



MEDINA CITY COUNCIL

Monday, January 09, 2023

5:00 PM – REGULAR MEETING

AGENDA

VISION STATEMENT

Medina is a family-friendly, diverse and inclusive community on the shores of Lake Washington. With parks and open spaces, Medina is a quiet and safe small city, with active and highly-engaged residents. Medina honors its heritage while preserving its natural environment and resources for current and future generations.

MISSION STATEMENT

Ensure efficient delivery of quality public services, act as responsible stewards of Medina's financial and natural resources, celebrate diversity, leverage local talent, and promote the safety, health, and quality of life of those who live, work, and play in Medina.



MEDINA, WASHINGTON

MEDINA CITY COUNCIL REGULAR MEETING

Hybrid - Virtual/In-Person
Monday, January 09, 2023 – 5:00 PM

AGENDA

MAYOR | Jessica Rossman

DEPUTY MAYOR | Randy Reeves

COUNCIL MEMBERS | Cynthia F. Adkins, Jennifer Garone, Harini Gokul, Mac Johnston, Bob Zook

CITY MANAGER | Stephen R. Burns

CITY ATTORNEY | Scott Missall

CITY CLERK | Aimee Kellerman

Virtual Meeting Participation

The Medina City Council has moved to hybrid meetings, offering both in-person and online meeting participation. In accordance with the direction from Governor Inslee, masking and social distancing will be optional for those participating in person. Individuals who are participating online and wish to speak live must register their request with the City Clerk at 425.233.6411 or email akellerman@medina-wa.gov and leave a message before 2PM on the day of the January 9 Council meeting. Please reference Public Comments for January 9 Council Meeting on your correspondence. The City Clerk will call on you by name or telephone number when it is your turn to speak. You will be allotted 3 minutes for your comment and will be asked to stop when you reach the 3 minute limit. The city will also accept written comments. Any written comments must be submitted by 2 PM on the day of the January 9 Council meeting to the City Clerk at akellerman@medina-wa.gov.

[Join Zoom Meeting](#)

Meeting ID: 832 5227 3105

Passcode: 589036

One tap mobile

+12532158782,,83252273105# US (Tacoma)

1. REGULAR MEETING - CALL TO ORDER / ROLL CALL

Council Members Adkins, Garone, Gokul, Johnston, Reeves, Rossman and Zook

2. APPROVAL OF MEETING AGENDA

3. PUBLIC COMMENT PERIOD

Individuals wishing to speak live during the Virtual City Council meeting will need to register their request with the City Clerk at 425.233.6411 or email akellerman@medina-wa.gov and leave a message **before 2PM** on the day of the January 9 Council meeting.

Please reference Public Comments for January 9 Council Meeting on your correspondence. The City Clerk will call on you by name or telephone number when it is your turn to speak. You will be allotted 3 minutes for your comment and will be asked to stop when you reach the 3 minute limit.

4. **PRESENTATIONS**

- [4.1](#) SR520 Build It Faster Presentation by Carl Stixrood and John Hutchins - SR520 Working Group

Time Estimate: 15 minutes

- 4.2 Reports and announcements from Park Board, Planning Commission, Emergency Preparedness, and City Council.

Time Estimate: 10 minutes

5. **CITY MANAGER'S REPORT**

Time Estimate: 15 minutes

Police, Development Services, Finance, Central Services, Public Works, City Attorney

- [5.1a](#) City Manager's Monthly Report

- [5.1b](#) Police Monthly Report

- [5.1c](#) Development Services Monthly Report

- [5.1d](#) Finance Monthly Report

- [5.1e](#) Central Services Monthly Report

- [5.1f](#) Public Works Monthly Report

6. **CONSENT AGENDA**

Time Estimate: 5 minutes

Consent agenda items are considered to be routine and will be considered for adoption by one motion. There will be no separate discussion of these items unless a Councilmember or City staff requests the Council to remove an item from the consent agenda.

- [6.1](#) December 2022, Check Register

Recommendation: Approve.

Staff Contact: Ryan Wagner, Finance Director

- [6.2](#) Draft Meeting Minutes of December 12, 2022

Recommendation: Adopt Minutes.

Staff Contact: Aimee Kellerman, CMC, City Clerk

[6.3](#) Resolution Supporting Mercer Island Marine Patrol Funding

Recommendation: Adopt Resolution No. 429.

Staff Contact: Stephen R. Burns, City Manager

7. **LEGISLATIVE HEARING**

[7.1](#) Ordinance Approving New Solicitation and Permitting Regulations

Recommendation: Adopt Ordinance No. 1018.

Staff Contact(s): Scott M. Missall, City Attorney; Jeffrey R. Sass, Chief of Police

Time Estimate: 10 minutes

8. **PUBLIC HEARING**

None.

9. **CITY BUSINESS**

[9.1](#) Comprehensive Plan Update

Recommendation: Discussion and direction.

Staff Contact: Stephanie Keyser, AICP, Planning Manager

Time Estimate: 30 minutes

[9.2](#) Gas-Powered Leaf Blower Education and Outreach Plan

Recommendation: Council discussion and direction.

Staff Contact: Stephen R. Burns, City Manager

Time Estimate: 20 minutes

[9.3](#) Park Use Permit Pilot Program

Recommendation: Approve Proposed Pilot Program.

Staff Contacts: Stephen R. Burns, City Manager and Aimee Kellerman, CMC, City Clerk

Time Estimate: 30 minutes

10. **REQUESTS FOR FUTURE AGENDA ITEMS AND COUNCIL ROUND TABLE**

11. **PUBLIC COMMENT**

Comment period is limited to 10 minutes. Speaker comments limited to one minute per person.

12. **ADJOURNMENT**

Next regular City Council Meeting: January 23, 2023 at 5 PM.

ADDITIONAL INFORMATION

Public documents related to items on the open session portion of this agenda, which are distributed to the City Council less than 72 hours prior to the meeting, shall be available for public inspection at the time the documents are distributed to the Council. Documents are available for inspection at the City Clerk's office located in Medina City Hall.

The agenda items are accessible on the City's website at www.medina-wa.gov on Thursdays or Fridays prior to the Regular City Council Meeting.

In compliance with the Americans with Disabilities Act, if you need a disability-related modification or accommodation, including auxiliary aids or services, to participate in this meeting, please contact the City Clerk's Office at (425) 233-6410 at least 48 hours prior to the meeting.

UPCOMING MEETINGS

Monday, January 16, 2023 - Martin Luther King, Jr. Day - City Hall Closed

Monday, January 23, 2023 - City Council Meeting (5:00 PM)

Monday, February 13, 2023 - City Council Meeting (5:00 PM)

Monday, February 20, 2023 - President's Day - City Hall Closed

Monday, February 27, 2023 - City Council Meeting (5:00 PM)

Monday, March 13, 2023 - City Council Meeting (5:00 PM)

Monday, March 27, 2023 - City Council Meeting (5:00 PM)

Monday, April 10, 2023 - City Council Meeting (5:00 PM)

Monday, April 24, 2023 - City Council Meeting (5:00 PM)

Monday, May 8, 2023 - City Council Meeting (5:00 PM)

Monday, May 22, 2023 - City Council Meeting (5:00 PM)

Monday, May 29, 2023 - Memorial Day - CITY HALL CLOSED

Monday, June 12, 2023 - City Council Meeting (5:00 PM)

Monday, June 26, 2023 - City Council Meeting (5:00 PM)

Tuesday, July 4, 2023 - Independence Day - City Hall Closed

Monday, July 10, 2023 - City Council Meeting (5:00 PM)

Monday, July 24, 2023 - City Council Meeting (5:00 PM)

Monday, August 14, 2023 - City Council Meeting - ***Dark No Meeting***

Monday, August 28, 2023 - City Council Meeting - ***Dark No Meeting***

Monday, September 4, 2023 - Labor Day - City Hall Closed

Monday, September 11, 2023 - City Council Meeting (5:00 PM)

Monday, September 25, 2023 - City Council Meeting (5:00 PM)

Monday, October 9, 2023 - City Council Meeting (5:00 PM)

Monday, October 23, 2023 - City Council Meeting (5:00 PM)

Friday, November 10, 2023 - Veterans Day - City Hall Closed

Monday, November 13, 2023 - City Council Meeting (5:00 PM)

Thursday, November 23, 2023 - Thanksgiving Holiday - City Hall Closed

Friday, November 24, 2023 - Day After Thanksgiving Holiday - City Hall Closed

Monday, November 27, 2023 - City Council Meeting (5:00 PM)

Monday, December 11, 2023 - City Council Meeting (5:00 PM)

Monday, December 25, 2023 - Christmas Day - City Hall Closed

CERTIFICATION OF POSTING AGENDA

The agenda for Monday, January 9, 2023 Regular Meeting of the Medina City Council was posted and available for review on Friday, January 6, 2023 at City Hall of the City of Medina, 501 Evergreen Point Road, Medina, WA 98039. The agenda is also available on the city website at www.medina-wa.gov.

Portage Bay Bridge Replacement

Proposal: to offer contractors an option of bidding using maritime construction



Rendering of a box girder conceptual design of Portage Bay Bridge, looking southwest. Final Concept Design Report, 2016.

Who we are

John R. Hutchins, P.E., S.E. Principal Harbor Consulting Engineers, Inc.
40 years consulting engineer, focused on bridges
Has designed bridges for WSDOT
Has been expert witness on WSDOT bridge cases

Carl Stixrood, 40 years environmental and permitting services: roads, bridge, dams, light rail, other

Pete DeLauney: President of Community Council, retired business owner

Anne Preston: Community Council, retired business owner

Gregg DuPont : DVM, Dipl AVDC, Retired Practice Owner, Leading Health Aspects of SR520 Noise Variance Appeal

Fran Conley: former CEO and venture capitalist, led 520 coalition

Portage Bay Bridge Replacement

- Current plan
- work bridges north and south
 - cast-in-place concrete
 - hauling on local streets
 - destructive noise and vibrations

Plan is not realistic, ignores real problems

Likely delays, challenges, cost over-runs

Marine Construction

Uses barges for hauling

Uses floating cranes for construction

Favors large pre-cast components

- Shorter Construction Schedule : could save two years
- Reduced Construction Cost, potentially by one-third
- Reduced conflicts with other project phases
- Reduced Neighborhood Impacts
 - Less noise, vibration, heavy truck traffic on narrow residential streets, damage to homes, and detours

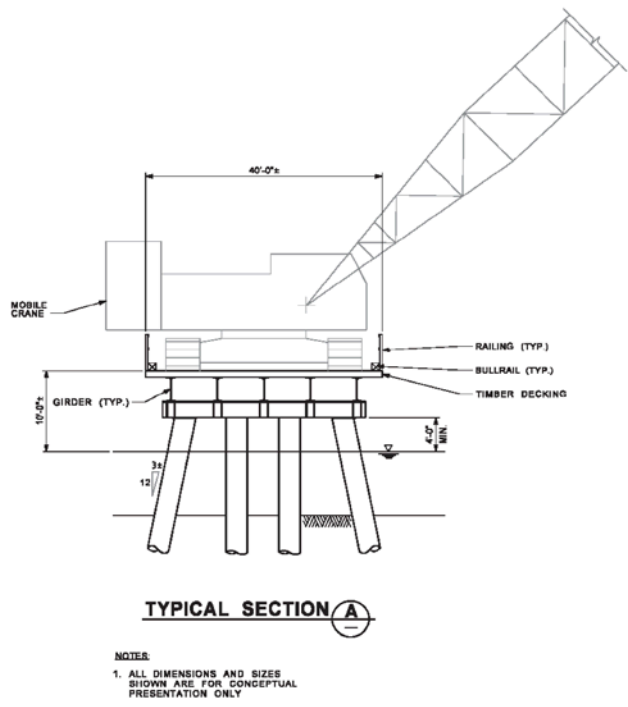
Original 520 Bridge Construction Used Barges and a Marine Approach



But WSDOT is blocking this choice now.

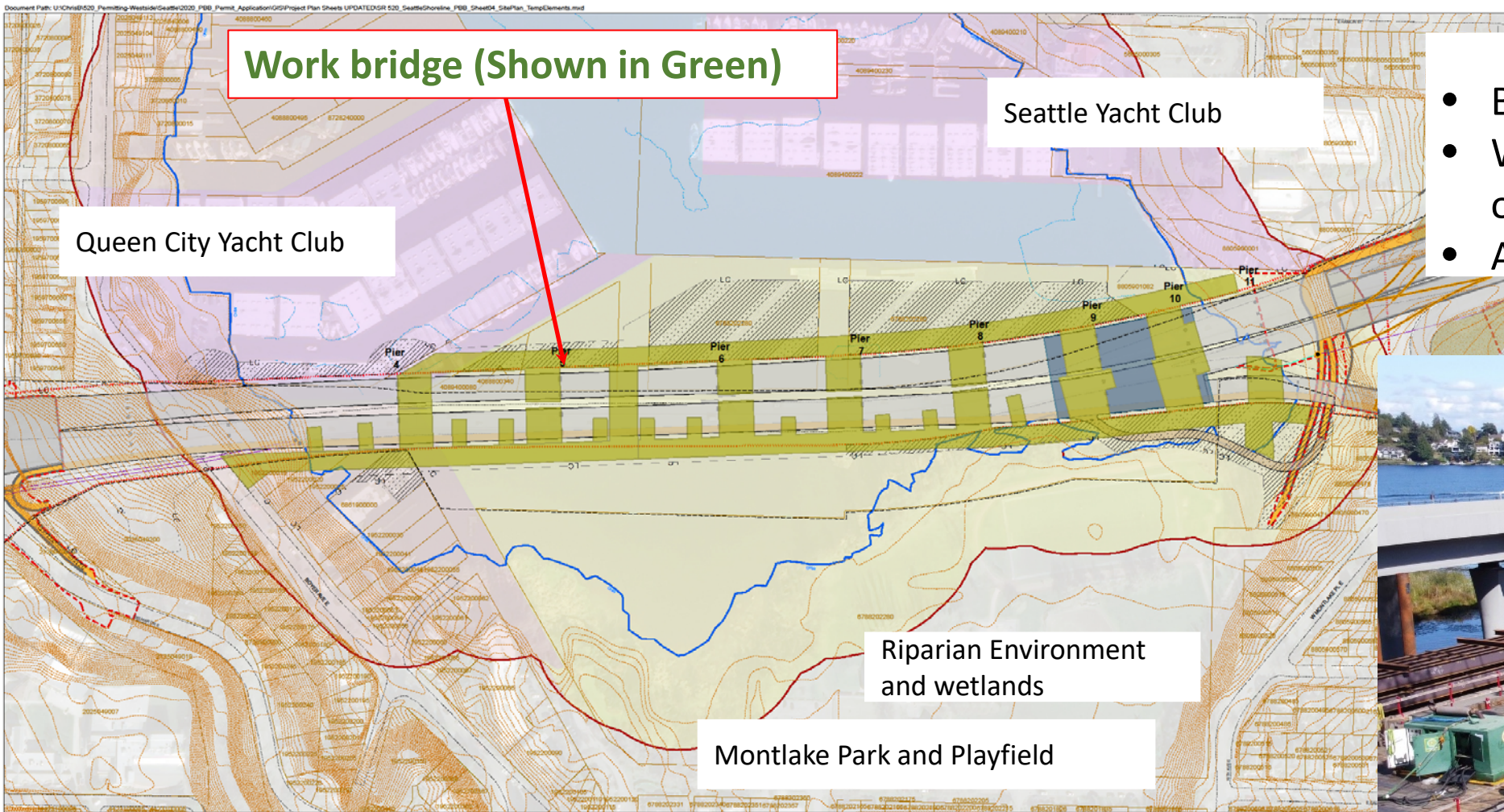
From WA State digital archives

WSDOT's Shift From Barges to Work Bridges Increases costs, construction time and impacts



Work Bridge Used in Union Bay:
If done in Portage Bay would
increase costs up to \$130M





- Bridge lengths, 2,740 feet ea.
- Work bridge area, 9 acres over-water coverage
- Approximate cost \$132 mill

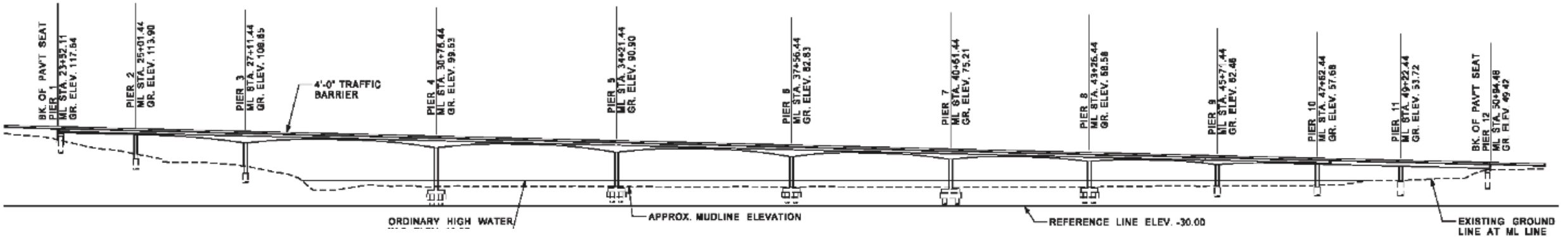
Work Bridges Add Greater Costs and Impacts

- Driving appr. 1000 pilings for temporary bridges damages the environment and disrupts neighbors
- All materials delivered and removed by road for 6 years
- Workbridges obstruct barge access



Vibratory Hammer for Work Bridges

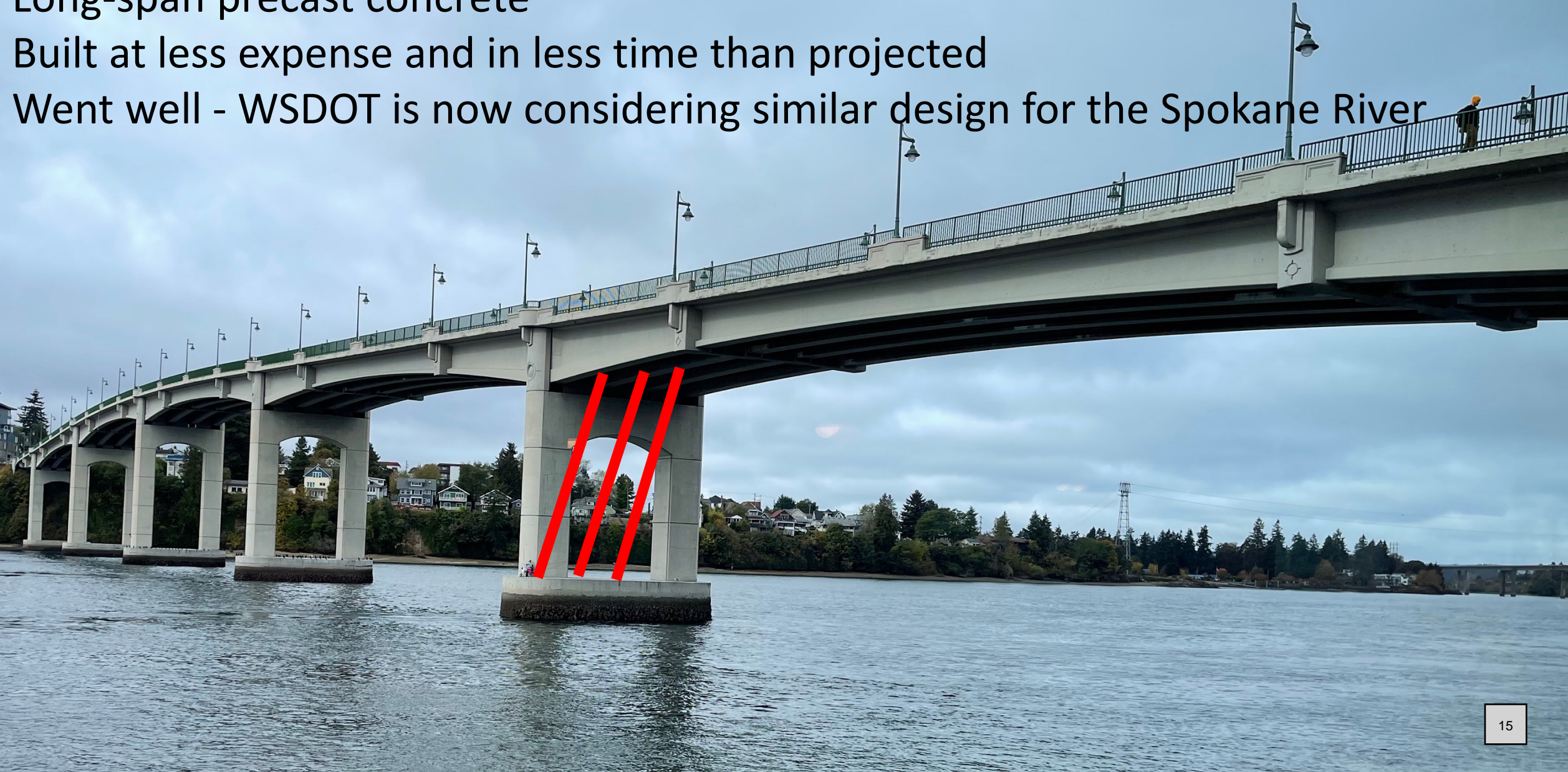
WSDOT's current Design: variable length span



Marine Construction enables pre-cast long span girders of equal length

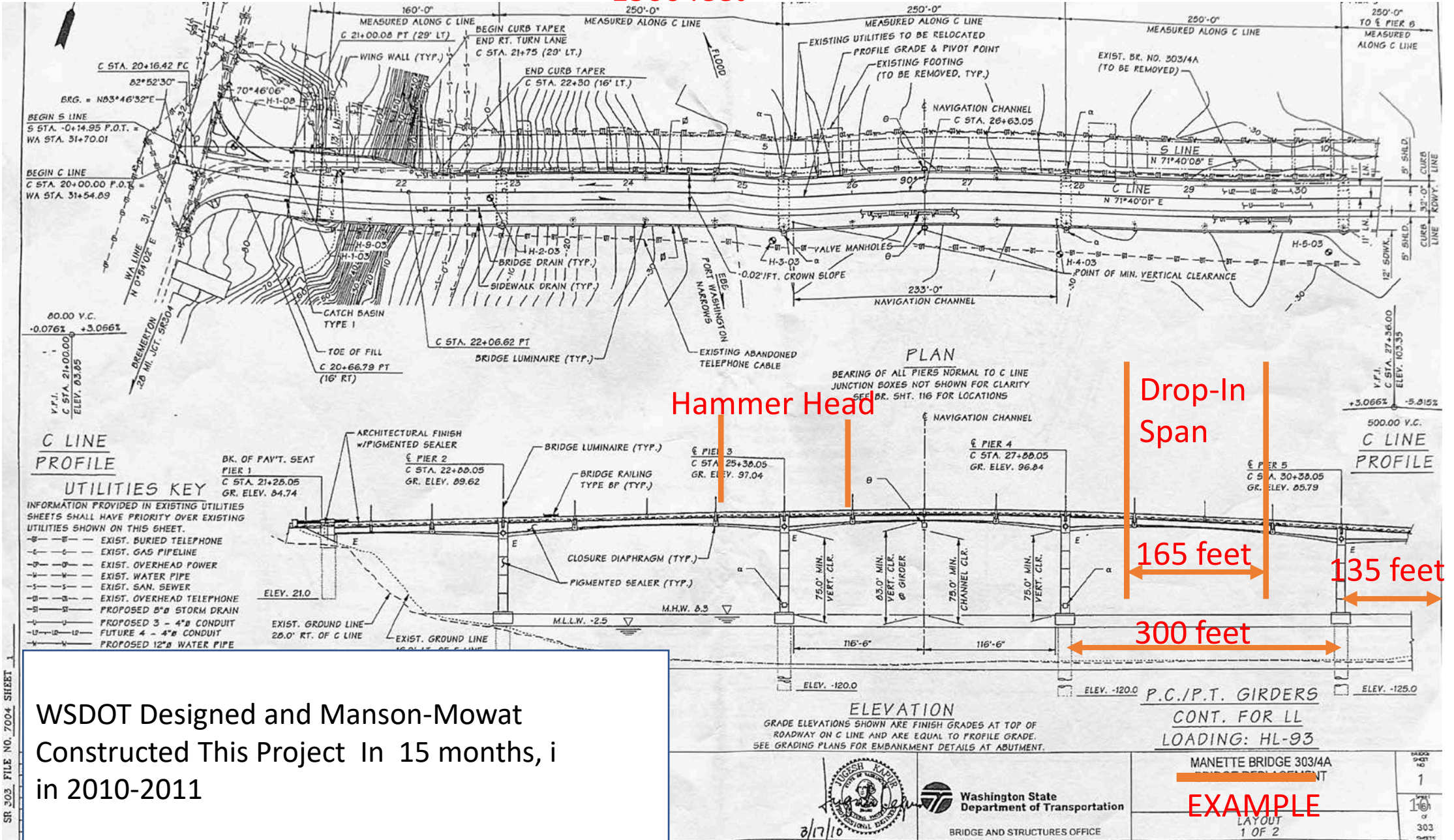
- Would Be Significantly Less Expensive Than This Variable Span Design
- Would Be Quieter Than This Box Girder Design

The Manette Bridge in Bremerton –
Long-span precast concrete
Built at less expense and in less time than projected
Went well - WSDOT is now considering similar design for the Spokane River



Precast Concrete Long Span Bridge Elements – Manette Bridge Exam

1500 feet

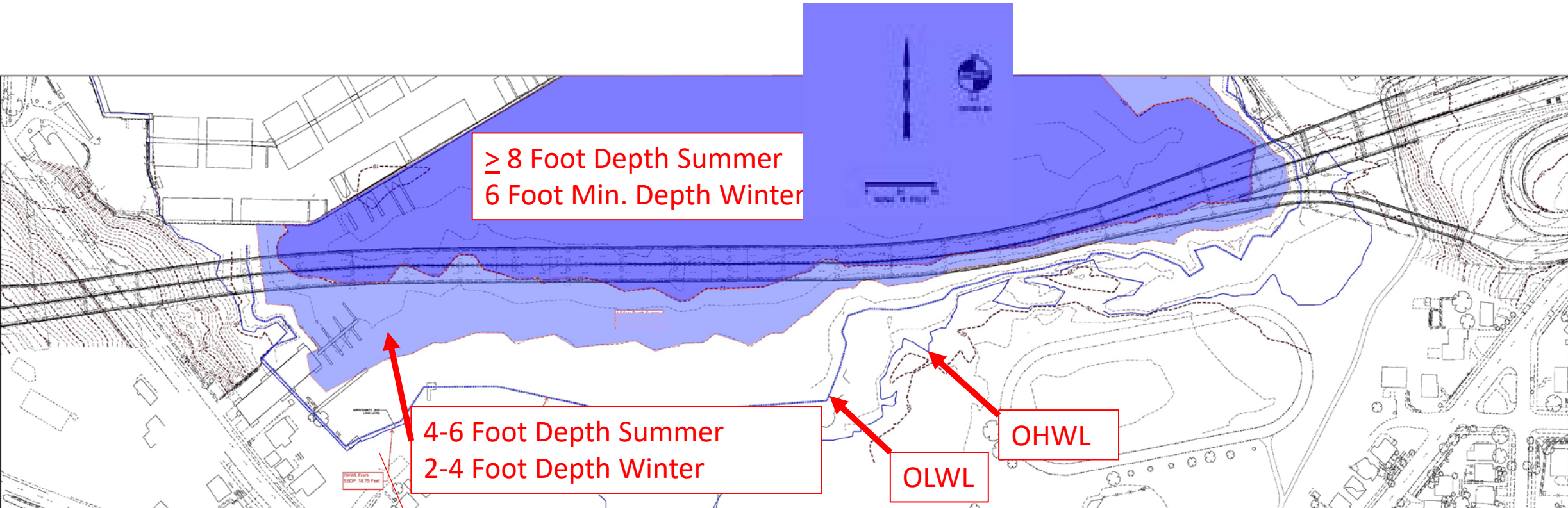


WSDOT Designed and Manson-Mowat
Constructed This Project In 15 months, i
in 2010-2011

EXAMPLE

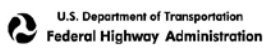
SR 303 FILE NO. 7004 SHEET 1

Water Depths: Dark Blue Depths Sufficient for Barge Access Only Limited Dredging Needed in Light Blue for Sufficient Barge Access



WSDOT soil testing revealed no contaminants of concern, and dredged materials can be used to improve site

TIME 4:00:19 PM DATE 5/20/22



PRELIMINARY
FOR INFORMATION ONLY
SUBJECT TO CHANGE WITHOUT NOTIFICATION

Depth Interpretation by CWS 5/20/22 - Depth Information from WSDOT

OHWL – Ordinary High Water Line
OLWL – Ordinary Low Water Line

Ask contractors!

- Proposed marine-based construction is worthy of serious examination
- Contractors are in best position to evaluate exact benefits and savings.
- Modify Request for Qualifications to enable contractors to include the option of using marine equipment.

What Is Needed to Create This Option?

An RFQ addendum stating that marine construction competency will be considered in contractor evaluation

RFQ addendum stating that Contractors may make other design changes, such as the use of precast uniform-length spans

A Corps of Engineers permit amendment, to allow dredging for crane barges and derricks along the south side of the current span

Requests:

- 1) WSDOT needs to amend the Request for Qualifications to require marine construction qualifications
- 2) WSDOT must get dredging permit from Army Corps prior to issuing the RFP
- 3) Deciders on contractors must be open to maritime construction.

Reduce costs by an estimated \$200M

Reduce duration of construction by up to 2 yrs

Reduce damage to homes, roads, health, and environment.

Empower contractors to choose best methods.



CITY OF MEDINA

501 EVERGREEN POINT ROAD | PO BOX 144 | MEDINA WA 98039-0144
TELEPHONE 425-233-6400 | www.medina-wa.gov

Date: January 9, 2023

To: Honorable Mayor and City Council

From: Stephen R. Burns, City Manager

Subject: City Manager Report – December 2022

1. State Route 520 Expansion Joint – The University of Washington completed their final report (**Attachment 1**) on the phase 2 joint noise mitigation study and has sent it to WSDOT in late December. Professor Per Reinhall is tentatively scheduled to come give a presentation to the City Council at your March 13, 2023 City Council meeting.

I am providing the Executive Summary:

“As required in ESSB 5689, Section 219 (4), this study investigated the design and feasibility of noise mitigation strategies for installation in modular expansion joints (MEJs), with a focus on Washington state’s SR 520 bridge. The three main sources of noise from MEJs include resonance of the air within the gaps, resonance of the beams, and resonance of the tires. By filling the gaps in the MEJs with engineered chevron support structures, we showed that it is feasible to significantly reduce the noise from MEJs. We performed both experimental and computer evaluations of a noise attenuation system before performing limited testing on the SR 520 bridge.

Installation of the treatment on one westbound lane of the east MEJ of the SR 520 bridge proved to be highly effective over the two-month test period. At a distance of 160 feet, we measured a more than 70 percent reduction in audible noise over the noise of background traffic throughout the testing period. Beyond 160 feet the difference between noise from the concrete road surface and from the MEJ became so small that it became very difficult to identify when individual cars crossed the MEJ. While we have shown that the chevron system can be an effective solution to the expansion joint noise issue, we outline further development and testing to extend the durability of the treatment.”

2. Winter Storm Response – The City of Medina had several winter storms in December. I wanted to thank the Medina Police Department and Medina Public Works for their outstanding work. Icy and windy conditions made it extremely dangerous for workers to get their jobs done so I appreciate City Staff for all they did to keep the streets safe for travel. Police officers continues to patrol the city while assisting Public Works in determining dangerous areas to focus on. Public Works did an outstanding job a treating the streets and clearing trees and debris.
3. Bellevue Fire Report – Bellevue Fire Department is providing a list of calls they respond to in the City of Medina. Attached is the list of the types of incidents and the number of times they responded to Medina in December 2022 and the total number of calls for 2022. (**Attachments 2 and 3**)

ATTACHMENT 1

Research Report
Agreement T1461, Task 78
WSDOT Expansion Joint Ph 2

**DESIGN AND TESTING OF MODULAR EXPANSION JOINT
NOISE MITIGATION STRATEGIES**

by
Per Reinhall, Professor Sawyer Thomas, Graduate Research Assistant
Jeff Lipton, Assistant Professor Waiel Elmadih, Research Scientist

University of Washington
Department of Mechanical Engineering

Washington State Transportation Center (TRAC)
University of Washington, Box 359446
University Tower
4333 Brooklyn Ave NE
Seattle, Washington 98195-8690

Washington State Department of Transportation
Technical Monitor Mark Gaines

Prepared for

The State of Washington
Department of Transportation
Roger Millar, Secretary

December 2022

ATTACHMENT 1

TECHNICAL REPORT STANDARD TITLE PAGE

1. REPORT NO. WA-RD 920.1		2. GOVERNMENT ACCESSION NO.		3. RECIPIENT'S CATALOG NO.	
4. TITLE AND SUBTITLE Design and Testing of Modular Expansion Joint Noise Mitigation Strategy				5. REPORT DATE December 2022	
				6. PERFORMING ORGANIZATION CODE	
7. AUTHOR(S) Per Reinhall, Sawyer Thomas, Jeff Lipton, Waiel Elmadih				8. PERFORMING ORGANIZATION REPORT NO.	
9. PERFORMING ORGANIZATION NAME AND ADDRESS Washington State Transportation Center (TRAC) University of Washington, Box 359446 University Tower; 4333 Brooklyn Ave NE Seattle, Washington 98195-8690				10. WORK UNIT NO.	
				11. CONTRACT OR GRANT NO. Agreement T1461, Task 78	
12. SPONSORING AGENCY NAME AND ADDRESS Research Office Washington State Department of Transportation Transportation Building, MS 47372 Olympia, Washington 98504-7372 Project Manager: Jon Peterson, 360.705.7499				13. TYPE OF REPORT AND PERIOD COVERED Research Report	
				14. SPONSORING AGENCY CODE	
15. SUPPLEMENTARY NOTES This study was conducted in cooperation with the U.S. Department of Transportation, Federal Highway Administration.					
16. ABSTRACT: <p>This study investigated the design and feasibility of noise mitigation strategies for installation in modular expansion joints (MEJs), with a focus on Washington state's SR 520 bridge. The three main sources of noise from MEJs include resonance of the air within the gaps, resonance of the beams, and resonance of the tires. By filling the gaps in the MEJs with engineered chevron support structures we have shown that it is feasible to significantly reduce the noise from MEJs. We performed both experimental and computer evaluations of a noise attenuation system before performing limited testing on the SR 520 bridge.</p> <p>Installation of the treatment on one westbound lane of the east MEJ of the SR 520 bridge proved to be highly effective over the two-month test period. At a distance of 160 feet, we measured a more than 70 percent reduction in audible noise over the noise of background traffic throughout the testing period. Beyond 160 feet the difference between noise from the concrete road surface and from the MEJ became so small that it became very difficult to identify when individual cars crossed the MEJ. While we have shown that the chevron system can be an effective solution to the expansion joint noise issue, we outline further development and testing to extend the durability of the treatment.</p>					
17. KEY WORDS			18. DISTRIBUTION STATEMENT No restrictions. This document is available to the public through the National Technical Information Service, Springfield, VA 22616		
19. SECURITY CLASSIF. (of this report) None		20. SECURITY CLASSIF. (of this page) None		21. NO. OF PAGES	
				22. PRICE	

ATTACHMENT 1**Disclaimer**

The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Washington State Department of Transportation or Federal Highway Administration. This report does not constitute a standard, specification, or regulation.

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This material can be made available in an alternate format by emailing the Office of Equal Opportunity at wsdotada@wsdot.wa.gov or by calling toll free, 855-362-4ADA(4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.

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Notificación de Título VI al Público

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ATTACHMENT 1

excluido de la participación, negado los beneficios de o ser discriminado de otra manera bajo cualquiera de sus programas y actividades. Cualquier persona que crea que su protección bajo el Título VI ha sido violada, puede presentar una queja o reclamación ante la Oficina de Igualdad de Oportunidades (OEO, por sus siglas en inglés) del Departamento de Transportación del Estado de Washington (WSDOT, por sus siglas en inglés). Para obtener información adicional sobre los procedimientos de quejas y/o reclamaciones bajo el Título VI y/o información sobre nuestras obligaciones anti-discriminatorias, pueden contactar al coordinador del Título VI en la EEOC 360-705-7090.

Información de la Ley sobre Estadounidenses con Discapacidades**(ADA, por sus siglas en inglés)**

Este material está disponible en un formato alternativo, que puede ser solicitado al enviar un correo electrónico a la Oficina de Igualdad de Oportunidades (OEO, por sus siglas en inglés)/ wsdotada@wsdot.wa.gov o llamando gratis al siguiente número de teléfono: 855-362-4ADA (4232). Personas sordas o con discapacidad auditiva pueden solicitar la misma información llamando al Washington State Relay al 711.

