



2026 No. 066

# Modernizing Work Context Information Within the O\*NET Content Model

## Final Report

**Prepared for:** National Center for O\*NET Development 313  
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**Prepared under:** Subcontract Number  
(through RTI International):  
1-312-0207142-41224L

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**Date:** August 19, 2026

## Executive Summary

The O\*NET Work Context domain has served as the nation's primary source of standardized information describing the physical, social, and structural conditions under which work is performed for nearly three decades. During that time, the nature of work has changed significantly. Advances in digital technology, the growth of remote and hybrid work, increased automation and artificial intelligence (AI), evolving work arrangements, and new occupational safety and organizational practices have reshaped how work is performed across the U.S. economy. This project evaluated whether the current Work Context taxonomy continues to reflect these changes and identified opportunities to modernize the framework while preserving continuity with O\*NET's longstanding Content Model.

Using a comprehensive review of occupational data sources, scientific literature, historical O\*NET development materials, and adjacent O\*NET Content Model domains, the project developed a proposed modernization of the Work Context taxonomy. The recommendations retain the strengths of the existing framework while expanding its ability to describe contemporary work. The revised taxonomy increases the number of measurable Work Context elements from 57 to 81, introduces new concepts reflecting today's workplace—including remote work, digital collaboration, electronic performance monitoring, work-related travel, screen exposure, workload demands, and work design characteristics—and modernizes definitions to improve conceptual clarity and facilitate application of future measurement methods, including potential AI-assisted data collection methods.

Modernizing the Work Context domain has the potential to benefit the full spectrum of O\*NET stakeholders. Job seekers, students, career counselors, and workforce development professionals would gain richer information about the environments in which occupations are performed, enabling more informed career exploration and occupational matching. Employers, educators, and training providers could better understand emerging workplace requirements and design education, training, and workforce development programs that reflect modern occupational realities. Researchers and policymakers would gain a more comprehensive, standardized framework for analyzing changes in work organization, technology adoption, occupational safety, and labor market trends. Software developers, data scientists, and workforce technology providers would benefit from a more robust and interoperable data resource that supports advanced analytics, AI applications, and integration with other workforce and labor market information systems.

The proposed revisions position O\*NET to remain the nation's authoritative source of occupational information as work continues to evolve. By preserving compatibility with the existing Content Model while thoughtfully incorporating contemporary work practices and emerging technologies, the revised Work Context taxonomy provides a foundation for future data collection, improved occupational measurement, and innovative dissemination methods. The recommendations presented in this report support O\*NET's continued mission of providing accurate, relevant, and forward-looking occupational information for the diverse public, private, educational, and research communities that depend upon it.

# Modernizing Work Context Information Within the O\*NET Content Model

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# Modernizing Work Context Information Within the O\*NET Content Model

## Introduction

The Occupational Information Network (O\*NET) is a comprehensive system developed by the U.S. Department of Labor that provides information for over 900 occupations encompassing over 57,000 jobs within the U.S. economy. This information is maintained in a comprehensive database ([National Center for O\\*NET Development, 2026a](#)). To keep the database current, the National Center for O\*NET Development (hereinafter, “the Center”) conducts ongoing data collection to identify and maintain current information on the characteristics of workers and occupations. The Human Resources Research Organization (HumRRO) has supported the Center's efforts to maintain the database for years. The purpose of this project was to revisit and update the Work Context portion of the O\*NET Content Model.

Work Contexts constitute one type of occupational requirement in the [O\\*NET Content Model](#). Whereas worker-oriented domains such as Abilities, Skills, Work Styles, and Interests describe attributes of workers, Work Contexts describe the conditions under which occupational work is performed. O\*NET defines Work Contexts as the “physical and social conditions in which work is performed” ([National Center for O\\*NET Development, 2026a](#)). From the outset, Work Context was organized into three broad categories: Interpersonal Relationships, Physical Work Conditions, and Structural Job Characteristics ([Peterson et al., 2001](#)), with occupational ratings published only for the most specific elements within each ([Strong et al., 1999](#)). Current dimensions describe, for example, the extent to which work involves public speaking, face-to-face discussions, contact with external customers, exposure to physical hazards, and time pressure. These data help O\*NET users understand how occupations differ not only in the activities workers perform, but also in the circumstances, demands, and constraints surrounding those activities.

