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**IN THE UNITED STATES DISTRICT COURT**  
**FOR THE DISTRICT OF OREGON**  
**PORTLAND DIVISION**

MATS JÄRLSTRÖM,

Case No.: 3:17-cv-652

Plaintiff,

v.

**COMPLAINT**  
Civil Rights Action  
(42 U.S.C. § 1983)

CHRISTOPHER D. ALDRIDGE, WILLIAM J.  
BOYD, DAREN L. CONE, SHELLY MC  
DUQUETTE, JASON J. KENT, LOGAN T.  
MILES, RON SINGH, DAVE M. VAN DYKE,  
SEAN W. ST. CLAIR, AMIN WAHAB, and

OSCAR J. ZUNIGA JR., in their official capacities as members of the Oregon State Board of Examiners for Engineering and Land Surveying,

Defendants.

## **INTRODUCTION**

1. This is a civil-rights lawsuit to vindicate the right of Plaintiff Mats Järnlström to talk and write freely without fear of government punishment. Järnlström wants to write and speak publicly about a matter of local, state, and nationwide concern: the safety and fairness of traffic lights and traffic-light cameras. Specifically, Järnlström wishes to communicate about the mathematics behind traffic-light timing. If he does so in Oregon, however, he will be exposed to government investigation and punishment for engaging in the unlicensed “practice of engineering.” In fact, between February 2015 and January 2017, Järnlström was investigated and fined for “critiquing” the standard formula for calculating traffic-light timing and for sharing his ideas with “members of the public.” Under Oregon’s Professional Engineer Registration Act (Act), Or. Rev. Stat. §§ 672.002 *et seq.*, only state-licensed professional engineers are entitled to speak publicly on these sorts of topics. For everyone else—in the words of the Oregon State Board of Examiners for Engineering and Land Surveying (Board)—sharing “reports, commentary, and testimony” on technical subjects is “clearly not protected speech.” *See, e.g.*, Final Order by Default, *In the Matter of: Dale La Forest*, Case No. 2697 (Aug. 14, 2015). But speech like Järnlström’s is *exactly* what the First Amendment’s Speech and Petition Clauses exist to protect.

2. This lawsuit also challenges a second aspect of the Act. Not only does the Act create a government-run monopoly on engineering concepts generally, its “title law” imposes a ban on who can describe themselves using the word “engineer.” This content-based ban was

deployed against Järström based on e-mails he sent to, among others, media outlets and the Board itself. The title law has also given rise to government investigations based on speech on personal websites and in voter guides, political ads, and even the “Oregon Woman 2015” edition of *Portland Monthly*. But the government does not have the power to take speech that is objectively true, declare it false, and then punish speakers who—wittingly or unwittingly—deviate from the government’s idiosyncratic definition. Because the title law does just that, it, too, violates the First Amendment. Järström thus brings this federal civil-rights lawsuit to vindicate his and others’ constitutional right to speak out on any topic—however complex it may be—and to describe themselves truthfully using the word “engineer.”

### **JURISDICTION AND VENUE**

3. Plaintiff Mats Järström brings this civil-rights lawsuit pursuant to the Civil Rights Act of 1871, 42 U.S.C. § 1983, and the Declaratory Judgment Act, 28 U.S.C. §§ 2201-2202, for violations of the First and Fourteenth Amendments to the United States Constitution.

4. Plaintiff seeks declaratory and injunctive relief against Oregon’s ban on his discussion of technical topics and Oregon’s ban on his describing himself using the word “engineer,” which are set forth in the Oregon Professional Engineer Registration Act, Or. Rev. Stat. §§ 672.002, *et seq.*, and Or. Admin. Rs. 820-010-0730 and 820-040-0030.

5. This Court has jurisdiction under 28 U.S.C. §§ 1331, 1343, and 2201-2202, and 42 U.S.C. § 1983.

6. Venue lies in this District under 28 U.S.C. § 1391(b) because Defendants reside in this District and a substantial part of the events giving rise to Plaintiff’s claims occurred in this District.

7. Pursuant to Local Rule 3-2(a), divisional venue is proper in this Division because a substantial part of the events giving rise to Plaintiff's claims occurred in Washington County.

### **PARTIES**

8. Plaintiff Mats Järnlström is a resident of Washington County, Oregon. He is a citizen of the Kingdom of Sweden and a lawful permanent resident of the United States.

