



CITY OF BURLINGTON, VERMONT
CITY COUNCIL TRANSPORTATION, ENERGY & UTILITIES COMMITTEE

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Transportation, Energy and Utilities Committee of the City Council

Tuesday, September 17, 2019 5:30 PM

**Burlington Department of Public Works – Front Conference Room
645 Pine Street – Burlington, VT**

–AGENDA–

1. **Agenda**
2. **Minutes of 07/25/2019**
3. **Public Forum**
4. **Consolidated Collection Study & Organics Collection**
 - a. Lee Perry, DPW presenting
 - b. 20-minute duration
 - c. No action requested, informational only.
5. **Saint Paul Street Great Streets Project Update**
 - a. Laura Wheelock, DPW and Norm Baldwin, DPW presenting
 - b. 40-minute duration
 - c. No action requested, informational only.
6. **Set Future TEUC Meeting date**
7. **Councilor Updates**
8. **Adjourn**

DRAFT Meeting Minutes for the Transportation, Energy, and Utilities Committee

Tuesday, September 17, 2019 - 5:30pm

Notes: WCAX attending

MT - Meeting begins at 5:39

1. Agenda

MT: proposal to amend the agenda by moving Item 5 to Item 4.

JH: motion to approve amended agenda

MT: second to approve

Passes 5:41

2. Minutes of 8/22/2019

JH: motion

MT: second to approve

Passes 5:41

3. Public Forum

James – Burlington Resident

- Appreciates everything the City is doing for bicycle and pedestrian safety
- Concerned about Maple and St. Paul intersection
 - At some point, pedestrians need to take responsibility of their own safety
 - Pedestrians get too comfortable.
 - Intersection should be wider because it is a main thoroughfare
 - Needs more lighting because you can't see pedestrians at intersection
 - Vehicles can't turn

Dennis – St. Paul Street Resident

- Concerned about Maple Street and St. Paul intersection
 - Should be more law enforcement present
 - City needs to think more about accessible infrastructure in that area, with Decker Towers, assisted living facility, etc.
 - Very busy intersection

Tom – Spruce Street Resident

- Has done research on cities that have tried curb extensions.
 - 2010 Article says that if curb extension is poorly designed it creates a hazard, pinch point for bicycles and pedestrians
 - Curb extensions do not affect the speed of traffic, only makes motorists more concerned for their safety
 - Curb extensions improve safety at signalized intersections
 - Shorter crossing distance
 - Concerned about fire engines and emergency services

- Curb extensions create opportunities for panhandlers and drug dealers

Andrea - Ward 6 Resident

- Concerned about the narrowing of intersections and forcing the bikes into traffic.
- Concerned about eliminating parking.
- Concerned about the vitality of downtown Burlington - people not wanting to drive into downtown because it is too difficult to drive and park

Dave – Ward 6 Resident

- Concerned about Maple – St. Paul Street intersection; not a safe intersection.
 - Concerned about busses and snow plows.
 - Most energy used for cars are at slow speeds - more carbon in air because of these intersections.

Dot – Howard Street Resident

- Concerned about Maple-St. Paul intersection.
 - Difficult to turn.
 - Should be ample space for bikes and pedestrians, but people still need to be able to drive to work, grocery store, etc.
 - Concerned about inclement weather and how this will affect the narrow street.
 - When it gets dark you cannot see these curbs.

Nancy – Sandra Circle Resident

- Her son goes to Wake Robin at 5:00 p.m. and sliced a tire at the intersection on his way to work. He has decided to go Pine street and picked up a nail. Feels that no one is listening to tax payers, feels bad for people who are paying for these damages out of pocket.

Colin – Burlington Business Association

- Heard concerns from members regarding Maple-St. Paul intersection.
 - Trucks and box trucks to get to the area, and the issues visitors are having. Appreciates the work that has been put in.
 - Hopes tweaks can be made as construction is ongoing.

Richard – Owner of Perky Planet

- Concerned with management and oversight.
- State issues guidelines on contaminated soils management. City did not abide by these – did not have contaminated soil management plan and full investigation of soils prior to construction. City operated under a subsection which allows you to test for what you do find during construction. The street was closed down in 2018 when the contractor got into contaminated soils, they were stored on site, testing happened. Caused project to be delayed for the entire month of September and the street remained closed through the winter when it was supposed to be open in November. Issue with city choosing what they

can operate under, how is the public to believe proposed schedules if this is how projects operate?

Brain – Pearl St. Resident

- St. George street crosswalk should have lights on it.
- Almost wrecked car on Maple and St. Paul.
 - Used to work for Meyers, believes Meyers would never send trucks through that intersection. Has Class A CDL.
 - People who have boats, trucks create hazard to bikes, pedestrians, and other cars because you have to hug the curb and cross over into other lane.
 - Records show there hasn't been a pedestrian accident here in 3.5 years.
 - Doesn't think this is sensible. More dangerous than it was originally.
 - Do this where there are no trucks, no boat ramp. Friends blew a tire on their trailer and almost hit a car with their boat because they could not get through.
 - Pepsi, Reinhart, school busses, etc. cannot get through.
 - As a CDL driver – not feasible to drive through this intersection. Does not know why City does this.

Laura Wheelock on behalf on Kristi McHugh – Burlington Resident

(From Email): Hello. I will be unable to attend the meeting on the 17th due to being at work. I want to ensure that my voice is out there on this issue. I do not see this strategy working in a city that gets snow. Send this project to Cali maybe? This intersection is too narrow for a car and a van to pass each other when it's not snowing. Gas trucks, cable, electric, school buses take up more than 50% of this intersection. We should never install anything that increases the risk of accidents. When the snow plows are torn apart this winter, you will see why this isn't feasible as a "new norm" snow will narrow this intersection by as much as two feet, making it impassable. I have yet to find anyone who lives and works in Burlington who thinks this is acceptable.

4. Saint Paul Street Great Streets Project Update

- a. Laura Wheelock, DPW and Norm Baldwin, DPW presenting
- b. 40-minute duration
- c. No action requested, informational only.

CS Intro:

- Overview of Great Streets.
- The funding comes from a number of different sources. This project has successfully brought a significant amount of funding from outside sources, less burden on taxpayer.
- Presenting modest but impactful changes to the St. Paul-Maple intersection.
- Traffic calming in this neighborhood with the goal of reducing truck traffic.
- DPW is a responsive team. Understood from beginning that we are learning and would need to adapt. Have been challenged along the way.
- In the future we need to offer more incentives to adjacent property owners for smoother and more expeditious project.

- We need to give more explicit direction to design consultants to design parameters.
- Narrow rights of way, challenge to balance diverse uses.
- Proposing modest but impactful changes to the project. Minimizing cost and time impacts by using contractors that are there now.
- When the project is complete, there will be more through movements and fewer turns which will help with some of the issues we are experiencing.

NB:

- The goal was well intended to properly accommodate traffic while limiting crossing distance for pedestrians and limit commercial vehicles in adjacent neighborhoods.
- Chapin eluded to the fact that we have two neighborhoods we are focused on: King Street and Maple Street.
- We have had success in the past with similar geometric designs – with bumpouts and return radii. (Norm explains what return radii means – the corner along the bumpouts).
- The City is trying to figure out whether these issues are stemming from detours due to construction or the fact that the design does not work.
- The City did not fully appreciate the volumes and class of vehicles, and specific movements being used at that intersection – particularly the eastbound right turn movement and the northbound right turn movements are challenging for people.
- As engineers we do not simply work through things on paper, there were site visits to assess the new geometry and issues. We spent a considerable amount of time deciding what is the best approach. From our experience [this issues with the bumpouts] we began working with our consultant to develop alternatives for those two turning movements.
- The solutions that we worked with were broadening the return radii on the southern corners from 14' to 20' and widening the Northbound approach at Maple and St. Paul, since those two movements were the most critical and challenging for people.
- We used CAD in our design analysis which uses turning templates to describe the positions of the vehicles and their turning paths as they make those turns, so we know and understand the limits of that vehicle.
- We focused on three classes of vehicles: WB40 which is our firetruck apparatus, SU30 which is a single unit truck like a large UPS truck or food delivery truck, and DL23 which is a FedEx truck. The DL23 is 23' long with a 20' wheelbase.
- In our analysis we did three iterations. One was a 20' radius, no curb return with no reduction in the bumpouts, and 20' radius with a 2' reduction in the bumpout, and 20' radius with a 4' reduction in the bumpout. From those iterations and applying the turning movements, specifically for the DL23, we believe these turning movements can occur concurrently without having the problems and challenges we have been having. Single unit trucks can also make that movement but with some overlap into the other lane.