O\*NET's Work Context taxonomy has, fundamentally, changed little since its initial development in the mid-1990s. The most notable subsequent revision occurred as part of the broader O\*NET instrument revision described by [Hubbard et al. \(2000\)](#), which reduced the number of Work Context dimensions and introduced a more streamlined set of rating scales. Since then, however, the world of work has changed substantially. For example, remote and hybrid work, platform and gig work, and automation and artificial intelligence (AI) have substantially altered the conditions under which many occupations are performed ([Autor, 2015](#); [Barrero et al., 2023](#); [Kellogg et al., 2020](#)). These developments do not necessarily render the existing taxonomy obsolete, but they do raise the question of whether it still captures the conditions under which contemporary occupational work is performed. We elaborate on these changes in the Developments section below.

Revisiting Work Context dimensions differs in an important way from revisiting other O\*NET domains. Namely, recent work updating the Work Styles and Career Interest domains in O\*NET capitalized on well-researched personality and interest taxonomies from the research literature to inform those domains ([Putka et al., 2024](#); [Rounds et al., 2023](#)). Work Contexts have no analogous, consensually accepted external taxonomy. Instead, relevant constructs are distributed across multiple literatures. For this reason, the present effort did not aim to replace the current taxonomy with a single alternative model. Rather, we drew from multiple sources to identify gaps, outdated variables, and boundary issues with other parts of the Content Model (e.g., Organizational Contexts, Work Activities).

The Center also expressed interest in ensuring that any revised Work Context taxonomy could provide a feasible foundation for future rating development. Current Work Context ratings are largely based on incumbent survey responses (with a smaller portion based on Occupational Experts [OEs]), and current definitions are closely tied to existing rating questions and scales. We therefore distinguished between the conceptual definition of a Work Context dimension and the rating question or scale that might eventually be used to measure it. This distinction was important because a revised taxonomy should first define what is to be represented before decisions are made about how it is scaled. As part of this effort, we also conducted preliminary work to align rating scales with the revised definitions and to prepare prototype rating questions suitable for potential use in Large Language Model (LLM) and other approaches to generating Work Context ratings for occupations.

It is important to note that our working hypothesis at the outset of this effort was not that the Work Context domain required wholesale replacement. Many current Work Context elements remain useful and continue to capture meaningful occupational differences. Rather, we envisioned revising the taxonomy to preserve useful continuity with the existing O\*NET framework while addressing limitations that have become more apparent over time. We anticipated that such revisions might involve (a) removing non-substantive subcategories or redundant dimensions; (b) revising dimension labels and definitions to improve clarity and remove scale-specific wording; (c) moving dimensions across subcategories to improve conceptual organization; (d) adding new dimensions that reflect contemporary work or gaps in the current taxonomy; (e) reconsidering adjacent Organizational Context dimensions that might be viable as occupation-level Work Contexts; and (f) adopting a broadened domain definition that encompasses both the conditions under which work occurs and the structural properties of the work itself.

The approach we took to identifying needed revisions involved (a) reviewing the developmental history and current structure of the Work Context taxonomy; (b) identifying and coding preexisting datasets that might contain variables relevant to current or potential Work Context dimensions; (c) reviewing relevant academic and applied literatures to identify constructs that could inform revisions or additions; (d) reviewing now-retired Organizational Contexts<sup>1</sup> part of the O\*NET Content Model to determine whether any could be reframed as Work Context elements; (e) developing a preliminary revised taxonomy that retained, revised, deleted, and added candidate dimensions; (f) using subteam review and adjudication to finalize a proposed revised taxonomy; and (g) preparing preliminary rating scales and prototype questions for the revised taxonomy to support future rating development efforts via LLMs.

The resulting revised taxonomy contains 81 data-level dimensions (i.e., elements for which ratings would be populated) organized within three renamed categories (Social Work Context, Physical Work Context, Structural Work Context), compared to the current taxonomy's 57 data-level dimensions. The net gain of 24 elements reflects 27 additions and 3 deletions. The great majority of current elements were retained, with updated definitions that separate construct meaning from rating scale language.

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<sup>1</sup> Although an active part of the Content Model while the work described in this document was being performed, Organizational Context dimensions were retired upon the release of O\*NET 30.3 in May 2026 ([National Center for O\\*NET Development, 2026b](#)).