9. Defendants Christopher D. Aldridge, William J. Boyd, Daren L. Cone, Shelly MC Duquette, Jason J. Kent, Logan T. Miles, Ron Singh, Dave M. Van Dyke, Sean W. St. Clair, Amin Wahab, and Oscar J. Zuniga Jr., are members of the Oregon State Board of Examiners for Engineering and Land Surveying, the agency charged with administering and enforcing the Professional Engineer Registration Act, Or. Rev. Stat. §§ 672.002 *et seq.*, and implementing regulations. They are sued in their official capacities.

### **FACTUAL ALLEGATIONS**

#### **I. MATS JÄRLSTRÖM SHARES HIS IDEAS ABOUT TRAFFIC LIGHTS.**

10. In May 2013, Mats Järnlström's wife drove her Volkswagen through the intersection of Allen Boulevard and Lombard Avenue in Beaverton, Oregon. Based on the red-light camera in use there, she later received a ticket in the mail.

11. The ticket his wife received sparked Järnlström's fascination with traffic-light timing.

12. Järnlström is a Swedish-born and -educated electronics engineer.

13. Järnlström has the equivalent of an American Bachelor of Science in electrical engineering.

14. In Sweden, Järnlström served as an airplane-camera mechanic with the Swedish Air Force, and he worked in research and development for Luxor Electronics.

15. Järström moved to the United States in 1992, and he has lived in Oregon for more than 20 years. In the early 1990s, he headed the electronics department at Triad Speakers, in Portland, where he helped design a new line of professional and consumer products, such as satellite speakers and powered subwoofers for audio and home-theater use. Currently, he is self-employed, testing audio products as well as repairing, upgrading, and calibrating test instruments.

16. For the past three years, Järström has devoted his spare time to studying traffic lights and analyzing mathematical issues involved with traffic-light timing.

17. In Järström's view, the accepted mathematical formula for calculating the duration of yellow lights (dating back to 1959) is incomplete. In effect, the formula accounts only for drivers who respond to a yellow light either by stopping or by continuing straight through the intersection, but the formula does not account for the extra time it takes for drivers to slow down before, for example, making a legal right-hand turn.

18. Järström has expressed his ideas on traffic lights in various ways, including by writing to local and national media outlets, policymakers, and other people who are interested in traffic-light issues.

19. A number of people have expressed interest in his ideas.

20. For example, Järström has corresponded with Dr. Alexei Maradudin, one of the physicists who developed the original formula in 1959.

21. In 2016, a local television station ran two pieces about Järström and his theories.

22. Also in 2016, Järström presented his findings in Los Angeles, at the conference of the Institute of Transportation Engineers.

23. Among those with whom Järnlström shared his ideas was the Oregon State Board of Examiners for Engineering and Land Surveying (Board).

24. In the first of several e-mails that the Board would later deem unlawful, Järnlström sent a message on September 3, 2014, to the Board's general e-mail address.

25. In that e-mail, Järnlström wrote: "I would like to have your support and help to investigate and present the laws of physics related to transportation engineering in the State of Oregon," and he offered to present his theories to the Board "for your review and comments."

26. A Board investigator responded two days later.

27. The Board investigator told Järnlström that the Board has no authority over traffic lights but that the Board does have authority over engineering laws, and that Järnlström was breaking those laws by "use of the title 'electronics engineer' and the statement 'I'm an engineer.'"

28. Järnlström is not a licensed professional engineer in Oregon or any other jurisdiction.

29. Because Järnlström is not an Oregon-licensed professional engineer, the Board investigator warned Järnlström to "stop any further references until you become registered with the Board."

30. A true and correct copy of the Board investigator's September 5, 2014 e-mail is attached as Exhibit 1 to this Complaint.

31. Over the following months, Järnlström continued to publicize his ideas on traffic-light timing.

32. On January 13, 2015, for example, Järlström sent an e-mail to, among others, a representative of the National Council of Examiners for Engineering and Surveying, the *60 Minutes* news program, and Dr. Maradudin.

33. Järlström's January 13, 2015 e-mail asserted that he had developed a mathematical formula that he believed would serve as a better basis for timing yellow traffic lights, and he attached a document describing his formula.

34. Järlström also sent his January 13, 2015 e-mail to the Board investigator with whom he had corresponded.

35. No one at the Board responded to Järlström's January 13, 2015 e-mail.

36. On January 15, 2015, Järlström sent an e-mail to representatives of KOIN 6, a local news station.

37. Järlström's January 15, 2015 e-mail introduced himself as "a Swedish engineer living in Beaverton." Järlström's e-mail further stated that he had "developed an improved traffic light change interval timing formula" and included a document detailing his formula.

38. Järlström forwarded the e-mail he had sent to KOIN 6 to the Board investigator. In a cover message, Järlström explained that "[y]ou might enjoy seeing this too" and stated "I'm an excellent **engineer** . . . ."

