

The background of the cover is a dark grey chalkboard filled with white architectural sketches. At the top, there are several rows of numbers and symbols, including '13', '2', '6', '2', '10', '2', '2', '6', '2', '2', '6', '2'. Below these are various geometric drawings, including rectangles, circles, and lines, some with hatching or cross-hatching. A prominent sketch in the center shows a grid of lines forming a city block layout. The overall aesthetic is technical and urban planning-oriented.

DOWNTOWN **FOR EVERYONE**

A REIMAGINED DOWNTOWN BLOOMINGTON EXPERIENCE

**STREETSCAPE PROGRAM REPORT
VOLUME 3**

Adopted April 8th, 2024

TABLE OF CONTENTS

pg. 1	Core Team Meeting Minutes
pg. 50	IDOT Meeting Minutes
pg. 56	Steering Committee Meeting Minutes
pg. 146	Utility Company Meeting Minutes
pg. 151	Advocacy Groups Meeting Minutes
pg. 154	Letters of Support from Bike Advocacy Groups
pg. 159	McLean County Property Committee Meeting Minutes
pg. 163	Community Open House Attendance Logs
pg. 190	Community Open House and Website Feedback
pg. 208	Public Voting Results
pg. 210	City Utility Information
pg. 214	Traffic Calculations

Core Team Meeting Minutes



DOWNTOWN CONCEPT DESIGN

KICKOFF MEETING

September 28, 2022 – 11:00 AM



MEETING MINUTES

1) OPENING REMARKS

2) COUNCIL RECAP / FINAL SCOPE DISCUSSION

- Noted that despite some objections on contract technicalities, Council appears supportive of investment Downtown. Appears to be significant community support for Downtown improvements as well.

- City Admin (Tim/Billy) will lead efforts to keep Council informed/involved, supported by CMT Team.

1. CRITICAL SUCCESS FACTORS DISCUSSION

- Admin validates program approach: (1) Focus on infrastructure modifications to prioritize “walkability” Downtown, not merely a cosmetic program; (2) Everything is on the table going from building face to building face; (3) Acquisitions not preferred unless a unique opportunity presents itself (such as adjacent private surface parking lots); and (4) No specific design element preferences at this time – would like the process to play itself out and see what develops out of it.

- Admin verifies approach to public involvement: public will be informed and consulted at various points during life of program design via public meetings and use of City’s Communications Manager. Team will meet at least quarterly with “Steering Committee” including community leaders and cross-section of downtown users.

3) SCHEDULE DISCUSSION

- 12-month design schedule. CMT authorized to engage subs.

- Core Team meetings to be scheduled every two weeks starting Tuesday 10/11/22 at 9:00am.

4) IMPLEMENTATION PLAN UPDATE:

a) City To Do List:

- i) Define CORE team members (to meet bi-weekly) **CoB has already identified Craig and Billy as City Core Team members with other City staff brought in to meetings as needed.**
- ii) Define STEERING committee team member (to meet quarterly) **Craig, Billy, and Tim to assemble this team.**
- iii) Define Community Stakeholder team members (to meet quarterly) **To simplify things, there will not be a separate Community Stakeholder Team. The Steering Committee will include representatives of the community.**
- iv) Schedule meeting with County regarding courthouse square **Billy will set something up with the County and then let CMT know when a meeting can occur.**

b) CMT To Do List:

- i) Schedule bi-monthly meetings (with City) **Mike Sewell to send out Outlook invites.**
- ii) Schedule internal kickoff meetings (traffic, funding, etc.)
- iii) Obtain and review City GIS data – determine need for supplemental information (videos, etc.) **Craig to provide Mike with Troy and Craig’s availability.**

5) CRITICAL CITY DECISION POINTS:

- a) Provide “ok” to start traffic counts (commence immediately) **City approval given.**
- b) Provide “ok” to start pavement cores (wait until traffic counts are complete) **City approval given.**

6) ONGOING TASK ITEMS:

- a) CMT/MMA – Develop detailed project schedule and QA plan
- b) CMT/MMA – Review existing studies / reports
- c) CMT/MMA – Data collection (utilities, GIS data, aerial imagery) **CMT has shared propose traffic data collection plan with City Traffic Engineer.**
- d) CMT – Developing Existing Traffic Model

7) UPCOMING TASK ITEMS:

- a) CMT – Schedule 1st quarterly meeting with Steering Committee / Core teams (vision & goals session)
- b) CMT – Schedule onsite investigation & recording trip
- c) City – Define community stakeholders
- d) City – Develop external communication plan (stakeholders, council, staff, etc.) **CMT to add standing agenda item to Core Team meeings: “STORIES”, intended to provide ongoing, compelling content to public to keep them in the loop.**

8) COMPLETED TASK ITEMS:

- a) CMT – Executed sub agreements with MMA & Workbench
- b) City – Executed agreement with CMT & provided NTP

9) OPEN DISCUSSION / QUESTIONS

DOWNTOWN CONCEPT DESIGN

CORE TEAM MEETING
October 10, 2022 – 10:00 AM

MEETING MINUTES

1) DISCUSSION ITEMS:

- a) Project “Stories” Approach – Katherine Murphy and CMT Team Intro
 - Katherine will now attend every Core Team Meeting.
 - Katherine and Mike will work together on publishing stories: Katherine will provide suggestions on format/frequency/etc and Mike will keep “ear to the ground” on content.
- b) Traffic Counts – Status Update for Katherine
- c) Illinois Main Street Conference – CoB Involvement
 - Kent Massie and C.J. Baker will attend from CMT Team. Billy to let CMT know if any sort of content/participation is needed, but unlikely.
- d) Project Schedule – Review Milestones
 - See attached schedule.
 - Notable milestones: City to deliver GIS info to CMT by 10/21. Steering Committee Meeting #1 tentatively scheduled for week before Thanksgiving. City to deliver “critical utilities” data by Thanksgiving.
- e) GIS Data – Next Steps

2) IMPLEMENTATION PLAN UPDATE:

- a) City To Do List:
 - City to provide CMT with downtown maps for vaults and steam tunnels.
 - i) Define STEERING committee team member (to meet quarterly)
 - ii) Schedule meeting with County regarding courthouse square
 - Meeting has been scheduled for 10/27.
 - iii) Develop first wave of “easy” data to be shared from GIS and share availability for meeting with CMT Team
- b) CMT To Do List:
 - CMT to prepare less detailed schedule for general use.
 - i) See Ongoing Task Items below...

3) CRITICAL CITY DECISION POINTS:

- a) None at this time...

4) ONGOING TASK ITEMS:

- a) CMT/MMA – Develop QA plan
- b) CMT/MMA – Review existing studies / reports
- c) CMT/MMA – Data collection (utilities, GIS data, aerial imagery)
 - Traffic counts to be collected 10/25.
- d) CMT – Developing Existing Traffic Model

5) UPCOMING TASK ITEMS:

- a) CMT – Schedule 1st quarterly meeting with Steering Committee / Core teams (vision & goals session)
- b) CMT – Schedule onsite investigation & recording trip
 - Data collection beginning week of 10/17.

- 6) **COMPLETED TASK ITEMS:**
 - a) CMT – Developed Project Schedule
- 7) **“STORIES” TO TELL**
- 8) **OPEN DISCUSSION / QUESTIONS**

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	22	Sep 4, '22	Sep 11, '22	Sep 18, '22	Sep 25, '22	Oct 2, '22	Oct 9, '22	Oct 16, '22	Oct 23, '22	Oct 30, '22	Nov 6, '22	Nov 13, '22	Nov 20, '22	Nov 27, '22	Dec 4, '22	Dec 11, '22	Dec 18, '22	Dec 25, '22	Jan
1	Task	Overall Program Design	262 days?	Thu 9/1/22	Fri 9/1/23																				
2	Task	Task #A - PROGRAM MEETINGS	262 days	Thu 9/1/22	Fri 9/1/23																				
3	Task	Bi-Monthly Core Team Meetings	262 days	Thu 9/1/22	Fri 9/1/23																				
4	Task	Quarterly Steering Committee Meeting #1	0 days	Tue 11/1/22	Tue 11/1/22																				
5	Task	Quarterly Steering Committee Meeting #2	0 days	Tue 2/7/23	Tue 2/7/23																				
6	Task	Quarterly Steering Committee Meeting #3	0 days	Tue 5/2/23	Tue 5/2/23																				
7	Task	Quarterly Steering Committee Meeting #4	0 days	Tue 8/1/23	Tue 8/1/23																				
8	Task	TASK #B - DATA COLLECTION	35 days	Mon 10/3/22	Fri 11/18/22																				
9	Task	Subtask #B.1 - Analyze Data from Previous Studies & Reports	15 days	Mon 10/10/22	Fri 10/28/22																				
10	Task	Subtask #B.3 - Coordinate City GIS Data & Aerial Imagery	15 days	Mon 10/3/22	Fri 10/21/22																				
11	Task	Subtask #B.2 - Review Available Record Plans & Drawings	20 days	Mon 10/24/22	Fri 11/18/22	10																			
12	Task	Subtask #B.4 - Set Up Base Planning Drawings	20 days	Mon 10/24/22	Fri 11/18/22	10,18																			
13	Task	Subtask #B.5 - On-Site Investigation & Recording	25 days	Mon 10/17/22	Fri 11/18/22																				
14	Task	Subtask #B.6 - ADA Compliance Review	25 days	Mon 10/17/22	Fri 11/18/22																				
15	Task	TASK #C - UTILITY COORDINATION	88 days	Thu 9/1/22	Mon 1/2/23																				

Project: Downtown CoB Streets
Date: Sat 10/8/22

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Manual Progress
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Progress	

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	22	Sep 4, '22	Sep 11, '22	Sep 18, '22	Sep 25, '22	Oct 2, '22	Oct 9, '22	Oct 16, '22	Oct 23, '22	Oct 30, '22	Nov 6, '22	Nov 13, '22	Nov 20, '22	Nov 27, '22	Dec 4, '22	Dec 11, '22	Dec 18, '22	Dec 25, '22	Jan
16	Task	Subtask #C.1 - Confirm & Analyze Existing City Utility Data	19 days	Tue 10/25/22	Fri 11/18/22	10																			
17	Task	Subtask #C.2 - Confirm & Analyze Vaults/Stair Wells Data	25 days	Mon 10/17/22	Fri 11/18/22																				
18	Task	Subtask #C.3 - Coordinate with Various Utility Companies	37 days	Thu 9/1/22	Fri 10/21/22																				
19	Task	Subtask #C.4 - Perform CCTV Televising of Sewers	50 days	Tue 10/25/22	Mon 1/2/23	10																			
20	Task	Subtask #C.5 - Drainage Assessment	19 days	Tue 10/25/22	Fri 11/18/22	10																			
21	Task	City Delivers List of "Critical" Utilities	0 days	Wed 11/23/22	Wed 11/23/22																				
22	Task	Subtask #C.6 - Utility Risk Assessment	25 days	Mon 11/28/22	Fri 12/30/22	21																			
23	Task	TASK #D - TRAFFIC ANALYSIS	158 days?	Mon 10/24/22	Wed 5/31/23																				
24	Task	Subtask #D.1 - Analyze Existing Conditions Including Vehicle Traffic Counts	20 days	Mon 10/24/22	Fri 11/18/22																				
25	Task	Subtask #D.2 - Analyze Data from Parking Analysis Study Done by Others	15 days	Mon 10/31/22	Fri 11/18/22																				
26	Task	Subtask #D.3 - Model Traffic Alternatives	138 days?	Mon 11/21/22	Wed 5/31/23																				
27	Task	Subtask #D.4 - Traffic Meetings with City Traffic Engineer	138 days?	Mon 11/21/22	Wed 5/31/23																				
28	Task	Subtask #D.5 - Bicycle Analysis	138 days?	Mon 11/21/22	Wed 5/31/23																				
29	Task	Subtask #D.6 - Pedestrian Analysis	138 days?	Mon 11/21/22	Wed 5/31/23																				

Project: Downtown CoB Streets
Date: Sat 10/8/22

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Manual Progress
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Progress	

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Sep 4, '22	Sep 11, '22	Sep 18, '22	Sep 25, '22	Oct 2, '22	Oct 9, '22	Oct 16, '22	Oct 23, '22	Oct 30, '22	Nov 6, '22	Nov 13, '22	Nov 20, '22	Nov 27, '22	Dec 4, '22	Dec 11, '22	Dec 18, '22	Dec 25, '22	Jan			
							T	F	S	M	T	W	T	F	S	M	T	W	T	F	S	M	T	W	T	F	S
30		TASK #E - ASSISTANCE WITH PUBLIC COORDINATION	138 days?	Mon 11/21/22	Wed 5/31/23																						
31		TASK #F - US 51B COORDINATION	138 days?	Mon 11/21/22	Wed 5/31/23																						
32		TASK #G - PAVEMENT ANALYSIS	55 days?	Mon 10/17/22	Fri 12/30/22																						
33		TASK #H - CONCEPT DEVELOPMENT	138 days?	Mon 11/21/22	Wed 5/31/23																						
34		TASK #I - PREPARATION OF "STANDARDS FOR DOWNTOWN STREETSCAPE" DOCUMENT	67 days?	Thu 6/1/23	Fri 9/1/23																						
35		TASK #J - FUNDING OPPORTUNITIES	1 day?	Fri 9/1/23	Fri 9/1/23																						
36		TASK #K - HISTORICAL CLEARANCES & COMMUNITY RESEARCH	138 days?	Mon 11/21/22	Wed 5/31/23																						
37		TASK #L - PROGRAM COST OPINION	67 days?	Thu 6/1/23	Fri 9/1/23																						
38		TASK #M - PROGRAM PHASING ANALYSIS	67 days?	Thu 6/1/23	Fri 9/1/23																						
39		TASK #N - MISCELLANEOUS TASKS	138 days?	Mon 11/21/22	Wed 5/31/23																						
40		TASK #O - QUALITY ASSURANCE	1 day?	Fri 9/1/23	Fri 9/1/23																						
41		TASK #P - ADMINISTRATION/MANAGEMENT	262 days	Thu 9/1/22	Fri 9/1/23																						
42		TASK #Q - FINAL "DOWNTOWN STREETSCAPE PROJECT - CONCEPT DESIGN" DELIVERABLE	67 days?	Thu 6/1/23	Fri 9/1/23																						

Project: Downtown CoB Streets
Date: Sat 10/8/22

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Manual Progress
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Progress	

DOWNTOWN CONCEPT DESIGN

CORE TEAM MEETING
October 25, 2022 – 9:00 AM

MEETING MINUTES

1) DISCUSSION ITEMS:

- a) Program Funding Opportunities Approach – Ally Fields (CMT Funding Specialist) and Melissa Hon (CoB Economic and Community Development Director)
 - i) Current Funding Opportunities Identified by Ally
 - ii) Existing City Approach to Pursuing Funding Opportunities
 - iii) Strategy for Integrating Program Elements into City’s Ongoing Pursuits of Funding
 - **Ally directed to look for grants/funding opportunities that are good candidates for the Streetscaping Program and let CoB know when they’re coming up so that they can prepare for them.**
- b) Illinois Main Street Conference – Quick Recap from Kent
- c) County Meeting – Scheduled for 10/27. Minimal prep likely required.
 - **Core Team subsequently met with County and had productive conversations. Next step is for City, Mike, and Museum to meet with Cassy Taylor (McLean County) likely the week of 11/14 to introduce some concepts to the County for consideration.**

2) IMPLEMENTATION PLAN UPDATE:

- a) City To Do List:
 - i) Define STEERING committee team member (to meet ~ quarterly).
 - **Billy believes composition of committee will be finalized by 10/28/22.**
 - ii) Provide CMT with Downtown vault and steam tunnel maps.
 - **CoB has now provided CMT with this information.**
 - iii) Develop first wave of “easy” data to be shared from GIS and share availability for meeting with CMT Team – by 10/21.
 - **Mike directed by Craig to reach out directly to Troy Olson. Mike and others from CMT subsequently met with Troy and Joe Palma and have begun receiving access to data.**
- b) CMT To Do List:
 - i) Prepare less detailed schedule for general use.
 - ii) Develop QA Plan.
 - iii) Data collection (utilities, GIS data, aerial imagery) – ongoing.
 - iv) Develop existing traffic model – ongoing. Counts occurring 10/25/22.
 - **Counts have now been completed.**

3) CRITICAL CITY DECISION POINTS:

- a) None at this time...

4) UPCOMING TASK ITEMS:

- a) City Tasks:
 - i) Deliver “critical utilities” data by Thanksgiving.
- b) CMT Tasks:
 - **CMT to draft a first list of upcoming grants/funding opportunities for CoB to review. This will be a “living document”, updated as warranted by Ally and her team who have their ear to the ground for us.**
 - i) Schedule 1st quarterly meeting with Steering Committee (tentatively week before Thanksgiving)
 - ii) Develop base map

5) COMPLETED TASK ITEMS:

- a) CMT – Developed Project Schedule

6) “STORIES” TO TELL

- a) How often? What format?
- b) Traffic modeling “story”. What content needed from CMT Team?

- Katherine will take lead on determining frequency and format of messaging, now that she is attending all Core Team meetings and since she will now be in the loop on what elements of the design are being focused on. CMT will assist with providing content.

7) OPEN DISCUSSION / QUESTIONS

- Discussion on next steps needed to allow Design Team to begin preparing concepts. Consensus was that Design Team needs some additional input first, particularly from the Steering Committee once established.

DOWNTOWN CONCEPT DESIGN

CORE TEAM MEETING
November 8, 2022 – 9:00 AM

MEETING MINUTES

1) DISCUSSION ITEMS:

- a) *US-51B Walkability Strategy* – Phil Allyn (CoB Traffic Engineer) and Roger Driskell (CMT Surface Transportation Director) in attendance
 - i) Recap by Craig Shonkwiler on conversations recently had with IDOT and Hutchison
 - **Craig recounts that IDOT is giving consideration to outside bike lane but perhaps skeptical on further lane reductions due to volume of traffic.**
 - ii) ~~Review of Massie sketches and general discussion on walkability options~~
 - iii) Discuss strategy for engaging IDOT, next steps, etc.
 - **Kent and Roger discuss possibility of speed reduction either by City Ordinance (change speed limit) or perhaps more effectively by implementing traffic calming such as lane reduction.**
 - **Phil notes that City has an adopted Bicycle Master Plan that includes bike lanes on US-51B and advises we not do anything to take that off the board.**
 - **Discussion amongst team that walkability must also be emphasized, particularly ability to safely cross US-51B.**
 - **Next Steps: Roger to reach out informally to his Hutchison contacts to find out status of Phase I, prior to engaging IDOT. Depending on what we learn, likely set up meeting for CMT and IDOT to develop specific strategy for IDOT meeting.**
- b) *McLean County Museum of History Meeting (held 10/27/22) Debrief* –
 - i) Scharnett proposed plan for main entrance (south entrance)
 - ii) War memorial clutter and other ideas...
 - iii) Upcoming meeting with Cassy Taylor, County Administrator
 - **Discussion amongst team that we would like to further explore some of Scharnett's ideas prior to presentation to County.**
- c) *Johnson Controls Meeting (held 11/07/22) Debrief* –
 - **City open to working with Johnson Controls to the extent lighting will be a piece of Design Team's efforts. Kent confirms lighting will be a major component of program.**
- d) *First Steering Committee Meeting Tentative Schedule* –
 - **New plan is to move up first committee meeting to week of December 5th. Morning meeting and no more than 2 hours likely best option.**
 - i) 11/11/22 – Finalize Steering Committee members and schedule first meeting
 - ii) Week of 11/21/22 – Send out questionnaire to committee members
 - iii) 12/01/22 – Questionnaire due back from members
 - iv) 12/06/22 – Review questionnaire results and finalize game plan for first steering committee meeting
 - v) Week of 12/12/22 – First Steering Committee Meeting
- e) *Quick Update from Kent on Friday's Wine/Art Walk*
 - **Amongst other things, Kent remarks on very strong Visual Arts community based in Downtown Bloomington.**

2) IMPLEMENTATION PLAN UPDATE:

- a) *City To Do List:*
 - **Craig and Phil to provide any draft IDS that may have been provided them by IDOT for the Phase I.**
 - **Billy to cancel upcoming meeting with County and instead set up meeting with Scharnett for further discussion of Museum Square options.**

- Billy to make contact with prospective Steering Committee members and inform them of their selection, then notify Mike and provide him with their contact info.

- i) Define STEERING committee team member (to meet ~ quarterly). **To be finalized this week.**
- ii) Determine “critical utilities”, ideally by Thanksgiving.

b) *CMT To Do List:*

- CMT (Roger) to reach out to Hutchison to determine status of Phase I study and gauge IDOT’s stance on walkability improvements.

- Once Billy has made initial contact with Steering Committee members, Mike to reach out and schedule first meeting for week of December 5th.

- i) Prepare less detailed schedule for general use. Done prior to next Core Team meeting.
- ii) Prepare list of promising grants/funding opportunities – ongoing. Will be presented by Ally at next Core Team meeting.
- iii) Data collection (utilities, GIS data, aerial imagery) – ongoing.
- iv) Develop base map - ongoing. Should be completed this week.
- v) Develop existing traffic model – ongoing. Counts have been completed.
- vi) Develop narrative for planned downtown improvements.

3) CRITICAL CITY DECISION POINTS:

- a) Appointment of Steering Committee – **To be finalized this week.**

4) “STORIES” TO TELL

- a) Upcoming publications/tweets/etc
 - Katherine developing piece on underground vaults, then turning to a piece on traffic counts/modeling.**
- b) Content needed from CMT Team

5) OPEN DISCUSSION / QUESTIONS

DOWNTOWN CONCEPT DESIGN

CORE TEAM MEETING
November 29, 2022 – 9:00 AM

MEETING MINUTES

1) DISCUSSION ITEMS:

- a) *Streetscape Grants/Funding Opportunities* – Ally Fields (CMT Government Affairs Manager) in attendance
 - i) Upcoming Grants/Funding Opportunities List
 - **November '22 List included with these meeting minutes.**
 - ii) Next Steps
 - **Consensus is that design is not yet developed enough to warrant applying for funding.**
 - **City is working on FY'24 budget and will internally strategize about adding a streetscape project to their capital improvements plan as well as engaging Town of Normal and McLean County in discussions so that the project can be included on MPO TIPs. CMT to provide support if asked.**
 - **Streetscaping project is a great candidate for Bloomington-Normal Economic Development Council "One Voice Task Force" one year from now.**
- b) *US-51B* – Meeting scheduled for Monday, 12/05
 - i) Roger's discussion with Hutchison
 - **Learned that IDOT has tasked Hutchison with primarily keeping improvements between the curb, with a focus on mill & fill and curb ramp improvements; but IDOT likely to at least consider proposals from City for additional improvements.**
 - **Hutchison is performing 26 Intersection Design Studies along the corridor as part of this Phase I.**
 - ii) Upcoming meeting strategy
 - **Agenda to be prepared by CMT to ensure we discuss everything we want to be covered.**
 - **Need to determine IDOT's schedule for US-51B, both design and construction. When do we need to have things to them?**
 - **Site visit after meeting: Goal is to have IDOT appreciate the economic impact of US-51B choking off Downtown.**
 - **Back pocket strategy: IDOT likely to be more amenable to CoB proposed improvements if the City is willing to consider bearing costs or sharing costs.**
- c) *Steering Committee Meetings* – First meeting scheduled for Wednesday, 12/07
 - i) Tentative Overall Meeting Schedule:
 - (1) Early December '22 – Big Picture Discussion/Listening
 - (2) Late February '23 – Discussing Specific Ideas/Strategy
 - (3) Late April '23 – Reviewing Specific Improvements, Colors, Amenities, Themes, etc
 - (4) Late June '23 – Plan Review/Final Buy-Off from Committee
 - ii) Tentative First Meeting Format:
 - (1) 1st 30 minutes – Intro from Billy/Tim. Brief presentation from Design Team
 - (2) 2nd 45 minutes – Break into three focus groups (Local Business Interests, Traffic & Parking, and Cultural/Public Spaces). Each group will spend ~15 minutes considering the *past* (challenges/lessons learned), 15 minutes on *present* conditions (challenges and opportunities), and 15 minutes dreaming big about *future* solutions.
 - (3) 3rd 30 minutes – 10 minutes per focus group reporting back the Top 3-5 Takeaways from their discussions. Quick wrap-up.
 - iii) Questionnaire Results –
 - (1) Due back by 12/01/22
 - (2) Results will be compiled prior to 12/06 Core Team Meeting
- d) ~~*Connect Transit/Market Street Parking Garage*~~

- ~~i) Update from Billy & Craig~~
- ~~ii) Overall Downtown Parking Impact due to Displacement of Garage Parking Spaces~~
- ~~iii) Next Steps~~

2) IMPLEMENTATION PLAN UPDATE:

a) *City To Do List:*

- **City to internally strategize about how to integrate City Council updates and public meetings into the program design schedule.**
- **Craig to provide CMT with updated Intersection Design Studies or, if he can't get them from Hutchison in a timely manner, provide us with the older IDS from March.**

- i) Data on sewer televising status – by 11/25
- ii) Determine “critical utilities”, ideally by Thanksgiving.

b) *CMT To Do List:*

- **Prepare agenda for 12/05 IDOT meeting.**

- i) Prepare less detailed schedule for general use. Done prior to next Core Team meeting.
 - **This schedule summary is being developed for the First Steering Committee Meeting and will be shared with City to aid in City's internal strategy about updating Council and public meetings. (See 2(a) above.)**
- ii) Data collection (utilities, GIS data, aerial imagery) – complete for now.
- iii) Develop base map - complete.
- iv) Develop existing traffic model – ongoing. Counts have been completed.
- v) Develop narrative for planned downtown improvements.

3) CRITICAL CITY DECISION POINTS:

- a) None at this time

4) “STORIES” TO TELL

- a) Upcoming publications/tweets/etc
- b) Content needed from CMT Team

5) OPEN DISCUSSION / QUESTIONS

Downtown Streetscape Potential Funding Opportunities November 2022

Federal:

Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program

- The RAISE program, included in the Bipartisan Infrastructure Law (BIL) of 2021, is designed to help communities modernize roads, bridges, transit, and other transportation facilities to make the transportation systems safer, more accessible, more affordable, and more sustainable. Projects are evaluated on several criteria, including safety, environmental sustainability, quality of life, economic competitiveness and opportunity, partnership and collaboration, innovation, state of good repair, and mobility and community connectivity.
- The RAISE Program will award at least \$1.5 billion per year through FY2026. While the program has typically opened in the first few months of each calendar year, USDOT is trying to shift to a schedule a few months earlier to more closely align with the fiscal year.
- RAISE grants must be matched by a 20% non-federal contribution.
- RAISE grants do not need to be shovel-ready but are scored on project readiness. Ability to articulate a clear project vision and address any possible barriers to project development (permitting, ROW, etc.) is needed.

State:

Illinois Transportation Enhancement Program (ITEP)

- ITEP is designed to allocate resources to well-planned projects that provide and support alternate modes of transportation enhance the transportation system through preservation of visual and cultural resources and improve the quality of life for members of the communities. ITEP can be used for pedestrian or bicycle facilities, streetscapes, conversion of abandoned railroad corridors to trails, historic preservation and rehab of historic transportation facilities, vegetation management in transportation rights-of-way, storm water management, the construction of turnouts, overlooks, and viewing areas, or other specified uses.
- The ITEP is funded by a mix of state and federal funds and is awarded bi-annually, with the application period opening in the fall of each even numbered year. ITEP includes a \$3 million cap per project.
- Planning studies are not eligible for funding under the ITEP. However, preliminary engineering and construction engineering are eligible.

Illinois Main Streets Program

- The Illinois Main Streets Program set out to support improvements and encourage investment in commercial corridors and downtowns that have experienced disinvestment, particularly in communities hardest-hit by COVID-19. The program funded capital projects that make these commercial areas in Illinois more attractive for private investment, generate short-term and long-term employment opportunities, and improve quality of life in the community through high-quality infrastructure and amenities.
- Under the 2022 program, engineering design was an eligible cost.
- The Illinois Main Streets program provided \$56 million worth of grants between \$250,000 and \$3 million and was awarded in the fall of 2022. This program is unlikely to receive further rounds of funding unless a new capital program is passed.

Other:

State or Federal Budget Line-Items

- State or federal elected officials may be able to place an “earmark” or “line-item” for a project in a federal appropriations bill or the state budget. This route of funding, like grants, cannot be guaranteed, but can be worthwhile if a project is significant enough to garner attention of elected officials.
- The FY2022 federal appropriations package included “Congressionally directed spending” for projects. Line-items for individual projects in the Economic Development Initiatives account averaged \$1.5 million. The committee considered requests of up to \$4 million.
 - Rules for these programs may change in the new Congress in 2023.
- Line-items in federal programs follow the appropriations processes. Federal requests would typically need to be submitted in February or March.
- State budget line-items follow a less standardized process. If they are available to members, outreach early in the legislative session will help position a project.

Typical Timelines		
<u>Program</u>	<u>Application Timeframe</u>	<u>Notice of Award</u>
RAISE Program	Q1	Q3
Budget line-items/earmarks	Q1	State: Q2 Federal: Q3 or Q4
Illinois Transportation Enhancement Program (ITEP)	Q3 – EVEN NUMBERED YEARS ONLY	Q2 – ODD NUMBERED YEARS

DOWNTOWN CONCEPT DESIGN

CORE TEAM MEETING
December 6, 2022 – 9:00 AM

MEETING MINUTES

1) DISCUSSION ITEMS:

- a) *IDOT/Hutchison Meeting* – Confirm Next Steps
 - Discussion on risk of Design Team getting bogged down with US-51B efforts at the expense of Downtown core. MBS and CJS assure City that Design Team has capacity, that CMT traffic engineers outside of Core Team will mainly be the ones doing this work, and that there is a risk in waiting to resolve US-51B issues til last as there may be constraints discovered that impact the core design.
 - Discussion about being aggressive pursuing objectives for US-51B (“it’s your road, but this is our community”) while balancing against threat of damaging working relationship with IDOT or even having them pull out as they have in other communities. Team will solicit input on strategy for negotiations with IDOT from Roger Driskell when/if the alternatives are deemed viable.
 - i) Identify Alternatives (CMT to Develop and Get CoB Blessing)
 - Design Team to provide this in next couple of weeks
 - ii) Perform Modeling of Alternatives and Document Results
 - To be completed prior to February meeting with IDOT
 - iii) Present Alternatives to IDOT for Consideration – Week of February 20th (MBS to Schedule)
- b) *Steering Committee Meeting* – Scheduled for Tomorrow
 - i) Review Presentation
 - ii) Review Questionnaire Results
 - iii) Discuss Subgroup Arrangements
- c) *Connect Transit/Market Street Parking Garage* –
 - i) Update from Billy & Craig
 - Project is likely moving forward but is delayed due to Section 106 review. Funding for project will likely include our proposed streetscaping improvements in the vicinity.
 - ii) ~~Overall Downtown Parking Impact due to Displacement of Garage Parking Spaces~~
 - iii) Next Steps
- d) *Next Meeting* – Everyone OK with the 20th? **Yes.**

2) IMPLEMENTATION PLAN UPDATE:

- a) *City To Do List:*
 - i) Data on sewer televising status – by 11/25
 - ii) Determine “critical utilities”, ideally by Thanksgiving.
 - iii) Clarify approach/timing for integrating City Council updates and public meetings into the program design schedule.
- b) *CMT To Do List:*
 - i) Schedule IDOT Meeting for week of February 20th
 - ii) Develop alternatives for US-51B and get CoB blessing before modeling.
 - iii) Prepare less detailed schedule for general use. Amended PowerPoint slide suffice?

3) CRITICAL CITY DECISION POINTS:

- a) None at this time

4) "STORIES" TO TELL

- Katherine confirms press release for "Spotlight on Little Known City Structures" and sends to Design Team.
- Katherine will lead effort to develop a City website for the Streetscaping project.

- a) Upcoming publications/tweets/etc
- b) Content needed from CMT Team

5) OPEN DISCUSSION / QUESTIONS

DOWNTOWN CONCEPT DESIGN

CORE TEAM MEETING
December 20, 2022 – 9:00 AM

MEETING MINUTES

1) DISCUSSION ITEMS:

a) *Quick Miscellaneous Business* –

i) Meeting with Tim

- **Schedule “sooner rather than later”. MBS to make arrangements w/ Amy Overton.**

ii) Sign Clutter

- **Report will include discussion of sign clutter, but project scope will not at this time include detailed sign inventory or document specific solutions. That will be developed at a later point in time.**

iii) 1st Steering Committee: Catch-Up Session

- **MBS to host catch-up session in January (and following other steering committee meetings) in order to keep everyone in the loop and engaged. No additional participation from other Core Team members necessary.**

iv) Rescheduled County Meeting Status

- **Kent relates his recent discussion with Paul and suggests that County is likely OK holding for now. As our plan becomes more developed we will re-engage them.**

b) *US-51B Alternatives* –

i) Discussion to determine alternatives to model

- **City re-affirms priorities: shorten crossing, add buffers for people walking N-S on sidewalk, improve safety, and greenery.**

- **City OK entertaining relocation of proposed bike lane to adjacent streets, though Craig notes IDOT may take exception since it was the City who first asked them to move it there in accordance with the City’s Bicycle Master Plan.**

- **Phil notes we should be considering actual design vehicles, not just IDOT’s policy for design vehicles, when reviewing intersection return radii.**

- **Kent discusses some big picture ideas for connectivity to the Downtown area. These will be further discussed in subsequent meetings.**

- **City will provide us feedback by end of day Thursday.**

ii) Schedule for modeling/finalizing alternatives

- **CMT will report back on modeling results and work to refine alternatives prior to meeting with IDOT in February.**

- **Craig notes we may want to feed them information iteratively versus all at once.**

c) *Next Meeting* – January 10th Work Session at CoB

2) IMPLEMENTATION PLAN UPDATE:

a) *City To Do List:*

i) Data on sewer televising status – by 11/25

ii) Determine “critical utilities”, ideally by Thanksgiving.

b) *CMT To Do List:*

i) Schedule IDOT Meeting for week of February 20th

ii) Develop and model alternatives for US-51B

iii) Develop recommendations for integration of broader public into the process.

3) CRITICAL CITY DECISION POINTS:

a) None at this time

4) "STORIES" TO TELL

- a) Upcoming publications/tweets/etc
- b) Content needed from CMT Team

5) OPEN DISCUSSION / QUESTIONS

DOWNTOWN STREETScape DESIGN

CORE TEAM WORKSHOP
January 10, 2023 – 8:00 AM

MEETING MINUTES

- 1) **US-51B CORRIDOR / BIKE LANE CONCEPTS (~1h)**
 - Reviewed preliminary data from traffic model.
- 2) **MARKET ST / EAST ST CONCEPTS (~0.5h)**
 - Reviewed preliminary concepts.
- 3) **OUTER LOOP CONCEPT (~0.5h)**
 - Discussed traffic circulation. Discussed need to schedule meeting with Connect Transit to discuss bus traffic/routes.
- 4) **JEFFERSON OVERPASS (~0.5h)**
 - Reviewed preliminary concepts.
- 5) **2ND STEERING COMMITTEE MEETING STRATEGY (~0.5h)**
 - Discussed when we should meet again and what content to present. Billy to discuss with Tim and then provide Design Team direction.
- 6) **2ND IDOT MEETING STRATEGY (~0.25h)**
 - Design Team needs to run additional simulations and prepare exhibits clarifying alternatives. Will report back at next Core Team Workshop in two weeks.
- ~~7) **INTRO TO 2ND CORE TEAM WORKSHOP (~0.5h)**~~
- 8) **MEETING WRAP-UP / NEXT STEPS DISCUSSION (~0.25h)**

DOWNTOWN STREETScape DESIGN

CORE TEAM WORKSHOP #2

January 23, 2023 – 8:00 AM

MEETING MINUTES

- 1) **OLD BUSINESS** (~45m)
 - a) US-51B Corridor – Preliminary Concepts
 - Discussed various alternatives as well as which blocks support which alternatives. Reviewed traffic modeling results.
 - b) Bike Lanes – Preliminary Concepts
 - Discussed various alternatives.

- 2) **NEW BUSINESS** (~2h)
 - a) Main & Center – Preliminary Concepts
 - Discussed various alternatives.
 - b) Museum Square – Preliminary Concepts
 - Discussed various alternatives.
 - c) N Main Plaza – Preliminary Concepts
 - Discussed various alternatives.
 - d) Roundabout Transfer Station – Preliminary Concepts
 - Discussed various alternatives.

- 3) **MEETING UPDATES** (~1h)
 - a) Connect Transit – 01/25 @ 2:00 PM (in person)
 - Kent and Mike to meet with David and discuss options for routing bus traffic out of the downtown core.
 - b) County Architect – 01/25 @ 3:30 PM (in person)
 - Billy to get back with Design Team about additional invitees.
 - c) IDOT #2 – 02/22 @ 10:00 AM (in person)
 - Discussed approach for discussing alternatives with IDOT.
 - d) Stakeholder #2 – TBD
 - Mike to schedule meeting for early March.
 - e) City Council – TBD
 - Discussed meeting with Council using “three on ones” or at a Committee of the Whole
 - f) Core Team Workshop #3 – 02/21 @ 8:00 AM (in person)
 - g) ~~Public Meeting – TBD~~
 - h) ~~Utility Meetings – TBD~~

- 4) **MEETING WRAP-UP / NEXT STEPS DISCUSSION** (~15m)

DOWNTOWN CONCEPT DESIGN

CORE TEAM MEETING
February 7, 2022 – 9:00 AM

MEETING MINUTES

1) DISCUSSION ITEMS:

- a) *Engagement Plan* –
 - i) Review strategy
 - Discussion includes activities the Design Team will initiate as well as supplemental activities City personnel will initiate. City needs a little time to determine what this should look like.
 - Design Team to keep Katherine involved during this process, to make sure City's story is being told.
 - ii) Review schedule and milestones
 - Craig and Billy will discuss overall schedule and sequencing of milestones in relation to how soon we can begin a construction project.
 - iii) Review next steps
 - Core Team members from the City will meet to review the engagement plan and decision matrix and then report back to the Design Team.
- b) *Review Decision Matrix* –
 - City was issued Decision Matrix comprised of concepts previously presented by the Design Team. Goal is for the City to meet, without any of the members of the Design Team present, to come to a consensus on what direction City wants to go.
 - Design Team will be available at any point to clarify decision points/concepts and/or provide additional information.
- c) *Meeting(s) with Utility Companies* – Brief discussion on who should attend from City
 - Craig states that he would like to participate in these meetings. CMT will begin to set these meetings up.
- d) *Upcoming Meetings* –
 - i) February 8th Meeting with County
 - Design Team will present ideas/concepts previously presented to Core Team with caveat that these ideas are very preliminary and have not yet been vetted past Council or any outside bodies.
 - ii) February 21st Workshop at CoB
 - iii) February 22nd IDOT Meeting
 - iv) March 6th 7th Steering Committee Meeting

2) IMPLEMENTATION PLAN UPDATE:

- a) *City To Do List* –
 - i) Determine “critical utilities”, ideally by Thanksgiving.
 - Craig reports that we will begin receiving this information yet this month.
- b) *CMT To Do List* –
 - i) Arrange for meetings with utility companies, accessibility advocacy group, and Historic Preservation Commission
 - ii) Ongoing work on report

3) CRITICAL CITY DECISION POINTS:

- a) Approve or modify Engagement Plan by 2/21
 - Return Preliminary “Group A Decisions” to Design Team by 2/21. Returning sooner may allow CMT to engage Workbench in preparing renderings prior to the March 7th Steering Committee meeting.

- Because of the upcoming IDOT meeting, City will prioritize decisions related to US-51B by the end of the week.

4) "STORIES" TO TELL

a) Pending

5) OPEN DISCUSSION / QUESTIONS



DOWNTOWN STREETScape DESIGN

CORE TEAM WORKSHOP #3

February 28, 2023 – 8:00 AM



AGENDA ITEMS

- 1) **REVIEW OF ENGAGEMENT PLAN/SCHEDULE**
 - a) Discussion led by CoB
 - b) Next Steps

- 2) **REVIEW OF DECISION MATRIX**
 - a) Discussion led by CoB
 - b) Next Steps

- 3) **BRIEF DISCUSSION ON IDOT**

- 4) **DISCUSSION OF UPCOMING MEETINGS**
 - a) Steering Committee Meeting #2 – 03/07 @ 2:30 PM
 - b) City Council Committee of the Whole – 03/20?
 - c) Public Meeting – TBD
 - d) Utility Meetings – Ongoing
 - e) Interest Group Meetings (Bike BloNo and ADA Advocacy Group) - TBD

- 5) **MEETING WRAP-UP / NEXT STEPS DISCUSSION**

DOWNTOWN CONCEPT DESIGN

CORE TEAM MEETING
March 6, 2022 – 1:00 PM

MEETING MINUTES

1) DISCUSSION ITEMS:

- a) *2nd Steering Committee Meeting* –
 - i) Discuss goals of meeting
 - **Want to make sure we're not just providing the committee with an update but getting plenty of feedback from them. Goal is to vet the concepts past them.**
 - ii) Review presentation format and content
 - **Received input from City staff on modifications needed to PowerPoint.**
 - iii) Get City input on highlighted sections
- b) *What's Next?*
 - i) IDOT –
 - (1) 3rd Meeting scheduled for 3/30
 - (2) Need to schedule meeting with Bike BloNo – 3/13?
 - **Craig will schedule.**
 - (3) Get City input on drawings to be shared at meeting
 - **Craig suggests overall bike route map is sufficient for this meeting and details of highway crossings are not yet needed.**
 - (4) Ask IDOT for permission to share concepts?
 - **Billy says don't reach out to them about this yet.**
 - ii) Engagement Strategy –
 - **Billy says he will get this info to Design Team soon. Discussed that there are additional activities beyond those proposed by the Design Team that will be necessary for engagement strategy to be successful. Mike clarifies that Decision Matrix returned by the City is helpful, but in order for design rework to be avoided the concepts should be vetted past the Steering Committee/Council/public before Design Team gets too far ahead of themselves.**
 - (1) Committee of the Whole? (Meet with County first?)
 - (2) Broader Public Engagement?
 - (3) Renderings
 - (4) Websites? Storyteller videos?
 - (5) Overall schedule?
 - iii) Museum –
 - (1) Design meeting with Scharnett
 - **Billy says hold off on design meeting with Scharnett, but that he will work to schedule meeting with County.**
 - (2) Share concepts with the County (and have museum folks in attendance)
 - iv) Design –
 - (1) Further exploration of North Main Plaza and Gateway Features
 - (2) Develop preliminary palette of materials/colors/furnishings
 - (3) Individual Street Design – ON HOLD?

2) IMPLEMENTATION PLAN UPDATE:

- a) *City To Do List* –
 - i) Determine "critical utilities".
 - ii) Set up meeting with Bike BloNo.

iii) Determine Engagement Strategy and associated timeline.

b) *CMT To Do List* –

i) Provide City with questions related to sewer televising exhibit.

ii) Arrange for meetings with accessibility advocacy group and Historic Preservation Commission.

iii) Ongoing work on report.

3) CRITICAL CITY DECISION POINTS:

a) Approve or modify Engagement Plan by 2/21

4) “STORIES” TO TELL

a) Pending

5) OPEN DISCUSSION / QUESTIONS

DOWNTOWN CONCEPT DESIGN

CORE TEAM MEETING
March 21, 2023 – 9:00 PM

MEETING MINUTES

1) DISCUSSION ITEMS:

a) 2nd Steering Committee Meeting Recap –

i) General impressions

- **Overall consensus is that for the most part all concepts proposed to the Steering Committee were well received.**

ii) Follow-up items:

(1) Refuse management & committee member follow-up question

- **Craig and Billy OK with Design Team reaching out to committee for clarification, but also suggest that concerns with a “dirty” Downtown likely stem from (1) overflowing public trash cans out on the sidewalk and (2) unorganized/disjointed dumpster locations for businesses/residents.**

(2) Museum Square – North stage capacity versus existing events

- **Design team shares preliminary north stage capacity calculations: ~3,000 people if seated and ~5,000 people if standing. Capacity is less if Main and Center are left open. This capacity is very similar to current attendance at outdoor concerts reported by Kim.**

(3) Committee members reporting back on public feedback for concepts

- **Design Team will reach out for update.**

iii) Meeting minutes

- **Billy will review Mike’s minutes.**

iv) Make-up session

- **Mike will schedule. Nobody from City need attend.**

b) Upcoming IDOT Meeting (3/30) –

i) Information requested by IDOT:

(1) Sign-off on bike lane relocation by Bike BloNo

- **Meeting scheduled with Bike BloNo and Friends of Constitution Trail for 3/22/23.**

(2) Documented ability to fund local improvements

- **Billy asks at what point in IDOT’s process must City make funding commitment. Mike will speak with Roger and report back.**

ii) Discuss City’s implementation alternatives and associated strategy

- **Alternatives include:**

- **Pushing IDOT to modify their design to incorporate our improvements. (Challenges to meeting IDOT’s schedule and possibility of exceeding program funding, even if local portions reimbursed later.)**

- **Have IDOT remove the downtown section from their plans and City take over design as a permit project. (Would require a commitment from the City to undertake this work and would result in City bearing all costs.)**

- **Possible hybrid of above two alternatives. (E.g., IDOT re-pave just center two lanes. Craig has some misgivings over this scenario.)**

c) Renderings Discussion –

i) Discuss rendering “levels” 1, 2, and 3

- **Design Team presents spreadsheet with Points of Interest and associated levels of renderings. Core Team will make final decision at upcoming Workshop #4.**

- ii) Confirm “point of interest”/locations for renderings
 - **Craig suggests we likely need to include renderings for US-51B.**
- iii) ~~Discuss schedule for delivery~~
- d) *Traffic Modeling Discussion* – Confirm elements to be modeled.
 - **Design Team suggests modeling all intersections as stop signs rather than existing signals, except at Washington Street which is a designated emergency access route. Stop signs will further elevate the “walkability” Downtown.**
 - **Design team will begin modeling these alternatives, with goal of presenting findings at Workshop #5.**
- e) *Future Workshops* – Tentative schedule: Workshop #4 on 4/04, Workshop #5 on 4/18
 - **Mike to send out Outlook invites and Craig to reserve rooms.**

2) IMPLEMENTATION PLAN UPDATE:

- a) *City To Do List* –
 - i) Determine Engagement Strategy and associated timeline.
 - **Billy to send me his thoughts that he’s jotted down, then Mike to prepare 2nd version of Engagement Strategy/Plan.**
 - ii) Schedule meeting with County.
 - iii) Respond to questions about Right-of-Way irregularities.
 - **Craig directs Design Team to just use street centerline and fine tune with boundary survey during detailed design.**
 - iv) Determine “critical utilities”.
 - **City meeting internally on this next week.**
 - **CMT still owes City feedback on sewer drawings.**
- b) *CMT To Do List* –
 - i) Provide City with questions related to sewer televising exhibit.
 - ii) Arrange for meetings with accessibility advocacy group.
 - **Mike to prepare draft agenda and share with Craig, then set up meeting.**
 - iii) Ongoing work on report.

3) CRITICAL CITY DECISION POINTS:

- a) Approve or modify Engagement Plan by 2/21

4) OPEN DISCUSSION / QUESTIONS

DOWNTOWN STREETScape DESIGN

CORE TEAM WORKSHOP #4

April 4, 2023 – 9:00 AM

MEETING MINUTES

1) CONCEPTS: OLD BUSINESS

- a) Updated Streetscape Sections
 - Reviewed geometrics for typical sections, intersections, and mid-block crossings, with particular emphasis on opportunities for amenities like outdoor dining and public art.
 - Also discussed street graphics and other differentiators to give Bloomington its own sense of identity.
 - Brief discussion on cost of losing parking in favor of increasing walkability, establishing open space for dining, etc. Additional alternatives for the street sections will be explored by the Design Team in order to validate choices.
 - It is desirable to implement green/sustainable features with streetscaping improvements. It is also desirable to improve storm water management issues.
- b) Refined Museum Square Concept
 - Discussed opportunities for additional activities (oversized checkers, e.g.).
 - Discussed preservation of existing trees.
 - Concerts on the north end of the square could support crowds in the range of 3,000-5,000.
- c) Refined North Main Plaza Concept
 - Discussed potential opportunity for similar alternative in BCPA lawn.

2) CONCEPTS: NEW BUSINESS

- a) Streetscape Materials Introduction
 - Preference is for clay pavers rather than precast concrete pavers that are sensitive to salt degradation.
 - Pavers should not be located in the main traffic lane.
 - Preference is for fixed banners rather than cloth due to their durability.
 - Planters will likely need to be self-watering. Coordination with Parks Department should occur.
 - Tree grates and ash receptacles are not desired.
 - Stained concrete may be explored, but all material choices should be both maintainable and replaceable.

~~3) BRIEF DISCUSSION ITEMS~~

- ~~a) Rendering Decisions~~
- ~~b) Brief Discussion on Program Cost Estimating/Budget~~
- ~~c) IDOT Follow Up?~~

~~4) MEETING UPDATES~~

- ~~a) Storybook Studios Meeting – 04/06 @ 1:30 PM~~
- ~~b) Core Team Workshop #5 – 04/18 @ 9:00 AM~~
- ~~c) Utility Meetings – Frontier?~~
- ~~d) ADA Advocacy Group – TBD~~
- ~~e) City Council Meeting – TBD~~
- ~~f) Public Meeting – TBD~~

5) MEETING WRAP-UP / NEXT STEPS DISCUSSION

- Additional workshops to be scheduled in order to keep making progress on the many elements of this design.

DOWNTOWN STREETScape DESIGN

CORE TEAM WORKSHOP #5

April 18, 2023 – 8:30 AM

MEETING MINUTES

1) CONCEPTS: OLD BUSINESS

- a) ~~Updated Street Sections on Museum Square Drawing~~
- b) North Main Plaza/BCPA Lawn Discussion
 - City directs Design Team to provide new iteration that will perhaps result in more open lawn space.
- c) Main and Center Sections/Downtown Parking Discussion
 - Various street sections were presented by the Design Team for Main and Center demonstrating trade-offs between improved pedestrian space/outdoor dining and quantity of on-street parking. Discussed “walkable downtown” concept, which involves moving some spaces off streets and instead consolidating parking into a few larger lots/garages: people need to walk further, but outdoor opportunities for the “public sphere” are increased.
 - Group decided we need additional input from business owners and broader public so we can feel confident in what direction we move forward with.

2) CONCEPTS: NEW BUSINESS

- a) None at this time
- b) 5/02 Meeting: Gateway Structures and Refuse Management Options
- c) 5/16 Meeting: Detailed colors/materials/fixtures/etc and Interior Traffic Modeling (stop signs vs signals)
 - Discussed that this agenda item should be moved up to the 5/02 meeting, in order to facilitate renderings that are more representative of what we may eventually end up with.

3) BRIEF DISCUSSION ITEMS

- a) Rendering Decisions
 - In order to help with visualization of street options for the public, a “Level 2” rendering will be prepared for each of the three Main Street options. Renderings of Museum Square will follow.
- b) IDOT Follow Up (and Results of HCS Modeling)
 - Design Team shared that HCS modeling results in a justifiable argument for reducing lanes to two on US-51B. City authorizes CMT to reach out directly to IDOT’s geometrics engineer to discuss assumptions made when preparing the models as well as working out other details necessary to receive from IDOT a preliminary blessing on what has been proposed.
- c) ~~Brief Discussion on Program Cost Estimating/Budget~~

4) MEETING UPDATES

- a) Core Team Workshop #6 – 05/02 @ 8:30 AM
- b) Utility Meetings – Frontier?
- c) ADA Advocacy Group – TBD
- d) City Council Meeting – TBD
- e) Public Meeting – TBD
 - Group discussed presenting options to the public in mid-late May. The format will likely be a combination of in-person community input workshop and online tool for soliciting input. Around the same time, City Aldermen will also be consulted. Design Team to develop short presentation, drawings, renderings, etc. for these meetings. M Sewell and B Tyus to discuss further.

5) MEETING WRAP-UP / NEXT STEPS DISCUSSION

DOWNTOWN STREETScape DESIGN

CORE TEAM WORKSHOP #6

May 2, 2023 – 8:30 AM

MEETING MINUTES

1) THE PATH FORWARD FOR THIS PROJECT

- a) Review flow chart
- See attached.
- b) Discuss “categories of emphasis” and prioritization
- Discussed items that must be resolved prior to Design Team being able to produce streetscaping drawings for Downtown. The two items of highest priority are (1) resolution to the Main/Center parking dilemma and (2) resolution to the US-51B cross-section.
- c) Discuss parallel paths: (1) design path and (2) public engagement/momentum building path

2) CONCEPTS TO REVIEW:

- a) Revised BCPA Lawn/Parking Concept
- City reaffirmed desire for a surface parking lot, not structure.
- b) Downtown Overall Parking Alternatives Exhibit
- Discussion regarding location of displaced parking (based on proposed Main/Center roadway cross-sections) into concentrated locations at the corners of Downtown. Design Team notes that if parking is not available directly in front of Main/Center businesses, people will have to walk no more than two blocks in any direction from concentrated parking locations to arrive at destination. Discussion amongst Core Team on benefits of a transformative, more walkable Downtown versus the cost of asking people to potentially walk further. This question will be put directly to the public for feedback.
- c) Detailed colors/materials/fixtures/etc
- Kent shares various options for pavement and light fixtures. Core Team has interest in exploring suspended lights on cable, similar to Dubuque Millwork Marketplace. Core Team agrees with Design Team’s suggestions for a light pole/fixture aesthetic that is more traditional than modern.

3) UPCOMING PUBLIC OUTREACH PHASE:

- a) *Content:* Review Outline
- Discussion on content for presentation that brings public up to speed, presents concepts, and poses specific questions to them for feedback.
- b) *Format:*
- Exact format for public outreach to be discussed in upcoming meeting between CMT and City on 5/04/23.
 - i) In-Person Public Input Workshop:
 - (1) Attendees: Business Owners vs Broad Public
 - (2) Venue?
 - (3) Who is Responsible for Setting Up
 - ii) Online Tools:
 - (1) Website?
 - (2) Pinpoint/Engagement HQ/etc?
 - (3) Who is Responsible for Setting Up
 - iii) City Council (three on ones)
- c) *Future Public Outreach Items:*
 - i) Social Organization Road Tour
 - ii) Storyteller Studios Videos
 - iii) Weekly to Biweekly Videos/Social Media Posts (to provide regular engagement)

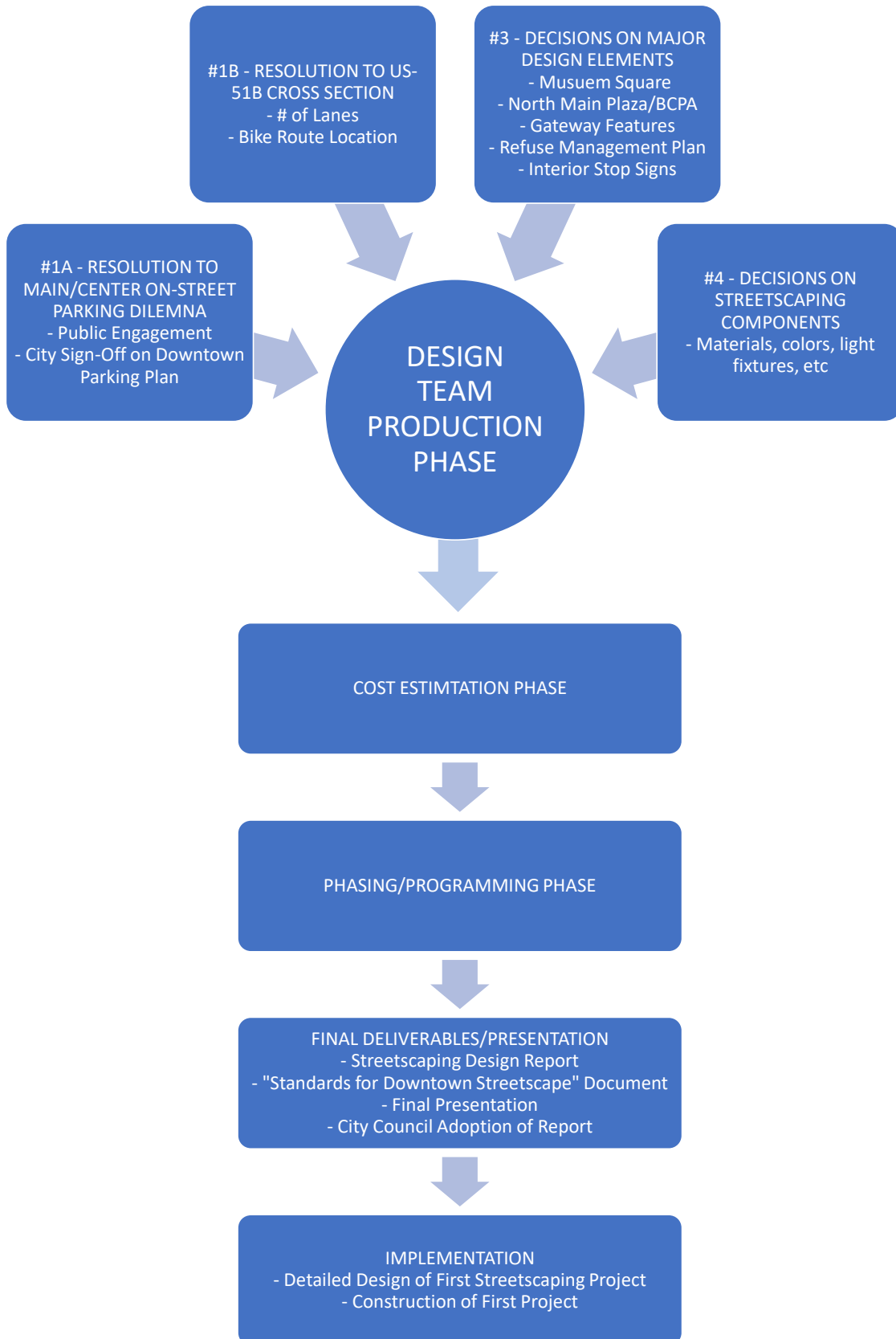
4) FUTURE MEETING ITEMS:

- a) Gateway Structures
- b) Refuse Management Options
- c) Interior Traffic Modeling (stop signs vs signals)
- d) Brief Discussion on Program Cost Estimating/Budget

5) MEETING UPDATES

- a) Core Team Workshop #7 – 05/16 @ 8:30 AM
- b) Utility Meetings – Frontier?
- Craig agrees we should set up meeting with Frontier, similar to meetings Team has already conducted with Ameren and Nicor.
- c) ADA Advocacy Group – TBD
- Discussion that we should get this meeting scheduled for week of 5/08/23 if possible.
- d) City Council Meeting – TBD
- e) Public Meeting – TBD

6) MEETING WRAP-UP / NEXT STEPS DISCUSSION



DOWNTOWN STREETScape DESIGN

CORE TEAM WORKSHOP #7

August 22nd, 2023 – 8:30 AM

MEETING MINUTES

1) THE PATH FORWARD FOR THIS PROJECT

- a) Quick recap, for context
 - Discussed critical path items and how to resolve them. See original graphic from 04/27/23 attached.
- b) Review/discuss overall schedule
 - Discussed impact of public outreach campaign on overall design schedule. Core team discussed schedule alternatives to expedite the first streetscaping project. See draft schedule attached.

2) US-51B NEXT STEPS:

- a) Review latest response from IDOT
 - Despite the Design Team having demonstrated that a two-lane section is acceptable, the District engineers state that they will proceed with a three-lane construction project.
- b) Discuss alternatives
 - Billy to discuss with Tim and report back to the team regarding next steps.

3) UPCOMING PUBLIC OUTREACH PHASE:

- a) ~~Social Media:~~
 - i) ~~Teaser video is live – any feedback?~~
 - ii) ~~Feature video in production will point towards website~~
- b) ~~Website:~~
 - i) ~~Discuss content/outline~~
 - ii) Confirm what specific input we want from public
 - (1) Parking philosophy – Design Team instructed to include this
 - (2) Level of investment (too big/too little) – Design Team instructed to not include this
 - (3) Review colors/materials/furnishings, etc – Design Team instructed to include this
 - (4) Curbs/no curbs? – Discussion to be resolved at next Core Team Meeting
- c) ~~In-Person Public Input Workshop:~~
 - i) ~~Discuss venue, date, and format of workshop~~
 - ii) ~~Discuss CoB/CMT responsibilities – Securing venue, large prints/panels, etc~~
- d) ~~Future Public Outreach Items:~~
 - i) ~~Social Organization Road Tour~~
 - ii) ~~Weekly to Biweekly Videos/Social Media Posts (to provide regular engagement)~~

4) FUTURE STEERING COMMITTEE MEETING:

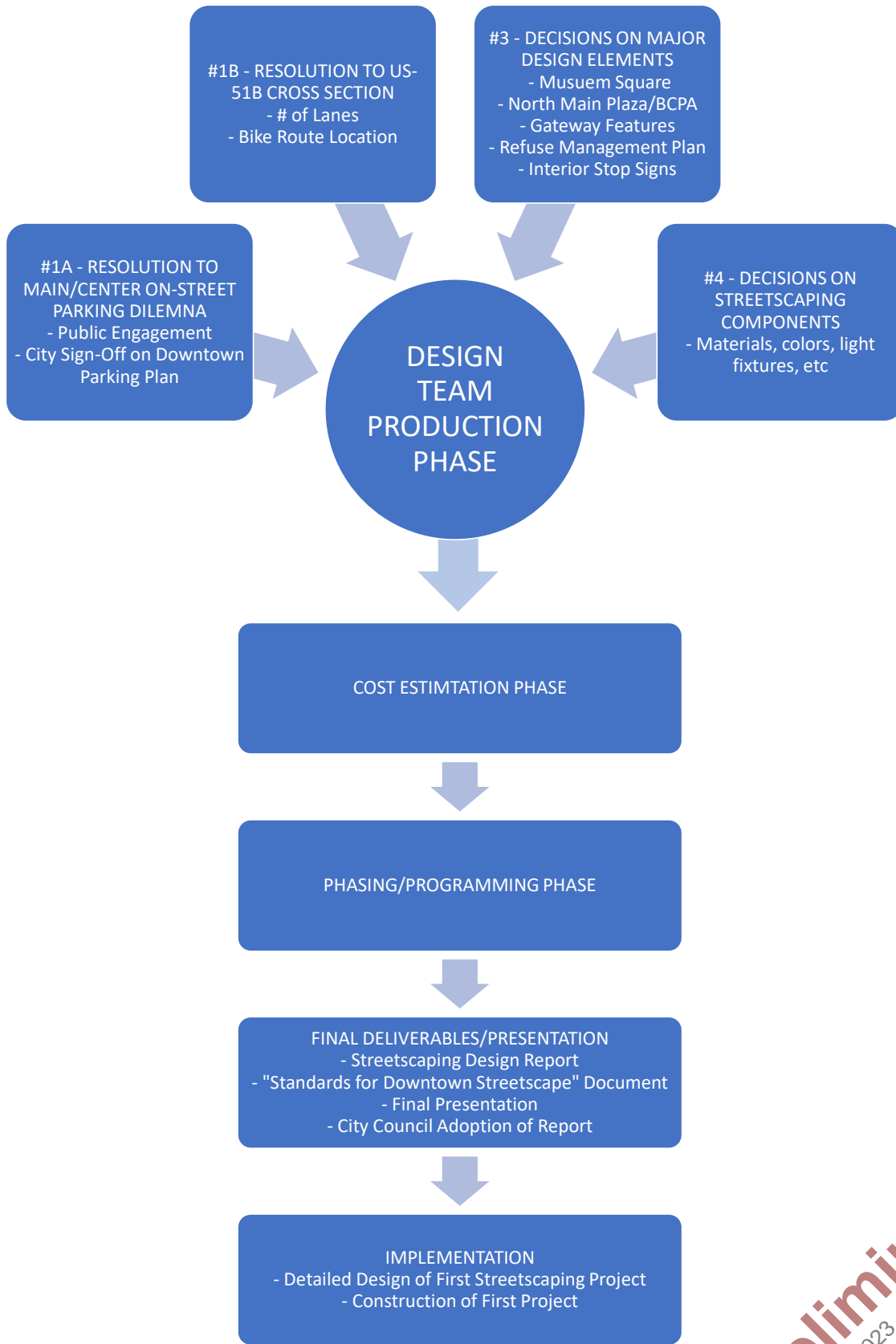
- a) Discuss schedule and purpose of future meetings
 - i) Suggestion for 3rd meeting: Meet two weeks after public input to discuss direction related to specific design elements and review of colors, materials, furnishings, etc. Also discuss trash collection alternatives.
 - Discussed that an additional meeting should be held sooner rather than later to provide an update to the committee. MBS to schedule.
 - ii) Suggestion for 4th meeting: Meet one more time to discuss phasing/prioritization and also general buy-off on plan (provide draft in advance?)

~~5) MATERIALS/COLORS/FIXTURES RECOMMENDATIONS:~~

- a) ~~Review alternatives and recommendations from Design Team~~
- b) ~~Discuss how selections will ultimately be made.~~

6) MEETING WRAP-UP / NEXT STEPS DISCUSSION

- Items that were not discussed at this workshop will be pushed to the following Core Team Meeting.



Preliminary
08/29/2023 3:26:05 PM

Downtown Streetscape - Overall Schedule

Updated 8/23/23



Overall Streetscaping Plan			First Streetscape Project		
<i>Prepare for Public Outreach:</i> Develop website, video, secure Public Input Workshop venue, etc. AND host Steering Committee Meeting #3.	1.5 Months				
Milestone: Public Outreach Launch		10/9/2023			
<i>Public Outreach:</i> Solicit public input thru website and Public Input Workshop.	2 Weeks				
<i>Make Critical Overall-Plan Design Decisions:</i> Host Steering Committee Meeting #4 followed by Core Team Meeting.	1 Week		<i>Determine What First Project Will Be – Additional time needed in addition to adjacent “Make Critical Overall-Plan Design Decisions” . Council 3x1s?</i>	3 Weeks	
Milestone: Resume Design Efforts		10/30/2023			
<i>Planning Production Phase:</i> Prepare overall plan drawings and cost estimates. Concurrently, resolve outstanding design issues such as refuse management, gateway features, BCPA, etc.	3 Months		Milestone: 1st Project Determined and Contract Preparation Begins		11/13/2023
			<i>1st Project:</i> Contract preparation/ negotiation/getting on council agenda.	2 Months	
			Milestone: City Council Approves 1st Design Contract		1/8/2024
<i>Programming Phase:</i> Design Team develops recommendations for phasing strategy. Then host Steering Committee Meeting #5 followed by Core Team Workshop to approve phasing strategy and finalize plan.	1 Month		<i>1st Project – Detailed Design (accelerated) :</i> Survey, prepare construction documents, secure permits, prepare bid documents, etc.	5 Months	
Milestone: City Council Adopts Plan		3/11/2024			
			Milestone: Bid 1st Streetscaping Project		June '24
			<i>1st Project – Bidding Process:</i> Pre-bid meeting, addendum, etc.	2 Months	
			Milestone: Award 1st Streetscaping Project		August '24
			Milestone: Issue Notice to Proceed for 1st Project		September '24
			Construct 1 st Streetscaping Project.	3 Months, then break for winter, then 6 Months	
			Milestone: 1st Streetscaping Project Complete		September '25

MEETING MINUTES

1) OLD BUSINESS:

- a) *Update on US-51B*
 - Discussion about each of the options for moving forward with IDOT on US-51B.
 - Discussion to be resumed at following Core Team Meeting.
- b) *Updated Schedule*
 - Billy states that we will be moving forward with updated schedule. See attached.
- c) *Public Outreach*
 - i) Quick discussion on curbs
 - Decision made to introduce zero curbs on Main and Center where drainage allows for it.
 - ii) ~~Video/Website development~~
 - iii) In-Person Public Input Workshop
 - MBS to follow up with Katherine and begin coordinating this workshop.
 - (1) Discuss venue, date, and format of workshop
 - (2) Discuss CoB/CMT responsibilities – Securing venue, large prints/easels, etc
- d) ~~Review Draft Agendas for Upcoming Steering Committee Meetings~~

2) NEW BUSINESS:

- a) *Materials/Colors/Fixtures/Recommendations*
 - i) Review alternatives and recommendations from Design Team
 - Design Team directed to research new options for lighting, chairs/tables, and to prepare drawings showing various color/material options that make Downtown Bloomington unique.
 - Discussion to be resumed at following Core Team Meeting.
 - ii) Discuss how selections will ultimately be made.

~~3) IMPLEMENTATION PLAN UPDATE:~~

- a) ~~City To Do List~~
 - i) ~~Respond to Clear Design deadlines.~~
 - ii) ~~Coordinate with CMT on in-person workshop.~~
- b) ~~CMT To Do List~~
 - i) ~~Coordinate with City on in-person workshop.~~
 - ii) ~~Provide cost estimate on Museum Square project.~~
 - iii) ~~Ongoing work on report.~~

~~4) CRITICAL CITY DECISION POINTS:~~

- a) ~~Clear Design stuff~~

5) OPEN DISCUSSION / QUESTIONS

DOWNTOWN CONCEPT DESIGN

CORE TEAM MEETING
September 8, 2023 – 9:00 PM

MEETING MINUTES

1) OLD BUSINESS:

a) *Resume discussion on US-51B*

- Discussed a phased option of reducing traffic lanes and crossing distances.
- Billy to get in touch with MBS about final direction.

2) NEW BUSINESS:

a) *Materials/Colors/Fixtures/Recommendations*

i) Review alternatives and recommendations from Design Team

- Recommendations from City staff included the following:

- Charging stations with adjacent seating options and shade.
- Planters should be smaller in pedestrian walking spaces, so as not to take up valuable real estate.
- No tree grates.
- Provide digital directory signs in key locations.
- Provide locations for public art that can be on a rotation.
- Promote use of building murals.

- Discussed trash collection system, and how much the proposed street section will impact options.
Discussion to be resumed at a future meeting next week.

ii) Discuss how selections will ultimately be made.

- Billy to get in touch with MBS to follow up.

3) IMPLEMENTATION UPDATE:

a) *City To Do List –*

- i) Finalize recommendations on materials/colors/fixtures by Weds 9/20
- ii) Coordinate with CMT on in-person workshop.

b) *CMT To Do List –*

- i) Provide City revised materials/colors/fixtures selections by Weds 9/13
- ii) Coordinate with City on in-person workshop.
- iii) Provide cost estimate on Museum Square project.
- iv) Ongoing work on report.

4) CRITICAL CITY DECISION POINTS:

- i) Finalize recommendations on materials/colors/fixtures by Weds 9/20
- ii) **Provide final direction on US-51B**

5) OPEN DISCUSSION / QUESTIONS



DOWNTOWN CONCEPT DESIGN

CORE TEAM MEETING
October 17, 2023 – 9:00 PM



MEETING MINUTES

1) SCHEDULE REVIEW:

- a) Discuss upcoming milestones.
 - **10/23 – Steering Committee Meeting #4 to provide final recommendations on Streetscape Section and Styles. Committee will also discuss first streetscape project out of the entire Downtown program to be taken on.**
 - **10/25 – Core Team Meeting to finalize key design decisions (related to section and style). Design Team to then resume design efforts.**
 - **11/13 – First streetscape project to be determined.**

2) NEXT WEEK'S STEERING COMMITTEE MEETING:

- a) Review draft agenda.
- b) Discuss decision making process – Schedule follow-up Core Team Meeting?
 - **Confirmed that decision would be made by the City, not the Steering Committee. The latter is an advisory group only.**

3) THORN RUN / CMT COORDINATION:

- a) Discuss potential coordination meeting.
 - **Mike discusses that concepts are developed enough that we can begin pursuing funding opportunities, grants, etc. DowntownforEveryone.com website has content that will show very well.**
 - **Mike to provide Ally Field's contact info to Billy so that this meeting can be scheduled.**

4) GARBAGE MANAGEMENT:

- a) Discuss next steps, including website update.
 - **Billy says that City will have an internal meeting on this topic soon.**

5) REVIEW PUBLIC FEEDBACK THUS FAR:

- i) Street Section
 - **“Alternate B” is the clear favorite thus far.**
- ii) Street Theme
 - **“Hybrid Blend” is the clear favorite thus far.**
- iii) Comments

6) IMPLEMENTATION UPDATE:

- a) *City To Do List* –
 - i) None at this time.
- b) *CMT To Do List* –
 - i) Provide cost estimate on Museum Square project.
 - ii) Traffic modeling of four-way stops.
 - iii) Ongoing work on report.

7) CRITICAL CITY DECISION POINTS:

- i) Finalize street section and street theme decisions by 10/27.
- ii) Determine first street scaping project by 11/10.

8) OPEN DISCUSSION / QUESTIONS

DOWNTOWN CONCEPT DESIGN

CORE TEAM MEETING
November 7, 2023 – 9:00 AM

MEETING MINUTES

1) 1ST STREETScape PROJECT UPDATE

- Mike reports that he met with Billy, Tim, and Melissa on 11/03/23. Potential first project out of the overall Downtown program discussed. CMT to prepare high-level cost estimate to verify that the project budget is acceptable before moving forward.

2) EV CHARGING STATION UPDATE FROM PHIL

- Phil discusses meeting with Ameren representatives to discuss Bloomington's community readiness for electric vehicle charging stations (EVCS).
- There are various funding opportunities available for EVCS installations, though municipalities are not eligible for some of them.
- Mike to reach out to Russ Waller, City Facilities Manager, to learn more info on desired EVCS locations from Russ' consultant.

3) SCHEDULE DISCUSSION

- Following today's discussion, Design Team will work for ~4 weeks to further refine concepts and Core Team will regroup on 12/05/23.
- Steering Committee Meeting #5 tentatively scheduled for 12/18/23. Tentative agenda: (1) Progress/Schedule Update, (2) Review & Discuss "Hybrid Style", (3) Review & Discuss Remaining Design Concepts (East-West Streets, Center Street, US-51B Areas, BCPA Area), (4) Review & Discuss Project Phasing, and (5) Review & Discuss Garbage Management Plan.

4) CONCEPT REVIEW:

a) East-West Streets

- Design Team proposes the following: (1) corner curb extensions to shorten pedestrian crossings, (2) bold graphic pavement striping (similar to the core area) with indicators for on-street parallel parking and driveway locations for no parking, (3) brick amenity strip and/or turf and trees between curb and sidewalks, and (4) uniform sidewalk width and treatment.
- Phil requests an alternate marking for the no-parking locations.

b) Center Street

- Design Team proposes the following: (1) pedestrian space to duplicate what is proposed for Main Street with uniform concrete sidewalks and wide amenity strips for outdoor activities and plantings, (2) curb extensions on the east side only to shorten pedestrian crossings, (3) parallel parking on the east side similar to the existing configuration, and (4) bold graphic pavement striping indicating the flexible use lane on the west side.

c) US-51B

- Design Team proposes the following: (1) modification of the existing four lanes of traffic to two lanes of traffic, (2) crosswalk distances will reduce approximately 50% as a result of the lane reductions, (3) wider green space on both sides for turf, street trees, and the space for lighting and other amenities, (4) maintain a typical 8-foot sidewalk adjacent to the properties on the core side of the streets, (5) create a 10-foot wide shared use path on the outward side of the core area that would be set 5-foot off the property lines to allow for screening and ADA access to adjacent properties, and (6) add sculpture, illuminated walls, wayfinding and landmark signage along the streets to add character.
- Core Team discusses the need to emphasize to the public that the ultimate development of US-51B

into two-lanes is not going to be the next iteration, since IDOT first plans to repave and re-stripe down to three-lanes. This can be communicated on the website, in the report, and in a presentation to Council.

d) BCPA Area

- Design Team proposes the following: (1) Reconfigure the area (based on minimal acquisition of open space) to align Market Street which will reduce the two existing intersections down to one. The new intersection can be developed with just a minor alignment kink if the traffic and parking on Market Street between East and Main Streets is modified. (2) Reconfigure the open lawn space by BCPA to be more linear and to provide a major connection to both the North Main area and to the BCPA. Add sculpture and trees to the space making it more park-like. (3) Develop a major parking area with smaller parking areas to accommodate large events, local business patrons, and the potential for large markets/concerts needing a paved area. Underground storm water detention and other environmentally friendly practices can be incorporated in the design and materials. (4) Douglas Street would be diverted to Market Street, and East Market east of East Street would be converted to just parking. No building removal is required.

5) SIGNALS → ALL-WAY STOPS:

a) Review modeling results

- CMT shares results and show how intersection Level of Services greatly improve by changing from signals to all-way stops at Market/Center and Market/Main.

b) Discuss next steps for integration into plan

- Phil asks CMT to provide results of queueing lengths.

- CMT to verify with Connect Transit the routing of busses into and out of the new transit center.

6) IMPLEMENTATION UPDATE:

a) City To Do List –

i) Social organization road show? How can CMT help?

- Billy says City will handle this.

ii) Thorn Run/Allie Fields meeting?

- Billy says City will schedule.

b) CMT To Do List –

i) Develop concept of chosen street style, including renderings.

ii) Prepare final design elements (BCPA, areas around US-51B, etc).

iii) Ongoing work on report.

7) CRITICAL CITY DECISION POINTS:

i) Determine first street scaping project by 11/10.

8) OPEN DISCUSSION / QUESTIONS

DOWNTOWN CONCEPT DESIGN

CORE TEAM MEETING
December 6, 2023 – 1:00 PM

MEETING MINUTES

1) CONCEPT REVIEW:

- a) Hybrid Style Draft and Materials
 - Reviewed options for styles, including colors, light fixtures, and materials. Narrowed options down to two which will be presented to the Steering Committee and public.
- b) North Main Plaza Update
 - Design Team presented refined concept which was well received by the Core Team. Design Team will proceed with renderings for this area.

2) REVIEW DRAFT PHASING PLAN

- Design Team presented plan for dividing overall program into logical phases and sequencing them in ways that minimize negative impacts to businesses during construction as well as other criteria. Well received by the Core Team. Acknowledged that phasing plan is subject to change based on available grants and other future unforeseen conditions.

3) DISCUSS SUSTAINABILITY IMPLEMENTATION

- Design Team reviewed various design elements that will be incorporated into the Downtown program that will result in improved public health and/or implementation of sustainable practices.

4) PUBLIC MEETING/SCHEDULE DISCUSSION

- City will follow up with Design Team regarding future opportunity for engaging and updating the public. CMT will provide list of potential topics for meeting to City for consideration.

5) ADDITIONAL RENDERING CANDIDATES

- a) North Main Plaza – Decision made to prepare full rendering.
- b) BCPA Area – Decision made to prepare an artistic sketch – less detailed than full rendering.
- c) US-51B Areas – Decision made to prepare an artistic sketch – less detailed than full rendering.

6) PUBLIC ART UPDATE

- MBS updated Core Team about meetings and Downtown walk-thru with Doug Johnston, Director of the McLean County Arts Center.
- Final Report will include an exhibit with potential locations for public art (murals, sculptures, etc.) as well as information on how to best plan for and implement public art.

7) IMPLEMENTATION UPDATE:

- a) City To Do List –
 - i) All-way stops – Input needed for next steps
- b) CMT To Do List –
 - i) Provide input to City on RAISE Grant pursuit
 - ii) Develop any remaining renderings
 - iii) Ongoing work on report

8) CRITICAL CITY DECISION POINTS:

- i) Direction on public input
 - **Billy to eventually follow up with Design Team on what is required.**
- ii) Selection of City PM for first project
 - **Phil Allyn will be City PM. CMT to set up meeting to coordinate questions.**

9) OPEN DISCUSSION / QUESTIONS

DOWNTOWN CONCEPT DESIGN

CORE TEAM MEETING
January 9, 2024 – 9:00 AM

MEETING MINUTES

1) DOWNTOWN FOR EVERYONE CAMPAIGN:

- a) Upcoming website updates
 - Updates to correspond with second community open house in February.
- b) Re-engagement Campaign
 - Need to make sure momentum doesn't stall out if construction doesn't commence this year.
 - Josh with Clear encourages a re-engagement campaign, possibly including billboards because not everyone is re-visiting the website. Many outside of our Downtown sphere aren't even aware of the streetscaping program.

2) FINAL REPORT PREVIEW

- Design Team shares preview of Chapter 1 to ensure City is OK with look and feel.
- City staff sign-off on look and feel, believe quality of deliverable is appropriate.

3) DISCUSS OVERALL SCHEDULE

- a) Construction Schedule
 - Construction could start in very late 2024, but both City and Design Team agree that tearing things up right before the winter would cause more harm than good. Need to find alternate way of demonstrating progress and keeping momentum.
- b) Public Update
 - Mike is looking to schedule a 2nd Community Open House for early to mid-February at the BCPA.
- c) "Streetscape Concept" Final Report
 - Design Team propose schedule with final presentation to Council in early May. Billy suggests this needs to happen sooner. Mike will try to develop a different schedule and report back.
- d) Design Contract
 - Phil, Mike, and Chris have been working on this. Now that construction will get deferred until after council reviews the final report, we have more time to develop this.

4) CONCEPT UPDATE – THE SQUARE

- Mike questions if fountain improvements on west side are truly not desired by Museum.
- Billy suggests Museum may be expecting to see more than Design Team shows on south side.
- Billy asks if west lawn can be used for activities. Neil suggests that the Square is perhaps not the appropriate place for this, and that Withers Park would be a better candidate.
- Billy is going to set up meeting with Museum so we can discuss these items.

5) IMPLEMENTATION UPDATE:

- a) City To Do List –
 - i) Provide clarification on overall schedule
 - Done
- b) CMT To Do List –
 - i) Refine renderings (N Main Plaza, US-51B Areas, BCPA/Douglas Lots Area)
 - ii) Facilitate working session w/ Billy on streetscape treatments
 - iii) Ongoing work on final report

6) CRITICAL CITY DECISION POINTS:

- i) Direction on public input
- **Done**
- ii) Direction on overall schedule
- **Done**

7) OPEN DISCUSSION / QUESTIONS

DOWNTOWN CONCEPT DESIGN

CORE TEAM BLITZ MEETING
January 23rd, 2024 – 9:00 AM

MEETING MINUTES

1) 2nd Community Open House

- a) Confirm Date: February 13th, 4-6:30
- City confirmed this time will work.
- b) Confirm Content
- City good with content proposed, but Billy suggests adding a station for “Garbage Management”.
- c) Overall Map Review?
- City and Design Team will meet in-person on February 5th to review the map and make any changes prior to the public meeting.

2) FINAL REPORT REVIEW

- a) Who at CoB Reviews?
- Billy would like us to provide the final report to him and he will distribute to other departments as necessary.
- b) Review Schedule
- Discussed getting this to the Council to adopt in March, but we want to make sure they have enough time to review – so probably looking at the first Council meeting in April. This will require an expedient review by the City.

3) 2ND CONTRACT

- a) Contract Date Logistics
- Billy will discuss with others how 2nd contract will be managed.
- b) DFE Extended Campaign
- Mike to set up meeting with Clear and Katherine to discuss next steps.

IDOT Meeting Minutes

MEETING MINUTES

1) INTRODUCTIONS:

- a) City of Bloomington – Billy Tyus, Kimberly Smith, Craig Shonkwiler, Phil Allyn
- b) CMT – Roger Driskell, Chris Stritzel, Mike Sewell
- c) Massie – Kent Massie
- d) IDOT – ~~Scott Neihart~~, Jeff Allen, Ryan Carroll, Jason Stults
- e) Hutchison – Jim Burke, Brian Borgman

2) DOWNTOWN STREETScape PROGRAM UPDATE:

- a) Opening Remarks from City Engineer/Assistant Public Works Director
- b) What We’re Trying to Do
 - i) Overall streetscape program objective: Revitalize Downtown Bloomington
 - ii) Related to US-51B:
 - (1) Provide safe access for pedestrians and bicyclists into and out of the Downtown core
 - (2) Integrate community assets that are outside the “beltloop” into the Downtown environment
 - (3) Restore economic well-being to Downtown that is currently being choked off by highway

3) IDOT PHASE I UPDATE:

- a) IDOT/Hutchison Update
 - **IDOT staff discuss status of Phase I and overall project. Hutchison is working on finalizing Intersection Design Studies (IDSs), and a public involvement meeting is planned for late 2023.**
 - **IDOT believes cross-section for roadway is fairly “set”, but willing to entertain other alternatives from City.**
 - **Due to continued escalation of construction costs, IDOT staff concerned about limits of program funding as City considers introducing additional elements. IDOT can’t exceed program funding, even if City driven improvements were to be reimbursed by the City later on.**
- b) General Discussion of Opportunities to Team Up on Walkability Improvements
 - **CMT discusses possible design opportunities to achieve City goals.**
 - **City wants to make sure critical community concerns are addressed with US51B improvements.**
- c) IDOT’s Design Schedule: When do you need things from us?
 - **CMT will work with City to develop specific concepts for IDOT to consider, and all parties will meet again week of February 20th to discuss further.**
- d) IDOT’s Construction Schedule: When will the US-51B improvements be implemented?
 - **Project has a planned January 2025 letting date.**

4) NEXT STEPS

- a) CoB/CMT action items
 - **CMT to work with the City on refining design concepts, and traffic models will be developed to ensure that reasonable/responsible alternatives are being proposed to IDOT.**
 - **CMT to schedule follow meeting in February.**
- b) IDOT/Hutchison action items
 - **None at this time**

~~5) DOWNTOWN WALKING TOUR~~

MEETING MINUTES

1) IN ATTENDANCE:

- a) City of Bloomington – Billy Tyus, Kimberly Smith, Craig Shonkwiler, Phil Allyn
- b) CMT – ~~Roger Driskell~~, Chris Stritzel, Mike Sewell, Brian Eads
- c) IDOT – Clare Dietz, ~~Scott Neihart~~, Jeff Allen, Ryan Carroll, Jason Stults
- d) Hutchison – Jim Burke, Brian Borgman

2) APPROACH TO PROGRAM SCHEDULES

- a) IDOT Phase I Program
 - IDOT has a rigid schedule for their project they must adhere to, due to the use of Restricted Funding (part of the Capital Plan).
- b) City of Bloomington Streetscape Program
 - City wishes to respect the approved program that IDOT and Hutchison are committed to and not disrupt their process, but also wish to underscore the importance of their proposed US-51B improvements as part of the overall Downtown revitalization. City’s approach would be to work with IDOT on ways we can minimize having to re-do improvements that the other party is planning to construct.

3) PRESENTATION OF CITY PROPOSED CONCEPT

- a) Downtown Revitalization Goals
 - Goals for Downtown extend beyond a simple “fresh coat of paint”. Rather, the City is investing in potential changes to roadway infrastructure that elevate walkability and provide opportunities for increasing the “pubic sphere” (outdoor dining, public outdoor space, etc). US-51B currently severs the Downtown core from the surrounding community and threatens to undermine the economic viability of investments the City is proposing there. Additionally, there are currently legitimate safety concerns for pedestrians and bicyclists wishing to cross the four-lane highway.
- b) Bicycle Path Concept
 - Discussed preliminary concept proposing that the bike routes be relocated to the “inner loop” of Downtown rather than as proposed on the highway – both for safety reasons and for attracting bicyclists to Downtown.
- c) Cross-Section Concept
 - Discussed preliminary concepts that involve reducing the number of traffic lanes (in order to establish safer pedestrian and bicyclist crossings) and creating new opportunities for parking. CMT asserts that data provided by their traffic modeling supports consideration of these concepts.

4) INTEGRATION OF IDOT/CITY PLANS: NEXT STEPS

- a) CoB/CMT action items
 - CMT to submit traffic modeling data and preliminary concept sketches to IDOT and Hutchison.
- b) IDOT/Hutchison action items
 - After receiving info from CMT, IDOT will consider these proposals, and all parties will then reconvene on March 30th to discuss IDOT’s findings.
 - Goal is to have IDOT provide a “preliminary blessing” on a concept so that CMT can then perform Intersection Design Studies (IDSs) for IDOT’s further evaluation. The IDSs will facilitate IDOT’s formal

review of what the City is proposing.

MEETING MINUTES
Revised 4/28/23

1) IN ATTENDANCE:

- a) City of Bloomington –Craig Shonkwiler, Phil Allyn
- b) CMT – Roger Driskell, Chris Stritzel, Mike Sewell
- c) IDOT – Clare Dietz, Scott Neihart, Jeff Allen, ~~Ryan Carroll~~, Jason Stults
- d) Hutchison – Jim Burke, Brian Borgman

2) DISCUSSION ON PROPOSED CITY IMPROVEMENTS

- a) Quick review of proposed improvements
 - **M Sewell summarizes elements proposed by City for US-51B: (1) reduce lanes down to two based on Design Team traffic modeling, (2) provide on-street parking on at least one side of the roadway, and (3) relocate the proposed bike path to the interior of Downtown Bloomington.**
- b) Relocation of Bike Route off US-51B
 - **M Sewell shares that Letters of Support from community bicycle organizations for relocation of bike path to the interior of Downtown Bloomington have been received by the City: Bike BloNo, Friends of the Constitution Trail, West Bloomington Revitalization Project Bike Co-op, and McLean County Wheelers.**
- c) Feedback from IDOT/Hutchison on design elements
 - **IDOT states that their desire is to stick with the proposed preliminary roadway section previously presented to the City as part of their Phase I effort: three lanes of traffic with an adjacent buffered bicycle lane.**
 - **IDOT believes that a two-lane section would not hold up if modeled using IDOT’s preferred Highway Capacity Software (HCS), including queued traffic backing into the previous intersection.**
 - **IDOT states that it is not their policy to allow new on-street parking on State Routes.**
 - **IDOT states that their Central Office bicycle coordinator, Steve Letsky, believes the bicycle lane should be located on US-51B.**
 - **IDOT suggests a Jurisdictional Transfer (JT) could be entertained, but C Shonkwiler says that is not very likely unless it is for a limited section of US-51B. IDOT states that they would not consider a JT unless there is a “logical termini”, such as another State Route.**
 - **M Sewell states that the Design Team will need to meet with the City to discuss next steps.**
- d) ~~Discuss process for design revisions, revised modeling, etc.~~

~~**3) DISCUSSION ON INTEGRATION OF IDOT/CITY PLANS**~~

- ~~a) Discuss scenarios/sequencing for integrating IDOT and City projects~~
- ~~b) Discuss Memorandum of Understanding – Content~~
- ~~c) Discuss Memorandum of Understanding – Timeline~~
- ~~d) Discuss required IDSs~~

~~**4) NEXT STEPS**~~

- ~~a) CoB/CMT action items~~
- ~~b) IDOT/Hutchison action items~~

Steering Committee Meeting Minutes

DOWNTOWN STREETScape DESIGN

FIRST STEERING COMMITTEE MEETING

December 7, 2022 – 1:00 AM

MEETING MINUTES

1) ATTENDEES –

- a) City of Bloomington –
 - i) Billy Tyus - Deputy City Manager
 - ii) Phil Allyn - City Traffic Engineer
 - iii) Kimberly Smith - Assistant Economic & Community Development Director
- b) Design Team –
 - i) Mike Sewell - Project Manager/Point of Contact (Crawford, Murphy, & Tilly)
 - ii) Chris Stritzel - Project Principle (Crawford, Murphy, & Tilly)
 - iii) Kent Massie - Lead Designer (Massie Massie + Associates)
 - iv) Neil Brumleve - Landscape Architect (Massie Massie + Associates)
 - v) Scott Swanson - Project Architect (Workbench Architects)
 - vi) Kyle Glandon - Project Architect (Workbench Architects)
- c) Steering Committee –
 - i) Vicki Tilton - Owner, Fox and Hound Day Spa
 - ii) Andy Shirk - President, Beer Nuts
 - iii) David Braun - General Manager, Connect Transit
 - iv) Andi Whalen - Branch Manager, INB (and President, Local Jaycees)
 - v) Jamie Mathy - Owner, Red Raccoon Games (and Former Council Member)
 - vi) Jan Lancaster - Owner, The Bistro
 - vii) Pam Eaton - Gallerist Eaton Studio Gallery
 - viii) Elmo Dowd - Production Systems Development Manager, Ferrero
 - ix) Tony Grant - Assistant County Administrator, McLean County

2) INTRODUCTION/PRESENTATION –

- a) See Exhibit 1 for PowerPoint presentation.
- b) *General Discussion*
 - i) See Exhibit 2 for notes on group discussion during presentation.
 - ii) Main Takeaways:
 - (1) Need to improve connections to adjacent neighborhoods and not just focus on downtown.
 - (2) Less planning/talking, more action! Eagerness to see this implemented and not just sit on the shelf once it reaches the City Council.
 - (3) Public involvement:
 - (a) There are now around 1,000 people living downtown and those people (and the larger community) need to be involved in discussions of what is planned for Downtown.
 - (b) That said, most are likely not interested in attending public meetings and consideration should be given to creating a website for this program or other online tools to solicit feedback.

3) SUBGROUP BREAK-OUT SESSIONS –

- a) *Traffic & Parking Subgroup*
 - i) See Exhibit 3 for notes on Traffic/Parking subgroup discussion.

- ii) Main Takeaways:
 - (1) Perception is that parking downtown is stressful right now – access difficult as well as challenging to find a spot on certain blocks. But still a general desire for wider walks and outdoor dining opportunities – even if it means displacing some parking that was immediately in front of businesses.
 - (2) Underground utilities need to be assessed prior to streetscaping improvements being constructed in order to avoid tearing up what was just built. For example, there may be power capacity issues with Ameren service for Downtown or old watermains that need to be replaced right now.
 - (3) Trees in Downtown are scraggly and not robust. They are also not symmetrical across each block. General desire for more greenspace Downtown.
 - (4) Mixed opinions in the Steering Committee on one-way versus two-way streets. One-way with a loading lane accommodates the many delivery trucks downtown, but two-way reduces frustrations with visitors attempting to park Downtown and slows traffic.

b) Local Business Interests Subgroup

- i) See Exhibit 4 for notes on Local Business Interests subgroup discussion.
- ii) Main Takeaways:
 - (1) Outdoor dining has been a huge success, but the dining look is not the greatest.
 - (2) Outdoor concerts are a good addition to the Downtown scene.
 - (3) Concern due to absentee building owners and abandoned buildings contributing to property values going down.
 - (4) Trash collection needs a hard look. City cans are overflowing and dumpsters are in ill-advised locations.
 - (5) Perception of Downtown building unsafe and dirty.
 - (6) Need better notification/marketing of upcoming events.

c) Cultural/Public Spaces Subgroup

- i) See Exhibit 5 for notes on Cultural/Public Spaces subgroup discussion.
- ii) Main Takeaways:
 - (1) Downtown was originally THE retail hub. How do we elevate this again?
 - (2) Downtown currently offers affordable rent and a variety of spaces. But some of the facilities (the Coliseum and Bloomington Center for the Performing Arts that aren't being used as they should – too expensive to rent and need managed differently.
 - (3) Need better utilization of existing green spaces such as the BCPA lawn and Museum Square.

4) MEETING WRAP-UP –

- a) Provide follow-up thoughts to Mike Sewell (CMT):
 msewell@cmtengr.com
 Cell: (309)386-0679 – call anytime
- b) Second Steering Committee Meeting to be scheduled for March '23. Doodle poll to follow.

5) Exhibits –

- a) Exhibit 1 – PowerPoint Presentation
- b) Exhibit 2 – Notes on Group Discussion During Presentation
- c) Exhibit 3 – Notes on Traffic/Parking Subgroup Discussion
- d) Exhibit 4 – Notes on Local Business Interests Subgroup Discussion
- e) Exhibit 5 – Notes on Cultural/Public Spaces Subgroup Discussion



FIRST STEERING COMMITTEE MEETING

Downtown Streetscape Program

City of Bloomington, IL | December 7, 2022



WHO YOU'LL BE WORKING WITH



Billy Tyus
Craig Shonkwiler
Melissa Hon
Kimberly Smith

Deputy City Manager
City Engineer
Economic & Community Development Director
Assistant Economic & Community Development Director

Mike Sewell
Chris Stritzel

Project Manager/Point of Contact
Project Principle

Kent Massie
Neil Brumleve

Lead Designer
Landscape Architect

Scott Swanson
Kyle Glandon

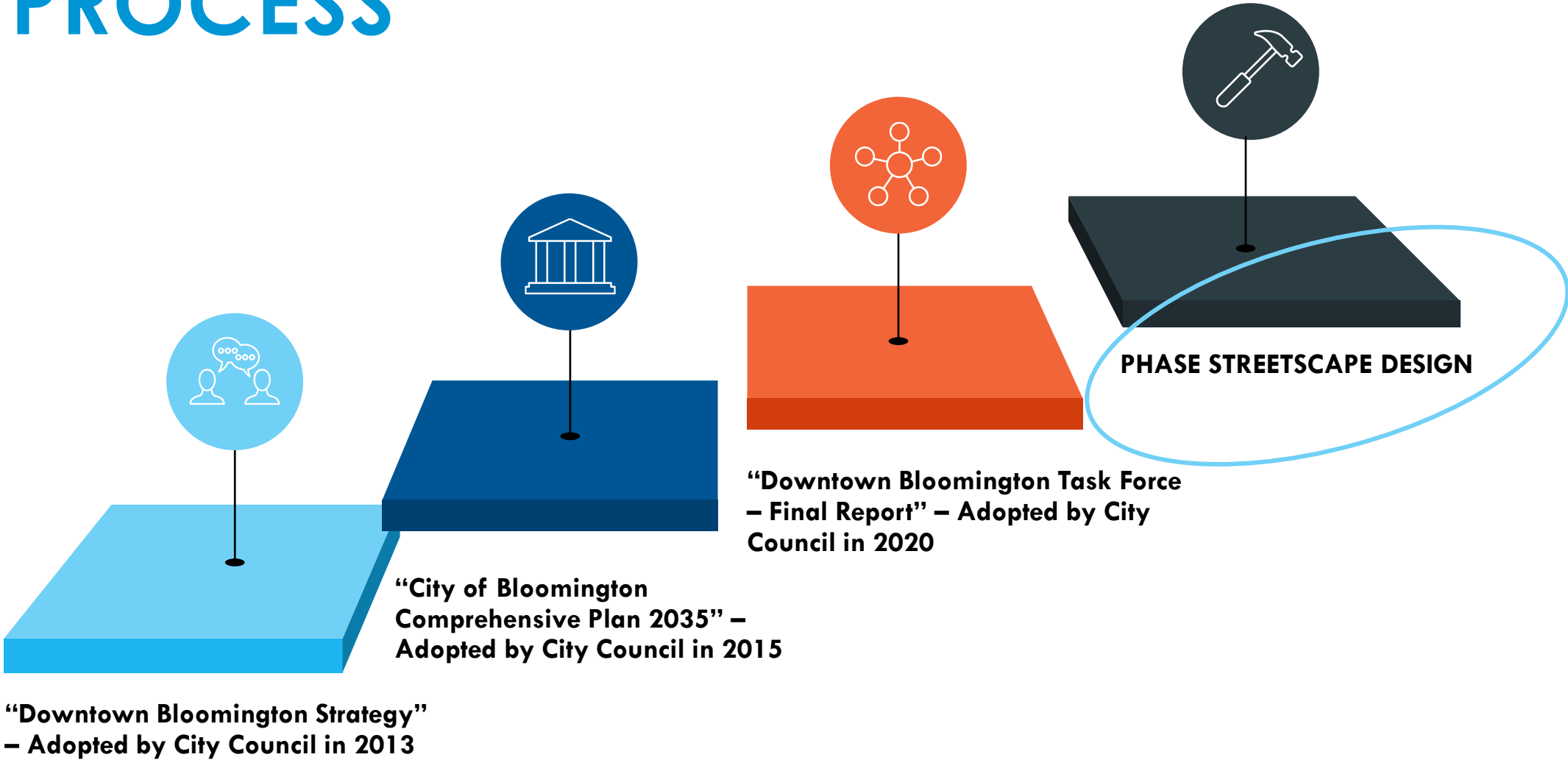
Project Architect
Project Architect

WHO WE'LL BE WORKING WITH

STEERING COMMITTEE

Vicki Tilton	Owner, Fox and Hound Day Spa
Andy Shirk	President, Beer Nuts
David Braun	General Manager, Connect Transit
Andi Whalen	Branch Manager, INB (and President, Local Jaycees)
Jamie Mathy	Owner, Red Raccoon Games (and Former Council Member)
Jan Lancaster	Owner, The Bistro
Pam Eaton	Gallerist Eaton Studio Gallery
Brandon Thornton	Learning Behavior Specialist, Bloomington High School
Elmo Dowd	Production Systems Development Manager, Ferrero
Tony Grant	Assistant County Administrator, McLean County

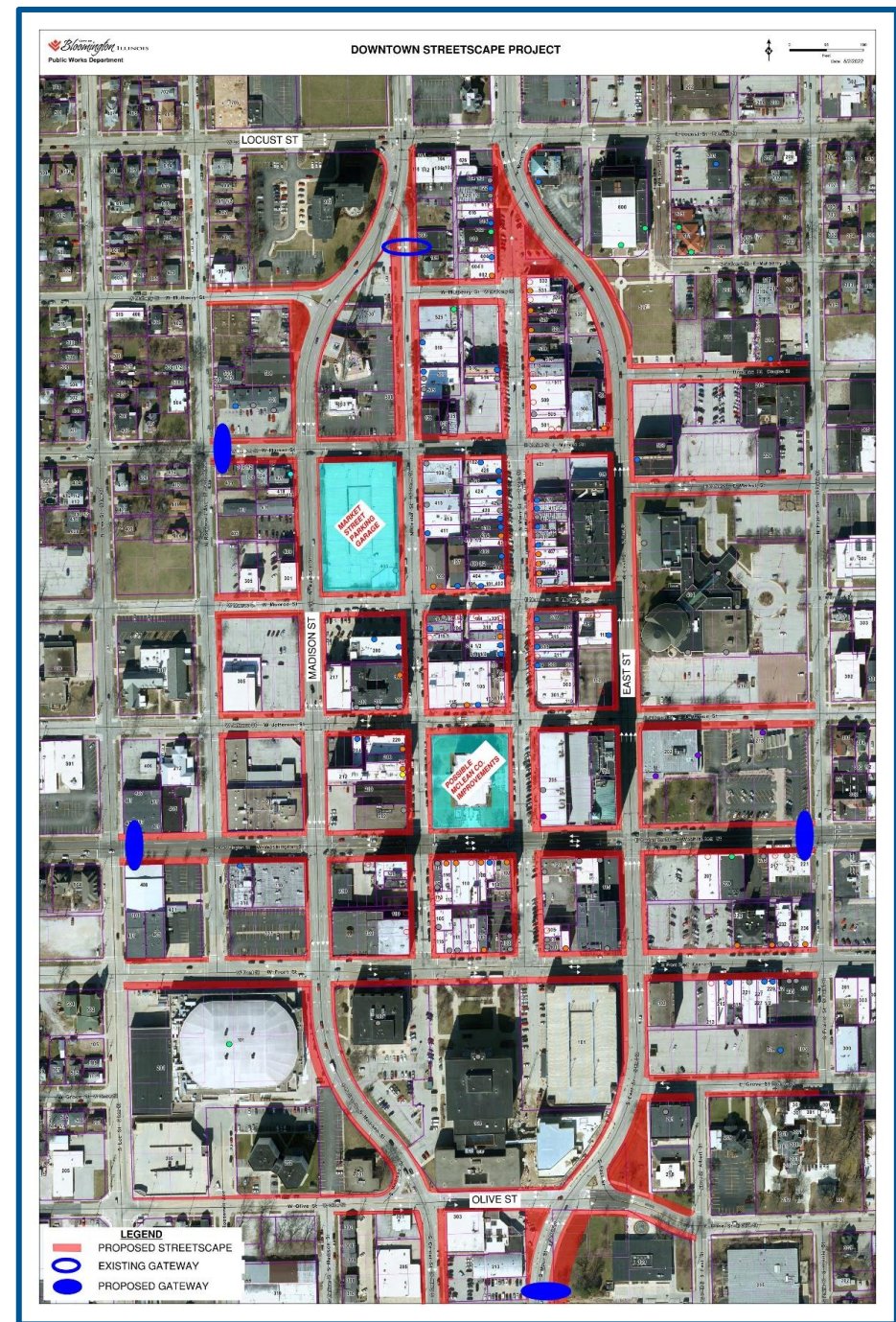
THE PROCESS



Ultimate Goal: Develop an implementable multi-year plan for streetscaping enhancements in order to revitalize Downtown Bloomington

PROGRAM OBJECTIVES

- ✓ Enhance the Streetscape Aesthetic
- ✓ Create/Enhance/Activate Public Spaces
- ✓ Improve Walkability and Accessibility
- ✓ Facilitate Greater use of Public ROW by Downtown Businesses
- ✓ Bridge Downtown Core and Surrounding Neighborhoods
- ✓ Integrate History into the Downtown Experience
- ✓ Integrate Sustainability where Appropriate



PROGRAM SCHEDULE

Q1 (September-November '22) – DATA COLLECTION PHASE

Q3 (March '23-May'23) – DESIGN PHASE

Q4 (June'23-July'23) – PROGRAMMING PHASE

>Q4 – COUNCIL ADOPTION AND BEGIN IMPLEMENTING PROJECTS

Q2 (December '22-March '23) – STRATEGY DEVELOPMENT PHASE



WHAT WE'VE HEARD

“What are some of the biggest challenges/obstacles you feel that prevents Downtown Bloomington from reaching its full potential?”

- **Government inaction – lack of political will and funding**
- **Aesthetics of entry points into downtown are poor**
- **Lack of attractive businesses & lighting between parking garages and main strip**
- **Loitering and pan-handling discouraging to visitors**
- **Lack of unified sense of place Downtown – different areas are disparate**
- **Downtown’s reputation is primarily for nightlife – not very family friendly**
- **Costs of upgrading buildings to ADA scares investors away**
- **Office traffic has declined, limiting daytime viability of ground floor retail**
- **Some building owners just “sitting on properties” rather than investing in them**
- **Poor promotion in advance of Downtown events**
- **Core services (e.g. trash collection) overlooked**

WHAT WE'VE HEARD

“What do you believe would be the most impactful streetscape improvements in terms of generating more visitors to Downtown?”

- **U.S. Route 51B road diet – elevate pedestrians over vehicles**
- **Gateway project along Market Street to make Downtown entrance more inviting**
- **Enlarge the “public sphere” – narrower road lanes and wider sidewalks**
- **Better utilization of alleys as restaurant/green space with festive lighting**
- **Make certain streets for pedestrians only**
- **More vibrant décor – color, banners, lighting, creative/fun things, etc.**
- **Less hardscaping and more landscaping – large, robust trees e.g.**
- **Creation of a central space for events/recreation – destination for the community**
- **Multi-modal access improvements (e.g. bicycles) – overcome reliance on cars**
- **Street furniture to encourage visitors to stay longer**
- **Traffic calming to promote safe walking Downtown**

DISCUSSION GROUPS



TRAFFIC & PARKING

Mike Sewell/Craig Shonkwiler (Facilitators)
David Braun
Anthony Grant
Jamie Mathy

LOCAL BUSINESS INTERESTS

Scott Swanson/Chris Stritzel (Facilitators)
Elmo Dowd
Vicki Tilton
Jan Lancaster



SUBGROUP DISCUSSION:

First 10 minutes – “Past”

Second 10 minutes – “Present”

Final 10 minutes – “Future”

15 minute presentation to larger group – 3-5
Takeaways



CULTURAL/PUBLIC SPACES

Neil Brumleve/Kyle Glandon (Facilitators)
Pam Eaton
Andi Whalen
Andy Shirk

WHAT'S NEXT

POINT OF CONTACT:

Mike Sewell (CMT)

msewell@cmtengr.com

(309)386-0679

- **Provide any additional thoughts to Mike in the next week or so.**
- **We will provide Minutes from the meeting to all participants (including those unable to attend today)**
- **We will be in touch to schedule the 2nd Steering Committee Meeting (tentatively March '23)**

THANK YOU!

Exhibit 2 – General Discussion Meeting Notes

December 7, 2022

Streetscape - Steering Committee Meeting #1

Downtown Bloomington, IL

- Looking to improve connections to neighborhoods just outside the downtown
- Need different touch points with the community (absentee business owners, bar owners vs. etc.). Involve other building owners sooner in the process (30% may have changed hands). Property owners vs. business owners. (Jamie)
- Brought up website idea (Connect)
- Pam Eaton sent out our questionnaire to 20 other people already
- There are now around 1,000 people living downtown and those people (and the larger community) need to be involved in discussions of what is planned for Downtown.
- That said, most are likely not interested in attending public meetings and consideration should be given to creating a website for this program or other online tools to solicit feedback.
- Some residents aren't interested (not an owner attitude)
- Some of the room doesn't think there are any new issues from previous studies
- Over signage
- Communication from City isn't perfect
- Message isn't consistent
- 50% of Connect Transit will be electric by 2024
- Need to future proof (extra conduits, etc.)
- Some pessimism in the room about whether or not we will deliver on our word
- Wayfinding sign tag line was "Dream Big"
- Signage are for visitors to town, not residents
- Pam wants us to get article out to Pantagraph requesting information from constituents

Exhibit 3 – Traffic & Parking Meeting Notes

December 7, 2022

Streetscape - Steering Committee Meeting #1

Downtown Bloomington, IL

Traffic and Parking

Facilitators: Phil Allyn (City of Bloomington), Michael Sewell (Crawford, Murphy, & Tilly)

Team Members: David Braun (Connect Transit), Anthony Grant (McLean County), Jamie Mathy (Red Raccoon)

Past

- Mistakes made in past:
 - Abundant Life (flop house) negatively affecting neighborhood.
 - Asymmetrical light poles – not lined up.
 - Planting little trees vs larger, more robust. Don't provide shade. – Lose parking for more shade
 - Four lanes of traffic. Concerns with older folks and also dropping people off on bus lines and having to cross highway.
- Good things in past:
 - One-way good for deliveries

Present

- Walker parking study didn't take into account people that were working remote from County. Anecdotally, Jamie is now having to park on upper level where he didn't have to before.
- Parking right outside front door is clientele dependent
- Most people fine parking within one or two blocks.
- Lot of anecdotally people do not like parking downtown because it's difficult. Stressful and anxiety.
- Weather considerations affect people's appetite for walking.
- Current wayfinding good for people that don't live here.
- Homeless people make visitors feel unsafe.
- Transient people downtown, sketchy west side.
- Blind spot – people crossing over to BCPA. Fine line between protecting people from what they shouldn't be doing vs encouraging bad behavior by putting in a protection.

Future

- Autonomous cars – less people own cars. You get a subscription for Ford fleet to come pick you up. Less parking needed perhaps.
- Fix underground infrastructure first. Concern about utilities such as water mains that need replaced. But also Ameren has a capacity issue that needs discussed. Need to be fixing this in advance of big streetscaping work. Fiber providers are also the worst about digging things up.
- More businesses do seem to be coming downtown and giving reasons for people to come back downtown.
- Need digital information boards (wayfinding) – not static. Events board. Right now are not dynamic. Need push frame that tells you restaurants.
- Nobody has ever complained about losing parking for the parklets (outdoor dining). Wider sidewalks
- 6 bus “trains” going away – and moving lines to the outside highways.
- Frustrated with IDOT being reactive not proactive
- Discourage people from crossing US51
- Takeaways:
 - Parking problem right now (perception for visitors – it’s not fun and it’s stressful)
 - But desire for wider walks and outdoor dining – and future parking needs may not be as bad due to autonomous vehicles
 - Make sure underground utilities are thought through

Exhibit 4 – Local Business Interests Meeting Notes

December 7, 2022

Streetscape - Steering Committee Meeting #1

Downtown Bloomington, IL

Local Business Interests

Facilitators: Scott Swanson, Chris Stritzel

Team Members: Elmo David, Vicki Tilton, Jan Lancaster

PAST DISCUSSION

- Lack of support for business owners from City
- No clear path for setting up building or business (Rueben – Spice Works)
- Need single point of contact for business owners to help walk through the process
- Hard to promote downtown
- Told all the time it's entirely different in Normal (business relations)
- Pub crawl was a huge success – no longer a thing
- Couldn't close the street down before
- Jazz & Blues (pub crawl) was for an adult crowd (not students)
- Lost of Osco/CVS, small grocers, etc.
- Parking tickets were ridiculous
- Churches used to have place for homeless

PRESENT DISCUSSION

- Outdoor dining = huge success
- Outdoor dining look is not the greatest
- Festivals on the square
- Student pub crawl – students get bused in – not notice to business owners (trash)
- Covid restrictions was tough as times
- Lost employees – staffing issues – especially in service industries
- Business is almost back to growing again
- Recession proof for the most part
- Switching business models (more adaptable)
- Retail outlets need to be good marketers
- Free parking during COVID (sign clutter)
- Bars are open to 1 during the week and 2 on the weekend
- Outdoor concerts are a good addition
- Problem is in the 500-block (college bars)
- Food truck vendors (stay until 5:30 AM)

FUTURE DISCUSSION

- Ordinance (Merl Huff - Peoria) – abandoned buildings
- Property values going down because of abandoned buildings
- Need to figure out parking (probably more of a perception)

- Need to up services for downtown residences
- Trash – no garbage on the street (city cans are overflowing)
- Updated lighting
- Perception of being unsafe – code blue stations
- Perception of being dirty
- Welcome wagon for new people in downtown (DBA)
- Would prefer outdoor sidewalk space over parking next to business
- People want to park right in front of the business
- Want downtown to be walkable, want family
- Want flexible use space like uptown Normal circle
- Need to notify owners of upcoming events
- Correct homelessness issues
- Promote mixed-use buildings
- Get the students out of town when bars are done

Exhibit 5 – Cultural/Public Spaces Meeting Notes

December 7, 2022

Streetscape - Steering Committee Meeting #1

Downtown Bloomington, IL

Cultural / Public Spaces

Kyle Glandon Workbench Architects
Neil Brumleve Massie Massie
Pam Eaton Eaton Gallery
Andi Whalen INB / Jaycees
Andy Shirk Beer Nuts

Past

- + Originally THE retail hub
- Coliseum, never worked, lack of communication, personal interests driving decisions, not big enough, no hotel, hockey venue without a feeder youth program
- One way streets
- Facade grants misappropriated or poorly utilized, little oversight on the program – City made poor decisions
- + Second Pres. big addition / Holy Trinity / First Christian - thriving church community downtown – acoustics in their facilities are great
- + Library
- + string lights, benches, christmas decorations,
- inconsistent lighting levels
- + painted transformers
- + affordable rent, variety of spaces
- + neighborhood associations as affiliates
- + County Seat
- + Downtown was center of activity

Current

- + Library is filling void of culture for many coming out of COVID
- Mclean County History Museum needs more programming, more events to help operating deficits
- + New lighting is ok although illumination levels are inconsistent – String lights are nice
- + The courthouse square serves as an event space - this is a positive but can be improved upon
- Churches downtown haven't rebounded and aren't coordinating activities with downtown. Second Presbyterian congregation is way down. No longer biggest Youth program and therefore fewer families coming downtown
- No public toilets
- + Jefferson Street as the regular outdoor event space (suspect its the default and not critically evaluated-Kyle). Improve ease of use and supporting amenities.
- + BCPA acoustics are great
- Management of Coliseum and BCPA difficult. too expensive to rent
- + Parklets for restaurants, image of buildings spilling outside are really welcoming

- jersey barriers the City is providing for parklets aren't permitted to be personalized or beautified by businesses. difficult for businesses to get approvals. certain number per block, applications required, etc.
- + Grass around at Museum Square used (although not optimized) for seating
- Museum square World War memorial isn't seating although people need seating and it's an obvious place to sit.
- Safety - perception of safety, lighting, storefronts need to be lit, paving uneven
- Recent site furnishing (trash, benches, etc.) were a nice addition

Future

- + Two way streets to slow traffic. Stop signs in lieu of traffic signals. Linked traffic signals allow drivers to speed. Eliminate one-way streets...confusing
- + Improved circulation (I believe this was automobiles-Kyle)
- + Better utilization of existing green spaces. Includes BCPA lawn (needs branding)
- + Warehouse district. Public works area south of project scope has tons of potential and interested parties (Tom Kirk, Hermes) – should be emphasized and connected
- + Museum Square can be better optimized, needs a plaza cafe leased by 3rd party to encourage lingering.
- + Better activate roofs. Parking garage roofs should be programmed and landscaped. Pam had several programming suggestions.
- + Family oriented green space as destination and reason to linger. "Give me a reason to bring my family"
- + Connect transit location should be located closer to amenities that riders are using - library, courts, jail, government facilities, etc (Pam Eaton suggested they're planning to put Connect in the wrong garage. Should be at the Front Street garage)
- How is new open space going to be used and maintained. Is it just going to be a place for trash to collect and dog poop. can the City manage a new public amenity in a way that it stays beneficial to the downtown experience.
- + Programmed events such as farmers markets, music festivals need to be expanded
- + Management of spaces need to be considered
- + Want more businesses spilling out into the sidewalk spaces
- + Want a consistent look for parklets
- + Shorten crosswalk distances to encourage walkability
- + County Museum space could work better in the future

DOWNTOWN STREETScape DESIGN

2nd STEERING COMMITTEE MEETING

March 7, 2023 – 2:30 PM

MEETING MINUTES

1) PROGRAM SCHEDULE UPDATE:

- Design Team has mostly completed the Data Collection Phase and has moved on to the Strategy Development Phase.
- Design program is on schedule for Fall '23 completion.