The remainder of this report details these efforts and is organized into the following sections:

- Overview of Current Work Context Taxonomy
- Developments in the Relevant Literatures and World of Work
- Developing a Draft Set of Revised Work Contexts
- Preparing to Explore Alternative Approaches for the Population of Work Context Ratings

## Overview of Current Work Context Taxonomy

The Work Context taxonomy has been part of the O\*NET Content Model since its inception in the mid-1990s ([McPhail et al., 1995](#)). Although its broad architecture has remained stable, it has also undergone substantial revision at greater levels of specificity. This section briefly traces that history, describes the current taxonomy, and identifies features of the original conceptualization that were lost in subsequent revisions, features that, in part, inform the effort described in this report.

### Historical Background

Before the creation of O\*NET, the Dictionary of Occupational Titles (DOT) described work environments primarily to support task-oriented job descriptions. Contextual information was fragmented and theoretically unstructured. By the 1980s, the DOT's cross-functional domains were widely viewed as dated and as failing to provide a common language for comparing jobs across the economy. In 1990, the Secretary of Labor convened the Advisory Panel for the Dictionary of Occupational Titles (APDOT) to recommend a modernized occupational information system. The panel proposed a Content Model offering multiple “windows” into the world of work and identified Work Contexts as a distinct domain, separate from worker traits and tasks (APDOT, 1993).

### Developing the Work Context Taxonomy

[McPhail et al. \(1995\)](#) developed the original taxonomic structure for the Work Context domain, which was slightly refined by [Strong et al. \(1999, p. 128\)](#), and initially defined as “non-task-related factors of work that affect intrapersonal, interpersonal, or work outcomes or activities.” To build the taxonomy, the team synthesized findings from clinical, industrial, and social psychology, as well as medicine, human factors, and industrial engineering. They drew on McGrath's (1976) categorization of stressors to distinguish stress arising from the physical environment, the social environment, and role-based tasks, and they grounded the social and interpersonal components in Katz and Kahn's (1978) view of organizations as open systems of roles.

To unify these literatures, the team adopted an information-processing paradigm in which the worker is construed as an agent who transforms inputs into outputs, and Work Contexts serve as moderator variables acting on that transformation. They were clear that their goal was not to enumerate all workplace contextual elements, but only those that could have a meaningful impact on workplace outcomes *and* that could differentiate occupations ([McPhail et al., 1995](#)); variables such as paint color or furniture style were never treated as viable categories. The resulting taxonomy was organized into three pillars: Interpersonal Relationships, Physical Work Conditions, and Structural Job Characteristics ([Peterson et al., 2001](#)). This three-pillar structure has persisted into the present time.

## From Prototype to the Current Work Contexts

The O\*NET Prototype Work Context questionnaire was one of the most extensive instruments in the system. Initial field tests in the late 1990s indicated that respondents found the questions abstract and laden with technical jargon, resulting in low completion rates and raising concerns about the feasibility of large-scale data collection ([Hubbard et al., 2000](#)). In response, the instrument was simplified ([Hubbard et al., 2000](#)). This revision reduced the set of dimensions from 97 to 57 by combining redundant items and eliminating those with weak conceptual or empirical support; this was the largest item reduction among the O\*NET questionnaires ([Hubbard et al., 2000](#); [National Research Council, 2010](#)). Later, Levine and Oswald (2012) characterized the revisions as intended to enable automation, improve readability, and reduce respondent burden, rather than fundamentally reconceptualize the domain.

## Current Work Context Taxonomy

Table 1 lists the Work Contexts as they existed at the beginning of the effort described in this report.

