As Reported by the House Commerce and Labor Committee

134th General Assembly

Regular Session

Sub. H. B. No. 235

2021-2022

Representatives Swearingen, Baldridge

Cosponsors: Representatives Edwards, Ghanbari, Stephens, Cutrona, Jones, Plummer, Troy, Johnson, White, Click, Ray, Patton, Abrams, Manning, Callender, Loychik, Fraizer, Hillyer, Stewart, Sheehy, Sobecki, Sweeney, Kelly, Galonski

A BILL

То	amend sections 121.083 and 121.084 and to enact	1
	sections 4145.01, 4145.02, 4145.03, 4145.04,	2
	4145.05, 4145.06, 4145.07, 4145.08, 4145.09,	3
	4145.10, 4145.11, and 4145.12 of the Revised	4
	Code to enact the High Hazard Training	5
	Certification (HHTC) Act regarding construction	6
	services performed under a contract at a	7
	stationary source.	8

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF OHIO:

Section 1. That sections 121.083 and 121.084 be amended	9
and sections 4145.01, 4145.02, 4145.03, 4145.04, 4145.05,	10
4145.06, 4145.07, 4145.08, 4145.09, 4145.10, 4145.11, and	11
4145.12 of the Revised Code be enacted to read as follows:	12
Sec. 121.083. (A) The superintendent of industrial	13
compliance in the department of commerce shall do all of the	14
following:	15
(1) Administer and enforce the general laws of this state	16

pertaining to buildings, pressure piping, boilers, bedding,	17
upholstered furniture, and stuffed toys, steam engineering,	18
elevators, plumbing, licensed occupations regulated by the	19
department, and travel agents, as they apply to plans review,	20
inspection, code enforcement, testing, licensing, registration,	21
and certification.	22
(2) Exercise the powers and perform the duties delegated	23
to the superintendent by the director of commerce under Chapters	24
4109., 4111., and 4115., and 4145. of the Revised Code.	25
(3) Collect and collate statistics as are necessary.	26
(4) Examine and license persons who desire to act as steam	27
engineers, to operate steam boilers, and to act as inspectors of	28
steam boilers, provide for the scope, conduct, and time of such	29
examinations, provide for, regulate, and enforce the renewal and	30
revocation of such licenses, inspect and examine steam boilers	31
and make, publish, and enforce rules and orders for the	32
construction, installation, inspection, and operation of steam	33
boilers, and do, require, and enforce all things necessary to	34
make such examination, inspection, and requirement efficient.	35
(5) Rent and furnish offices as needed in cities in this	36
state for the conduct of its affairs.	37
(6) Oversee a chief of construction and compliance, a	38
chief of operations and maintenance, a chief of licensing and	39
certification, a chief of worker protection, and other designees	40
appointed by the director to perform the duties described in	41
this section.	42
(7) Enforce the rules the board of building standards	43
adopts pursuant to division (A)(2) of section 4104.43 of the	44

Revised Code under the circumstances described in division (D)

of that section. 46 (8) Accept submissions, establish a fee for submissions, 47 and review submissions of certified welding and brazing 48 procedure specifications, procedure qualification records, and 49 performance qualification records for building services piping 50 as required by section 4104.44 of the Revised Code. 51 (B) The superintendent may enter into a contract with a 52 municipal corporation, township, or county building department 53 certified by the board of building standards pursuant to 54 division (E) of section 3781.10 of the Revised Code, or a 55 municipal or county health district, to do any of the following 56 on behalf of the building department or health district: 57 (1) Exercise enforcement authority pursuant to section 58 3781.03 of the Revised Code; 59 (2) Accept and approve plans and specifications, and make 60 inspections, pursuant to section 3791.04 of the Revised Code; 61 (3) Enforce the rules adopted pursuant to division (A) (2) 62 of section 4104.43 of the Revised Code. 63 Sec. 121.084. (A) All moneys collected under sections 64 3783.05, 3791.07, 4104.07, 4104.18, 4104.44, 4105.17, 4105.20, 65 4145.09, 4169.03, and 5104.051 of the Revised Code, and any 66 other moneys collected by the division of industrial compliance 67 shall be paid into the state treasury to the credit of the 68 industrial compliance operating fund, which is hereby created. 69 The department of commerce shall use the moneys in the fund for 70 paying the operating expenses of the division and the 71 administrative assessment described in division (B) of this 72 section. 73

