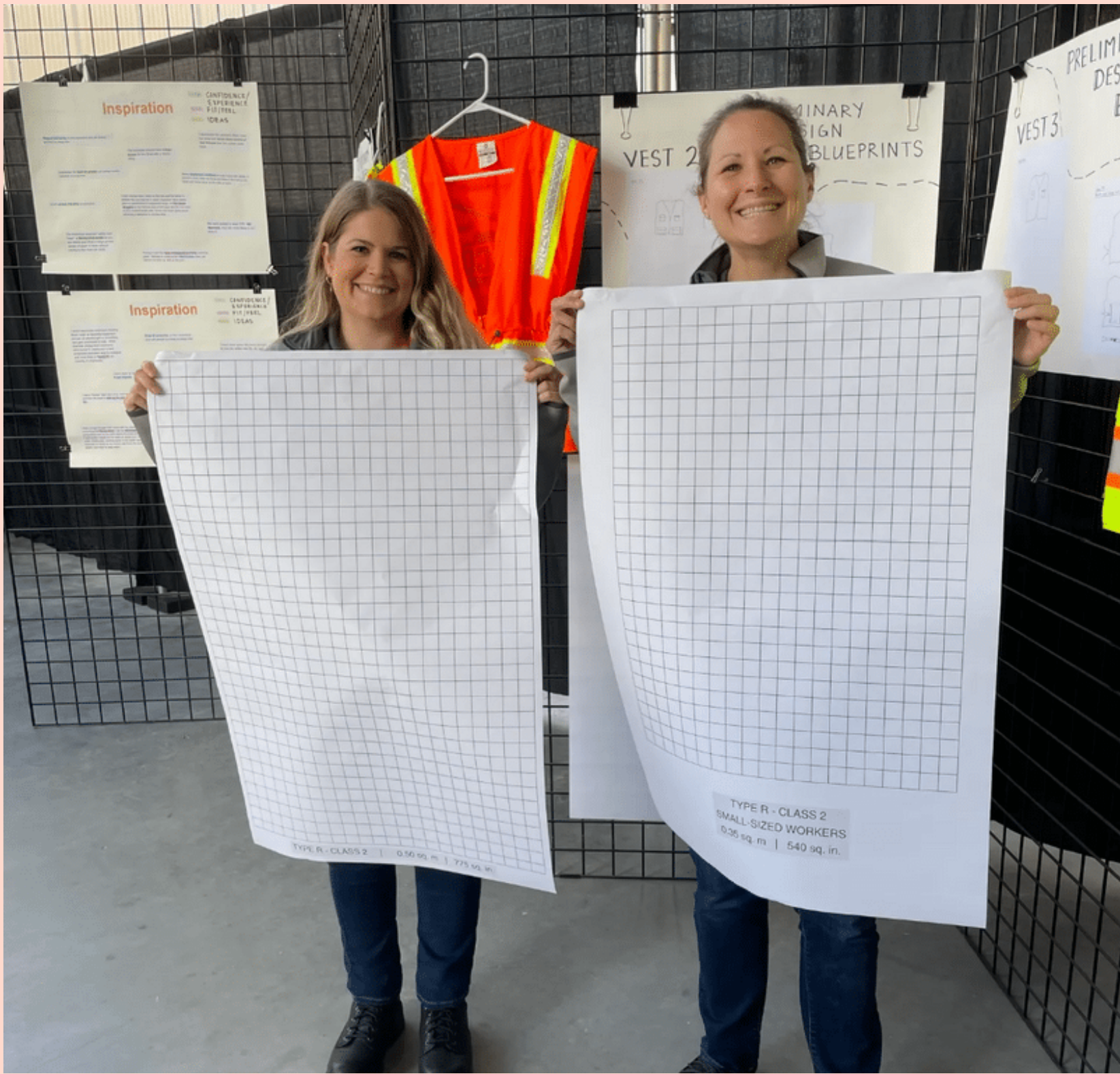


Safely Covered or Dangerously Exposed? Analyzing the ANSI/ISEA Code for High Visibility Safety Vests

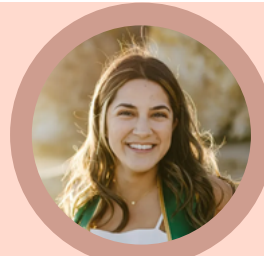
ABSTRACT

Through previous senior project data collection, it has become obvious that there is a demand for a more universally fitting safety vest. Drawing upon the information obtained through this initial survey, the Cal Poly Construction Management Department hosted the first Verifying Everyone's Safety Together (VEST) Hackathon. This event fostered a collaborative space for industry professionals, students, and faculty to come together to address concerns set forth about the traditional safety vest. Conversations and interviews of participants were held throughout and following the two-day event to gauge personal experiences and potential hurdles in implementing a better fitting vest. The research for this paper takes a look at the conversations and interviews around the Safety VEST Hackathon event and analyzes the ANSI/ISEA 107-2020 code for High Visibility Safety Apparel and Accessories. The code's primary purpose is to eliminate low visibility hazards on site but needs to be built upon to address risks associated with snags from excess vest material. Taking into account the generalized consensus of how the "one size fits all" safety vest does not fit all, it is crucial to develop a more narrowly tailored definition of "proper fit" that can be applied to the set of standards which governs the design of the construction vest.