**Table 1. Current Work Context Taxonomy in the O\*NET Content Model**

| Element ID   | Dimension Name                             | Dimension Description                                                                                                                     | Data-Level |
|--------------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>4.C.1</b> | <b>Interpersonal Relationships</b>         | <b>This category describes the context of the job in terms of human interaction processes</b>                                             |            |
| 4.C.1.a      | Communication                              | Types and frequency of interactions with other people that are required as part of this job.                                              |            |
| 4.C.1.a.2    | Communication Methods                      | How frequently does this job require the use of the following communication methods?                                                      |            |
| 4.C.1.a.2.c  | Public Speaking                            | How often do you have to perform public speaking in this job?                                                                             | X          |
| 4.C.1.a.2.f  | Telephone Conversations                    | How often do you have telephone conversations in this job?                                                                                | X          |
| 4.C.1.a.2.h  | E-Mail                                     | How often do you use e-mail in this job?                                                                                                  | X          |
| 4.C.1.a.2.j  | Letters and Memos                          | How often does the job require written letters and memos?                                                                                 | X          |
| 4.C.1.a.2.l  | Face-to-Face Discussions                   | How often do you have to have face-to-face discussions with individuals or teams in this job?                                             | X          |
| 4.C.1.a.4    | Contact With Others                        | How much does this job require the worker to be in contact with others (face-to-face, by telephone, or otherwise) in order to perform it? | X          |
| 4.C.1.b      | Role Relationships                         | Importance of different types of interactions with others both inside and outside the organization                                        |            |
| 4.C.1.b.1    | Job Interactions                           | How important are interactions requiring the worker to:                                                                                   |            |
| 4.C.1.b.1.e  | Work With Work Group or Team               | How important is it to work with others in a group or team in this job?                                                                   | X          |
| 4.C.1.b.1.f  | Deal With External Customers               | How important is it to work with external customers or the public in this job?                                                            | X          |
| 4.C.1.b.1.g  | Coordinate or Lead Others                  | How important is it to coordinate or lead others in accomplishing work activities in this job?                                            | X          |
| 4.C.1.c      | Responsibility for Others                  | Amount of responsibility the worker has for other workers as a part of this job                                                           |            |
| 4.C.1.c.1    | Health and Safety of Other Workers         | How much responsibility is there for the health and safety of others in this job?                                                         | X          |
| 4.C.1.c.2    | Work Outcomes and Results of Other Workers | How responsible is the worker for work outcomes and results of other workers?                                                             | X          |

**Table 1. (Continued)**

| Element ID   | Dimension Name                                        | Dimension Description                                                                                                                                                                          | Data-Level |
|--------------|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 4.C.1.d      | Conflictual Contact                                   | Amount of conflict that the worker will encounter as part of this job                                                                                                                          |            |
| 4.C.1.d.1    | Frequency of Conflict Situations                      | How often are there conflict situations the employee has to face in this job?                                                                                                                  | X          |
| 4.C.1.d.2    | Deal With Unpleasant or Angry People                  | How frequently does the worker have to deal with unpleasant, angry, or discourteous individuals as part of the job requirements?                                                               | X          |
| 4.C.1.d.3    | Deal With Physically Aggressive People                | How frequently does this job require the worker to deal with physical aggression of violent individuals?                                                                                       | X          |
| <b>4.C.2</b> | <b>Physical Work Conditions</b>                       | <b>This category describes the work context as it relates to the interactions between the worker and the physical job environment</b>                                                          |            |
| 4.C.2.a      | Work Setting                                          | Description of physical surroundings that the worker will face as part of this job                                                                                                             |            |
| 4.C.2.a.1    | Frequency Required to Work                            | How frequently does this job require the worker to work:                                                                                                                                       |            |
| 4.C.2.a.1.a  | Indoors, Environmentally Controlled                   | How often does this job require working indoors in environmentally controlled conditions?                                                                                                      | X          |
| 4.C.2.a.1.b  | Indoors, Not Environmentally Controlled               | How often does this job require working indoors in non-controlled environmental conditions (e.g., warehouse without heat)?                                                                     | X          |
| 4.C.2.a.1.c  | Outdoors, Exposed to Weather                          | How often does this job require working outdoors, exposed to all weather conditions?                                                                                                           | X          |
| 4.C.2.a.1.d  | Outdoors, Under Cover                                 | How often does this job require working outdoors, under cover (e.g., structure with roof but no walls)?                                                                                        | X          |
| 4.C.2.a.1.e  | In an Open Vehicle or Equipment                       | How often does this job require working in an open vehicle or equipment (e.g., tractor)?                                                                                                       | X          |
| 4.C.2.a.1.f  | In an Enclosed Vehicle or Equipment                   | How often does this job require working in a closed vehicle or equipment (e.g., car)?                                                                                                          | X          |
| 4.C.2.a.3    | Physical Proximity                                    | To what extent does this job require the worker to perform job tasks in close physical proximity to other people?                                                                              | X          |
| 4.C.2.b      | Environmental Conditions                              | Description of extreme environmental conditions the worker will be placed in as part of this job                                                                                               |            |
| 4.C.2.b.1    | Frequency in Environmental Conditions                 | How often during a usual work period is the worker exposed to the following conditions:                                                                                                        |            |
| 4.C.2.b.1.a  | Sounds, Noise Levels Are Distracting or Uncomfortable | How often does this job require working exposed to sounds and noise levels that are distracting or uncomfortable?                                                                              | X          |
| 4.C.2.b.1.b  | Very Hot or Cold Temperatures                         | How often does this job require working in very hot (above 90 F degrees) or very cold (below 32 F degrees) temperatures?                                                                       | X          |
| 4.C.2.b.1.c  | Extremely Bright or Inadequate Lighting               | How often does this job require working in extremely bright or inadequate lighting conditions?                                                                                                 | X          |
| 4.C.2.b.1.d  | Exposed to Contaminants                               | How often does this job require working exposed to contaminants (such as pollutants, gases, dust, or odors)?                                                                                   | X          |
| 4.C.2.b.1.e  | Cramped Work Space, Awkward Positions                 | How often does this job require working in cramped work spaces that requires getting into awkward positions?                                                                                   | X          |
| 4.C.2.b.1.f  | Exposed to Whole Body Vibration                       | How often does this job require exposure to whole body vibration (e.g., operate a jackhammer)?                                                                                                 | X          |
| 4.C.2.c      | Job Hazards                                           | Descriptions of types of hazardous conditions the worker could be exposed to as part of this job. This includes the frequency of exposure, and the likelihood and degree of injury if exposed. |            |
| 4.C.2.c.1    | Frequency of Exposure to Job Hazards                  | How often does this job require the worker to be exposed to the following hazards?                                                                                                             |            |
| 4.C.2.c.1.a  | Exposed to Radiation                                  | How often does this job require exposure to radiation?                                                                                                                                         | X          |

