# WHISTLE REDUCTION EFFORT OVERVIEW



#### GOAL -

Reduce train whistles through downtown by implementing the public quiet zone requirements at subject crossings. Subject crossings are at Weber Avenue, Sixth Street, and 8th Street crossings.

On August 17, 2006, the Federal Railroad Administration (FRA) issued 49 CFR Parts 222 and 229, the Final Rule on Use of Locomotive Horns at Highway-Rail Grade Crossings (Final Rule). The purpose of the rule is to mandate a federal requirement for the sounding of locomotive horns at all public highway-rail grade crossings. This rule also establishes both minimum and maximum decibel levels for the locomotive horns themselves. While the purpose of the rule was to require the sounding of locomotive horns, it also created a methodology by which communities could create quiet zones.

## Requirements for Public Quiet Zone Crossings

In accordance with the Final Rule, each public highway-rail grade crossing within a quiet zone must be equipped with flashing lights, gates and at least one bell. Each public crossing must also be equipped with a Constant Warning Time Device where reasonably practical. A Constant Warning Time Device is an electronic device that activates the railroad gates and lights based on the speed of an approaching train, ensuring consistent warning times for motorists before the train's arrival.

### **Supplemental Safety Measures (SSM)**

Routine locomotive horn hounding is not required if each highway-rail grade crossing in the proposed quiet zone is equipped with Supplemental Safety Measures (SSMs). SSMs are safety measures that have been determined by the FRA to adequately compensate for the lack of a locomotive horn. Examples of SSMs include:

- Temporary or permanent closure of a crossing
- One-way street with gates
- Gates with medians (non-traversable curbs) or channelization devices
- Four quadrant gate systems

#### **Sounding of Horns Within a Quiet Zone**

The establishment of a quiet zone does not result in total elimination of all train horn noise. The Final Rule allows for the locomotive engineer to sound the locomotive horn before starting movement, to warn men or equipment performing work around or on track, or to comply with other operating rules. It also allows engineers to provide a warning to vehicle operators, animals, pedestrians, trespassers or crews on other trains in an emergency if, in the locomotive engineer's sole judgment, such action is appropriate to prevent imminent injury, death or property damage.

D	Task	Task Name	Duration	Start	Finish			2	2022		2023				
0	Mode					1st Quarter Jan Feb M	2nd Quarter Iar April May	3	Brd Quarter	4th Quarter ept Oct Nov Dec	1st Quarter Jan Feb M	42nd Quarter ar Apr May Jun		4th Quarter Oct Nov	1st Qu Dec Jan
1	*	NTP-Benesch (City)	1 day	January 2022	January 2022	П									
2	*	Diagnostic Coordination (Benesch)	36 days	January 2022	March 2022		Щ								
3	*	Diagnostic Meeting (Benesch)	1 day	Mar 2022	Mar 2022		<b>F</b>								
4	*	Diagnostic Notes - Draft (Benesch)	5 days	Mar 2022	Mar 2022										
5	*	Diagnostic Notes - Final (Benesch)	10 days	Apr 2022	Apr 2022										
6	*	BNSF Estimate Requested (City)	1 day	Apr 2022	Apr 2022										
7	*	BNSF Estimate Prep (BNSF)	90 days	May 2022	Aug 2022										
8	*	NOI Preparation (Benesch)	60 days	May 2022	July 2022				۱				CITY OF		
9	*	NOI Submittal (City)	10 days	Jul 2022	Jul 2022			ì				SIO	UX FAL	LS	
10	*	Roadway Design NTP (City)	1 day	Iul 2022	Jul 2022				<b>K</b>				BLIC WORKS		
11	*	Roadway Design/Bid (Consultant)	3 mons	lul 2022	Oct 2022							PC	BLIC WORKS	3	
12	*	Request C&M Agmt incl internal review (City)	10 days	Sept 2022	Sept 2022										
13	*	C&M Agmt prep (BNSF)	60 days	Sept 2022	Nov 2022										
14	*	C&M Agmt signed (City)	25 days	Dec 2022	Jan 2022						<b>-</b>				
15	*	Roadway Construction NTP (City)	1 day	Oct 2022	Oct 2022					ħ					
16	*	Roadway Construction (Contractor)	90 days	Oct 2022	Feb 2023										
17	*	C&M Agmt executed (BNSF)	20 days	lan 2023	Feb 2023										
18	*	NTP-BNSF (City)	1 day	Feb 2023	Feb 2023						<b>I</b>				
19	*	BNSF Construction (BNSF)	9 mons	Mar 2023	Nov 2023									<b>լ</b>	
20	*	NOE Submittal (City)	10 days	Dec 2023	Dec 2023									<b>L</b>	
21	*	Quiet Zone Effective Date	30 days	Jan 2024											

### City of Sioux Falls Notes:

- City to hire consultant to complete concepts for each intersection layout,; Weber Street, 6th Street, 8th Street. This step was completed in May-November 2021.
- The schedule above uses an example of January 1st Notice to Proceed. Typical time frame is 24 months.
- If approved to move forward, a diagnostic meeting between City, IDG, BNSF and their consultant should be planned for January 2022.
- City maintains the quiet zones for perpetuity, There are annual maintenance costs due to BNSF, roughly \$50K a year.
- Every two and a half years, FRA has to reauthorize the quiet zone. This includes inspection of the pavement markings, confirming median length and height, as any street maintenance impacting the height of the median, signals, and other related items.
- No environmental assessment is required by FRA to install quiet zones. This means no noise studies before/after, no traffic studies, no alternatives analysis, no required public input.
- The pedestrian crossings are the biggest unknown for the design. If we expect a high number of pedestrians crossing, pedestrian gates may be required.
- City to hire an engineering firm to complete all necessary street improvements. For example, the median, sidewalks, pavement markings, street narrowing, signage, communication with traffic signals, etc.
- BNSF will design the actual gates, arms, signals, communication with flashing beacons. They will bill City for the design work and the installation costs.
- City can build the street independently of the gates/arms etc. This means, if need be, we can narrow up the street before BNSF has the crossing designed.
- BNSF is required to sound its horn 1/4 mile in advance of a normal crossing. Cliff Avenue and 14th Street rail crossings are 1/2 mile away. However, the bike trail crossing north of 6th Street is within that 1/4 mile from both the Weber Crossing and the 6th Street crossing. We need to look into this further.

	Task		Project Summary		Manual Task		Start-only	Е	Deadline	•	
Project: Sioux Falls QZ Schedul	Split		Inactive Task		Duration-only		Finish-only	3	Progress		
Date: Fri 12/6/21	Milestone	<b>♦</b>	Inactive Milestone	$\Diamond$	Manual Summary Rollu	р	External Tasks		Manual Progress		
	Summary		Inactive Summary		Manual Summary		External Milestone	<b>♦</b>			
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