ATTACHMENT 1

Table of Contents

1. Introduction..... 1

 1.1 The Modular Expansion Joint 2

 1.2 The Source of Noise 3

2. Noise Mitigation Design..... 6

 2.1 Design Constraints 6

 2.2 Candidate Design Overview..... 6

 2.3 Single-Layer Design..... 8

 2.4 Multi-Layer Design 10

 2.5 Design Selection..... 13

3. Methodology 17

 3.1 Sound Equipment 17

 3.2 Data Collection and Processing..... 17

 3.3 Simulation Information 18

 3.3.1 Tire and Beam Model 18

 3.3.2 Finite Element Model 18

4. Results and Discussion..... 20

 4.1 Support Fabrication and Installation 20

 4.2 Initial Results..... 24

 4.3 Performance Over Time 27

 4.4 Suggestions for Future Implementation 32

 4.5 Conclusions 33

References 35

Appendix A. High Speed Testing..... A-1

Appendix B. Static Testing Procedures B-1

Appendix C. Full 520 Bridge MEJ Test Results C-1

ATTACHMENT 1

Figures

Figure 1-1. Expansion joint as designed (left) and installed (right). The I-beams run across the lanes to provide a continuous medium of traffic with the two sides of the bridge. 2

Figure 1-2. A) Computer aided design (CAD) model for the vehicle tire and I-beam design for simulation. B) A sharp pressure spike occurs as the tire rolls over the leading edge of the second I-beam. C) Visualization of peak pressure on the I-beam surface. 4

Figure 1-3. Overview of car-pass events using simultaneous noise and video recordings. Screenshots from high-speed video are assigned to specific parts of the noise recording using letters (A)-(I). 5

Figure 2-1. A) Single-layer elastomer chevron design with original moisture seal, installed between MEJ I-beams. B) Multi-layer design with an elastomer top layer and custom moisture seal. 7

Figure 2-2. A) Plot of maximum internal stress as the support structure fully compresses. B) Detailed visualization of stress over the surface of each chevron element throughout 9

Figure 2-3. A) High speed test set-up. We made five 3-in. gaps by gluing a wooden ramp and 2-ft x 3.5-in. x75-in. metal beams to the roadway using a silicon-based glue. Two microphones sat before and after the test set-up to record noise (white boxes). B) Results showed slightly improved noise reduction with the more rigid material supporting the tire. 10

Figure 2-4. Bottom support structures. (Left) Chevron design fabricated from high durometer urethane. (Right) Structure fabricated from interlocking spring steel. 11

Figure 2-5. A) Set-up for static compression testing. B) Measured results from compression testing 12

Figure 2-6. A) Mesh for the FEA of the rolling tire. B) Pressure curves as the tire strikes the leading edge of the second beam. C) Visualizations of the pressure on the edge of the beam for each treatment option. 14

Figure 2-7. FEA visualizations of deformation of the top surface and internal stresses within the support as the tire rolls over the top. 15

Figure 4-1. Diagram detailing support installation components. 20

Figure 4-2. A) 6-in. sections of urethane cast support structures. B) We glued together four 6-inch support sections to create a single support with opposing direction chevrons. 21

Figure 4-3. Installation of MEJ treatment. A, B) Support structure after four weeks of wear. C) Cleaning out the expansion joint before installation. 23

Figure 4-4. Underside of the MEJ with viscoelastic foam strips stuffed into the gaps. 24

Figure 4-5. Map showing expansion joint and sound measurement locations. 25

ATTACHMENT 1

Figure 4-6. Comparison between control and initial results at a distance of 160 feet.26

Figure 4-7. Comparison between control and initial results directly beside the MEJ. 27

Figure 4-8. Comparison between roadway noise and MEJ noise over a two-month period at a distance of 160 feet. Error bars represent standard deviation of measurements. 28

Figure 4-9. Comparison between roadway noise and MEJ noise over a two-month period directly beside the MEJ. Error bars represent standard deviation of measurements. 29

Table

Table 2-1: Key design points for multi-layer design vs single-layer design..... 16

ATTACHMENT 1

ATTACHMENT 1**Executive Summary**

As required in ESSB 5689, Section 219 (4), this study investigated the design and feasibility of noise mitigation strategies for installation in modular expansion joints (MEJs), with a focus on Washington state's SR 520 bridge. The three main sources of noise from MEJs include resonance of the air within the gaps, resonance of the beams, and resonance of the tires. By filling the gaps in the MEJs with engineered chevron support structures, we showed that it is feasible to significantly reduce the noise from MEJs. We performed both experimental and computer evaluations of a noise attenuation system before performing limited testing on the SR 520 bridge.

Installation of the treatment on one westbound lane of the east MEJ of the SR 520 bridge proved to be highly effective over the two-month test period. At a distance of 160 feet, we measured a more than 70 percent reduction in audible noise over the noise of background traffic throughout the testing period. Beyond 160 feet the difference between noise from the concrete road surface and from the MEJ became so small that it became very difficult to identify when individual cars crossed the MEJ. While we have shown that the chevron system can be an effective solution to the expansion joint noise issue, we outline further development and testing to extend the durability of the treatment.

ATTACHMENT 1

ATTACHMENT 1**1. Introduction**

Bridge and viaduct expansion joints play a critical role worldwide by enabling movement of the structure with changing environmental conditions. Expansion joints can be found on bridges around the world, each with specific designs, dimensions, and materials (see Figure 1-1). However, they all share the same concept: they connect two isolated sections of a bridge to provide a continuous medium for travellers¹. The reason for having two isolated sections on the bridge in the first place is to make sure that expansion and contraction of the bridge due to changes in water level (for floating bridges), changes in temperature, lateral and rotational movement induced by wind and current, and general land movement do not cause any damage. The expansion allows motion to occur without causing excessive stress in the bridge that can lead to failure.

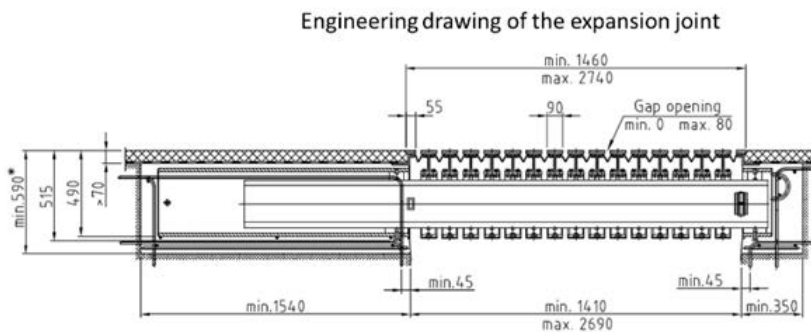
While expansion joints remain a necessary component for effective development, they also contribute to noise pollution and have become an area of focus for many acoustic studies and noise mitigation strategies²⁻⁹. Several potential technologies reduce expansion joint noise, such as sinus plates^{1,10,11}, foam inserts^{8,12}, and Helmholtz absorbers⁶; however, these solutions either require large-scale bridge renovation, fail to effectively reduce broadband noise, or require frequent maintenance. Here we suggest alternative sound mitigation strategies that show great potential for effectively retrofitting existing expansion joints.

Large modular expansion joints (MEJs) such as those installed on Washington state's Evergreen Point Floating Bridge (SR 520 bridge) tend to result in nuisance noise generation. Shortly after that bridge opened in 2016, the Washington State Department of Transportation (WSDOT) began receiving noise complaints related to the large expansion joints on the east and west ends of the bridge. The noticeable impact of each car hitting the MEJs contributes to noise pollution in the area. While this specific bridge has received complaints since its opening, similar expansion joints across the state and beyond pose similar difficulties associated with noise. To combat this problem, we developed, fabricated, and installed a test noise mitigation treatment in a single lane of the SR 520 floating bridge. Over the course of two months, we recorded and processed sound data to evaluate our results. Through this study, we gained significant insight into the mechanism and practical mitigation of MEJ noise.

ATTACHMENT 1

1.1 The Modular Expansion Joint

To reduce the noise coming from the SR 520 bridge, we must consider the general design of the existing modular expansion joint (MEJ). The expansion joint consists of a closing box connected to a concrete block (one side of the bridge) and an opening box connected to the other side (Figure 1-1). A central beam runs between the boxes, leaving room toward the end of one box for expansion and contraction¹³. Supported on the central beam are the I-beams that protrude out of the sub-structures of the expansion joint, forming a travel surface with the rest of the bridge.



The main material used in the expansion joint is steel, with various hardening and grades in some critical regions, for example the shear studs that connect to the concrete. A gap exists between any two I-beams (including the edge beam and the first I-beam from each side). This gap changes width with the opening and closing of the expansion joint. A seal made of a flexible material (Neoprene) is mounted between each beam (below the surface of travel) to collect debris, dirt, water and/or any parts/particles that can potentially cause damage to the substructure of the expansion joint, as well as to keep untreated water and debris from entering Lake Washington. A large, enclosed cavity exists underneath the expansion joint on the east side to provide noise reduction and easy access to the expansion joints for servicing and replacing parts.

ATTACHMENT 1**1.2 The Source of Noise**

The source of the noise was discussed in detail in our previous research report, “[Modular Expansion Joint Noise Mitigation Study](#),” which was prepared for WSDOT in January 2019. This report discussed that the noise emanating from expansion joints is due to the following:

- The acoustic resonances of the air cavity enclosed by the tire, seal, and beams.
- Motion of the beams as they are excited by the tires when they strike the edges of the beams.
- The deformation of the tires as they strike the beams.

Additional conclusions from the previous study include the following:

- The noise as evaluated by energy spectral density (ESD) at residential locations is highest between 400 Hz and 800 Hz. ESD at the bridge close to the expansion joint is also highest between 400 Hz and 800 Hz.
- Most of the noise radiates from **the top** of the modular expansion.
- The frequency characteristics of the noise for vehicle-pass events are closely related to vehicle tire width. The frequency peak for wider tires occurs at lower frequencies than that for narrower tires. This is a result of excitation of the air volume between the tire and the air gap between center beams.
- A concrete joint cavity enclosure (WSDOT design) under the east expansion bridge significantly reduces the noise coming from the underside of the bridge.
- Filling the gaps between the center beams could reduce the noise on the SR 520 bridge and other expansion joints.

Understanding the cause of the noise is critical for exploring potential solutions. The previous report from the University of Washington (UW) successfully showed the levels of noise at various frequencies. In general, noises can generate from various sources, and the literature would categorize these sources on the basis of various generation mechanisms (things like frequency ranges, type, and nature). In this work, we identified two main generation mechanisms. The first one is acoustic radiation from the tire and the beams when the tires hit the edge of the I-beam on the expansion joint. The second-generation mechanism is acoustic radiation from the sudden compression and expansion of the air within the cavity formed by the seal and the top part of any two neighboring I-beams when a tire passes over the cavity. This can be viewed as a type

ATTACHMENT 1

of Helmholtz resonator phenomenon. The previous study found a generally inverse relationship between tire width and dominant frequency such that f_{peak} is the peak of the ESD and W_t is the width of the tire.

$$f_{peak} \propto \frac{1}{W_t}$$

We simulated the deformation of the tire and the excitation pressure on the MEJ I-beams (Figure 1-2) with the help of a finite element model (see details in section 3. Methodology) of the tire and section of the expansion joint. As a tire rolls across the joint, it drops into the gap between the MEJ I-beams. As it meets the leading edge of the next I-beam, the tire accelerates upward, creating a pressure spike and exciting the structure and tire (Figure 1-2). By adding a structure that resists vertical deformation in the gap, we can support the tire as it rolls overhead, reducing the distance that the tire drops and subsequently reducing the pressure spike between the tire and the I-beam.

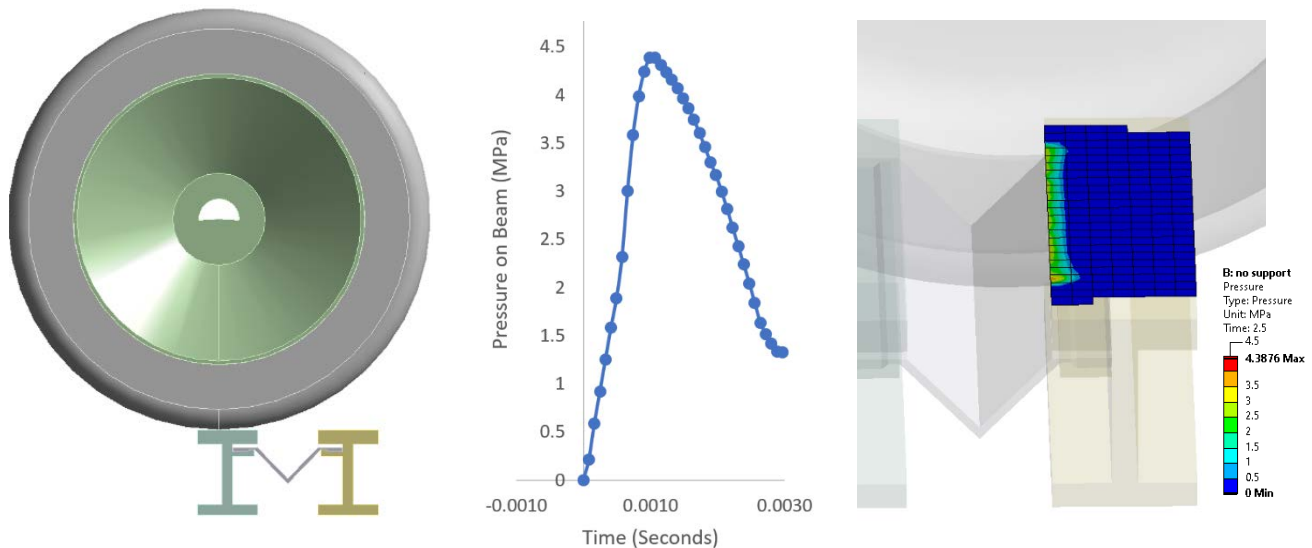


Figure 1-2. A) Computer aided design (CAD) model for the vehicle tire and I-beam design for simulation. B) A sharp pressure spike occurs as the tire rolls over the leading edge of the second I-beam. C) Visualization of peak pressure on the I-beam surface.

As a vehicle rolls over the expansion joint on the east side of the bridge, we observed in our measured noise data two distinct peaks in noise as each pair of tires (front and rear) strikes the beams of the MEJ. A third, smaller peak in noise occurs as the vehicle passes over a smaller joint slightly past the main joint. For testing, we considered a single event to be the time between the

ATTACHMENT 1

front tires striking the first I-beam in the joint (Figure 1-3.B) and the vehicle completely passing the expansion joint (Figure 1-3.I). To evaluate smooth road noise, we sampled the audio directly before the vehicle rolled onto the expansion joint (before Figure 1-3.A)

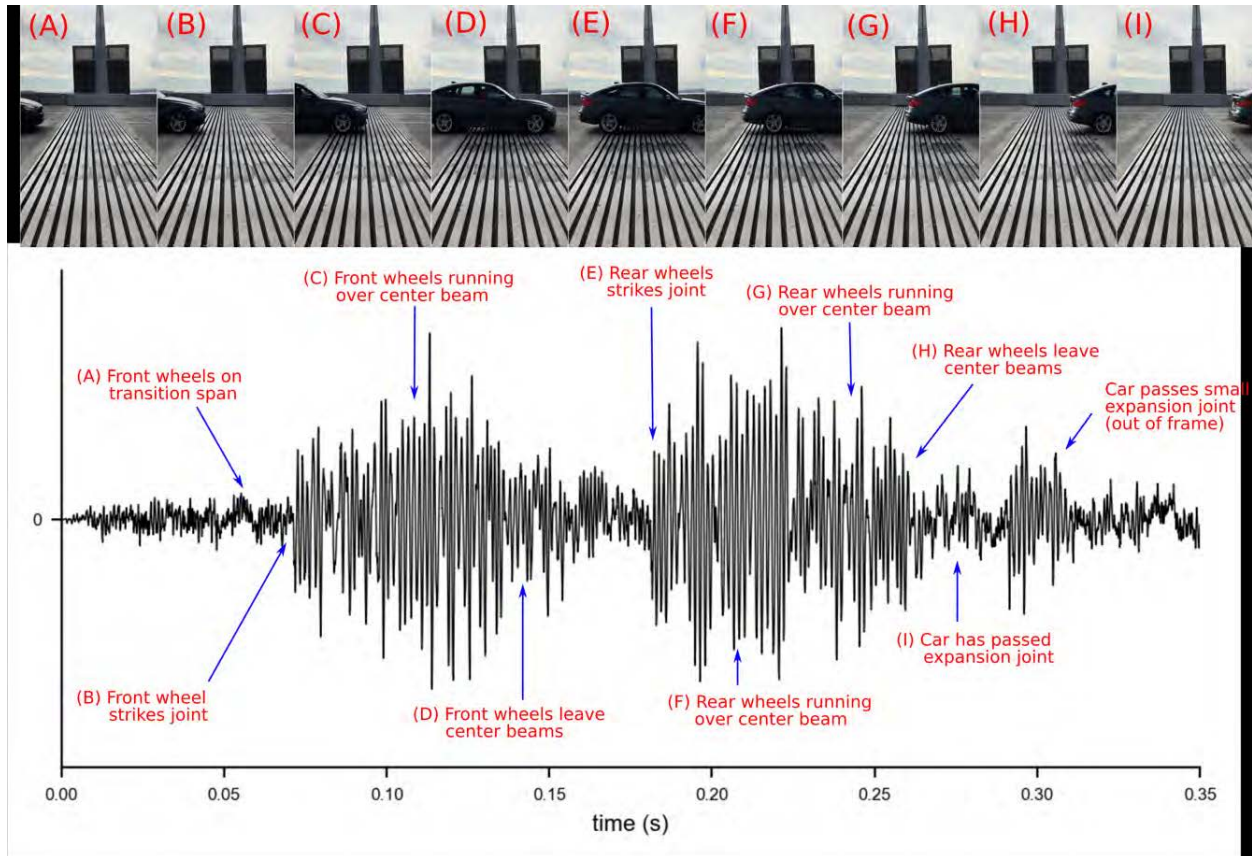


Figure 1-3. Overview of car-pass events using simultaneous noise and video recordings. Screenshots from high-speed video are assigned to specific parts of the noise recording using letters (A)-(I).

ATTACHMENT 1**2. Noise Mitigation Design****2.1 Design Constraints**

As described in our previous report, we must address three main noise generation mechanisms to create an effective noise mitigation treatment. These include 1) the vibration amplitude of the I-beams impacted by the tire, 2) the acoustic resonance amplitude of the air cavity under the tire, and 3) the noise emitted from the tire itself as it rolls across the MEJ. For each of these noise generation mechanisms, the exciting force is generated by the tire deforming into the gap between the beams as the tire crosses the expansion joint. By filling the space between each I-beam, we can reduce the amount by which the tire slips into the gaps, and as a result, limit pressure spikes in the beam, tire, and cavity simultaneously. To be effective, this treatment must partially be able to support the load of the tire while still allowing the joint to function as intended and surviving the wear of traffic and weather over time.

The geometric and structural constraints of the modular expansion joint create a challenging design problem. First, the structure must allow the MEJ to regularly open and close with gaps that shift between .84 in. to 3 in. during normal operation. The floating bridge has both vertical, rotational, and transverse movements up to 9 degrees that must be accounted for. Under extreme conditions the Pontoon "W" gap can potentially completely close to a 0-in. gap or expand to a width of 3.85 in. The pontoon "A" gap can expand to a width of 4.38 in. If the gap fully closes, the design must be easy to remove, or in a worst-case scenario the structure must selectively fail to allow full closure, ensuring that no damage occurs to the MEJ or bridge. Additionally, the solution should also be easy to install, durable, and include a moisture seal to prevent dirt, gravel, water, etc. from penetrating the substructure of the expansion joint or entering Lake Washington. These requirements necessitate a unique structure design that must have a horizontal expansion ratio of greater than 3.5 while still being able to partially support the weight of a semi-truck in the vertical direction. These designs must be extremely durable to withstand extended exposure to overhead roadway traffic and weather of all kinds.

2.2 Candidate Design Overview

To match the shifts in the beam gaps, the structure must expand and contract along the roadway with no material interference or height change along the length of the gap. To do this, our designs incorporate flexible chevrons tailored to have a net zero Poisson's ratio behavior (Figure 2-1). This allows material to remain fastened in place and level with the roadway as the MEJ

ATTACHMENT 1

expands and contracts over time. In between the I-beams, a neoprene moisture seal fastens to each beam via a welded metal connector (Figure 2-1). We explored two main design categories to retrofit the existing structure: 1) a single-layer design that we can install without removing the current moisture seal and 2) a multilayer support system with a custom fabricated moisture seal to replace the current version.

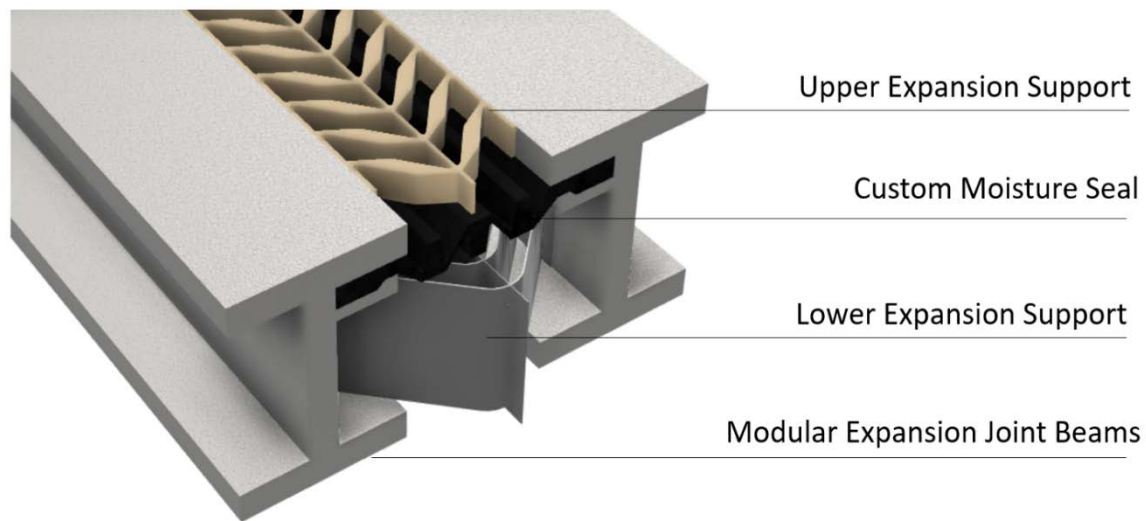
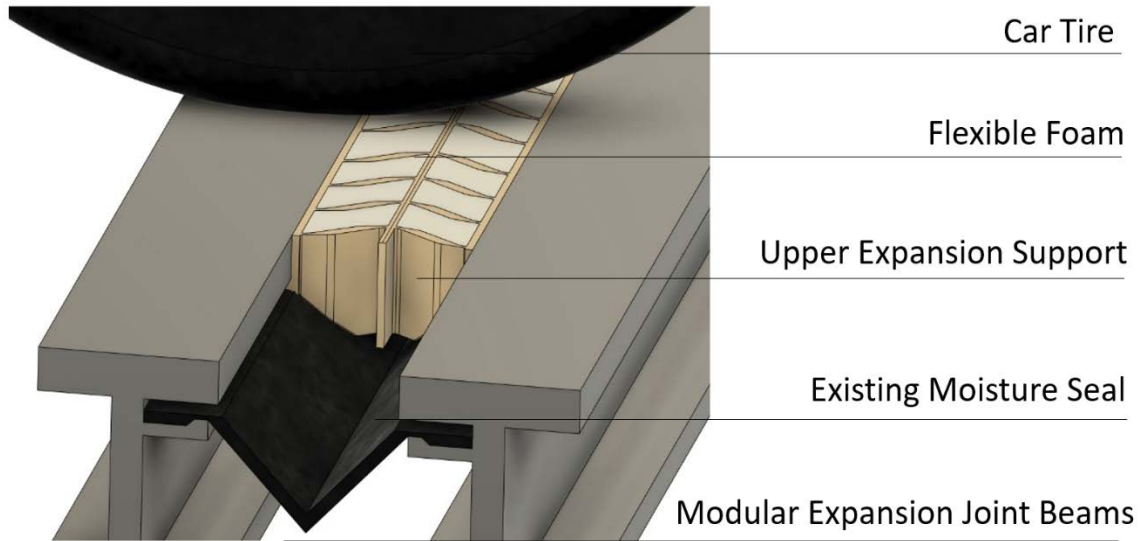


Figure 2-1. A) Single-layer elastomer chevron design with original moisture seal, installed between MEJ I-beams. B) Multi-layer design with an elastomer top layer and custom moisture seal.

ATTACHMENT 1**2.3 Single-Layer Design**

To offer the simplest solution, we propose retrofitting the existing MEJs such that no components need to be modified or replaced. To avoid altering the current moisture seal, we designed a support component that fits into the space accessible from the surface of the bridge. This support must be durable enough to withstand roadway wear and must compress/expand between .85 in. and 3 in. without yielding. Under extreme compression it must fail and squeeze out of the MEJ without causing any damage, meaning that rigid materials such as steel cannot be used. Rather than creating a traditional hinge design, which can be susceptible to blocking with grime and binding, we designed chevron structures with compliant flexure joints. These structures can be easily 3D printed or cast for prototyping and can eventually be injection molded for large-scale manufacturing. For installation, these can be easily compressed and inserted into the existing gaps.

To select the support shape, we created a chevron with the thickest beam and flexure width possible while still adhering to space limitations. To optimize material, we tapered the edge of each beam to neatly mesh with surrounding components during compression. This design relies on glued connections at each beam edge and small geometric interference between the moisture seal and the chevrons. For initial prototyping and testing, we fabricated these joints out of a variety of high durometer elastomers with shore hardness values between 85A-95A. For initial models, we 3D printed structures from Ninjatek–Cheetah thermoplastic polyurethane (TPU). These prototypes exhibited desirable traits, but fused deposition modelling (FDM) 3D printing could not be scaled to fabricate enough durable samples for our test on the SR 520 bridge. To create a larger number of high-quality durable parts, we instead switched from 3D printing to urethane casting. This process creates high quality parts with many high durability and commercial-grade options. We selected 90A durometer urethane from BJB Enterprises called FP90 A/B. With this material, our finite element models showed enough strength to tolerate complete compression of the structure within the MEJ's normal working limits (Figure 2-2). To test the structure's behavior in extreme conditions when the joint fully closed (a gap of 0 in.), we compressed a Ninjaflex chevron support using an Instron universal testing system with a force of 180 KN. This caused the support to squeeze to a final width of 0.164 in. and expand outward toward the edges of the test plates.

ATTACHMENT 1

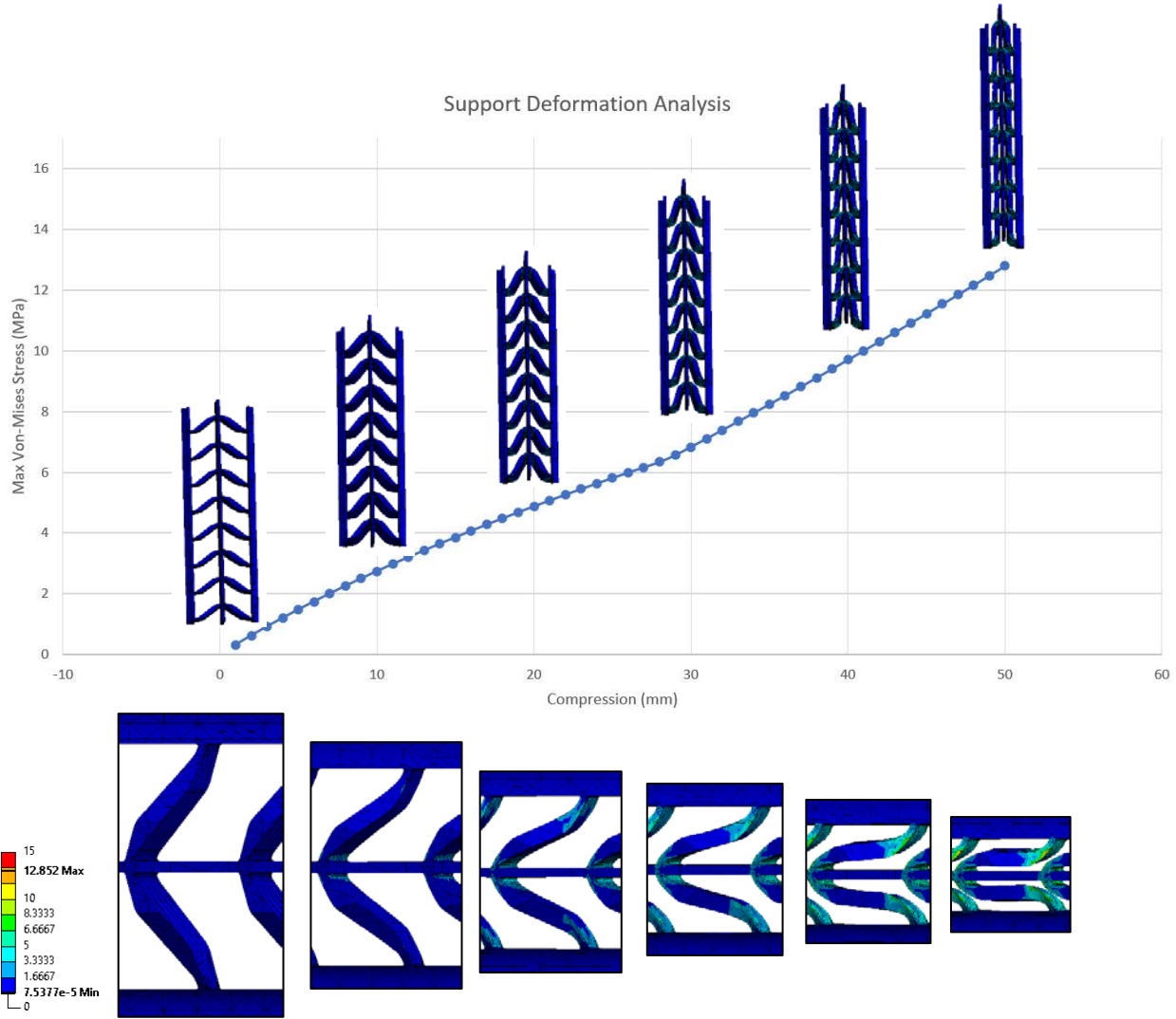


Figure 2-2. A) Plot of maximum internal stress as the support structure fully compresses. B) Detailed visualization of stress over the surface of each chevron element throughout

We performed the initial high-speed testing to assess the feasibility of different materials and geometry given a perfectly rigid lower support (roadway) (Figure 2-3). We investigated two potential material types: rigid plastic and semi rigid, high-durometer rubber (Appendix A) and performed tests at the PACCAR Facility in Mount Vernon, Washington. While these results demonstrated the feasibility of the supports in reducing noise in shallow roadway gaps, they also highlighted the importance of acoustic resonance in the cavities of the bridge structure. Even though we performed our testing on gap widths similar to those on the bridge, we recorded much lower noise levels on every configuration than those measured on the bridge. This indicated that that the resonance of the air cavities between the supports of the structure played a much larger

ATTACHMENT 1

role than the magnitude of the tire and beam impacts. It was difficult to create an experimental set-up that closely resembled the true expansion joint. One issue was that the wooden ramps leading to the beams (Figure 2-3) created loud noises upon impact, making it difficult to process the data and draw detailed conclusions about the results. While we measured decreases in total noise with the added supports, background noise from the ramps made it difficult to confidently interpret the results.

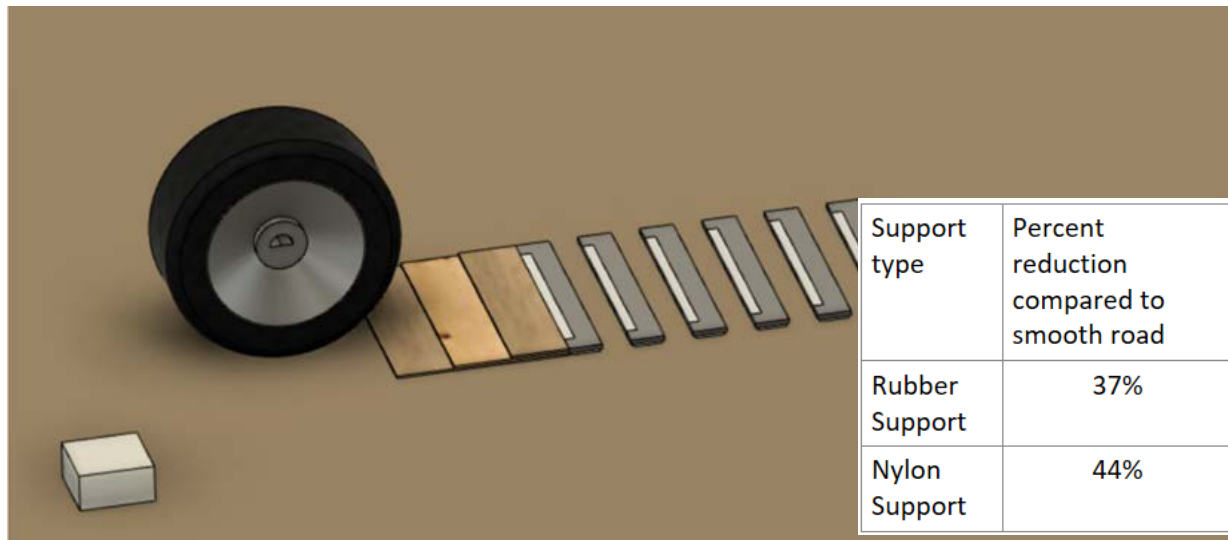


Figure 2-3. A) High speed test set-up. We made five 3-in. gaps by gluing a wooden ramp and 2-ft x 3.5-in. x75-in. metal beams to the roadway using a silicon-based glue. Two microphones sat before and after the test set-up to record noise (white boxes). B) Results showed slightly improved noise reduction with the more rigid material supporting the tire.

2.4 Multi-Layer Design

While the single-layer support design (Figure 2-1.A) benefits from simple fabrication and installation, an additional support layer could offer better resistance to deformation, potentially improving performance and reducing stress at glued connections (Figure 2-1.B). The bottom support structure rests in the I-beam cavity, supported by the lower flange of each I-beam. The lower support structure must repeatedly expand and compress between 5.875 in. and 2.875 in. to match the motion of MEJ Pontoon “W”; this offers significantly wider compression during the event of a fully closed joint than the upper support. Here, no possibility exists for the gap to fully close, so spring steel remains a viable material option. We designed two different support structures, a high-durometer urethane chevron and an interlocking, laser cut spring steel frame

ATTACHMENT 1

(Figure 2-4). The urethane structure offers far less rigidity but could be injection molded or extruded for a low-cost solution.

We fabricated the elastomer structure by 3D printing molds and casting individual chevrons out of SmoothOn PMC 790 two-part urethane. We then glued overlapping portions to get a single connected structure. We ordered spring steel structure components to be laser cut and heat treated to improve elasticity. Notches in each sheet allowed easy assembly, and the chevrons attached to side plates with bolts (potentially rivets). For future installation, both structures may be installed by first clamping each section into a compressed state and dropping them into the gap, where they will be held in place by outward pressure. A layer of plastic siding must be included between the support and the beam to ensure no damage to the beam surface. To avoid interference with internal joint components such as nuts and bolts, the support must be selectively placed in small sections, potentially increasing installation time.

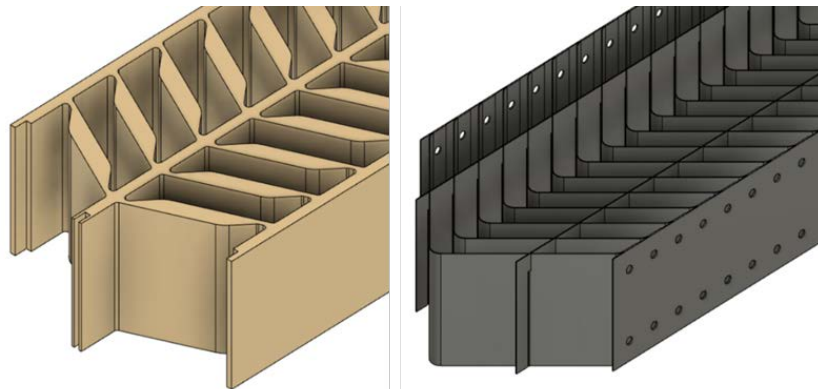


Figure 2-4. Bottom support structures. (Left) Chevron design fabricated from high durometer urethane. (Right) Structure fabricated from interlocking spring steel.

To validate our simulations and assess the potential of various multi-layer designs, we built a static compression test set-up (Figure 2-5) with reconfigurable components and tested eight different configurations for support deformation and edge pressure. To create realistic conditions, we fabricated I-beams matching those found on the SR 520 Bridge MEJ and drove a vehicle so that it rested on the installed supports. We used Fujifilm 70-350 psi Prescale pressure paper to determine edge pressure and an IFM diffuse light photoelectric distance sensor to measure deformation in the structure. On the physical MEJ, the largest tire deformations and subsequent impacts occur when the gap spans a larger distance. We positioned the I-beams accordingly to have a 3-in. gap, the maximum MEJ gap width within its normal working range. Every support

ATTACHMENT 1

combination significantly reduced deformation in comparison to the untreated (unsupported) version. Between the two potential base supports, the spring steel version consistently performed far better than the urethane support, making it a strong candidate for future implementation.