**Table 1. (Continued)**

| Element ID  | Dimension Name                                                                                                                   | Dimension Description                                                                                                                           | Data-Level |
|-------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 4.C.2.c.1.b | Exposed to Disease or Infections                                                                                                 | How often does this job require exposure to disease/infections?                                                                                 | X          |
| 4.C.2.c.1.c | Exposed to High Places                                                                                                           | How often does this job require exposure to high places?                                                                                        | X          |
| 4.C.2.c.1.d | Exposed to Hazardous Conditions                                                                                                  | How often does this job require exposure to hazardous conditions?                                                                               | X          |
| 4.C.2.c.1.e | Exposed to Hazardous Equipment                                                                                                   | How often does this job require exposure to hazardous equipment?                                                                                | X          |
| 4.C.2.c.1.f | Exposed to Minor Burns, Cuts, Bites, or Stings                                                                                   | How often does this job require exposure to minor burns, cuts, bites, or stings?                                                                | X          |
| 4.C.2.c.2   | Likelihood of Injury From Job Hazards                                                                                            | What is the likelihood that the worker would be injured as a result of being exposed to the following hazards while performing this job?        | X          |
| 4.C.2.c.3   | Degree of Injury                                                                                                                 | If injury, due to exposure to the following hazards, were to occur while performing this job, how serious would be the likely outcome?          | X          |
| 4.C.2.d     | Body Positioning                                                                                                                 | Amount of time the worker will spend in a variety of physical positions on this job                                                             |            |
| 4.C.2.d.1   | Time Spent in Body Positions                                                                                                     | How much time in a usual work period does the worker spend:                                                                                     |            |
| 4.C.2.d.1.a | Spend Time Sitting                                                                                                               | How much does this job require sitting?                                                                                                         | X          |
| 4.C.2.d.1.b | Spend Time Standing                                                                                                              | How much does this job require standing?                                                                                                        | X          |
| 4.C.2.d.1.c | Spend Time Climbing Ladders, Scaffolds, or Poles                                                                                 | How much does this job require climbing ladders, scaffolds, or poles?                                                                           | X          |
| 4.C.2.d.1.d | Spend Time Walking and Running                                                                                                   | How much does this job require walking and running?                                                                                             | X          |
| 4.C.2.d.1.e | Spend Time Kneeling, Crouching, Stooping, or Crawling                                                                            | How much does this job require kneeling, crouching, stooping or crawling?                                                                       | X          |
| 4.C.2.d.1.f | Spend Time Keeping or Regaining Balance                                                                                          | How much does this job require keeping or regaining your balance?                                                                               | X          |
| 4.C.2.d.1.g | Spend Time Using Your Hands to Handle, Control, or Feel Objects, Tools, or Controls                                              | How much does this job require using your hands to handle, control, or feel objects, tools, or controls?                                        | X          |
| 4.C.2.d.1.h | Spend Time Bending or Twisting the Body                                                                                          | How much does this job require bending or twisting your body?                                                                                   | X          |
| 4.C.2.d.1.i | Spend Time Making Repetitive Motions                                                                                             | How much does this job require making repetitive motions?                                                                                       | X          |
| 4.C.2.e     | Work Attire                                                                                                                      | Dress requirements of this job                                                                                                                  |            |
| 4.C.2.e.1   | Frequency of Wearing Work Attire                                                                                                 | How often does the worker wear:                                                                                                                 |            |
| 4.C.2.e.1.d | Wear Common Protective or Safety Equipment such as Safety Shoes, Glasses, Gloves, Hearing Protection, Hard Hats, or Life Jackets | How much does this job require wearing common protective or safety equipment such as safety shoes, glasses, gloves, hard hats, or life jackets? | X          |