39. No one at the Board responded to Järlström's January 15, 2015 e-mail.

40. On March 6, 2015, Järlström e-mailed the Sheriff of Washington County. He wrote, "I have researched the yellow light timing issues for almost two years now and I have actually invented and publicly released a new extended solution to the original problem with the amber signal light in traffic flow which was first solved in 1959." He included a chart illustrating that the majority of red-light-camera tickets issued by the City of Beaverton captured

drivers turning right on red, which, in Järnlström's view, demonstrated that "the yellow lights are too short for a vehicle making a safe right hand turn."

41. Järnlström forwarded this March 6, 2015 e-mail to, among others, the Board's general e-mail address.

42. No one at the Board responded to Järnlström's March 6, 2015 e-mail.

43. Unbeknownst to Järnlström, the Board had opened a "law enforcement case" against him a month earlier. On February 12, 2015, the Board's Law Enforcement Committee voted to investigate Järnlström for the unlicensed practice of engineering and for illegally describing himself using the word "engineer."

## **II. ENGINEERING LICENSURE IN OREGON.**

44. Like every other state in the nation, Oregon regulates "professional engineers." These are the specialists who, for instance, design the HVAC plan for a hospital or the plumbing system for a courthouse. Unusually, however, Oregon's Professional Engineer Registration Act (Act), Or. Rev. Stat. §§ 672.002 *et seq.*, also restricts and punishes ordinary people for their most basic acts of civic engagement and political speech.

45. Oregon regulates professional engineering through the Act and rules and regulations promulgated pursuant to the Act.

46. Violating the Act may give rise to \$1,000 in civil penalties, \$6,250 in criminal fines, and up to one year in jail. *Id.* §§ 672.325 (civil penalties), 672.991 (designating unlicensed practice of engineering a Class A misdemeanor), 161.615 (terms of imprisonment), 161.635 (criminal fines).

47. The Act provides that "no person shall practice or offer to practice engineering in this state unless the person is registered and has a valid certificate to practice engineering issued under ORS 672.002 to 672.325." *Id.* § 672.020(1). Similarly, the Act provides that "[a] person



may not . . . [e]ngage in the practice of engineering . . . without having a valid certificate or permit to so practice issued in accordance with ORS 672.002 to 672.325.” *Id.* § 672.045(1).

And implementing regulations likewise provide that “[u]nless registered as a professional engineer in Oregon, no persons may . . . [o]ffer to practice engineering; or . . . [e]ngage in the practice of engineering.” Or. Admin. R. 820-010-0730(3)(b)-(c).

48. Under the Act, “[a] person is practicing or offering to practice engineering if the person . . . [p]urports to be able to perform, or who does perform, any service or work that is defined by ORS 672.005 as the practice of engineering.” Or. Rev. Stat. § 672.007(1)(c).

49. In turn, Section 672.005 defines “[p]ractice of engineering’ or ‘practice of professional engineering’” to include the following:

- (a) Performing any professional service or creative work requiring engineering education, training and experience.
- (b) Applying special knowledge of the mathematical, physical and engineering sciences to such professional services or creative work as consultation, investigation, testimony, evaluation, planning, design and services during construction, manufacture or fabrication for the purpose of ensuring compliance with specifications and design, in connection with any public or private utilities, structures, buildings, machines, equipment, processes, works or projects.

*Id.* § 672.005(1)(a)-(b); *see also* Or. Admin. R. 820-040-0030 (defining “traffic engineering” to include “[t]he use of algorithms for the operation of traffic control system” and “the science of analysis, review, and application of traffic data systems”).

50. Separately, the Act restricts who can describe themselves publicly using the word “engineer.”

51. Under the Act, “[e]ngineer,’ ‘professional engineer’ or ‘registered professional engineer’ means an individual who is registered in this state and holds a valid certificate to practice engineering in this state as provided under ORS 672.002 to 672.325.” Or. Rev. Stat. § 672.002(2).

52. A person is deemed to be “practicing or offering to practice engineering if the person”:

- (a) By verbal claim, sign, advertisement, letterhead, card or in any other way implies that the person is or purports to be a registered professional engineer;
- (b) Through the use of some other title implies that the person is an engineer or a registered professional engineer; or
- (c) Purports to be able to perform, or who does perform, any service or work that is defined by ORS 672.005 as the practice of engineering.

*Id.* § 672.007(1).