2) VALIDATION OF PREVIOUS FEEDBACK:

- Briefly reviewed “Main Takeaways” from previous Steering Committee meeting in order to ensure that feedback from the committee is informing design decisions. Takeaways from Overall Group, Traffic and Parking Subgroup, Local Business Interests Subgroup, and Cultural/Public Spaces Subgroup were discussed.
- Design Team shares how various discussion points have been incorporated into design decisions, such as (1) improving connections to adjacent neighborhoods, (2) greatly increased opportunities for outdoor dining, (3) consistency in parking layout and street sections to make parking less stressful, (4) review of utilities (private and public) to avoid tearing out recent improvements due to utility replacement projects, (5) incorporating more “greenspace” Downtown including tree symmetry, (6) use of streets to facilitate deliveries, (7) better facilities for outdoor concerts, and (8) better utilization of open spaces.

3) DISCUSSION OF PRELIMINARY CONCEPTS:

- Provided update on meetings with IDOT. IDOT appears to be receptive to various improvements proposed by Design Team on US-51B with goal of slowing down traffic, making crossings safer, inviting traffic into Downtown, and establishing “sense of arrival”. Possible alternatives include lane reduction, curb bump outs, on-street parallel parking, and streetscape beautification.
- Discussed potential location of bike lanes inside the Downtown core, rather than located on US-51B. Team has upcoming meeting planned with Bike BloNo and Friends of the Constitution Trail to further discuss.
- Discuss alternatives for Main Street, Center Street, and East/West streets. Proposals include consistent parking layout, flexible use lane for bicycles and deliveries, and wider sidewalks for outdoor amenities.
- Discussed alternatives for utilizing open space in Downtown Bloomington to enhance quality of life and attract more visitors.

4) OPEN FLOOR DISCUSSION / WRAP-UP

- 3rd Steering Committee Meeting to be tentatively scheduled for early June.

DOWNTOWN STREETScape DESIGN

3rd STEERING COMMITTEE MEETING

September 27th, 2023 – 2:30 PM

MEETING MINUTES

1) PROGRAM SCHEDULE UPDATE:

- See attached presentation for details.

2) UPCOMING PUBLIC OUTREACH CAMPAIGN:

- Discussed goals of the campaign: (1) to inform and update, (2) to solicit feedback for critical design decisions, and (3) to build excitement/engagement in order to attract more feedback and public involvement.

- Discussed different elements of the campaign, including the upcoming community input workshop and project website. See attached presentation for more details.

- Discussed possibility of having a press conference to announce the campaign.

- Discussed plans for making sure all Downtown business owners are invited to the open house, invited to view the project website, and how we could encourage additional feedback from them.

3) UPDATE ON RECENT MEETINGS W/ COUNCIL & COUNTY:

- Provided update on meetings with County: two meetings with McLean County Museum of History staff, one with County Administration staff, and one with County Property Committee. Reported that all meetings went very well. We incorporated some feedback from these meetings and concepts have been very well received. Property Committee asked "How can we help you make this happen?"

- Provided update on meetings with City Councilmen during three-on-one meetings. With just a couple of exceptions, the Downtown project was very well received and councilmen appear very eager to see this project happen.

4) UPDATE ON US-51B:

- 3rd Steering Committee Meeting to be tentatively scheduled for early June.

5) MATERIALS/COLORS/FIXTURES:

- 3rd Steering Committee Meeting to be tentatively scheduled for early June.

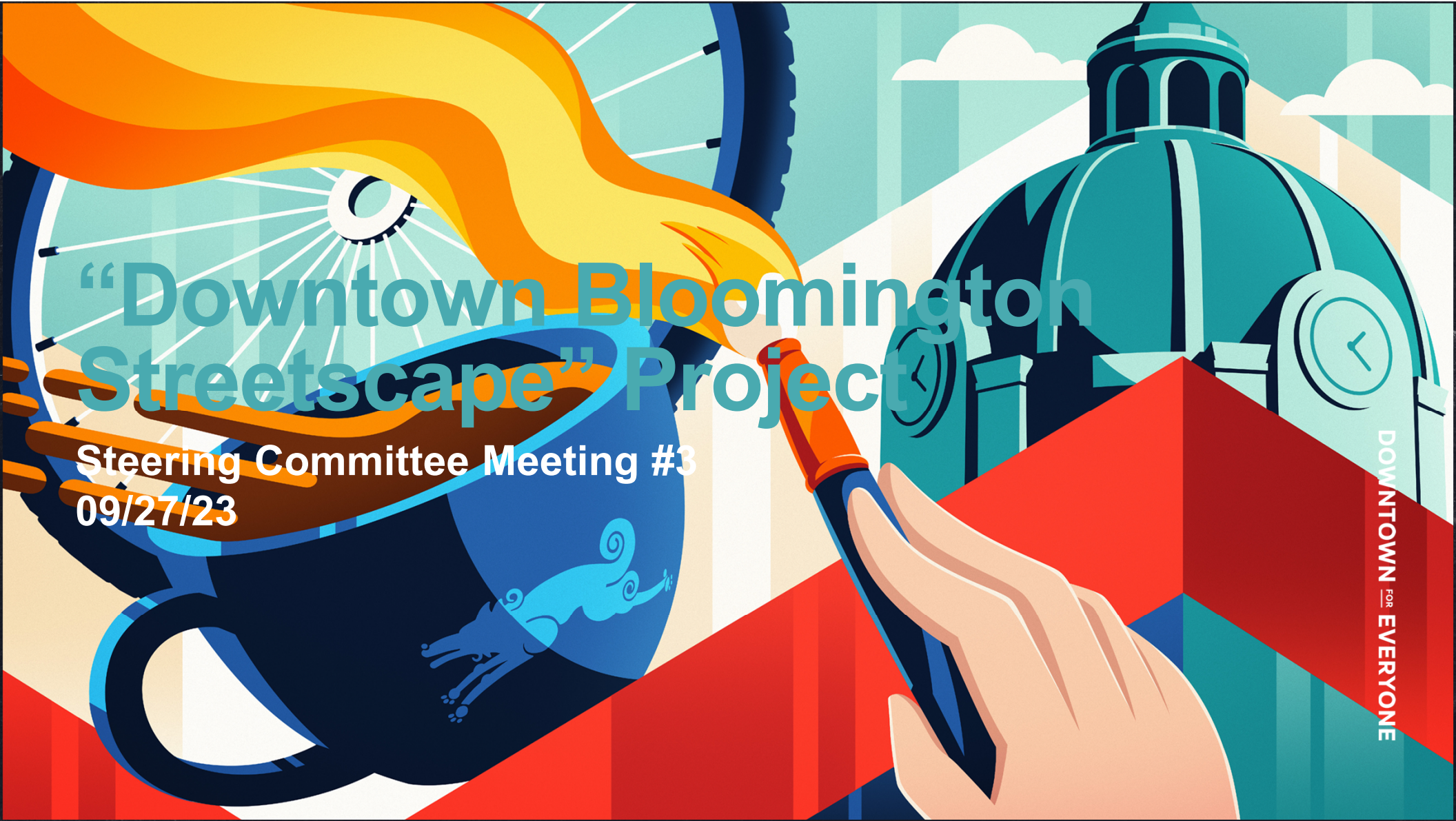
6) STEERING COMMITTEE MEETING #4:

- 3rd Steering Committee Meeting to be tentatively scheduled for early June.

7) OPEN FLOOR DISCUSSION / WRAP-UP:

- Several committee members discussed that there is already adequate parking around Downtown but visitors are unaware of these options. Need better education, parking wayfinding, etc.

- Several committee members discussed the need to communicate to the public that the proposed flex lane will accommodate delivery vehicles.



“Downtown Bloomington Streetscape” Project

Steering Committee Meeting #3
09/27/23

DOWNTOWN FOR EVERYONE

TODAY'S AGENDA

- Schedule Update
- Upcoming Public Outreach Campaign
- Update on Recent Meetings w/ Council & County
- Update on US-51B
- Materials/Colors/Fixtures...
- Meeting #4

SCHEDULE UPDATE

- **October '23** – Public Outreach Campaign, 4th Steering Committee Meeting, make critical design choices, and select 1st streetscape project
- **March 2024** – City adopts Streetscape Plan
- **June 2024** – Bid 1st streetscape project
- **Fall 2025** – 1st project complete

Downtown Streetscape - Overall Schedule
Updated 8/23/23



Overall Streetscaping Plan		First Streetscape Project	
Prepare for Public Outreach: Develop website, video, secure Public Input Workshop venue, etc. AND host Steering Committee Meeting #3.	1.5 Months		
Milestone: Public Outreach Launch		10/9/2023	
Public Outreach: Solicit public input thru website and Public Input Workshop.	2 Weeks		
Make Critical Overall-Plan Design Decisions: Host Steering Committee Meeting #4 followed by Core Team Meeting.	1 Week		Determine What First Project Will Be – Additional time needed in addition to adjacent "Make Critical Overall-Plan Design Decisions" . Council 3x1s?
Milestone: Resume Design Efforts		10/30/2023	
Planning Production Phase: Prepare overall plan drawings and cost estimates. Concurrently, resolve outstanding design issues such as refuse management, gateway features, BCPA, etc.	3 Months		Milestone: 1st Project Determined and Contract Preparation Begins
			11/13/2023
			1 st Project: Contract preparation/ negotiation/getting on council agenda.
			2 Months
			Milestone: City Council Approves 1st Design Contract
			1/8/2024
Programming Phase: Design Team develops recommendations for phasing strategy. Then host Steering Committee Meeting #5 followed by Core Team Workshop to approve phasing strategy and finalize plan.	1 Month		1 st Project – Detailed Design (accelerated): Survey, prepare construction documents, secure permits, prepare bid documents, etc.
Milestone: City Council Adopts Plan		3/11/2024	5 Months
			Milestone: Bid 1st Streetscaping Project
			June '24
			1 st Project – Bidding Process: Pre-bid meeting, addendum, etc.
			2 Months
			Milestone: Award 1st Streetscaping Project
			August '24
			Milestone: Issue Notice to Proceed for 1st Project
			September '24
			Construct 1 st Streetscaping Project.
			3 Months, then break for winter, then 6 Months
			Milestone: 1st Streetscaping Project Complete
			September '25

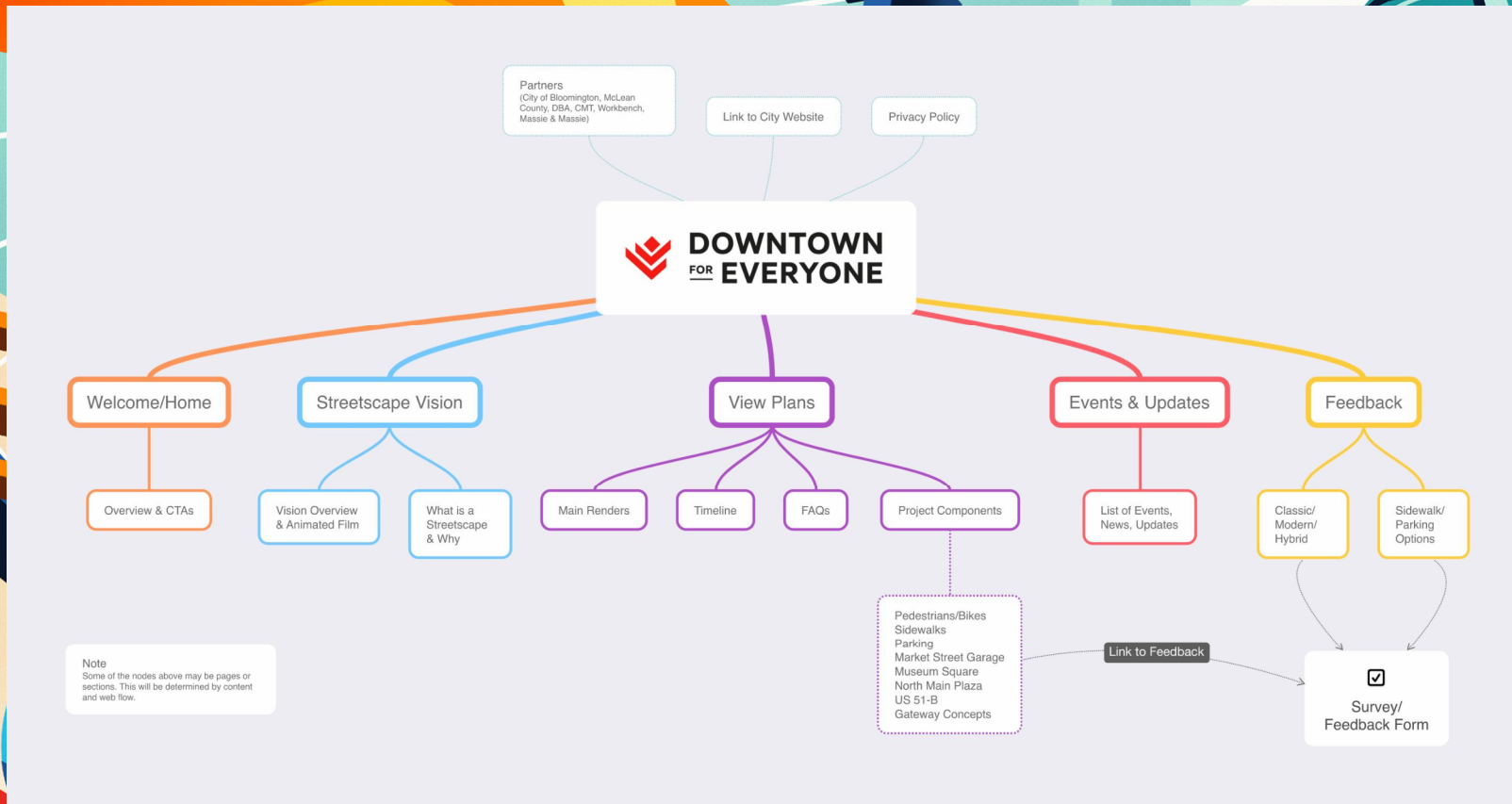
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PUBLIC OUTREACH CAMPAIGN

- Branding/Messaging
- Project Website
- “Hype Video”
- Community Input Workshop
- Social Organization Road Show



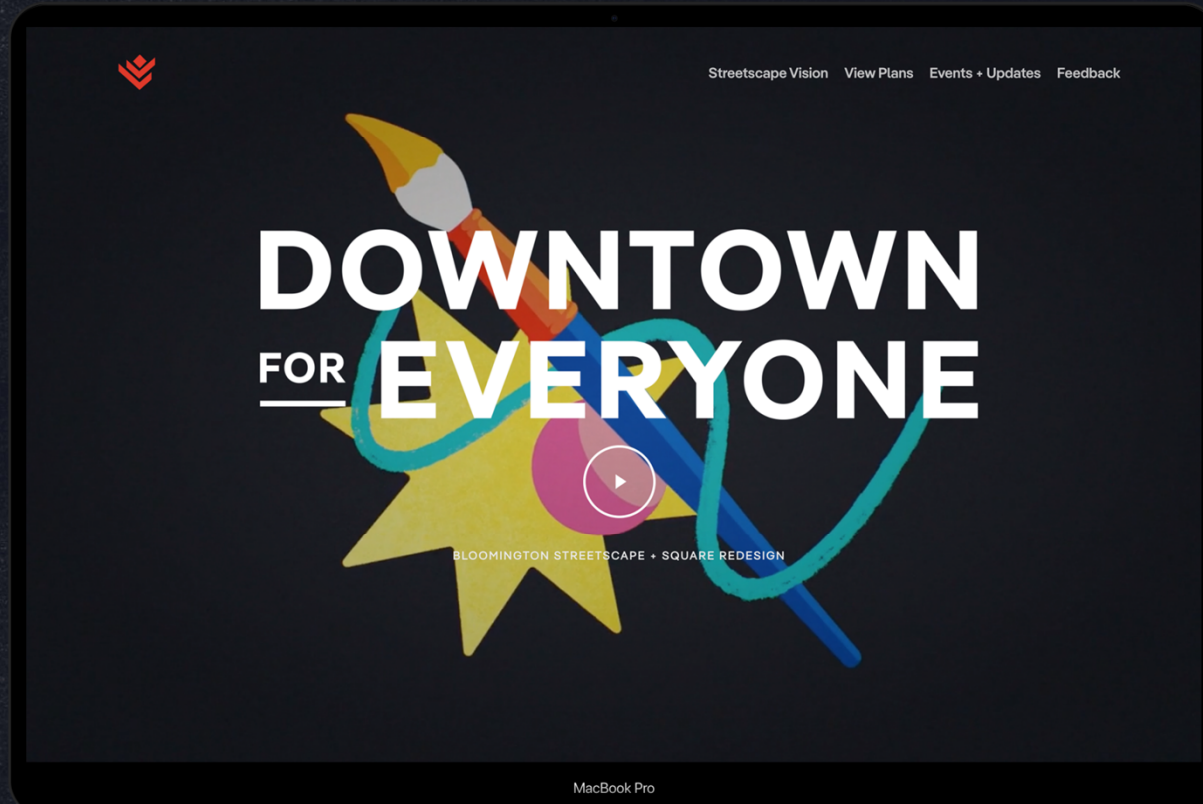
PROJECT WEBSITE



DowntownforEveryone.com

DOWNTOWN FOR EVERYONE

PROJECT WEBSITE



<https://downtownforeveryone.com/renders>

<https://downtownforeveryone.com/feedback>

DOWNTOWN FOR EVERYONE

“HYPE VIDEO”

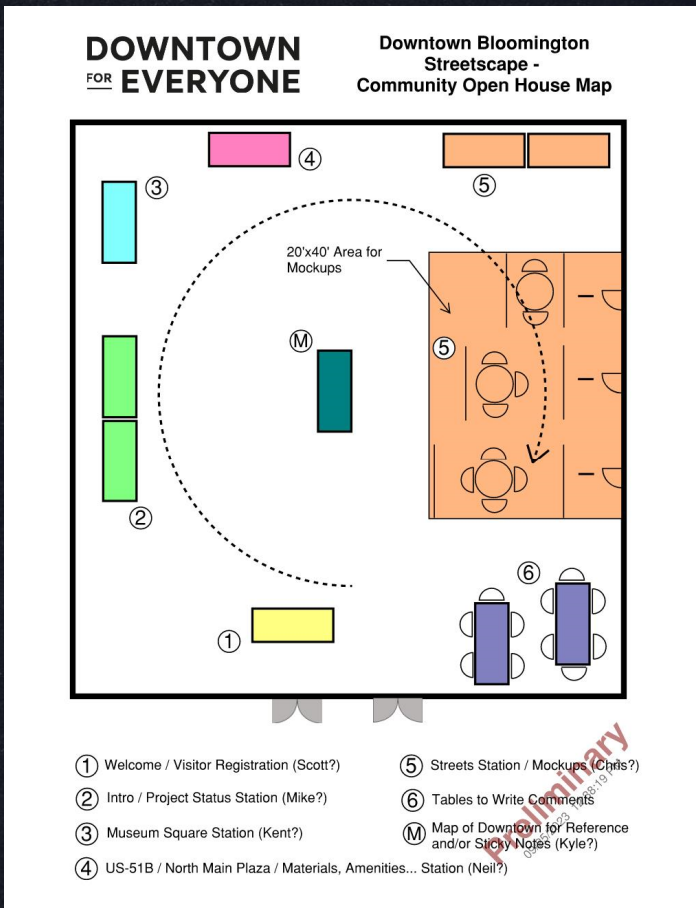


DOWNTOWN BLOOMINGTON



DOWNTOWN FOR EVERYONE

COMMUNITY OPEN HOUSE

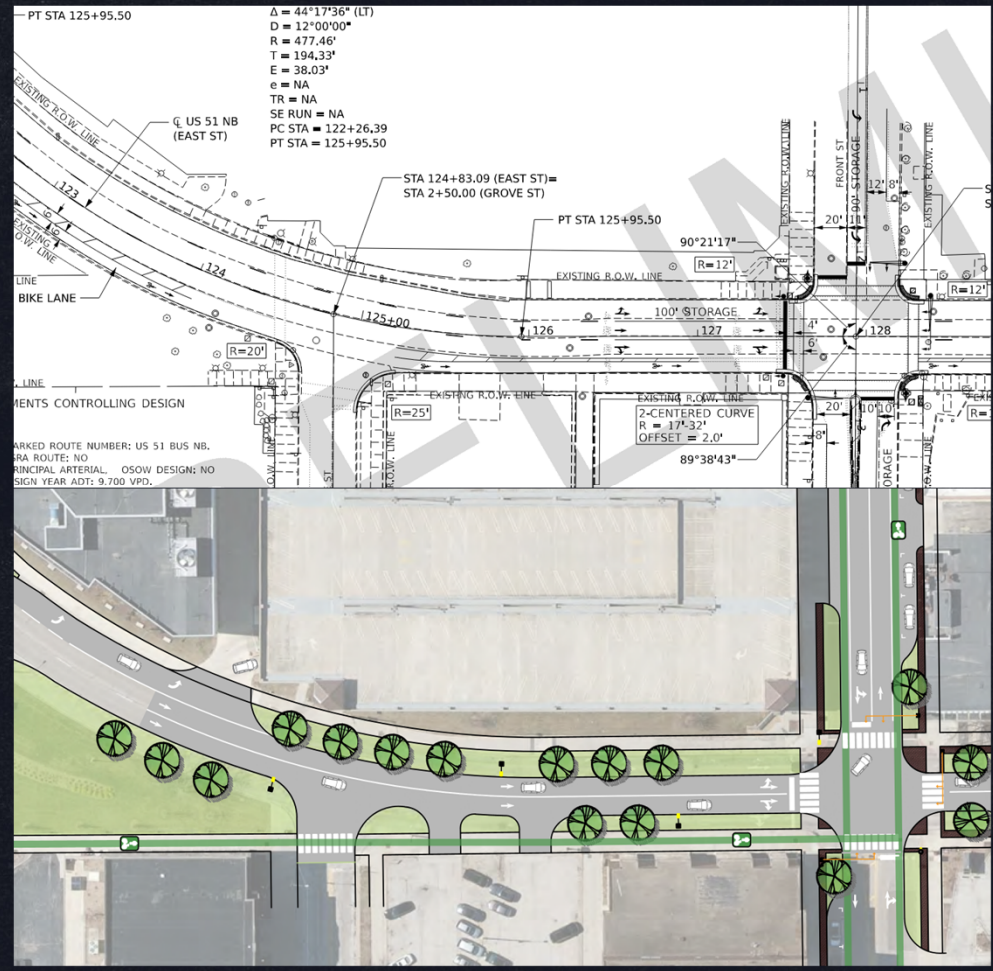


Wednesday, October
11th from 4-7PM at
the BCPA Ball Room

UPDATE ON RECENT MEETINGS

- City Council 3-on-1s
- County Property Committee

UPDATE ON US-51B



MATERIALS/COLORS/FIXTURES

- Make selection/approval process more manageable:
First identify the vision for the Downtown aesthetic
- Three Themes:
 - Classic / Traditional
 - Modern / Contemporary
 - Hybrid Blend

CLASSIC / TRADITIONAL

MODERN / CONTEMPORARY

HYBRID BLEND

STEERING COMMITTEE MEETING #4

- Week of October 23rd
- Draft Agenda:
 - Review of Public Feedback
 - Recommendations on critical design decisions
 - Recommendation of 1st streetscaping project

WHAT'S NEXT

POINT OF CONTACT:
Mike Sewell (CMT)
msewell@cmtengr.com
(309) 386-0679

- Provide any additional thoughts to Mike in the next week or so.
- We will be doing a “make-up session” with those unable to join today, so that all are kept in the loop.
- We will be in touch soon to schedule the 4th Steering Committee Meeting (tentatively week of October 23rd)

THANK YOU!



DOWNTOWN STREETScape DESIGN

4th STEERING COMMITTEE MEETING

October 23rd, 2023 – 10:00 AM



MEETING MINUTES

1) REVIEW RESULTS OF PUBLIC INPUT (AS OF 10/20/23):

- **Street Section: Alternate B was the clear favorite with more than twice the votes of the second closest option. 84% of the votes favor a section that prioritizes walkability/pedestrian space over parking.**
- **Street Style: Hybrid Blend was the clear favorite with almost twice the votes of the second closest option. Modern/Contemporary only received 11% of the votes.**

2) FINAL RECOMMENDATION FROM COMMITTEE ON STREETScape SECTION:

- **Steering Committee voted unanimously for Alternate B.**
 - **Alternate A: 0 votes.**
 - **Alternate B: 9 votes.**
 - **Alternate C: 0 votes.**
- **Design Team clarified that the proposed section for Center Street would be parallel parking on just one side of the road, in order to provide very nearly the same amount of pedestrian space as that provided by Main Street Alternate B.**
- **Design Team reaffirmed numbers shown on the DowntownforEveryone.com website, that include the aforementioned Center Street parking reductions:**
 - **Current number of on-street parking spaces: 780**
 - **Proposed number of on-street parking spaces: 720**
 - **Current downtown public parking vacancy during peak hours: 64%**
 - **Proposed downtown public parking vacancy during peak hours: 56%**

3) FINAL RECOMMENDATION FROM COMMITTEE ON STREETScape SECTION:

- **Steering Committee voted unanimously for Hybrid Blend.**
 - **Classic/Traditional: 0 votes.**
 - **Hybrid Blend: 7 votes.**
 - **Modern/Contemporary: 0 votes.**
- **Committee was told they would have a chance to review the proposed hybrid style once the Design Team develops it.**

4) DISCUSSION ON 1ST STREETScape PROJECT:

- **No consensus on what the first Streetscaping project should be. Suggestions included the following:**
 - **Focus on beautifying/expanding the Douglas Street lots first so that there is a place for people to park when parking spaces in the Downtown Core are displaced due to construction.**
 - **Center Street needs more attention than Main Street.**
 - **Stay away from Center Street during the construction of the new Transit Center, slated for Fall '24 construction through spring/summer of 2026.**
 - **The Square project will make the biggest "splash".**
 - **Focus on beautifying the corridors between the parking garages and the Square (Center from Monroe to Jefferson and Main from Front to Washington).**
 - **City would have some PR to do if our first project was anything other than the Square or Main Street Alt B improvements, since that is what the public is most excited for.**
 - **Focus on the Market Street corridor from Roosevelt all the way to and including the Douglas Street lots.**

5) OPEN FLOOR DISCUSSION / WRAP-UP:

- Several committee members discussed that there needed to be more “icing” to the parking in order to make it attractive to visitors: well-lit and change from 90 minute parking to 2 hours. There was some discussion about businesses validating parking. Many business owners prefer metered parking.
- There was some discussion that the use of flex lanes precludes the possibility of some customers getting drive-up service (such as parking adjacent to a coffee shop and running in to get a coffee you ordered in advance).
- There was not time to discuss the proposed garbage management plan. This will be deferred to the next Steering Committee Meeting.

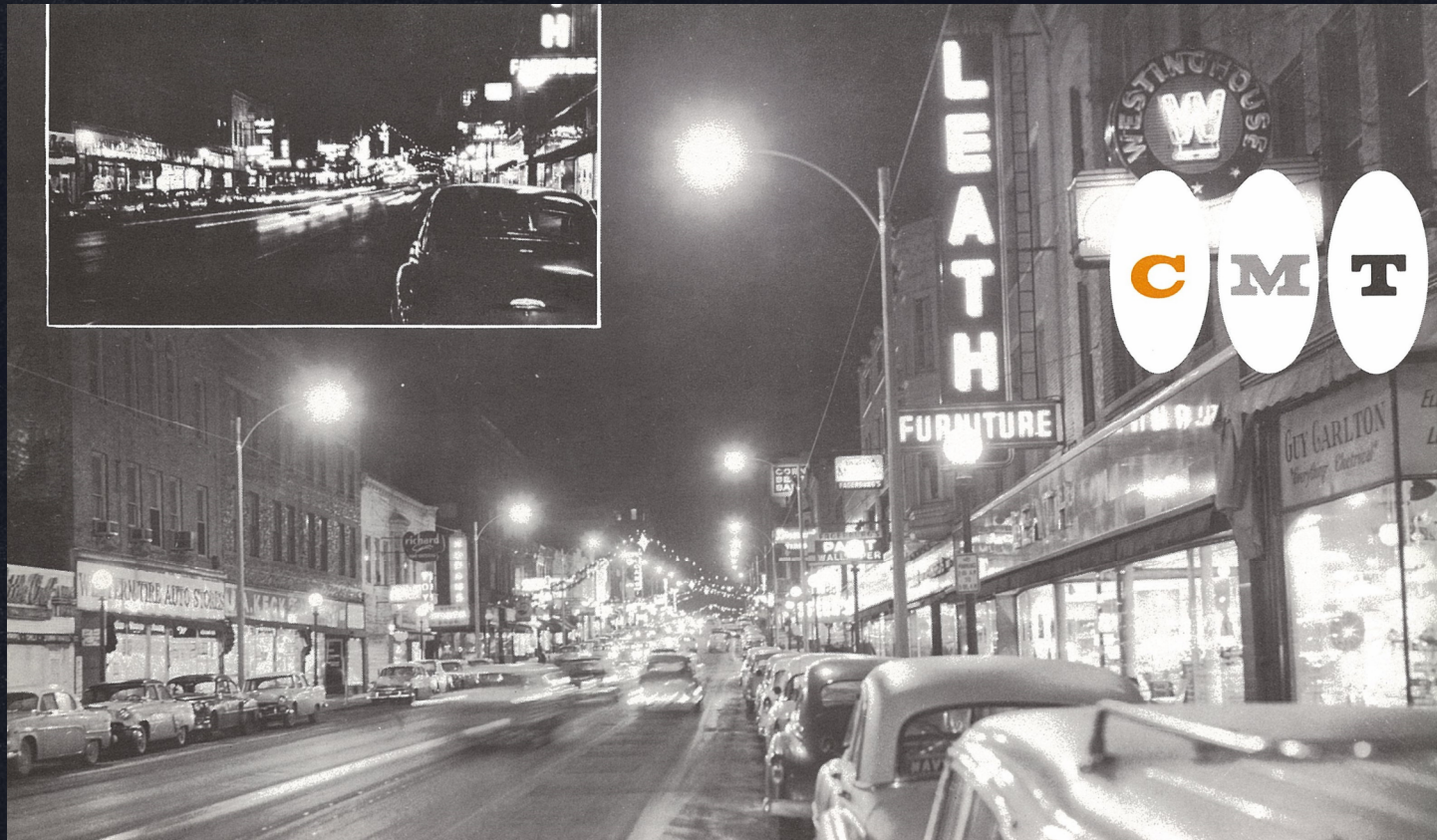
An illustration showing a hand holding a paintbrush, painting a cityscape. The scene includes a fountain with a blue dog on the left, a large teal dome with a clock tower on the right, and a red geometric shape in the foreground. The background has vertical stripes and clouds.

DOWNTOWN FOR EVERYONE Streetscape Project

Steering Committee Meeting #4
10/23/23

DOWNTOWN FOR EVERYONE

A long time ago, in a Downtown not too far away...



DOWNTOWN FOR EVERYONE

Now hold on a minute...



1950s



1983

DOWNTOWN FOR EVERYONE

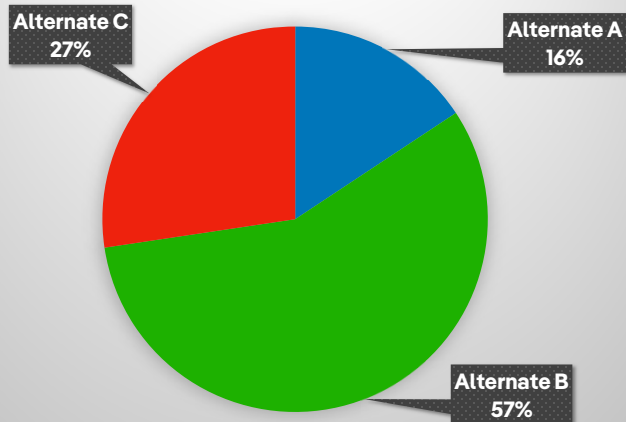
TODAY'S AGENDA

- Review Results of Public Input
- Final Recommendation from Committee on Streetscape Section
- Final Recommendation from Committee on Streetscape Style
- Discussion/Recommendation on 1st Streetscape Project
- Update/Discussion on Garbage Situation (if time allows)

PUBLIC INPUT RESULTS

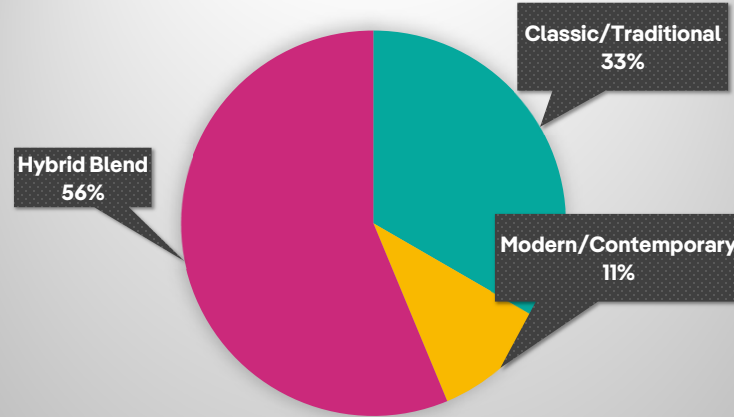
(as of 10/20/23)

STREET SECTION



Alternate A	35
Alternate B	127
Alternate C	61

STREET STYLE



Classic/Traditional	77
Modern/Contemporary	24
Hybrid Blend	130

FINAL RECOMMENDATION FROM STEERING COMMITTEE ON STREET SECTION

Alternate A –

Maintains Current Level of Parking/
Least Pedestrian Space



Alternate B –

Improves Walkability of
Downtown



Alternate C –

Establishes the Greatest Amount of
Pedestrian Space / Least Parking



Website: <https://downtownforeveryone.com/feedback/>

FINAL RECOMMENDATION FROM STEERING COMMITTEE ON STREET STYLE

Classic / Traditional



Modern / Contemporary



Hybrid Blend



Website: <https://downtownforeveryone.com/feedback/>

FIRST STREETSCAPE PROJECT

CONSIDERATIONS / POTENTIAL CRITERIA

- Make an Immediate Impact...
- Minimize Disruption...
- Parking Considerations...
- Budget Considerations...



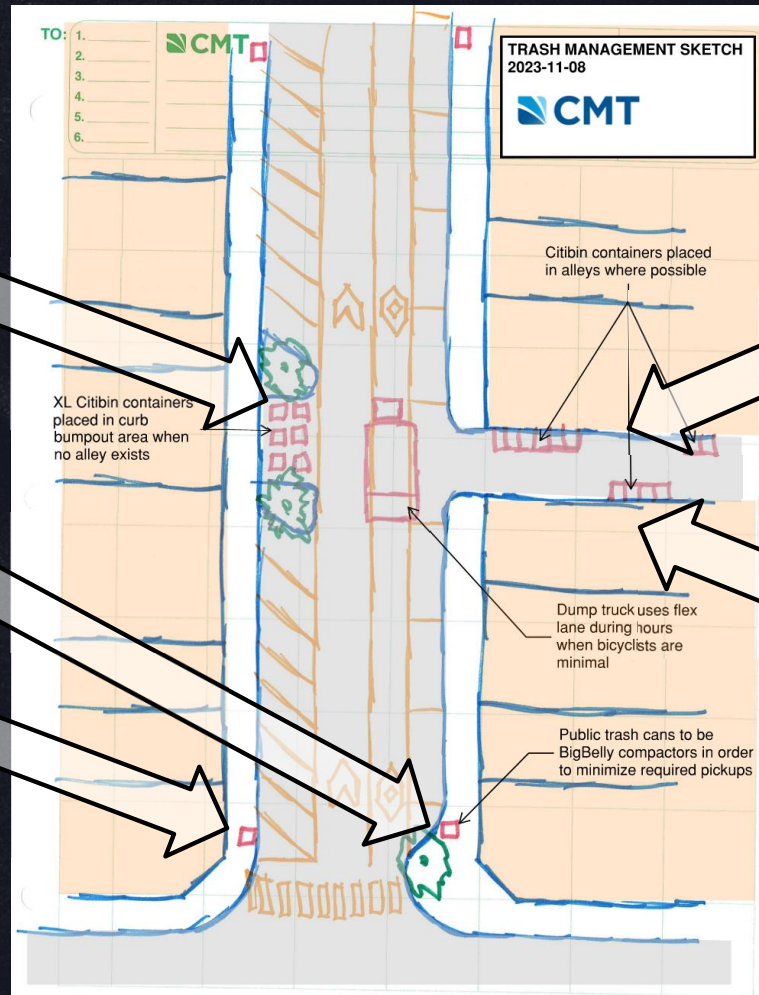
GARBAGE SITUATION/UPDATE

CONSIDERATIONS / CRITERIA –

- Minimize visibility of trash along streets...
- Minimize smell of trash along streets...
- Maximize screening of dumpsters...
- More laborious pickup process acceptable if results in desired placement...



GARBAGE SITUATION/UPDATE



DOWNTOWN FOR EVERYONE

GARBAGE SITUATION/UPDATE



WHAT'S NEXT

POINT OF CONTACT:
Mike Sewell (CMT)
msewell@cmtengr.com
(309) 386-0679

- Provide any additional thoughts to Mike in the next week or so.
- We will be doing a “make-up session” with those unable to join today, so that all are kept in the loop.
- Steering Committee Meeting #5 date TBD

THANK YOU!

MEETING MINUTES

1) REVIEW & DISCUSS “HYBRID STYLE”:

- Steering Committee generally in favor of the hybrid style shown. (See attached presentation.)
- Concerns about material durability. Design Team responds that clay pavers proposed are much more durable than similar materials, such as concrete pavers. Design Team will avoid selecting furnishings that include wood, in order to avoid burdening City staff with maintenance issues.
- Committee member suggests exploring use of planters made of recycled wind turbine blades. This fits in well with Design Team’s sustainability initiatives for this project.
- Asked the Committee for their preference on color scheme (see attached presentation).
 - Tan Blend: 3 votes.
 - Red Blend: 7 votes.

2) PRESENT CONCEPT UPDATES:

- Steering Committee in strong support of the concepts shown (see attached presentation):
 - Center Street
 - East-West Streets
 - North Main Plaza revisions
 - Bloomington Center for Performing Arts/Douglas Lots Area
 - US-51B Areas, including Withers Park
- Some discussion about the large radio tower Downtown (the “Eiffel Tower”). Committee likes the idea of making a community asset out of the tower. Pending owner approval, Committee agrees with Design Team’s suggestion of ornamenting the tower with lights and turning it into a valuable landmark.

3) REVIEW & DISCUSS PROJECT PHASING:

- Steering Committee generally in favor of the project phasing shown. (See attached presentation.) Design Team explains that phasing plan is very much subject to change based on unforeseen funding, new building developments, etc.
- Design Team explains rationale of proposed phasing:
 - Stay away from Center Street until after transit center construction.
 - Save US-51B for last (almost), and focus on interior first due to dynamic with IDOT.
 - Prioritize BCPA area in order to establish more parking spaces.
 - Alternate streets so that detours during construction are nevermore than a block.
 - Save side streets outside of the beltloop for last.

4) REVIEW & DISCUSS GARBAGE MANAGEMENT PLAN:

- Design Team explains rationale for proposed garbage management plan:
 - Minimize visibility of trash along streets.
 - Minimize smell of trash along streets.
 - Maximize screening of dumpsters.
 - More laborious pickup process acceptable to the City if it results in desired placement of receptacle.
- Steering Committee generally in favor of the garbage management plan shown.



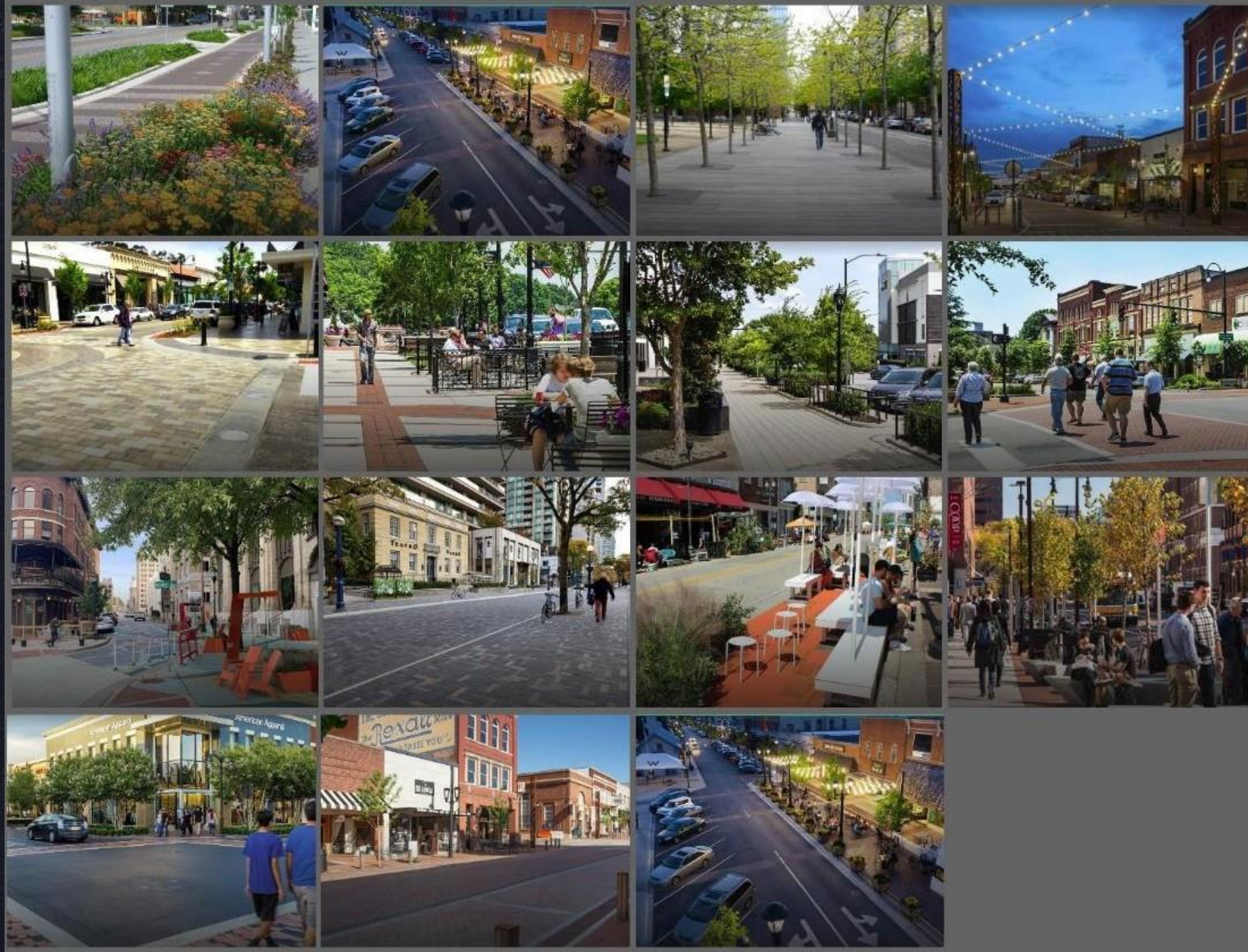
DOWNTOWN FOR EVERYONE Streetscape Project

**Steering Committee Meeting #5
12/19/23**

TODAY'S AGENDA

- Review & Discuss “Hybrid Style”
- Present Concept Updates
- Review & Discuss Project Phasing
- Review & Discuss Garbage Management Plan

HYBRID BLEND



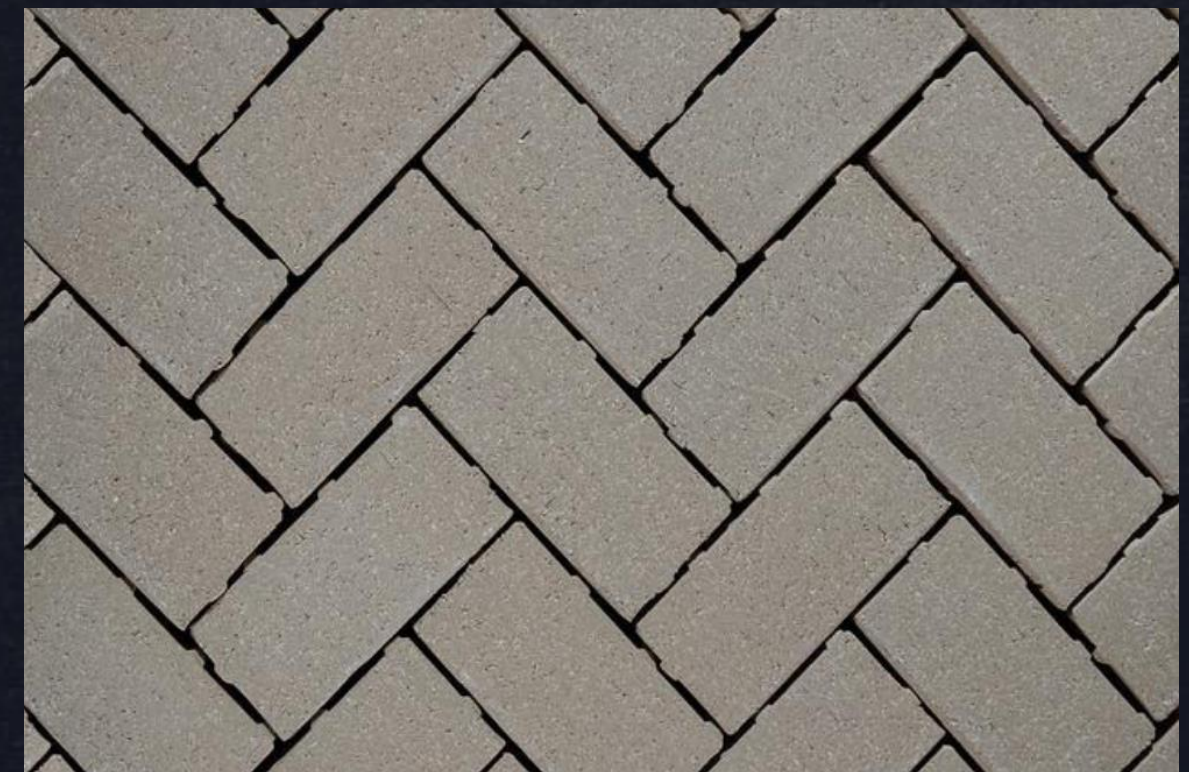
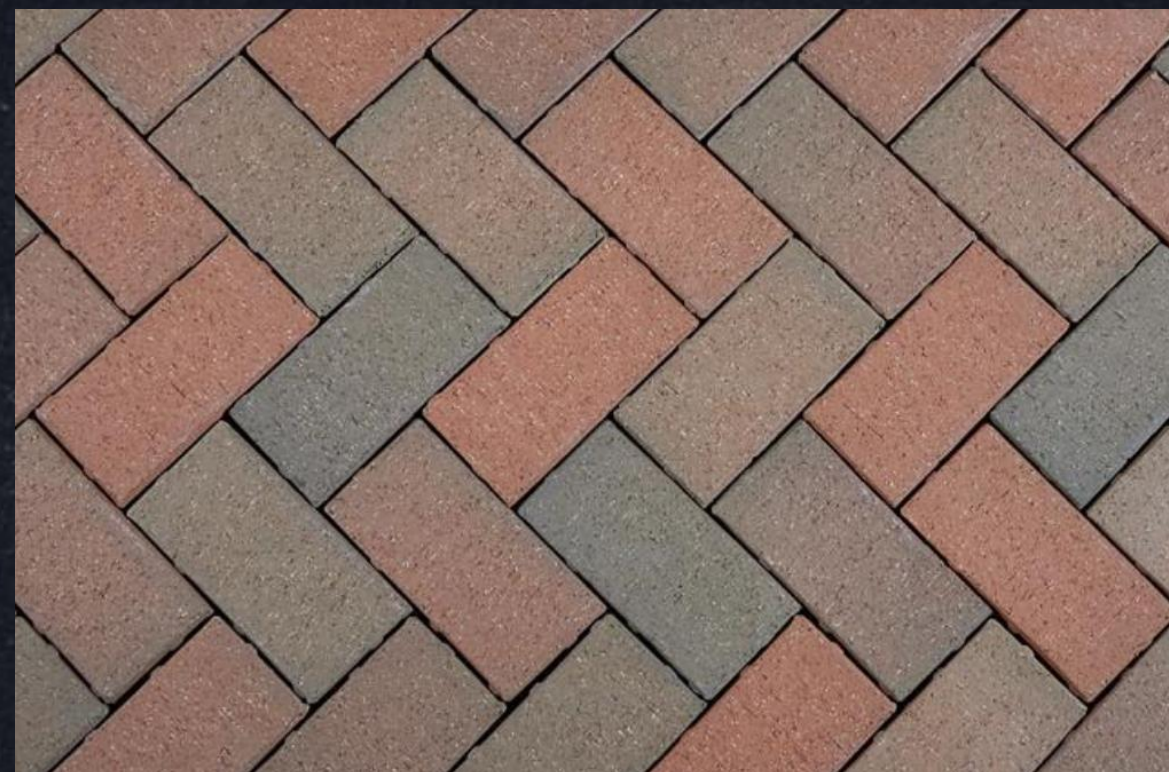
DOWNTOWN FOR EVERYONE

HYBRID – Pavement Colors

Option 1 – Tan Blend



Option 2 – Red Blend



HYBRID – Option 1 (Tan Blend)



113
DOWNTOWN FOR EVERYONE

HYBRID – Option 2 (Red Blend)



DOWNTOWN FOR EVERYONE

HYBRID – Option 1 (Tan Blend)



DOWNTOWN FOR EVERYONE

HYBRID – Option 2 (Red Blend)



DOWNTOWN FOR EVERYONE

HYBRID – Option 1 (Tan Blend)



DOWNTOWN FOR EVERYONE

HYBRID – Option 2 (Red Blend)



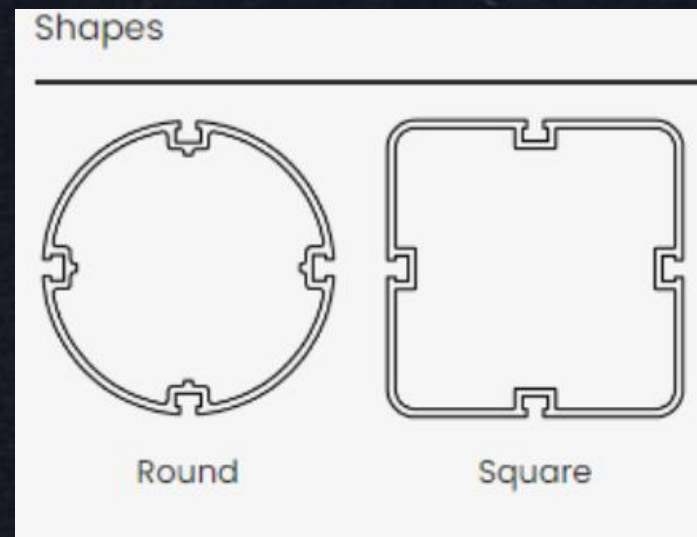
118

DOWNTOWN FOR EVERYONE

HYBRID – Materials



Lighting (New)



Lighting (Repurposed)



Bicycle Racks



Benches



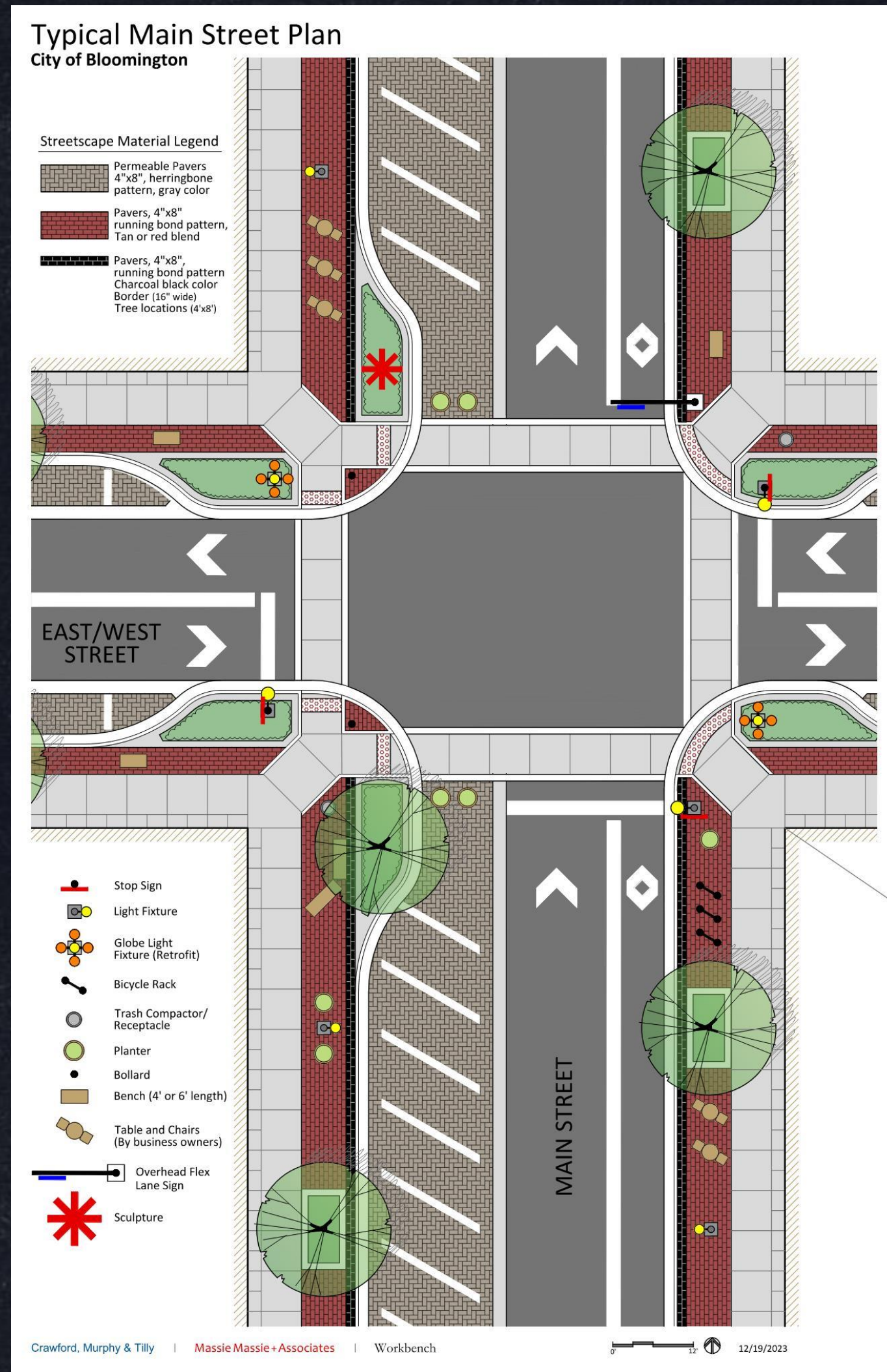
Planters

DOWNTOWN FOR EVERYONE

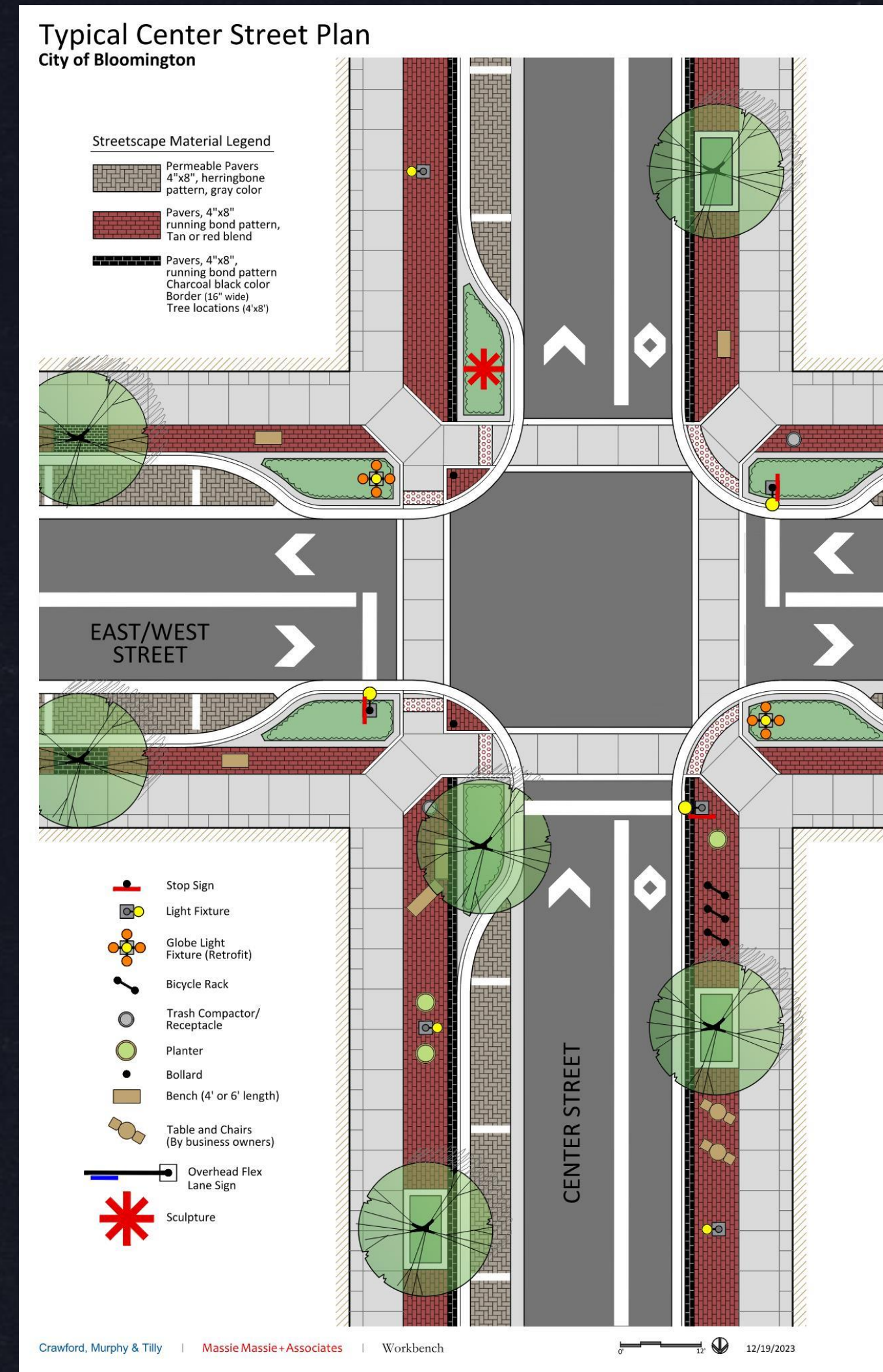
CONCEPT UPDATES

- Center Street Comparison
- East-West Streets
- North Main Plaza
- BCPA/Douglas Lots Area
- US-51B Areas

CENTER STREET COMPARISON



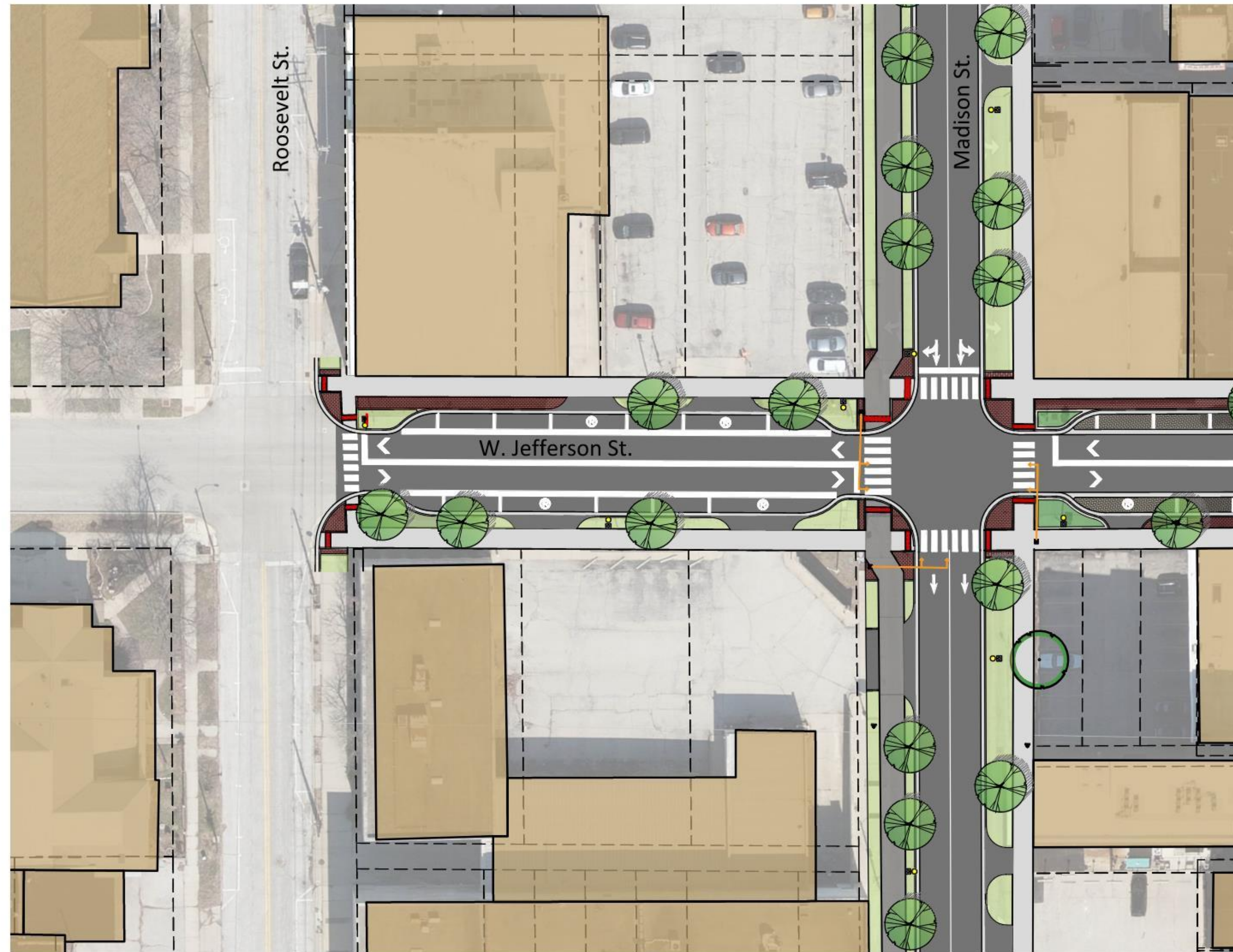
Main Street



Center Street

EAST-WEST STREETS

W. JEFFERSON STREET - 300 | Roosevelt St. to Madison St.



LOCATION PLAN

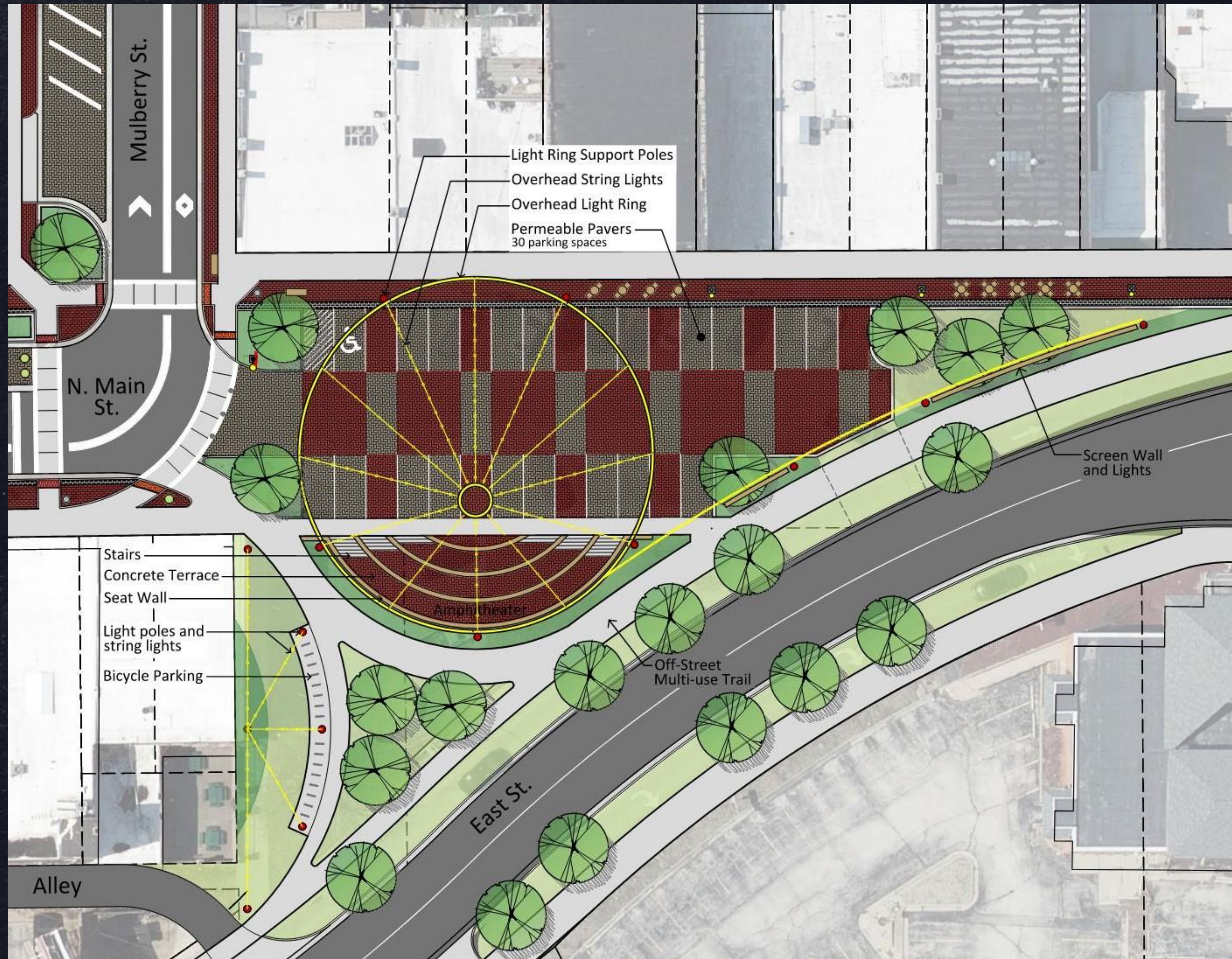


Parking Calculations

- 4 - Existing Parking Spaces
- 7 - Proposed Parking Spaces



NORTH MAIN PLAZA



DOWNTOWN FOR EVERYONE

NORTH MAIN PLAZA



DOWNTOWN FOR EVERYONE

NORTH MAIN PLAZA



DRAFT

DOWNTOWN FOR EVERYONE

NORTH MAIN PLAZA

DRAFT



DOWNTOWN FOR EVERYONE

NORTH MAIN PLAZA

DRAFT



DOWNTOWN FOR EVERYONE

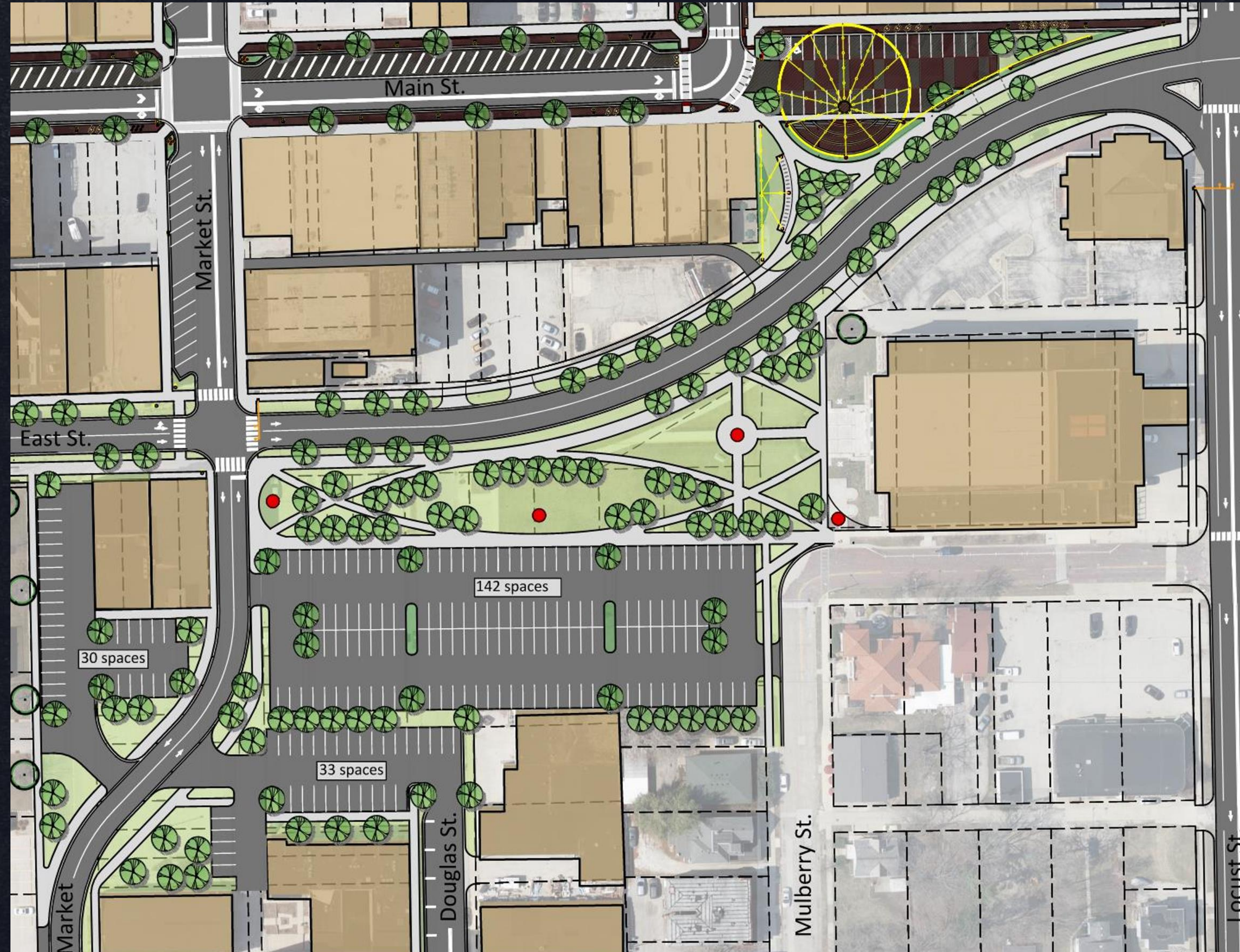
NORTH MAIN PLAZA

DRAFT



DOWNTOWN FOR EVERYONE

BCPA / DOUGLAS LOTS

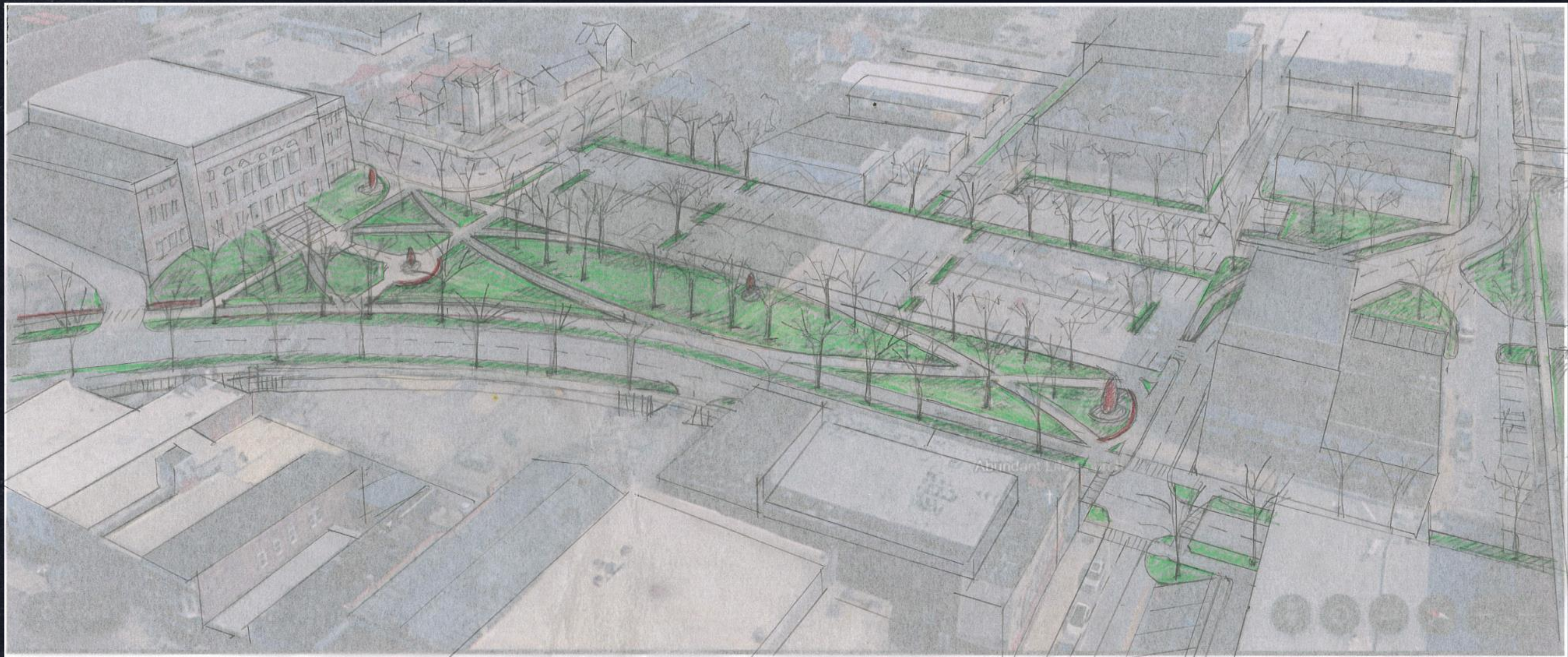


BCPA / DOUGLAS LOTS



FOR
DOWNTOWN
EVERYONE

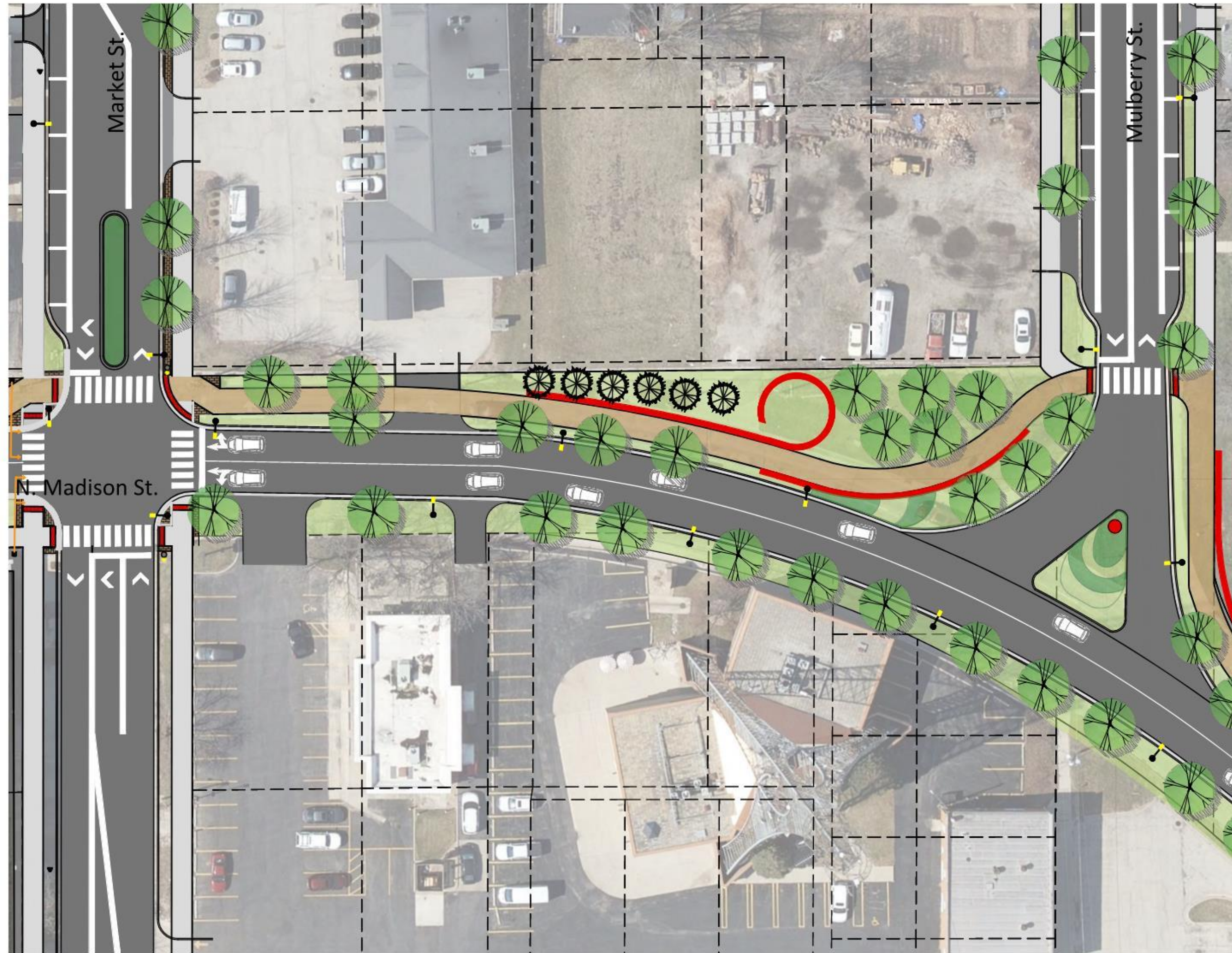
BCPA / DOUGLAS LOTS



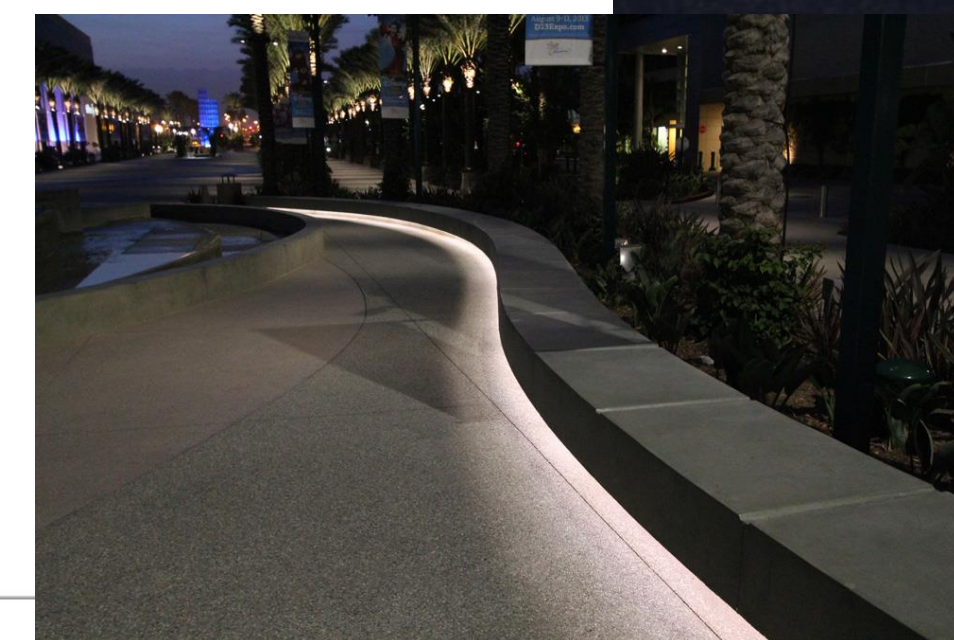
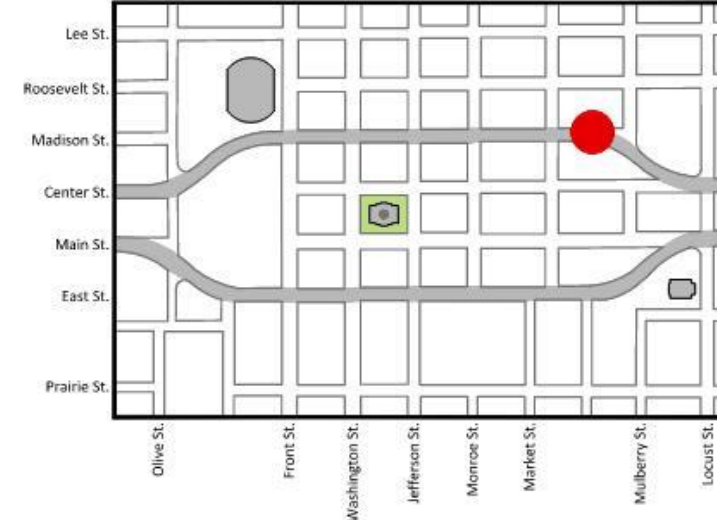
Abundant
DOWNTOWN FOR **EVERYONE**

US-51B AREAS

N. MADISON STREET - 500 | Market St. to Mulberry St.



LOCATION PLAN



Crawford, Murphy & Tilly | Massie Massie+Associates | Workbench



DOWNTOWN FOR EVERYONE

US-51B AREAS



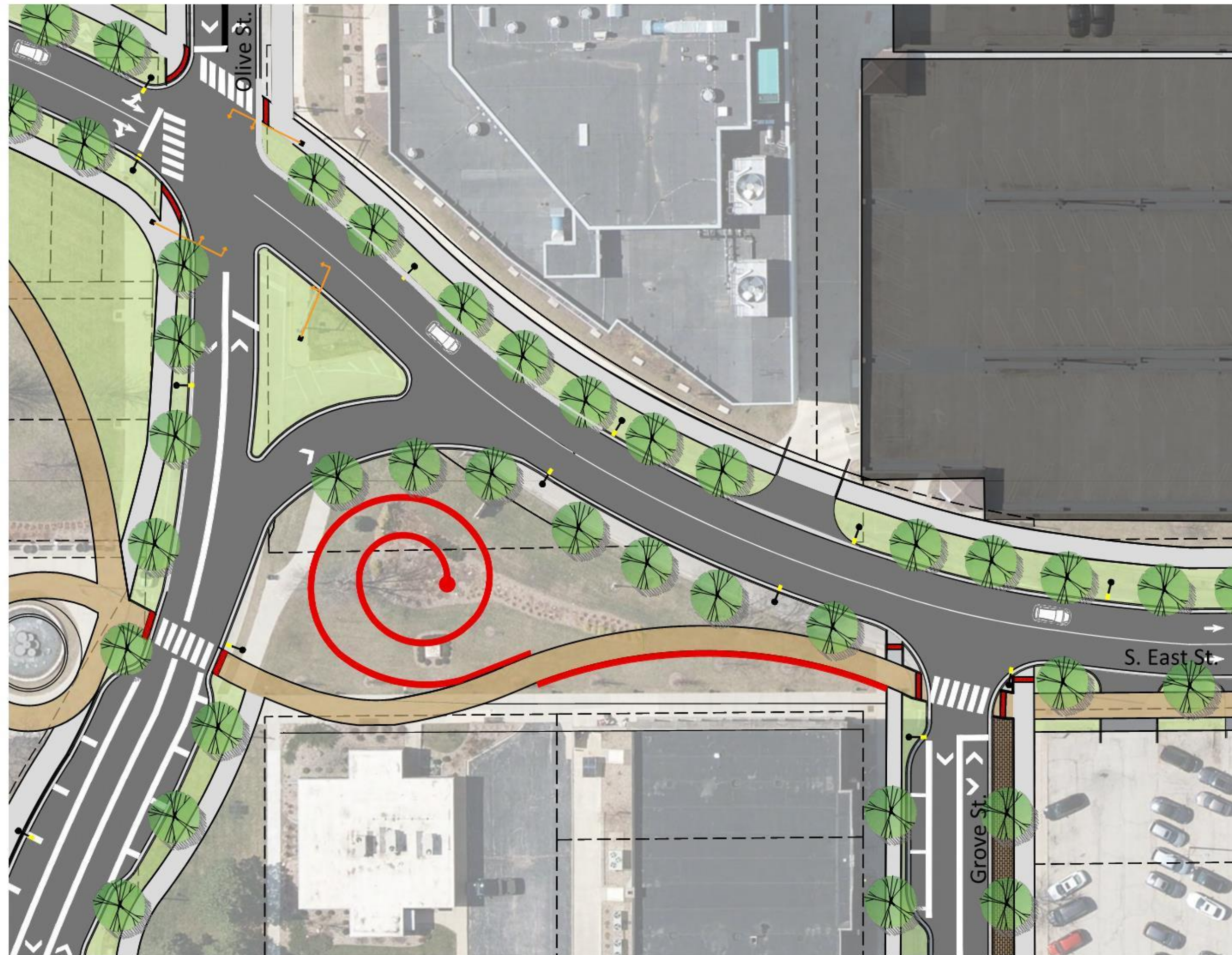
FOR
DOWNTOWN
EVERYONE

US-51B AREAS

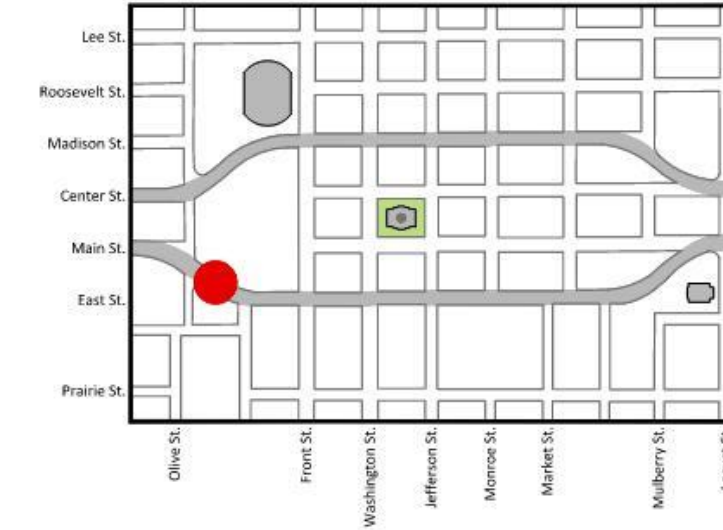


US-51B AREAS

S. EAST STREET - 200 | Olive St. to Grove St. | CONCEPT



LOCATION PLAN



STREETSCAPE SUMMARY

Existing

Traffic Lanes = 4 northbound
 Turn Lanes = None
 Boulevard = None
 Pedestrian Zone = 8' wide

Proposed

Traffic Lanes = 2 northbound
 Turn Lanes = 1 into garage
 Boulevard = 10'-14' wide (turf)
 Pedestrian Zone = 8'-12' wide

Preliminary
 11/08/2023 10:06:41 AM

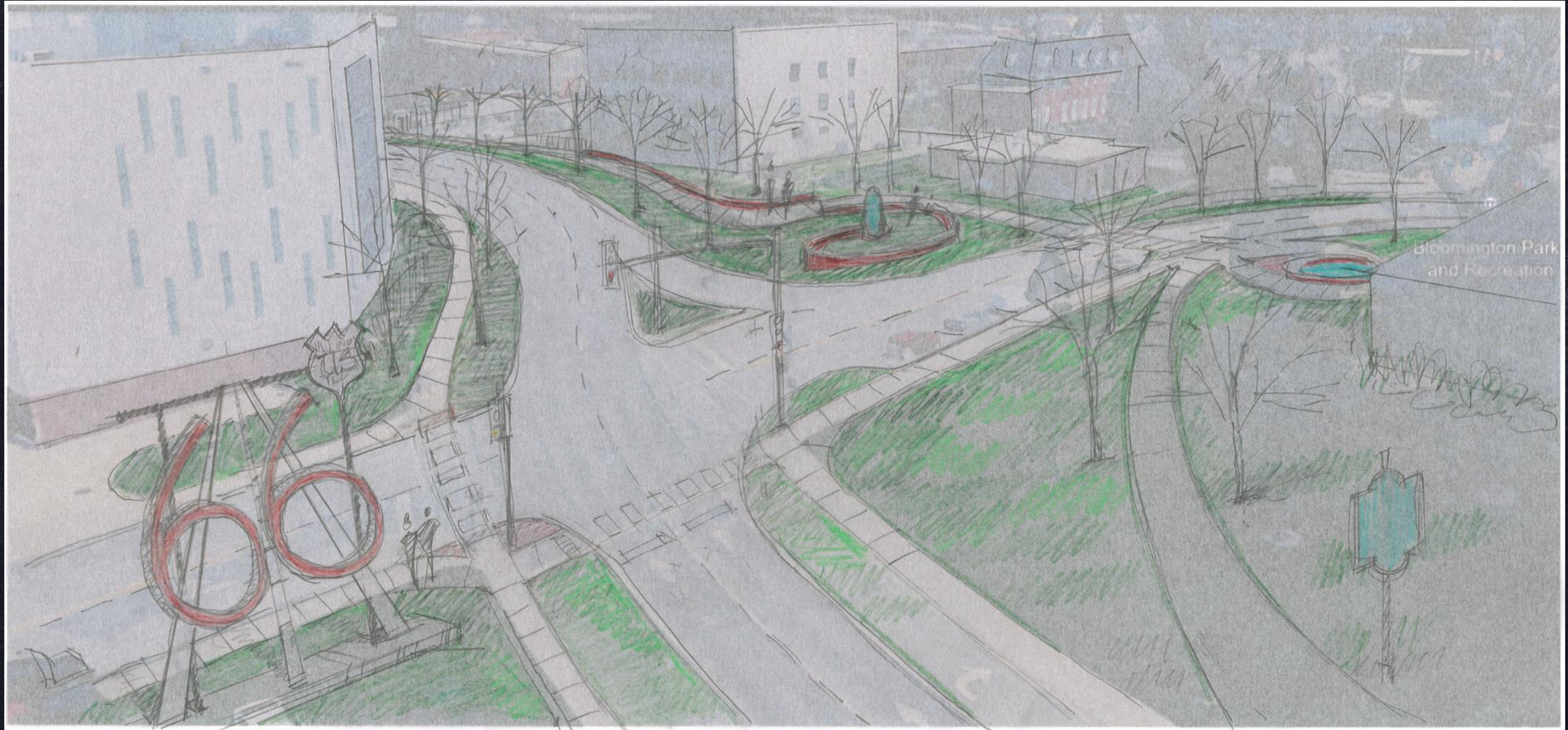


US-51B AREAS



FOR
DOWNTOWN
EVERYONE

US-51B AREAS



DOWNTOWN FOR EVERYONE

US-51B AREAS



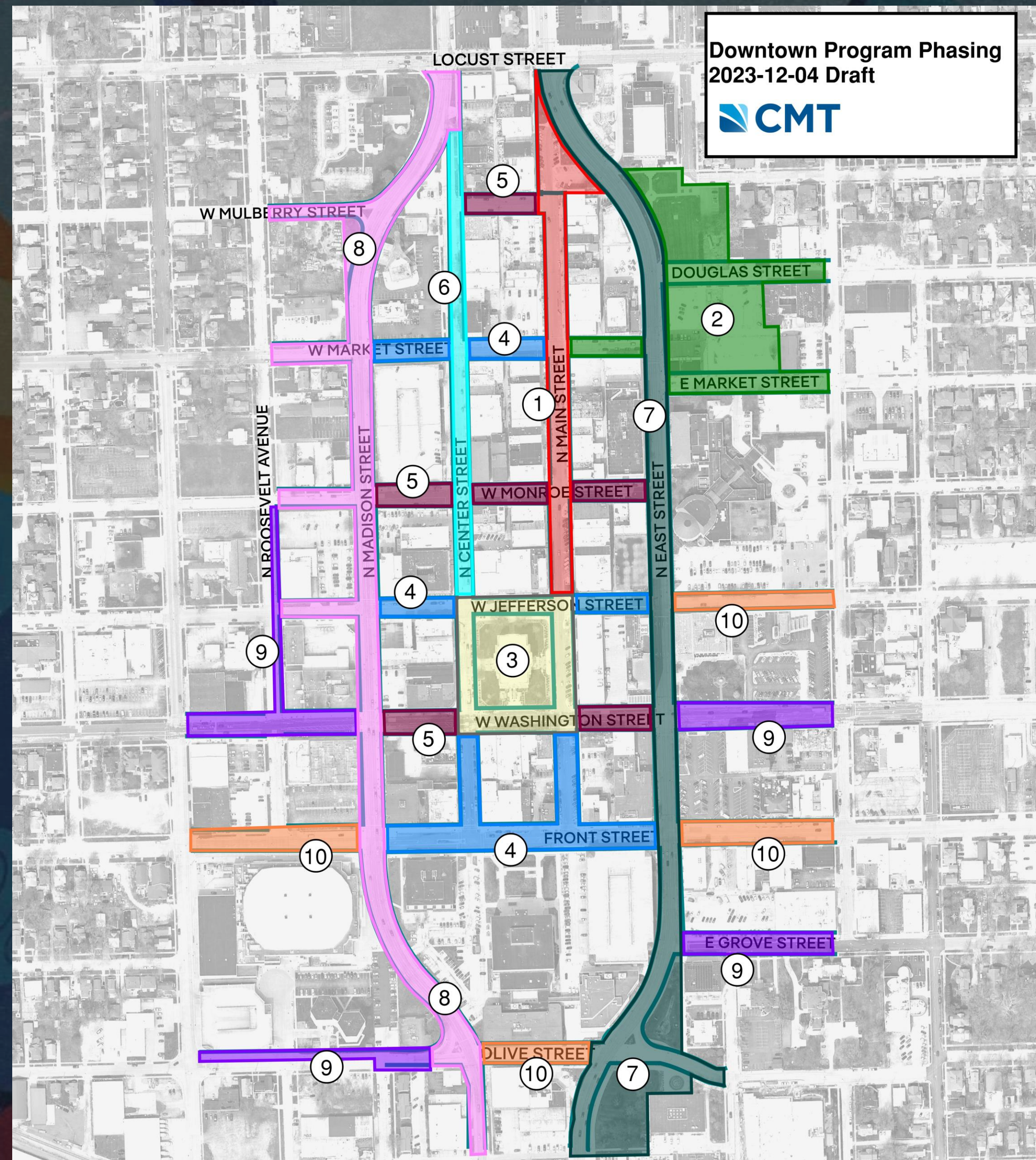
FOR
DOWNTOWN
EVERYONE

US-51B AREAS



FOR
DOWNTOWN
EVERYONE

PROJECT PHASING



Downtown Program Phasing
2023-12-04 Draft



PHASING CONSIDERATIONS:

- 1. Stay away from Center Street until after transit center construction.
- 2. Save US-51B for last (almost), and focus on interior first due to dynamic with IDOT.
- 3. Prioritize BCPA area in order to establish more parking spaces.
- 4. Alternate streets so that detours during construction are never more than a block.
- 5. Save side streets outside of the beltloop for last.

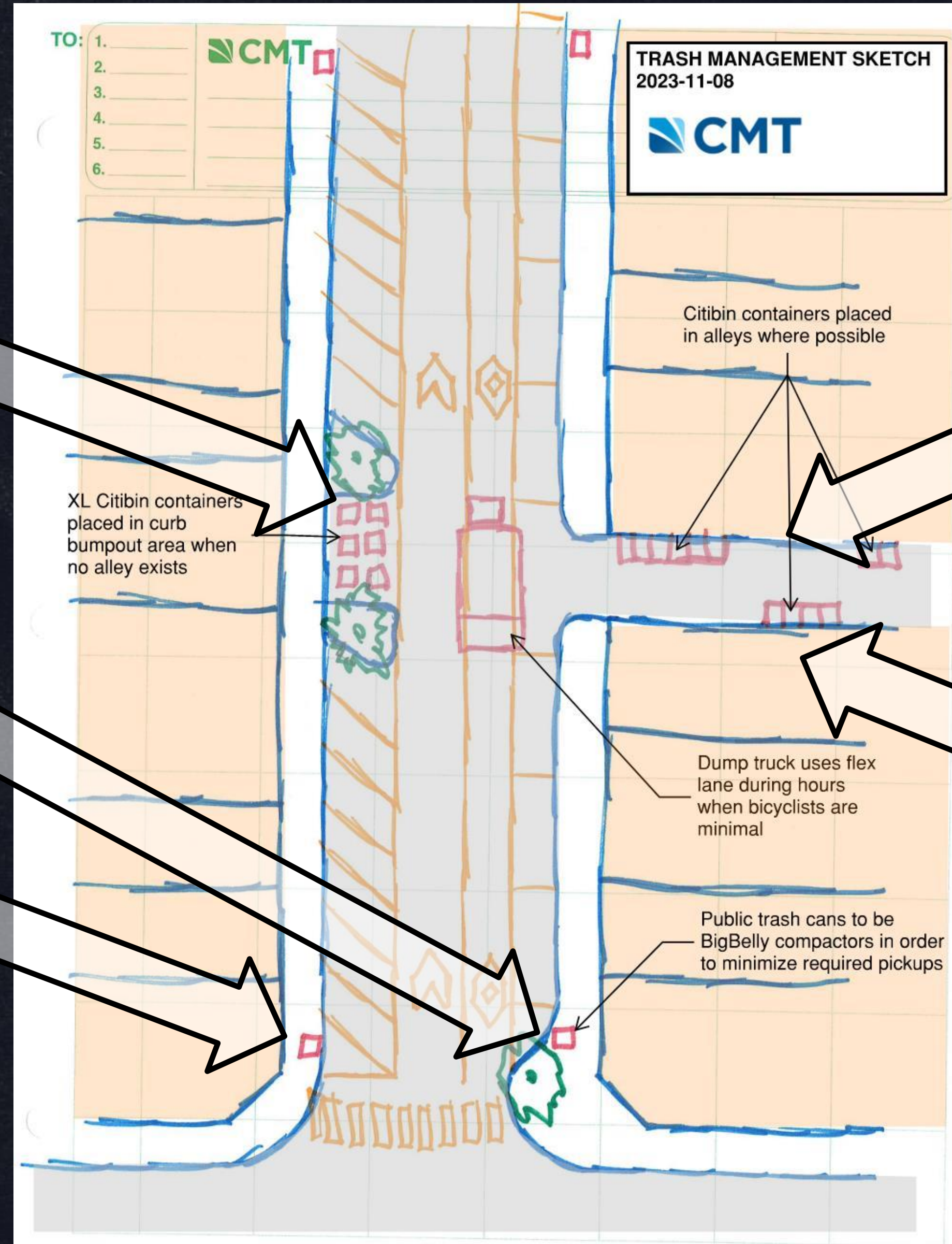
GARBAGE MANAGEMENT PLAN

CONSIDERATIONS / CRITERIA –

- Minimize visibility of trash along streets...
- Minimize smell of trash along streets...
- Maximize screening of dumpsters...
- More laborious pickup process acceptable if results in desired placement...



GARBAGE MANAGEMENT PLAN



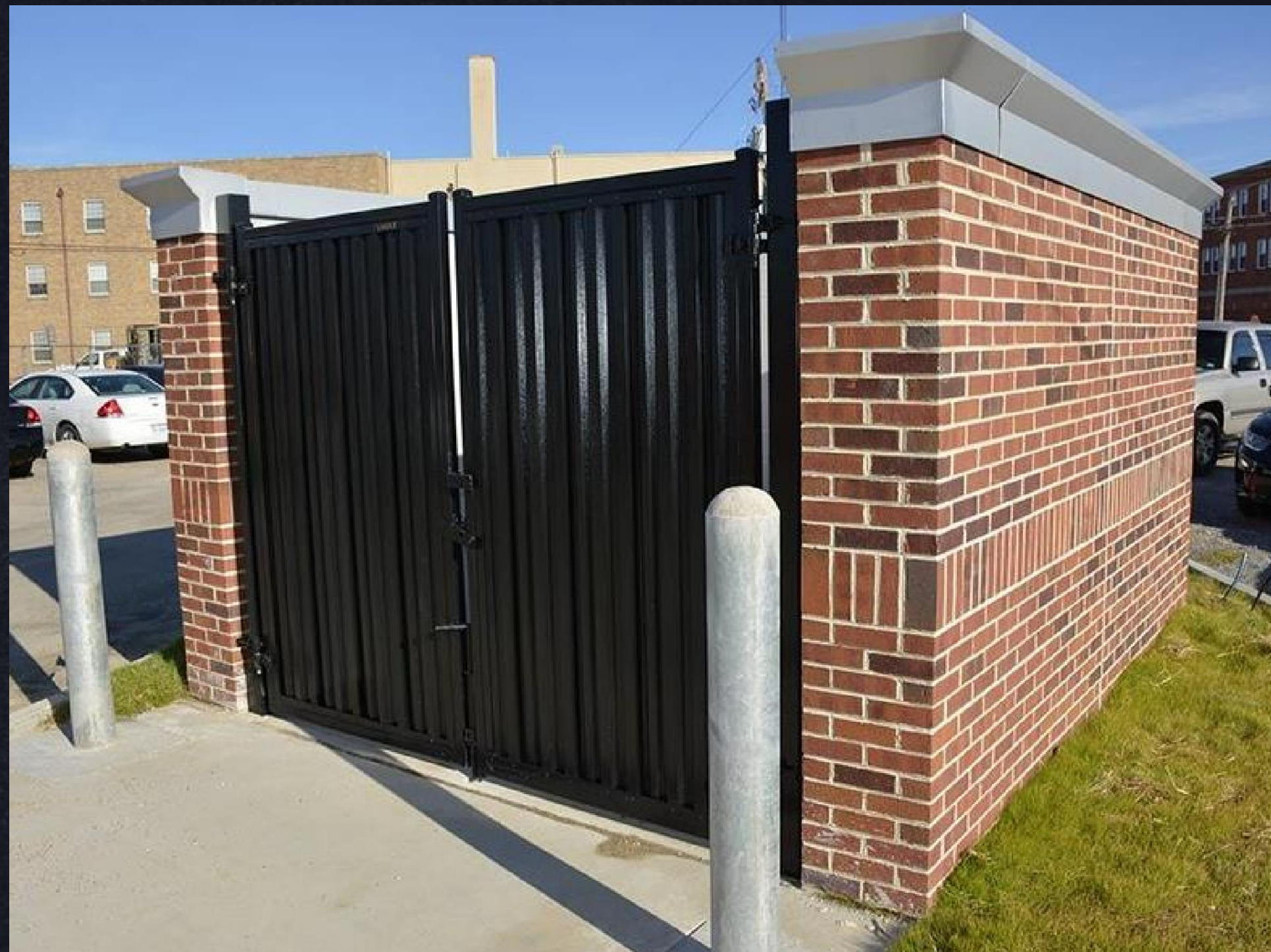
Bigbelly

Bigbelly Smart Max

- FULLY ENCLOSED
- CLEAN™ CONNECTED
- FULLNESS INDICATOR
- COMPACTOR

DOWNTOWN FOR EVERYONE

GARBAGE MANAGEMENT PLAN



WHAT'S NEXT

POINT OF CONTACT:
Mike Sewell (CMT)
msewell@cmtengr.com
(309) 386-0679

- Provide any additional thoughts to Mike in the next week or so.
- Future Steering Committee meetings??

THANK YOU!

5) OPEN FLOOR DISCUSSION / WRAP-UP:

- Billy Tyus discussed need to keep Steering Committee involved beyond adoption of the plan and during design and construction of individual projects. Committee can provide invaluable input and support.

Utility Company Meeting Minutes

MEETING MINUTES

1) Attendance:

- Craig Shonkwiler – City Engineer, City of Bloomington
- Michael Sewell – Project Manager, Crawford, Murphy, & Tilly, Inc.
- Abby Helm – Community Relations Coordinator, Ameren
- Emily Moore – Engineer, Ameren
- Andrué Zulueta – Engineer, Ameren
- Dean Thompson – Engineer, Ameren

2) Overview of Streetscaping Project

- M Sewell and C Shonkwiler give overview of project and approximate program timeline.
- M Sewell discusses potential impacts to Ameren facilities due to utility work, street construction, and/or ADA grade correction. A Zulueta discusses how City franchise agreement generally requires Ameren to bear costs of relocation/adjustments due to this work, but details to be worked out as design progresses.

3) Review of Upcoming Ameren Projects

- E Moore shares information on upcoming facility replacement projects in Downtown Bloomington over next 5-10 years. Some are manhole replacements (containing splices) while some are vault replacements (containing transformers and venting). It is approximately \$250,000 to replace a manhole. Vault replacement costs are even higher.
- Attendees discuss need for coordinating streetscaping construction schedule with Ameren replacement schedule in order to avoid tearing up recently installed streetscaping improvements.

4) Review of Potential “Tap-On” Locations for Future Electronic Vehicle (EV) Charging Stations

- D Thompson shares location of two 277/480V spot locations (required for any Level 3 EV stations) Downtown. Remainder of Downtown power grid is on a 208V network.
- A Zulueta discusses that locating Level 3 EV charging stations elsewhere will require extension of 480V service, the cost of which is not covered by the City’s franchise agreement. Alternatively, the City can install a dry-mount transformer to step-up voltage anywhere a Level 3 charger is desired but where only 208V service is available. This cost would likewise not be covered by the City’s franchise agreement.

5) Review of Potential Light Fixture Replacements

- C Shonkwiler shares that many light fixtures will likely be replaced as part of streetscaping projects. Majority of lights on US-51B are Ameren owned, while majority inside the “beltway” are City owned.
- A Helm shares that Ameren has a program in place to replace ~1,500 new bulbs with LEDs throughout Bloomington in June/July ’23. But A Zulueta says they will likely proceed with that work and simply salvage the new bulbs whenever a streetscaping project that involves street light replacement occurs.
- A Zulueta states that if new lights are added (not just replacing existing light fixtures in the same location) and/or pigtailed added for electrical outlets on poles then this will need to be metered.

6) Review of Potential Relocation of Overhead Power Lines

- M Sewell shares concerns about overhead wire “pollution” downtown and desire to bring underground during streetscape constructions. A Zulueta shares that majority of Ameren’s power grid is already underground.

7) Brief Discussion on Solar Buy-Back Opportunities Downtown

- A Zulueta states that Downtown Bloomington is currently not well equipped to accommodate solar buy-back because most customer services are linked to a multi-transformer network with protectors that prevent reverse flow. This isn’t an insurmountable situation, but is made more difficult due to the system being a linked network versus single spot network.

8) Discuss Next Steps

- E Moore will share marked up map(s) with CMT sharing location of facilities and schedule for planned projects.
- Once CMT/City have a more developed design, they will be in contact with Ameren to coordinate schedule for future construction projects.

DOWNTOWN STREETScape DESIGN

NICOR-CITY MEETING
March 31, 2023 – 8:30 AM

MEETING MINUTES

1) Attendance

- **Craig Shonkwiler – City Engineer, City of Bloomington**
- **Michael Sewell – Project Manager, Crawford, Murphy, & Tilly, Inc.**
- **Bernie Anderson – Regional Manager, Nicor Gas**
- **Jeremy Burton – Field Operations Supervisor, Nicor Gas**
- **Mark Hylton – Supervisor Bloomington Field Operations, Nicor Gas**

2) Overview of Streetscaping Program

- a) Scope of Project
 - **M Sewell provides brief overview of program and typical improvements.**
- b) Anticipated Schedule
 - **M Sewell provides brief overview of schedule but notes that phasing of individual projects is yet to be determined.**
- c) Phasing - TBD

3) Review of Upcoming Nicor Projects

- a) 5-10 Year Infrastructure Replacement Plan?
 - **Nicor notes that most of the mains Downtown have recently been replaced. Other mains, even those that are as old as the 1970s, should last indefinitely, Nicor says. That said, Nicor plans to reach out to others in the company to see if there are any corporate plans for replacing any of these mains and, if so, might these be expedited to avoid conflict with the Streetscaping Program.**
- b) Aged infrastructure?
 - **Nicor notes that there should be no capacity issues in Downtown Bloomington. Even should the Downtown Transfer Station for Connect Transit be constructed, there should not be any capacity issues.**

4) Integration of Streetscaping Program and Nicor Projects

- a) Discuss franchise agreement and process for dealing with project conflicts
 - **B Anderson acknowledges cost of relocation of Nicor utilities due to conflict with City infrastructure would be borne by Nicor.**
- b) Discuss meters/regulations and vent piping and implications for relocation
 - **B Anderson states that meters are located in basements, not vaults, and consequently we can't eliminate the vent piping.**
- c) Discuss typical costs/schedule for relocation of Nicor pipes/facilities
 - **Nicor notes that mains are at 60 psi pressure and located 2-1/2' to 3' below the surface. Services are about 18" below the surface.**
 - **Nicor notes that valve lids can be easily adjusted but that some valves have been buried by City asphalt paving operations.**

5) Discuss Next Steps

- **Nicor to let City and CMT know if there are any plans for replacing any of the Downtown mains.**

6) Site Visit

MEETING MINUTES

1) Attendance

- Mike Sewell – Crawford, Murphy, & Tilly, Inc., Project Manager
- Craig Shonkwiler – City of Bloomington, Assistant Public Works Director
- Adam Gangloff – Frontier, Bloomington Supervisor

2) Overview of Streetscaping Program

- Mike provides an overview of the program to Adam.
- a) Scope of Project
- b) Anticipated Schedule
- c) Phasing - TBD

3) Review of Upcoming Frontier Projects

- a) 5-10 Year Infrastructure Replacement Plan?
 - Adam shares Frontier’s plan to provide Fiber To The Home (FTTH) to all homes in Bloomington-Normal, but notes that the schedule is on hold. 1st Phase was to consist of running fiber to single-family homes. The 2nd Phase would include multi-family homes Downtown. All fiber lines come out of Frontier’s downtown building on Market and East Street.
 - Adam will attempt to provide the City with a copy of the mapping for this plan. (On June 9th, Adam provided a preliminary plan of the FTTH to Mike and Craig.)
- b) Aged infrastructure?
 - Most of Frontier’s infrastructure Downtown is very old, Adam says. Much of it is old copper phone lines, and Frontier does not have much incentive to be proactive in the replacement of those lines due to the business decision to move away from that service in favor of fiber lines. Most old lines are simply abandoned in place.
 - Most of the conduit is located in the center of roads and located 3-4’ deep. Most infrastructure is below ground and not overhead.

4) Integration of Streetscaping Program and Frontier Projects

- a) Discuss franchise agreement and process for dealing with project conflicts
- b) Discuss typical costs/schedule for relocation of Frontier facilities
 - Adam suggests it depends on the specific conflict.
- c) Project specific coordination process
 - Besides the aforementioned FTTH program, most of Frontier’s work is focused on putting in new services based on orders from new customers.
 - Adam asks that we alert Frontier during construction if we notice any issues (such as settlement around Frontier manholes).
 - Adam also suggests that many adjustments to Frontier infrastructure due to City construction are relatively easy to implement (such as raising or lowering manhole lids).

5) Discuss Next Steps

- When the detailed design of specific streetscaping projects are initiated, the City will reach back out to Frontier to coordinate any potential conflicts.

Advocacy Groups Meeting Minutes

DOWNTOWN CONCEPT DESIGN

BICYCLE MEETING
March 22, 2023 – 10:00 AM

MEETING MINUTES

1) Attendance:

- Craig Shonkwilker – City Engineer, City of Bloomington
- Phil Allyn – Traffic Engineer, City of Bloomington
- Michael Sewell – Project Manager, Crawford, Murphy, & Tilly, Inc.
- Patrick Dullard – Treasurer, Bike BloNo
- Dan Steadman – Manager, West Bloomington Revitalization Project Bike Co-op

2) Overview of Streetscaping Project:

- M Sewell and C Shonkwiler give overview of project and approximate program timeline.

3) Review of Potential US-51B Alternatives:

- M Sewell provides update of conversations with IDOT and shares IDOT's proposal to place a bike lane adjacent to three lanes of traffic on US-51B. P Dullard and D Steadman suggest that this feels unsafe without a physical barrier protecting the bike lane from lanes of traffic.
- M Sewell presents Design Team proposal for reducing to two lanes on US-51B with bike path moved to dedicated "flex lanes" in the Downtown interior. P Dullard and D Steadman are in favor of this idea. They do comment that bike commuters traveling past Downtown Bloomington on US-51B are unlikely to go out of their way to make use of the flex lanes in the Downtown interior, but that they would likely feel comfortable sharing the street lanes on US-51B due to the traffic calming impact of reducing to two lanes.

4) Discuss Next Steps

- M Sewell shares that IDOT has requested letters of support for the proposed bike path relocation off US-51B from the community bike organizations. P Dullard suggests he will likely be able to provide these letters from Bike BloNo, Friends of the Constitution Trail, West Bloomington Revitalization Project Bike Co-op, and McLean County Wheelers.



DOWNTOWN STREETScape DESIGN

Life Center for Independent Living Meeting

June 8, 2023 – 10:15 AM



MEETING MINUTES

1) INTRODUCTIONS

- a) Mike Sewell – Crawford, Murphy, & Tilly, Inc., Project Manager
- b) Craig Shonkwiler – City of Bloomington, Assistant Public Works Director
- c) Conan Calhoun – LIFE CIL, Advocacy & Advancement Director

2) BRIEF SUMMARY OF THE STREETSCAPING PROJECT

- Conan was already familiar with the plan for the streetscaping project.
- All present view this project as an opportunity to make Downtown ADA accessible.

- ~~a) Goals & Objectives~~
- ~~b) Project Limits~~
- ~~c) Process & Schedule~~

3) DOCUMENTATION OF NON-CONFORMING ADA ELEMENTS

- a) Current Study: High level review only
- b) Future Detailed Design Projects: High accuracy topographic survey

4) INCORPORATION OF ADA ELEMENTS

- a) Standard Design Practice: Title II, 2010 ADA Standards
- b) Approach for Unique/Challenging Situations
 - Conan provides commentary on various options used in other communities, including use of ramps/handrails and steps.

5) OPEN FLOOR TO VOICE ADA CONCERNS

- Conan shares that the disabled community view Downtown as very unfriendly to those with disabilities. Many people have never been able to visit certain restaurants and shops due to being inaccessible.
- Conan remarks that an accessible outdoor environment is insufficient – accessibility improvements must also be made to the inside of businesses, or Downtown remains inaccessible. Mike remarks that there will need to be a bigger conversation related to these barriers, because the current scope is limited to streetscaping improvements. Conan suggests promotion of and adjustments to the Rust Grant in order to incentivize building improvements.

6) MEETING WRAP-UP / NEXT STEPS DISCUSSION

- Craig notes that we will keep Conan involved, but additional input is likely unnecessary until we move to the detailed design of specific streetscaping projects.

Letters of Support from Bike Advocacy Groups



March 29, 2023

Mr. Craig Shonkwiler, City Engineer
City of Bloomington, IL

RE: Proposed Bicycle Lanes in Downtown Bloomington

Dear Mr. Shonkwiler:

During our meeting with you and representatives of the Downtown Bloomington Streetscape Core Team on March 22nd, 2023, you presented our organization with information related to the proposed streetscaping improvements in Downtown Bloomington. This included a discussion on the location of bicycle routes in the area.

We understand that the "City of Bloomington Bicycle Master Plan" (adopted in May 2015) recommends locating a bike route on US-51B. We further understand that the Illinois Department of Transportation (IDOT) intends to establish bike lanes on said highway in accordance with the bicycle master plan. However, at our meeting your team proposed to instead relocate the bike route to the interior of Downtown on proposed flexible use lanes constructed as part of the streetscaping program. We are in agreement that doing so would have several benefits over the original proposal including (1) improved safety and (2) access to bike amenities and points of interest that will be constructed as part of the Downtown streetscaping program.

In short, Bike BloNo is in agreement that relocating the bike route from US-51B to the interior of Downtown would be in the best interest of the bicycle community and support any efforts you may undertake with IDOT in order to see this accomplished.

Sincerely,
Patrick Dullard
Treasurer
Bike BloNo



roots · pride · vision
West Bloomington
revitalization project

3/27/2023

Mr. Craig Shonkwiler, City Engineer

City of Bloomington, IL

RE: Proposed Bicycle Lanes in Downtown Bloomington

Dear Mr. Shonkwiler:

During our meeting with you and representatives of the Downtown Bloomington Streetscape Core Team on March 22nd, 2023, you presented our organization with information related to the proposed streetscaping improvements in Downtown Bloomington. This included a discussion on the location of bicycle routes in the area.

We understand that the “City of Bloomington Bicycle Master Plan” (adopted in May 2015) recommends locating a bike route on US-51B. We further understand that the Illinois Department of Transportation (IDOT) intends to establish bike lanes on said highway in accordance with the bicycle master plan. However, at our meeting your team proposed to instead relocate the bike route to the interior of Downtown on proposed flexible use lanes constructed as part of the streetscaping program. We are in agreement that doing so would have several benefits over the original proposal including (1) improved safety and (2) access to bike amenities and points of interest that will be constructed as part of the Downtown streetscaping program.