**Table 1. (Continued)**

| Element ID   | Dimension Name                                                                                                                              | Dimension Description                                                                                                                                                                        | Data-Level |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 4.C.2.e.1.e  | Wear Specialized Protective or Safety Equipment such as Breathing Apparatus, Safety Harness, Full Protection Suits, or Radiation Protection | How much does this job require wearing specialized protective or safety equipment such as breathing apparatus, safety harness, full protection suits, or radiation protection?               | X          |
| <b>4.C.3</b> | <b>Structural Job Characteristics</b>                                                                                                       | <b>This category involves the relationships or interactions between the worker and the structural characteristics of the job</b>                                                             |            |
| 4.C.3.a      | Criticality of Position                                                                                                                     | Amount of impact the worker has on final products and their outcomes                                                                                                                         |            |
| 4.C.3.a.1    | Consequence of Error                                                                                                                        | How serious would the result usually be if the worker made a mistake that was not readily correctable?                                                                                       | X          |
| 4.C.3.a.2    | Impact of Decisions                                                                                                                         | The frequency and nature of the impact of worker's decisions on the organization                                                                                                             |            |
| 4.C.3.a.2.a  | Impact of Decisions on Co-workers or Company Results                                                                                        | What results do your decisions usually have on other people or the image or reputation or financial resources of your employer?                                                              | X          |
| 4.C.3.a.2.b  | Frequency of Decision Making                                                                                                                | How frequently is the worker required to make decisions that affect other people, the financial resources, and/or the image and reputation of the organization?                              | X          |
| 4.C.3.a.4    | Freedom to Make Decisions                                                                                                                   | How much decision making freedom, without supervision, does the job offer?                                                                                                                   | X          |
| 4.C.3.b      | Routine versus Challenging Work                                                                                                             | The relative amounts of routine versus challenging work the worker will perform as part of this job                                                                                          |            |
| 4.C.3.b.2    | Degree of Automation                                                                                                                        | How automated is the job?                                                                                                                                                                    | X          |
| 4.C.3.b.4    | Importance of Being Exact or Accurate                                                                                                       | How important is being very exact or highly accurate in performing this job?                                                                                                                 | X          |
| 4.C.3.b.7    | Importance of Repeating Same Tasks                                                                                                          | How important is repeating the same physical activities (e.g., key entry) or mental activities (e.g., checking entries in a ledger) over and over, without stopping, to performing this job? | X          |
| 4.C.3.b.8    | Determine Tasks, Priorities and Goals                                                                                                       | To what extent is this job structured for the worker, rather than allowing the worker to determine tasks, priorities, and goals?                                                             | X          |
| 4.C.3.c      | Competition                                                                                                                                 | Amount of competition that the worker will face as part of this job                                                                                                                          |            |
| 4.C.3.c.1    | Level of Competition                                                                                                                        | To what extent does this job require the worker to compete or to be aware of competitive pressures?                                                                                          | X          |
| 4.C.3.d      | Pace and Scheduling                                                                                                                         | Description of the role that time plays in the way the worker performs the tasks required by this job                                                                                        |            |
| 4.C.3.d.1    | Time Pressure                                                                                                                               | How often does this job require the worker to meet strict deadlines?                                                                                                                         | X          |
| 4.C.3.d.3    | Pace Determined by Speed of Equipment                                                                                                       | How important is it to this job that the pace is determined by the speed of equipment or machinery? (This does not refer to keeping busy at all times on this job.)                          | X          |
| 4.C.3.d.4    | Work Schedules                                                                                                                              | How regular are the work schedules for this job?                                                                                                                                             | X          |
| 4.C.3.d.8    | Duration of Typical Work Week                                                                                                               | Number of hours typically worked in one week.                                                                                                                                                | X          |