(B) The director of commerce shall prescribe procedures

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(a) A program that trains an individual for a trade or	104
occupation through paid on-the-job training and related	105
instruction that is registered with the United States department	106
of labor as meeting the minimum standards established by the	107
"National Apprenticeship Act of 1937," 29 U.S.C. 50, and 29	108
C.F.R. Part 29, Subpart A;	109
(b) An apprenticeship program registered by the department	110
of job and family services under Chapter 4139. of the Revised	111
Code;	112
(c) An apprenticeship program registered by the state	113
apprenticeship agency of another state that has been authorized	114
to register apprenticeship programs for federal purposes under	115
the laws of that state.	116
(2) "Registered apprenticeship program" may include any	117
apprenticeship program subject to the "Employee Retirement	118
<pre>Income Security Act of 1974," 29 U.S.C. 1001, et seq., as</pre>	119
amended or an apprenticeship program supported through an	120
<pre>employer's general funds.</pre>	121
(3) "Registered apprenticeship program" does not include	122
an industry-recognized apprenticeship program as described under	123
29 C.F.R. Part 29, Subpart B.	124
(F) "Class A skilled journeyperson" means an individual	125
who satisfies the requirements of division (A) of section	126
4145.02 of the Revised Code.	127
(G) "Class B skilled journeyperson" means an individual	128
who satisfies the requirements of division (B) of section	129
4145.02 of the Revised Code.	130
(H) "State apprenticeship agency" means the state	131
government agency that is authorized by the United States	132

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(c) Apprentices.	189
(2) The contractor or subcontractor shall follow the	190
following implementation schedule regarding the proportion of	191
the contractor's or subcontractor's employees performing those	192
construction services who shall be class A skilled	193
journeypersons, apprentices, or both:	194
(a) Beginning on January 1, 2023, at least sixty-five per	195
<pre>cent;</pre>	196
(b) Beginning on January 1, 2024, at least eighty per	197
cent.	198
(3) The contractor or subcontractor shall employ class B	199
skilled journeypersons for the remaining portion of the	200
contractor's or subcontractor's employees performing	201
construction services who are not required to be class A skilled	202
journeypersons or apprentices pursuant to division (B)(2) of	203
this section.	204
(4) An individual employed by a contractor or	205
subcontractor is not required to be a class A or class B skilled	206
journeyperson or apprentice pursuant to division (B)(1) of this	207
section if both of the following apply:	208
(a) The individual is employed as a project	209
superintendent, project manager, engineer, safety professional,	210
quality control professional, or clerical employee;	211
(b) The individual does not perform construction services.	212
(C) (1) Divisions (A) and (B) of this section do not apply	213
under any of the following circumstances:	214
(a) When a contractor or subcontractor requests qualified	215
individuals from a hiring hall or referral system that	216

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of section 4145.03 of the Revised Code, the owner or operator	246
shall, not later than seven days after the date on which the	247
owner or operator first believes a contractor or subcontractor	248
is failing or has failed to comply with the implementation	249
schedule, provide written notice of the alleged noncompliance to	250
the director of commerce, and shall include both of the	251
following in the notice:	252
(A) A summary that describes the contractor's or	253
subcontractor's alleged noncompliance, including the applicable	254
dates of noncompliance and degree to which the contractor or a	255
subcontractor has allowed the proportion of the contractor's or	256
subcontractor's employees performing construction services to	257
deviate from the implementation schedule;	258
(B) The corrective actions, if any, that the owner or	259
operator has taken to ensure the contractor or subcontractor is	260
complying with the implementation schedule, and the date by	261
which the owner or operator expects the contractor or	262
subcontractor to comply with the implementation schedule.	263
Sec. 4145.05. (A) Each contractor and subcontractor	264
subject to section 4145.03 of the Revised Code shall maintain	265
the following records for a period of not less than five years	266
after the date on which construction services under the contract	267
have been completed:	268
(1) Payroll records for all individuals who performed	269
construction services;	270
(2) Apprenticeship records;	271
(3) Copies of the reports that each contractor and	272
subcontractor is required to submit under sections 4145.06 and	273
4145.07 of the Revised Code.	274