In short, The West Bloomington Revitalization Project Bike Co-op is in agreement that relocating the bike route from US-51B to the interior of Downtown would be in the best interest of the bicycle community and support any efforts you may undertake with IDOT in order to see this accomplished.

Sincerely,
Dan Steadman
WBRP Bike Co-op



March 29, 2023

Mr. Craig Shonkwiler, City Engineer
City of Bloomington, IL

RE: Proposed Bicycle Lanes in Downtown Bloomington

Dear Mr. Shonkwiler:

During our meeting with you and representatives of the Downtown Bloomington Streetscape Core Team on March 22nd, 2023, you presented our organization with information related to the proposed streetscaping improvements in Downtown Bloomington. This included a discussion on the location of bicycle routes in the area.

We understand that the “City of Bloomington Bicycle Master Plan” (adopted in May 2015) recommends locating a bike route on US-51B. We further understand that the Illinois Department of Transportation (IDOT) intends to establish bike lanes on said highway in accordance with the bicycle master plan. However, at our meeting your team proposed to instead relocate the bike route to the interior of Downtown on proposed flexible use lanes constructed as part of the streetscaping program. We are in agreement that doing so would have several benefits over the original proposal including (1) improved safety and (2) access to bike amenities and points of interest that will be constructed as part of the Downtown streetscaping program.

In short, Friends of the Constitution Trail is in agreement that relocating the bike route from US-51B to the interior of Downtown would be in the best interest of the bicycle community and support any efforts you may undertake with IDOT in order to see this accomplished.

Sincerely,
Patrick Dullard
President
Friends of the Constitution Trail



March 29, 2023

Craig Shonkwiler, City Engineer
City of Bloomington
109 E Olive St
Bloomington, IL 61701

RE: Proposed Bicycle Lanes in Downtown Bloomington

Dear Mr. Shonkwiler:

At a recent meeting of representatives of the Downtown Bloomington Streetscape Core Team on March 22nd, 2023, you presented information about the proposed streetscaping improvements in Downtown Bloomington. This included a discussion on the location of bicycle routes in the area.

We understand that the "City of Bloomington Bicycle Master Plan" (adopted in May 2015) recommends locating a bike route on US-51B. We further understand that the Illinois Department of Transportation (IDOT) plans to establish bike lanes on US-52B in accordance with the bicycle master plan. However, at the recent meeting, your team proposed to relocate the bike route through the interior of Downtown on proposed flexible use lanes, constructed as part of the overall streetscaping program. We are in agreement this plan as doing so would have several benefits over the original proposal: (1) improved safety, and (2) access to bike amenities and points of interest that will be integrated into the Downtown streetscaping program.

The McLean County Wheelers, a cycling club with over 200 McLean County cycling enthusiasts, agrees that relocating the bike route from US-51B to the interior of Downtown would be in the best interest of the bicycle community and we support your efforts with IDOT to see this accomplished.

Sincerely,

Kellie Williams, President
[McLean County Wheelers](#)
mcleancountywheelers@gmail.com

McLean County Property Committee Meeting Minutes

Minutes of the Property Committee Meeting

The Property Committee of the McLean County Board met on Thursday, August 10, 2023, at 5:00 p.m. in Room 404 of the Government Center Building, 115 E. Washington Street, Bloomington, Illinois.

Members Present: Chair Val Laymon; Members Jim Soeldner, Geoff Tompkins, Corey Beirne

Members Absent: Members Lyndsay Bloomfield

Other Members

Present: None

Staff Present: Cassy Taylor, County Administrator; Anthony Grant, Assistant County Administrator; Cathy Dreyer, Assistant County Administrator; Taylor Williams, Assistant State’s Attorney; Julie Morlock, Recording Secretary.

Department Heads/

Elected Officials Present: Joseph Gaither, Facilities Management; Mike Steffa, Director of Parks and Recreation

Others Present: Trevor Sierra, Assistant State’s Attorney; Dan Leary, Information Technology

Chair Laymon called the meeting to order at 5:10 p.m. and declared a quorum.

Chair Laymon presented for approval the consent agenda including minutes from the July 6, 2023 regular meeting as well as the bills in the amount of \$275,730.83.

MCLEAN COUNTY BOARD COMMITTEE REPORT

PAGE 1 OF 7

AS OF 7/31/2023

EXPENDITURE SUMMARY BY FUND

Property Committee

FUND	FUND TITLE	PENDING TOTAL	PREPAID TOTAL	FUND TOTAL
0001	GENERAL FUND		\$275,730.83	\$275,730.83
			<hr/>	<hr/>
			\$275,730.83	\$275,730.83



COMMITTEE CHAIRMAN

Motion by Beirne/Tompkins to approve the Consent Agenda including minutes from the July 6, 2023, regular meeting as well as bills in the amount of \$275,730.83.

Motion Carried.

Chair Laymon confirmed with Ms. Taylor there were no requests for appearances by members of the public or County employees.

Chair Laymon introduced Mr. Mike Sewell, project manager for the City Streetscape project. He noted they had met with County Museum staff and County Administration but Cassy suggested meeting with the Property Committee to get further input before starting public outreach. Mr. Sewell presented information on the City of Bloomington’s Downtown

Streetscape including an overview of the project, schedule update, concepts and upcoming public outreach campaign.

Mr. Beirne asked for more information about the data they had collected. Mr. Sewell noted they reviewed traffic numbers and information, utility information and consulted with some downtown businesses. He noted the streetscape would involve a collection of all the sidewalks, paths, landscaping, and decorative lighting to enhance the pedestrian experience along the streets. Mr. Sewell indicated they were in-between the strategy phase and design phase and wanted to adopt a design late this year or early next year. Ms. Laymon asked if they were getting input from the public on access to downtown. Mr. Sewell indicated they had set up a steering committee to discuss needs and wants and the questions posed to the public would not be general but more specific.

Mr. Sewell showed concept pictures that illustrated a people centric instead of vehicle centric downtown. Mr. Beirne asked about traffic flow. Mr. Sewell confirmed they were looking at reducing vehicle traffic to one lane with a possible bicycle lane. Ms. Laymon noted the change to make the square street level and asked about ADA compliance. Mr. Sewell confirmed all plans were ADA compliant. Mr. Tompkins noted more pedestrian friendly but Illinois had about 7 months of winter and asked how that played into the planning. Mr. Sewell agreed that people are less likely to walk around in bad weather. Ms. Taylor noted that in previous discussions they had discussed snowman competitions, sleigh rides and other events that would involve cold weather activities that might encourage people to come to the square. Mr. Soeldner asked if security and car access during possible public protests had been considered. Mr. Beirne asked if they had considered closing some of the street's vehicle traffic. Discussion of options for security, deliveries and closures.

Mr. Tompkins asked about the balance between business utilization of the area and citizens' use of the property. Mr. Sewell noted that the City issues permits for outside dining but that they were taking into consideration creating enough space for businesses and people. Ms. Laymon asked how the court house would be affected by extreme rain events with the different landscape grading. Mr. Sewell indicated there would be some challenges but those could be addressed. Ms. Laymon asked if there would be any structural changes to the Courthouse. Mr. Sewell confirmed there would not.

Mr. Sierra asked for the physical parameters of the project. Mr. Sewell showed the boundaries for the project on a map. Mr. Soeldner asked if they had considered restroom facilities for the increased number of people visiting the downtown area. Mr. Sewell agreed there are nicer portables available, but they would need to look at options for permanent facilities. Mr. Tompkins asked how the County could help with the project. Mr. Sewell indicated they appreciated the support and would appreciate members getting information out to the public once they start up the public input portion of the project. Mr. Sewell confirmed the members were ok with them sharing the draft concept drawings with the public. Members concurred. Ms. Laymon thanked him for coming and providing information.

Chair Laymon presented on behalf of Facilities Management a request to approve an Amendment to Agreement for Boiler Replacements. Mr. Gaither went over the project. Ms. Laymon asked him to confirm efficiency would be increased. Mr. Gaither confirmed.

Motion by Tompkins/Beirne to recommend approval of an Amendment to Agreement for Boiler Replacement.
Motion Carried.

Mr. Gaither presented the monthly report for the Facilities Department. Mr. Beirne asked about the sewer smell. Mr. Gaither provided an update on steps being taken to eliminate the smell. Mr. Beirne if Mr. Gaither could find out what it would take for the clocks on the museum tower to be operational. Mr. Gaither indicated he would research how the clocks worked and possible repairs. Chair Laymon asked if there were any additional questions or comments; hearing none, she thanked him.

Mike Steffa, Direct of the Parks Department provided his monthly report to the Committee. He provided an update on the bait shop project. Mr. Steffa discussed a long-term project they were starting with the goal of improving the water quality of the lake. Ms. Laymon asked how they would eliminate the invasive plant life. Mr. Steffa went over the process. Mr. Soeldner asked him to confirm mostly mechanical removal and chemicals only on specific spots. Mr. Steffa confirmed and noted the safety of chemicals used. Ms. Laymon asked for an update on the beavers at the park. Mr. Steffa noted he had been in contact with several individuals including the Illinois Beaver Alliance. He noted there are grant opportunities to help with the situation and went over work that could be done to deter the beavers. Ms. Laymon asked about getting volunteers. Mr. Steffa confirmed they would ask for volunteers. Mr. Beirne noted another beaver situation in town. Mr. Steffa indicated he would reach out to get more information on how they were handling that situation. Chair Laymon asked if there were any further questions; hearing nothing, she thanked Mr. Steffa.

Cassy Taylor, County Administrator provided an update on the energy audit. Ms. Laymon asked for more information on high-performance water fixtures. Ms. Taylor noted that would include updated sink and shower fixtures at the nursing home and jail. She provided an example of sinks with automatic turn off features. Ms. Taylor thanked Mr. Grant and Mr. Gaither for their work on the project.

Ms. Taylor noted the Committee would be in this room next month due to delays in the Dias project. Chair Laymon asked if there were questions for Ms. Taylor; hearing none, she thanked her.

Under Other Business Mr. Tompkins thanked Mr. Gaither and Mr. Steffa for their work to maintain both the physical buildings and natural settings for the County. Chair Laymon noted the next meeting would be September 7, 2023. She noted there was no other business to come before the Committee and adjourned the meeting at 6:18 p.m.

Respectfully Submitted,

Julie A. Morlock

Julie Morlock
Recording Secretary

Community Open House Attendance Logs

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#2

DOWNTOWN FOR EVERYONE

"DOWNTOWN BLOOMINGTON STREETSCAPE" 2nd COMMUNITY OPEN HOUSE - REGISTRATION FORM

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Community Open House and Website Feedback

Public Comments (10/11/23 through 3/23/24)

Comment # Comment

- 1 Too much car traffic in one-ways downtown
- 2 Need for rentable e-scooters and e-bikes. Solar charging stations. Rainbow crossings by Bistro.
- 3 Rainbow crosswalk near The Bistro. Need spaces for e-scooters.
- 4 Weird is memorable! Go wild with the modern architecture!
- 5 I still think the idea of a meandering street can make the experience more pleasurable. The real obstacle is the bike lane which has a double purpose for loading/unloading. But I like the idea in general.
- 6 Love the lights overhead!
- 7 Alternate C-bike and parking on East - cars will collide / Hybrid blend looks messy / Can't change most of the building so make big change in streets.
- 8 Let's do this!
- 9 Street sections - In all 3 scenarios we'd need a bike lane going south on center st. / Street styles - classic is more in keeping w/ our existing buildings. / Definitely prefer a bike lane next to the sidewalk. Otherwise, people exiting from a parallel park lane will have to pull out into the bike lane, plus bikes could hit car doors as they open. Would love to see a water feature that captures runoff, as in Uptown Normal. We'll also need good, safe crosswalks on center and East streets.
- 10 Alternate B-want to prioritize as much pedestrian room/access as possible but value the parking on only one side of the street
- 11 The water feature seems an unneeded waste of water and further reduces green space. There seems to be a kind of public-use tables/seating on the square. I am impressed with the parking plan and walkability.
- 12 I love the idea of lots of green space - trees, flowers, etc. Good lighting. Don't sacrifice beauty for utility.
- 13 Having a bike path next to parking isn't optional. B provides a much safer and smarter path for bicyclists.
- 14 PARKLETS! Strip bike lanes with a color to improve awareness and safety. Create "canopies" of hanging lights. Curbless around square. Mini parks. More greenspace.
- 15 need alternate accommodations for our homeless neighbors
- 16 What will be done about unhoused population? As a downtown resident, they are a problem that continues to increase. More walkability is great, but where will they go?
- 17 Love everything! Let's do it this time and not shelve it forever!
- 18 Can you do hybrid blend streets but classic/traditional sidewalks
- 19 Completely on board with everything I've seen tonight. Kudos to the city of Bloomington for its dedication to this project!
- 20 Great job!
- 21 Create a welcoming feel for all ages. Family "hang out" feel needed - currently adult feel oriented. Features water and art to go visit. Fountain also good for photo ops.
- 22 Please provide a logistical plan from the city of Bloomington outlining the maintenance of this proposed space. This would include jobs and duties of city employees - including job descriptions and budget distribution for wages.
- 23 I think there needs to be more communication with all the downtown stakeholders. For those that work in these spaces, disruptions and change can be welcome, but then needs to be more open conversation. I also worry about sustainability. Will the city hire more staff to maintain these new features (cleaning the splash pad, managing projector, weeding between cobblestones)
- 24 As long as there is safe parking...
- 25 let's move forward!
- 26 I love the idea of the MOST sidewalk. I would love to see the protected bike lane in this scenario. As an owner of a building and resident I raise the desire for less cars and more people. START THIS PROJECT
- 27 Major concerns are availability of parking, safety of bicyclists, and stormwater drainage.
- 28 Don't like the concert stage on the square
- 29 Very excited to see this happening in the community. Would definitely be interested in continued opportunities for public input or ways to support as this aligns with what I do for work. Love walkable and bikeable communities!
- 30 Will there be interesting murals both modern and old? I was in Pontiac last weekend and I was surprised at the number of people admiring all the ROUTE 66 murals!

31 I didn't feel overwhelmed with the closeness of the sidewalk in "A" but I could see it being tight with servers at tables, more than one person walking in either direction. Make
Douglas lots (surface) more appealing looking. Offer limited number of permit parking in 4 hour lots for business and employees.

32 Agree with starting with museum square
PEOPLE OVER CARS! WALKABILITY! / Street Sections A-not keen on this one. Limits the walking area and when you add in outdoor dining, need space to get a stroller or
wheelchair through. But wouldn't be mad about C. / Street Styles-like some of the hybrid features. Lighting! Trees! / parking-consider pay to street park, tree garage. would
33 encourage downtown employees to not monopolize street parking. add public restaurants (at least during events) permanent structures to open and close streets. business
signage-no banners, no electronic/neon/LED lights. Feel like the water feature/splash pad might be a safety issue. Wet kids on those slippery stairs might be hazardous, it also feels
close to the street to encourage kids to be running around (outside of times where the street is closed) overall, love all the ideas. Keep them coming!

34 Take care not to just duplicate what Normal is doing. Keep Bloomington identity unique. May be one reason to lean toward more traditional styles. Ideas so far look beautiful and
promising! Open house was a great idea!

35 1) Connection/Bridge to local residential areas is very important. 2) Quality and width of sidewalks is important. 3) Ability to easily and safely bike downtown is important.

36 The reduction of any parking is detrimental to downtown. Bicycles reduce the flow of traffic.

37 It's a beautiful concept, but I can't vote for any until I know what you are going to fix prior to this plan. Parking is an issue. You target people who come downtown. You have a
homeless issue. You shouldn't paint the house until you powerwash the dirt.

38 We need to commit to whichever design we choose. If we half-ass it, we will waste tax payer money.

39 If A or C is chosen, switch the bike lane and parking lane. Consider reverse angle parking for increased safety.

40 More communication between stakeholders-the people who live and work downtown is needed to move forward. The water feature is concerning, mostly due to the maintenance it
will require. The city will have to hire more staff. Too many flags for no reason. Need to include updates to the South side of the square for consistency.

41 Question #2 is skewed. I want the greenery of "traditional" but juxtaposed with modern art, structures, energy-but the photos of those options are mostly pavement. Yuck. I want
protected bike lanes. Alternate C should swap parking and bike lanes to be perfect. Projected lights are "fun" but light pollution and not an amenity.

42 The museum lawn design doesn't invite staying. I'd like to see more areas just for sitting in the shade with a friend, not shopping or "doing" public restrooms please! Visual
designation for pedestrian. Also the splash pad maybe doesn't serve the same function that a fountain would - kids playing like to get water in unwanted places. Areas (like the
brick/concrete distinction) for amenities. All the protected bike lanes!

43 please ensure proper bike parking, trash, water fountains, or public restrooms. Would love to see bike path separated or have activated signals i.e. ann arbor

44 Don't forget ADA / take out curbs / create design for south side of museum

45 more public restrooms and drinking fountains are a must

46 It's lovely however you have too many issues to address before you tackle this - 1) parking 2) homeless 3) you need to encourage one trip visits. YOU NEED METERED PARKING.

47 Close the square to cars, make it 100% foot traffic or cut 1 lane down to allow for more walkability/greenery/seating space.

Alternate A -but not good - eliminate bike lane / Parking is too important to lose any spaces. The amount of people that use the current bike lanes is few but because they have a
48 loud voice and the city feels like we have to accommodate them. We are not in Chicago!! Let the bikes ride with the traffic. There is never enough parking for the arena. This
discourages people to come to any of the shows. Think about adding a hotel in the downtown for conventions and events.

49 More residential.

50 Safe, well-lit parking is critical. As a downtown resident, I just hope there is some effort to NOT increase the homeless loitering.

51 More communication with museum staff needed to work out the finer details for implementations. Start referring to the "museum square" in downtown Bloomington in all
communication NOT downtown square. I like the several design excerpts. It will be good for downtown

52 Very nice presentation!

53 Public restrooms. Raised enclosed catwalks. Closed off pedestrian area.

54 Would have loved to see an option with no vehicular access and only pedestrian. At least for a few blocks.

55 Wish there was a pedestrian only option.

56 For #1 B because I prefer diagonal parking - question what about deliveries for the businesses? With one lane of parking instead of this that may be a problem logistically. For #2 we
have classical/traditional now - I love the addition of pavers because it is warmer and adds interest to not have all concrete and asphalt - keeping classical touches in place like
street lamps and adding twinkly lights and modern touches makes the space inviting and inclusive for all ages. I look forward to hearing/seeing how mosaics and sculpture and
public art will be incorporated.

57 Where is wifi? It really would not be difficult to have public wifi covering the walkable areas downtown.

58 The water feature needs to be done well. It needs to be on the Jefferson Street side. Close the one Block of Jefferson by the museum. Create water feature, concessions, restrooms, picnic area, and a shelter for farmers market (and other events) headquarters. Information building.

59 At one of your kiosks you had overhead lighthing. Those need to be incorporated all over the downtown area. People want a reason to "hook up". Lighting and safety go together! Stores might be willing to stay open later developing many more visitors downtown.

60 Parking and walking spaces can be done better. None of your options are quite correct. The issues around garbage pick up were not addresses here either. More trees/planters/seating could be planned in as well. Talk to Jamie Mathy and truly payattention to what he is saying.

61 Street sections - prefer none / still the same problems - go beyond the main avenue all the problems still exist. FYI in weather people do not walk here and parking needs to be nearer. No ADA shown on rendering. Downtown/surrounding area not supported.

62 Need to expand entertainment space behind museum.

63 I'm happy that the plan extends to beyond the center streets and connects to the outer neighborhoods. The weste side often feels forgotten and I appreciate the efforts to include those areas. Why so many flags on the square though?

64 People do not come downtown for parking. They come for events, shopping, dining. There is plenty parking with the garages.

65 Street Sections - NO to alternate C / Street Styles - DEFINITELY NO to modern/contemporary. Maybe some elements are nice to hybrid blend.

66 02-ADA access?? Love northside improvement and outdoor projection. 05 - like the off road bike lane. Transportation center is definitely needed.

67 Street Styles - like modern but history is unique and attractive and US keep historic street lamps! Love the storage - not sure about splash pad. ADA (02) - with more consolidated parking, we'd like to see more ADA/accessible parking not just minimum. Make sure ADA can get to lawn and stage on square. Keep new way finding sign and arch! :)

68 Sustainability and climate residency must be prioritized - flooding prep, reducing transmission pollution and car dependency, more pedestrian-friendly streets!

69 Pedestrian priority should be the design focus - minimize parking to get full use of garages.

70 Plan to manage for homeless occupancy.

71 Doesn't look like you included the cultural district (MCAC and BCPA) in your plan. Why?

72 Why no consideration for the existing art hubs? The "Program Goals" map completely excludes the BCPA and MCAC.

73 Downtown needs more trees, decorative grasses, and plants in larger spaces to help provide shade. Etc. sidewalk repairs are a MUST!! Public art will bring more variety of people - see Ottawa, Geneva, Urbana

74 Option 3 - don't do this! BLM has spent way too much on downtown already and is not generating a lot of traffic to DT. The arena was a bust. The BCPA generates some traffic, but continues to run it in the red and most people don't spend more money DT. The return on investment of millions of tax payer money is not there and would be there. These types of projects SHOULD be put to a vote in a referendum. A small committee that is appointed, should not have so much say in tax payer money. Just putting a pretty facade on some buildings i not wanted by the majority.

75 The #1 complaint about downtown is lack of parking. People do not want to walk very far unless they are casually strolling. If they have specific errands, they want to pakr as close to the business they are visiting.

76 Jefferson from Main to Cneter should be a pedestrian-only area. Not too thrilled with water features around the museum. Like CT transfer station design. Wish we could carrow East and Madison - NOT ped friendly.

77 Please keep shop owners and businesses in the loop about these proposals, or better yet, more involved in these proposals.

78 NO WAY! To Alternate C Street Section / I don't think the modern vibes with our historic buildings.

79 It's about time, thank you - love it and I support it!

80 Need lanes for "delivery" trucks garbage is now terrible. All the "new" won't help if the garbage, etc. isn't fixed.

81 Of the street section options I prefer Alternate B the most because it separates vehicles, bike lane, and pedestrians the best. I do think it would help to have a more long-term plan to include areas for streetscape redesign beyond just the core downtown area, such as library area and around the arena.

82 No parking downtown.

83 Close street southside of square. Need that for event/gathering space.

84 Lighting/Lighting/Lighting! Layers of light - improve safety, LOVE water features :), planters/trees. EXCITED! Thank you!

85 Consider marking bike lanes with a unique material or color so bikers and pedestrians can stay in the proper lane.

86 These are very beautiful but lofty ideas. .Don't paint the house until you have power washed the dirt. Issues to resolve: parking, and homeless. Questions: what is the incentive for any business to locate downtown? What is the cost and what was the cost of devising this plan? The cart is well before the horse here.

87 No water feature on the Museum Square. It would be better placed elsewhere downtown if that is kept in the plan. Prefer traditional, but hybrid is nice too. The modern feels soulless and cold.

88 I don't like the water features location. While centralized, I think it cuts off walkability and access, introduces fall risk with the amount of bars, unless constantly maintained

Better placement would be by bcpa

89 Please consider putting pressure on current building owners to upgrade and maintain the exteriors as well.

90 I think that walkability should be the priority, with the exception that there be accessible spaces for those with mobility issues. With the parking garages surrounding the area, there is plenty of space for folks to park . Perhaps a compromise are some spaces for "pick-up" if people are ordering food and just need to swing by and get it from restaurants.

91 Adding permanent biking/walking paths that connect the trail will do wonderful things to the foot traffic of the downtown area. On street bike lanes are at least something but is still scary territory for the more novice biker. Barricades or some sort of separation goes along was in increasing viability to more pedestrians. The room may not be available but roundabouts have shown to decrease automotive and pedestrian accidents. Really excited to see what new and interesting uses we can find for this great communal space.

92 I believe this option would be the most equitable to all impacted parties while still accomplishing the mission of improving walkability of Downtown Bloomington. To mitigate the safety issue of the flex lane, it should be a priority to avoid any structures or landscaping that would obstruct a driver's line of sight in a way that would be detrimental to a bicyclist in motion.

Streetscaping is all well and good, but what about safety and cleanliness? We have issues with people urinating and vomiting in door ways. What's going to stop them from doing such on the water feature? And we have issues of close calls of pedestrians almost being hit crossing intersections. Will this help or hinder the situation? And is the city committed

93 to maintaining this? They aren't committed to tons of trees they plant each year in the parkways - a good percentage die from neglect.

Most of the images shown are for flat areas. How will these designs work for the hills on Main and Center? Will these designs be extended to East and Madison?

Is the only reason for the water feature is because they have one in Normal? It seems incongruous with the rest of the area.

94 These upgrades will be great for downtown. I live downtown and we are very excited for these changes. How will we clean up downtown and maintain to keep it clean? Right now, downtowns current state has trash all over (especially north side) . As a resident and business owner downtown, I hope the first step is to clean all of downtown up and help the homeless find a new home that isn't downtown Bloomington.

95 What are you doing to help the unhoused population? As this is in crisis, none of these improvements will be worth it if they are not dealt with. They will simply be using the night fountains to do exactly what you think they will.

96 Wow! I love the options you have presented! I'm looking forward to a more immersive experience downtown. Thank you for all your hard work!

97 I like the idea of more green (trees/plants) in the modern design but the look of the traditional look. And walking around town I have never not crossed the street to get to somewhere I want to go that was seen as a potential con to business owners on opposite side of the street

98 I like the changes called out here. Pedestrian and bike traffic are often under represented in smaller cities like ours. A couple questions and thoughts. How will this change bus routes/bus depot? Im not a fan of the projections on the buildings, not sure how that will be an attraction full time, maybe just for big holidays? I could see this also annoying people in the apartments nearby

99 I think Downtown is plenty walkable, people don't actually want to walk though. They complain if they have to walk half a block. They might walk if they have decided to take a stroll around the shops. But that's few and far between. Most people have an errand to run and they want to park close to where they are going. In the cold months especially no one will want to walk far.

The water feature on the side of the museum. I'm not sure that is a great idea. I just imagine it being a place for drunks to pee. Then children are supposed to play in that? I wonder if anyone in the planning committee ever goes out between 11pm and 2am on the weekends to watch what goes on.

100 No one seems to think it's their responsibility to pick up trash. The cans don't get emptied enough. There needs to be a plan for basic maintenance and cleanliness.

Would love to see that native plants make it into the landscape design

101 With the amount of parking near downtown (parking garage, multiple lots, and other side streets), improving the pedestrian space and walkability of downtown would bring the most benefit to businesses and overall feel of downtown. Making downtown a pedestrian friendly place would improve opportunities for restaurant outdoor seating and make biking more practical, as well as make the improved concert area more accessible and open. I think keeping with the traditional brick and small town style fits Bloomington the best and would go well with the improved pedestrian first approach. A hybrid blend would be okay, but going too modern would remove some of the charm of the downtown area.

102 I don't like the idea of having the parallel parking on the other side of the sharrows that's really dangerous when people open their doors.

103 The style should include landscape design that is sustainable and regenerative. Collaborate with the Ecology Action Center and the town of normal to explore plantings that are beautiful and ecologically beneficial.

104 Let's do this! So much opportunity to improve the experience for everyone in our lovely downtown area, we can make it so much better!

105 Love the designs! I don't see how any design would be a down grade. Excited about the walkability and a revamped look! Would really make the downtown area a much more desirable area to go eat or do shopping or going to live music.

106 Let's move forward!!!!

107 I think the downtown area is so compact that having parking only on one side is worth the additional walking space. Especially if improvements to the parking garage are coming.

108 I want to see art, lights, and lots of color!

109 The hybrid seems to be more appropriate considering the classic architecture of downtown's buildings while also modernizing the streetscape. Incorporating Perennial plants would be a nice addition to cut down on landscape maintenance.

I love these improvements! I would love to see more improvements for cyclists. Many cities have started painting bike lanes green or red and I really think it provides another layer of separation from cars without many added expenses.

Even better than this would be to include ballards or planters or some other form of physical separation from cars to improve safety. I understand that this may be difficult in this project as parking is on the other side of the bike lane. However, things like this improve safety for cyclists, it'd be nice to see here but also in places like Front Street.

Another improvement, that is perhaps a bit beyond the scope of this project, is improving connectivity in bike lanes all over the city. Bloomington-Normal is just dense enough to be ideal for many to commute via bicycle but a lot of useful connections just aren't there. Constitution Trail is an amazing resource we have here and I think just improving the bike network to go beyond these scenic trails would do wonders for the city!

For this project, just ensuring that people can get to these very nice bike lanes from where they live and to where they want to go is essential in making sure that they are actually used!

Thanks so much for reaching out to the community for input, it really makes me feel connected to everything! I am very lucky to be in a place that values feedback like Bloomington does. Thank you so much!

111 As someone who is a cyclist, adding specific bike lanes is MUCH better than "Sharrows." After traveling to Europe, the Dutch idea of separate bike lanes really raised the number of bikers. Importantly, we need to add more bike parking facilities and secure a more permanent connection to the Constitution...

112 What's missing here is the ultimate intent of the new streetscape. If it's to encourage biking and pedestrian access, Design Alternate B would be safest. But where will the parking be? Will there be a safe, structurally sound parking garage nearby, or are there other plans for parking? As for the streetscape style, that also depends on intent. Do we want to encourage meeting spaces, contemplative spaces, or something else? I do think that whichever choice of style is decided on, we need to allow for adequate stormwater drainage. That could mean curb cuts to swales or stormwater drains, or raingardens, or other solutions. The more hardscape we keep or add will make stormwater drainage a greater

113 I'm so excited this is underway in Bloomington! Improving the built environment will have positive impacts on community well-being and economic vitality for years to come!

114 Our community needs this!

115 As someone in a wheelchair, I'm excited about downtown becoming more accessible

Prioritize dealing with real needs like empty/dilapidated buildings in downtown, deteriorating parking garages and infrastructure needs before the 'nice to have' items like a water feature and outdoor projection

116 This would be on the nice to have list, but I think Bloomington a community market space like one of these could be a neat addition to downtown:
<https://www.newbocitymarket.org/>
<https://milwaukeekeepublicmarket.org/>
<https://midtownglobalmarket.org/>

117 These redesign plans make so much sense for downtown! I'm really hopeful and excited for follow-through and completion of this work in some capacity. It will transform
downtown into the jewel of Bloomington.

118 This is so great!! I think improving walkability is vital along with more space to be there safely with kids and bikes and dogs.

119 I like design C, but it would be better if you switch the bike lane and parking. Place the bike lane curb side and keep the parking left of the bike lane so cyclists will be protected from
traffic. That way it'll be safer for everybody.

120 How will the unhoused be assisted?

121 Please stop this nonsense. Stop wasting money on useless things like this. Fix the roads, or lower our taxes. We don't need any more pet projects. This is really annoying. Stop
wasting money!!!!!! Feed the homeless, give them a place to stay fix what is already broken like the crappy roads all over town. STOP SPENDING MONEY ON THIS TYPE OF STUFF

122 Love these ideas and am so excited to see this implemented! As a downtown resident, my concern before any of this is implemented is the homeless population. These new
spaces are beautiful, but don't want to see anything misused.

123 I think including more things that reference Route 66 might help draw more travelers to downtown. We should have something that makes people want to visit the downtown area.
More inviting eating and shopping places are needed.

124 Like option C with the hybrid style!

I don't favor A, B, or C. An ideal plan to me would be to close Main between Washington & where it ends at East, close Jefferson between East & Madison, close Center between
Washington & Monroe. Keep Center open from Monroe to where it begins at Madison. Have Center return to Madison at Monroe. This allows access to the Center parking garage
and whatever it entails in the future. It also maintains access from Madison and allows continued use for the wayfinding sign. Add a parking garage on the flat (currently privately
owned) lot at Market & Main.

Note, I selected C only because no options similar to mine were offered. I definitely believe we should go BIG!!

126 No discussion on bus system which now uses Main St. . Water feature not large or interesting enough to be an attraction. Use of pavers is good, would calm traffic. Significant
investment has been made to erect vintage style lights, why not keep them?

127 Tearing up downtown to make changes is going to drive people away from the area so whatever you do make it quick. And, fiscal responsibility isn't one of the City's strong suits - be
cautious to not overspend please.

128 Who the heck is complaining about crowded sidewalks? The only things I have to dodge each day are the persons who ask me if I know the time then proceed to ask me for money,
and the overwhelming smell of urine and vomit in the parking deck.

129 We get a lot of complaints about parking, so I don't want to give up so much. I would like to see outdoor dining as less of an afterthought, so I like not eating in a parking space.
Maybe the city can help fill vacant spaces instead of writing reports about a missing ceiling tile.

130 Please make sure there is parking for those of us who can't parallel park

131 \$700,000 just to study one block in Downtown? Why are the improvements only planned in front of that one building? Downtown is large and needs updating throughout, not just in
the middle. Do better.

How exciting is this?! As a new and young resident of Bloomington (24yo) it is important to me that this concept prioritizes walkability and green space. We live in such a
manufactured world, that city squares that prioritize pedestrian and bike traffic are the places I want to be. Likewise, I challenge you to consider features that keep pavement and
urban heat to a minimum. No one wants to sit outside if the pavement is radiating heat and there is no shade; please use green spaces to mitigate this. I would much rather see the
parklets and protected bike lanes than more parking spaces. Accessibility is important for drivers that need to park next to the storefront, however, how can you provide an option
that respects accessibility and ENCOURAGES people to actually use the bike lanes? I'll tell you right now that I will never ride my bike to downtown if I am in fear of my life trying to
dodge cars attempting to parallel park across my bike lane.

132 I absolutley love more walkability. I think the younger population will really value that and create a more "city like" feel helping retain younger professionals. I also think outdoor
seating will bring huge potential to the downtown area. Additionally, I think the city needs to be more intentional on what shops and stores are approved and signage that is
required. There should be a consistent look and plastic signs make the area feel cheap and take away from the charm. We need more storefronts that cater to an experience,
locally owned restaurants, and boutiques.

133 I believe that option B offers the best option to incorporate drivers, walkers, and bikers. If the Connect Transit hub that will replace the parking garage will not offer the public
parking as being discussed, I would lean towards Option A.

134 Love the 1 driving lane idea, people drive too fast!

135

136 Beautification with no less parking is important. Street parking is already difficult in the area. There are garages, but people are less likely to use a garage when wanting to stop in a store or business

137 All 3 designs are terrible. They do not represent Bloomington's ideals or atmosphere in any sense.

138 I love the proposed improvements especially the projections and water features!

139 We want more plants and green. They give life to an area. Plants and green impress on people happiness and warmth, somewhere where people want to be .

140 We need this as soon as humanly possible! Yet this shouldn't also be confined to just the Downtown area, but in other areas of commerce around Bloomington, including along Veterans Parkway, such as the Eastland Commons, Empire Plaza, Oakland, El Dorado Rd. and the entire length of Market Street.

141 The water feature is absolutely the worst part of these plans. Not only will it cause problems for businesses with wet children walking in and out, but drives pedestrians away from the center in fear of playing children/getting wet.

I am favoring Plan A and favoring Classic design. I like the looks of the new garage on Market and Monroe with retail stores on lower level and a possible mix use of the upper deck of

142 the garage. I feel the Transportation Center (Connect Transit) should be at the Front Street Garage where there are more destinations and workers: New Public Library, Police Station, Jail, Law & Justice Center, McLean Co Health Dep., Grossinger Arena, Government Center and many eating locations.

143 So glad you are pursuing this!

144 No brick pavers, too high maintenance and not ADA accessible. Keep it simple, museum square only to start, and no splash pads.

Parking can be a deal breaker for many people. Many do not like Uptown Normal for a quick meal or stop anymore because of all the parallel parking which also is dangerous when backing in in the small streetscape. Elderly shopper do not care to park far away in parking garages. The positives in Normal that would help Bloomington is the beautiful landscaping and flow of color and design of buildings. Water feature are aesthetically nice but can become a liability when children are encouraged to play in them unless meant

145 for play. I am a native of Bloomington and grew up with downtown as our primary source for about everything. So glad it will be revitalized. The atmosphere of evening lighting in your photos is a great addition not just for safety but atmosphere to bring people in. Safety in design should be a priority as right now many homeless esp on the north end are a concern and not inviting.

146 Convenient and accessible public restrooms! Small designated spaces for street performers (jugglers, magicians, musicians, etc.). Plenty of benches.

147 I don't think bike lanes need to be a priority. I practically NEVER see anyone riding bikes in bike lanes around town.

148 When we have out of town guests, they comment on how well preserved a lot of the old buildings in Bloomington are. I don't know why you'd want neon etc, when we have something much more timeless and interesting that just needs refurbished. Also, it mentions books, I don't know where to buy books in downtown b;ton. I also wish there was at least a little place to buy beer nuts, people used to love that, and its an only in Bloomington sort of thing. I'm ok with the additional music space, don;t see a need for another splash park, plenty of those in town. Sometimes I don;t feel safe walking after dark, can that be addressed?

Hi, I have worked downtown for over 30 years. I am very happy to see progress on downtown renewal.

We have many clients who complain about the downtown parking situation. The complaint is about the over zealous parking ticketing- not about the lack of parking. Our clients are often here for hours at a time. This makes the downtown "unwelcoming". Please consider open-space (as opposed to deck) parking, like patrons would have at virtually every other

149 common area location in the city. This will likely entail tearing down some buildings for parking. Moreover, the parking deck on Monroe is an unsafe , unsightly structure. Tearing it down is a must for any revitalization. But in turn, the plan must include a different vision for parking.

Aside from that issue, all the proposed plans look fantastic.

Peter Brandt

150 How about none of these? I guess we haven't learned that downtown is a money pit. All the funds that have previously been funneled to downtown have just gone to waste. This will just be the same: millions of dollars for a whole lot of nothing. I know you won't scrap this project based on one person's feedback, but you should learn from previous history.

151 You MUST repair Washington street!!!

I am disappointed to see that none of the plans include the cultural center or Art Center where parking is truly an issue. For a business to be successful it must be convenient for people to get to and to use their services. Limiting parking should not be an option. If I understood the plan correctly, it would remove the parking level (Lincoln lot) and rebuild a bus station with another parking garage. Is that the best use of tax dollars? perhaps saving the present garage and adding a bus station would be more fiscally responsible. This is the way I interpret the plans you have laid out on this web site.

152

153 Can you tell me what is the estimated cost? And what will the increase in tax be per household?

154 Design 3 is my choice. The challenges don't seem too complex . I like the parking on both sides of the street. I like the classic/traditional design look because it is surrounding a very old building and would blend better with it - make it shine.

155 The homeless population is a huge problem for the downtown. It needs to be addressed or national/local retailers will avoid it no matter how nice we make it.
156 There is not enough green space or a large enough water feature to draw citizens downtown - therefore I would not reduce the parking.
If you're going to spend the money, do it right.

157 Consider adding speakers with soft music near sidewalks throughout downtown. Other downtowns do this and have the speakers mounted on light poles. It adds a lot of ambiance
to the downtown area and draws in many more people, due to the added sensory of having music playing while being out in downtown.

158 Safety of the flex lane is IMPORTANT if people are going to use it! Thank you for making the curbs disappear :)

159 Definitely plan a and modern contemporary should be the point.

As a young person who moved here from California two years ago, I have to tell you that what makes this town special IS the classic, historic Main Street feel. I saw the
contemporization process happen again and again in CA, and what you inevitably end up with is a look that feels VERY dated VERY quickly. There are a million towns with gimmicky
water features, nonsense Adirondack chairs that seemingly exist solely to be vandalized, ugly light fixtures that try to capture some Carnaby Street magic but don't work out of
context... but when you stumble upon a downtown that feels truly grounded in its history, it's something special. (There's a reason people flock to Galena every year!) Bloomington
retains so much of this unique charm, and I hope it remembers to prioritize that. Because gimmicks like projection screens and water features are just that - gimmicks. (Come over
to my Miller Park neighborhood and visit our tacky new Route 66 lawn ornament on any given day to see how that's working out.) What's more important are things like walkability
and bikability - so I desperately hope you prioritize those parts of the project rather than flushing money down the toilet on flash. I applaud the attention paid to improving East and
160 Madison streets as well, and hope you consider expanding that part of the project. Improving walkability in the *surrounding* neighborhoods would certainly encourage more foot
traffic and ease parking worries - as of right now, there's no way for many Westsiders to walk downtown in a particularly safe or enjoyable way. I love going to the farmer's markets
on Saturdays, shopping at Neighborhood Thrift, eating dinners at Rosie's and Anju, drinking cocktails at Mystic Kitchen - and I know my husband and I would do ALL of these things
more frequently if there were a Constitution-Trail-style walking path or even a well-maintained street that could get us there more easily! We've noticed more and more young
couples moving into our area near Miller Park, and I hope all of us will be able to walk and bike downtown more freely in the future.

Thanks for encouraging community comment, and kudos on the site design - this has been a very user-friendly experience, and I hope that attention to detail carries on through this
process. Looking forward to the improvements!

161 **FIX THE ROADS FIRST**

There is no problem with "walkability" in downtown. Certainly to the extent the cost of this requires. There are more pressing problems in our community that giving downtown a
162 facelift. This is a luxury tax payers really can't afford at this time. Taxes are increasing almost monthly for one reason or another. Please consider people who would rather spend
their money of food and housing. Some things we shouldn't do just because we can.

163 Gross waste of money. Fix the streets and the areas where 98% of the population LIVES, not spend money where 2% LIVES. This idea is to feed the ego of Gleason and company. His
work in the Decatur downtown and it's failure proves he is wasting money.

164 Please don't spend our tax dollars like this.

165 Reduced lane usage is a mistake.

166 Walking downtown is a mistake. There was a murder down there.

167 Want to hear more about the blocks north of the square including the more dense bar district

While the designs are lovely, we cannot afford to spend our hard earned money on items that are not necessary. Upgrades will not bring people to stay. Taxes are too high, roads
168 need fixing, we need to eliminate Smart cities, Agenda 2030, leftist government that does not care about the citizens, eliminate DEI, CRT and CSE in schools. Many students are not
meeting education standards, many are not getting enough to eat.

Please re think your values. Put God into your life.

As a long time citizen of Bloomington (50+ years), I strenuously protest the spending being considered on downtown and the surrounding area. LISTEN to your citizens and STOP
169 SPENDING OUR MONEY ON THIS FOOLISHNESS! None of these choices are acceptable as they obviously will cost an extreme amount of money. People don't want to hang out
downtown because of the difficulty with parking and the beggars. I am so sick of this city spending our money so recklessly. STOP!

170 Why do you think downtown needs to be reimaged? There isn't enough lipstick in the world for that pig! Stop spending our taxes on this. There are OTHER areas in Bloomington, in
case you are not aware. Get your heads out of your asses and listen to the taxpayers. WE DON'T WANT THIS!

171 Please focus on the roads and sewers! Downtown will never be a safe or attractive place to shop as long as it is located near the west side, has an ongoing homeless and crime
problem. I do not feel safe during the day time let alone the night time.

172 Waste of money - nobody will go downtown for any of these ideas, aka arena

173 Don't spend the tax payer money. It sounds very utopian, but you must consider, the majority of people in this community will never visit downtown, no matter what. Decreasing parking and trying to increase walking and biking makes it even more inconvenient. Also, have you considered that out of 365 days in a year, less than 30% of those days are comfortable to spend any significant time outside? We are not Disney in a warm climate, and you can't change that. Nobody wants to be hanging out outside when it's under 50 degrees, snowy, rainy or even humid and 90 degrees plus. All the ridiculous entertainment sounds real enticing, when you're trying to sell a bill of goods, but how much of our community really will regularly take advantage of that? Is it enough to justify the price tag? You know what would really benefit the community? Lower taxes. Everyone suffers under higher property taxes, and other taxes. I know you'll do what you want, but I'm like so many others that you want to pay for this, I'll be leaving this community and moving to a lower tax environment as soon as my child graduates high school (private school, because the schools we pay so much for are pathetic). By the way, how is the arena doing?

174 Before you get to far over your skis, fix the streets. Downtown streets are competing with IL State roads thru Bloomington as the very worst. No worries about speeding downtown with street conditions as they currently exist. And, if I have difficulty finding reasonable parking, I'll go elsewhere. So will everyone else

175 I have mobility issues, but not to the extent that warrant a handicapped card. Every parking space eliminated limits my ability to access Downtown. I have virtually stopped going to Uptown Normal altogether because too much walking is required. I have never encountered pedestrian congestion Downtown with the current level of access. The impressive and interesting traditional architecture of Downtown does NOT need light shows and water parks; it just looks like mayhem to me.

176 All great options - but also make sure that trash is taken care of in a timely manner, lighting is improved, and safety officers are patrolling to keep everyone safe. Great ideas and I'm looking forward to seeing the improvements! I'd suggest a curb type barrier for the bike lane. Offers protection to bikers. Another alternative to "design C" would be to reverse the bike lane and parallel parking lane (Bike lane against the sidewalk, then park lane, then one-way street). Again, protects bikers and doesn't allow cross traffic

177 between cars and bikes. I've seen this in many cities. Downtown St. Petersburg, FL is a good example, and it has one of the most vibrant downtowns I've seen. Thanks! I understand the need for parking, but perhaps part of the plan should be to use/purchase property for public metered parking lots nearby or small parking decks. I would really prefer almost zero cars and definitely no busses in areas where people want to eat/gather/walk. If not possible, then some sort of barrier (fencing, dense bushes, etc) to break it up. There's really nothing like having a nice dinner outside and having a bus or car belch exhaust just a few feet from the table. The buses really should be routed away from the streets within downtown anyway.

178 Maybe just a lot of speed bumps to discourage unsafe driving through the area.

I think these changes are exciting and I have long known that downtown has the potential to be a popular daytime and nighttime destination. I do really really like the vision you have put forth here.

179 However, making sure nearby areas and parking garages are well lit and surrounding areas are safe will also further promote interest. I think that is a challenge currently in today's environment. People not feeling safe or afraid to walk by themselves. Even in places I think should be relatively safe, there are times where I'm wary of some of the garage "residents" and some areas that just seem dark/isolated. Maybe it's optics but as someone who does frequent downtown socially I've heard similar sentiments, especially from It seems like option c only has parallel parking, I would visit downtown even less if there was only parallel parking because I do not enjoy trying to parallel park. Even with the amount of parking there is now, it is often difficult to find somewhere to park on busier weekends. The parking garage on Market is nice but I'm not sure what the plans are for parking in it with the new bus station going there. I think parking should be a priority. Even when downtown is busy, I have never thought "oh man, I need more walking space", but I have frequently thought "man I wish there were more places to park." Please don't get rid of the parking that is downtown, it will negatively influence the amount of visitors that I've always heard there are large caverns (not the right word) under the sidewalks downtown that would be required to be filled to make any substantial changes to the streetscape. If true, would that happen as a part of these potential streetscape improvements. This was always talked about as a barrier to improving downtown, so I am hopeful it's either not an issue or the City is prepared to do what they need to do to move forward! I wish this plan would have addressed the major barrier that is the racetrack of a state route surrounding downtown, because until people start thinking about/feel safe parking across and/or walking from the other side, parking is going to continue to be a hot button topic in the core. I really like the online engagement platform built for this effort - very simple and easy to participate!

180 I prefer option C over B and A for the reason that it offers the most pedestrian space while keeping the street even. Option A is too lopsided and option B isn't pedestrian enough.

181 Also the parallel parking on option C is really good because it provides a cheap buffer for the sidewalk from the street. I would look into incorporating many plants into the design as well, as it is proven that established tree canopies above streets reduces driver's speeds which may reduce pedestrian deaths.

The historic nature of Bloomington's downtown is its greatest asset and needs to be preserved and maintained.

Downtown is a unique multi-use neighborhood where commercial, retail, and residential exist in tandem. Residents and visitors, especially pedestrians and cyclists should feel safe while using their mode of transportation. Pedestrians and cyclists are more likely to visit various retail shops as opposed to automobile users.

182 Since Bloomington's Park system has several splash pads in various locations throughout the City, a splash pad water feature would be duplicative. Perhaps permanent tables/benches for chess/checkers would be of more value for visitors of all ages to gather and linger while playing downtown. This is where Bloomington should think outside the box.

While I believe access to permanent electrical outlets is necessary to support entertainment activities throughout downtown, constructing a permanent bandstand on the History Museum stairs detracts from the architectural beauty of the former historic courthouse.

183 I'd be interested in the cost breakdown of the options as well as proposed implementation plan. Although this is a "nice to have" design concept, we have other priorities in the city that need attention, like road repairs, sewers, and efforts to reduce costs by improving efficiencies.

Don't listen to any of the NIMBY east siders who'd never step into Downtown anyway, including Motney, Becker, and Lee. They have their little suburban enclaves and subdivisions, let us who actually live in and around Downtown be the loudest voices in what we want to see. Our historic core needs far more attention than these far flung money drains and this plan should go beyond just a streetscape. This should come with a new 5-10 year plan for downtown including how the city is going to tackle delinquent landlords, providing resources and aid to bring buildings completely into compliance, tax land speculators and parking lot holders, encourage indirect rent control measures until the state ban is lifted like a rental profit tax, and actually curate a Downtown through public funding and control rather than allowing the private market to ineffectively, inefficiently, and unequally develop it.

I'd love to see these plans extended to areas outside of the immediate downtown, Main and Center. It should be extended east to at least Gridley, preferably McLean, west to Lee, and south to Oakland taking in the old industrial center. We can extend North later. Downtown really is more than just the 15 or so square blocks everyone thinks about - mostly because of the abominations that bind it in, the four lane sections of Madison and East.

The city should explore ideas of emanate domain and other tools to ensure compliance and better move building stock, even if just the threat of it for absentee, slum, and out of town landlords.

184 At a larger scale we should readjust our taxing bodies to lower the taxes on downtown properties, if possible, and increase it on the suburban sprawl developments along Veterans and other areas. Removing parking mins and adding a tax per parking spot I think would do wonders. We subsidize too much of their space as it is. If Best Buy really wants to keep their current square footage but not pay for parking, Front and Center building has been open for the taking for years. Hell, see if Jewel wants to move it. Urban two story grocery stores are nothing new and the whole area surrounding Downtown is a food desert.

The city should use and encourage completely native plantings in future landscaping, not just downtown but everywhere. Reduce the amount of turf grass the city needs to mow every other week, reduce ornamentals that dont add to our ecosystem, and reduce the risk of invasives getting into unwanted areas.

Work with Connect Transit and other agencies to improve public transportation, at least explore what would need to happen first to ensure more ridership.

Start rezoning areas immediately outside of Downtown to allow multi-family and mixed use development. R1 zoning will continue to bleed the city dry. No one's going to get hurt if all of a sudden there is a duplex next to their single family home, or a coffeeshop with a few apartments on top over on the corner. This will also bring more traffic downtown with increasing amounts of people living around it.

185 I hope this is not rude to say, but it was very difficult for me to actually see the differences between the options, even with the pictures and explanations. I had the same photos open in all three areas and I was really squinting to see what the actual differences are. Still, I think B probably makes the most sense? There is already a parking garage downtown that is free for quite a bit of time during the day, so losing some street parking would not bother me.

186 Where do the delivery trucks park? Will fewer car lanes increase traffic jams and discourage people to go downtown? I prefer the seasonal traffic parklets because in the winter, customers don't want to walk so far in the snow.

The graphics on the courthouse is excessive.

187 Definitely a much needed improvement. Lots of exciting things happening already....but one thing that you could do to make downtown more inviting on a daily basis is creating a greenway / walkway / trail space between Illinois Wesleyan through Franklin Park and into the North Corridor. This is blatantly obvious...restore the blighted area, increase viable business, living space and help connect a tremendous asset of residents and students maybe even stretching to Constitution Trail around Empire or Emerson Streets. Most communities would love a chance to use this what is today a wasted space and opportunity. Please consider this :)

188 Love the redesign ideas!

Design. The parking that is lost with Plan B needs to be made up with additional parking in the parking garage or somewhere else. There is a shortage of parking downtown. Streetscape style. This is hard to tell because they do not look like Bloomington. I think it is important to keep the city connected to the two main attributes the city has--Abraham Lincoln and Route 66. and perhaps the origins of State Farm downtown. what is happening with that building? Anyway, I guess that would mean a more traditional aesthetic with some modern bits.

I would like to see easier pedestrian access to the Library from downtown.

190 I am excited for downtown Bloomington to be improved! This should make more people feel positive about the area and produce a desire to visit and spend time there.

191 Until you give people a reason to come downtown (not just a farmers market) they still will not come there. All you have now are bars a few restaurants that are over priced and too niche.

192 Veterans memorial plaques MUST be preserved and prominently placed in whatever design is adopted.

None of the above!!! Stop spending money on pet projects like this that bring little benefit to the average citizen but force us all to pay for it. Bloomington residents are being taxed to death and many are leaving the area. Businesses are leaving or selling property to keep costs down. The expensive pet projects (library upgrade, the new water park, many new parks, etc) are getting a ridiculous amount of tax dollars allocated to them while necessities that we use every day are NOT being addressed. Our roads are crumbling horribly in Golden Eagle and many other neighborhoods. Our water infrastructure needs major updates. Do project to address that! Stop pouring money into the nice-to-haves while neglecting what you SHOULD be paying attention to!

193 Stop spending money on this type of stuff. My property taxes are really high, and you want to piss money away on this nonsense. Lower property taxes first, or fix the crappy roads. I have concerns with removing on street parking options considering we do not have a safe parking garage within a reasonable distance to most businesses in downtown. The Market Street garage not only needs a large number of repairs, it also falls into a "hang out" for many of the homeless people that frequent downtown. This makes patrons of downtown feel very unsafe. With regards to the spaces for pedestrians there is a big concern to this being abused by the homeless population. This is a concern that also needs addressed. Currently the homeless population has increased and due our police not able to move them, adding more places for them to take up residence is concerning. I would like to see some sort of action taken with regards to the homeless prior to the streetscape updates happening.

194 We live on the far east side of Bloomington and don't see us using the downtown facility. We attended two farmers markets last year and didn't see where you can really shop. We are not in the bar/grill scene and limited gluten free items available. Why do we need projections, water features? Will they be politically correct? Will it really draw a big crowd, maybe at first, This is geared toward a specific audience. No real shopping - specialty shops. How much did we pay (taxpayers/residents) for the consultants/plans for this project? No shoe stores, grocery stores, clothing stores. All of the buildings are owned by private entities so why don't they pick up the cost or provide products that people actually want/need to buy? Parking will be very limited. Will you have armed guards at the parking deck on Center street for the residents safety?

196 Option C and Hybrid Blend

197 Design alternate C is preferable & to offset the loss of parking we make downtown more accessible by re-establishing the Streetcar & connect people from Hudson on the North to Funks Grove in the South

198 How about we skip spending millions on this unnecessary project and put that money instead towards the water/sewer infrastructure, and other actually necessary projects. Seems stupid to double water rates over three years when we're also wasting money on a project like this one. Downtown will never be revived. Stop throwing money into a pit. Please coordinate with connect transit to increase the amount of buses and expand the bus schedule. Our city should work to eliminate dependence on cars and increase public transportation. A walkable city only becomes walkable when public transportation is actually available from people's homes.

200

We also need transit routes to and from Hudson, Heyworth, and many other surrounding cities.

201 I would love to see an option where Design A swaps the bikeway with the parallel parking spaces. It would be great to see a barrier between the motorway and the bikeway, emphasizing safety between the two zones. Additionally, as a young resident of Bloomington, I hope that you focus your designs on sustainability/greenery, walkability, attractiveness, and safety for pedestrians. This is your opportunity to rebuild a downtown that grows with the next generation. We want a cool place to hang out where we can stretch our legs and support local business. The rest of Town is hard to walk through and full of concrete. Please let this space be different.

202 Available parking is part of the current downside of downtown. The bulk of the citizens will have to drive to get to downtown. There will have to be lanes for delivery trucks without causing traffic problems. Current venues/shops are not desirable to everyone. Bars are filled with drunks and the disorderly. We don't care to be around them. Will there be any public restroom facilities? If so where. Who will maintain them? Will citizens be safe from drunks, drug addicts, homeless beggars, thugs, the mentally ill?

203 More trees down town will help tremendously. They provide cool shade and please our brains. PLEASE ADD TREES

204 As a resident I believe in the value of this project. Thank you to the city employees prioritizing this and making it happen.

Must, must, must consider the effect of delivery & ride-share drivers ignoring all parking regulations, posted or otherwise. Must not count on enforcement, either - just look to UT Normal circle for example of the avoidable mistake. Design should account for these needs to make it easy and natural for the delivery & ride share drivers to comply. None of these designs seem to take that into account. They're going to block the cycle lanes, park in the traffic lane, etc. It's also really odd the cycle lanes are not "protected" as is the current world-wide standard. In all of A, B, and C this can be improved by just swapping the parking and bike lane positions and adding structure (mindful of winter weather needs) that completely prevents cars from encroaching into the bike lane. Else, just forget the bike lane entirely... without doing that, it would just become a wasted space that cyclists will ignore. If you're doing a bike lane, please don't also forget bike parking and fixing infrastructure... but really, if you're not going to physically protect the lane, just don't add one.

205 Period.

Also, I live outside of town, but pass through often. I love to stop in at the bake and coffee shops, but if you get rid of convenient parking, that's going to come to an end because it would no longer be a quick stop for me... having instead to find parking outside the DT area or in a faraway parking structure. How to account for this? Nearly all parking could be short-term, 20 minute parking. Another -in-the-middle parking structure would also help. Really bizarre this hasn't happened with Connect Transit. I know it's expensive, but it's foundational and puts everyone (bus & car users) in quick-trip walking distances of their destinations. Else... a new parking structure just outside DT would need to somehow have the design of "quick-trip access" across 51.... Bridge? Ditto, even, for dining, but to a slightly lesser extent. Getting rid of parking near Brass Pig & Ale, etc, would mean I would be

206 Two downtown projects that I really find attractive are Cincinnati, OH with their downtown playground, riverwalk, and color-changing waterfall fountain (<https://www.cincinnati-oh.gov/cincyparks/visit-a-park/find-a-parkfacility/smale-riverfront-park/>) and Burlington, VT with their pedestrian-only (no vehicle traffic) downtown area with access to restaurants, shopping, and performances (<https://www.vermontvacation.com/towns-and-regions/historic-downtowns/burlington>).

207 the proposal you choose will tell the community what you value - cars, or more climate friendly, healthy choices of walking or biking..

208 I think an emphasis on the original architecture would preserve the unique quality of our historical heritage, with a reorganization of space and additional contemporary aesthetic would help us identify ourselves as a diverse, progressive community.

209 We absolutely need pedestrian friendly walking AND sitting space to attract our population and visitors

Repurpose or remove abandoned buildings: Commerce Bank, Elks Lodge, Montgomery Ward (Front and Center). If removed, the vacant areas could, at the very least, provide needed greenspace or even a dog park. The best case scenario would be a sorely needed downtown hotel built on one of these sites. These buildings detract from any effort to

210 make downtown attractive.

Are there any provisions for public restrooms?
Thanks for reading

211 I love that the city is looking at reviving downtown. I spend a lot of time there and it would be great to have it more walkable and just fresh and vibrant in general. Love all the suggested enhancements around the courthouse building, especially the east side! As long as there is still plenty of parking and access to local businesses. I'd hate for them to suffer if parking was lost in front of their establishments.

Thank you for hearing us in the community.

212 May God Bless Blono

213 Frankly, I wish there was a pedestrian only street option. I don't care about parking, make the parking in the back of the business for those who really need it, as we have large parking garages already. It's also so important to me that there is A LOT of plants. Style matters less to me than just avoiding bare concrete everywhere, which is what downtown often feels like.

214 Let's get this going!! Thumbs up!
Ideally I would prefer design C as it allows for the most pedestrian space, however having parallel parking on either side of the street makes the road feel very cramped. One example of this is uptown circle in Normal, granted the road is two ways. Maybe parallel parking on either side wouldn't feel as tight on a one-way.

215 For streetscape style, I think a blend of modern and classic would be best. The modern look is a bit too "flashy" and feels full of itself, but a lot of the smaller design elements such as the outdoor lighting and the use of greenery to break things apart is really nice. On the other end of this, classic and traditional can feel a little outdated at times, but you could argue that that's kind of the whole point.
There are many sidewalks in the downtown area that are currently out of ADA specifications, especially cross slope.. I hope that these challenging issues are being addressed. There are many areas where a stores entrance is considerably higher than the current street level, creating a sidewalk cross slope that is dangerous. These areas would most likely need a split level sidewalk.

216 I think the designs that are being considered all look very nice. As for eliminating parking on one side of the street, i don't believe it will negatively effect businesses because it's not often that you can get a spot directly in front of the business you are going to, so you'll have to walk anyway. It may even help businesses because as you exit your vehicle you'll see all the store fronts, not just the one you're planning to shop at.
Our there are any plans to address the empty building downtown that could really be used for other things, or torn down entirely and then turned into park space.

217 All these ideas would be great for the city and to get people out to enjoy a part of town they maybe aren't going to. Would also be good to attract other businesses downtown. I love going to uptown and I wish downtown Bloomington was just as nice.
I have worked downtown for over 30 years. Any plan must include parking solutions. I see none here. Without a parking solution, any plan will fail. If the plan is to continue the

218 current parking enforcement policy (over zealous, aggressive ticketing), few will have the desire to head to the downtown area. I am not a city planner but it seems basic that this issue should be part of any plan and be addressed. Thanks.
I think maintaining the most amount of parking is vital to the downtown area - In designing this I believe we need to also be putting funds into maintenance. Cleaning up the streets

219 (garbage, residue, cigarette butts, etc) gives the image of a safe environment. We can spend all this money to revamp the street scape but without maintaining it - it will become just as we are right now - a decent but not great downtown area. Cleanliness makes one feel safer. Parking meters would be a great addition as well - every city now has online parking meters - easily maintained and convenient.

220 Downtown will never be a destination for chunks of time vs in and out stops if we don't create a culture of come, stay and play. The farmers market has even turned in to an in and out stop because you can't have breakfast or brunch nearby (though I love a coffee stop). We need a place and plan for all day all seasons visitors and residents.
I went to the open house tonight at the BCPA and I have VERY mixed feelings. I feel like there is an over emphasis on bike lanes that will cut into parking for all of downtown bloomington businesses and residents. My main dislike is for the North Main Plaza that is in the 600 block of North main.. I have 3 commercial properties and 2 businesses on that

221 block that will directly be impacted in a bad way. During events this lot will be barricaded. Also the entrance and exits will be removed from Main Street cutting off flow of traffic to that area. This will cut off traffic to my business and create a dead end landlocked section of Main Street. Patrons will have to backtrack 3-4 blocks in the opposite direction to get back on 51 or center street. This doesn't make any sense to be honest. Don't get me wrong, it looks pretty but pretty doesn't pay your bills. Commerce and tax dollars pay your bills. Whatever hurts business will also hurt the city. Please add an easement lane in North Main plaza to still create this green space but not kill business. Thank you

222 Please explain how cars in the 500-600 blocks of Main st get to Locust st or back to Main st to drive north. Please leave Main st open to East st/Main st

223 I'm on the Trustee board of Second Presbyterian Church and steward of their gardens. We would like to learn more about the plans along East St and Market St. We have a garden on each Street and need to understand the impacts.
As an owner of a business in the 600 block of Main St., the proposal for the amphitheater and removal of vehicle exits hinder the access. This would deter patrons from frequenting

224 this area. This is not an acceptable plan for the area to promote visitors. This also restricts deliveries from being accomplished to keep the businesses open. Step back and view this from the owner's point of view and how the decrease in access will affect our income, not to mention your Bev and Sales tax and first responder routes. Making it look pretty like uptown will not promote more traffic when there are no businesses open for them to visit.

Pat Fitzgerald and I attended the first open house on behalf of Crossroads Fair Trade but were unable to attend the open house held Feb. 11. Can you please advise as to where/how we can see the actual downtown renderings showing our location at 428 N. Main Street.

The graphics provided in the online "tour" are exceptional! I didn't see Crossroads depicted, maybe I missed it? As a part of downtown since 1988, I thought maybe you'd want to include it.

225 We are extremely grateful for the attention and resources put into the enhancements in Downtown Bloomington to make it a valuable asset to our community and a primary destination for families and all generations!

Donna Brouillet, Board Member
Crossroads Fair Trade
Cell: 309-824-5631

226 One of the problems of bicycles on sidewalks, has there been any accidents with bicycles and pedestrians? We come to down town Bloomington, to eat, and not be interrupted by a loud pickup or other noisy Camaro or Mustang. How do you have a parking space that also serves seating in amphitheater style seating at another time. Bicyclists currently do not follow the rules on riding on the sidewalks, stopping at stop signs or being careful and respectful on the trail, including uptown Normal. Now add in the skateboarders and scooters, find a way first prior to deal with these abuses.

227 The priority should be for pedestrian and bicycle safety and comfort. I care a lot less about the design style. This is a rare part of B/N that is somewhat walkable and bikable, so it should be much easier for people of all ages and abilities to get around without needing to drive and park immediately in front of a location. If the streetscape is comfortable with reduced (and slower!) vehicular traffic, people will hang out longer and spend more money at the local businesses.

If parking is made scarce or remote it will expedite businesses leaving downtown. a law firm or accounting practices' elderly clients cannot park in a garage and walk multiple blocks during typical winter weather. If they were to fall and hurt themselves they would be at the mercy of hoping someone saw them and came to their rescue

After parking, I care the most about pedestrians. I do not care at all about cyclists. Very few people who work downtown ride their bikes to work, and parts of the year it is not feasible. A bike lane seems like a massive waste of precious road space. I live near Washington and almost never see anyone use the bike lanes.

228 The current lack of parking, coupled with the parking time limits and aggressiveness with which the enforcement writes tickets, it is already hard to go shopping downtown. If I have to pay to park in a garage to then walk multiple blocks I will just go home instead of looking for parking or waiting for a spot. I know from talking to business owners the tickets have hurt business, and made it hard for employees. It deters from people from spending time downtown when they have to move their vehicle after every, or every other store they visit.

If we rely on garages for parking how aggressively are the sidewalks and crosswalks going to be attacked when bad winter weather arrives?

Can we get more lighting?

I know it's not an easy problem, but any ideas for the homeless issue downtown?

229 I don't think the reduced parking or one side of the street parking are an issue (businesswise) if the area is walkable enough for people to actually safely walk downtown. As it stands no one gets to park on the side of the street they want to go to anyway, or usually even on the same block. You take what you can get or just use a parking garage and then you have to navigate car filled streets on foot. If parking is diverted to somewhere just outside of downtown, and the streets of actual downtown are mostly (or preferably to me, entirely) people walking, it becomes a much more pleasant and safe place to spend time.

While you're at it, making it safer to walk into downtown from nearby areas would be nice as well, and beneficial to the businesses and culture downtown. We live under a mile away, an easy distance to walk for us, but our options are: 1) curb tight sidewalks on busy main street, 2) walking through a sparsely populated and run down area with abandoned looking warehouses and homes and having to cross a busy street at the end, or 3) going several blocks out of our way and still having to cross a busy street at the end anyway.

230 What is being proposed for the Front & Center/Peoples Bank Building block? If nothing is being done, no amount of beautification and street enhancement, will improve downtown's image.

231 It would be great to not have cars parked along street where people are trying to enjoy their lunch. Maybe have 15 minute parking in some spots and make sure there is signage to route them to a parking deck near by for longer parking.

I like that some restaurants take up the parking spots during the summer.

232 I am Darrell Hartweg. I own the Illinois House Building and have been the owner/tenant of the Building since 1977. Currently, the Building has 27 tenants; all but one of these tenants (Mystic Kitchen) are counseling offices, insurance offices, social service agencies, and law firms. Every day, approximately 60 persons come to the Building as employees of the tenants. Every tenant provides services to its customers. I estimate that, on average, at least 30 to 40 clients/customers enter the Building every day to meet with one of these tenants. Each one of these people depends on their automobiles to deliver them to the Building; these automobiles require parking spaces in the Downtown area . Many of the clients/customers of IHB's tenants are elderly and need parking areas which are close to their ultimate destination whether that be Illinois House or other businesses. ANY reduction in the existing parking areas required to be made to accommodate a new streetscape design would cause great hardship to clients/customers doing business with IHB tenants with a resulting problem accruing to owners of office buildings like me. I STRONGLY oppose any reduction in the present parking spaces in the downtown area especially since there are not a sufficient number of parking spaces presently.

233 My biggest problem with diagonal parking is that I have a Camry and when a van, suv, or truck park next to me I have to back out too far into traffic to see if anyone is coming. I like the look and ease of diagonal parking, however, looking at the plans if someone had to swerve to avoid me because I can't see them coming, they are going to swerve into the bike lane.

234 Please consider additional space and activities for children and families. Would love to see a greater focus on 3rd places to facilitate community engagement and interactions.

235 Please consider adding additional space and/or businesses with a focus on younger children - infant / toddlers. There is a heavy focus on adult spaces and would love for more opportunities for families to utilize these spaces year round, especially during the winter months.

236 Decreased parking and/or close parking may result in fewer people being attracted to downtown despite the improvements. If parking is an issue, they won't come.

237 Once again you are squandering valuable resources to correct a previously failed design which was done to correct a previously failed design. When will you learn that you aren't smart enough to fix the problem. Diagonal parking with today's vehicles is dangerous and just waiting for a lot of rear end accidents. Further, not a damned dime should be spent on such ridiculous pipe dreams until you fix the damned rotting infrastructure of this City. Spend the money to fix the roads (without damned bicycle paths and other crap in the way) and stop your constant waste on a few bitching people. Want to satisfy the public? FIX THE DAMNED ROADS AND OTHER INFRASTRUCTURE. If downtown can't make it without this waste of money, maybe downtown is not worth saving, sadly the result of past foolishness by tone deaf politicians and city staff. Lipstick on a pig does not take away the smell.

238 Bloomington resident for 10 years and I love this. Very supportive!

239 Maybe someone has already had this idea so forgive me if redundant. I've asked several of my customers if the city provided park and ride buses on Thursday Friday and Saturday nights, would you take advantage, and I got a lot of positive feedback. We could ask banks and other day time M-F businesses to be a park and ride bus stop strictly for shuttling downtown. This would really cut down on DUIs and be more reliable than Uber. \$5 rides that run back and forth from downtown from 5-1:30 Thursday Friday and Saturdays. This would fix parking concerns and drunk driving.

The addition of a much too small stage area and a water feature on the courthouse grounds compromises the historic integrity of the building and the surrounding lawns.

The arched stage structure blocks sightlines of the building and frankly, does not blend well with the courthouse itself. It looks forced. If you must do it, skip the arches and incorporate some other lower to the ground structure for plug and play.

The space you are proposing for the water feature is too small and again, does not blend well with the historic architecture surrounding it. Don't compromise that building's integrity for the sake of turning the square into an amusement park.

240 Why not buy the old bank building and parking lot on the corner of Washington and Center Streets and turn that into an area for concerts and gatherings with a larger water feature? (For that matter, find a developer who can turn that old Montgomery Ward's building into a chic boutique hotel .)

I have been visiting the square of Downtown Bloomington regularly since the 1960s. I have seen a lot of change, some good and some not so good. The past decade has seen a reawakening of the downtown area and I applaud it. But, let's leave the historical courthouse grounds alone and focus on reimagining and revitalizing some of the still blighted areas of downtown instead.

Thank you for your consideration. And thank you for wanting to improve the downtown space.

The parking situation in downtown is already bad. If the City really eliminates parking...unless the City is providing a free trolley (or something), I think your dream of "walkability" will negatively impact the businesses that are losing that parking.

In the last month, I tried twice going to Neighbor Thrift for a quick trip on a Saturday. Closest parking was by Abundant Life Thrift Shop. On the first attempt, I chose not to go because of the cold and I didn't want to walk. On the second attempt, I parked by Abundant Life Thrift and attempted to go, but sidewalks were icy so again chose not to go any further and left.

Parallel parking should not be an option. At all. For any of the designs.

241

Overall, I think the bike lanes are unnecessary for a small scope project like this. They can "park" their bikes and maneuver (the "walkability") like the rest of the people who arrive in cars. For the few summer months, I can see how bike lanes might seem like a good idea; however, this is Illinois, and I don't believe bike lanes are justifiable reasons to eliminate parking year round.

As far as the other design plans:

*definitely like the stage area

I would love to see more sustainability initiatives built into this design. I think Uptown Normal did a great job incorporating sustainability into the circle, and I would love to see Bloomington take on the same type of leadership. This could include the addition of swales, EV charging spaces, permeable sidewalks, more trees and greenery, compacting trash receptacles, recycling bins, solar powered elements, etc.

242

Im just extremely concerned about parking and how do we get deliveries ? Everyone does the double parking thing now which works. I have no back entrance options for deliveries & pick ups? 2 FruGALS Thrift 417 n main

243

I worry about reduced parking, especially with the new housing development proposed for Washington Street. It is assumed that those who live there will not drive but walk and use public transport but the streets are already jammed with cars now and I fear that reduced parking will have a negative effect on the downtown area.

244

Parking in that area is already problematic. I live and work and shop in Bloomington and there have been times I wanted to shop but couldn't find parking that was close enough (I'm in my 70s), so I went home instead. Been a problem for a long time. Anything that reduces parking is counterproductive.

245

The parallel parking next to the bike lane does not make sense. Parallel parking shouldn't even be in downtown, especially since they are getting rid of the parking garage. I don't think a bike lane is necessary for downtown. None of these are good options and seem like a waste of time and space and the renovations will take a long time and cramp the space more.

246

Since our roads are in such terrible conditions, perhaps we should take care of the important items (like infrastructure). Put this on hold till the necessary is taken care of. We are retirees on a fixed income and don't need to have taxes increased for this unnecessary extravagance. We are still paying for the coliseum and the cultural center. Maybe we should try to stay within our budget.

247

Costs are important as our taxes are a usual drawing card, and with the state increasing our taxes, they need to do the most contributing to a lovely addition. Parking is so important if you want the entire community to enjoy downtown, so with pedestrian areas very important, parking is as well.

248

Is the next community open house - Wednesday, October 8 or Friday, October 11/

The website shows Wednesday, October 11.

249

What is the correct date?

Please let me know, thanks

Ann Sullivan

250

I think as a homeowner in Bloomington, Illinois that until our streets get repaved and are safe to drive on that no more money needs spent on down town . I also think my property taxes are already too high, and dont need the added increases as I near retirement .

251

leave downtown alone. Spend the money on infrastructure. Rescind the additional charges on the upcoming water bills and use the money planned for down improvement on infr

252

With more and more architecture being modernized, it'd be nice to see the downtown area stay people friendly and continue to have a home-like feel.

253

Stop the parking police!!

254

Has delivery access from vendors been considered on the street design? I chose Design C based on this, it looks like delivery trucks could park to unload. Thinking of Amazon, Food suppliers, moving trucks, etc.

255

Make parking accommodations for those that work downtown (ex: apply for free garage parking pass with proof of employment)

256 Parking accommodation for people who work downtown. If you work downtown, you either have to move your car every couple of hours and risk parking tickets, or buy a parking pass, which is frankly overpriced and not worth it if you don't live downtown.

257 Give Downtown Business Owners Parking Passes for their employees. Increase restaurant varieties. Do public scooter/bike transport (diiv). Add seating for bus stops that lack one.

258 I'm Glad It's About Time They Do Something Down Town I Might Start Coming Back

259 Most city streets in bad shape. Use money to fix them first. Most people will not go downtown unless an event like farmers market happens. Reason: parking hard to find. Don't have less parking!

260 Downtown visitors already find existing amount of parking to be an obstacle. Removing street parking and forcing people to the parking garages (that usually have homeless lingering outside) is not a good idea if the goal is to bring more people downtown. If we're going to create more walking space and lose parking, can something be done about the multiple private lots that aren't used by downtown businesses and tow cars? Why isn't the city buying those back from private owners or cutting a deal with owners to allow downtown visitors and residents to use those lots during certain hours?

261 Please make actual safe and well lit parking garages to accommodate the loss of parking. As a female, I don't feel safe using the parking garage but I would love to be able to spend more time in Downtown Bloomington but parking is always an issue. More pedestrian pathways would be amazing but we need better parking.

262 These renderings are missing all the homeless people and tents.

263 There so much more we could do with the tax dollars in our community, over the last 15 years my property taxes have increased dramatically. Let's take care of our Locust St from 150 to Bloomington Country Club and Empire from Country Club to Main St.

264 As an EV driver for over 10 years I would suggest that charging stations not be placed on the streets. The one in Miller Park is very hard to use, I witnessed a EV facing the wrong way on the one-way street to charge. The chargers work best in a dedicated area with access from both sides, more like a gas pump. Also, I believe it is best to have the electricity paid for by the user, not the taxpayers. I would suggest Charge point or Electrify America

Public Voting Results

Public Voting Results (as of 3/23/24)

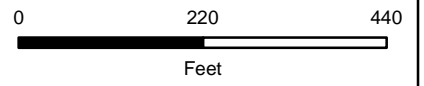
Open House	Votes
Alternate A	11
Alternate B	72
Alternate C	31
Classic/Tradition	38
Modern/Contem	10
Hybrid Blend	73

Website	Votes
Alternate A	64
Alternate B	117
Alternate C	77
Classic/Tradition	90
Modern/Contem	43
Hybrid Blend	126

Total	Votes	%
Alternate A	75	20%
Alternate B	189	51%
Alternate C	108	29%
Classic/Tradition	128	34%
Modern/Contem	53	14%
Hybrid Blend	199	52%

City Utility Information

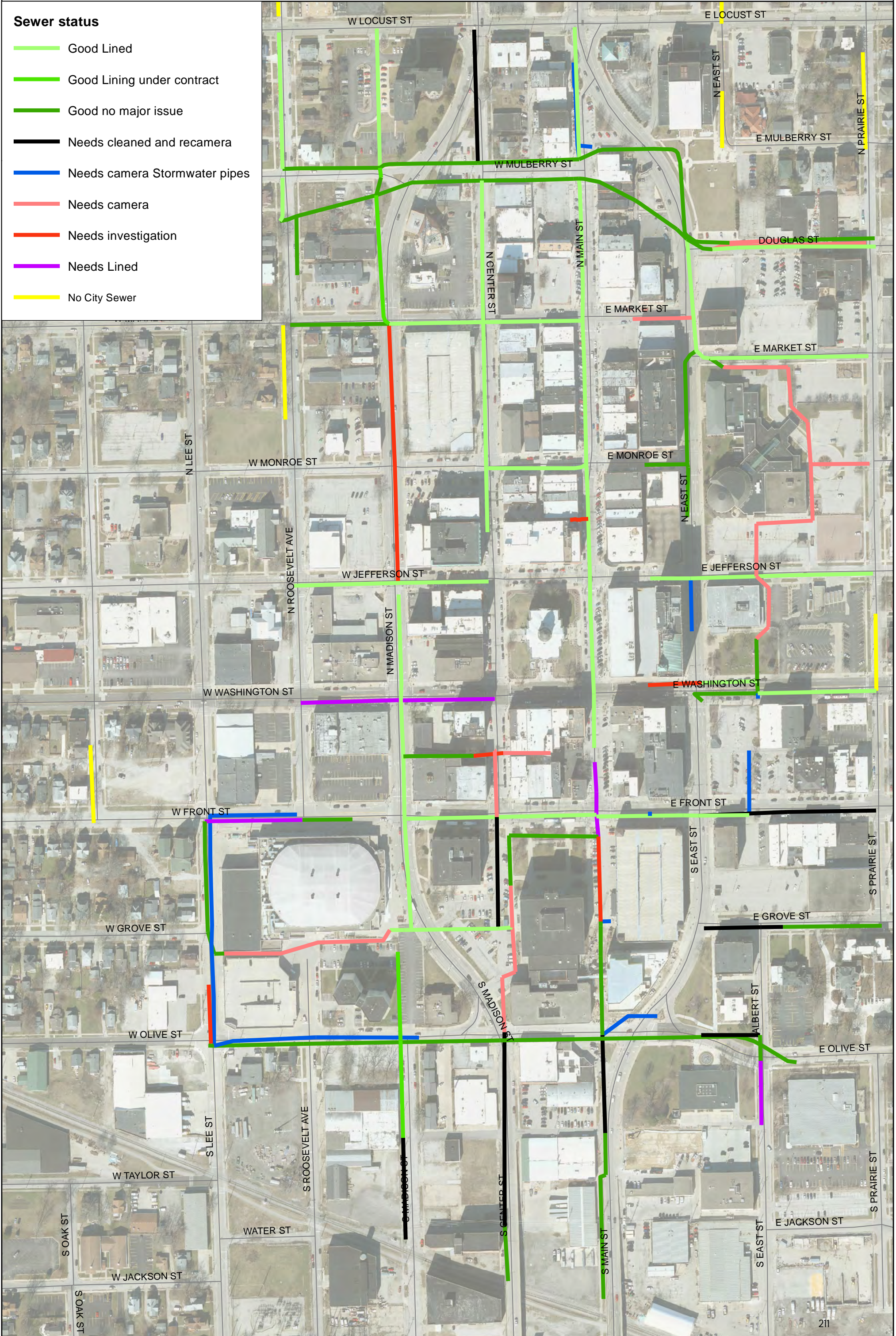
Downtown detailed sewer status



Date: 2/27/2023

Sewer status

- Good Lined
- Good Lining under contract
- Good no major issue
- Needs cleaned and recamera
- Needs camera Stormwater pipes
- Needs camera
- Needs investigation
- Needs Lined
- No City Sewer



No.	Street	From	To	Size	Install Date	Location	Repair / Break History	Useful life (5-10 yrs.)	Useful life (10-20 yrs.)	Useful life (>20 yrs.)	Notes	Recommendation	Hydrants
1	Olive	Lee	Roosevelt	12"	2005	Street	None	Yes	Yes	Yes			Hyd 423 Waterous
2	Olive	Roosevelt	Madison	12"	2005	Street	2013	Yes	Yes	Yes			Hyd 424 Waterous, Hyd 359 Iowa, Hyd 425 Iowa
3	Olive	Madison	Center	6"	1895	Street	2013	Yes	Yes	potential	128 year pipe	Potential replacement after 20 years	Hyd 426 Corey
4	Olive	Center	Main			No Water Main	None						
5	Olive	Main	East	12"	2017	Parkway/Sidewalk	None	Yes	Yes	Yes			Hyd 427 Iowa
6	Grove	East	Albert	10"	1934	South side sidewalk	None	Yes	Yes	Yes			Hyd 775 Clow
7	Grove	Albert	Prairie	10"	1934	South side sidewalk	None	Yes	Yes	Yes			Hyd 773 Eddy
8	Front	Lee	Roosevelt	12"	2005	north edge of WB travel lane	None	Yes	Yes	Yes			Hyd 354 Waterous
9	Front	Roosevelt	Madison	12"	2005	north edge of WB travel lane	None	Yes	Yes	Yes			Hyd 3304
10	Front	Madison	Center	4"	1875	north edge of WB travel lane	not much recent, 2009	yes	yes	potential	no real issues. Not in 20 year plan. Very aged - potential for breaks but history ok.	Main remains, Potential replacement after 20 years	Hyd 355 Waterous
11	Front	Center	Main	6"	1890	north edge of WB travel lane	2016	Yes	Yes	potential	133 year pipe	Potential replacement after 20 years	Hyd 356 Clow 2500
12	Front	Main	East	6"	1916	north edge of WB travel lane	2012,2012,2019, one without date	No	No	No	Would recommend replacing watermain with the number of breaks.		Hyd 357 Clow 2500
13	Front	East	Prairie	6"	1916	north edge of WB travel lane	2018, 2012, 2009, 2012, 2018, 2017	No	No	No	Would recommend replacing watermain with the number of breaks.		Hyd 358 Iowa
14	Washington	Lee	Roosevelt	12"	1961	South parkway	2009	Yes	Yes	Potential		Potential replacement after 20 years	Hyd 320 Iowa
15	Washington	Roosevelt	Madison	12"	1961	South parkway/south edge of EB travel lane	2003	Yes	Yes	Potential		Potential replacement after 20 years	Hyd 321 Clow Medallion
16	Washington	Madison	Center	16"	1913	north edge of WB travel lane	2003	Yes	Potential	Potential	110 year pipe	Potential replacement after 10 years	Hyd 322 Iowa
17	Washington	Center	Main	16"	1913	north edge of WB travel lane	None	Yes	Yes	Potential	110 year pipe	Potential replacement after 20 years	Hyd 323 Iowa
18	Washington	Main	East	16"	1913	north edge of WB travel lane	None	Yes	Yes	Potential	110 year pipe	Potential replacement after 20 years	Hyd 324 Clow 2500
19	Washington	East	Prairie	12"	1914	north edge of WB travel lane	None	Yes	Yes	Potential	109 year pipe	Potential replacement after 20 years	Hyd 325 Waterous
20	Jefferson	Roosevelt	Madison	6"	1893	north edge of WB travel lane	None	Yes	Potential	Potential	130 year pipe	Potential replacement after 10 years	Hyd 289 Waterous, Hyd 290 Iowa
21	Jefferson	Madison	Center	6"	1893	north edge of WB travel lane	None	Yes	Potential	Potential	130 year pipe	Potential replacement after 10 years	
22	Jefferson	Center	Main			No Water Main							Hyd 291 Waterous
23	Jefferson	Main	East			No Water Main							Hyd 292 Waterous
24	Jefferson	East	Prairie	8"	2015	north edge of WB travel lane	2012,2013, two more without dates	Yes	Yes	Yes	Breaks occurred prior to the new water main		Hyd 293 Waterous
25	Monroe	Roosevelt	Madison	10"	1900	north edge of WB travel lane	None	Yes	Yes	Potential	123 year pipe	Potential replacement after 20 years	Hyd 261 Waterous
26	Monroe	Madison	Center	10"	1900	north edge of WB travel lane	None	Yes	yes	Potential	123 year pipe	Potential replacement after 20 years	Hyd 262 Iowa
27	Monroe	Center	Main			No Water Main							Hyd 263 Iowa
28	Monroe	Main	East	6"	1996	Main only extends half the block, south EB travel lane		Yes	Yes	Yes			Hyd 264 Waterous
29	Market	Roosevelt	Madison	6"	1879	Between WB driving lane and turn lane.	None	Yes	potential	potential	144 year pipe	Potential replacement after 10 years	Hyd 239 Clow 2500
30	Market	Madison	Center	6"	1879	Between WB driving lane and turn lane.	None	Yes	potential	potential	144 year pipe	Potential replacement after 10 years	Hyd 240 Iowa
31	Market	Center	Main	6"	1875	Between WB driving lane and turn lane.	None	Yes	potential	potential	148 year pipe	Potential replacement after 10 years	Hyd 241 Iowa
32	Market	Main	East			No Water Main							Hyd 242 Clow 2500
33	Market	East	Prairie	6"	1897	North edge along parking spots	Not recent	Yes	potential	potential	126 year pipe	Potential replacement after 10 years	Hyd 243 Waterous
34	Douglas	East	Prairie	8"	1995	Sidewalk	None	Yes	Yes	Yes			Hyd 220 Waterous
35	Mulberry	Roosevelt	Madison	6"	1899	North edge of WB travel lane along curb	None	Yes	potential	potential	124 year pipe	Potential replacement after 10 years	Hyd 210 Corey ??, Hyd 211 Iowa
36	Mulberry	Center	Main			No Water Main							Hyd 212 Iowa
37	Madison	Olive	Front	10"	1900	Through parking lot of 201 Olive Street	None	Yes	potential	potential	123 year pipe	Potential replacement after 10 years	Hyd 425 Iowa, Hyd 388 Waterous
38	Madison	Front	Washington	10"	1900	From east side of curb between lane one and two	None	Yes	potential	potential	123 year pipe	Potential replacement after 10 years	Hyd 355 Iowa, Hyd 3304 Waterous
39	Madison	Washington	Jefferson	10"	1900	From east side of curb between lane one and two	None	Yes	potential	potential	123 year pipe	Potential replacement after 10 years	Hyd 322 Iowa
40	Madison	Jefferson	Monroe	10"	1900	From east side of curb between lane one and two	None	Yes	potential	potential	123 year pipe	Potential replacement after 10 years	Hyd 290 Iowa
41	Madison	Monroe	Market	6"	1985	Under curb line of the west curb	None	Yes	Yes	Yes			Hyd 262 Iowa
42	Madison	Market	Mulberry	6"	1896	From east side of curb between lane one and two	2003	Yes	potential	potential	127 year pipe	Potential replacement after 10 years	Hyd 240 Iowa
43	Madison	Mulberry	Locust	6"	1896	Runs through the parking lot of 202 Locust St.	None	Yes	potential	potential	127 year pipe	Potential replacement after 10 years	Hyd 211 Iowa
44	Center	Kentucky	Olive	6"	1875	Along bridge wall east side of bridge	None	Yes	potential	potential	148 year pipe	Potential replacement after 10 years	
45	Center	Front	Washington	6"	1875	under parking spots on east parking/ water main runs under sidewalk bump out	None	Yes	potential	potential	148 year pipe	Potential replacement after 10 years	Hyd 356 Corey F-2500
46	Center	Washington	Jefferson	20"	1913	under parking spots on east parking/ water main runs under sidewalk bump out	2018, 2019	potential	potential	potential	110 year pipe		Hyd 323 Waterous, Hyd 291 Waterous
47	Center	Jefferson	Monroe	20"	1913	under parking spots on east parking/ water main runs under sidewalk bump out	None	Yes	Yes	potential	110 year pipe	Potential replacement after 20 years	
48	Center	Monroe	Market	20"	1913	Between parallel parking and NB traffic lane	None	Yes	Yes	potential	110 year pipe	Potential replacement after 20 years	Hyd 263 Waterous
49	Center	Market	Mulberry	20"	1913	Between parallel parking and NB traffic lane	None	Yes	Yes	potential	110 year pipe	Potential replacement after 20 years	Hyd 241 Iowa
50	Center	Mulberry	Locust	20"	1913	Along parallel parking	None	Yes	Yes	potential	110 year pipe	Potential replacement after 20 years	Hyd 212 Iowa
51	Main	Kentucky	Olive	8"	1875	Runs through all 4 lanes of NB traffic lanes and through grass island at Olive St.	None	Yes	potential	potential	148 year pipe	Potential replacement after 5 years	Hyd 756 Corey
52	Main	Olive	Front	12"	1996	Main runs through the parking lot along side of the Law and Justice center and the East Street Parking Garage.	None	Yes	Yes	Yes			Hyd 3634 Clow F-2500, Hyd 357 Waterous

No.	Street	From	To	Size	Install Date	Location	Repair / Break History	Useful life (5-10 yrs.)	Useful life (10-20 yrs.)	Useful life (>20 yrs.)	Notes	Recommendation	Hydrants
52	Main	Front	Washington	12"	1996	At Front Street, main runs under the sidewalk bump out and main continues north under the parking spots on the east side of Main St. Water main runs under the bump out at Washington St.	None	Yes	Yes	Yes			Hyd 3634 Clow F-2500, Hyd 357 Waterous
53	Main	Washington	Jefferson	12"	1996	At Washington St, main runs under the sidewalk bump out and main continues north under the parking spots on the east side of Main St. Water main runs under the bump out at Jefferson St.	None	Yes	Yes	Yes			Hyd 324 Clow F-2500, Hyd 292 Waterous
54	Main	Jefferson	Monroe	12"	1996	At Jefferson Street, main runs under the sidewalk bump out and main continues north under the parking spots on the east side of Main St. Water main runs under the bump out at Monroe St.	None	Yes	Yes	Yes			
55	Main	Monroe	Market	12"	1996	Water main runs in the middle of the east NB lane, before Market St. the water main transitions into the east side walk	None	Yes	Yes	Yes			Hyd 264 Waterous
56	Main	Market	Mulberry	12"	1994	Main runs under the east sidewalk at the curb line	None	Yes	Yes	Yes			Hyd 242 Clow F-2500, Hyd 3145 Clow F-2500
57	Main	Mulberry	Locust	12"	1994	Main runs under the sidewalk bump out and continues north under the parking spots between Mulberry and Locust and heads North under all four lanes of the NB traffic. At Mulberry a 8" WM ties in and runs on the west side of Main Street under the parking spots on the west side of Main. and ties back into the 12" WM just North of the west parking spots.	None	Yes	Yes	Yes			
58	East	Olive	Grove	16"	1973	Water main runs under the east side sidewalk	None	Yes	Yes	Yes			
59	East	Grove	Front	16"	1973	Water main runs under the east side sidewalk	None	Yes	Yes	Yes			
60	East	Front	Washington	16"	1973	Water main runs under the east side sidewalk. At Washington St, the main transitions under the east NB lane of traffic.	None	Yes	Yes	Yes			Hyd 358 Iowa
61	East	Washington	Jefferson	8"	1991	Water main is in the east NB traffic lane before transiting back under the east sidewalk.	None	Yes	Yes	Yes			Hyd 325 Waterous
62	East	Jefferson	Monroe	8"	1994	WM runs under the east sidewalk	None	Yes	Yes	Yes			HYD 293 Waterous
63	East	Monroe	Market	8"	1994	WM runs under the east sidewalk	None	Yes	Yes	Yes			Hyd 265 Waterous
64	East	Market	Douglas	8"	1995	runs along the east curb line and the NB traffic lane.	None	Yes	Yes	Yes			Hyd 243 Waterous
65	East	Douglas	Mulberry	8"	2004	Runs along the east sidewalk into the green space in front of the Bloomington Center for the Performing Arts. A 12" WM runs between Main St. and Prairie St. in the green space in front of the BCPA.	None	Yes	Yes	Yes			Hyd 220 Waterous

Notes

- All fire hydrants older than 10 years impacted by Streetscape features should be replaced.
- Valves will need to be evaluated and determined if replacement is needed based on proximity and impacts from roadway and streetscape features.
- Service line material will need to be reviewed. Service line replacement will be needed when lead is present. Further review to be performed as detailed design development occurs.
- Proposed roadway reconstruction, curb line placement, and streetscape features may impact the recommendations for water main replacement. Further coordination during design development.

Considerations

- Size - flow, capacity
- location within ROW
- repair history
- expected "short term" life expectancy
- unserved properties
- master plan identified fire flows

Traffic Calculations



Intersection	App.	Max Q	2024 - 2 Lanes, No Parking						2044 - 2 Lanes, No Parking					
			AM			PM			AM			PM		
			Delay (s)	LOS	95%ile Q	Delay (s)	LOS	95%ile Q	Delay (s)	LOS	95%ile Q	Delay (s)	LOS	95%ile Q
Locust & Madison	EB	454	29.8	C	139	29.6	C	129	29.5	C	154	29.3	C	142
	SB	326	9.3	A	220	10.0	A	243	11.6	B	270	12.8	B	307
	Int.		15.4	B		15.2	B		16.9	B		17.2	B	
Locust & East	EB	194	28.3	C	167	28.3	C	181	27.8	C	185	27.0	C	194
	NB	790	8.2	A	181	9.1	A	203	9.8	A	217	10.7	B	231
	Int.		15.6	B		16.1	B		16.4	B		16.6	B	
Market & Madison	EB	192	33.0	C	158	31.9	C	192	32.9	C	174	34.2	C	216
	WB	182	26.7	C	68	25.2	C	72	26.2	C	75	24.8	C	78
	SB	787	8.2	A	182	11.1	B	240	10.1	B	223	13.9	B	291
Int.		12.8	B		15.3	B		14.2	B		17.7	B		
Market & East N	EB	427	34.1	C	65	33.8	C	134	34.7	C	73	34.6	C	148
	NB	197	3.0	A	51	4.5	A	71	3.6	A	61	5.7	A	88
	Int.		4.9	A		7.7	A		5.4	A		8.8	A	
Monroe & East	EB	193	34.8	C	4	35.0	C	50	34.8	C	4	34.6	C	56
	NB	237	1.6	A	31	2.0	A	38	1.7	A	35	2.2	A	44
	Int.		1.7	A		3.4	A		1.8	A		3.6	A	
Jefferson & Madison	EB	191	26.7	C	20	25.4	C	25	29.0	C	21	28.0	C	29
	WB	193	26.1	C	15	25.2	C	38	29.0	C	18	27.6	C	44
	SB	252	5.6	A	120	7.6	A	168	7.4	A	195	6.6	A	153
Int.		6.4	A		8.7	A		8.2	A		8.0	A		
Jefferson & East	EB	203	29.4	C	29	29.3	C	43	29.9	C	31	29.6	C	49
	WB	424	28.7	C	14	28.5	C	34	30.1	C	17	28.7	C	38
	NB	237	6.3	A	155	6.7	A	162	6.2	A	162	7.2	A	179
Int.		7.3	A		8.5	A		7.3	A		9.0	A		
Washington & Madison	EB	192	31.5	C	112	30.7	C	113	21.6	C	114	25.5	C	122
	WB	193	34.7	C	192	33.4	C	182	23.4	C	193	27.6	C	192
	SB	240	5.8	A	142	6.3	A	164	13.5	B	212	11.1	B	230
Int.		13.6	B		13.1	B		16.1	B		15.2	B		
Washington & East	EB	193	28.7	C	168	27.6	C	174	29.5	C	188	28.7	C	193
	WB	417	33.2	C	253	29.0	C	238	33.4	C	278	34.4	C	286
	NB	239	8.3	A	181	9.0	A	180	10.1	B	217	9.7	A	201
Int.		16.7	B		16.5	B		18.0	B		18.4	B		
Front & Madison	EB	191	34.1	C	87	33.1	C	41	33.2	C	101	33.1	C	46
	WB	191	32.9	C	33	34.4	C	56	29.6	C	35	34.4	C	61
	SB	230	5.7	A	140	5.5	A	154	8.1	A	196	6.1	A	175
Int.		9.5	A		9.0	A		11.4	B		9.5	A		
Front & East	EB	200	30.7	C	27	31.5	C	104	28.0	C	30	28.8	C	110
	WB	411	32.5	C	126	28.7	C	41	28.2	C	130	26.7	C	48
	NB	564	6.5	A	161	6.8	A	160	9.6	A	225	8.9	A	203
Int.		11.1	B		12.3	B		13.0	B		13.4	B		
Olive & Madison	EB	181	26.9	C	46	33.8	C	83	28.4	C	53	33.3	C	87
	WB	282	25.8	C	25	32.1	C	28	27.0	C	29	30.5	C	29
	SB	570	7.7	A	163	5.6	A	132	7.6	A	173	7.6	A	209
Int.		10.0	A		9.0	A		10.0	B		10.7	B		
Olive & East	EB	271	30.7	C	88	32.7	C	134	34.9	C	112	28.6	C	138
	WB	287	28.9	C	21	26.7	C	25	29.1	C	22	23.5	C	26
	NB	224	7.3	A	166	7.9	A	161	7.8	A	193	11.3	B	223
Int.		10.2	B		12.3	B		11.0	B		14.3	B		

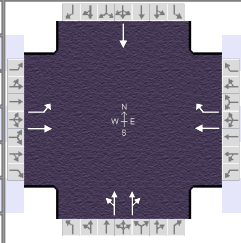
Downtown Bloomington Streetscape - Signal Vs All-Way Stop Analysis
11/14/2023



Intersection	App.	HCM 6 Delays and LOS											
		2024						2044					
		AM			PM			AM			PM		
Delay (s)	LOS	95th % Queue	Delay (s)	LOS	95th % Queue	Delay (s)	LOS	95th % Queue	Delay (s)	LOS	95th % Queue		
Market & Center (SIGNAL)	EB	25.9	C	48	26.0	C	118	25.6	C	53	25.5	C	123
	WB	27.3	C	98	25.8	C	103	27.2	C	108	25.8	C	120
	SB	3.7	A	18	4.6	A	20	3.9	A	20	5.0	A	25
	Int.	16.4	B		18.3	B		16.4	B		18.2	B	
Market & Main (SIGNAL)	EB	27.3	C	38	27.1	C	130	26.9	C	43	26.9	C	145
	WB	30.1	C	85	26.1	C	95	30.0	C	95	25.4	C	103
	NB	2.9	A	8	4.2	A	13	3.1	A	8	4.7	A	18
	Int.	20.0	C		19.8	B		19.9	B		19.6	B	
Market & Center (ALL WAY)	EB	7.9	A	8	8.9	A	23	8.0	A	8	9.2	A	25
	WB	8.6	A	18	9.0	A	20	8.8	A	20	9.3	A	23
	SB	8.6	A	13	9.0	A	15	8.7	A	13	9.2	A	18
	Int.	8.4	A		9.0	A		8.6	A		9.3	A	
Market & Main (ALL WAY)	EB	8.6	A	8	9.2	A	10	8.7	A	8	9.4	A	13
	WB	7.6	A	5	8.2	A	8	7.9	A	5	8.4	A	8
	NB	7.9	A	13	8.8	A	23	8.1	A	15	9.1	A	28
	Int.	8.0	A		8.8	A		8.2	A		9.1	A	

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Front			Analysis Year	2023		
Project Description	2024 AM			Analysis Period	1 > 8:00		
File Name	2 lane - East 2024 AM S.xus						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	13	30			127	36	40	904	16		0	

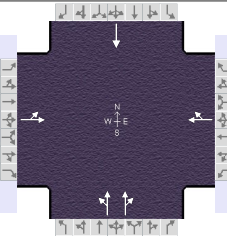
Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	64	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	57.0	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	2.4	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		7.0		8.0		8.0
Phase Duration, s		17.4		17.4		62.6		62.6
Change Period, ($Y+R_c$), s		5.2		5.2		5.6		5.6
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		9.7		8.7				
Green Extension Time (g_e), s		0.7		0.7		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.00				

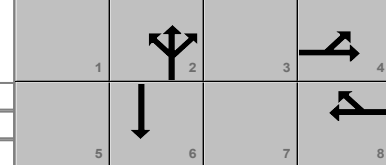
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	15	35			149	42	570		522		0	
Adjusted Saturation Flow Rate (s), veh/h/ln	1078	1759			1657	1362	1665		1529		1635	
Queue Service Time (g_s), s	1.1	1.4			6.7	2.2	0.0		12.3		0.0	
Cycle Queue Clearance Time (g_c), s	7.7	1.4			6.7	2.2	12.1		12.3		0.0	
Green Ratio (g/C)	0.15	0.15			0.15	0.15	0.71		0.71		0.71	
Capacity (c), veh/h	164	268			252	208	1235		1090		1166	
Volume-to-Capacity Ratio (X)	0.093	0.132			0.592	0.204	0.461		0.479		0.000	
Back of Queue (Q), ft/ln (95 th percentile)	13.1	26.9			126.1	33.7	161.3		151		0	
Back of Queue (Q), veh/ln (95 th percentile)	0.5	1.0			4.9	1.3	6.5		6.0		0.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.15	0.00			0.00	0.34	0.00		0.00		0.00	
Uniform Delay (d_1), s/veh	34.5	28.7			30.9	29.7	5.3		5.3		0.0	
Incremental Delay (d_2), s/veh	0.2	0.2			2.2	0.5	1.1		1.3		0.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0	0.0		0.0		0.0	
Control Delay (d), s/veh	34.7	28.9			33.1	30.1	6.4		6.6		0.0	
Level of Service (LOS)	C	C			C	C	A		A			
Approach Delay, s/veh / LOS	30.7	C			32.5	C	6.5		A		0.0	
Intersection Delay, s/veh / LOS	11.1						B					

Multimodal Results	EB		WB		NB		SB	
	Pedestrian LOS Score / LOS	1.93	B	1.94	B	1.85	B	1.85
Bicycle LOS Score / LOS	1.64	B	1.88	B	2.49	B	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Jefferson			Analysis Year	2023		
Project Description	2024 AM			File Name	2 lane - East 2024 AM S.xus		
							

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	6	23			11	4	21	947	26		0	

Signal Information														
Cycle, s	80.0	Reference Phase	2											
Offset, s	56	Reference Point	Begin											
Uncoordinated	No	Simult. Gap E/W	On											
Force Mode	Fixed	Simult. Gap N/S	On											
		Green	56.8	12.8	0.0	0.0	0.0	0.0						
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0						
		Red	2.0	2.0	0.0	0.0	0.0	0.0						

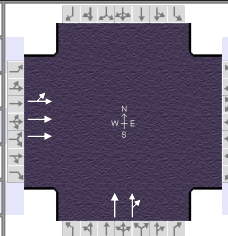
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		18.0		18.0		62.0		62.0
Change Period, ($Y+R_c$), s		5.2		5.2		5.2		5.2
Max Allow Headway (MAH), s		4.1		4.1		0.0		0.0
Queue Clearance Time (g_s), s		3.3		2.8				
Green Extension Time (g_e), s		0.1		0.1		0.0		0.0
Phase Call Probability		1.00		0.69				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	35			18			582			527		
Adjusted Saturation Flow Rate (s), veh/h/ln	1706			1594			1660			1504		
Queue Service Time (g_s), s	0.0			0.8			0.0			12.5		
Cycle Queue Clearance Time (g_c), s	1.3			0.8			12.4			12.5		
Green Ratio (g/C)	0.16			0.16			0.71			0.71		
Capacity (c), veh/h	327			255			1226			1068		
Volume-to-Capacity Ratio (X)	0.107			0.071			0.475			0.493		
Back of Queue (Q), ft/ln (95 th percentile)	28.7			13.7			154.9			145.7		
Back of Queue (Q), veh/ln (95 th percentile)	1.1			0.5			6.2			5.8		
Queue Storage Ratio (RQ) (95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay (d_1), s/veh	28.8			28.5			5.2			5.2		
Incremental Delay (d_2), s/veh	0.7			0.1			1.0			1.2		
Initial Queue Delay (d_3), s/veh	0.0			0.0			0.0			0.0		
Control Delay (d), s/veh	29.4			28.7			6.2			6.4		
Level of Service (LOS)	C			C			A			A		
Approach Delay, s/veh / LOS	29.4		C	28.7		C	6.3		A	0.0		
Intersection Delay, s/veh / LOS	7.3						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.94	B	1.62	B	1.63	B
Bicycle LOS Score / LOS	1.61	B	1.59	B	2.55	C	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Locust			Analysis Year	2023		
Project Description	2024 AM			File Name	2 lane - East 2024 AM N.xus		
				Analysis Period	1> 8:00		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	83	478						842	93			

Signal Information														
Cycle, s	70.0	Reference Phase	2											
Offset, s	50	Reference Point	Begin											
Uncoordinated	No	Simult. Gap E/W	On	Green	45.9	13.1	0.0	0.0	0.0	0.0	1	2	3	4
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.2	3.2	0.0	0.0	0.0	0.0	5	6	7	8
				Red	2.3	2.3	0.0	0.0	0.0	0.0				

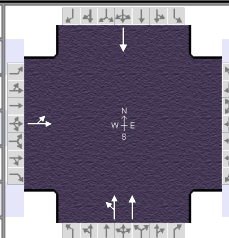
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		
Case Number		12.0				8.0		
Phase Duration, s		18.6				51.4		
Change Period, (Y+R _c), s		5.5				5.5		
Max Allow Headway (MAH), s		4.1				0.0		
Queue Clearance Time (g _s), s		11.2						
Green Extension Time (g _e), s		1.9				0.0		
Phase Call Probability		1.00						
Max Out Probability		0.17						

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4						2	12			
Adjusted Flow Rate (v), veh/h	227	418						571	551			
Adjusted Saturation Flow Rate (s), veh/h/ln	1622	1657						1657	1598			
Queue Service Time (g _s), s	9.2	8.2						15.5	13.1			
Cycle Queue Clearance Time (g _c), s	9.2	8.2						15.5	13.1			
Green Ratio (g/C)	0.19	0.19						0.66	0.66			
Capacity (c), veh/h	303	619						1087	1048			
Volume-to-Capacity Ratio (X)	0.747	0.675						0.525	0.526			
Back of Queue (Q), ft/ln (95 th percentile)	167	146.4						180.5	170.7			
Back of Queue (Q), veh/ln (95 th percentile)	6.6	5.7						7.0	6.8			
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00						0.00	0.00			
Uniform Delay (d ₁), s/veh	26.4	26.0						6.7	6.7			
Incremental Delay (d ₂), s/veh	3.7	1.3						1.5	1.6			
Initial Queue Delay (d ₃), s/veh	0.0	0.0						0.0	0.0			
Control Delay (d), s/veh	30.1	27.3						8.2	8.3			
Level of Service (LOS)	C	C						A	A			
Approach Delay, s/veh / LOS	28.3	C		0.0			8.2	A		0.0		
Intersection Delay, s/veh / LOS	15.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.71	B	1.72	B	1.85	B	1.95	B
Bicycle LOS Score / LOS	1.91	B			2.45	B	0.00	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Market			Analysis Year	2023		
Project Description	2024 AM			File Name	2 lane - East 2024 AM N.xus		
				Analysis Period	1 > 8:00		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	59	0					80	861				0

Signal Information													
Cycle, s	70.0	Reference Phase	2										
Offset, s	29	Reference Point	Begin										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
Green	48.5	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Yellow	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Red	2.3	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

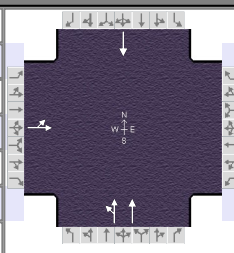
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		6
Case Number		12.0				8.0		8.0
Phase Duration, s		16.0				54.0		54.0
Change Period, (Y+R _c), s		5.4				5.5		5.5
Max Allow Headway (MAH), s		4.2				0.0		0.0
Queue Clearance Time (g _s), s		5.1						
Green Extension Time (g _e), s		0.1				0.0		0.0
Phase Call Probability		1.00						
Max Out Probability		0.24						

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	7	4					5	2			6	
Adjusted Flow Rate (v), veh/h	72						592	555	0			
Adjusted Saturation Flow Rate (s), veh/h/ln	1633						1522	1443	1825			
Queue Service Time (g _s), s	3.1						0.0	12.7	0.0			
Cycle Queue Clearance Time (g _c), s	3.1						4.2	12.7	0.0			
Green Ratio (g/C)	0.15						0.69	0.69	0.69			
Capacity (c), veh/h	247						1115	999	1264			
Volume-to-Capacity Ratio (X)	0.291						0.531	0.556	0.000			
Back of Queue (Q), ft/ln (95 th percentile)	65.1						48.8	51.3	0			
Back of Queue (Q), veh/ln (95 th percentile)	2.5						2.0	2.0	0.0			
Queue Storage Ratio (RQ) (95 th percentile)	0.00						0.00	0.00	0.00			
Uniform Delay (d ₁), s/veh	31.2						1.0	1.0	0.0			
Incremental Delay (d ₂), s/veh	2.9						1.8	2.2	0.0			
Initial Queue Delay (d ₃), s/veh	0.0						0.0	0.0	0.0			
Control Delay (d), s/veh	34.1						2.8	3.3	0.0			
Level of Service (LOS)	C						A	A				
Approach Delay, s/veh / LOS	34.1	C	0.0				3.0	A	0.0			
Intersection Delay, s/veh / LOS	4.9						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.94	B	1.95	B	1.33	A	1.33	A
Bicycle LOS Score / LOS	1.67	B			2.51	C	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East	Time Period		PHF	0.82		
Intersection	East & Monroe	Analysis Year	2023	Analysis Period	1 > 8:00		
Project Description	2024 AM			File Name	2 lane - East 2024 AM S.xus		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	3	0					28	924			0	

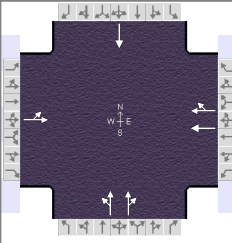
Signal Information														
Cycle, s	80.0	Reference Phase	2	↓	↖	↗					1	2	3	4
Offset, s	60	Reference Point	Begin	↕	↖	↗					5	6	7	8
Uncoordinated	No	Simult. Gap E/W	On	Green	58.8	10.8	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
				Red	2.0	2.0	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		6
Case Number		12.0				8.0		8.0
Phase Duration, s		16.0				64.0		64.0
Change Period, (Y+R _c), s		5.2				5.2		5.2
Max Allow Headway (MAH), s		4.2				0.0		0.0
Queue Clearance Time (g _s), s		2.2						
Green Extension Time (g _e), s		0.0				0.0		0.0
Phase Call Probability		1.00						
Max Out Probability		0.00						

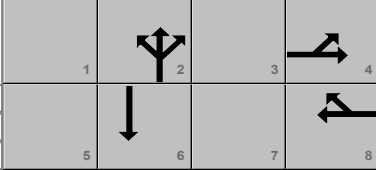
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4					5	2			6	
Adjusted Flow Rate (v), veh/h		4					558	511			0	
Adjusted Saturation Flow Rate (s), veh/h/ln		1657					1759	1616			1599	
Queue Service Time (g _s), s		0.2					0.0	10.4			0.0	
Cycle Queue Clearance Time (g _c), s		0.2					2.5	10.4			0.0	
Green Ratio (g/C)		0.13					0.74	0.74			0.74	
Capacity (c), veh/h		224					1340	1188			1175	
Volume-to-Capacity Ratio (X)		0.016					0.416	0.431			0.000	
Back of Queue (Q), ft/ln (95 th percentile)		3.6					31.3	31.2			0	
Back of Queue (Q), veh/ln (95 th percentile)		0.1					1.3	1.2			0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00					0.00	0.00			0.00	
Uniform Delay (d ₁), s/veh		34.7					0.7	0.7			0.0	
Incremental Delay (d ₂), s/veh		0.1					0.8	0.9			0.0	
Initial Queue Delay (d ₃), s/veh		0.0					0.0	0.0			0.0	
Control Delay (d), s/veh		34.8					1.5	1.6			0.0	
Level of Service (LOS)		C					A	A				
Approach Delay, s/veh / LOS	34.8	C	0.0				1.6	A	0.0			
Intersection Delay, s/veh / LOS			1.7					A				

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.95	B	1.96	B	1.32	A	1.33	A
Bicycle LOS Score / LOS	1.56	B			2.52	C	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Olive			Analysis Year	2023		
Project Description	2024 AM			File Name	2 lane - East 2024 AM S.xus		
							

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	53	47			15	23	28	928	10		0	

Signal Information														
Cycle, s	80.0	Reference Phase	2											
Offset, s	51	Reference Point	Begin											
Uncoordinated	No	Simult. Gap E/W	On											
Force Mode	Fixed	Simult. Gap N/S	On											
		Green	55.8	13.1	0.0	0.0	0.0	0.0						
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0						
		Red	2.4	2.3	0.0	0.0	0.0	0.0						

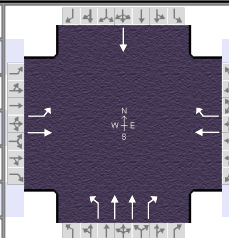
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		18.6		18.6		61.4		61.4
Change Period, ($Y+R_c$), s		5.5		5.5		5.6		5.6
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		7.2		3.1				
Green Extension Time (g_e), s		0.2		0.3		0.0		0.0
Phase Call Probability		0.96		1.00				
Max Out Probability		0.25		0.01				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	109			16 25			549 501			0		
Adjusted Saturation Flow Rate (s), veh/h/ln	1448			1784 1607			1544 1413			1825		
Queue Service Time (g_s), s	3.5			0.6 1.1			0.0 13.2			0.0		
Cycle Queue Clearance Time (g_c), s	5.2			0.6 1.1			13.1 13.2			0.0		
Green Ratio (g/C)	0.16			0.16 0.16			0.70 0.70			0.70		
Capacity (c), veh/h	306			292 263			1125 985			1273		
Volume-to-Capacity Ratio (X)	0.355			0.056 0.095			0.488 0.508			0.000		
Back of Queue (Q), ft/ln (95 th percentile)	88.4			13.5 20.6			165.6 154.7			0		
Back of Queue (Q), veh/ln (95 th percentile)	3.4			0.5 0.8			6.6 6.2			0.0		
Queue Storage Ratio (RQ) (95 th percentile)	0.00			0.00 0.00			0.00 0.00			0.00		
Uniform Delay (d_1), s/veh	30.1			28.2 28.4			5.6 5.6			0.0		
Incremental Delay (d_2), s/veh	0.7			0.4 0.7			1.5 1.9			0.0		
Initial Queue Delay (d_3), s/veh	0.0			0.0 0.0			0.0 0.0			0.0		
Control Delay (d), s/veh	30.7			28.6 29.1			7.1 7.5			0.0		
Level of Service (LOS)	C			C C			A A					
Approach Delay, s/veh / LOS	30.7	C		28.9	C		7.3	A		0.0		
Intersection Delay, s/veh / LOS	10.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.94	B	1.85	B	1.86	B
Bicycle LOS Score / LOS	1.73	B	1.59	B	2.43	B	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Washington			Analysis Year	2023		
Project Description	2024 AM			Analysis Period	1 > 8:00		
File Name	2 lane - East 2024 AM S.xus						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	10	171			236	77	23	899	53		0	

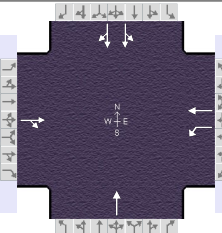
Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	64	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	50.1	18.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	2.8	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		7.0		5.0		8.0
Phase Duration, s		23.9		23.9		56.1		56.1
Change Period, ($Y+R_c$), s		5.4		5.4		6.0		6.0
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		16.6		15.6				
Green Extension Time (g_e), s		1.4		1.6		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.40		0.29				