Public Comment (PC): Questions whether the Northwest bumpout, when you are going east on Maple, is the largest bumpout?

NB: They are symmetrical

PC: Questions what the changes are on the graphic

NB: (referring to the graphic) explains that we are not proposing changes to the northern bumpouts.

PC: Why?

NB: Our primary focus is where these turning movements are most problematic, which are the southern bumpouts. The east bound right turn and the northbound right turn. (Norm continues to clarify orientation of graphic)

PC: coming south, we haven't had enough traffic for people to complain because it was just opened.

NB: We know and understand that these are the primary turning movements in the intersection. Suggest revising the southern bumpouts to a 20' radius and reducing the bumpout to 4' from 8'. Pulled in both sides. Approach is widened to 30'. (Norm clarifies what lines mean on graphic).

PC: So how much are you reducing it by?

NB: We are broadening this radius to 20' from 14' and we are widening this approach by 8'.

NB: we are proposing that the new curbs be replaced with concrete. Granite would be a 6 week delay, which is not preferred. We need to get these in before lower block opens so that we do not further disturb businesses. This is one of two intersections; we are looking to chamfer the curb return on the northern bumpouts with a 3" chamfer which will be forgiving when people hit it. Also proposing for King Street which is a much lower activity area but is some measure of challenge for people

PC: What about lighting?

LW: The lighting on the lower block is not fully installed so when it is completed and energized, the new great streets lighting also exists on the south side of the intersection and will look like the upper block for light levels.

NB: one thing affected by the modifications is the light levels so we have been looking at that. We have moved the lights slightly to make this work.

PC: if you leave the radius the same at the top how will you prevent vehicles from making this turn?

NB: we will be reviewing and monitoring how people accept the design and how it will work in the future. We will be monitoring it closely. The struggle and challenge is that we are trying to preserve and protect these neighborhoods from commercial traffic while being reasonable about what we are demanding of the public. Larger class vehicles should be seeking other routes. Unfortunately during construction many of those vehicles were detoured to this intersection which was never conceived to accommodate. That has been part of the problem. We think some of this will go away when all streets are open. Absent of that there are still challenges that warrant modifications to this.

MT -open up to Councilor questions

FP: DL23 vehicle – would it be able to fit if you leave as is?

NB: It should, yes. The most limiting movement is the right turn.

FP: The incline as you come up St. Paul you don't have the field of vision and there is more reveal.

NB: yes there is more reveal than at finished grade. There is also gravel for ADA crossing – people are avoiding and not making full use of area and cutting that area short, making the problem worse. With the modifications there will be significantly more buffer space.

FP: What is the standard turning vehicle used for existing intersection?

NB: When the [original] street was installed there was likely no consideration given to specific design vehicles. There was variability within the radii at each corner. Not true radii on every corner. Ranged from 11' to 22'. We took the existing condition to compare our design and put a SU truck through it and it performed similar to the new design, which is an important fact.

FP: is there a bus route that turns onto either of those streets?

NB: Transit route heading north and south but not for right turns. Champlain College is making use of the right turn there and they were never conceived to be a transit route, and that was a problem under the current design. The new design is more forgiving but we are not designing these for school busses. It is not appropriate to do that. If we feel otherwise we need to rethink Great Streets and how we design our streets.

CS: Just to clarify, school busses can make the turn, but with encroachment into other lane which is acceptable under the design standards.

MT: will Burlington school district make that turn?

CS: Knows GMT better. GMT will not turn right. Chapin will follow up about school busses.

JH: timeline?

NB: With TEUC support, they can start tomorrow and have it complete before the end of the month (before opening)

CS: Both lanes of St Paul will be open by end of month according to Laura. Some additional (minor – benches, planters) work will go into October for 2 weeks.

JH: any concerns about making these modifications?

CS: Has been done in coordination with consultant, in coordination with S.D. Ireland on change order, we've worked with BED on changes

NB: All details have been worked out, should be able to execute quickly.

JH: Any other drawbacks over new curb design?

NB: Preserving the integrity of the neighborhood and adjacent residential streets Limiting commercial traffic, while still being reasonable about normal traffic, making it safer for pedestrians. All things combined have to be considered We use as much science as we can in terms of templates and geometries but it comes down to understanding what people support and can live with.

JH: Cost of these changes is 20,000\$?

NB: correct.

JH: How does that compare to the project costs?

CS: Total project cost is \$4.9 million. Most of funding is not general fund.

JH: The modifications fit into that overall funding structure?

CS: Remaining \$60,000 dollars in contingency. This is a unit quantity contract. Will need to settle with the contractor about how much material was needed. If at that point there needs to be a reconciliation, we will have to go to the council at that point if additional funding is needed.

PC: How much of the budget was allocated to the design and construction of the Maple – St. Paul Street intersection, which could have worked to calm traffic as it existed if users abided by the traffic laws?

CS: We have not broken the construction portion of this intersection out separately.

PC: Should you not know that value?

CS: It is part of the larger project. We can look at a unit quantity estimated cost of this southern side of the intersection. The cost to retrofit is approximately \$20,000

CS: Don't have the number on hand. Have unit costs and quantities, would need to calculate. For example, could calculate the cost of the granite curbs.

PC: North side is 22' and south side is 30'. What happens to UPS trucks making turning movements on North side?

NB: Will likely be making through movements here. There are not many vehicles making the maneuver from Maple north to St. Paul. Southbound movements are predominant movements and that is why we have focused on those.

(NB clarifies width of travel lanes vs. width of parking)

PC: Concerned about 30-40 school busses that go to Flynn. What happens to school busses if the intersection does not accommodate them?

NB: Design suggests primary movements are North-South and limited number of turns from Maple to St. Paul for larger vehicles.

PC: They would come in from St. Paul to Main St.? What would happen if Main St. were bumped out?

CS: We have left Main Street as it exists. Important to recognize that Maple St. is not a truck route. Truck route continues North to Main St. and we have kept Main St. wide to accommodate that. If a vehicle needs to turn periodically they could make the choice to turn from Maple to St. Paul or continue to Pine St. to loop around to Main St.

NB: Simply because the bus is not maneuvering within its lane does not mean it can't make use of the full intersection to make that turn by crossing the centerline.

PC: No accommodations for bike activity in the new design. Bikes should stay in the street and not on the sidewalk. Also people roll through the stop sign so they can see and by then it is too late to see trucks turning. Should get in the car and drive it or have a police officer look at it - a lot of bike activity on the sidewalk. A lot going on in this intersection. This intersection doesn't solve the bike problem.

CS: PlanBTV identifies other bike routes. We knew we would not put bike facilities on every street and St. Paul St. was not designated as a bike route/street with bike facilities. The calming efforts on St. Paul are meant to encourage slow, steady traffic and the cyclist is encouraged to ride in the street with traffic.

PC: Bikes ride on the sidewalk and they shouldn't be.

CS: Yes in the downtown corridor, cyclists over 16 are not allowed to ride on the sidewalk.

PC: On St. Paul between Maple and Main you have to walk your bike on sidewalks.

CS: Once out of the downtown core you can ride your bike on sidewalk.

PC: I have a business on St. Paul. Truck should go all the way up to Main St. and back down St. Paul because you want this to be a North-South.

CS: That is the predominant movement.

PC: Can't go from King or Maple to St. Paul?

CS: A single unit truck can make the turn with some encroachment. A delivery truck can make the turn without any encroachment. It is really tractor trailers and larger commercial vehicles that we are trying to prohibit from these neighborhoods.

PC: Coming down St. Paul, where do tractor trailers go once they make their delivery? Kilburn?

NB: We want to keep them on the main routes such as Pine Street, Main Street, St. Paul Street, not neighborhood streets.

PC: From Kilburn to Pine is a horror show.

NB: Need to recognize that a single unit truck is a pretty substantial size and covers most of the classifications of delivery trucks with the exception of WB50s and other larger class vehicles. So there is an opportunity for people to make those maneuvers but we don't want every truck doing so in those neighborhoods.

PC: 11' on either side, is that sufficient for a car+cyclist?

NB: standards are 9.5' to 11'; we prefer 10-11' which is a reasonable size given the standard.

CS: Expectation bikes will ride in the lane. If bike lanes were constructed we would need an extra 5'.

PC: King St. dimensions are the same?

CS: One difference on King is that it has parking (8') on both sides. So for a turning vehicle off King St they have an extra 8' buffer for turning movement.

PC: Cyclists do not have enough room on these streets to be next to cars.

CS: Encourages bikes to take the lane in narrow urban environments. Cars can pass bikes when there are no cars in the opposing direction and it is safe to pass.