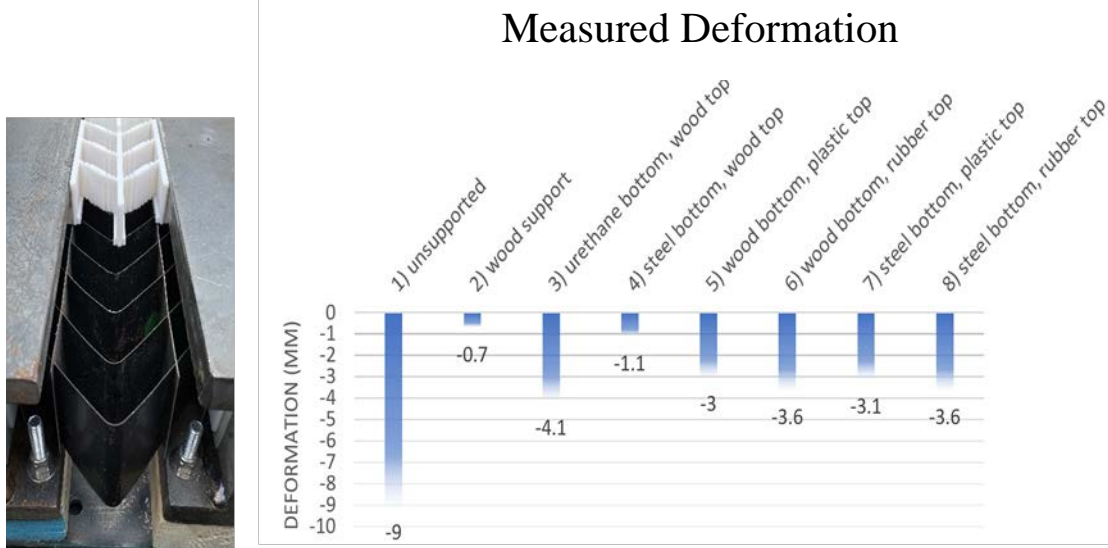
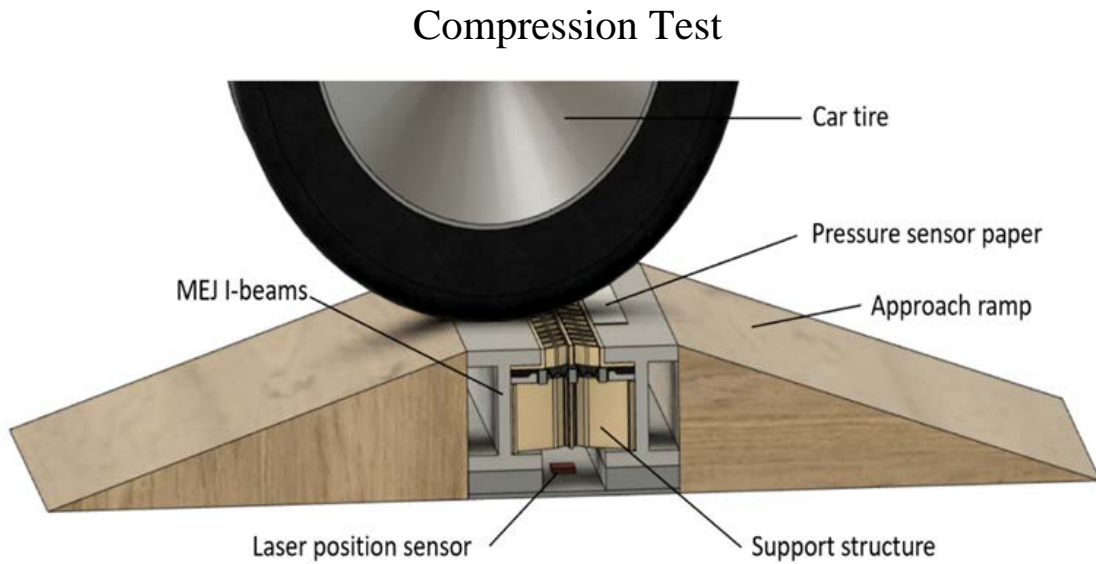


Figure 2-5. A) Set-up for static compression testing. B) Measured results from compression testing.

ATTACHMENT 1

2.5 Design Selection

While both designs have potential to significantly reduce noise created by the Washington SR 520 modular expansion joints, we weighed practical considerations for implementing each support structure. We used finite element models to compare the influence of each on the resulting pressure spike caused by the tire on the beam edge. For the completely unsupported gap, the tire creates a sharp increase in pressure, with a peak of 4.39 MPa. For a perfectly flat road, the pressure of the tire rolling over the flat surface still creates a pressure spike but a much lower one, topping out at 1.45 MPa. If we consider the unsupported version to be the worst-case scenario, and the supported to be the best case, we can look at the percentage pressure reduction for each of the options.

$$\% \text{ Pressure Reduction} = \frac{(P_{us} - P_{fs}) - (P_s - P_{fs})}{(P_{us} - P_{fs})}$$

with P_{us} being unsupported pressure, P_{fs} being flat surface pressure, and P_s being pressure of the support. Given the values shown in Figure 2-6, we see that the single-layer chevron support provided a pressure reduction of 67.17 percent, while the multi-layer chevron support (approximated as a rigid lower support) provided a pressure reduction of 76.40 percent. This may equate to driving over a slightly textured road as opposed to driving over a set of distinct metal beams such as a cattle guard. While the multi-layer support offered better reduction, both solutions provided significant improvements over the original unsupported beam gap. For these simulations, we focused specifically on the 3-in. beam gap configuration; a smaller gap may have shown lower overall values but would represent similar corresponding trends. In these simulations, we considered the connection between the support and the beams to be in contact. This connection relied on the surfaces to be bonded by either mechanical interference or a chemical adhesive. The multi-layer design did not rely as heavily on such a connection because of the support from below.

In addition to reducing pressure, each of the solutions deformed vertically and underwent internal stresses as vehicles rolled over top. For a 3-in. gap, the multi-layer support option had maximum internal stresses of 2.91 MPa and a surface deformation of 2.08 mm. The single-layer option had a significantly higher maximum stress of 4.64 MPa and a surface deformation of 3.60 mm. Stresses for both options were well below FP90's tensile strength of 14.5 MPa. The 3-in. gap represented the worst-case loading scenario; for smaller gaps we expect internal stresses to be reduced.

ATTACHMENT 1

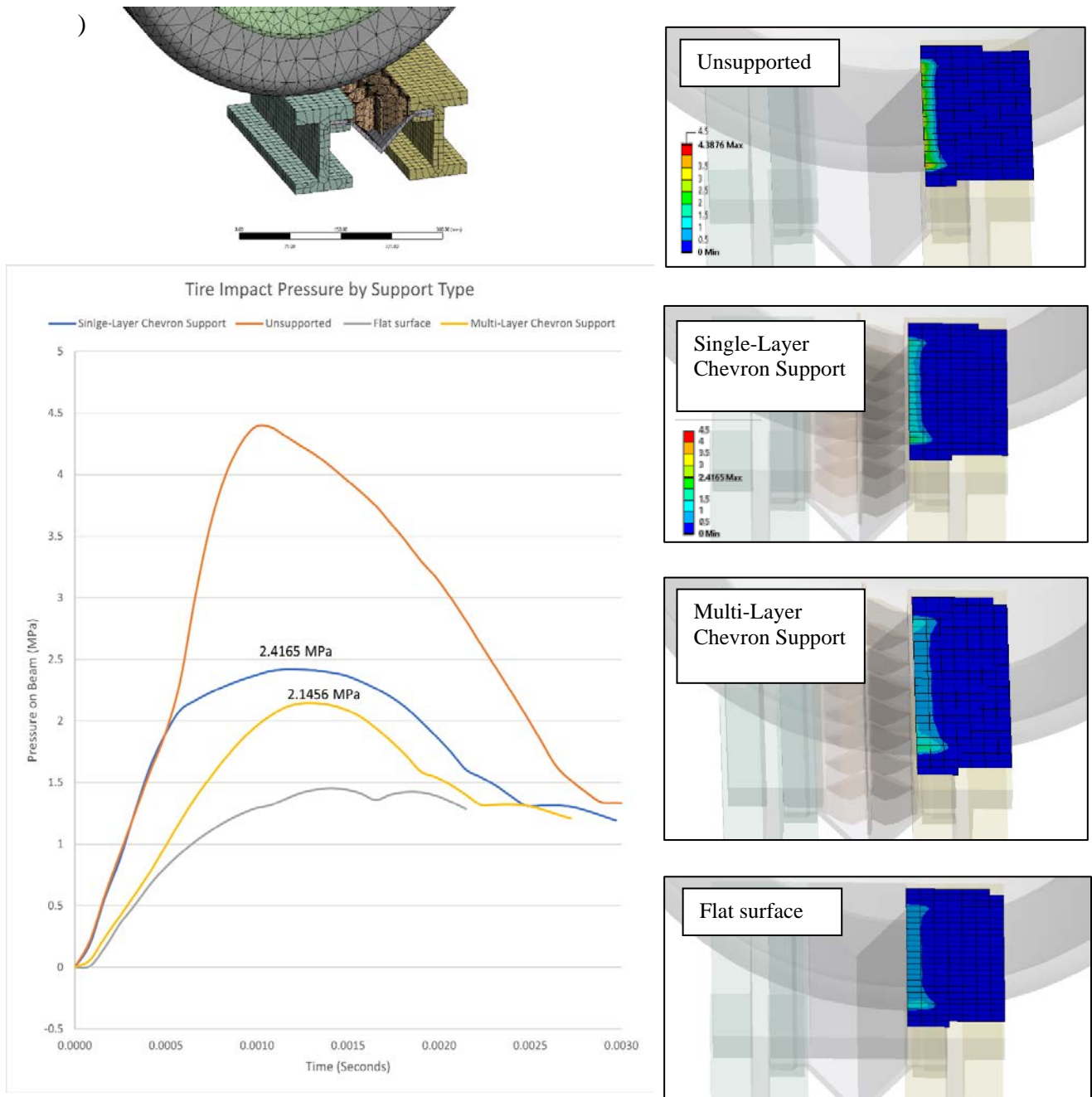


Figure 2-6. A) Mesh for the FEA of the rolling tire. B) Pressure curves as the tire strikes the leading edge of the second beam. C) Visualizations of the pressure on the edge of the beam for each treatment option.

ATTACHMENT 1

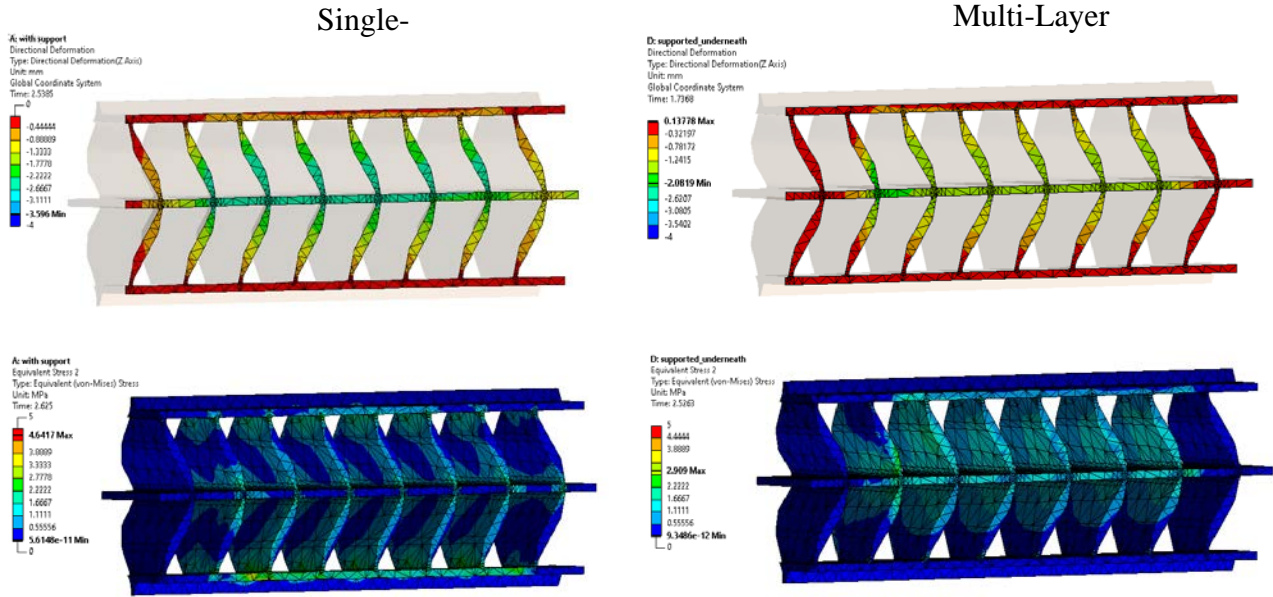


Figure 2-7. FEA visualizations of deformation of the top surface and internal stresses within the support as the tire rolls over the top.

Despite the slightly improved functionality of the multi-layer design, practical considerations favor installation of the single-layer design. Reducing the number of parts can drastically decrease the cost of fabrication and installation time. The reductions in internal stresses and pressures on beam edges are minimal in comparison to the benefits of simplicity. Along with analysis of the support structure, the adhesive and foam type for the single layer support structure also require careful consideration. Optimizing these materials will be critical to the long-term success of the treatment. To weigh the pros and cons of each solution, Table 2-1 summarizes significant stress points for each aspect of the design.

Given the points shown in the table, solution 1 (single-layer support) seems to be the best candidate for effective and affordable implementation. Solution 2 (multi-layer support) may provide increased resistance to deformation and reduce overall excitation of the system, but it requires far more complex and expensive fabrication and installation. For installation and field testing, we selected the single-layer support. Future work could investigate additional cost and durability trade-offs for a multi-layer support structure. Although the single-layer option seems like a better solution for retroactive installation, the multi-layer support could be potentially implemented in new bridge infrastructure.

ATTACHMENT 1

Table 2-1: Key design points for multi-layer design vs single-layer design

Design Aspect	Single-Layer Design	Multi-Layer Design
Moisture seal replacement	Incorporates current moisture seal.	Required custom seal design, fabrication, and installation.
Structure Fabrication	Less complex fabrication that easily scales through urethane casting or injection molding.	Additional fabrication and assembly required for lower support.
Installation	Significantly simpler installation.	Multi-step installation required.
Pressure Reduction	Less reduction of pressure on the beam edge and impulse on the tire.	Higher reduction of pressure on beam and impulse on tire.
Durability	Less vertical support and greater reliance on beam edge contact.	Improved vertical support may lead to slightly better durability.

ATTACHMENT 1

3. Methodology

3.1 Sound Equipment

Throughout this project, we used the same methodology and instruments used to complete the UW's phase 1 *Modular Expansion Joint Noise Mitigation Study*¹⁴. We took noise measurements with a Brüel and Kjaer Type 2270-S, class 1 (BK2270) sound level meter. We sampled acoustic data at a frequency of 48,000 Hz and recorded the files as 24-bit .wav files. We calibrated our files using a Brüel and Kjaer Type 4231 sound calibrator that outputs a 94 ± 0.2 dB re 20 μ Pa tone at 1000 Hz.

3.2 Data Collection and Processing

Each sound level recording consisted of ~90 seconds of audio, during which many vehicles struck the modular expansion joint. To extract meaningful results from our sound measurements, we manually labelled events by selecting the start and end time of every vehicle that passed over the desired portion of the expansion joint. To do this, we compared matched video recordings to each audio recording to observe the specific time that each vehicle successfully struck the expansion joint segment in which our treatment was installed. To limit the influence of additional background noise, we selected only samples in which a single vehicle drove over the MEJ at a time. Additionally, we marked a short period (~.1 second) directly before the vehicle struck the expansion joint to act as a baseline measurement for comparison between the flat roadway and the MEJ for each vehicle. We used the open-source audio editor Audacity to mark and export text files with this information.

Next we computed the energy spectral density (ESD) to measure the associated spectra for each event^{15,16}. This computation adapted the general method used during phase 1 of this project¹⁴, and leveraged the SciPy. Signal toolbox¹⁷ in Python to compute the power spectral density (PSD). We presented the ESD in dB with reference to E_{ref} of $1 \text{ J/m}^2/\text{Hz}$ (or $10 \log_{10}(ESD/E_{ref})$).

$$ESD = \frac{PSD \times T_e}{\rho c}$$

with T_e being event duration, ρ the density of air (1.225 kg/m^3), and c the speed of sound in air (340 m/s). For the ESD computation, we applied a Tukey (tapered-cosine) window with 25 percent tapering to the time series, and a Fast-Fourier Transform (FFT) zero padded to a length of

ATTACHMENT 1

$4 \times f_5$ (or 192,000 samples). Using a standard FFT length allowed spectral averages to be computed. It is important to note that ESD should not be confused with a pressure level widely used for measuring environmental noise. In comparing the ESD of two events, however, a higher ESD corresponds to a higher noise level. The Federal Highway Administration uses either 15-min or 1-hour equivalent sound levels, L_{eq} , and third-octave sound levels to measure compliance and noise abatement criteria. In this project we used ESD, as it allows transient events with varying durations to be compared. This is an effective tool to help investigate the mechanism(s) responsible for expansion joint noise, including their spectral characteristics, which was one of the main goals of this project. To apply a correction that accounted for the relative loudness of sounds perceived by the human ear, we applied A-weighting to some samples (SM). For these samples, ESD will be presented as dBA.

3.3 Simulation Information*3.3.1 Tire and Beam Model*

We created a car tire model that approximated the complex geometry of a physical tire while preserving key characteristics. The computer aided design (CAD) model included a steel rim with an edge positioned directly at the center to act as pivot point for rolling. The model of the tire itself was made up of two layers. The interior layer represented a tire's inner liner, body plies, and the belts that give the tire structural strength. We approximated these as a 7-mm polyethylene strip with a Young's Modulus of 1.1 GPa and a Poisson's Ratio of 0.42. The outer layer represented the tire tread and sidewall. We modeled this as 18-mm thick rubber with a Young's Modulus of 20.6 MPa and a Poisson's ratio of 0.42. While this simple model only approximated the behavior of a tire, it functioned as an effective tool for comparing results between different treatment options. We modeled the MEJ beams as steel 1-foot extrusions of the I-beams used on the SR 520 Bridge. The moisture seal played no structural role in our simulations but was also approximated to be rubber like that of the tire.

3.3.2 Finite Element Model

To perform finite element analysis (FEA), we used the commercial software ANSYS Workbench 2021R1, a simulation suite for various types of solid and fluid analysis. For support compression and loading testing, we used ANSYS static structural simulation, with non-linear behavior and large deformations enabled. While this method only approximated the forces of a high-speed vehicle, it functioned as a useful tool for comparing several potential support

ATTACHMENT 1

geometries. We applied bonded connections to each of the components in the tire and the beam assembly, respectively. Between the surface of the tire and the surface of the beams/supports, we created frictional contacts with a coefficient of friction of 0.2. We then generated a mesh by using ANSYS's automatic mesh generation and a feature resolution of 6. To simulate the event of a car tire rolling over a gap in the beams, we broke the analysis into four separate steps.

1. First, we applied a displacement to one of the beams in the -Y direction to squeeze the support and establish the desired gap width and analyze stress in the chevron support joints.
2. Next, we applied a pressure of 35 PSI to the interior of the tire to effectively inflate the structure.
3. Third, we loaded the tire with -4448 N (1000 lbf) in the Z direction to approximate the weight of a medium-sized truck with equal force distributed on each tire.
4. Finally, we applied a remote displacement of 177 mm in the Y direction to roll the tire across the surface of the I-beam, into the gap, and onto the surface of the next I-beam.

To perform post-processing, we used the ANSYS contact tool to measure the pressure between the tire and the surface of the second beam over time. We also measured the displacement of the support surface and the stresses in the support throughout the simulation.

ATTACHMENT 1

4. Results and Discussion

On the basis of our current installation of Solution 1 (Single-Layer Support) on the SR 520 Bridge Modular Expansion Joint, we present our experimental results and physical observations, as well as provide suggestions for future implementation.

4.1 Support Fabrication and Installation

For on-bridge testing, we ordered support structures cast from BJB Enterprises FP-90A urethane by Quickparts, a digital, on-demand manufacturing company. We ordered the chevrons in 6-in. segments with extending middle and edge sections to allow them to fit together. Before installation we used Loctite 406 instant adhesive to combine four 6-in. sections into 2-ft support strips. With proper application, this adhesive creates a strong bond between urethane rubbers; however, for future fabrication, support sections could be completely welded together with a more aggressive bonding method. To avoid directional biasing and transverse motion of the supports with repeated compression (“walking”), we joined the 2-ft sections so that each side included two 6-in. segments opposing each other (figures 4-1, 4-2).

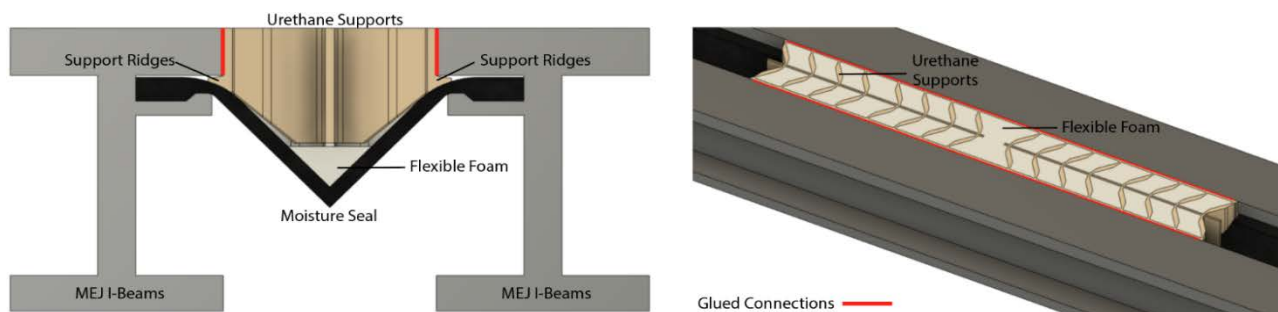


Figure 4-1. Diagram detailing support installation components.

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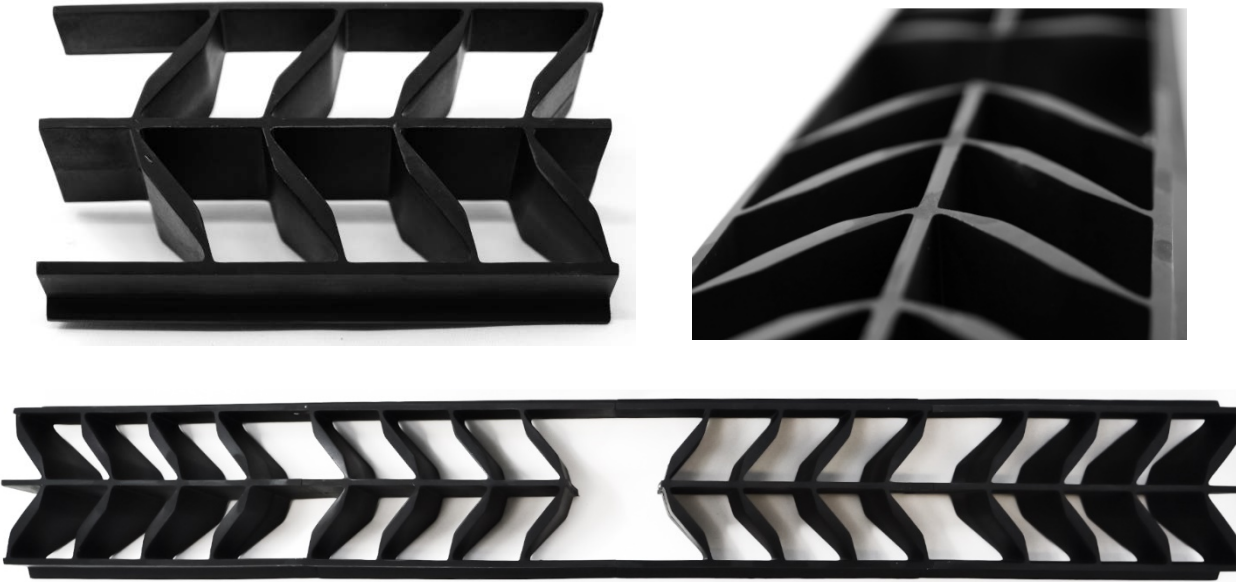


Figure 4-2. A) 6-in. sections of urethane cast support structures. B) We glued together four 6-inch support sections to create a single support with opposing direction chevrons.

For bridge installation, we first cleaned out a large amount of gravel and debris from the MEJ by using scraping tools and an air compressor. Next we cleaned the I-beam surface to glue the support to the edge. To secure the supports, we squeezed the sides by hand and slotted them into MEJ gaps so that the small ridges on the sides of the supports created mechanical interference with the edges of the moisture seal, locking them in place. Significant variation in the gap between the beam and the moisture seal made this step somewhat time consuming. To account for these variations, we manually trimmed some of the support ridges to create a tight fit. For future installation, an improved method of fitting these supports could greatly reduce installation time. We glued the support edges to the MEJ beam edges with Bostik 70-03A Elastic Bonding Adhesive.

Next we used 50-ml 2:1 ratio epoxy mixing guns to inject Smooth-On FlexFoam-iT III into each gap in the supports. This is a two-part flexible foam with a roughly 15x expansion ratio that is typically used for making soft cushions or props. While this foam acted as a good proof of concept for our design, a more durable selection of foam may be preferable for large-scale installation. The method of foam application could also use additional consideration. The epoxy guns had far too low capacity and volume for what would be preferable for large-scale installation. This forced us to refill the cartridges many times, adding significant time and difficulty to the

ATTACHMENT 1

installation process. With our application system, we found it very difficult to completely fill every support, and many were left with gaps and imperfections.

To test the feasibility and effectiveness of our design, we installed our experimental solution in a single lane on the eastern side of the SR 520 Bridge. Because most vehicles drive in the center of the lane, there are clear markings where the two tires of each car most commonly strike the edges of the MEJ beams. To reduce installation time and production cost, we installed 2-ft supports only in these positions where tires commonly strike (Figure 4-3.A). While most cars successfully passed over the supports, additional post processing was required to manually select cases in which vehicles partially missed the supports.

Because of several design and roadway inconsistencies, our support installation had to be completed over multiple steps. Upon installation, the height of the chevron structures extended above the surface of the roadway. Overhead traffic destroyed some of them completely and damaged most of the others. Even with the opposing chevron design, many of the supports could also be seen to have “walked” transverse to the movement of the bridge, which indicated failure of the support-beam adhesion. Additionally, the extra height created an uneven road surface, and the supports did little to improve MEJ noise. Despite this failure, we were able to return to the bridge and replace some of the destroyed supports, attempt to mend the others, and shave down the extra height to create a smooth road surface. In replacing the chevrons care had to be taken in order not to cut into the seal below. Returning to the bridge and completing these updates instantly made an audible difference in MEJ noise and resolved the “walking” that we had observed before.

Unfortunately, because of this error, many of the joints were structurally compromised upon test initialization. We expect this to greatly affect overall structure durability over time. The new supports that we installed to replace destroyed sections are the only non-damaged components and may offer a better indication of how the structure will survive over time. We performed this renovation completely at night, and temperatures were colder than suggested to correctly cure the Bostik flexible adhesive. Because this was a short road closure, the glue also had only approximately 4 hours to cure instead of the desired 24 hours before traffic began driving over the lane. We believe that improper curing of the adhesives will affect the overall performance and durability of the structure.

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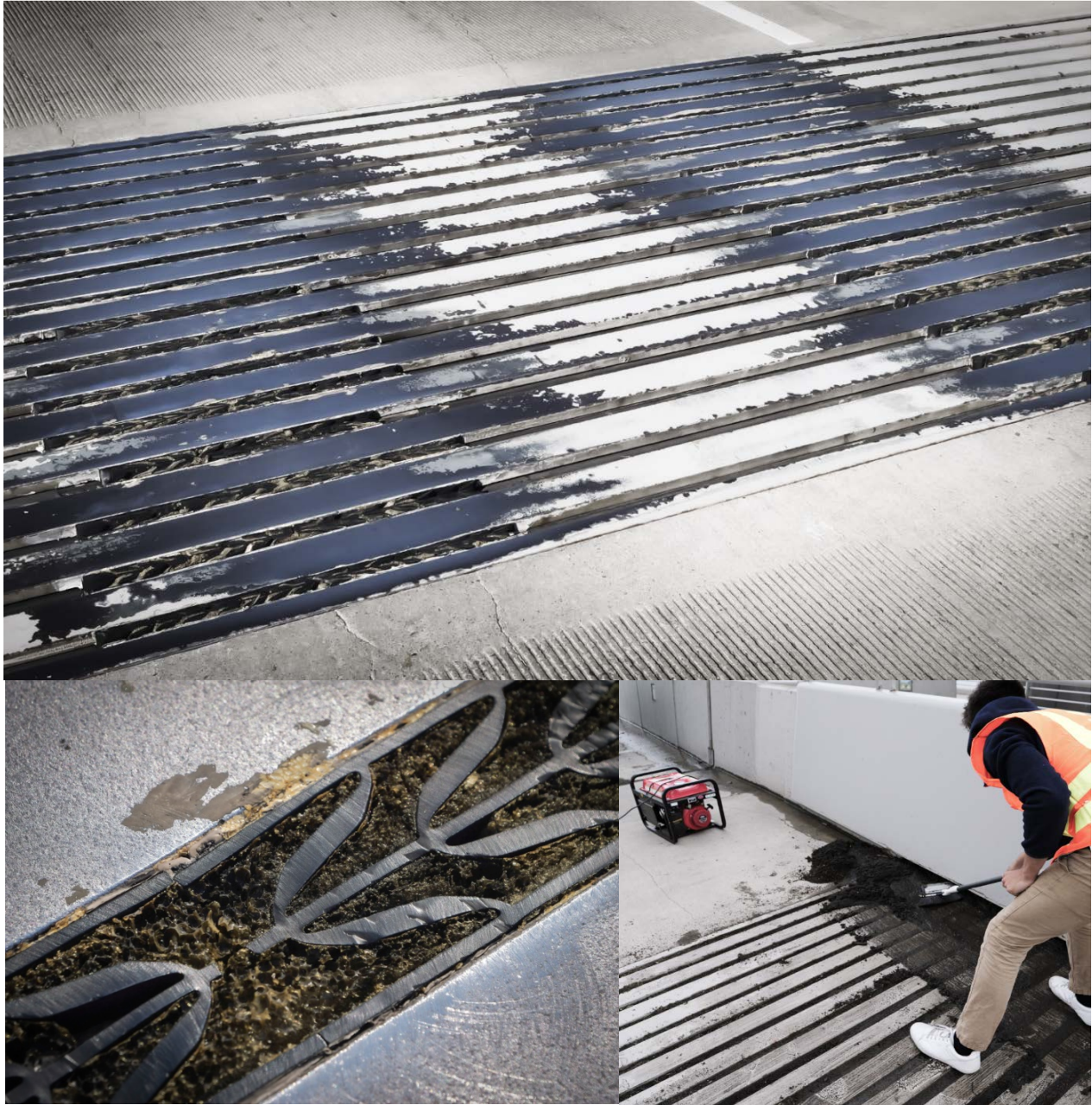


Figure 4-3. Installation of MEJ treatment. A, B) Support structure after four weeks of wear. C) Cleaning out the expansion joint before installation.

Five days after the supports had been adjusted, we once again returned to the MEJ and installed 3-in. by 4-in., 3.5-lb density viscoelastic (memory) foam extrusions into the spaces between each I-beam, below the moisture seal. Although this foam was not included in the original single-layer design, we wanted to evaluate whether including a viscoelastic dampening material between the beams would improve results. We hypothesized that additional foam could possibly

ATTACHMENT 1

reduce either the remaining low-frequency noise from the MEJ beam structure or reduce any amplification that could occur from the chamber below the MEJ. We filled every gap in the MEJ and spanned a width approximately equal to that of the single lane. To install this foam, we squeezed it into the space between the beams, where it expanded to fill the gap and remained secured through mechanical interference (Figure 4-4). As shown by the initial results (figures 4-5, 4-6), the foam did little to reduce the noise of the MEJ. These results could be potentially improved by filling the entire span of the bridge, but additional investigation would be required to evaluate the potential benefits of this procedure.



Figure 4-4. Underside of the MEJ with viscoelastic foam strips stuffed into the gaps.

4.2 Initial Results

To evaluate the performance of the support structure, we took control audio readings before the initial installation. We recorded 90 seconds of audio roadside directly in line with the MEJ and 90 seconds of audio roadside 160 feet in front of the MEJ. At both distances, the impact of the car tires striking the MEJ resulted in two distinct peaks, one as the front tires rolled over the joint and the second as the rear tires passed. Each 90-second sample contained many viable test events in which a vehicle struck the supported lane of the MEJ with no other vehicles present. Details of post processing can be found in section 3.2. After the treatment had been installed, we returned to the MEJ roughly one hour after traffic started driving across the bridge to again take measurements. From observations, the pitch and the magnitude of the noise emitted from the supported section of

ATTACHMENT 1

the MEJ was a lower frequency and quieter than the unsupported section (SM Video). At a distance of 160 feet in front of the joint, the noise from the supported lane became very difficult to discern from that of general roadway traffic (SM Video). We measured the overall ESD for both the control and the initial results for the support; additionally, we subtracted the background noise of roadway traffic directly before each event to show the contrast of the impact noise from the general noise of the bridge (figures 4-5, 4-6).



Figure 4-5. Map showing expansion joint and sound measurement locations.

As shown in figures 4-6 and 4-7, a significant spike in energy occurred between 500 Hz and 900 Hz for the control testing. These results mirror those presented by the findings in the UW's phase 1 *Modular Expansion Joint Noise Mitigation Study*¹⁴. As humans, we perceive this frequency range to be relatively loud in comparison to lower frequency signals, and shifting or diminishing this peak has been a primary objective for an effective solution. Both directly beside the MEJ and 160 feet in front of the MEJ, we saw significant reductions in broadband RMS, especially in the problem frequency region of 500 to 900 Hz. In the full spectrum 0- to 15000-Hz frequency range, we saw the most significant differences occur in the 0- to 1000-Hz frequency

ATTACHMENT 1

range. Matching our qualitative observations, the sound recorded directly beside the MEJ changed less significantly with the installation of the supports than the sound recorded 160 feet in front of the MEJ. Comparing event recordings to background noise, we saw a 56.0 percent reduction in broadband RMS directly beside the MEJ and an 89.61 percent reduction in broadband RMS at 160

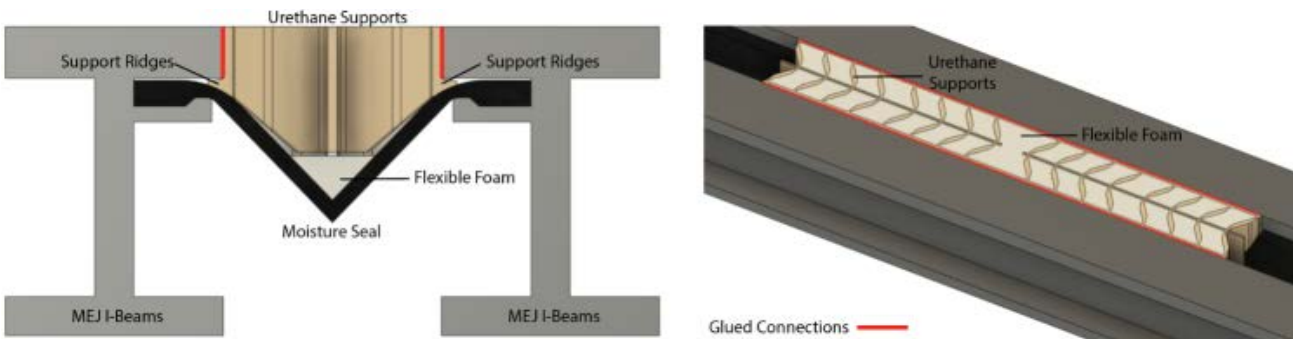


Figure 11. Diagram detailing support installation components.

feet in front of the MEJ. It should be noted that the peak at the 500 to 900 Hz interval was reduced by approximately 10 dB. At a distance farther than 160 feet the effective noise attenuation made it difficult to distinguish between general roadway noise and the noise from the supported expansion joint. As a result, accurate post processing became very difficult, and we could not clearly select events since the other lanes with untreated expansion joints were also open to traffic.