(B) The director of commerce or attorney general may	275
request to inspect the records described in division (A) of this	276
section at any time during the time period described in that	277
division. A contractor or subcontractor shall make the records	278
available not later than seven days from the date the director	279
or attorney general makes a request under this division.	280
Sec. 4145.06. (A) A contractor subject to section 4145.03	281
of the Revised Code shall prepare a compliance report at the end	282
of each calendar quarter during which the contractor provided	283
construction services at a stationary source. The contractor	284
shall submit each report to the director of commerce not later	285
than thirty days after the date on which the calendar quarter	286
ends. The contractor shall submit a final report to the director	287
not later than thirty days after construction services under the	288
contract are completed. The contractor shall include in each	289
report all of the following information with respect to that	290
<pre>calendar quarter:</pre>	291
(1) The name and address of the contractor;	292
(2) The name and title of the individual preparing the	293
report on behalf of the contractor;	294
(3) The name and address of the owner or operator of the	295
stationary source at which construction services were performed;	296
(4) The name of the project and project number, if any;	297
(5) The total dollar value of the contract;	298
(6) The name and address of all subcontractors involved in	299
providing construction services at the stationary source;	300
(7) The total number of class A and class B skilled	301
journeypersons and apprentices who performed construction	302

services;	303
(8) The name and address of each registered apprenticeship	304
program from which class A skilled journeypersons graduated and	305
each registered apprenticeship program that provided training to	306
apprentices;	307
(9) Certification that the contractor has complied with	308
division (B) of section 4145.03 of the Revised Code;	309
(10) All of the following:	310
(a) The total number of class A skilled journeypersons who	311
<pre>performed construction services;</pre>	312
(b) The total number of class B skilled journeypersons who	313
<pre>performed construction services;</pre>	314
(c) The total number of apprentices who performed	315
<pre>construction services;</pre>	316
(d) The numbers described in divisions (A)(10)(a) to (c)	317
of this section represented as a per cent of the total number of	318
class A and class B skilled journeypersons and apprentices who	319
performed construction services.	320
(B) At the time a contractor submits a report to the	321
director under division (A) of this section, the contractor	322
shall provide a copy of the report to the owner or operator of	323
the stationary source at which the contractor is providing	324
construction services.	325
Sec. 4145.07. Each subcontractor subject to section	326
4145.03 of the Revised Code shall prepare a workforce report at	327
the end of each calendar quarter during which the subcontractor	328
provided construction services at a stationary source. The	329
subcontractor shall submit each report to the contractor not	330

later than ten days after the date on which the calendar quarter	331
ends. The subcontractor shall include in each report all of the	332
following information regarding individuals who performed	333
construction services during that calendar quarter:	334
(A) The total number of class A and class B skilled	335
journeypersons and apprentices who performed construction	336
services;	337
(B) The total number of class A skilled journeypersons and	338
apprentices who performed construction services;	339
(C) The total number of class B skilled journeypersons who	340
performed construction services and the means by which the	341
subcontractor verified that each class B skilled journeyperson	342
has satisfied the experience requirement under division (B)(1)	343
of section 4145.02 of the Revised Code;	344
(D) The name and address of each registered apprenticeship	345
program from which class A skilled journeypersons graduated and	346
each registered apprenticeship program that provided training to	347
apprentices.	348
Sec. 4145.08. (A) No owner or operator shall do any of the	349
<pre>following:</pre>	350
(1) Fail to comply with division (A) of section 4145.03 of	351
the Revised Code;	352
(2) Fail to comply with the notice requirement under	353
section 4145.04 of the Revised Code within the time period	354
specified in that section;	355
(3) Submit a written notice as described under section	356
4145.04 of the Revised Code that includes false or inaccurate	357
information.	358