NB: Effective radius which is the radius of the travel of the vehicle vs. the radius of the corner. Parking either narrow or broaden the radius for the turn. Effective radius takes this into account.

PC: Is there enough room for cars to pass each other in 22' width with a cyclist?

CS: No. Cyclists need to take the lane. Once the street is open we will evaluate normal movements and decide whether or not we need to make further modifications.

PC: People downtown may get the hang of the intersection, but people from out of town will struggle. Driving in Burlington is already bad. People from out of town don't know where they are going, distracted, looking at their phone, danger to bicycles. Why doesn't the 20' radius become the standard?

PC: Certain bike corridors that are designated? Online?

CS: yes, PlanBTV walk bike.

NB: Great Streets take these into considerations. Design for individual streets with truck routes, bike routes, etc. happens when we redevelop a street, the cross section will change based on the users and needs. Not just using Great Streets typical cross sections for every street/intersection.

PC: How will no turns from Maple right onto St. Paul affect trash trucks?

NB: A single unit truck is similar to a trash truck. That movement will be allowed.

PC: If you are coming from Maple and you make a right onto St. Paul that is not wide enough, a trash truck will overlap into other lane.

NB: This movement will not happen often; only a handful of trucks per day. Very small percentage of traffic.

CS: Will monitor this and change geometry if this proves to be a large issue.

PC: What possessed the City to make these changes?

NB: Many people believe that we need to make streets better for all users, and have a better balance between pedestrians, bikes, cars. It is very hard to measure success and failure in this process, and the only way to learn is to go through this process. It is a difficult process for us and the public. We think this is the right thing to do to improve the city.

PC: Would it be a feasible idea to hold public meetings?

NB: We have done that, but when things actually arrive, people start to recognize problems. It is very difficult to look at paper and know if it will work or not work, until you do it. It is a learning process we will learn and grow from.

PC: Will you give yourself enough time to learn from this project before constructing similar projects?

CS: Yes, no imminent Great Street projects after this. Other redevelopment projects are stalled. We have discussed Bank and Cherry, and Main St. but we do not have anything beyond a conceptual design at this point. 30% design currently; not imminent.

NB: Expectation is that when these projects advance the designer will need to develop turning templates, we will look at volumes and the classes of vehicles making use of these intersections, we will have a better sense of whether or not it will function as anticipated. With these new changes to streets and intersections, people will be uncomfortable at first but we need to use these tools to better inform the work. We will be using tools to better inform the work well in advance of construction in the future.

PC: Concerned that firetrucks were not tested. Did you do a study of pedestrian traffic and vehicle traffic?

NB: We use a WB40 in CAD program and designer demonstrated that these vehicles can use these intersections but would need the full width of the road.

PC: Why wouldn't you do a study to look at these movements?

NB: The study is using the turning templates to determine whether or not we can use these vehicles. We need to make sure the firetrucks understand our approach and are onboard. What is on paper may be different than what is built and that is the challenge.

PC: No inspection, no stormwater management plan, erosion control, public outreach, police officer, traffic control plan? How do you not have this in a \$4.9 million project? How much more staff was hired when the city started this project? Developers need to provide more money to support city staff.

(MT opens comments up to Councilors)

FP: Inconsistency because we are making a change to half of this intersection, not the whole thing, and doing it without opening that northern side, which has more restaurants, more action, more foot traffic. We do not want to repeat this problem on the north side. There is a close parking garage so people will be driving through the area. Concerned over trucks needing full intersection. How do you clear an intersection for trucks at rush hour if needed? Concerned over being more expensive to reconstruct northern corners if needed.

NB: This is the least expensive option today. If we were to pursue redesign of the northern corners it would be much more expensive because sidewalk has been poured. It would also have delays to the project which we are trying to avoid. We believe the southern corners are the key corners. We will closely monitor them and reassess if this is an issue down the road.

MT: Asks that the public be patient and wait until the project is done. DPW is doing their best to be responsive in real time and making an on the fly decision. Asks that the public gives this a chance, then see how it works, making it a learning opportunity for the city. This is an iterative process and it is good that we had an opportunity to make these modifications now. We need to make changes to the public right of way and recognize that people use alternative methods of transportation that we need to account for. We need to be more proactive about contaminated soils. Come up with more realistic timelines as we move forward with more Great Streets projects. Asks public to reserve judgement until this is complete and the intersection is functioning as a whole – Right now there are factors preventing that, such as lane closures and gravel that causes people to not make use of the whole lane. We will then be able to assess, and that will be the real learning opportunity. Pleased with DPW's response time. Understands this is a learning process and appreciates DPW's receptivity to public input and appreciates public's input as it is crucial to this learning process.

FP: Motion to widen St. Paul on the southern side of Maple to 30', modify those radii to 20' and shave down the corners of the northern intersections.

JH: Second to approve

All in favor - 7:24 PM

5. Consolidated Collection Study & Organics Collection

- a. Lee Perry, DPW presenting
- b. 20-minute duration
- c. No action requested, informational only
- **Consolidated Collection Feasibility Study** - Performed by Chittenden County Solid Waste District and their consultant (GBB) on behalf of City of Burlington and City of South Burlington.
- **Preliminary report** findings will be discussed in an upcoming conference call. **Cost** to residents not included in this version. This will be in final report.
- **A revised/final version** of the report will follow and contain the **various alternatives** for this collection system.
- Potential **benefits** to residents include:
 - Lower rates to residents
 - More efficient collection route
 - Reduce environmental impacts
 - Reduce impacts to infrastructure due to fewer large trucks
 - Safer for neighborhoods
 - Reduced litter
 - Most cost effective mechanism to collect food scraps
 - Reduced noise in neighborhoods and better compliance with local mandates.
- GBB conducted **survey** consisting of
 - 407 residents (>18 years old) from June 3-24
 - 65% of these residents lived in Burlington, the remaining live in South Burlington.
 - Examples of Questions: Do you use a drop-off center? Which hauler collects your trash? Do you bring your yard trimmings to a drop-off center? Do you compost at home? How do you like to be billed?
 - There were a lot of indeterminate answers during the survey, most likely because many are rental units who don't know how much trash collection costs.

(Lee asks for questions from Councilors)

JH: Will the City remain in/be broken up into different zones with one company (hauler) per zone?

LP: One hauler for all the City broken up into zones and each zone would get picked up on a different day, similar to the way we do our recycling routes. With a single hauler, we don't know how many trucks would be doing pickup on a daily basis.

CS: Could be one hauler for all zones, but will very likely be a different hauler for different zones. Part of consolidated collection allows for a competitive bidding process for each zone. While we can't mandate

that there be multiple different haulers we can set up the bidding process in a way that encourages that so that we do not have just one hauler.

JH: They are looking at both one hauler for the entire city as well as having different haulers for different zones? They are looking at both of those options?

CS: We are looking at a consolidated collection program that would include zones and the bidding process would allow for different haulers to bid on different zones. If we get one hauler that wins all or we have a mix, we cannot force one.

JH: Would the zones be the current zones or would new zones be created?

LP: That will be broken down in the next version of the report as they need to look at haul routes.

JH: Trash, recycling and food scraps – hauler would do all three?

LP: They have not presented organics in this version of the report, so we will have that information in the next version, it will be one of the scenarios.

CS: We doubt it would be one vehicle while there are split pack vehicles with two resource collections, we have never seen a tri-pack.

JH: But it will be one company?

CS: Yes and that it would be collected on the same day whereas now you could have trash and recycling picked up on different days.

JH: There are two existing compost haulers. Within this study is there an opportunity for the organics piece to be bid on separately?

LP: In the initial study they took all of the local haulers (Meyers, Casella, Gauthiers) and found them well-equipped to handle all of these.

CS: We will pass the question of bidding organics separately onto the consultant. Perhaps they could subcontract organics.

JH: Looking at price points of haulers – the existing haulers we have for organics are substantially lower than other haulers. Possible that larger haulers could do it cheaper but they haven't presented that yet. It would be good to explore using existing haulers. At the State level there is a conversation around mandatory composting and haulers are saying it is too expensive. We have two existing organics haulers that are doing it extremely cheap.

CS: So you want to see a separate bidding of the organics collection separate from solid waste and trash?

JH: Yes

JH: Is the idea behind the contracting process to choose the cheapest option and if they don't hold true to the price point they bid at we have authority to cancel their contract, so we make sure people don't get hit with higher rates?

LP: They have to meet a standard

CS: There is a performance criteria which we will also look at. Price is a major factor but it is not the only one. We will wait for consultant to recommend a selection criteria. If the vendor does not meet performance standards there would need to be a way to get out of their contract.

