

(Return in triplicate)

FISCAL NOTE

Bill/Resolution No.: 2326

Amendment to: _____

Requested by: Legislative Council

Date of Receipt: 19 Jan 83

Please estimate the fiscal impact of the above measure for:

State general or special funds Counties Cities

In the following space note the fiscal effect in dollars of this measure:

Narrative:

See attachment

State Fiscal Effect:

1983-84		1984-85		Biennium Total	
Special Funds	General Fund	Special Funds	General Fund	Special Funds	General Fund

County and City Fiscal Effect:

1983-84		1984-85		Biennium Total	
Counties	Cities	Counties	Cities	Counties	Cities

Unknown

Unknown

In excess of \$400,000 to \$800,000 (unknown break-out between city and county as it is impossible to know where the mobile home parks are actually located (city or county

If additional space is needed, attach a supplemental sheet.

Signed *Ronald D. Affeldt* (jurisdiction)

Typed Name Ronald D. Affeldt

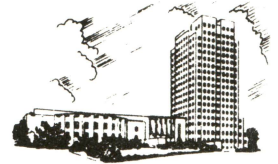
Date prepared: January 24, 1983

Department Disaster Emergency Services

STATE HEADQUARTERS

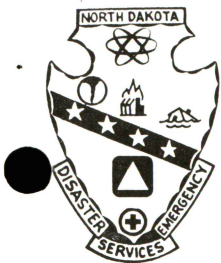
Disaster Emergency Services

Box 1817
Bismarck, North Dakota 58505
701-224-2111




ALLEN I. OLSON
Governor

MAJ. GEN. C. EMERSON MURRY
Adjutant General



RONALD D. AFFELDT
State Director

TO: John Walstad
Legislative Council

FROM: Ronald D. Affeldt, State Director 
Disaster Emergency Services

DATE: January 24, 1983

SUBJECT: Fiscal Note for SB 2326

In the development of this fiscal note, the following assumptions had to be made because specific information was not available from the affected local governments.

1. Equipment costs were developed from price list at suggested retail. (See Attachment 1.)
2. System engineering was done using maximum performance data on electro-mechanical siren, available from one vendor. (See Attachment 2.)
3. All systems were designed to stand alone; i.e., without support from existing activation capabilities for the additional sirens. (Additional costs can be added depending upon the type of systems which are currently in place.)
4. That the lot size was 50 X 120 plus an equal amount for street variance in lot shapes, rights-of-way, supporting buildings, and general trailer court layouts that were not in a square configuration.
5. Engineering data that was used was for outdoor warning only. To convert to an effective indoor warning system using sirens, the costs would have to be an estimated double-plus (\$800,000.00+).
6. Installation estimation is based on using a wood pole 25-35 feet high to support the siren and that commercial three-phase power is available at the site.
7. Flat terrain that is relatively free of large trees or other obstructions.

Mr. John Walstad
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8. Installation was based on all the work being done by commercial contractors using wood poles.
9. That there are 116 trailer courts in the State at present, with more than 50 lots. The size ranges from 50 lots to 639 lots. (See Attachment 3, supplied by the State Lab.)

RDA



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Enclosures (as stated)

TRAILER PARK SIZE RANGE	NUMBER COURTS	SIZE SIREN NEEDED	RANGE COVERAGE	COST SIREN EACH COURT	COST INSTALL EACH COURT	TOTAL COST	
						TOTAL EQUIPMENT	TOTAL INSTALLATION
Lots 50 - 83 (To 1,000,000 Square Feet)	52	104DB	1000 FT Radius	1633.25 + FRT	750.00	84,929.00	39,000.00
Lots 83-333 (To 4,000,000 Square Feet)	58	113DB	2000 FT Radius	3429.00 + FRT	750.00	198,882.00	43,500.00
Lots 333-2600 (To 31,360,000 Square Feet)	6	128	5600 FT Radius	6100.25 + FRT	1000.00	36,601.50	6,000.00
						TOTALS =	
						<u>320,412.50</u>	<u>88,500.00</u>
						TOTAL ESTIMATED INSTALLED COST =	\$408,912.50
							(If doubled = \$817,000.00)