53. And “no person shall practice or offer to practice engineering in this state unless the person is registered and has a valid certificate to practice engineering issued under ORS 672.002 to 672.325.” *Id.* § 672.020(1). Likewise, the Act provides that “[a] person may not . . . [f]alsely represent, by any means, that the person is authorized to practice engineering,” *id.* § 672.045(2), and implementing regulations provide that “[u]nless registered as a professional engineer in Oregon, no persons may . . . [h]old themselves out as an ‘engineer’ other than as described in subsection (1) of this rule or in ORS 672.060.” Or. Admin. R. 820-010-0730(3)(a).

54. Together, Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) make it illegal for someone who is not a licensed

professional engineer to publicly describe themselves in the State of Oregon using the word “engineer.”

55. As the Oregon Attorney General has warned, “using a title which implies that a person is an ‘engineer’ rather than a registered professional engineer nonetheless constitutes the ‘practice of engineering,’ which is prohibited without registration.” Or. Op. Att’y Gen. OP-5483, 1983 WL 165673 (1983).

56. Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) are sometimes referred to as the “title law.”

57. The title law has given rise to at least two Board investigations based on the content of voter pamphlets.

58. The title law has given rise to a Board investigation based on the content of court testimony.

59. The title law has given rise to a Board investigation based on the content of a complaint letter sent to the Board.

60. The title law has given rise to a Board investigation based on the content of a political advertisement.

61. The title law has given rise to a Board investigation based on the content of an article in the “Oregon Woman 2015” edition of *Portland Monthly*.

### **III. THE BOARD INVESTIGATES JÄRLSTRÖM AND FINES HIM \$500.**

62. After voting to open an investigation against Järlström in February 2015, the Board sent notice to Järlström nearly two months later.

63. On March 30, 2015, a Board investigator notified Järlström of the investigation and informed him that “the allegations are that you . . . continued to use the title ‘engineer’ in your communications with Board staff and, of more concern, are the documents you provided

that indicate you may have engaged in unlicensed engineering work in Oregon.” The notice invited Järlström to send a written response, “to provide the Board with information from your perspective . . . .”

64. A true and correct copy of the Board’s March 30, 2015 notice to Järlström (without enclosures) is attached as Exhibit 2 to this Complaint.

65. In an April 6, 2015 e-mail to the Board investigator, Järlström replied that he had previously sought to clarify the Professional Engineer Registration Act’s application to him but had received no response from the Board at that time. He further stated that, based on his view of Oregon law, “you should understand *why* I am exempt from needing to be a licensed Professional Engineer, PE in the State of Oregon and *why* I can call myself an ‘Engineer.’”

66. On April 13, 2015, Järlström sent a further response to the Board. In part, this response detailed his “efforts to communicate, cooperate, and inquire with [the Board] regarding how to come into compliance with Oregon law.”

67. Järlström attached as exhibits to his April 13, 2015 response several previous e-mails he had sent to the Board’s representatives. Included in those e-mails were a number of documents detailing Järlström’s mathematical theories relating to traffic-light timing.

68. After acknowledging receipt of Järlström’s responses, the Board did not contact Järlström again for more than a year.

69. In August 2016—18 months after voting to investigate Järlström—the Board’s Law Enforcement Committee voted to assess Järlström a \$500 penalty.

70. About two and a half months later, the Board sent Järlström a Notice of Intent to Assess Civil Penalty.

71. A true and correct copy of the Board's Notice of Intent to Assess Civil Penalty, dated November 1, 2016, is attached as Exhibit 3 to this Complaint.

72. The November 1, 2016 Notice of Intent to Assess Civil Penalty for the first time detailed why the Board believed Järlström's e-mails had violated the Act.

73. By sending e-mails talking about his traffic-light theories, the Board said, Järlström violated two separate statutory prohibitions on several occasions, both by talking about engineering-related subjects and by stating (or, in some instances, merely implying) that he was an "engineer."

74. First, the Notice of Intent to Assess Civil Penalty stated, circulating his theories about traffic lights amounted to the unlicensed practice of engineering, a violation of Or. Rev. Stat. §§ 672.020(1) and 672.045(1) and Or. Admin. R. 820-010-0730(3)(c).

75. The Board stated that Järlström engaged in the unlicensed practice of engineering by sending five different e-mails:

a. Järlström's first e-mail to the Board, in which he explained that he was researching traffic-light issues and expressed general concerns with traffic-light timing in Oregon.