“ If the personal protective equipment does not fit properly, it can make the difference between being safely covered or dangerously exposed” (OSHA).



Two Hackathon Industry Participants holding current SF required for Type R Class 2 Safety Vests



Liz Galvez (CM, 2021)
"Fitting In" Research

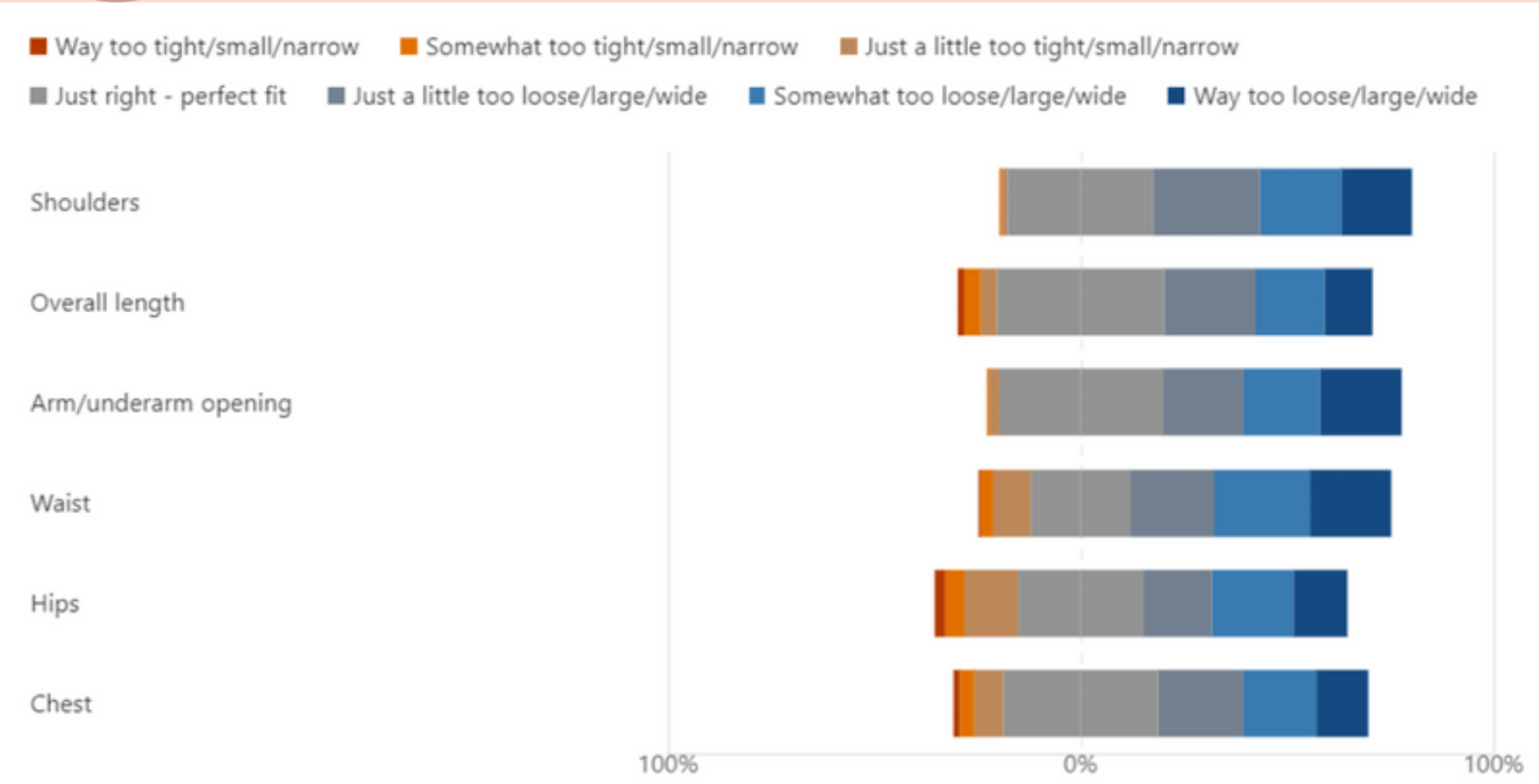
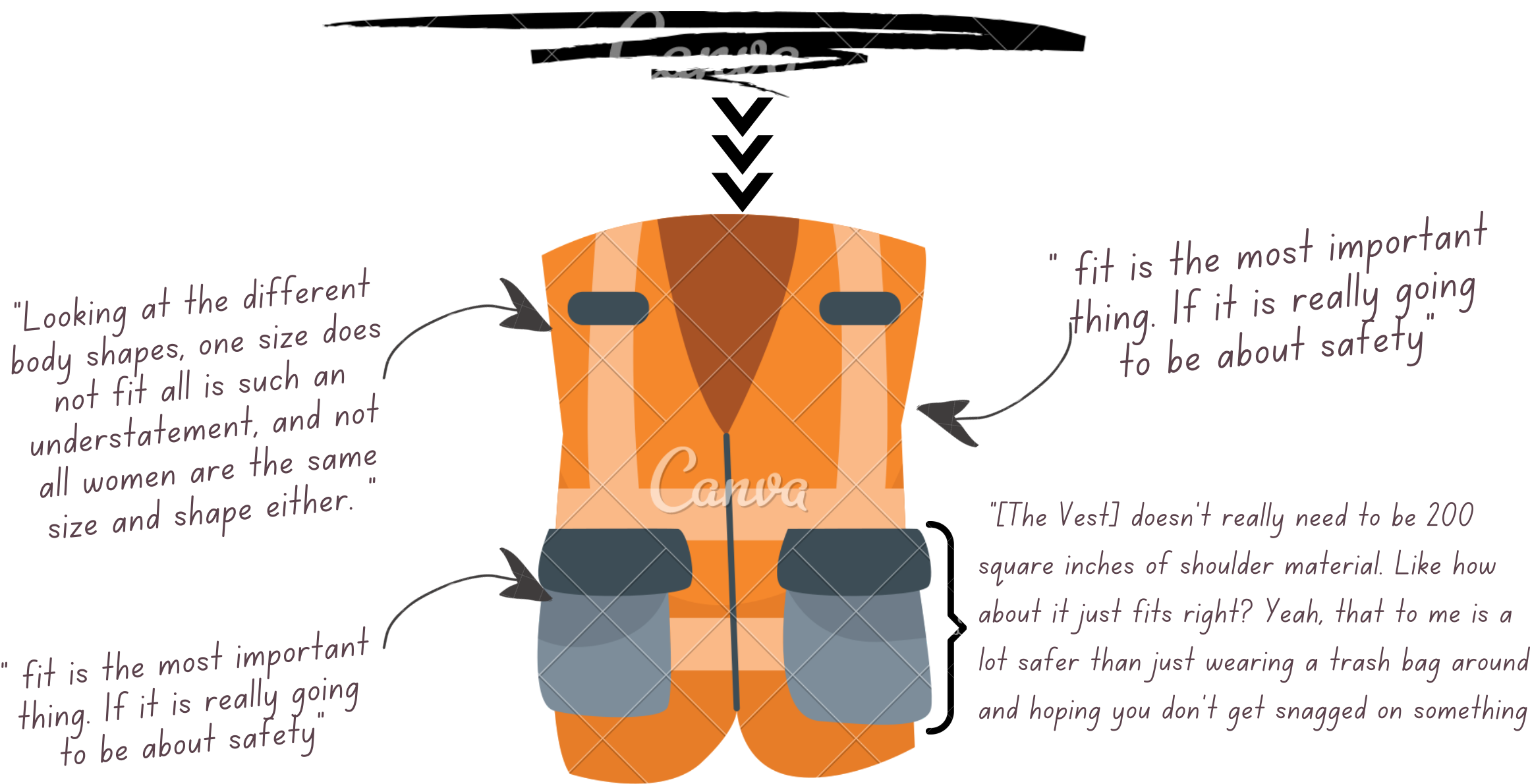