JH: In support of this initiative. Requests to see draft of report.

FP: Is the City involved in collecting the money? Who would I pay the bill to?

LP: That was one of the questions in the survey and this hasn't been determined yet.

CS: The first round of the study was not fully done. We have provided our feedback and asked for a revised version. One key question is who does the billing. There are pros and cons to various approaches. If the City does it we can ride on existing bills, the challenge is that some bills go to renters and not the homeowner, how to coordinate that? If haulers bill, is the City wanting to manage the customer service? Extra services are a tricky/complex piece as well. Whether the City wants to be a part of the billing piece or not will be a major piece of the upcoming report.

JH: Although the new approach may be complex it may be less complex than the existing system.

CS: Do the council members have any ideas/preference on the billing?

MT: Would like to see comparisons. Seems like having one bill that would encompass all three may be beneficial but it may not work out because some may opt-out of one of the resources. May make sense to keep it with the City because if everyone is doing recycling you make sure to capture everyone.

CS: It is a major administrative challenge.

MT: Encourage options/cost comparison. Asking that these options are presented to be weighed out and fully assessed.

FP: Feels that City may not want to take that on. How do you manage billing and not the customer service piece? Seems like it is a lot of work for the City to deal with the billing – may be able to charge a fee for the contract management.

CS: Do we require everyone to pay or do we allow an opt-out?

MT: We should allow people to self-haul. That is an important option. People who self haul are usually very aware of how much trash they are producing.

FP: It would be interesting to see how many people are self-hauling.

MT: One caveat to the self-hauling is that if someone is a landlord, there are trash and recycling issues around this. Want to make sure tenants have the services they need. Also want to make sure there is tenant protection; don't want this to be a way landlords can increase rent.

FP: This is where managing the contract may be useful.

CS: There would be a contract and part of that contract would be determining yearly rates which the company would not be allowed to deviate from. There may be rates for extra services but they will be spelled out in the contract.

JH: Billing sounds scary for the City to take on but if it is more efficient it may make sense. It is also worth seeing the comparison between mandatory vs. opt-out and how that would impact price.

6. Set Future TEUC Meeting date

Thursday, October 24th at 5:30, Location TBD

7. Councilor Updates

FP: requests FPF about the change to St. Paul.

RG: releasing statement tonight. Repurpose that for FPF and social media outreach.

MT: Want to show the public that we are taking action, concerned that WCAX, news only got the concerns.

JH: Colchester Ave line striping?

RG: in discussion about schedule with contractor. Rob will follow up. Need to have enough for a full night's work. Also, hoping to approach GMT study idea. Want to be able to explore the options with them and expand beyond College St shuttle. Will follow up by email.

CS: confident we can get GMT here. Board meeting this morning –starting to get rider data in. strong rider ship on blue and red lines. Challenges on circulators and college street shuttles.

MT: North Union protected bike lane? Disappointed about it not going in. NNE concern at NPA – concern over Archibald and interval geometry issue. Parents are concerned about kids and crossing. Can we get a crossing guard there? Also, doing traffic calming in that intersection to address the strange geometry. Room for improvement. Prioritizing this?

RG: Will send PDF of ad for crossing guards, 9-10 vacancies currently.

8. Adjourn

FP: motion to adjourn,

JH: second to approve

All in favor

Adjourn - 8:00 p.m.

Sign In Sheet

TEUC

September 17, 2019

5:30 PM

FIRM NAME	ADDRESS	PHONE	EMAIL
Nancy Bevan	134 Spandrea Circle	343-5977	beanked@comcast.net
JAMES MULLOWNEY	7 DRIFTWOOD	951-0339	smullowney@vermontgas.com
Dennis Ailor	227 Saint Paul	820 203-5489	ailorinc@msn.com
TOM COOPER	143 SPRUCE ST.	598-0107	W1EAT@YAHOO.COM
Andrea Rogers	387 So Union	864-6003	andrea@burfingintelecom.net
Colin Hilliard	29 Church		colin@bbva.net
Brian WRIGHT	90 Pearl St	802-310-9132	
Tim Palmer	20 Forest Run Rd	802-879-3207	timjpalmer@msn.com
Dave Porteous	136 Crescent Rd	802-343-6066	davidp@remaxnp.com
Richard Vard	1705 St Paul	802-522-2222	INVE@outlook.com
Wendy Foxelle	79 Howard St	864-5940	WendyFoxelle@yahoo.com

TEUC

Request to Speak @ Public Forum

September 17, 2019

5:30 PM

NAME	ADDRESS	PHONE	EMAIL
1 JAMES MULLOWNEY	7 DRIFWOOD	951-0339	
2 Dennis Ailor	221 St. Paul St.	520 203-5487	ailorinc@msn.com
3 Brian Wright	90 Pearl St	310-9132	—
4 Richard Long	170 St Paul	752-7070	info@rallysheds.org
5 Andrew Rogers	387 So Union St	864-6003	andrew.Dobry@ketchikan.net
6 Tom Cooper	143 SPANCE ST.	598-0107	WLEATOYA1400.COM
7 Dave Porteous	136 Crescent Rd	802-343-6066	davidp@cmexnp.com
8 Bob Saxwell	79 Howard St	864-5940	bgagnoninc@yahoo.com
9 Nancy Bean	134 Sandra Ln.	343-5977	beankid@comcast.net
10 Colin Hilliard			Colin@hiliard.org
11 Laura on behalf of Kristie McManis			



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Chapin Spencer
DIRECTOR OF PUBLIC WORKS

Norman J. Baldwin, P.E.
ASSISTANT DIRECTOR OF PUBLIC WORKS

Date: 9/13/19

To: Transportation Energy and Utilities Committee
From: Norman J. Baldwin, P.E.
City Engineer/Ass't Director of Public Works

C.C. Miro Weinberger, Mayor
Chapin Spencer, Director of Public Works
Olivia Lavecchia, Mayoral Communications Coordinator
Laura Wheelock, Senior Public Works Engineer

Subject: Proposed Geometric Design Revisions to intersection of Maple and St.Paul Street

GREAT STREETS OVERVIEW

The Great Streets Initiative (GSI) launched in the summer of 2016 to create design and construction standards to guide the development of downtown streets. At the forefront of this approach was pedestrian safety, livability, commercial vitality and rebalancing the ecology of the streetscape. GSI built on many years of planning and project development to advance three individual but connected projects:

-) Conceptual Design of 6 blocks of Main Street
-) Redevelopment of St.Paul Street from Main to Maple
-) Redevelopment of City Hall Park

The vigorous public process lasted 18 months and engaged key stakeholders including and not limited to: Public Works Commission, Parks Commission, Burlington Electric Commission, Transportation, Energy and Utilities Committee and the Neighborhood Planning Assemblies. Burlington City Council formally adopted the standards on Monday, April 16, 2018. In addition to this process, outreach has also been conducted on specific Great Streets projects, including numerous business and neighborhood meetings.

In August 2018, the City began the construction of Burlington's first Great Streets project on St. Paul Street. The renovation of a streetscape happens, at most, once in a generation. We were aggressive in implementing the standards – as you can see by a newly reinvigorated streetscape, getting closer to completion each day. Included in this approach was narrowing the streetscape at two intersections to make crossings shorter for pedestrians and discouraging truck

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traffic through residential streets. We believe the project has been and will be a success for our community, including on these key elements of public safety. At the same time, we have listened closely to our community and after a thorough analysis are proposing modest, but impactful geometric changes to Maple & St. Paul; and a more modest change to the King & St. Paul intersection. We lay out our rationale and recommendations in the following memo.