b. Järlström's January 13, 2015 e-mail to the National Council of Examiners for Engineering and Surveying, Dr. Maradudin, *60 Minutes*, and the Board investigator. The Board reasoned that "[b]y reviewing, critiquing, and altering an engineered ITE [Institute of Transportation Engineers] formula and submitting the critique and calculations for his modified version of the ITE formula to members of the public for consideration and modification of Beaverton, Oregon's and 'worldwide' traffic signals, which signals are public equipment, processes and works, Jarlstrom applied special knowledge of the mathematical, physical and

engineering sciences to such creative work as investigation, evaluation, and design in connection with public equipment, processes and works.” In this way, “Jarlstrom thereby engaged in the practice of engineering under ORS 672.005(1)(b).” The Notice of Intent to Assess Civil Penalty further stated that “[b]y doing so through the use of algorithms for the operation of traffic control systems, and through the use of the science of analysis, review, and application of traffic data systems to advise members of the public on the treatment of the functional characteristics of traffic signal timing, Jarlstrom engaged, specifically, in traffic engineering under OAR 820-040-0030(1)(b) and (2)(a).” The Notice of Intent to Assess Civil Penalty thus concluded that “[b]y engaging the [sic] practice of engineering (specifically, traffic engineering) without registration, Jarlstrom violated ORS 672.020(1), 672.045(1) and OAR 820-010-0730(3)(c) on a second occasion.”

c. Järllström’s January 15, 2015 e-mail to the KOIN 6 news station, which he forwarded to the Board investigator. As before, the Board reasoned, “[b]y again providing the public with his traffic engineering calculations for the modification of Beaverton’s traffic signal timing Jarlstrom again engaged in the practice of engineering and, specifically, the practice of traffic engineering.”

d. Järllström’s March 6, 2015 e-mail to the Sheriff of Washington County. The Board charged that “[b]y providing his ‘publicly released’ traffic engineering calculations to the sheriff of the county where he advised changes in traffic signals, Jarlstrom again . . . did engage in, the practice of engineering.”

e. Järllström’s response to the Board’s March 30, 2015 notice of investigation. “Jarlstrom attached a paper he wrote to the email,” and, in the Board’s view, that paper “opined that the Institute of Transportation Engineers made an error in the calculation on

which its change interval formula is based.” “[B]y providing an engineering analysis and critique of an engineered traffic signal formula, all to a public a [sic] body,” the Board stated, Järllström engaged in the unlicensed practice of engineering for a fifth time.

76. Apart from identifying five instances in which Järllström engaged in the unlicensed practice of engineering, the Board noted that Järllström had separately broken the title law, which bans people who are not licensed professional engineers from describing themselves using the word “engineer”:

a. Because Järllström’s original e-mail to the Board indicated that he was studying traffic lights, the Board stated, he “purported to be able to perform engineering services or work and represented that he was authorized to perform engineering work.”

b. Järllström broke the title law a second time, the Board said, when he introduced himself to the KOIN 6 news station by saying “I’m a Swedish engineer” and when he sent the Board an e-mail calling himself “an excellent engineer.” “By asserting to a public body in correspondence that he is an (‘excellent’) engineer, and asserting to the public media in correspondence that he is a (‘Swedish’) engineer,” the Board said, “Jarlstrom held himself out as, and implied that he is, an engineer.”

c. Even though he did not describe himself as an “engineer” when he e-mailed the Washington County Sheriff, the Board said Järllström violated the title law a third time because he “again purported to be authorized to engage in . . . the practice of engineering” by talking confidently about traffic lights.

d. Lastly, the Board stated that Järllström violated the title law in his April 6, 2015 e-mail to the Board investigator by disputing that the title law applied to him.

77. All told, the Board’s November 1, 2016 Notice of Intent to Assess Civil Penalty listed nine separate violations of the Professional Engineer Registration Act.

78. The Notice of Intent to Assess Civil Penalty advised Järllström that the Board intended to assess a total penalty of \$500. But it also made clear that “the Agency may impose a maximum civil penalty of \$1,000 per violation against Jarlstrom without amending its notice.”

79. Järllström paid the \$500 penalty.

80. After nearly another two months, the Board closed its investigation.

81. A true and correct copy of the Final Order by Default, dated January 10, 2017, is attached as Exhibit 4 to this Complaint.

82. The Final Order stated that Järllström violated the engineering-practice law and title law in precisely the manner alleged by the Board, as set forth in Paragraphs 74 and 77.

#### **IV. INJURY TO JÄRLSTRÖM**

83. Before the Board issued its Notice of Intent to Assess Civil Penalty against him, Järllström was engaged in a public debate about an issue of local, state, and national importance—the safety, accuracy, and fairness of traffic lights.

84. This is an issue that Järllström cares about deeply.

85. To engage in discourse about this issue fully and effectively, Järllström must be able to communicate information and opinions publicly and attempt to persuade people that his ideas have merit.

86. In Washington County, in Oregon more broadly, and elsewhere, Järllström would like to convey his ideas to the academic and scientific communities, to policymakers and government agencies, and to the public at large.