ATTACHMENT 1

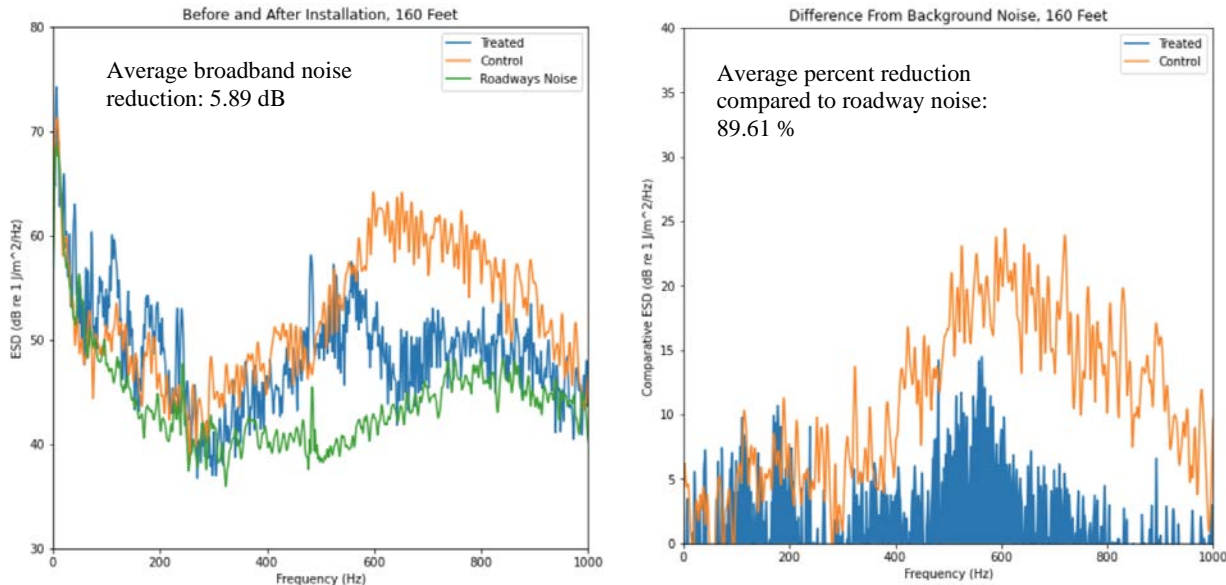


Figure 4-6. Comparison between control and initial results at a distance of 160 feet.

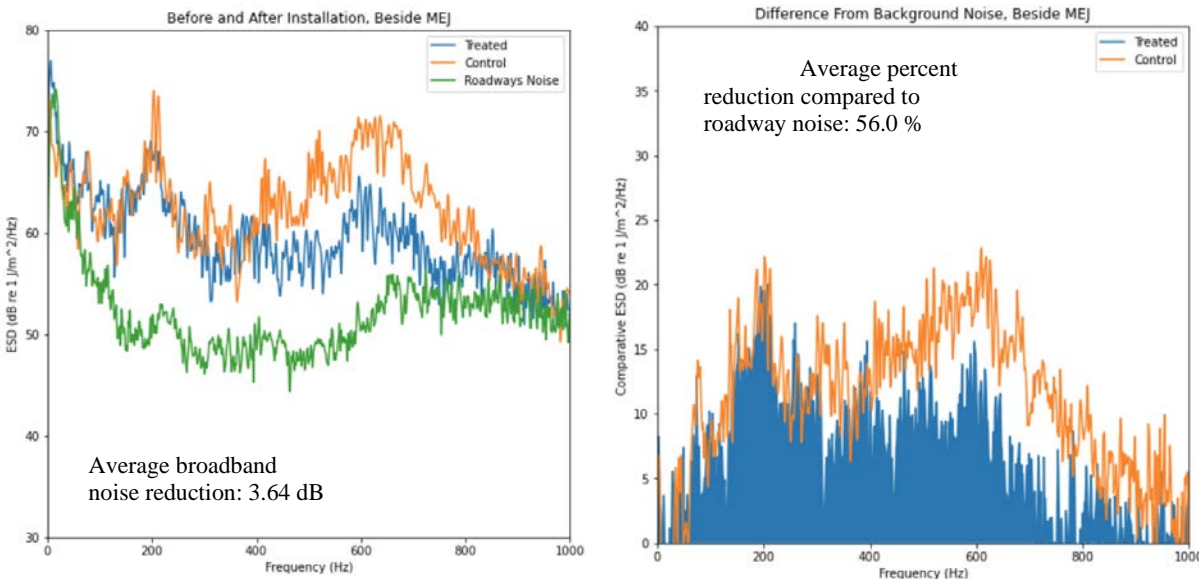


Figure 4-7. Comparison between control and initial results directly beside the MEJ.

4.3 Performance Over Time

We took measurements at the MEJ pre- and post-support installation, before and after inserting additional foam below the moisture seal (five days), and then every two weeks for two months. Changing environmental and road conditions existed for each measurement, possibly

ATTACHMENT 1

resulting in some inconsistencies in the data. Over the period of two months (September to October), the average span of each gap in the expansion joint increased significantly (approximately 1.5 in. to approximately 2.5 in.), and temperature and humidity varied greatly day to day. Given simulation results, we expect a widening gap to correlate to an increase in MEJ noise, but no physical data exist to validate this assertion. Additionally, roadway traffic played a role in both background noise and average vehicle speed (i.e., more traffic tended to correlate to slower speeds). To help account for this, we subtracted the background noise from the expansion joint noise to give us the overall noise contribution of the impacts (see details in section 3. Methodology).

Comparing the difference between the supported MEJ section and the control allowed us to observe general trends in the performance of the MEJ treatment over time. As shown in Figure 4-8, directly after installation at a distance of 160 feet, the difference between standard roadway noise and supported MEJ was less than 1 dB, which is generally considered imperceptible¹⁸. Throughout the entirety of testing, the difference in sound levels remained below 2 dB, which is considered to be barely perceptible¹⁸. At these levels, the surrounding neighborhood would experience no perceivable difference in noise between the bridge roadway and the expansion joint.

ATTACHMENT 1

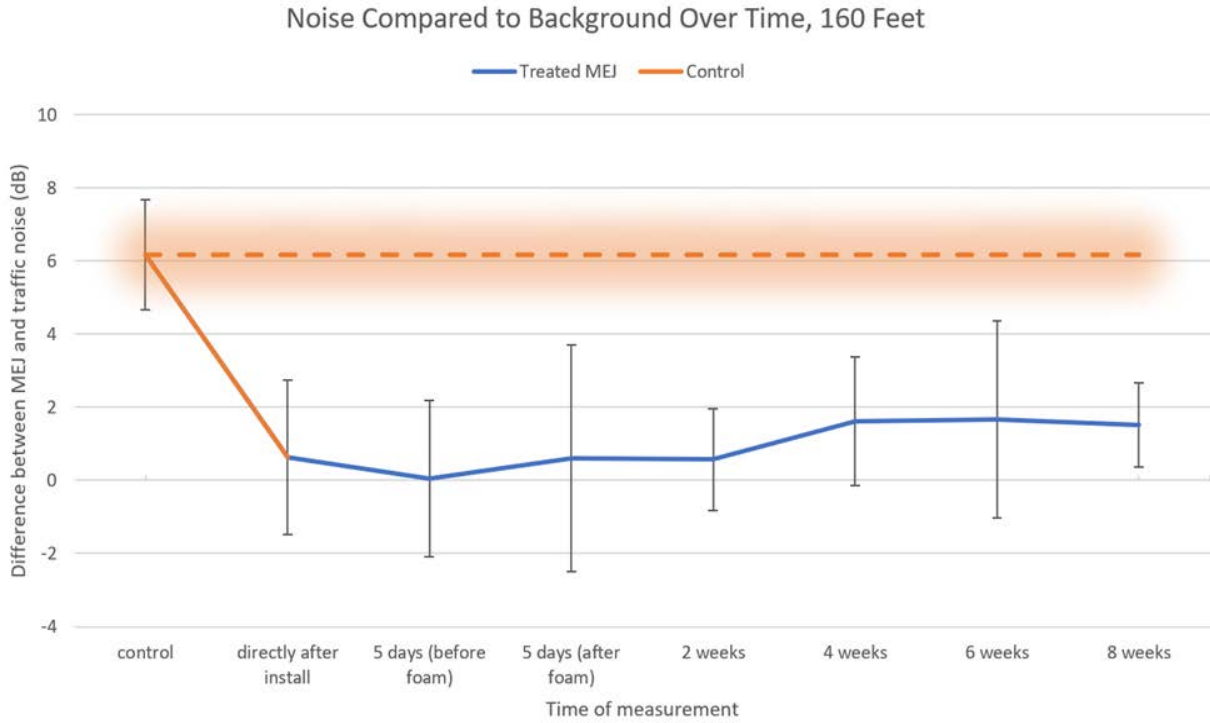


Figure 4-8. Comparison between roadway noise and MEJ noise over a two-month period at a distance of 160 feet. Error bars represent standard deviation of measurements.

As shown in Figure 4-9, the noise directly beside the MEJ was significantly more noticeable but still greatly improved from the original configuration. With no support, the difference between MEJ and roadway noise was over 8 dB, which is fairly close to the 10-dB threshold that generally denotes double the perceived noise level^{18,19}. Throughout the duration of the study, the noise of cars driving over the supported expansion joint increased but remained well below the noise of the original control testing.

ATTACHMENT 1

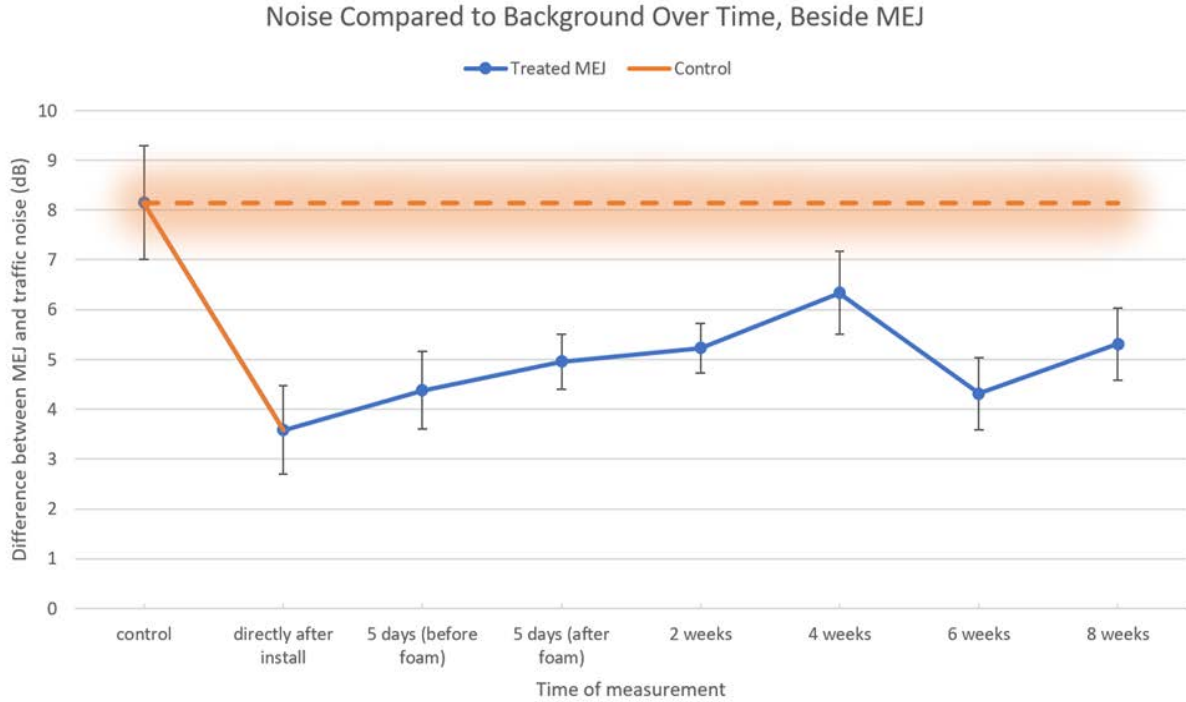


Figure 4-9. Comparison between roadway noise and MEJ noise over a two-month period directly beside the MEJ. Error bars represent standard deviation of measurements.

To get a sense for performance over time, we calculated the percentage of audible noise reduction.

$$\% \text{ Reduction} = \frac{(RMS_c - RMS_{rc}) - (RMS_s - RMS_{rs})}{(RMS_c - RMS_r)}$$

Here RMS_c is the noise in dB of the control MEJ, RMS_{rc} is the noise of the road in front of the control MEJ, RMS_s is the noise of the supported MEJ, and RMS_{rs} is the noise of road in front of the supported MEJ. As seen in figures 4-8,4-9, and 4-10, the MEJ treatment performed best during the first two weeks of implementation at both 160 feet and directly beside the MEJ. Between week 2 and 4 we observed a slight increase in MEJ impact noise. From week 4 to week 8, we measured some variation in treatment noise but observed no clear trend in the data. Throughout the two-month period, noise measurements remained lower than that of the sinus plate at both distances.

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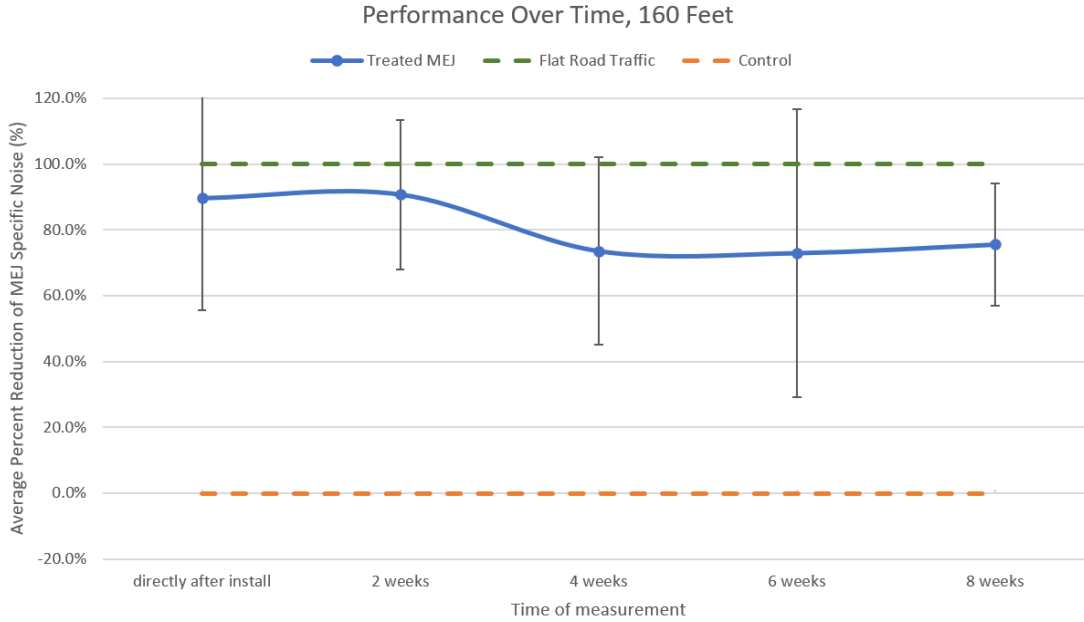


Figure 4-10. Comparison between untreated MEJ noise and the installed treatment over a two-month period at a distance of 160 feet.

Approximately four weeks after installation, we closely inspected the supports during a scheduled bridge closure. First, we observed the rubber supports to be in roughly the same condition as when we initially trimmed their height after installation. Supports that had been damaged within the first few days of installation remained in place, but some of the glued connections appeared to have failed, and the flexible joints appeared severely compromised. In contrast, the replacement supports that had been trimmed flat at the time of installation remained in exceptionally good condition. In many of the supports, the foam also experienced significant wear. This likely occurred because of a combination of imprecise application of the foam during installation and wear of the soft material. The previously damaged supports appeared to show a more pronounced loss of foam (Figure 4-11) than the intact replacement joints (Figure 4-3). We also noted deposition of large amounts of gravel inside the MEJ gaps since we had cleared out debris four weeks earlier (Figure 4-11). While this was clearly apparent in the spaces with no added treatment (Figure 4-11), the gaps within supports themselves had virtually no build-up of debris.

ATTACHMENT 1



Figure 4-11. Over one month of installation, gravel and debris started to fill up the unsupported portion of the joint (left), while we observed no debris in the chevrons themselves. While the chevrons remained in good condition, some foam had been pulled from the supports after one month of wear (right).

4.4 Suggestions for Future Implementation

Future work should consider several design and installation aspects for large-scale implementation. First, we conducted this study with convenient fabrication processes and materials for rapid prototyping and low run production. While we selected effective support materials for testing functionality, more durable options may be available by using another fabrication process such as injection molding, which we avoided because of cost, low part counts, and time restrictions. To fabricate each 2-ft support section, we glued together four individual 6-in. components. While this was strong enough for installation, more permanent methods may exist to fuse components. The foam we used was an off-the-shelf, two-part mixture that was in no way optimized for extended use in an outdoor environment. For enhanced durability, a more specialized foam may be desired. While the chevron supports offer the foam some protection from vehicle wear, ideally, the foam would sit slightly shy of the road's surface, and an additional coating would be added to improve weathering and abrasion resistance.

We performed the one-lane installation of the treatment in approximately two 9-hour sessions with two people continuously working. With improved methods, the time required for this process could be dramatically reduced. Initially, we spent several hours cleaning debris out

ATTACHMENT 1

the joint, a step that could be performed ahead of time in much less time by using the proper equipment. Next, sizing inconsistencies in the interior of the beam gaps between the moisture seal and the beam forced us to trim several of the chevron supports by hand to ensure a tight fit. Adjusting the support geometry to universally fit in every gap or using a more specialized tool for trimming the support would dramatically improve installation time. When gluing the support structure to the MEJ beams, we relied on the rebound of the compliant structure to hold the support in place as the glue cured. Many of these supports didn't create adequate pressure to squeeze excess glue from the interface, and an additional specialized tool to expand the support might have improved adhesion. Properly curing the Bostik flexible adhesive takes a minimum of 24 hours in warm, dry weather. Special care should be taken to ensure that weather conditions and installation timelines match these requirements. The support structures can be removed from the expansion joint by sliding a knife along the glued interface between the joint and the I-beam and pulling them out with a pair of pliers. Caution should be exercised to not damage the seal below.

This study showed that the chevron system is a very effective means of significantly decreasing the noise emanating from large expansion joints. To examine the long-term durability on an installed system we propose the following next phase:

- 1) Installation of the chevron system across all westbound lanes of east SR 520 expansion joint.
- 2) Injection molding of the chevrons to decrease the cost of larger volume fabrication.
- 3) Use of high durability material consisting of a mix of natural rubber, synthetic rubbers, and antioxidants instead of high strength urethane.
- 4) Use of fiber-reinforced, low density foam with a high strength polymer as a protective layer.
- 5) Inspection for wear and acoustic performance every month for up to one year with modifications as needed.
- 6) Full installation across all lanes of the east expansion joint of the SR 520 bridge if the wear characteristics are judge satisfactory,

4.5 Conclusions

This study investigated the design and feasibility of noise mitigation strategies for installation in modular expansion joints (MEJs), with a focus on Washington state's SR 520 bridge.

ATTACHMENT 1

The three main sources of noise from the MEJ include resonance of the air within the gaps, resonance of the beams, and resonance of the tires. By filling the gaps in the MEJs with a supportive zero-Poisson's ratio material, we can reduce the input signal for each of these noise sources simultaneously. We proposed two potential solutions to reduce tire deformation into beam gaps and subsequently decrease pressure spikes on tires and beam edges: a single-layer support structure, and a multi-layer support structure. We performed both physical testing and simulation to evaluate the effectiveness of each solution and selected the single-layer chevron support to be the most feasible solution.

Installation of this treatment in one lane of the SR 520 bridge MEJ proved to be highly effective over the two-month test period. At a distance of 160 feet, we consistently measured a greater than 4.51-dB broadband reduction in expansion joint noise. This accounts for more than a 70 percent reduction in additional noise produced by the expansion joint over the background noise of vehicles on the flat roadway. Beyond 160 feet the difference in noise between the flat roadway and the MEJ became so small that it was difficult to accurately measure.

If these supports were installed in all expansion joints on the bridge, residents living in the area would still hear the general noise of the roadway, but the abrasive sound of vehicles hitting the expansion joints would effectively be eliminated.

While we showed that the chevron system can be an effective solution to the expansion joint noise issue, this report outlines further development and testing to extend the durability of the treatment.

ATTACHMENT 1

References

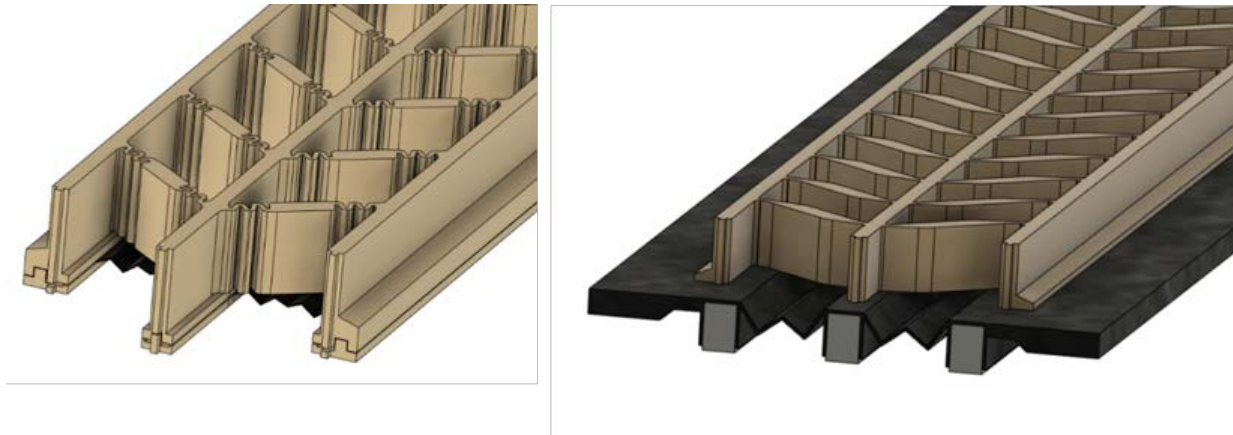
1. *Tailor Made Concrete Structures: New Solutions for our Society (Abstracts Book 314 pages + CD-ROM full papers 1196 pages)*. (CRC Press, 2008). doi:10.1201/9781439828410.
2. Ding, Y., Zhang, W. & Au, F. T. K. Effect of dynamic impact at modular bridge expansion joints on bridge design. *Eng. Struct.* **127**, 645–662 (2016).
3. Bohatkiewicz, J., Jukowski, M., Hałucha, M. & Dębiński, M. Influence of the Acoustic Cover of the Modular Expansion Joint on the Acoustic Climate in the Bridge Structure Surroundings. *Materials* **13**, 2842 (2020).
4. Mao, D. & Ding, Y. Measurement and analysis of bridge expansion joint noise. *E3S Web Conf.* **293**, 02053 (2021).
5. Ravshanovich, K. A., Yamaguchi, H., Matsumoto, Y., Tomida, N. & Uno, S. Mechanism of noise generation from a modular expansion joint under vehicle passage. *Eng. Struct.* **29**, 2206–2218 (2007).
6. Ancich, E. J., Brown, S. C. & Cove, L. Modular Bridge Joints – Reduction of noise emissions by use of Helmholtz Absorber. 12.
7. Numerical investigation of noise generation and radiation from an existing modular expansion joint between prestressed concrete bridges | Elsevier Enhanced Reader.
<https://reader.elsevier.com/reader/sd/pii/S0022460X09005872?token=8E6C0FB3B1BE998C4A8C12979C97576F146391BC30D4236346C0CC38D134BC3E20386B5A6C7ACD7CB63BDF8A82571D51&originRegion=us-east-1&originCreation=20221021203714>
doi:10.1016/j.jsv.2009.07.016.
8. Review of Noise Reduction of the Highway Bridge Expansion Joints.
<https://ascelibrary.org/doi/epdf/10.1061/9780784484265.214>.
9. Moor, G., Spuler, T. & Hoffmann, S. THE MODULAR EXPANSION JOINT – UPDATE ON WHAT CAN TODAY BE EXPECTED OF IT. 22.
10. Spuler, T., Moor, G. & O’Suilleabhain, C. Single gap expansion joints – an optimal solution for small deck movements. in 404–405 (2013). doi:10.2749/222137813806501803.
11. Spuler, T., Moor, G. & O’Suilleabhain, C. Expansion joints for ever longer, lighter bridges. 8.
12. Vancouver’s Golden Ears Bridge Noise Assessment. *HGC Engineering* <https://acoustical-consultants.com/casestudy/vancouver-golden-ears-bridge-noise-assessment/>.
13. Vaitkus, A. & Vorobjovas, V. Traffic / Road Noise Mitigation under Modified Asphalt Pavements Traffic / road noise mitigation under modified asphalt pavements. in *6th Transport Research Arena* (2016). doi:10.1016/j.trpro.2016.05.446.

ATTACHMENT 1

14. Reinhall, P. G. & Soloway, A. G. Expansion Joint Noise Mitigation Study. 55.
15. Crocker, M. J. *Handbook of Noise and Vibration Control*. (John Wiley & Sons, 2007).
16. *Springer Handbook of Acoustics*.
17. Virtanen, P. *et al.* SciPy 1.0: fundamental algorithms for scientific computing in Python. *Nat. Methods* **17**, 261–272 (2020).
18. DECIBEL (LOUDNESS) COMPARISON CHART | Galen Carol Audio | Galen Carol Audio. <https://www.gcaudio.com/tips-tricks/decibel-loudness-comparison-chart/>.
19. Ljunggren, F., Simmons, C. & Hagberg, K. Correlation between sound insulation and occupants' perception – Proposal of alternative single number rating of impact sound. *Appl. Acoust.* **85**, 57–68 (2014).
20. PROSPECT-TENSA-MODULAR-LR-ch-en.pdf.

ATTACHMENT 1

Appendix A. High Speed Testing



Support Type:	Max Noise Magnitude:	Percent Reduction:
No Support	.0054	None
Rubber Support	.0034	37% reduction
Nylon Support	.0030	44% reduction

A-1. Top support structures. (Left) Chevron design features an S-shaped hinge to reduce internal stress. This allows the structure to be fabricated from a stiff material such as nylon. (Right) We fabricated the structure from a flexible material such high 90A urethane or thermoplastic polyurethane (TPU).

As a car tire rolls over a gap in the road, it affects the edge of the gap, creating a pressure spike and a resulting noise. To evaluate the acoustic and dynamic effect of top support structures, we built a high speed (60 mph) test set-up to measure pressure on the beam’s leading edges and changes in recorded sound. At the widest span, a car tire will only deform roughly 1 cm into the gaps between the beams. This allowed us to build a simplified test set-up by gluing ¾-in. steel beams to the roadway and driving over them at 60 mph to get a general comparison of noise with different top supports.

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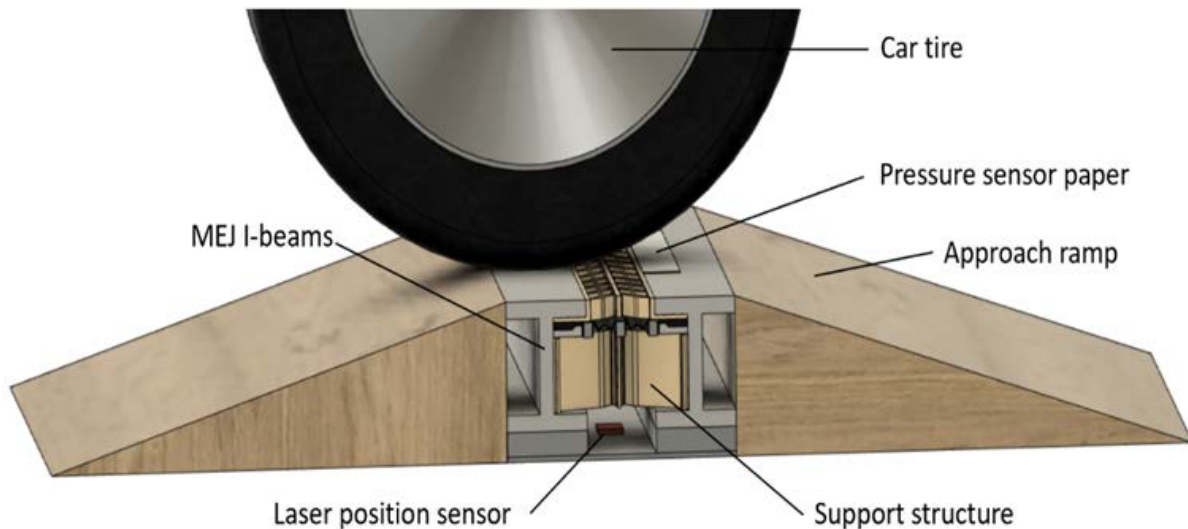
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Appendix B. Static Testing Procedures

B.1 Physical Tests

To validate our simulations and assess the potential of each multi-layer design, we built a static compression test set-up (shown in Figure B-1) with reconfigurable components and tested eight different configurations for support deformation and edge pressure. We used Fujifilm 70-350 psi Prescale pressure paper to determine edge pressure and an IFM diffuse light photoelectric distance sensor to measure deformation in the structure. On the physical MEJ, the largest tire deformations and subsequent impacts occur when the gap spans a larger distance. We positioned the I-beams accordingly to have a 3-in. gap, the maximum MEJ gap width within its normal working range.

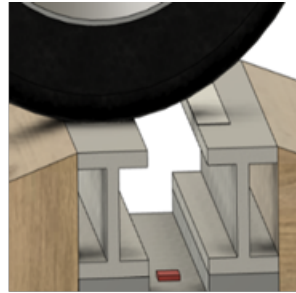
We built the approach ramps from wood and performed our compression tests by driving a Ford Transit Connect cargo van over the set-up. Additional variation in vehicle type could be tested to provide a wider range of results. For this specific test, using a single vehicle enabled us to perform side by side comparisons of configurations and select the most effective solution.



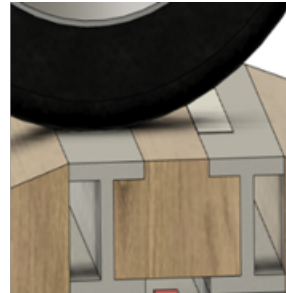
B-1. Compression test set-up. This test set-up matched a 2-foot section of the MEJ and could be driven over by a desired vehicle to provide pressure and displacement measurements.

We tested eight separate configurations (shown in Figure B.2.) to compare results for each individual support structure and combinations of support structures.

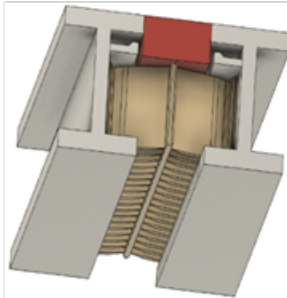
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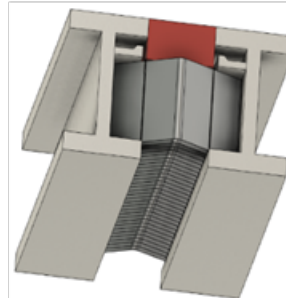
1) **Unsupported**



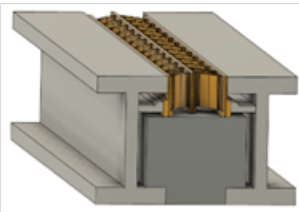
2) **Wood support**



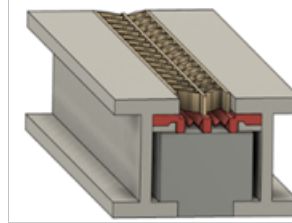
3) **Urethane bottom,**



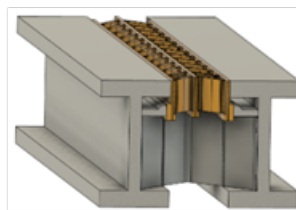
4) **Steel bottom,**



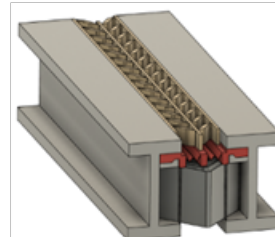
5) **Wood bottom,**



6) **Wood bottom,**



7) **Steel bottom,**



8) **Steel bottom,**

B.2. Compression test configurations 1 through 8. These include baseline testing, individual component testing, and full structure testing.

For baseline testing, we first performed tests with no support structure and a rigid support structure with very little deformation. To create the rigid support, we used layers of 3/4-in. oak

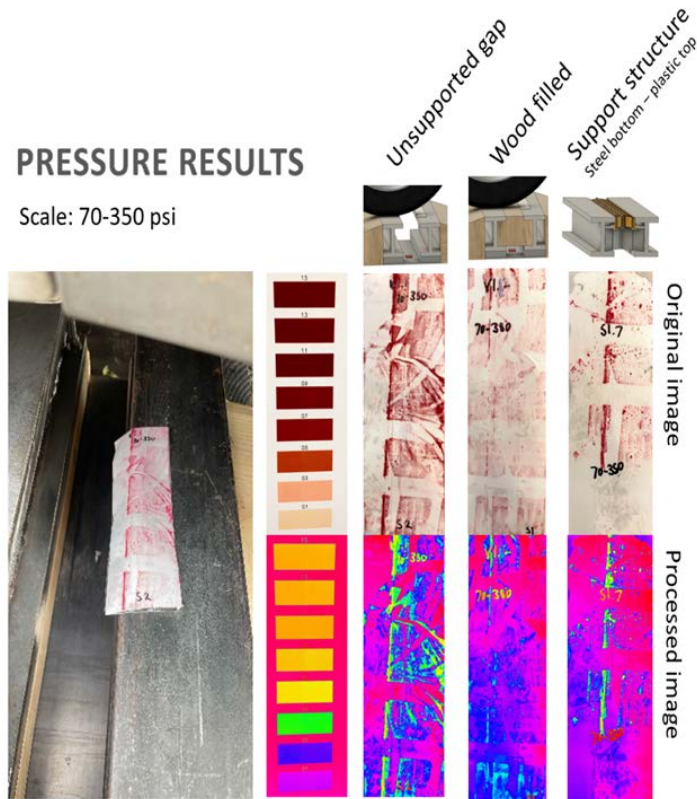
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planking cut to fill the gap. While this gave a good approximation of a flat surface, some compression still occurred in the wood, particularly at the interface of each rough surface. Next, we tested each of the four support structures individually by combining each with rigid supports as the other section of the structure. Inaccuracies in structure fabrication; dirt, gravel, and water on the roadway; and limited sensor accuracy all acted as sources of error in the tests.

To test deformation in the structure, we measured the distance from the lens to a fixed point on the surface of the structure by using the diffuse light position sensor and recorded the total displacement as a vehicle drove over the set-up. For the unsupported configuration we measured a total displacement of 9 mm, and for a quasi-rigid support made from oak we recorded a displacement of 0.7 mm. Each of the remaining six support configurations showed a dramatic reduction in deformation in comparison to the original gap. Samples 3, 4, 5, and 6 isolated individual support structures to give an idea of component-by-component rigidity. These tests demonstrated that spring steel lower-support greatly outperformed the urethane lower-support, with a total deformation of only 1.1 mm as opposed to 4.1 mm for the urethane version. The top supports both had relatively similar deformations, within the margin of error of the position sensor, but the plastic top support demonstrated a slightly lower deformation of 3 mm versus 3.6 mm for the rubber support. Configurations 7 and 8 tested the deformation of the combined multilayer structure, and both provided more than 60 percent reduction in overall deformation into the gap. Of these options, configuration 7 (spring steel lower support and rigid plastic upper support) offered the most resistance to deformation, showing a 65 percent reduction vertical of tire displacement.

To test the pressure on the leading edge of the I-beam, we used Fujifilm Prescale 70-350 psi pressure sensor paper, which chemically becomes a more vibrant shade of red under direct pressure. This sensing method offers instantaneous feedback and qualitative results but is difficult to quantify with a high level of confidence. We performed post processing on sample images to color code the results. As shown in Figure B.3., high pressures (350 psi) can be seen as bright orange areas, while low pressures (70 psi) show up as dark purple. The support solutions showed a dramatic reduction of pressure on the edge of the beam in comparison to the original unsupported sample. Some error could be found in these samples, since tiny pressure concentrations such as gravel or misalignment in support height also created small areas of high pressure.

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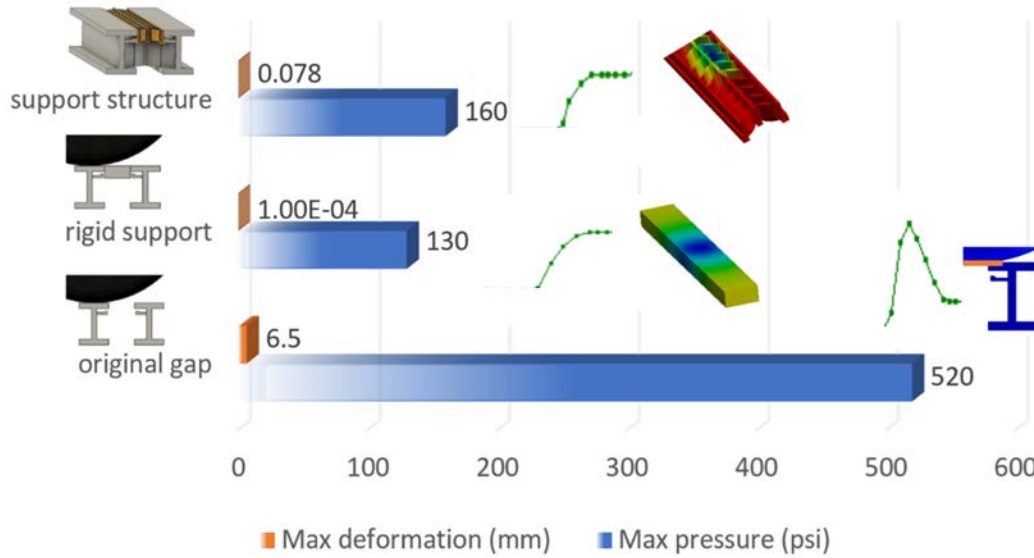
B.3. Pressure measurements for each test configuration. All supported configurations had noticeably lower pressure concentrations at the beam edge.