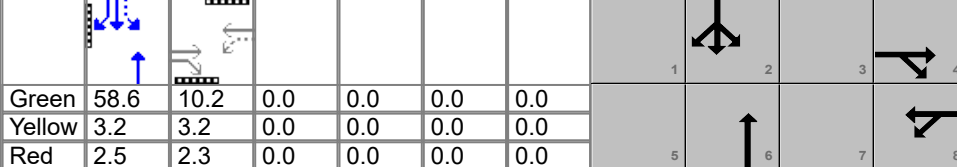
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	13	214			295	96	26	1001	59		0	
Adjusted Saturation Flow Rate (s), veh/h/ln	959	1762			1635	1377	1578	1678	1537		1678	
Queue Service Time (g_s), s	1.0	8.6			13.6	4.6	0.5	12.6	1.2		0.0	
Cycle Queue Clearance Time (g_c), s	14.6	8.6			13.6	4.6	0.5	12.6	1.2		0.0	
Green Ratio (g/C)	0.23	0.23			0.23	0.23	0.63	0.63	0.63		0.63	
Capacity (c), veh/h	148	407			378	318	1079	2103	963		1052	
Volume-to-Capacity Ratio (X)	0.084	0.525			0.781	0.303	0.024	0.476	0.061		0.000	
Back of Queue (Q), ft/ln (95 th percentile)	11.1	167.8			253.4	70.5	7	181	16		0	
Back of Queue (Q), veh/ln (95 th percentile)	0.4	6.5			9.8	2.7	0.3	7.0	0.6		0.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.17	0.00			0.00	0.88	0.09	0.00	0.00		0.00	
Uniform Delay (d_1), s/veh	36.2	27.3			29.3	25.4	5.6	7.9	5.7		0.0	
Incremental Delay (d_2), s/veh	0.2	0.9			6.3	0.5	0.0	0.7	0.1		0.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Control Delay (d), s/veh	36.4	28.3			35.6	26.0	5.7	8.5	5.8		0.0	
Level of Service (LOS)	D	C			D	C	A	A	A			
Approach Delay, s/veh / LOS	28.7	C		33.2	C	8.3	A	0.0				
Intersection Delay, s/veh / LOS	16.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.93	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.92	B	2.21	B	2.57	C	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Front	File Name	2 lane - Madison 2024 AM S.xus				
Project Description	2024 AM						

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		60	15	21	31			0		58	704	33

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	4	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	58.6	10.2	0.0	0.0	0.0	0.0				
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
		Red	2.5	2.3	0.0	0.0	0.0	0.0				

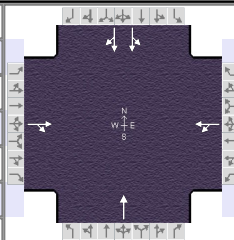
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		8.0		6.0		8.0		8.0
Phase Duration, s		15.7		15.7		64.3		64.3
Change Period, ($Y+R_c$), s		5.5		5.5		5.7		5.7
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		6.8		8.7				
Green Extension Time (g_e), s		0.5		0.5		0.0		0.0
Phase Call Probability		0.98		0.98				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		4	14	3	8		6		5	2	12	
Adjusted Flow Rate (v), veh/h		100		28	41		0		553		510	
Adjusted Saturation Flow Rate (s), veh/h/ln		1531		1163	1749		1705		1621		1503	
Queue Service Time (g_s), s		4.8		1.8	1.7		0.0		0.0		11.4	
Cycle Queue Clearance Time (g_c), s		4.8		6.7	1.7		0.0		10.9		11.4	
Green Ratio (g/C)		0.13		0.13	0.13		0.73		0.73		0.73	
Capacity (c), veh/h		196		168	224		1248		1238		1100	
Volume-to-Capacity Ratio (X)		0.511		0.166	0.185		0.000		0.447		0.463	
Back of Queue (Q), ft/ln (95 th percentile)		86.5		24.6	33.4		0		140.1		130.7	
Back of Queue (Q), veh/ln (95 th percentile)		3.3		0.9	1.3		0.0		5.5		5.2	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.41	0.00		0.00		0.00		0.00	
Uniform Delay (d_1), s/veh		32.1		35.2	30.7		0.0		4.5		4.6	
Incremental Delay (d_2), s/veh		2.1		0.5	0.4		0.0		1.0		1.2	
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0		0.0		0.0		0.0	
Control Delay (d), s/veh		34.1		35.6	31.1		0.0		5.5		5.8	
Level of Service (LOS)		C		D	C				A		A	
Approach Delay, s/veh / LOS	34.1	C		32.9	C		0.0		5.7		A	
Intersection Delay, s/veh / LOS			9.5						A			

Multimodal Results	EB		WB		NB		SB	
	Pedestrian LOS Score / LOS	1.93	B	1.93	B	1.84	B	1.61
Bicycle LOS Score / LOS	1.72	B	1.67	B	1.56	B	2.43	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	Madison			Time Period	PHF		
Intersection	Madison & Jefferson			Analysis Year	2023		
Project Description	2024 AM			File Name	2 lane - Madison 2024 AM S.xus		
				Analysis Period	1 > 8:00		



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		15	4	4	12			0		12	817	11

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	10	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On	Green	53.6	15.9	0.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.2	3.2	0.0	0.0	0.0	0.0		
				Red	2.2	1.9	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		21.0		21.0		59.0		59.0
Change Period, ($Y+R_c$), s		5.4		5.4		5.4		5.4
Max Allow Headway (MAH), s		4.1		4.1		0.0		0.0
Queue Clearance Time (g_s), s		3.0		2.7				
Green Extension Time (g_e), s		0.1		0.1		0.0		0.0
Phase Call Probability		1.00		0.64				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		4	14	3	8			6		5	2	12
Adjusted Flow Rate (v), veh/h		25			21			0		579		526
Adjusted Saturation Flow Rate (s), veh/h/ln		1587			1748			1689		1643		1493
Queue Service Time (g_s), s		1.0			0.0			0.0		0.0		10.1
Cycle Queue Clearance Time (g_c), s		1.0			0.7			0.0		10.1		10.1
Green Ratio (g/C)		0.19			0.19			0.67		0.67		0.67
Capacity (c), veh/h		309			397			1131		1147		1000
Volume-to-Capacity Ratio (X)		0.081			0.053			0.000		0.505		0.526
Back of Queue (Q), ft/ln (95 th percentile)		19.5			14.9			0		120.1		111.3
Back of Queue (Q), veh/ln (95 th percentile)		0.8			0.6			0.0		4.7		4.5
Queue Storage Ratio (RQ) (95 th percentile)		0.00			0.00			0.00		0.00		0.00
Uniform Delay (d_1), s/veh		26.2			26.1			0.0		3.8		3.8
Incremental Delay (d_2), s/veh		0.5			0.1			0.0		1.6		2.0
Initial Queue Delay (d_3), s/veh		0.0			0.0			0.0		0.0		0.0
Control Delay (d), s/veh		26.7			26.1			0.0		5.4		5.8
Level of Service (LOS)		C			C					A		A
Approach Delay, s/veh / LOS	26.7	C		26.1	C			0.0		5.6		A
Intersection Delay, s/veh / LOS	6.4						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.93	B	1.63	B	1.63	B
Bicycle LOS Score / LOS	1.60	B	1.59	B	1.56	B	2.47	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Locust	File Name	2 lane - Madison 2024 AM N.xus				
Project Description	2024 AM						

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		415	52	4	46			0		148	942	134

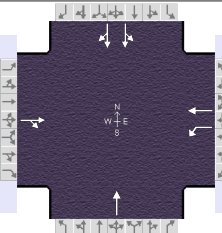
Signal Information												
Cycle, s	70.0	Reference Phase	2									
Offset, s	47	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	47.0	15.0	0.0	0.0	0.0	0.0				
		Yellow	3.0	3.0	0.0	0.0	0.0	0.0				
		Red	1.0	1.0	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		8.0		8.0		7.0
Phase Duration, s		19.0		19.0		51.0		51.0
Change Period, ($Y+R_c$), s		4.0		4.0		4.0		4.0
Max Allow Headway (MAH), s		4.0		4.0		0.0		0.0
Queue Clearance Time (g_s), s		13.6		13.7				
Green Extension Time (g_e), s		1.3		1.3		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.46		0.46				

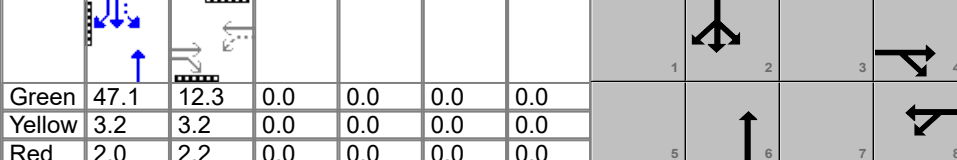
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement		8	18	7	4			6		5	2	12
Adjusted Flow Rate (v), veh/h		288	282		61			0		683	646	155
Adjusted Saturation Flow Rate (s), veh/h/ln		1657	1616		1664			1710		1537	1508	1449
Queue Service Time (g_s), s		10.5	11.6		0.0			0.0		14.8	17.3	2.8
Cycle Queue Clearance Time (g_c), s		10.5	11.6		11.7			0.0		18.1	17.3	2.8
Green Ratio (g/C)		0.21	0.21		0.21			0.67		0.67	0.67	0.67
Capacity (c), veh/h		355	346		412			1148		1097	1012	973
Volume-to-Capacity Ratio (X)		0.810	0.814		0.148			0.000		0.623	0.638	0.159
Back of Queue (Q), ft/ln (95 th percentile)		225.8	216.8		37.8			0		220.3	219	31.9
Back of Queue (Q), veh/ln (95 th percentile)		8.8	8.7		1.5			0.0		8.7	8.5	1.3
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.00		0.00			0.00		0.00	0.00	0.00
Uniform Delay (d_1), s/veh		26.1	26.2		23.5			0.0		6.7	6.6	4.3
Incremental Delay (d_2), s/veh		7.7	8.1		0.0			0.0		2.7	3.1	0.3
Initial Queue Delay (d_3), s/veh		0.0	0.0		0.0			0.0		0.0	0.0	0.0
Control Delay (d), s/veh		33.8	34.2		23.6			0.0		9.4	9.7	4.6
Level of Service (LOS)		C	C		C					A	A	A
Approach Delay, s/veh / LOS	34.0		C	23.6		C		0.0		9.0		A
Intersection Delay, s/veh / LOS	16.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	2.12	B	1.85	B	1.85	B
Bicycle LOS Score / LOS	2.03	B	0.59	A	1.56	B	2.78	C

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Market	File Name	2 lane - Madison 2024 AM N.xus				
Project Description	2024 AM						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		65	81	10	75			0		6	753	84

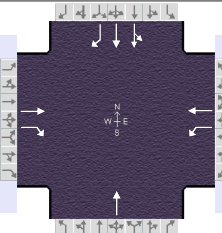
Signal Information												
Cycle, s	70.0	Reference Phase	2									
Offset, s	64	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	47.1	12.3	0.0	0.0	0.0	0.0				
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
		Red	2.0	2.2	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		8.0		6.0		8.0		8.0
Phase Duration, s		17.7		17.7		52.3		52.3
Change Period, ($Y+R_c$), s		5.4		5.4		5.2		5.2
Max Allow Headway (MAH), s		4.3		4.3		0.0		0.0
Queue Clearance Time (g_s), s		10.9		11.7				
Green Extension Time (g_e), s		0.6		0.6		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.28		0.43				

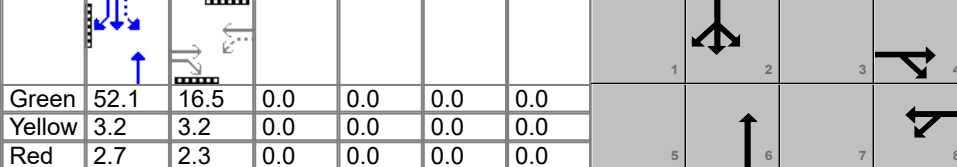
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		4	14	3	8			6		5	2	12
Adjusted Flow Rate (v), veh/h		197		14	101			0		648		569
Adjusted Saturation Flow Rate (s), veh/h/ln		1485		1049	1727			1922		1570		1378
Queue Service Time (g_s), s		8.9		0.9	3.6			0.0		0.0		15.9
Cycle Queue Clearance Time (g_c), s		8.9		9.7	3.6			0.0		15.8		15.9
Green Ratio (g/C)		0.18		0.18	0.18			0.67		0.67		0.67
Capacity (c), veh/h		261		154	303			1294		1109		927
Volume-to-Capacity Ratio (X)		0.757		0.088	0.334			0.000		0.584		0.614
Back of Queue (Q), ft/ln (95 th percentile)		158.1		10.4	68.2			0		182.2		166.5
Back of Queue (Q), veh/ln (95 th percentile)		6.1		0.4	2.6			0.0		7.2		6.7
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00			0.00		0.00		0.00
Uniform Delay (d_1), s/veh		27.6		32.3	25.5			0.0		6.2		6.2
Incremental Delay (d_2), s/veh		5.3		0.2	0.5			0.0		1.7		2.3
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0			0.0		0.0		0.0
Control Delay (d), s/veh		33.0		32.5	26.0			0.0		7.9		8.6
Level of Service (LOS)		C		C	C					A		A
Approach Delay, s/veh / LOS	33.0	C		26.7	C			0.0		8.2		A
Intersection Delay, s/veh / LOS		12.8					B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	1.92	B	1.85	B	1.63	B
Bicycle LOS Score / LOS	1.89	B	1.75	B	1.56	B	2.50	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Olive	File Name	2 lane - Madison 2024 AM S.xus				
Project Description	2024 AM						

Demand Information	EB			WB			NB			SB			
	L	T	R	L	T	R	L	T	R	L	T	R	
Approach Movement													
Demand (v), veh/h		55	33	3	33			0			39	657	52

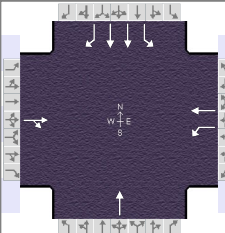
Signal Information																
Cycle, s	80.0	Reference Phase	2													
Offset, s	21	Reference Point	Begin													
Uncoordinated	No	Simult. Gap E/W	On													
Force Mode	Fixed	Simult. Gap N/S	On	Green	52.1	16.5	0.0	0.0	0.0	0.0						
				Yellow	3.2	3.2	0.0	0.0	0.0	0.0						
				Red	2.7	2.3	0.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		7.0		6.0		8.0		7.0
Phase Duration, s		22.0		22.0		58.0		58.0
Change Period, ($Y+R_c$), s		5.5		5.5		5.9		5.9
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		4.3		4.5				
Green Extension Time (g_e), s		0.3		0.3		0.0		0.0
Phase Call Probability		1.00		0.95				
Max Out Probability		0.00		0.00				

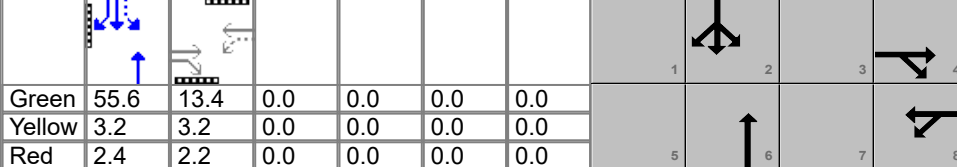
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		4	14	3	8			6		5	2	12
Adjusted Flow Rate (v), veh/h		60	36	3	36			0		478	443	69
Adjusted Saturation Flow Rate (s), veh/h/ln		1678	1422	1209	1789			1662		1678	1564	1456
Queue Service Time (g_s), s		2.3	1.6	0.2	1.3			0.0		0.0	11.1	1.4
Cycle Queue Clearance Time (g_c), s		2.3	1.6	2.5	1.3			0.0		10.8	11.1	1.4
Green Ratio (g/C)		0.21	0.21	0.21	0.21			0.65		0.65	0.65	0.65
Capacity (c), veh/h		346	293	304	369			1083		1143	1018	948
Volume-to-Capacity Ratio (X)		0.173	0.122	0.011	0.097			0.000		0.418	0.435	0.073
Back of Queue (Q), ft/ln (95 th percentile)		46.3	27.8	2.3	25.1			0		163.3	154	17.7
Back of Queue (Q), veh/ln (95 th percentile)		1.8	1.1	0.1	1.0			0.0		6.4	6.1	0.7
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.35	0.00	0.00			0.00		0.00	0.00	0.35
Uniform Delay (d_1), s/veh		26.0	25.7	27.0	25.6			0.0		6.8	6.8	5.1
Incremental Delay (d_2), s/veh		1.1	0.9	0.0	0.1			0.0		1.0	1.2	0.1
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Control Delay (d), s/veh		27.1	26.6	27.0	25.7			0.0		7.8	8.0	5.3
Level of Service (LOS)		C	C	C	C					A	A	A
Approach Delay, s/veh / LOS	26.9	C		25.8	C			0.0		7.7	A	
Intersection Delay, s/veh / LOS			10.0							A		

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	2.12	B	1.86	B	1.86	B
Bicycle LOS Score / LOS	1.72	B	1.62	B	1.56	B	2.23	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Washington	File Name	2 lane - Madison 2024 AM S.xus				
Project Description	2024 AM						

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		97	9	34	188			0		37	765	22

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	79	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	55.6	13.4	0.0	0.0	0.0	0.0				
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
		Red	2.4	2.2	0.0	0.0	0.0	0.0				

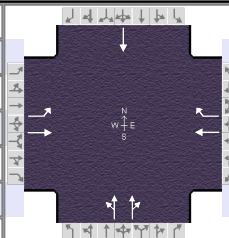
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		8.0		6.0		8.0		5.0
Phase Duration, s		18.8		18.8		61.2		61.2
Change Period, ($Y+R_c$), s		5.4		5.4		5.6		5.6
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		8.0		12.1				
Green Extension Time (g_e), s		1.5		1.4		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.01				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		4	14	3	8			6		5	2	12
Adjusted Flow Rate (v), veh/h		136		44	241			0		49	1008	29
Adjusted Saturation Flow Rate (s), veh/h/ln		1648		1110	1833			1689		1578	1644	1509
Queue Service Time (g_s), s		6.0		3.0	10.1			0.0		0.8	10.9	0.5
Cycle Queue Clearance Time (g_c), s		6.0		8.9	10.1			0.0		0.8	10.9	0.5
Green Ratio (g/C)		0.17		0.17	0.17			0.69		0.69	0.69	0.69
Capacity (c), veh/h		277		194	308			1173		1186	2284	1048
Volume-to-Capacity Ratio (X)		0.491		0.225	0.783			0.000		0.041	0.441	0.028
Back of Queue (Q), ft/ln (95 th percentile)		111.8		37.3	191.9			0		10.1	142.2	5.8
Back of Queue (Q), veh/ln (95 th percentile)		4.3		1.4	7.4			0.0		0.4	5.5	0.2
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.57	0.00			0.00		0.07	0.00	0.00
Uniform Delay (d_1), s/veh		30.1		34.2	31.8			0.0		3.9	5.5	3.9
Incremental Delay (d_2), s/veh		1.3		0.4	3.0			0.0		0.1	0.5	0.0
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0			0.0		0.0	0.0	0.0
Control Delay (d), s/veh		31.5		34.5	34.8			0.0		4.0	6.0	3.9
Level of Service (LOS)		C		C	C					A	A	A
Approach Delay, s/veh / LOS	31.5	C		34.7	C			0.0		5.8	A	
Intersection Delay, s/veh / LOS	13.6						B					

Multimodal Results	EB		WB		NB		SB	
	Pedestrian LOS Score / LOS	1.93	B	2.29	B	1.85	B	1.62
Bicycle LOS Score / LOS	1.78	B	2.03	B	1.56	B	2.43	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Front			Analysis Year	2023		
Project Description	2024 PM			Analysis Period	1 > 8:00		
File Name	2 lane - East 2024 PM S.xus						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	82	115			48	22		43	910	29		0

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	58	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	56.1	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	2.4	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

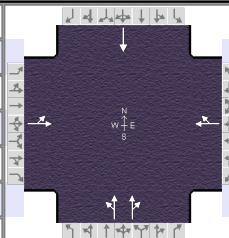
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		7.0		8.0		8.0
Phase Duration, s		18.3		18.3		61.7		61.7
Change Period, (Y+R _c), s		5.2		5.2		5.6		5.6
Max Allow Headway (MAH), s		4.3		4.3		0.0		0.0
Queue Clearance Time (g _s), s		10.2		4.2				
Green Extension Time (g _e), s		0.9		1.1		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.01		0.00				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	94	132			55	25	532		485		0	
Adjusted Saturation Flow Rate (s), veh/h/ln	1181	1787			1683	1380	1690		1546		1662	
Queue Service Time (g _s), s	5.9	5.3			2.2	1.2	0.0		11.6		0.0	
Cycle Queue Clearance Time (g _c), s	8.2	5.3			2.2	1.2	11.3		11.6		0.0	
Green Ratio (g/C)	0.16	0.16			0.16	0.16	0.70		0.70		0.70	
Capacity (c), veh/h	251	293			276	226	1233		1084		1165	
Volume-to-Capacity Ratio (X)	0.376	0.451			0.200	0.112	0.431		0.448		0.000	
Back of Queue (Q), ft/ln (95 th percentile)	77.8	104.3			41.3	19.1	160		149		0	
Back of Queue (Q), veh/ln (95 th percentile)	3.1	4.1			1.6	0.8	6.4		6.0		0.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.86	0.00			0.00	0.19	0.00		0.00		0.00	
Uniform Delay (d ₁), s/veh	31.8	29.6			28.3	28.5	5.6		5.7		0.0	
Incremental Delay (d ₂), s/veh	0.9	1.1			0.4	0.2	1.0		1.2		0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0	0.0	0.0		0.0		0.0	
Control Delay (d), s/veh	32.7	30.7			28.7	28.7	6.6		6.9		0.0	
Level of Service (LOS)	C	C			C	C	A		A			
Approach Delay, s/veh / LOS	31.5	C		28.7	C		6.8	A		0.0		
Intersection Delay, s/veh / LOS	12.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.94	B	1.85	B	1.85	B
Bicycle LOS Score / LOS	1.93	B	1.69	B	2.49	B	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Jefferson			Analysis Year	2023		
Project Description	2024 PM			Analysis Period	1 > 8:00		
File Name	2 lane - East 2024 PM S.xus						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	26	25			22	21	21	1032	6		0	

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	62	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	55.8	13.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

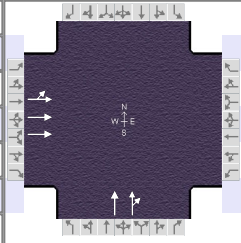
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		19.0		19.0		61.0		61.0
Change Period, (Y+R _c), s		5.2		5.2		5.2		5.2
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g _s), s		4.1		4.0				
Green Extension Time (g _e), s		0.2		0.2		0.0		0.0
Phase Call Probability		1.00		0.89				
Max Out Probability		0.01		0.01				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	53			45			569			518		
Adjusted Saturation Flow Rate (s), veh/h/ln	1506			1527			1674			1528		
Queue Service Time (g _s), s	0.1			2.0			0.0			12.3		
Cycle Queue Clearance Time (g _c), s	2.1			2.0			12.3			12.3		
Green Ratio (g/C)	0.17			0.17			0.70			0.70		
Capacity (c), veh/h	328			263			1215			1066		
Volume-to-Capacity Ratio (X)	0.162			0.170			0.468			0.486		
Back of Queue (Q), ft/ln (95 th percentile)	43.3			33.7			161.7			150.8		
Back of Queue (Q), veh/ln (95 th percentile)	1.7			1.3			6.5			6.0		
Queue Storage Ratio (RQ) (95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay (d ₁), s/veh	28.2			28.2			5.5			5.5		
Incremental Delay (d ₂), s/veh	1.1			0.3			1.1			1.3		
Initial Queue Delay (d ₃), s/veh	0.0			0.0			0.0			0.0		
Control Delay (d), s/veh	29.3			28.5			6.6			6.8		
Level of Service (LOS)	C			C			A			A		
Approach Delay, s/veh / LOS	29.3	C		28.5	C		6.7	A		0.0		
Intersection Delay, s/veh / LOS	8.5						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.94	B	1.62	B	1.63	B
Bicycle LOS Score / LOS	1.64	B	1.63	B	2.47	B	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			PHF	0.93		
Intersection	East & Locust			Analysis Year	2023		
Project Description	2024 PM			Analysis Period	1 > 8:00		
				File Name	2 lane - East 2024 PM N.xus		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	102	542						1004	209			

Signal Information														
Cycle, s	70.0	Reference Phase	2											
Offset, s	30	Reference Point	Begin											
Uncoordinated	No	Simult. Gap E/W	On											
Force Mode	Fixed	Simult. Gap N/S	On											
				Green	45.4	13.6	0.0	0.0	0.0	0.0				
				Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
				Red	2.3	2.3	0.0	0.0	0.0	0.0				

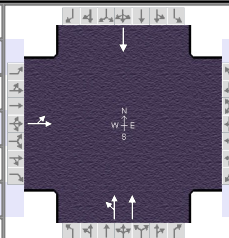
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		
Case Number		12.0				8.0		
Phase Duration, s		19.1				50.9		
Change Period, (Y+R _c), s		5.5				5.5		
Max Allow Headway (MAH), s		4.1				0.0		
Queue Clearance Time (g _s), s		11.7						
Green Extension Time (g _e), s		1.9				0.0		
Phase Call Probability		1.00						
Max Out Probability		0.31						

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4						2	12			
Adjusted Flow Rate (v), veh/h	243	449						628	590			
Adjusted Saturation Flow Rate (s), veh/h/ln	1646	1683						1683	1573			
Queue Service Time (g _s), s	9.7	8.6						20.0	15.3			
Cycle Queue Clearance Time (g _c), s	9.7	8.6						20.0	15.3			
Green Ratio (g/C)	0.19	0.19						0.65	0.65			
Capacity (c), veh/h	319	653						1092	1021			
Volume-to-Capacity Ratio (X)	0.761	0.689						0.575	0.578			
Back of Queue (Q), ft/ln (95 th percentile)	181.1	153.7						202.7	190.9			
Back of Queue (Q), veh/ln (95 th percentile)	7.1	6.0						8.0	7.6			
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00						0.00	0.00			
Uniform Delay (d ₁), s/veh	26.1	25.7						7.4	7.4			
Incremental Delay (d ₂), s/veh	4.5	1.3						1.7	1.8			
Initial Queue Delay (d ₃), s/veh	0.0	0.0						0.0	0.0			
Control Delay (d), s/veh	30.7	27.0						9.1	9.2			
Level of Service (LOS)	C	C						A	A			
Approach Delay, s/veh / LOS	28.3	C		0.0			9.1	A		0.0		
Intersection Delay, s/veh / LOS	16.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.71	B	1.72	B	1.86	B	1.95	B
Bicycle LOS Score / LOS	1.94	B			2.64	C	0.00	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Market			Analysis Year	2023		
Project Description	2024 PM			File Name	2 lane - East 2024 PM N.xus		
				Analysis Period	1> 8:00		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	137	0					126	1008			0	

Signal Information												Signal Phases										
Cycle, s	70.0	Reference Phase	2									1	2	3	4							
Offset, s	14	Reference Point	Begin									Green	44.5	14.6	0.0	0.0	0.0	0.0	5	6	7	8
Uncoordinated	No	Simult. Gap E/W	On									Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On									Red	2.3	2.2	0.0	0.0	0.0	0.0				

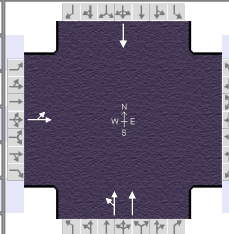
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		6
Case Number		12.0				8.0		8.0
Phase Duration, s		20.0				50.0		50.0
Change Period, ($Y+R_c$), s		5.4				5.5		5.5
Max Allow Headway (MAH), s		4.2				0.0		0.0
Queue Clearance Time (g_s), s		8.3						
Green Extension Time (g_e), s		0.2				0.0		0.0
Phase Call Probability		1.00						
Max Out Probability		0.19						

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4					5	2			6	
Adjusted Flow Rate (v), veh/h	146						619	587	0			
Adjusted Saturation Flow Rate (s), veh/h/ln	1607						1471	1418	1825			
Queue Service Time (g_s), s	6.3						0.0	16.9	0.0			
Cycle Queue Clearance Time (g_c), s	6.3						5.2	16.9	0.0			
Green Ratio (g/C)	0.21						0.64	0.64	0.64			
Capacity (c), veh/h	335						997	902	1160			
Volume-to-Capacity Ratio (X)	0.435						0.621	0.651	0.000			
Back of Queue (Q), ft/ln (95 th percentile)	134.4						64.3	70.5	0			
Back of Queue (Q), veh/ln (95 th percentile)	5.2						2.6	2.7	0.0			
Queue Storage Ratio (RQ) (95 th percentile)	0.00						0.00	0.00	0.00			
Uniform Delay (d_1), s/veh	30.9						1.2	1.3	0.0			
Incremental Delay (d_2), s/veh	2.9						2.9	3.6	0.0			
Initial Queue Delay (d_3), s/veh	0.0						0.0	0.0	0.0			
Control Delay (d), s/veh	33.8						4.1	4.9	0.0			
Level of Service (LOS)	C						A	A				
Approach Delay, s/veh / LOS	33.8	C		0.0			4.5	A		0.0		
Intersection Delay, s/veh / LOS	7.7						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.94	B	1.95	B	1.34	A	1.35	A
Bicycle LOS Score / LOS	1.79	B			2.55	C	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East	Time Period		PHF	0.97		
Intersection	East & Monroe	Analysis Year	2023	Analysis Period	1 > 8:00		
Project Description	2024 PM			File Name	2 lane - East 2024 PM S.xus		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	48	0					19	1054			0	

Signal Information																	
Cycle, s	80.0	Reference Phase	2	↓	↖	↗					1	↖	2	↗	3	↘	4
Offset, s	58	Reference Point	Begin	↖	↗	↘					5	↘	6	↖	7	↗	8
Uncoordinated	No	Simult. Gap E/W	On	Green	54.8	14.8	0.0	0.0	0.0	0.0							
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.2	3.2	0.0	0.0	0.0	0.0							
				Red	2.0	2.0	0.0	0.0	0.0	0.0							

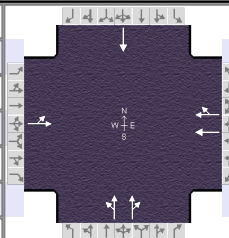
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		6
Case Number		12.0				8.0		8.0
Phase Duration, s		20.0				60.0		60.0
Change Period, (Y+R _c), s		5.2				5.2		5.2
Max Allow Headway (MAH), s		4.2				0.0		0.0
Queue Clearance Time (g _s), s		4.4						
Green Extension Time (g _e), s		0.1				0.0		0.0
Phase Call Probability		1.00						
Max Out Probability		0.00						

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4					5	2			6	
Adjusted Flow Rate (v), veh/h		49					579	529			0	
Adjusted Saturation Flow Rate (s), veh/h/ln		1632					1781	1628			1599	
Queue Service Time (g _s), s		2.4					0.0	11.4			0.0	
Cycle Queue Clearance Time (g _c), s		2.4					2.8	11.4			0.0	
Green Ratio (g/C)		0.18					0.69	0.69			0.69	
Capacity (c), veh/h		302					1267	1115			1095	
Volume-to-Capacity Ratio (X)		0.164					0.457	0.474			0.000	
Back of Queue (Q), ft/ln (95 th percentile)		49.6					37.7	37.5			0	
Back of Queue (Q), veh/ln (95 th percentile)		1.9					1.5	1.5			0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00					0.00	0.00			0.00	
Uniform Delay (d ₁), s/veh		33.8					0.8	0.8			0.0	
Incremental Delay (d ₂), s/veh		1.2					1.0	1.2			0.0	
Initial Queue Delay (d ₃), s/veh		0.0					0.0	0.0			0.0	
Control Delay (d), s/veh		35.0					1.9	2.1			0.0	
Level of Service (LOS)		C					A	A				
Approach Delay, s/veh / LOS	35.0	C	0.0				2.0	A	0.0			
Intersection Delay, s/veh / LOS			3.4						A			

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.95	B	1.96	B	1.34	A	1.34	A
Bicycle LOS Score / LOS	1.63	B			2.47	B	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Olive			Analysis Year	2023		
Project Description	2024 PM			Analysis Period	1> 8:00		
File Name	2 lane - East 2024 PM S.xus						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	79	60			35	27	16	830	14		0	

Signal Information				Signal Timing (s)									Signal Phases						
Cycle, s	80.0	Reference Phase	2	Green	53.4	15.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	52	Reference Point	Begin	Yellow	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	2.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On																

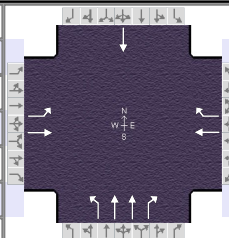
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		21.0		21.0		59.0		59.0
Change Period, ($Y+R_c$), s		5.5		5.5		5.6		5.6
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		9.6		3.4				
Green Extension Time (g_e), s		0.4		0.6		0.0		0.0
Phase Call Probability		1.00		0.99				
Max Out Probability		0.32		0.01				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	151			34 33			490			445		
Adjusted Saturation Flow Rate (s), veh/h/ln	1404			1784 1627			1552			1410		
Queue Service Time (g_s), s	6.1			1.3 1.4			0.0			12.2		
Cycle Queue Clearance Time (g_c), s	7.6			1.3 1.4			12.1			12.2		
Green Ratio (g/C)	0.19			0.19 0.19			0.67			0.67		
Capacity (c), veh/h	343			346 315			1082			941		
Volume-to-Capacity Ratio (X)	0.441			0.098 0.106			0.453			0.473		
Back of Queue (Q), ft/ln (95 th percentile)	134.2			24.8 24.1			161.4			149.6		
Back of Queue (Q), veh/ln (95 th percentile)	5.2			1.0 0.9			6.5			6.0		
Queue Storage Ratio (RQ) (95 th percentile)	0.00			0.00 0.00			0.00			0.00		
Uniform Delay (d_1), s/veh	28.9			26.5 26.5			6.4			6.4		
Incremental Delay (d_2), s/veh	3.7			0.1 0.1			1.4			1.7		
Initial Queue Delay (d_3), s/veh	0.0			0.0 0.0			0.0			0.0		
Control Delay (d), s/veh	32.7			26.6 26.7			7.8			8.1		
Level of Service (LOS)	C			C C			A			A		
Approach Delay, s/veh / LOS	32.7	C		26.7	C		7.9	A		0.0		
Intersection Delay, s/veh / LOS	12.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.94	B	1.86	B	1.86	B
Bicycle LOS Score / LOS	1.80	B	1.62	B	2.33	B	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Washington			Analysis Year	2023		
Project Description	2024 PM			Analysis Period	1> 8:00		
File Name	2 lane - East 2024 PM S.xus						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	34	222			285	87	31	906	69		0	

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	60	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	48.2	20.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	2.8	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

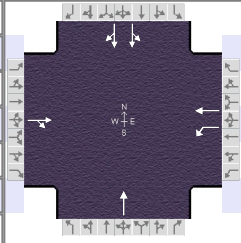
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		7.0		5.0		8.0
Phase Duration, s		25.8		25.8		54.2		54.2
Change Period, ($Y+R_c$), s		5.4		5.4		6.0		6.0
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		18.4		15.5				
Green Extension Time (g_e), s		1.8		2.1		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.31		0.13				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	37	239			306	94	33	957	73		0	
Adjusted Saturation Flow Rate (s), veh/h/ln	965	1789			1662	1384	1629	1703	1528		1678	
Queue Service Time (g_s), s	2.9	9.2			13.5	4.3	0.6	12.2	1.6		0.0	
Cycle Queue Clearance Time (g_c), s	16.4	9.2			13.5	4.3	0.6	12.2	1.6		0.0	
Green Ratio (g/C)	0.25	0.25			0.25	0.25	0.60	0.60	0.60		0.60	
Capacity (c), veh/h	173	456			424	353	1071	2053	921		1011	
Volume-to-Capacity Ratio (X)	0.211	0.523			0.723	0.265	0.031	0.466	0.079		0.000	
Back of Queue (Q), ft/ln (95 th percentile)	31.3	173.7			238.3	64.5	9.4	179.5	21.7		0	
Back of Queue (Q), veh/ln (95 th percentile)	1.2	6.8			9.4	2.5	0.4	7.1	0.9		0.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.48	0.00			0.00	0.81	0.12	0.00	0.00		0.00	
Uniform Delay (d_1), s/veh	34.7	25.6			27.2	23.8	6.3	8.6	6.5		0.0	
Incremental Delay (d_2), s/veh	0.5	0.8			3.3	0.4	0.0	0.6	0.1		0.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Control Delay (d), s/veh	35.2	26.4			30.5	24.2	6.4	9.2	6.6		0.0	
Level of Service (LOS)	D	C			C	C	A	A	A			
Approach Delay, s/veh / LOS	27.6	C			29.0	C	9.0	A	0.0			
Intersection Delay, s/veh / LOS	16.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.93	B	1.87	B	1.88	B
Bicycle LOS Score / LOS	2.01	B	2.22	B	2.45	B	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	Madison			Time Period	PHF		
Intersection	Madison & Front			Analysis Year	2023		
Project Description	2024 PM			File Name	2 lane - Madison 2024 PM S.xus		
				Analysis Period	1 > 8:00		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		35	13	53	65			0		22	1026	27

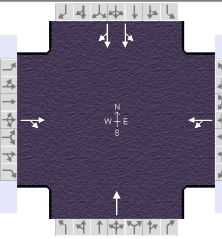
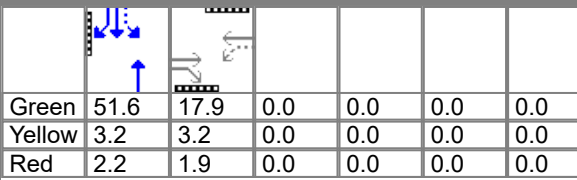
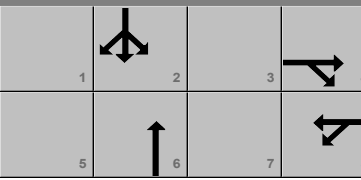
Signal Information													
Cycle, s	80.0	Reference Phase	2										
Offset, s	8	Reference Point	Begin										
Uncoordinated	No	Simult. Gap E/W	On	Green	59.8	9.0	0.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.2	3.2	0.0	0.0	0.0	0.0			
				Red	2.5	2.3	0.0	0.0	0.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		8.0		6.0		8.0		8.0
Phase Duration, s		14.5		14.5		65.5		65.5
Change Period, (Y+R _c), s		5.5		5.5		5.7		5.7
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g _s), s		4.3		7.7				
Green Extension Time (g _e), s		0.5		0.5		0.0		0.0
Phase Call Probability		0.98		0.98				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement		4	14	3	8			6		5	2	12
Adjusted Flow Rate (v), veh/h		49		55	67			0		645		584
Adjusted Saturation Flow Rate (s), veh/h/ln		1549		1247	1789			1705		1708		1549
Queue Service Time (g _s), s		2.3		3.3	2.7			0.0		0.0		12.5
Cycle Queue Clearance Time (g _c), s		2.3		5.7	2.7			0.0		12.4		12.5
Green Ratio (g/C)		0.11		0.11	0.11			0.75		0.75		0.75
Capacity (c), veh/h		175		194	202			1274		1323		1157
Volume-to-Capacity Ratio (X)		0.283		0.281	0.332			0.000		0.487		0.505
Back of Queue (Q), ft/ln (95 th percentile)		40.9		47.2	55.5			0		154		140.3
Back of Queue (Q), veh/ln (95 th percentile)		1.6		1.9	2.2			0.0		6.1		5.6
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.79	0.00			0.00		0.00		0.00
Uniform Delay (d ₁), s/veh		32.3		34.8	32.4			0.0		4.2		4.3
Incremental Delay (d ₂), s/veh		0.9		0.8	1.0			0.0		1.1		1.3
Initial Queue Delay (d ₃), s/veh		0.0		0.0	0.0			0.0		0.0		0.0
Control Delay (d), s/veh		33.1		35.6	33.4			0.0		5.3		5.6
Level of Service (LOS)		C		D	C					A		A
Approach Delay, s/veh / LOS	33.1	C		34.4	C			0.0		5.5		A
Intersection Delay, s/veh / LOS	9.0						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.94	B	1.94	B	1.84	B	1.61	B
Bicycle LOS Score / LOS	1.64	B	1.76	B	1.56	B	2.47	B

HCS Signalized Intersection Results Summary

General Information						Intersection Information									
Agency						Duration, h		0.250							
Analyst		Analysis Date		4/12/2023		Area Type		CBD							
Jurisdiction		Time Period				PHF		0.85							
Urban Street		Madison		Analysis Year		2023		Analysis Period					1 > 8:00		
Intersection		Madison & Jefferson		File Name		2 lane - Madison 2024 PM S.xus									
Project Description		2024 PM													
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h					19	9	25	21			0		18	1046	17
Signal Information															
Cycle, s	80.0	Reference Phase	2												
Offset, s	6	Reference Point	Begin												
Uncoordinated	No	Simult. Gap E/W	On												
Force Mode	Fixed	Simult. Gap N/S	On												
Green	51.6	17.9	0.0	0.0	0.0	0.0									
Yellow	3.2	3.2	0.0	0.0	0.0	0.0									
Red	2.2	1.9	0.0	0.0	0.0	0.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase					4		8		6		2				
Case Number					8.0		8.0		8.0		8.0				
Phase Duration, s					23.0		23.0		57.0		57.0				
Change Period, (Y+R _c), s					5.4		5.4		5.4		5.4				
Max Allow Headway (MAH), s					4.2		4.2		0.0		0.0				
Queue Clearance Time (g _s), s					3.3		3.9								
Green Extension Time (g _e), s					0.2		0.2		0.0		0.0				
Phase Call Probability					1.00		0.86								
Max Out Probability					0.00		0.00								
Movement Group Results				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement					4	14	3	8		6		5	2	12	
Adjusted Flow Rate (v), veh/h					33		54		0		667		605		
Adjusted Saturation Flow Rate (s), veh/h/ln					1568		1582		1689		1655		1504		
Queue Service Time (g _s), s					1.3		0.2		0.0		0.0		14.2		
Cycle Queue Clearance Time (g _c), s					1.3		1.9		0.0		14.2		14.2		
Green Ratio (g/C)					0.22		0.22		0.64		0.64		0.64		
Capacity (c), veh/h					345		417		1089		1114		970		
Volume-to-Capacity Ratio (X)					0.095		0.130		0.000		0.599		0.624		
Back of Queue (Q), ft/ln (95 th percentile)					24.6		37.5		0		167.5		156.2		
Back of Queue (Q), veh/ln (95 th percentile)					1.0		1.5		0.0		6.6		6.2		
Queue Storage Ratio (RQ) (95 th percentile)					0.00		0.00		0.00		0.00		0.00		
Uniform Delay (d ₁), s/veh					24.9		25.1		0.0		4.9		4.9		
Incremental Delay (d ₂), s/veh					0.5		0.1		0.0		2.4		3.0		
Initial Queue Delay (d ₃), s/veh					0.0		0.0		0.0		0.0		0.0		
Control Delay (d), s/veh					25.4		25.2		0.0		7.3		7.9		
Level of Service (LOS)					C		C				A		A		
Approach Delay, s/veh / LOS				25.4	C	25.2	C	0.0		7.6	A				
Intersection Delay, s/veh / LOS				8.7				A							
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				1.93	B	1.93	B	1.64	B	1.64	B				
Bicycle LOS Score / LOS				1.61	B	1.65	B	1.56	B	2.61	C				

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Locust	File Name	2 lane - Madison 2024 PM N.xus				
Project Description	2024 PM						

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		444	63	4	57			0		196	1182	165

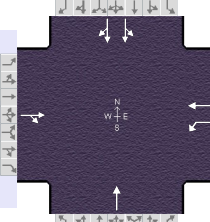
Signal Information												
Cycle, s	70.0	Reference Phase	2									
Offset, s	33	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	47.8	14.2	0.0	0.0	0.0	0.0				
		Yellow	3.0	3.0	0.0	0.0	0.0	0.0				
		Red	1.0	1.0	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		8.0		8.0		7.0
Phase Duration, s		18.2		18.2		51.8		51.8
Change Period, ($Y+R_c$), s		4.0		4.0		4.0		4.0
Max Allow Headway (MAH), s		4.0		4.0		0.0		0.0
Queue Clearance Time (g_s), s		12.9		12.9				
Green Extension Time (g_e), s		1.2		1.2		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.48		0.48				

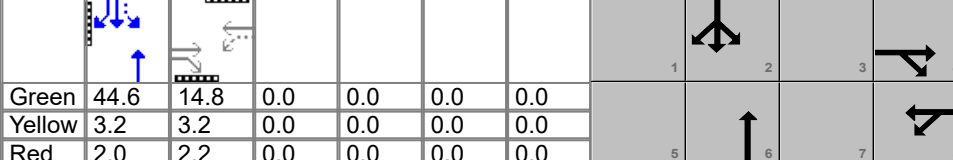
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		8	18	7	4			6		5	2	12
Adjusted Flow Rate (v), veh/h		273	267		65			0		757	709	168
Adjusted Saturation Flow Rate (s), veh/h/ln		1683	1635		1541			1710		1554	1532	1449
Queue Service Time (g_s), s		9.9	10.9		0.0			0.0		18.7	19.2	2.9
Cycle Queue Clearance Time (g_c), s		9.9	10.9		10.9			0.0		21.0	19.2	2.9
Green Ratio (g/C)		0.20	0.20		0.20			0.68		0.68	0.68	0.68
Capacity (c), veh/h		342	333		368			1167		1126	1045	989
Volume-to-Capacity Ratio (X)		0.797	0.802		0.176			0.000		0.673	0.678	0.170
Back of Queue (Q), ft/ln (95 th percentile)		212.2	206.7		40.7			0		246.1	235	32.8
Back of Queue (Q), veh/ln (95 th percentile)		8.4	8.3		1.6			0.0		9.7	9.3	1.3
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.00		0.00			0.00		0.00	0.00	0.00
Uniform Delay (d_1), s/veh		26.5	26.5		24.0			0.0		6.9	6.6	4.0
Incremental Delay (d_2), s/veh		7.1	7.5		0.1			0.0		3.2	3.5	0.4
Initial Queue Delay (d_3), s/veh		0.0	0.0		0.0			0.0		0.0	0.0	0.0
Control Delay (d), s/veh		33.6	34.1		24.1			0.0		10.1	10.2	4.4
Level of Service (LOS)		C	C		C					B	B	A
Approach Delay, s/veh / LOS	33.8	C		24.1	C			0.0		9.5		A
Intersection Delay, s/veh / LOS	15.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	2.12	B	1.85	B	1.85	B
Bicycle LOS Score / LOS	2.00	B	0.59	A	1.56	B	2.91	C

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Market	File Name	2 lane - Madison 2024 PM N.xus				
Project Description	2024 PM						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		124	108	24	108			0		12	931	146

Signal Information												
Cycle, s	70.0	Reference Phase	2									
Offset, s	52	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	44.6	14.8	0.0	0.0	0.0	0.0				
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
		Red	2.0	2.2	0.0	0.0	0.0	0.0				

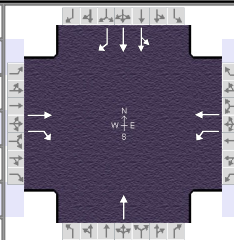
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		8.0		6.0		8.0		8.0
Phase Duration, s		20.2		20.2		49.8		49.8
Change Period, ($Y+R_c$), s		5.4		5.4		5.2		5.2
Max Allow Headway (MAH), s		4.3		4.3		0.0		0.0
Queue Clearance Time (g_s), s		12.5		14.2				
Green Extension Time (g_e), s		0.8		0.6		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.41		0.88				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		4	14	3	8			6		5	2	12
Adjusted Flow Rate (v), veh/h		247		26	115			0		710		619
Adjusted Saturation Flow Rate (s), veh/h/ln		1547		1019	1754			1922		1595		1382
Queue Service Time (g_s), s		10.5		1.7	3.9			0.0		0.0		20.5
Cycle Queue Clearance Time (g_c), s		10.5		12.2	3.9			0.0		20.2		20.5
Green Ratio (g/C)		0.21		0.21	0.21			0.64		0.64		0.64
Capacity (c), veh/h		327		166	371			1225		1069		880
Volume-to-Capacity Ratio (X)		0.754		0.154	0.310			0.000		0.665		0.703
Back of Queue (Q), ft/ln (95 th percentile)		191.9		19.1	71.7			0		239.6		218.5
Back of Queue (Q), veh/ln (95 th percentile)		7.6		0.8	2.8			0.0		9.4		8.7
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00			0.00		0.00		0.00
Uniform Delay (d_1), s/veh		25.9		31.7	23.3			0.0		8.2		8.3
Incremental Delay (d_2), s/veh		5.9		0.3	0.4			0.0		2.4		3.4
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0			0.0		0.0		0.0
Control Delay (d), s/veh		31.9		32.0	23.7			0.0		10.6		11.7
Level of Service (LOS)		C		C	C					B		B
Approach Delay, s/veh / LOS	31.9	C		25.2	C			0.0		11.1		B
Intersection Delay, s/veh / LOS		15.3						B				

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	1.92	B	1.86	B	1.63	B
Bicycle LOS Score / LOS	1.97	B	1.79	B	1.56	B	2.52	C

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	Madison	Time Period		PHF	0.92		
Intersection	Madison & Olive	Analysis Year	2023	Analysis Period	1 > 8:00		
Project Description	2024 PM			File Name	2 lane - Madison 2024 PM S.xus		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		81	43	9	29			0		48	1037	46

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	25	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On	Green	54.1	14.5	0.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.2	3.2	0.0	0.0	0.0	0.0		
				Red	2.7	2.3	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		7.0		6.0		8.0		7.0
Phase Duration, s		20.0		20.0		60.0		60.0
Change Period, (Y+R _c), s		5.5		5.5		5.9		5.9
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g _s), s		6.0		6.6				
Green Extension Time (g _e), s		0.3		0.3		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.04		0.07				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		4	14	3	8		6		5	2	12	
Adjusted Flow Rate (v), veh/h		88	47	10	32		0		619	571	50	
Adjusted Saturation Flow Rate (s), veh/h/ln		1678	1422	1178	1789		1662		1688	1564	1456	
Queue Service Time (g _s), s		4.0	2.5	0.7	1.3		0.0		0.0	11.1	0.6	
Cycle Queue Clearance Time (g _c), s		4.0	2.5	4.6	1.3		0.0		10.9	11.1	0.6	
Green Ratio (g/C)		0.18	0.18	0.18	0.18		0.68		0.68	0.68	0.68	
Capacity (c), veh/h		304	258	245	324		1124		1190	1057	985	
Volume-to-Capacity Ratio (X)		0.289	0.181	0.040	0.097		0.000		0.520	0.540	0.051	
Back of Queue (Q), ft/ln (95 th percentile)		82.7	43.2	9.3	27.7		0		132.3	125.9	8	
Back of Queue (Q), veh/ln (95 th percentile)		3.3	1.7	0.4	1.1		0.0		5.2	5.0	0.3	
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.54	0.00	0.00		0.00		0.00	0.00	0.16	
Uniform Delay (d ₁), s/veh		31.9	31.3	34.1	30.7		0.0		4.0	4.1	2.9	
Incremental Delay (d ₂), s/veh		2.4	1.5	0.3	0.6		0.0		1.5	1.8	0.1	
Initial Queue Delay (d ₃), s/veh		0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Control Delay (d), s/veh		34.3	32.8	34.4	31.3		0.0		5.5	5.9	3.0	
Level of Service (LOS)		C	C	C	C				A	A	A	
Approach Delay, s/veh / LOS	33.8	C		32.1	C		0.0			5.6	A	
Intersection Delay, s/veh / LOS	9.0						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	2.12	B	1.85	B	1.85	B
Bicycle LOS Score / LOS	1.78	B	1.63	B	1.56	B	2.57	C

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Washington	File Name	2 lane - Madison 2024 PM S.xus				
Project Description	2024 PM						

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		126	8	59	228			0		58	1011	40

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	0	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	55.0	14.0	0.0	0.0	0.0	0.0				
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
		Red	2.4	2.2	0.0	0.0	0.0	0.0				

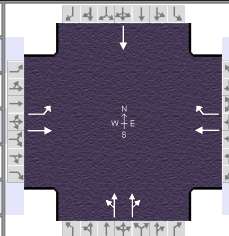
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		8.0		6.0		8.0		5.0
Phase Duration, s		19.4		19.4		60.6		60.6
Change Period, ($Y+R_c$), s		5.4		5.4		5.6		5.6
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		8.0		12.2				
Green Extension Time (g_e), s		1.5		1.4		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.01				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		4	14	3	8			6		5	2	12
Adjusted Flow Rate (v), veh/h		141		62	240			0		66	1158	46
Adjusted Saturation Flow Rate (s), veh/h/ln		1682		1118	1861			1689		1603	1670	1506
Queue Service Time (g_s), s		6.0		4.2	9.8			0.0		1.1	13.2	0.8
Cycle Queue Clearance Time (g_c), s		6.0		10.2	9.8			0.0		1.1	13.2	0.8
Green Ratio (g/C)		0.18		0.18	0.18			0.69		0.69	0.69	0.69
Capacity (c), veh/h		295		202	326			1160		1192	2294	1035
Volume-to-Capacity Ratio (X)		0.478		0.308	0.735			0.000		0.056	0.505	0.044
Back of Queue (Q), ft/ln (95 th percentile)		112.5		52.5	182.1			0		13.8	164.4	9.3
Back of Queue (Q), veh/ln (95 th percentile)		4.4		2.1	7.2			0.0		0.5	6.5	0.4
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.81	0.00			0.00		0.09	0.00	0.00
Uniform Delay (d_1), s/veh		29.5		34.1	31.0			0.0		4.0	5.9	4.0
Incremental Delay (d_2), s/veh		1.2		0.5	2.1			0.0		0.1	0.6	0.1
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0			0.0		0.0	0.0	0.0
Control Delay (d), s/veh		30.7		34.7	33.1			0.0		4.1	6.5	4.1
Level of Service (LOS)		C		C	C					A	A	A
Approach Delay, s/veh / LOS	30.7	C		33.4	C		0.0			6.3	A	
Intersection Delay, s/veh / LOS	13.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	2.29	B	1.85	B	1.63	B
Bicycle LOS Score / LOS	1.79	B	2.06	B	1.56	B	2.52	C

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Front			Analysis Year	2023		
Project Description	2044 AM			Analysis Period	1 > 8:00		
File Name	2 lane - East 2044 AM S.xus						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	15	33			141	40	45	999	18		0	

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	60	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	52.4	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	2.4	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

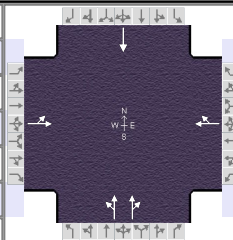
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		7.0		8.0		8.0
Phase Duration, s		22.0		22.0		58.0		58.0
Change Period, ($Y+R_c$), s		5.2		5.2		5.6		5.6
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		10.2		9.0				
Green Extension Time (g_e), s		0.5		0.6		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.25		0.13				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	18	39			166	47	629		576		0	
Adjusted Saturation Flow Rate (s), veh/h/ln	1071	1759			1657	1374	1663		1529		1635	
Queue Service Time (g_s), s	1.2	1.4			7.0	2.2	0.0		16.8		0.0	
Cycle Queue Clearance Time (g_c), s	8.2	1.4			7.0	2.2	16.5		16.8		0.0	
Green Ratio (g/C)	0.21	0.21			0.21	0.21	0.66		0.66		0.66	
Capacity (c), veh/h	221	369			348	289	1138		1002		1071	
Volume-to-Capacity Ratio (X)	0.080	0.105			0.477	0.163	0.553		0.575		0.000	
Back of Queue (Q), ft/ln (95 th percentile)	15.9	29.7			129.9	34.1	224.8		213.7		0	
Back of Queue (Q), veh/ln (95 th percentile)	0.6	1.2			5.0	1.3	9.0		8.5		0.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.18	0.00			0.00	0.34	0.00		0.00		0.00	
Uniform Delay (d_1), s/veh	31.3	25.5			27.7	25.8	7.7		7.8		0.0	
Incremental Delay (d_2), s/veh	0.7	0.6			1.0	0.3	1.7		2.1		0.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0	0.0		0.0		0.0	
Control Delay (d), s/veh	32.1	26.1			28.8	26.1	9.4		9.9		0.0	
Level of Service (LOS)	C	C			C	C	A		A			
Approach Delay, s/veh / LOS	28.0		C	28.2		C	9.6		A	0.0		
Intersection Delay, s/veh / LOS	13.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.94	B	1.86	B	1.87	B
Bicycle LOS Score / LOS	1.65	B	1.91	B	2.59	C	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period			
Intersection	East & Jefferson			PHF	0.83		
Project Description	2044 AM			Analysis Year	2023		
				Analysis Period	1 > 8:00		
				File Name	2 lane - East 2044 AM S.xus		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	7	26			12	4	23	1047	29		0	

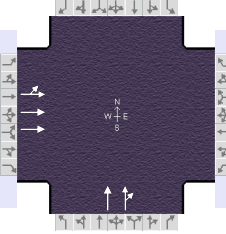
Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	55	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	57.8	11.8	0.0	0.0	0.0	0.0				
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
		Red	2.0	2.0	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		17.0		17.0		63.0		63.0
Change Period, ($Y+R_c$), s		5.2		5.2		5.2		5.2
Max Allow Headway (MAH), s		4.1		4.1		0.0		0.0
Queue Clearance Time (g_s), s		3.6		2.8				
Green Extension Time (g_e), s		0.1		0.1		0.0		0.0
Phase Call Probability		0.73		1.00				
Max Out Probability		0.01		0.00				

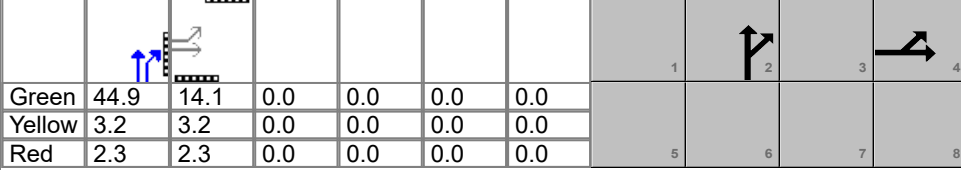
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	40			19			643			582		
Adjusted Saturation Flow Rate (s), veh/h/ln	1705			1598			1660			1504		
Queue Service Time (g_s), s	0.0			0.8			0.0			14.1		
Cycle Queue Clearance Time (g_c), s	1.6			0.8			14.0			14.1		
Green Ratio (g/C)	0.15			0.15			0.72			0.72		
Capacity (c), veh/h	306			236			1246			1087		
Volume-to-Capacity Ratio (X)	0.130			0.082			0.516			0.536		
Back of Queue (Q), ft/ln (95 th percentile)	30.9			16.5			161.6			152		
Back of Queue (Q), veh/ln (95 th percentile)	1.2			0.6			6.5			6.1		
Queue Storage Ratio (RQ) (95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay (d_1), s/veh	29.7			29.4			5.1			5.1		
Incremental Delay (d_2), s/veh	0.2			0.7			1.0			1.3		
Initial Queue Delay (d_3), s/veh	0.0			0.0			0.0			0.0		
Control Delay (d), s/veh	29.9			30.1			6.1			6.4		
Level of Service (LOS)	C			C			A			A		
Approach Delay, s/veh / LOS	29.9	C		30.1	C		6.2	A		0.0		
Intersection Delay, s/veh / LOS	7.3						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.94	B	1.62	B	1.62	B
Bicycle LOS Score / LOS	1.62	B	1.59	B	2.65	C	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Locust			Analysis Year	2023		
Project Description	2044 AM			File Name	2 lane - East 2044 AM N.xus		
							

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	92	528						931	103			

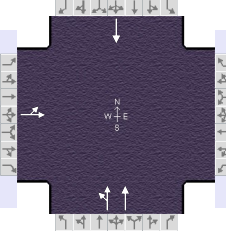
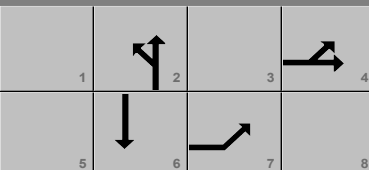
Signal Information													
Cycle, s	70.0	Reference Phase	2										
Offset, s	23	Reference Point	Begin										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green		44.9	14.1	0.0	0.0	0.0	0.0				
		Yellow		3.2	3.2	0.0	0.0	0.0	0.0				
		Red		2.3	2.3	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		
Case Number		12.0				8.0		
Phase Duration, s		19.6				50.4		
Change Period, ($Y+R_c$), s		5.5				5.5		
Max Allow Headway (MAH), s		4.1				0.0		
Queue Clearance Time (g_s), s		12.1						
Green Extension Time (g_e), s		2.0				0.0		
Phase Call Probability		1.00						
Max Out Probability		0.27						

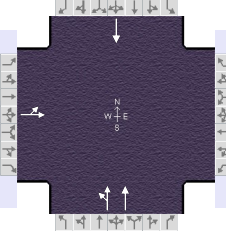
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4					2	12				
Adjusted Flow Rate (v), veh/h	250	462					630	609				
Adjusted Saturation Flow Rate (s), veh/h/ln	1622	1657					1657	1598				
Queue Service Time (g_s), s	10.1	9.0					18.1	16.1				
Cycle Queue Clearance Time (g_c), s	10.1	9.0					18.1	16.1				
Green Ratio (g/C)	0.20	0.20					0.64	0.64				
Capacity (c), veh/h	327	668					1062	1025				
Volume-to-Capacity Ratio (X)	0.765	0.692					0.593	0.594				
Back of Queue (Q), ft/ln (95 th percentile)	184.5	158.9					217.3	206.3				
Back of Queue (Q), veh/ln (95 th percentile)	7.3	6.2					8.4	8.3				
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00					0.00	0.00				
Uniform Delay (d_1), s/veh	25.7	25.3					7.8	7.8				
Incremental Delay (d_2), s/veh	4.4	1.3					1.9	2.0				
Initial Queue Delay (d_3), s/veh	0.0	0.0					0.0	0.0				
Control Delay (d), s/veh	30.2	26.6					9.7	9.8				
Level of Service (LOS)	C	C					A	A				
Approach Delay, s/veh / LOS	27.8	C		0.0			9.8	A		0.0		
Intersection Delay, s/veh / LOS	16.4						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.71	B	1.72	B	1.86	B	1.95	B
Bicycle LOS Score / LOS	1.95	B			2.54	C	0.00	A

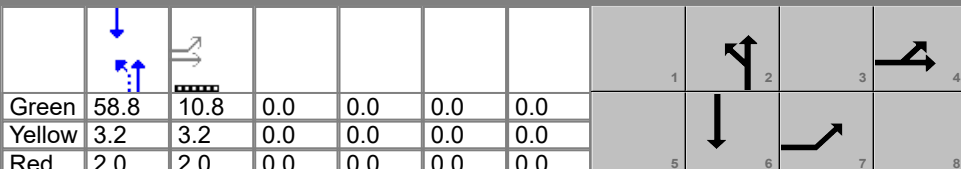
HCS Signalized Intersection Results Summary

General Information						Intersection Information									
Agency						Duration, h		0.250							
Analyst		Analysis Date		4/12/2023		Area Type		CBD							
Jurisdiction		Time Period				PHF		0.82							
Urban Street		East		Analysis Year		2023		Analysis Period						1 > 8:00	
Intersection		East & Market		File Name		2 lane - East 2044 AM N.xus									
Project Description		2044 AM													
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				65	0					88	951			0	
Signal Information															
Cycle, s	70.0	Reference Phase	2	Green	48.5	10.6	0.0	0.0	0.0	0.0					
Offset, s	4	Reference Point	Begin	Yellow	3.2	3.2	0.0	0.0	0.0	0.0					
Uncoordinated	No	Simult. Gap E/W	On	Red	2.3	2.2	0.0	0.0	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On												
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase					4				2			6			
Case Number					12.0				8.0			8.0			
Phase Duration, s					16.0				54.0			54.0			
Change Period, (Y+R _c), s					5.4				5.5			5.5			
Max Allow Headway (MAH), s					4.2				0.0			0.0			
Queue Clearance Time (g _s), s					5.4										
Green Extension Time (g _e), s					0.1				0.0			0.0			
Phase Call Probability					1.00										
Max Out Probability					0.35										
Movement Group Results				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7	4					5	2			6	
Adjusted Flow Rate (v), veh/h					79					654	613			0	
Adjusted Saturation Flow Rate (s), veh/h/ln					1633					1521	1443			1825	
Queue Service Time (g _s), s					3.4					0.0	14.9			0.0	
Cycle Queue Clearance Time (g _c), s					3.4					5.1	14.9			0.0	
Green Ratio (g/C)					0.15					0.69	0.69			0.69	
Capacity (c), veh/h					247					1113	999			1264	
Volume-to-Capacity Ratio (X)					0.321					0.588	0.613			0.000	
Back of Queue (Q), ft/ln (95 th percentile)					72.5					58.1	61.3			0	
Back of Queue (Q), veh/ln (95 th percentile)					2.8					2.3	2.4			0.0	
Queue Storage Ratio (RQ) (95 th percentile)					0.00					0.00	0.00			0.00	
Uniform Delay (d ₁), s/veh					31.4					1.1	1.1			0.0	
Incremental Delay (d ₂), s/veh					3.3					2.3	2.8			0.0	
Initial Queue Delay (d ₃), s/veh					0.0					0.0	0.0			0.0	
Control Delay (d), s/veh					34.7					3.3	3.9			0.0	
Level of Service (LOS)					C					A	A				
Approach Delay, s/veh / LOS				34.7	C	0.0			3.6	A	0.0				
Intersection Delay, s/veh / LOS				5.4						A					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				1.94	B	1.95	B	1.33	A	1.33	A	1.55	B		
Bicycle LOS Score / LOS				1.68	B			2.60	C	1.55	B				

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF 0.82		
Intersection	East & Monroe			Analysis Year	2023		
Project Description	2044 AM			File Name	2 lane - East 2044 AM S.xus		
							

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	3	0						31	1021			0

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	61	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	58.8			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.2			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	2.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

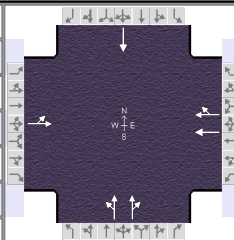
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		6
Case Number		12.0				8.0		8.0
Phase Duration, s		16.0				64.0		64.0
Change Period, ($Y+R_c$), s		5.2				5.2		5.2
Max Allow Headway (MAH), s		4.2				0.0		0.0
Queue Clearance Time (g_s), s		2.2						
Green Extension Time (g_e), s		0.0				0.0		0.0
Phase Call Probability		1.00						
Max Out Probability		0.00						

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4					5	2			6	
Adjusted Flow Rate (v), veh/h	4						616	565	0			
Adjusted Saturation Flow Rate (s), veh/h/ln	1657						1758	1616	1599			
Queue Service Time (g_s), s	0.2						0.0	12.2	0.0			
Cycle Queue Clearance Time (g_c), s	0.2						3.0	12.2	0.0			
Green Ratio (g/C)	0.13						0.74	0.74	0.74			
Capacity (c), veh/h	224						1340	1188	1175			
Volume-to-Capacity Ratio (X)	0.016						0.460	0.475	0.000			
Back of Queue (Q), ft/ln (95 th percentile)	3.6						34.9	34.9	0			
Back of Queue (Q), veh/ln (95 th percentile)	0.1						1.4	1.4	0.0			
Queue Storage Ratio (RQ) (95 th percentile)	0.00						0.00	0.00	0.00			
Uniform Delay (d_1), s/veh	34.7						0.7	0.7	0.0			
Incremental Delay (d_2), s/veh	0.1						0.9	1.0	0.0			
Initial Queue Delay (d_3), s/veh	0.0						0.0	0.0	0.0			
Control Delay (d), s/veh	34.8						1.6	1.8	0.0			
Level of Service (LOS)	C						A	A				
Approach Delay, s/veh / LOS	34.8		C	0.0			1.7	A	0.0			
Intersection Delay, s/veh / LOS	1.8						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.95	B	1.96	B	1.32	A	1.33	A
Bicycle LOS Score / LOS	1.56	B			2.62	C	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Olive			Analysis Year	2023		
Project Description	2044 AM			Analysis Period	1 > 8:00		
File Name	2 lane - East 2044 AM S.xus						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	58	52			17	26	31	1025	11		0	

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	55	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	56.4	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	2.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

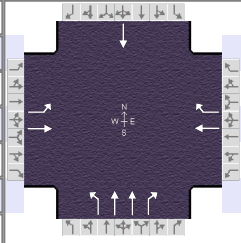
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		18.0		18.0		62.0		62.0
Change Period, (Y+R _c), s		5.5		5.5		5.6		5.6
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g _s), s		7.9		3.2				
Green Extension Time (g _e), s		0.2		0.3		0.0		0.0
Phase Call Probability		1.00		0.98				
Max Out Probability		0.71		0.02				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	120			18 28			606 553			0		
Adjusted Saturation Flow Rate (s), veh/h/ln	1447			1784 1607			1544 1413			1825		
Queue Service Time (g _s), s	4.1			0.7 1.2			0.0 15.4			0.0		
Cycle Queue Clearance Time (g _c), s	5.9			0.7 1.2			15.2 15.4			0.0		
Green Ratio (g/C)	0.16			0.16 0.16			0.70 0.70			0.70		
Capacity (c), veh/h	295			279 251			1136 996			1286		
Volume-to-Capacity Ratio (X)	0.405			0.066 0.113			0.534 0.556			0.000		
Back of Queue (Q), ft/ln (95 th percentile)	111.5			14.2 21.5			192.6 181.9			0		
Back of Queue (Q), veh/ln (95 th percentile)	4.3			0.5 0.8			7.7 7.3			0.0		
Queue Storage Ratio (RQ) (95 th percentile)	0.00			0.00 0.00			0.00 0.00			0.00		
Uniform Delay (d ₁), s/veh	30.9			28.8 29.0			5.8 5.8			0.0		
Incremental Delay (d ₂), s/veh	4.1			0.1 0.2			1.8 2.2			0.0		
Initial Queue Delay (d ₃), s/veh	0.0			0.0 0.0			0.0 0.0			0.0		
Control Delay (d), s/veh	34.9			28.9 29.2			7.6 8.1			0.0		
Level of Service (LOS)	C			C C			A A					
Approach Delay, s/veh / LOS	34.9	C		29.1	C		7.8	A		0.0		
Intersection Delay, s/veh / LOS	11.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.94	B	1.85	B	1.85	B
Bicycle LOS Score / LOS	1.75	B	1.60	B	2.52	C	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF 0.80		
Intersection	East & Washington			Analysis Year	2023		
Project Description	2044 AM			File Name	2 lane - East 2044 AM S.xus		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	11	189			261	85	26	993	58		0	

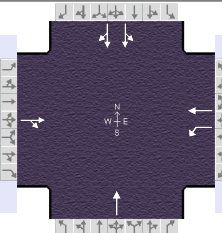
Signal Information													
Cycle, s	80.0	Reference Phase	2										
Offset, s	64	Reference Point	Begin										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green		48.0	20.6	0.0	0.0	0.0	0.0				
		Yellow		3.2	3.2	0.0	0.0	0.0	0.0				
		Red		2.8	2.2	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		7.0		5.0		8.0
Phase Duration, s		26.0		26.0		54.0		54.0
Change Period, ($Y+R_c$), s		5.4		5.4		6.0		6.0
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		17.9		16.8				
Green Extension Time (g_e), s		0.8		1.1		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

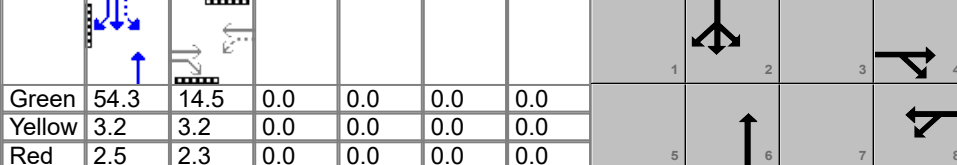
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	14	236			326	106	29	1105	65		0	
Adjusted Saturation Flow Rate (s), veh/h/ln	933	1762			1635	1378	1578	1678	1537		1678	
Queue Service Time (g_s), s	1.1	9.2			14.8	5.0	0.6	15.7	1.4		0.0	
Cycle Queue Clearance Time (g_c), s	15.9	9.2			14.8	5.0	0.6	15.7	1.4		0.0	
Green Ratio (g/C)	0.26	0.26			0.26	0.26	0.60	0.60	0.60		0.60	
Capacity (c), veh/h	158	454			421	355	1037	2013	922		1007	
Volume-to-Capacity Ratio (X)	0.087	0.521			0.775	0.299	0.028	0.549	0.070		0.000	
Back of Queue (Q), ft/ln (95 th percentile)	13.4	188.3			278	74.8	8.8	217.4	19.4		0	
Back of Queue (Q), veh/ln (95 th percentile)	0.5	7.3			10.8	2.9	0.3	8.4	0.8		0.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.21	0.00			0.00	0.93	0.11	0.00	0.00		0.00	
Uniform Delay (d_1), s/veh	34.9	25.5			27.5	23.9	6.5	9.5	6.7		0.0	
Incremental Delay (d_2), s/veh	0.9	3.7			8.8	0.5	0.0	0.8	0.1		0.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Control Delay (d), s/veh	35.9	29.2			36.3	24.4	6.6	10.4	6.8		0.0	
Level of Service (LOS)	D	C			D	C	A	B	A			
Approach Delay, s/veh / LOS	29.5	C			33.4	C	10.1	B	0.0			
Intersection Delay, s/veh / LOS	18.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.93	B	1.87	B	1.88	B
Bicycle LOS Score / LOS	1.96	B	2.27	B	2.67	C	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Front	File Name	2 lane - Madison 2044 AM S.xus				
Project Description	2044 AM						

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		66	17	23	35			0		64	778	37

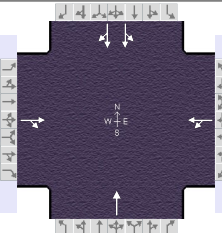
Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	4	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	54.3	14.5	0.0	0.0	0.0	0.0				
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
		Red	2.5	2.3	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		8.0		6.0		8.0		8.0
Phase Duration, s		20.0		20.0		60.0		60.0
Change Period, ($Y+R_c$), s		5.5		5.5		5.7		5.7
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		7.1		9.0				
Green Extension Time (g_e), s		0.3		0.3		0.0		0.0
Phase Call Probability		1.00		0.98				
Max Out Probability		0.11		0.42				

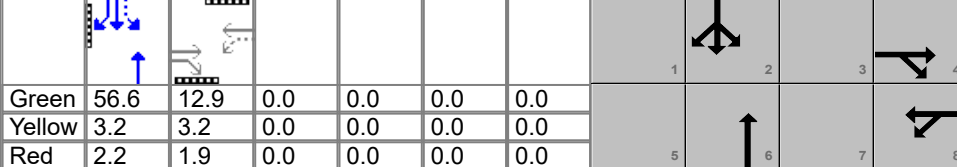
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement		4	14	3	8			6		5	2	12
Adjusted Flow Rate (v), veh/h		111		31	47			0		611		562
Adjusted Saturation Flow Rate (s), veh/h/ln		1532		1162	1749			1705		1621		1503
Queue Service Time (g_s), s		5.1		1.9	1.8			0.0		3.5		15.3
Cycle Queue Clearance Time (g_c), s		5.1		7.0	1.8			0.0		14.9		15.3
Green Ratio (g/C)		0.18		0.18	0.18			0.68		0.68		0.68
Capacity (c), veh/h		278		226	317			1157		1152		1020
Volume-to-Capacity Ratio (X)		0.398		0.135	0.147			0.000		0.531		0.551
Back of Queue (Q), ft/ln (95 th percentile)		100.7		25.5	35.3			0		195.6		184.5
Back of Queue (Q), veh/ln (95 th percentile)		3.9		1.0	1.4			0.0		7.7		7.4
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.43	0.00			0.00		0.00		0.00
Uniform Delay (d_1), s/veh		28.9		32.0	27.6			0.0		6.5		6.6
Incremental Delay (d_2), s/veh		4.2		0.3	0.2			0.0		1.5		1.8
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0			0.0		0.0		0.0
Control Delay (d), s/veh		33.2		32.3	27.8			0.0		7.9		8.3
Level of Service (LOS)		C		C	C					A		A
Approach Delay, s/veh / LOS	33.2	C		29.6	C			0.0		8.1		A
Intersection Delay, s/veh / LOS			11.4							B		

Multimodal Results	EB		WB		NB		SB	
	Pedestrian LOS Score / LOS	1.93	B	1.93	B	1.85	B	1.63
Bicycle LOS Score / LOS	1.74	B	1.69	B	1.56	B	2.53	C

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Jefferson	File Name	2 lane - Madison 2044 AM S.xus				
Project Description	2044 AM						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		17	4	4	13			0		13	903	12

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	11	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	56.6	12.9	0.0	0.0	0.0	0.0				
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
		Red	2.2	1.9	0.0	0.0	0.0	0.0				

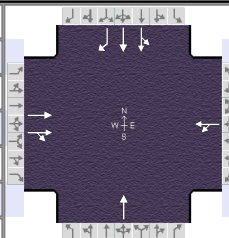
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		18.0		18.0		62.0		62.0
Change Period, ($Y+R_c$), s		5.4		5.4		5.4		5.4
Max Allow Headway (MAH), s		4.1		4.1		0.0		0.0
Queue Clearance Time (g_s), s		3.2		2.8				
Green Extension Time (g_e), s		0.1		0.1		0.0		0.0
Phase Call Probability		0.67		1.00				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		4	14	3	8			6		5	2	12
Adjusted Flow Rate (v), veh/h		28			22			0		640		581
Adjusted Saturation Flow Rate (s), veh/h/ln		1592			1763			1689		1643		1493
Queue Service Time (g_s), s		1.2			0.0			0.0		0.0		14.8
Cycle Queue Clearance Time (g_c), s		1.2			0.8			0.0		14.8		14.8
Green Ratio (g/C)		0.16			0.16			0.71		0.71		0.71
Capacity (c), veh/h		251			333			1195		1209		1056
Volume-to-Capacity Ratio (X)		0.110			0.067			0.000		0.529		0.550
Back of Queue (Q), ft/ln (95 th percentile)		21.1			18.1			0		195.4		180.6
Back of Queue (Q), veh/ln (95 th percentile)		0.8			0.7			0.0		7.7		7.2
Queue Storage Ratio (RQ) (95 th percentile)		0.00			0.00			0.00		0.00		0.00
Uniform Delay (d_1), s/veh		28.8			28.7			0.0		5.5		5.5
Incremental Delay (d_2), s/veh		0.2			0.4			0.0		1.7		2.1
Initial Queue Delay (d_3), s/veh		0.0			0.0			0.0		0.0		0.0
Control Delay (d), s/veh		29.0			29.0			0.0		7.2		7.6
Level of Service (LOS)		C			C					A		A
Approach Delay, s/veh / LOS	29.0	C		29.0	C			0.0		7.4		A
Intersection Delay, s/veh / LOS	8.2						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.93	B	1.62	B	1.62	B
Bicycle LOS Score / LOS	1.61	B	1.60	B	1.56	B	2.57	C

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	Madison			Time Period	PHF		
Intersection	Madison & Locust			Analysis Year	2023		
Project Description	2044 AM			File Name	2 lane - Madison 2044 AM N.xus		
				Analysis Period	1 > 8:00		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		459	57	4	51			0		164	1041	148

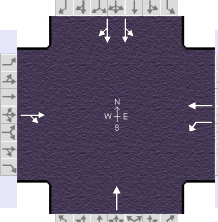
Signal Information												
Cycle, s	70.0	Reference Phase	2									
Offset, s	10	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On	Green	45.7	16.3	0.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.0	3.0	0.0	0.0	0.0	0.0		
				Red	1.0	1.0	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		8.0		8.0		7.0
Phase Duration, s		20.3		20.3		49.7		49.7
Change Period, (Y+R _c), s		4.0		4.0		4.0		4.0
Max Allow Headway (MAH), s		4.0		4.0		0.0		0.0
Queue Clearance Time (g _s), s		14.8		14.9				
Green Extension Time (g _e), s		1.5		1.4		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.52		0.53				

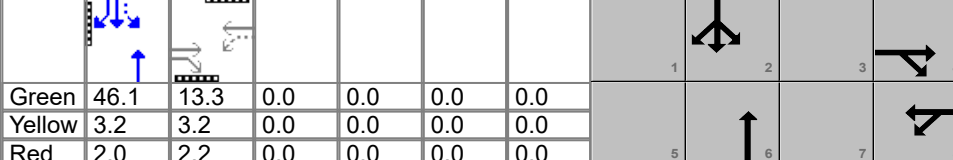
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		8	18	7	4		6		5	2	12	
Adjusted Flow Rate (v), veh/h		318	311		67		0		760	709	172	
Adjusted Saturation Flow Rate (s), veh/h/ln		1657	1616		1507		1710		1535	1508	1449	
Queue Service Time (g _s), s		11.6	12.8		0.0		0.0		21.0	21.4	3.3	
Cycle Queue Clearance Time (g _c), s		11.6	12.8		12.9		0.0		23.4	21.4	3.3	
Green Ratio (g/C)		0.23	0.23		0.23		0.65		0.65	0.65	0.65	
Capacity (c), veh/h		386	376		406		1116		1067	984	946	
Volume-to-Capacity Ratio (X)		0.824	0.827		0.165		0.000		0.713	0.721	0.182	
Back of Queue (Q), ft/ln (95 th percentile)		246.3	236.1		41.2		0		275	267.7	39	
Back of Queue (Q), veh/ln (95 th percentile)		9.5	9.4		1.6		0.0		10.8	10.4	1.6	
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.00		0.00		0.00		0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh		25.5	25.5		22.9		0.0		8.1	7.8	4.8	
Incremental Delay (d ₂), s/veh		8.6	9.0		0.0		0.0		4.1	4.6	0.4	
Initial Queue Delay (d ₃), s/veh		0.0	0.0		0.0		0.0		0.0	0.0	0.0	
Control Delay (d), s/veh		34.1	34.5		22.9		0.0		12.1	12.3	5.2	
Level of Service (LOS)		C	C		C				B	B	A	
Approach Delay, s/veh / LOS	34.3	C		22.9	C		0.0			11.5	B	
Intersection Delay, s/veh / LOS	17.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	2.12	B	1.86	B	1.86	B
Bicycle LOS Score / LOS	2.08	B	0.60	A	1.56	B	2.91	C

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Market	File Name	2 lane - Madison 2044 AM N.xus				
Project Description	2044 AM						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		71	89	11	83			0		7	833	93

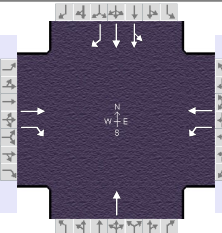
Signal Information												
Cycle, s	70.0	Reference Phase	2									
Offset, s	28	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	46.1	13.3	0.0	0.0	0.0	0.0				
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
		Red	2.0	2.2	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		8.0		6.0		8.0		8.0
Phase Duration, s		18.7		18.7		51.3		51.3
Change Period, ($Y+R_c$), s		5.4		5.4		5.2		5.2
Max Allow Headway (MAH), s		4.3		4.3		0.0		0.0
Queue Clearance Time (g_s), s		11.7		12.7				
Green Extension Time (g_e), s		0.7		0.7		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.27		0.44				

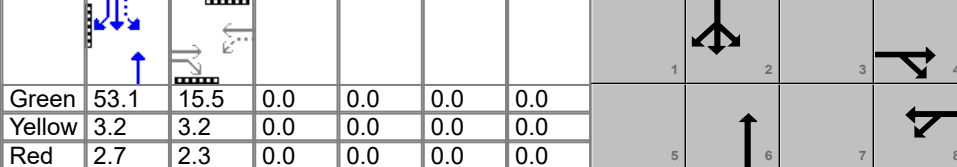
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		4	14	3	8			6		5	2	12
Adjusted Flow Rate (v), veh/h		216		15	112			0		714		630
Adjusted Saturation Flow Rate (s), veh/h/ln		1485		1032	1727			1922		1570		1378
Queue Service Time (g_s), s		9.7		1.0	4.0			0.0		0.0		20.1
Cycle Queue Clearance Time (g_c), s		9.7		10.7	4.0			0.0		19.9		20.1
Green Ratio (g/C)		0.19		0.19	0.19			0.66		0.66		0.66
Capacity (c), veh/h		283		156	329			1266		1086		907
Volume-to-Capacity Ratio (X)		0.765		0.095	0.341			0.000		0.658		0.694
Back of Queue (Q), ft/ln (95 th percentile)		174.3		11.4	74.5			0		222.5		204.4
Back of Queue (Q), veh/ln (95 th percentile)		6.8		0.4	2.9			0.0		8.8		8.2
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00			0.00		0.00		0.00
Uniform Delay (d_1), s/veh		27.2		32.3	24.9			0.0		7.4		7.5
Incremental Delay (d_2), s/veh		5.7		0.2	0.5			0.0		2.2		3.0
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0			0.0		0.0		0.0
Control Delay (d), s/veh		32.9		32.5	25.3			0.0		9.6		10.5
Level of Service (LOS)		C		C	C					A		B
Approach Delay, s/veh / LOS	32.9	C		26.2	C			0.0		10.0		B
Intersection Delay, s/veh / LOS		14.2						B				

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	1.92	B	1.85	B	1.63	B
Bicycle LOS Score / LOS	1.92	B	1.77	B	1.56	B	2.60	C

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Olive	File Name	2 lane - Madison 2044 AM S.xus				
Project Description	2044 AM						

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		60	37	3	37			0		44	726	57

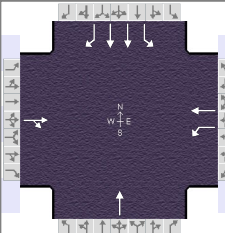
Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	21	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	53.1	15.5	0.0	0.0	0.0	0.0				
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
		Red	2.7	2.3	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		7.0		6.0		8.0		7.0
Phase Duration, s		21.0		21.0		59.0		59.0
Change Period, ($Y+R_c$), s		5.5		5.5		5.9		5.9
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		4.6		4.8				
Green Extension Time (g_e), s		0.3		0.3		0.0		0.0
Phase Call Probability		1.00		0.96				
Max Out Probability		0.00		0.01				

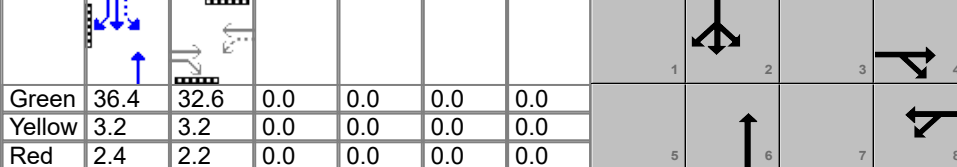
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement		4	14	3	8		6		5	2	12	
Adjusted Flow Rate (v), veh/h		65	40	3	40		0		527	489	75	
Adjusted Saturation Flow Rate (s), veh/h/ln		1678	1422	1203	1789		1662		1677	1564	1456	
Queue Service Time (g_s), s		2.6	1.9	0.2	1.5		0.0		0.0	12.4	1.5	
Cycle Queue Clearance Time (g_c), s		2.6	1.9	2.8	1.5		0.0		12.0	12.4	1.5	
Green Ratio (g/C)		0.19	0.19	0.19	0.19		0.66		0.66	0.66	0.66	
Capacity (c), veh/h		325	276	284	347		1103		1163	1038	967	
Volume-to-Capacity Ratio (X)		0.201	0.146	0.011	0.116		0.000		0.453	0.471	0.078	
Back of Queue (Q), ft/ln (95 th percentile)		52.5	32.4	2.4	29		0		173.3	166.1	18.5	
Back of Queue (Q), veh/ln (95 th percentile)		2.1	1.3	0.1	1.1		0.0		6.8	6.5	0.7	
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.41	0.00	0.00		0.00		0.00	0.00	0.37	
Uniform Delay (d_1), s/veh		27.2	26.9	28.4	26.7		0.0		6.6	6.7	4.8	
Incremental Delay (d_2), s/veh		1.4	1.1	0.0	0.1		0.0		1.0	1.3	0.1	
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Control Delay (d), s/veh		28.6	28.0	28.4	26.9		0.0		7.7	7.9	5.0	
Level of Service (LOS)		C	C	C	C				A	A	A	
Approach Delay, s/veh / LOS	28.4	C		27.0	C		0.0		7.6		A	
Intersection Delay, s/veh / LOS		10.0					B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	2.12	B	1.86	B	1.86	B
Bicycle LOS Score / LOS	1.73	B	1.63	B	1.56	B	2.30	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Washington	File Name	2 lane - Madison 2044 AM S.xus				
Project Description	2044 AM						

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		107	10	38	208			0		41	845	25

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	78	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	36.4	32.6	0.0	0.0	0.0	0.0				
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
		Red	2.4	2.2	0.0	0.0	0.0	0.0				

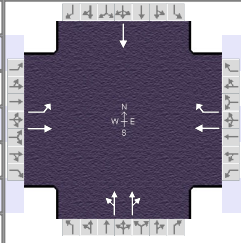
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		8.0		6.0		8.0		5.0
Phase Duration, s		38.0		38.0		42.0		42.0
Change Period, ($Y+R_c$), s		5.4		5.4		5.6		5.6
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		8.0		11.9				
Green Extension Time (g_e), s		1.7		1.7		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		4	14	3	8			6		5	2	12
Adjusted Flow Rate (v), veh/h		150		49	267			0		54	1112	33
Adjusted Saturation Flow Rate (s), veh/h/ln		1648		1096	1833			1689		1578	1644	1509
Queue Service Time (g_s), s		6.0		3.2	9.9			0.0		1.0	18.6	0.6
Cycle Queue Clearance Time (g_c), s		6.0		9.0	9.9			0.0		1.0	18.6	0.6
Green Ratio (g/C)		0.41		0.41	0.41			0.45		0.45	0.45	0.45
Capacity (c), veh/h		672		455	747			768		808	1496	687
Volume-to-Capacity Ratio (X)		0.223		0.107	0.357			0.000		0.067	0.743	0.048
Back of Queue (Q), ft/ln (95 th percentile)		113.7		39.5	193.1			0		17	212	10.1
Back of Queue (Q), veh/ln (95 th percentile)		4.4		1.5	7.5			0.0		0.7	8.2	0.4
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.61	0.00			0.00		0.11	0.00	0.00
Uniform Delay (d_1), s/veh		20.8		24.5	22.3			0.0		8.0	11.2	8.0
Incremental Delay (d_2), s/veh		0.8		0.3	0.9			0.0		0.1	2.8	0.1
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0			0.0		0.0	0.0	0.0
Control Delay (d), s/veh		21.6		24.8	23.2			0.0		8.2	13.9	8.1
Level of Service (LOS)		C		C	C					A	B	A
Approach Delay, s/veh / LOS	21.6	C		23.4	C			0.0		13.5	B	
Intersection Delay, s/veh / LOS			16.1									B

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	2.26	B	1.90	B	1.67	B
Bicycle LOS Score / LOS	1.81	B	2.08	B	1.56	B	2.52	C

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Front			Analysis Year	2023		
Project Description	2044 PM			Analysis Period	1 > 8:00		
File Name	2 lane - East 2044 PM S.xus						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	90	127			54	25	48	1005	32		0	

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	58	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	52.4	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	2.4	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

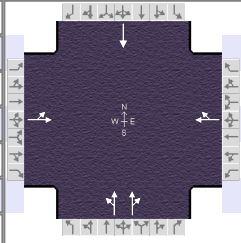
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		7.0		8.0		8.0
Phase Duration, s		22.0		22.0		58.0		58.0
Change Period, ($Y+R_c$), s		5.2		5.2		5.6		5.6
Max Allow Headway (MAH), s		4.3		4.3		0.0		0.0
Queue Clearance Time (g_s), s		10.7		4.4				
Green Extension Time (g_e), s		0.7		1.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.41		0.02				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	103	146			62	29	588		536		0	
Adjusted Saturation Flow Rate (s), veh/h/ln	1182	1787			1683	1390	1689		1546		1662	
Queue Service Time (g_s), s	6.3	5.6			2.4	1.3	0.0		14.8		0.0	
Cycle Queue Clearance Time (g_c), s	8.7	5.6			2.4	1.3	14.5		14.8		0.0	
Green Ratio (g/C)	0.21	0.21			0.21	0.21	0.66		0.66		0.66	
Capacity (c), veh/h	303	375			353	292	1155		1013		1089	
Volume-to-Capacity Ratio (X)	0.342	0.389			0.176	0.098	0.509		0.529		0.000	
Back of Queue (Q), ft/ln (95 th percentile)	82.2	109.6			48.1	22.2	203.3		192.6		0	
Back of Queue (Q), veh/ln (95 th percentile)	3.2	4.3			1.9	0.9	8.1		7.7		0.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.91	0.00			0.00	0.22	0.00		0.00		0.00	
Uniform Delay (d_1), s/veh	29.5	27.2			25.9	25.5	7.4		7.4		0.0	
Incremental Delay (d_2), s/veh	0.7	0.7			1.1	0.7	1.4		1.7		0.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0	0.0		0.0		0.0	
Control Delay (d), s/veh	30.2	27.8			27.0	26.2	8.7		9.1		0.0	
Level of Service (LOS)	C	C			C	C	A		A			
Approach Delay, s/veh / LOS	28.8	C		26.7	C	8.9	A		0.0			
Intersection Delay, s/veh / LOS	13.4						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.94	B	1.86	B	1.87	B
Bicycle LOS Score / LOS	1.96	B	1.71	B	2.59	C	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Jefferson			Analysis Year	2023		
Project Description	2044 PM			File Name	2 lane - East 2044 PM S.xus		
				Analysis Period	1 > 8:00		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	29	28			25	23	23	1141	7		0	

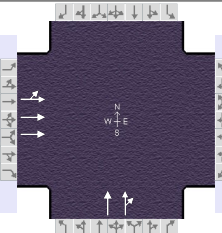
Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	55	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On	Green	55.8	13.8	0.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.2	3.2	0.0	0.0	0.0	0.0		
				Red	2.0	2.0	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		19.0		19.0		61.0		61.0
Change Period, (Y+R _c), s		5.2		5.2		5.2		5.2
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g _s), s		4.7		4.2				
Green Extension Time (g _e), s		0.2		0.2		0.0		0.0
Phase Call Probability		1.00		0.91				
Max Out Probability		0.01		0.01				

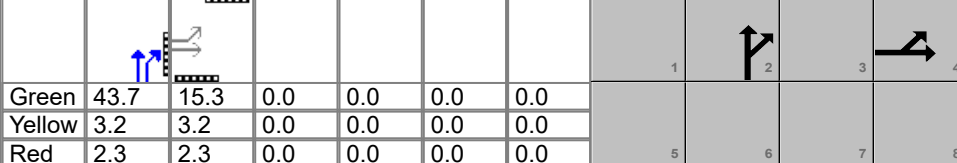
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	59			50			626			571		
Adjusted Saturation Flow Rate (s), veh/h/ln	1480			1530			1674			1528		
Queue Service Time (g _s), s	0.4			2.2			0.0			14.3		
Cycle Queue Clearance Time (g _c), s	2.7			2.2			14.3			14.3		
Green Ratio (g/C)	0.17			0.17			0.70			0.70		
Capacity (c), veh/h	323			264			1214			1066		
Volume-to-Capacity Ratio (X)	0.184			0.189			0.516			0.536		
Back of Queue (Q), ft/ln (95 th percentile)	48.9			37.8			179			169.4		
Back of Queue (Q), veh/ln (95 th percentile)	1.9			1.5			7.2			6.8		
Queue Storage Ratio (RQ) (95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay (d ₁), s/veh	28.4			28.3			5.8			5.8		
Incremental Delay (d ₂), s/veh	1.2			0.3			1.2			1.5		
Initial Queue Delay (d ₃), s/veh	0.0			0.0			0.0			0.0		
Control Delay (d), s/veh	29.6			28.7			7.0			7.3		
Level of Service (LOS)	C			C			A			A		
Approach Delay, s/veh / LOS	29.6	C		28.7	C		7.2	A		0.0		
Intersection Delay, s/veh / LOS	9.0						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.94	B	1.62	B	1.63	B
Bicycle LOS Score / LOS	1.65	B	1.64	B	2.57	C	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			PHF	0.93		
Intersection	East & Locust			Analysis Year	2023		
Project Description	2044 PM			File Name	2 lane - East 2044 PM N.xus		
							

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	113	599						1109	231			

Signal Information												
Cycle, s	70.0	Reference Phase	2									
Offset, s	10	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	43.7	15.3	0.0	0.0	0.0	0.0				
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
		Red	2.3	2.3	0.0	0.0	0.0	0.0				

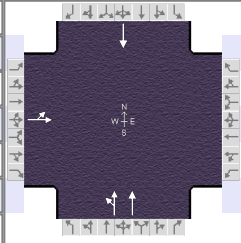
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		
Case Number		12.0				8.0		
Phase Duration, s		20.8				49.2		
Change Period, ($Y+R_c$), s		5.5				5.5		
Max Allow Headway (MAH), s		4.1				0.0		
Queue Clearance Time (g_s), s		12.7						
Green Extension Time (g_e), s		2.7				0.0		
Phase Call Probability		1.00						
Max Out Probability		0.08						

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	7	4					2	12				
Adjusted Flow Rate (v), veh/h	268	497					693	654				
Adjusted Saturation Flow Rate (s), veh/h/ln	1646	1683					1683	1574				
Queue Service Time (g_s), s	10.7	9.5					28.5	18.8				
Cycle Queue Clearance Time (g_c), s	10.7	9.5					28.5	18.8				
Green Ratio (g/C)	0.22	0.22					0.62	0.62				
Capacity (c), veh/h	360	737					1050	982				
Volume-to-Capacity Ratio (X)	0.745	0.675					0.660	0.666				
Back of Queue (Q), ft/ln (95 th percentile)	193.7	168.7					231.4	220				
Back of Queue (Q), veh/ln (95 th percentile)	7.6	6.6					9.1	8.8				
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00					0.00	0.00				
Uniform Delay (d_1), s/veh	25.5	25.0					8.5	8.6				
Incremental Delay (d_2), s/veh	3.1	1.1					2.1	2.3				
Initial Queue Delay (d_3), s/veh	0.0	0.0					0.0	0.0				
Control Delay (d), s/veh	28.6	26.1					10.6	10.9				
Level of Service (LOS)	C	C					B	B				
Approach Delay, s/veh / LOS	27.0	C	0.0				10.7	B	0.0			
Intersection Delay, s/veh / LOS	16.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.71	B	1.72	B	1.86	B	1.95	B
Bicycle LOS Score / LOS	1.98	B			2.75	C	0.00	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Market			Analysis Year	2023		
Project Description	2044 PM			File Name	2 lane - East 2044 PM N.xus		
				Analysis Period	1> 8:00		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	152	0					139	1114			0	

Signal Information												
Cycle, s	70.0	Reference Phase	2									
Offset, s	64	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	44.5	14.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	2.3	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

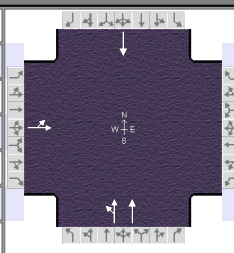
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		6
Case Number		12.0				8.0		8.0
Phase Duration, s		20.0				50.0		50.0
Change Period, (Y+R _c), s		5.4				5.5		5.5
Max Allow Headway (MAH), s		4.2				0.0		0.0
Queue Clearance Time (g _s), s		9.0						
Green Extension Time (g _e), s		0.2				0.0		0.0
Phase Call Probability		1.00						
Max Out Probability		0.35						

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	7	4					5	2			6	
Adjusted Flow Rate (v), veh/h	162						686	647	0			
Adjusted Saturation Flow Rate (s), veh/h/ln	1607						1469	1418	1825			
Queue Service Time (g _s), s	7.0						2.4	20.1	0.0			
Cycle Queue Clearance Time (g _c), s	7.0						7.2	20.1	0.0			
Green Ratio (g/C)	0.21						0.64	0.64	0.64			
Capacity (c), veh/h	335						996	902	1160			
Volume-to-Capacity Ratio (X)	0.483						0.688	0.718	0.000			
Back of Queue (Q), ft/ln (95 th percentile)	148						79.7	88.3	0			
Back of Queue (Q), veh/ln (95 th percentile)	5.7						3.2	3.4	0.0			
Queue Storage Ratio (RQ) (95 th percentile)	0.00						0.00	0.00	0.00			
Uniform Delay (d ₁), s/veh	31.2						1.3	1.3	0.0			
Incremental Delay (d ₂), s/veh	3.4						3.9	4.9	0.0			
Initial Queue Delay (d ₃), s/veh	0.0						0.0	0.0	0.0			
Control Delay (d), s/veh	34.6						5.2	6.2	0.0			
Level of Service (LOS)	C						A	A				
Approach Delay, s/veh / LOS	34.6	C	0.0				5.7	A	0.0			
Intersection Delay, s/veh / LOS	8.8						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.94	B	1.95	B	1.34	A	1.35	A
Bicycle LOS Score / LOS	1.82	B			2.66	C	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East	Time Period		PHF	0.97		
Intersection	East & Monroe	Analysis Year	2023	Analysis Period	1 > 8:00		
Project Description	2044 PM			File Name	2 lane - East 2044 PM S.xus		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	54	0					21	1165			0	

Signal Information														
Cycle, s	80.0	Reference Phase	2	↓	↕	↗					1	2	3	4
Offset, s	59	Reference Point	Begin	↕	↕	↕					5	6	7	8
Uncoordinated	No	Simult. Gap E/W	On	Green	53.8	15.8	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
				Red	2.0	2.0	0.0	0.0	0.0	0.0				

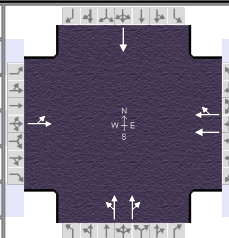
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				2		6
Case Number		12.0				8.0		8.0
Phase Duration, s		21.0				59.0		59.0
Change Period, (Y+R _c), s		5.2				5.2		5.2
Max Allow Headway (MAH), s		4.2				0.0		0.0
Queue Clearance Time (g _s), s		4.7						
Green Extension Time (g _e), s		0.1				0.0		0.0
Phase Call Probability		1.00						
Max Out Probability		0.00						

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4					5	2			6	
Adjusted Flow Rate (v), veh/h	56						638	583	0			
Adjusted Saturation Flow Rate (s), veh/h/ln	1632						1781	1628	1599			
Queue Service Time (g _s), s	2.7						0.0	13.7	0.0			
Cycle Queue Clearance Time (g _c), s	2.7						3.4	13.7	0.0			
Green Ratio (g/C)	0.20						0.67	0.67	0.67			
Capacity (c), veh/h	322						1244	1095	1075			
Volume-to-Capacity Ratio (X)	0.173						0.513	0.532	0.000			
Back of Queue (Q), ft/ln (95 th percentile)	55.6						43.6	43.6	0			
Back of Queue (Q), veh/ln (95 th percentile)	2.1						1.7	1.7	0.0			
Queue Storage Ratio (RQ) (95 th percentile)	0.00						0.00	0.00	0.00			
Uniform Delay (d ₁), s/veh	33.5						0.9	0.9	0.0			
Incremental Delay (d ₂), s/veh	1.2						1.2	1.5	0.0			
Initial Queue Delay (d ₃), s/veh	0.0						0.0	0.0	0.0			
Control Delay (d), s/veh	34.6						2.1	2.4	0.0			
Level of Service (LOS)	C						A	A				
Approach Delay, s/veh / LOS	34.6	C		0.0			2.2	A	0.0			
Intersection Delay, s/veh / LOS	3.6						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.95	B	1.96	B	1.34	A	1.34	A
Bicycle LOS Score / LOS	1.64	B			2.57	C	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF 0.92		
Intersection	East & Olive			Analysis Year	2023		
Project Description	2044 PM			File Name	2 lane - East 2044 PM S.xus		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	87	67			39	30	18	917	16		0	

Signal Information													
Cycle, s	80.0	Reference Phase	2										
Offset, s	54	Reference Point	Begin										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green		49.4	19.5	0.0	0.0	0.0	0.0				
		Yellow		3.2	3.2	0.0	0.0	0.0	0.0				
		Red		2.4	2.3	0.0	0.0	0.0	0.0				

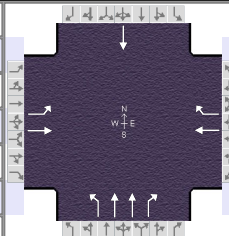
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		25.0		25.0		55.0		55.0
Change Period, ($Y+R_c$), s		5.5		5.5		5.6		5.6
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		10.0		3.4				
Green Extension Time (g_e), s		0.6		0.7		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.04		0.00				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	167			38 37			542 492			0		
Adjusted Saturation Flow Rate (s), veh/h/ln	1394			1784 1627			1551 1409			1825		
Queue Service Time (g_s), s	6.5			1.3 1.4			0.0 16.3			0.0		
Cycle Queue Clearance Time (g_c), s	8.0			1.3 1.4			16.2 16.3			0.0		
Green Ratio (g/C)	0.24			0.24 0.24			0.62 0.62			0.62		
Capacity (c), veh/h	410			435 397			1004 870			1127		
Volume-to-Capacity Ratio (X)	0.408			0.087 0.094			0.540 0.565			0.000		
Back of Queue (Q), ft/ln (95 th percentile)	137.5			25.6 24.7			223.1 211			0		
Back of Queue (Q), veh/ln (95 th percentile)	5.3			1.0 1.0			8.9 8.4			0.0		
Queue Storage Ratio (RQ) (95 th percentile)	0.00			0.00 0.00			0.00 0.00			0.00		
Uniform Delay (d_1), s/veh	25.8			23.4 23.4			8.9 8.9			0.0		
Incremental Delay (d_2), s/veh	2.8			0.1 0.1			2.1 2.7			0.0		
Initial Queue Delay (d_3), s/veh	0.0			0.0 0.0			0.0 0.0			0.0		
Control Delay (d), s/veh	28.6			23.5 23.5			11.0 11.6			0.0		
Level of Service (LOS)	C			C C			B B					
Approach Delay, s/veh / LOS	28.6	C		23.5	C		11.3	B		0.0		
Intersection Delay, s/veh / LOS	14.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	1.93	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.83	B	1.62	B	2.41	B	1.55	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	East			Time Period	PHF		
Intersection	East & Washington			Analysis Year	2023		
Project Description	2044 PM			Analysis Period	1 > 8:00		
File Name	2 lane - East 2044 PM S.xus						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	38	246			315	96	35	1001	79		0	

Signal Information													
Cycle, s	80.0	Reference Phase	2										
Offset, s	60	Reference Point	Begin										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
				Green	48.0	20.6	0.0	0.0	0.0	0.0			
				Yellow	3.2	3.2	0.0	0.0	0.0	0.0			
				Red	2.8	2.2	0.0	0.0	0.0	0.0			

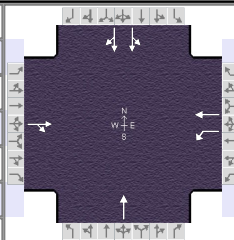
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		7.0		5.0		8.0
Phase Duration, s		26.0		26.0		54.0		54.0
Change Period, (Y+R _c), s		5.4		5.4		6.0		6.0
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g _s), s		20.6		17.2				
Green Extension Time (g _e), s		0.0		1.1		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4			8	18	5	2	12		6	
Adjusted Flow Rate (v), veh/h	41	265			339	103	37	1053	83		0	
Adjusted Saturation Flow Rate (s), veh/h/ln	937	1789			1662	1384	1629	1703	1528		1678	
Queue Service Time (g _s), s	3.4	10.3			15.2	4.8	0.7	14.3	1.8		0.0	
Cycle Queue Clearance Time (g _c), s	18.6	10.3			15.2	4.8	0.7	14.3	1.8		0.0	
Green Ratio (g/C)	0.26	0.26			0.26	0.26	0.60	0.60	0.60		0.60	
Capacity (c), veh/h	153	461			428	356	1067	2044	917		1007	
Volume-to-Capacity Ratio (X)	0.267	0.574			0.791	0.290	0.035	0.515	0.091		0.000	
Back of Queue (Q), ft/ln (95 th percentile)	36.4	192.8			286.1	71.4	10.8	200.9	25.4		0	
Back of Queue (Q), veh/ln (95 th percentile)	1.4	7.6			11.3	2.8	0.4	7.9	1.0		0.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.56	0.00			0.00	0.89	0.14	0.00	0.00		0.00	
Uniform Delay (d ₁), s/veh	36.4	25.9			27.7	23.8	6.5	9.3	6.8		0.0	
Incremental Delay (d ₂), s/veh	0.8	1.5			9.7	0.4	0.0	0.7	0.2		0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0	0.0	0.0	0.0	0.0		0.0	
Control Delay (d), s/veh	37.2	27.4			37.4	24.3	6.6	10.0	6.9		0.0	
Level of Service (LOS)	D	C			D	C	A	A	A			
Approach Delay, s/veh / LOS	28.7	C		34.4	C		9.7	A		0.0		
Intersection Delay, s/veh / LOS	18.4						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.51	C	2.33	B	2.13	B	2.10	B
Bicycle LOS Score / LOS	2.56	C	2.87	C	3.45	C	2.10	B

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	Madison	Time Period		PHF	0.97		
Intersection	Madison & Front	Analysis Year	2023	Analysis Period	1 > 8:00		
Project Description	2044 PM			File Name	2 lane - Madison 2044 PM S.xus		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		39	15	58	71			0		25	1134	30

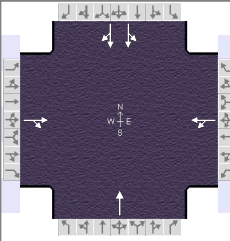
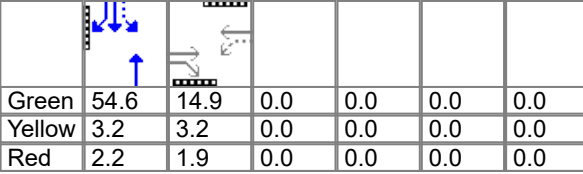
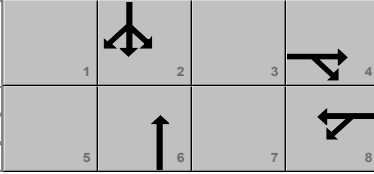
Signal Information				Signal Timing (s)										
Cycle, s	80.0	Reference Phase	2	Green	59.2	9.6	0.0	0.0	0.0	0.0	1	2	3	4
Offset, s	0	Reference Point	Begin	Yellow	3.2	3.2	0.0	0.0	0.0	0.0	5	6	7	8
Uncoordinated	No	Simult. Gap E/W	On	Red	2.5	2.3	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On											

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		8.0		6.0		8.0		8.0
Phase Duration, s		15.1		15.1		64.9		64.9
Change Period, (Y+R _c), s		5.5		5.5		5.7		5.7
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g _s), s		4.6		8.3				
Green Extension Time (g _e), s		0.5		0.4		0.0		0.0
Phase Call Probability		0.98		0.98				
Max Out Probability		0.00		0.06				

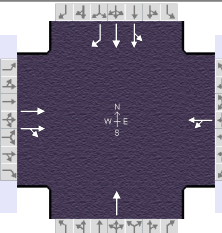
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		4	14	3	8			6		5	2	12
Adjusted Flow Rate (v), veh/h		56		60	73			0		713		646
Adjusted Saturation Flow Rate (s), veh/h/ln		1548		1241	1789			1705		1707		1549
Queue Service Time (g _s), s		2.6		3.7	3.0			0.0		0.0		14.9
Cycle Queue Clearance Time (g _c), s		2.6		6.3	3.0			0.0		14.7		14.9
Green Ratio (g/C)		0.12		0.12	0.12			0.74		0.74		0.74
Capacity (c), veh/h		185		198	214			1262		1311		1147
Volume-to-Capacity Ratio (X)		0.301		0.303	0.342			0.000		0.544		0.563
Back of Queue (Q), ft/ln (95 th percentile)		46.1		52.1	60.7			0		174.9		162.8
Back of Queue (Q), veh/ln (95 th percentile)		1.8		2.1	2.4			0.0		6.9		6.5
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.87	0.00			0.00		0.00		0.00
Uniform Delay (d ₁), s/veh		32.2		35.0	32.3			0.0		4.6		4.6
Incremental Delay (d ₂), s/veh		0.9		0.9	0.9			0.0		1.3		1.6
Initial Queue Delay (d ₃), s/veh		0.0		0.0	0.0			0.0		0.0		0.0
Control Delay (d), s/veh		33.1		35.9	33.3			0.0		5.9		6.2
Level of Service (LOS)		C		D	C					A		A
Approach Delay, s/veh / LOS	33.1	C		34.4	C			0.0		6.1		A
Intersection Delay, s/veh / LOS			9.5							A		

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.94	B	1.94	B	1.84	B	1.61	B
Bicycle LOS Score / LOS	1.65	B	1.78	B	1.56	B	2.57	C

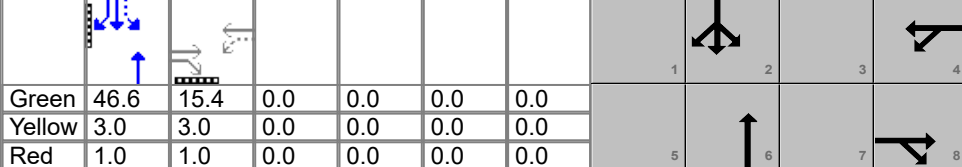
HCS Signalized Intersection Results Summary

General Information					Intersection Information											
Agency					Duration, h		0.250									
Analyst					Analysis Date		4/12/2023									
Jurisdiction					Time Period											
Urban Street		Madison			Analysis Year		2023									
Intersection		Madison & Jefferson			File Name		2 lane - Madison 2044 PM S.xus									
Project Description		2044 PM														
Demand Information					EB			WB			NB			SB		
Approach Movement					L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h						21	10	28	23			0		20	1156	19
Signal Information																
Cycle, s	80.0	Reference Phase	2													
Offset, s	0	Reference Point	Begin													
Uncoordinated	No	Simult. Gap E/W	On													
Force Mode	Fixed	Simult. Gap N/S	On													
Green	54.6	14.9	0.0	0.0	0.0	0.0										
Yellow	3.2	3.2	0.0	0.0	0.0	0.0										
Red	2.2	1.9	0.0	0.0	0.0	0.0										
Timer Results					EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase						4		8		6		2				
Case Number						8.0		8.0		8.0		8.0				
Phase Duration, s						20.0		20.0		60.0		60.0				
Change Period, (Y+R _c), s						5.4		5.4		5.4		5.4				
Max Allow Headway (MAH), s						4.2		4.2		0.0		0.0				
Queue Clearance Time (g _s), s						3.5		4.3								
Green Extension Time (g _e), s						0.2		0.2		0.0		0.0				
Phase Call Probability						1.00		0.88								
Max Out Probability						0.00		0.00								
Movement Group Results					EB			WB			NB			SB		
Approach Movement					L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement						4	14	3	8			6		5	2	12
Adjusted Flow Rate (v), veh/h						36			60			0			737	
Adjusted Saturation Flow Rate (s), veh/h/ln						1567			1581			1689			1654	
Queue Service Time (g _s), s						1.5			0.6			0.0			0.0	
Cycle Queue Clearance Time (g _c), s						1.5			2.3			0.0			14.2	
Green Ratio (g/C)						0.18			0.18			0.68			0.68	
Capacity (c), veh/h						286			358			1153			1176	
Volume-to-Capacity Ratio (X)						0.127			0.167			0.000			0.627	
Back of Queue (Q), ft/ln (95 th percentile)						29.1			43.9			0			152.6	
Back of Queue (Q), veh/ln (95 th percentile)						1.1			1.7			0.0			6.0	
Queue Storage Ratio (RQ) (95 th percentile)						0.00			0.00			0.00			0.00	
Uniform Delay (d ₁), s/veh						27.1			27.4			0.0			3.8	
Incremental Delay (d ₂), s/veh						0.9			0.2			0.0			2.5	
Initial Queue Delay (d ₃), s/veh						0.0			0.0			0.0			0.0	
Control Delay (d), s/veh						28.0			27.6			0.0			6.3	
Level of Service (LOS)						C			C						A	
Approach Delay, s/veh / LOS					28.0	C		27.6	C		0.0			6.6	A	
Intersection Delay, s/veh / LOS					8.0					A						
Multimodal Results					EB			WB			NB			SB		
Pedestrian LOS Score / LOS					1.93	B		1.93	B		1.63	B		1.63	B	
Bicycle LOS Score / LOS					1.62	B		1.66	B		1.56	B		2.72	C	

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Locust	File Name	2 lane - Madison 2044 PM N.xus				
Project Description	2044 PM						

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		491	69	4	63			0		216	1306	182

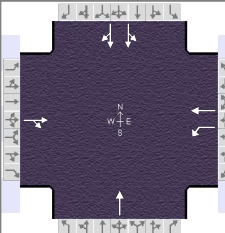
Signal Information												
Cycle, s	70.0	Reference Phase	2									
Offset, s	45	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	46.6	15.4	0.0	0.0	0.0	0.0				
		Yellow	3.0	3.0	0.0	0.0	0.0	0.0				
		Red	1.0	1.0	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		8.0		8.0		7.0
Phase Duration, s		19.4		19.4		50.6		50.6
Change Period, ($Y+R_c$), s		4.0		4.0		4.0		4.0
Max Allow Headway (MAH), s		4.0		4.0		0.0		0.0
Queue Clearance Time (g_s), s		14.0		14.0				
Green Extension Time (g_e), s		1.4		1.3		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.53		0.53				

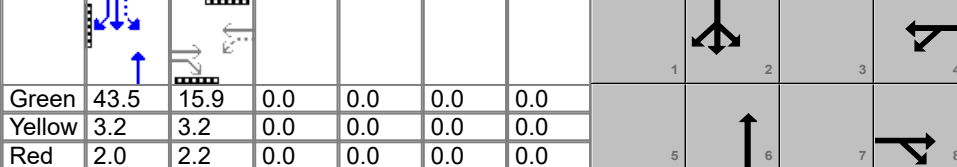
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement		8	18	7	4			6		5	2	12
Adjusted Flow Rate (v), veh/h		301	294		71			0		846	773	194
Adjusted Saturation Flow Rate (s), veh/h/ln		1683	1636		1539			1710		1553	1532	1449
Queue Service Time (g_s), s		10.9	12.0		0.0			0.0		26.2	23.7	3.6
Cycle Queue Clearance Time (g_c), s		10.9	12.0		12.0			0.0		27.7	23.7	3.6
Green Ratio (g/C)		0.22	0.22		0.22			0.67		0.67	0.67	0.67
Capacity (c), veh/h		371	361		394			1138		1099	1019	964
Volume-to-Capacity Ratio (X)		0.813	0.816		0.181			0.000		0.770	0.759	0.201
Back of Queue (Q), ft/ln (95 th percentile)		231.5	224.9		44.1			0		317.3	289.4	41.4
Back of Queue (Q), veh/ln (95 th percentile)		9.1	9.0		1.7			0.0		12.5	11.4	1.7
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.00		0.00			0.00		0.00	0.00	0.00
Uniform Delay (d_1), s/veh		25.9	25.9		23.3			0.0		8.4	7.8	4.5
Incremental Delay (d_2), s/veh		8.0	8.4		0.1			0.0		5.2	5.3	0.5
Initial Queue Delay (d_3), s/veh		0.0	0.0		0.0			0.0		0.0	0.0	0.0
Control Delay (d), s/veh		33.9	34.4		23.4			0.0		13.6	13.1	4.9
Level of Service (LOS)		C	C		C					B	B	A
Approach Delay, s/veh / LOS	34.1		C	23.4		C	0.0			12.5		B
Intersection Delay, s/veh / LOS	18.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	2.11	B	1.85	B	1.85	B
Bicycle LOS Score / LOS	2.05	B	0.61	A	1.56	B	3.06	C

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Market	File Name	2 lane - Madison 2044 PM N.xus				
Project Description	2044 PM						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		137	119	27	119			0		13	1029	162

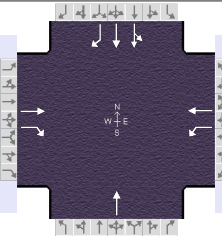
Signal Information												
Cycle, s	70.0	Reference Phase	2									
Offset, s	64	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	43.5	15.9	0.0	0.0	0.0	0.0				
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
		Red	2.0	2.2	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		6.0		8.0		8.0
Phase Duration, s		21.3		21.3		48.7		48.7
Change Period, ($Y+R_c$), s		5.4		5.4		5.2		5.2
Max Allow Headway (MAH), s		4.3		4.3		0.0		0.0
Queue Clearance Time (g_s), s		13.6		15.5				
Green Extension Time (g_e), s		0.7		0.4		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

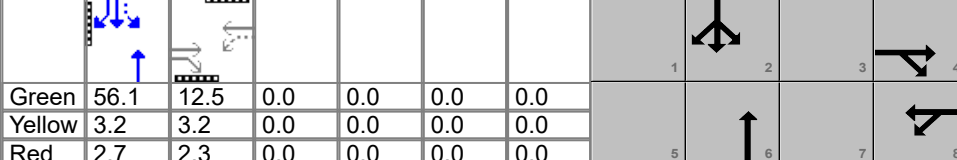
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		8	18	7	4			6		5	2	12
Adjusted Flow Rate (v), veh/h		272		29	127			0		782		685
Adjusted Saturation Flow Rate (s), veh/h/ln		1547		996	1754			1922		1595		1381
Queue Service Time (g_s), s		11.6		1.9	4.2			0.0		0.0		26.1
Cycle Queue Clearance Time (g_c), s		11.6		13.5	4.2			0.0		25.4		26.1
Green Ratio (g/C)		0.23		0.23	0.23			0.62		0.62		0.62
Capacity (c), veh/h		351		164	398			1195		1044		858
Volume-to-Capacity Ratio (X)		0.775		0.175	0.318			0.000		0.749		0.798
Back of Queue (Q), ft/ln (95 th percentile)		216.1		21.5	78.2			0		290.4		270
Back of Queue (Q), veh/ln (95 th percentile)		8.5		0.8	3.1			0.0		11.4		10.8
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00			0.00		0.00		0.00
Uniform Delay (d_1), s/veh		25.5		31.7	22.8			0.0		9.9		10.0
Incremental Delay (d_2), s/veh		8.6		0.4	0.3			0.0		3.2		4.9
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0			0.0		0.0		0.0
Control Delay (d), s/veh		34.1		32.1	23.1			0.0		13.0		14.9
Level of Service (LOS)		C		C	C					B		B
Approach Delay, s/veh / LOS	34.1	C		24.7	C			0.0		13.9		B
Intersection Delay, s/veh / LOS	17.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	1.92	B	1.86	B	1.64	B
Bicycle LOS Score / LOS	2.01	B	1.82	B	1.56	B	2.62	C

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency				Duration, h	0.250		
Analyst				Analysis Date	4/12/2023		
Jurisdiction				Area Type	CBD		
Urban Street	Madison			PHF	0.92		
Intersection	Madison & Olive			Analysis Year	2023		
Project Description	2044 PM			File Name	2 lane - Madison 2044 PM S.xus		
							

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		89	48	10	32			0		54	1145	51

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	16	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	56.1	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Red	2.7	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		7.0		6.0		8.0		7.0
Phase Duration, s		18.0		18.0		62.0		62.0
Change Period, ($Y+R_c$), s		5.5		5.5		5.9		5.9
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		6.1		6.8				
Green Extension Time (g_e), s		0.3		0.3		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.22		0.35				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		4	14	3	8			6		5	2	12
Adjusted Flow Rate (v), veh/h		97	52	11	35			0		685	631	56
Adjusted Saturation Flow Rate (s), veh/h/ln		1678	1422	1169	1789			1636		1686	1564	1456
Queue Service Time (g_s), s		4.1	2.6	0.7	1.3			0.0		0.0	16.2	1.0
Cycle Queue Clearance Time (g_c), s		4.1	2.6	4.8	1.3			0.0		15.9	16.2	1.0
Green Ratio (g/C)		0.16	0.16	0.16	0.16			0.70		0.70	0.70	0.70
Capacity (c), veh/h		262	222	212	280			1147		1231	1097	1021
Volume-to-Capacity Ratio (X)		0.369	0.235	0.051	0.124			0.000		0.556	0.575	0.055
Back of Queue (Q), ft/ln (95 th percentile)		87.2	46	9.7	28.8			0		209	200	11.2
Back of Queue (Q), veh/ln (95 th percentile)		3.4	1.8	0.4	1.1			0.0		8.2	7.9	0.4
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.58	0.00	0.00			0.00		0.00	0.00	0.22
Uniform Delay (d_1), s/veh		30.1	29.4	32.2	28.9			0.0		6.0	6.0	3.7
Incremental Delay (d_2), s/veh		4.0	2.5	0.5	0.9			0.0		1.6	1.9	0.1
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0
Control Delay (d), s/veh		34.0	31.9	32.7	29.8			0.0		7.5	7.9	3.8
Level of Service (LOS)		C	C	C	C					A	A	A
Approach Delay, s/veh / LOS	33.3	C		30.5	C		0.0			7.6	A	
Intersection Delay, s/veh / LOS	10.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	2.12	B	1.85	B	1.85	B
Bicycle LOS Score / LOS	1.81	B	1.63	B	1.56	B	2.68	C

HCS Signalized Intersection Results Summary

General Information				Intersection Information			
Agency		Duration, h	0.250				
Analyst		Analysis Date	4/12/2023				
Jurisdiction		Time Period					
Urban Street	Madison	Analysis Year	2023				
Intersection	Madison & Washington	File Name	2 lane - Madison 2044 PM S.xus				
Project Description	2044 PM						

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		139	9	66	252			0		64	1117	45

Signal Information												
Cycle, s	80.0	Reference Phase	2									
Offset, s	0	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	44.4	24.6	0.0	0.0	0.0	0.0				
		Yellow	3.2	3.2	0.0	0.0	0.0	0.0				
		Red	2.4	2.2	0.0	0.0	0.0	0.0				

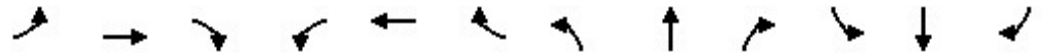
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		6		2
Case Number		8.0		6.0		8.0		5.0
Phase Duration, s		30.0		30.0		50.0		50.0
Change Period, ($Y+R_c$), s		5.4		5.4		5.6		5.6
Max Allow Headway (MAH), s		4.2		4.2		0.0		0.0
Queue Clearance Time (g_s), s		8.2		12.6				
Green Extension Time (g_e), s		1.7		1.5		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.01		0.05				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		4	14	3	8		6		5	2	12	
Adjusted Flow Rate (v), veh/h		156		69	265		0		73	1280	52	
Adjusted Saturation Flow Rate (s), veh/h/ln		1682		1105	1861		1689		1603	1670	1505	
Queue Service Time (g_s), s		6.2		4.6	9.9		0.0		1.4	19.8	1.0	
Cycle Queue Clearance Time (g_c), s		6.2		10.6	9.9		0.0		1.4	19.8	1.0	
Green Ratio (g/C)		0.31		0.31	0.31		0.55		0.55	0.55	0.55	
Capacity (c), veh/h		517		344	572		937		980	1853	835	
Volume-to-Capacity Ratio (X)		0.301		0.202	0.464		0.000		0.075	0.691	0.062	
Back of Queue (Q), ft/ln (95 th percentile)		121.7		58.4	191.7		0		21.1	230.2	14.6	
Back of Queue (Q), veh/ln (95 th percentile)		4.8		2.3	7.5		0.0		0.8	9.1	0.6	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.90	0.00		0.00		0.14	0.00	0.00	
Uniform Delay (d_1), s/veh		24.0		28.4	25.5		0.0		6.7	10.0	6.6	
Incremental Delay (d_2), s/veh		1.5		0.8	1.7		0.0		0.1	1.5	0.1	
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0		0.0		0.0	0.0	0.0	
Control Delay (d), s/veh		25.5		29.3	27.2		0.0		6.8	11.5	6.7	
Level of Service (LOS)		C		C	C				A	B	A	
Approach Delay, s/veh / LOS	25.5	C		27.6	C		0.0		11.1		B	
Intersection Delay, s/veh / LOS	15.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.32	B	2.53	C	2.06	B	1.88	B
Bicycle LOS Score / LOS	1.97	B	2.45	B	2.13	B	3.18	C

Lanes, Volumes, Timings
 3: N Madison St/N Center St & W Locust St

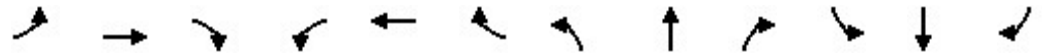
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑						↑↑	↑
Traffic Volume (vph)	0	415	52	4	46	0	0	0	0	148	942	134
Future Volume (vph)	0	415	52	4	46	0	0	0	0	148	942	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		150
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		1.00									1.00	
Frt		0.983										0.850
Flt Protected					0.996						0.993	
Satd. Flow (prot)	0	3407	0	0	1820	0	0	0	0	0	3447	1553
Flt Permitted					0.951						0.993	
Satd. Flow (perm)	0	3407	0	0	1737	0	0	0	0	0	3445	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19										163
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		659			244			860			526	
Travel Time (s)		15.0			5.5			19.5			12.0	
Confl. Peds. (#/hr)			2							4		
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	0	506	63	5	56	0	0	0	0	180	1149	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	569	0	0	61	0	0	0	0	0	1329	163
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	1
Detector Template		Thru		Left	Thru					Left	Thru	Right
Leading Detector (ft)		100		20	100					20	100	20
Trailing Detector (ft)		0		0	0					0	0	0
Detector 1 Position(ft)		0		0	0					0	0	0
Detector 1 Size(ft)		6		20	6					20	6	20
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	

Lanes, Volumes, Timings
 3: N Madison St/N Center St & W Locust St

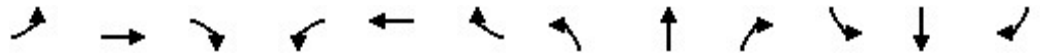
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type		NA		Perm	NA					Perm	NA	Perm
Protected Phases		4			8						6	
Permitted Phases				8						6		6
Detector Phase		4		8	8					6	6	6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		23.4		22.5	22.5					23.4	23.4	23.4
Total Split (s)		24.0		22.5	22.5					46.0	46.0	46.0
Total Split (%)		34.3%		32.1%	32.1%					65.7%	65.7%	65.7%
Maximum Green (s)		18.6		18.0	18.0					40.6	40.6	40.6
Yellow Time (s)		3.2		3.5	3.5					3.2	3.2	3.2
All-Red Time (s)		2.2		1.0	1.0					2.2	2.2	2.2
Lost Time Adjust (s)		0.0			0.0						0.0	0.0
Total Lost Time (s)		5.4			4.5						5.4	5.4
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Recall Mode		None		None	None					C-Max	C-Max	C-Max
Walk Time (s)		7.0		7.0	7.0					7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0					0	0	0
Act Effct Green (s)		16.4			17.3						42.8	42.8
Actuated g/C Ratio		0.23			0.25						0.61	0.61
v/c Ratio		0.70			0.14						0.63	0.16
Control Delay		28.5			25.9						10.8	1.7
Queue Delay		0.0			0.0						0.0	0.0
Total Delay		28.5			25.9						10.8	1.7
LOS		C			C						B	A
Approach Delay		28.5			25.9						9.8	
Approach LOS		C			C						A	
90th %ile Green (s)		18.6		19.5	19.5					40.6	40.6	40.6
90th %ile Term Code		Max		Hold	Hold					Coord	Coord	Coord
70th %ile Green (s)		18.6		19.5	19.5					40.6	40.6	40.6
70th %ile Term Code		Max		Hold	Hold					Coord	Coord	Coord
50th %ile Green (s)		17.2		18.1	18.1					42.0	42.0	42.0
50th %ile Term Code		Gap		Hold	Hold					Coord	Coord	Coord
30th %ile Green (s)		15.5		16.4	16.4					43.7	43.7	43.7
30th %ile Term Code		Gap		Hold	Hold					Coord	Coord	Coord
10th %ile Green (s)		12.1		13.0	13.0					47.1	47.1	47.1
10th %ile Term Code		Gap		Hold	Hold					Coord	Coord	Coord
Stops (vph)		395			51						651	12
Fuel Used(gal)		7			1						10	1
CO Emissions (g/hr)		509			45						731	46
NOx Emissions (g/hr)		99			9						142	9
VOC Emissions (g/hr)		118			10						169	11
Dilemma Vehicles (#)		0			0						0	0
Queue Length 50th (ft)		112			27						174	0
Queue Length 95th (ft)		141			m52						212	16
Internal Link Dist (ft)		579			164			780			446	

Lanes, Volumes, Timings
 3: N Madison St/N Center St & W Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												150
Base Capacity (vph)		919			483						2106	1013
Starvation Cap Reductn		0			0						0	0
Spillback Cap Reductn		0			0						0	0
Storage Cap Reductn		0			0						0	0
Reduced v/c Ratio		0.62			0.13						0.63	0.16

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	47 (67%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.70
Intersection Signal Delay:	15.2
Intersection LOS:	B
Intersection Capacity Utilization	52.6%
ICU Level of Service	A
Analysis Period (min)	15
m Volume for 95th percentile queue is metered by upstream signal.	