GREAT STREETS DESIGN STANDARDS

“Burlington recognizes its street system not merely as roadways for vehicles, but as the backbone of its collective public spaces, which reflects values, identity and character of Burlington.” Great Streets BTV, Page 5

“ A great street system for downtown Burlington will also restore a balance among all of the users and uses within the public realm. Throughout most of urban history, walking has been the primary form of movement on city streets. But over the past 100 years, the growing demands of the automobile for ever more space to move and to park have tended to overwhelm all other users, not least the pedestrian. **Burlington intends for these standards to correct that imbalance by once again placing the needs and experience of pedestrians first, while ensuring that all other users and uses are accommodated in a delicate balance.**” Great Streets BTV, Page 5

“These Standards DO:

-) Identify a common palette of materials and furnishings that will provide for unity and visual integrity as downtown’s streets are developed over time
-)
-) Take precedence over the existing City policies/documents regarding the design and construction of elements within the public right of way that existed prior to the most recent date of adoption by Council(unless otherwise noted)

These Standards DO NOT:

-) Mandate immediate reconstruction of all streets or replacement of individual elements within the row; instead the standards should be applied to streets as they are redeveloped in a significant way, and guide the replacement of furnishing when they reach the end of useful life
-) **Provide specific designs for each street in downtown Burlington; some streets will require corridor-specific master plans to identify future design/transportation system goals**
-) Inventory all conditions that may exist within the City’s public right of way, particularly unknown conditions such as locations of abandoned utilities, contaminated soils, etc.” Great Streets BTV, Page.13

GREAT STREET & OTHER APPLICABLE STANDARDS-ST.PAUL STREET AND MAPLE STREET

The Civil Engineering Design Consultant for Great Streets St.Paul is Dubois and King. Dubois and King has been working in collaboration with the City of Burlington preparing Design Drawings for the Great Streets-St.Paul Street Project. Development of the design of St.Paul Street made use of the Great Streets Design Standards, Utilities Design Standards, Planning Documents, Truck, Bike and Transit Routes among many of design references. Below is specific sections relevant to the geometric design of the St.Paul and Maple as well as King Street and Maple Street.

-) Maple Street within the Great Streets Design Manual Maple Street was designated as a Downtown Residential Street. See Fig. 1 Below
-) St.Paul Street was designated as a Commercial Slow Street with Transit. See Fig. 2 Below
-) Bumpout and Radii Design Discussion and Dimensions See Fig. 3 & 4 Below
-) St.Paul Street was designated as a truck route Fig. 5

Maple Street is not designated as a truck route See Fig. 5 Below

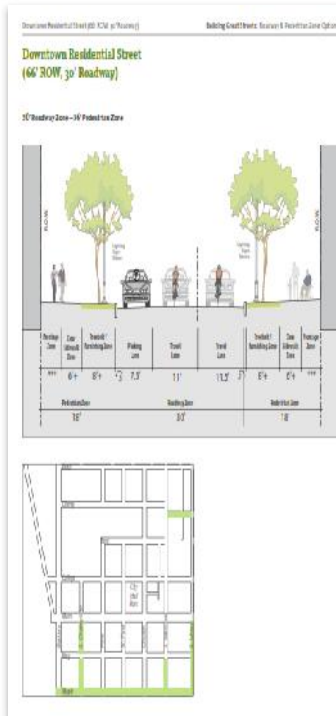


Fig. 1. Maple Street Conceptual Cross Section, Pg.78 & 79

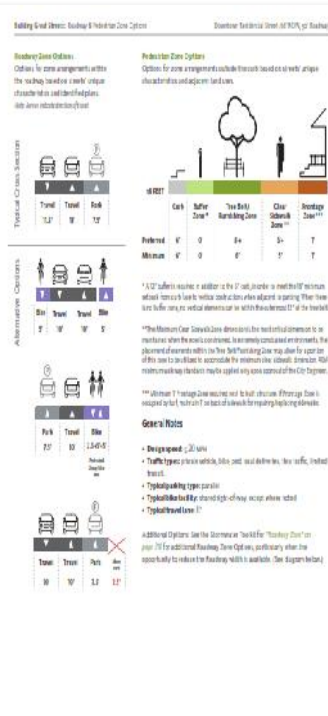


Fig. 2 Saint Paul Street Conceptual Cross Section, pg. 70 & 71

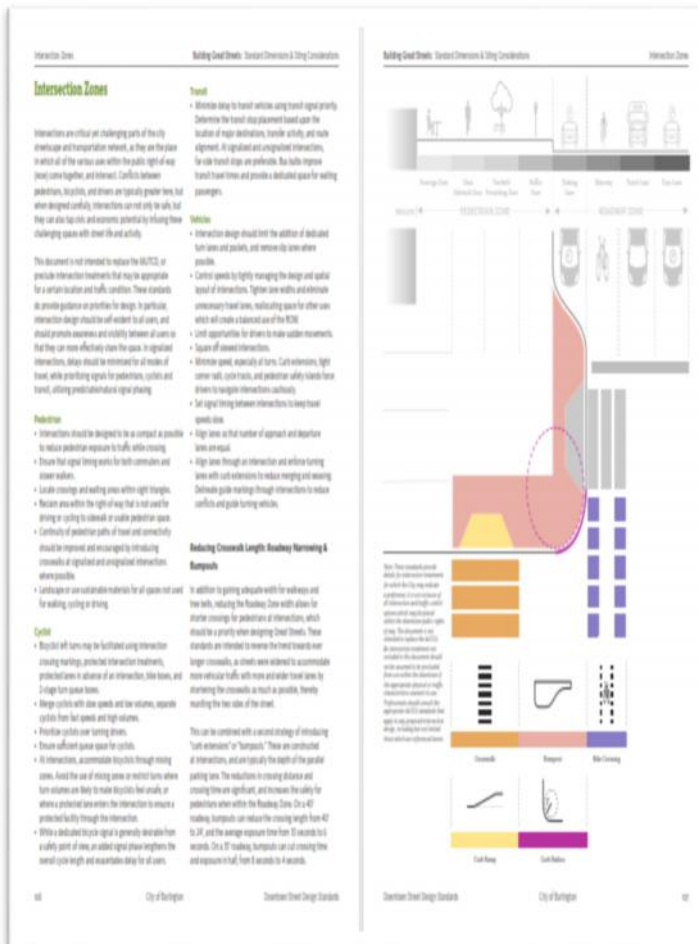


Fig. 3 Intersection Zones, Pg.106 & 107



Fig. 4 Bumpouts and Curb Radii, Pg.108 & 109

FIGURE 12: DESIGNATED TRUCK ROUTES

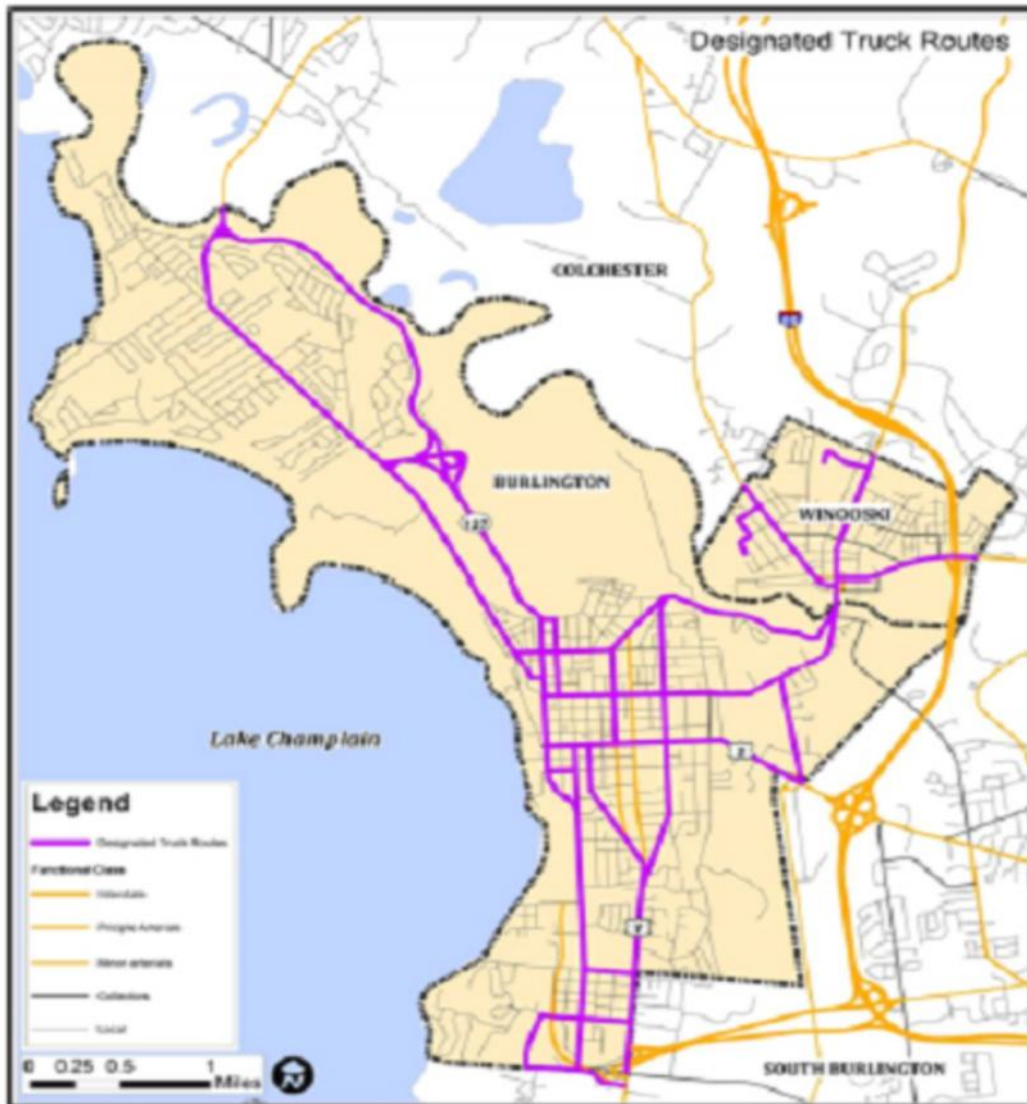


Fig. 5 Burlington-Truck Routes

The intersection of Maple and St.Paul Street prior to construction had corner radius and effective radius of:

- └ Curb Radius 11.97', Effective Radius S.B. Right Turn 22.5'-Southwest Corner
- └ Curb Radius 14.83', Effective Radius E.B. Right Turn 22.5'-Southeast Corner
- └ Curb Radius 13.95', Effective Radius S.B. Right Turn 40.0'-Northwest Corner
- └ Curb Radius 21.39', Effective Radius W.B. Right Turn 40.0'-Northeast Corner

See Fig. 6 Below, please note Eastbound Right Turn and Northbound Right Turns overlap and the Single Unit Truck SU-30 cannot make the same movement at the same time under pre construction condition.

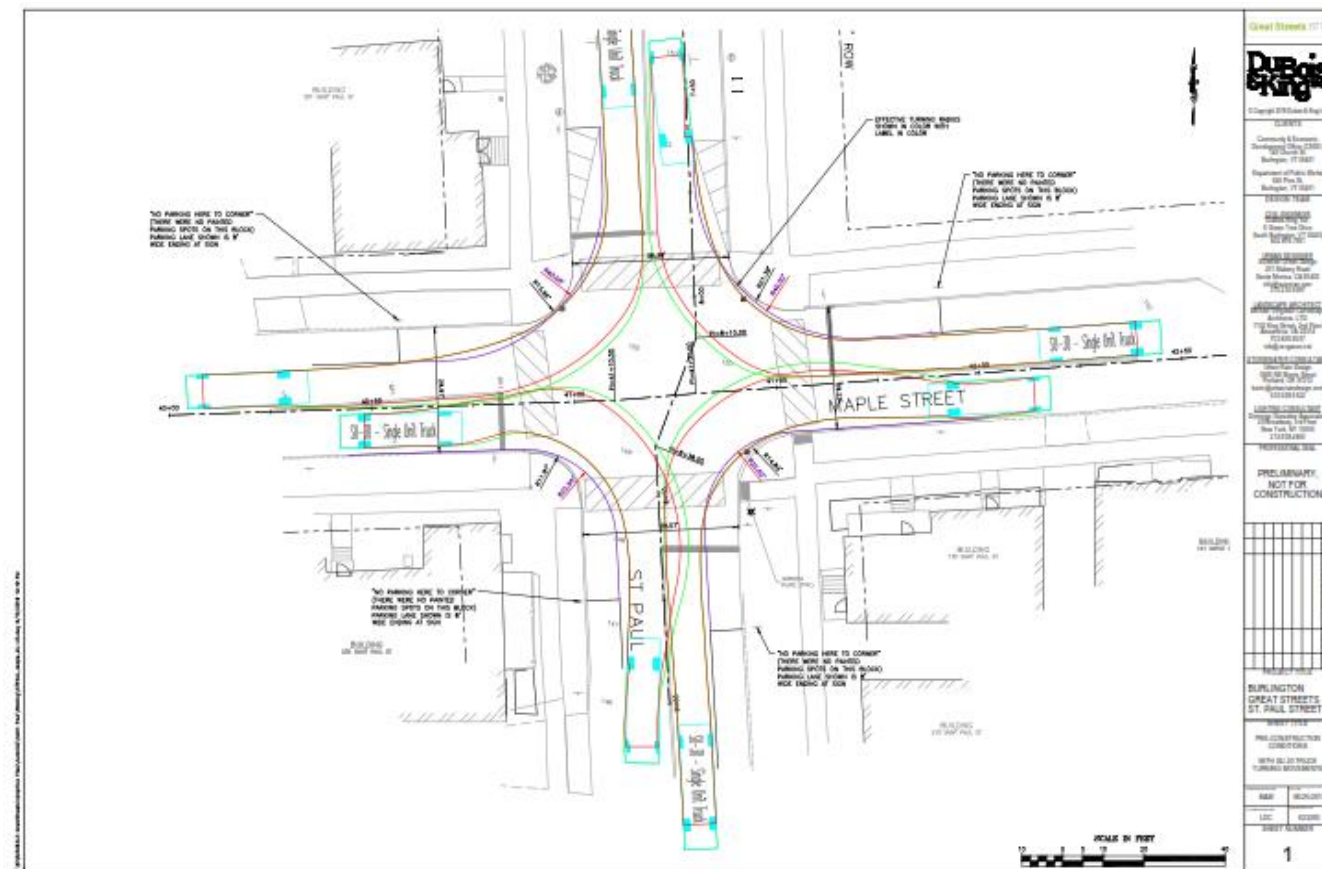


Fig. 6 Pre Construction Condition Single Unit Truck SU-30 Turning

Throughout the various stages, Conceptual Design-30%, Preliminary Design-60%, Semi Final Design-90%, Final Design-100%. Various stakeholders were consulted, including the Fire Department and Public Works Right of Way Team.

Of particular interest to the designers was the need to appropriately accommodate Fire Apparatus while improving pedestrian safety. Design of the Intersection of Maple and St.Paul according to the approved plan set was designed to accommodate the WB-40 turning associated with dimension and turning movement of the City's Tower Truck, with the understanding that the apparatus would be required to make use of the entire intersection and cross over into the receiving approaches.

Given the Great Streets Design intent was to achieve the following key performance objectives of

- └ Pedestrians are to be served as a first priority, crossing distance would be as short as possible
- └ The design would be required to accommodate the intended class of vehicle making specific turning
 - movements the assumption more specifically that all passenger vehicles at all turning movements would be accommodated staying within their departure and receiving lane and

- WB-40 Fire Apparatus would be accommodated however it would require use of the entire intersection and some of the receive lane opposing approach.
- ⌋ Limit turning movement speed

The current design

- ⌋ shortened crossing distances prior to construction Crossing St.Paul 38.3 feet, Maple Street 29.3 feet to 22 feet for both St.Paul and Maple
- ⌋ Curb Radius 14.0', Bumpout-St.Paul 8.0', None-Maple-Southwest Corner
- ⌋ Curb Radius 14.0', Bumpout-St.Paul 8.0'-None-Maple-Southeast Corner
- ⌋ Curb Radius 14.0', Bump out St.Paul 7.5'-Maple 7.5'-Northwest Corner
- ⌋ Curb Radius 14.0', Bump out St.Paul 7.5'-Maple 7.5'-Northeast Corner

We anticipated there would be some difficulties for people with larger classes of vehicles attempting to make maneuvers that were never intended to be accommodated by the current design with the intent to protect the adjacent neighborhood streets from commercial truck traffic. During the period of on-going construction, the north-south route for commercial truck traffic has been closed, leaving commercial truck traffic to detour around the lower St.Paul construction closure. This proved to exacerbate made the public's acceptance of the design given the volume of commercial vehicles making right hand turns at the same time passenger vehicles attempting to maneuver. There are numerous accounts of people entering the intersection and hitting the curb and doing damage to their tires to avoid commercial truck traffic.

Seeing the geometries for Maple and St.Paul have been determined to be more challenging than anyone could accept DPW had begun working on examining the existing built condition in the middle of August.

DPW's Evaluation took into account:

- ⌋ Cost to dismantle what had already been built,
- ⌋ Time necessary to procure and install material(granite vs. concrete)
- ⌋ Developing a range of geometric permutations that included
 - narrowing of the proposed bumpout,
 - widening the approach widths,
 - broadening the curb return radius to arrive at a more favorable effective travel radius for larger vehicles
- ⌋ Determining what larger class of vehicle would be appropriate to be accommodated,
- ⌋ Which movements would be accommodated?

Below is the various permutations we considered, and the class of vehicles we used to determine our next steps to reconstruct the two southernmost corners of Maple and St.Paul Street.Fig 10-Fig.12

The National Association of City Transportation Officials(NACTO) recommends to adopting design vehicles for various street types.