B.2 Simulation Results

Simulations of three test configurations (unsupported, rigid support, metal-plastic chevron support structure) are shown in Figure B.4. These results showed trends that were similar to our experimental results. Deformations shown in the simulation results were much lower than those observed in physical tests. Factors that may account for these discrepancies include inconsistent fabrication, compression in the rough surface to surface connections, and differences in tire size and material properties. All test results indicated a significant reduction in pressure on the beam edges, leading to a reduction in excitation energy and noise. The support structure simulations showed a 69 percent reduction in maximum pressure on the beam and showed only a 30-psi pressure increase from the flat, rigid surface simulation.

ATTACHMENT 1

SIMULATION RESULTS



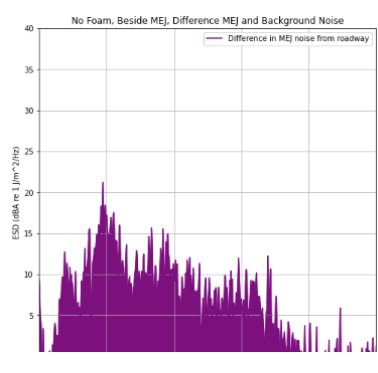
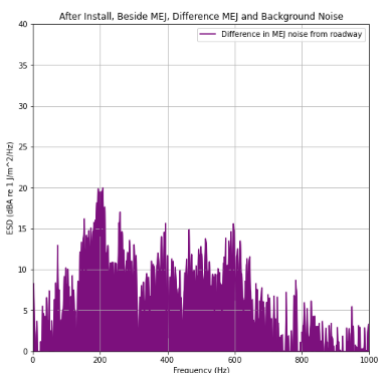
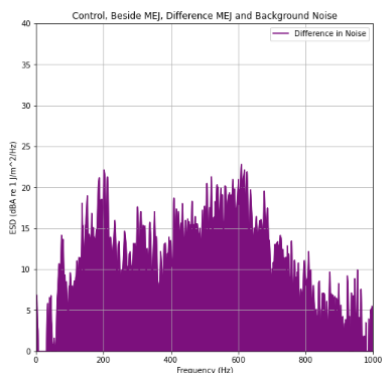
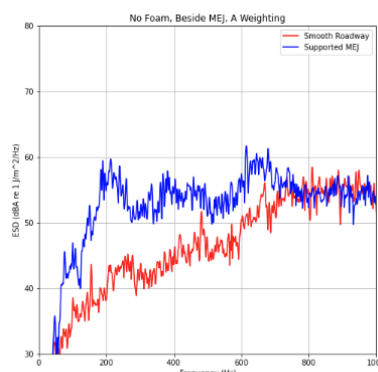
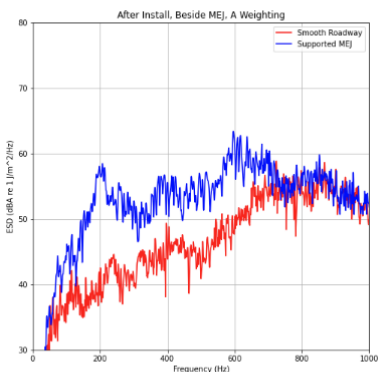
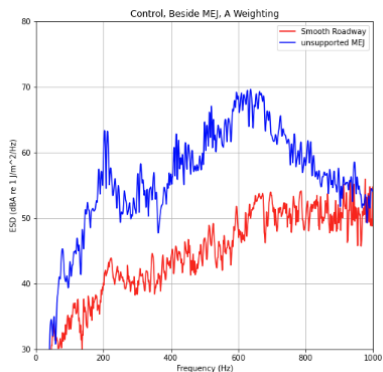
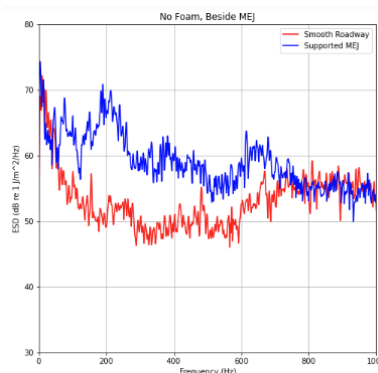
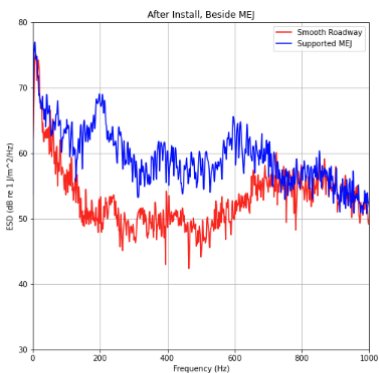
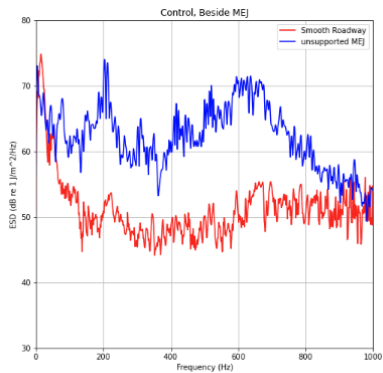
B.4. Pressure and deformation results from finite element simulations of each configuration. Icons show the pressure profile as it impacts the beam, with green being maximum pressure, blue being average pressure, and red being minimum pressure. The pressure curves (shown in green) show the maximum pressure on the I-beams.

ATTACHMENT 1

ATTACHMENT 1

Appendix C. Full 520 Bridge MEJ Test Results

C.1 Roadside Test Results

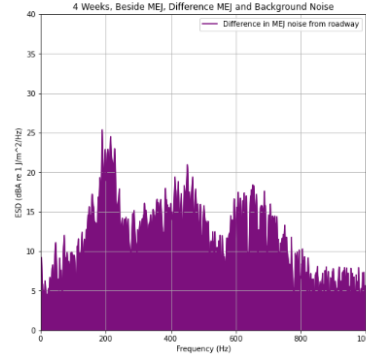
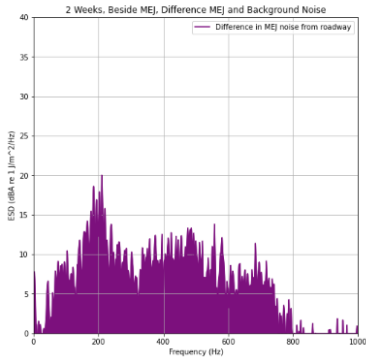
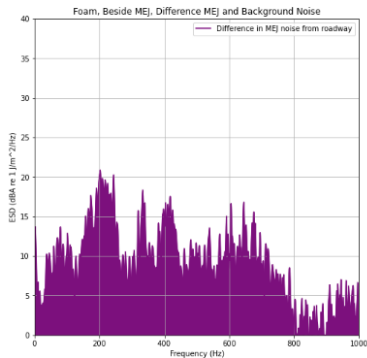
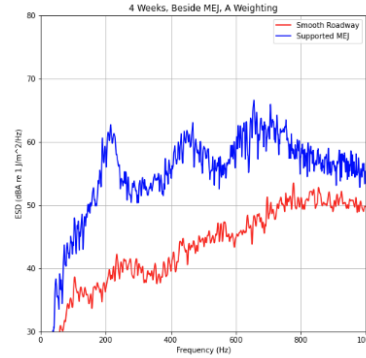
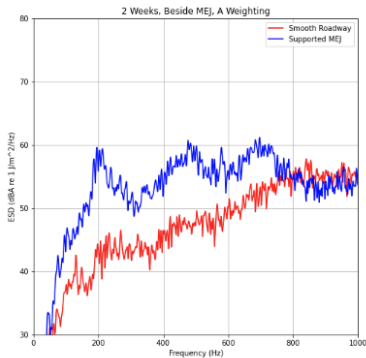
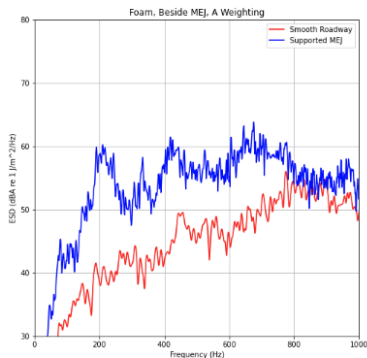
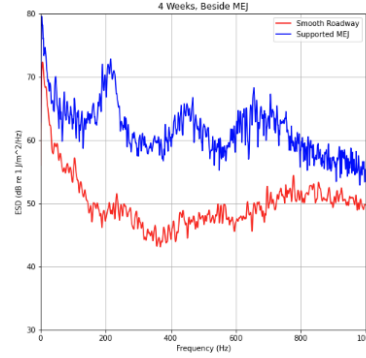
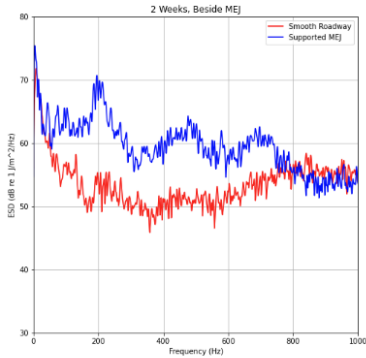
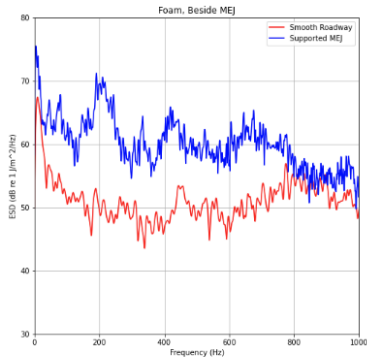


road rms:
 avg rms 93.00629235337709 +/- 2.442946488100547 db
 support rms:
 avg rms 101.15208665312284 +/- 1.1401473468784902 db

road rms:
 avg rms 93.92484797024257 +/- 1.519582590966658 db
 support rms:
 avg rms 97.51196025973033 +/- 0.8936762751002695 db

road rms:
 avg rms 92.80165650856223 +/- 1.4778772048731931 db
 support rms:
 avg rms 97.10803259514447 +/- 0.7879023141340654 db

ATTACHMENT 1

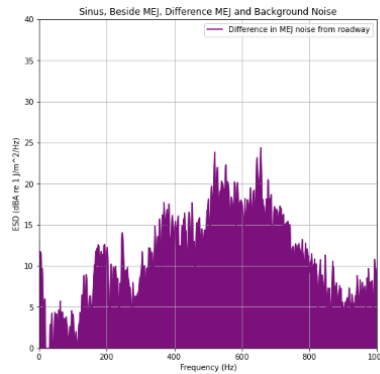
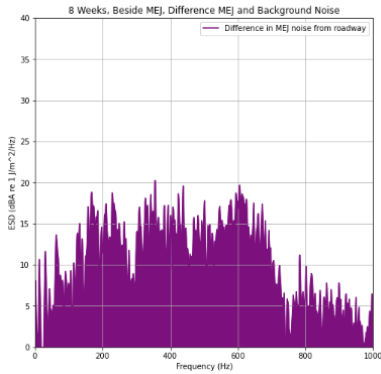
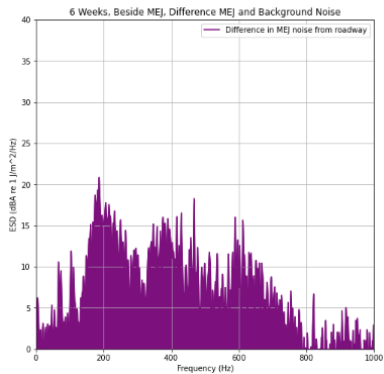
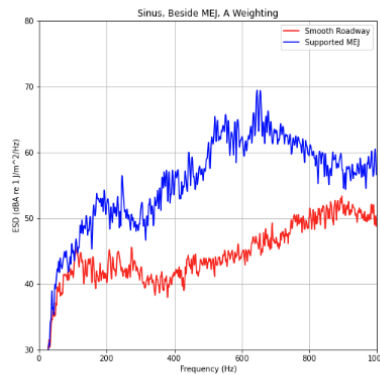
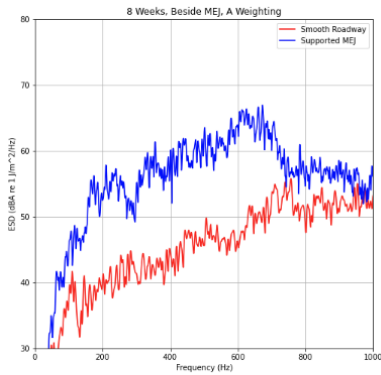
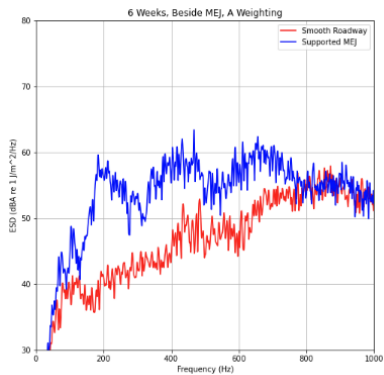
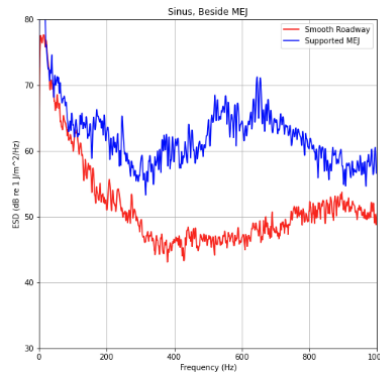
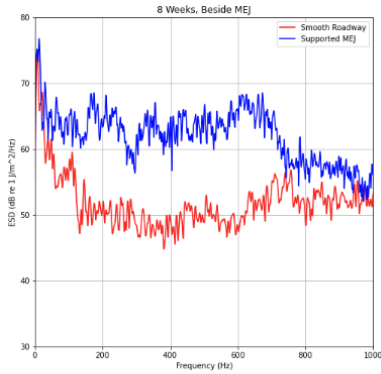
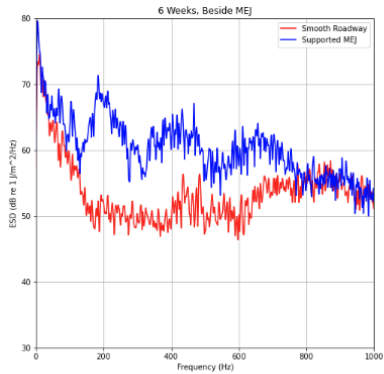


road rms:
 avg rms 93.13854991415008 +/- 0.9981218000406752 db
 support rms:
 avg rms 98.08902735686293 +/- 0.5587382244214214 db

road rms:
 avg rms 92.9784894659716 +/- 0.8200706499253699 db
 support rms:
 avg rms 98.20932119395796 +/- 0.5085160130297738 db

road rms:
 avg rms 92.23218315995246 +/- 0.9830175071969608 db
 support rms:
 avg rms 98.5733725881718 +/- 0.8313370953019971 db

ATTACHMENT 1



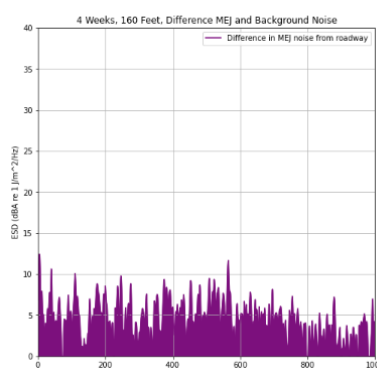
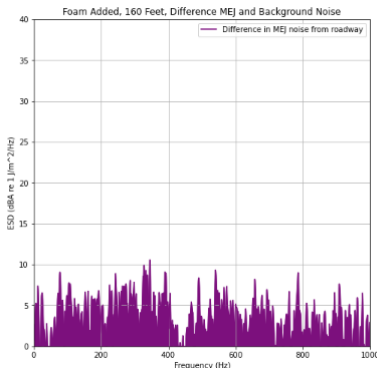
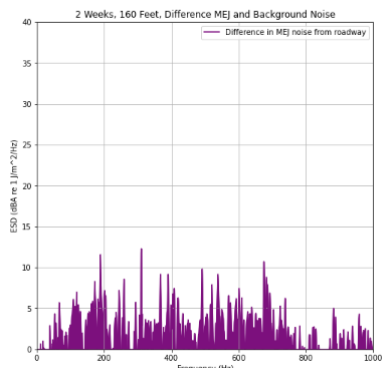
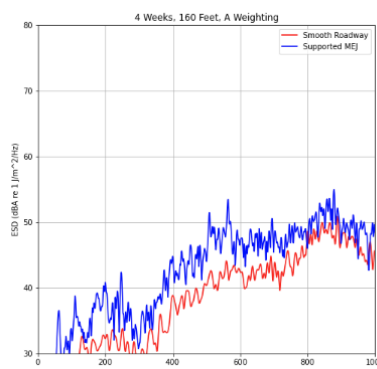
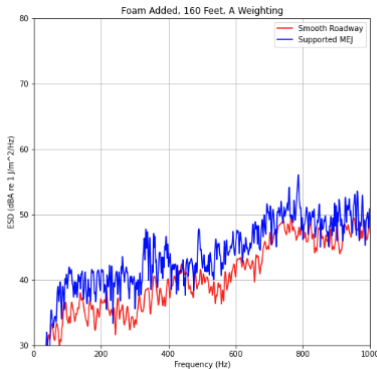
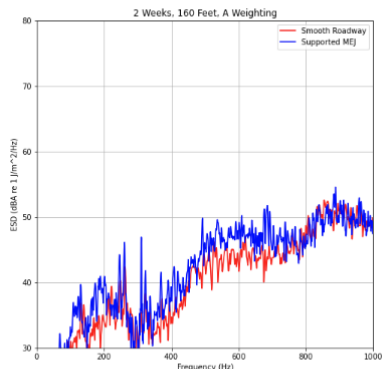
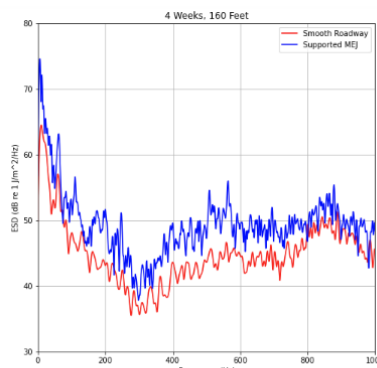
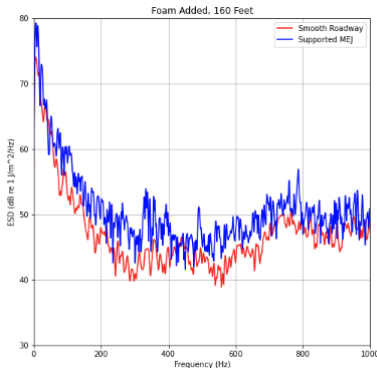
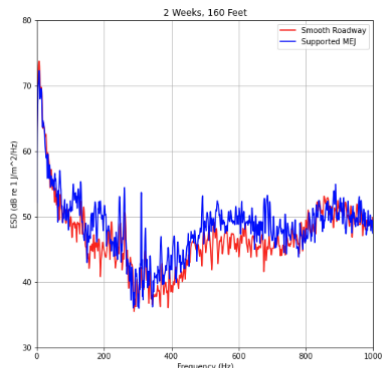
road rms:
 avg rms 94.2088391359218 +/- 1.8436229451646244 dB
 support rms:
 avg rms 98.52223762479328 +/- 0.7389707601836331 dB

road rms:
 avg rms 93.35091844097164 +/- 1.2817754440141105 dB
 support rms:
 avg rms 98.66089342799323 +/- 0.7201799666430807 dB

road rms:
 avg rms 97.29270578713043 +/- 1.3421456498739521 dB
 support rms:
 avg rms 103.68620913171071 +/- 1.6844597050176147 dB

ATTACHMENT 1

C.2 Test Results at 160 Feet

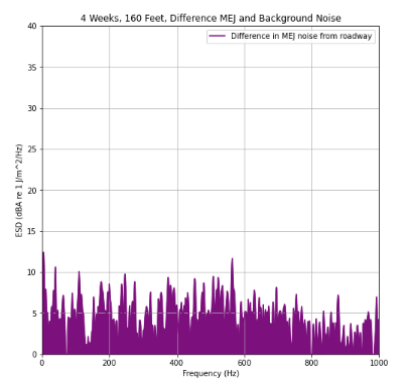
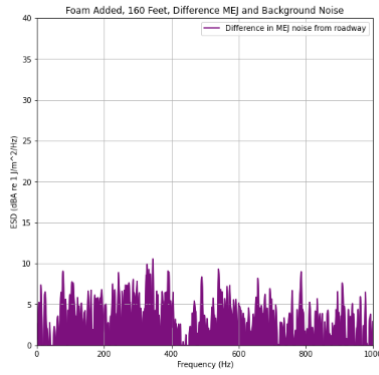
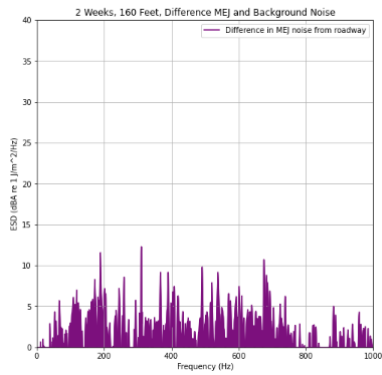
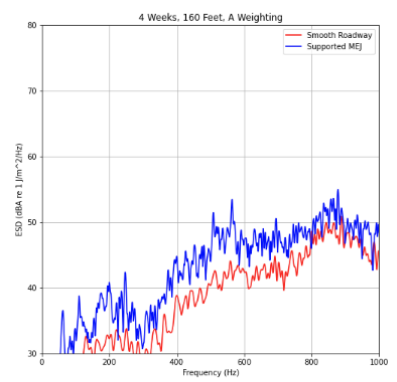
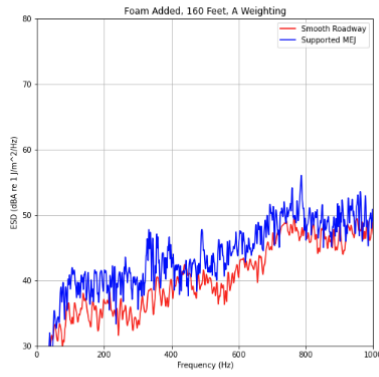
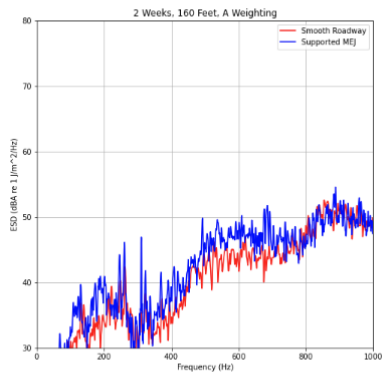
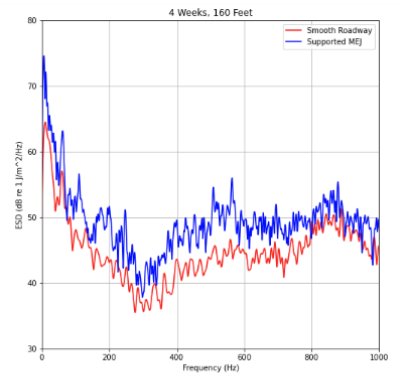
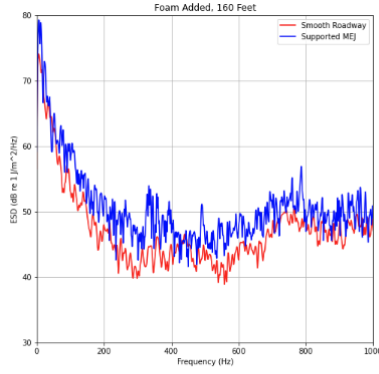
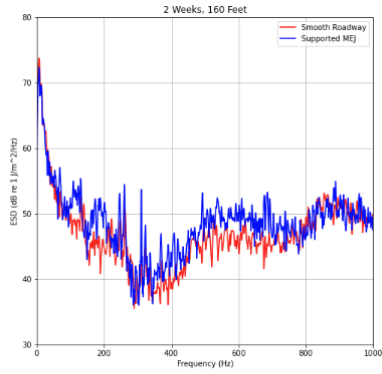


road rms:
 avg rms 92.98971959105067 +/- 2.3022513364087605 dB
 support rms:
 avg rms 93.60011778239631 +/- 3.0744470248568687 dB

road rms:
 avg rms 89.06865647608726 +/- 1.5050269448549545 dB
 support rms:
 avg rms 90.70466665674218 +/- 1.7592174919765862 dB

road rms:
 avg rms 88.54932311386182 +/- 2.008925246340456 dB
 support rms:
 avg rms 87.9697272482375 +/- 1.3975977083687727 dB

ATTACHMENT 1

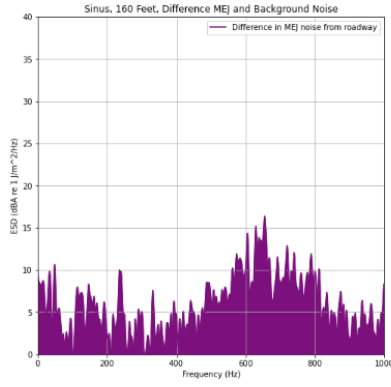
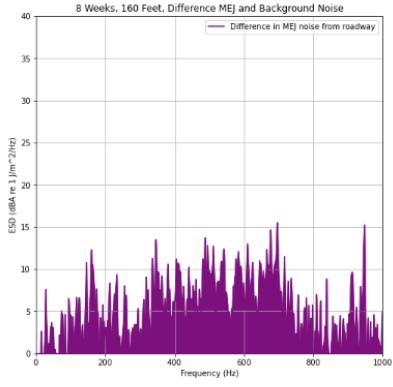
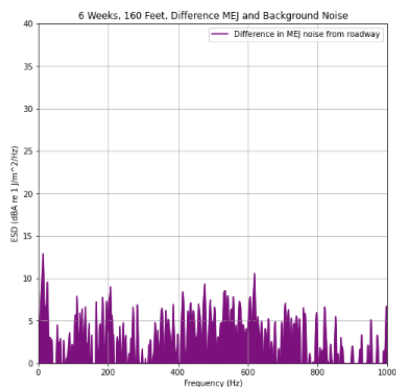
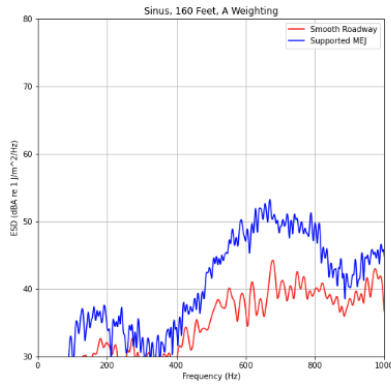
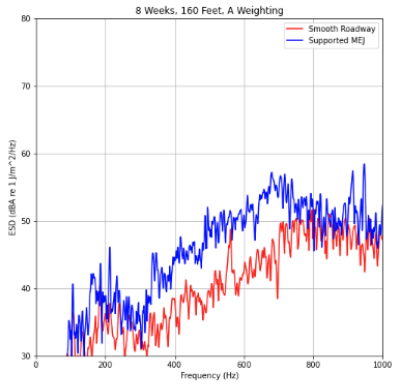
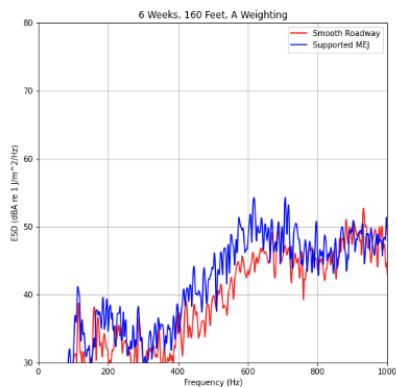
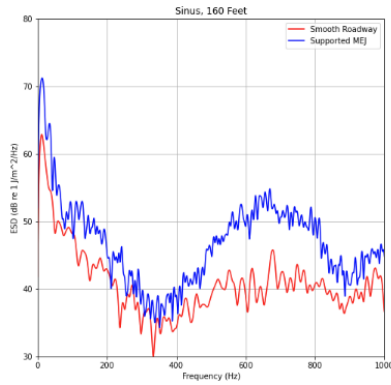
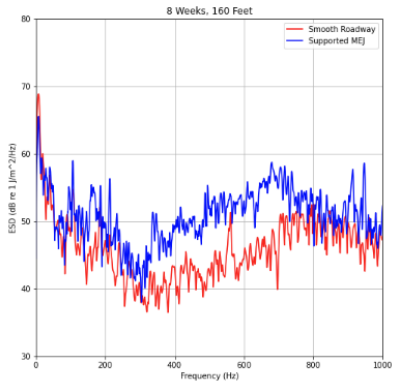
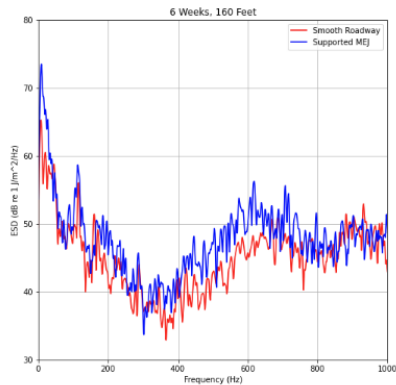


road rms:
 avg rms 92.98971959105067 +/- 2.3022513364087605 dB
 support rms:
 avg rms 93.60811778239631 +/- 3.0744470248568687 dB

road rms:
 avg rms 89.06865647608726 +/- 1.5050269448549545 dB
 support rms:
 avg rms 90.70466665674218 +/- 1.7592174919765862 dB

road rms:
 avg rms 88.54932311386182 +/- 2.008925246340456 dB
 support rms:
 avg rms 87.9697272402375 +/- 1.3975977083687727 dB

ATTACHMENT 1



road rms:
avg rms 87.37330979053705 +/- 1.8443004144446955 dB

support rms:
avg rms 89.03812348557146 +/- 2.7026584266780254 dB

road rms:
avg rms 87.24628409845741 +/- 2.736960746858909 dB

support rms:
avg rms 88.76852168976542 +/- 1.1542263129304955 dB

road rms:
avg rms 86.36323853190031 +/- 1.8840942972315275 dB

support rms:
avg rms 90.63011650698735 +/- 2.073780639479017 dB

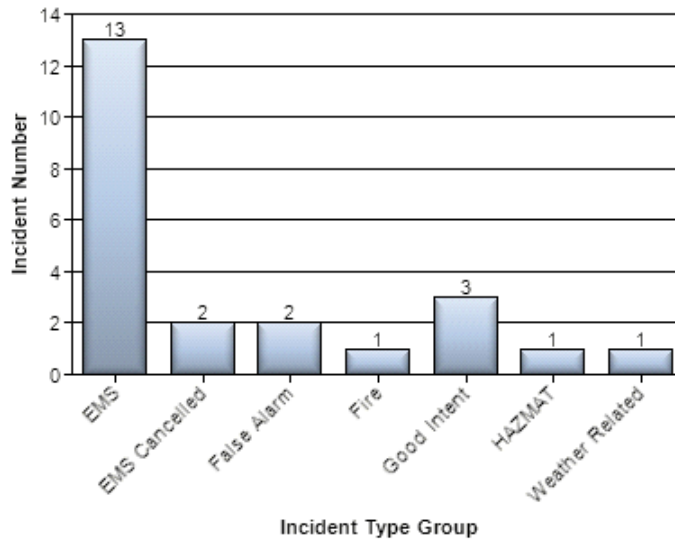
ATTACHMENT 2

20180807 - Contract Cities Incident Types

Date: Tuesday, January 3, 2023
Time: 9:31:16 AM

Incident Date between 2022-12-01 and 2023-01-01
City equal to Medina

Incident Type Group	Incident Count
EMS	13
EMS Cancelled	2
False Alarm	2
Fire	1
Good Intent	3
HAZMAT	1
Weather Related	1



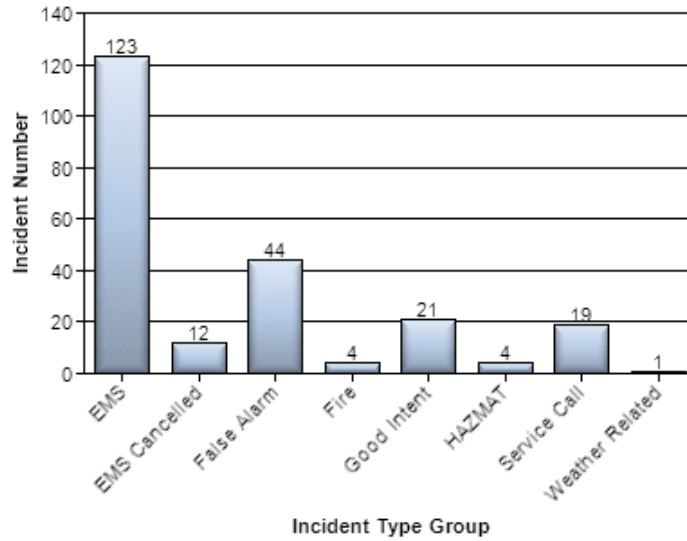
ATTACHMENT 3

20180807 - Contract Cities Incident Types

Date: Tuesday, January 3, 2023
Time: 10:19:31 AM

Incident Date between 2022-01-01 and 2023-01-01
City equal to Medina

Incident Type Group	Incident Count
EMS	123
EMS Cancelled	12
False Alarm	44
Fire	4
Good Intent	21
HAZMAT	4
Service Call	19
Weather Related	1





MEDINA POLICE DEPARTMENT

DATE: January 9, 2023
TO: Stephen R. Burns, City Manager
FROM: Jeffrey R. Sass, Chief of Police
RE: Police Department Update – December 2022

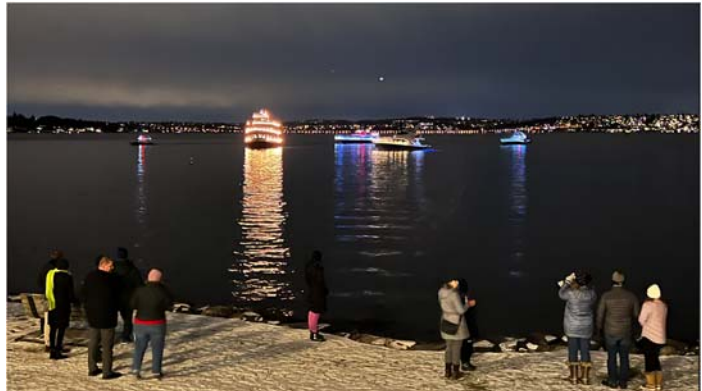
The following is a summary highlighting some of the Medina Police Department activity in December 2022.

Follow up:

Nothing to report.

Christmas Ships:

Despite the freezing temperatures, Christmas Ships 2022 saw a great turnout of people from all over the area. Eventgoers enjoyed the festive lighting on the passing ships at Medina Beach Park and the carolers on the main Argosy Cruise ship were a delight to all.



Winter Weather:

A massive cold weather front hit the area on December 23rd. The Police Department issued community alerts via E-lert publications as well as social media postings on Twitter and Facebook reminding community members to drive slowly and to ensure they are prepared for power outages. The roads were extremely icy, and most residences lost power for at least a few hours.

**Post Office Mail Drop Box Theft:**

The mail drop box at the Medina Post Office was stolen at approximately 4am on December 27th. Security footage from the area of the Post Office showed two utility vans stop next to the drop box, cut the bolts that were securing it to the sidewalk and drive off with it within a matter of approximately two minutes. The drop box contained outgoing mail that had been deposited since approximately 4:30pm on December 24th (the last time the mail was picked up by the United States Postal Service). The Police Department and the City is working with the USPS to increase security measures in the area and to consider methods of allowing mail to be dropped off in a more secure manner.

Marine Patrol:

Nothing to report.



MEDINA POLICE DEPARTMENT
Jeff Sass, Chief of Police
MONTHLY SUMMARY
DECEMBER 2022



FELONY CRIMES

Theft **2022-00004768** **12/06/2022**
 A Police Officer received a call from the 8000 blk of NE 16th St for a theft report at the Overlake Golf and Country Club. This occurred during a private event. Several pieces of jewelry were reported missing by the vendor. The estimated value is unknown. Under investigation.

Theft **2022-00005177** **12/27/2022**
 The Police Department received a report from the Medina Post Office located at 816 Evergreen Point Road that the mail drop box was stolen on December 27th at approximately 4:00am. Security footage showed two utility vans stop next to the drop box, cut the bolts that secured the box to the sidewalk and drive off within a matter of approximately two minutes. The drop box contained outgoing mail that had been deposited since 4:30pm on December 24th. The drop box is valued at approximately \$700.00. Under investigation.

MISDEMEANOR CRIMES

Nothing to report.