(B) No contractor or subcontractor shall do any of the	359
<pre>following:</pre>	360
(1) Fail to comply with division (B) of section 4145.03 of	361
the Revised Code;	362
(2) Fail to maintain the records specified in section	363
4145.05 of the Revised Code for the time period specified in	364
that section;	365
(3) Fail to make available the records specified in	366
section 4145.05 of the Revised Code within the time period	367
specified in that section;	368
(4) Fail to comply with the reporting requirements under	369
sections 4145.06 and 4145.07 of the Revised Code;	370
(5) Submit a report under section 4145.06 or 4145.07 of	371
the Revised Code that includes false or inaccurate information.	372
Sec. 4145.09. (A) Any person who believes an owner or	373
operator, contractor, or subcontractor has violated section	374
4145.08 of the Revised Code may file a written complaint with	375
the director of commerce. On receiving a complaint, the director	376
may investigate the alleged violation. The director also may	377
investigate whether an owner or operator, contractor, or	378
subcontractor has violated section 4145.08 of the Revised Code	379
on the director's own initiative.	380
(B)(1) If the director determines after an investigation	381
that reasonable grounds exist that an owner or operator,	382
contractor, or subcontractor has violated section 4145.08 of the	383
Revised Code, the director shall proceed in accordance with the	384
notice and hearing requirements prescribed in Chapter 119. of	385
the Revised Code	386

(2) After a hearing conducted under Chapter 119. of the	387
Revised Code, if the director determines an owner or operator,	388
contractor, or subcontractor has violated section 4145.08 of the	389
Revised Code, the director shall order the offending owner or	390
operator, contractor, or subcontractor to remedy the violation.	391
The offending owner or operator, contractor, or subcontractor	392
shall remedy the violation not later than thirty days after the	393
date on which the director issues the order.	394
(C) An offending owner or operator, contractor, or	395
subcontractor that fails to remedy a violation within the time	396
period specified in division (B)(2) of this section is subject	397
to the civil penalty specified in section 4145.10 of the Revised	398
Code. The attorney general, on behalf of the director, may bring	399
a civil action in any court of competent jurisdiction to enforce	400
the violation. If the attorney general is the prevailing party	401
in a civil action brought under this division, the court shall	402
award to the attorney general court costs and reasonable	403
attorney's fees. A civil penalty assessed under section 4145.10	404
of the Revised Code and any court costs and attorney's fees	405
recovered shall be paid into the state treasury to the credit of	406
the industrial compliance operating fund created under section	407
121.084 of the Revised Code.	408
Sec. 4145.10. Subject to section 4145.09 of the Revised	409
Code, an owner or operator, contractor, or subcontractor that	410
violates section 4145.08 of the Revised Code is subject to a	411
civil penalty of not more than ten thousand dollars for each	412
violation. Each day during which a violation of division (A)(1)	413
or (B)(1) of section 4145.08 of the Revised Code occurs	414
constitutes a separate violation.	415
Sec. 4145.11. (A) The director of commerce may adopt rules	416