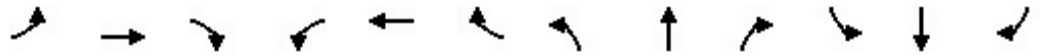
Splits and Phases: 3: N Madison St/N Center St & W Locust St



Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕				
Traffic Volume (vph)	83	478	0	0	0	0	51	792	93	0	0	0
Future Volume (vph)	83	478	0	0	0	0	51	792	93	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00										
Frt								0.985				
Flt Protected		0.993						0.997				
Satd. Flow (prot)	0	3447	0	0	0	0	0	3409	0	0	0	0
Flt Permitted		0.993						0.997				
Satd. Flow (perm)	0	3446	0	0	0	0	0	3409	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								27				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		244			514			878				525
Travel Time (s)		5.5			11.7			20.0				11.9
Confl. Peds. (#/hr)	2											
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	95	549	0	0	0	0	59	910	107	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	644	0	0	0	0	0	1076	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2					1	2				
Detector Template	Left	Thru					Left	Thru				
Leading Detector (ft)	20	100					20	100				
Trailing Detector (ft)	0	0					0	0				
Detector 1 Position(ft)	0	0					0	0				
Detector 1 Size(ft)	20	6					20	6				
Detector 1 Type	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0					0.0	0.0				
Detector 1 Queue (s)	0.0	0.0					0.0	0.0				
Detector 1 Delay (s)	0.0	0.0					0.0	0.0				
Detector 2 Position(ft)		94						94				
Detector 2 Size(ft)		6						6				
Detector 2 Type		Cl+Ex						Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0				
Turn Type	Perm	NA					Perm	NA				
Protected Phases		4						2				
Permitted Phases	4						2					

Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

02/22/2024

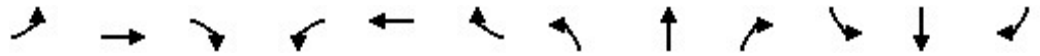


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4					2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0					5.0	5.0				
Minimum Split (s)	23.5	23.5					23.5	23.5				
Total Split (s)	26.0	26.0					44.0	44.0				
Total Split (%)	37.1%	37.1%					62.9%	62.9%				
Maximum Green (s)	20.5	20.5					38.5	38.5				
Yellow Time (s)	3.2	3.2					3.2	3.2				
All-Red Time (s)	2.3	2.3					2.3	2.3				
Lost Time Adjust (s)		0.0						0.0				
Total Lost Time (s)		5.5						5.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0					3.0	3.0				
Recall Mode	None	None					C-Max	C-Max				
Walk Time (s)	7.0	7.0					7.0	7.0				
Flash Dont Walk (s)	11.0	11.0					11.0	11.0				
Pedestrian Calls (#/hr)	0	0					0	0				
Act Effct Green (s)		18.3						40.7				
Actuated g/C Ratio		0.26						0.58				
v/c Ratio		0.72						0.54				
Control Delay		13.2						6.8				
Queue Delay		0.3						0.0				
Total Delay		13.5						6.8				
LOS		B						A				
Approach Delay		13.5						6.8				
Approach LOS		B						A				
90th %ile Green (s)	20.5	20.5					38.5	38.5				
90th %ile Term Code	Max	Max					Coord	Coord				
70th %ile Green (s)	20.5	20.5					38.5	38.5				
70th %ile Term Code	Max	Max					Coord	Coord				
50th %ile Green (s)	19.7	19.7					39.3	39.3				
50th %ile Term Code	Gap	Gap					Coord	Coord				
30th %ile Green (s)	17.1	17.1					41.9	41.9				
30th %ile Term Code	Gap	Gap					Coord	Coord				
10th %ile Green (s)	13.6	13.6					45.4	45.4				
10th %ile Term Code	Gap	Gap					Coord	Coord				
Stops (vph)		177						552				
Fuel Used(gal)		4						11				
CO Emissions (g/hr)		248						752				
NOx Emissions (g/hr)		48						146				
VOC Emissions (g/hr)		58						174				
Dilemma Vehicles (#)		0						0				
Queue Length 50th (ft)		48						52				
Queue Length 95th (ft)		63						62				
Internal Link Dist (ft)		164			434			798			445	
Turn Bay Length (ft)												
Base Capacity (vph)		1009						1994				
Starvation Cap Reductn		66						0				

Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		0.68						0.54				

Intersection Summary

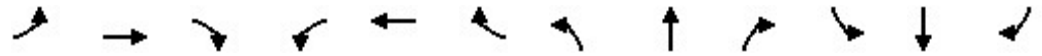
Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	50 (71%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	9.3
Intersection LOS:	A
Intersection Capacity Utilization	51.1%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 6: N East St/N Main St & W Locust St/E Locust St



Lanes, Volumes, Timings
 9: N Madison St & W Market St

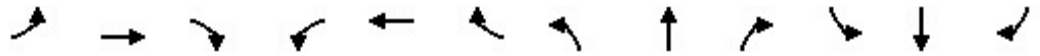
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↗						↖↗	
Traffic Volume (vph)	0	65	81	10	75	0	0	0	0	6	753	84
Future Volume (vph)	0	65	81	10	75	0	0	0	0	6	753	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		1%			-2%			-6%			4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99		1.00								
Frt		0.925									0.985	
Flt Protected				0.950								
Satd. Flow (prot)	0	1447	0	1578	1605	0	0	0	0	0	3016	0
Flt Permitted				0.531								
Satd. Flow (perm)	0	1447	0	878	1605	0	0	0	0	0	3016	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		85									30	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		705			247			400			860	
Travel Time (s)		16.0			5.6			9.1			19.5	
Confl. Peds. (#/hr)			3	3								
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	0	88	109	14	101	0	0	0	0	8	1018	114
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	197	0	14	101	0	0	0	0	0	1140	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	1.15	1.20	1.15	1.13	1.18	1.13	1.10	1.10	1.10	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	

Lanes, Volumes, Timings
 9: N Madison St & W Market St

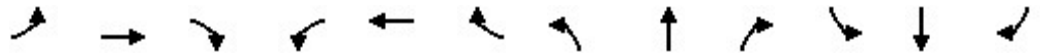
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		15.4		15.4	15.4					47.2	47.2	
Total Split (s)		23.0		23.0	23.0					47.0	47.0	
Total Split (%)		32.9%		32.9%	32.9%					67.1%	67.1%	
Maximum Green (s)		17.6		17.6	17.6					41.8	41.8	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.2		2.2	2.2					2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0						0.0	
Total Lost Time (s)		5.4		5.4	5.4						5.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		1.0		1.0	1.0					31.0	31.0	
Flash Dont Walk (s)		9.0		9.0	9.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		11.2		11.2	11.2						48.2	
Actuated g/C Ratio		0.16		0.16	0.16						0.69	
v/c Ratio		0.65		0.10	0.39						0.55	
Control Delay		25.3		23.8	29.2						1.7	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		25.3		23.8	29.2						1.7	
LOS		C		C	C						A	
Approach Delay		25.3			28.6						1.7	
Approach LOS		C			C						A	
90th %ile Green (s)		17.3		17.3	17.3					42.1	42.1	
90th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
70th %ile Green (s)		13.7		13.7	13.7					45.7	45.7	
70th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
50th %ile Green (s)		11.0		11.0	11.0					48.4	48.4	
50th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
30th %ile Green (s)		8.4		8.4	8.4					51.0	51.0	
30th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
10th %ile Green (s)		5.8		5.8	5.8					53.6	53.6	
10th %ile Term Code		Hold		Hold	Hold					Coord	Coord	
Stops (vph)		77		9	62						52	
Fuel Used(gal)		2		0	1						6	
CO Emissions (g/hr)		138		8	65						436	
NOx Emissions (g/hr)		27		2	13						85	
VOC Emissions (g/hr)		32		2	15						101	
Dilemma Vehicles (#)		0		0	0						0	
Queue Length 50th (ft)		45		5	40						16	
Queue Length 95th (ft)		69		15	59						16	
Internal Link Dist (ft)		625			167			320			780	

Lanes, Volumes, Timings
 9: N Madison St & W Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		427		220	403						2084	
Starvation Cap Reductn		0		0	0						0	
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.46		0.06	0.25						0.55	

Intersection Summary

Area Type:	CBD
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	64 (91%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.65
Intersection Signal Delay:	7.0
Intersection LOS:	A
Intersection Capacity Utilization	44.6%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 9: N Madison St & W Market St



Lanes, Volumes, Timings
11: N East St & E Market St

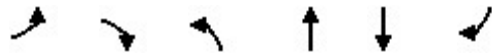
02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	59	0	80	861	0	0
Future Volume (vph)	59	0	80	861	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	11	12	12
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor				1.00		
Frt						
Flt Protected	0.950			0.996		
Satd. Flow (prot)	1467	0	0	2761	0	0
Flt Permitted	0.950			0.996		
Satd. Flow (perm)	1467	0	0	2760	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	263			127	878	
Travel Time (s)	6.0			2.9	20.0	
Confl. Peds. (#/hr)			1			
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	0		20	20		
Adj. Flow (vph)	72	0	98	1050	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	0	0	1148	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.25	1.14	1.13	1.34	1.16	1.16
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2		
Detector Template	Left		Left	Thru		
Leading Detector (ft)	20		20	100		
Trailing Detector (ft)	0		0	0		
Detector 1 Position(ft)	0		0	0		
Detector 1 Size(ft)	20		20	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(ft)				94		
Detector 2 Size(ft)				6		
Detector 2 Type				Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)				0.0		

Lanes, Volumes, Timings
11: N East St & E Market St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Type	Prot		Perm	NA		
Protected Phases	4			2		
Permitted Phases			2			
Detector Phase	4		2	2		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	13.4		49.5	49.5		
Total Split (s)	15.0		55.0	55.0		
Total Split (%)	21.4%		78.6%	78.6%		
Maximum Green (s)	9.6		49.5	49.5		
Yellow Time (s)	3.2		3.2	3.2		
All-Red Time (s)	2.2		2.3	2.3		
Lost Time Adjust (s)	0.0			0.0		
Total Lost Time (s)	5.4			5.5		
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		C-Max	C-Max		
Walk Time (s)	1.0		33.0	33.0		
Flash Dont Walk (s)	7.0		11.0	11.0		
Pedestrian Calls (#/hr)	0		0	0		
Act Effct Green (s)	8.1			54.2		
Actuated g/C Ratio	0.12			0.77		
v/c Ratio	0.42			0.54		
Control Delay	36.1			5.4		
Queue Delay	0.0			0.0		
Total Delay	36.1			5.4		
LOS	D			A		
Approach Delay	36.1			5.4		
Approach LOS	D			A		
90th %ile Green (s)	9.6		49.5	49.5		
90th %ile Term Code	Max		Coord	Coord		
70th %ile Green (s)	9.6		49.5	49.5		
70th %ile Term Code	Max		Coord	Coord		
50th %ile Green (s)	8.7		50.4	50.4		
50th %ile Term Code	Gap		Coord	Coord		
30th %ile Green (s)	7.3		51.8	51.8		
30th %ile Term Code	Gap		Coord	Coord		
10th %ile Green (s)	0.0		64.5	64.5		
10th %ile Term Code	Skip		Coord	Coord		
Stops (vph)	53			361		
Fuel Used(gal)	1			4		
CO Emissions (g/hr)	59			277		
NOx Emissions (g/hr)	12			54		
VOC Emissions (g/hr)	14			64		
Dilemma Vehicles (#)	0			0		
Queue Length 50th (ft)	29			97		
Queue Length 95th (ft)	59			124		
Internal Link Dist (ft)	183			47	798	

Lanes, Volumes, Timings
 11: N East St & E Market St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Bay Length (ft)						
Base Capacity (vph)	201			2138		
Starvation Cap Reductn	0			0		
Spillback Cap Reductn	0			0		
Storage Cap Reductn	0			0		
Reduced v/c Ratio	0.36			0.54		

Intersection Summary

















Area Type:	CBD
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	29 (41%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.54
Intersection Signal Delay:	7.2
Intersection LOS:	A
Intersection Capacity Utilization	42.3%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 11: N East St & E Market St



Lanes, Volumes, Timings
12: N Madison St & W Monroe St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											 	
Traffic Volume (vph)	0	9	0	6	4	0	0	0	0	17	818	9
Future Volume (vph)	0	9	0	6	4	0	0	0	0	17	818	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			-3%			6%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor												
Frt												0.998
Flt Protected					0.970							0.999
Satd. Flow (prot)	0	1605	0	0	1610	0	0	0	0	0	3051	0
Flt Permitted					0.970							0.999
Satd. Flow (perm)	0	1605	0	0	1610	0	0	0	0	0	3051	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		699			209			307			400	
Travel Time (s)		15.9			4.8			7.0			9.1	
Confl. Peds. (#/hr)			3	3						4		1
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	12	0	8	5	0	0	0	0	22	1062	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	12	0	0	13	0	0	0	0	0	1096	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.19	1.14	1.14	1.14	1.14	1.12	1.12	1.12	1.19	1.19	1.19
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Free	
Intersection Summary												
Area Type:	CBD											
Control Type:	Unsignalized											
Intersection Capacity Utilization	38.8%						ICU Level of Service A					
Analysis Period (min)	15											

Lanes, Volumes, Timings
13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	0	28	924	0	0
Future Volume (vph)	3	0	28	924	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12
Grade (%)	-2%			-3%	4%	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor				1.00		
Frt						
Flt Protected	0.950			0.999		
Satd. Flow (prot)	1434	0	0	2783	0	0
Flt Permitted	0.950			0.999		
Satd. Flow (perm)	1434	0	0	2783	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	221			318	266	
Travel Time (s)	5.0			7.2	6.0	
Confl. Peds. (#/hr)			1			
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	0		20	20		
Adj. Flow (vph)	4	0	34	1127	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	0	1161	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.29	1.13	1.12	1.34	1.17	1.17
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2		
Detector Template	Left		Left	Thru		
Leading Detector (ft)	20		20	100		
Trailing Detector (ft)	0		0	0		
Detector 1 Position(ft)	0		0	0		
Detector 1 Size(ft)	20		20	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(ft)				94		
Detector 2 Size(ft)				6		
Detector 2 Type				Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)				0.0		

Lanes, Volumes, Timings
13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Type	Prot		Perm	NA		
Protected Phases	4			2		
Permitted Phases			2			
Detector Phase	4		2	2		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	13.2		49.2	49.2		
Total Split (s)	15.0		65.0	65.0		
Total Split (%)	18.8%		81.3%	81.3%		
Maximum Green (s)	9.8		59.8	59.8		
Yellow Time (s)	3.2		3.2	3.2		
All-Red Time (s)	2.0		2.0	2.0		
Lost Time Adjust (s)	0.0			0.0		
Total Lost Time (s)	5.2			5.2		
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		C-Max	C-Max		
Walk Time (s)	1.0		33.0	33.0		
Flash Dont Walk (s)	7.0		11.0	11.0		
Pedestrian Calls (#/hr)	0		0	0		
Act Effct Green (s)	5.9			76.6		
Actuated g/C Ratio	0.07			0.96		
v/c Ratio	0.04			0.44		
Control Delay	35.0			0.5		
Queue Delay	0.0			0.0		
Total Delay	35.0			0.5		
LOS	C			A		
Approach Delay	35.0			0.5		
Approach LOS	C			A		
90th %ile Green (s)	6.6		63.0	63.0		
90th %ile Term Code	Gap		Coord	Coord		
70th %ile Green (s)	0.0		74.8	74.8		
70th %ile Term Code	Skip		Coord	Coord		
50th %ile Green (s)	0.0		74.8	74.8		
50th %ile Term Code	Skip		Coord	Coord		
30th %ile Green (s)	0.0		74.8	74.8		
30th %ile Term Code	Skip		Coord	Coord		
10th %ile Green (s)	0.0		74.8	74.8		
10th %ile Term Code	Skip		Coord	Coord		
Stops (vph)	5			2		
Fuel Used(gal)	0			2		
CO Emissions (g/hr)	4			172		
NOx Emissions (g/hr)	1			33		
VOC Emissions (g/hr)	1			40		
Dilemma Vehicles (#)	0			0		
Queue Length 50th (ft)	2			0		
Queue Length 95th (ft)	10			2		
Internal Link Dist (ft)	141			238	186	

Lanes, Volumes, Timings
 13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Bay Length (ft)						
Base Capacity (vph)	175			2665		
Starvation Cap Reductn	0			0		
Spillback Cap Reductn	0			0		
Storage Cap Reductn	0			0		
Reduced v/c Ratio	0.02			0.44		

Intersection Summary

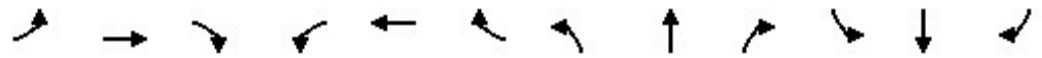
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	60 (75%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.44
Intersection Signal Delay:	0.6
Intersection LOS:	A
Intersection Capacity Utilization	42.1%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 13: N East St & Monroe St



Lanes, Volumes, Timings
15: N Madison St & W Jefferson St

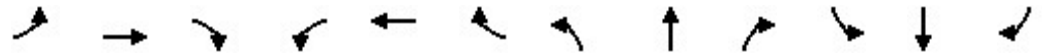
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔↔	
Traffic Volume (vph)	0	15	4	4	12	0	0	0	0	12	817	11
Future Volume (vph)	0	15	4	4	12	0	0	0	0	12	817	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	14	12	12	12	12	12	12	12
Grade (%)		4%			-3%			2%			2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00			1.00							
Frt		0.973									0.998	
Flt Protected					0.988						0.999	
Satd. Flow (prot)	0	1787	0	0	1598	0	0	0	0	0	3113	0
Flt Permitted					0.952						0.999	
Satd. Flow (perm)	0	1787	0	0	1537	0	0	0	0	0	3113	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5									3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		692			253			310			307	
Travel Time (s)		15.7			5.8			7.0			7.0	
Confl. Peds. (#/hr)			3	3								
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)					0					20		20
Adj. Flow (vph)	0	20	5	5	16	0	0	0	0	16	1075	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	21	0	0	0	0	0	1105	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.17	1.00	1.17	1.12	1.18	1.12	1.16	1.16	1.16	1.16	1.16	1.16
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	

Lanes, Volumes, Timings
15: N Madison St & W Jefferson St

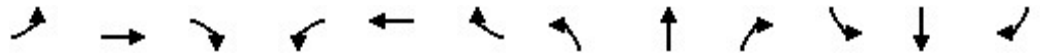
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		15.1		15.4	15.4					47.4	47.4	
Total Split (s)		21.0		21.0	21.0					59.0	59.0	
Total Split (%)		26.3%		26.3%	26.3%					73.8%	73.8%	
Maximum Green (s)		15.9		15.6	15.6					53.6	53.6	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.9		2.2	2.2					2.2	2.2	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.1			5.4						5.4	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		Max		None	None					C-Max	C-Max	
Walk Time (s)		1.0		1.0	1.0					31.0	31.0	
Flash Dont Walk (s)		9.0		9.0	9.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		15.9			15.6						53.6	
Actuated g/C Ratio		0.20			0.20						0.67	
v/c Ratio		0.07			0.07						0.53	
Control Delay		23.1			27.1						7.9	
Queue Delay		0.0			0.0						0.0	
Total Delay		23.1			27.1						7.9	
LOS		C			C						A	
Approach Delay		23.1			27.1						7.9	
Approach LOS		C			C						A	
90th %ile Green (s)		15.9		15.6	15.6					53.6	53.6	
90th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
70th %ile Green (s)		15.9		15.6	15.6					53.6	53.6	
70th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
50th %ile Green (s)		15.9		15.6	15.6					53.6	53.6	
50th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
30th %ile Green (s)		15.9		15.6	15.6					53.6	53.6	
30th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
10th %ile Green (s)		15.9		15.6	15.6					53.6	53.6	
10th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
Stops (vph)		14			15						392	
Fuel Used(gal)		0			0						6	
CO Emissions (g/hr)		19			14						386	
NOx Emissions (g/hr)		4			3						75	
VOC Emissions (g/hr)		4			3						89	
Dilemma Vehicles (#)		0			0						0	
Queue Length 50th (ft)		8			9						127	
Queue Length 95th (ft)		23			23						130	
Internal Link Dist (ft)		612			173			230			227	

Lanes, Volumes, Timings
 15: N Madison St & W Jefferson St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		359			299						2086	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.07			0.07						0.53	

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	10 (13%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.53
Intersection Signal Delay:	8.6
Intersection LOS:	A
Intersection Capacity Utilization	43.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 15: N Madison St & W Jefferson St



Lanes, Volumes, Timings
16: N East St & E Jefferson St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↕				
Traffic Volume (vph)	6	23	0	0	11	4	21	947	26	0	0	0
Future Volume (vph)	6	23	0	0	11	4	21	947	26	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	12	12	11	11	12	12	12
Grade (%)		-3%			3%			0%			3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.99			0.99			1.00				
Frt					0.962			0.996				
Flt Protected		0.990						0.999				
Satd. Flow (prot)	0	1501	0	0	1602	0	0	3032	0	0	0	0
Flt Permitted		0.952						0.999				
Satd. Flow (perm)	0	1432	0	0	1602	0	0	3031	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					5			8				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		268			710			308			318	
Travel Time (s)		6.1			16.1			7.0			7.2	
Confl. Peds. (#/hr)	17					17	8		8			
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)		0					20		20			
Adj. Flow (vph)	7	28	0	0	13	5	25	1141	31	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	35	0	0	18	0	0	1197	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.28	1.12	1.17	1.12	1.17	1.14	1.19	1.19	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				

Lanes, Volumes, Timings
16: N East St & E Jefferson St

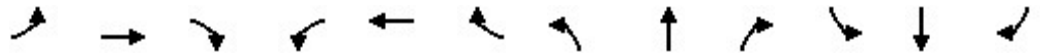
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Detector Phase	4	4			8		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	15.2	15.2			15.2		47.2	47.2				
Total Split (s)	18.0	18.0			18.0		62.0	62.0				
Total Split (%)	22.5%	22.5%			22.5%		77.5%	77.5%				
Maximum Green (s)	12.8	12.8			12.8		56.8	56.8				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Recall Mode	Max	Max			None		C-Max	C-Max				
Walk Time (s)	1.0	1.0			1.0		31.0	31.0				
Flash Dont Walk (s)	9.0	9.0			9.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		12.8			12.8			56.8				
Actuated g/C Ratio		0.16			0.16			0.71				
v/c Ratio		0.15			0.07			0.56				
Control Delay		30.9			24.6			2.2				
Queue Delay		0.0			0.0			0.0				
Total Delay		30.9			24.6			2.2				
LOS		C			C			A				
Approach Delay		30.9			24.6			2.2				
Approach LOS		C			C			A				
90th %ile Green (s)	12.8	12.8			12.8		56.8	56.8				
90th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
70th %ile Green (s)	12.8	12.8			12.8		56.8	56.8				
70th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
50th %ile Green (s)	12.8	12.8			12.8		56.8	56.8				
50th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
30th %ile Green (s)	12.8	12.8			12.8		56.8	56.8				
30th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
10th %ile Green (s)	12.8	12.8			12.8		56.8	56.8				
10th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
Stops (vph)		27			13			78				
Fuel Used(gal)		0			0			3				
CO Emissions (g/hr)		27			16			227				
NOx Emissions (g/hr)		5			3			44				
VOC Emissions (g/hr)		6			4			53				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		15			6			24				
Queue Length 95th (ft)		37			21			34				
Internal Link Dist (ft)		188			630			228				238

Lanes, Volumes, Timings
 16: N East St & E Jefferson St

02/22/2024

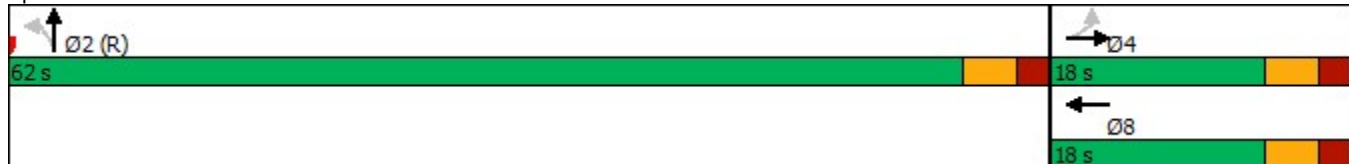


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		229			260			2154				
Starvation Cap Reductn		0			0			93				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.15			0.07			0.58				

Intersection Summary

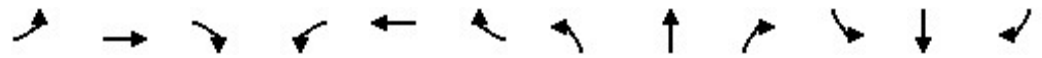
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	56 (70%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.56
Intersection Signal Delay:	3.3
Intersection LOS:	A
Intersection Capacity Utilization	50.8%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 16: N East St & E Jefferson St



Lanes, Volumes, Timings
 19: N Madison St & W Washington St

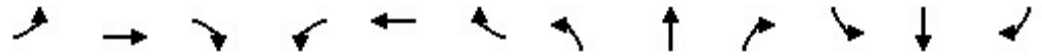
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖					↖	↖↗	↖
Traffic Volume (vph)	0	97	9	34	188	0	0	0	0	37	765	22
Future Volume (vph)	0	97	9	34	188	0	0	0	0	37	765	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	12	12	12	12	12
Grade (%)		3%			-3%			2%				-2%
Storage Length (ft)	0		0	65		0	0		0	150		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.988										0.996
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1488	0	1585	1552	0	0	0	0	1262	3143	0
Flt Permitted				0.670						0.950		
Satd. Flow (perm)	0	1488	0	1118	1552	0	0	0	0	1262	3143	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7										5
Link Speed (mph)		30			30			30				30
Link Distance (ft)		690			253			324				310
Travel Time (s)		15.7			5.8			7.4				7.0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		0			0					20		20
Adj. Flow (vph)	0	124	12	44	241	0	0	0	0	47	981	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	136	0	44	241	0	0	0	0	47	1009	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane					Yes							
Headway Factor	1.17	1.28	1.17	1.12	1.23	1.12	1.16	1.16	1.16	1.49	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings
 19: N Madison St & W Washington St

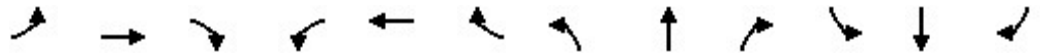
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6		6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		15.4		25.4	25.4					37.6	37.6	
Total Split (s)		33.0		33.0	33.0					47.0	47.0	
Total Split (%)		41.3%		41.3%	41.3%					58.8%	58.8%	
Maximum Green (s)		27.6		27.6	27.6					41.4	41.4	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.2		2.2	2.2					2.4	2.4	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		5.4		5.4	5.4					5.6	5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		1.0		9.0	9.0					21.0	21.0	
Flash Dont Walk (s)		9.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		17.9		17.9	17.9					51.1	51.1	
Actuated g/C Ratio		0.22		0.22	0.22					0.64	0.64	
v/c Ratio		0.40		0.18	0.70					0.06	0.50	
Control Delay		27.3		22.0	36.3					7.1	8.2	
Queue Delay		0.0		0.0	0.1					0.0	0.2	
Total Delay		27.3		22.0	36.4					7.1	8.3	
LOS		C		C	D					A	A	
Approach Delay		27.3			34.2							8.3
Approach LOS		C			C							A
90th %ile Green (s)		25.1		25.1	25.1					43.9	43.9	
90th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
70th %ile Green (s)		20.6		20.6	20.6					48.4	48.4	
70th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
50th %ile Green (s)		17.8		17.8	17.8					51.2	51.2	
50th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
30th %ile Green (s)		14.9		14.9	14.9					54.1	54.1	
30th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
10th %ile Green (s)		10.9		10.9	10.9					58.1	58.1	
10th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
Stops (vph)		80		15	90					13	288	
Fuel Used(gal)		2		0	2					0	5	
CO Emissions (g/hr)		112		21	158					15	336	
NOx Emissions (g/hr)		22		4	31					3	65	
VOC Emissions (g/hr)		26		5	37					3	78	
Dilemma Vehicles (#)		0		0	0					0	0	
Queue Length 50th (ft)		55		11	64					8	111	
Queue Length 95th (ft)		79		17	62					m19	117	

Lanes, Volumes, Timings
 19: N Madison St & W Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		610			173			244			230	
Turn Bay Length (ft)				65						150		
Base Capacity (vph)		517		385	535					806	2010	
Starvation Cap Reductn		0		0	26					0	277	
Spillback Cap Reductn		12		0	0					0	0	
Storage Cap Reductn		0		0	0					0	0	
Reduced v/c Ratio		0.27		0.11	0.47					0.06	0.58	

Intersection Summary

Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 79 (99%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 15.0 Intersection LOS: B
 Intersection Capacity Utilization 44.4% ICU Level of Service A
 Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: N Madison St & W Washington St



Lanes, Volumes, Timings
20: N East St & E Washington St

02/22/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	171	0	0	236	77	23	899	53	0	0	0
Future Volume (vph)	10	171	0	0	236	77	23	899	53	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	10	11	11	11	12	12	12
Grade (%)		-3%			2%			-3%			1%	
Storage Length (ft)	65		0	0		80	80		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00					0.98	1.00	1.00				
Frt						0.850		0.992				
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1585	1502	0	0	1574	1291	1226	3037	0	0	0	0
Flt Permitted	0.388						0.950					
Satd. Flow (perm)	645	1502	0	0	1574	1266	1220	3037	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						75		12				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		262			724			322				308
Travel Time (s)		6.0			16.5			7.3				7.0
Confl. Peds. (#/hr)	5					5	5		2			
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		0					20		20			
Adj. Flow (vph)	13	214	0	0	295	96	29	1124	66	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	214	0	0	295	96	29	1190	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.12	1.28	1.12	1.16	1.21	1.26	1.54	1.17	1.17	1.15	1.15	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				

Lanes, Volumes, Timings
20: N East St & E Washington St

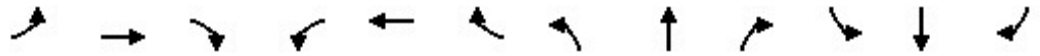
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex				Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0				0.0				
Turn Type	Perm	NA		NA		Perm	Perm	NA				
Protected Phases	4			8				2				
Permitted Phases	4					8	2					
Detector Phase	4	4		8		8	2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0	5.0	5.0				
Minimum Split (s)	31.4	31.4		21.4		21.4	47.0	47.0				
Total Split (s)	29.0	29.0		29.0		29.0	51.0	51.0				
Total Split (%)	36.3%	36.3%		36.3%		36.3%	63.8%	63.8%				
Maximum Green (s)	23.6	23.6		23.6		23.6	45.0	45.0				
Yellow Time (s)	3.2	3.2		3.2		3.2	3.2	3.2				
All-Red Time (s)	2.2	2.2		2.2		2.2	2.8	2.8				
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0	0.0				
Total Lost Time (s)	5.4	5.4		5.4		5.4	6.0	6.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0	3.0				
Recall Mode	None	None		None		None	C-Max	C-Max				
Walk Time (s)	15.0	15.0		5.0		5.0	30.0	30.0				
Flash Dont Walk (s)	11.0	11.0		11.0		11.0	11.0	11.0				
Pedestrian Calls (#/hr)	0	0		0		0	0	0				
Act Effct Green (s)	19.5	19.5		19.5		19.5	49.1	49.1				
Actuated g/C Ratio	0.24	0.24		0.24		0.24	0.61	0.61				
v/c Ratio	0.08	0.59		0.77		0.26	0.04	0.64				
Control Delay	29.0	29.2		41.7		9.9	3.7	6.3				
Queue Delay	0.0	0.2		0.0		0.0	0.0	0.1				
Total Delay	29.0	29.3		41.7		9.9	3.7	6.4				
LOS	C	C		D		A	A	A				
Approach Delay		29.3		33.9				6.3				
Approach LOS		C		C				A				
90th %ile Green (s)	23.6	23.6		23.6		23.6	45.0	45.0				
90th %ile Term Code	Hold	Hold		Max		Max	Coord	Coord				
70th %ile Green (s)	23.6	23.6		23.6		23.6	45.0	45.0				
70th %ile Term Code	Hold	Hold		Max		Max	Coord	Coord				
50th %ile Green (s)	20.1	20.1		20.1		20.1	48.5	48.5				
50th %ile Term Code	Hold	Hold		Gap		Gap	Coord	Coord				
30th %ile Green (s)	17.2	17.2		17.2		17.2	51.4	51.4				
30th %ile Term Code	Hold	Hold		Gap		Gap	Coord	Coord				
10th %ile Green (s)	12.8	12.8		12.8		12.8	55.8	55.8				
10th %ile Term Code	Hold	Hold		Gap		Gap	Coord	Coord				
Stops (vph)	8	89		211		22	3	379				
Fuel Used(gal)	0	2		5		1	0	6				
CO Emissions (g/hr)	9	130		315		50	6	399				
NOx Emissions (g/hr)	2	25		61		10	1	78				
VOC Emissions (g/hr)	2	30		73		12	1	92				
Dilemma Vehicles (#)	0	0		0		0	0	0				

Lanes, Volumes, Timings
20: N East St & E Washington St

02/22/2024

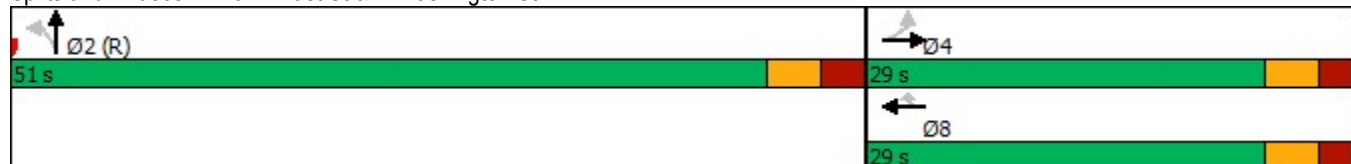


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	3	43			136	8	2	45				
Queue Length 95th (ft)	16	113			180	33	m5	54				
Internal Link Dist (ft)		182			644			242			228	
Turn Bay Length (ft)	65					80	80					
Base Capacity (vph)	190	443			464	426	749	1869				
Starvation Cap Reductn	0	20			0	0	0	49				
Spillback Cap Reductn	0	0			0	0	0	0				
Storage Cap Reductn	0	0			0	0	0	0				
Reduced v/c Ratio	0.07	0.51			0.64	0.23	0.04	0.65				

Intersection Summary

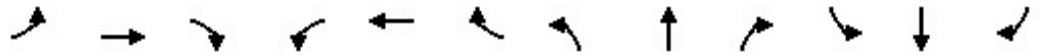
Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 64 (80%), Referenced to phase 2:NBTL and 6:, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 15.0 Intersection LOS: B
 Intersection Capacity Utilization 59.3% ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: N East St & E Washington St



Lanes, Volumes, Timings
 23: S Center St/N Madison St & W Front St

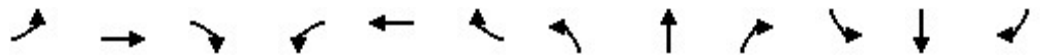
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔						↔↔	
Traffic Volume (vph)	0	60	15	21	31	0	0	0	0	58	704	33
Future Volume (vph)	0	60	15	21	31	0	0	0	0	58	704	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	12	12	12	12	12	12	12	12
Grade (%)		3%			-3%			1%				-1%
Storage Length (ft)	0		0	60		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			0			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99		0.98								1.00
Fr _t		0.973										0.994
Fl _t Protected				0.950								0.996
Satd. Flow (prot)	0	1394	0	1623	1488	0	0	0	0	0	3075	0
Fl _t Permitted				0.692								0.996
Satd. Flow (perm)	0	1394	0	1155	1488	0	0	0	0	0	3075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16										9
Link Speed (mph)		30			30			30				30
Link Distance (ft)		684			247			660				324
Travel Time (s)		15.5			5.6			15.0				7.4
Confl. Peds. (#/hr)			11	11						3		5
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Parking (#/hr)		0			0					20		20
Adj. Flow (vph)	0	80	20	28	41	0	0	0	0	77	939	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	28	41	0	0	0	0	0	1060	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.17	1.33	1.17	1.08	1.28	1.12	1.15	1.15	1.15	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6

Lanes, Volumes, Timings
 23: S Center St/N Madison St & W Front St

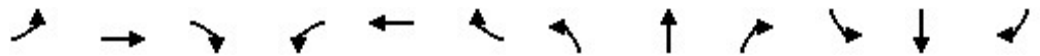
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex						Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0						0.0		
Turn Type	NA		Perm		NA				Perm		NA	
Protected Phases	4			8						6		
Permitted Phases				8						6		
Detector Phase	4			8			8			6		6
Switch Phase												
Minimum Initial (s)	5.0		5.0		5.0				5.0		5.0	
Minimum Split (s)	15.5		25.5		25.5				37.7		37.7	
Total Split (s)	30.0		30.0		30.0				50.0		50.0	
Total Split (%)	37.5%		37.5%		37.5%				62.5%		62.5%	
Maximum Green (s)	24.5		24.5		24.5				44.3		44.3	
Yellow Time (s)	3.2		3.2		3.2				3.2		3.2	
All-Red Time (s)	2.3		2.3		2.3				2.5		2.5	
Lost Time Adjust (s)	0.0		0.0		0.0						0.0	
Total Lost Time (s)	5.5		5.5		5.5						5.7	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0		3.0		3.0				3.0		3.0	
Recall Mode	None		None		None				C-Max		C-Max	
Walk Time (s)	1.0		9.0		9.0				21.0		21.0	
Flash Dont Walk (s)	9.0		11.0		11.0				11.0		11.0	
Pedestrian Calls (#/hr)	0		0		0				0		0	
Act Effct Green (s)	10.2		10.2		10.2						61.9	
Actuated g/C Ratio	0.13		0.13		0.13						0.77	
v/c Ratio	0.52		0.19		0.22						0.45	
Control Delay	36.2		32.3		32.2						1.1	
Queue Delay	0.0		0.0		0.0						0.0	
Total Delay	36.2		32.3		32.2						1.1	
LOS	D		C		C						A	
Approach Delay	36.2				32.3						1.1	
Approach LOS	D				C						A	
90th %ile Green (s)	15.1		15.1		15.1				53.7		53.7	
90th %ile Term Code	Gap		Hold		Hold				Coord		Coord	
70th %ile Green (s)	12.2		12.2		12.2				56.6		56.6	
70th %ile Term Code	Gap		Hold		Hold				Coord		Coord	
50th %ile Green (s)	10.2		10.2		10.2				58.6		58.6	
50th %ile Term Code	Gap		Hold		Hold				Coord		Coord	
30th %ile Green (s)	8.2		8.2		8.2				60.6		60.6	
30th %ile Term Code	Gap		Hold		Hold				Coord		Coord	
10th %ile Green (s)	0.0		0.0		0.0				74.3		74.3	
10th %ile Term Code	Skip		Skip		Skip				Coord		Coord	
Stops (vph)	57		20		28						35	
Fuel Used(gal)	1		0		0						2	
CO Emissions (g/hr)	89		20		29						166	
NOx Emissions (g/hr)	17		4		6						32	
VOC Emissions (g/hr)	21		5		7						39	
Dilemma Vehicles (#)	0		0		0						0	

Lanes, Volumes, Timings
 23: S Center St/N Madison St & W Front St

02/22/2024

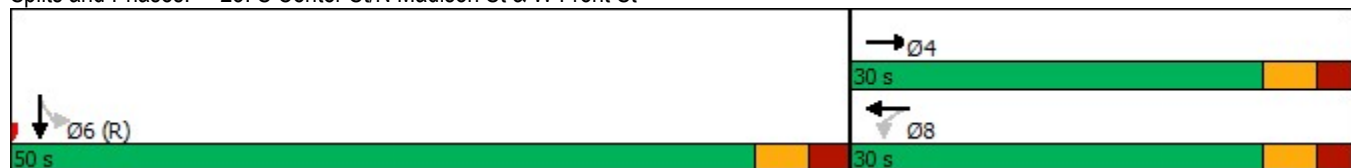


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		40		13	19							11
Queue Length 95th (ft)		65		28	36							12
Internal Link Dist (ft)		604			167			580				244
Turn Bay Length (ft)				60								
Base Capacity (vph)		438		353	455							2381
Starvation Cap Reductn		0		0	0							20
Spillback Cap Reductn		0		0	0							0
Storage Cap Reductn		0		0	0							0
Reduced v/c Ratio		0.23		0.08	0.09							0.45

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	4 (5%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.52
Intersection Signal Delay:	5.7
Intersection LOS:	A
Intersection Capacity Utilization	44.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 23: S Center St/N Madison St & W Front St



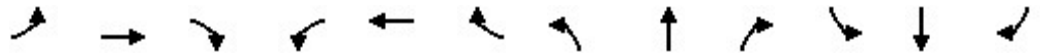
Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

02/22/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	30	0	0	127	36	40	904	16	0	0	0
Future Volume (vph)	13	30	0	0	127	36	40	904	16	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	16	12	12	10	10	13	11	11	12	12	12
Grade (%)		-1%			0%			-1%				2%
Storage Length (ft)	90		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.98					0.96		1.00				
Fr _t						0.850		0.997				
Fl _t Protected	0.950							0.998				
Satd. Flow (prot)	1518	1873	0	0	1535	1304	0	3019	0	0	0	0
Fl _t Permitted	0.620							0.998				
Satd. Flow (perm)	966	1873	0	0	1535	1250	0	3017	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						42		3				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		256			710			633				322
Travel Time (s)		5.8			16.1			14.4				7.3
Confl. Peds. (#/hr)	15					15	19		1			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)							5					
Adj. Flow (vph)	15	35	0	0	149	42	47	1064	19	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	35	0	0	149	42	0	1130	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.19	0.97	1.14	1.14	1.25	1.25	1.09	1.19	1.19	1.16	1.16	1.16
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				

Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

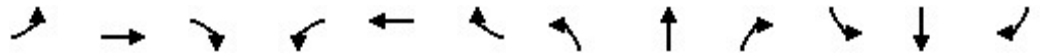
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex				Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0				0.0				
Turn Type	Perm	NA		NA		Perm	Perm	NA				
Protected Phases	4			8				2				
Permitted Phases	4					8	2					
Detector Phase	4	4		8		8	2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0	5.0	5.0				
Minimum Split (s)	27.2	27.2		17.2		17.2	50.6	50.6				
Total Split (s)	29.0	29.0		29.0		29.0	51.0	51.0				
Total Split (%)	36.3%	36.3%		36.3%		36.3%	63.8%	63.8%				
Maximum Green (s)	23.8	23.8		23.8		23.8	45.4	45.4				
Yellow Time (s)	3.2	3.2		3.2		3.2	3.2	3.2				
All-Red Time (s)	2.0	2.0		2.0		2.0	2.4	2.4				
Lost Time Adjust (s)	0.0	0.0		0.0		0.0		0.0				
Total Lost Time (s)	5.2	5.2		5.2		5.2		5.6				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0	3.0				
Recall Mode	None	None		None		None	C-Max	C-Max				
Walk Time (s)	11.0	11.0		1.0		1.0	34.0	34.0				
Flash Dont Walk (s)	11.0	11.0		11.0		11.0	11.0	11.0				
Pedestrian Calls (#/hr)	0	0		0		0	0	0				
Act Effct Green (s)	13.1	13.1		13.1		13.1		56.1				
Actuated g/C Ratio	0.16	0.16		0.16		0.16		0.70				
v/c Ratio	0.10	0.11		0.60		0.18		0.53				
Control Delay	27.4	27.3		40.2		10.6		4.8				
Queue Delay	0.0	0.0		0.0		0.0		0.0				
Total Delay	27.4	27.3		40.2		10.6		4.8				
LOS	C	C		D		B		A				
Approach Delay		27.3		33.7				4.8				
Approach LOS		C		C				A				
90th %ile Green (s)	18.4	18.4		18.4		18.4	50.8	50.8				
90th %ile Term Code	Hold	Hold		Gap		Gap	Coord	Coord				
70th %ile Green (s)	15.3	15.3		15.3		15.3	53.9	53.9				
70th %ile Term Code	Hold	Hold		Gap		Gap	Coord	Coord				
50th %ile Green (s)	13.1	13.1		13.1		13.1	56.1	56.1				
50th %ile Term Code	Hold	Hold		Gap		Gap	Coord	Coord				
30th %ile Green (s)	10.8	10.8		10.8		10.8	58.4	58.4				
30th %ile Term Code	Hold	Hold		Gap		Gap	Coord	Coord				
10th %ile Green (s)	7.7	7.7		7.7		7.7	61.5	61.5				
10th %ile Term Code	Hold	Hold		Gap		Gap	Coord	Coord				
Stops (vph)	12	26		113		11		264				
Fuel Used(gal)	0	0		2		0		7				
CO Emissions (g/hr)	12	26		165		24		499				
NOx Emissions (g/hr)	2	5		32		5		97				
VOC Emissions (g/hr)	3	6		38		5		116				
Dilemma Vehicles (#)	0	0		0		0		0				

Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

02/22/2024

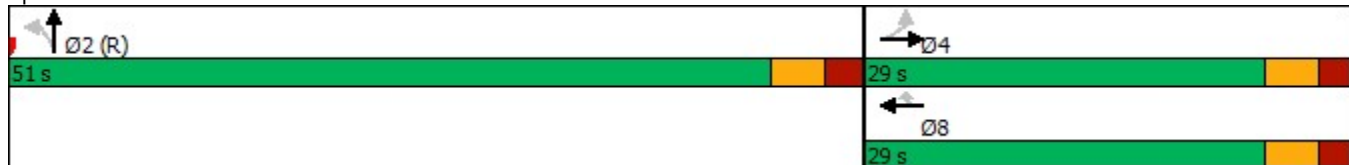


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	6	15			70	0		67				
Queue Length 95th (ft)	20	34			110	22		80				
Internal Link Dist (ft)		176			630			553			242	
Turn Bay Length (ft)	90					100						
Base Capacity (vph)	287	557			456	401		2118				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		41				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.05	0.06			0.33	0.10		0.54				

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	64 (80%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	9.7
Intersection LOS:	A
Intersection Capacity Utilization	61.5%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 24: S East St/N East St & E Front St



Lanes, Volumes, Timings
27: N Center St & W Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	38	21	12	101	0	0	0	0	4	126	12
Future Volume (vph)	0	38	21	12	101	0	0	0	0	4	126	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor												
Frt	0.951										0.987	
Flt Protected					0.995				0.999			
Satd. Flow (prot)	0	1534	0	0	1445	0	0	0	0	0	2871	0
Flt Permitted					0.995				0.999			
Satd. Flow (perm)	0	1534	0	0	1445	0	0	0	0	0	2871	0
Link Speed (mph)					30				30			
Link Distance (ft)					247				266			
Travel Time (s)					5.6				6.0			
Confl. Peds. (#/hr)			23		23				6		6	
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Parking (#/hr)												0
Adj. Flow (vph)	0	48	27	15	128	0	0	0	0	5	159	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	0	0	143	0	0	0	0	0	179	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)			0		0				0		0	
Link Offset(ft)			0		0				0		0	
Crosswalk Width(ft)					16				16			
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14
Turning Speed (mph)	15		9		15		9		15		9	
Sign Control	Stop				Stop				Stop			

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	26.1%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
29: N Center St & W Jefferson St

02/22/2024



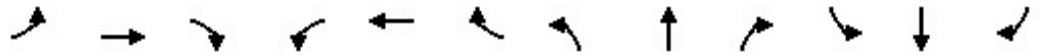
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔↔	
Traffic Volume (vph)	0	30	1	11	16	0	0	0	0	18	94	3
Future Volume (vph)	0	30	1	11	16	0	0	0	0	18	94	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor												
Frt	0.997										0.996	
Flt Protected					0.980				0.992			
Satd. Flow (prot)	0	1408	0	0	1384	0	0	0	0	0	2798	0
Flt Permitted					0.980				0.992			
Satd. Flow (perm)	0	1408	0	0	1384	0	0	0	0	0	2798	0
Link Speed (mph)	30				30				30			
Link Distance (ft)	253				255				306			
Travel Time (s)	5.8				5.8				7.0			
Confl. Peds. (#/hr)			7	7					13	9		
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	0											
Adj. Flow (vph)	0	38	1	14	20	0	0	0	0	23	118	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	0	34	0	0	0	0	0	145	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0				0		0	
Link Offset(ft)	0				0				0		0	
Crosswalk Width(ft)	16				16				16		16	
Two way Left Turn Lane												
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14
Turning Speed (mph)	15		9		15		9		15		9	
Sign Control	Stop				Stop				Stop		Stop	

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	21.1%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
30: N Center St & W Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	149	6	21	194	0	0	0	0	45	55	6
Future Volume (vph)	0	149	6	21	194	0	0	0	0	45	55	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00		1.00								0.99
Frt		0.994										0.991
Flt Protected				0.950								0.979
Satd. Flow (prot)	0	1416	0	1504	1425	0	0	0	0	0	2766	0
Flt Permitted				0.563								0.979
Satd. Flow (perm)	0	1416	0	889	1425	0	0	0	0	0	2755	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4										8
Link Speed (mph)		30			30			30				30
Link Distance (ft)		253			254			326				306
Travel Time (s)		5.8			5.8			7.4				7.0
Confl. Peds. (#/hr)			3	3						4		10
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		0			0							0
Adj. Flow (vph)	0	186	8	26	243	0	0	0	0	56	69	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	194	0	26	243	0	0	0	0	0	133	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes		Yes								
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex		Cl+Ex								Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings
30: N Center St & W Washington St

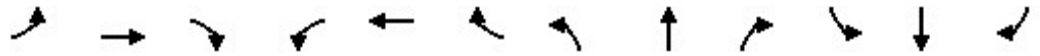
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6		6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		23.0		23.0	23.0					23.0	23.0	
Total Split (s)		50.0		50.0	50.0					30.0	30.0	
Total Split (%)		62.5%		62.5%	62.5%					37.5%	37.5%	
Maximum Green (s)		45.0		45.0	45.0					25.0	25.0	
Yellow Time (s)		4.0		4.0	4.0					4.0	4.0	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0							0.0
Total Lost Time (s)		5.0		5.0	5.0							5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		7.0		7.0	7.0					7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		19.8		19.8	19.8							50.2
Actuated g/C Ratio		0.25		0.25	0.25							0.63
v/c Ratio		0.55		0.12	0.69							0.08
Control Delay		18.2		3.3	14.5							7.0
Queue Delay		0.0		0.0	0.1							0.0
Total Delay		18.2		3.3	14.5							7.0
LOS		B		A	B							A
Approach Delay		18.2			13.4							7.0
Approach LOS		B			B							A
90th %ile Green (s)		28.3		28.3	28.3					41.7	41.7	
90th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
70th %ile Green (s)		23.2		23.2	23.2					46.8	46.8	
70th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
50th %ile Green (s)		19.7		19.7	19.7					50.3	50.3	
50th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
30th %ile Green (s)		16.3		16.3	16.3					53.7	53.7	
30th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
10th %ile Green (s)		11.6		11.6	11.6					58.4	58.4	
10th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
Stops (vph)		91		5	131							40
Fuel Used(gal)		1		0	2							1
CO Emissions (g/hr)		97		6	117							44
NOx Emissions (g/hr)		19		1	23							9
VOC Emissions (g/hr)		22		1	27							10
Dilemma Vehicles (#)		0		0	0							0
Queue Length 50th (ft)		37		2	16							11
Queue Length 95th (ft)		49		4	17							25

Lanes, Volumes, Timings
 30: N Center St & W Washington St

02/22/2024

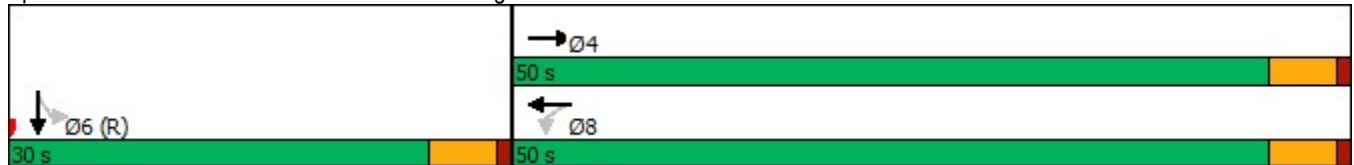


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		173			174			246			226	
Turn Bay Length (ft)				65								
Base Capacity (vph)		798		500	801						1730	
Starvation Cap Reductn		50		0	68						0	
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.26		0.05	0.33						0.08	

Intersection Summary




















Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	20 (25%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.69
Intersection Signal Delay:	13.6
Intersection LOS:	B
Intersection Capacity Utilization	46.9%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 30: N Center St & W Washington St



Lanes, Volumes, Timings
31: W Front St & N Center St

02/22/2024

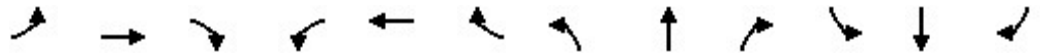
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	115	19	20	56	0	0	0	0	52	13	5
Future Volume (vph)	0	115	19	20	56	0	0	0	0	52	13	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	8	12	12	12	12
Storage Length (ft)	0		0	70		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.981										0.961
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1398	0	1504	1425	0	0	1235	0	1354	1369	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	1398	0	1504	1425	0	0	1235	0	1354	1369	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			262			221			326	
Travel Time (s)		5.6			6.0			5.0			7.4	
Confl. Peds. (#/hr)			35	35			19		8	8		19
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		0			0			0		0	0	
Adj. Flow (vph)	0	125	21	22	61	0	0	0	0	57	14	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	22	61	0	0	0	0	57	19	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			0			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane	Yes											
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.55	1.14	1.30	1.30	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	34.4%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 34: N Main St & W Market St/E Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	7	37	0	0	87	5	29	26	18	0	0	0	
Future Volume (vph)	7	37	0	0	87	5	29	26	18	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor													
Frt						0.993			0.964				
Flt Protected	0.992								0.980				
Satd. Flow (prot)	0	1414	0	0	1415	0	0	2700	0	0	0	0	
Flt Permitted	0.992								0.980				
Satd. Flow (perm)	0	1414	0	0	1415	0	0	2700	0	0	0	0	
Link Speed (mph)					30				30				
Link Distance (ft)					266			263			249		
Travel Time (s)					6.0				5.7				
Confl. Peds. (#/hr)	13						13	1					
Confl. Bikes (#/hr)							1						
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	
Parking (#/hr)	0								0				
Adj. Flow (vph)	9	48	0	0	113	6	38	34	23	0	0	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	57	0	0	119	0	0	95	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0								0				
Link Offset(ft)	0								0				
Crosswalk Width(ft)	16				16			16		16			
Two way Left Turn Lane													
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.22	1.14	1.14	1.14	1.14	
Turning Speed (mph)	15	9		15	9		15	9		15	9		
Sign Control	Stop		Stop				Stop			Stop			

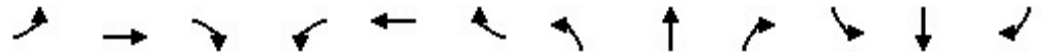
Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	20.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

36: N Main St & W Jefferson St/E Jefferson St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔↔					
Traffic Volume (vph)	14	14	0	0	15	10	23	61	10	0	0	0	
Future Volume (vph)	14	14	0	0	15	10	23	61	10	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor													
Frt					0.945			0.984					
Flt Protected	0.976				0.988								
Satd. Flow (prot)	0	1366	0	0	1322	0	0	2728	0	0	0	0	
Flt Permitted	0.976				0.988								
Satd. Flow (perm)	0	1366	0	0	1322	0	0	2728	0	0	0	0	
Link Speed (mph)	30				30			30					
Link Distance (ft)	255				268			306					
Travel Time (s)	5.8				6.1			7.0					
Confl. Peds. (#/hr)	11						11		2		24		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	
Parking (#/hr)	0				0				0				
Adj. Flow (vph)	15	15	0	0	16	11	25	66	11	0	0	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	30	0	0	27	0	0	102	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0				0				0				
Link Offset(ft)	0				0				0				
Crosswalk Width(ft)	16				16				16				
Two way Left Turn Lane													
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.22	1.14	1.14	1.14	1.14	
Turning Speed (mph)	15		9		15		9		15		9		
Sign Control	Stop				Stop				Stop				

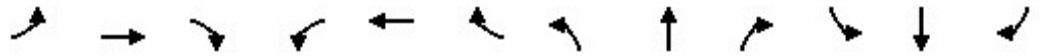
Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	23.9%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024

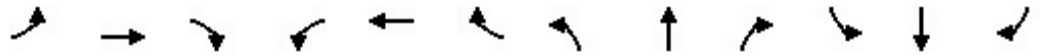


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	176	0	0	229	27	5	22	9	0	0	0
Future Volume (vph)	1	176	0	0	229	27	5	22	9	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	65		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00				1.00			1.00	0.97			
Fr _t					0.986				0.850			
Fl _t Protected	0.950							0.991				
Satd. Flow (prot)	1504	1425	0	0	1403	0	0	1412	1211	0	0	0
Fl _t Permitted	0.406							0.991				
Satd. Flow (perm)	641	1425	0	0	1403	0	0	1408	1171	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					13				27			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		254			262			326			306	
Travel Time (s)		5.8			6.0			7.4			7.0	
Confl. Peds. (#/hr)	3					3	7		6			
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		0			0			0	0			
Adj. Flow (vph)	1	220	0	0	286	34	6	28	11	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	220	0	0	320	0	0	34	11	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.30	1.30	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2	1			
Detector Template	Left	Thru			Thru		Left	Thru	Right			
Leading Detector (ft)	20	100			100		20	100	20			
Trailing Detector (ft)	0	0			0		0	0	0			
Detector 1 Position(ft)	0	0			0		0	0	0			
Detector 1 Size(ft)	20	6			6		20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024

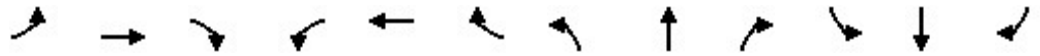


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Detector Phase	4	4			8		2	2	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Minimum Split (s)	23.0	23.0			23.0		23.0	23.0	23.0			
Total Split (s)	51.0	51.0			51.0		29.0	29.0	29.0			
Total Split (%)	63.8%	63.8%			63.8%		36.3%	36.3%	36.3%			
Maximum Green (s)	46.0	46.0			46.0		24.0	24.0	24.0			
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0			
Total Lost Time (s)	5.0	5.0			5.0			5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Recall Mode	None	None			None		C-Max	C-Max	C-Max			
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)	24.6	24.6			24.6			45.4	45.4			
Actuated g/C Ratio	0.31	0.31			0.31			0.57	0.57			
v/c Ratio	0.01	0.50			0.73			0.04	0.02			
Control Delay	15.0	29.2			11.5			13.2	5.3			
Queue Delay	0.0	0.1			0.1			0.0	0.0			
Total Delay	15.0	29.3			11.6			13.2	5.3			
LOS	B	C			B			B	A			
Approach Delay		29.3			11.6			11.3				
Approach LOS		C			B			B				
90th %ile Green (s)	35.2	35.2			35.2		34.8	34.8	34.8			
90th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
70th %ile Green (s)	28.6	28.6			28.6		41.4	41.4	41.4			
70th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
50th %ile Green (s)	24.4	24.4			24.4		45.6	45.6	45.6			
50th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
30th %ile Green (s)	20.2	20.2			20.2		49.8	49.8	49.8			
30th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
10th %ile Green (s)	14.4	14.4			14.4		55.6	55.6	55.6			
10th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
Stops (vph)	1	99			42			19	4			
Fuel Used(gal)	0	2			1			0	0			
CO Emissions (g/hr)	1	136			95			17	4			
NOx Emissions (g/hr)	0	26			18			3	1			
VOC Emissions (g/hr)	0	31			22			4	1			
Dilemma Vehicles (#)	0	0			0			0	0			
Queue Length 50th (ft)	0	78			12			11	0			
Queue Length 95th (ft)	m1	48			13			m28	m5			

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024

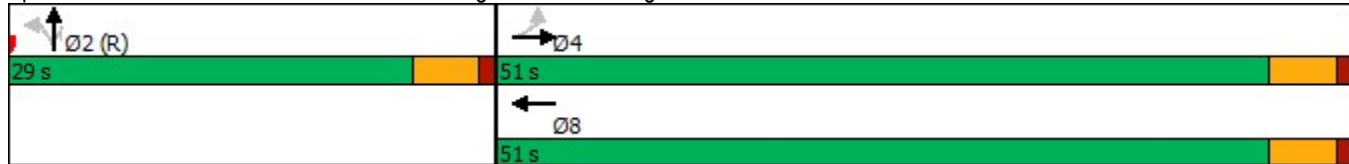


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		174			182			246			226	
Turn Bay Length (ft)	65											
Base Capacity (vph)	368	819			812			799	677			
Starvation Cap Reductn	0	120			39			0	0			
Spillback Cap Reductn	0	27			7			0	0			
Storage Cap Reductn	0	0			0			0	0			
Reduced v/c Ratio	0.00	0.31			0.41			0.04	0.02			

Intersection Summary

Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 7 (9%), Referenced to phase 2:NBTL and 6:, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 18.2
 Intersection LOS: B
 Intersection Capacity Utilization 46.9%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 37: N Main St & W Washington St/E Washington St



Lanes, Volumes, Timings
 38: W Front St/E Front St & N Main St

02/22/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	135	0	0	81	26	0	0	0	0	0	0
Future Volume (vph)	30	135	0	0	81	26	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	8	12	12	12	12
Storage Length (ft)	70		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.968											
Flt Protected	0.950											
Satd. Flow (prot)	1504	1425	0	0	1379	0	0	1308	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1504	1425	0	0	1379	0	0	1308	0	0	0	0
Link Speed (mph)	30				30				30		30	
Link Distance (ft)	262				256				210		326	
Travel Time (s)	6.0				5.8				4.8		7.4	
Confl. Peds. (#/hr)	17		2	2		17	7		36			
Peak Hour Factor	0.83	0.83	0.92	0.92	0.83	0.83	0.92	0.92	0.92	0.83	0.92	0.83
Heavy Vehicles (%)	8%	8%	2%	2%	8%	8%	2%	2%	2%	8%	2%	8%
Parking (#/hr)	0											
Adj. Flow (vph)	36	163	0	0	98	31	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	163	0	0	129	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12				12				0		0	
Link Offset(ft)	0				0				0		0	
Crosswalk Width(ft)	16				16				16		16	
Two way Left Turn Lane	Yes											
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.55	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control	Free				Free				Stop		Stop	

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	26.7%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
44: N East St & E Market St




















02/22/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	15	925	6	0	0
Future Volume (vph)	0	15	925	6	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	0%		-2%			2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Fr _t		0.865	0.999			
Fl _t Protected						
Satd. Flow (prot)	0	1292	3077	0	0	0
Fl _t Permitted						
Satd. Flow (perm)	0	1292	3077	0	0	0
Link Speed (mph)	30		30			30
Link Distance (ft)	558		266			127
Travel Time (s)	12.7		6.0			2.9
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)		0				
Adj. Flow (vph)	0	18	1128	7	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	18	1135	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.30	1.18	1.18	1.16	1.16
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Stop
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					
Intersection Capacity Utilization	38.6%		ICU Level of Service A			
Analysis Period (min)	15					

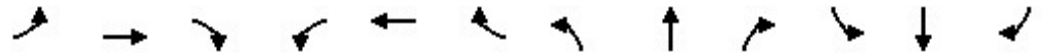
Lanes, Volumes, Timings
47: S Center St & W Olive St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											 	
Traffic Volume (vph)	0	55	33	3	33	0	0	0	0	39	657	52
Future Volume (vph)	0	55	33	3	33	0	0	0	0	39	657	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	10	12	12	12	12	12	12	12	12	12
Grade (%)		1%			-3%			3%			-1%	
Storage Length (ft)	0		80	0		0	0		0	0		50
Storage Lanes	0		1	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									0.850
Flt Protected				0.950							0.997	
Satd. Flow (prot)	0	1792	1470	1796	1891	0	0	0	0	0	3546	1591
Flt Permitted				0.718							0.997	
Satd. Flow (perm)	0	1792	1470	1358	1891	0	0	0	0	0	3546	1591
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			40									55
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		777			330			770			660	
Travel Time (s)		17.7			7.5			17.5			15.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	60	36	3	36	0	0	0	0	42	714	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	60	36	3	36	0	0	0	0	0	756	57
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.05	1.10	0.98	0.98	0.98	1.02	1.02	1.02	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA	Perm	Perm	NA					Perm	NA	Perm

Lanes, Volumes, Timings
47: S Center St & W Olive St

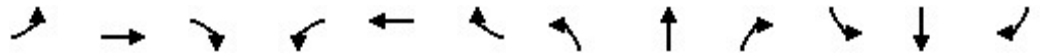
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8						6	
Permitted Phases			4	8						6		6
Detector Phase		4	4	8	8					6	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		13.5	13.5	13.5	13.5					37.9	37.9	37.9
Total Split (s)		22.0	22.0	22.0	22.0					58.0	58.0	58.0
Total Split (%)		27.5%	27.5%	27.5%	27.5%					72.5%	72.5%	72.5%
Maximum Green (s)		16.5	16.5	16.5	16.5					52.1	52.1	52.1
Yellow Time (s)		3.2	3.2	3.2	3.2					3.2	3.2	3.2
All-Red Time (s)		2.3	2.3	2.3	2.3					2.7	2.7	2.7
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	0.0
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		Max	Max	None	None					C-Max	C-Max	C-Max
Walk Time (s)		1.0	1.0	1.0	1.0					21.0	21.0	21.0
Flash Dont Walk (s)		7.0	7.0	7.0	7.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0					0	0	0
Act Effct Green (s)		16.5	16.5	16.5	16.5						52.1	52.1
Actuated g/C Ratio		0.21	0.21	0.21	0.21						0.65	0.65
v/c Ratio		0.16	0.11	0.01	0.09						0.33	0.05
Control Delay		27.5	9.2	25.7	25.7						3.9	0.7
Queue Delay		0.0	0.0	0.0	0.0						0.0	0.0
Total Delay		27.5	9.2	25.7	25.7						3.9	0.7
LOS		C	A	C	C						A	A
Approach Delay		20.7			25.7						3.6	
Approach LOS		C			C						A	
90th %ile Green (s)		16.5	16.5	16.5	16.5					52.1	52.1	52.1
90th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
70th %ile Green (s)		16.5	16.5	16.5	16.5					52.1	52.1	52.1
70th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
50th %ile Green (s)		16.5	16.5	16.5	16.5					52.1	52.1	52.1
50th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
30th %ile Green (s)		16.5	16.5	16.5	16.5					52.1	52.1	52.1
30th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
10th %ile Green (s)		16.5	16.5	16.5	16.5					52.1	52.1	52.1
10th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
Stops (vph)		45	10	4	29						226	5
Fuel Used(gal)		1	0	0	0						5	0
CO Emissions (g/hr)		62	22	3	29						376	21
NOx Emissions (g/hr)		12	4	1	6						73	4
VOC Emissions (g/hr)		14	5	1	7						87	5
Dilemma Vehicles (#)		0	0	0	0						0	0
Queue Length 50th (ft)		25	0	1	15						88	3
Queue Length 95th (ft)		56	22	m5	m38						21	0
Internal Link Dist (ft)		697			250			690			580	
Turn Bay Length (ft)			80									50

Lanes, Volumes, Timings
 47: S Center St & W Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		369	334	280	390						2309	1055
Starvation Cap Reductn		0	0	0	0						0	0
Spillback Cap Reductn		0	0	0	0						0	0
Storage Cap Reductn		0	0	0	0						0	0
Reduced v/c Ratio		0.16	0.11	0.01	0.09						0.33	0.05

Intersection Summary

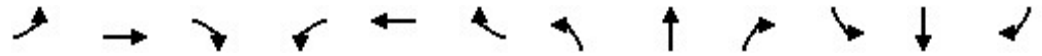
Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 21 (26%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.33
 Intersection Signal Delay: 6.3
 Intersection LOS: A
 Intersection Capacity Utilization 41.7%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 47: S Center St & W Olive St



Lanes, Volumes, Timings
48: S East St & E Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕↕			↕↕				
Traffic Volume (vph)	53	47	0	0	15	23	28	928	10	0	0	0
Future Volume (vph)	53	47	0	0	15	23	28	928	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	12	12	12	12	12
Grade (%)		2%			-4%			4%				-4%
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.909			0.998				
Flt Protected		0.974						0.999				
Satd. Flow (prot)	0	1675	0	0	3188	0	0	3359	0	0	0	0
Flt Permitted		0.810						0.999				
Satd. Flow (perm)	0	1393	0	0	3188	0	0	3359	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					25			3				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		330			647			682				633
Travel Time (s)		7.5			14.7			15.5				14.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Parking (#/hr)		0										
Adj. Flow (vph)	58	51	0	0	16	25	30	1009	11	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	109	0	0	41	0	0	1050	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.07	1.01	0.97	0.97	0.97	1.03	1.03	1.03	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												

Lanes, Volumes, Timings
48: S East St & E Olive St

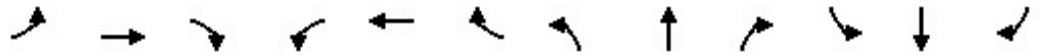
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Detector Phase	4	4			8		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	17.5	17.5			17.5		60.6	60.6				
Total Split (s)	18.6	18.6			18.6		61.4	61.4				
Total Split (%)	23.3%	23.3%			23.3%		76.8%	76.8%				
Maximum Green (s)	13.1	13.1			13.1		55.8	55.8				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.3	2.3			2.3		2.4	2.4				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.5			5.5			5.6				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Recall Mode	None	None			Max		C-Max	C-Max				
Walk Time (s)	1.0	1.0			1.0		44.0	44.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		13.1			13.1			55.8				
Actuated g/C Ratio		0.16			0.16			0.70				
v/c Ratio		0.48			0.08			0.45				
Control Delay		38.0			16.6			6.0				
Queue Delay		0.0			0.0			0.0				
Total Delay		38.0			16.6			6.0				
LOS		D			B			A				
Approach Delay		38.0			16.6			6.0				
Approach LOS		D			B			A				
90th %ile Green (s)	13.1	13.1			13.1		55.8	55.8				
90th %ile Term Code	Max	Max			MaxR		Coord	Coord				
70th %ile Green (s)	13.1	13.1			13.1		55.8	55.8				
70th %ile Term Code	Max	Max			MaxR		Coord	Coord				
50th %ile Green (s)	13.1	13.1			13.1		55.8	55.8				
50th %ile Term Code	Hold	Hold			MaxR		Coord	Coord				
30th %ile Green (s)	13.1	13.1			13.1		55.8	55.8				
30th %ile Term Code	Hold	Hold			MaxR		Coord	Coord				
10th %ile Green (s)	13.1	13.1			13.1		55.8	55.8				
10th %ile Term Code	Hold	Hold			MaxR		Coord	Coord				
Stops (vph)		98			19			382				
Fuel Used(gal)		2			0			8				
CO Emissions (g/hr)		110			30			590				
NOx Emissions (g/hr)		21			6			115				
VOC Emissions (g/hr)		25			7			137				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		56			3			101				
Queue Length 95th (ft)		110			17			135				

Lanes, Volumes, Timings
 48: S East St & E Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		250			567			602			553	
Turn Bay Length (ft)												
Base Capacity (vph)		228			542			2343				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.48			0.08			0.45				

Intersection Summary

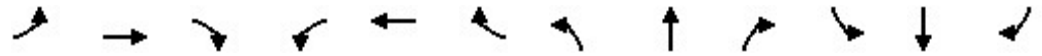
Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	51 (64%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.48
Intersection Signal Delay:	9.3
Intersection LOS:	A
Intersection Capacity Utilization	48.1%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 48: S East St & E Olive St



Lanes, Volumes, Timings
 3: N Madison St/N Center St & W Locust St

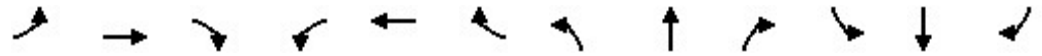
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↔						↔↑	↔
Traffic Volume (vph)	0	444	63	4	57	0	0	0	0	196	1182	165
Future Volume (vph)	0	444	63	4	57	0	0	0	0	196	1182	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		150
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		1.00									1.00	
Frt		0.981										0.850
Flt Protected					0.997						0.993	
Satd. Flow (prot)	0	3465	0	0	1857	0	0	0	0	0	3514	1583
Flt Permitted					0.965						0.993	
Satd. Flow (perm)	0	3465	0	0	1798	0	0	0	0	0	3507	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22										176
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		659			244			860			526	
Travel Time (s)		15.0			5.5			19.5			12.0	
Confl. Peds. (#/hr)			4							12		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	472	67	4	61	0	0	0	0	209	1257	176
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	539	0	0	65	0	0	0	0	0	1466	176
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	1
Detector Template		Thru		Left	Thru					Left	Thru	Right
Leading Detector (ft)		100		20	100					20	100	20
Trailing Detector (ft)		0		0	0					0	0	0
Detector 1 Position(ft)		0		0	0					0	0	0
Detector 1 Size(ft)		6		20	6					20	6	20
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm	NA	Perm

Lanes, Volumes, Timings
 3: N Madison St/N Center St & W Locust St

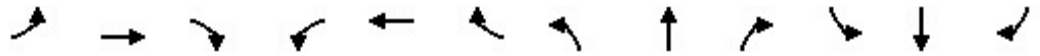
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8						6	
Permitted Phases				8						6		6
Detector Phase		4		8	8					6	6	6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		23.4		22.5	22.5					23.4	23.4	23.4
Total Split (s)		24.0		22.5	22.5					46.0	46.0	46.0
Total Split (%)		34.3%		32.1%	32.1%					65.7%	65.7%	65.7%
Maximum Green (s)		18.6		18.0	18.0					40.6	40.6	40.6
Yellow Time (s)		3.2		3.5	3.5					3.2	3.2	3.2
All-Red Time (s)		2.2		1.0	1.0					2.2	2.2	2.2
Lost Time Adjust (s)		0.0			0.0						0.0	0.0
Total Lost Time (s)		5.4			4.5						5.4	5.4
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Recall Mode		None		None	None					C-Max	C-Max	C-Max
Walk Time (s)		7.0		7.0	7.0					7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0					0	0	0
Act Effct Green (s)		15.7			16.6						43.5	43.5
Actuated g/C Ratio		0.22			0.24						0.62	0.62
v/c Ratio		0.68			0.15						0.67	0.17
Control Delay		28.1			29.8						11.1	1.6
Queue Delay		0.0			0.0						0.0	0.0
Total Delay		28.2			29.8						11.1	1.6
LOS		C			C						B	A
Approach Delay		28.2			29.8						10.1	
Approach LOS		C			C						B	
90th %ile Green (s)		18.6		19.5	19.5					40.6	40.6	40.6
90th %ile Term Code		Max		Hold	Hold					Coord	Coord	Coord
70th %ile Green (s)		18.1		19.0	19.0					41.1	41.1	41.1
70th %ile Term Code		Gap		Hold	Hold					Coord	Coord	Coord
50th %ile Green (s)		16.4		17.3	17.3					42.8	42.8	42.8
50th %ile Term Code		Gap		Hold	Hold					Coord	Coord	Coord
30th %ile Green (s)		13.9		14.8	14.8					45.3	45.3	45.3
30th %ile Term Code		Gap		Hold	Hold					Coord	Coord	Coord
10th %ile Green (s)		11.4		12.3	12.3					47.8	47.8	47.8
10th %ile Term Code		Gap		Hold	Hold					Coord	Coord	Coord
Stops (vph)		423			63						852	13
Fuel Used(gal)		8			1						13	1
CO Emissions (g/hr)		549			58						942	56
NOx Emissions (g/hr)		107			11						183	11
VOC Emissions (g/hr)		127			14						218	13
Dilemma Vehicles (#)		0			0						0	0
Queue Length 50th (ft)		105			31						195	0
Queue Length 95th (ft)		148			m49						290	22
Internal Link Dist (ft)		579			164			780			446	
Turn Bay Length (ft)												150

Lanes, Volumes, Timings
 3: N Madison St/N Center St & W Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		936			500						2180	1050
Starvation Cap Reductn		0			0						0	0
Spillback Cap Reductn		4			0						0	0
Storage Cap Reductn		0			0						0	0
Reduced v/c Ratio		0.58			0.13						0.67	0.17

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 33 (47%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 15.0 Intersection LOS: B
 Intersection Capacity Utilization 61.8% ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.















Splits and Phases: 3: N Madison St/N Center St & W Locust St



Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

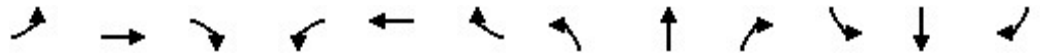
02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	542	0	0	0	0	60	944	209	0	0	0
Future Volume (vph)	102	542	0	0	0	0	60	944	209	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00						1.00				
Frt								0.974				
Flt Protected		0.992						0.998				
Satd. Flow (prot)	0	3511	0	0	0	0	0	3431	0	0	0	0
Flt Permitted		0.992						0.998				
Satd. Flow (perm)	0	3508	0	0	0	0	0	3431	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								57				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		244			514			878				525
Travel Time (s)		5.5			11.7			20.0				11.9
Confl. Peds. (#/hr)	5								3			
Confl. Bikes (#/hr)									1			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	110	583	0	0	0	0	65	1015	225	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	693	0	0	0	0	0	1305	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2					1	2				
Detector Template	Left	Thru					Left	Thru				
Leading Detector (ft)	20	100					20	100				
Trailing Detector (ft)	0	0					0	0				
Detector 1 Position(ft)	0	0					0	0				
Detector 1 Size(ft)	20	6					20	6				
Detector 1 Type	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0					0.0	0.0				
Detector 1 Queue (s)	0.0	0.0					0.0	0.0				
Detector 1 Delay (s)	0.0	0.0					0.0	0.0				
Detector 2 Position(ft)		94						94				
Detector 2 Size(ft)		6						6				
Detector 2 Type		Cl+Ex						Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0				
Turn Type	Perm	NA					Perm	NA				
Protected Phases		4						2				
Permitted Phases	4						2					

Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

02/22/2024

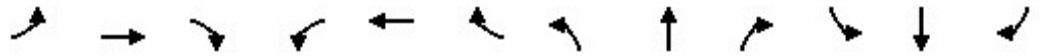


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4					2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0					5.0	5.0				
Minimum Split (s)	23.5	23.5					23.5	23.5				
Total Split (s)	25.0	25.0					45.0	45.0				
Total Split (%)	35.7%	35.7%					64.3%	64.3%				
Maximum Green (s)	19.5	19.5					39.5	39.5				
Yellow Time (s)	3.2	3.2					3.2	3.2				
All-Red Time (s)	2.3	2.3					2.3	2.3				
Lost Time Adjust (s)		0.0						0.0				
Total Lost Time (s)		5.5						5.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0					3.0	3.0				
Recall Mode	None	None					C-Max	C-Max				
Walk Time (s)	7.0	7.0					7.0	7.0				
Flash Dont Walk (s)	11.0	11.0					11.0	11.0				
Pedestrian Calls (#/hr)	0	0					0	0				
Act Effct Green (s)		18.1						40.9				
Actuated g/C Ratio		0.26						0.58				
v/c Ratio		0.76						0.64				
Control Delay		20.1						7.3				
Queue Delay		0.4						0.0				
Total Delay		20.4						7.3				
LOS		C						A				
Approach Delay		20.4						7.3				
Approach LOS		C						A				
90th %ile Green (s)	19.5	19.5					39.5	39.5				
90th %ile Term Code	Max	Max					Coord	Coord				
70th %ile Green (s)	19.5	19.5					39.5	39.5				
70th %ile Term Code	Max	Max					Coord	Coord				
50th %ile Green (s)	19.5	19.5					39.5	39.5				
50th %ile Term Code	Max	Max					Coord	Coord				
30th %ile Green (s)	17.7	17.7					41.3	41.3				
30th %ile Term Code	Gap	Gap					Coord	Coord				
10th %ile Green (s)	14.2	14.2					44.8	44.8				
10th %ile Term Code	Gap	Gap					Coord	Coord				
Stops (vph)		299						504				
Fuel Used(gal)		6						13				
CO Emissions (g/hr)		385						902				
NOx Emissions (g/hr)		75						175				
VOC Emissions (g/hr)		89						209				
Dilemma Vehicles (#)		0						0				
Queue Length 50th (ft)		65						76				
Queue Length 95th (ft)		126						92				
Internal Link Dist (ft)		164			434			798			445	
Turn Bay Length (ft)												
Base Capacity (vph)		977						2029				
Starvation Cap Reductn		50						0				

Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		0.75						0.64				

Intersection Summary


















Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	30 (43%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.76
Intersection Signal Delay:	11.9
Intersection LOS:	B
Intersection Capacity Utilization	61.7%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 6: N East St/N Main St & W Locust St/E Locust St



Lanes, Volumes, Timings
 9: N Madison St & W Market St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	124	108	24	108	0	0	0	0	12	931	146
Future Volume (vph)	0	124	108	24	108	0	0	0	0	12	931	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		1%			-2%			-6%			4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99		1.00							1.00	
Frt		0.937									0.980	
Flt Protected				0.950							0.999	
Satd. Flow (prot)	0	1501	0	1609	1637	0	0	0	0	0	3047	0
Flt Permitted				0.449							0.999	
Satd. Flow (perm)	0	1501	0	759	1637	0	0	0	0	0	3047	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61									42	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		705			247			400			860	
Travel Time (s)		16.0			5.6			9.1			19.5	
Confl. Peds. (#/hr)			1	1								4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	132	115	26	115	0	0	0	0	13	990	155
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	247	0	26	115	0	0	0	0	0	1158	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	1.15	1.20	1.15	1.13	1.18	1.13	1.10	1.10	1.10	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8							6

Lanes, Volumes, Timings
 9: N Madison St & W Market St

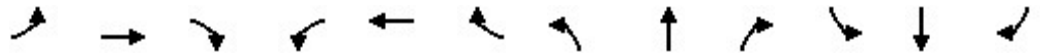
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		17.4		17.4	17.4					45.2	45.2	
Total Split (s)		24.1		24.1	24.1					45.9	45.9	
Total Split (%)		34.4%		34.4%	34.4%					65.6%	65.6%	
Maximum Green (s)		18.7		18.7	18.7					40.7	40.7	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.2		2.2	2.2					2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0						0.0	
Total Lost Time (s)		5.4		5.4	5.4						5.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		1.0		1.0	1.0					29.0	29.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		13.7		13.7	13.7						45.7	
Actuated g/C Ratio		0.20		0.20	0.20						0.65	
v/c Ratio		0.72		0.18	0.36						0.58	
Control Delay		31.2		24.1	26.1						1.6	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		31.2		24.1	26.1						1.6	
LOS		C		C	C						A	
Approach Delay		31.2			25.7						1.6	
Approach LOS		C			C						A	
90th %ile Green (s)		18.7		18.7	18.7					40.7	40.7	
90th %ile Term Code		Max		Hold	Hold					Coord	Coord	
70th %ile Green (s)		16.9		16.9	16.9					42.5	42.5	
70th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
50th %ile Green (s)		14.2		14.2	14.2					45.2	45.2	
50th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
30th %ile Green (s)		11.4		11.4	11.4					48.0	48.0	
30th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
10th %ile Green (s)		7.4		7.4	7.4					52.0	52.0	
10th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
Stops (vph)		159		21	88						48	
Fuel Used(gal)		4		0	1						8	
CO Emissions (g/hr)		254		20	89						554	
NOx Emissions (g/hr)		49		4	17						108	
VOC Emissions (g/hr)		59		5	21						128	
Dilemma Vehicles (#)		0		0	0						0	
Queue Length 50th (ft)		74		9	43						12	
Queue Length 95th (ft)		136		27	79						15	
Internal Link Dist (ft)		625			167			320			780	
Turn Bay Length (ft)												
Base Capacity (vph)		445		202	437						2003	

Lanes, Volumes, Timings
 9: N Madison St & W Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0		0	0						0	
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.56		0.13	0.26						0.58	

Intersection Summary

Area Type:	CBD
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	52 (74%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	8.5
Intersection LOS:	A
Intersection Capacity Utilization	65.2%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 9: N Madison St & W Market St



Lanes, Volumes, Timings
11: N East St & E Market St

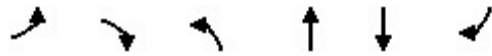
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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	137	0	126	1008	0	0
Future Volume (vph)	137	0	126	1008	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	11	12	12
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor	0.98			1.00		
Frt						
Flt Protected	0.950			0.994		
Satd. Flow (prot)	1481	0	0	2782	0	0
Flt Permitted	0.950			0.994		
Satd. Flow (perm)	1447	0	0	2782	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	263			127	878	
Travel Time (s)	6.0			2.9	20.0	
Confl. Peds. (#/hr)	11		2			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Parking (#/hr)	0		20	20		
Adj. Flow (vph)	146	0	134	1072	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	146	0	0	1206	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.25	1.14	1.13	1.34	1.16	1.16
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2		
Detector Template	Left		Left	Thru		
Leading Detector (ft)	20		20	100		
Trailing Detector (ft)	0		0	0		
Detector 1 Position(ft)	0		0	0		
Detector 1 Size(ft)	20		20	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(ft)				94		
Detector 2 Size(ft)				6		
Detector 2 Type				Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)				0.0		
Turn Type	Prot		Perm	NA		

Lanes, Volumes, Timings
11: N East St & E Market St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4			2		
Permitted Phases			2			
Detector Phase	4		2	2		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	15.4		47.5	47.5		
Total Split (s)	20.0		50.0	50.0		
Total Split (%)	28.6%		71.4%	71.4%		
Maximum Green (s)	14.6		44.5	44.5		
Yellow Time (s)	3.2		3.2	3.2		
All-Red Time (s)	2.2		2.3	2.3		
Lost Time Adjust (s)	0.0			0.0		
Total Lost Time (s)	5.4			5.5		
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		C-Max	C-Max		
Walk Time (s)	1.0		31.0	31.0		
Flash Dont Walk (s)	9.0		11.0	11.0		
Pedestrian Calls (#/hr)	0		0	0		
Act Effct Green (s)	11.6			51.1		
Actuated g/C Ratio	0.17			0.73		
v/c Ratio	0.60			0.59		
Control Delay	36.9			8.0		
Queue Delay	0.0			0.0		
Total Delay	36.9			8.0		
LOS	D			A		
Approach Delay	36.9			8.0		
Approach LOS	D			A		
90th %ile Green (s)	14.6		44.5	44.5		
90th %ile Term Code	Max		Coord	Coord		
70th %ile Green (s)	14.1		45.0	45.0		
70th %ile Term Code	Gap		Coord	Coord		
50th %ile Green (s)	12.1		47.0	47.0		
50th %ile Term Code	Gap		Coord	Coord		
30th %ile Green (s)	10.0		49.1	49.1		
30th %ile Term Code	Gap		Coord	Coord		
10th %ile Green (s)	0.0		64.5	64.5		
10th %ile Term Code	Skip		Coord	Coord		
Stops (vph)	122			559		
Fuel Used(gal)	2			6		
CO Emissions (g/hr)	139			424		
NOx Emissions (g/hr)	27			82		
VOC Emissions (g/hr)	32			98		
Dilemma Vehicles (#)	0			0		
Queue Length 50th (ft)	58			133		
Queue Length 95th (ft)	108			217		
Internal Link Dist (ft)	183			47	798	
Turn Bay Length (ft)						

Lanes, Volumes, Timings
 11: N East St & E Market St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Base Capacity (vph)	308			2031		
Starvation Cap Reductn	0			0		
Spillback Cap Reductn	0			0		
Storage Cap Reductn	0			0		
Reduced v/c Ratio	0.47			0.59		

Intersection Summary

Area Type:	CBD
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	14 (20%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	11.1
Intersection LOS:	B
Intersection Capacity Utilization	52.5%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 11: N East St & E Market St



Lanes, Volumes, Timings
12: N Madison St & W Monroe St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻						↻↻	
Traffic Volume (vph)	0	9	0	31	25	0	0	0	0	3	1057	6
Future Volume (vph)	0	9	0	31	25	0	0	0	0	3	1057	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			-3%			6%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor												
Frt												0.999
Flt Protected					0.973							
Satd. Flow (prot)	0	1621	0	0	1631	0	0	0	0	0	3087	0
Flt Permitted					0.973							
Satd. Flow (perm)	0	1621	0	0	1631	0	0	0	0	0	3087	0
Link Speed (mph)					30				30			
Link Distance (ft)					209				307			
Travel Time (s)					4.8				7.0			
Confl. Peds. (#/hr)											4	2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	10	0	35	28	0	0	0	0	3	1188	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	0	63	0	0	0	0	0	1198	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0				0		0	
Link Offset(ft)	0				0				0		0	
Crosswalk Width(ft)	16				16				16		16	
Two way Left Turn Lane												
Headway Factor	1.14	1.19	1.14	1.14	1.14	1.14	1.12	1.12	1.12	1.19	1.19	1.19
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control	Stop				Stop				Stop		Free	

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	49.5%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	48	0	19	1054	0	0
Future Volume (vph)	48	0	19	1054	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12
Grade (%)	-2%			-3%	4%	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor	0.98			1.00		
Frt						
Flt Protected	0.950			0.999		
Satd. Flow (prot)	1448	0	0	2810	0	0
Flt Permitted	0.950			0.999		
Satd. Flow (perm)	1426	0	0	2810	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	221			318	266	
Travel Time (s)	5.0			7.2	6.0	
Confl. Peds. (#/hr)	5		7			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Parking (#/hr)	0		20	20		
Adj. Flow (vph)	49	0	20	1087	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	49	0	0	1107	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.29	1.13	1.12	1.34	1.17	1.17
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2		
Detector Template	Left		Left	Thru		
Leading Detector (ft)	20		20	100		
Trailing Detector (ft)	0		0	0		
Detector 1 Position(ft)	0		0	0		
Detector 1 Size(ft)	20		20	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(ft)				94		
Detector 2 Size(ft)				6		
Detector 2 Type				Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)				0.0		
Turn Type	Prot		Perm	NA		

Lanes, Volumes, Timings
13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4			2		
Permitted Phases			2			
Detector Phase	4		2	2		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	13.2		49.2	49.2		
Total Split (s)	17.0		63.0	63.0		
Total Split (%)	21.3%		78.8%	78.8%		
Maximum Green (s)	11.8		57.8	57.8		
Yellow Time (s)	3.2		3.2	3.2		
All-Red Time (s)	2.0		2.0	2.0		
Lost Time Adjust (s)	0.0			0.0		
Total Lost Time (s)	5.2			5.2		
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		C-Max	C-Max		
Walk Time (s)	1.0		33.0	33.0		
Flash Dont Walk (s)	7.0		11.0	11.0		
Pedestrian Calls (#/hr)	0		0	0		
Act Effct Green (s)	8.2			68.0		
Actuated g/C Ratio	0.10			0.85		
v/c Ratio	0.33			0.46		
Control Delay	38.6			1.2		
Queue Delay	0.0			0.0		
Total Delay	38.6			1.2		
LOS	D			A		
Approach Delay	38.6			1.2		
Approach LOS	D			A		
90th %ile Green (s)	11.3		58.3	58.3		
90th %ile Term Code	Gap		Coord	Coord		
70th %ile Green (s)	9.4		60.2	60.2		
70th %ile Term Code	Gap		Coord	Coord		
50th %ile Green (s)	8.1		61.5	61.5		
50th %ile Term Code	Gap		Coord	Coord		
30th %ile Green (s)	0.0		74.8	74.8		
30th %ile Term Code	Skip		Coord	Coord		
10th %ile Green (s)	0.0		74.8	74.8		
10th %ile Term Code	Skip		Coord	Coord		
Stops (vph)	44			62		
Fuel Used(gal)	1			3		
CO Emissions (g/hr)	49			228		
NOx Emissions (g/hr)	10			44		
VOC Emissions (g/hr)	11			53		
Dilemma Vehicles (#)	0			0		
Queue Length 50th (ft)	23			12		
Queue Length 95th (ft)	53			24		
Internal Link Dist (ft)	141			238	186	
Turn Bay Length (ft)						

Lanes, Volumes, Timings
 13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Base Capacity (vph)	213			2388		
Starvation Cap Reductn	0			0		
Spillback Cap Reductn	0			0		
Storage Cap Reductn	0			0		
Reduced v/c Ratio	0.23			0.46		

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	58 (73%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.46
Intersection Signal Delay:	2.8
Intersection LOS:	A
Intersection Capacity Utilization	45.8%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 13: N East St & Monroe St



Lanes, Volumes, Timings
15: N Madison St & W Jefferson St

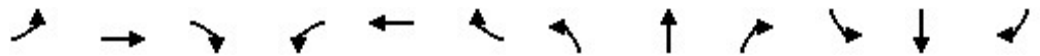
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔↔	
Traffic Volume (vph)	0	19	9	25	21	0	0	0	0	18	1046	17
Future Volume (vph)	0	19	9	25	21	0	0	0	0	18	1046	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	14	12	12	12	12	12	12	12
Grade (%)		4%			-3%			2%			2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00						1.00	
Frt		0.955									0.998	
Flt Protected					0.974						0.999	
Satd. Flow (prot)	0	1766	0	0	1591	0	0	0	0	0	3144	0
Flt Permitted					0.854						0.999	
Satd. Flow (perm)	0	1766	0	0	1388	0	0	0	0	0	3144	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11									4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		692			253			310			307	
Travel Time (s)		15.7			5.8			7.0			7.0	
Confl. Peds. (#/hr)			4	4						2		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Parking (#/hr)					0					20		20
Adj. Flow (vph)	0	22	11	29	25	0	0	0	0	21	1231	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	33	0	0	54	0	0	0	0	0	1272	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.17	1.00	1.17	1.12	1.18	1.12	1.16	1.16	1.16	1.16	1.16	1.16
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm	NA	

Lanes, Volumes, Timings
15: N Madison St & W Jefferson St

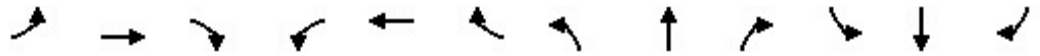
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		15.1		15.4	15.4					47.4	47.4	
Total Split (s)		23.0		23.0	23.0					57.0	57.0	
Total Split (%)		28.8%		28.8%	28.8%					71.3%	71.3%	
Maximum Green (s)		17.9		17.6	17.6					51.6	51.6	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.9		2.2	2.2					2.2	2.2	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.1			5.4						5.4	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		Max		None	None					C-Max	C-Max	
Walk Time (s)		1.0		1.0	1.0					31.0	31.0	
Flash Dont Walk (s)		9.0		9.0	9.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		17.9			17.6						51.6	
Actuated g/C Ratio		0.22			0.22						0.64	
v/c Ratio		0.08			0.18						0.63	
Control Delay		19.2			27.2						10.2	
Queue Delay		0.0			0.0						0.0	
Total Delay		19.2			27.2						10.2	
LOS		B			C						B	
Approach Delay		19.2			27.2						10.2	
Approach LOS		B			C						B	
90th %ile Green (s)		17.9		17.6	17.6					51.6	51.6	
90th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
70th %ile Green (s)		17.9		17.6	17.6					51.6	51.6	
70th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
50th %ile Green (s)		17.9		17.6	17.6					51.6	51.6	
50th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
30th %ile Green (s)		17.9		17.6	17.6					51.6	51.6	
30th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
10th %ile Green (s)		17.9		17.6	17.6					51.6	51.6	
10th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
Stops (vph)		17			37						595	
Fuel Used(gal)		0			1						8	
CO Emissions (g/hr)		25			38						567	
NOx Emissions (g/hr)		5			7						110	
VOC Emissions (g/hr)		6			9						131	
Dilemma Vehicles (#)		0			0						0	
Queue Length 50th (ft)		9			22						174	
Queue Length 95th (ft)		29			49						211	
Internal Link Dist (ft)		612			173			230			227	
Turn Bay Length (ft)												

Lanes, Volumes, Timings
 15: N Madison St & W Jefferson St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		403			305							2029
Starvation Cap Reductn		0			0							0
Spillback Cap Reductn		0			0							0
Storage Cap Reductn		0			0							0
Reduced v/c Ratio		0.08			0.18							0.63

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	6 (8%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	11.1
Intersection LOS:	B
Intersection Capacity Utilization	51.7%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 15: N Madison St & W Jefferson St



Lanes, Volumes, Timings
16: N East St & E Jefferson St













02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↗			↖↗				
Traffic Volume (vph)	26	25	0	0	22	21	21	1032	6	0	0	0
Future Volume (vph)	26	25	0	0	22	21	21	1032	6	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	12	12	11	11	12	12	12
Grade (%)		-3%			3%			0%			3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.97			0.97			1.00				
Frt					0.934			0.999				
Flt Protected		0.975						0.999				
Satd. Flow (prot)	0	1493	0	0	1539	0	0	3073	0	0	0	0
Flt Permitted		0.845						0.999				
Satd. Flow (perm)	0	1257	0	0	1539	0	0	3072	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					22			2				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		268			710			308			318	
Travel Time (s)		6.1			16.1			7.0			7.2	
Confl. Peds. (#/hr)	25					25	17		4			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Parking (#/hr)		0					20		20			
Adj. Flow (vph)	27	26	0	0	23	22	22	1075	6	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	53	0	0	45	0	0	1103	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.28	1.12	1.17	1.12	1.17	1.14	1.19	1.19	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA				

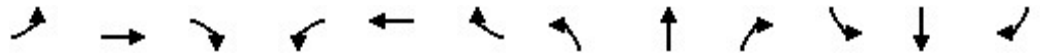
Lanes, Volumes, Timings
16: N East St & E Jefferson St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8			2				
Permitted Phases	4						2					
Detector Phase	4	4			8		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	15.2	15.2			15.2		47.2	47.2				
Total Split (s)	19.0	19.0			19.0		61.0	61.0				
Total Split (%)	23.8%	23.8%			23.8%		76.3%	76.3%				
Maximum Green (s)	13.8	13.8			13.8		55.8	55.8				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Recall Mode	Max	Max			None		C-Max	C-Max				
Walk Time (s)	1.0	1.0			1.0		31.0	31.0				
Flash Dont Walk (s)	9.0	9.0			9.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		13.8			13.8			55.8				
Actuated g/C Ratio		0.17			0.17			0.70				
v/c Ratio		0.25			0.16			0.51				
Control Delay		32.1			19.3			2.4				
Queue Delay		0.0			0.0			0.2				
Total Delay		32.1			19.3			2.7				
LOS		C			B			A				
Approach Delay		32.1			19.3			2.7				
Approach LOS		C			B			A				
90th %ile Green (s)	13.8	13.8			13.8		55.8	55.8				
90th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
70th %ile Green (s)	13.8	13.8			13.8		55.8	55.8				
70th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
50th %ile Green (s)	13.8	13.8			13.8		55.8	55.8				
50th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
30th %ile Green (s)	13.8	13.8			13.8		55.8	55.8				
30th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
10th %ile Green (s)	13.8	13.8			13.8		55.8	55.8				
10th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
Stops (vph)		44			25			201				
Fuel Used(gal)		1			1			4				
CO Emissions (g/hr)		48			38			292				
NOx Emissions (g/hr)		9			7			57				
VOC Emissions (g/hr)		11			9			68				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		23			10			12				
Queue Length 95th (ft)		56			38			22				
Internal Link Dist (ft)		188			630			228			238	
Turn Bay Length (ft)												

Lanes, Volumes, Timings
 16: N East St & E Jefferson St

02/22/2024

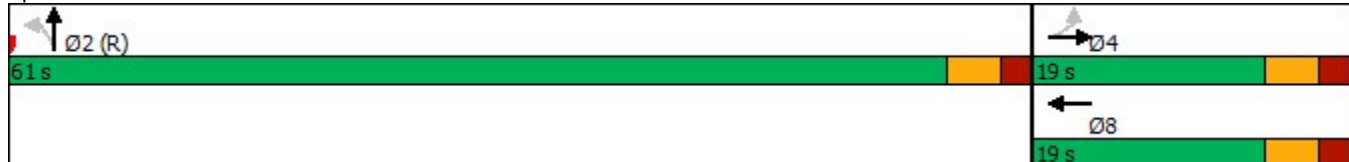


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		216			283			2143				
Starvation Cap Reductn		0			0			366				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.25			0.16			0.62				

Intersection Summary

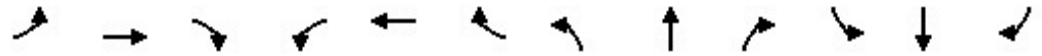
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	62 (78%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.51
Intersection Signal Delay:	4.6
Intersection LOS:	A
Intersection Capacity Utilization	53.4%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 16: N East St & E Jefferson St