OTHER

Warrant Arrest **2022-00004726** **12/04/2022**
 A Police Officer conducted a traffic stop in the 8400 block of NE 12th St at the Chevron Gas Station. The driver had a misdemeanor warrant out of Renton for attempted forgery and was taken into custody and transported to jail.



MEDINA POLICE DEPARTMENT

Jeffrey R. Sass, Chief of Police

City of Medina



December 2022 - Monthly Report

CRIMES	Current Month	YTD 2022	YTD 2021	Year-End 2021
Burglary	0	10	13	13
Vehicle Prowl	0	4	13	13
Vehicle Theft	0	7	2	2
Theft (mail & all other)	2	10	15	15
ID Theft/Fraud	0	16	11	11
Malicious Mischief (Vandalism)	0	5	6	6
Domestic Violence/Violation of Contact Order	No 0	5	10	10
Disturbance, Harassment & Non-DV Assault	3	19	17	17
TOTAL CRIMES	5	76	87	87

COMMUNITY POLICING	Current Month	YTD 2022	YTD 2021	Year-End 2021
Drug Violations - Referrals to Treatment	0	1	1	1
Community Assists	9	139	116	116
House Watch Checks	120	595	548	548
School Zone	15	216	304	304
Mental Health	1	39	49	49
TOTAL ENFORCEMENT	145	990	1018	1018

TRAFFIC	Current Month	YTD 2022	YTD 2021	Year-End 2021
Collisions				
Injury	0	2	0	0
Non-Injury	0	6	18	18
Non-Reportable	0	1	N/A	N/A
Traffic Stops				
Citations/Infractions/Parking	13	250	171	171
Warnings	202	1426	1808	1808
Directed Patrol	4	99	488	488
TOTAL TRAFFIC	219	1784	2485	2485

CALLS FOR SERVICE	Current Month	YTD 2022	YTD 2021	Year-End 2021
Animal Complaints	1	46	33	33
Residential Alarms	29	255	242	242
Missing Person	0	5	9	9
Suspicious Activity/Area Check	11	219	304	304
Medical Call/Assist Fire Department	2	29	47	47
Juvenile (underage party, substance use, etc.)	0	7	11	11
TOTAL SERVICE	43	561	646	646

*This report does not include all calls for service handled by Medina Police Officers. It is meant to be an overview of general calls for service within the specified reporting period.



MEDINA POLICE DEPARTMENT
Jeff Sass, Chief of Police
MONTHLY SUMMARY
DECEMBER 2022

TOWN OF
HUNTS POINT
Washington

FELONY CRIMES

Trespass

2022-00005024

12/18/2022

Officers were dispatched to the 4000 block of Hunts Point Road for a previously trespassed subject currently on the property. The subject left the area prior to the officer's arrival. Criminal charges were forwarded to the Prosecuting Attorney for First Degree Criminal Trespass.

MISDEMEANOR CRIMES

Nothing to report.

OTHER

Mental

2022-00004790

12/07/2022

Police Officers were dispatched to a report of a disturbance in the 8400 block of Hunts Point Road. The subject involved was under the influence of narcotics and had made several suicidal statements. After talking with the subject on the phone and in person, the subject was taken into custody and transported to the hospital for evaluation.



MEDINA POLICE DEPARTMENT

Jeffrey R. Sass, Chief of Police

Town of Hunts Point



December 2022 - Monthly Report

CRIMES	Current Month	YTD 2022	YTD 2021	Year-End 2021
Burglary	0	1	1	1
Vehicle Prowl	0	0	1	1
Vehicle Theft	0	0	2	2
Theft (mail & all other)	0	4	3	3
ID Theft/Fraud	0	2	1	1
Malicious Mischief (Vandalism)	0	2	2	2
Domestic Violence	0	1	2	2
Disturbance, Harassment & Non-DV Assault	1	5	1	1
TOTAL CRIMES	1	15	13	13

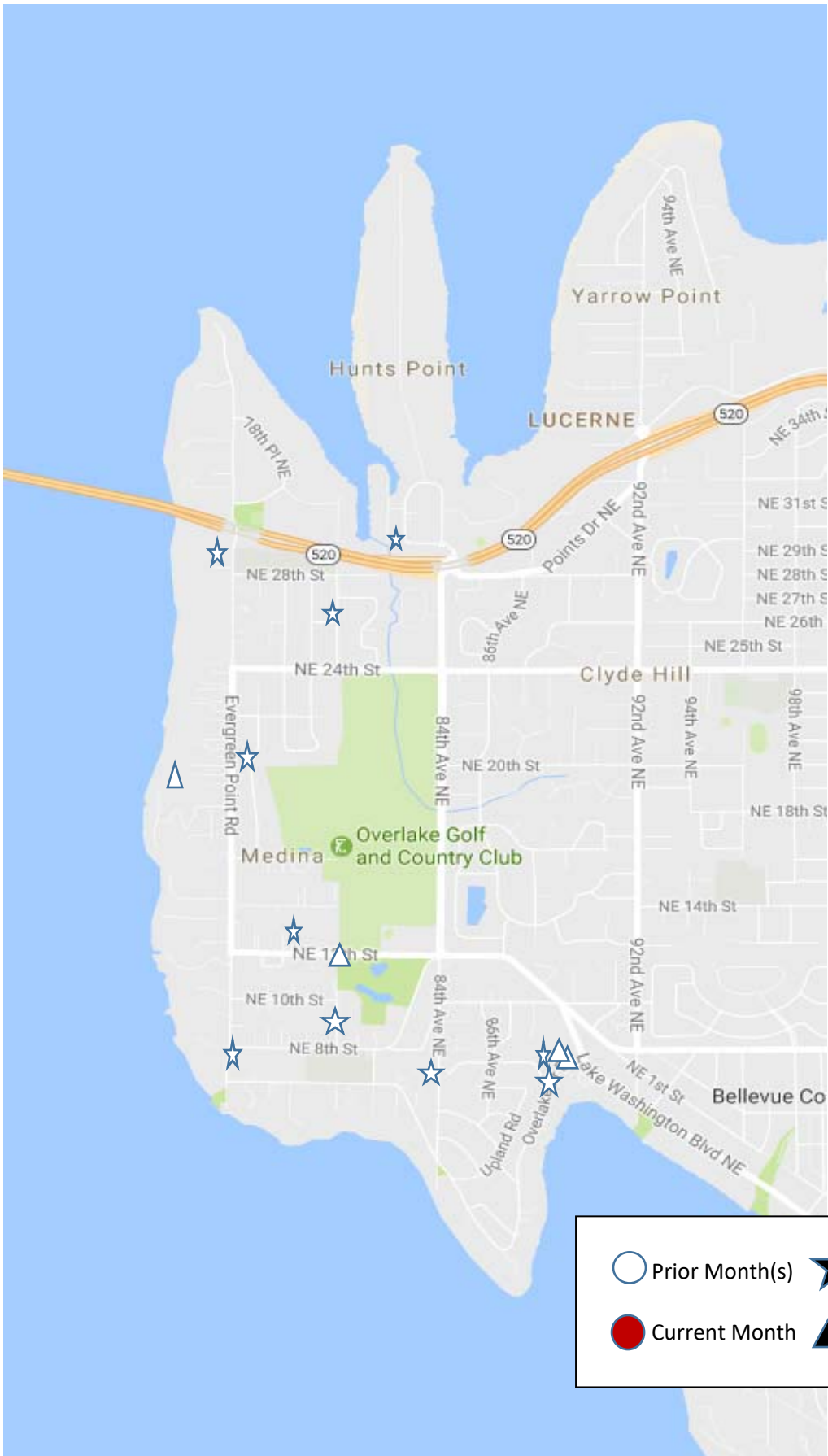
COMMUNITY POLICING	Current Month	YTD 2022	YTD 2021	Year-End 2021
Drug Violations - Referrals to Treatment	0	0	0	0
Community Assists	1	17	11	11
House Watch Checks	12	60	66	66
Mental Health	0	11	5	5
TOTAL ENFORCEMENT	13	88	82	82

TRAFFIC	Current Month	YTD 2022	YTD 2021	Year-End 2021
Collisions				
Injury	0	0	0	0
Non-Injury	0	1	1	1
Non-Reportable	0	1	0	0
Traffic Stops				
Citations/Infractions/Parking	5	84	28	28
Warnings	58	289	187	187
Directed Patrol	1	26	38	38
TOTAL TRAFFIC	64	401	254	254

CALLS FOR SERVICE	Current Month	YTD 2022	YTD 2021	Year-End 2021
Animal Complaints	0	4	5	5
Residential Alarms	3	32	24	24
Missing Person	0	0	0	0
Suspicious Activity/Area Check	3	23	33	33
Medical Call/Assist Fire Department	0	5	2	2
Juvenile (underage party, substance use, etc.)	1	1	1	1
TOTAL SERVICE	7	65	65	65

*This report does not include all calls for service handled by Medina Police Officers. It is meant to be an overview of general calls for service within the specified reporting period.

2022 Burglaries & Vehicle Prowls Medina & Hunts Point





CITY OF MEDINA

501 EVERGREEN POINT ROAD | PO BOX 144 | MEDINA WA 98039-0144
 TELEPHONE 425-233-6400 | www.medina-wa.gov

Date: January 9, 2023
To: Honorable Mayor and City Council
Via: Stephen R. Burns, City Manager
From: Steven R. Wilcox, Development Services Department Director
Subject: Development Services Department Monthly Report

Permit Activity

We had several new home permit inquiries through our pre-application process in the last quarter of 2022. However, none of these projects have yet been submitted to us as building permit applications. If the projects we are aware of are submitted to us we could have a strong first quarter in 2023.

Two of our largest permitted development projects have notified us that they are scaling back the sizes of their projects. Both projects will be reduced in scope significantly and will need to be re-permitted due to the extensive design changes. One project was permitted at about 17,000 sq. ft. building area, but will become 7,000 sq. ft.

Permit valuation is one method of understanding the volume or size of development activity in Medina. The calculation of permit value has remained consistent for several years, so comparison is possible. Permit value is a number calculated based on standardized criteria for the purpose of determining permit fees. Permit value reflects the size of building construction. The following is a comparison of year-end permit value for the past five years:

2022	\$32,094,040
2021	\$47,608,926
2020	\$42,893,158
2019	\$118,126,280
2018	\$39,445,599

Planning Commission

Planning Commission did not meet in December. The next Planning Commission meeting is scheduled for Tuesday January 24th at 6:00 pm.

A Comprehensive Plan Visioning Workshop will be held at Medina Elementary School on Thursday January 26th at 5:00 pm

State Legislation

Building Official Steve Wilcox and Deputy Building Official Rob Kilmer attended a Washington Association of Building Officials Government Relations Committee meeting. The Government Relations Committee monitors, evaluates and responds to State legislative matters which have effect on the technical or administrative operations of building departments. We are deciding how much involvement we can have in the Government Relations Committee.

One significant item is that legislation will be submitted in 2023 to mandate building permit timeframes. The Washington Association of Building Officials is concerned about the possibility of this mandate. There already is a 120-day maximum permit review time which has been in effect since the early 1990's. Medina is unique in the way we operate. Medina development projects are often larger than most other jurisdictions and our projects are considered to be commercial in the way they are viewed by the state and our ordinance. With the added complexity of professional consultants used in our Medina permit reviews, a new timeline mandate may not be beneficial to Medina. While the conversation is early and details are lacking, it is known that this legislation will include a financial incentive to jurisdictions to achieve a new building permit review timeframe mandate. As this legislation progresses Council will be kept informed.

As previously mentioned, the 2021 Washington State Building Code ("State Code") will be implemented on July 1, 2023. Council will be asked to approve of this mandated 2021 adoption. There will be proposed amendments for Medina beyond the minimum mandates. Likely Municipal Code amendment proposals will include:

- Adoption of the International Property Maintenance Code in whole or in part. There are certain chapters within the IPMC that may assist with better enforcement of vacant and poorly maintained properties. Medina has had an observable increase in vacant properties with absentee owners. These vacant properties can often become a nuisance for a variety of reasons. More tools to assist with these vacant properties in code enforcement may be a proposal for Council to consider as part of the 2021 State Code adoption.
- We will need to review our entire Medina adoption of the International Fire Code to assure we conform to the City of Bellevue Fire Departments minimum requirements. There will likely be several amendments proposed to our Municipal Code. Because Bellevue provides both fire prevention services and fire response services it is important that our codes parallel the needs of the Bellevue Fire Department.
- Minor updates to administrative sections of the State Code will be proposed.
- Swimming Pool safety will be reviewed and a change in the State code that Medina should use may be proposed.
- Update to our definition of a complete permit application.
- Various clarifications to existing site identification (address posting), underground service wiring requirements, etc. will be proposed as part of the 2021 State Code adoption.

Tree Code Enforcement

Attached is a report regarding December 2022 non-development activity tree removal permitting.

There were non development project tree removal permits to report.

Development Services Committee

The Development Services Committee met in January. Our two arborists gave a preview of their presentation for Council on January 23rd.

The presentation was initiated from our new arborists' observations of the effectiveness of Medina's Tree Management Code now that they have used it for the past several months. This is essentially a contrast between the stated Purpose and Intent of the tree code vs. how it actually performs.

December 2022 Permit Applications Received

Permit Type	Submitted Date	Permit Number	Total Valuation	Address
B-ACCST	12/01/2022	B-22-135	\$250,000.00	945 88TH AVE NE
B-ACCST	12/14/2022	B-22-137	\$20,000.00	7915 NE 24TH ST
TOTAL B-ACCST:	2		\$270,000.00	
B-ADD/ALT	12/21/2022	B-22-138	\$185,000.00	7545 NE 28TH PL
TOTAL B-ADD/ALT:	1		\$185,000.00	
B-DEM	12/14/2022	D-22-023		7652 NE 12TH ST
B-DEM	12/01/2022	D-22-022		3450 EVERGREEN POINT RD
TOTAL B-DEM:	2		\$0.00	
B-FENCE	12/22/2022	B-22-139	\$10,000.00	854 EVERGREEN POINT RD
TOTAL B-FENCE:	1		\$10,000.00	
B-GAS	12/20/2022	G-22-038		854 EVERGREEN POINT RD
TOTAL B-GAS:	1		\$0.00	
B-MECHANICAL	12/01/2022	M-22-114		2623 EVERGREEN POINT RD
B-MECHANICAL	12/02/2022	M-22-115		101 84TH AVE NE
B-MECHANICAL	12/06/2022	M-22-116		2639 82ND AVE NE

PW-RIGHT OF WAY	12/13/2022	PW-ROW-22-105		8000 NE 16TH ST
PW-RIGHT OF WAY	12/07/2022	PW-ROW-22-101		3450 EVERGREEN POINT RD
PW-RIGHT OF WAY	12/01/2022	PW-ROW-22-099		7811 NE 10TH ST
PW-RIGHT OF WAY	12/06/2022	PW-ROW-22-100		3607 EVERGREEN POINT RD
PW-RIGHT OF WAY	12/08/2022	PW-ROW-22-102		8458 NE 9TH ST
PW-RIGHT OF WAY	12/08/2022	PW-ROW-22-103		2221 78TH AVE NE
PW-RIGHT OF WAY	12/08/2022	PW-ROW-22-104		3430 Evergreen Point RD
PW-RIGHT OF WAY	12/15/2022	PW-ROW-22-106		850 80TH AVE NE
PW-RIGHT OF WAY	12/20/2022	PW-ROW-22-107		619 84TH AVE NE
PW-RIGHT OF WAY	12/20/2022	PW-ROW-22-108		3436 EVERGREEN POINT RD
PW-RIGHT OF WAY	12/20/2022	PW-ROW-22-109		1525 79TH PL NE
TOTAL PW-RIGHT OF WAY:	11		\$0.00	
TREE-PERFORMANCE	12/02/2022	TREE-22-083		3440 78TH PL NE
TREE-PERFORMANCE	12/16/2022	TREE-22-085		2548 MEDINA CIR
TOTAL TREE-PERFORMANCE:	2		\$0.00	

December 2022 Permit Applications Received

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TOTAL B-ACCST:	2		\$270,000.00	
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TOTAL B-ADD/ALT:	1		\$185,000.00	
B-DEM	12/14/2022	D-22-023		7652 NE 12TH ST
B-DEM	12/01/2022	D-22-022		3450 EVERGREEN POINT RD
TOTAL B-DEM:	2		\$0.00	
B-FENCE	12/22/2022	B-22-139	\$10,000.00	854 EVERGREEN POINT RD
TOTAL B-FENCE:	1		\$10,000.00	
B-GAS	12/20/2022	G-22-038		854 EVERGREEN POINT RD
TOTAL B-GAS:	1		\$0.00	
B-MECHANICAL	12/01/2022	M-22-114		2623 EVERGREEN POINT RD
B-MECHANICAL	12/02/2022	M-22-115		101 84TH AVE NE
B-MECHANICAL	12/06/2022	M-22-116		2639 82ND AVE NE

B-MECHANICAL	12/06/2022	M-22-117		7614 OVERLAKE DR W
B-MECHANICAL	12/19/2022	M-22-118		7800 NE 10TH ST
B-MECHANICAL	12/29/2022	M-22-119		2790 EVERGREEN POINT RD
TOTAL B-MECHANICAL:	6		\$0.00	
B-PLUMBING	12/19/2022	P-22-067		2790 EVERGREEN POINT RD
TOTAL B-PLUMBING:	1		\$0.00	
B-WALL	12/14/2022	B-22-136	\$100,000.00	1818 77TH AVE NE
TOTAL B-WALL:	1		\$100,000.00	
CAP - CONSTRUCTION ACTIVITY PERMIT	12/12/2022	CAP-22-039		3450 EVERGREEN POINT RD
TOTAL CAP - CONSTRUCTION ACTIVITY PERMIT:	1		\$0.00	
ENG-GRADING/DRAINAGE	12/01/2022	ENG-GD-22-029		3450 EVERGREEN POINT RD
ENG-GRADING/DRAINAGE	12/06/2022	ENG-GD-22-030		3444 EVERGREEN POINT RD
ENG-GRADING/DRAINAGE	12/14/2022	ENG-GD-22-031		1818 77TH AVE NE
TOTAL ENG-GRADING/DRAINAGE:	3		\$0.00	
P-ADMIN VARIANCE	12/19/2022	P-22-068		2626 78TH AVE NE
TOTAL P-ADMIN VARIANCE:	1		\$0.00	

PW-RIGHT OF WAY	12/13/2022	PW-ROW-22-105		8000 NE 16TH ST
PW-RIGHT OF WAY	12/07/2022	PW-ROW-22-101		3450 EVERGREEN POINT RD
PW-RIGHT OF WAY	12/01/2022	PW-ROW-22-099		7811 NE 10TH ST
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PW-RIGHT OF WAY	12/20/2022	PW-ROW-22-109		1525 79TH PL NE
TOTAL PW-RIGHT OF WAY:	11		\$0.00	
TREE-PERFORMANCE	12/02/2022	TREE-22-083		3440 78TH PL NE
TREE-PERFORMANCE	12/16/2022	TREE-22-085		2548 MEDINA CIR
TOTAL TREE-PERFORMANCE:	2		\$0.00	

TREE-RESTORATION	12/10/2022	TREE-22-084		7746 NE 6TH ST
TOTAL TREE-RESTORATION:	1		\$0.00	
TREE-WITH BUILDING/DEVELOPMENT	12/01/2022	TREE-22-082		3450 EVERGREEN POINT RD
TOTAL TREE-WITH BUILDING/DEVELOPMENT:	1		\$0.00	
Total # of Permits	35		\$565,000.00	



December 2022 Issued Permits

Page 1 of 1

Report run on: 01/04/2023 07:54 AM

Construction Value:	December 2022	December 2021	2022 YTM	2021 YTM	Difference
Accessory Structure	-	-	\$70,000.00	-	\$70,000.00
Addition / Alteration	\$303,780.00	\$55,914.47	\$3,575,676.32	\$11,456,165.68	(\$7,880,489.36)
Fence / Wall	-	-	\$429,536.00	\$455,900.00	(\$26,364.00)
New Construction	-	\$3,930,374.00	\$27,948,828.40	\$35,696,861.00	(\$7,748,032.60)
Repair / Replace	-	-	-	-	\$0.00
Wireless Comm. Facility	-	-	\$70,000.00	-	\$70,000.00
Total Value:	\$303,780.00	\$3,986,288.47	\$32,094,040.72	\$47,608,926.68	(\$15,514,885.96)
Permits Issued:	December 2022	December 2021	2022 YTM	2021 YTM	Difference
New Construction	-	1	15	16	(1)
Permit Extension	12	5	59	40	19
Accessory Structure	-	-	1	-	1
Addition / Alteration	2	1	24	36	(12)
Construction Activity Permit	2	-	25	24	1
Demolition	-	-	11	18	(7)
Fence / Wall	-	-	18	16	2
Grading / Drainage	1	-	20	23	(3)
Mechanical	6	4	100	79	21
Other - Moving	-	-	-	-	0
Plumbing / Gas	2	6	71	88	(17)
Repair / Replace	-	-	-	-	0
Reroof	-	-	-	-	0
Right of Way Use	11	4	88	90	(2)
Tree Mitigation	4	1	58	66	(8)
Wireless Comm. Facility	-	-	1	-	1
Total Permits:	40	22	491	496	(5)
Inspections:	December 2022	December 2021	2022 YTM	2021 YTM	Difference
Building	70	89	1,027	1,093	(66)
Engineering/Other	10	13	229	348	(119)
	1	4	62	65	(3)
Tree	3	-	70	20	50
Total Inspections:	84	106	1,388	1,526	(138)



December Code Enforcement Report

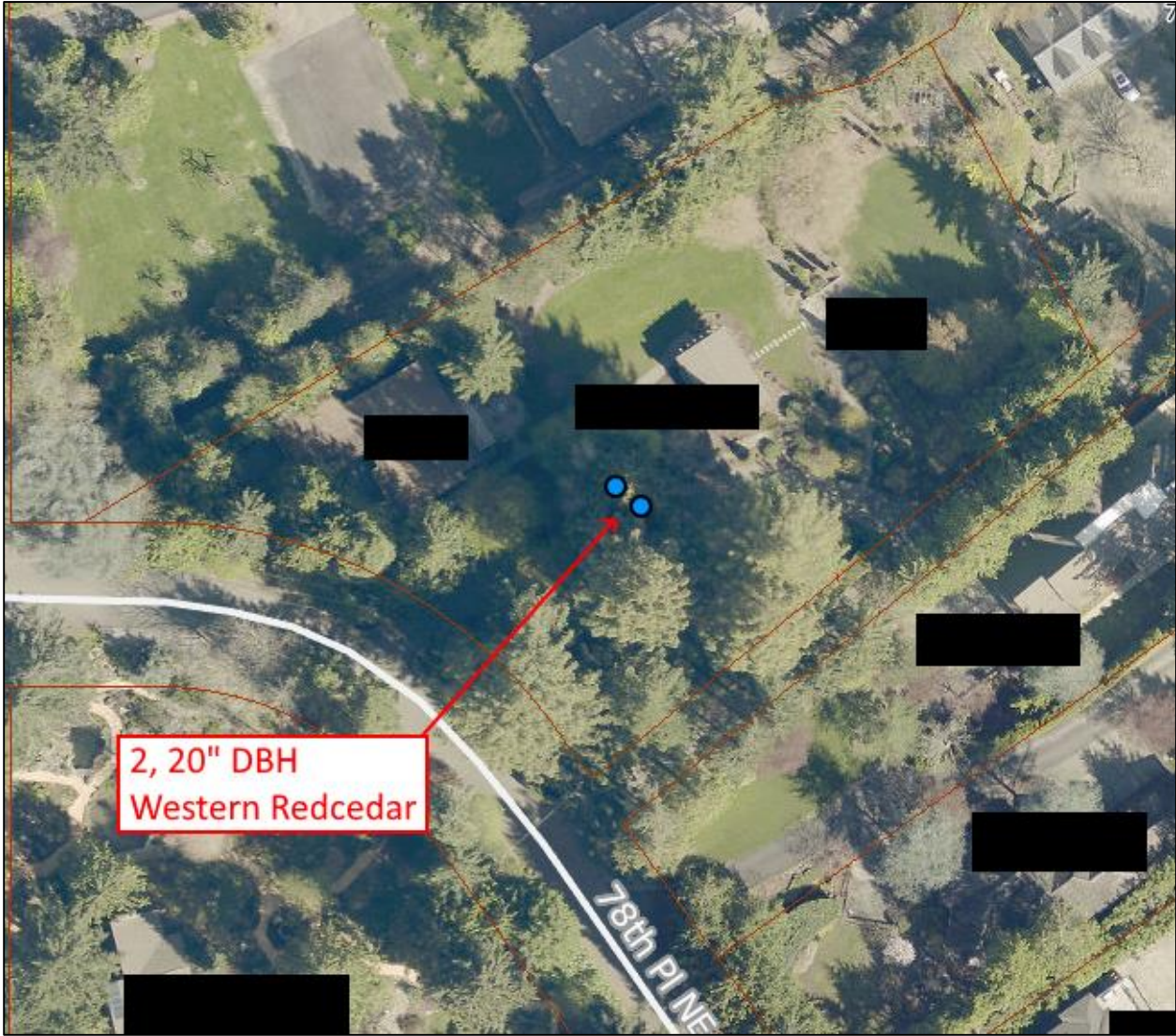
Case Number	Case Type	Assigned To	Address	Case Text
CC-2022-224	SIGN VIOLATION	Rob Kilmer	NE 12th & 84th Ave NE	<p>Description: Commercial advertising sign (Professional Christmas Lights) displayed in the ROW.</p> <p>Action Taken: Removed sign and notified company of Medina Municipal Code rules regarding signs.</p>
CC-2022-225	FORMAL, WRITTEN WARNING	Rob Kilmer	7742 OVERLAKE DR W	<p>Description: Repeated instance of bins left in ROW</p> <p>Action Taken: Mailed formal warning to owner of bins.</p>
CC-2022-226	SIGN VIOLATION	Rob Kilmer	7715 NE 22ND ST	<p>Description: Commercial advertising sign (About Grout Tile Specialties) displayed in ROW</p> <p>Action Taken: Removed sign and contacted company about the sign rules in Medina.</p>
CC-2022-230	SIGN VIOLATION	Rob Kilmer	NE 24th St. & 84th Ave NE	<p>Description: Commercial advertising sign (Belltree) displayed in ROW</p> <p>Action Taken: Removed sign and contacted company to inform them of the rules against displaying commercial advertising.</p>
CC-2022-231	STOP WORK ORDER	Rob Kilmer	8105 OVERLAKE DR W	<p>Description: Tree cutting observed</p> <p>Action Taken: Spoke with workers to determine if any tree permit had been issued. Posted Stop Work Order.</p>
CC-2023-001	INITIAL WARNING	Rob Kilmer	802 EVERGREEN POINT RD	<p>Description: Workers observed parked along ROW, working prior to a pre-construction meeting.</p> <p>Action Taken: Sent initial warning to project Agent reminding them that workers cannot park in the parking spaces along EPR or NE 8th Street. And, a pre-construction meeting must take place prior</p>

City of Medina Arborist Monthly Report – Non-Development Activity – 12/1/2022 – 12/31/2022

8718 Overlake Dr W – One hazardous 16" white poplar. Tree had uprooted and was leaning heavily north into neighboring property.



3448 78TH PL NE – Two 20" western redcedar. Trees removed under tree performance permit.





CITY OF MEDINA

501 EVERGREEN POINT ROAD | PO BOX 144 | MEDINA WA 98039-0144
 TELEPHONE 425-233-6400 | www.medina-wa.gov

Date: January 9th, 2023
To: Honorable Mayor and City Council
Via: Stephen R. Burns, City Manager
From: Ryan Wagner, Finance & HR Director
Subject: December 2022 Financial Reporting

The December 2022 Reporting includes:

- December AP Check Register Activity Detail
- December Cash Position Report

The City of Medina operates on a modified accrual year which allows us to have a “13th month” each year in order to process expenses into a prior year. December & 2022 will not close until January 20, 2023. There will be a brief presentation during the January 23rd meeting to give the broad picture results and a Finance Committee meeting will be scheduled in early 2023 to review closing statements in detail. Final reports will be submitted in your February meeting packet.

What to Expect in The Future:

- 2021 Financial and Accountability Audit is finished, Council and the community will be provided with the resulting documents later this month once the end of audit conference is held (planned for January 23rd).
- December 2022 Financial Reporting and end of year in review, will be provided once the year is closed and all entries are in.
- Planning for future investments and funding sources for capital projects and rising costs due to inflation.

December 2022 End of Year Cash Position Report

<u>2022 Beginning Cash Balance 11/30/2022</u>		<u>2022 Cash Balance, 12/31/2022</u>	
<u>TOTAL CASH & INVESTMENTS</u>		<u>TOTAL CASH & INVESTMENTS</u>	
<u>Period Ending: 11/30/2022</u>		<u>Period Ending: 12/31/2022</u>	
WA ST INV POOL	\$ 7,765,530	WA ST INV POOL	\$ 7,990,461
OTHER INVESTMENTS	4,000,000	OTHER INVESTMENTS*	4,000,000
CHECKING	1,127,439	CHECKING	494,721
	<u>\$ 12,892,968</u>		<u>\$ 12,485,182</u>

*Bond maturity dates:

Matured, cash received on 1/3/2022



\$500K bond (Mar 2020)	3/25/2025
\$1M bond (Aug 2020)	8/5/2024
\$1M bond (June 2022)	12/31/2022
\$1M bond (June 2022)	5/31/2023
\$500K bond (June 2022)	12/31/2025



CITY OF MEDINA

501 EVERGREEN POINT ROAD | PO BOX 144 | MEDINA WA 98039-0144
 TELEPHONE 425-233-6400 | www.medina-wa.gov

Date: January 9, 2023
To: Honorable Mayor and City Council
Via: Stephen R. Burns, City Manager
From: Aimee Kellerman, City Clerk
Subject: Central Services Department Monthly Report

JANUARY AND FEBRUARY PUBLIC MEETINGS AND EVENTS

Event	Date	Time	Location
Emergency Preparedness Committee Meeting	Jan 11	4:00 pm	In-Person/Online
Martin Luther King Jr. Day – City Hall Closed	Jan 16		
Park Board Meeting	Jan 17	5:00 pm	In-Person/Online
City Council Meeting	Jan 23	5:00 pm	In-Person/Online
Planning Commission Meeting	Jan 24	6:00 pm	In-Person/Online
Comprehensive Plan Visioning Workshop	Jan 26	5:00 pm – 8:00 pm	Medina Elementary 8001 NE 8 th Street
City Council Meeting	Feb 13	5:00 pm	In-Person/Online
President’s Day – City Hall Closed	Feb 20		
Planning Commission Meeting	Feb 28	6:00 pm	In-Person/Online

Meetings are publicly noticed on the City’s three official notice boards, City website, and via GovDelivery. Occasionally notices require publication in the City’s official newspaper, The Seattle Times. Public meetings scheduled after publication of this report can be found on the City’s website.

COMMUNICATION TO OUR COMMUNITY

E-Notice Program: During the month of December, the City issued 33 bulletins amounting to a total of 202,268 bulletins delivered to subscribers; approximately 19% were opened. See **Attachment 1**.

As of December 31, the city had 13,935 subscribers (change in total subscribers **+131**), with a combined total of 127,323 subscriptions (change in total subscriptions **+704**).

RECORDS REQUESTS

As of December 31, 7 public records requests have been received by Central Services. See **Attachment 2**.

ATTACHMENT 1

	Bulletins Developed	Total Recipients	Total Delivered	Unique Email Opens	Email Open Rate	Wireless Recipients
Comparisons:						
December, 2022	33	223,587	202,268	25,975	19.00%	78,584
November, 2022	24	128,822	116,286	14,221	17.90%	44,131
October, 2022	28	131,830	119,181	15,287	18.10%	41,173
September, 2022	18	71,635	64,845	8,554	18.20%	21,385
August, 2022	13	65,817	60,494	8,916	19.90%	18,579
July, 2022	17	66,926	61,741	8,809	18.5%	16,757
June, 2022	38	170,001	156,176	17,192	15.00%	48,346
May, 2022	21	93,246	86,088	9,650	14.8%	24,298
April, 2022	31	166,938	154,946	17,108	14.70%	45,327
March, 2022	21	108,426	100,766	11,437	15.00%	28,354
February, 2022	17	48,354	44,691	4,260	11.80%	10,350
January, 2022	25	101,589	94,429	10,651	14.20%	23,288
December, 2021	32	193,448	180,037	18,165	13.10%	49,149
November, 2021	27	100,179	93,226	7,593	10.20%	22,569
Date Sent	Top 10 Most Read Bulletins During December				Emails Opened	Email Open Rate
12/01/2022 06:05 PM PST	Community Bulletin - Celebration of Life Service for Bellevue Police Officer				1,918	22%
12/06/2022 08:16 AM PST	Medina Newsletter - Winter 2022				1,730	20%
12/07/2022 08:12 AM PST	Notice of New Years Eve Fireworks - Meydenbauer Bay - Saturday, December 31, 2022 Notice of New Years Eve Fireworks - Meydenbauer Bay - Saturday,				1,485	18%
12/07/2022 02:07 PM PST	LAST CHANCE! - Annual Holiday Giving Program to Benefit Childhaven				1,321	17%
12/08/2022 08:50 AM PST	Reminder - Christmas Ships Parade - Thursday, Dec. 22nd 5:00 PM @ Medina Beach Park!				1,461	18%
12/13/2022 09:55 AM PST	Save The Date! - Comprehensive Plan Visioning Workshop				1,499	19%
12/19/2022 03:00 PM PST	City Hall Closed on Tuesday, December 20, 2022 - Inclement Weather				1,568	20%
12/23/2022 08:33 AM PST	SERVICE ALERT! No Republic Services This Week				2,230	23%
12/23/2022 08:44 AM PST	Community Bulletin - Icy Conditions				2,028	23%
12/28/2022 12:08 PM PST	Mailbox Incident				1,753	17%

**ATTACHMENT 2**

501 EVERGREEN POINT ROAD • P.O. BOX 144 • MEDINA, WA 98039-0144
TELEPHONE (425) 233-6400 • FAX (425) 451-8197 • www.medina-wa.gov

DATE: January 9, 2023
TO: Mayor and City Council
From: Aimee Kellerman, City Clerk
Subject: December 2022, Public Records Request Tracking

In December 2022, Central Services staff received **7** new public records requests and **1** ongoing request. These requests required approximately **11 hours** of Central Services staff time and **0 hours** of consulting time with the City Attorney. The overall December cost, which includes staff hourly rate plus benefits and City Attorney fees is approximately **\$825**.

In addition, the police department receives public records requests specific to police business that require records research and information distribution. In December 2022, the Police Department received **21** new records requests. These requests required approximately **5 hours** of staff time and **0 hours** of consulting time with the City Attorney. The overall December cost, which includes staff hourly rate plus benefits is approximately **\$326**. The requests are from outside law enforcement agencies, insurance carriers, the public and persons involved in the incidents.

