one now!

Slow traffic.

Slows down traffic on Main Street, makes it easier from Spring Street.

Slows traffic down--was hard for pedestrians.

It works smoother than previous.

Seems a lot more safe than the old intersection. I enjoy it and think it prevents accidents.

Better for pedestrians than cars...cars do go slower.

Great for pedestrians! Before it was very dangerous.

Tends to speed movement of traffic without increasing actual speed.

Good traffic flow, slower and safer Improved pedestrian crossing.

I think it helps the traffic move through quicker.

Smoother traveling.

Coming from Elm Street easier.

Now drive Elm Street purposely to safe Spring/Main connection [to Franklins/Cross Street neighborhood] and avoid dangerous School to Main Street intersection

Attractive, once your in it, it seems to be OK.
Like central island.
I feel the roundabout has been a success. Traffic flow is good and pedestrian crossing a big plus.
Lot easier to get through the intersection.
Does what it is designed to do, functioning correctly.
Easier to cross the street as a pedestrian, particularly for kids at Middle School.
Works out fine.
Works fine.
No problems, easier walking.
Better aesthetics.
Hard at first...OK now.
Works as good now as it did before.
Easy, friendly, smooth traveling in and out.
Seems to work.
Helps traffic.
Different. Good place for a fountain.
Makes intersection a lot safer.
Purposely use that intersection now, used to avoid it.
Traffic slower when walking through it, traffic keeps on going.
Working better than I expected.
Living right here, people slow down more...and there is less noise now.
I was prepared to hate it, but I do like it and find it much safer when I walk to work.
Not waiting at a stop sign.
It seems to work fine if people would yield properly.
Not stopped in traffic for a long period of time. Flows well.
Not having to stop.
If I forget and turn down the wrong street, I can keep going around until I find it again.
I don't mind driving through it. I like the fact that the Masonic Temple got some \$ out of it and repaired the furnace!
Nothing.

DISLIKES

I wish it were a little bit bigger...People adjusting to it well, still some do not yield.
Users don't signal...you have to wait for them to clear.
People who do not know what to do.
Some people don't yield and use signals.
People who do not yield to you when you are in the circle.
"No one" knows the rules.
Yield problem on Main Street.
People going up Main Street don't yield.
People don't yield, confusing.
People learn what yield signs mean.
People going up Main Street not yielding.
Extremely apprehensive, people not yielding, got to take in whole thing...if nobody there it's great.
People don't use directionals.
Funny lip, friend blew out tire.
More confusing now.

Near accidents because people stop, yield problems.
I hate people who don't yield coming in or signal while they are inside.
Never sure where people are going to go out of circle--don't use directionals; lived here all my life and never had any problems with old intersection.
Lot's of people don't know how to use it.
Yield problem.
Cost, money that was spent, backed up traffic during school time.
Some people don't yield when they are supposed to--which could cause an accident because they dart right into the roundabout when it is not their turn.
People still stop vehicle in the middle of the roundabout or sometimes don't yield from the Spring Street side.
People don't yield, slows the flow of traffic.
People don't use turn signals. I avoid it as much as I can. Someone failed to yield today. Center ugly. Main Street cars from downtown don't slow down.
Bad-turn-signaling drivers!
People do not yield, do not pay attention.
Some people who stop who are in travel way.
People do not realize the traffic rules--how and when to enter the circle, right-of-way.
People approaching the roundabout too fast.
(1) People (cars) coming to roundabout don't yield to drivers in roundabout--need more signs, cops on hand, something! (2) Cross walks need to be much further from intersection--one pedestrian can cause gridlock of entire intersection (and I see it often) 1/2 block away.
Probably should have a wider lane.
Nuisance.
Confusing to out of town people.
Aesthetics issue, somebody just wanted to put a roundabout there, there wasn't a problem, didn't improve anything, money could have been spent on more priority issues.
Grassy portion should be larger--looks.
Aesthetics, [apron issue], too many signs
Visually poor--ugly, too much blacktop.
Cutting down on the middle green, cut down Masonic Temple trees.
Center part is ugly--would like it to be better.
Ugly and aesthetically sour ramp area--paint and put in textured concrete or paver brick: do something about the appearance.
I think the middle portion is too large and difficult to see.
Paved apron.
The semi-raised inner circle is wasteful and confusing.
Center plate.
Tarred area [apron] not well marked, make travelway wider.
The apron; so many signs; and people still don't know who has the right of way.
Going up Main Street takes a couple seconds more, have to be extra careful with kids crossing, the narrowness of entries.
Seems confusing to many. Have personally been cut off .
Traffic backup.
Right hand corners on exit sections stick out too far for trucks.
Small enough so people don't signal, too small.
Nearly been killed more than ever before. Boy hit on a bicycle this summer.
Wasting time, causing cars to congest and large trucks have to go up on curb.

The rise in the middle.

I think the money could have been more wisely spent--the roundabout saves no more time and people do not want to yield.

As you enter from the east side of Main Street, turning too soon to the right may damage tires. Need better signing, i.e., "vehicles in circle have right of way," "use directional signals when entering circle to indicate your intended route." We could use a couple of these in Barre to improve traffic flow and safety! I have used the old intersection and new roundabout for 10 years while entering or leaving the Masonic Building...The improvement in egress and smooth traffic flow is very noticeable particularly at 4:30 p.m.-5:00 p.m. with increased traffic from Elm, Spring to Main Street. Suggest inner (upper) circle be striped with yellow to indicate not normal travel lane.