- ⌋ Neighborhood and Residential Streets-Delivery Truck DL-23
- ⌋ Downtown and Commercial Streets-Single Unit Truck SU-30
- ⌋ Designated Truck Routes-WB-50
- ⌋ Designated Bus Routes-BU40

Maple Street would be considered a Neighborhood and Residential Street-Delivery Truck DL-23

St.Paul Street would be considered a Downtown and Commercial Street as well, as a Truck Route for through movements, not side street movements.

Design Vehicle

Design for the most vulnerable street user rather than the largest possible vehicle. While designs must account for the challenges that larger vehicles, especially emergency vehicles, may face, these infrequent challenges must not dominate the safety or comfort of a site for the majority of daily users.

The selection of design vehicle influences the physical characteristics, safety, and operations of a roadway.

DISCUSSION

The selection of a design vehicle impacts the ultimate design characteristics of that street. Before selecting a design vehicle, consider the ideal design given the overall context of the roadway, understanding how larger vehicles might flexibly operate within the proposed design.

Curb radii designed to accommodate the largest possible vehicle at its highest possible speed degrade the pedestrian environment and result in longer crossing distances.

Large emergency vehicles, such as fire trucks, have certain ideal dimensions for operation often tied to response times. Assume that emergency vehicles are permitted full use of the right-of-way in both directions, especially where right curb radii may necessitate use of the opposite lane during a turn.

Transit vehicles, such as articulated buses, benefit from the use of a larger effective turning radius, which is benefited by bikeway and/or on-street parking.

CRITICAL

The design vehicle is a frequent user of a given street and dictates the minimum required turning radius a control vehicle is an infrequent large user. The design vehicle can turn using one lane and one crossing lane; the control vehicle can turn using multiple lane spaces.

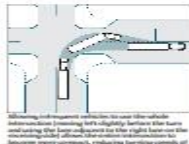
[More Info](#)

Adapt both a design vehicle and a control vehicle standard based on context-specific city street types. The design vehicle determines the design of elements such as turning radius and lane width. The control vehicle dictates how the design might accommodate a larger vehicle's turning needs when using the whole intersection.

City transit buses must be able to turn on bus routes without resorting to a 3-point operation. Where a 3-point turn would be necessary, designers should consider removing parking spaces near the intersection or increasing the stop line on the receiving street.

[More Info](#)

Overized trucks and other large vehicles may be restricted from certain conditions based on existing context, vulnerable street users, or impractical operational impacts. Re-route trucks to parallel routes where extension reconstruction is not required to meet their needs.



Use "crawl" speeds, as opposed to design speed, when determining local street geometry factors associated with the design vehicle. Vehicles traveling at slower speeds have more flexibility and can make difficult turns that may be challenging or unsafe at higher speeds.

[More Info](#)

THE DESIGN VEHICLE TYPES BELOW SHOULD BE CONSIDERED IN ORDER TO MAINTAIN PROPERLY ACCESSIBLE, UNIMPACTED PEDESTRIAN SAFETY AND LOW SPEEDS.

STREET TYPE

Neighborhood and Residential Streets

DESIGN VEHICLE

DL-23



Downtown and Commercial Streets

SU-30



Designated Truck Routes

WB-60



Note: Trucks are permitted to use the full intersection when making turns onto a

RECOMMENDED

Adopt a new design vehicle that is a frequent user of urban streets—the delivery truck (DL-23). Package delivery trucks commonly travel on city streets, and have an inside turning radius of 22.5 feet and an outside turning radius of 29 feet.



Custom Group, LLC. This truck is an example of the DL-23.



Portland's freight route plan classified truck routes and created freight districts. Click to enlarge.

All truck routes should be designed to permit the safe and effective operation by trucks. Designation of freight routes should be considered in coordination with mapping of primary bicycle, transit, and pedestrian corridors, as well as through the analysis of key access routes, bridge hazards, and industrial or commercial land uses. Pair truck route programming with enforcement to ensure that oversized vehicles are not diverting off-network.



Click to enlarge.

Where truck routes intersect and frequent turns are made, install bollards at the intersection corner to help prevent injuries and fatalities from truck wheels overrunning the curb.

OPTIONAL

On narrow commercial streets that require frequent loading and unloading, consider the application of a shared street design to avoid large turning radii or freight vehicles parking on sidewalks.

Where trucks or city buses are expected to frequently encroach on the centerline, consider using a dashed centerline at the potential conflict point at the intersection.