December 2022 Monthly PRR Report

ATTACHMENT 2

Run Date: 01/03/2023 3:53 PM

Assigned Dept	Create Date	Reference No	Request Type	Required Completion Date	Summary	Customer Full Name	PRR - Type of Records Requested	Public Record Desired	Assigned Staff
Central Services	12/5/2022	P002587-120522	Public Records Request	1/3/2023	Public Records Request	Designer Reid Beloff	Building	3267 evergreen point rd Just want to see plans	Dawn Nations
Central Services	12/8/2022	P002593-120822	Public Records Request	12/19/2022	Public Records Request	office manager Stacia Hinds	Building	I need a list of all types of Permits and Inspections associated with Building Permit # B19-068, approved and completed.	Dawn Nations
Central Services	12/12/2022	P002596-121222	Public Records Request	12/21/2022	Public Records Request	Braden Mineer	Building	Requesting a report of all issued and pending building permits for residential & commercial properties from 11/1/2022 to 11/30/2022. Report to include if possible: permit number, issue date, site addresses, valuation of project, description of work, contractor information and owner name. If a report is unavailable, then copies of the original permits would be more than adequate.	Dawn Nations
Central Services	12/12/2022	P002597-121222	Public Records Request	1/3/2023	Public Records Request	Keana Mendez	Finance	SmartProcure is submitting a public records request to the City of Medina for any and all purchasing records from 8/31/2021 to current. The request is limited to readily available records without physically copying, scanning or printing paper documents. Any editable electronic document is acceptable. Please be advised that we are not seeking a list of individuals. We are only looking for purchasing information. The specific information requested from your record keeping system is: 1. Purchase order number. If purchase orders are not used a comparable substitute is acceptable, i.e., invoice, encumbrance, or check number 2. Purchase date 3. Line item details (Detailed description of the purchase) 4. Line item quantity 5. Line item price 6. Vendor ID number, name, address If you would like to let me know what type of financial software you use, I may have report samples that help to determine how, or if, you are able to respond.	Dawn Nations

ATTACHMENT 2

Central Services	12/15/2022	P002601-121522	Public Records Request	12/26/2022	Public Records Request	Christina Zhang	Building	May I request for permits information of parcel#252504-9146? I want to get details of the following two permits: 1. Permit# B080508-2364, issue date 8/8/2008 2. Permit# B110706-1627, issue date 11/13/2006	Dawn Nations
Central Services	12/28/2022	P002613-122822	Public Records Request	1/6/2023	Public Records Request	Shiyu Gan	Building	Approved building plan and permit for 2431 Evergreen Point Rd. I'm current owner who bought property in 2021. As part of the transaction, previous owner guaranteed there is a previously approved building permit and plan for this property that I can request (and entitled to legally as property owner). Proof of identity and ownership can be provided.	Dawn Nations
Central Services	12/30/2022	P002615-123022	Public Records Request	1/10/2023	Public Records Request	David McCourt	Building	Good morning, I'm trying to find out if the house at 1611 Evergreen Pt. Rd (Arakawa residence) had any remodel permits in or around 2019? They're appealing their tax assessment and interior photos show significant work underway at our visit the same year. We have no permits in our system so most likely didn't follow up with this. Thanks! David King Co. Assessments	Dawn Nations





CITY OF MEDINA

501 EVERGREEN POINT ROAD | PO BOX 144 | MEDINA WA 98039-0144
 TELEPHONE 425-233-6400 | www.medina-wa.gov

Date: January 9, 2023
To: Honorable Mayor and City Council
Via: Stephen R. Burns, City Manager
From: Ryan Osada, Public Works Director
Subject: Public Works Monthly Report

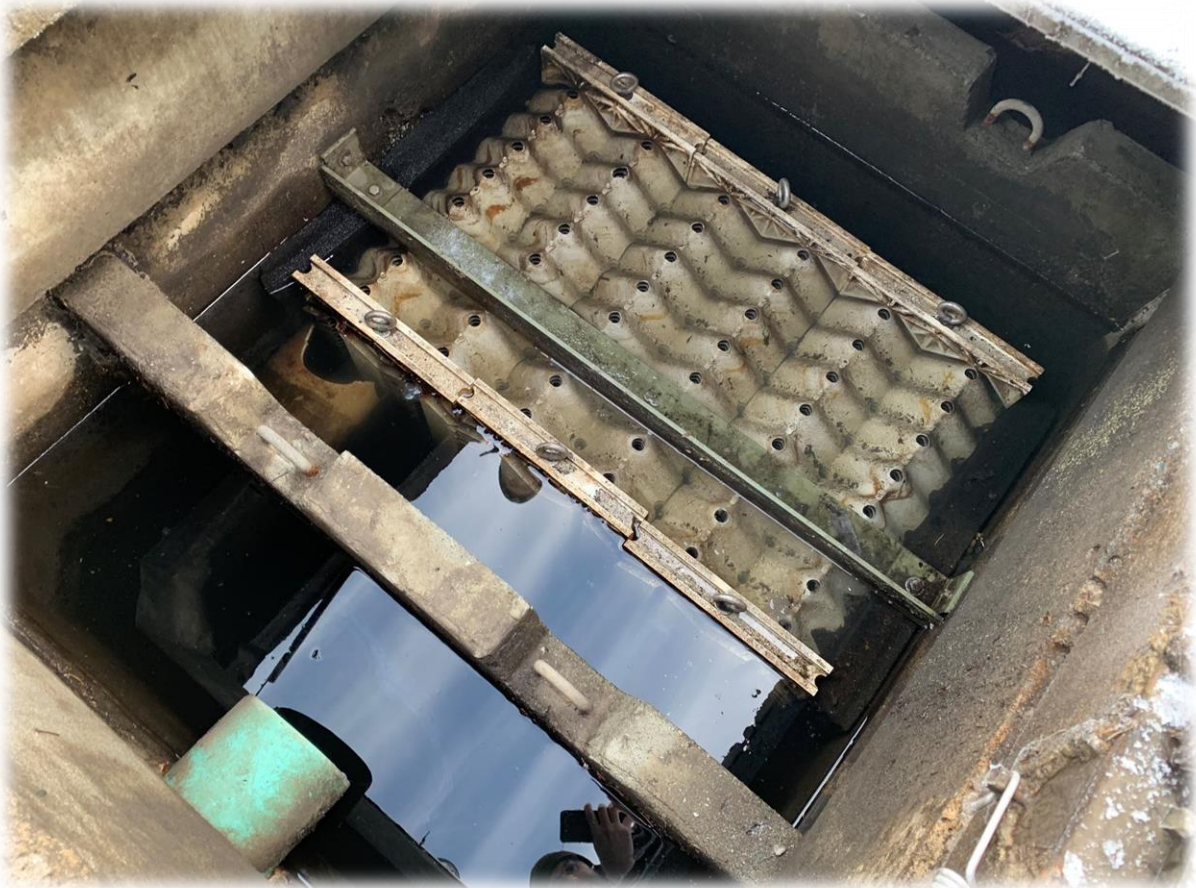
- 2023 PROPOSED PROJECT LIST** – At the beginning of every year, Public Works drafts a proposed capital project list based on adopted budget and awarded grant funds. As mentioned in previous years, this list is not set in stone and may change throughout the year. The city and its consultants use this guide to schedule and manage projects. We also use it to coordinate with other jurisdictions such as Clyde Hill and Bellevue.

2023 PROPOSED PROJECT LIST	START DATE	DURATION	GRANT FUNDS	TOTAL COST	CITY COST
STREETS:					
Upland Road Overlay	Sep-23	4 weeks	\$ 231,660.00	\$ 257,400.00	\$ 25,740.00
86th Ave NE _ Ridge Rd, NE 5th, NE 6th	Sep-23	1 week	\$ -	\$ 90,000.00	\$ 90,000.00
2023 Maintenance Project _ Crack Seal	Jun-23	1 week	\$ 83,250.00	\$ 92,500.00	\$ 9,250.00
SIDEWALK:					
Medina Elementary School Sidewalks Ph 1 _ NE 8th St to Overlake Dr W	Aug-23	4 weeks	\$ 102,800.00	\$ 121,050.00	\$ 18,250.00
NE 12th Street Sidewalk Improvements & Undergrounding	Sep-23	8 weeks	\$ -	\$ 390,000.00	\$ 390,000.00
PARKS:					
Medina Park Irrigation & Pathway Improvements _ West	Jul-23	3 weeks	\$ 50,000.00	\$ 50,000.00	\$ -
Medina Beach Park Tree Planting	Apr-23	2 days	\$ -	\$ 5,000.00	\$ 5,000.00
STORMWATER:					
2023 Localized Improvements *Upland Road	Jul-23	TBD	\$ 200,000.00	\$ 200,000.00	\$ -
Citywide Stormwater System Mapping & Evaluation	2023	TBD	\$ -	\$ 10,000.00	\$ 10,000.00
BUILDING:					
City Hall Balcony Improvements	2023	TBD	\$ -	\$ 170,000.00	\$ 170,000.00
City Hall Carpet Replacement	2023	TBD		\$ 20,000.00	\$ 20,000.00
Post Office Floor Replacement	2023	TBD	\$ -	\$ 10,000.00	\$ 10,000.00
OTHER:					
2023 Hazardous Tree Removal	Summer 2022	2 weeks	\$ -	\$ 25,000.00	\$ 25,000.00

*UPDATED 12/13/2022

TOTALS	\$ 667,710.00	\$ 1,440,950.00	\$ 773,240.00
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2. PRIVATE STORMWATER INSPECTION PROGRAM – The City of Medina has achieved full compliance with the Private Stormwater Inspection Program. This is a mandatory requirement imposed by the Department of Ecology. The city had been struggling to attain 80% cooperation by homeowners over the last two years after introducing the program. Once homeowners are aware and familiar with the yearly process, we hope to reduce staff time for this program.



3. HOLIDAY SNOW & ICE – The last two weeks of the year brought several weather events which included everything from snow, ice, wind, and heavy rains. The Public Works staff were on-call and ready during all the forecasted events. We also partner with Clyde Hill, which provides de-icing services before any snow or black ice develops. Both cities rely on each other and partner to keep the communities’ roadways clear and safe.





4. **MAINTENANCE** - In addition to the numerous weather related duties, Public Works maintenance has been busy with their regular daily activities. Last month, they were also helping with the investigative demolition work on the City Hall Balcony project and trying to wrap up the bench and tree planting donation services from 2022.







5. PROJECT UPDATES -

Upland Road Overlay –

86th Ave NE Overlay –

2023 Crack Seal –

Medina Elementary Sidewalks_81st Ave NE –

Medina Park Irrigation & Pathway Impr _ West –

2023 Upland Road Stormwater Improvements –

City Hall Carpet Replacement –

Post Office Floor Replacement –

2023 Hazardous Tree Removal –

Post Office Floor Replacement – Currently soliciting proposals

Citywide Stormwater System Mapping & Evaluation – G&O has completed most of the mapping. We are currently working on scoping and mapping the storm infrastructure that is located on several private properties.

NE 12th Street Sidewalk Improvements & Undergrounding – Finalizing 90% construction drawings. Still waiting for final drawings for luminaire locations. First round of notices was sent to residents along the corridor. *Revised construction schedule Summer 2023.*

2022 City Hall Repairs – Miscellaneous – Balcony – in review

77TH Ave NE Sidewalk & Curb Ramp Imp. – reevaluating scope of work

2017 Medina Beach Park Tree Replanting – Phase III tree planting.

2015 Medina Park Stormwater Pond Imp. – Dredging is tentatively planned for summer of 2024

December 2022 Check Register

Vendor	Invoice Number	Expense Notes	Invoice Amount	Check Number	Check Date	Account Number	Account Description
3R Technology, LLC	INV-12053	Community Shredder/Recycle Day	\$591.00	64320	12/30/2022	001-000-000-521-20-49-60	Crime Prevention/Public Educ
			\$591.00				
8X8, Inc.	Invoice - #3637780	CH Phones	\$911.31	64309	12/15/2022	001-000-000-518-80-41-50	Technical Services, Software Services
			\$911.31				
911 Supply Inc	Invoice - #INV-2-24461	Uniform - Anderson	\$30.28	64265	12/13/2022	001-000-000-521-20-22-00	Uniforms
911 Supply Inc	Invoice - #INV-2-24459	Uniform - Dept Issue	\$187.15	64265	12/13/2022	001-000-000-521-20-22-00	Uniforms
911 Supply Inc	Invoice - #INV-2-24460	Uniform - Hadland	\$47.35	64265	12/13/2022	001-000-000-521-20-22-00	Uniforms
911 Supply Inc	Invoice - #INV-2-24408	Uniform - Dept Issue	\$93.58	64265	12/13/2022	001-000-000-521-20-22-00	Uniforms
			\$358.36				
Adamson Police Products	Invoice - #INV387583	Ammo/Firearm Supplies	\$3,675.00	64266	12/13/2022	001-000-000-521-20-31-60	Ammo/Range (Targets, etc)
			\$3,675.00				
Alexander Gow Fire Equipment Co.	Invoice - #12464354	Troubleshoot DACT Line Issues	\$926.10	64267	12/13/2022	001-000-000-518-30-48-00	Repairs/maint-City Hall Bldg
			\$926.10				
AT&T Mobility	Invoice - #287287975246X11272022	Patrol Car Connection	\$1,583.87	64268	12/13/2022	001-000-000-521-20-42-00	Communications (phone,Pager)
			\$1,583.87				
Bellevue, City of	42569	2022 ARCH Payment	\$25,459.00	64321	12/30/2022	001-000-000-551-10-40-00	Public Housing Services - ARCH
			\$25,459.00				
BlueLine Group LLC, The	Invoice - #25020	Zoning Code Review	\$1,475.00	64269	12/13/2022	401-000-000-558-60-41-01	Planning Consultant
			\$1,475.00				
BRC Acoustics & Audiovisual Design	Invoice - #26939	Sound Test Services	\$443.44	64270	12/13/2022	401-000-000-558-60-41-08	Sound Testing Consultant
			\$443.44				
Buenavista Services, Inc	Invoice - #10260	Janitorial Services at Park	\$1,158.62	64271	12/13/2022	001-000-000-518-30-48-00	Repairs/maint-City Hall Bldg
Buenavista Services, Inc	Invoice - #10261	Janitorial Services at Post Office	\$2,037.75	64271	12/13/2022	001-000-000-518-30-48-00	Repairs/maint-City Hall Bldg
			\$3,196.37				
Car Wash Enterprises	Invoice - #October 2022	PD Car Wash	\$24.00	64272	12/13/2022	001-000-000-521-20-32-00	Vehicle Expenses-Gas, Car Wash
			\$24.00				
Carquest Auto Parts Stores	Invoice - #2417-526635	Vehicle Gear Oil/Motor Oil	\$52.31	64273	12/13/2022	001-000-000-576-80-32-00	Vehicle Fuel & Lube
			\$52.31				
Centurylink	For Services from November 17 through	PD Phone/Fax	\$489.26	64274	12/13/2022	001-000-000-521-20-42-00	Communications (phone,Pager)
			\$489.26				
Certified Laboratories	7907755	Shop Cleaning Supplies	\$630.12	64322	12/30/2022	001-000-000-576-80-31-00	Operating Supplies
			\$630.12				
Comcast	For Services from December 7, 2022 through	1000 LWB NE Camera	\$245.36	64275	12/13/2022	001-000-000-521-20-48-20	Repairs & Maint- HW/SW Maint
			\$245.36				
CREA Affiliates, LLC	Invoice - #WMD22107 - 002	Comp Plan Update	\$36,797.66	64276	12/13/2022	401-000-000-558-60-41-01	Planning Consultant
CREA Affiliates, LLC	WMD22107-003	2024 Periodic Comp. Plan Update	\$21,947.39	64323	12/30/2022	401-000-000-558-60-41-01	Planning Consultant
			\$58,745.05				
Crime Stoppers of Puget Sound	Invoice - #CSOPS231029	2023 Crime Stoppers Dues	\$580.39	64277	12/13/2022	001-000-000-521-20-49-40	Dues,Subscriptions,Memberships
			\$580.39				
Crystal And Sierra Springs-Admin	Invoice - #11037150 120322	CH Drinking Water	\$227.39	64310	12/15/2022	001-000-000-518-10-31-00	Office And Operating Supplies
			\$227.39				
Crystal And Sierra Springs-PW	Invoice - #5291929 120322	PW Drinking Water	\$2.63	64278	12/13/2022	001-000-000-576-80-31-00	Operating Supplies
			\$2.63				
CSPA Interlocal	Invoice - #2023-Medina	Annual Dues CSPA	\$400.00	64279	12/13/2022	001-000-000-521-20-49-40	Dues,Subscriptions,Memberships
			\$400.00				
CWA Consultants	Invoice - #22-483	Building Plan Review Services	\$330.00	64280	12/13/2022	401-000-000-558-60-41-00	Professional Services
			\$330.00				
Dooley Enterprises, Inc.	Invoice - #26771	PD Ammo Return	\$135.16	64281	12/13/2022	001-000-000-521-20-31-60	Ammo/Range (Targets, etc)
			\$135.16				
Eastside Public Safety Communications	Invoice - #10988	December 2022 Radio Access	\$495.39	64282	12/13/2022	001-000-000-521-20-41-20	Dispatch-EPSCA
			\$495.39				
Gray & Osborne, Inc.	Invoice - #6/Project No - #22464.00	NPDES Assistances	\$476.64	64283	12/13/2022	101-000-000-542-30-41-03	NPDES Grant
Gray & Osborne, Inc.	Invoice - #12/Project No - #20597.00	NPDES Compliance Services	\$424.83	64283	12/13/2022	101-000-000-542-30-41-03	NPDES Grant
Gray & Osborne, Inc.	Invoice - #7/Project No - #22503.00	2205 LPR System	\$4,235.94	64283	12/13/2022	307-000-000-595-30-63-01	Street Improvements, Overlays
Gray & Osborne, Inc.	Invoice - #5/Project No - #22488.00	NE 7th St Overlay PE	\$197.90	64283	12/13/2022	307-000-000-595-30-63-01	Street Improvements, Overlays
Gray & Osborne, Inc.	Invoice - #7/Project No - #22488.01	NE 7th St Overlay PE	\$188.60	64283	12/13/2022	307-000-000-595-30-63-01	Street Improvements, Overlays

Gray & Osborne, Inc.	Invoice - #6/Project No - #22512.00	General Engineering Services	\$884.69	64283	12/13/2022	307-000-000-595-30-63-02	Storm Sewer Improvements
Gray & Osborne, Inc.	Invoice - #5/Project No - #22427.01	Grading and Drainage Consulting	\$198.63	64283	12/13/2022	401-000-000-558-60-41-07	Engineering Consultant
Gray & Osborne, Inc.	Invoice - #11/Project No - #21427.26	Grading and Drainage Consulting	\$198.63	64283	12/13/2022	401-000-000-558-60-41-07	Engineering Consultant
Gray & Osborne, Inc.	Invoice - #10/Project No - #21427.14	Grading and Drainage Consulting	\$198.63	64283	12/13/2022	401-000-000-558-60-41-07	Engineering Consultant
Gray & Osborne, Inc.	Invoice - #12/Project No - #22427.00	Grading and Drainage Consulting	\$1,418.79	64283	12/13/2022	401-000-000-558-60-41-07	Engineering Consultant
Gray & Osborne, Inc.	Invoice - #5/Project No - #21427.25	Grading and Drainage Consulting	\$139.86	64283	12/13/2022	401-000-000-558-60-41-07	Engineering Consultant
Gray & Osborne, Inc.	Invoice - #4/Project No - #22427.17	Grading and Drainage Consulting	\$264.84	64283	12/13/2022	401-000-000-558-60-41-07	Engineering Consultant
Gray & Osborne, Inc.	Invoice - #2/Project No - #22427.22	Grading and Drainage Consulting	\$213.51	64283	12/13/2022	401-000-000-558-60-41-07	Engineering Consultant
Gray & Osborne, Inc.	Invoice - #1/Project No - #22427.23	Grading and Drainage Consulting	\$331.05	64283	12/13/2022	401-000-000-558-60-41-07	Engineering Consultant
Gray & Osborne, Inc.	Invoice - #3/Project No - #21427.20	Grading and Drainage Consulting	\$66.21	64283	12/13/2022	401-000-000-558-60-41-07	Engineering Consultant
Gray & Osborne, Inc.	Invoice - #16/Project No - #20425.10	Grading and Drainage Consulting	\$272.28	64283	12/13/2022	401-000-000-558-60-41-07	Engineering Consultant
Gray & Osborne, Inc.	Invoice - #7/Project No - #22427.05	Grading and Drainage Consulting	\$215.33	64283	12/13/2022	401-000-000-558-60-41-07	Engineering Consultant
Gray & Osborne, Inc.	Invoice - #10/Project No - #20425.23	Grading and Drainage Consulting	\$132.42	64283	12/13/2022	401-000-000-558-60-41-07	Engineering Consultant
			\$10,058.78				
Hermanson Company, LLP	Invoice - #8032296	CH HVAC Maintenance	\$2,067.40	64284	12/13/2022	001-000-000-518-30-48-00	Repairs/maint-City Hall Bldg
Hermanson Company, LLP	Invoice - #8032295	Thermistor Repair	\$1,237.69	64284	12/13/2022	001-000-000-518-30-48-00	Repairs/maint-City Hall Bldg
			\$3,305.09				
Home Depot Credit Services	November 2022 Screws for Shop Stairs	November 2022 Screws for Shop	\$307.21	64285	12/13/2022	001-000-000-576-80-31-00	Operating Supplies
Home Depot Credit Services	December 2022 Trailer Towing Lights	December 2022 Trailer Towing	\$33.01	64285	12/13/2022	101-000-000-542-30-31-00	Operating & Maintenance Supplies
			\$340.22				
Horticultural Elements, Inc.	Invoice - #7149	84th Ave NE Median Maintenance	\$4,943.49	64286	12/13/2022	101-000-000-542-30-41-00	Professional Services
			\$4,943.49				
JR Mailing Services, Inc.	Invoice - #23778	Winter Newsletter Mailing	\$756.60	64287	12/13/2022	001-000-000-518-10-49-30	Postcard, Public information
			\$756.60				
King County Treasury	Invoice - #11013091	KC INET	\$375.00	64288	12/13/2022	001-000-000-518-80-41-50	Technical Services, Software Services
King County Treasury	Invoice - #11012982	KCIT October 2022 Contract	\$375.00	64288	12/13/2022	001-000-000-518-80-41-50	Technical Services, Software Services
			\$750.00				
Kirkland Municipal Court	Invoice - #NOV22MED	October 2022 Filing Fees	\$541.13	64289	12/13/2022	001-000-000-512-50-40-10	Municipal Court-Traffic/NonTrf
			\$541.13				
Lexipol LLC	Invoice - #INVLEX13959	Lexipol Manual - Annual Fee	\$4,544.77	64290	12/13/2022	001-000-000-521-20-49-41	Lexipol Manuals
			\$4,544.77				
LexisNexis Risk Management - Account	Invoice - #1011660-20221031	Investigative Tool	\$116.81	64291	12/13/2022	001-000-000-521-20-41-00	Professional Services
			\$116.81				
Mac Towing	Invoice - #22-11-35725	Investigative Purposes	\$377.53	64292	12/13/2022	001-000-000-521-20-41-00	Professional Services
			\$377.53				
Mercer Island, City of	Invoice - #004512	2022 Marine Patrol Agreement	\$88,000.00	64293	12/13/2022	001-000-000-521-20-41-40	Marine Patrol Services
			\$88,000.00				
Moberly & Roberts, PLLC	Invoice - #1072	November 2022 Prosecution	\$4,000.00	64294	12/13/2022	001-000-000-512-50-41-10	Prosecuting Attorney
			\$4,000.00				
Motorola	Invoice - #8281501732	PD Phones	\$249.97	64295	12/13/2022	001-000-000-521-20-42-00	Communications (phone,Pager)
Motorola	Invoice - #8281510511	PD Phones	\$520.82	64295	12/13/2022	001-000-000-521-20-42-00	Communications (phone,Pager)
			\$770.79				
Nations, Dawn	December 2022 Nations Expense	Nothing Bundt Cakes - PD	\$156.00	EFT Payment 12/13/2022	12/13/2022	001-000-000-518-10-49-10	Miscellaneous
			\$156.00				
Ogden Murphy Wallace	Invoice - #870290	City Attorney	\$135.00	64296	12/13/2022	001-000-000-515-41-40-00	City Attorney
Ogden Murphy Wallace	Invoice - #870285	City Attorney	\$2,429.00	64296	12/13/2022	001-000-000-515-41-40-00	City Attorney
Ogden Murphy Wallace	Invoice - #870281	City Attorney	\$4,572.00	64296	12/13/2022	001-000-000-515-41-40-00	City Attorney
Ogden Murphy Wallace	Invoice - #870289	City Attorney	\$1,296.00	64296	12/13/2022	001-000-000-515-41-40-00	City Attorney
Ogden Murphy Wallace	Invoice - #870288	City Attorney	\$1,530.00	64296	12/13/2022	001-000-000-515-41-40-00	City Attorney
Ogden Murphy Wallace	Invoice - #870280	City Attorney	\$486.00	64296	12/13/2022	001-000-000-515-41-40-00	City Attorney
Ogden Murphy Wallace	Invoice - #870287	City Attorney	\$1,422.00	64296	12/13/2022	001-000-000-515-41-40-00	City Attorney
Ogden Murphy Wallace	Invoice - #870283	City Attorney	\$315.00	64296	12/13/2022	001-000-000-515-41-40-00	City Attorney
Ogden Murphy Wallace	Invoice - #870286	City Attorney	\$1,728.00	64296	12/13/2022	001-000-000-515-41-40-00	City Attorney
Ogden Murphy Wallace	Invoice - #870279	City Attorney	\$108.00	64296	12/13/2022	001-000-000-515-41-40-00	City Attorney
Ogden Murphy Wallace	Invoice - #870282	City Attorney	\$2,331.00	64296	12/13/2022	001-000-000-515-41-40-00	City Attorney
			\$16,352.00				
Pro-shred	Invoice - #58537	CH Shredding Services	\$55.66	64311	12/15/2022	001-000-000-518-10-41-00	Professional Services
			\$55.66				
Puget Sound Energy	For Services from October 19 through	CH Utilities Gas/Electricity	\$1,630.18	64312	12/15/2022	001-000-000-518-10-47-00	Utility Serv-Elec,Water,Waste

Puget Sound Energy	For Services from October 20 through	NE 10th St Camera	\$69.63	64297	12/13/2022	001-000-000-521-20-48-20	Repairs & Maint- HW/SW Maint
Puget Sound Energy	For Services from October 20 through	ODE Camera	\$74.88	64297	12/13/2022	001-000-000-521-20-48-20	Repairs & Maint- HW/SW Maint
Puget Sound Energy	For Services from October 19 through	82nd Ave NE Camera	\$65.46	64297	12/13/2022	001-000-000-521-20-48-20	Repairs & Maint- HW/SW Maint
Puget Sound Energy	For Services from October 20 through	View Point Park Power	\$31.74	64297	12/13/2022	001-000-000-576-80-47-00	Utilities
Puget Sound Energy	Limited Use Permit 25-25-04-0111	Limited Use Permit 25-25-04-0111	\$500.00	64297	12/13/2022	001-000-000-576-80-49-00	Miscellaneous, annual lease
Puget Sound Energy	For Services from October 19 through	Street Light Power	\$166.02	64297	12/13/2022	101-000-000-542-63-41-00	Street Light Utilities
Puget Sound Energy	For Services from October 1 through	Street Light Power	\$0.15	64297	12/13/2022	101-000-000-542-63-41-00	Street Light Utilities
			\$2,538.06				
Seattle Times, The	Invoice - #30731	Legal Notices	\$1,028.67	64313	12/15/2022	001-000-000-518-10-44-00	Advertising
			\$1,028.67				
Sound View Strategies, LLC	Invoice - #2809	SR520 Consultant	\$3,000.00	64298	12/13/2022	001-000-000-513-10-41-00	Professional Services
			\$3,000.00				
Spot-On Print & Design	Invoice - #57743	Winter Newsletter	\$649.59	64314	12/15/2022	001-000-000-518-10-49-30	Postcard, Public information
			\$649.59				
Staples Business Advantage	Invoice - #3522214260	CH Office Supplies	\$25.86	64315	12/15/2022	001-000-000-518-10-31-00	Office And Operating Supplies
Staples Business Advantage	Invoice - #3522214259	CH Office Supplies	\$48.07	64315	12/15/2022	001-000-000-518-10-31-00	Office And Operating Supplies
Staples Business Advantage	Invoice - #3522214258	CH Office Supplies	\$35.00	64315	12/15/2022	001-000-000-518-10-31-00	Office And Operating Supplies
Staples Business Advantage	Invoice - #3524578968	PD Office Supplies	\$43.98	64299	12/13/2022	001-000-000-521-20-31-00	Office Supplies
Staples Business Advantage	Invoice - #3524578967	PD Office Supplies	\$109.11	64299	12/13/2022	001-000-000-521-20-31-00	Office Supplies
			\$262.02				
Stewart MacNichols Harmell, Inc., PS	November 2022 Public Defender Services	Public Defender Services	\$575.00	64300	12/13/2022	001-000-000-515-91-40-00	Public Defender
			\$575.00				
TIG Technology Integration Group	Invoice - #5488190	Cable Cleanup/Server Rm	\$279.65	64316	12/15/2022	001-000-000-518-80-31-00	IT HW, SW, Operating Supplies
TIG Technology Integration Group	Invoice - #60787	IT Managed Services	\$10,619.78	64316	12/15/2022	001-000-000-518-80-41-50	Technical Services, Software Services
TIG Technology Integration Group	Invoice - #60787	IT Services	\$1,956.94	64316	12/15/2022	401-000-000-518-80-41-50	Technical Services, Software Services
			\$12,856.37				
Tree Frog LLC	Invoice - #1612	Arborist Consultant	\$2,287.50	64301	12/13/2022	401-000-000-558-60-41-50	Landscape Consultant
			\$2,287.50				
US Bank	December 2022 Kellerman CC Statement	SCA Annual Dinner Meeting -	\$75.00	EFT Payment 1/5/2023	12/31/2022	001-000-000-511-60-43-00	Travel & Training
US Bank	December 2022 Nations CC Statement	New Christmas Tree for City Hall	\$200.36	EFT Payment 1/5/2023	12/31/2022	001-000-000-518-10-31-00	Office And Operating Supplies
US Bank	December 2022 Nations CC Statement	Postage Certified Letter	\$16.90	EFT Payment 1/5/2023	12/31/2022	001-000-000-518-10-42-00	Postage/Telephone
US Bank	December 2022 Nations CC Statement	Postage Certified Letter	\$9.90	EFT Payment 1/5/2023	12/31/2022	001-000-000-518-10-42-00	Postage/Telephone
US Bank	December 2022 Wagner CC Statement	Stamps for Outgoing Checks	\$24.00	EFT Payment 1/5/2023	12/31/2022	001-000-000-518-10-42-00	Postage/Telephone
US Bank	December 2022 Kellerman CC Statement	Public Storage	\$947.00	EFT Payment 1/5/2023	12/31/2022	001-000-000-518-30-45-00	Facility Rental
US Bank	December 2022 Osada CC Statement	Post Office Water Leak Repair	\$1,488.38	EFT Payment 1/5/2023	12/31/2022	001-000-000-518-30-48-00	Repairs/maint-City Hall Bldg
US Bank	December 2022 Kellerman CC Statement	Web Services for Internet Logs	\$0.29	EFT Payment 1/5/2023	12/31/2022	001-000-000-518-80-41-50	Technical Services, Software Services
US Bank	December 2022 Sass CC Statement	Sass - Uniforms	\$13.80	EFT Payment 1/5/2023	12/31/2022	001-000-000-521-20-22-00	Uniforms
US Bank	December 2022 Gidlof CC Statement	Uniforms - Boots	\$69.47	EFT Payment 1/5/2023	12/31/2022	001-000-000-521-20-22-00	Uniforms
US Bank	December 2022 Gidlof CC Statement	Tool Pouch Holster	\$31.87	EFT Payment 1/5/2023	12/31/2022	001-000-000-521-20-22-00	Uniforms
US Bank	December 2022 Gidlof CC Statement	Uniforms - Boots	\$69.47	EFT Payment 1/5/2023	12/31/2022	001-000-000-521-20-22-00	Uniforms
US Bank	December 2022 Gidlof CC Statement	ZTE USB	(\$60.54)	EFT Payment 1/5/2023	12/31/2022	001-000-000-521-20-31-00	Office Supplies
US Bank	December 2022 Gidlof CC Statement	Tresspass Letters	\$152.87	EFT Payment 1/5/2023	12/31/2022	001-000-000-521-20-31-00	Office Supplies
US Bank	December 2022 Gidlof CC Statement	Calculator	\$12.96	EFT Payment 1/5/2023	12/31/2022	001-000-000-521-20-31-00	Office Supplies
US Bank	December 2022 Gidlof CC Statement	MGM Grand-Tasercon	\$130.39	EFT Payment 1/5/2023	12/31/2022	001-000-000-521-20-43-00	Travel & Training
US Bank	December 2022 Gidlof CC Statement	Tasercon - Gidlof	\$217.20	EFT Payment 1/5/2023	12/31/2022	001-000-000-521-20-43-00	Travel & Training
US Bank	December 2022 Gidlof CC Statement	Tasercon - Gidlof	\$115.98	EFT Payment 1/5/2023	12/31/2022	001-000-000-521-20-43-00	Travel & Training
US Bank	December 2022 Anderson CC Statement	Training - Anderson	\$150.00	EFT Payment 1/5/2023	12/31/2022	001-000-000-521-20-43-00	Travel & Training
US Bank	December 2022 Sass CC Statement	IACP Membership Dues	\$190.00	EFT Payment 1/5/2023	12/31/2022	001-000-000-521-20-49-40	Dues,Subscriptions,Memberships
US Bank	December 2022 Gidlof CC Statement	Dues - Sunita	\$125.00	EFT Payment 1/5/2023	12/31/2022	001-000-000-521-20-49-40	Dues,Subscriptions,Memberships
US Bank	December 2022 Gidlof CC Statement	Dues	\$190.00	EFT Payment 1/5/2023	12/31/2022	001-000-000-521-20-49-40	Dues,Subscriptions,Memberships
US Bank	December 2022 Crickmore CC Statement	Water Pump Lubricant and Bucket	\$179.74	EFT Payment 1/5/2023	12/31/2022	001-000-000-576-80-31-00	Operating Supplies
US Bank	December 2022 Crickmore CC Statement	Extension Ladder Replacement	\$17.47	EFT Payment 1/5/2023	12/31/2022	001-000-000-576-80-31-00	Operating Supplies
US Bank	December 2022 Crickmore CC Statement	Lumber and Fasteners for Shop	\$2,260.33	EFT Payment 1/5/2023	12/31/2022	001-000-000-576-80-31-00	Operating Supplies
US Bank	December 2022 Crickmore CC Statement	Drill Bit Set	\$27.51	EFT Payment 1/5/2023	12/31/2022	001-000-000-576-80-31-00	Operating Supplies
US Bank	December 2022 Crickmore CC Statement	Diesel Fuel	\$300.00	EFT Payment 1/5/2023	12/31/2022	001-000-000-576-80-32-00	Vehicle Fuel & Lube
US Bank	December 2022 Crickmore CC Statement	Diesel Fuel	\$261.80	EFT Payment 1/5/2023	12/31/2022	001-000-000-576-80-32-00	Vehicle Fuel & Lube
US Bank	December 2022 Crickmore CC Statement	Propane	\$60.87	EFT Payment 1/5/2023	12/31/2022	001-000-000-576-80-32-00	Vehicle Fuel & Lube
US Bank	December 2022 Osada CC Statement	Disel Fuel for Plow Truck	\$100.00	EFT Payment 1/5/2023	12/31/2022	001-000-000-576-80-32-00	Vehicle Fuel & Lube
US Bank	December 2022 Crickmore CC Statement	Butane for Torch	\$15.25	EFT Payment 1/5/2023	12/31/2022	001-000-000-576-80-41-00	Professional Services

US Bank	December 2022 Crickmore CC Statement	Electric Power Wall Heaters	\$396.24	EFT Payment 1/5/2023	12/31/2022	001-000-000-576-80-41-00	Professional Services
US Bank	December 2022 Crickmore CC Statement	Pesticide License	\$50.00	EFT Payment 1/5/2023	12/31/2022	001-000-000-576-80-43-00	Travel & Training
US Bank	December 2022 Crickmore CC Statement	Pesticide License Conv. Fee	\$1.50	EFT Payment 1/5/2023	12/31/2022	001-000-000-576-80-43-00	Travel & Training
US Bank	December 2022 Crickmore CC Statement	Uniforms	\$264.20	EFT Payment 1/5/2023	12/31/2022	101-000-000-542-30-22-00	Uniforms
US Bank	December 2022 Crickmore CC Statement	Uniforms	\$46.89	EFT Payment 1/5/2023	12/31/2022	101-000-000-542-30-22-00	Uniforms
US Bank	December 2022 Osada CC Statement	F550 Cooling System Repair	\$296.34	EFT Payment 1/5/2023	12/31/2022	101-000-000-542-30-48-00	Equipment Maintenance
US Bank	December 2022 Crickmore CC Statement	Sign Tape	\$1,369.28	EFT Payment 1/5/2023	12/31/2022	101-000-000-542-64-41-00	Traffic Control Devices
US Bank	December 2022 Wilcox CC Statement	2023 Membership Dues	\$95.00	EFT Payment 1/5/2023	12/31/2022	401-000-000-558-60-49-00	Dues, Subscriptions, Memberships
US Bank	December 2022 Wilcox CC Statement	Regular Certified Mail for Code	\$15.70	EFT Payment 1/5/2023	12/31/2022	401-000-000-558-60-49-10	Miscellaneous
US Bank	December 2022 Wilcox CC Statement	Regular Certified Mail for Code	\$16.90	EFT Payment 1/5/2023	12/31/2022	401-000-000-558-60-49-10	Miscellaneous
US Bank	December 2022 Wilcox CC Statement	Regular Certified Mail for Code	\$7.85	EFT Payment 1/5/2023	12/31/2022	401-000-000-558-60-49-10	Miscellaneous
US Bank	December 2022 Wilcox CC Statement	Regular Certified Mail for Code	\$25.35	EFT Payment 1/5/2023	12/31/2022	401-000-000-558-60-49-10	Miscellaneous
			\$9,978.52				
US Bank Voyager Fleet Sys.	Invoice - #8693624262246	PD Fuel	\$1,616.73	EFT Payment 1/5/2023	12/31/2022	001-000-000-521-20-32-00	Vehicle Expenses-Gas, Car Wash
			\$1,616.73				
Utilities Underground Location Ctr	Invoice - #2110181	Utility Locate Services	\$59.34	64302	12/13/2022	101-000-000-542-30-47-00	Utility Services
			\$59.34				
WA ST Auditor's Office	Invoice - #L151455	2021 Annual Audit	\$7,314.30	64303	12/13/2022	001-000-000-514-20-42-00	Intergvtml Prof Serv-Auditors
			\$7,314.30				
WA ST Dept of Ecology	Invoice - #23-WAR045527-1	Stormwater Monitoring	\$2,856.00	64304	12/13/2022	101-000-000-542-30-41-03	NPDES Grant
			\$2,856.00				
WA ST Dept of Transportation	Invoice - #FB91017005231	PW Vehicles	\$396.18	64305	12/13/2022	001-000-000-576-80-32-00	Vehicle Fuel & Lube
WA ST Dept of Transportation	Invoice - #FB91017005231	Building Inspection Vehicle	\$51.38	64305	12/13/2022	401-000-000-558-60-32-00	Vehicle Expenses - Gas, Oil, Maint.
			\$447.56				
Washington State Patrol	Invoice - #I23002708	CPL Backgrounds	\$26.50	64306	12/13/2022	631-000-000-589-30-02-00	WA ST Patrol-Gun-Fbi
			\$26.50				
Willard's Pest Control	Invoice - #396054	PD Rodent Services	\$204.05	64307	12/13/2022	001-000-000-518-30-48-00	Repairs/maint-City Hall Bldg
			\$204.05				
Grand Total			\$281,745.59	AP Total			
Payroll	December 2022 Payroll	Payroll	\$18,585.91		12/31/2022	001-000-000-513-10-11-00	Salaries, Wages & Benefits
Payroll	December 2022 Payroll	Payroll	\$20,376.32		12/31/2022	001-000-000-514-20-11-00	Salaries, Wages & Benefits
Payroll	December 2022 Payroll	Payroll	\$40,503.98		12/31/2022	001-000-000-518-10-11-00	Salaries, Wages & Benefits
Payroll	December 2022 Payroll	Payroll	\$198,598.53		12/31/2022	001-000-000-521-20-11-00	Salaries, Wages & Benefits
Payroll	December 2022 Payroll	Payroll	\$36,054.80		12/31/2022	001-000-000-576-80-11-00	Salaries, Wages & Benefits
Payroll	December 2022 Payroll	Payroll	\$24,036.76		12/31/2022	101-000-000-542-30-11-00	Salaries, Wages & Benefits
Payroll	December 2022 Payroll	Payroll	\$51,527.22		12/31/2022	401-000-000-558-60-11-00	Salaries, Wages & Benefits
			\$389,683.52	Payroll Total			
			\$671,429.11	Grand Total			



MEDINA, WASHINGTON

MEDINA CITY COUNCIL REGULAR MEETING

Hybrid - Virtual/In-Person
Monday, December 12, 2022 – 5:00 PM

MINUTES

1. REGULAR MEETING - CALL TO ORDER / ROLL CALL

Mayor Rossman called the regular meeting to order in the Medina Council Chambers at 5:02 p.m.