Lanes, Volumes, Timings
 19: N Madison St & W Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖					↖	↖↗	↖
Traffic Volume (vph)	0	126	8	59	228	0	0	0	0	58	1011	40
Future Volume (vph)	0	126	8	59	228	0	0	0	0	58	1011	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	12	12	12	12	12
Grade (%)		3%			-3%			2%				-2%
Storage Length (ft)	0		0	65		0	0		0	150		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor		1.00		0.99						1.00	1.00	
Fr _t		0.992									0.994	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1522	0	1617	1758	0	0	0	0	1287	3195	0
Flt Permitted				0.666						0.950		
Satd. Flow (perm)	0	1522	0	1126	1758	0	0	0	0	1283	3195	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4									7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		690			253			324			310	
Travel Time (s)		15.7			5.8			7.4			7.0	
Confl. Peds. (#/hr)			4	4						2		3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Parking (#/hr)		0								20		20
Adj. Flow (vph)	0	133	8	62	240	0	0	0	0	61	1064	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	141	0	62	240	0	0	0	0	61	1106	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.17	1.28	1.17	1.12	1.08	1.12	1.16	1.16	1.16	1.49	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex

Lanes, Volumes, Timings
 19: N Madison St & W Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		17.4		27.4	27.4					35.6	35.6	
Total Split (s)		32.0		32.0	32.0					48.0	48.0	
Total Split (%)		40.0%		40.0%	40.0%					60.0%	60.0%	
Maximum Green (s)		26.6		26.6	26.6					42.4	42.4	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.2		2.2	2.2					2.4	2.4	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		5.4		5.4	5.4					5.6	5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		1.0		11.0	11.0					19.0	19.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		16.3		16.3	16.3					52.7	52.7	
Actuated g/C Ratio		0.20		0.20	0.20					0.66	0.66	
v/c Ratio		0.45		0.27	0.67					0.07	0.53	
Control Delay		30.5		16.3	23.2					5.3	6.0	
Queue Delay		0.0		0.0	0.2					0.0	0.1	
Total Delay		30.5		16.3	23.4					5.3	6.1	
LOS		C		B	C					A	A	
Approach Delay		30.5			21.9							6.1
Approach LOS		C			C							A
90th %ile Green (s)		22.9		22.9	22.9					46.1	46.1	
90th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
70th %ile Green (s)		18.7		18.7	18.7					50.3	50.3	
70th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
50th %ile Green (s)		16.2		16.2	16.2					52.8	52.8	
50th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
30th %ile Green (s)		13.7		13.7	13.7					55.3	55.3	
30th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
10th %ile Green (s)		10.2		10.2	10.2					58.8	58.8	
10th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
Stops (vph)		107		14	56					15	266	
Fuel Used(gal)		2		0	2					0	5	
CO Emissions (g/hr)		150		27	128					20	371	
NOx Emissions (g/hr)		29		5	25					4	72	
VOC Emissions (g/hr)		35		6	30					5	86	
Dilemma Vehicles (#)		0		0	0					0	0	
Queue Length 50th (ft)		60		8	33					8	81	

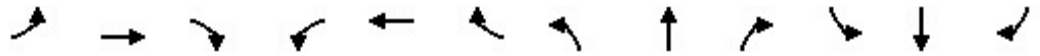
Lanes, Volumes, Timings
20: N East St & E Washington St

02/22/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	222	0	0	285	87	31	906	69	0	0	0
Future Volume (vph)	34	222	0	0	285	87	31	906	69	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	10	11	11	11	12	12	12
Grade (%)		-3%			2%			-3%			1%	
Storage Length (ft)	65		0	0		80	80		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00					0.98	1.00	1.00				
Fr _t						0.850		0.989				
Fl _t Protected	0.950						0.950					
Satd. Flow (prot)	1617	1531	0	0	1604	1317	1250	3085	0	0	0	0
Fl _t Permitted	0.382						0.950					
Satd. Flow (perm)	648	1531	0	0	1604	1292	1245	3085	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						87		15				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		262			724			322				308
Travel Time (s)		6.0			16.5			7.3				7.0
Confl. Peds. (#/hr)	4					4	4		9			
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Parking (#/hr)		0					20		20			
Adj. Flow (vph)	37	239	0	0	306	94	33	974	74	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	239	0	0	306	94	33	1048	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.12	1.28	1.12	1.16	1.21	1.26	1.54	1.17	1.17	1.15	1.15	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				

Lanes, Volumes, Timings
20: N East St & E Washington St

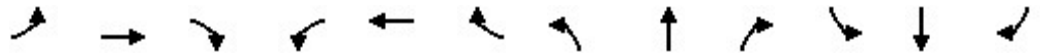
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex				Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0				0.0				
Turn Type	Perm	NA		NA		Perm	Perm	NA				
Protected Phases	4			8				2				
Permitted Phases	4					8	2					
Detector Phase	4	4		8		8	2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0	5.0	5.0				
Minimum Split (s)	31.4	31.4		21.4		21.4	47.0	47.0				
Total Split (s)	32.0	32.0		32.0		32.0	48.0	48.0				
Total Split (%)	40.0%	40.0%		40.0%		40.0%	60.0%	60.0%				
Maximum Green (s)	26.6	26.6		26.6		26.6	42.0	42.0				
Yellow Time (s)	3.2	3.2		3.2		3.2	3.2	3.2				
All-Red Time (s)	2.2	2.2		2.2		2.2	2.8	2.8				
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0	0.0				
Total Lost Time (s)	5.4	5.4		5.4		5.4	6.0	6.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0	3.0				
Recall Mode	None	None		None		None	C-Max	C-Max				
Walk Time (s)	15.0	15.0		5.0		5.0	30.0	30.0				
Flash Dont Walk (s)	11.0	11.0		11.0		11.0	11.0	11.0				
Pedestrian Calls (#/hr)	0	0		0		0	0	0				
Act Effct Green (s)	20.4	20.4		20.4		20.4	48.2	48.2				
Actuated g/C Ratio	0.26	0.26		0.26		0.26	0.60	0.60				
v/c Ratio	0.22	0.61		0.75		0.24	0.04	0.56				
Control Delay	29.5	39.1		38.7		7.2	4.5	6.7				
Queue Delay	0.0	0.2		0.5		0.0	0.0	0.1				
Total Delay	29.5	39.3		39.2		7.2	4.5	6.9				
LOS	C	D		D		A	A	A				
Approach Delay	38.0			31.7				6.8				
Approach LOS	D			C				A				
90th %ile Green (s)	26.6	26.6		26.6		26.6	42.0	42.0				
90th %ile Term Code	Hold	Hold		Max		Max	Coord	Coord				
70th %ile Green (s)	24.1	24.1		24.1		24.1	44.5	44.5				
70th %ile Term Code	Hold	Hold		Gap		Gap	Coord	Coord				
50th %ile Green (s)	20.5	20.5		20.5		20.5	48.1	48.1				
50th %ile Term Code	Hold	Hold		Gap		Gap	Coord	Coord				
30th %ile Green (s)	17.5	17.5		17.5		17.5	51.1	51.1				
30th %ile Term Code	Hold	Hold		Gap		Gap	Coord	Coord				
10th %ile Green (s)	13.1	13.1		13.1		13.1	55.5	55.5				
10th %ile Term Code	Hold	Hold		Gap		Gap	Coord	Coord				
Stops (vph)	21	146		251		19	6	395				
Fuel Used(gal)	0	3		5		1	0	6				
CO Emissions (g/hr)	27	212		366		51	10	417				
NOx Emissions (g/hr)	5	41		71		10	2	81				
VOC Emissions (g/hr)	6	49		85		12	2	97				
Dilemma Vehicles (#)	0	0		0		0	0	0				

Lanes, Volumes, Timings
 20: N East St & E Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	12	81			141	3	3	52				
Queue Length 95th (ft)	33	134			205	33	m7	108				
Internal Link Dist (ft)		182			644			242			228	
Turn Bay Length (ft)	65					80	80					
Base Capacity (vph)	215	509			533	487	750	1865				
Starvation Cap Reductn	0	30			0	0	0	161				
Spillback Cap Reductn	0	0			46	0	0	0				
Storage Cap Reductn	0	0			0	0	0	0				
Reduced v/c Ratio	0.17	0.50			0.63	0.19	0.04	0.62				

Intersection Summary

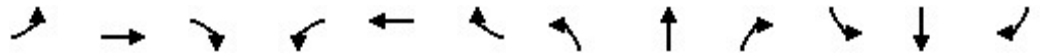
Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 60 (75%), Referenced to phase 2:NBTL and 6:, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 17.4
 Intersection LOS: B
 Intersection Capacity Utilization 69.0%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: N East St & E Washington St



Lanes, Volumes, Timings
 23: S Center St/N Madison St & W Front St

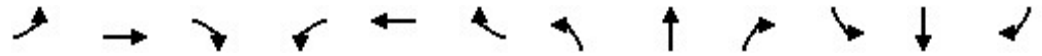
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖						↖↗	
Traffic Volume (vph)	0	35	13	53	65	0	0	0	0	22	1026	27
Future Volume (vph)	0	35	13	53	65	0	0	0	0	22	1026	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	12	12	12	12	12	12	12	12
Grade (%)		3%			-3%			1%				-1%
Storage Length (ft)	0		0	60		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			0			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99		0.98							1.00	
Frt		0.964									0.996	
Flt Protected				0.950							0.999	
Satd. Flow (prot)	0	1421	0	1670	1531	0	0	0	0	0	3183	0
Flt Permitted				0.725							0.999	
Satd. Flow (perm)	0	1421	0	1252	1531	0	0	0	0	0	3182	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13										5
Link Speed (mph)		30			30			30				30
Link Distance (ft)		684			247			660				324
Travel Time (s)		15.5			5.6			15.0				7.4
Confl. Peds. (#/hr)			8	8						13		4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Parking (#/hr)		0			0					20		20
Adj. Flow (vph)	0	36	13	55	67	0	0	0	0	23	1058	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	49	0	55	67	0	0	0	0	0	1109	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.17	1.33	1.17	1.08	1.28	1.12	1.15	1.15	1.15	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex

Lanes, Volumes, Timings
 23: S Center St/N Madison St & W Front St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		15.5		25.5	25.5					37.7	37.7	
Total Split (s)		29.0		29.0	29.0					51.0	51.0	
Total Split (%)		36.3%		36.3%	36.3%					63.8%	63.8%	
Maximum Green (s)		23.5		23.5	23.5					45.3	45.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.3		2.3	2.3					2.5	2.5	
Lost Time Adjust (s)		0.0		0.0	0.0							0.0
Total Lost Time (s)		5.5		5.5	5.5							5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		1.0		9.0	9.0					21.0	21.0	
Flash Dont Walk (s)		9.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		9.0		9.0	9.0							63.1
Actuated g/C Ratio		0.11		0.11	0.11							0.79
v/c Ratio		0.28		0.39	0.39							0.44
Control Delay		29.0		40.0	38.5							0.9
Queue Delay		0.0		0.0	0.0							0.0
Total Delay		29.0		40.0	38.5							0.9
LOS		C		D	D							A
Approach Delay		29.0			39.2							0.9
Approach LOS		C			D							A
90th %ile Green (s)		12.9		12.9	12.9					55.9	55.9	
90th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
70th %ile Green (s)		10.5		10.5	10.5					58.3	58.3	
70th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
50th %ile Green (s)		8.9		8.9	8.9					59.9	59.9	
50th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
30th %ile Green (s)		7.4		7.4	7.4					61.4	61.4	
30th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
10th %ile Green (s)		0.0		0.0	0.0					74.3	74.3	
10th %ile Term Code		Skip		Skip	Skip					Coord	Coord	
Stops (vph)		35		48	58							45
Fuel Used(gal)		1		1	1							3
CO Emissions (g/hr)		51		56	67							221
NOx Emissions (g/hr)		10		11	13							43
VOC Emissions (g/hr)		12		13	15							51
Dilemma Vehicles (#)		0		0	0							0
Queue Length 50th (ft)		17		26	32							11

Lanes, Volumes, Timings

23: S Center St/N Madison St & W Front St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)		46		58	66							14
Internal Link Dist (ft)		604			167			580				244
Turn Bay Length (ft)				60								
Base Capacity (vph)		426		367	449							2510
Starvation Cap Reductn		0		0	0							99
Spillback Cap Reductn		0		0	0							0
Storage Cap Reductn		0		0	0							0
Reduced v/c Ratio		0.12		0.15	0.15							0.46

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	8 (10%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.44
Intersection Signal Delay:	5.7
Intersection LOS:	A
Intersection Capacity Utilization	52.4%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 23: S Center St/N Madison St & W Front St



Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

02/22/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	115	0	0	48	22	43	910	29	0	0	0
Future Volume (vph)	82	115	0	0	48	22	43	910	29	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	16	12	12	10	10	13	11	11	12	12	12
Grade (%)		-1%			0%			-1%				2%
Storage Length (ft)	90		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.97					0.95		1.00				
Fr _t						0.850		0.996				
Fl _t Protected	0.950							0.998				
Satd. Flow (prot)	1547	1910	0	0	1565	1330	0	3074	0	0	0	0
Fl _t Permitted	0.721							0.998				
Satd. Flow (perm)	1135	1910	0	0	1565	1267	0	3071	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						35		6				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		256			710			633				322
Travel Time (s)		5.8			16.1			14.4				7.3
Confl. Peds. (#/hr)	18					18	28		1			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Parking (#/hr)							5					
Adj. Flow (vph)	94	132	0	0	55	25	49	1046	33	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	94	132	0	0	55	25	0	1128	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.19	0.97	1.14	1.14	1.25	1.25	1.09	1.19	1.19	1.16	1.16	1.16
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				

Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

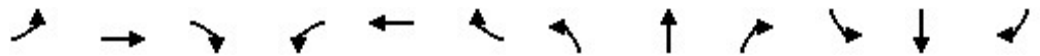
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4					8	2					
Detector Phase	4	4			8	8	2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0				
Minimum Split (s)	27.2	27.2			17.2	17.2	50.6	50.6				
Total Split (s)	29.2	29.2			29.2	29.2	50.8	50.8				
Total Split (%)	36.5%	36.5%			36.5%	36.5%	63.5%	63.5%				
Maximum Green (s)	24.0	24.0			24.0	24.0	45.2	45.2				
Yellow Time (s)	3.2	3.2			3.2	3.2	3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.4	2.4				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0				
Total Lost Time (s)	5.2	5.2			5.2	5.2		5.6				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Recall Mode	None	None			None	None	C-Max	C-Max				
Walk Time (s)	11.0	11.0			1.0	1.0	34.0	34.0				
Flash Dont Walk (s)	11.0	11.0			11.0	11.0	11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0	0	0	0				
Act Effct Green (s)	12.1	12.1			12.1	12.1		57.1				
Actuated g/C Ratio	0.15	0.15			0.15	0.15		0.71				
v/c Ratio	0.55	0.46			0.23	0.11		0.51				
Control Delay	42.6	35.0			30.5	8.3		5.0				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	42.6	35.0			30.5	8.3		5.0				
LOS	D	D			C	A		A				
Approach Delay		38.2			23.5			5.0				
Approach LOS		D			C			A				
90th %ile Green (s)	17.7	17.7			17.7	17.7	51.5	51.5				
90th %ile Term Code	Gap	Gap			Hold	Hold	Coord	Coord				
70th %ile Green (s)	14.3	14.3			14.3	14.3	54.9	54.9				
70th %ile Term Code	Gap	Gap			Hold	Hold	Coord	Coord				
50th %ile Green (s)	11.9	11.9			11.9	11.9	57.3	57.3				
50th %ile Term Code	Gap	Gap			Hold	Hold	Coord	Coord				
30th %ile Green (s)	9.6	9.6			9.6	9.6	59.6	59.6				
30th %ile Term Code	Gap	Gap			Hold	Hold	Coord	Coord				
10th %ile Green (s)	6.8	6.8			6.8	6.8	62.4	62.4				
10th %ile Term Code	Gap	Gap			Hold	Hold	Coord	Coord				
Stops (vph)	74	99			40	5		284				
Fuel Used(gal)	1	2			1	0		7				
CO Emissions (g/hr)	90	112			55	13		518				
NOx Emissions (g/hr)	17	22			11	3		101				
VOC Emissions (g/hr)	21	26			13	3		120				
Dilemma Vehicles (#)	0	0			0	0		0				
Queue Length 50th (ft)	44	61			25	0		71				

Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

02/22/2024

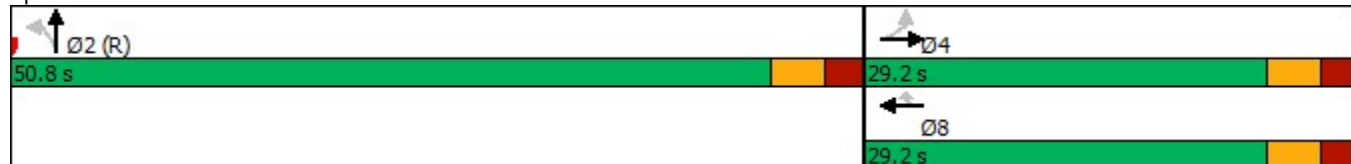


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	81	100			50	14		104				
Internal Link Dist (ft)		176			630			553			242	
Turn Bay Length (ft)	90					100						
Base Capacity (vph)	340	573			469	404		2195				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		17				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.28	0.23			0.12	0.06		0.52				

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	58 (73%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.55
Intersection Signal Delay:	11.3
Intersection LOS:	B
Intersection Capacity Utilization	62.7%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 24: S East St/N East St & E Front St



Lanes, Volumes, Timings
27: N Center St & W Market St

02/22/2024



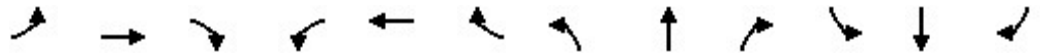
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	134	28	33	108	0	0	0	0	33	121	15	
Future Volume (vph)	0	134	28	33	108	0	0	0	0	33	121	15	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	
Ped Bike Factor													
Frt	0.977										0.986		
Flt Protected						0.988							0.990
Satd. Flow (prot)	0	1606	0	0	1462	0	0	0	0	0	2897	0	
Flt Permitted						0.988							0.990
Satd. Flow (perm)	0	1606	0	0	1462	0	0	0	0	0	2897	0	
Link Speed (mph)					30						30		
Link Distance (ft)					247						266		
Travel Time (s)					5.6						6.0		
Confl. Peds. (#/hr)			30		30				6		5		
Confl. Bikes (#/hr)			1										
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	
Parking (#/hr)												0	
Adj. Flow (vph)	0	149	31	37	120	0	0	0	0	37	134	17	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	180	0	0	157	0	0	0	0	0	188	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)			0		0				0		0		
Link Offset(ft)			0		0				0		0		
Crosswalk Width(ft)			16		16				16		16		
Two way Left Turn Lane													
Headway Factor	1.14	1.14	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14	
Turning Speed (mph)	15	9		15	9		15	9		15	9		
Sign Control	Stop				Stop				Stop		Stop		

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	37.1%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 29: N Center St & W Jefferson St

02/22/2024



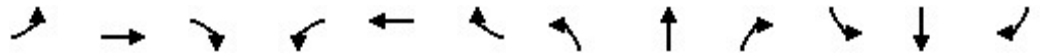
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations		↔			↔						↔↔			
Traffic Volume (vph)	0	35	4	9	39	0	0	0	0	35	96	10		
Future Volume (vph)	0	35	4	9	39	0	0	0	0	35	96	10		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95		
Ped Bike Factor														
Frt	0.985											0.989		
Flt Protected												0.991		
Satd. Flow (prot)	0	1458	0	0	1466	0	0	0	0	0	2900	0		
Flt Permitted												0.991		
Satd. Flow (perm)	0	1458	0	0	1466	0	0	0	0	0	2900	0		
Link Speed (mph)					30					30				
Link Distance (ft)					253					255			306	278
Travel Time (s)					5.8					5.8			7.0	6.3
Confl. Peds. (#/hr)			5	5							20	8		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86		
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%		
Parking (#/hr)	0													
Adj. Flow (vph)	0	41	5	10	45	0	0	0	0	41	112	12		
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	46	0	0	55	0	0	0	0	0	165	0		
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No		
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right		
Median Width(ft)	0				0				0					
Link Offset(ft)	0				0				0					
Crosswalk Width(ft)	16				16				16					
Two way Left Turn Lane														
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14		
Turning Speed (mph)	15		9	15	9		15	9		15	9			
Sign Control	Stop			Stop			Stop			Stop				

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	22.7%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
30: N Center St & W Washington St

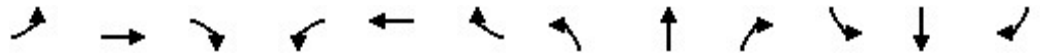
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔						↔↔	
Traffic Volume (vph)	0	193	5	8	286	0	0	0	0	62	42	7
Future Volume (vph)	0	193	5	8	286	0	0	0	0	62	42	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00		0.99								0.98
Frt		0.997										0.991
Flt Protected				0.950								0.973
Satd. Flow (prot)	0	1474	0	1562	1480	0	0	0	0	0	2854	0
Flt Permitted				0.563								0.973
Satd. Flow (perm)	0	1474	0	916	1480	0	0	0	0	0	2804	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3										7
Link Speed (mph)		30			30			30				30
Link Distance (ft)		253			254			326				306
Travel Time (s)		5.8			5.8			7.4				7.0
Confl. Peds. (#/hr)			10	10						14		12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		0			0							0
Adj. Flow (vph)	0	201	5	8	298	0	0	0	0	65	44	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	206	0	8	298	0	0	0	0	0	116	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings
 30: N Center St & W Washington St

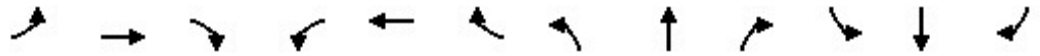
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6		6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		23.0		23.0	23.0					23.0	23.0	
Total Split (s)		52.0		52.0	52.0					28.0	28.0	
Total Split (%)		65.0%		65.0%	65.0%					35.0%	35.0%	
Maximum Green (s)		47.0		47.0	47.0					23.0	23.0	
Yellow Time (s)		4.0		4.0	4.0					4.0	4.0	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0							0.0
Total Lost Time (s)		5.0		5.0	5.0							5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		7.0		7.0	7.0					7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		22.9		22.9	22.9							47.1
Actuated g/C Ratio		0.29		0.29	0.29							0.59
v/c Ratio		0.49		0.03	0.70							0.07
Control Delay		13.6		3.1	16.6							8.6
Queue Delay		0.0		0.0	0.1							0.0
Total Delay		13.7		3.1	16.7							8.6
LOS		B		A	B							A
Approach Delay		13.7			16.3							8.6
Approach LOS		B			B							A
90th %ile Green (s)		32.6		32.6	32.6					37.4	37.4	
90th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
70th %ile Green (s)		26.5		26.5	26.5					43.5	43.5	
70th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
50th %ile Green (s)		22.6		22.6	22.6					47.4	47.4	
50th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
30th %ile Green (s)		18.9		18.9	18.9					51.1	51.1	
30th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
10th %ile Green (s)		13.7		13.7	13.7					56.3	56.3	
10th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
Stops (vph)		68		3	250							47
Fuel Used(gal)		1		0	3							1
CO Emissions (g/hr)		92		3	204							50
NOx Emissions (g/hr)		18		1	40							10
VOC Emissions (g/hr)		21		1	47							12
Dilemma Vehicles (#)		0		0	0							0
Queue Length 50th (ft)		38		0	78							11
Queue Length 95th (ft)		59		m1	94							29

Lanes, Volumes, Timings
 30: N Center St & W Washington St

02/22/2024



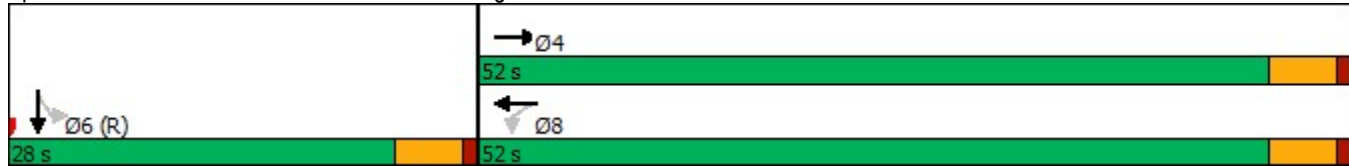
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		173			174			246			226	
Turn Bay Length (ft)				65								
Base Capacity (vph)		867		538	869						1655	
Starvation Cap Reductn		62		0	94						0	
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.26		0.01	0.38						0.07	

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	21 (26%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.70
Intersection Signal Delay:	14.0
Intersection LOS:	B
Intersection Capacity Utilization	51.3%
ICU Level of Service	A
Analysis Period (min)	15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 30: N Center St & W Washington St



Lanes, Volumes, Timings
31: W Front St & N Center St

02/22/2024

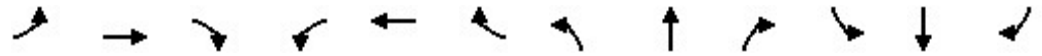
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	54	5	5	110	0	0	0	1	46	3	9
Future Volume (vph)	0	54	5	5	110	0	0	0	1	46	3	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	8	12	12	12	12
Storage Length (ft)	0		0	70		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.989						0.865			0.890	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1396	0	1490	1412	0	0	1176	0	1341	1257	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	1396	0	1490	1412	0	0	1176	0	1341	1257	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			262			221			326	
Travel Time (s)		5.6			6.0			5.0			7.4	
Confl. Peds. (#/hr)			48	48			25		13	13		25
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%
Parking (#/hr)		0			0					0	0	
Adj. Flow (vph)	0	66	6	6	134	0	0	0	1	56	4	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	0	6	134	0	0	1	0	56	15	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			0			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.37	1.14	1.30	1.30	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	29.7%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 34: N Main St & W Market St/E Market St

02/22/2024



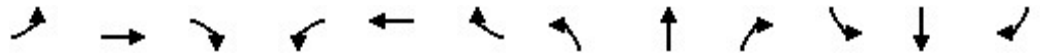
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔↔					
Traffic Volume (vph)	32	130	0	0	115	8	43	58	25	0	0	0	
Future Volume (vph)	32	130	0	0	115	8	43	58	25	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor													
Frt						0.992			0.970				
Flt Protected	0.990									0.983			
Satd. Flow (prot)	0	1479	0	0	1482	0	0	2857	0	0	0	0	
Flt Permitted	0.990									0.983			
Satd. Flow (perm)	0	1479	0	0	1482	0	0	2857	0	0	0	0	
Link Speed (mph)					30				30				
Link Distance (ft)					266			249			404		
Travel Time (s)					6.0				5.7				
Confl. Peds. (#/hr)	19						19	20					
Confl. Bikes (#/hr)								1				1	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	
Parking (#/hr)	0									0			
Adj. Flow (vph)	37	151	0	0	134	9	50	67	29	0	0	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	188	0	0	143	0	0	146	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0									0			
Link Offset(ft)	0									0			
Crosswalk Width(ft)					16				16				
Two way Left Turn Lane													
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.22	1.14	1.14	1.14	1.14	
Turning Speed (mph)	15		9	15			9	15	9	15			
Sign Control	Stop							Stop		Stop			

Intersection Summary												
Area Type:	CBD											
Control Type:	Unsignalized											
Intersection Capacity Utilization	38.2%					ICU Level of Service A						
Analysis Period (min)	15											

Lanes, Volumes, Timings

36: N Main St & W Jefferson St/E Jefferson St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔↔					
Traffic Volume (vph)	33	35	0	0	28	15	14	75	8	0	0	0	
Future Volume (vph)	33	35	0	0	28	15	14	75	8	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor													
Frt						0.953			0.987				
Flt Protected	0.976									0.993			
Satd. Flow (prot)	0	1404	0	0	1371	0	0	2827	0	0	0	0	
Flt Permitted	0.976									0.993			
Satd. Flow (perm)	0	1404	0	0	1371	0	0	2827	0	0	0	0	
Link Speed (mph)					30				30				
Link Distance (ft)					255				268			306	272
Travel Time (s)					5.8				6.1			7.0	6.2
Confl. Peds. (#/hr)	11						11	3					
Confl. Bikes (#/hr)									2				
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	
Parking (#/hr)	0							0					
Adj. Flow (vph)	40	42	0	0	34	18	17	90	10	0	0	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	82	0	0	52	0	0	117	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0							0		0			
Link Offset(ft)	0							0		0			
Crosswalk Width(ft)					16				16			16	
Two way Left Turn Lane													
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.22	1.14	1.14	1.14	1.14	
Turning Speed (mph)	15	9		15	9		15	9		15	9		
Sign Control	Stop							Stop		Stop			

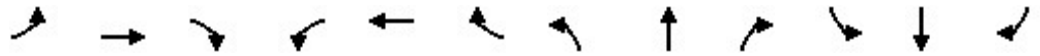
Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	25.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024

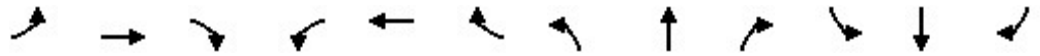


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	240	0	0	291	37	11	26	15	0	0	0
Future Volume (vph)	17	240	0	0	291	37	11	26	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	65		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99				1.00			0.99	0.93			
Flt					0.985				0.850			
Flt Protected	0.950							0.986				
Satd. Flow (prot)	1562	1480	0	0	1454	0	0	1459	1258	0	0	0
Flt Permitted	0.387							0.986				
Satd. Flow (perm)	632	1480	0	0	1454	0	0	1451	1168	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					14				27			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		254			262			326			306	
Travel Time (s)		5.8			6.0			7.4			7.0	
Confl. Peds. (#/hr)	8					8	9		23			
Confl. Bikes (#/hr)						1			1			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		0			0			0	0			
Adj. Flow (vph)	17	245	0	0	297	38	11	27	15	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	245	0	0	335	0	0	38	15	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.30	1.30	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2	1			
Detector Template	Left	Thru			Thru		Left	Thru	Right			
Leading Detector (ft)	20	100			100		20	100	20			
Trailing Detector (ft)	0	0			0		0	0	0			
Detector 1 Position(ft)	0	0			0		0	0	0			
Detector 1 Size(ft)	20	6			6		20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024

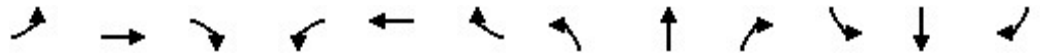


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Detector Phase	4	4			8		2	2	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Minimum Split (s)	23.0	23.0			23.0		23.0	23.0	23.0			
Total Split (s)	51.0	51.0			51.0		29.0	29.0	29.0			
Total Split (%)	63.8%	63.8%			63.8%		36.3%	36.3%	36.3%			
Maximum Green (s)	46.0	46.0			46.0		24.0	24.0	24.0			
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0			
Total Lost Time (s)	5.0	5.0			5.0			5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Recall Mode	None	None			None		C-Max	C-Max	C-Max			
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)	24.8	24.8			24.8			45.2	45.2			
Actuated g/C Ratio	0.31	0.31			0.31			0.56	0.56			
v/c Ratio	0.09	0.53			0.73			0.05	0.02			
Control Delay	17.9	29.5			14.1			13.0	5.3			
Queue Delay	0.0	0.1			0.3			0.0	0.0			
Total Delay	17.9	29.6			14.5			13.0	5.3			
LOS	B	C			B			B	A			
Approach Delay		28.9			14.5			10.8				
Approach LOS		C			B			B				
90th %ile Green (s)	35.2	35.2			35.2		34.8	34.8	34.8			
90th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
70th %ile Green (s)	28.7	28.7			28.7		41.3	41.3	41.3			
70th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
50th %ile Green (s)	24.6	24.6			24.6		45.4	45.4	45.4			
50th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
30th %ile Green (s)	20.5	20.5			20.5		49.5	49.5	49.5			
30th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
10th %ile Green (s)	14.8	14.8			14.8		55.2	55.2	55.2			
10th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
Stops (vph)	8	141			261			21	4			
Fuel Used(gal)	0	3			3			0	0			
CO Emissions (g/hr)	10	188			214			22	5			
NOx Emissions (g/hr)	2	37			42			4	1			
VOC Emissions (g/hr)	2	44			50			5	1			
Dilemma Vehicles (#)	0	0			0			0	0			
Queue Length 50th (ft)	6	95			9			9	0			

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024

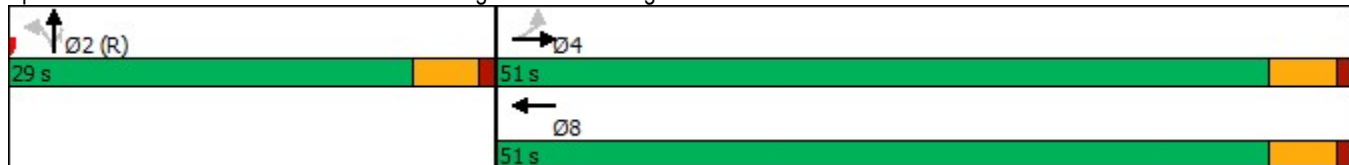


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	10	69			13			m29	m7			
Internal Link Dist (ft)		174			182			246			226	
Turn Bay Length (ft)	65											
Base Capacity (vph)	363	851			842			820	672			
Starvation Cap Reductn	0	112			154			0	0			
Spillback Cap Reductn	0	0			88			0	0			
Storage Cap Reductn	0	0			0			0	0			
Reduced v/c Ratio	0.05	0.33			0.49			0.05	0.02			

Intersection Summary

















Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 8 (10%), Referenced to phase 2:NBTL and 6:, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 20.0 Intersection LOS: B
 Intersection Capacity Utilization 51.3% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 37: N Main St & W Washington St/E Washington St



Lanes, Volumes, Timings
 38: W Front St/E Front St & N Main St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	79	0	0	108	21	0	0	0	0	0	0
Future Volume (vph)	21	79	0	0	108	21	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	8	12	12	12	12
Storage Length (ft)	70		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.978											
Flt Protected	0.950											
Satd. Flow (prot)	1504	1425	0	0	1394	0	0	1308	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1504	1425	0	0	1394	0	0	1308	0	0	0	0
Link Speed (mph)	30				30				30		30	
Link Distance (ft)	262				256				210		326	
Travel Time (s)	6.0				5.8				4.8		7.4	
Confl. Peds. (#/hr)	13		7	7		13	4		32			
Peak Hour Factor	0.82	0.82	0.92	0.92	0.82	0.82	0.92	0.92	0.92	0.82	0.92	0.82
Heavy Vehicles (%)	8%	8%	2%	2%	8%	8%	2%	2%	2%	8%	2%	8%
Parking (#/hr)	0				0				0			
Adj. Flow (vph)	26	96	0	0	132	26	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	96	0	0	158	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12				12				0		0	
Link Offset(ft)	0				0				0		0	
Crosswalk Width(ft)	16				16				16		16	
Two way Left Turn Lane	Yes											
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.55	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		60	60		9	60		60	15		9
Sign Control	Free				Free				Stop		Stop	

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	35.9%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
44: N East St & E Market St

02/22/2024






















Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕	↘	↙	↘
Traffic Volume (vph)	0	26	1108	6	0	0
Future Volume (vph)	0	26	1108	6	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	0%		-2%			2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.865	0.999			
Flt Protected						
Satd. Flow (prot)	0	1305	3107	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1305	3107	0	0	0
Link Speed (mph)	30		30			30
Link Distance (ft)	558		266			127
Travel Time (s)	12.7		6.0			2.9
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Parking (#/hr)		0				
Adj. Flow (vph)	0	28	1179	6	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	28	1185	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.30	1.18	1.18	1.16	1.16
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Stop

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	44.2%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
47: S Center St & W Olive St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											 	
Traffic Volume (vph)	0	81	43	9	29	0	0	0	0	48	1037	46
Future Volume (vph)	0	81	43	9	29	0	0	0	0	48	1037	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	10	12	12	12	12	12	12	12	12	12
Grade (%)		1%			-3%			3%			-1%	
Storage Length (ft)	0		80	0		0	0		0	0		50
Storage Lanes	0		1	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									0.850
Flt Protected				0.950							0.998	
Satd. Flow (prot)	0	1792	1470	1796	1891	0	0	0	0	0	3550	1591
Flt Permitted				0.700							0.998	
Satd. Flow (perm)	0	1792	1470	1323	1891	0	0	0	0	0	3550	1591
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			47									34
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		777			330			770			660	
Travel Time (s)		17.7			7.5			17.5			15.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	88	47	10	32	0	0	0	0	52	1127	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	88	47	10	32	0	0	0	0	0	1179	50
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.05	1.10	0.98	0.98	0.98	1.02	1.02	1.02	0.99	0.99	0.99
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA	Perm	Perm	NA					Perm	NA	Perm

Lanes, Volumes, Timings
47: S Center St & W Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8						6	
Permitted Phases			4	8						6		6
Detector Phase		4	4	8	8					6	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		13.5	13.5	13.5	13.5					37.9	37.9	37.9
Total Split (s)		21.0	21.0	21.0	21.0					59.0	59.0	59.0
Total Split (%)		26.3%	26.3%	26.3%	26.3%					73.8%	73.8%	73.8%
Maximum Green (s)		15.5	15.5	15.5	15.5					53.1	53.1	53.1
Yellow Time (s)		3.2	3.2	3.2	3.2					3.2	3.2	3.2
All-Red Time (s)		2.3	2.3	2.3	2.3					2.7	2.7	2.7
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	0.0
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		None	None	None	None					C-Max	C-Max	C-Max
Walk Time (s)		1.0	1.0	1.0	1.0					21.0	21.0	21.0
Flash Dont Walk (s)		7.0	7.0	7.0	7.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0					0	0	0
Act Effct Green (s)		9.3	9.3	9.2	9.2						62.8	62.8
Actuated g/C Ratio		0.12	0.12	0.12	0.12						0.78	0.78
v/c Ratio		0.43	0.22	0.07	0.15						0.42	0.04
Control Delay		38.5	12.4	36.8	36.9						2.1	0.4
Queue Delay		0.0	0.0	0.0	0.0						0.0	0.0
Total Delay		38.5	12.4	36.8	36.9						2.1	0.4
LOS		D	B	D	D						A	A
Approach Delay		29.4			36.9						2.1	
Approach LOS		C			D						A	
90th %ile Green (s)		12.7	12.7	12.7	12.7					55.9	55.9	55.9
90th %ile Term Code		Gap	Gap	Hold	Hold					Coord	Coord	Coord
70th %ile Green (s)		10.7	10.7	10.7	10.7					57.9	57.9	57.9
70th %ile Term Code		Gap	Gap	Hold	Hold					Coord	Coord	Coord
50th %ile Green (s)		9.3	9.3	9.3	9.3					59.3	59.3	59.3
50th %ile Term Code		Gap	Gap	Hold	Hold					Coord	Coord	Coord
30th %ile Green (s)		7.8	7.8	7.8	7.8					60.8	60.8	60.8
30th %ile Term Code		Gap	Gap	Hold	Hold					Coord	Coord	Coord
10th %ile Green (s)		0.0	0.0	0.0	0.0					74.1	74.1	74.1
10th %ile Term Code		Skip	Skip	Skip	Skip					Coord	Coord	Coord
Stops (vph)		73	13	12	30						229	0
Fuel Used(gal)		2	0	0	0						7	0
CO Emissions (g/hr)		107	31	11	32						512	17
NOx Emissions (g/hr)		21	6	2	6						100	3
VOC Emissions (g/hr)		25	7	3	7						119	4
Dilemma Vehicles (#)		0	0	0	0						0	0
Queue Length 50th (ft)		42	0	5	16						24	1
Queue Length 95th (ft)		82	28	m18	m42						38	m1
Internal Link Dist (ft)		697			250			690			580	
Turn Bay Length (ft)			80									50

Lanes, Volumes, Timings
47: S Center St & W Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		347	322	256	366						2786	1255
Starvation Cap Reductn		0	0	0	0						0	0
Spillback Cap Reductn		0	0	0	0						0	0
Storage Cap Reductn		0	0	0	0						0	0
Reduced v/c Ratio		0.25	0.15	0.04	0.09						0.42	0.04

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	25 (31%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.43
Intersection Signal Delay:	5.7
Intersection LOS:	A
Intersection Capacity Utilization	52.5%
ICU Level of Service	A
Analysis Period (min)	15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 47: S Center St & W Olive St



Lanes, Volumes, Timings
48: S East St & E Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖↗			↖↗				
Traffic Volume (vph)	79	60	0	0	35	27	16	830	14	0	0	0
Future Volume (vph)	79	60	0	0	35	27	16	830	14	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	12	12	12	12	12
Grade (%)		2%			-4%			4%				-4%
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.935			0.998				
Flt Protected		0.972						0.999				
Satd. Flow (prot)	0	1672	0	0	3279	0	0	3359	0	0	0	0
Flt Permitted		0.784						0.999				
Satd. Flow (perm)	0	1348	0	0	3279	0	0	3359	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					29			4				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		330			647			682				633
Travel Time (s)		7.5			14.7			15.5				14.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Parking (#/hr)		0										
Adj. Flow (vph)	86	65	0	0	38	29	17	902	15	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	151	0	0	67	0	0	934	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.07	1.01	0.97	0.97	0.97	1.03	1.03	1.03	0.97	0.97	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												

Lanes, Volumes, Timings
48: S East St & E Olive St

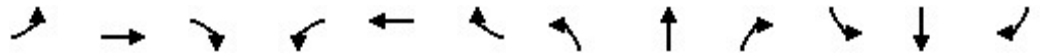
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Detector Phase	4	4			8		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	19.5	19.5			19.5		58.6	58.6				
Total Split (s)	21.0	21.0			21.0		59.0	59.0				
Total Split (%)	26.3%	26.3%			26.3%		73.8%	73.8%				
Maximum Green (s)	15.5	15.5			15.5		53.4	53.4				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.3	2.3			2.3		2.4	2.4				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.5			5.5			5.6				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Recall Mode	Max	Max			None		C-Max	C-Max				
Walk Time (s)	3.0	3.0			3.0		42.0	42.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		15.5			15.5			53.4				
Actuated g/C Ratio		0.19			0.19			0.67				
v/c Ratio		0.58			0.10			0.42				
Control Delay		35.9			17.8			6.8				
Queue Delay		0.0			0.0			0.0				
Total Delay		35.9			17.8			6.8				
LOS		D			B			A				
Approach Delay		35.9			17.8			6.8				
Approach LOS		D			B			A				
90th %ile Green (s)	15.5	15.5			15.5		53.4	53.4				
90th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
70th %ile Green (s)	15.5	15.5			15.5		53.4	53.4				
70th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
50th %ile Green (s)	15.5	15.5			15.5		53.4	53.4				
50th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
30th %ile Green (s)	15.5	15.5			15.5		53.4	53.4				
30th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
10th %ile Green (s)	15.5	15.5			15.5		53.4	53.4				
10th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
Stops (vph)		135			32			358				
Fuel Used(gal)		2			1			8				
CO Emissions (g/hr)		148			50			540				
NOx Emissions (g/hr)		29			10			105				
VOC Emissions (g/hr)		34			12			125				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		80			8			96				
Queue Length 95th (ft)		138			24			130				

Lanes, Volumes, Timings
48: S East St & E Olive St

02/22/2024

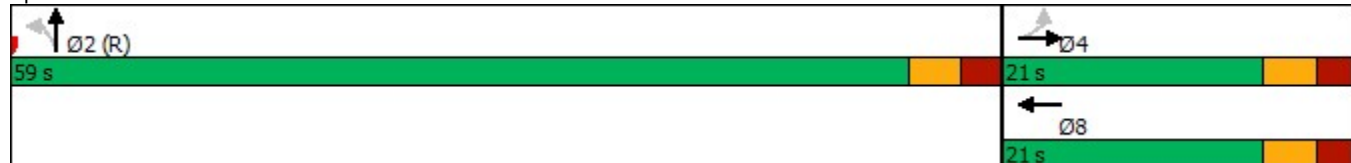


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		250			567			602			553	
Turn Bay Length (ft)												
Base Capacity (vph)		261			658			2243				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.58			0.10			0.42				

Intersection Summary

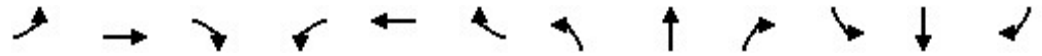
Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	52 (65%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.58
Intersection Signal Delay:	11.2
Intersection LOS:	B
Intersection Capacity Utilization	47.3%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 48: S East St & E Olive St



Lanes, Volumes, Timings
 3: N Madison St/N Center St & W Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↓						↑↑	↑
Traffic Volume (vph)	0	459	57	0	0	0	0	0	0	164	1046	0
Future Volume (vph)	0	459	57	0	0	0	0	0	0	164	1046	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		150
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		1.00									1.00	
Frt		0.983										
Flt Protected											0.993	
Satd. Flow (prot)	0	3407	0	0	1827	0	0	0	0	0	3447	1827
Flt Permitted											0.993	
Satd. Flow (perm)	0	3407	0	0	1827	0	0	0	0	0	3445	1827
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19										
Link Speed (mph)		30			30			30				30
Link Distance (ft)		659			244			860				526
Travel Time (s)		15.0			5.5			19.5				12.0
Confl. Peds. (#/hr)			2							4		
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	0	560	70	0	0	0	0	0	0	200	1276	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	630	0	0	0	0	0	0	0	0	1476	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	1
Detector Template		Thru		Left	Thru					Left	Thru	Right
Leading Detector (ft)		100		20	100					20	100	20
Trailing Detector (ft)		0		0	0					0	0	0
Detector 1 Position(ft)		0		0	0					0	0	0
Detector 1 Size(ft)		6		20	6					20	6	20
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0

Lanes, Volumes, Timings

3: N Madison St/N Center St & W Locust St

02/22/2024

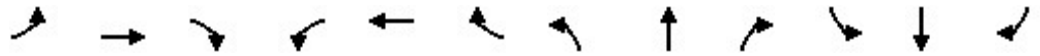


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Turn Type	NA									Perm	NA	Perm	
Protected Phases	4								8		6		
Permitted Phases				8						6	6		
Detector Phase	4		8		8					6	6	6	
Switch Phase													
Minimum Initial (s)	5.0		5.0		5.0					5.0	5.0	5.0	
Minimum Split (s)	23.4		22.5		22.5					23.4	23.4	23.4	
Total Split (s)	23.7		22.5		22.5					46.3	46.3	46.3	
Total Split (%)	33.9%		32.1%		32.1%					66.1%	66.1%	66.1%	
Maximum Green (s)	18.3		18.0		18.0					40.9	40.9	40.9	
Yellow Time (s)	3.2		3.5		3.5					3.2	3.2	3.2	
All-Red Time (s)	2.2		1.0		1.0					2.2	2.2	2.2	
Lost Time Adjust (s)	0.0				0.0					0.0		0.0	
Total Lost Time (s)	5.4				4.5					5.4		5.4	
Lead/Lag													
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0		3.0		3.0					3.0	3.0	3.0	
Recall Mode	None		None		None					C-Max	C-Max	C-Max	
Walk Time (s)	7.0		7.0		7.0					7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		11.0		11.0					11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0		0					0	0	0	
Act Effct Green (s)	16.9									42.3			
Actuated g/C Ratio	0.24									0.60			
v/c Ratio	0.75									0.71			
Control Delay	30.0									12.4			
Queue Delay	52.8									0.0			
Total Delay	82.8									12.4			
LOS	F									B			
Approach Delay	82.8									12.4			
Approach LOS	F									B			
90th %ile Green (s)	18.3		19.2		19.2					40.9	40.9	40.9	
90th %ile Term Code	Max		Hold		Hold					Coord	Coord	Coord	
70th %ile Green (s)	18.3		19.2		19.2					40.9	40.9	40.9	
70th %ile Term Code	Max		Hold		Hold					Coord	Coord	Coord	
50th %ile Green (s)	18.3		19.2		19.2					40.9	40.9	40.9	
50th %ile Term Code	Max		Hold		Hold					Coord	Coord	Coord	
30th %ile Green (s)	16.6		17.5		17.5					42.6	42.6	42.6	
30th %ile Term Code	Gap		Hold		Hold					Coord	Coord	Coord	
10th %ile Green (s)	13.1		14.0		14.0					46.1	46.1	46.1	
10th %ile Term Code	Gap		Hold		Hold					Coord	Coord	Coord	
Stops (vph)	445									794			
Fuel Used(gal)	8									12			
CO Emissions (g/hr)	578									867			
NOx Emissions (g/hr)	112									169			
VOC Emissions (g/hr)	134									201			
Dilemma Vehicles (#)	0									0			
Queue Length 50th (ft)	124									218			
Queue Length 95th (ft)	158									247			
Internal Link Dist (ft)	579				164		780			446			

Lanes, Volumes, Timings

3: N Madison St/N Center St & W Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		904										2080
Starvation Cap Reductn		0										0
Spillback Cap Reductn		367										0
Storage Cap Reductn		0										0
Reduced v/c Ratio		1.17										0.71

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	10 (14%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.75
Intersection Signal Delay:	33.4
Intersection LOS:	C
Intersection Capacity Utilization	57.2%
ICU Level of Service	B
Analysis Period (min)	15

















Splits and Phases: 3: N Madison St/N Center St & W Locust St



Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

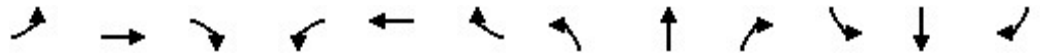
02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 				
Traffic Volume (vph)	92	528	0	0	0	0	0	931	103	0	0	0
Future Volume (vph)	92	528	0	0	0	0	0	931	103	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00										
Frt								0.985				
Flt Protected		0.993										
Satd. Flow (prot)	0	3447	0	0	0	0	0	3419	0	0	0	0
Flt Permitted		0.993										
Satd. Flow (perm)	0	3446	0	0	0	0	0	3419	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								27				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		244			514			878				525
Travel Time (s)		5.5			11.7			20.0				11.9
Confl. Peds. (#/hr)	2											
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	106	607	0	0	0	0	0	1070	118	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	713	0	0	0	0	0	1188	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2					1	2				
Detector Template	Left	Thru					Left	Thru				
Leading Detector (ft)	20	100					20	100				
Trailing Detector (ft)	0	0					0	0				
Detector 1 Position(ft)	0	0					0	0				
Detector 1 Size(ft)	20	6					20	6				
Detector 1 Type	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0					0.0	0.0				
Detector 1 Queue (s)	0.0	0.0					0.0	0.0				
Detector 1 Delay (s)	0.0	0.0					0.0	0.0				
Detector 2 Position(ft)		94						94				
Detector 2 Size(ft)		6						6				
Detector 2 Type		Cl+Ex						Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0				
Turn Type	Perm	NA						NA				
Protected Phases		4						2				
Permitted Phases	4						2					

Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

02/22/2024

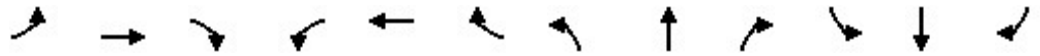


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4					2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0					5.0	5.0				
Minimum Split (s)	23.5	23.5					23.5	23.5				
Total Split (s)	26.0	26.0					44.0	44.0				
Total Split (%)	37.1%	37.1%					62.9%	62.9%				
Maximum Green (s)	20.5	20.5					38.5	38.5				
Yellow Time (s)	3.2	3.2					3.2	3.2				
All-Red Time (s)	2.3	2.3					2.3	2.3				
Lost Time Adjust (s)		0.0						0.0				
Total Lost Time (s)		5.5						5.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0					3.0	3.0				
Recall Mode	None	None					C-Max	C-Max				
Walk Time (s)	7.0	7.0					7.0	7.0				
Flash Dont Walk (s)	11.0	11.0					11.0	11.0				
Pedestrian Calls (#/hr)	0	0					0	0				
Act Effct Green (s)		18.9						40.1				
Actuated g/C Ratio		0.27						0.57				
v/c Ratio		0.77						0.60				
Control Delay		19.3						7.7				
Queue Delay		46.9						0.0				
Total Delay		66.3						7.7				
LOS		E						A				
Approach Delay		66.3						7.7				
Approach LOS		E						A				
90th %ile Green (s)	20.5	20.5					38.5	38.5				
90th %ile Term Code	Max	Max					Coord	Coord				
70th %ile Green (s)	20.5	20.5					38.5	38.5				
70th %ile Term Code	Max	Max					Coord	Coord				
50th %ile Green (s)	20.5	20.5					38.5	38.5				
50th %ile Term Code	Max	Max					Coord	Coord				
30th %ile Green (s)	18.3	18.3					40.7	40.7				
30th %ile Term Code	Gap	Gap					Coord	Coord				
10th %ile Green (s)	14.7	14.7					44.3	44.3				
10th %ile Term Code	Gap	Gap					Coord	Coord				
Stops (vph)		584						480				
Fuel Used(gal)		7						11				
CO Emissions (g/hr)		479						793				
NOx Emissions (g/hr)		93						154				
VOC Emissions (g/hr)		111						184				
Dilemma Vehicles (#)		0						0				
Queue Length 50th (ft)		167						57				
Queue Length 95th (ft)		217						67				
Internal Link Dist (ft)		164			434			798			445	
Turn Bay Length (ft)												
Base Capacity (vph)		1009						1970				
Starvation Cap Reductn		354						0				

Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		1.09						0.60				

Intersection Summary

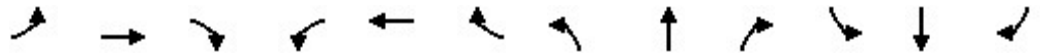
Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	23 (33%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	29.6
Intersection LOS:	C
Intersection Capacity Utilization	55.4%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 6: N East St/N Main St & W Locust St/E Locust St



Lanes, Volumes, Timings
 9: N Madison St & W Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔						↔↔	
Traffic Volume (vph)	0	75	80	20	80	0	0	0	0	10	780	105
Future Volume (vph)	0	75	80	20	80	0	0	0	0	10	780	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		1%			-2%			-6%			4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99		1.00								
Frt		0.930									0.982	
Flt Protected				0.950							0.999	
Satd. Flow (prot)	0	1456	0	1578	1605	0	0	0	0	0	3003	0
Flt Permitted				0.508							0.999	
Satd. Flow (perm)	0	1456	0	840	1605	0	0	0	0	0	3003	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		72									38	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		705			247			400			860	
Travel Time (s)		16.0			5.6			9.1			19.5	
Confl. Peds. (#/hr)			3	3								
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	0	101	108	27	108	0	0	0	0	14	1054	142
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	209	0	27	108	0	0	0	0	0	1210	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	1.15	1.20	1.15	1.13	1.18	1.13	1.10	1.10	1.10	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	

Lanes, Volumes, Timings
 9: N Madison St & W Market St

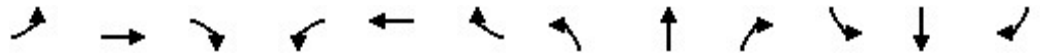
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		15.4		15.4	15.4					47.2	47.2	
Total Split (s)		22.0		22.0	22.0					48.0	48.0	
Total Split (%)		31.4%		31.4%	31.4%					68.6%	68.6%	
Maximum Green (s)		16.6		16.6	16.6					42.8	42.8	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.2		2.2	2.2					2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0						0.0	
Total Lost Time (s)		5.4		5.4	5.4						5.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		1.0		1.0	1.0					31.0	31.0	
Flash Dont Walk (s)		9.0		9.0	9.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		11.8		11.8	11.8						47.6	
Actuated g/C Ratio		0.17		0.17	0.17						0.68	
v/c Ratio		0.69		0.19	0.40						0.59	
Control Delay		28.8		26.1	29.0						1.4	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		28.8		26.1	29.0						1.4	
LOS		C		C	C						A	
Approach Delay		28.8			28.4						1.4	
Approach LOS		C			C						A	
90th %ile Green (s)		16.6		16.6	16.6					42.8	42.8	
90th %ile Term Code		Max		Hold	Hold					Coord	Coord	
70th %ile Green (s)		14.8		14.8	14.8					44.6	44.6	
70th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
50th %ile Green (s)		12.1		12.1	12.1					47.3	47.3	
50th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
30th %ile Green (s)		9.5		9.5	9.5					49.9	49.9	
30th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
10th %ile Green (s)		6.0		6.0	6.0					53.4	53.4	
10th %ile Term Code		Hold		Hold	Hold					Coord	Coord	
Stops (vph)		93		18	67						38	
Fuel Used(gal)		2		0	1						6	
CO Emissions (g/hr)		159		17	70						452	
NOx Emissions (g/hr)		31		3	14						88	
VOC Emissions (g/hr)		37		4	16						105	
Dilemma Vehicles (#)		0		0	0						0	
Queue Length 50th (ft)		54		10	42						12	
Queue Length 95th (ft)		82		23	63						10	
Internal Link Dist (ft)		625			167			320			780	

Lanes, Volumes, Timings
 9: N Madison St & W Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		400		199	380						2054	
Starvation Cap Reductn		0		0	0						0	
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.52		0.14	0.28						0.59	

Intersection Summary

Area Type:	CBD
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	28 (40%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.69
Intersection Signal Delay:	7.4
Intersection LOS:	A
Intersection Capacity Utilization	55.3%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 9: N Madison St & W Market St



Lanes, Volumes, Timings
11: N East St & E Market St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	50	0	100	1010	0	0
Future Volume (vph)	50	0	100	1010	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	11	12	12
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor				1.00		
Frt						
Flt Protected	0.950			0.996		
Satd. Flow (prot)	1467	0	0	2761	0	0
Flt Permitted	0.950			0.996		
Satd. Flow (perm)	1467	0	0	2760	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	263			127	878	
Travel Time (s)	6.0			2.9	20.0	
Confl. Peds. (#/hr)			1			
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	0		20	20		
Adj. Flow (vph)	61	0	122	1232	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	0	0	1354	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.25	1.14	1.13	1.34	1.16	1.16
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2		
Detector Template	Left		Left	Thru		
Leading Detector (ft)	20		20	100		
Trailing Detector (ft)	0		0	0		
Detector 1 Position(ft)	0		0	0		
Detector 1 Size(ft)	20		20	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(ft)				94		
Detector 2 Size(ft)				6		
Detector 2 Type				Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)				0.0		

Lanes, Volumes, Timings
 11: N East St & E Market St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Type	Prot		Perm	NA		
Protected Phases	4			2		
Permitted Phases			2			
Detector Phase	4		2	2		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	13.4		49.5	49.5		
Total Split (s)	16.0		54.0	54.0		
Total Split (%)	22.9%		77.1%	77.1%		
Maximum Green (s)	10.6		48.5	48.5		
Yellow Time (s)	3.2		3.2	3.2		
All-Red Time (s)	2.2		2.3	2.3		
Lost Time Adjust (s)	0.0			0.0		
Total Lost Time (s)	5.4			5.5		
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		C-Max	C-Max		
Walk Time (s)	1.0		33.0	33.0		
Flash Dont Walk (s)	7.0		11.0	11.0		
Pedestrian Calls (#/hr)	0		0	0		
Act Effct Green (s)	8.2			57.8		
Actuated g/C Ratio	0.12			0.83		
v/c Ratio	0.36			0.59		
Control Delay	33.8			5.7		
Queue Delay	0.0			0.0		
Total Delay	33.8			5.7		
LOS	C			A		
Approach Delay	33.8			5.7		
Approach LOS	C			A		
90th %ile Green (s)	10.6		48.5	48.5		
90th %ile Term Code	Max		Coord	Coord		
70th %ile Green (s)	9.6		49.5	49.5		
70th %ile Term Code	Gap		Coord	Coord		
50th %ile Green (s)	8.2		50.9	50.9		
50th %ile Term Code	Gap		Coord	Coord		
30th %ile Green (s)	0.0		64.5	64.5		
30th %ile Term Code	Skip		Coord	Coord		
10th %ile Green (s)	0.0		64.5	64.5		
10th %ile Term Code	Skip		Coord	Coord		
Stops (vph)	47			425		
Fuel Used(gal)	1			5		
CO Emissions (g/hr)	49			332		
NOx Emissions (g/hr)	10			65		
VOC Emissions (g/hr)	11			77		
Dilemma Vehicles (#)	0			0		
Queue Length 50th (ft)	25			127		
Queue Length 95th (ft)	51			177		
Internal Link Dist (ft)	183			47	798	

Lanes, Volumes, Timings
 11: N East St & E Market St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Bay Length (ft)						
Base Capacity (vph)	222			2278		
Starvation Cap Reductn	0			0		
Spillback Cap Reductn	0			0		
Storage Cap Reductn	0			0		
Reduced v/c Ratio	0.27			0.59		

Intersection Summary

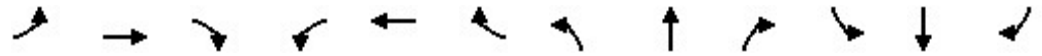
Area Type:	CBD
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	4 (6%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.59
Intersection Signal Delay:	6.9
Intersection LOS:	A
Intersection Capacity Utilization	47.5%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 11: N East St & E Market St



Lanes, Volumes, Timings
 12: N Madison St & W Monroe St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔↔	
Traffic Volume (vph)	0	10	0	7	4	0	0	0	0	19	904	10
Future Volume (vph)	0	10	0	7	4	0	0	0	0	19	904	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			-3%			6%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor												
Frt												0.998
Flt Protected					0.969							0.999
Satd. Flow (prot)	0	1605	0	0	1609	0	0	0	0	0	3051	0
Flt Permitted					0.969							0.999
Satd. Flow (perm)	0	1605	0	0	1609	0	0	0	0	0	3051	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		699			209			307			400	
Travel Time (s)		15.9			4.8			7.0			9.1	
Confl. Peds. (#/hr)			3	3						4		1
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	13	0	9	5	0	0	0	0	25	1174	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	0	0	14	0	0	0	0	0	1212	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.19	1.14	1.14	1.14	1.14	1.12	1.12	1.12	1.19	1.19	1.19
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Free	

Intersection Summary
 Area Type: CBD
 Control Type: Unsignalized
 Intersection Capacity Utilization 42.5% ICU Level of Service A
 Analysis Period (min) 15

Lanes, Volumes, Timings
13: N East St & Monroe St

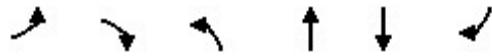
02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 		
Traffic Volume (vph)	15	0	45	1020	0	0
Future Volume (vph)	15	0	45	1020	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12
Grade (%)	-2%			-3%	4%	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor				1.00		
Frt						
Flt Protected	0.950			0.998		
Satd. Flow (prot)	1434	0	0	2780	0	0
Flt Permitted	0.950			0.998		
Satd. Flow (perm)	1434	0	0	2780	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	221			318	266	
Travel Time (s)	5.0			7.2	6.0	
Confl. Peds. (#/hr)			1			
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	0		20	20		
Adj. Flow (vph)	18	0	55	1244	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	0	1299	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.29	1.13	1.12	1.34	1.17	1.17
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2		
Detector Template	Left		Left	Thru		
Leading Detector (ft)	20		20	100		
Trailing Detector (ft)	0		0	0		
Detector 1 Position(ft)	0		0	0		
Detector 1 Size(ft)	20		20	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(ft)				94		
Detector 2 Size(ft)				6		
Detector 2 Type				Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)				0.0		

Lanes, Volumes, Timings
13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Type	Prot		Perm	NA		
Protected Phases	4			2		
Permitted Phases			2			
Detector Phase	4		2	2		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	13.2		49.2	49.2		
Total Split (s)	15.0		65.0	65.0		
Total Split (%)	18.8%		81.3%	81.3%		
Maximum Green (s)	9.8		59.8	59.8		
Yellow Time (s)	3.2		3.2	3.2		
All-Red Time (s)	2.0		2.0	2.0		
Lost Time Adjust (s)	0.0			0.0		
Total Lost Time (s)	5.2			5.2		
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		C-Max	C-Max		
Walk Time (s)	1.0		33.0	33.0		
Flash Dont Walk (s)	7.0		11.0	11.0		
Pedestrian Calls (#/hr)	0		0	0		
Act Effct Green (s)	6.6			76.2		
Actuated g/C Ratio	0.08			0.95		
v/c Ratio	0.15			0.49		
Control Delay	36.4			0.6		
Queue Delay	0.0			0.0		
Total Delay	36.4			0.6		
LOS	D			A		
Approach Delay	36.4			0.6		
Approach LOS	D			A		
90th %ile Green (s)	8.4		61.2	61.2		
90th %ile Term Code	Gap		Coord	Coord		
70th %ile Green (s)	0.0		74.8	74.8		
70th %ile Term Code	Skip		Coord	Coord		
50th %ile Green (s)	0.0		74.8	74.8		
50th %ile Term Code	Skip		Coord	Coord		
30th %ile Green (s)	0.0		74.8	74.8		
30th %ile Term Code	Skip		Coord	Coord		
10th %ile Green (s)	0.0		74.8	74.8		
10th %ile Term Code	Skip		Coord	Coord		
Stops (vph)	17			5		
Fuel Used(gal)	0			3		
CO Emissions (g/hr)	16			195		
NOx Emissions (g/hr)	3			38		
VOC Emissions (g/hr)	4			45		
Dilemma Vehicles (#)	0			0		
Queue Length 50th (ft)	9			0		
Queue Length 95th (ft)	25			2		
Internal Link Dist (ft)	141			238	186	

Lanes, Volumes, Timings
 13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Bay Length (ft)						
Base Capacity (vph)	175			2649		
Starvation Cap Reductn	0			9		
Spillback Cap Reductn	0			0		
Storage Cap Reductn	0			0		
Reduced v/c Ratio	0.10			0.49		

Intersection Summary

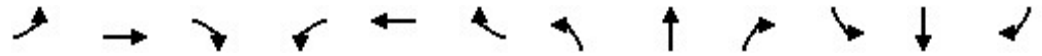
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	61 (76%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.49
Intersection Signal Delay:	1.1
Intersection LOS:	A
Intersection Capacity Utilization	45.6%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 13: N East St & Monroe St



Lanes, Volumes, Timings
15: N Madison St & W Jefferson St

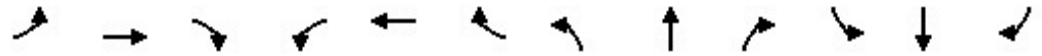
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔↔	
Traffic Volume (vph)	0	10	5	5	20	0	0	0	0	5	840	10
Future Volume (vph)	0	10	5	5	20	0	0	0	0	5	840	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	14	12	12	12	12	12	12	12
Grade (%)		4%			-3%			2%			2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00							
Frt		0.953									0.998	
Flt Protected					0.990							
Satd. Flow (prot)	0	1746	0	0	1602	0	0	0	0	0	3117	0
Flt Permitted					0.948							
Satd. Flow (perm)	0	1746	0	0	1531	0	0	0	0	0	3117	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7									3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		692			253			310			307	
Travel Time (s)		15.7			5.8			7.0			7.0	
Confl. Peds. (#/hr)			3	3								
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)					0					20		20
Adj. Flow (vph)	0	13	7	7	26	0	0	0	0	7	1105	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	33	0	0	0	0	0	1125	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.17	1.00	1.17	1.12	1.18	1.12	1.16	1.16	1.16	1.16	1.16	1.16
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	

Lanes, Volumes, Timings
 15: N Madison St & W Jefferson St

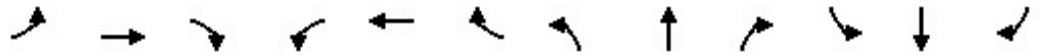
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		15.1		15.4	15.4					47.4	47.4	
Total Split (s)		18.0		18.0	18.0					62.0	62.0	
Total Split (%)		22.5%		22.5%	22.5%					77.5%	77.5%	
Maximum Green (s)		12.9		12.6	12.6					56.6	56.6	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.9		2.2	2.2					2.2	2.2	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.1			5.4						5.4	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		Max	Max					C-Max	C-Max	
Walk Time (s)		1.0		1.0	1.0					31.0	31.0	
Flash Dont Walk (s)		9.0		9.0	9.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		12.9			12.6						56.6	
Actuated g/C Ratio		0.16			0.16						0.71	
v/c Ratio		0.07			0.14						0.51	
Control Delay		23.1			30.7						6.3	
Queue Delay		0.0			0.0						0.0	
Total Delay		23.1			30.7						6.3	
LOS		C			C						A	
Approach Delay		23.1			30.7						6.3	
Approach LOS		C			C						A	
90th %ile Green (s)		12.9		12.6	12.6					56.6	56.6	
90th %ile Term Code		Hold		MaxR	MaxR					Coord	Coord	
70th %ile Green (s)		12.9		12.6	12.6					56.6	56.6	
70th %ile Term Code		Hold		MaxR	MaxR					Coord	Coord	
50th %ile Green (s)		12.9		12.6	12.6					56.6	56.6	
50th %ile Term Code		Hold		MaxR	MaxR					Coord	Coord	
30th %ile Green (s)		12.9		12.6	12.6					56.6	56.6	
30th %ile Term Code		Hold		MaxR	MaxR					Coord	Coord	
10th %ile Green (s)		12.9		12.6	12.6					56.6	56.6	
10th %ile Term Code		Hold		MaxR	MaxR					Coord	Coord	
Stops (vph)		11			23						352	
Fuel Used(gal)		0			0						5	
CO Emissions (g/hr)		15			23						356	
NOx Emissions (g/hr)		3			5						69	
VOC Emissions (g/hr)		3			5						82	
Dilemma Vehicles (#)		0			0						0	
Queue Length 50th (ft)		6			14						111	
Queue Length 95th (ft)		20			33						113	
Internal Link Dist (ft)		612			173			230			227	

Lanes, Volumes, Timings
 15: N Madison St & W Jefferson St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		287			241						2206	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.07			0.14						0.51	

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	11 (14%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.51
Intersection Signal Delay:	7.3
Intersection LOS:	A
Intersection Capacity Utilization	41.3%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 15: N Madison St & W Jefferson St



Lanes, Volumes, Timings
16: N East St & E Jefferson St

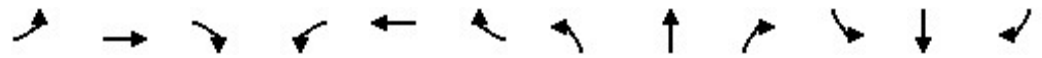
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↕				
Traffic Volume (vph)	5	25	0	0	5	5	20	1040	25	0	0	0
Future Volume (vph)	5	25	0	0	5	5	20	1040	25	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	12	12	11	11	12	12	12
Grade (%)		-3%			3%			0%				3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.99			0.97			1.00				
Frt					0.932			0.997				
Flt Protected		0.992						0.999				
Satd. Flow (prot)	0	1504	0	0	1534	0	0	3035	0	0	0	0
Flt Permitted		0.960						0.999				
Satd. Flow (perm)	0	1446	0	0	1534	0	0	3035	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					6			7				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		268			710			308				318
Travel Time (s)		6.1			16.1			7.0				7.2
Confl. Peds. (#/hr)	17					17	8		8			
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)		0					20		20			
Adj. Flow (vph)	6	30	0	0	6	6	24	1253	30	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	36	0	0	12	0	0	1307	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.12	1.28	1.12	1.17	1.12	1.17	1.14	1.19	1.19	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				

Lanes, Volumes, Timings
 16: N East St & E Jefferson St

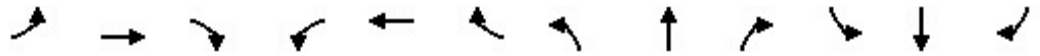
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Detector Phase	4	4			8		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	15.2	15.2			15.2		47.2	47.2				
Total Split (s)	17.0	17.0			17.0		63.0	63.0				
Total Split (%)	21.3%	21.3%			21.3%		78.8%	78.8%				
Maximum Green (s)	11.8	11.8			11.8		57.8	57.8				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Recall Mode	None	None			Max		C-Max	C-Max				
Walk Time (s)	1.0	1.0			1.0		31.0	31.0				
Flash Dont Walk (s)	9.0	9.0			9.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		11.8			11.8			57.8				
Actuated g/C Ratio		0.15			0.15			0.72				
v/c Ratio		0.17			0.05			0.60				
Control Delay		32.1			23.2			2.6				
Queue Delay		0.0			0.0			0.1				
Total Delay		32.1			23.2			2.7				
LOS		C			C			A				
Approach Delay		32.1			23.2			2.7				
Approach LOS		C			C			A				
90th %ile Green (s)	11.8	11.8			11.8		57.8	57.8				
90th %ile Term Code	Hold	Hold			MaxR		Coord	Coord				
70th %ile Green (s)	11.8	11.8			11.8		57.8	57.8				
70th %ile Term Code	Hold	Hold			MaxR		Coord	Coord				
50th %ile Green (s)	11.8	11.8			11.8		57.8	57.8				
50th %ile Term Code	Hold	Hold			MaxR		Coord	Coord				
30th %ile Green (s)	11.8	11.8			11.8		57.8	57.8				
30th %ile Term Code	Hold	Hold			MaxR		Coord	Coord				
10th %ile Green (s)	11.8	11.8			11.8		57.8	57.8				
10th %ile Term Code	Hold	Hold			MaxR		Coord	Coord				
Stops (vph)		28			8			117				
Fuel Used(gal)		0			0			4				
CO Emissions (g/hr)		29			10			267				
NOx Emissions (g/hr)		6			2			52				
VOC Emissions (g/hr)		7			2			62				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		16			3			40				
Queue Length 95th (ft)		39			16			47				
Internal Link Dist (ft)		188			630			228				238

Lanes, Volumes, Timings
 16: N East St & E Jefferson St

02/22/2024

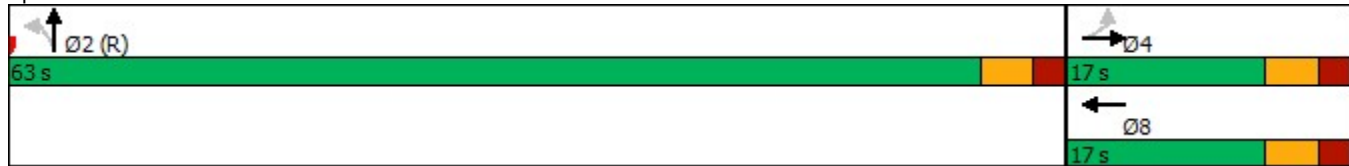


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		213			231			2194				
Starvation Cap Reductn		0			0			190				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.17			0.05			0.65				

Intersection Summary

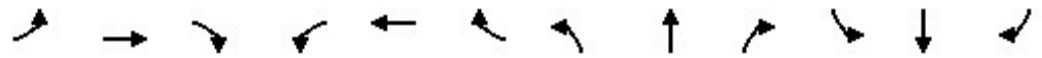
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	55 (69%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	3.7
Intersection LOS:	A
Intersection Capacity Utilization	52.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 16: N East St & E Jefferson St



Lanes, Volumes, Timings
 19: N Madison St & W Washington St

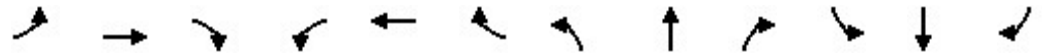
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	150	20	40	215	0	0	0	0	35	760	35
Future Volume (vph)	0	150	20	40	215	0	0	0	0	35	760	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	12	12	12	12	12
Grade (%)		3%			-3%			2%				-2%
Storage Length (ft)	0		0	65		0	0		0	150		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.984										0.993
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1482	0	1585	1552	0	0	0	0	1262	3133	0
Flt Permitted				0.538						0.950		
Satd. Flow (perm)	0	1482	0	898	1552	0	0	0	0	1262	3133	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8										10
Link Speed (mph)		30			30			30				30
Link Distance (ft)		690			253			324				310
Travel Time (s)		15.7			5.8			7.4				7.0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		0			0					20		20
Adj. Flow (vph)	0	192	26	51	276	0	0	0	0	45	974	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	218	0	51	276	0	0	0	0	45	1019	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane					Yes							
Headway Factor	1.17	1.28	1.17	1.12	1.23	1.12	1.16	1.16	1.16	1.49	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings
 19: N Madison St & W Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm		NA
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6		6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0		5.0
Minimum Split (s)		15.4		25.4	25.4					37.6		37.6
Total Split (s)		26.0		26.0	26.0					54.0		54.0
Total Split (%)		32.5%		32.5%	32.5%					67.5%		67.5%
Maximum Green (s)		20.6		20.6	20.6					48.4		48.4
Yellow Time (s)		3.2		3.2	3.2					3.2		3.2
All-Red Time (s)		2.2		2.2	2.2					2.4		2.4
Lost Time Adjust (s)		0.0		0.0	0.0					0.0		0.0
Total Lost Time (s)		5.4		5.4	5.4					5.6		5.6
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0		3.0
Recall Mode		None		Max	Max					C-Max		C-Max
Walk Time (s)		1.0		9.0	9.0					21.0		21.0
Flash Dont Walk (s)		9.0		11.0	11.0					11.0		11.0
Pedestrian Calls (#/hr)		0		0	0					0		0
Act Effct Green (s)		20.6		20.6	20.6					48.4		48.4
Actuated g/C Ratio		0.26		0.26	0.26					0.60		0.60
v/c Ratio		0.56		0.22	0.69					0.06		0.54
Control Delay		31.4		13.2	19.9					6.7		8.7
Queue Delay		0.0		0.0	1.0					0.0		0.1
Total Delay		31.4		13.2	20.9					6.7		8.8
LOS		C		B	C					A		A
Approach Delay		31.4			19.7							8.7
Approach LOS		C			B							A
90th %ile Green (s)		20.6		20.6	20.6					48.4		48.4
90th %ile Term Code		Max		MaxR	MaxR					Coord		Coord
70th %ile Green (s)		20.6		20.6	20.6					48.4		48.4
70th %ile Term Code		Hold		MaxR	MaxR					Coord		Coord
50th %ile Green (s)		20.6		20.6	20.6					48.4		48.4
50th %ile Term Code		Hold		MaxR	MaxR					Coord		Coord
30th %ile Green (s)		20.6		20.6	20.6					48.4		48.4
30th %ile Term Code		Hold		MaxR	MaxR					Coord		Coord
10th %ile Green (s)		20.6		20.6	20.6					48.4		48.4
10th %ile Term Code		Hold		MaxR	MaxR					Coord		Coord
Stops (vph)		140		10	70					12		281
Fuel Used(gal)		3		0	2					0		5
CO Emissions (g/hr)		194		17	118					14		342
NOx Emissions (g/hr)		38		3	23					3		66
VOC Emissions (g/hr)		45		4	27					3		79
Dilemma Vehicles (#)		0		0	0					0		0
Queue Length 50th (ft)		91		4	21					9		104
Queue Length 95th (ft)		134		19	70					m17		109

Lanes, Volumes, Timings
 19: N Madison St & W Washington St

02/22/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		610			173			244			230	
Turn Bay Length (ft)				65						150		
Base Capacity (vph)		387		231	399					763	1899	
Starvation Cap Reductn		0		0	25					0	111	
Spillback Cap Reductn		0		0	0					0	0	
Storage Cap Reductn		0		0	0					0	0	
Reduced v/c Ratio		0.56		0.22	0.74					0.06	0.57	

Intersection Summary

Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 78 (98%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 14.0 Intersection LOS: B
 Intersection Capacity Utilization 52.5% ICU Level of Service A
 Analysis Period (min) 15




















m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: N Madison St & W Washington St



Lanes, Volumes, Timings
 20: N East St & E Washington St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	155	0	0	235	100	30	1070	55	0	0	0
Future Volume (vph)	10	155	0	0	235	100	30	1070	55	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	10	11	11	11	12	12	12
Grade (%)		-3%			2%			-3%			1%	
Storage Length (ft)	65		0	0		80	80		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00					0.98	1.00	1.00				
Fr _t						0.850		0.993				
Fl _t Protected	0.950						0.950					
Satd. Flow (prot)	1585	1502	0	0	1574	1291	1226	3040	0	0	0	0
Fl _t Permitted	0.375						0.950					
Satd. Flow (perm)	623	1502	0	0	1574	1266	1220	3040	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						62		12				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		262			724			322				308
Travel Time (s)		6.0			16.5			7.3				7.0
Confl. Peds. (#/hr)	5					5	5		2			
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		0					20		20			
Adj. Flow (vph)	13	194	0	0	294	125	38	1338	69	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	194	0	0	294	125	38	1407	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.12	1.28	1.12	1.16	1.21	1.26	1.54	1.17	1.17	1.15	1.15	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				

Lanes, Volumes, Timings
20: N East St & E Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex					
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0					
Turn Type	Perm	NA		NA	Perm	Perm	NA					
Protected Phases	4			8			2					
Permitted Phases	4				8	2						
Detector Phase	4	4		8	8	2	2					
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0					
Minimum Split (s)	31.4	31.4		21.4	21.4	47.0	47.0					
Total Split (s)	24.0	24.0		24.0	24.0	56.0	56.0					
Total Split (%)	30.0%	30.0%		30.0%	30.0%	70.0%	70.0%					
Maximum Green (s)	18.6	18.6		18.6	18.6	50.0	50.0					
Yellow Time (s)	3.2	3.2		3.2	3.2	3.2	3.2					
All-Red Time (s)	2.2	2.2		2.2	2.2	2.8	2.8					
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0					
Total Lost Time (s)	5.4	5.4		5.4	5.4	6.0	6.0					
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0					
Recall Mode	Max	Max		None	None	C-Max	C-Max					
Walk Time (s)	15.0	15.0		5.0	5.0	30.0	30.0					
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0					
Pedestrian Calls (#/hr)	0	0		0	0	0	0					
Act Effct Green (s)	18.6	18.6		18.6	18.6	50.0	50.0					
Actuated g/C Ratio	0.23	0.23		0.23	0.23	0.62	0.62					
v/c Ratio	0.09	0.56		0.81	0.37	0.05	0.74					
Control Delay	20.7	23.3		47.9	17.6	3.5	6.1					
Queue Delay	0.0	0.2		0.0	0.0	0.0	0.1					
Total Delay	20.7	23.5		47.9	17.6	3.5	6.2					
LOS	C	C		D	B	A	A					
Approach Delay	23.3			38.9			6.1					
Approach LOS	C			D			A					
90th %ile Green (s)	18.6	18.6		18.6	18.6	50.0	50.0					
90th %ile Term Code	Ped	Ped		Max	Max	Coord	Coord					
70th %ile Green (s)	18.6	18.6		18.6	18.6	50.0	50.0					
70th %ile Term Code	Ped	Ped		Max	Max	Coord	Coord					
50th %ile Green (s)	18.6	18.6		18.6	18.6	50.0	50.0					
50th %ile Term Code	Ped	Ped		Max	Max	Coord	Coord					
30th %ile Green (s)	18.6	18.6		18.6	18.6	50.0	50.0					
30th %ile Term Code	Ped	Ped		Hold	Hold	Coord	Coord					
10th %ile Green (s)	18.6	18.6		18.6	18.6	50.0	50.0					
10th %ile Term Code	Ped	Ped		Hold	Hold	Coord	Coord					
Stops (vph)	5	69		205	47	5	224					
Fuel Used(gal)	0	1		5	1	0	5					
CO Emissions (g/hr)	6	100		332	83	9	382					
NOx Emissions (g/hr)	1	19		65	16	2	74					
VOC Emissions (g/hr)	1	23		77	19	2	89					
Dilemma Vehicles (#)	0	0		0	0	0	0					

Lanes, Volumes, Timings
 20: N East St & E Washington St

02/22/2024

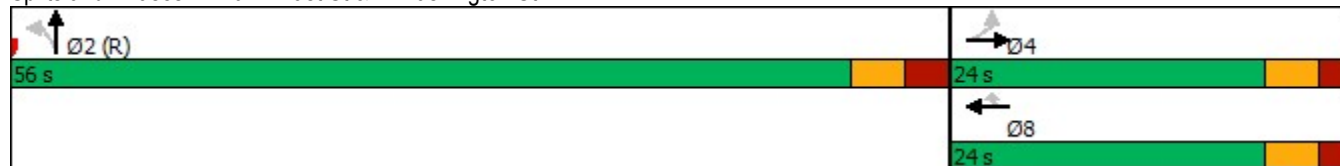


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	0	27			139	25	3	63				
Queue Length 95th (ft)	12	77			#214	59	m5	68				
Internal Link Dist (ft)		182			644			242			228	
Turn Bay Length (ft)	65					80	80					
Base Capacity (vph)	144	349			365	341	762	1904				
Starvation Cap Reductn	0	11			0	0	0	32				
Spillback Cap Reductn	0	0			0	0	0	0				
Storage Cap Reductn	0	0			0	0	0	0				
Reduced v/c Ratio	0.09	0.57			0.81	0.37	0.05	0.75				

Intersection Summary

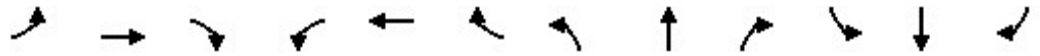
Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 61 (76%), Referenced to phase 2:NBTL and 6:, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 14.5 Intersection LOS: B
 Intersection Capacity Utilization 61.3% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: N East St & E Washington St



Lanes, Volumes, Timings
 23: S Center St/N Madison St & W Front St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖			↖			↖	↖
Traffic Volume (vph)	0	70	10	20	30	0	0	0	0	50	800	30
Future Volume (vph)	0	70	10	20	30	0	0	0	0	50	800	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	12	12	12	12	12	12	12	12
Grade (%)		3%			-3%			1%				-1%
Storage Length (ft)	0		0	60		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			0			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00		0.98							1.00	
Flt		0.983									0.995	
Flt Protected				0.950							0.997	
Satd. Flow (prot)	0	1413	0	1623	1488	0	0	0	0	0	3082	0
Flt Permitted				0.689							0.997	
Satd. Flow (perm)	0	1413	0	1150	1488	0	0	0	0	0	3082	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8									10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		684			247			660			324	
Travel Time (s)		15.5			5.6			15.0			7.4	
Confl. Peds. (#/hr)			11	11						3		5
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Parking (#/hr)		0			0					20		20
Adj. Flow (vph)	0	93	13	27	40	0	0	0	0	67	1067	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	106	0	27	40	0	0	0	0	0	1174	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.17	1.33	1.17	1.08	1.28	1.12	1.15	1.15	1.15	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6

Lanes, Volumes, Timings
 23: S Center St/N Madison St & W Front St

02/22/2024

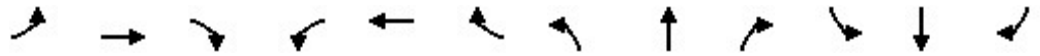


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Detector 2 Type	Cl+Ex			Cl+Ex						Cl+Ex				
Detector 2 Channel														
Detector 2 Extend (s)	0.0			0.0						0.0				
Turn Type	NA		Perm		NA				Perm		NA			
Protected Phases	4			8						6				
Permitted Phases				8						6				
Detector Phase	4			8			8			6		6		
Switch Phase														
Minimum Initial (s)	5.0			5.0		5.0					5.0		5.0	
Minimum Split (s)	15.5			25.5		25.5					37.7		37.7	
Total Split (s)	20.0			20.0		20.0					60.0		60.0	
Total Split (%)	25.0%			25.0%		25.0%					75.0%		75.0%	
Maximum Green (s)	14.5			14.5		14.5					54.3		54.3	
Yellow Time (s)	3.2			3.2		3.2					3.2		3.2	
All-Red Time (s)	2.3			2.3		2.3					2.5		2.5	
Lost Time Adjust (s)	0.0			0.0		0.0					0.0			
Total Lost Time (s)	5.5			5.5		5.5					5.7			
Lead/Lag														
Lead-Lag Optimize?														
Vehicle Extension (s)	3.0			3.0		3.0					3.0		3.0	
Recall Mode	Max			None		None					C-Max		C-Max	
Walk Time (s)	1.0			9.0		9.0					21.0		21.0	
Flash Dont Walk (s)	9.0			11.0		11.0					11.0		11.0	
Pedestrian Calls (#/hr)	0			0		0					0		0	
Act Effct Green (s)	14.5			14.5		14.5					54.3			
Actuated g/C Ratio	0.18			0.18		0.18					0.68			
v/c Ratio	0.40			0.13		0.15					0.56			
Control Delay	32.1			29.4		29.3					3.1			
Queue Delay	0.0			0.0		0.0					0.1			
Total Delay	32.1			29.4		29.3					3.2			
LOS	C			C		C					A			
Approach Delay	32.1					29.3					3.2			
Approach LOS	C					C					A			
90th %ile Green (s)	14.5			14.5		14.5					54.3		54.3	
90th %ile Term Code	MaxR			Hold		Hold					Coord		Coord	
70th %ile Green (s)	14.5			14.5		14.5					54.3		54.3	
70th %ile Term Code	MaxR			Hold		Hold					Coord		Coord	
50th %ile Green (s)	14.5			14.5		14.5					54.3		54.3	
50th %ile Term Code	MaxR			Hold		Hold					Coord		Coord	
30th %ile Green (s)	14.5			14.5		14.5					54.3		54.3	
30th %ile Term Code	MaxR			Hold		Hold					Coord		Coord	
10th %ile Green (s)	14.5			14.5		14.5					54.3		54.3	
10th %ile Term Code	MaxR			Hold		Hold					Coord		Coord	
Stops (vph)	64			18		26					159			
Fuel Used(gal)	1			0		0					4			
CO Emissions (g/hr)	91			18		27					256			
NOx Emissions (g/hr)	18			4		5					59			
VOC Emissions (g/hr)	21			4		6					59			
Dilemma Vehicles (#)	0			0		0					0			

Lanes, Volumes, Timings

23: S Center St/N Madison St & W Front St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		44		11	17						32	
Queue Length 95th (ft)		73		28	36						32	
Internal Link Dist (ft)		604			167			580			244	
Turn Bay Length (ft)				60								
Base Capacity (vph)		262		208	269						2095	
Starvation Cap Reductn		0		0	0						165	
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.40		0.13	0.15						0.61	

Intersection Summary

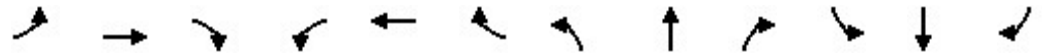
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	4 (5%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.56
Intersection Signal Delay:	6.8
Intersection LOS:	A
Intersection Capacity Utilization	44.9%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 23: S Center St/N Madison St & W Front St



Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	50	0	0	110	30	40	1045	15	0	0	0
Future Volume (vph)	25	50	0	0	110	30	40	1045	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	16	12	12	10	10	13	11	11	12	12	12
Grade (%)		-1%			0%			-1%				2%
Storage Length (ft)	90		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.97					0.96		1.00				
Fr _t						0.850		0.998				
Fl _t Protected	0.950							0.998				
Satd. Flow (prot)	1518	1873	0	0	1535	1304	0	3022	0	0	0	0
Fl _t Permitted	0.674							0.998				
Satd. Flow (perm)	1050	1873	0	0	1535	1250	0	3020	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						35		4				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		256			710			633				322
Travel Time (s)		5.8			16.1			14.4				7.3
Confl. Peds. (#/hr)	15					15	19		1			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	29	59	0	0	129	35	47	1229	18	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	59	0	0	129	35	0	1294	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.19	0.97	1.14	1.14	1.25	1.25	1.09	1.19	1.19	1.16	1.16	1.16
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				

Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

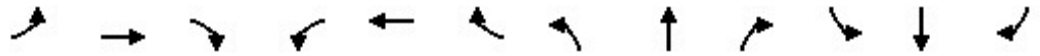
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4					8	2					
Detector Phase	4	4			8	8	2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0				
Minimum Split (s)	27.2	27.2			17.2	17.2	50.6	50.6				
Total Split (s)	22.0	22.0			22.0	22.0	58.0	58.0				
Total Split (%)	27.5%	27.5%			27.5%	27.5%	72.5%	72.5%				
Maximum Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
Yellow Time (s)	3.2	3.2			3.2	3.2	3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.4	2.4				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0				
Total Lost Time (s)	5.2	5.2			5.2	5.2		5.6				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Recall Mode	Max	Max			None	None	C-Max	C-Max				
Walk Time (s)	11.0	11.0			1.0	1.0	34.0	34.0				
Flash Dont Walk (s)	11.0	11.0			11.0	11.0	11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0	0	0	0				
Act Effct Green (s)	16.8	16.8			16.8	16.8		52.4				
Actuated g/C Ratio	0.21	0.21			0.21	0.21		0.66				
v/c Ratio	0.13	0.15			0.40	0.12		0.65				
Control Delay	27.6	27.0			31.7	10.6		6.4				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	27.6	27.0			31.7	10.6		6.4				
LOS	C	C			C	B		A				
Approach Delay		27.2			27.2			6.4				
Approach LOS		C			C			A				
90th %ile Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
90th %ile Term Code	Ped	Ped			Max	Max	Coord	Coord				
70th %ile Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
70th %ile Term Code	Ped	Ped			Hold	Hold	Coord	Coord				
50th %ile Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
50th %ile Term Code	Ped	Ped			Hold	Hold	Coord	Coord				
30th %ile Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
30th %ile Term Code	Ped	Ped			Hold	Hold	Coord	Coord				
10th %ile Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
10th %ile Term Code	Ped	Ped			Hold	Hold	Coord	Coord				
Stops (vph)	22	41			93	9		303				
Fuel Used(gal)	0	1			2	0		9				
CO Emissions (g/hr)	22	42			128	20		596				
NOx Emissions (g/hr)	4	8			25	4		116				
VOC Emissions (g/hr)	5	10			30	5		138				
Dilemma Vehicles (#)	0	0			0	0		0				
Queue Length 50th (ft)	12	24			56	0		84				

Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

02/22/2024

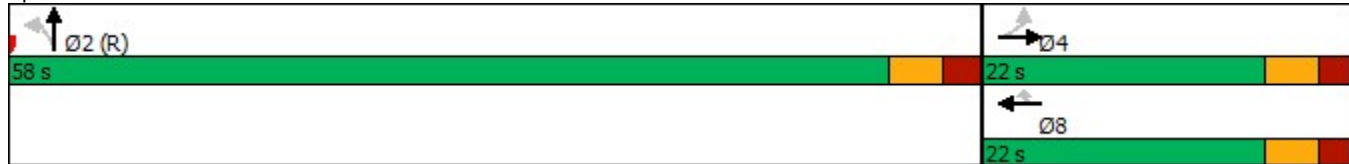


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	32	52			100	21		93				
Internal Link Dist (ft)		176			630			553			242	
Turn Bay Length (ft)	90					100						
Base Capacity (vph)	220	393			322	290		1979				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		15				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.13	0.15			0.40	0.12		0.66				

Intersection Summary

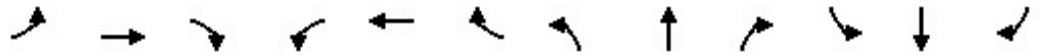
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	60 (75%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.65
Intersection Signal Delay:	9.8
Intersection LOS:	A
Intersection Capacity Utilization	61.5%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 24: S East St/N East St & E Front St



Lanes, Volumes, Timings
27: N Center St & W Market St

02/22/2024



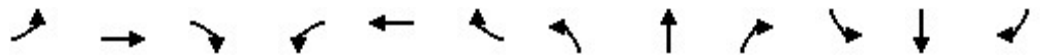
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔						↔↔		
Traffic Volume (vph)	0	42	23	13	112	0	0	0	0	4	139	13	
Future Volume (vph)	0	42	23	13	112	0	0	0	0	4	139	13	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	
Ped Bike Factor													
Frt	0.952										0.988		
Flt Protected						0.995							0.999
Satd. Flow (prot)	0	1536	0	0	1445	0	0	0	0	0	2874	0	
Flt Permitted						0.995							0.999
Satd. Flow (perm)	0	1536	0	0	1445	0	0	0	0	0	2874	0	
Link Speed (mph)					30						30		
Link Distance (ft)					247						266		
Travel Time (s)					5.6						6.0		
Confl. Peds. (#/hr)			23		23						6		
Confl. Bikes (#/hr)			1										
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	
Parking (#/hr)												0	
Adj. Flow (vph)	0	53	29	16	142	0	0	0	0	5	176	16	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	82	0	0	158	0	0	0	0	0	197	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)			0		0						0		
Link Offset(ft)			0		0						0		
Crosswalk Width(ft)			16		16						16		
Two way Left Turn Lane													
Headway Factor	1.14	1.14	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Sign Control	Stop				Stop				Stop		Stop		

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	27.1%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 29: N Center St & W Jefferson St

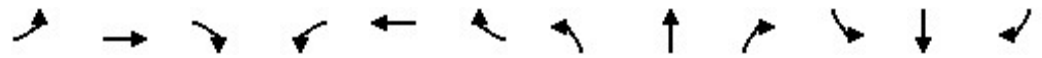
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔↔	
Traffic Volume (vph)	0	33	1	12	18	0	0	0	0	20	104	3
Future Volume (vph)	0	33	1	12	18	0	0	0	0	20	104	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor												
Frt	0.997										0.996	
Flt Protected					0.981				0.992			
Satd. Flow (prot)	0	1408	0	0	1385	0	0	0	0	0	2798	0
Flt Permitted					0.981				0.992			
Satd. Flow (perm)	0	1408	0	0	1385	0	0	0	0	0	2798	0
Link Speed (mph)	30				30				30			
Link Distance (ft)	253				255				306			
Travel Time (s)	5.8				5.8				7.0			
Confl. Peds. (#/hr)			7	7					13	9		
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	0											
Adj. Flow (vph)	0	41	1	15	23	0	0	0	0	25	130	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	0	0	38	0	0	0	0	0	159	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0				0			
Link Offset(ft)	0				0				0			
Crosswalk Width(ft)	16				16				16			
Two way Left Turn Lane												
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14
Turning Speed (mph)	15		9	15	9		15	9		15	9	
Sign Control	Stop			Stop			Stop			Stop		
Intersection Summary												
Area Type:	CBD											
Control Type:	Unsignalized											
Intersection Capacity Utilization	21.5%						ICU Level of Service A					
Analysis Period (min)	15											

Lanes, Volumes, Timings
30: N Center St & W Washington St

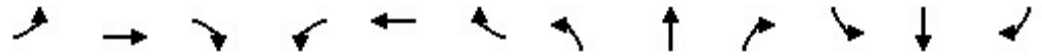
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	165	7	23	214	0	0	0	0	50	60	7
Future Volume (vph)	0	165	7	23	214	0	0	0	0	50	60	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00		1.00								0.99
Frt		0.994										0.991
Flt Protected				0.950								0.979
Satd. Flow (prot)	0	1416	0	1504	1425	0	0	0	0	0	2766	0
Flt Permitted				0.538								0.979
Satd. Flow (perm)	0	1416	0	849	1425	0	0	0	0	0	2755	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4										9
Link Speed (mph)		30			30			30				30
Link Distance (ft)		253			254			326				306
Travel Time (s)		5.8			5.8			7.4				7.0
Confl. Peds. (#/hr)			3	3						4		10
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		0			0							0
Adj. Flow (vph)	0	206	9	29	268	0	0	0	0	63	75	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	215	0	29	268	0	0	0	0	0	147	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes		Yes								
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex		Cl+Ex								Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings
 30: N Center St & W Washington St

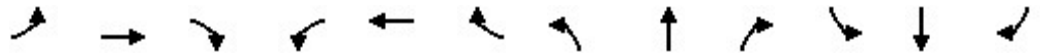
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm		NA
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6		6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0		5.0
Minimum Split (s)		23.0		23.0	23.0					23.0		23.0
Total Split (s)		50.0		50.0	50.0					30.0		30.0
Total Split (%)		62.5%		62.5%	62.5%					37.5%		37.5%
Maximum Green (s)		45.0		45.0	45.0					25.0		25.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		0.0		0.0	0.0							0.0
Total Lost Time (s)		5.0		5.0	5.0							5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0		3.0
Recall Mode		None		None	None					C-Max		C-Max
Walk Time (s)		7.0		7.0	7.0					7.0		7.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0		11.0
Pedestrian Calls (#/hr)		0		0	0					0		0
Act Effct Green (s)		21.5		21.5	21.5							48.5
Actuated g/C Ratio		0.27		0.27	0.27							0.61
v/c Ratio		0.56		0.13	0.70							0.09
Control Delay		13.8		3.4	13.3							7.9
Queue Delay		0.0		0.0	0.1							0.0
Total Delay		13.8		3.4	13.4							7.9
LOS		B		A	B							A
Approach Delay		13.8			12.4							7.9
Approach LOS		B			B							A
90th %ile Green (s)		31.0		31.0	31.0					39.0		39.0
90th %ile Term Code		Hold		Gap	Gap					Coord		Coord
70th %ile Green (s)		25.0		25.0	25.0					45.0		45.0
70th %ile Term Code		Hold		Gap	Gap					Coord		Coord
50th %ile Green (s)		21.3		21.3	21.3					48.7		48.7
50th %ile Term Code		Hold		Gap	Gap					Coord		Coord
30th %ile Green (s)		17.7		17.7	17.7					52.3		52.3
30th %ile Term Code		Hold		Gap	Gap					Coord		Coord
10th %ile Green (s)		12.6		12.6	12.6					57.4		57.4
10th %ile Term Code		Hold		Gap	Gap					Coord		Coord
Stops (vph)		43		4	75							47
Fuel Used(gal)		1		0	1							1
CO Emissions (g/hr)		74		6	99							51
NOx Emissions (g/hr)		14		1	19							10
VOC Emissions (g/hr)		17		1	23							12
Dilemma Vehicles (#)		0		0	0							0
Queue Length 50th (ft)		31		3	26							13
Queue Length 95th (ft)		30		m5	30							30

Lanes, Volumes, Timings
 30: N Center St & W Washington St

02/22/2024



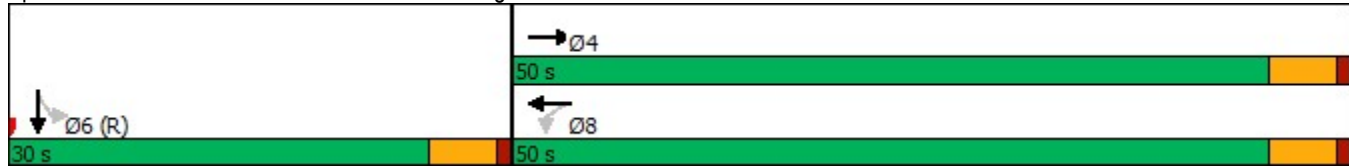
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		173			174			246			226	
Turn Bay Length (ft)				65								
Base Capacity (vph)		798		477	801						1673	
Starvation Cap Reductn		35		0	70						0	
Spillback Cap Reductn		0		0	24						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.28		0.06	0.37						0.09	

Intersection Summary

Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 19 (24%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 11.9
 Intersection LOS: B
 Intersection Capacity Utilization 48.5%
 ICU Level of Service A
 Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 30: N Center St & W Washington St



Lanes, Volumes, Timings
31: W Front St & N Center St

02/22/2024



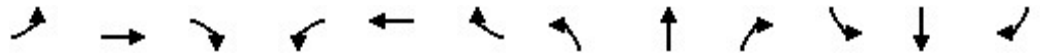
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔			↔		↔	↔	
Traffic Volume (vph)	0	127	21	22	61	0	0	0	0	57	15	6
Future Volume (vph)	0	127	21	22	61	0	0	0	0	57	15	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	8	12	12	12	12
Storage Length (ft)	0		0	70		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.981										0.954	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1398	0	1504	1425	0	0	1235	0	1354	1359	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	1398	0	1504	1425	0	0	1235	0	1354	1359	0
Link Speed (mph)	30						30		30			
Link Distance (ft)	247						221		326			
Travel Time (s)	5.6						5.0		7.4			
Confl. Peds. (#/hr)			35		35		19		8		8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Parking (#/hr)	0						0		0			
Adj. Flow (vph)	0	138	23	24	66	0	0	0	0	62	16	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	161	0	24	66	0	0	0	0	62	23	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	13						13		0			
Link Offset(ft)	0						0		0			
Crosswalk Width(ft)	16						16		16			
Two way Left Turn Lane	Yes											
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.55	1.14	1.30	1.30	1.14
Turning Speed (mph)	15		9		15		9		15		9	
Sign Control	Stop			Stop			Stop			Stop		

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	34.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 34: N Main St & W Market St/E Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↖			↗			↖↗					
Traffic Volume (vph)	8	41	0	0	96	6	32	29	20	0	0	0	
Future Volume (vph)	8	41	0	0	96	6	32	29	20	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor													
Frt						0.992			0.963				
Flt Protected	0.992									0.981			
Satd. Flow (prot)	0	1414	0	0	1414	0	0	2700	0	0	0	0	
Flt Permitted	0.992									0.981			
Satd. Flow (perm)	0	1414	0	0	1414	0	0	2700	0	0	0	0	
Link Speed (mph)					30				30				
Link Distance (ft)					266			249			404		
Travel Time (s)					6.0			5.7			9.2		
Confl. Peds. (#/hr)	13						13	1			7		
Confl. Bikes (#/hr)							1						
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	
Parking (#/hr)	0									0			
Adj. Flow (vph)	10	53	0	0	125	8	42	38	26	0	0	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	63	0	0	133	0	0	106	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0									0			
Link Offset(ft)	0									0			
Crosswalk Width(ft)					16				16			16	
Two way Left Turn Lane													
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.22	1.14	1.14	1.14	1.14	
Turning Speed (mph)	15	9		15	9		15	9		15	9		
Sign Control	Stop						Stop				Stop		

Intersection Summary	
Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	21.6%
	ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings

36: N Main St & W Jefferson St/E Jefferson St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕			↕			↕↕					
Traffic Volume (vph)	16	16	0	0	17	11	26	67	11	0	0	0	
Future Volume (vph)	16	16	0	0	17	11	26	67	11	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor													
Frt					0.946					0.984			
Flt Protected	0.976								0.988				
Satd. Flow (prot)	0	1366	0	0	1324	0	0	2728	0	0	0	0	
Flt Permitted	0.976								0.988				
Satd. Flow (perm)	0	1366	0	0	1324	0	0	2728	0	0	0	0	
Link Speed (mph)					30					30			
Link Distance (ft)					255					268			
Travel Time (s)					5.8					6.1			
Confl. Peds. (#/hr)	11						11	2					24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	
Parking (#/hr)	0								0				
Adj. Flow (vph)	17	17	0	0	18	12	28	73	12	0	0	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	34	0	0	30	0	0	113	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0								0				
Link Offset(ft)					0					0			
Crosswalk Width(ft)					16					16			
Two way Left Turn Lane													
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.22	1.14	1.14	1.14	1.14	
Turning Speed (mph)	15	9		15	9		15	9		15	9		
Sign Control	Stop						Stop		Stop		Stop		

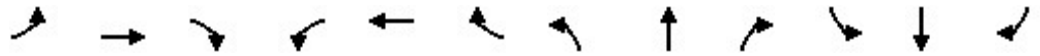
Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	24.2%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024

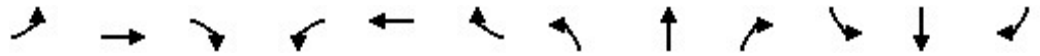


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	194	0	0	253	30	6	25	10	0	0	0
Future Volume (vph)	1	194	0	0	253	30	6	25	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	65		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00				1.00			1.00	0.97			
Flt					0.986				0.850			
Flt Protected	0.950							0.990				
Satd. Flow (prot)	1504	1425	0	0	1403	0	0	1411	1211	0	0	0
Flt Permitted	0.386							0.990				
Satd. Flow (perm)	610	1425	0	0	1403	0	0	1406	1171	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					13				27			
Link Speed (mph)		30			30			30				30
Link Distance (ft)		254			262			326				306
Travel Time (s)		5.8			6.0			7.4				7.0
Confl. Peds. (#/hr)	3					3	7		6			
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		0			0			0	0			
Adj. Flow (vph)	1	243	0	0	316	38	8	31	13	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	243	0	0	354	0	0	39	13	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.30	1.30	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2	1			
Detector Template	Left	Thru			Thru		Left	Thru	Right			
Leading Detector (ft)	20	100			100		20	100	20			
Trailing Detector (ft)	0	0			0		0	0	0			
Detector 1 Position(ft)	0	0			0		0	0	0			
Detector 1 Size(ft)	20	6			6		20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024

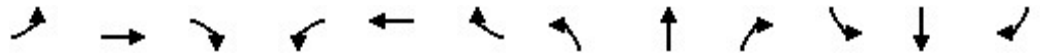


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Detector Phase	4	4			8		2	2	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Minimum Split (s)	23.0	23.0			23.0		23.0	23.0	23.0			
Total Split (s)	52.0	52.0			52.0		28.0	28.0	28.0			
Total Split (%)	65.0%	65.0%			65.0%		35.0%	35.0%	35.0%			
Maximum Green (s)	47.0	47.0			47.0		23.0	23.0	23.0			
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0			
Total Lost Time (s)	5.0	5.0			5.0			5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Recall Mode	None	None			None		C-Max	C-Max	C-Max			
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)	26.9	26.9			26.9			43.1	43.1			
Actuated g/C Ratio	0.34	0.34			0.34			0.54	0.54			
v/c Ratio	0.00	0.51			0.74			0.05	0.02			
Control Delay	23.0	32.4			13.0			13.8	5.3			
Queue Delay	0.0	0.1			0.1			0.0	0.0			
Total Delay	23.0	32.6			13.1			13.8	5.3			
LOS	C	C			B			B	A			
Approach Delay		32.5			13.1			11.7				
Approach LOS		C			B			B				
90th %ile Green (s)	38.1	38.1			38.1		31.9	31.9	31.9			
90th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
70th %ile Green (s)	31.3	31.3			31.3		38.7	38.7	38.7			
70th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
50th %ile Green (s)	26.7	26.7			26.7		43.3	43.3	43.3			
50th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
30th %ile Green (s)	22.3	22.3			22.3		47.7	47.7	47.7			
30th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
10th %ile Green (s)	16.1	16.1			16.1		53.9	53.9	53.9			
10th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
Stops (vph)	2	134			75			22	4			
Fuel Used(gal)	0	2			2			0	0			
CO Emissions (g/hr)	1	168			122			20	4			
NOx Emissions (g/hr)	0	33			24			4	1			
VOC Emissions (g/hr)	0	39			28			5	1			
Dilemma Vehicles (#)	0	0			0			0	0			
Queue Length 50th (ft)	0	102			23			12	0			
Queue Length 95th (ft)	m1	92			m24			m31	m6			

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024



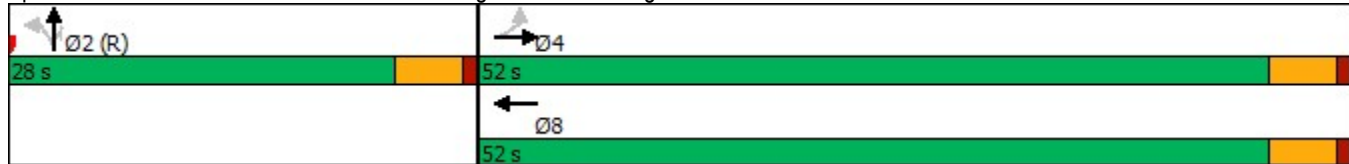
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		174			182			246			226	
Turn Bay Length (ft)	65											
Base Capacity (vph)	358	837			829			757	643			
Starvation Cap Reductn	0	129			65			0	0			
Spillback Cap Reductn	0	0			0			0	0			
Storage Cap Reductn	0	0			0			0	0			
Reduced v/c Ratio	0.00	0.34			0.46			0.05	0.02			

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	7 (9%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	20.3
Intersection LOS:	C
Intersection Capacity Utilization	48.5%
ICU Level of Service	A
Analysis Period (min)	15

















m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 37: N Main St & W Washington St/E Washington St



Lanes, Volumes, Timings
 38: W Front St/E Front St & N Main St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	150	0	0	89	29	0	0	0	0	0	0
Future Volume (vph)	33	150	0	0	89	29	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	8	12	12	12	12
Storage Length (ft)	70		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.967											
Flt Protected	0.950											
Satd. Flow (prot)	1504	1425	0	0	1378	0	0	1308	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1504	1425	0	0	1378	0	0	1308	0	0	0	0
Link Speed (mph)	30				30				30		30	
Link Distance (ft)	262				256				210		326	
Travel Time (s)	6.0				5.8				4.8		7.4	
Confl. Peds. (#/hr)	17		2	2		17	7		36			
Peak Hour Factor	0.83	0.83	0.92	0.92	0.83	0.83	0.92	0.92	0.92	0.83	0.92	0.83
Heavy Vehicles (%)	8%	8%	2%	2%	8%	8%	2%	2%	2%	8%	2%	8%
Parking (#/hr)	0				0				0			
Adj. Flow (vph)	40	181	0	0	107	35	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	181	0	0	142	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12				12				0		0	
Link Offset(ft)	0				0				0		0	
Crosswalk Width(ft)	16				16				16		16	
Two way Left Turn Lane	Yes											
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.55	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control	Free				Free				Stop		Stop	

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization 27.1%	ICU Level of Service A
Analysis Period (min)	15

Lanes, Volumes, Timings
44: N East St & E Market St




















02/22/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	17	1022	7	0	0
Future Volume (vph)	0	17	1022	7	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	0%		-2%			2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Fr _t		0.865	0.999			
Fl _t Protected						
Satd. Flow (prot)	0	1292	3077	0	0	0
Fl _t Permitted						
Satd. Flow (perm)	0	1292	3077	0	0	0
Link Speed (mph)	30		30			30
Link Distance (ft)	558		266			127
Travel Time (s)	12.7		6.0			2.9
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)		0				
Adj. Flow (vph)	0	21	1246	9	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	21	1255	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.30	1.18	1.18	1.16	1.16
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Stop
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					
Intersection Capacity Utilization	41.6%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings
47: S Center St & W Olive St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											 	
Traffic Volume (vph)	0	60	35	5	35	0	0	0	0	45	745	55
Future Volume (vph)	0	60	35	5	35	0	0	0	0	45	745	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	10	12	12	12	12	12	12	12	12	12
Grade (%)		1%			-3%			3%			-1%	
Storage Length (ft)	0		80	0		0	0		0	0		50
Storage Lanes	0		1	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									0.850
Flt Protected				0.950							0.997	
Satd. Flow (prot)	0	1792	1470	1796	1891	0	0	0	0	0	3546	1591
Flt Permitted				0.715							0.997	
Satd. Flow (perm)	0	1792	1470	1352	1891	0	0	0	0	0	3546	1591
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			40									53
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		777			330			770			660	
Travel Time (s)		17.7			7.5			17.5			15.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	65	38	5	38	0	0	0	0	49	810	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	38	5	38	0	0	0	0	0	859	60
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.05	1.10	0.98	0.98	0.98	1.02	1.02	1.02	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA	Perm	Perm	NA					Perm	NA	Perm

Lanes, Volumes, Timings
47: S Center St & W Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8						6	
Permitted Phases			4	8						6		6
Detector Phase		4	4	8	8					6	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		13.5	13.5	13.5	13.5					37.9	37.9	37.9
Total Split (s)		21.0	21.0	21.0	21.0					59.0	59.0	59.0
Total Split (%)		26.3%	26.3%	26.3%	26.3%					73.8%	73.8%	73.8%
Maximum Green (s)		15.5	15.5	15.5	15.5					53.1	53.1	53.1
Yellow Time (s)		3.2	3.2	3.2	3.2					3.2	3.2	3.2
All-Red Time (s)		2.3	2.3	2.3	2.3					2.7	2.7	2.7
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	0.0
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		Max	Max	None	None					C-Max	C-Max	C-Max
Walk Time (s)		1.0	1.0	1.0	1.0					21.0	21.0	21.0
Flash Dont Walk (s)		7.0	7.0	7.0	7.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0					0	0	0
Act Effct Green (s)		15.5	15.5	15.5	15.5						53.1	53.1
Actuated g/C Ratio		0.19	0.19	0.19	0.19						0.66	0.66
v/c Ratio		0.19	0.12	0.02	0.10						0.37	0.06
Control Delay		28.7	10.0	25.2	25.3						1.4	0.1
Queue Delay		0.0	0.0	0.0	0.0						0.0	0.0
Total Delay		28.7	10.0	25.2	25.3						1.4	0.1
LOS		C	B	C	C						A	A
Approach Delay		21.8			25.3						1.3	
Approach LOS		C			C						A	
90th %ile Green (s)		15.5	15.5	15.5	15.5					53.1	53.1	53.1
90th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
70th %ile Green (s)		15.5	15.5	15.5	15.5					53.1	53.1	53.1
70th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
50th %ile Green (s)		15.5	15.5	15.5	15.5					53.1	53.1	53.1
50th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
30th %ile Green (s)		15.5	15.5	15.5	15.5					53.1	53.1	53.1
30th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
10th %ile Green (s)		15.5	15.5	15.5	15.5					53.1	53.1	53.1
10th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
Stops (vph)		49	10	7	30						76	0
Fuel Used(gal)		1	0	0	0						5	0
CO Emissions (g/hr)		69	24	5	30						329	20
NOx Emissions (g/hr)		13	5	1	6						64	4
VOC Emissions (g/hr)		16	5	1	7						76	5
Dilemma Vehicles (#)		0	0	0	0						0	0
Queue Length 50th (ft)		27	0	2	16						10	0
Queue Length 95th (ft)		61	23	m6	m35						12	m0
Internal Link Dist (ft)		697			250			690			580	
Turn Bay Length (ft)			80									50