Federal Signal Outdoor Warning Sirens

PRICE LIST OWS
EFFECTIVE JULY 15, 1982
PRINTED JULY 15, 1982

USER PRICE LIST*

Model	Description	Shipping Wt.		List Price
		LB	KG	
SINGLE-TONE, TWO-SIGNAL				
2	Siren, Universal Series, 120 or 240V., 25-60 Hz. <i>98 DB</i>	68	31	942.50
5A	Siren, 208-240/480V., 50/60 Hz., 3 Ph. <i>108 DB</i>	395	179	2,628.75
5B	Siren, 240V., 60 Hz., 1 Ph.	430	195	4,752.50
STH10A	Siren, Hi-Pitch, 208-240/480V., 50/60 Hz., 3 Ph.	391	177	2,925.75
STH10B	Siren, Hi-Pitch, 240V., 60 Hz., 1 Ph.	403	183	5,181.00
STL10A	Siren, Lo-Pitch, 208-240/480V., 50/60 Hz., 3 Ph.	381	173	2,925.75
STL10B	Siren, Lo-Pitch, 240V., 60 Hz., 1 Ph.	413	187	5,181.00
1000A	Thunderbolt® Siren, Directional, 208-240/480V., 50/60 Hz., 3 Ph.	1040	472	9,038.50
1000B	Thunderbolt Siren, Directional, 240V., 60 Hz., 1 Ph.	1040	472	10,255.25
 RSH10A	ThunderBeam® Siren, Directional, 208-240/480V., 50/60 Hz., 3 Ph. <i>128 DB</i>	600	272	5,300.00
RSH10B	ThunderBeam Siren, Directional, 240V., 60 Hz., 1 Ph.	630	286	6,934.00
DUAL-TONE, TWO-SIGNAL				
2T	Siren, Universal Series, 120 or 240V., 25-60 Hz.	70	32	942.50
5AT	Siren, 208-240/480V., 50/60 Hz., 3 Ph.	405	184	2,628.75
5BT	Siren, 240V., 60 Hz., 1 Ph.	410	186	4,752.50
SD10A	Siren, 240-480V., 50/60 Hz., 3 Ph.	538	244	2,652.50
SD10B	Siren, 240V., 60 Hz., 1 Ph.	550	250	4,973.50
2T22A	Siren, Double Rotor, 208-240/480V., 50/60 Hz., 3 Ph. <i>113 DB</i>	686	311	4,080.75
2T22B	Siren, Double Rotor, 240V., 60 Hz., 1 Ph.	689	313	6,337.50
1000AT	Thunderbolt Siren, Directional, 208-240/480V., 50/60 Hz., 3 Ph.	1040	472	9,038.50
1000BT	Thunderbolt Siren, Directional, 240V., 60 Hz., 1 Ph.	1040	472	10,255.25
DUAL-TONE, THREE-SIGNAL				
3T22A	Siren, Double Rotor, 208-240/480V., 50/60 Hz., 3 Ph.	710	322	5,539.00
3T22B	Siren, Double Rotor, 240V., 60 Hz., 1 Ph.	713	323	7,799.50
1003A	Siren, Directional, 208-240/480V., 50/60 Hz., 3 Ph.	1080	490	10,759.00
1003B	Siren, Directional, 240V., 60 Hz., 1 Ph.	1080	490	11,989.50
ELECTRONIC				
 EOWS*115	SiraTone® Siren, 12 speakers, omnidirectional, 6 tones plus voice	485	220	4,300.00
EOWS*408	SiraTone Siren, 4 speakers, rotating, 6 tones plus voice	660	300	6,887.00
EOWS*812	SiraTone Siren, 8 speakers, rotating, 6 tones plus voice	840	386	8,000.00
EOWS*M/12	Mobile SiraTone Siren, vehicular	—	—	price available upon request

NOTES:

- Mounting hardware not included for any model 2, 5, 1000 or 1003 siren, see pg. 2.
- Specify roof or pole mount for any STH10, STL10, 2T22 and 3T22 siren.
- Only Federal motor starters and controls must be ordered for each siren, see pg. 2.
- Weight and/or price of items in this price list may vary with specification.
- On any of the items in this price list offering an option of more than one voltage or phase, voltage and/or phase must be specified.