PRESENT

Mayor Jessica Rossman (left at 6:04 p.m.)
Deputy Mayor Randy Reeves
Councilmember Cynthia Adkins
Councilmember Jennifer Garone (in-person until 6:04 p.m. – online from 6:14 p.m. to adjournment)
Councilmember Harini Gokul (online)
Councilmember Mac Johnston
Councilmember Bob Zook

ABSENT

None

STAFF PRESENT

Burns, Missall, Wagner, Osada, Wilcox, Sass, Keyser, and Kellerman

2. APPROVAL OF MEETING AGENDA

By consensus, the meeting agenda was approved as presented.

3. PUBLIC COMMENT PERIOD

Mayor Rossman opened the public comment period. There were no speakers. Subsequently, the public comment was closed.

4. PRESENTATIONS

4.1 Comprehensive Plan Update - Joint meeting with Planning Commission

Anindita with Crea Affiliates gave a presentation on the upcoming City of Medina Comprehensive Plan update project. Council and Commissioners asked questions and staff responded.

ACTION: By consensus, Council directed staff to add Citizen Committee discussion to their January 2023 City Council meeting.

****10 Minute Break****

4.2 Reports and announcements from Park Board, Planning Commission, Emergency Preparedness, and City Council.

Director of Public Works Ryan Osada announced that the Christmas Ships Parade will be coming to Medina Beach Park on Thursday, December 22, 2022, at 5:35 pm and the Park Board is looking at a schedule change starting 2023 to meet about six times a year. Further discussion and a vote of the Park Board will be on the agenda at their January 2023 meeting.

5. CITY MANAGER'S REPORT

Director of Development Services Steve Wilcox reported that T-Mobile submitted their first application for a small wireless facility as part of the approved franchise agreement. Council will be adopting the 2021 State Building Code by July 2023.

Director of Public Works Ryan Osada reported that the city met the 80% requirement for stormwater inspections. Awarded three grants from TIB

Director of Finance and HR reported that the city is wrapping up the 2021 audit.

Police Chief Jeff Sass reported that the city is moving forward with Flock for the license plate reader system.

City Manager Steve Burns reported that Overlake Golf and Country Club will be submitting a petition for a street vacation.

6. CONSENT AGENDA

ACTION: Motion Adkins second Johnston and carried by a 6:0 (Rossman absent) vote; Council approved the Consent Agenda as presented.

6.1 November 2022, Check Register

Recommendation: Approve.

Staff Contact: Ryan Wagner, Finance Director

6.2 Approved Park Board Meeting Minutes of September 19, 2022

Recommendation: Receive and file.

Staff Contact: Dawn Nations, Deputy City Clerk

6.3 Approved Planning Commission Meeting Minutes of October 25, 2022

Recommendation: Receive and file.

Staff Contact: Stephanie Keyser, AICP, Planning Manager

6.4 Draft Meeting Minutes of November 14, 2022

Recommendation: Adopt Minutes.

Staff Contact: Aimee Kellerman, CMC, City Clerk

7. LEGISLATIVE HEARING

None.

8. PUBLIC HEARING

8.1 Planning Commission Annual Code Update

Recommendation: Approve.

Staff Contact: Stephanie Keyser, Planning Manager

Planning Manager Stephanie Keyser walked Council through Planning Commission's proposed annual code amendments.

Deputy Mayor Reeves opened the public hearing. There were no speakers. The public hearing was closed.

ACTION: Motion Adkins second Johnston and carried by a 6:0 (Rossman absent) vote; Council adopted Ordinance No. 1017.

9. CITY BUSINESS

9.1 Letter of Support - Mercer Island Marine Patrol Funding

Recommendation: Approve.

Staff Contact: Stephen R. Burns, City Manager

City Manager Burns gave a summary of the Letter of Support for City of Mercer Island Marine Patrol.

ACTION: Motion Adkins to support the City of Mercer Island's request for legislative backing for an appropriation request in the upcoming State of Washington Legislative Session for funding to replace two of the Mercer Island marine patrol vessels and direct staff to bring a Resolution of support at the January 2023 City Council Meeting. This was seconded by Johnston and carried by a 6:0 (Rossman absent) vote.

9.2 Soliciting Permit Recommendations

Recommendation: Discussion and direction.

Staff Contact: Jeff Sass, Police Chief

Medina Police Chief Sass provided Council with recommendations for soliciting permits using the Town of Hunts Point model.

ACTION: Motion Zook second Adkins to instruct the Police Chief and City Attorney to draft a proposal and come back to Council at the January meeting for adoption. Motion carried by a 6:0 (Rossman absent) vote.

10. REQUESTS FOR FUTURE AGENDA ITEMS AND COUNCIL ROUND TABLE

Councilmember Garone volunteered to be the city's voting rep for the SCA North Caucus meeting on December 15, 2022.

11. PUBLIC COMMENT

Deputy Mayor Reeves opened the public comment period. There were no speakers. Subsequently, public comment was closed.

12. **ADJOURNMENT**

Motion Zook second Adkins; Council adjourned the regular meeting at 7:08 p.m.

DRAFT



MEDINA, WASHINGTON

AGENDA BILL

January 9, 2023

Subject: Resolution Supporting Mercer Island Marine Patrol Funding

Category: Consent

Staff Contact: Stephen R. Burns, City Manager

Summary

On November 11, 2022, the City of Medina received a letter from the City of Mercer Island requesting legislative support for an appropriation request in the upcoming State of Washington Legislative Session for funding to replace two of the Mercer Island marine patrol vessels. In part, *"We are very pleased to be offering marine patrol services to the City of Medina and we are writing to ask you to support Representative Tana Senn's appropriation request in the upcoming State Legislative Session for funding to replace two of the Mercer Island marine patrol vessels."*

At the December 12, 2022, Medina Council Meeting, City Staff was given direction to prepare a Council Resolution supporting Mercer Island's request. City Attorney Scott Missall has prepared the attached resolution for approval.

Attachments

1. Council Resolution No. 429 supporting Mercer Island's request
2. Mercer Island Marine Patrol Vessel Replacement Request

Budget/Fiscal Impact: Cost savings for the city with a lower shared operational cost.

Recommendation: Adopt Resolution No. 429.

City Manager Approval:

Proposed Council Motion: *"I move to support the Council Resolution No. 429 for the City of Mercer Island's request for legislative backing for an appropriation request in the upcoming State of Washington Legislative Session for funding to replace two of the Mercer Island marine patrol vessels."*

CITY OF MEDINA, WASHINGTON

RESOLUTION NO. 429

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MEDINA, WASHINGTON,
SUPPORTING THE CITY OF MERCER ISLAND REQUEST TO THE WASHINGTON
STATE LEGISLATURE TO MAKE STATE FUNDING AVAILABLE TO MERCER
ISLAND IN 2023 FOR THE REPLACEMENT OF TWO AGED MARINE PATROL
VESSELS CURRENTLY SERVING THE CITY OF MEDINA, OTHER POINT CITIES
AND TOWNS, AND NEARBY CITIES**

WHEREAS, the City of Medina contracts with the City of Mercer Island for Marine Patrol services in Lake Washington, relying on Mercer Island to provide capable and up-to-date vessels and services for the benefit of Medina and all of its residents, children, parents and visitors; and

WHEREAS, Mercer Island has advised Medina of Mercer Island's need to replace two aging Marine Patrol vessels at an estimated cost of \$1.1 million so that it can continue providing Medina with the required and necessary Marine Patrol services; and

WHEREAS, Mercer Island has prepared and distributed to the State Legislature, City of Medina and the other Lake Washington communities it serves, a detailed legislative funding request explaining the need for assistance, set forth at **Attachment A** to this Resolution, incorporated herein by this reference; and

WHEREAS, the Medina City Council has reviewed said materials, finding Mercer Island's request to be in the State and public interest, and therefore supports and approves of Mercer Island's funding request to the Legislature; and

WHEREAS, the funds requested by Mercer Island would be expended to support and protect all the users of Lake Washington, providing necessary public health, safety and protection benefits beyond the residents of Medina and other Lake Washington communities;

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF MEDINA, WASHINGTON, RESOLVES AS FOLLOWS:

Section 1. Based on the foregoing facts and circumstances, the Medina City Council urges the State Legislature to take quick action granting and funding the City of Mercer Island request for Marine Patrol vessel replacement funds in the amount of \$1.1 million.

Section 2. The Council authorizes the City Clerk to forthwith distribute this Resolution to the Washington State Legislature and other relevant entities.

PASSED BY THE CITY COUNCIL OF THE CITY OF MEDINA ON JANUARY 9, 2023 BY A VOTE OF ____ FOR, ____ AGAINST, AND ____ ABSTAINING, AND SIGNED IN AUTHENTICATION THEREOF ON JANUARY 9, 2023.

APPROVED:

MAYOR, JESSICA ROSSMAN

ATTEST/AUTHENTICATED:

CITY CLERK, AIMEE KELLERMAN

Attachment A: Mercer Island Marine Patrol—Legislative Priority

FILED WITH THE CITY CLERK:
PASSED BY THE CITY COUNCIL:
RESOLUTION NO. 429



Mercer Island Marine Patrol – Legislative Priority

Support Representative Tana Senn in seeking State funding to replace the aging City Of Mercer Island Marine Patrol fleet

The City of Mercer Island requests \$1,100,000 in State funds to partially support the replacement of Mercer Island Police Department’s aging Marine Patrol vessels, a regional asset for the individuals who reside and recreate on Lake Washington.

The Mercer Island Police Department has maintained a state-certified Marine Patrol Unit since it was founded in 1982. At its founding, the unit became a regional asset as other cities on Lake Washington signed Interlocal Agreements for marine-related services for their respective cities. **Today, the Mercer Island Police Department has Interlocal Agreements with the cities of Medina, Bellevue, and Renton and the Towns of Yarrow Point and Hunts Point for their water-based services.** Mercer Island is also part of a larger regional public safety umbrella comprised of the Seattle Police Department’s Harbor Patrol, King County Sheriff’s Office Marine Patrol, and the Washington State Department of Fish and Wildlife. Lake Washington is a federal navigable waterway, and Mercer Island partners with the US Coast Guard for enforcement and maritime-related rescue operations.

The Washington State Department of Licensing reports that more than 237,000 recreational marine vessels are registered in the State of Washington. A study by the University of Washington indicates approximately 40,850 recreational marine vessels are registered in King County, with an additional 5,400 vessels from other counties moored within King County. In 2021, over 1,800 new recreational marine vessels were purchased in King County. The other large group of vessels, which is difficult to fully quantify, is the ever-growing number of human-powered watercraft such as kayaks, canoes, and stand-up paddleboards, representing an additional and particularly at-risk portion of the recreating public in Mercer Island’s jurisdiction.

Since its inception, the Mercer Island Marine Patrol Unit has dedicated its resources to public safety, education, maritime law enforcement, and public assistance on and off the water. The Police Department has **22 certified Marine Patrol Officers**, able to respond twenty-four hours a day, seven days a week, to emergency and routine calls for service. **Marine Patrol Officers patrol the waters of Lake Washington and the approximate 34 miles of shoreline comprising its operational jurisdiction.** Officers respond to emergency calls for vessel collisions, search and rescue missions, vessel, and shore accessible fire suppression, boating under the influence, and more routine calls such as disabled vessels, debris, and hazard removal.

Mercer Island, Marine Patrol vessels spend approximately 900 hours on patrol, which equates to more than 2,000 officer hours on the water. Marine Patrol Officers conduct 200-250 Vessel Safety Inspections, 300 plus vessel stops and contacts, 100 assists, and 100s of citizen contacts each year. In the off-season, the Marine Unit participates in a wide range of educational outreach through kindergarten water safety classes, public safety events, marine/boat shows, and news/radio/podcast interviews. **The Marine Unit supports the safety and security of significant state infrastructure, including the I-90 and SR-520 Bridges, Renton Municipal Airport, and the Sound Transit light rail system.**

Mercer Island’s current patrol vessel fleet consists of three vessels, two built in the 1990s and one in the early 2000s. With a life expectancy of approximately 20 years, two of these marine patrol vessels are experiencing increasing mechanical and other failures, challenging our important mission to provide critical water safety services and enforcement. Advancements in marine technology make newly purchased vessels safer, more ergonomic, and more reliable than our current fleet.

This request for legislative funding will support the replacement of one to two vessels and the associated equipment. Washington State manufacturers and laborers will design and build new vessels, putting the funds directly back into our local communities.



MEDINA, WASHINGTON

AGENDA BILL

Monday, January 9, 2023

Subject: Ordinance Approving New Solicitation and Permitting Regulations

Category: Ordinance

Staff Contact(s): Scott M. Missall, City Attorney; Jeffrey R. Sass, Chief of Police

Summary

At the request of the City Council, create a Municipal Code to establish and regulate peddler and solicitation activities. This creates a method which individuals will need to have a permit to be able to engage in peddler or solicitation activities in the City of Medina. This creates an opportunity for the Police Department to do background checks prior to allowing individuals to contact residents, set hours that individuals are authorized to contact households, and hold individuals accountable while in the City of Medina.

Attachment(s)

1. Ordinance No. 1018 - Ordinance Approving New Solicitation and Permitting Regulations
2. Draft Municipal code

Budget/Fiscal Impact: None

Recommendation: Adopt Ordinance No. 1018.

City Manager Approval:

Proposed Council Motion:

“I move to adopt Ordinance No. 1018 adding new Municipal Code Section 5.10 to Establish and Regulate Peddler and Solicitation Activities.”

Time Estimate: 10 minutes

Ordinance No. 1018

MEDINA CITY COUNCIL

AN ORDINANCE OF THE CITY OF MEDINA, WASHINGTON, ADOPTING NEW CHAPTER 5.10 TO THE MEDINA MUNICIPAL CODE TO ESTABLISH AND REGULATE PEDDLER AND SOLICITATION ACTIVITIES, PERMITTING PROCEDURES AND STANDARDS; REPEALING MEDINA'S EXISTING PEDDLER CODE; PROVIDING FOR SEVERABILITY; AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, existing Medina Municipal Code (MMC) Chapter 5.12. contains outdated policies and procedures regarding peddler and solicitation activities; and

WHEREAS, the Medina Police Department currently enforces the peddler and solicitation regulations of the Town of Hunts Point and is familiar with the scope, procedures, and application of said regulations; and

WHEREAS, the Medina Police Department has requested that the City Council adopt and establish new and updated peddler and solicitation policies, procedures, standards, and criteria modeled on the Town of Hunts Point regulations to simplify and enhance the Department's public safety responsibilities and better serve the City and its resident's needs; and

WHEREAS, the City Council has duly considered **Exhibit A** to this Ordinance, comprising a new MMC Chapter 5.10 entitled Peddler and Solicitation Activities, which chapter closely mirrors the Town of Hunt's Point regulations, and finds that such regulations will enhance the ability of the Medina Police Department to address peddler and solicitation activities in Medina, benefitting the City and its residents.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MEDINA, WASHINGTON, DOES ORDAIN AS FOLLOWS:

Section 1. Findings. The foregoing recitals are adopted as findings of fact in support of this Ordinance.

Section 2. Repeal of Existing MMC Ch. 5.12. MMC Chapter 5.12, originally adopted in 1988 to regulate peddlers and solicitors, is hereby repealed in its entirety.

Section 3. Adoption of New MMC Chapter 5.10. New MMC Chapter 5.10, entitled Peddler and Solicitation Activities, is hereby adopted into the Medina Municipal Code as set forth in attached **Exhibit A**, incorporated in full by this reference.

Section 4. Corrections. The City Clerk and codifiers of this Ordinance are authorized to make necessary corrections to this Ordinance, including but not limited to the correction of scrivener and clerical errors, references, ordinance numbering, section/subsection numbering and any references thereto.

Section 5. Severability. If any section, subsection, paragraph, sentence, clause, or phrase of this Ordinance is declared unconstitutional or invalid for any reason, such invalidity shall not affect the validity or effectiveness of the remaining portions of this Ordinance.

Section 6. Effective Date. This Ordinance or a summary thereof consisting of the title shall be published in the official newspaper of the City and shall take effect and be in full force five (5) days after such publication.

PASSED BY THE CITY COUNCIL OF THE CITY OF MEDINA ON THE 9th DAY OF JANUARY 2023 BY A VOTE OF FOR, AGAINST, AND ABSTAINING, AND IS SIGNED IN AUTHENTICATION OF ITS PASSAGE THE 9TH DAY OF JANUARY 2023.

Jessica Rossman, Mayor

Approved as to form:
Ogden Murphy Wallace, PLLC

Attest:

Scott M. Missall, City Attorney

Aimee Kellerman, City Clerk

PUBLISHED:
EFFECTIVE DATE:
ORDINANCE NO.: / AB

EXHIBIT A

**Medina Municipal Code
Chapter 5.10
Peddler and Solicitation Activities**

Sections:

- 5.10.010 Definition of peddler and solicitor.
- 5.10.020 Permit required – Exemptions.
- 5.10.030 Permit – Application.
- 5.10.040 Investigation of applicant – Issuance and denial of permit.
- 5.10.050 Permit – Exhibition.
- 5.10.060 Permit – Expiration.
- 5.10.070 Permit – Revocation.
- 5.10.080 Right of appeal.
- 5.10.090 Loud noises or speaking devices.
- 5.10.100 Use of streets.
- 5.10.110 Hours and notice.
- 5.10.120 Records.
- 5.10.130 Unlawful to peddle or solicit on posted premises.
- 5.10.140 Violation – Penalty.

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5.10.010 Definition of peddler and solicitor.

A peddler and/or solicitor are interchangeable labels and each is defined as follows:

- (1) All persons, both principals and agents, as well as employers and employees, who shall sell, offer for, or expose for sale, or who shall trade, deal or traffic in any personal property or services in the City by going from house to house or from place to place or by indiscriminately approaching individuals.
- (2) Sales by sample or for future delivery, and executory contracts of sale by solicitors or peddlers are embraced within subsection (1) of this section; provided, however, that this chapter is not applicable to any salesperson or canvasser who solicits trade from wholesale or retail dealers in the City.
- (3) Any person, both principals and agents, as well as employers and employees, who, while selling or offering for sale, any goods, wares, merchandise, or anything of value, stands in a doorway or on any unenclosed vacant lot, parcel of land, or in any other place not used by such person as a permanent place of business.

5.10.020 Permit required – Exemptions.

- (1) No person, corporation, partnership, or other organization shall engage in the business or activity of peddler within the City limits without first obtaining a permit as provided in this chapter. If an individual is acting as an agent for or employed by an individual, corporation, partnership, or other organization, both the individual and the employer or principal for whom the individual is peddling must obtain a permit as provided in this chapter.

(2) The following persons are eligible for an exemption to the permit requirements and/or fee provisions of this chapter as stated below:

- (a) Farmers who peddle agricultural, horticultural or farm products which they have actually grown, harvested or produced;
- (b) Any person who is specifically requested to call upon another for the purpose of displaying goods, literature or giving information about any article, service or product;
- (c) Charitable, religious, or nonprofit organizations or corporations which have received tax exempt status under Section 26 USC 501(c)(3) or other similar civic, charitable, or nonprofit organizations;
- (d) Newspaper carriers; provided, however, that any such person must first apply for an exemption on forms to be furnished by the Medina Police Department. Upon determination by the Medina Police Department that such person is exempt from the permit requirements of this chapter, a special permit shall be issued which must be carried by the person at all times the person is engaging in peddling in the City;
- (e) Bona fide candidates, campaign workers, and political committees campaigning on behalf of candidates or on ballot issues and persons soliciting signatures of registered voters on petitions to be submitted to any governmental agency;
- (f) Pursuant to RCW 73.04.050, every honorably discharged soldier, sailor or marine of the military or naval service of the United States, who is a resident of this state, shall not have to pay a fee for the permit.

5.10.030 Permit – Application.

- (1) Applicants for a permit under this chapter shall file with the Medina Police Department a sworn application in writing on a form to be furnished by the Medina Police Department.
- (2) Individuals who are employed by or acting as an agent for another individual, corporation, partnership, or other organization shall provide the following information on the application:
 - (a) Name, date of birth and description of the applicant;
 - (b) Address and telephone number;
 - (c) A brief description of the nature of the business and the goods or services to be sold;
 - (d) If employed or acting as an agent, the name and address of the employer or principal, together with a description of the exact relationship with the principal or employer;
 - (e) If a vehicle is to be used, a description of the same, including the license number;
 - (f) A photograph of the applicant, taken within 60 days immediately prior to the date of filing the application, which picture shall be two inches by two inches, showing the head and shoulders of the applicant in a clear and distinguishing manner;
 - (g) A statement as to whether or not the applicant has been convicted of any crime within the past 10 years, including misdemeanors or violations of any municipal ordinance, the nature of the offense, and the punishment or penalty assessed therefor; and
 - (h) Such other information as may be required by the Medina Police Department.
- (3) Any individual, corporation, partnership, or other organization which acts as the principal or employer for individual peddlers shall provide the following information on the application:
 - (a) The applicant's name, address and telephone number, and the names and addresses of all individuals who are employed by or acting as an agent for the applicant;
 - (b) If a corporation, the names, addresses and telephone numbers of the corporation's board of directors, principal officers, and registered agent; provided, however, that the Medina Police Department may waive any portion of this requirement when disclosure would be unduly burdensome;

- (c) If a partnership, the names, addresses and telephone numbers of the partners;
- (d) A list of any criminal convictions during the past 10 years for the applicant, any owners of the business, and if a corporation, the board of directors and officers;
- (e) The name, address, and telephone numbers (business and home) of the individual, as applicable, acting as the manager for the applicant;
- (f) A list of all other cities, towns, and counties where the applicant has obtained a peddlers permit or similar permit within the past five years; and
- (g) Such other information as may be required by the Medina Police Department.

[if deleting this, then not necessary to list fee exemption in 5.10.020.2.f.] **5.10.040 Investigation of applicant – Issuance and denial of permit.**

- (1) The Medina Police Department shall determine the accuracy of the information contained in the application and conduct a criminal history background investigation of the applicant.
- (2) If, as a result of the investigation, the character and business responsibility of the applicant are found to be satisfactory, the Medina Police Department shall issue the permit to the applicant. The Medina Police Department shall deny the applicant the permit if the applicant has:
 - (a) Committed any act consisting of fraud or misrepresentation;
 - (b) Committed any act which, if committed by a permit holder, would be grounds for suspension or revocation of a permit;
 - (c) Within the previous 10 years, been convicted of a misdemeanor or felony directly relating to the occupation of peddler, including, but not limited to, those misdemeanors and felonies involving moral turpitude, fraud or misrepresentation;
 - (d) Been refused a permit under the provisions of this chapter; provided, however, that any applicant denied a permit under the provisions of this chapter may reapply if and when the reasons for denial no longer exist; or
 - (e) Made any false or misleading statement in the application.
- (3) The denial of a permit to an individual, corporation, partnership or other organization which serves as the employer or principal for individual peddlers shall be a sufficient basis to deny a permit to the individual applicants who are employed by or acting as an agent for the applicant.

5.10.050 Permit – Exhibition.

Peddlers are required to exhibit their permit at the request of any citizen or police officer.

5.10.060 Permit – Expiration.

All permits issued pursuant to this chapter are nontransferable and shall be valid only for the duration as requested by the applicant – not to exceed two weeks. At the termination of two weeks, the applicant must reapply for an additional, separate permit via the process outlined in this ordinance if continuation of peddler activities is desired.

5.10.070 Permit – Revocation.

- (1) Permits issued pursuant to this chapter may be revoked by the Medina Police Department after notice and hearing for any of the following causes:
 - (a) Fraud, misrepresentation, or false statement contained in the application for permit;
 - (b) Fraud, misrepresentation, or false statement made in the course of carrying on the business as peddler;

(c) A violation of this chapter;

(d) Conviction after submission of the application for a peddler's permit of a felony or misdemeanor directly relating to the occupation of peddler, including, but not limited to, those misdemeanors and felonies involving moral turpitude, fraud, or misrepresentation; or

(e) Conducting the business of peddling in any unlawful manner or in such a manner as to constitute a breach of the peace or to constitute a menace to the health, safety, and general welfare of the public.

(2) The revocation of any permit held by an individual, corporation, partnership or other organization which serves as the employer or principal for individual peddlers shall constitute a basis for revoking the permits issued to individual applicants who are employed by or acting as agents for such individual, corporation, partnership, or organization.

(3) The revocation of a permit for three or more persons who are employees or agents of an individual, corporation, partnership or organization shall constitute a basis for revoking the permit issued to the employer or principal, as well as the permits issued to all other employees or agents of that employer or principal.

(4) Notice of the hearing for revocation of a permit shall be given in writing, setting forth specifically the grounds of the complaint and the time and place of hearing. In addition, it shall state that the peddler's permit shall be suspended pending the outcome of said hearing. Such notice shall be mailed, postage prepaid, to the permit holder at his or her last known address at least 10 days prior to the date set for hearing. If the permit holder is an individual, corporation, partnership or organization which employs or serves as the principal for individual permit holders, the notice shall also be mailed to the individual permit holders thereof.

5.10.080 Right of appeal.

Any person aggrieved by the action of the Medina Police Department in the denial of an application for permit or in the decision to revoke a permit as provided in this chapter shall have the right to appeal to the City hearing examiner in accordance with the procedures set out in MMC Chapter 2.72.

5.10.090 Loud noises or speaking devices.

No peddler, nor any person on the peddler's behalf, shall shout, make any outcry, blow a horn, ring a bell or use any sound device, including any loud-speaking radio or sound-amplifying system, upon any of the streets, alleys, parks or other public places of the City or upon any private premises in the City where sound of sufficient volume is emitted or produced therefrom to be capable of being plainly heard upon the streets, avenues, alleys, parks or other public places for the purpose of attracting attention to any goods, wares or merchandise which such peddler proposes to sell.

5.10.100 Use of streets.

No peddler shall have any exclusive right to any location in the public streets or public places, nor be permitted a stationary location, nor be permitted to operate in any congested area where operations might impede or inconvenience the public. For the purpose of this section, the judgment of a police officer, exercised in good faith, shall be conclusive as to whether the area is congested or the public impeded or inconvenienced.

1.10.110 Hours and notice.

(1) All peddlers shall notify the Medina Police Department at least two hours before any peddling activities are to be conducted. If peddling activities will take place on a Friday, Saturday, or Sunday the peddler shall notify the Medina Police Department that such activities are going to occur by close of business on the Thursday prior.

(2) No person shall engage in the business of peddler during the following hours:

- (a) October 1st through April 30th, between 6:00 p.m. and 10:00 a.m. of any day.
- (b) May 1st through September 30th, between 8:00 p.m. and 10:00 a.m. of any day.

5.10.120 Records.

The Medina Police Department shall maintain a record for each permit issued and record the reports of violations therein.

5.10.130 Unlawful to peddle or solicit on posted premises.

It is unlawful for any uninvited peddler to ring the bell, or knock on the door, or otherwise attempt to gain admittance for the purpose of peddling or soliciting at any residence or dwelling at which a sign bearing the words "No Peddlers or Solicitors" (or words of similar import indicating that peddlers or solicitors are not wanted on said premises) is painted, affixed, or otherwise exposed to public view.

5.10.140 Violation – Penalty.

- (1) Criminal Penalties. Violation of any of the provisions of this chapter or failure to comply with any of the provisions of this chapter shall constitute a misdemeanor and shall be punishable by a fine not to exceed \$1,000 or by imprisonment not to exceed 90 days, or by both. Any such violation of any provisions of this chapter shall also be grounds for revocation of a license previously approved.
- (2) Civil Penalties. Any person who fails to comply with the provisions of this chapter is, in lieu of or in addition to any criminal penalties, subject to a maximum civil penalty of \$500.00 for each day or portion of the day that the violation continues.
- (3) Other Legal Remedies. Nothing in this chapter limits the right of the Medina Police Department to pursue other lawful, criminal, civil or equitable remedies to abate, discontinue, correct, or discourage unlawful acts under or in violation of this article.

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NO ATTACHMENTS FOR AGENDA ITEM 9.1



MEDINA, WASHINGTON

AGENDA BILL

Monday, January 9, 2023

Subject: Gas-Powered Leaf Blower Education and Outreach Plan

Category: City Council Business

Staff Contact: Stephen R. Burns, City Manager

Summary

At the November 14, 2022, Medina City Council Meeting, Council directed staff to move forward with the following action items:

Item 1 - Public awareness, education, outreach and input specific to the current noise code.

Item 2 - Draft a plan for outreach education specific to gas-powered leaf blowers

City Staff is bringing forward the following proposal as a starting point to gather information and feedback from the community to determine the level of interest in restricting or banning gas-powered leaf blowers. Staff would like further recommendations or suggestions from Council prior to moving forward on this plan.

1. The “Public Awareness Plan” will use the following resources to remind our residents of the current noise ordinance:
 - a. Newsletter – recently the noise ordinance reminder was sent out in the December 2022 newsletter.
 - b. Social Media Outlets – ongoing.
 - c. Postcards – first quarter of 2023
 - d. Open House – tentatively set for Thursday, March 16, 2023, from 5:30pm to 7pm.
2. Use “**Engage Medina Platform**” to have items that include background from the last community forum, key dates, upcoming meetings, and events.
3. Outreach and Education Plan for Gas-Powered Leaf Blowers:
 - a. Survey – Anticipate sending out the first part of February 2023
 - i. Survey key stakeholders (Multiple languages – English, Chinese, Spanish and Russian):
 1. Residents
 2. Landscaping companies that serve Medina

- ii. Send postcard with QR code link to survey.
 - iii. A-frame boards with QR code.
 - iv. Flyers at City Hall, Parks, and Post Office.
4. Possible Survey Questions:
- a. Should the city put a ban on all leaf blowers (gas, battery, electric)?
 - b. Should the city put a ban on only gas-powered leaf blowers?
 - c. Should the city ban the following:
 - i. Commercial use gas-powered leaf blowers.
 - ii. Residential use gas-powered leaf blowers.
 - iii. Or both a and b
 - d. Should the city further restrict hours of operation? (Currently landscaping noise is only permissible weekdays from 7am to 7pm, Saturday from 9am to 5pm, and Sundays/holidays it is not allowed.)
 - i. Yes
 - ii. No
 - iii. Other input/ideas (allow for a suggestion box).
5. Hold an Open House on March 16, 2023, from 5:30pm to 7pm to educate residents about current noise ordinances and gather feedback about banning or restricting hours of operation for gas-powered leaf blowers.
6. Presentation to Council with feedback from Survey and Open House at the April 10, 2023 City Council Meeting.
- a. At the April 10 City Council meeting, Council should expect to provide further direction to staff based on input from the survey.
7. The creation of Frequently Asked Questions page on the City Webpage - FAQs with the following:
- a. What is happening?
 - b. Why is it happening?
 - c. When is it happening?
 - d. Who does this apply to?
 - e. Are other cities banning gas-powered leaf blowers?
 - f. Is the state or county planning to ban gas-powered leaf blowers?
 - g. What is the current noise ordinance?
 - h. What are the risks of banning gas-powered leaf blowers?
 - i. What are the benefits of banning gas-powered leaf blowers?
 - j. What are the differences between gas, electric, and battery-powered leaf blowers?

Attachment(s)

Budget/Fiscal Impact: Postcard and mailings for survey and open house - \$2,000. Central Services 2023 budget can accommodate this expense.

Recommendation: Council discussion and direction.

City Manager Approval: 

Proposed Council Motion: N/A

Time Estimate: 20 minutes



MEDINA, WASHINGTON

AGENDA BILL

Monday, January 9, 2023

Subject: Park Use Permit Pilot Program

Category: City Council Business – Discussion

Staff Contacts: Stephen R. Burns, City Manager and Aimee Kellerman, CMC, City Clerk

Summary

The city processes two types of permits for events in Medina. A Special Event permit for groups of 50 or more and a Park Use permit for groups of 49 or less. In July 2019, City Council directed then City Manager, Michael Sauerwein to update the Special Events permit ordinance to include full cost recovery, including disposal of large volumes of garbage as well as personnel costs.

In review of both the Special Event permit and Park Use permit, staff is proposing to keep the two permits divided and start a one-year pilot program with the Park Use permit. The city receives a relatively small number of requests to reserve either the picnic shelter at Medina Park or a picnic table at Medina Beach Park including the picnic table and open space by the south dock.

The pilot program proposal would run from April 1, 2023, through September 30, 2023, allowing for two picnic tables at Medina Beach Park and the picnic shelter at Medina Park to be reservable each day.

Reservation rules would include a \$200 non-refundable deposit for residents and a \$300 non-reusable deposit for non-residents at Medina Beach Park and a \$250 non-refundable deposit for residents and a \$350 non-refundable deposit for non-residents for the Medina Park picnic shelter.

A minimum of one hour is required for a reservation with an hourly fee of \$65 an hour for residents and \$85 an hour for non-residents with a time limit of two-hours per reservation at Medina Beach Park. A minimum of one hour is required for a reservation with an hourly fee \$85 for residents and \$100 for non-residents for the Medina Park picnic shelter with a maximum time limit of three hours.

Other rules will include requiring reservation requests of at least 7 days advance but not more than 45 days for residents and not more than 30 days for non-residents.

Having a limited reservation system and a structured process in place for our park use, allows staff to better manage park use, recover costs for staff time, and manage the wear and tear of our parks, picnic tables and shelter. In addition, having time limits on reservations allows for other park patrons to have use of the picnic tables.

Lastly, applicants would be required to provide a parking plan for additional parking beyond Medina City Hall parking lot if needed.

This pilot program meets and supports Council's priorities 3, 4, and 5.

Council Priorities:

1. Financial Stability and Accountability
2. Quality Infrastructure
3. Efficient and Effective Government
4. Public Safety and Health
5. Neighborhood Character

Attachment

Proposed Park Reservation Rules and fees

Budget/Fiscal Impact: TBD

Recommendation: Approve Proposed Pilot Program.

City Manager Approval:



Proposed Council Motion: "I move to approve staff's recommendation to start a Park Use Pilot Program as proposed and report back to Council at the October 2023 City Council meeting."

Time Estimate: 30 minutes

PARK RESERVATION/USE FEES

Park Facility Reservation/Use Fees and Deposits:

- (1) Park Facility Reservation/Use Fees and Deposits. Charges for use the City of Medina Parks picnic tables, covered shelter, and open space areas shall be as follow:

Facility	Non-refundable Deposit	Hourly Fee - Resident	Hourly Fee - Non-Resident
Medina Park Gazebo/Shade Structure	\$250.00/resident \$350.00/non-resident	\$85.00	\$100.00
Medina Beach Park Picnic Table/Greenspace Area	\$250.00/resident \$350/non-resident	\$85.00	\$100.00
Medina Beach Park Picnic Table	\$200.00/resident \$300/non-resident	\$65.00	\$85.00

The applicable fee and deposit shall be required per area or facility reserved.

Minimum of one hour required for reservation.

Medina Beach Park Small Picnic Tables: Maximum party size is 12 people.

Medina Park Gazebo/Shade Structure and Medina Beach Park South Picnic Table/Green Space:
Maximum party size 30