87. Based on positive feedback he received at the 2016 Institute of Transportation Engineers meeting, Järnlström began work on a paper about his theories, which is intended for publication in the *ITE Journal* or another academic journal. He is currently about 85 percent done with his work on this paper.

88. Järnlström would like to publish his paper as soon as possible. But he is refraining from engaging in the speech described above because speaking would expose him to further punishment under the Act.

89. Järnlström wishes to speak and write publicly—including in his home state of Oregon—on his ideas and theories about traffic-light timing. But as long as Or. Rev. Stat. §§ 672.005(1)(a)-(b), 672.007(1), 672.020(1), and 672.045(1) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 remain in place, his speech is chilled—and outright prohibited.

90. If Järnlström speaks out as described above, he risks further Board investigations and punishment.

91. As the Board's history of investigating and fining him and others demonstrates, Järnlström is threatened by the future applications of Or. Rev. Stat. §§ 672.005(1)(a)-(b), 672.007(1), 672.020(1), and 672.045(1) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 to his speech. If Järnlström speaks out as he would like to, he faces a genuine threat of investigation and punishment.

92. Or. Rev. Stat. §§ 672.005(1)(a)-(b), 672.007(1), 672.020(1), and 672.045(1) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 thus prohibit and prevent Järnlström from speaking and writing publicly about his ideas relating to traffic lights, and these laws are enough to chill or silence other persons of ordinary firmness from speaking out on similar topics of public note.

93. Before the Board issued its Notice of Intent to Assess Civil Penalty against him, Järnlström regularly described himself using the word “engineer.”

94. Järnlström is proud of having graduated with the equivalent of a Bachelor of Science in electrical engineering.

95. He is also proud of his experience working in technical fields with the Swedish Air Force and Luxor Electronics abroad and with Triad Speakers here in Oregon.

96. Describing his educational background, experience, and skills using the word “engineer” is an important part of Järnlström’s professional and personal identity.

97. For example, if Järnlström could publish his writings about traffic-light timing without fear of government enforcement, he would describe himself as an “engineer” in the biographical stub associated with those writings. Because that speech would expose him to punishment under the Professional Engineer Registration Act, however, he is refraining from engaging in that speech.

98. Järnlström would also like to describe himself as an “engineer” when communicating with the media, the academic and scientific communities, policymakers, government officials, and the public at large about topics like traffic-light timing, both in Oregon and elsewhere. Because that speech would expose him to punishment under the Professional Engineer Registration Act, however, he is refraining from engaging in that speech.

99. Järnlström would also like to describe himself publicly as an “engineer” when discussing other technical topics. But, again, because doing so would expose him to punishment under the Act, he is refraining from engaging in that speech.

100. As the Board’s history of investigating him and others demonstrates, Järnlström is threatened with future enforcement of Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and

672.045(2) and Or. Admin. R. 820-010-0730(3). If Järllström describes himself publicly using the word “engineer,” he faces a genuine threat of investigation and punishment.

101. So long as Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) remain in place, Järllström’s use of the word “engineer” is chilled—and outright prohibited—because publicly describing himself as an “engineer” puts him at risk of future investigations and punishment.

102. Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) thus prohibit and prevent Järllström from describing himself publicly using the word “engineer,” and these laws are enough to chill or silence other persons of ordinary firmness from speaking in this way.

## **CAUSES OF ACTION**

### **FIRST CAUSE OF ACTION**

#### **(Oregon’s engineering-practice law violates the First Amendment’s Speech Clause)**

103. Plaintiff Järllström reasserts and realleges paragraphs 1 through 102 as if fully set forth herein.

104. The First Amendment to the United States Constitution provides, in relevant part, that “Congress shall make no law . . . abridging the freedom of speech.”

105. The First Amendment is incorporated against the State of Oregon through the Fourteenth Amendment to the United States Constitution.

106. Speaking and writing about technical topics—including the mathematics behind traffic lights—is fully protected speech under the First Amendment and does not fall within any historically recognized exception to the First Amendment.

107. Both facially and as applied, Or. Rev. Stat. §§ 672.005(1)(a)-(b), 672.007(1), 672.020(1), and 672.045(1) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 prohibit

Järnlström from writing and speaking publicly about his ideas relating to the mathematics behind traffic lights. This is a content-based restriction on speech.

108. As the Board's past enforcement has demonstrated, Or. Rev. Stat. §§ 672.005(1)(a)-(b), 672.007(1), 672.020(1), and 672.045(1) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 prohibit everything from "critiquing" traffic-light formulas to writing and speaking about "algorithms" relating to traffic lights.

109. Defendants lack a state interest, compelling or otherwise, in banning Järnlström from speaking and writing publicly about his ideas relating to the mathematics behind traffic lights.