Figure 1: Identification of the fit of safety vests

"If the Vest Doesn't Fit, I don't Fit"



ANSI/ISEA 107-2020 OVERVIEW

STANDARD FOR HIGH-VISIBILITY SAFETY APPAREL



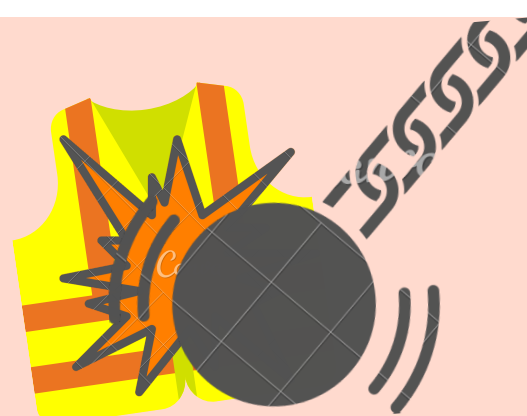
DESIGN REQUIREMENTS & APPAREL CONFIGURATIONS

GARMENT TYPE	Performance Class	Background Material	Retroreflective or Combined-Performance Materials	Minimum Width Reflective Material
TYPE O Off-road & Non-roadway use	Class 1	0.14 sq. m. 217 sq. in.	0.10 sq. m. 155 sq. in.	25 mm 1 in.
TYPE R Roadway & TTC Zones	Class 2	0.35 sq. m. 540 sq. in.	0.50 sq. m. 775 sq. in.	25 mm (1 in.)* 35 mm (1.38 in)

(vesthackathon.org)



SCAN ME



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