Appearance needs improving (the collar area), even green paint would help as a driving visual clue and color enhancement.

Dangerous for pedestrians?

Worry someone will come up on sidewalk and hit me or my dog. Took our crosswalk at Brown Street.

How it handles pedestrian traffic--think it is more dangerous.

Sometimes kids do roller blading in center...some stop in travelway, need education for drivers to know those in travelway have right-of-way.

The backup of traffic on Spring Street and coming down from Towne Hill on Main Street.

It's slow.

Do not understand what problem it was solving; lip not high enough on apron to keep drivers off. Longer to walk on Spring St. side of Main Street--preferred side of street to walk (particularly in winter).

Kids know how to drive roundabout--older people don't know how! (They should learn.)

Difficult to judge entering gap, some going too fast on travelway, needs to be "slow ahead sign"

Am convinced money could have been spent more wisely on failing infrastructure elsewhere.

It's too small, completely unnecessary and many people don't know exactly what to do--they stop and wait, they don't signal, cars are held up unnecessarily and it's an accident waiting to happen some day.

Negativity of stupid people about roundabout.

Waste of money, have to stop coming home--did not have to before.

QUESTION 4: WHAT DO YOU MISS ABOUT THE OLD INTERSECTION?

(NEGATIVE OR NEUTRAL)

Nothing. (24 responses the same).

Nothing really.

Not much.

Nothing, it was a bottleneck getting to Route 12 from Main Street School, children and pedestrians had poor crossings.

Nothing (used [intersection] 20 to 30 times a day).

Not a dam thing.

Nothing, gotten used to it.

Don't miss it.

Miss nothing.

Do not miss a thing.

Don't miss anything.

No, nothing.
Not much of anything.
Can't say that I miss it at all.
Hardly anything.
I don't think I miss a thing.
I don't even remember.
Insecurity of trying to dash across traffic, sitting and waiting for traffic, and speeders passing Main Street School.
Neutral...other places need it more.
Frustration.
Watching semi's try to get through!
Miss late at night being able to get through intersection fast!
Could drive faster through the intersection.
Lost tourists trying to turn around.

(POSITIVE)

From Spring down Main I had to clearly yield before, not as clear now.
Miss the flow, upper Main Street down; less to think about.
Clear expectation of "right of way" rules.
Like hedges at edge of triangle.
Seemed to work adequately.
I miss through-travel section on Main.
I never thought about it before--it seemed to work.
Felt very comfortable with it--guess you get used to it.
Never had a problem with it.
Little less confusing.
Was prettier, more grass before.
I liked it.
Liked walking down Main Street straight through. I understand it was not so safe--cars travel faster.
Drivers knew "what to do" and when to go/stop (by looking) large vehicles could go through with no problem.
Going up Main Street not having to slow down.
You do not have to wait turn to go through on a bike, because on a bike you have to be on the street.
The crosswalk between the Inn and the Gary Home.
Nothing, it was all right.
Miss the old sidewalks, longer to walk around on Spring Street side; thinks conditions were safer for cars, less "near misses"; do not use City tax money to improve apron.
Ease of walking crossing--less confusing.
Why did they do it--lot less cross walks.
Continuity of Main Street itself as a street rather than an intersection.
Big trees you took down.
Smaller scale, the appearance, because of the large mountable apron now.
It was simple and quick without congestion.
Unnecessary to do, cost, it might be better.
Money could have been better spent, simplicity, yard cut out at Masonic Temple, center is ugly.
Quicker to travel from upper Main St. leg

We were able to place a temporary sign in the grassed-in fork area...to advertise the craft fair, etc.

More simpler, more confusing this way.

The change. People now have learned what to do--people confused at first.

Convenience...

Nothing, convenience of getting around with through traffic.

Lawn taken away from the Masonic Temple.

Masonic Temple land lost.

(MISCELLANEOUS)

Parking on Spring Street makes things cluttered.

We could use some of these [in Burlington]

Just another way to spend tax dollars when the roads of the City are a disgrace.

(Morrisville) No we do not want/need a roundabout in Morrisville.

I feel that the money could have been spent in a more productive way, i.e., repair pot holes, resurface streets, etc. It seems to be a whim of someone who wanted to say Montpelier is the only state capital with a roundabout. I think the Keck family wouldn't want their name associated with it after the negative reactions of the citizens and homeowners of the City of Montpelier.

Husband rear ended.

The crosswalk at Langdon Street should be moved to State and Main Street, slows traffic down...

Spring and Elm Street intersection is a bad intersection, need to do something [roundabout?] about it.

Montpelier high taxes.

Not convinced it was worth the money.

School and Main Street still a problem even with bulb-outs.

REFERENCES

(1) "Relative Safety of Modern Roundabouts and Signalized Cross Intersections," Leif Ourston, P.E., Santa Barbara, California (1996)

(2) "The Safety of Roundabouts in the Netherlands," Traffic Engineering and Control, March 1994.

(3) Ourston, op. cit., p. 5.

(4) "Modern Roundabouts and Traffic Crash Experience in the United States," Aimee Flannery, Transportation Research Board, January 1996.

(5) "Montpelier Roundabout Final Report Main Street/Spring Street Montpelier, Vermont," Amy L. Gamble, P.E., Vermont Agency of Transportation, Montpelier, Vermont, 1996.