All prices F.O.B. Factory, Blue Island Minimum billing on any order \$100.00



FEDERAL SIGNAL CORPORATION

Model	Description	Shipping Wt.		List Price
		LB	KG	
SELF-CONTAINED SIREN SYSTEM				
7000	System 7000, fully contained Thunderbolt Siren with engine driven generator and controls, single or dual tone, 2, 4, or 6 signals, 208-240/380/415/480V., 50/60 Hz., 1 or 3 Ph., radio, land line, or remote activation control, intrusion alarm. Enclosed in 8' x 8' x 8' container.	4000	1814	price available upon request

CONTROL EQUIPMENT FOR SIRENS

Motor Starters

RC2	For 2 and 2T Sirens, 120/240V., Any Hz.	7	3	178.75
RC2W	Same as above in weatherproof cabinet	30	14	284.25
RC5A	For 5A, 5AT, STH10A, STL10A, SD10A, 2T22A and RSH10A Sirens	11	5	288.25
RC5WA	Same as above in weatherproof cabinet	35	16	397.50
RC5B	For 5B, 5BT, STH10B, STL10B, SD10B, 2T22B and RSH10B Sirens	11	5	359.75
RC5WB	Same as above in weatherproof cabinet	35	16	452.50
RC6A	For 3T22A Sirens only	63	29	975.50
RC6B	For 3T22B Sirens only	63	29	892.50
RCM1A	For Model 1000A, 1000AT and 1003A Sirens	78	35	1,219.00
RCM1B	For Model 1000B, 1000BT and 1003B Sirens	78	35	1,222.50
RCM3	For 1003A and 1003B Sirens only	50	23	477.50

(Auxiliary panel required with RCM1A or RCM1B for 1003 Siren)

ELECTRONIC CONTROLS

EOWS C/B	Control Cabinet SiraTone Models EOWS*115 and EOWS*812	315	143	3,600.00
EOWS C/B4	Control Cabinet SiraTone Model EOWS*408	315	143	3,500.00
EOWS C/M12	Control Cabinet for Mobile SiraTone Model EOWS*M12	—	—	price available upon request

ACTUATING CONTROLS AND ACCESSORIES

SS	Push Button, start/stop, momentary closure	2	1	37.50
SO	Push Button, start only, momentary closure	2	1	37.50
PGA	Timer, one-signal, 120/240V., 2 minute operation	5	2	385.00
AR	Timer, two-signal, 120/240V., 3 minute operation	11	5	512.00
AF	Timer, two-signal, 120/240V., 3 minute operation	11	5	576.50
AR5	Timer, two-signal, 120/240V., 5 minute operation	11	5	565.92
AF5	Timer, three-signal, 120/240V., 5 minute operation	11	5	513.00
75*120	Program Clock	11	5	316.75
75WC	Program Clock with day selection	12	5	374.00
TRC	Telephone Relay, weatherproof	2	1	67.50
PS	Power Supply 120 or 240V., AC input, 48 or 96V., DC output	14	6	267.50
PMS	Pole Mounting Stand for 2, 2T, 5A, 5B, 5AT and 5BT Sirens	71	32	247.25
TPM*BA	Blower Platform for Thunderbolt Sirens	210	95	470.00
TPM*PS	Blower Pipe Support Bracket Thunderbolt Sirens	8	4	52.00

(Order the TPM*BA and TPM*PS when mounting a Thunderbolt Siren on a pole)

RMS	Roof Mount Kit, for STH10, STL10, 2T22, 3T22, SD10, yellow or gray	35	16	95.00
TRMK*G	Roof mounting kit for ThunderBeam Siren			95.00

RADIO ACTIVATION

Federal offers a complete line of radio receivers for siren activation. With or without timer, 30.0-512.0 MHz, dual tone codes or dual tone multiple frequency (DTMF). Federal also offers a complete line of accessories as well as tone encoders and all other components for a complete radio activation system. For further information see price list COM1.