Fig.8-NACTO Reference to Design Vehicles

Fig.9-NACTO Delivery Vehicle DL-23

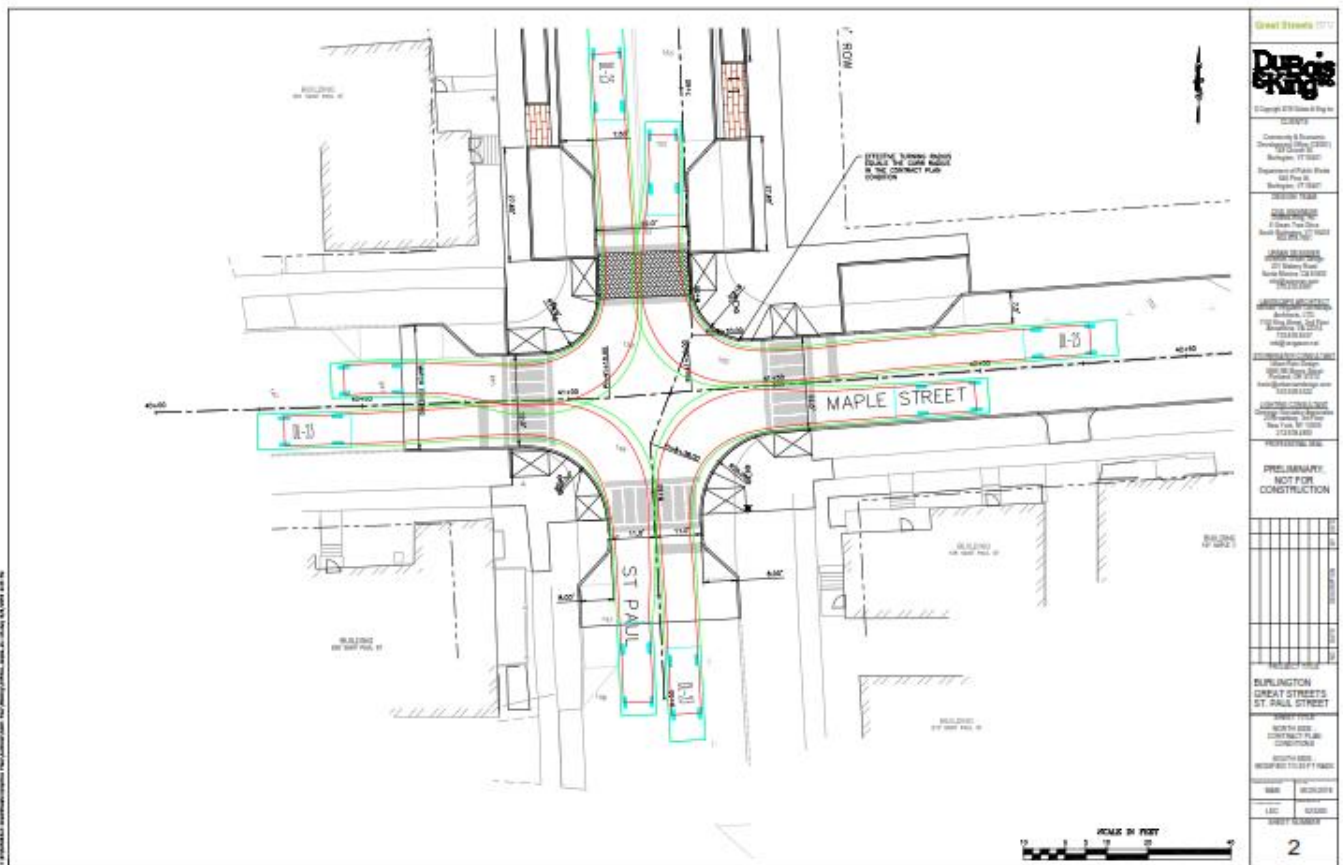


Fig.10-Maple & St.Paul 20' Curb Radius

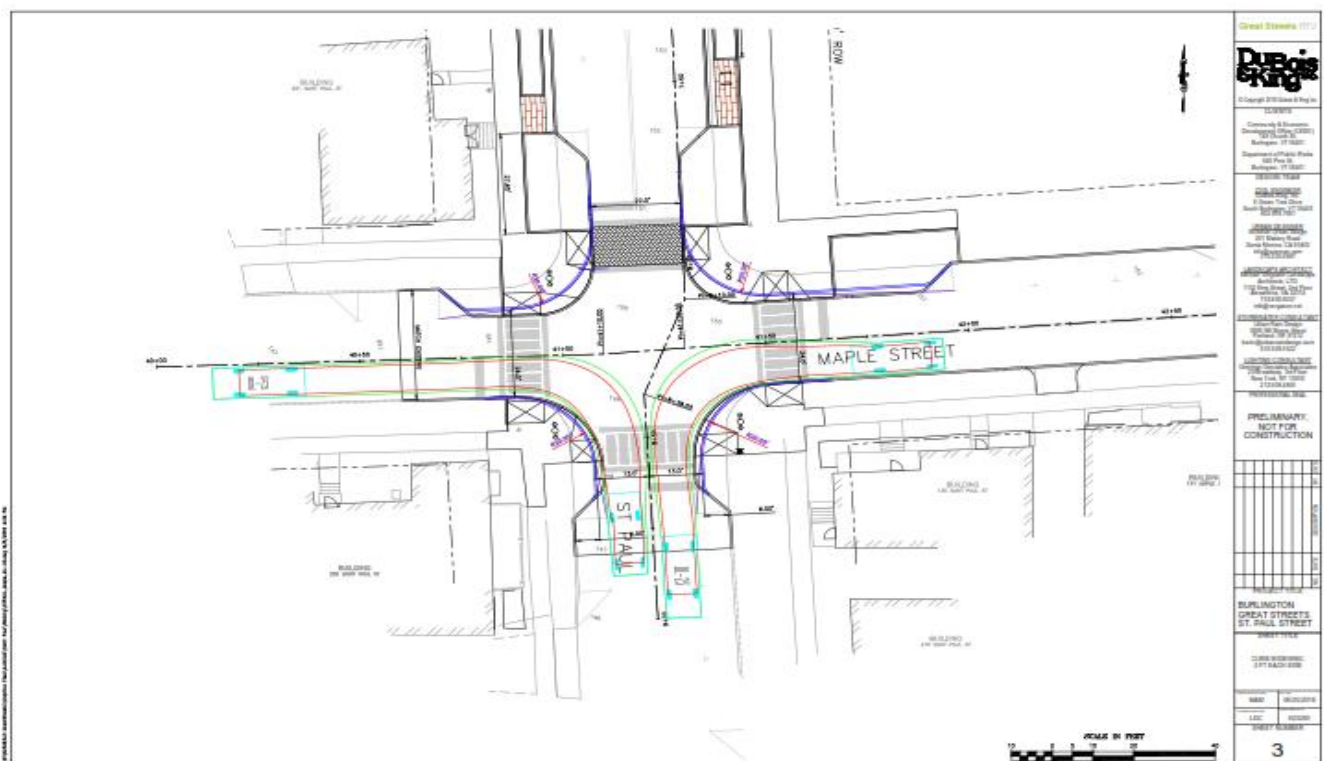


Fig.11-Maple St & St.Paul St.-20' Curb Radius-4' widening of Northbound Approach

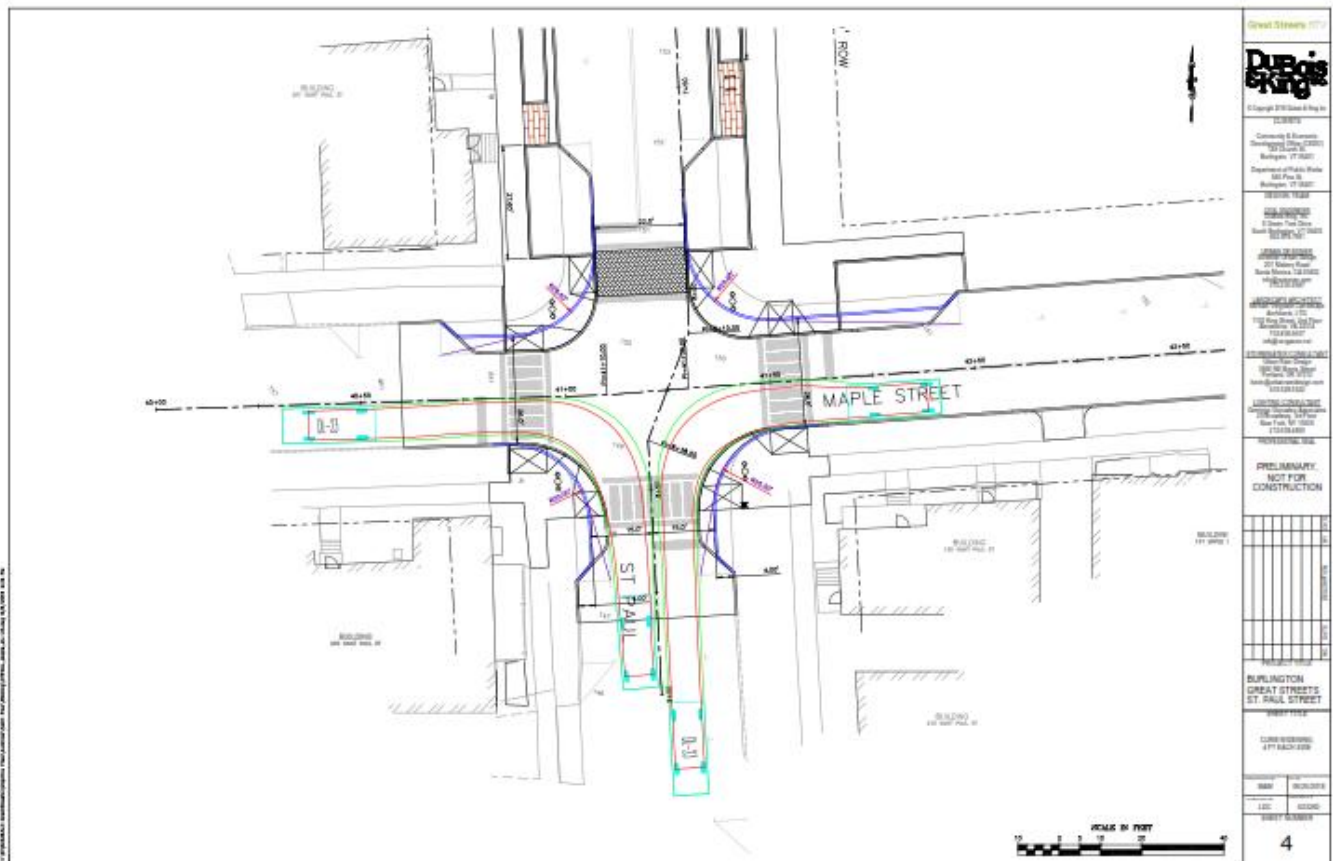


Fig.12-Maple Street and St.Paul Street-20' Curb Radius, 8' widening of northbound approach

CONCLUSIONS AND RECOMMENDATIONS:

DPW has concluded that the intersection of Maple and St.Paul Street as built, requires modifications. In attempting to create the a new balance in how the public will make use of the right of way, we recognize our first attempt at finding the right balance of accommodating pedestrians and vehicular movement did not arrive at a favorable result for the public.

We believe having a design that will accommodate a Delivery Vehicle-DL23 the design vehicle for Eastbound Right Turns and Northbound Right Turns at Maple and St.Paul is appropriate, given Maple Street is intended to be a Downtown Residential Street.

The Design shown in Fig.12 calling for a 20' Curb Radius and an additional 8' of approach widening for the northbound approach is suitable for Delivery vehicle DL-23's and to a lesser degree Single Unit Trucks-SU-30.

Therefore the design modifications identified in Fig. 12, calling for a 20' radius for the two southern most corners and an 8' widening of the northbound approach at Maple and St.Paul is the design modifications DPW would recommend in this case.

Staff has gotten pricing from S.D.Ireland for the proposed curb and chamfering work to be approximately \$20,000. The work could be completed prior to the opening of two way traffic on the lower block of St.Paul currently closed, however the work needs to be released immediately to avoid further extending the roadway closure.

In addition DPW would recommend that the granite curbs for the intersection of King and St.Paul be modified to have a 3 inch chamfer cut on the inside edge of the curb to reduce the potential of damaging tires or rims in the event that people maneuver too close to the limits of the roadway.

DPW plans on monitoring the performance of the street and intersections once the project is completed and in full operation.

Thank you for taking the time to read and understand the circumstance surrounding this complex issue and being a partner in getting this issue resolved as soon as possible. I will be at the meeting present this solution and available to answer any questions you may have.