in accordance with Chapter 119. of the Revised Code as necessary	417
to administer and enforce this chapter.	418
(B) The director shall do both of the following:	419
(1) Create and make available a form on which a contractor	420
shall include the information specified in section 4145.06 of	421
the Revised Code;	422
(2) Make publicly available on the department of	423
commerce's internet web site each compliance report a contractor	424
submits to the director under section 4145.06 of the Revised	425
Code not later than thirty days after the date on which the	426
contractor submits the report to the director.	427
Sec. 4145.12. The purpose of this chapter is to protect	428
public health and safety by requiring minimum training and skill	429
standards for persons performing construction services on	430
certain high hazard facilities where inferior or faulty work	431
practices can pose serious risks to the public and result in	432
potentially catastrophic consequences.	433
Section 2. That existing sections 121.083 and 121.084 of	434
the Revised Code are hereby repealed.	435
Section 3. This act shall be known as the High Hazard	436
Training Certification (HHTC) Act.	437
Section 4. The General Assembly finds the following:	438
(A) The General Assembly has long recognized our State	439
Government's duty to protect the public health, safety and	440
welfare. This Act falls within these powers and duties by	441
requiring certain training and qualification standards for	442
contractors performing construction work on high hazard	443
facilities.	444

- (B) Public health and safety protections enacted under the 445 State's police powers have been repeatedly upheld by the courts. 446 For example, the Ohio Supreme Court has pointedly recognized 447 that the "[p]rotection and preservation of public health are 448 among the prime governmental concerns and functions of the state 449 as a sovereignty." State ex. rel. Mowrer v. Underwood, 137 Ohio 450 St. 1 (1940) (upholding state legislation relating to regulation 451 of health districts); see also State v. Martin, 168 Ohio St. 37 452 (1958) (upholding state regulation of well drilling to protect 453 water supply as a reasonable police power function). Federal 454 courts likewise have protected the sanctity of state police 455 powers for the sake of both public health and worker safety. 456 See Associated Builders & Contractors v. Michigan Department of 457 Labor and Economic Growth, 543 F.3d 275 (6th Cir. 2008) 458 (upholding apprenticeship training requirements in state trade 459 licensing law under state's police powers). 460
- (C) In this Act, the General Assembly recognizes that use 461 of its police power is necessary to protect public health and 462 worker safety by requiring adherence to certain training and 463 certification standards by contractors performing work on high 464 hazard facilities, where faulty or inferior work practices can 465 pose serious risks to workers at these facilities and the 466 general public, resulting in potentially catastrophic 467 consequences. 468
- (D) There are compelling grounds and public policy

 justifications for this Act. Construction is an inherently

 dangerous industry, wherein errors in project planning or

 execution can result in serious health and safety risks. Geetha

 M. Waehrer, Xiuwen S. Dong, Ted Miller, Elizabeth Haile, and

 Yurong Men, Costs of Occupational Injuries in Construction in

 the United States, 39 Accident Analysis and Prevention 1258

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(2007) (construction is a high risk industry and accounts for	476
disproportionate share of work-related injuries).	477
(E) The risks inherent in construction are substantially	478
higher in high hazard facilities that handle dangerous materials	479
or substances insofar as unsafe work practices may cause	480
explosions, chemical spills and other hazardous conditions,	481
which may expose workers and the public, especially populations	482
in nearby communities, to dangerous conditions that can lead to	483
serious bodily injuries and death.	484
(F) Congress has addressed these dangers by enacting	485
section 112(r) of the "Clean Air Act," 42 U.S.C. 7412(r), under	486
which the U.S. Environmental Protection Agency requires owners	487
and operators of such facilities to implement "Risk Management	488
Plans" ("RMP") to prevent public health threats presented by	489
such facilities. See also 40 C.F.R. Part 68 and 59 Fed. Reg.	490
4233 and 4478.	491
(G) It has been well documented that petroleum refineries,	492
in particular, present acute risks of workplace accidents. The	493
U.S. Department of Labor, Occupational Safety and Health	494
Administration (OSHA) found that, since the agency began	495
monitoring safety management at these facilities in 1992, "no	496
other industry sector has had as many fatal or catastrophic	497
incidents related to the release of highly hazardous chemicals .	498
as petroleum refining " See Occupational Safety and	499
Health Administration, OSHA 3918-08 2017, Process Safety	500
Management for Petroleum Refineries (2017).	501
(H) In an attempt to address these risks, OSHA issued	502
regulations in 1992 for high hazard facilities that require	503
owners and operators to follow certain procedures for evaluating	504