Performance Data Electronic and ElectroMechanical Sirens

MODEL	MAX. SOUND OUTPUT (dBC)		TYPE		TONE		Nominal Output Frequency	No. of Signals Available	Horizontal Beam Width @ -6dB Points	Effective Range for 70dBC Level Ft.	Nominal Rotor Speed RPM	Rotational Speed RPM
	Free Field Non-Reflective @ 100'	Outdoor Rating @ 100'	Omnidirectional	Directional	Single	Dual						
2	98	104	X		X		488	2	360°	1000	5850 ¹	
2T	94	100	X			X	425/525	2	360°	800	6340 ¹	
5	107	113	X		X		675	2	360°	2000	3375	
5T	102	108	X			X	500/675	2	360°	1400	3355	
SD10	103	109	X			X	525/675	2	360°	1500	3440	
STH10	109	115	X		X		675	2	360°	2400	3375	
STL10	108	114	X		X		387	2	360°	2200	3320	
2T22	107	113	X			X	575/675	2	360°	1970	3410	
3T22	107	113	X			X	575/675	3	360°	1970	3410	
RSH10	122	128		X	X		675	2	60°	5600	3375	2
1000	125	131		X	X		550	2	80°	6900	6600 ¹	2 or 4
1000T	121	127		X		X	550/675	2	80°	5200	6675 ¹	2 or 4
1003	121	127		X		X	550/675	3	80°	5200	6675 ¹	2 or 4
7012 System 7000	125	131		X	X		550	6	80°	6900	6600 ¹	2 or 4
7022 System 7000	—	123 ± 10'		X	X	X	300/1050 ²	7 ³	60°	1400	*	*
7026 System 7000	121	127		X		X	550/675	6	80°	5200	6675 ¹	2 or 4
EOWS*115	113	119	X			X	300/1050 ²	7 ³	360°	2700	*	
EOWS*408	119	125		X		X	300/1050 ²	7 ³	60°	4000	*	.75 or 1.5
	122	128		X	X		300/1050 ²	7 ³	40°	4500	*	.75 or 1.5
EOWS*812	124	130		X		X	300/1050 ²	7 ³	60°	5000	*	.75 or 1.5
	126	132		X	X		300/1050 ²	7 ³	40°	6000	*	.75 or 1.5

NOTES: ¹ = RPM on these sirens are voltage dependent. ² = Standard operating frequency range for various signals. ³ = Has voice capability.

The Free-Field, Non-Reflective Sound Output figures are derived from anechoic chamber measurements or measurements made outdoors where the siren and the sound level recorder were mounted at an elevation of 50 feet and separated by 100 feet. The second column indicates the nominal siren rating which includes a 6dB ground reflection factor. These numbers are given since they compare directly with outdoor sound output levels as measured according to the Office of Civil Defense (now FEMA) measurement criteria. For years these figures have been used in application of sirens. More recently however, anechoic chamber measurements have been viewed as more readily attainable and generally more reliable. All of the free-field sound output levels given are taken from reports prepared by independent acoustic consultants including Acoustic Technology, Inc., Boston, Massachusetts, and IIT Research Institute, Chicago, Illinois. Test reports available on request.

* Not applicable

ND STATE LABORATORIES

Box 937

Bismarck, ND 58502

C

C

170. +
 100. +
 50. +
 193. +
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 50. +
 87. +
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 130. +
 103. +
 339. +
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 276. +
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 176. +
 14,191. *

116 Courts

Total # of lots