Lanes, Volumes, Timings
47: S Center St & W Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		347	317	261	366						2353	1073
Starvation Cap Reductn		0	0	0	0						0	0
Spillback Cap Reductn		0	0	0	0						0	0
Storage Cap Reductn		0	0	0	0						0	0
Reduced v/c Ratio		0.19	0.12	0.02	0.10						0.37	0.06

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 21 (26%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.37
 Intersection Signal Delay: 4.2 Intersection LOS: A
 Intersection Capacity Utilization 44.3% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 47: S Center St & W Olive St



Lanes, Volumes, Timings
48: S East St & E Olive St

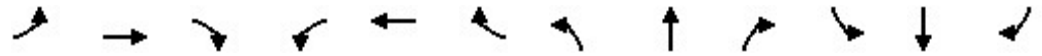
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕↕			↕↕				
Traffic Volume (vph)	60	55	0	0	15	25	30	1075	10	0	0	0
Future Volume (vph)	60	55	0	0	15	25	30	1075	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	12	12	12	12	12
Grade (%)		2%			-4%			4%				-4%
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.906			0.999				
Flt Protected		0.975						0.999				
Satd. Flow (prot)	0	1677	0	0	3177	0	0	3363	0	0	0	0
Flt Permitted		0.813						0.999				
Satd. Flow (perm)	0	1398	0	0	3177	0	0	3363	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					27			3				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		330			647			682				633
Travel Time (s)		7.5			14.7			15.5				14.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Parking (#/hr)		0										
Adj. Flow (vph)	65	60	0	0	16	27	33	1168	11	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	125	0	0	43	0	0	1212	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.07	1.01	0.97	0.97	0.97	1.03	1.03	1.03	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												

Lanes, Volumes, Timings
48: S East St & E Olive St

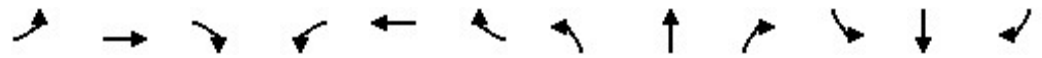
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Detector Phase	4	4			8		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	17.5	17.5			17.5		60.6	60.6				
Total Split (s)	18.0	18.0			18.0		62.0	62.0				
Total Split (%)	22.5%	22.5%			22.5%		77.5%	77.5%				
Maximum Green (s)	12.5	12.5			12.5		56.4	56.4				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.3	2.3			2.3		2.4	2.4				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.5			5.5			5.6				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Recall Mode	Max	Max			None		C-Max	C-Max				
Walk Time (s)	1.0	1.0			1.0		44.0	44.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		12.5			12.5			56.4				
Actuated g/C Ratio		0.16			0.16			0.70				
v/c Ratio		0.57			0.08			0.51				
Control Delay		43.2			16.4			6.3				
Queue Delay		0.0			0.0			0.0				
Total Delay		43.2			16.4			6.3				
LOS		D			B			A				
Approach Delay		43.2			16.4			6.3				
Approach LOS		D			B			A				
90th %ile Green (s)	12.5	12.5			12.5		56.4	56.4				
90th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
70th %ile Green (s)	12.5	12.5			12.5		56.4	56.4				
70th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
50th %ile Green (s)	12.5	12.5			12.5		56.4	56.4				
50th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
30th %ile Green (s)	12.5	12.5			12.5		56.4	56.4				
30th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
10th %ile Green (s)	12.5	12.5			12.5		56.4	56.4				
10th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
Stops (vph)		112			20			463				
Fuel Used(gal)		2			0			10				
CO Emissions (g/hr)		135			31			694				
NOx Emissions (g/hr)		26			6			135				
VOC Emissions (g/hr)		31			7			161				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		66			3			121				
Queue Length 95th (ft)		#125			17			160				

Lanes, Volumes, Timings
48: S East St & E Olive St

02/22/2024

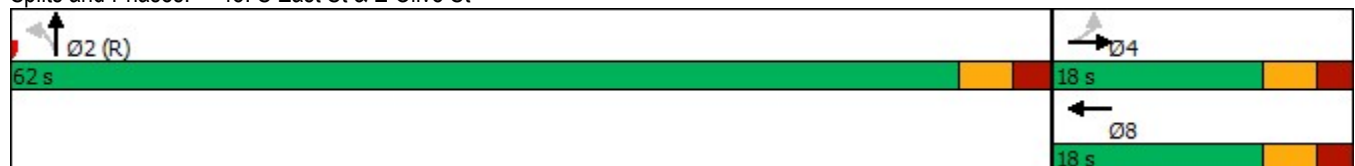


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		250			567			602			553	
Turn Bay Length (ft)												
Base Capacity (vph)		218			519			2371				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.57			0.08			0.51				

Intersection Summary

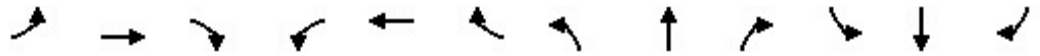
Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	55 (69%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.57
Intersection Signal Delay:	10.0
Intersection LOS:	B
Intersection Capacity Utilization	53.0%
ICU Level of Service	A
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 48: S East St & E Olive St



Lanes, Volumes, Timings
 3: N Madison St/N Center St & W Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑						↑↑	↑
Traffic Volume (vph)	0	491	69	0	0	0	0	0	0	216	1310	0
Future Volume (vph)	0	491	69	0	0	0	0	0	0	216	1310	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		150
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		1.00									1.00	
Frt		0.982										
Flt Protected											0.993	
Satd. Flow (prot)	0	3468	0	0	1863	0	0	0	0	0	3514	1863
Flt Permitted											0.993	
Satd. Flow (perm)	0	3468	0	0	1863	0	0	0	0	0	3507	1863
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		659			244			860			526	
Travel Time (s)		15.0			5.5			19.5			12.0	
Confl. Peds. (#/hr)			4							12		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	522	73	0	0	0	0	0	0	230	1394	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	595	0	0	0	0	0	0	0	0	1624	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	1
Detector Template		Thru		Left	Thru					Left	Thru	Right
Leading Detector (ft)		100		20	100					20	100	20
Trailing Detector (ft)		0		0	0					0	0	0
Detector 1 Position(ft)		0		0	0					0	0	0
Detector 1 Size(ft)		6		20	6					20	6	20
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA								Perm	NA	Perm

Lanes, Volumes, Timings
 3: N Madison St/N Center St & W Locust St

02/22/2024

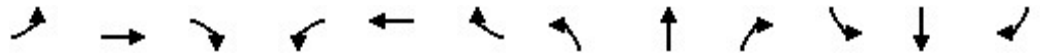


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8						6	
Permitted Phases				8						6		6
Detector Phase		4		8	8					6	6	6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		23.4		22.5	22.5					23.4	23.4	23.4
Total Split (s)		23.6		22.5	22.5					46.4	46.4	46.4
Total Split (%)		33.7%		32.1%	32.1%					66.3%	66.3%	66.3%
Maximum Green (s)		18.2		18.0	18.0					41.0	41.0	41.0
Yellow Time (s)		3.2		3.5	3.5					3.2	3.2	3.2
All-Red Time (s)		2.2		1.0	1.0					2.2	2.2	2.2
Lost Time Adjust (s)		0.0			0.0						0.0	0.0
Total Lost Time (s)		5.4			4.5						5.4	5.4
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Recall Mode		None		None	None					C-Max	C-Max	C-Max
Walk Time (s)		7.0		7.0	7.0					7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0					0	0	0
Act Effct Green (s)		16.4									42.8	
Actuated g/C Ratio		0.23									0.61	
v/c Ratio		0.72									0.76	
Control Delay		29.0									13.2	
Queue Delay		0.8									2.4	
Total Delay		29.8									15.6	
LOS		C									B	
Approach Delay		29.8									15.6	
Approach LOS		C									B	
90th %ile Green (s)		18.2		19.1	19.1					41.0	41.0	41.0
90th %ile Term Code		Max		Hold	Hold					Coord	Coord	Coord
70th %ile Green (s)		18.2		19.1	19.1					41.0	41.0	41.0
70th %ile Term Code		Max		Hold	Hold					Coord	Coord	Coord
50th %ile Green (s)		17.5		18.4	18.4					41.7	41.7	41.7
50th %ile Term Code		Gap		Hold	Hold					Coord	Coord	Coord
30th %ile Green (s)		15.7		16.6	16.6					43.5	43.5	43.5
30th %ile Term Code		Gap		Hold	Hold					Coord	Coord	Coord
10th %ile Green (s)		12.3		13.2	13.2					46.9	46.9	46.9
10th %ile Term Code		Gap		Hold	Hold					Coord	Coord	Coord
Stops (vph)		475									1053	
Fuel Used(gal)		9									16	
CO Emissions (g/hr)		615									1132	
NOx Emissions (g/hr)		120									220	
VOC Emissions (g/hr)		142									262	
Dilemma Vehicles (#)		0									0	
Queue Length 50th (ft)		117									247	
Queue Length 95th (ft)		167									344	
Internal Link Dist (ft)		579			164			780			446	
Turn Bay Length (ft)												

Lanes, Volumes, Timings

3: N Madison St/N Center St & W Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		917										2145
Starvation Cap Reductn		0										0
Spillback Cap Reductn		117										377
Storage Cap Reductn		0										0
Reduced v/c Ratio		0.74										0.92

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	45 (64%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.76
Intersection Signal Delay:	19.4
Intersection LOS:	B
Intersection Capacity Utilization	67.3%
ICU Level of Service	C
Analysis Period (min)	15

















Splits and Phases: 3: N Madison St/N Center St & W Locust St



Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

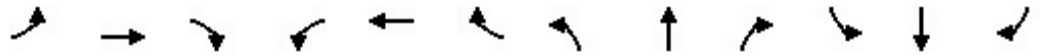
02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	599	0	0	0	0	0	1109	231	0	0	0
Future Volume (vph)	113	599	0	0	0	0	0	1109	231	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00						1.00				
Frt								0.974				
Flt Protected		0.992										
Satd. Flow (prot)	0	3511	0	0	0	0	0	3438	0	0	0	0
Flt Permitted		0.992										
Satd. Flow (perm)	0	3508	0	0	0	0	0	3438	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								41				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		244			514			878				525
Travel Time (s)		5.5			11.7			20.0				11.9
Confl. Peds. (#/hr)	5								3			
Confl. Bikes (#/hr)									1			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	122	644	0	0	0	0	0	1192	248	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	766	0	0	0	0	0	1440	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2					1	2				
Detector Template	Left	Thru					Left	Thru				
Leading Detector (ft)	20	100					20	100				
Trailing Detector (ft)	0	0					0	0				
Detector 1 Position(ft)	0	0					0	0				
Detector 1 Size(ft)	20	6					20	6				
Detector 1 Type	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0					0.0	0.0				
Detector 1 Queue (s)	0.0	0.0					0.0	0.0				
Detector 1 Delay (s)	0.0	0.0					0.0	0.0				
Detector 2 Position(ft)		94						94				
Detector 2 Size(ft)		6						6				
Detector 2 Type		Cl+Ex						Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0				
Turn Type	Perm	NA						NA				
Protected Phases		4						2				
Permitted Phases	4						2					

Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

02/22/2024

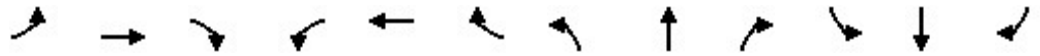


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4					2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0					5.0	5.0				
Minimum Split (s)	23.5	23.5					23.5	23.5				
Total Split (s)	24.0	24.0					46.0	46.0				
Total Split (%)	34.3%	34.3%					65.7%	65.7%				
Maximum Green (s)	18.5	18.5					40.5	40.5				
Yellow Time (s)	3.2	3.2					3.2	3.2				
All-Red Time (s)	2.3	2.3					2.3	2.3				
Lost Time Adjust (s)		0.0						0.0				
Total Lost Time (s)		5.5						5.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0					3.0	3.0				
Recall Mode	None	None					C-Max	C-Max				
Walk Time (s)	7.0	7.0					7.0	7.0				
Flash Dont Walk (s)	11.0	11.0					11.0	11.0				
Pedestrian Calls (#/hr)	0	0					0	0				
Act Effct Green (s)		18.1						40.9				
Actuated g/C Ratio		0.26						0.58				
v/c Ratio		0.84						0.71				
Control Delay		34.4						7.7				
Queue Delay		50.0						0.0				
Total Delay		84.4						7.7				
LOS		F						A				
Approach Delay		84.4						7.7				
Approach LOS		F						A				
90th %ile Green (s)	18.5	18.5					40.5	40.5				
90th %ile Term Code	Max	Max					Coord	Coord				
70th %ile Green (s)	18.5	18.5					40.5	40.5				
70th %ile Term Code	Max	Max					Coord	Coord				
50th %ile Green (s)	18.5	18.5					40.5	40.5				
50th %ile Term Code	Max	Max					Coord	Coord				
30th %ile Green (s)	18.5	18.5					40.5	40.5				
30th %ile Term Code	Max	Max					Coord	Coord				
10th %ile Green (s)	16.6	16.6					42.4	42.4				
10th %ile Term Code	Gap	Gap					Coord	Coord				
Stops (vph)		666						628				
Fuel Used(gal)		10						15				
CO Emissions (g/hr)		701						1030				
NOx Emissions (g/hr)		136						200				
VOC Emissions (g/hr)		162						239				
Dilemma Vehicles (#)		0						0				
Queue Length 50th (ft)		175						82				
Queue Length 95th (ft)		#257						98				
Internal Link Dist (ft)		164			434			798			445	
Turn Bay Length (ft)												
Base Capacity (vph)		927						2024				
Starvation Cap Reductn		262						0				

Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		1.15						0.71				

Intersection Summary

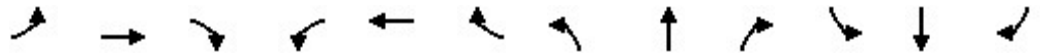
Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	10 (14%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.84
Intersection Signal Delay:	34.3
Intersection LOS:	C
Intersection Capacity Utilization	67.1%
ICU Level of Service	C
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 6: N East St/N Main St & W Locust St/E Locust St



Lanes, Volumes, Timings
 9: N Madison St & W Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔						↔↔	
Traffic Volume (vph)	0	125	85	20	150	0	0	0	0	10	1025	160
Future Volume (vph)	0	125	85	20	150	0	0	0	0	10	1025	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		1%			-2%			-6%			4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99		1.00							1.00	
Frt		0.946									0.980	
Flt Protected				0.950								
Satd. Flow (prot)	0	1517	0	1609	1637	0	0	0	0	0	3050	0
Flt Permitted				0.494								
Satd. Flow (perm)	0	1517	0	835	1637	0	0	0	0	0	3050	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46									43	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		705			247			400			860	
Travel Time (s)		16.0			5.6			9.1			19.5	
Confl. Peds. (#/hr)			1	1								4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Parking (#/hr)										20		20
Adj. Flow (vph)	0	133	90	21	160	0	0	0	0	11	1090	170
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	223	0	21	160	0	0	0	0	0	1271	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	1.15	1.20	1.15	1.13	1.18	1.13	1.10	1.10	1.10	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm	NA	

Lanes, Volumes, Timings
 9: N Madison St & W Market St

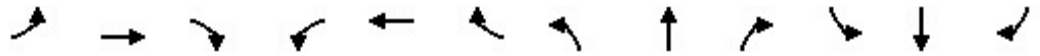
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		17.4		17.4	17.4					45.2	45.2	
Total Split (s)		23.0		23.0	23.0					47.0	47.0	
Total Split (%)		32.9%		32.9%	32.9%					67.1%	67.1%	
Maximum Green (s)		17.6		17.6	17.6					41.8	41.8	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.2		2.2	2.2					2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0						0.0	
Total Lost Time (s)		5.4		5.4	5.4						5.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		1.0		1.0	1.0					29.0	29.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		13.1		13.1	13.1						46.3	
Actuated g/C Ratio		0.19		0.19	0.19						0.66	
v/c Ratio		0.69		0.13	0.52						0.63	
Control Delay		32.0		23.6	30.9						1.5	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		32.0		23.6	30.9						1.5	
LOS		C		C	C						A	
Approach Delay		32.0			30.1						1.5	
Approach LOS		C			C						A	
90th %ile Green (s)		17.6		17.6	17.6					41.8	41.8	
90th %ile Term Code		Max		Hold	Hold					Coord	Coord	
70th %ile Green (s)		16.1		16.1	16.1					43.3	43.3	
70th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
50th %ile Green (s)		13.6		13.6	13.6					45.8	45.8	
50th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
30th %ile Green (s)		11.0		11.0	11.0					48.4	48.4	
30th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
10th %ile Green (s)		7.3		7.3	7.3					52.1	52.1	
10th %ile Term Code		Gap		Gap	Gap					Coord	Coord	
Stops (vph)		151		19	128						48	
Fuel Used(gal)		3		0	2						9	
CO Emissions (g/hr)		235		17	136						605	
NOx Emissions (g/hr)		46		3	26						118	
VOC Emissions (g/hr)		54		4	31						140	
Dilemma Vehicles (#)		0		0	0						0	
Queue Length 50th (ft)		71		8	62						12	
Queue Length 95th (ft)		130		24	108						13	
Internal Link Dist (ft)		625			167			320			780	
Turn Bay Length (ft)												

Lanes, Volumes, Timings
 9: N Madison St & W Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		415		209	411						2031	
Starvation Cap Reductn		0		0	0						0	
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.54		0.10	0.39						0.63	

Intersection Summary

Area Type:	CBD
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	64 (91%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.69
Intersection Signal Delay:	8.7
Intersection LOS:	A
Intersection Capacity Utilization	64.8%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 9: N Madison St & W Market St



Lanes, Volumes, Timings
11: N East St & E Market St

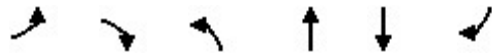
02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	155	0	135	1070	0	0
Future Volume (vph)	155	0	135	1070	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	11	12	12
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor	0.98			1.00		
Frt						
Flt Protected	0.950			0.994		
Satd. Flow (prot)	1481	0	0	2782	0	0
Flt Permitted	0.950			0.994		
Satd. Flow (perm)	1447	0	0	2782	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	263			127	878	
Travel Time (s)	6.0			2.9	20.0	
Confl. Peds. (#/hr)	11		2			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Parking (#/hr)	0		20	20		
Adj. Flow (vph)	165	0	144	1138	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	165	0	0	1282	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.25	1.14	1.13	1.34	1.16	1.16
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2		
Detector Template	Left		Left	Thru		
Leading Detector (ft)	20		20	100		
Trailing Detector (ft)	0		0	0		
Detector 1 Position(ft)	0		0	0		
Detector 1 Size(ft)	20		20	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(ft)				94		
Detector 2 Size(ft)				6		
Detector 2 Type				Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)				0.0		
Turn Type	Prot		Perm	NA		

Lanes, Volumes, Timings
11: N East St & E Market St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4			2		
Permitted Phases			2			
Detector Phase	4		2	2		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	15.4		47.5	47.5		
Total Split (s)	21.0		49.0	49.0		
Total Split (%)	30.0%		70.0%	70.0%		
Maximum Green (s)	15.6		43.5	43.5		
Yellow Time (s)	3.2		3.2	3.2		
All-Red Time (s)	2.2		2.3	2.3		
Lost Time Adjust (s)	0.0			0.0		
Total Lost Time (s)	5.4			5.5		
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		C-Max	C-Max		
Walk Time (s)	1.0		31.0	31.0		
Flash Dont Walk (s)	9.0		11.0	11.0		
Pedestrian Calls (#/hr)	0		0	0		
Act Effct Green (s)	12.4			46.7		
Actuated g/C Ratio	0.18			0.67		
v/c Ratio	0.63			0.69		
Control Delay	37.1			10.4		
Queue Delay	0.0			0.0		
Total Delay	37.1			10.4		
LOS	D			B		
Approach Delay	37.1			10.4		
Approach LOS	D			B		
90th %ile Green (s)	15.6		43.5	43.5		
90th %ile Term Code	Max		Coord	Coord		
70th %ile Green (s)	15.1		44.0	44.0		
70th %ile Term Code	Gap		Coord	Coord		
50th %ile Green (s)	13.0		46.1	46.1		
50th %ile Term Code	Gap		Coord	Coord		
30th %ile Green (s)	10.8		48.3	48.3		
30th %ile Term Code	Gap		Coord	Coord		
10th %ile Green (s)	7.6		51.5	51.5		
10th %ile Term Code	Gap		Coord	Coord		
Stops (vph)	137			717		
Fuel Used(gal)	2			8		
CO Emissions (g/hr)	157			539		
NOx Emissions (g/hr)	31			105		
VOC Emissions (g/hr)	36			125		
Dilemma Vehicles (#)	0			0		
Queue Length 50th (ft)	66			156		
Queue Length 95th (ft)	119			256		
Internal Link Dist (ft)	183			47	798	
Turn Bay Length (ft)						

Lanes, Volumes, Timings
 11: N East St & E Market St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Base Capacity (vph)				1855		
Starvation Cap Reductn	0			0		
Spillback Cap Reductn	0			0		
Storage Cap Reductn	0			0		
Reduced v/c Ratio	0.50			0.69		

Intersection Summary

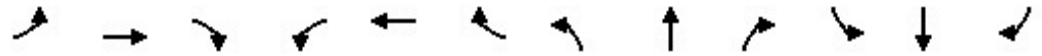
Area Type:	CBD
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	64 (91%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.69
Intersection Signal Delay:	13.4
Intersection LOS:	B
Intersection Capacity Utilization	55.8%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 11: N East St & E Market St



Lanes, Volumes, Timings
 12: N Madison St & W Monroe St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔						↔↔		
Traffic Volume (vph)	0	10	0	35	28	0	0	0	0	3	1168	7	
Future Volume (vph)	0	10	0	35	28	0	0	0	0	3	1168	7	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	12	12	12	12	12	12	12	12	12	12	
Grade (%)		0%			0%			-3%			6%		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	
Ped Bike Factor													
Frt												0.999	
Flt Protected					0.973								
Satd. Flow (prot)	0	1621	0	0	1631	0	0	0	0	0	3087	0	
Flt Permitted					0.973								
Satd. Flow (perm)	0	1621	0	0	1631	0	0	0	0	0	3087	0	
Link Speed (mph)					30					30			
Link Distance (ft)					699			209			307		
Travel Time (s)					15.9			4.8			7.0		
Confl. Peds. (#/hr)											4	2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
Adj. Flow (vph)	0	11	0	39	31	0	0	0	0	3	1312	8	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	11	0	0	70	0	0	0	0	0	1323	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0					0				0		0	
Link Offset(ft)	0					0				0		0	
Crosswalk Width(ft)	16					16				16		16	
Two way Left Turn Lane													
Headway Factor	1.14	1.19	1.14	1.14	1.14	1.14	1.12	1.12	1.12	1.19	1.19	1.19	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Sign Control	Stop					Stop				Stop		Free	
Intersection Summary													
Area Type:	CBD												
Control Type:	Unsignalized												
Intersection Capacity Utilization	53.3%					ICU Level of Service A							
Analysis Period (min)	15												

Lanes, Volumes, Timings
13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	45	0	30	1110	0	0
Future Volume (vph)	45	0	30	1110	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12
Grade (%)	-2%			-3%	4%	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor	0.98			1.00		
Frt						
Flt Protected	0.950			0.999		
Satd. Flow (prot)	1448	0	0	2810	0	0
Flt Permitted	0.950			0.999		
Satd. Flow (perm)	1426	0	0	2809	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	221			318	266	
Travel Time (s)	5.0			7.2	6.0	
Confl. Peds. (#/hr)	5		7			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Parking (#/hr)	0		20	20		
Adj. Flow (vph)	46	0	31	1144	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	46	0	0	1175	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.29	1.13	1.12	1.34	1.17	1.17
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2		
Detector Template	Left		Left	Thru		
Leading Detector (ft)	20		20	100		
Trailing Detector (ft)	0		0	0		
Detector 1 Position(ft)	0		0	0		
Detector 1 Size(ft)	20		20	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(ft)				94		
Detector 2 Size(ft)				6		
Detector 2 Type				Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)				0.0		
Turn Type	Prot		Perm	NA		

Lanes, Volumes, Timings
13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4			2		
Permitted Phases			2			
Detector Phase	4		2	2		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	13.2		49.2	49.2		
Total Split (s)	17.0		63.0	63.0		
Total Split (%)	21.3%		78.8%	78.8%		
Maximum Green (s)	11.8		57.8	57.8		
Yellow Time (s)	3.2		3.2	3.2		
All-Red Time (s)	2.0		2.0	2.0		
Lost Time Adjust (s)	0.0			0.0		
Total Lost Time (s)	5.2			5.2		
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		C-Max	C-Max		
Walk Time (s)	1.0		33.0	33.0		
Flash Dont Walk (s)	7.0		11.0	11.0		
Pedestrian Calls (#/hr)	0		0	0		
Act Effct Green (s)	8.0			68.1		
Actuated g/C Ratio	0.10			0.85		
v/c Ratio	0.32			0.49		
Control Delay	38.4			1.0		
Queue Delay	0.0			0.0		
Total Delay	38.4			1.0		
LOS	D			A		
Approach Delay	38.4			1.0		
Approach LOS	D			A		
90th %ile Green (s)	11.0		58.6	58.6		
90th %ile Term Code	Gap		Coord	Coord		
70th %ile Green (s)	9.2		60.4	60.4		
70th %ile Term Code	Gap		Coord	Coord		
50th %ile Green (s)	7.9		61.7	61.7		
50th %ile Term Code	Gap		Coord	Coord		
30th %ile Green (s)	0.0		74.8	74.8		
30th %ile Term Code	Skip		Coord	Coord		
10th %ile Green (s)	0.0		74.8	74.8		
10th %ile Term Code	Skip		Coord	Coord		
Stops (vph)	42			33		
Fuel Used(gal)	1			3		
CO Emissions (g/hr)	46			226		
NOx Emissions (g/hr)	9			44		
VOC Emissions (g/hr)	11			52		
Dilemma Vehicles (#)	0			0		
Queue Length 50th (ft)	22			11		
Queue Length 95th (ft)	52			16		
Internal Link Dist (ft)	141			238	186	
Turn Bay Length (ft)						

Lanes, Volumes, Timings
 13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Base Capacity (vph)	213			2392		
Starvation Cap Reductn	0			0		
Spillback Cap Reductn	0			0		
Storage Cap Reductn	0			0		
Reduced v/c Ratio	0.22			0.49		

Intersection Summary

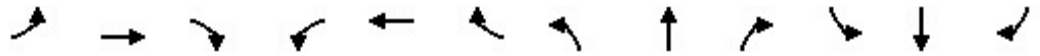
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	59 (74%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.49
Intersection Signal Delay:	2.4
Intersection LOS:	A
Intersection Capacity Utilization	47.9%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 13: N East St & Monroe St



Lanes, Volumes, Timings
15: N Madison St & W Jefferson St

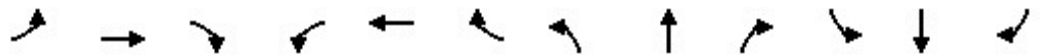
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔↔	
Traffic Volume (vph)	0	20	5	15	15	0	0	0	0	15	1155	10
Future Volume (vph)	0	20	5	15	15	0	0	0	0	15	1155	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	14	12	12	12	12	12	12	12
Grade (%)		4%			-3%			2%			2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00			1.00						1.00	
Frt		0.973									0.999	
Flt Protected					0.976						0.999	
Satd. Flow (prot)	0	1804	0	0	1594	0	0	0	0	0	3147	0
Flt Permitted					0.869						0.999	
Satd. Flow (perm)	0	1804	0	0	1413	0	0	0	0	0	3147	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6									2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		692			253			310			307	
Travel Time (s)		15.7			5.8			7.0			7.0	
Confl. Peds. (#/hr)			4	4						2		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Parking (#/hr)					0					20		20
Adj. Flow (vph)	0	24	6	18	18	0	0	0	0	18	1359	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	30	0	0	36	0	0	0	0	0	1389	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.17	1.00	1.17	1.12	1.18	1.12	1.16	1.16	1.16	1.16	1.16	1.16
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm	NA	

Lanes, Volumes, Timings
15: N Madison St & W Jefferson St

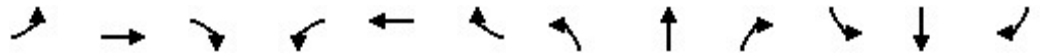
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		15.1		15.4	15.4					47.4	47.4	
Total Split (s)		20.0		20.0	20.0					60.0	60.0	
Total Split (%)		25.0%		25.0%	25.0%					75.0%	75.0%	
Maximum Green (s)		14.9		14.6	14.6					54.6	54.6	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.9		2.2	2.2					2.2	2.2	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.1			5.4						5.4	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		Max		None	None					C-Max	C-Max	
Walk Time (s)		1.0		1.0	1.0					31.0	31.0	
Flash Dont Walk (s)		9.0		9.0	9.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		14.9			14.6						54.6	
Actuated g/C Ratio		0.19			0.18						0.68	
v/c Ratio		0.09			0.14						0.65	
Control Delay		23.8			29.1						9.0	
Queue Delay		0.0			0.0						0.0	
Total Delay		23.8			29.1						9.0	
LOS		C			C						A	
Approach Delay		23.8			29.1						9.0	
Approach LOS		C			C						A	
90th %ile Green (s)		14.9		14.6	14.6					54.6	54.6	
90th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
70th %ile Green (s)		14.9		14.6	14.6					54.6	54.6	
70th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
50th %ile Green (s)		14.9		14.6	14.6					54.6	54.6	
50th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
30th %ile Green (s)		14.9		14.6	14.6					54.6	54.6	
30th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
10th %ile Green (s)		14.9		14.6	14.6					54.6	54.6	
10th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
Stops (vph)		20			28						616	
Fuel Used(gal)		0			0						8	
CO Emissions (g/hr)		26			28						586	
NOx Emissions (g/hr)		5			5						114	
VOC Emissions (g/hr)		6			6						136	
Dilemma Vehicles (#)		0			0						0	
Queue Length 50th (ft)		10			15						176	
Queue Length 95th (ft)		30			38						211	
Internal Link Dist (ft)		612			173			230			227	
Turn Bay Length (ft)												

Lanes, Volumes, Timings
 15: N Madison St & W Jefferson St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		340			257						2148	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.09			0.14						0.65	

Intersection Summary

















Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.65
Intersection Signal Delay:	9.8
Intersection LOS:	A
Intersection Capacity Utilization	53.8%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 15: N Madison St & W Jefferson St















Lanes, Volumes, Timings
16: N East St & E Jefferson St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	40	0	0	45	35	20	1080	20	0	0	0
Future Volume (vph)	15	40	0	0	45	35	20	1080	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	12	12	11	11	12	12	12
Grade (%)		-3%			3%			0%			3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.99			0.97			1.00				
Frt					0.941			0.997				
Flt Protected		0.986						0.999				
Satd. Flow (prot)	0	1510	0	0	1556	0	0	3066	0	0	0	0
Flt Permitted		0.913						0.999				
Satd. Flow (perm)	0	1378	0	0	1556	0	0	3065	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					36			5				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		268			710			308			318	
Travel Time (s)		6.1			16.1			7.0			7.2	
Confl. Peds. (#/hr)	25					25	17		4			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Parking (#/hr)		0					20		20			
Adj. Flow (vph)	16	42	0	0	47	36	21	1125	21	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	0	0	83	0	0	1167	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.28	1.12	1.17	1.12	1.17	1.14	1.19	1.19	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA				

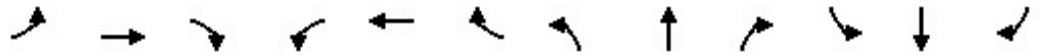
Lanes, Volumes, Timings
 16: N East St & E Jefferson St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8			2				
Permitted Phases	4						2					
Detector Phase	4	4			8		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	15.2	15.2			15.2		47.2	47.2				
Total Split (s)	20.0	20.0			20.0		60.0	60.0				
Total Split (%)	25.0%	25.0%			25.0%		75.0%	75.0%				
Maximum Green (s)	14.8	14.8			14.8		54.8	54.8				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Recall Mode	Max	Max			None		C-Max	C-Max				
Walk Time (s)	1.0	1.0			1.0		31.0	31.0				
Flash Dont Walk (s)	9.0	9.0			9.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		14.8			14.8			54.8				
Actuated g/C Ratio		0.18			0.18			0.68				
v/c Ratio		0.23			0.26			0.56				
Control Delay		30.5			20.1			3.0				
Queue Delay		0.0			0.0			0.1				
Total Delay		30.5			20.1			3.2				
LOS		C			C			A				
Approach Delay		30.5			20.1			3.2				
Approach LOS		C			C			A				
90th %ile Green (s)	14.8	14.8			14.8		54.8	54.8				
90th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
70th %ile Green (s)	14.8	14.8			14.8		54.8	54.8				
70th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
50th %ile Green (s)	14.8	14.8			14.8		54.8	54.8				
50th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
30th %ile Green (s)	14.8	14.8			14.8		54.8	54.8				
30th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
10th %ile Green (s)	14.8	14.8			14.8		54.8	54.8				
10th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
Stops (vph)		47			42			143				
Fuel Used(gal)		1			1			4				
CO Emissions (g/hr)		51			70			292				
NOx Emissions (g/hr)		10			14			57				
VOC Emissions (g/hr)		12			16			68				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		25			20			41				
Queue Length 95th (ft)		58			58			53				
Internal Link Dist (ft)		188			630			228			238	
Turn Bay Length (ft)												

Lanes, Volumes, Timings
 16: N East St & E Jefferson St

02/22/2024

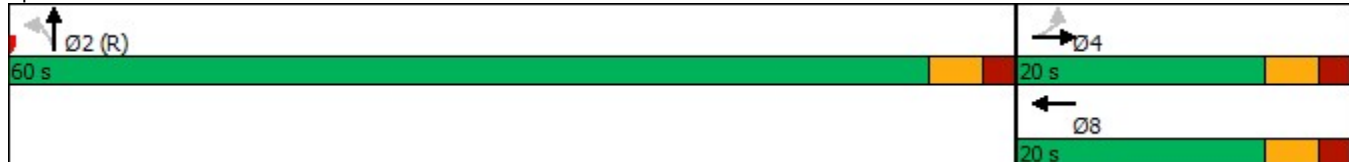


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		254			317			2101				
Starvation Cap Reductn		0			0			221				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.23			0.26			0.62				

Intersection Summary

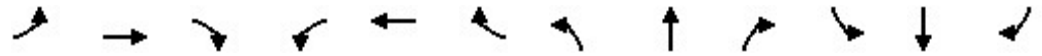
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	55 (69%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.56
Intersection Signal Delay:	5.5
Intersection LOS:	A
Intersection Capacity Utilization	53.6%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 16: N East St & E Jefferson St



Lanes, Volumes, Timings
 19: N Madison St & W Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖					↖	↗	↗
Traffic Volume (vph)	0	165	35	75	250	0	0	0	0	45	1095	45
Future Volume (vph)	0	165	35	75	250	0	0	0	0	45	1095	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	12	12	12	12	12
Grade (%)		3%			-3%			2%				-2%
Storage Length (ft)	0		0	65		0	0		0	150		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor		1.00		0.99						1.00	1.00	
Fr _t		0.976									0.994	
Fl _t Protected				0.950						0.950		
Satd. Flow (prot)	0	1494	0	1617	1758	0	0	0	0	1367	3195	0
Fl _t Permitted				0.523						0.950		
Satd. Flow (perm)	0	1494	0	885	1758	0	0	0	0	1364	3195	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12									10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		690			253			324			310	
Travel Time (s)		15.7			5.8			7.4			7.0	
Confl. Peds. (#/hr)			4	4						2		3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Parking (#/hr)		0								10		10
Adj. Flow (vph)	0	174	37	79	263	0	0	0	0	47	1153	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	211	0	79	263	0	0	0	0	47	1200	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.17	1.28	1.17	1.12	1.08	1.12	1.16	1.16	1.16	1.38	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex

Lanes, Volumes, Timings
 19: N Madison St & W Washington St

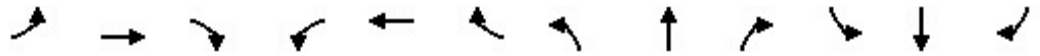
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		17.4		27.4	27.4					35.6	35.6	
Total Split (s)		23.0		23.0	23.0					57.0	57.0	
Total Split (%)		28.8%		28.8%	28.8%					71.3%	71.3%	
Maximum Green (s)		17.6		17.6	17.6					51.4	51.4	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.2		2.2	2.2					2.4	2.4	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		5.4		5.4	5.4					5.6	5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		Max	Max					C-Max	C-Max	
Walk Time (s)		1.0		11.0	11.0					19.0	19.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		17.6		17.6	17.6					51.4	51.4	
Actuated g/C Ratio		0.22		0.22	0.22					0.64	0.64	
v/c Ratio		0.62		0.41	0.68					0.05	0.58	
Control Delay		35.8		20.7	26.4					3.2	4.3	
Queue Delay		0.0		0.0	15.6					0.0	0.2	
Total Delay		35.8		20.7	42.0					3.2	4.4	
LOS		D		C	D					A	A	
Approach Delay		35.8			37.1							4.4
Approach LOS		D			D							A
90th %ile Green (s)		17.6		17.6	17.6					51.4	51.4	
90th %ile Term Code		Max		Ped	Ped					Coord	Coord	
70th %ile Green (s)		17.6		17.6	17.6					51.4	51.4	
70th %ile Term Code		Max		Ped	Ped					Coord	Coord	
50th %ile Green (s)		17.6		17.6	17.6					51.4	51.4	
50th %ile Term Code		Hold		Ped	Ped					Coord	Coord	
30th %ile Green (s)		17.6		17.6	17.6					51.4	51.4	
30th %ile Term Code		Hold		Ped	Ped					Coord	Coord	
10th %ile Green (s)		17.6		17.6	17.6					51.4	51.4	
10th %ile Term Code		Hold		Ped	Ped					Coord	Coord	
Stops (vph)		170		72	246					7	267	
Fuel Used(gal)		3		1	3					0	5	
CO Emissions (g/hr)		243		60	224					12	365	
NOx Emissions (g/hr)		47		12	43					2	71	
VOC Emissions (g/hr)		56		14	52					3	85	
Dilemma Vehicles (#)		0		0	0					0	0	
Queue Length 50th (ft)		90		42	144					4	47	

Lanes, Volumes, Timings
 19: N Madison St & W Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)		162		82	#227					m6	57	
Internal Link Dist (ft)		610			173			244			230	
Turn Bay Length (ft)				65						150		
Base Capacity (vph)		338		194	386					876	2056	
Starvation Cap Reductn		0		0	107					0	197	
Spillback Cap Reductn		0		0	0					106	0	
Storage Cap Reductn		0		0	0					0	0	
Reduced v/c Ratio		0.62		0.41	0.94					0.06	0.65	

Intersection Summary

Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 14.3
 Intersection LOS: B
 Intersection Capacity Utilization 65.6%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: N Madison St & W Washington St



Lanes, Volumes, Timings
20: N East St & E Washington St

02/22/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	275	0	0	80	100	35	1095	90	0	0	0
Future Volume (vph)	40	275	0	0	80	100	35	1095	90	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	10	11	11	11	12	12	12
Grade (%)		-3%			2%			-3%			1%	
Storage Length (ft)	65		0	0		80	80		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.99					0.98	1.00	1.00				
Fr _t						0.850		0.989				
Fl _t Protected	0.950						0.950					
Satd. Flow (prot)	1617	1702	0	0	1604	1317	1250	3084	0	0	0	0
Fl _t Permitted	0.701						0.950					
Satd. Flow (perm)	1186	1702	0	0	1604	1292	1245	3084	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						64		17				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		262			724			322				308
Travel Time (s)		6.0			16.5			7.3				7.0
Confl. Peds. (#/hr)	4					4	4		9			
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Parking (#/hr)							20		20			
Adj. Flow (vph)	43	296	0	0	86	108	38	1177	97	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	296	0	0	86	108	38	1274	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.12	1.12	1.12	1.16	1.21	1.26	1.54	1.17	1.17	1.15	1.15	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				

Lanes, Volumes, Timings
20: N East St & E Washington St

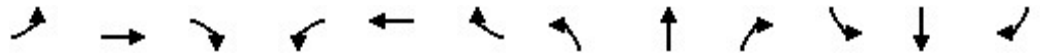
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex				Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0				0.0				
Turn Type	Perm	NA		NA		Perm	Perm	NA				
Protected Phases	4			8				2				
Permitted Phases	4					8	2					
Detector Phase	4	4		8		8	2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0	2.0	2.0				
Minimum Split (s)	31.4	31.4		21.4		21.4	47.0	47.0				
Total Split (s)	29.0	29.0		29.0		29.0	51.0	51.0				
Total Split (%)	36.3%	36.3%		36.3%		36.3%	63.8%	63.8%				
Maximum Green (s)	23.6	23.6		23.6		23.6	45.0	45.0				
Yellow Time (s)	3.2	3.2		3.2		3.2	3.2	3.2				
All-Red Time (s)	2.2	2.2		2.2		2.2	2.8	2.8				
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0	0.0				
Total Lost Time (s)	5.4	5.4		5.4		5.4	6.0	6.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0	3.0				
Recall Mode	None	None		None		None	C-Max	C-Max				
Walk Time (s)	15.0	15.0		5.0		5.0	30.0	30.0				
Flash Dont Walk (s)	11.0	11.0		11.0		11.0	11.0	11.0				
Pedestrian Calls (#/hr)	0	0		0		0	0	0				
Act Effct Green (s)	18.6	18.6		18.6		18.6	50.0	50.0				
Actuated g/C Ratio	0.23	0.23		0.23		0.23	0.62	0.62				
v/c Ratio	0.16	0.75		0.23		0.31	0.05	0.66				
Control Delay	7.2	19.2		24.9		13.5	3.6	5.8				
Queue Delay	0.0	0.5		0.0		0.0	0.0	0.1				
Total Delay	7.2	19.7		24.9		13.5	3.6	5.9				
LOS	A	B		C		B	A	A				
Approach Delay	18.1			18.5				5.8				
Approach LOS	B			B				A				
90th %ile Green (s)	23.6	23.6		23.6		23.6	45.0	45.0				
90th %ile Term Code	Max	Max		Hold		Hold	Coord	Coord				
70th %ile Green (s)	21.7	21.7		21.7		21.7	46.9	46.9				
70th %ile Term Code	Gap	Gap		Hold		Hold	Coord	Coord				
50th %ile Green (s)	19.1	19.1		19.1		19.1	49.5	49.5				
50th %ile Term Code	Gap	Gap		Hold		Hold	Coord	Coord				
30th %ile Green (s)	16.3	16.3		16.3		16.3	52.3	52.3				
30th %ile Term Code	Gap	Gap		Hold		Hold	Coord	Coord				
10th %ile Green (s)	12.3	12.3		12.3		12.3	56.3	56.3				
10th %ile Term Code	Gap	Gap		Hold		Hold	Coord	Coord				
Stops (vph)	10	109		60		37	6	386				
Fuel Used(gal)	0	2		1		1	0	6				
CO Emissions (g/hr)	14	157		83		73	10	454				
NOx Emissions (g/hr)	3	30		16		14	2	88				
VOC Emissions (g/hr)	3	36		19		17	2	105				
Dilemma Vehicles (#)	0	0		0		0	0	0				

Lanes, Volumes, Timings
 20: N East St & E Washington St

02/22/2024

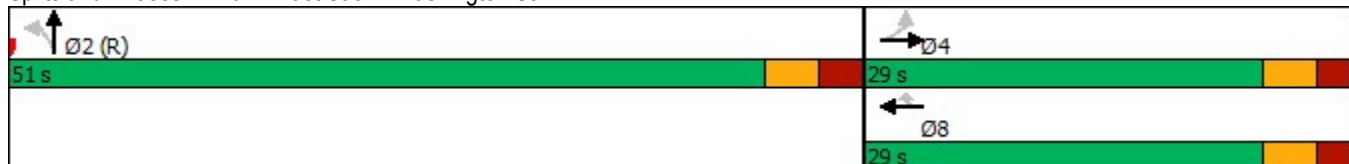


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	4	26			35	17	3	55				
Queue Length 95th (ft)	9	60			66	54	m6	71				
Internal Link Dist (ft)		182			644			242			228	
Turn Bay Length (ft)	65					80	80					
Base Capacity (vph)	349	502			473	426	778	1934				
Starvation Cap Reductn	0	37			0	0	0	92				
Spillback Cap Reductn	0	0			10	0	0	0				
Storage Cap Reductn	0	0			0	0	0	0				
Reduced v/c Ratio	0.12	0.64			0.19	0.25	0.05	0.69				

Intersection Summary

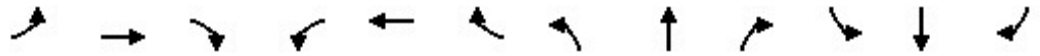
Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 64 (80%), Referenced to phase 2:NBTL and 6:, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 9.4
 Intersection LOS: A
 Intersection Capacity Utilization 63.1%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: N East St & E Washington St



Lanes, Volumes, Timings
 23: S Center St/N Madison St & W Front St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖						↖↗	
Traffic Volume (vph)	0	30	25	75	55	0	0	0	0	10	1130	30
Future Volume (vph)	0	30	25	75	55	0	0	0	0	10	1130	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	12	12	12	12	12	12	12	12
Grade (%)		3%			-3%			1%				-1%
Storage Length (ft)	0		0	60		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			0			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99		0.98							1.00	
Frt		0.938									0.996	
Flt Protected				0.950								
Satd. Flow (prot)	0	1374	0	1670	1531	0	0	0	0	0	3186	0
Flt Permitted				0.720								
Satd. Flow (perm)	0	1374	0	1244	1531	0	0	0	0	0	3186	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26										7
Link Speed (mph)		30			30			30				30
Link Distance (ft)		684			247			660				324
Travel Time (s)		15.5			5.6			15.0				7.4
Confl. Peds. (#/hr)			8	8						13		4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Parking (#/hr)		0			0					20		20
Adj. Flow (vph)	0	31	26	77	57	0	0	0	0	10	1165	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	0	77	57	0	0	0	0	0	1206	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.17	1.33	1.17	1.08	1.28	1.12	1.15	1.15	1.15	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex

Lanes, Volumes, Timings
 23: S Center St/N Madison St & W Front St

02/22/2024

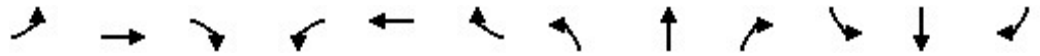


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6		6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0		5.0
Minimum Split (s)		15.5		25.5	25.5					37.7		37.7
Total Split (s)		22.0		22.0	22.0					58.0		58.0
Total Split (%)		27.5%		27.5%	27.5%					72.5%		72.5%
Maximum Green (s)		16.5		16.5	16.5					52.3		52.3
Yellow Time (s)		3.2		3.2	3.2					3.2		3.2
All-Red Time (s)		2.3		2.3	2.3					2.5		2.5
Lost Time Adjust (s)		0.0		0.0	0.0							0.0
Total Lost Time (s)		5.5		5.5	5.5							5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0		3.0
Recall Mode		None		None	None					C-Max		C-Max
Walk Time (s)		1.0		9.0	9.0					21.0		21.0
Flash Dont Walk (s)		9.0		11.0	11.0					11.0		11.0
Pedestrian Calls (#/hr)		0		0	0					0		0
Act Effct Green (s)		10.2		10.2	10.2							61.9
Actuated g/C Ratio		0.13		0.13	0.13							0.77
v/c Ratio		0.29		0.48	0.29							0.49
Control Delay		22.7		41.6	33.9							2.6
Queue Delay		0.0		0.0	0.0							0.0
Total Delay		22.7		41.6	33.9							2.6
LOS		C		D	C							A
Approach Delay		22.7			38.3							2.6
Approach LOS		C			D							A
90th %ile Green (s)		14.9		14.9	14.9					53.9		53.9
90th %ile Term Code		Hold		Gap	Gap					Coord		Coord
70th %ile Green (s)		12.2		12.2	12.2					56.6		56.6
70th %ile Term Code		Hold		Gap	Gap					Coord		Coord
50th %ile Green (s)		10.2		10.2	10.2					58.6		58.6
50th %ile Term Code		Hold		Gap	Gap					Coord		Coord
30th %ile Green (s)		8.3		8.3	8.3					60.5		60.5
30th %ile Term Code		Hold		Gap	Gap					Coord		Coord
10th %ile Green (s)		0.0		0.0	0.0					74.3		74.3
10th %ile Term Code		Skip		Skip	Skip					Coord		Coord
Stops (vph)		31		66	48							161
Fuel Used(gal)		1		1	1							4
CO Emissions (g/hr)		50		80	53							312
NOx Emissions (g/hr)		10		16	10							61
VOC Emissions (g/hr)		12		19	12							72
Dilemma Vehicles (#)		0		0	0							0
Queue Length 50th (ft)		14		36	26							55

Lanes, Volumes, Timings

23: S Center St/N Madison St & W Front St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)		44		74	56							65
Internal Link Dist (ft)		604			167			580				244
Turn Bay Length (ft)				60								
Base Capacity (vph)		304		256	315							2467
Starvation Cap Reductn		0		0	0							122
Spillback Cap Reductn		0		0	0							0
Storage Cap Reductn		0		0	0							0
Reduced v/c Ratio		0.19		0.30	0.18							0.51

Intersection Summary



















Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.49
Intersection Signal Delay:	6.9
Intersection LOS:	A
Intersection Capacity Utilization	56.7%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 23: S Center St/N Madison St & W Front St



Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	130	0	0	45	30	40	990	35	0	0	0
Future Volume (vph)	90	130	0	0	45	30	40	990	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	16	12	12	10	10	13	11	11	12	12	12
Grade (%)		-1%			0%			-1%				2%
Storage Length (ft)	90		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.97					0.95		1.00				
Fr _t						0.850		0.995				
Fl _t Protected	0.950							0.998				
Satd. Flow (prot)	1547	1910	0	0	1565	1330	0	3071	0	0	0	0
Fl _t Permitted	0.723							0.998				
Satd. Flow (perm)	1138	1910	0	0	1565	1267	0	3068	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						35		8				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		256			710			633				322
Travel Time (s)		5.8			16.1			14.4				7.3
Confl. Peds. (#/hr)	18					18	28		1			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	103	149	0	0	52	34	46	1138	40	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	149	0	0	52	34	0	1224	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.19	0.97	1.14	1.14	1.25	1.25	1.09	1.19	1.19	1.16	1.16	1.16
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												

Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

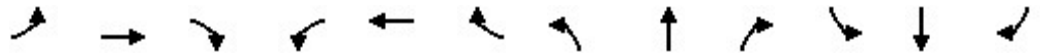
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4					8	2					
Detector Phase	4	4			8	8	2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0				
Minimum Split (s)	27.2	27.2			17.2	17.2	50.6	50.6				
Total Split (s)	25.0	25.0			25.0	25.0	55.0	55.0				
Total Split (%)	31.3%	31.3%			31.3%	31.3%	68.8%	68.8%				
Maximum Green (s)	19.8	19.8			19.8	19.8	49.4	49.4				
Yellow Time (s)	3.2	3.2			3.2	3.2	3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.4	2.4				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0				
Total Lost Time (s)	5.2	5.2			5.2	5.2		5.6				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Recall Mode	None	None			Max	Max	C-Max	C-Max				
Walk Time (s)	11.0	11.0			1.0	1.0	34.0	34.0				
Flash Dont Walk (s)	11.0	11.0			11.0	11.0	11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0	0	0	0				
Act Effct Green (s)	19.8	19.8			19.8	19.8		49.4				
Actuated g/C Ratio	0.25	0.25			0.25	0.25		0.62				
v/c Ratio	0.37	0.32			0.13	0.10		0.65				
Control Delay	29.5	26.8			24.6	9.3		7.3				
Queue Delay	0.0	0.0			0.0	0.0		0.1				
Total Delay	29.5	26.8			24.6	9.3		7.3				
LOS	C	C			C	A		A				
Approach Delay		27.9			18.6			7.3				
Approach LOS		C			B			A				
90th %ile Green (s)	19.8	19.8			19.8	19.8	49.4	49.4				
90th %ile Term Code	Hold	Hold			MaxR	MaxR	Coord	Coord				
70th %ile Green (s)	19.8	19.8			19.8	19.8	49.4	49.4				
70th %ile Term Code	Hold	Hold			MaxR	MaxR	Coord	Coord				
50th %ile Green (s)	19.8	19.8			19.8	19.8	49.4	49.4				
50th %ile Term Code	Hold	Hold			MaxR	MaxR	Coord	Coord				
30th %ile Green (s)	19.8	19.8			19.8	19.8	49.4	49.4				
30th %ile Term Code	Hold	Hold			MaxR	MaxR	Coord	Coord				
10th %ile Green (s)	19.8	19.8			19.8	19.8	49.4	49.4				
10th %ile Term Code	Hold	Hold			MaxR	MaxR	Coord	Coord				
Stops (vph)	73	103			36	9		337				
Fuel Used(gal)	1	2			1	0		9				
CO Emissions (g/hr)	78	108			47	19		608				
NOx Emissions (g/hr)	15	21			9	4		118				
VOC Emissions (g/hr)	18	25			11	4		141				
Dilemma Vehicles (#)	0	0			0	0		0				
Queue Length 50th (ft)	43	61			20	0		90				
Queue Length 95th (ft)	84	107			47	20		106				

Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

02/22/2024

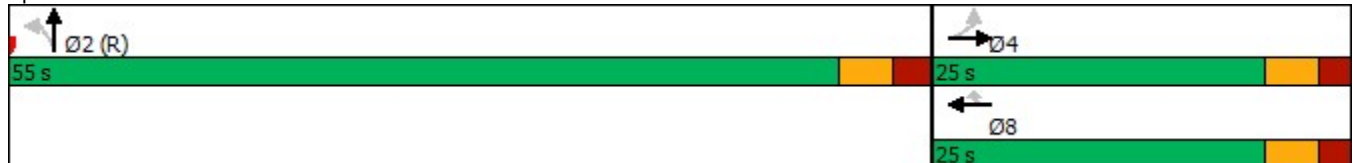


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		176			630			553			242	
Turn Bay Length (ft)	90					100						
Base Capacity (vph)	281	472			387	339		1897				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		52				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.37	0.32			0.13	0.10		0.66				

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	58 (73%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.65
Intersection Signal Delay:	11.3
Intersection LOS:	B
Intersection Capacity Utilization	66.4%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 24: S East St/N East St & E Front St



Lanes, Volumes, Timings
27: N Center St & W Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	148	31	37	119	0	0	0	0	37	134	17	
Future Volume (vph)	0	148	31	37	119	0	0	0	0	37	134	17	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	
Ped Bike Factor													
Frt	0.977										0.986		
Flt Protected						0.988							0.990
Satd. Flow (prot)	0	1606	0	0	1462	0	0	0	0	0	2897	0	
Flt Permitted						0.988							0.990
Satd. Flow (perm)	0	1606	0	0	1462	0	0	0	0	0	2897	0	
Link Speed (mph)					30						30		
Link Distance (ft)					247						266		
Travel Time (s)					5.6						6.0		
Confl. Peds. (#/hr)			30		30						6		
Confl. Bikes (#/hr)			1								5		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	
Parking (#/hr)												0	
Adj. Flow (vph)	0	164	34	41	132	0	0	0	0	41	149	19	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	198	0	0	173	0	0	0	0	0	209	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)			0		0						0		
Link Offset(ft)			0		0						0		
Crosswalk Width(ft)			16		16						16		
Two way Left Turn Lane													
Headway Factor	1.14	1.14	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Sign Control	Stop				Stop				Stop		Stop		

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	38.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 29: N Center St & W Jefferson St

02/22/2024



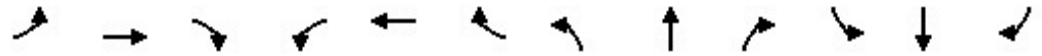
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔↔	
Traffic Volume (vph)	0	39	4	10	44	0	0	0	0	39	106	11
Future Volume (vph)	0	39	4	10	44	0	0	0	0	39	106	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor												
Frt	0.986										0.989	
Flt Protected					0.991				0.988			
Satd. Flow (prot)	0	1459	0	0	1466	0	0	0	0	0	2900	0
Flt Permitted					0.991				0.988			
Satd. Flow (perm)	0	1459	0	0	1466	0	0	0	0	0	2900	0
Link Speed (mph)	30				30				30			
Link Distance (ft)	253				255				306			
Travel Time (s)	5.8				5.8				7.0			
Confl. Peds. (#/hr)			5	5					20	8		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)	0											
Adj. Flow (vph)	0	45	5	12	51	0	0	0	0	45	123	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	50	0	0	63	0	0	0	0	0	181	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0				0		0	
Link Offset(ft)	0				0				0		0	
Crosswalk Width(ft)	16				16				16		16	
Two way Left Turn Lane												
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14
Turning Speed (mph)	15		9		15		9		15		9	
Sign Control	Stop			Stop			Stop			Stop		

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	23.4%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
30: N Center St & W Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔						↔↔	
Traffic Volume (vph)	0	213	6	9	316	0	0	0	0	68	47	8
Future Volume (vph)	0	213	6	9	316	0	0	0	0	68	47	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00		0.99								0.98
Frt		0.996										0.991
Flt Protected				0.950								0.973
Satd. Flow (prot)	0	1473	0	1562	1480	0	0	0	0	0	2853	0
Flt Permitted				0.542								0.973
Satd. Flow (perm)	0	1473	0	883	1480	0	0	0	0	0	2804	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3										8
Link Speed (mph)		30			30			30				30
Link Distance (ft)		253			254			326				306
Travel Time (s)		5.8			5.8			7.4				7.0
Confl. Peds. (#/hr)			10	10						14		12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		0			0							0
Adj. Flow (vph)	0	222	6	9	329	0	0	0	0	71	49	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	228	0	9	329	0	0	0	0	0	128	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings
30: N Center St & W Washington St

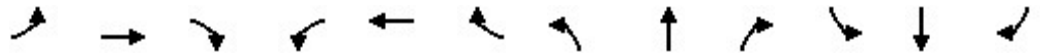
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm		NA
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6		6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0		5.0
Minimum Split (s)		23.0		23.0	23.0					23.0		23.0
Total Split (s)		52.0		52.0	52.0					28.0		28.0
Total Split (%)		65.0%		65.0%	65.0%					35.0%		35.0%
Maximum Green (s)		47.0		47.0	47.0					23.0		23.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		0.0		0.0	0.0							0.0
Total Lost Time (s)		5.0		5.0	5.0							5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0		3.0
Recall Mode		None		None	None					C-Max		C-Max
Walk Time (s)		7.0		7.0	7.0					7.0		7.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0		11.0
Pedestrian Calls (#/hr)		0		0	0					0		0
Act Effct Green (s)		24.8		24.8	24.8							45.2
Actuated g/C Ratio		0.31		0.31	0.31							0.56
v/c Ratio		0.50		0.03	0.72							0.08
Control Delay		39.8		4.0	13.5							9.6
Queue Delay		0.2		0.0	0.1							0.0
Total Delay		40.1		4.0	13.6							9.6
LOS		D		A	B							A
Approach Delay		40.1			13.3							9.6
Approach LOS		D			B							A
90th %ile Green (s)		35.1		35.1	35.1					34.9		34.9
90th %ile Term Code		Hold		Gap	Gap					Coord		Coord
70th %ile Green (s)		28.7		28.7	28.7					41.3		41.3
70th %ile Term Code		Hold		Gap	Gap					Coord		Coord
50th %ile Green (s)		24.6		24.6	24.6					45.4		45.4
50th %ile Term Code		Hold		Gap	Gap					Coord		Coord
30th %ile Green (s)		20.6		20.6	20.6					49.4		49.4
30th %ile Term Code		Hold		Gap	Gap					Coord		Coord
10th %ile Green (s)		15.0		15.0	15.0					55.0		55.0
10th %ile Term Code		Hold		Gap	Gap					Coord		Coord
Stops (vph)		200		1	41							55
Fuel Used(gal)		3		0	2							1
CO Emissions (g/hr)		232		2	120							59
NOx Emissions (g/hr)		45		0	23							11
VOC Emissions (g/hr)		54		0	28							14
Dilemma Vehicles (#)		0		0	0							0
Queue Length 50th (ft)		118		0	19							13
Queue Length 95th (ft)		165		m1	26							34

Lanes, Volumes, Timings
 30: N Center St & W Washington St

02/22/2024



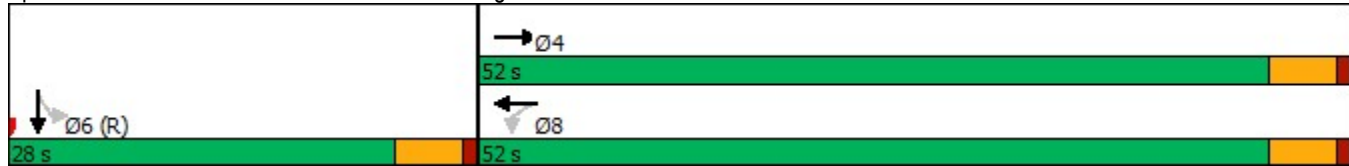
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		173			174			246			226	
Turn Bay Length (ft)				65								
Base Capacity (vph)		866		518	869						1587	
Starvation Cap Reductn		214		0	38						0	
Spillback Cap Reductn		0		0	90						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.35		0.02	0.42						0.08	

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	2 (3%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	21.4
Intersection LOS:	C
Intersection Capacity Utilization	53.3%
ICU Level of Service	A
Analysis Period (min)	15



















m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 30: N Center St & W Washington St



Lanes, Volumes, Timings
31: W Front St & N Center St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	59	6	6	122	0	0	0	1	51	3	10
Future Volume (vph)	0	59	6	6	122	0	0	0	1	51	3	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	8	12	12	12	12
Storage Length (ft)	0		0	70		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.988						0.865			0.887	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1395	0	1490	1412	0	0	1176	0	1341	1252	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	1395	0	1490	1412	0	0	1176	0	1341	1252	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			262			221			326	
Travel Time (s)		5.6			6.0			5.0			7.4	
Confl. Peds. (#/hr)			48	48			25		13	13		25
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%
Parking (#/hr)		0			0					0	0	
Adj. Flow (vph)	0	72	7	7	149	0	0	0	1	62	4	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	79	0	7	149	0	0	1	0	62	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			0			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.37	1.14	1.30	1.30	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

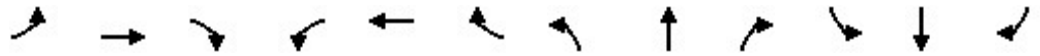
Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	30.0%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

34: N Main St & W Market St/E Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔↔				
Traffic Volume (vph)	36	144	0	0	127	9	48	64	28	0	0	0
Future Volume (vph)	36	144	0	0	127	9	48	64	28	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.991			0.970			
Flt Protected	0.990							0.983				
Satd. Flow (prot)	0	1479	0	0	1481	0	0	2857	0	0	0	0
Flt Permitted	0.990							0.983				
Satd. Flow (perm)	0	1479	0	0	1481	0	0	2857	0	0	0	0
Link Speed (mph)					30				30			
Link Distance (ft)					266			249			404	
Travel Time (s)					6.0				5.7			
Confl. Peds. (#/hr)	19						19	20				
Confl. Bikes (#/hr)								1				
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	0							0				
Adj. Flow (vph)	42	167	0	0	148	10	56	74	33	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	209	0	0	158	0	0	163	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0							0				
Link Offset(ft)	0							0				
Crosswalk Width(ft)					16				16			16
Two way Left Turn Lane												
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.22	1.14	1.14	1.14	1.14
Turning Speed (mph)	15	9		15	9		15	9		15	9	
Sign Control	Stop						Stop		Stop		Stop	

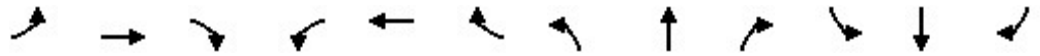
Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	39.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

36: N Main St & W Jefferson St/E Jefferson St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔↔					
Traffic Volume (vph)	37	39	0	0	31	17	16	83	9	0	0	0	
Future Volume (vph)	37	39	0	0	31	17	16	83	9	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor													
Frt					0.953					0.987			
Flt Protected	0.976								0.993				
Satd. Flow (prot)	0	1404	0	0	1371	0	0	2827	0	0	0	0	
Flt Permitted	0.976								0.993				
Satd. Flow (perm)	0	1404	0	0	1371	0	0	2827	0	0	0	0	
Link Speed (mph)					30					30			
Link Distance (ft)					255					268			
Travel Time (s)					5.8					6.1			
Confl. Peds. (#/hr)	11						11	3					
Confl. Bikes (#/hr)									2				
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	
Parking (#/hr)					0					0			
Adj. Flow (vph)	45	47	0	0	37	20	19	100	11	0	0	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	92	0	0	57	0	0	130	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0								0				
Link Offset(ft)	0								0				
Crosswalk Width(ft)					16					16			
Two way Left Turn Lane													
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.22	1.14	1.14	1.14	1.14	
Turning Speed (mph)	15	9		15	9		15	9		15	9		
Sign Control	Stop			Stop				Stop			Stop		

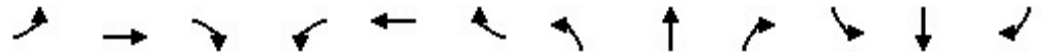
Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	26.5%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024

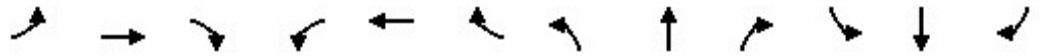


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	266	0	0	321	41	12	29	17	0	0	0
Future Volume (vph)	19	266	0	0	321	41	12	29	17	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	65		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99				1.00			0.99	0.93			
Fr _t					0.985				0.850			
Fl _t Protected	0.950							0.986				
Satd. Flow (prot)	1562	1480	0	0	1454	0	0	1459	1258	0	0	0
Fl _t Permitted	0.368							0.986				
Satd. Flow (perm)	602	1480	0	0	1454	0	0	1451	1168	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					14				27			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		254			262			326			306	
Travel Time (s)		5.8			6.0			7.4			7.0	
Confl. Peds. (#/hr)	8					8	9		23			
Confl. Bikes (#/hr)						1			1			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		0			0			0	0			
Adj. Flow (vph)	19	271	0	0	328	42	12	30	17	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	271	0	0	370	0	0	42	17	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.30	1.30	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2	1			
Detector Template	Left	Thru			Thru		Left	Thru	Right			
Leading Detector (ft)	20	100			100		20	100	20			
Trailing Detector (ft)	0	0			0		0	0	0			
Detector 1 Position(ft)	0	0			0		0	0	0			
Detector 1 Size(ft)	20	6			6		20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024

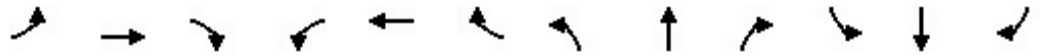


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Detector Phase	4	4			8		2	2	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Minimum Split (s)	23.0	23.0			23.0		23.0	23.0	23.0			
Total Split (s)	52.0	52.0			52.0		28.0	28.0	28.0			
Total Split (%)	65.0%	65.0%			65.0%		35.0%	35.0%	35.0%			
Maximum Green (s)	47.0	47.0			47.0		23.0	23.0	23.0			
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0			
Total Lost Time (s)	5.0	5.0			5.0			5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Recall Mode	None	None			None		C-Max	C-Max	C-Max			
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)	27.1	27.1			27.1			42.9	42.9			
Actuated g/C Ratio	0.34	0.34			0.34			0.54	0.54			
v/c Ratio	0.09	0.54			0.74			0.05	0.03			
Control Delay	8.8	12.6			27.3			12.3	4.5			
Queue Delay	0.0	0.1			0.2			0.0	0.0			
Total Delay	8.8	12.7			27.5			12.3	4.5			
LOS	A	B			C			B	A			
Approach Delay		12.4			27.5			10.1				
Approach LOS		B			C			B				
90th %ile Green (s)	38.1	38.1			38.1		31.9	31.9	31.9			
90th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
70th %ile Green (s)	31.4	31.4			31.4		38.6	38.6	38.6			
70th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
50th %ile Green (s)	26.9	26.9			26.9		43.1	43.1	43.1			
50th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
30th %ile Green (s)	22.5	22.5			22.5		47.5	47.5	47.5			
30th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
10th %ile Green (s)	16.4	16.4			16.4		53.6	53.6	53.6			
10th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
Stops (vph)	6	74			242			24	4			
Fuel Used(gal)	0	2			4			0	0			
CO Emissions (g/hr)	7	113			286			24	6			
NOx Emissions (g/hr)	1	22			56			5	1			
VOC Emissions (g/hr)	2	26			66			6	1			
Dilemma Vehicles (#)	0	0			0			0	0			
Queue Length 50th (ft)	3	37			121			10	0			

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024

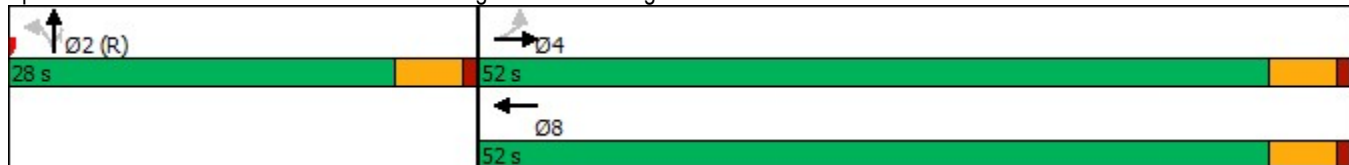


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	10	70			149			m32	m8			
Internal Link Dist (ft)		174			182			246			226	
Turn Bay Length (ft)	65											
Base Capacity (vph)	353	869			860			778	639			
Starvation Cap Reductn	0	71			96			0	0			
Spillback Cap Reductn	0	0			0			0	0			
Storage Cap Reductn	0	0			0			0	0			
Reduced v/c Ratio	0.05	0.34			0.48			0.05	0.03			

Intersection Summary

















Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 78 (98%), Referenced to phase 2:NBTL and 6:, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 20.0 Intersection LOS: B
 Intersection Capacity Utilization 53.3% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 37: N Main St & W Washington St/E Washington St



Lanes, Volumes, Timings
 38: W Front St/E Front St & N Main St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	87	0	0	119	23	0	0	0	0	0	0
Future Volume (vph)	23	87	0	0	119	23	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	8	12	12	12	12
Storage Length (ft)	70		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.978											
Flt Protected	0.950											
Satd. Flow (prot)	1504	1425	0	0	1394	0	0	1308	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1504	1425	0	0	1394	0	0	1308	0	0	0	0
Link Speed (mph)	30				30				30		30	
Link Distance (ft)	262				256				210		326	
Travel Time (s)	6.0				5.8				4.8		7.4	
Confl. Peds. (#/hr)	13		7	7		13	4		32			
Peak Hour Factor	0.82	0.82	0.92	0.92	0.82	0.82	0.92	0.92	0.92	0.82	0.92	0.82
Heavy Vehicles (%)	8%	8%	2%	2%	8%	8%	2%	2%	2%	8%	2%	8%
Parking (#/hr)	0				0				0			
Adj. Flow (vph)	28	106	0	0	145	28	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	106	0	0	173	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12				12				0		0	
Link Offset(ft)	0				0				0		0	
Crosswalk Width(ft)	16				16				16		16	
Two way Left Turn Lane	Yes											
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.55	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		60	60		9	60		60	15		9
Sign Control	Free				Free				Stop		Stop	

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	37.0%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
44: N East St & E Market St

02/22/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕↗			
Traffic Volume (vph)	0	29	1224	7	0	0
Future Volume (vph)	0	29	1224	7	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	0%		-2%			2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.865	0.999			
Flt Protected						
Satd. Flow (prot)	0	1305	3107	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1305	3107	0	0	0
Link Speed (mph)	30		30			30
Link Distance (ft)	558		266			127
Travel Time (s)	12.7		6.0			2.9
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Parking (#/hr)		0				
Adj. Flow (vph)	0	31	1302	7	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	31	1309	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.30	1.18	1.18	1.16	1.16
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Stop

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	47.8%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
47: S Center St & W Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↑						↖	↗
Traffic Volume (vph)	0	90	45	10	30	0	0	0	0	55	1175	50
Future Volume (vph)	0	90	45	10	30	0	0	0	0	55	1175	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	10	12	12	12	12	12	12	12	12	12
Grade (%)		1%			-3%			3%			-1%	
Storage Length (ft)	0		80	0		0	0		0	0		50
Storage Lanes	0		1	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									0.850
Flt Protected				0.950							0.998	
Satd. Flow (prot)	0	1792	1470	1796	1891	0	0	0	0	0	3550	1591
Flt Permitted				0.694							0.998	
Satd. Flow (perm)	0	1792	1470	1312	1891	0	0	0	0	0	3550	1591
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			49									35
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		777			330			770			660	
Travel Time (s)		17.7			7.5			17.5			15.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	98	49	11	33	0	0	0	0	60	1277	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	98	49	11	33	0	0	0	0	0	1337	54
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.05	1.10	0.98	0.98	0.98	1.02	1.02	1.02	0.99	0.99	0.99
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA	Perm	Perm	NA					Perm	NA	Perm

Lanes, Volumes, Timings
47: S Center St & W Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8						6	
Permitted Phases			4	8						6		6
Detector Phase		4	4	8	8					6	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		13.5	13.5	13.5	13.5					37.9	37.9	37.9
Total Split (s)		18.0	18.0	18.0	18.0					62.0	62.0	62.0
Total Split (%)		22.5%	22.5%	22.5%	22.5%					77.5%	77.5%	77.5%
Maximum Green (s)		12.5	12.5	12.5	12.5					56.1	56.1	56.1
Yellow Time (s)		3.2	3.2	3.2	3.2					3.2	3.2	3.2
All-Red Time (s)		2.3	2.3	2.3	2.3					2.7	2.7	2.7
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	0.0
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		Max	Max	None	None					C-Max	C-Max	C-Max
Walk Time (s)		1.0	1.0	1.0	1.0					21.0	21.0	21.0
Flash Dont Walk (s)		7.0	7.0	7.0	7.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0					0	0	0
Act Effct Green (s)		12.5	12.5	12.5	12.5						56.1	56.1
Actuated g/C Ratio		0.16	0.16	0.16	0.16						0.70	0.70
v/c Ratio		0.35	0.18	0.05	0.11						0.54	0.05
Control Delay		34.2	11.2	32.2	32.0						4.1	0.7
Queue Delay		0.0	0.0	0.0	0.0						0.0	0.0
Total Delay		34.2	11.2	32.2	32.0						4.1	0.7
LOS		C	B	C	C						A	A
Approach Delay		26.5			32.1						4.0	
Approach LOS		C			C						A	
90th %ile Green (s)		12.5	12.5	12.5	12.5					56.1	56.1	56.1
90th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
70th %ile Green (s)		12.5	12.5	12.5	12.5					56.1	56.1	56.1
70th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
50th %ile Green (s)		12.5	12.5	12.5	12.5					56.1	56.1	56.1
50th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
30th %ile Green (s)		12.5	12.5	12.5	12.5					56.1	56.1	56.1
30th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
10th %ile Green (s)		12.5	12.5	12.5	12.5					56.1	56.1	56.1
10th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
Stops (vph)		79	13	12	30						308	3
Fuel Used(gal)		2	0	0	0						9	0
CO Emissions (g/hr)		112	31	11	31						633	20
NOx Emissions (g/hr)		22	6	2	6						123	4
VOC Emissions (g/hr)		26	7	3	7						147	5
Dilemma Vehicles (#)		0	0	0	0						0	0
Queue Length 50th (ft)		44	0	5	16						91	1
Queue Length 95th (ft)		89	29	m17	m40						46	m1
Internal Link Dist (ft)		697			250			690			580	
Turn Bay Length (ft)			80									50

Lanes, Volumes, Timings
47: S Center St & W Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		280	271	205	295						2489	1126
Starvation Cap Reductn		0	0	0	0						0	0
Spillback Cap Reductn		0	0	0	0						0	0
Storage Cap Reductn		0	0	0	0						0	0
Reduced v/c Ratio		0.35	0.18	0.05	0.11						0.54	0.05

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 16 (20%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.54
 Intersection Signal Delay: 6.9
 Intersection LOS: A
 Intersection Capacity Utilization 56.5%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 47: S Center St & W Olive St



Lanes, Volumes, Timings
48: S East St & E Olive St

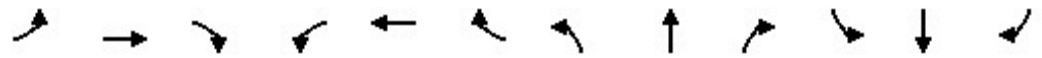
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕↕			↕↕				
Traffic Volume (vph)	95	70	0	0	40	30	20	855	15	0	0	0
Future Volume (vph)	95	70	0	0	40	30	20	855	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	12	12	12	12	12
Grade (%)		2%			-4%			4%				-4%
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.935			0.998				
Flt Protected		0.972						0.999				
Satd. Flow (prot)	0	1672	0	0	3279	0	0	3359	0	0	0	0
Flt Permitted		0.777						0.999				
Satd. Flow (perm)	0	1336	0	0	3279	0	0	3359	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					33			4				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		330			647			682				633
Travel Time (s)		7.5			14.7			15.5				14.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Parking (#/hr)		0										
Adj. Flow (vph)	103	76	0	0	43	33	22	929	16	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	179	0	0	76	0	0	967	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.07	1.01	0.97	0.97	0.97	1.03	1.03	1.03	0.97	0.97	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												

Lanes, Volumes, Timings
48: S East St & E Olive St

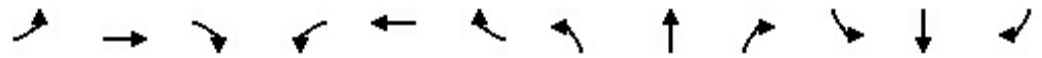
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Detector Phase	4	4			8		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	19.5	19.5			19.5		58.6	58.6				
Total Split (s)	25.0	25.0			25.0		55.0	55.0				
Total Split (%)	31.3%	31.3%			31.3%		68.8%	68.8%				
Maximum Green (s)	19.5	19.5			19.5		49.4	49.4				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.3	2.3			2.3		2.4	2.4				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.5			5.5			5.6				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Recall Mode	Max	Max			None		C-Max	C-Max				
Walk Time (s)	3.0	3.0			3.0		42.0	42.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		19.5			19.5			49.4				
Actuated g/C Ratio		0.24			0.24			0.62				
v/c Ratio		0.55			0.09			0.47				
Control Delay		32.0			15.5			9.1				
Queue Delay		0.0			0.0			0.0				
Total Delay		32.0			15.5			9.1				
LOS		C			B			A				
Approach Delay		32.0			15.5			9.1				
Approach LOS		C			B			A				
90th %ile Green (s)	19.5	19.5			19.5		49.4	49.4				
90th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
70th %ile Green (s)	19.5	19.5			19.5		49.4	49.4				
70th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
50th %ile Green (s)	19.5	19.5			19.5		49.4	49.4				
50th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
30th %ile Green (s)	19.5	19.5			19.5		49.4	49.4				
30th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
10th %ile Green (s)	19.5	19.5			19.5		49.4	49.4				
10th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
Stops (vph)		152			34			440				
Fuel Used(gal)		2			1			9				
CO Emissions (g/hr)		163			53			616				
NOx Emissions (g/hr)		32			10			120				
VOC Emissions (g/hr)		38			12			143				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		87			8			121				
Queue Length 95th (ft)		152			25			162				

Lanes, Volumes, Timings
48: S East St & E Olive St

02/22/2024

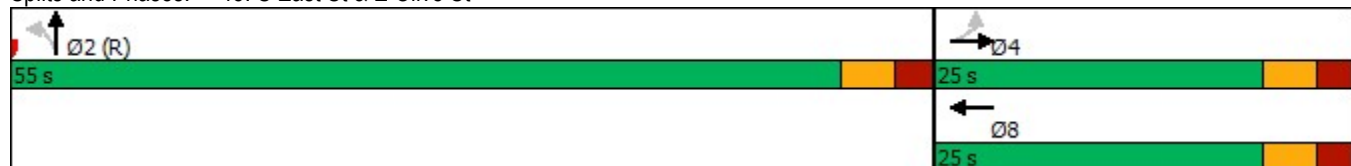


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		250			567			602			553	
Turn Bay Length (ft)												
Base Capacity (vph)		325			824			2075				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.55			0.09			0.47				

Intersection Summary

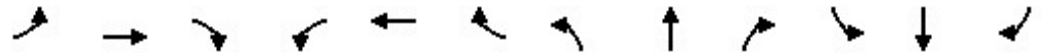
Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	54 (68%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.55
Intersection Signal Delay:	12.8
Intersection LOS:	B
Intersection Capacity Utilization	49.6%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 48: S East St & E Olive St



Lanes, Volumes, Timings
 3: N Madison St/N Center St & W Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↓						↑↑	↑
Traffic Volume (vph)	0	459	57	4	51	0	0	0	0	164	1041	148
Future Volume (vph)	0	459	57	4	51	0	0	0	0	164	1041	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		150
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		1.00									1.00	
Frt		0.983										0.850
Flt Protected					0.996						0.993	
Satd. Flow (prot)	0	3407	0	0	1820	0	0	0	0	0	3447	1553
Flt Permitted					0.951						0.993	
Satd. Flow (perm)	0	3407	0	0	1737	0	0	0	0	0	3445	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19										180
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		659			244			860			526	
Travel Time (s)		15.0			5.5			19.5			12.0	
Confl. Peds. (#/hr)			2							4		
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	0	560	70	5	62	0	0	0	0	200	1270	180
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	630	0	0	67	0	0	0	0	0	1470	180
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	1
Detector Template		Thru		Left	Thru					Left	Thru	Right
Leading Detector (ft)		100		20	100					20	100	20
Trailing Detector (ft)		0		0	0					0	0	0
Detector 1 Position(ft)		0		0	0					0	0	0
Detector 1 Size(ft)		6		20	6					20	6	20
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	

Lanes, Volumes, Timings
 3: N Madison St/N Center St & W Locust St

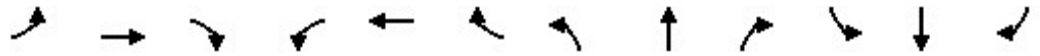
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type		NA		Perm	NA					Perm	NA	Perm
Protected Phases		4			8						6	
Permitted Phases				8						6		6
Detector Phase		4		8	8					6	6	6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		23.4		22.5	22.5					23.4	23.4	23.4
Total Split (s)		23.7		22.5	22.5					46.3	46.3	46.3
Total Split (%)		33.9%		32.1%	32.1%					66.1%	66.1%	66.1%
Maximum Green (s)		18.3		18.0	18.0					40.9	40.9	40.9
Yellow Time (s)		3.2		3.5	3.5					3.2	3.2	3.2
All-Red Time (s)		2.2		1.0	1.0					2.2	2.2	2.2
Lost Time Adjust (s)		0.0			0.0						0.0	0.0
Total Lost Time (s)		5.4			4.5						5.4	5.4
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Recall Mode		None		None	None					C-Max	C-Max	C-Max
Walk Time (s)		7.0		7.0	7.0					7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0					0	0	0
Act Effct Green (s)		16.9			17.8						42.3	42.3
Actuated g/C Ratio		0.24			0.25						0.60	0.60
v/c Ratio		0.75			0.15						0.71	0.18
Control Delay		30.0			16.1						12.3	1.6
Queue Delay		52.8			0.0						0.0	0.0
Total Delay		82.8			16.1						12.3	1.6
LOS		F			B						B	A
Approach Delay		82.8			16.1						11.2	
Approach LOS		F			B						B	
90th %ile Green (s)		18.3		19.2	19.2					40.9	40.9	40.9
90th %ile Term Code		Max		Hold	Hold					Coord	Coord	Coord
70th %ile Green (s)		18.3		19.2	19.2					40.9	40.9	40.9
70th %ile Term Code		Max		Hold	Hold					Coord	Coord	Coord
50th %ile Green (s)		18.3		19.2	19.2					40.9	40.9	40.9
50th %ile Term Code		Max		Hold	Hold					Coord	Coord	Coord
30th %ile Green (s)		16.6		17.5	17.5					42.6	42.6	42.6
30th %ile Term Code		Gap		Hold	Hold					Coord	Coord	Coord
10th %ile Green (s)		13.1		14.0	14.0					46.1	46.1	46.1
10th %ile Term Code		Gap		Hold	Hold					Coord	Coord	Coord
Stops (vph)		445			48						787	12
Fuel Used(gal)		8			1						12	1
CO Emissions (g/hr)		578			38						861	51
NOx Emissions (g/hr)		112			7						167	10
VOC Emissions (g/hr)		134			9						200	12
Dilemma Vehicles (#)		0			0						0	0
Queue Length 50th (ft)		124			26						216	0
Queue Length 95th (ft)		158			m42						245	17
Internal Link Dist (ft)		579			164			780			446	

Lanes, Volumes, Timings
 3: N Madison St/N Center St & W Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												150
Base Capacity (vph)		904			476						2080	1009
Starvation Cap Reductn		0			0						0	0
Spillback Cap Reductn		367			0						0	0
Storage Cap Reductn		0			0						0	0
Reduced v/c Ratio		1.17			0.14						0.71	0.18

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 10 (14%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 30.5
 Intersection LOS: C
 Intersection Capacity Utilization 57.1%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

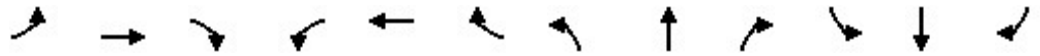
Splits and Phases: 3: N Madison St/N Center St & W Locust St



Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↕↕				
Traffic Volume (vph)	92	528	0	0	0	0	56	875	103	0	0	0
Future Volume (vph)	92	528	0	0	0	0	56	875	103	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00										
Frt								0.985				
Flt Protected		0.993						0.997				
Satd. Flow (prot)	0	3447	0	0	0	0	0	3409	0	0	0	0
Flt Permitted		0.993						0.997				
Satd. Flow (perm)	0	3446	0	0	0	0	0	3409	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								27				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		244			514			878				525
Travel Time (s)		5.5			11.7			20.0				11.9
Confl. Peds. (#/hr)	2											
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	106	607	0	0	0	0	64	1006	118	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	713	0	0	0	0	0	1188	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2					1	2				
Detector Template	Left	Thru					Left	Thru				
Leading Detector (ft)	20	100					20	100				
Trailing Detector (ft)	0	0					0	0				
Detector 1 Position(ft)	0	0					0	0				
Detector 1 Size(ft)	20	6					20	6				
Detector 1 Type	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0					0.0	0.0				
Detector 1 Queue (s)	0.0	0.0					0.0	0.0				
Detector 1 Delay (s)	0.0	0.0					0.0	0.0				
Detector 2 Position(ft)		94						94				
Detector 2 Size(ft)		6						6				
Detector 2 Type		Cl+Ex						Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0				
Turn Type	Perm	NA					Perm	NA				
Protected Phases		4						2				
Permitted Phases	4						2					

Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

02/22/2024

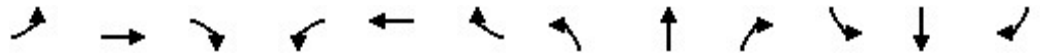


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4					2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0					5.0	5.0				
Minimum Split (s)	23.5	23.5					23.5	23.5				
Total Split (s)	26.0	26.0					44.0	44.0				
Total Split (%)	37.1%	37.1%					62.9%	62.9%				
Maximum Green (s)	20.5	20.5					38.5	38.5				
Yellow Time (s)	3.2	3.2					3.2	3.2				
All-Red Time (s)	2.3	2.3					2.3	2.3				
Lost Time Adjust (s)		0.0						0.0				
Total Lost Time (s)		5.5						5.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0					3.0	3.0				
Recall Mode	None	None					C-Max	C-Max				
Walk Time (s)	7.0	7.0					7.0	7.0				
Flash Dont Walk (s)	11.0	11.0					11.0	11.0				
Pedestrian Calls (#/hr)	0	0					0	0				
Act Effct Green (s)		18.9						40.1				
Actuated g/C Ratio		0.27						0.57				
v/c Ratio		0.77						0.60				
Control Delay		19.3						7.2				
Queue Delay		46.9						0.0				
Total Delay		66.3						7.2				
LOS		E						A				
Approach Delay		66.3						7.2				
Approach LOS		E						A				
90th %ile Green (s)	20.5	20.5					38.5	38.5				
90th %ile Term Code	Max	Max					Coord	Coord				
70th %ile Green (s)	20.5	20.5					38.5	38.5				
70th %ile Term Code	Max	Max					Coord	Coord				
50th %ile Green (s)	20.5	20.5					38.5	38.5				
50th %ile Term Code	Max	Max					Coord	Coord				
30th %ile Green (s)	18.3	18.3					40.7	40.7				
30th %ile Term Code	Gap	Gap					Coord	Coord				
10th %ile Green (s)	14.7	14.7					44.3	44.3				
10th %ile Term Code	Gap	Gap					Coord	Coord				
Stops (vph)		584						450				
Fuel Used(gal)		7						11				
CO Emissions (g/hr)		479						774				
NOx Emissions (g/hr)		93						151				
VOC Emissions (g/hr)		111						179				
Dilemma Vehicles (#)		0						0				
Queue Length 50th (ft)		167						61				
Queue Length 95th (ft)		217						72				
Internal Link Dist (ft)		164			434			798			445	
Turn Bay Length (ft)												
Base Capacity (vph)		1009						1964				
Starvation Cap Reductn		354						0				

Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		1.09						0.60				

Intersection Summary

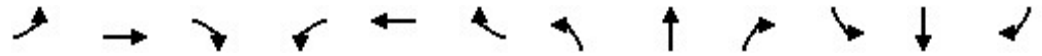
Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	23 (33%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	29.4
Intersection LOS:	C
Intersection Capacity Utilization	55.5%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 6: N East St/N Main St & W Locust St/E Locust St



Lanes, Volumes, Timings
 9: N Madison St & W Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖						↖↗	
Traffic Volume (vph)	0	71	89	11	83	0	0	0	0	7	833	93
Future Volume (vph)	0	71	89	11	83	0	0	0	0	7	833	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		1%			-2%			-6%			4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99		1.00								
Frt		0.925									0.985	
Flt Protected				0.950								
Satd. Flow (prot)	0	1447	0	1578	1605	0	0	0	0	0	3016	0
Flt Permitted				0.496								
Satd. Flow (perm)	0	1447	0	820	1605	0	0	0	0	0	3016	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		83									29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		705			247			400			860	
Travel Time (s)		16.0			5.6			9.1			19.5	
Confl. Peds. (#/hr)			3	3								
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	0	96	120	15	112	0	0	0	0	9	1126	126
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	216	0	15	112	0	0	0	0	0	1261	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	1.15	1.20	1.15	1.13	1.18	1.13	1.10	1.10	1.10	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	

Lanes, Volumes, Timings
 9: N Madison St & W Market St

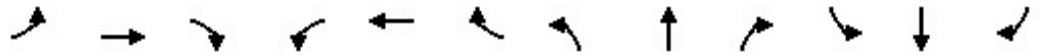
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		15.4		15.4	15.4					47.2	47.2	
Total Split (s)		24.0		24.0	24.0					46.0	46.0	
Total Split (%)		34.3%		34.3%	34.3%					65.7%	65.7%	
Maximum Green (s)		18.6		18.6	18.6					40.8	40.8	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.2		2.2	2.2					2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0						0.0	
Total Lost Time (s)		5.4		5.4	5.4						5.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		1.0		1.0	1.0					31.0	31.0	
Flash Dont Walk (s)		9.0		9.0	9.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		12.2		12.2	12.2						47.2	
Actuated g/C Ratio		0.17		0.17	0.17						0.67	
v/c Ratio		0.68		0.11	0.40						0.62	
Control Delay		26.4		23.0	28.3						2.0	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		26.4		23.0	28.3						2.0	
LOS		C		C	C						A	
Approach Delay		26.4			27.7						2.0	
Approach LOS		C			C						A	
90th %ile Green (s)		18.6		18.6	18.6					40.8	40.8	
90th %ile Term Code		Max		Hold	Hold					Coord	Coord	
70th %ile Green (s)		14.8		14.8	14.8					44.6	44.6	
70th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
50th %ile Green (s)		12.1		12.1	12.1					47.3	47.3	
50th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
30th %ile Green (s)		9.3		9.3	9.3					50.1	50.1	
30th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
10th %ile Green (s)		6.1		6.1	6.1					53.3	53.3	
10th %ile Term Code		Hold		Hold	Hold					Coord	Coord	
Stops (vph)		90		11	68						62	
Fuel Used(gal)		2		0	1						7	
CO Emissions (g/hr)		156		9	71						488	
NOx Emissions (g/hr)		30		2	14						95	
VOC Emissions (g/hr)		36		2	16						113	
Dilemma Vehicles (#)		0		0	0						0	
Queue Length 50th (ft)		53		6	43						20	
Queue Length 95th (ft)		76		15	62						16	
Internal Link Dist (ft)		625			167			320			780	

Lanes, Volumes, Timings
 9: N Madison St & W Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		445		217	426						2043	
Starvation Cap Reductn		0		0	0						0	
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.49		0.07	0.26						0.62	

Intersection Summary

Area Type:	CBD
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	28 (40%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	7.3
Intersection LOS:	A
Intersection Capacity Utilization	48.3%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 9: N Madison St & W Market St



Lanes, Volumes, Timings
11: N East St & E Market St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	65	0	88	951	0	0
Future Volume (vph)	65	0	88	951	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	11	12	12
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor				1.00		
Frt						
Flt Protected	0.950			0.996		
Satd. Flow (prot)	1467	0	0	2761	0	0
Flt Permitted	0.950			0.996		
Satd. Flow (perm)	1467	0	0	2760	0	0
Right Turn on Red	Yes			Yes		
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	263			127	878	
Travel Time (s)	6.0			2.9	20.0	
Confl. Peds. (#/hr)				1		
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	0		20	20		
Adj. Flow (vph)	79	0	107	1160	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	79	0	0	1267	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.25	1.14	1.13	1.34	1.16	1.16
Turning Speed (mph)	15	9	15	9		
Number of Detectors	1		1	2		
Detector Template	Left		Left	Thru		
Leading Detector (ft)	20		20	100		
Trailing Detector (ft)	0		0	0		
Detector 1 Position(ft)	0		0	0		
Detector 1 Size(ft)	20		20	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(ft)				94		
Detector 2 Size(ft)				6		
Detector 2 Type				Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)				0.0		

Lanes, Volumes, Timings
 11: N East St & E Market St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Type	Prot		Perm	NA		
Protected Phases	4			2		
Permitted Phases			2			
Detector Phase	4		2	2		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	13.4		49.5	49.5		
Total Split (s)	16.0		54.0	54.0		
Total Split (%)	22.9%		77.1%	77.1%		
Maximum Green (s)	10.6		48.5	48.5		
Yellow Time (s)	3.2		3.2	3.2		
All-Red Time (s)	2.2		2.3	2.3		
Lost Time Adjust (s)	0.0			0.0		
Total Lost Time (s)	5.4			5.5		
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		C-Max	C-Max		
Walk Time (s)	1.0		33.0	33.0		
Flash Dont Walk (s)	7.0		11.0	11.0		
Pedestrian Calls (#/hr)	0		0	0		
Act Effct Green (s)	8.7			53.7		
Actuated g/C Ratio	0.12			0.77		
v/c Ratio	0.43			0.60		
Control Delay	35.4			6.5		
Queue Delay	0.0			0.0		
Total Delay	35.4			6.5		
LOS	D			A		
Approach Delay	35.4			6.5		
Approach LOS	D			A		
90th %ile Green (s)	10.6		48.5	48.5		
90th %ile Term Code	Max		Coord	Coord		
70th %ile Green (s)	10.6		48.5	48.5		
70th %ile Term Code	Max		Coord	Coord		
50th %ile Green (s)	9.1		50.0	50.0		
50th %ile Term Code	Gap		Coord	Coord		
30th %ile Green (s)	7.6		51.5	51.5		
30th %ile Term Code	Gap		Coord	Coord		
10th %ile Green (s)	0.0		64.5	64.5		
10th %ile Term Code	Skip		Coord	Coord		
Stops (vph)	58			452		
Fuel Used(gal)	1			5		
CO Emissions (g/hr)	64			343		
NOx Emissions (g/hr)	13			67		
VOC Emissions (g/hr)	15			79		
Dilemma Vehicles (#)	0			0		
Queue Length 50th (ft)	32			119		
Queue Length 95th (ft)	62			157		
Internal Link Dist (ft)	183			47	798	

Lanes, Volumes, Timings
 11: N East St & E Market St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Bay Length (ft)						
Base Capacity (vph)	222			2117		
Starvation Cap Reductn	0			0		
Spillback Cap Reductn	0			0		
Storage Cap Reductn	0			0		
Reduced v/c Ratio	0.36			0.60		

Intersection Summary

Area Type:	CBD
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	4 (6%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	8.2
Intersection LOS:	A
Intersection Capacity Utilization	45.3%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 11: N East St & E Market St



Lanes, Volumes, Timings
 12: N Madison St & W Monroe St

02/22/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	10	0	7	4	0	0	0	0	19	904	10
Future Volume (vph)	0	10	0	7	4	0	0	0	0	19	904	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			-3%			6%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor												
Frt												0.998
Flt Protected					0.969							0.999
Satd. Flow (prot)	0	1605	0	0	1609	0	0	0	0	0	3051	0
Flt Permitted					0.969							0.999
Satd. Flow (perm)	0	1605	0	0	1609	0	0	0	0	0	3051	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		699			209			307			400	
Travel Time (s)		15.9			4.8			7.0			9.1	
Confl. Peds. (#/hr)			3	3						4		1
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	13	0	9	5	0	0	0	0	25	1174	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	0	0	14	0	0	0	0	0	1212	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.19	1.14	1.14	1.14	1.14	1.12	1.12	1.12	1.19	1.19	1.19
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Free	

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	42.5%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	0	31	1021	0	0
Future Volume (vph)	3	0	31	1021	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12
Grade (%)	-2%			-3%	4%	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor				1.00		
Frt						
Flt Protected	0.950			0.999		
Satd. Flow (prot)	1434	0	0	2783	0	0
Flt Permitted	0.950			0.999		
Satd. Flow (perm)	1434	0	0	2783	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	221			318	266	
Travel Time (s)	5.0			7.2	6.0	
Confl. Peds. (#/hr)			1			
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	0		20	20		
Adj. Flow (vph)	4	0	38	1245	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	0	1283	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.29	1.13	1.12	1.34	1.17	1.17
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2		
Detector Template	Left		Left	Thru		
Leading Detector (ft)	20		20	100		
Trailing Detector (ft)	0		0	0		
Detector 1 Position(ft)	0		0	0		
Detector 1 Size(ft)	20		20	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(ft)				94		
Detector 2 Size(ft)				6		
Detector 2 Type				Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)				0.0		

Lanes, Volumes, Timings
13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Type	Prot		Perm	NA		
Protected Phases	4			2		
Permitted Phases			2			
Detector Phase	4		2	2		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	13.2		49.2	49.2		
Total Split (s)	15.0		65.0	65.0		
Total Split (%)	18.8%		81.3%	81.3%		
Maximum Green (s)	9.8		59.8	59.8		
Yellow Time (s)	3.2		3.2	3.2		
All-Red Time (s)	2.0		2.0	2.0		
Lost Time Adjust (s)	0.0			0.0		
Total Lost Time (s)	5.2			5.2		
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		C-Max	C-Max		
Walk Time (s)	1.0		33.0	33.0		
Flash Dont Walk (s)	7.0		11.0	11.0		
Pedestrian Calls (#/hr)	0		0	0		
Act Effct Green (s)	5.9			76.6		
Actuated g/C Ratio	0.07			0.96		
v/c Ratio	0.04			0.48		
Control Delay	35.0			0.5		
Queue Delay	0.0			0.0		
Total Delay	35.0			0.5		
LOS	C			A		
Approach Delay	35.0			0.5		
Approach LOS	C			A		
90th %ile Green (s)	6.6		63.0	63.0		
90th %ile Term Code	Gap		Coord	Coord		
70th %ile Green (s)	0.0		74.8	74.8		
70th %ile Term Code	Skip		Coord	Coord		
50th %ile Green (s)	0.0		74.8	74.8		
50th %ile Term Code	Skip		Coord	Coord		
30th %ile Green (s)	0.0		74.8	74.8		
30th %ile Term Code	Skip		Coord	Coord		
10th %ile Green (s)	0.0		74.8	74.8		
10th %ile Term Code	Skip		Coord	Coord		
Stops (vph)	5			3		
Fuel Used(gal)	0			3		
CO Emissions (g/hr)	4			191		
NOx Emissions (g/hr)	1			37		
VOC Emissions (g/hr)	1			44		
Dilemma Vehicles (#)	0			0		
Queue Length 50th (ft)	2			0		
Queue Length 95th (ft)	10			1		
Internal Link Dist (ft)	141			238	186	

Lanes, Volumes, Timings
 13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Bay Length (ft)						
Base Capacity (vph)	175			2665		
Starvation Cap Reductn	0			9		
Spillback Cap Reductn	0			0		
Storage Cap Reductn	0			0		
Reduced v/c Ratio	0.02			0.48		

Intersection Summary

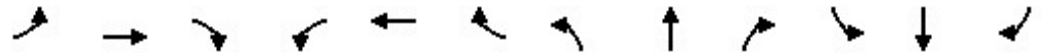
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	61 (76%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.48
Intersection Signal Delay:	0.6
Intersection LOS:	A
Intersection Capacity Utilization	45.2%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 13: N East St & Monroe St



Lanes, Volumes, Timings
15: N Madison St & W Jefferson St

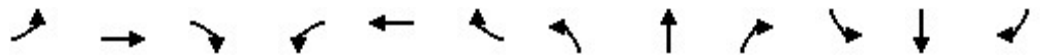
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔↔	
Traffic Volume (vph)	0	17	4	4	13	0	0	0	0	13	903	12
Future Volume (vph)	0	17	4	4	13	0	0	0	0	13	903	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	14	12	12	12	12	12	12	12
Grade (%)		4%			-3%			2%			2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00			1.00							
Frt		0.975									0.998	
Flt Protected					0.989						0.999	
Satd. Flow (prot)	0	1791	0	0	1600	0	0	0	0	0	3113	0
Flt Permitted					0.946						0.999	
Satd. Flow (perm)	0	1791	0	0	1528	0	0	0	0	0	3113	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5									4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		692			253			310			307	
Travel Time (s)		15.7			5.8			7.0			7.0	
Confl. Peds. (#/hr)			3	3								
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)					0					20		20
Adj. Flow (vph)	0	22	5	5	17	0	0	0	0	17	1188	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	27	0	0	22	0	0	0	0	0	1221	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.17	1.00	1.17	1.12	1.18	1.12	1.16	1.16	1.16	1.16	1.16	1.16
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0

Lanes, Volumes, Timings
 15: N Madison St & W Jefferson St

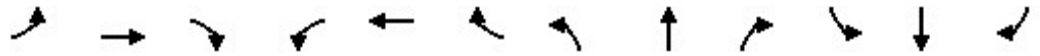
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						6	
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		15.1		15.4	15.4					47.4	47.4	
Total Split (s)		18.0		18.0	18.0					62.0	62.0	
Total Split (%)		22.5%		22.5%	22.5%					77.5%	77.5%	
Maximum Green (s)		12.9		12.6	12.6					56.6	56.6	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.9		2.2	2.2					2.2	2.2	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.1			5.4						5.4	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		Max	Max					C-Max	C-Max	
Walk Time (s)		1.0		1.0	1.0					31.0	31.0	
Flash Dont Walk (s)		9.0		9.0	9.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		12.9			12.6						56.6	
Actuated g/C Ratio		0.16			0.16						0.71	
v/c Ratio		0.09			0.09						0.55	
Control Delay		25.8			30.0						6.8	
Queue Delay		0.0			0.0						0.0	
Total Delay		25.8			30.0						6.8	
LOS		C			C						A	
Approach Delay		25.8			30.0						6.8	
Approach LOS		C			C						A	
90th %ile Green (s)		12.9		12.6	12.6					56.6	56.6	
90th %ile Term Code		Hold		MaxR	MaxR					Coord	Coord	
70th %ile Green (s)		12.9		12.6	12.6					56.6	56.6	
70th %ile Term Code		Hold		MaxR	MaxR					Coord	Coord	
50th %ile Green (s)		12.9		12.6	12.6					56.6	56.6	
50th %ile Term Code		Hold		MaxR	MaxR					Coord	Coord	
30th %ile Green (s)		12.9		12.6	12.6					56.6	56.6	
30th %ile Term Code		Hold		MaxR	MaxR					Coord	Coord	
10th %ile Green (s)		12.9		12.6	12.6					56.6	56.6	
10th %ile Term Code		Hold		MaxR	MaxR					Coord	Coord	
Stops (vph)		18			16						402	
Fuel Used(gal)		0			0						6	
CO Emissions (g/hr)		23			16						400	
NOx Emissions (g/hr)		4			3						78	
VOC Emissions (g/hr)		5			4						93	
Dilemma Vehicles (#)		0			0						0	
Queue Length 50th (ft)		9			10						127	
Queue Length 95th (ft)		26			25						127	
Internal Link Dist (ft)		612			173			230			227	

Lanes, Volumes, Timings
 15: N Madison St & W Jefferson St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		292			240						2203	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.09			0.09						0.55	

Intersection Summary

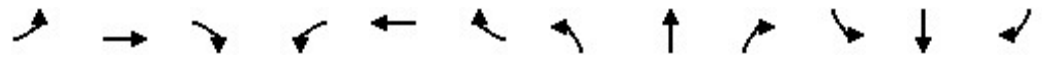
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	11 (14%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.55
Intersection Signal Delay:	7.6
Intersection LOS:	A
Intersection Capacity Utilization	42.2%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 15: N Madison St & W Jefferson St



Lanes, Volumes, Timings
16: N East St & E Jefferson St

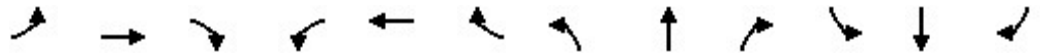
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↕				
Traffic Volume (vph)	7	26	0	0	12	4	23	1047	29	0	0	0
Future Volume (vph)	7	26	0	0	12	4	23	1047	29	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	12	12	11	11	12	12	12
Grade (%)		-3%			3%			0%			3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.99			0.99			1.00				
Frt					0.964			0.996				
Flt Protected		0.990						0.999				
Satd. Flow (prot)	0	1501	0	0	1607	0	0	3032	0	0	0	0
Flt Permitted		0.947						0.999				
Satd. Flow (perm)	0	1425	0	0	1607	0	0	3031	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					5			9				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		268			710			308			318	
Travel Time (s)		6.1			16.1			7.0			7.2	
Confl. Peds. (#/hr)	17					17	8		8			
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)		0					20		20			
Adj. Flow (vph)	8	31	0	0	14	5	28	1261	35	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	0	19	0	0	1324	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.28	1.12	1.17	1.12	1.17	1.14	1.19	1.19	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				

Lanes, Volumes, Timings
 16: N East St & E Jefferson St

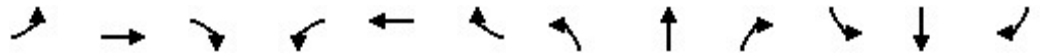
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Detector Phase	4	4			8		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	15.2	15.2			15.2		47.2	47.2				
Total Split (s)	17.0	17.0			17.0		63.0	63.0				
Total Split (%)	21.3%	21.3%			21.3%		78.8%	78.8%				
Maximum Green (s)	11.8	11.8			11.8		57.8	57.8				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Recall Mode	None	None			Max		C-Max	C-Max				
Walk Time (s)	1.0	1.0			1.0		31.0	31.0				
Flash Dont Walk (s)	9.0	9.0			9.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		11.8			11.8			57.8				
Actuated g/C Ratio		0.15			0.15			0.72				
v/c Ratio		0.19			0.08			0.60				
Control Delay		32.4			25.4			2.8				
Queue Delay		0.0			0.0			0.1				
Total Delay		32.4			25.4			2.8				
LOS		C			C			A				
Approach Delay		32.4			25.4			2.8				
Approach LOS		C			C			A				
90th %ile Green (s)	11.8	11.8			11.8		57.8	57.8				
90th %ile Term Code	Hold	Hold			MaxR		Coord	Coord				
70th %ile Green (s)	11.8	11.8			11.8		57.8	57.8				
70th %ile Term Code	Hold	Hold			MaxR		Coord	Coord				
50th %ile Green (s)	11.8	11.8			11.8		57.8	57.8				
50th %ile Term Code	Hold	Hold			MaxR		Coord	Coord				
30th %ile Green (s)	11.8	11.8			11.8		57.8	57.8				
30th %ile Term Code	Hold	Hold			MaxR		Coord	Coord				
10th %ile Green (s)	11.8	11.8			11.8		57.8	57.8				
10th %ile Term Code	Hold	Hold			MaxR		Coord	Coord				
Stops (vph)		30			13			124				
Fuel Used(gal)		0			0			4				
CO Emissions (g/hr)		31			17			276				
NOx Emissions (g/hr)		6			3			54				
VOC Emissions (g/hr)		7			4			64				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		17			6			43				
Queue Length 95th (ft)		41			23			51				
Internal Link Dist (ft)		188			630			228				238

Lanes, Volumes, Timings
 16: N East St & E Jefferson St

02/22/2024

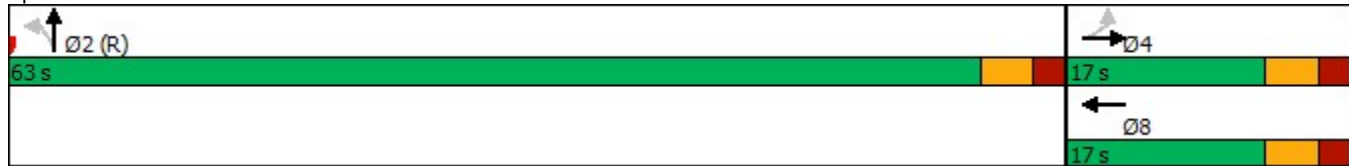


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		210			241			2192				
Starvation Cap Reductn		0			0			95				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.19			0.08			0.63				

Intersection Summary

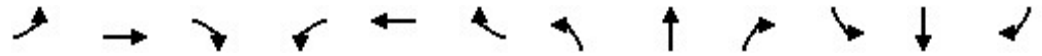
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	55 (69%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	4.0
Intersection LOS:	A
Intersection Capacity Utilization	52.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 16: N East St & E Jefferson St



Lanes, Volumes, Timings
 19: N Madison St & W Washington St

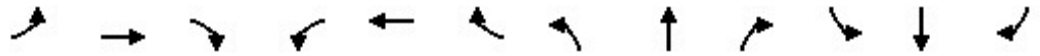
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖					↖	↗	↗
Traffic Volume (vph)	0	107	10	38	208	0	0	0	0	41	845	25
Future Volume (vph)	0	107	10	38	208	0	0	0	0	41	845	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	12	12	12	12	12
Grade (%)		3%			-3%			2%				-2%
Storage Length (ft)	0		0	65		0	0		0	150		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt		0.988										0.996
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1488	0	1585	1552	0	0	0	0	1262	3143	0
Flt Permitted				0.651						0.950		
Satd. Flow (perm)	0	1488	0	1086	1552	0	0	0	0	1262	3143	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5										7
Link Speed (mph)		30			30			30				30
Link Distance (ft)		690			253			324				310
Travel Time (s)		15.7			5.8			7.4				7.0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		0			0					20		20
Adj. Flow (vph)	0	137	13	49	267	0	0	0	0	53	1083	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	49	267	0	0	0	0	53	1115	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane					Yes							
Headway Factor	1.17	1.28	1.17	1.12	1.23	1.12	1.16	1.16	1.16	1.49	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings
 19: N Madison St & W Washington St

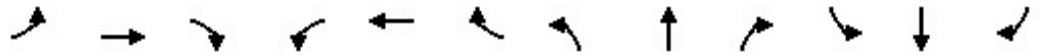
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6		6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		15.4		25.4	25.4					37.6	37.6	
Total Split (s)		23.0		23.0	23.0					57.0	57.0	
Total Split (%)		28.8%		28.8%	28.8%					71.3%	71.3%	
Maximum Green (s)		17.6		17.6	17.6					51.4	51.4	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.2		2.2	2.2					2.4	2.4	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		5.4		5.4	5.4					5.6	5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		Max	Max					C-Max	C-Max	
Walk Time (s)		1.0		9.0	9.0					21.0	21.0	
Flash Dont Walk (s)		9.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		17.6		17.6	17.6					51.4	51.4	
Actuated g/C Ratio		0.22		0.22	0.22					0.64	0.64	
v/c Ratio		0.45		0.21	0.78					0.07	0.55	
Control Delay		31.3		16.8	31.7					5.5	7.4	
Queue Delay		0.0		0.0	1.4					0.0	0.1	
Total Delay		31.3		16.8	33.0					5.5	7.4	
LOS		C		B	C					A	A	
Approach Delay		31.3			30.5						7.4	
Approach LOS		C			C						A	
90th %ile Green (s)		17.6		17.6	17.6					51.4	51.4	
90th %ile Term Code		Max		Ped	Ped					Coord	Coord	
70th %ile Green (s)		17.6		17.6	17.6					51.4	51.4	
70th %ile Term Code		Hold		Ped	Ped					Coord	Coord	
50th %ile Green (s)		17.6		17.6	17.6					51.4	51.4	
50th %ile Term Code		Hold		Ped	Ped					Coord	Coord	
30th %ile Green (s)		17.6		17.6	17.6					51.4	51.4	
30th %ile Term Code		Hold		Ped	Ped					Coord	Coord	
10th %ile Green (s)		17.6		17.6	17.6					51.4	51.4	
10th %ile Term Code		Hold		Ped	Ped					Coord	Coord	
Stops (vph)		96		12	99					13	275	
Fuel Used(gal)		2		0	2					0	5	
CO Emissions (g/hr)		133		19	161					15	344	
NOx Emissions (g/hr)		26		4	31					3	67	
VOC Emissions (g/hr)		31		4	37					4	80	
Dilemma Vehicles (#)		0		0	0					0	0	
Queue Length 50th (ft)		63		4	22					9	102	
Queue Length 95th (ft)		100		22	#133					m16	106	

Lanes, Volumes, Timings
 19: N Madison St & W Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		610			173			244			230	
Turn Bay Length (ft)				65						150		
Base Capacity (vph)		331		238	341					810	2021	
Starvation Cap Reductn		0		0	14					0	117	
Spillback Cap Reductn		0		0	0					0	0	
Storage Cap Reductn		0		0	0					0	0	
Reduced v/c Ratio		0.45		0.21	0.82					0.07	0.59	

Intersection Summary

Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 78 (98%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 14.0 Intersection LOS: B
 Intersection Capacity Utilization 48.2% ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: N Madison St & W Washington St



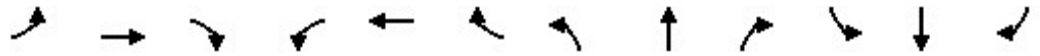
Lanes, Volumes, Timings
20: N East St & E Washington St

02/22/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	189	0	0	261	85	26	993	58	0	0	0
Future Volume (vph)	11	189	0	0	261	85	26	993	58	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	10	11	11	11	12	12	12
Grade (%)		-3%			2%			-3%			1%	
Storage Length (ft)	65		0	0		80	80		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00					0.98	1.00	1.00				
Fr _t						0.850		0.992				
Fl _t Protected	0.950						0.950					
Satd. Flow (prot)	1585	1502	0	0	1574	1291	1226	3037	0	0	0	0
Fl _t Permitted	0.352						0.950					
Satd. Flow (perm)	585	1502	0	0	1574	1266	1220	3037	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						68		13				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		262			724			322				308
Travel Time (s)		6.0			16.5			7.3				7.0
Confl. Peds. (#/hr)	5					5	5		2			
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		0					20		20			
Adj. Flow (vph)	14	236	0	0	326	106	33	1241	73	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	236	0	0	326	106	33	1314	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.12	1.28	1.12	1.16	1.21	1.26	1.54	1.17	1.17	1.15	1.15	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				