safety performance of contractors and established requirements

for safety programs to ensure that contractor employees are	506
properly trained. See 29 C.F.R. 1910.119.	507
(I) In 2017, OSHA announced a National Emphasis Program	508
for inspecting facilities with highly hazardous chemicals. The	509
directive detailed the numerous fatal and/or catastrophic safety	510
incidents that occurred just since 2010, including the	511
following:	512
(1) "A heat exchanger catastrophically ruptured, which	513
caused an explosion and fire killing seven workers."	514
(2) "A crew was realigning pumps due to a pump seal leak	515
in an isomerization unit when flammable materials were released,	516
formed a vapor cloud and ignited. The fire killed one worker and	517
hospitalized three with burn injuries."	518
(3) "An explosion killed two workers attempting to light a	519
boiler at a fluid catalytic cracking unit."	520
(4) "Ignition of a release of flammable materials killed	521
one contract worker attempting to install a blind flange on a	522
knockout drum."	523
(5) "An eight-inch-diameter pipe catastrophically	524
ruptured, releasing flammable, high-temperature light gas oil,	525
which then formed a large vapor cloud that ignited. The ensuing	526
explosion and fire caused minor injuries to six workers and	527
hospitalized approximately 20 residents of the community near	528
the refinery."	529
Occupational Safety and Health Administration, Directive	530
No. CPL 03-00-021, OSHA Instruction, PSM Covered Chemical	531
Facilities National Emphasis Program (January 17, 2017).	532
(J) A review of the most recently available OSHA data	533

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reveals that unacceptable levels of risk persist in this sector.	534
Specifically, there has been a recent surge in "serious" OSHA	535
safety violations at petroleum refineries—an increase of 78% in	536
2019 over the previous year. Federal law defines a "serious"	537
safety violation as one having a "substantial probability [of	538
causing] death or serious physical harm" that an employer knew	539
or should have known to exist. Section 17 of the "Occupational	540
Safety and Health Act of 1970," 29 U.S.C. 666.	541

(K) The other main federal agency that oversees the high 542 hazard sector of the construction industry is the U.S. Chemical 543 Safety and Hazard Investigation Board (CSB), which is 544 responsible for investigating serious accidents at high hazard 545 facilities.

Over the past several years, CSB has conducted several investigations at high hazard facilities in which it categorically determined that "insufficient safety requirements for contractor selection and oversight were found to be causal" to the accidents in question." United States Chemical Safety and Hazard Investigation Board, Contractor Safety Digest, The Importance of Contractor Selection and Oversight (2018).

(L) In addition to the considerable challenges highlighted 554 above, safety threats are likely to increase due to critical, 555 unprecedented craft labor shortages. These conditions underscore 556 the need for greater scrutiny over contractor qualifications 557 generally and especially in the high hazard sector. Ben DuBose, 558 ECF '16: Energy Contractors Need Newcomers to Ease Labor 559 Shortage, Hydrocarbon Processing (March 1, 2016) (craft shortage 560 primary factor in 65% failure rate among mega-projects in Gulf 561 Coast Region); Gavin Aronsen, Labor Shortage Delays DuPont 562 Plant Completion, Ames Tribune (January 9, 2015) (shortage of 563

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qualified workers delayed the completion of a \$200 million 564