110. Defendants' ban of Järnlström's speech is not sufficiently tailored to any state interest, much less a compelling state interest, in preventing people from hearing and reading about Järnlström's ideas.

111. Defendants' ban of Järnlström's speech is not sufficiently tailored to any other state interest, compelling or otherwise.

112. As applied to Järnlström's speech about the mathematics behind traffic lights, Or. Rev. Stat. §§ 672.005(1)(a)-(b), 672.007(1), 672.020(1), and 672.045(1) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 violate his rights under the Speech Clause of the First Amendment.

113. Because Or. Rev. Stat. §§ 672.005(1)(a)-(b), 672.007(1), 672.020(1), and 672.045(1) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 create an unacceptable risk of the suppression of ideas, these provisions are also invalid on their face under the Speech Clause of the First Amendment.

114. Unless Or. Rev. Stat. §§ 672.005(1)(a)-(b), 672.007(1), 672.020(1), and 672.045(1) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 are declared unconstitutional and Defendants are enjoined, Plaintiff Järström will suffer irreparable harm in being unable to exercise his First and Fourteenth Amendment rights to speak and write about the mathematics behind traffic lights without fear of investigation and punishment by the Board.

**SECOND CAUSE OF ACTION**  
**(Oregon’s engineering-practice law violates the First Amendment’s Petition Clause)**

115. Plaintiff Järström reasserts and realleges paragraphs 1 through 114 as if fully set forth herein.

116. The First Amendment to the United States Constitution provides, in relevant part, that “Congress shall make no law . . . abridging . . . the right of the people . . . to petition the government for a redress of grievances.”

117. Communicating with government agencies and officials about technical topics—including the mathematics behind traffic lights—is fully protected under the First Amendment’s Petition Clause.

118. Both facially and as applied, Or. Rev. Stat. §§ 672.005(1)(a)-(b), 672.007(1), 672.020(1), and 672.045(1) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 prohibit Järström from petitioning about his ideas relating to the mathematics behind traffic lights. This is a content-based restriction on his right to petition.

119. For example, as the Board’s past enforcement has demonstrated, Or. Rev. Stat. §§ 672.005(1)(a)-(b), 672.007(1), 672.020(1) and 672.045(1) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 prohibit Järström from expressing his concerns and ideas about traffic lights in communications with his local sheriff and even the Board itself.

120. Defendants lack a state interest, compelling or otherwise, in banning Järnlström from petitioning about his ideas relating to the mathematics behind traffic lights.

121. Defendants' ban of Järnlström's petitioning is not sufficiently tailored to any state interest, much less a compelling state interest, in preventing people from hearing and reading about Järnlström's ideas.

122. Defendants' ban of Järnlström's petitioning is not sufficiently tailored to any other state interest, compelling or otherwise.

123. As applied to Järnlström's petitioning about the mathematics behind traffic lights, Or. Rev. Stat. §§ 672.005(1)(a)-(b), 672.007(1), 672.020(1), and 672.045(1) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 violate his rights under the Petition Clause of the First Amendment.

124. Because Or. Rev. Stat. §§ 672.005(1)(a)-(b), 672.007(1), 672.020(1), and 672.045(1) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 create an unacceptable risk of the suppression of ideas, these provisions are also invalid on their face under the Petition Clause of the First Amendment.

125. Unless Or. Rev. Stat. §§ 672.005(1)(a)-(b), 672.007(1), 672.020(1), and 672.045(1) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 are declared unconstitutional and Defendants are enjoined, Plaintiff Järnlström will suffer irreparable harm in being unable to exercise his First and Fourteenth Amendment rights to petition about the mathematics behind traffic lights without fear of investigation and punishment by the Board.

**THIRD CAUSE OF ACTION**  
**(Oregon's title law violates the First Amendment's Speech Clause)**

126. Plaintiff Järnlström reasserts and realleges paragraphs 1 through 125 as if fully set forth herein.

127. The Speech Clause of the First Amendment to the United States Constitution protects the right to speak freely and to publish statements about oneself.

128. Järllström's use of the word "engineer" when describing himself in spoken and written statements is pure speech and does not fall within any historically recognized exception to the First Amendment.

129. Both facially and as applied, Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) prohibit Järllström from describing himself as an "engineer" even though that is an entirely accurate description. This is a content-based restriction on his speech.

130. Defendants lack any state interest, compelling or otherwise, in preventing Järllström from describing himself as an "engineer" in communications with the media, policymakers, and the public at large.

131. Defendants lack any state interest, compelling or otherwise, in preventing people from making truthful statements about themselves in any setting, including making truthful statements about their educational or professional credentials.

132. Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) are not sufficiently tailored to any other state interest, compelling or otherwise.

133. As applied to Järllström's use of the word "engineer" to describe himself in noncommercial settings, Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) violate his rights under the Speech Clause of the First Amendment.

134. As applied to Järlström’s truthful use of the word “engineer” to describe himself in any setting, Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) violate his rights under the Speech Clause of the First Amendment.

135. Because Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) create an unacceptable risk of the suppression of ideas, these provisions are also invalid on their face under the Speech Clause of the First Amendment.

136. Unless Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) are declared unconstitutional and Defendants are enjoined, Järlström will suffer irreparable harm in being unable to exercise his First and Fourteenth Amendment rights by using the word “engineer” to describe himself truthfully in public writings about technical topics, in correspondence, and in other contexts.

**FOURTH CAUSE OF ACTION**  
**(Oregon’s title law violates the First Amendment’s Petition Clause)**

137. Plaintiff Järlström reasserts and realleges paragraphs 1 through 136 as if fully set forth herein.

138. The Petition Clause of the First Amendment to the United States Constitution protects the right to make statements about oneself when petitioning the government.

139. Järlström’s use of the word “engineer” when describing himself while petitioning the government is pure speech and does not fall within any historically recognized exception to the First Amendment.

140. Both facially and as applied, Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) prohibit Järlström from describing himself as an “engineer”—even though that is an entirely accurate description—while exercising his right to petition. This is a content-based restriction on his right to petition.



141. Defendants lack any state interest, compelling or otherwise, in preventing Järllström from describing himself as an “engineer” in petitioning the government.

142. Defendants lack any state interest, compelling or otherwise, in preventing people from making truthful statements about themselves in any setting, including making truthful statements about their educational or professional credentials.

143. Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) are not sufficiently tailored to any other state interest, compelling or otherwise.

144. As applied to Järllström’s use of the word “engineer” to describe himself when petitioning the government, Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) violate his rights under the Petition Clause of the First Amendment.

145. Because Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) create an unacceptable risk of the suppression of ideas, these provisions are also invalid on their face under the Petition Clause of the First Amendment.

146. Unless Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) are declared unconstitutional and Defendants are enjoined, Järllström will suffer irreparable harm in being unable to exercise his First and Fourteenth Amendment rights by using the word “engineer” to describe himself truthfully when petitioning the government.

**PRAYER FOR RELIEF**

Plaintiff Järström prays for judgment as follows:

A. For entry of judgment declaring that Or. Rev. Stat. §§ 672.005(1)(a)-(b), 672.007(1), 672.020(1), and 672.045(1) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 violate the Speech Clause of the First Amendment on their face and as applied to Plaintiff Järström to the extent they limit the right of persons other than Oregon-licensed professional engineers to speak publicly and privately about technical topics, including the mathematics behind traffic lights;

B. For entry of judgment declaring that Or. Rev. Stat. §§ 672.005(1)(a)-(b), 672.007(1), 672.020(1), and 672.045(1) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 violate the Petition Clause of the First Amendment on their face and as applied to Plaintiff Järström to the extent they limit the right of persons other than Oregon-licensed professional engineers to petition the government about technical topics, including the mathematics behind traffic lights;

C. For entry of judgment declaring that Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) violate the Speech Clause of the First Amendment on their face and as applied to Plaintiff Järström to the extent they limit the right of persons other than Oregon-licensed professional engineers to truthfully describe themselves using the word “engineer”;

D. For entry of judgment declaring that Or. Rev. Stat. §§ 672.002(2), 672.007(1), 672.020(1), and 672.045(2) and Or. Admin. R. 820-010-0730(3) violate the Petition Clause of the First Amendment on their face and as applied to Plaintiff Järström to the extent they limit

the right of persons other than Oregon-licensed professional engineers to truthfully describe themselves using the word “engineer” while petitioning the government;

E. For entry of judgment declaring that Or. Rev. Stat. §§ 672.002(2), 672.005(1)(a)-(b), 672.007(1), 672.020(1), and 672.045(1)-(2) and Or. Admin. Rs. 820-010-0730(3) and 820-040-0030 are unconstitutional as-applied and on their face;

F. For entry of preliminary and permanent injunctions against Defendants prohibiting the enforcement of these unconstitutional statutes and regulations against Plaintiff Järllström and other similarly situated persons;

G. For an award of attorneys’ fees, costs, and expenses in this action pursuant to 42 U.S.C. § 1988; and

H. For such further legal and equitable relief as the Court may deem just and proper.

Respectfully submitted this 25th day of April, 2017.

s/ William J. Ohle

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