Lanes, Volumes, Timings
 20: N East St & E Washington St

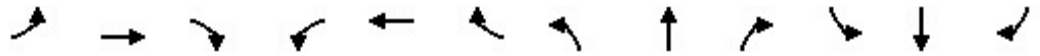
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex					
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0					
Turn Type	Perm	NA		NA		Perm	Perm	NA				
Protected Phases	4			8			2					
Permitted Phases	4					8	2					
Detector Phase	4	4		8		8	2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0	5.0	5.0	5.0			
Minimum Split (s)	31.4	31.4		21.4		21.4	47.0	47.0				
Total Split (s)	26.0	26.0		26.0		26.0	54.0	54.0				
Total Split (%)	32.5%	32.5%		32.5%		32.5%	67.5%	67.5%				
Maximum Green (s)	20.6	20.6		20.6		20.6	48.0	48.0				
Yellow Time (s)	3.2	3.2		3.2		3.2	3.2	3.2				
All-Red Time (s)	2.2	2.2		2.2		2.2	2.8	2.8				
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0	0.0				
Total Lost Time (s)	5.4	5.4		5.4		5.4	6.0	6.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0	3.0	3.0			
Recall Mode	Max	Max		None		None	C-Max	C-Max				
Walk Time (s)	15.0	15.0		5.0		5.0	30.0	30.0				
Flash Dont Walk (s)	11.0	11.0		11.0		11.0	11.0	11.0				
Pedestrian Calls (#/hr)	0	0		0		0	0	0				
Act Effct Green (s)	20.6	20.6		20.6		20.6	48.0	48.0				
Actuated g/C Ratio	0.26	0.26		0.26		0.26	0.60	0.60				
v/c Ratio	0.09	0.61		0.80		0.28	0.05	0.72				
Control Delay	22.8	26.7		45.2		12.8	3.4	6.3				
Queue Delay	0.0	0.3		0.0		0.0	0.0	0.1				
Total Delay	22.8	27.0		45.2		12.8	3.4	6.4				
LOS	C	C		D		B	A	A				
Approach Delay	26.7			37.2				6.4				
Approach LOS	C			D				A				
90th %ile Green (s)	20.6	20.6		20.6		20.6	48.0	48.0				
90th %ile Term Code	Ped	Ped		Max		Max	Coord	Coord				
70th %ile Green (s)	20.6	20.6		20.6		20.6	48.0	48.0				
70th %ile Term Code	Ped	Ped		Max		Max	Coord	Coord				
50th %ile Green (s)	20.6	20.6		20.6		20.6	48.0	48.0				
50th %ile Term Code	Ped	Ped		Max		Max	Coord	Coord				
30th %ile Green (s)	20.6	20.6		20.6		20.6	48.0	48.0				
30th %ile Term Code	Ped	Ped		Hold		Hold	Coord	Coord				
10th %ile Green (s)	20.6	20.6		20.6		20.6	48.0	48.0				
10th %ile Term Code	Ped	Ped		Hold		Hold	Coord	Coord				
Stops (vph)	6	104		226		30	3	301				
Fuel Used(gal)	0	2		5		1	0	6				
CO Emissions (g/hr)	7	139		358		61	7	396				
NOx Emissions (g/hr)	1	27		70		12	1	77				
VOC Emissions (g/hr)	2	32		83		14	2	92				
Dilemma Vehicles (#)	0	0		0		0	0	0				

Lanes, Volumes, Timings
 20: N East St & E Washington St

02/22/2024

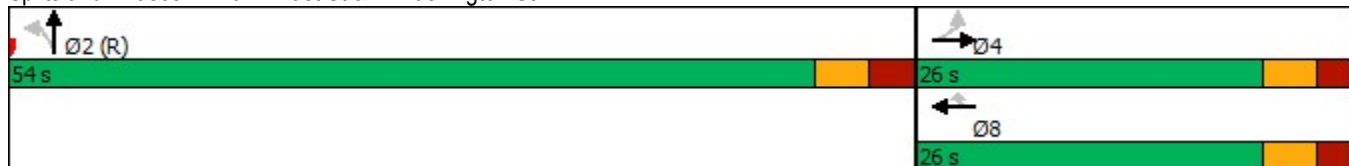


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	3	45			152	15	2	51				
Queue Length 95th (ft)	13	103			#230	44	m4	57				
Internal Link Dist (ft)		182			644			242			228	
Turn Bay Length (ft)	65					80	80					
Base Capacity (vph)	150	386			405	376	732	1827				
Starvation Cap Reductn	0	14			0	0	0	47				
Spillback Cap Reductn	0	0			0	0	0	0				
Storage Cap Reductn	0	0			0	0	0	0				
Reduced v/c Ratio	0.09	0.63			0.80	0.28	0.05	0.74				

Intersection Summary

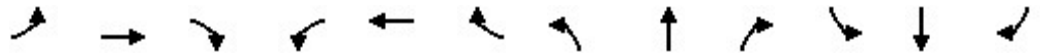
Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 64 (80%), Referenced to phase 2:NBTL and 6:, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 15.4 Intersection LOS: B
 Intersection Capacity Utilization 59.8% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: N East St & E Washington St



Lanes, Volumes, Timings
 23: S Center St/N Madison St & W Front St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔						↔↔	
Traffic Volume (vph)	0	66	17	23	35	0	0	0	0	64	778	37
Future Volume (vph)	0	66	17	23	35	0	0	0	0	64	778	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	12	12	12	12	12	12	12	12
Grade (%)		3%			-3%			1%				-1%
Storage Length (ft)	0		0	60		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			0			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99		0.98							1.00	
Fr _t		0.972									0.994	
Fl _t Protected				0.950							0.996	
Satd. Flow (prot)	0	1392	0	1623	1488	0	0	0	0	0	3075	0
Fl _t Permitted				0.685							0.996	
Satd. Flow (perm)	0	1392	0	1144	1488	0	0	0	0	0	3075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14									12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		684			247			660			324	
Travel Time (s)		15.5			5.6			15.0			7.4	
Confl. Peds. (#/hr)			11	11						3		5
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Parking (#/hr)		0			0					20		20
Adj. Flow (vph)	0	88	23	31	47	0	0	0	0	85	1037	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	111	0	31	47	0	0	0	0	0	1171	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.17	1.33	1.17	1.08	1.28	1.12	1.15	1.15	1.15	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6

Lanes, Volumes, Timings
 23: S Center St/N Madison St & W Front St

02/22/2024

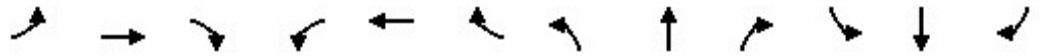


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Detector 2 Type	Cl+Ex			Cl+Ex						Cl+Ex			
Detector 2 Channel													
Detector 2 Extend (s)	0.0			0.0						0.0			
Turn Type	NA		Perm		NA				Perm		NA		
Protected Phases	4			8						6			
Permitted Phases				8						6			
Detector Phase	4			8		8					6		6
Switch Phase													
Minimum Initial (s)	5.0		5.0		5.0				5.0		5.0		
Minimum Split (s)	15.5		25.5		25.5				37.7		37.7		
Total Split (s)	20.0		20.0		20.0				60.0		60.0		
Total Split (%)	25.0%		25.0%		25.0%				75.0%		75.0%		
Maximum Green (s)	14.5		14.5		14.5				54.3		54.3		
Yellow Time (s)	3.2		3.2		3.2				3.2		3.2		
All-Red Time (s)	2.3		2.3		2.3				2.5		2.5		
Lost Time Adjust (s)	0.0		0.0		0.0						0.0		
Total Lost Time (s)	5.5		5.5		5.5						5.7		
Lead/Lag													
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0		3.0		3.0				3.0		3.0		
Recall Mode	Max		None		None				C-Max		C-Max		
Walk Time (s)	1.0		9.0		9.0				21.0		21.0		
Flash Dont Walk (s)	9.0		11.0		11.0				11.0		11.0		
Pedestrian Calls (#/hr)	0		0		0				0		0		
Act Effct Green (s)	14.5		14.5		14.5						54.3		
Actuated g/C Ratio	0.18		0.18		0.18						0.68		
v/c Ratio	0.42		0.15		0.17						0.56		
Control Delay	30.9		29.7		29.7						2.0		
Queue Delay	0.0		0.0		0.0						0.0		
Total Delay	30.9		29.7		29.7						2.0		
LOS	C		C		C						A		
Approach Delay	30.9				29.7						2.0		
Approach LOS	C				C						A		
90th %ile Green (s)	14.5		14.5		14.5				54.3		54.3		
90th %ile Term Code	MaxR		Hold		Hold				Coord		Coord		
70th %ile Green (s)	14.5		14.5		14.5				54.3		54.3		
70th %ile Term Code	MaxR		Hold		Hold				Coord		Coord		
50th %ile Green (s)	14.5		14.5		14.5				54.3		54.3		
50th %ile Term Code	MaxR		Hold		Hold				Coord		Coord		
30th %ile Green (s)	14.5		14.5		14.5				54.3		54.3		
30th %ile Term Code	MaxR		Hold		Hold				Coord		Coord		
10th %ile Green (s)	14.5		14.5		14.5				54.3		54.3		
10th %ile Term Code	MaxR		Hold		Hold				Coord		Coord		
Stops (vph)	63		21		31						55		
Fuel Used(gal)	1		0		0						3		
CO Emissions (g/hr)	92		21		31						201		
NOx Emissions (g/hr)	18		4		6						39		
VOC Emissions (g/hr)	21		5		7						47		
Dilemma Vehicles (#)	0		0		0						0		

Lanes, Volumes, Timings

23: S Center St/N Madison St & W Front St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		43		13	20						19	
Queue Length 95th (ft)		73		30	41						19	
Internal Link Dist (ft)		604			167			580			244	
Turn Bay Length (ft)				60								
Base Capacity (vph)		263		207	269						2091	
Starvation Cap Reductn		0		0	0						57	
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.42		0.15	0.17						0.58	

Intersection Summary

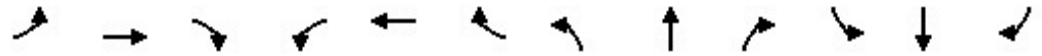
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	4 (5%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.56
Intersection Signal Delay:	6.0
Intersection LOS:	A
Intersection Capacity Utilization	45.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 23: S Center St/N Madison St & W Front St



Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	33	0	0	141	40	45	999	18	0	0	0
Future Volume (vph)	15	33	0	0	141	40	45	999	18	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	16	12	12	10	10	13	11	11	12	12	12
Grade (%)		-1%			0%			-1%				2%
Storage Length (ft)	90		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.98					0.96		1.00				
Fr _t						0.850		0.997				
Fl _t Protected	0.950							0.998				
Satd. Flow (prot)	1518	1873	0	0	1535	1304	0	3019	0	0	0	0
Fl _t Permitted	0.605							0.998				
Satd. Flow (perm)	945	1873	0	0	1535	1250	0	3017	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						47		4				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		256			710			633				322
Travel Time (s)		5.8			16.1			14.4				7.3
Confl. Peds. (#/hr)	15					15	19		1			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	18	39	0	0	166	47	53	1175	21	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	39	0	0	166	47	0	1249	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.19	0.97	1.14	1.14	1.25	1.25	1.09	1.19	1.19	1.16	1.16	1.16
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				

Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

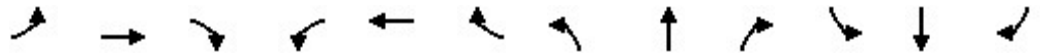
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4					8	2					
Detector Phase	4	4			8	8	2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0				
Minimum Split (s)	27.2	27.2			17.2	17.2	50.6	50.6				
Total Split (s)	22.0	22.0			22.0	22.0	58.0	58.0				
Total Split (%)	27.5%	27.5%			27.5%	27.5%	72.5%	72.5%				
Maximum Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
Yellow Time (s)	3.2	3.2			3.2	3.2	3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.4	2.4				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0				
Total Lost Time (s)	5.2	5.2			5.2	5.2		5.6				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Recall Mode	Max	Max			None	None	C-Max	C-Max				
Walk Time (s)	11.0	11.0			1.0	1.0	34.0	34.0				
Flash Dont Walk (s)	11.0	11.0			11.0	11.0	11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0	0	0	0				
Act Effct Green (s)	16.8	16.8			16.8	16.8		52.4				
Actuated g/C Ratio	0.21	0.21			0.21	0.21		0.66				
v/c Ratio	0.09	0.10			0.52	0.16		0.63				
Control Delay	26.9	26.4			34.6	9.8		6.2				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	26.9	26.4			34.6	9.8		6.3				
LOS	C	C			C	A		A				
Approach Delay		26.6			29.1			6.3				
Approach LOS		C			C			A				
90th %ile Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
90th %ile Term Code	Ped	Ped			Max	Max	Coord	Coord				
70th %ile Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
70th %ile Term Code	Ped	Ped			Hold	Hold	Coord	Coord				
50th %ile Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
50th %ile Term Code	Ped	Ped			Hold	Hold	Coord	Coord				
30th %ile Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
30th %ile Term Code	Ped	Ped			Hold	Hold	Coord	Coord				
10th %ile Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
10th %ile Term Code	Ped	Ped			Hold	Hold	Coord	Coord				
Stops (vph)	14	29			124	11		291				
Fuel Used(gal)	0	0			2	0		8				
CO Emissions (g/hr)	13	28			172	25		573				
NOx Emissions (g/hr)	3	5			33	5		111				
VOC Emissions (g/hr)	3	7			40	6		133				
Dilemma Vehicles (#)	0	0			0	0		0				
Queue Length 50th (ft)	7	16			74	0		82				

Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

02/22/2024

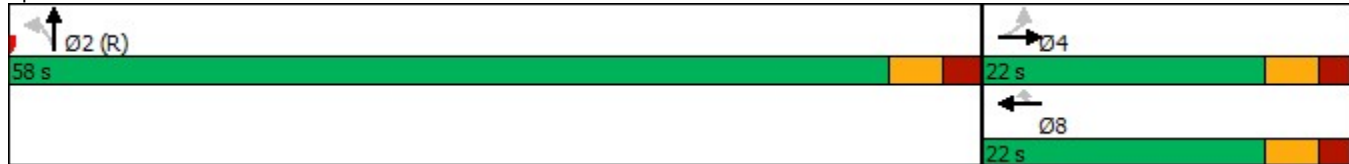


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	23	38			126	24		92				
Internal Link Dist (ft)		176			630			553			242	
Turn Bay Length (ft)	90					100						
Base Capacity (vph)	198	393			322	299		1977				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		31				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.09	0.10			0.52	0.16		0.64				

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	60 (75%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	10.2
Intersection LOS:	B
Intersection Capacity Utilization	61.5%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 24: S East St/N East St & E Front St



Lanes, Volumes, Timings
27: N Center St & W Market St

02/22/2024



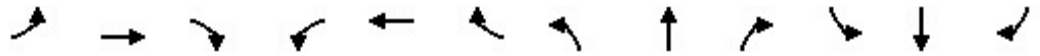
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	42	23	13	112	0	0	0	0	4	139	13
Future Volume (vph)	0	42	23	13	112	0	0	0	0	4	139	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor												
Frt	0.952										0.988	
Flt Protected					0.995				0.999			
Satd. Flow (prot)	0	1536	0	0	1445	0	0	0	0	0	2874	0
Flt Permitted					0.995				0.999			
Satd. Flow (perm)	0	1536	0	0	1445	0	0	0	0	0	2874	0
Link Speed (mph)					30				30			
Link Distance (ft)					266				264			
Travel Time (s)					6.0				6.0			
Confl. Peds. (#/hr)			23		23						6	
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Parking (#/hr)					0				0			
Adj. Flow (vph)	0	53	29	16	142	0	0	0	0	5	176	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	82	0	0	158	0	0	0	0	0	197	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0						0		0		0	
Link Offset(ft)	0						0		0		0	
Crosswalk Width(ft)	16						16		16		16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14
Turning Speed (mph)	15		9		15		9		15		9	
Sign Control	Stop						Stop		Stop		Stop	

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	27.1%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 29: N Center St & W Jefferson St

02/22/2024



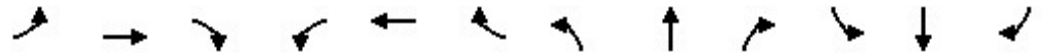
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔↔	
Traffic Volume (vph)	0	33	1	12	18	0	0	0	0	20	104	3
Future Volume (vph)	0	33	1	12	18	0	0	0	0	20	104	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor												
Frt	0.997										0.996	
Flt Protected					0.981				0.992			
Satd. Flow (prot)	0	1408	0	0	1385	0	0	0	0	0	2798	0
Flt Permitted					0.981				0.992			
Satd. Flow (perm)	0	1408	0	0	1385	0	0	0	0	0	2798	0
Link Speed (mph)	30				30				30			
Link Distance (ft)	253				255				306			
Travel Time (s)	5.8				5.8				7.0			
Confl. Peds. (#/hr)			7	7					13	9		
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	0											
Adj. Flow (vph)	0	41	1	15	23	0	0	0	0	25	130	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	0	0	38	0	0	0	0	0	159	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0				0			
Link Offset(ft)	0				0				0			
Crosswalk Width(ft)	16				16				16			
Two way Left Turn Lane												
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14
Turning Speed (mph)	15		9	15	9		15	9		15	9	
Sign Control	Stop			Stop			Stop			Stop		

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	21.5%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
30: N Center St & W Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔						↔↔	
Traffic Volume (vph)	0	165	7	23	214	0	0	0	0	50	60	7
Future Volume (vph)	0	165	7	23	214	0	0	0	0	50	60	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00		1.00								0.99
Frt		0.994										0.991
Flt Protected				0.950								0.979
Satd. Flow (prot)	0	1416	0	1504	1425	0	0	0	0	0	2766	0
Flt Permitted				0.538								0.979
Satd. Flow (perm)	0	1416	0	849	1425	0	0	0	0	0	2755	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4										9
Link Speed (mph)		30			30			30				30
Link Distance (ft)		253			254			326				306
Travel Time (s)		5.8			5.8			7.4				7.0
Confl. Peds. (#/hr)			3	3						4		10
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		0			0							0
Adj. Flow (vph)	0	206	9	29	268	0	0	0	0	63	75	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	215	0	29	268	0	0	0	0	0	147	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes		Yes								
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex		Cl+Ex								Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings
30: N Center St & W Washington St

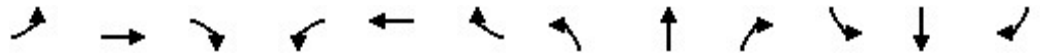
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm		NA
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6		6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0		5.0
Minimum Split (s)		23.0		23.0	23.0					23.0		23.0
Total Split (s)		50.0		50.0	50.0					30.0		30.0
Total Split (%)		62.5%		62.5%	62.5%					37.5%		37.5%
Maximum Green (s)		45.0		45.0	45.0					25.0		25.0
Yellow Time (s)		4.0		4.0	4.0					4.0		4.0
All-Red Time (s)		1.0		1.0	1.0					1.0		1.0
Lost Time Adjust (s)		0.0		0.0	0.0							0.0
Total Lost Time (s)		5.0		5.0	5.0							5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0		3.0
Recall Mode		None		None	None					C-Max		C-Max
Walk Time (s)		7.0		7.0	7.0					7.0		7.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0		11.0
Pedestrian Calls (#/hr)		0		0	0					0		0
Act Effct Green (s)		21.5		21.5	21.5							48.5
Actuated g/C Ratio		0.27		0.27	0.27							0.61
v/c Ratio		0.56		0.13	0.70							0.09
Control Delay		18.9		3.1	12.4							7.9
Queue Delay		0.0		0.0	0.1							0.0
Total Delay		18.9		3.1	12.5							7.9
LOS		B		A	B							A
Approach Delay		18.9			11.6							7.9
Approach LOS		B			B							A
90th %ile Green (s)		31.0		31.0	31.0					39.0		39.0
90th %ile Term Code		Hold		Gap	Gap					Coord		Coord
70th %ile Green (s)		25.0		25.0	25.0					45.0		45.0
70th %ile Term Code		Hold		Gap	Gap					Coord		Coord
50th %ile Green (s)		21.3		21.3	21.3					48.7		48.7
50th %ile Term Code		Hold		Gap	Gap					Coord		Coord
30th %ile Green (s)		17.7		17.7	17.7					52.3		52.3
30th %ile Term Code		Hold		Gap	Gap					Coord		Coord
10th %ile Green (s)		12.6		12.6	12.6					57.4		57.4
10th %ile Term Code		Hold		Gap	Gap					Coord		Coord
Stops (vph)		68		2	63							47
Fuel Used(gal)		1		0	1							1
CO Emissions (g/hr)		96		5	92							51
NOx Emissions (g/hr)		19		1	18							10
VOC Emissions (g/hr)		22		1	21							12
Dilemma Vehicles (#)		0		0	0							0
Queue Length 50th (ft)		45		2	22							13
Queue Length 95th (ft)		49		m4	20							30

Lanes, Volumes, Timings
 30: N Center St & W Washington St

02/22/2024



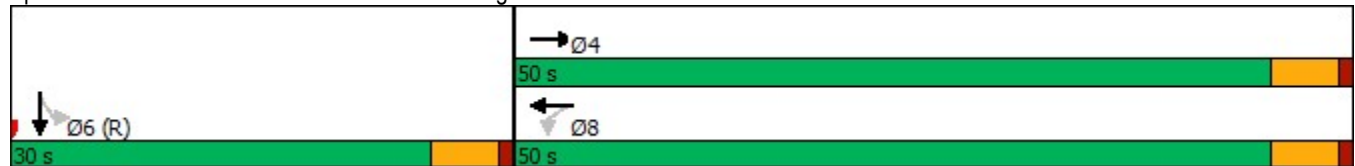
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		173			174			246			226	
Turn Bay Length (ft)				65								
Base Capacity (vph)		798		477	801						1673	
Starvation Cap Reductn		30		0	70						0	
Spillback Cap Reductn		0		0	45						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.28		0.06	0.37						0.09	

Intersection Summary

Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 19 (24%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 13.1
 Intersection LOS: B
 Intersection Capacity Utilization 48.5%
 ICU Level of Service A
 Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 30: N Center St & W Washington St



Lanes, Volumes, Timings
 31: W Front St & N Center St

02/22/2024

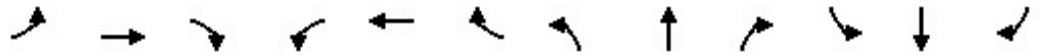
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	127	21	22	61	0	0	0	0	57	15	6
Future Volume (vph)	0	127	21	22	61	0	0	0	0	57	15	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	8	12	12	12	12
Storage Length (ft)	0		0	70		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.981					0.954						
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1398	0	1504	1425	0	0	1235	0	1354	1359	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	1398	0	1504	1425	0	0	1235	0	1354	1359	0
Link Speed (mph)					30						30	
Link Distance (ft)					247						262	
Travel Time (s)					5.6						6.0	
Confl. Peds. (#/hr)				35					19		8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Parking (#/hr)					0						0	
Adj. Flow (vph)	0	138	23	24	66	0	0	0	0	62	16	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	161	0	24	66	0	0	0	0	62	23	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)				13						12		
Link Offset(ft)					0						0	
Crosswalk Width(ft)					16						16	
Two way Left Turn Lane	Yes											
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.55	1.14	1.30	1.30	1.14
Turning Speed (mph)	15		9		15		9		15		9	
Sign Control	Stop			Stop			Stop			Stop		

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	34.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 34: N Main St & W Market St/E Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↗			↖↗				
Traffic Volume (vph)	8	41	0	0	96	6	32	29	20	0	0	0
Future Volume (vph)	8	41	0	0	96	6	32	29	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.992			0.963			
Flt Protected	0.992							0.981				
Satd. Flow (prot)	0	1414	0	0	1414	0	0	2700	0	0	0	0
Flt Permitted	0.992							0.981				
Satd. Flow (perm)	0	1414	0	0	1414	0	0	2700	0	0	0	0
Link Speed (mph)					30				30			
Link Distance (ft)					266			249			404	
Travel Time (s)					6.0				5.7			9.2
Confl. Peds. (#/hr)	13						13	1	7			
Confl. Bikes (#/hr)							1					
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Parking (#/hr)	0							0				
Adj. Flow (vph)	10	53	0	0	125	8	42	38	26	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	0	0	133	0	0	106	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0							0				
Link Offset(ft)	0							0				
Crosswalk Width(ft)	16				16		16			16		
Two way Left Turn Lane												
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.22	1.14	1.14	1.14	1.14
Turning Speed (mph)	15	9		15	9		15	9		15	9	
Sign Control	Stop		Stop				Stop			Stop		

Intersection Summary	
Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	21.6%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

36: N Main St & W Jefferson St/E Jefferson St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕			↕			↕↕					
Traffic Volume (vph)	16	16	0	0	17	11	26	67	11	0	0	0	
Future Volume (vph)	16	16	0	0	17	11	26	67	11	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor													
Frt					0.946					0.984			
Flt Protected	0.976								0.988				
Satd. Flow (prot)	0	1366	0	0	1324	0	0	2728	0	0	0	0	
Flt Permitted	0.976								0.988				
Satd. Flow (perm)	0	1366	0	0	1324	0	0	2728	0	0	0	0	
Link Speed (mph)					30					30			
Link Distance (ft)					255					268			272
Travel Time (s)					5.8					6.1			6.2
Confl. Peds. (#/hr)	11						11	2					24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	
Parking (#/hr)	0								0				
Adj. Flow (vph)	17	17	0	0	18	12	28	73	12	0	0	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	34	0	0	30	0	0	113	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0								0				
Link Offset(ft)					0					0			
Crosswalk Width(ft)					16					16			
Two way Left Turn Lane													
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.22	1.14	1.14	1.14	1.14	
Turning Speed (mph)	15	9		15	9		15	9		15	9		
Sign Control	Stop						Stop		Stop		Stop		

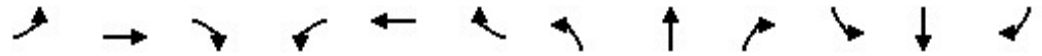
Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	24.2%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024

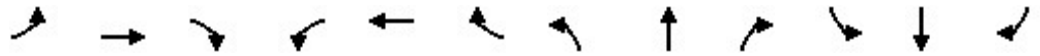


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	194	0	0	253	30	6	25	10	0	0	0
Future Volume (vph)	1	194	0	0	253	30	6	25	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	65		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00				1.00			1.00	0.97			
Flt					0.986				0.850			
Flt Protected	0.950							0.990				
Satd. Flow (prot)	1504	1425	0	0	1403	0	0	1411	1211	0	0	0
Flt Permitted	0.386							0.990				
Satd. Flow (perm)	610	1425	0	0	1403	0	0	1406	1171	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					13				27			
Link Speed (mph)		30			30			30				30
Link Distance (ft)		254			262			326				306
Travel Time (s)		5.8			6.0			7.4				7.0
Confl. Peds. (#/hr)	3					3	7		6			
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		0			0			0	0			
Adj. Flow (vph)	1	243	0	0	316	38	8	31	13	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	243	0	0	354	0	0	39	13	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.30	1.30	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2	1			
Detector Template	Left	Thru			Thru		Left	Thru	Right			
Leading Detector (ft)	20	100			100		20	100	20			
Trailing Detector (ft)	0	0			0		0	0	0			
Detector 1 Position(ft)	0	0			0		0	0	0			
Detector 1 Size(ft)	20	6			6		20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Detector Phase	4	4			8		2	2	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Minimum Split (s)	23.0	23.0			23.0		23.0	23.0	23.0			
Total Split (s)	52.0	52.0			52.0		28.0	28.0	28.0			
Total Split (%)	65.0%	65.0%			65.0%		35.0%	35.0%	35.0%			
Maximum Green (s)	47.0	47.0			47.0		23.0	23.0	23.0			
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0			
Total Lost Time (s)	5.0	5.0			5.0			5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Recall Mode	None	None			None		C-Max	C-Max	C-Max			
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)	26.9	26.9			26.9			43.1	43.1			
Actuated g/C Ratio	0.34	0.34			0.34			0.54	0.54			
v/c Ratio	0.00	0.51			0.74			0.05	0.02			
Control Delay	22.0	31.1			12.8			13.6	5.2			
Queue Delay	0.0	0.1			0.1			0.0	0.0			
Total Delay	22.0	31.3			12.8			13.6	5.2			
LOS	C	C			B			B	A			
Approach Delay		31.2			12.8			11.5				
Approach LOS		C			B			B				
90th %ile Green (s)	38.1	38.1			38.1		31.9	31.9	31.9			
90th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
70th %ile Green (s)	31.3	31.3			31.3		38.7	38.7	38.7			
70th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
50th %ile Green (s)	26.7	26.7			26.7		43.3	43.3	43.3			
50th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
30th %ile Green (s)	22.3	22.3			22.3		47.7	47.7	47.7			
30th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
10th %ile Green (s)	16.1	16.1			16.1		53.9	53.9	53.9			
10th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
Stops (vph)	1	128			78			22	5			
Fuel Used(gal)	0	2			2			0	0			
CO Emissions (g/hr)	1	162			122			20	4			
NOx Emissions (g/hr)	0	32			24			4	1			
VOC Emissions (g/hr)	0	38			28			5	1			
Dilemma Vehicles (#)	0	0			0			0	0			
Queue Length 50th (ft)	0	88			19			12	0			
Queue Length 95th (ft)	m1	86			m19			m30	m4			

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024

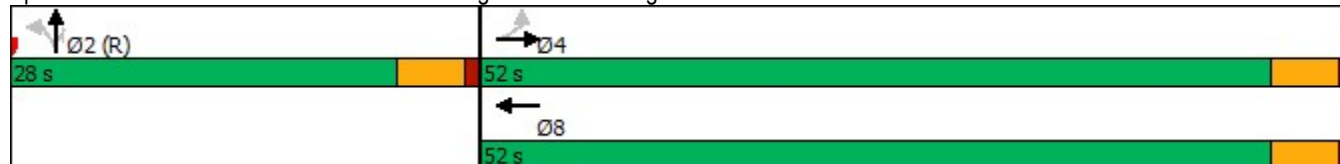


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		174			182			246			226	
Turn Bay Length (ft)	65											
Base Capacity (vph)	358	837			829			757	643			
Starvation Cap Reductn	0	129			49			0	0			
Spillback Cap Reductn	0	38			0			0	0			
Storage Cap Reductn	0	0			0			0	0			
Reduced v/c Ratio	0.00	0.34			0.45			0.05	0.02			

Intersection Summary

Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 7 (9%), Referenced to phase 2:NBTL and 6:, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 19.6
 Intersection LOS: B
 Intersection Capacity Utilization 48.5%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 37: N Main St & W Washington St/E Washington St



Lanes, Volumes, Timings
 38: W Front St/E Front St & N Main St

02/22/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	150	0	0	89	29	0	0	0	0	0	0
Future Volume (vph)	33	150	0	0	89	29	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	8	12	12	12	12
Storage Length (ft)	70		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.967											
Flt Protected	0.950											
Satd. Flow (prot)	1504	1425	0	0	1378	0	0	1308	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1504	1425	0	0	1378	0	0	1308	0	0	0	0
Link Speed (mph)	30				30				30		30	
Link Distance (ft)	262				256				210		326	
Travel Time (s)	6.0				5.8				4.8		7.4	
Confl. Peds. (#/hr)	17		2	2		17	7		36			
Peak Hour Factor	0.83	0.83	0.92	0.92	0.83	0.83	0.92	0.92	0.92	0.83	0.92	0.83
Heavy Vehicles (%)	8%	8%	2%	2%	8%	8%	2%	2%	2%	8%	2%	8%
Parking (#/hr)	0				0				0			
Adj. Flow (vph)	40	181	0	0	107	35	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	181	0	0	142	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12				12				0		0	
Link Offset(ft)	0				0				0		0	
Crosswalk Width(ft)	16				16				16		16	
Two way Left Turn Lane	Yes											
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.55	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control	Free				Free				Stop		Stop	

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	27.1%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
44: N East St & E Market St

02/22/2024





















Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	17	1022	7	0	0
Future Volume (vph)	0	17	1022	7	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	0%		-2%			2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.865	0.999			
Flt Protected						
Satd. Flow (prot)	0	1292	3077	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1292	3077	0	0	0
Link Speed (mph)	30		30			30
Link Distance (ft)	558		266			127
Travel Time (s)	12.7		6.0			2.9
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)		0				
Adj. Flow (vph)	0	21	1246	9	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	21	1255	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.30	1.18	1.18	1.16	1.16
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Stop

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	41.6%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
47: S Center St & W Olive St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	60	37	3	37	0	0	0	0	44	726	57
Future Volume (vph)	0	60	37	3	37	0	0	0	0	44	726	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	10	12	12	12	12	12	12	12	12	12
Grade (%)		1%			-3%			3%			-1%	
Storage Length (ft)	0		80	0		0	0		0	0		50
Storage Lanes	0		1	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									0.850
Flt Protected				0.950							0.997	
Satd. Flow (prot)	0	1792	1470	1796	1891	0	0	0	0	0	3546	1591
Flt Permitted				0.715							0.997	
Satd. Flow (perm)	0	1792	1470	1352	1891	0	0	0	0	0	3546	1591
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			40									56
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		777			330			770			660	
Travel Time (s)		17.7			7.5			17.5			15.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	65	40	3	40	0	0	0	0	48	789	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	40	3	40	0	0	0	0	0	837	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.05	1.10	0.98	0.98	0.98	1.02	1.02	1.02	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA	Perm	Perm	NA					Perm	NA	Perm

Lanes, Volumes, Timings
47: S Center St & W Olive St

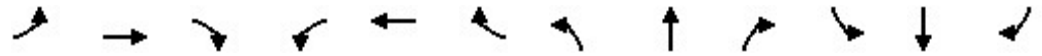
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8						6	
Permitted Phases			4	8						6		6
Detector Phase		4	4	8	8					6	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		13.5	13.5	13.5	13.5					37.9	37.9	37.9
Total Split (s)		21.0	21.0	21.0	21.0					59.0	59.0	59.0
Total Split (%)		26.3%	26.3%	26.3%	26.3%					73.8%	73.8%	73.8%
Maximum Green (s)		15.5	15.5	15.5	15.5					53.1	53.1	53.1
Yellow Time (s)		3.2	3.2	3.2	3.2					3.2	3.2	3.2
All-Red Time (s)		2.3	2.3	2.3	2.3					2.7	2.7	2.7
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	0.0
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		Max	Max	None	None					C-Max	C-Max	C-Max
Walk Time (s)		1.0	1.0	1.0	1.0					21.0	21.0	21.0
Flash Dont Walk (s)		7.0	7.0	7.0	7.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0					0	0	0
Act Effct Green (s)		15.5	15.5	15.5	15.5						53.1	53.1
Actuated g/C Ratio		0.19	0.19	0.19	0.19						0.66	0.66
v/c Ratio		0.19	0.13	0.01	0.11						0.36	0.06
Control Delay		28.7	10.4	25.7	25.8						1.6	0.2
Queue Delay		0.0	0.0	0.0	0.0						0.0	0.0
Total Delay		28.7	10.4	25.7	25.8						1.6	0.2
LOS		C	B	C	C						A	A
Approach Delay		21.7			25.8						1.5	
Approach LOS		C			C						A	
90th %ile Green (s)		15.5	15.5	15.5	15.5					53.1	53.1	53.1
90th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
70th %ile Green (s)		15.5	15.5	15.5	15.5					53.1	53.1	53.1
70th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
50th %ile Green (s)		15.5	15.5	15.5	15.5					53.1	53.1	53.1
50th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
30th %ile Green (s)		15.5	15.5	15.5	15.5					53.1	53.1	53.1
30th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
10th %ile Green (s)		15.5	15.5	15.5	15.5					53.1	53.1	53.1
10th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
Stops (vph)		49	11	5	32						84	0
Fuel Used(gal)		1	0	0	0						5	0
CO Emissions (g/hr)		69	25	4	33						326	21
NOx Emissions (g/hr)		13	5	1	6						64	4
VOC Emissions (g/hr)		16	6	1	8						76	5
Dilemma Vehicles (#)		0	0	0	0						0	0
Queue Length 50th (ft)		27	0	1	17						12	0
Queue Length 95th (ft)		61	25	m5	m38						15	m0
Internal Link Dist (ft)		697			250			690			580	
Turn Bay Length (ft)			80									50

Lanes, Volumes, Timings
47: S Center St & W Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		347	317	261	366						2353	1074
Starvation Cap Reductn		0	0	0	0						0	0
Spillback Cap Reductn		0	0	0	0						0	0
Storage Cap Reductn		0	0	0	0						0	0
Reduced v/c Ratio		0.19	0.13	0.01	0.11						0.36	0.06

Intersection Summary

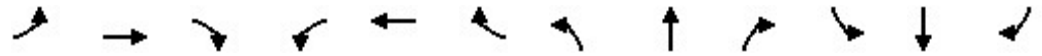
Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 21 (26%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.36
 Intersection Signal Delay: 4.5
 Intersection LOS: A
 Intersection Capacity Utilization 43.8%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 47: S Center St & W Olive St



Lanes, Volumes, Timings
48: S East St & E Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕↕			↕↕				
Traffic Volume (vph)	58	52	0	0	17	26	31	1025	11	0	0	0
Future Volume (vph)	58	52	0	0	17	26	31	1025	11	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	12	12	12	12	12
Grade (%)		2%			-4%			4%				-4%
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.909			0.998				
Flt Protected		0.974						0.999				
Satd. Flow (prot)	0	1675	0	0	3188	0	0	3359	0	0	0	0
Flt Permitted		0.809						0.999				
Satd. Flow (perm)	0	1391	0	0	3188	0	0	3359	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					28			3				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		330			647			682				633
Travel Time (s)		7.5			14.7			15.5				14.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Parking (#/hr)		0										
Adj. Flow (vph)	63	57	0	0	18	28	34	1114	12	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	120	0	0	46	0	0	1160	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.07	1.01	0.97	0.97	0.97	1.03	1.03	1.03	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												

Lanes, Volumes, Timings
48: S East St & E Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Detector Phase	4	4			8		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	17.5	17.5			17.5		60.6	60.6				
Total Split (s)	18.0	18.0			18.0		62.0	62.0				
Total Split (%)	22.5%	22.5%			22.5%		77.5%	77.5%				
Maximum Green (s)	12.5	12.5			12.5		56.4	56.4				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.3	2.3			2.3		2.4	2.4				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.5			5.5			5.6				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Recall Mode	Max	Max			None		C-Max	C-Max				
Walk Time (s)	1.0	1.0			1.0		44.0	44.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		12.5			12.5			56.4				
Actuated g/C Ratio		0.16			0.16			0.70				
v/c Ratio		0.55			0.09			0.49				
Control Delay		43.3			16.6			6.1				
Queue Delay		0.0			0.0			0.0				
Total Delay		43.3			16.6			6.1				
LOS		D			B			A				
Approach Delay		43.3			16.6			6.1				
Approach LOS		D			B			A				
90th %ile Green (s)	12.5	12.5			12.5		56.4	56.4				
90th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
70th %ile Green (s)	12.5	12.5			12.5		56.4	56.4				
70th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
50th %ile Green (s)	12.5	12.5			12.5		56.4	56.4				
50th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
30th %ile Green (s)	12.5	12.5			12.5		56.4	56.4				
30th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
10th %ile Green (s)	12.5	12.5			12.5		56.4	56.4				
10th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
Stops (vph)		107			21			430				
Fuel Used(gal)		2			0			9				
CO Emissions (g/hr)		129			33			656				
NOx Emissions (g/hr)		25			6			128				
VOC Emissions (g/hr)		30			8			152				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		65			4			113				
Queue Length 95th (ft)		#120			18			150				

Lanes, Volumes, Timings
48: S East St & E Olive St

02/22/2024

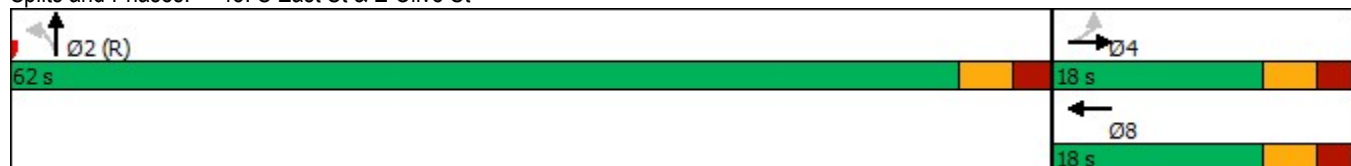


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		250			567			602			553	
Turn Bay Length (ft)												
Base Capacity (vph)		217			521			2368				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.55			0.09			0.49				

Intersection Summary

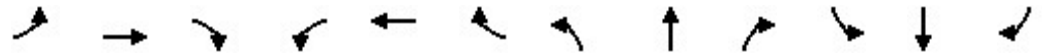
Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	55 (69%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.55
Intersection Signal Delay:	9.9
Intersection LOS:	A
Intersection Capacity Utilization	51.4%
ICU Level of Service	A
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 48: S East St & E Olive St



Lanes, Volumes, Timings
 3: N Madison St/N Center St & W Locust St

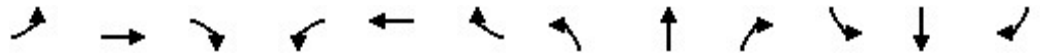
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↓						↑↑	↑
Traffic Volume (vph)	0	491	69	4	63	0	0	0	0	216	1306	182
Future Volume (vph)	0	491	69	4	63	0	0	0	0	216	1306	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		150
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		1.00									1.00	
Frt		0.982										0.850
Flt Protected					0.997						0.993	
Satd. Flow (prot)	0	3468	0	0	1857	0	0	0	0	0	3514	1583
Flt Permitted					0.965						0.993	
Satd. Flow (perm)	0	3468	0	0	1798	0	0	0	0	0	3507	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21										194
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		659			244			860			526	
Travel Time (s)		15.0			5.5			19.5			12.0	
Confl. Peds. (#/hr)			4							12		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	522	73	4	67	0	0	0	0	230	1389	194
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	595	0	0	71	0	0	0	0	0	1619	194
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	1
Detector Template		Thru		Left	Thru					Left	Thru	Right
Leading Detector (ft)		100		20	100					20	100	20
Trailing Detector (ft)		0		0	0					0	0	0
Detector 1 Position(ft)		0		0	0					0	0	0
Detector 1 Size(ft)		6		20	6					20	6	20
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm	NA	Perm

Lanes, Volumes, Timings
 3: N Madison St/N Center St & W Locust St

02/22/2024

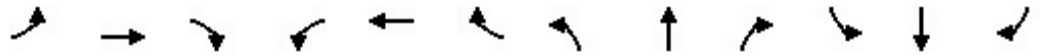


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8						6	
Permitted Phases				8						6		6
Detector Phase		4		8	8					6	6	6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		23.4		22.5	22.5					23.4	23.4	23.4
Total Split (s)		23.6		22.5	22.5					46.4	46.4	46.4
Total Split (%)		33.7%		32.1%	32.1%					66.3%	66.3%	66.3%
Maximum Green (s)		18.2		18.0	18.0					41.0	41.0	41.0
Yellow Time (s)		3.2		3.5	3.5					3.2	3.2	3.2
All-Red Time (s)		2.2		1.0	1.0					2.2	2.2	2.2
Lost Time Adjust (s)		0.0			0.0						0.0	0.0
Total Lost Time (s)		5.4			4.5						5.4	5.4
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Recall Mode		None		None	None					C-Max	C-Max	C-Max
Walk Time (s)		7.0		7.0	7.0					7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0					0	0	0
Act Effct Green (s)		16.4			17.3						42.8	42.8
Actuated g/C Ratio		0.23			0.25						0.61	0.61
v/c Ratio		0.72			0.16						0.75	0.19
Control Delay		29.0			13.8						13.2	1.6
Queue Delay		0.8			0.0						2.3	0.0
Total Delay		29.8			13.8						15.5	1.6
LOS		C			B						B	A
Approach Delay		29.8			13.8						14.0	
Approach LOS		C			B						B	
90th %ile Green (s)		18.2		19.1	19.1					41.0	41.0	41.0
90th %ile Term Code		Max		Hold	Hold					Coord	Coord	Coord
70th %ile Green (s)		18.2		19.1	19.1					41.0	41.0	41.0
70th %ile Term Code		Max		Hold	Hold					Coord	Coord	Coord
50th %ile Green (s)		17.5		18.4	18.4					41.7	41.7	41.7
50th %ile Term Code		Gap		Hold	Hold					Coord	Coord	Coord
30th %ile Green (s)		15.7		16.6	16.6					43.5	43.5	43.5
30th %ile Term Code		Gap		Hold	Hold					Coord	Coord	Coord
10th %ile Green (s)		12.3		13.2	13.2					46.9	46.9	46.9
10th %ile Term Code		Gap		Hold	Hold					Coord	Coord	Coord
Stops (vph)		475			29						1044	14
Fuel Used(gal)		9			0						16	1
CO Emissions (g/hr)		615			33						1125	62
NOx Emissions (g/hr)		120			6						219	12
VOC Emissions (g/hr)		142			8						261	14
Dilemma Vehicles (#)		0			0						0	0
Queue Length 50th (ft)		117			8						245	0
Queue Length 95th (ft)		167			m18						342	22
Internal Link Dist (ft)		579			164			780			446	
Turn Bay Length (ft)												150

Lanes, Volumes, Timings

3: N Madison St/N Center St & W Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		917			490						2145	1043
Starvation Cap Reductn		0			0						0	0
Spillback Cap Reductn		117			0						377	0
Storage Cap Reductn		0			0						0	0
Reduced v/c Ratio		0.74			0.14						0.92	0.19

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	45 (64%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.75
Intersection Signal Delay:	17.8
Intersection LOS:	B
Intersection Capacity Utilization	67.2%
ICU Level of Service	C
Analysis Period (min)	15

m Volume for 95th percentile queue is metered by upstream signal.

















Splits and Phases: 3: N Madison St/N Center St & W Locust St



Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

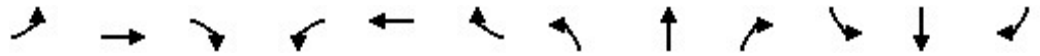
02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	599	0	0	0	0	67	1043	231	0	0	0
Future Volume (vph)	113	599	0	0	0	0	67	1043	231	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00						1.00				
Frt								0.974				
Flt Protected		0.992						0.998				
Satd. Flow (prot)	0	3511	0	0	0	0	0	3431	0	0	0	0
Flt Permitted		0.992						0.998				
Satd. Flow (perm)	0	3508	0	0	0	0	0	3431	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								41				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		244			514			878				525
Travel Time (s)		5.5			11.7			20.0				11.9
Confl. Peds. (#/hr)	5								3			
Confl. Bikes (#/hr)									1			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	122	644	0	0	0	0	72	1122	248	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	766	0	0	0	0	0	1442	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2					1	2				
Detector Template	Left	Thru					Left	Thru				
Leading Detector (ft)	20	100					20	100				
Trailing Detector (ft)	0	0					0	0				
Detector 1 Position(ft)	0	0					0	0				
Detector 1 Size(ft)	20	6					20	6				
Detector 1 Type	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0					0.0	0.0				
Detector 1 Queue (s)	0.0	0.0					0.0	0.0				
Detector 1 Delay (s)	0.0	0.0					0.0	0.0				
Detector 2 Position(ft)		94						94				
Detector 2 Size(ft)		6						6				
Detector 2 Type		Cl+Ex						Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0				
Turn Type	Perm	NA					Perm	NA				
Protected Phases		4						2				
Permitted Phases	4						2					

Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

02/22/2024

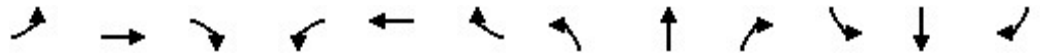


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4					2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0					5.0	5.0				
Minimum Split (s)	23.5	23.5					23.5	23.5				
Total Split (s)	24.0	24.0					46.0	46.0				
Total Split (%)	34.3%	34.3%					65.7%	65.7%				
Maximum Green (s)	18.5	18.5					40.5	40.5				
Yellow Time (s)	3.2	3.2					3.2	3.2				
All-Red Time (s)	2.3	2.3					2.3	2.3				
Lost Time Adjust (s)		0.0						0.0				
Total Lost Time (s)		5.5						5.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0					3.0	3.0				
Recall Mode	None	None					C-Max	C-Max				
Walk Time (s)	7.0	7.0					7.0	7.0				
Flash Dont Walk (s)	11.0	11.0					11.0	11.0				
Pedestrian Calls (#/hr)	0	0					0	0				
Act Effct Green (s)		18.1						40.9				
Actuated g/C Ratio		0.26						0.58				
v/c Ratio		0.84						0.71				
Control Delay		34.4						7.6				
Queue Delay		50.0						0.0				
Total Delay		84.4						7.6				
LOS		F						A				
Approach Delay		84.4						7.6				
Approach LOS		F						A				
90th %ile Green (s)	18.5	18.5					40.5	40.5				
90th %ile Term Code	Max	Max					Coord	Coord				
70th %ile Green (s)	18.5	18.5					40.5	40.5				
70th %ile Term Code	Max	Max					Coord	Coord				
50th %ile Green (s)	18.5	18.5					40.5	40.5				
50th %ile Term Code	Max	Max					Coord	Coord				
30th %ile Green (s)	18.5	18.5					40.5	40.5				
30th %ile Term Code	Max	Max					Coord	Coord				
10th %ile Green (s)	16.6	16.6					42.4	42.4				
10th %ile Term Code	Gap	Gap					Coord	Coord				
Stops (vph)		666						614				
Fuel Used(gal)		10						15				
CO Emissions (g/hr)		701						1025				
NOx Emissions (g/hr)		136						199				
VOC Emissions (g/hr)		162						237				
Dilemma Vehicles (#)		0						0				
Queue Length 50th (ft)		175						77				
Queue Length 95th (ft)		#257						104				
Internal Link Dist (ft)		164			434			798			445	
Turn Bay Length (ft)												
Base Capacity (vph)		927						2020				
Starvation Cap Reductn		262						0				

Lanes, Volumes, Timings

6: N East St/N Main St & W Locust St/E Locust St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		1.15						0.71				

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	10 (14%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.84
Intersection Signal Delay:	34.3
Intersection LOS:	C
Intersection Capacity Utilization	67.2%
ICU Level of Service	C
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 6: N East St/N Main St & W Locust St/E Locust St



Lanes, Volumes, Timings
9: N Madison St & W Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↗						↖↗	
Traffic Volume (vph)	0	137	119	27	119	0	0	0	0	13	1029	162
Future Volume (vph)	0	137	119	27	119	0	0	0	0	13	1029	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	12	12	12	12	12
Grade (%)		1%			-2%			-6%			4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99		1.00							1.00	
Frt		0.937									0.980	
Flt Protected				0.950							0.999	
Satd. Flow (prot)	0	1501	0	1609	1637	0	0	0	0	0	3046	0
Flt Permitted				0.403							0.999	
Satd. Flow (perm)	0	1501	0	682	1637	0	0	0	0	0	3046	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		60									44	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		705			247			400			860	
Travel Time (s)		16.0			5.6			9.1			19.5	
Confl. Peds. (#/hr)			1	1								4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Parking (#/hr)										20		20
Adj. Flow (vph)	0	146	127	29	127	0	0	0	0	14	1095	172
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	273	0	29	127	0	0	0	0	0	1281	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes										
Headway Factor	1.15	1.20	1.15	1.13	1.18	1.13	1.10	1.10	1.10	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm	NA	

Lanes, Volumes, Timings
 9: N Madison St & W Market St

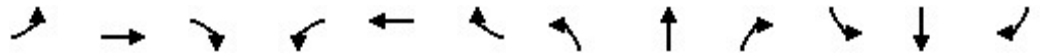
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		17.4		17.4	17.4					45.2	45.2	
Total Split (s)		23.0		23.0	23.0					47.0	47.0	
Total Split (%)		32.9%		32.9%	32.9%					67.1%	67.1%	
Maximum Green (s)		17.6		17.6	17.6					41.8	41.8	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.2		2.2	2.2					2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0						0.0	
Total Lost Time (s)		5.4		5.4	5.4						5.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		1.0		1.0	1.0					29.0	29.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		14.3		14.3	14.3						45.1	
Actuated g/C Ratio		0.20		0.20	0.20						0.64	
v/c Ratio		0.77		0.21	0.38						0.65	
Control Delay		34.9		25.3	26.3						1.7	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		34.9		25.3	26.3						1.7	
LOS		C		C	C						A	
Approach Delay		34.9			26.1						1.7	
Approach LOS		C			C						A	
90th %ile Green (s)		17.6		17.6	17.6					41.8	41.8	
90th %ile Term Code		Max		Hold	Hold					Coord	Coord	
70th %ile Green (s)		17.6		17.6	17.6					41.8	41.8	
70th %ile Term Code		Max		Hold	Hold					Coord	Coord	
50th %ile Green (s)		15.5		15.5	15.5					43.9	43.9	
50th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
30th %ile Green (s)		12.6		12.6	12.6					46.8	46.8	
30th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
10th %ile Green (s)		8.3		8.3	8.3					51.1	51.1	
10th %ile Term Code		Gap		Hold	Hold					Coord	Coord	
Stops (vph)		186		23	97						48	
Fuel Used(gal)		4		0	1						9	
CO Emissions (g/hr)		298		22	98						612	
NOx Emissions (g/hr)		58		4	19						119	
VOC Emissions (g/hr)		69		5	23						142	
Dilemma Vehicles (#)		0		0	0						0	
Queue Length 50th (ft)		85		10	46						12	
Queue Length 95th (ft)		158		31	88						14	
Internal Link Dist (ft)		625			167			320			780	
Turn Bay Length (ft)												

Lanes, Volumes, Timings
 9: N Madison St & W Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		422		171	411						1977	
Starvation Cap Reductn		0		0	0						0	
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.65		0.17	0.31						0.65	

Intersection Summary

Area Type:	CBD
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	64 (91%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	9.2
Intersection LOS:	A
Intersection Capacity Utilization	71.5%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 9: N Madison St & W Market St



Lanes, Volumes, Timings
11: N East St & E Market St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	152	0	139	1114	0	0
Future Volume (vph)	152	0	139	1114	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	11	12	12
Grade (%)	0%			-2%	2%	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor	0.98			1.00		
Frt						
Flt Protected	0.950			0.994		
Satd. Flow (prot)	1481	0	0	2782	0	0
Flt Permitted	0.950			0.994		
Satd. Flow (perm)	1447	0	0	2782	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	263			127	878	
Travel Time (s)	6.0			2.9	20.0	
Confl. Peds. (#/hr)	11		2			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Parking (#/hr)	0		20	20		
Adj. Flow (vph)	162	0	148	1185	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	162	0	0	1333	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.25	1.14	1.13	1.34	1.16	1.16
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2		
Detector Template	Left		Left	Thru		
Leading Detector (ft)	20		20	100		
Trailing Detector (ft)	0		0	0		
Detector 1 Position(ft)	0		0	0		
Detector 1 Size(ft)	20		20	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(ft)				94		
Detector 2 Size(ft)				6		
Detector 2 Type				Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)				0.0		
Turn Type	Prot		Perm	NA		

Lanes, Volumes, Timings
11: N East St & E Market St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4			2		
Permitted Phases			2			
Detector Phase	4		2	2		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	15.4		47.5	47.5		
Total Split (s)	21.0		49.0	49.0		
Total Split (%)	30.0%		70.0%	70.0%		
Maximum Green (s)	15.6		43.5	43.5		
Yellow Time (s)	3.2		3.2	3.2		
All-Red Time (s)	2.2		2.3	2.3		
Lost Time Adjust (s)	0.0			0.0		
Total Lost Time (s)	5.4			5.5		
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		C-Max	C-Max		
Walk Time (s)	1.0		31.0	31.0		
Flash Dont Walk (s)	9.0		11.0	11.0		
Pedestrian Calls (#/hr)	0		0	0		
Act Effct Green (s)	12.3			46.8		
Actuated g/C Ratio	0.18			0.67		
v/c Ratio	0.62			0.72		
Control Delay	37.0			10.9		
Queue Delay	0.0			0.0		
Total Delay	37.0			10.9		
LOS	D			B		
Approach Delay	37.0			10.9		
Approach LOS	D			B		
90th %ile Green (s)	15.6		43.5	43.5		
90th %ile Term Code	Max		Coord	Coord		
70th %ile Green (s)	15.0		44.1	44.1		
70th %ile Term Code	Gap		Coord	Coord		
50th %ile Green (s)	12.8		46.3	46.3		
50th %ile Term Code	Gap		Coord	Coord		
30th %ile Green (s)	10.6		48.5	48.5		
30th %ile Term Code	Gap		Coord	Coord		
10th %ile Green (s)	7.5		51.6	51.6		
10th %ile Term Code	Gap		Coord	Coord		
Stops (vph)	135			772		
Fuel Used(gal)	2			8		
CO Emissions (g/hr)	154			580		
NOx Emissions (g/hr)	30			113		
VOC Emissions (g/hr)	36			134		
Dilemma Vehicles (#)	0			0		
Queue Length 50th (ft)	65			165		
Queue Length 95th (ft)	117			278		
Internal Link Dist (ft)	183			47	798	
Turn Bay Length (ft)						

Lanes, Volumes, Timings
 11: N East St & E Market St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Base Capacity (vph)	330			1859		
Starvation Cap Reductn	0			0		
Spillback Cap Reductn	0			0		
Storage Cap Reductn	0			0		
Reduced v/c Ratio	0.49			0.72		

Intersection Summary

Area Type:	CBD
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	64 (91%), Referenced to phase 2:NBT and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	13.7
Intersection LOS:	B
Intersection Capacity Utilization	57.1%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 11: N East St & E Market St



Lanes, Volumes, Timings
12: N Madison St & W Monroe St

02/22/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	10	0	35	28	0	0	0	0	3	1168	7	
Future Volume (vph)	0	10	0	35	28	0	0	0	0	3	1168	7	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	12	12	12	12	12	12	12	12	12	12	
Grade (%)		0%			0%			-3%			6%		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	
Ped Bike Factor													
Frt												0.999	
Flt Protected					0.973								
Satd. Flow (prot)	0	1621	0	0	1631	0	0	0	0	0	3087	0	
Flt Permitted					0.973								
Satd. Flow (perm)	0	1621	0	0	1631	0	0	0	0	0	3087	0	
Link Speed (mph)					30					30			
Link Distance (ft)					699			209			307		
Travel Time (s)					15.9			4.8			7.0		
Confl. Peds. (#/hr)											4	2	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
Adj. Flow (vph)	0	11	0	39	31	0	0	0	0	3	1312	8	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	11	0	0	70	0	0	0	0	0	1323	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0					0					0		
Link Offset(ft)	0					0					0		
Crosswalk Width(ft)	16					16					16		
Two way Left Turn Lane													
Headway Factor	1.14	1.19	1.14	1.14	1.14	1.14	1.12	1.12	1.12	1.19	1.19	1.19	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Sign Control	Stop					Stop					Free		
Intersection Summary													
Area Type:	CBD												
Control Type:	Unsignalized												
Intersection Capacity Utilization	53.3%					ICU Level of Service A							
Analysis Period (min)	15												

Lanes, Volumes, Timings
13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	54	0	21	1165	0	0
Future Volume (vph)	54	0	21	1165	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12
Grade (%)	-2%			-3%	4%	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor	0.98			1.00		
Frt						
Flt Protected	0.950			0.999		
Satd. Flow (prot)	1448	0	0	2810	0	0
Flt Permitted	0.950			0.999		
Satd. Flow (perm)	1426	0	0	2810	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (mph)	30			30	30	
Link Distance (ft)	221			318	266	
Travel Time (s)	5.0			7.2	6.0	
Confl. Peds. (#/hr)	5		7			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Parking (#/hr)	0		20	20		
Adj. Flow (vph)	56	0	22	1201	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	56	0	0	1223	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.29	1.13	1.12	1.34	1.17	1.17
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2		
Detector Template	Left		Left	Thru		
Leading Detector (ft)	20		20	100		
Trailing Detector (ft)	0		0	0		
Detector 1 Position(ft)	0		0	0		
Detector 1 Size(ft)	20		20	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(ft)				94		
Detector 2 Size(ft)				6		
Detector 2 Type				Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)				0.0		
Turn Type	Prot		Perm	NA		

Lanes, Volumes, Timings
13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	4			2		
Permitted Phases			2			
Detector Phase	4		2	2		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	13.2		49.2	49.2		
Total Split (s)	17.0		63.0	63.0		
Total Split (%)	21.3%		78.8%	78.8%		
Maximum Green (s)	11.8		57.8	57.8		
Yellow Time (s)	3.2		3.2	3.2		
All-Red Time (s)	2.0		2.0	2.0		
Lost Time Adjust (s)	0.0			0.0		
Total Lost Time (s)	5.2			5.2		
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		C-Max	C-Max		
Walk Time (s)	1.0		33.0	33.0		
Flash Dont Walk (s)	7.0		11.0	11.0		
Pedestrian Calls (#/hr)	0		0	0		
Act Effct Green (s)	8.5			67.8		
Actuated g/C Ratio	0.11			0.85		
v/c Ratio	0.37			0.51		
Control Delay	39.1			1.2		
Queue Delay	0.0			0.0		
Total Delay	39.1			1.2		
LOS	D			A		
Approach Delay	39.1			1.2		
Approach LOS	D			A		
90th %ile Green (s)	11.8		57.8	57.8		
90th %ile Term Code	Max		Coord	Coord		
70th %ile Green (s)	9.8		59.8	59.8		
70th %ile Term Code	Gap		Coord	Coord		
50th %ile Green (s)	8.4		61.2	61.2		
50th %ile Term Code	Gap		Coord	Coord		
30th %ile Green (s)	0.0		74.8	74.8		
30th %ile Term Code	Skip		Coord	Coord		
10th %ile Green (s)	0.0		74.8	74.8		
10th %ile Term Code	Skip		Coord	Coord		
Stops (vph)	49			44		
Fuel Used(gal)	1			3		
CO Emissions (g/hr)	55			242		
NOx Emissions (g/hr)	11			47		
VOC Emissions (g/hr)	13			56		
Dilemma Vehicles (#)	0			0		
Queue Length 50th (ft)	27			16		
Queue Length 95th (ft)	59			21		
Internal Link Dist (ft)	141			238	186	
Turn Bay Length (ft)						

Lanes, Volumes, Timings
 13: N East St & Monroe St

02/22/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Base Capacity (vph)	213			2380		
Starvation Cap Reductn	0			0		
Spillback Cap Reductn	0			0		
Storage Cap Reductn	0			0		
Reduced v/c Ratio	0.26			0.51		

Intersection Summary

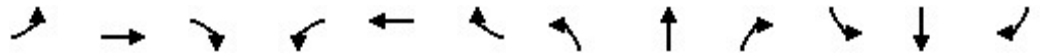
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	59 (74%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.51
Intersection Signal Delay:	2.8
Intersection LOS:	A
Intersection Capacity Utilization	49.3%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 13: N East St & Monroe St



Lanes, Volumes, Timings
15: N Madison St & W Jefferson St

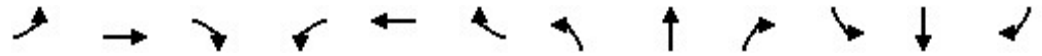
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔↔	
Traffic Volume (vph)	0	21	10	28	23	0	0	0	0	20	1156	19
Future Volume (vph)	0	21	10	28	23	0	0	0	0	20	1156	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	14	12	12	12	12	12	12	12
Grade (%)		4%			-3%			2%			2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99			0.99						1.00	
Frt		0.956									0.998	
Flt Protected					0.973						0.999	
Satd. Flow (prot)	0	1768	0	0	1589	0	0	0	0	0	3144	0
Flt Permitted					0.832						0.999	
Satd. Flow (perm)	0	1768	0	0	1352	0	0	0	0	0	3144	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12									4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		692			253			310			307	
Travel Time (s)		15.7			5.8			7.0			7.0	
Confl. Peds. (#/hr)			4	4						2		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Parking (#/hr)					0					20		20
Adj. Flow (vph)	0	25	12	33	27	0	0	0	0	24	1360	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	37	0	0	60	0	0	0	0	0	1406	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.17	1.00	1.17	1.12	1.18	1.12	1.16	1.16	1.16	1.16	1.16	1.16
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1	2	
Detector Template		Thru		Left	Thru					Left	Thru	
Leading Detector (ft)		100		20	100					20	100	
Trailing Detector (ft)		0		0	0					0	0	
Detector 1 Position(ft)		0		0	0					0	0	
Detector 1 Size(ft)		6		20	6					20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm	NA	

Lanes, Volumes, Timings
 15: N Madison St & W Jefferson St

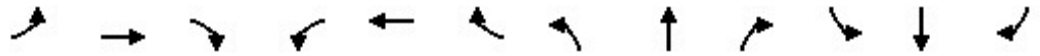
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		15.1		15.4	15.4					47.4	47.4	
Total Split (s)		20.0		20.0	20.0					60.0	60.0	
Total Split (%)		25.0%		25.0%	25.0%					75.0%	75.0%	
Maximum Green (s)		14.9		14.6	14.6					54.6	54.6	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.9		2.2	2.2					2.2	2.2	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.1			5.4						5.4	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		Max		None	None					C-Max	C-Max	
Walk Time (s)		1.0		1.0	1.0					31.0	31.0	
Flash Dont Walk (s)		9.0		9.0	9.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		14.9			14.6						54.6	
Actuated g/C Ratio		0.19			0.18						0.68	
v/c Ratio		0.11			0.24						0.65	
Control Delay		21.4			31.0						9.1	
Queue Delay		0.0			0.0						0.0	
Total Delay		21.4			31.0						9.1	
LOS		C			C						A	
Approach Delay		21.4			31.0						9.1	
Approach LOS		C			C						A	
90th %ile Green (s)		14.9		14.6	14.6					54.6	54.6	
90th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
70th %ile Green (s)		14.9		14.6	14.6					54.6	54.6	
70th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
50th %ile Green (s)		14.9		14.6	14.6					54.6	54.6	
50th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
30th %ile Green (s)		14.9		14.6	14.6					54.6	54.6	
30th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
10th %ile Green (s)		14.9		14.6	14.6					54.6	54.6	
10th %ile Term Code		MaxR		Hold	Hold					Coord	Coord	
Stops (vph)		21			44						629	
Fuel Used(gal)		0			1						9	
CO Emissions (g/hr)		29			47						598	
NOx Emissions (g/hr)		6			9						116	
VOC Emissions (g/hr)		7			11						139	
Dilemma Vehicles (#)		0			0						0	
Queue Length 50th (ft)		10			26						180	
Queue Length 95th (ft)		33			56						215	
Internal Link Dist (ft)		612			173			230			227	
Turn Bay Length (ft)												

Lanes, Volumes, Timings
 15: N Madison St & W Jefferson St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		339			246							2147
Starvation Cap Reductn		0			0							0
Spillback Cap Reductn		0			0							0
Storage Cap Reductn		0			0							0
Reduced v/c Ratio		0.11			0.24							0.65

Intersection Summary

















Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.65
Intersection Signal Delay:	10.3
Intersection LOS:	B
Intersection Capacity Utilization	55.6%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 15: N Madison St & W Jefferson St















Lanes, Volumes, Timings
16: N East St & E Jefferson St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	28	0	0	25	23	23	1141	7	0	0	0
Future Volume (vph)	29	28	0	0	25	23	23	1141	7	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	13	12	12	11	11	12	12	12
Grade (%)		-3%			3%			0%			3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.97			0.97			1.00				
Frt					0.935			0.999				
Flt Protected		0.975						0.999				
Satd. Flow (prot)	0	1493	0	0	1541	0	0	3073	0	0	0	0
Flt Permitted		0.839						0.999				
Satd. Flow (perm)	0	1248	0	0	1541	0	0	3072	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					24			2				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		268			710			308			318	
Travel Time (s)		6.1			16.1			7.0			7.2	
Confl. Peds. (#/hr)	25					25	17		4			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Parking (#/hr)		0					20		20			
Adj. Flow (vph)	30	29	0	0	26	24	24	1189	7	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	59	0	0	50	0	0	1220	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.28	1.12	1.17	1.12	1.17	1.14	1.19	1.19	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA				

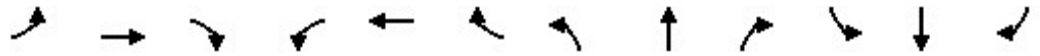
Lanes, Volumes, Timings
16: N East St & E Jefferson St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8			2				
Permitted Phases	4						2					
Detector Phase	4	4			8		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	15.2	15.2			15.2		47.2	47.2				
Total Split (s)	19.0	19.0			19.0		61.0	61.0				
Total Split (%)	23.8%	23.8%			23.8%		76.3%	76.3%				
Maximum Green (s)	13.8	13.8			13.8		55.8	55.8				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Recall Mode	Max	Max			None		C-Max	C-Max				
Walk Time (s)	1.0	1.0			1.0		31.0	31.0				
Flash Dont Walk (s)	9.0	9.0			9.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		13.8			13.8			55.8				
Actuated g/C Ratio		0.17			0.17			0.70				
v/c Ratio		0.27			0.18			0.57				
Control Delay		32.7			19.4			2.7				
Queue Delay		0.0			0.0			0.0				
Total Delay		32.7			19.4			2.7				
LOS		C			B			A				
Approach Delay		32.7			19.4			2.7				
Approach LOS		C			B			A				
90th %ile Green (s)	13.8	13.8			13.8		55.8	55.8				
90th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
70th %ile Green (s)	13.8	13.8			13.8		55.8	55.8				
70th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
50th %ile Green (s)	13.8	13.8			13.8		55.8	55.8				
50th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
30th %ile Green (s)	13.8	13.8			13.8		55.8	55.8				
30th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
10th %ile Green (s)	13.8	13.8			13.8		55.8	55.8				
10th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
Stops (vph)		50			26			127				
Fuel Used(gal)		1			1			4				
CO Emissions (g/hr)		54			42			290				
NOx Emissions (g/hr)		11			8			56				
VOC Emissions (g/hr)		13			10			67				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		26			11			33				
Queue Length 95th (ft)		61			41			50				
Internal Link Dist (ft)		188			630			228			238	
Turn Bay Length (ft)												

Lanes, Volumes, Timings
 16: N East St & E Jefferson St

02/22/2024

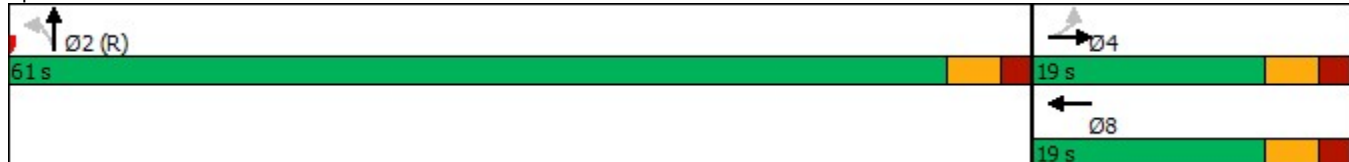


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		215			285			2143				
Starvation Cap Reductn		0			0			76				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.27			0.18			0.59				

Intersection Summary

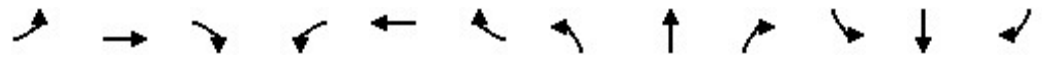
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	55 (69%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.57
Intersection Signal Delay:	4.7
Intersection LOS:	A
Intersection Capacity Utilization	54.8%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 16: N East St & E Jefferson St



Lanes, Volumes, Timings
 19: N Madison St & W Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖					↖	↗	↗
Traffic Volume (vph)	0	139	9	66	252	0	0	0	0	64	1117	45
Future Volume (vph)	0	139	9	66	252	0	0	0	0	64	1117	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	13	12	12	12	12	12	12	12
Grade (%)		3%			-3%			2%				-2%
Storage Length (ft)	0		0	65		0	0		0	150		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor		1.00		0.99						1.00	1.00	
Fr _t		0.992									0.994	
Fl _t Protected				0.950						0.950		
Satd. Flow (prot)	0	1522	0	1617	1758	0	0	0	0	1367	3195	0
Fl _t Permitted				0.641						0.950		
Satd. Flow (perm)	0	1522	0	1084	1758	0	0	0	0	1364	3195	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4									10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		690			253			324			310	
Travel Time (s)		15.7			5.8			7.4			7.0	
Confl. Peds. (#/hr)			4	4						2		3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Parking (#/hr)		0								10		10
Adj. Flow (vph)	0	146	9	69	265	0	0	0	0	67	1176	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	155	0	69	265	0	0	0	0	67	1223	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.17	1.28	1.17	1.12	1.08	1.12	1.16	1.16	1.16	1.38	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex

Lanes, Volumes, Timings
 19: N Madison St & W Washington St

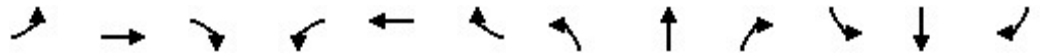
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm		NA
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6		6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0		5.0
Minimum Split (s)		17.4		27.4	27.4					35.6		35.6
Total Split (s)		23.0		23.0	23.0					57.0		57.0
Total Split (%)		28.8%		28.8%	28.8%					71.3%		71.3%
Maximum Green (s)		17.6		17.6	17.6					51.4		51.4
Yellow Time (s)		3.2		3.2	3.2					3.2		3.2
All-Red Time (s)		2.2		2.2	2.2					2.4		2.4
Lost Time Adjust (s)		0.0		0.0	0.0					0.0		0.0
Total Lost Time (s)		5.4		5.4	5.4					5.6		5.6
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0		3.0
Recall Mode		None		Max	Max					C-Max		C-Max
Walk Time (s)		1.0		11.0	11.0					19.0		19.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0		11.0
Pedestrian Calls (#/hr)		0		0	0					0		0
Act Effct Green (s)		17.6		17.6	17.6					51.4		51.4
Actuated g/C Ratio		0.22		0.22	0.22					0.64		0.64
v/c Ratio		0.46		0.29	0.69					0.08		0.59
Control Delay		31.5		14.1	25.1					3.4		4.4
Queue Delay		0.0		0.0	16.6					0.0		0.2
Total Delay		31.5		14.1	41.7					3.4		4.6
LOS		C		B	D					A		A
Approach Delay		31.5			36.0							4.6
Approach LOS		C			D							A
90th %ile Green (s)		17.6		17.6	17.6					51.4		51.4
90th %ile Term Code		Max		Ped	Ped					Coord		Coord
70th %ile Green (s)		17.6		17.6	17.6					51.4		51.4
70th %ile Term Code		Hold		Ped	Ped					Coord		Coord
50th %ile Green (s)		17.6		17.6	17.6					51.4		51.4
50th %ile Term Code		Hold		Ped	Ped					Coord		Coord
30th %ile Green (s)		17.6		17.6	17.6					51.4		51.4
30th %ile Term Code		Hold		Ped	Ped					Coord		Coord
10th %ile Green (s)		17.6		17.6	17.6					51.4		51.4
10th %ile Term Code		Hold		Ped	Ped					Coord		Coord
Stops (vph)		121		55	246					10		169
Fuel Used(gal)		2		1	3					0		5
CO Emissions (g/hr)		168		44	220					18		335
NOx Emissions (g/hr)		33		8	43					3		65
VOC Emissions (g/hr)		39		10	51					4		78
Dilemma Vehicles (#)		0		0	0					0		0
Queue Length 50th (ft)		66		28	145					6		52

Lanes, Volumes, Timings
 19: N Madison St & W Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)		123		44	#229					m9	62	
Internal Link Dist (ft)		610			173			244			230	
Turn Bay Length (ft)				65						150		
Base Capacity (vph)		337		238	386					876	2056	
Starvation Cap Reductn		0		0	107					0	203	
Spillback Cap Reductn		0		0	0					57	0	
Storage Cap Reductn		0		0	0					0	0	
Reduced v/c Ratio		0.46		0.29	0.95					0.08	0.66	

Intersection Summary




















Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 12.8 Intersection LOS: B
 Intersection Capacity Utilization 62.7% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 19: N Madison St & W Washington St



Lanes, Volumes, Timings
20: N East St & E Washington St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	246	0	0	315	96	35	1001	76	0	0	0
Future Volume (vph)	38	246	0	0	315	96	35	1001	76	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	10	11	11	11	12	12	12
Grade (%)		-3%			2%			-3%			1%	
Storage Length (ft)	65		0	0		80	80		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00					0.98	1.00	1.00				
Fr _t						0.850		0.989				
Fl _t Protected	0.950						0.950					
Satd. Flow (prot)	1617	1702	0	0	1604	1317	1250	3085	0	0	0	0
Fl _t Permitted	0.308						0.950					
Satd. Flow (perm)	523	1702	0	0	1604	1292	1245	3085	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						77		18				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		262			724			322				308
Travel Time (s)		6.0			16.5			7.3				7.0
Confl. Peds. (#/hr)	4					4	4		9			
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Parking (#/hr)							20		20			
Adj. Flow (vph)	41	265	0	0	339	103	38	1076	82	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	265	0	0	339	103	38	1158	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.12	1.12	1.12	1.16	1.21	1.26	1.54	1.17	1.17	1.15	1.15	1.15
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				

Lanes, Volumes, Timings
20: N East St & E Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type	Cl+Ex			Cl+Ex				Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0				0.0				
Turn Type	Perm	NA		NA		Perm	Perm	NA				
Protected Phases	4			8				2				
Permitted Phases	4					8	2					
Detector Phase	4	4		8		8	2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0		5.0	2.0	2.0				
Minimum Split (s)	31.4	31.4		21.4		21.4	47.0	47.0				
Total Split (s)	26.0	26.0		26.0		26.0	54.0	54.0				
Total Split (%)	32.5%	32.5%		32.5%		32.5%	67.5%	67.5%				
Maximum Green (s)	20.6	20.6		20.6		20.6	48.0	48.0				
Yellow Time (s)	3.2	3.2		3.2		3.2	3.2	3.2				
All-Red Time (s)	2.2	2.2		2.2		2.2	2.8	2.8				
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0	0.0				
Total Lost Time (s)	5.4	5.4		5.4		5.4	6.0	6.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0	3.0				
Recall Mode	None	None		None		None	C-Max	C-Max				
Walk Time (s)	15.0	15.0		5.0		5.0	30.0	30.0				
Flash Dont Walk (s)	11.0	11.0		11.0		11.0	11.0	11.0				
Pedestrian Calls (#/hr)	0	0		0		0	0	0				
Act Effct Green (s)	19.4	19.4		19.4		19.4	49.2	49.2				
Actuated g/C Ratio	0.24	0.24		0.24		0.24	0.62	0.62				
v/c Ratio	0.32	0.64		0.87		0.28	0.05	0.61				
Control Delay	15.9	15.6		52.8		11.1	4.0	5.4				
Queue Delay	0.0	0.7		0.0		0.0	0.0	0.2				
Total Delay	15.9	16.3		52.8		11.1	4.0	5.6				
LOS	B	B		D		B	A	A				
Approach Delay		16.3		43.1				5.6				
Approach LOS		B		D				A				
90th %ile Green (s)	20.6	20.6		20.6		20.6	48.0	48.0				
90th %ile Term Code	Max	Max		Max		Max	Coord	Coord				
70th %ile Green (s)	20.6	20.6		20.6		20.6	48.0	48.0				
70th %ile Term Code	Hold	Hold		Max		Max	Coord	Coord				
50th %ile Green (s)	20.6	20.6		20.6		20.6	48.0	48.0				
50th %ile Term Code	Hold	Hold		Max		Max	Coord	Coord				
30th %ile Green (s)	19.9	19.9		19.9		19.9	48.7	48.7				
30th %ile Term Code	Hold	Hold		Gap		Gap	Coord	Coord				
10th %ile Green (s)	15.5	15.5		15.5		15.5	53.1	53.1				
10th %ile Term Code	Hold	Hold		Gap		Gap	Coord	Coord				
Stops (vph)	14	95		277		29	6	218				
Fuel Used(gal)	0	2		7		1	0	5				
CO Emissions (g/hr)	19	127		468		64	10	356				
NOx Emissions (g/hr)	4	25		91		13	2	69				
VOC Emissions (g/hr)	5	29		108		15	2	83				
Dilemma Vehicles (#)	0	0		0		0	0	0				

Lanes, Volumes, Timings
 20: N East St & E Washington St

02/22/2024

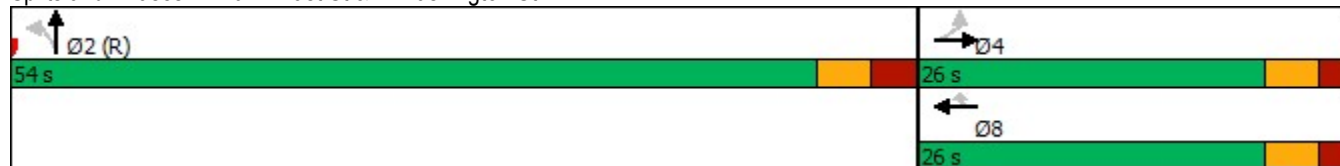


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	2	14			160	10	4	62				
Queue Length 95th (ft)	14	80			#297	48	m7	77				
Internal Link Dist (ft)		182			644			242			228	
Turn Bay Length (ft)	65					80	80					
Base Capacity (vph)	134	438			413	389	765	1902				
Starvation Cap Reductn	0	36			0	0	0	174				
Spillback Cap Reductn	0	0			0	0	0	0				
Storage Cap Reductn	0	0			0	0	0	0				
Reduced v/c Ratio	0.31	0.66			0.82	0.26	0.05	0.67				

Intersection Summary

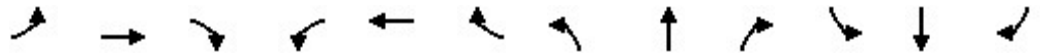
Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 60 (75%), Referenced to phase 2:NBTL and 6:, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 15.8 Intersection LOS: B
 Intersection Capacity Utilization 70.8% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: N East St & E Washington St



Lanes, Volumes, Timings
 23: S Center St/N Madison St & W Front St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↗						↖↗	
Traffic Volume (vph)	0	39	15	58	71	0	0	0	0	25	1134	30
Future Volume (vph)	0	39	15	58	71	0	0	0	0	25	1134	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	12	12	12	12	12	12	12	12
Grade (%)		3%			-3%			1%				-1%
Storage Length (ft)	0		0	60		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			0			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.99		0.98							1.00	
Flt		0.963									0.996	
Flt Protected				0.950							0.999	
Satd. Flow (prot)	0	1419	0	1670	1531	0	0	0	0	0	3183	0
Flt Permitted				0.721							0.999	
Satd. Flow (perm)	0	1419	0	1245	1531	0	0	0	0	0	3182	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15									7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		684			247			660			324	
Travel Time (s)		15.5			5.6			15.0			7.4	
Confl. Peds. (#/hr)			8	8						13		4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Parking (#/hr)		0			0					20		20
Adj. Flow (vph)	0	40	15	60	73	0	0	0	0	26	1169	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	60	73	0	0	0	0	0	1226	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.17	1.33	1.17	1.08	1.28	1.12	1.15	1.15	1.15	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex

Lanes, Volumes, Timings
 23: S Center St/N Madison St & W Front St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm		NA
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6		6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0		5.0
Minimum Split (s)		15.5		25.5	25.5					37.7		37.7
Total Split (s)		22.0		22.0	22.0					58.0		58.0
Total Split (%)		27.5%		27.5%	27.5%					72.5%		72.5%
Maximum Green (s)		16.5		16.5	16.5					52.3		52.3
Yellow Time (s)		3.2		3.2	3.2					3.2		3.2
All-Red Time (s)		2.3		2.3	2.3					2.5		2.5
Lost Time Adjust (s)		0.0		0.0	0.0							0.0
Total Lost Time (s)		5.5		5.5	5.5							5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0		3.0
Recall Mode		None		None	None					C-Max		C-Max
Walk Time (s)		1.0		9.0	9.0					21.0		21.0
Flash Dont Walk (s)		9.0		11.0	11.0					11.0		11.0
Pedestrian Calls (#/hr)		0		0	0					0		0
Act Effct Green (s)		9.3		9.3	9.3							62.8
Actuated g/C Ratio		0.12		0.12	0.12							0.78
v/c Ratio		0.31		0.41	0.41							0.49
Control Delay		28.8		40.4	38.7							2.3
Queue Delay		0.0		0.0	0.0							0.0
Total Delay		28.8		40.4	38.7							2.3
LOS		C		D	D							A
Approach Delay		28.8			39.5							2.3
Approach LOS		C			D							A
90th %ile Green (s)		13.4		13.4	13.4					55.4		55.4
90th %ile Term Code		Hold		Gap	Gap					Coord		Coord
70th %ile Green (s)		10.9		10.9	10.9					57.9		57.9
70th %ile Term Code		Hold		Gap	Gap					Coord		Coord
50th %ile Green (s)		9.2		9.2	9.2					59.6		59.6
50th %ile Term Code		Hold		Gap	Gap					Coord		Coord
30th %ile Green (s)		7.6		7.6	7.6					61.2		61.2
30th %ile Term Code		Hold		Gap	Gap					Coord		Coord
10th %ile Green (s)		0.0		0.0	0.0					74.3		74.3
10th %ile Term Code		Skip		Skip	Skip					Coord		Coord
Stops (vph)		38		53	63							132
Fuel Used(gal)		1		1	1							4
CO Emissions (g/hr)		56		62	73							300
NOx Emissions (g/hr)		11		12	14							58
VOC Emissions (g/hr)		13		14	17							69
Dilemma Vehicles (#)		0		0	0							0
Queue Length 50th (ft)		19		28	35							46

Lanes, Volumes, Timings
 23: S Center St/N Madison St & W Front St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)		49		62	70							53
Internal Link Dist (ft)		604			167			580				244
Turn Bay Length (ft)				60								
Base Capacity (vph)		304		256	315							2500
Starvation Cap Reductn		0		0	0							79
Spillback Cap Reductn		0		0	0							0
Storage Cap Reductn		0		0	0							0
Reduced v/c Ratio		0.18		0.23	0.23							0.51

Intersection Summary

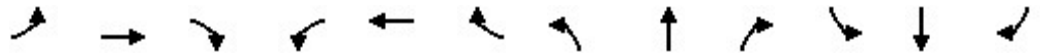
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	0 (0%), Referenced to phase 2: and 6:SBTL, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.49
Intersection Signal Delay:	6.8
Intersection LOS:	A
Intersection Capacity Utilization	56.3%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 23: S Center St/N Madison St & W Front St



Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

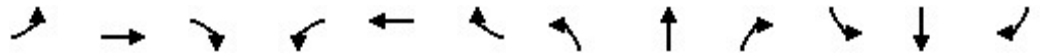
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	127	0	0	54	25	48	1005	32	0	0	0
Future Volume (vph)	90	127	0	0	54	25	48	1005	32	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	16	12	12	10	10	13	11	11	12	12	12
Grade (%)		-1%			0%			-1%				2%
Storage Length (ft)	90		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.97					0.95		1.00				
Frt						0.850		0.996				
Flt Protected	0.950							0.998				
Satd. Flow (prot)	1547	1910	0	0	1565	1330	0	3074	0	0	0	0
Flt Permitted	0.717							0.998				
Satd. Flow (perm)	1129	1910	0	0	1565	1267	0	3071	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						35		8				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		256			710			633				322
Travel Time (s)		5.8			16.1			14.4				7.3
Confl. Peds. (#/hr)	18					18	28		1			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	103	146	0	0	62	29	55	1155	37	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	146	0	0	62	29	0	1247	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11				11
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.19	0.97	1.14	1.14	1.25	1.25	1.09	1.19	1.19	1.16	1.16	1.16
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												

Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

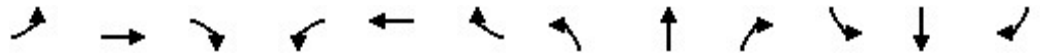
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4					8	2					
Detector Phase	4	4			8	8	2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0				
Minimum Split (s)	27.2	27.2			17.2	17.2	50.6	50.6				
Total Split (s)	22.0	22.0			22.0	22.0	58.0	58.0				
Total Split (%)	27.5%	27.5%			27.5%	27.5%	72.5%	72.5%				
Maximum Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
Yellow Time (s)	3.2	3.2			3.2	3.2	3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.4	2.4				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0				
Total Lost Time (s)	5.2	5.2			5.2	5.2		5.6				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Recall Mode	None	None			Max	Max	C-Max	C-Max				
Walk Time (s)	11.0	11.0			1.0	1.0	34.0	34.0				
Flash Dont Walk (s)	11.0	11.0			11.0	11.0	11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0	0	0	0				
Act Effct Green (s)	16.8	16.8			16.8	16.8		52.4				
Actuated g/C Ratio	0.21	0.21			0.21	0.21		0.66				
v/c Ratio	0.43	0.36			0.19	0.10		0.62				
Control Delay	34.2	30.1			27.9	9.1		5.5				
Queue Delay	0.0	0.0			0.0	0.0		0.0				
Total Delay	34.2	30.1			27.9	9.1		5.5				
LOS	C	C			C	A		A				
Approach Delay		31.8			21.9			5.5				
Approach LOS		C			C			A				
90th %ile Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
90th %ile Term Code	Max	Max			MaxR	MaxR	Coord	Coord				
70th %ile Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
70th %ile Term Code	Hold	Hold			MaxR	MaxR	Coord	Coord				
50th %ile Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
50th %ile Term Code	Hold	Hold			MaxR	MaxR	Coord	Coord				
30th %ile Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
30th %ile Term Code	Hold	Hold			MaxR	MaxR	Coord	Coord				
10th %ile Green (s)	16.8	16.8			16.8	16.8	52.4	52.4				
10th %ile Term Code	Hold	Hold			MaxR	MaxR	Coord	Coord				
Stops (vph)	77	105			44	7		267				
Fuel Used(gal)	1	2			1	0		8				
CO Emissions (g/hr)	86	113			59	16		562				
NOx Emissions (g/hr)	17	22			12	3		109				
VOC Emissions (g/hr)	20	26			14	4		130				
Dilemma Vehicles (#)	0	0			0	0		0				
Queue Length 50th (ft)	45	63			26	0		72				
Queue Length 95th (ft)	89	111			56	17		85				

Lanes, Volumes, Timings
 24: S East St/N East St & E Front St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		176			630			553			242	
Turn Bay Length (ft)	90					100						
Base Capacity (vph)	237	401			328	293		2014				
Starvation Cap Reductn	0	0			0	0		0				
Spillback Cap Reductn	0	0			0	0		0				
Storage Cap Reductn	0	0			0	0		0				
Reduced v/c Ratio	0.43	0.36			0.19	0.10		0.62				

Intersection Summary

Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	58 (73%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.62
Intersection Signal Delay:	10.6
Intersection LOS:	B
Intersection Capacity Utilization	66.4%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 24: S East St/N East St & E Front St



Lanes, Volumes, Timings
27: N Center St & W Market St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	148	31	37	119	0	0	0	0	37	134	17	
Future Volume (vph)	0	148	31	37	119	0	0	0	0	37	134	17	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	
Ped Bike Factor													
Frt	0.977										0.986		
Flt Protected						0.988							0.990
Satd. Flow (prot)	0	1606	0	0	1462	0	0	0	0	0	2897	0	
Flt Permitted						0.988							0.990
Satd. Flow (perm)	0	1606	0	0	1462	0	0	0	0	0	2897	0	
Link Speed (mph)					30						30		
Link Distance (ft)					247						266		
Travel Time (s)					5.6						6.0		
Confl. Peds. (#/hr)			30		30				6		5		
Confl. Bikes (#/hr)			1										
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	
Parking (#/hr)												0	
Adj. Flow (vph)	0	164	34	41	132	0	0	0	0	41	149	19	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	198	0	0	173	0	0	0	0	0	209	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0				0				0		0		
Link Offset(ft)	0				0				0		0		
Crosswalk Width(ft)	16				16				16		16		
Two way Left Turn Lane													
Headway Factor	1.14	1.14	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14	
Turning Speed (mph)	15		9		15		9		15		9		
Sign Control	Stop				Stop				Stop		Stop		

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	38.9%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
29: N Center St & W Jefferson St

02/22/2024



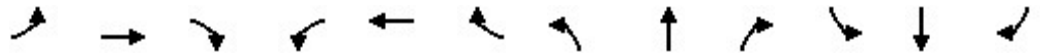
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔↔	
Traffic Volume (vph)	0	39	4	10	44	0	0	0	0	39	106	11
Future Volume (vph)	0	39	4	10	44	0	0	0	0	39	106	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor												
Frt	0.986										0.989	
Flt Protected					0.991				0.988			
Satd. Flow (prot)	0	1459	0	0	1466	0	0	0	0	0	2900	0
Flt Permitted					0.991				0.988			
Satd. Flow (perm)	0	1459	0	0	1466	0	0	0	0	0	2900	0
Link Speed (mph)					30				30			
Link Distance (ft)					253				278			
Travel Time (s)					5.8				7.0			
Confl. Peds. (#/hr)			5		5				20		8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)	0											
Adj. Flow (vph)	0	45	5	12	51	0	0	0	0	45	123	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	50	0	0	63	0	0	0	0	0	181	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0				0		0	
Link Offset(ft)	0				0				0		0	
Crosswalk Width(ft)	16				16				16		16	
Two way Left Turn Lane												
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14
Turning Speed (mph)	15		9		15		9		15		9	
Sign Control	Stop				Stop				Stop		Stop	

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	23.4%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
30: N Center St & W Washington St

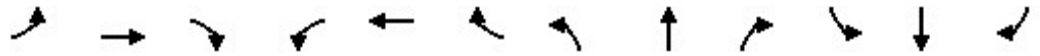
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔						↔↔	
Traffic Volume (vph)	0	213	6	9	316	0	0	0	0	68	47	8
Future Volume (vph)	0	213	6	9	316	0	0	0	0	68	47	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	65		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		1.00		0.99								0.98
Frt		0.996										0.991
Flt Protected				0.950								0.973
Satd. Flow (prot)	0	1473	0	1562	1480	0	0	0	0	0	2853	0
Flt Permitted				0.542								0.973
Satd. Flow (perm)	0	1473	0	883	1480	0	0	0	0	0	2804	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3										8
Link Speed (mph)		30			30			30				30
Link Distance (ft)		253			254			326				306
Travel Time (s)		5.8			5.8			7.4				7.0
Confl. Peds. (#/hr)			10	10						14		12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		0			0							0
Adj. Flow (vph)	0	222	6	9	329	0	0	0	0	71	49	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	228	0	9	329	0	0	0	0	0	128	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes		Yes								
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.14	1.14	1.14	1.22	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2					1		2
Detector Template		Thru		Left	Thru					Left		Thru
Leading Detector (ft)		100		20	100					20		100
Trailing Detector (ft)		0		0	0					0		0
Detector 1 Position(ft)		0		0	0					0		0
Detector 1 Size(ft)		6		20	6					20		6
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Queue (s)		0.0		0.0	0.0					0.0		0.0
Detector 1 Delay (s)		0.0		0.0	0.0					0.0		0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex		Cl+Ex	Cl+Ex							Cl+Ex
Detector 2 Channel												

Lanes, Volumes, Timings
 30: N Center St & W Washington St

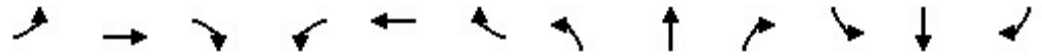
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8							6
Permitted Phases				8						6		
Detector Phase		4		8	8					6		6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		23.0		23.0	23.0					23.0	23.0	
Total Split (s)		52.0		52.0	52.0					28.0	28.0	
Total Split (%)		65.0%		65.0%	65.0%					35.0%	35.0%	
Maximum Green (s)		47.0		47.0	47.0					23.0	23.0	
Yellow Time (s)		4.0		4.0	4.0					4.0	4.0	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0							0.0
Total Lost Time (s)		5.0		5.0	5.0							5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		None		None	None					C-Max	C-Max	
Walk Time (s)		7.0		7.0	7.0					7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		24.8		24.8	24.8							45.2
Actuated g/C Ratio		0.31		0.31	0.31							0.56
v/c Ratio		0.50		0.03	0.72							0.08
Control Delay		37.7		9.7	21.0							9.6
Queue Delay		0.2		0.0	0.1							0.0
Total Delay		37.9		9.7	21.1							9.6
LOS		D		A	C							A
Approach Delay		37.9			20.8							9.6
Approach LOS		D			C							A
90th %ile Green (s)		35.1		35.1	35.1					34.9	34.9	
90th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
70th %ile Green (s)		28.7		28.7	28.7					41.3	41.3	
70th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
50th %ile Green (s)		24.6		24.6	24.6					45.4	45.4	
50th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
30th %ile Green (s)		20.6		20.6	20.6					49.4	49.4	
30th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
10th %ile Green (s)		15.0		15.0	15.0					55.0	55.0	
10th %ile Term Code		Hold		Gap	Gap					Coord	Coord	
Stops (vph)		194		2	117							55
Fuel Used(gal)		3		0	3							1
CO Emissions (g/hr)		223		3	183							59
NOx Emissions (g/hr)		43		1	36							11
VOC Emissions (g/hr)		52		1	43							14
Dilemma Vehicles (#)		0		0	0							0
Queue Length 50th (ft)		115		1	46							13
Queue Length 95th (ft)		156		m3	54							34

Lanes, Volumes, Timings
 30: N Center St & W Washington St

02/22/2024

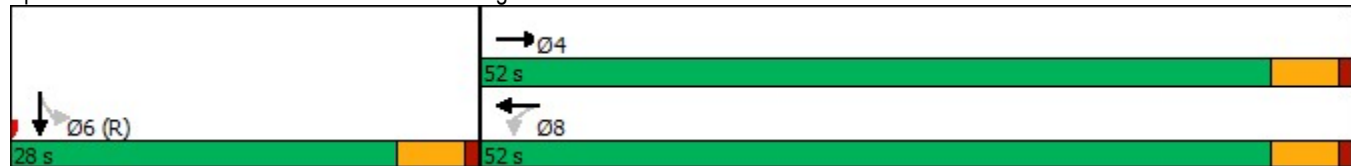


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		173			174			246			226	
Turn Bay Length (ft)				65								
Base Capacity (vph)		866		518	869						1587	
Starvation Cap Reductn		205		0	38						0	
Spillback Cap Reductn		0		0	54						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.34		0.02	0.40						0.08	

Intersection Summary



















Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 2 (3%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 24.3
 Intersection LOS: C
 Intersection Capacity Utilization 53.3%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 30: N Center St & W Washington St



Lanes, Volumes, Timings
31: W Front St & N Center St

02/22/2024

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	59	6	6	122	0	0	0	1	51	3	10
Future Volume (vph)	0	59	6	6	122	0	0	0	1	51	3	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	8	12	12	12	12
Storage Length (ft)	0		0	70		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.988						0.865			0.887	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1395	0	1490	1412	0	0	1176	0	1341	1252	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	1395	0	1490	1412	0	0	1176	0	1341	1252	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		247			262			221			326	
Travel Time (s)		5.6			6.0			5.0			7.4	
Confl. Peds. (#/hr)			48	48			25		13	13		25
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%
Parking (#/hr)		0			0					0	0	
Adj. Flow (vph)	0	72	7	7	149	0	0	0	1	62	4	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	79	0	7	149	0	0	1	0	62	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			0			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.37	1.14	1.30	1.30	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	30.0%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
 34: N Main St & W Market St/E Market St

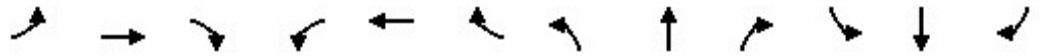
02/22/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	36	144	0	0	127	9	48	64	28	0	0	0	
Future Volume (vph)	36	144	0	0	127	9	48	64	28	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor													
Frt						0.991				0.970			
Flt Protected	0.990							0.983					
Satd. Flow (prot)	0	1479	0	0	1481	0	0	2857	0	0	0	0	
Flt Permitted	0.990							0.983					
Satd. Flow (perm)	0	1479	0	0	1481	0	0	2857	0	0	0	0	
Link Speed (mph)					30				30				
Link Distance (ft)					266				249				
Travel Time (s)					6.0				5.7				
Confl. Peds. (#/hr)	19						19	20					
Confl. Bikes (#/hr)						1				1			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	
Parking (#/hr)	0							0					
Adj. Flow (vph)	42	167	0	0	148	10	56	74	33	0	0	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	209	0	0	158	0	0	163	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0							0					
Link Offset(ft)	0							0					
Crosswalk Width(ft)					16				16				
Two way Left Turn Lane													
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.22	1.14	1.14	1.14	1.14	
Turning Speed (mph)	15	9		15				9	15			9	
Sign Control	Stop						Stop		Stop		Stop		
Intersection Summary													
Area Type:	CBD												
Control Type:	Unsignalized												
Intersection Capacity Utilization	39.9%						ICU Level of Service A						
Analysis Period (min)	15												

Lanes, Volumes, Timings

36: N Main St & W Jefferson St/E Jefferson St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔↔					
Traffic Volume (vph)	37	39	0	0	31	17	16	83	9	0	0	0	
Future Volume (vph)	37	39	0	0	31	17	16	83	9	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor													
Frt						0.953			0.987				
Flt Protected	0.976									0.993			
Satd. Flow (prot)	0	1404	0	0	1371	0	0	2827	0	0	0	0	
Flt Permitted	0.976									0.993			
Satd. Flow (perm)	0	1404	0	0	1371	0	0	2827	0	0	0	0	
Link Speed (mph)					30				30				
Link Distance (ft)					255				268			306	272
Travel Time (s)					5.8				6.1			7.0	6.2
Confl. Peds. (#/hr)	11						11	3					
Confl. Bikes (#/hr)									2				
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	
Parking (#/hr)					0				0				
Adj. Flow (vph)	45	47	0	0	37	20	19	100	11	0	0	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	92	0	0	57	0	0	130	0	0	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0							0		0			
Link Offset(ft)	0							0		0			
Crosswalk Width(ft)					16				16			16	
Two way Left Turn Lane													
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.22	1.14	1.14	1.14	1.14	
Turning Speed (mph)	15	9		15	9		15	9		15	9		
Sign Control	Stop						Stop		Stop		Stop		

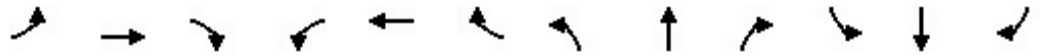
Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	26.5%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	266	0	0	321	41	12	29	17	0	0	0
Future Volume (vph)	19	266	0	0	321	41	12	29	17	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	65		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99				1.00			0.99	0.93			
Fr _t					0.985				0.850			
Fl _t Protected	0.950							0.986				
Satd. Flow (prot)	1562	1480	0	0	1454	0	0	1459	1258	0	0	0
Fl _t Permitted	0.368							0.986				
Satd. Flow (perm)	602	1480	0	0	1454	0	0	1451	1168	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					14				27			
Link Speed (mph)		30			30			30				30
Link Distance (ft)		254			262			326				306
Travel Time (s)		5.8			6.0			7.4				7.0
Confl. Peds. (#/hr)	8						8	9		23		
Confl. Bikes (#/hr)							1			1		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		0			0			0	0			
Adj. Flow (vph)	19	271	0	0	328	42	12	30	17	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	271	0	0	370	0	0	42	17	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.30	1.30	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2		1	2	1			
Detector Template	Left	Thru			Thru		Left	Thru	Right			
Leading Detector (ft)	20	100			100		20	100	20			
Trailing Detector (ft)	0	0			0		0	0	0			
Detector 1 Position(ft)	0	0			0		0	0	0			
Detector 1 Size(ft)	20	6			6		20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024

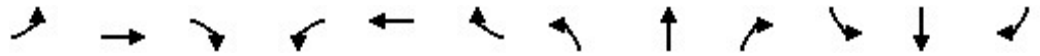


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Detector Phase	4	4			8		2	2	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Minimum Split (s)	23.0	23.0			23.0		23.0	23.0	23.0			
Total Split (s)	52.0	52.0			52.0		28.0	28.0	28.0			
Total Split (%)	65.0%	65.0%			65.0%		35.0%	35.0%	35.0%			
Maximum Green (s)	47.0	47.0			47.0		23.0	23.0	23.0			
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0			
Total Lost Time (s)	5.0	5.0			5.0			5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Recall Mode	None	None			None		C-Max	C-Max	C-Max			
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)	27.1	27.1			27.1			42.9	42.9			
Actuated g/C Ratio	0.34	0.34			0.34			0.54	0.54			
v/c Ratio	0.09	0.54			0.74			0.05	0.03			
Control Delay	9.2	12.9			23.7			12.1	4.2			
Queue Delay	0.0	0.1			0.0			0.0	0.0			
Total Delay	9.2	13.0			23.7			12.1	4.2			
LOS	A	B			C			B	A			
Approach Delay		12.7			23.7			9.8				
Approach LOS		B			C			A				
90th %ile Green (s)	38.1	38.1			38.1		31.9	31.9	31.9			
90th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
70th %ile Green (s)	31.4	31.4			31.4		38.6	38.6	38.6			
70th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
50th %ile Green (s)	26.9	26.9			26.9		43.1	43.1	43.1			
50th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
30th %ile Green (s)	22.5	22.5			22.5		47.5	47.5	47.5			
30th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
10th %ile Green (s)	16.4	16.4			16.4		53.6	53.6	53.6			
10th %ile Term Code	Hold	Hold			Gap		Coord	Coord	Coord			
Stops (vph)	6	76			291			24	4			
Fuel Used(gal)	0	2			4			0	0			
CO Emissions (g/hr)	7	115			286			24	6			
NOx Emissions (g/hr)	1	22			56			5	1			
VOC Emissions (g/hr)	2	27			66			5	1			
Dilemma Vehicles (#)	0	0			0			0	0			
Queue Length 50th (ft)	3	38			70			11	0			

Lanes, Volumes, Timings

37: N Main St & W Washington St/E Washington St

02/22/2024

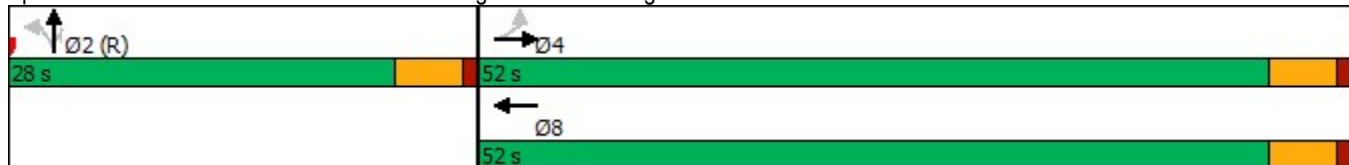


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	10	72			m17			m33	m9			
Internal Link Dist (ft)		174			182			246			226	
Turn Bay Length (ft)	65											
Base Capacity (vph)	353	869			860			778	639			
Starvation Cap Reductn	0	71			22			0	0			
Spillback Cap Reductn	0	3			0			0	0			
Storage Cap Reductn	0	0			0			0	0			
Reduced v/c Ratio	0.05	0.34			0.44			0.05	0.03			

Intersection Summary

Area Type: CBD
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 78 (98%), Referenced to phase 2:NBTL and 6:, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 18.1
 Intersection LOS: B
 Intersection Capacity Utilization 53.3%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 37: N Main St & W Washington St/E Washington St



Lanes, Volumes, Timings
 38: W Front St/E Front St & N Main St

02/22/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	87	0	0	119	23	0	0	0	0	0	0
Future Volume (vph)	23	87	0	0	119	23	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	8	12	12	12	12
Storage Length (ft)	70		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.978											
Flt Protected	0.950											
Satd. Flow (prot)	1504	1425	0	0	1394	0	0	1308	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1504	1425	0	0	1394	0	0	1308	0	0	0	0
Link Speed (mph)	30				30				30		30	
Link Distance (ft)	262				256				210		326	
Travel Time (s)	6.0				5.8				4.8		7.4	
Confl. Peds. (#/hr)	13		7	7		13	4		32			
Peak Hour Factor	0.82	0.82	0.92	0.92	0.82	0.82	0.92	0.92	0.92	0.82	0.92	0.82
Heavy Vehicles (%)	8%	8%	2%	2%	8%	8%	2%	2%	2%	8%	2%	8%
Parking (#/hr)	0											
Adj. Flow (vph)	28	106	0	0	145	28	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	106	0	0	173	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	12				12				0		0	
Link Offset(ft)	0				0				0		0	
Crosswalk Width(ft)	16				16				16		16	
Two way Left Turn Lane	Yes											
Headway Factor	1.14	1.30	1.14	1.14	1.30	1.14	1.14	1.55	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		60	60		9	60		60	15		9
Sign Control	Free				Free				Stop		Stop	

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	37.0%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
44: N East St & E Market St

02/22/2024





















Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕↗			
Traffic Volume (vph)	0	29	1224	7	0	0
Future Volume (vph)	0	29	1224	7	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	12	12
Grade (%)	0%		-2%			2%
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.865	0.999			
Flt Protected						
Satd. Flow (prot)	0	1305	3107	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1305	3107	0	0	0
Link Speed (mph)	30		30			30
Link Distance (ft)	558		266			127
Travel Time (s)	12.7		6.0			2.9
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Parking (#/hr)		0				
Adj. Flow (vph)	0	31	1302	7	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	31	1309	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.14	1.30	1.18	1.18	1.16	1.16
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Stop

Intersection Summary

Area Type:	CBD
Control Type:	Unsignalized
Intersection Capacity Utilization	47.8%
ICU Level of Service	A
Analysis Period (min)	15

Lanes, Volumes, Timings
47: S Center St & W Olive St

02/22/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	89	48	10	32	0	0	0	0	54	1145	51
Future Volume (vph)	0	89	48	10	32	0	0	0	0	54	1145	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	10	12	12	12	12	12	12	12	12	12
Grade (%)		1%			-3%			3%			-1%	
Storage Length (ft)	0		80	0		0	0		0	0		50
Storage Lanes	0		1	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									0.850
Flt Protected				0.950							0.998	
Satd. Flow (prot)	0	1792	1470	1796	1891	0	0	0	0	0	3550	1591
Flt Permitted				0.694							0.998	
Satd. Flow (perm)	0	1792	1470	1312	1891	0	0	0	0	0	3550	1591
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			52									36
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		777			330			770			660	
Travel Time (s)		17.7			7.5			17.5			15.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	97	52	11	35	0	0	0	0	59	1245	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	97	52	11	35	0	0	0	0	0	1304	55
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.05	1.10	0.98	0.98	0.98	1.02	1.02	1.02	0.99	0.99	0.99
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors		2	1	1	2					1	2	1
Detector Template		Thru	Right	Left	Thru					Left	Thru	Right
Leading Detector (ft)		100	20	20	100					20	100	20
Trailing Detector (ft)		0	0	0	0					0	0	0
Detector 1 Position(ft)		0	0	0	0					0	0	0
Detector 1 Size(ft)		6	20	20	6					20	6	20
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Detector 2 Position(ft)		94			94							94
Detector 2 Size(ft)		6			6							6
Detector 2 Type		Cl+Ex			Cl+Ex							Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							0.0
Turn Type		NA	Perm	Perm	NA					Perm	NA	Perm

Lanes, Volumes, Timings
47: S Center St & W Olive St

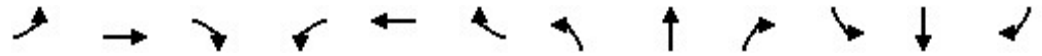
02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		4			8						6	
Permitted Phases			4	8						6		6
Detector Phase		4	4	8	8					6	6	6
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		13.5	13.5	13.5	13.5					37.9	37.9	37.9
Total Split (s)		18.0	18.0	18.0	18.0					62.0	62.0	62.0
Total Split (%)		22.5%	22.5%	22.5%	22.5%					77.5%	77.5%	77.5%
Maximum Green (s)		12.5	12.5	12.5	12.5					56.1	56.1	56.1
Yellow Time (s)		3.2	3.2	3.2	3.2					3.2	3.2	3.2
All-Red Time (s)		2.3	2.3	2.3	2.3					2.7	2.7	2.7
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	0.0
Total Lost Time (s)		5.5	5.5	5.5	5.5						5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Recall Mode		Max	Max	None	None					C-Max	C-Max	C-Max
Walk Time (s)		1.0	1.0	1.0	1.0					21.0	21.0	21.0
Flash Dont Walk (s)		7.0	7.0	7.0	7.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0					0	0	0
Act Effct Green (s)		12.5	12.5	12.5	12.5						56.1	56.1
Actuated g/C Ratio		0.16	0.16	0.16	0.16						0.70	0.70
v/c Ratio		0.35	0.19	0.05	0.12						0.52	0.05
Control Delay		34.1	11.1	32.7	32.3						3.1	0.6
Queue Delay		0.0	0.0	0.0	0.0						0.0	0.0
Total Delay		34.1	11.1	32.7	32.3						3.1	0.6
LOS		C	B	C	C						A	A
Approach Delay		26.1			32.4						3.0	
Approach LOS		C			C						A	
90th %ile Green (s)		12.5	12.5	12.5	12.5					56.1	56.1	56.1
90th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
70th %ile Green (s)		12.5	12.5	12.5	12.5					56.1	56.1	56.1
70th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
50th %ile Green (s)		12.5	12.5	12.5	12.5					56.1	56.1	56.1
50th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
30th %ile Green (s)		12.5	12.5	12.5	12.5					56.1	56.1	56.1
30th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
10th %ile Green (s)		12.5	12.5	12.5	12.5					56.1	56.1	56.1
10th %ile Term Code		MaxR	MaxR	Hold	Hold					Coord	Coord	Coord
Stops (vph)		78	14	12	31						213	3
Fuel Used(gal)		2	0	0	0						8	0
CO Emissions (g/hr)		111	33	11	32						567	20
NOx Emissions (g/hr)		22	6	2	6						110	4
VOC Emissions (g/hr)		26	8	3	8						131	5
Dilemma Vehicles (#)		0	0	0	0						0	0
Queue Length 50th (ft)		44	0	5	16						73	1
Queue Length 95th (ft)		88	30	m17	m41						78	m0
Internal Link Dist (ft)		697			250			690			580	
Turn Bay Length (ft)			80									50

Lanes, Volumes, Timings
47: S Center St & W Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)		280	273	205	295						2489	1126
Starvation Cap Reductn		0	0	0	0						0	0
Spillback Cap Reductn		0	0	0	0						0	0
Storage Cap Reductn		0	0	0	0						0	0
Reduced v/c Ratio		0.35	0.19	0.05	0.12						0.52	0.05

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 16 (20%), Referenced to phase 2: and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay: 6.1
 Intersection LOS: A
 Intersection Capacity Utilization 55.6%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 47: S Center St & W Olive St



Lanes, Volumes, Timings
48: S East St & E Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖↗			↖↗				
Traffic Volume (vph)	87	67	0	0	39	30	18	917	16	0	0	0
Future Volume (vph)	87	67	0	0	39	30	18	917	16	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	12	12	12	12	12
Grade (%)		2%			-4%			4%				-4%
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.934			0.998				
Flt Protected		0.973						0.999				
Satd. Flow (prot)	0	1673	0	0	3275	0	0	3359	0	0	0	0
Flt Permitted		0.781						0.999				
Satd. Flow (perm)	0	1343	0	0	3275	0	0	3359	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					33			4				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		330			647			682				633
Travel Time (s)		7.5			14.7			15.5				14.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Parking (#/hr)		0										
Adj. Flow (vph)	95	73	0	0	42	33	20	997	17	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	168	0	0	75	0	0	1034	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.01	1.07	1.01	0.97	0.97	0.97	1.03	1.03	1.03	0.97	0.97	0.97
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	2			2		1	2				
Detector Template	Left	Thru			Thru		Left	Thru				
Leading Detector (ft)	20	100			100		20	100				
Trailing Detector (ft)	0	0			0		0	0				
Detector 1 Position(ft)	0	0			0		0	0				
Detector 1 Size(ft)	20	6			6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												

Lanes, Volumes, Timings
48: S East St & E Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Detector Phase	4	4			8		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	19.5	19.5			19.5		58.6	58.6				
Total Split (s)	25.0	25.0			25.0		55.0	55.0				
Total Split (%)	31.3%	31.3%			31.3%		68.8%	68.8%				
Maximum Green (s)	19.5	19.5			19.5		49.4	49.4				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.3	2.3			2.3		2.4	2.4				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.5			5.5			5.6				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0				
Recall Mode	Max	Max			None		C-Max	C-Max				
Walk Time (s)	3.0	3.0			3.0		42.0	42.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		19.5			19.5			49.4				
Actuated g/C Ratio		0.24			0.24			0.62				
v/c Ratio		0.51			0.09			0.50				
Control Delay		31.0			15.4			9.4				
Queue Delay		0.0			0.0			0.0				
Total Delay		31.0			15.4			9.4				
LOS		C			B			A				
Approach Delay		31.0			15.4			9.4				
Approach LOS		C			B			A				
90th %ile Green (s)	19.5	19.5			19.5		49.4	49.4				
90th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
70th %ile Green (s)	19.5	19.5			19.5		49.4	49.4				
70th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
50th %ile Green (s)	19.5	19.5			19.5		49.4	49.4				
50th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
30th %ile Green (s)	19.5	19.5			19.5		49.4	49.4				
30th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
10th %ile Green (s)	19.5	19.5			19.5		49.4	49.4				
10th %ile Term Code	MaxR	MaxR			Hold		Coord	Coord				
Stops (vph)		142			33			483				
Fuel Used(gal)		2			1			10				
CO Emissions (g/hr)		151			52			668				
NOx Emissions (g/hr)		29			10			130				
VOC Emissions (g/hr)		35			12			155				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		81			8			133				
Queue Length 95th (ft)		144			25			178				

Lanes, Volumes, Timings
48: S East St & E Olive St

02/22/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		250			567			602			553	
Turn Bay Length (ft)												
Base Capacity (vph)		327			823			2075				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.51			0.09			0.50				

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	54 (68%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle:	80
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.51
Intersection Signal Delay:	12.6
Intersection LOS:	B
Intersection Capacity Utilization	50.6%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 48: S East St & E Olive St