DuPont ethanol plant in Iowa). 565

- (M) Acting in response to these growing risks and related 566 concerns, Washington State, California and New Jersey have 567 enacted legislation to require contractors on certain high 568 hazard facilities, including petroleum refineries, to require 569 construction contractors to ensure their craft workforce meets 570 minimum apprenticeship training and experience requirements as a 571 means of ensuring the use of properly trained, safety-conscious 572 employees at these facilities. 573
- (N) These statutes are based on growing concerns regarding the eminent dangers of the petroleum refinery sector, as well as extensive public policy findings, which recognize that established apprenticeship training programs in the construction industry are most reliable and effective means for ensuring proper qualifications of craft labor personnel due to the indepth skill and safety training they provide.
- (O) Widespread recognition of the value of apprenticeship 581 training generally has also promoted at least 14 states have 582 passed incorporating critical apprenticeship training components 583 into their public works programs. See 2020 Va. Acts Chapter 176; 584 Colo. Rev. Stat. Ann. 24-92-115; Title 26 Me. Rev. Stat. 3501 585 and 3502; Assembly No. 3666 of the 218th New Jersey Legislature; 586 N.J. Ann. Stat. 52:38-5; N.M. Stat. Ann. 13-4D-4; Wash. Rev. 587 Code 39.04.320; Ind. Code 5-30-5-3; Md. State Finance and 588 Procurement Code 17-601 to 17-606 and 17-6A-06; Wyo. Stat. 16-6-589 902; Chapter 30 Ill. Comp. Stat. 500/30-22; R.I. Gen. Laws 37-590 13-3.1; Title 8 Cal. Code of Reg. 230.1; Cal. Labor Code 1777.5; 591 Haw. Rev. Stat. 103-55.6; N.Y. Consolidated Law Service, Labor 592 Law 816-b; and Code of Md. Reg. 01.01.2013.05. 593

(P) The apprenticeship training provisions relate to skill	594
and safety training standards developed for craft labor	595
apprenticeship programs established under the "National	596
Apprenticeship Act of 1937," 29 U.S.C. 50, et seq.	597
Apprenticeship training is a system in which workers are fully	598
trained through organized, formally registered apprenticeship	599
standards, designed in accordance with established quality,	600
safety and performance standards approved and monitored by the	601
U.S. Department of Labor and state labor agencies, including the	602
Ohio Department of Job and Family Services. United States	603
Department of Commerce and Case Western Reserve University, The	604
Benefits and Costs of Apprenticeship: A Business Perspective	605
(2016) (apprenticeship programs are widely supported by	606
contractors and other employers as highly cost-effective due to	607
higher productivity of trained workers, improved safety,	608
improved project quality, more reliable project staffing, and	609
reduction in employee turnover).	610
(Q) In order to be approved under applicable federal	611
regulations, an apprenticeship program must have an organized,	612
written plan that contains provisions addressing "safety	613

- training for apprentices on the job and in related instruction" 614 in addition to numerous other standards for acquiring critical 615 skills in a given trade. Apprentices receive a combination of 616 extensive on-the-job training, combined with classroom and shop 617 instruction, and must pass specific skill-level tests after each 618 year before they can proceed to the next year in programs that 619 typically involve a 3 to 5 curriculum. See 29 C.F.R. 29.5. 620
- (R) In educating workers in the construction industry, the 621 training used to develop skills in the respective trades is 622 inextricably linked to safety training since performing many 623 functions or tasks safely requires that the work correctly. 624

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Executing tasks in construction properly also requires that they	625
be carried out in accordance with a number of complex industry	626
codes and standards. See, e.g., Farzad Minooei, Towards a	627
Deeper Understanding of the U.S. Workforce Development System	628
in the Construction Industry (2018) (Ph.D. dissertation,	629
University of Colorado) ("A skilled workforce is essential to	630
safety, productivity and sustainability of construction and	631
maintenance activities"). Conversely, the use of workers	632
with inadequate training can seriously undermine project safety.	633
See, e.g., Hossein Karimi, Timothy R.B. Taylor, Paul M. Goodrum,	634
and Cidambi Srinivasan, Quantitative Analysis of the Impact of	635
Craft Worker Availability on Construction Project Safety	636
Performance, 16 Construction Innovation 307 (2016) ("When a	637
project is executed by less qualified craft workers, increases	638
in human errors, less familiarity with safety procedures and	639
legislations and inadequate safety training will be the factors	640
that adversely influence safety performance.").	641
(S) In view of these factors, the General Assembly finds	642
that the use of apprenticeship training standards on	643
construction projects for high hazard facilities provides the	644

most effective means for addressing growing public safety

system used for these facilities.

threats and should be incorporated into the project planning