*Note.* Work Context dimensions are arranged in a hierarchy of up to four levels, with each row's color shading corresponding to a level in that hierarchy. The three Primary Categories organize dimensions at the broadest level and are shaded green. The Intermediate Categories, shaded blue, identify clusters of related Contexts within each Primary Category. Subcategories, shaded grey, delineate groups of Contexts with even greater specificity. Data-level dimensions, unshaded, are the most specific and the only ones subject to direct evaluation. Some labels are abbreviated. Full dimension names are given in Table A.1.

As shown in Table 1, Work Contexts are organized hierarchically under the three original higher-order categories, forming a four-level taxonomy of three Primary Categories, Intermediate Categories, Subcategories, and specific dimensions, of which only the latter are considered “data-level” and subject to evaluation by occupational incumbents and OEs, with those evaluations published in the O\*NET database. Interpersonal Relationships encompasses dimensions related to communication, contact with others, and responsibility for others. Physical Work Conditions encompasses dimensions related to the work setting, exposure to environmental conditions and hazards, body positioning, and the wearing of protective equipment. Structural Job Characteristics encompasses dimensions related to criticality of position, the structure and pace of work, and typical weekly hours ([Peterson et al., 2001](#); [Strong et al., 1999](#)).

The Work Context domain differs from domains such as Work Styles in the kind of judgment respondents are asked to make. Work Styles are rated for their benefit or detriment to job performance using a common 7-point scale, whereas Work Context ratings rely on multiple, sometimes dimension-specific response scales, although nearly all offer five response options ([Handel, 2016](#)). Most dimensions are rated on one of two frequency scales, such as “Never” to “Every day” or “Never” to “Continually or almost continually.” Others use customized scales that apply to a single dimension, such as “Not at all competitive” to “Extremely competitive.” Notably, scaling information is typically embedded in the dimension definitions themselves, as in “How often does this job require working indoors in environmentally controlled conditions?” or “How important is it to work with others in a group or team in this job?” Conflating a dimension’s definition with its response scale can have negative implications for measurement ([Lambert & Newman, 2023](#)); accordingly, one goal of the present revision was to remove scaling references from the dimensions’ definitions.

## Implications for Interpreting the Current Taxonomy

The preceding history and description are important for understanding what the current taxonomy does and does not represent. The three-pillar structure has been stable since the mid-1990s, but the set of dimensions has not. Several contextual features relevant to contemporary work were present in the prototype instrument but later deleted, collapsed, or simplified during the 2000 revision; many of these changes were made in response to practical constraints on data collection ([Hubbard et al., 2000](#)). Some focused on or concerned communication and technology-mediated work, others on cognitive and attentional demands, and yet others on scheduling and the temporal structure of work. Thus, the current Work Contexts do not constitute an exhaustive catalog of all important workplace contextual elements. In particular, recent reviews of O\*NET have highlighted the need to modernize the dimensions in the domains most affected by technological change ([Handel, 2016](#); Levine & Oswald, 2012; [National Research Council, 2010](#)). These considerations inform the modernization effort taken up in the remainder of this report, particularly in the domains most affected by technological and organizational change since 1995.

## Developments in the Relevant Literatures and World of Work

Unlike several other O\*NET domains, Work Contexts were not developed against a single, mature scientific taxonomy. For example, Career Interests can be interpreted in relation to Holland’s (1997) Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (RIASEC) model and subsequent basic-interest frameworks ([Rounds & Su, 2014](#)), Work Styles can be interpreted in relation to the Big Five, Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, Openness to Experience (HEXACO), and related personality-taxonomy

research ([McCrae & Costa, 2008](#); [Sackett & Walmsley, 2014](#); Stanek & Ones, 2018, [2023](#)), and Abilities can be interpreted in relation to a long psychometric tradition of cognitive ability modeling (Carroll, 1993; Schneider & McGrew, 2018). Work Contexts, by contrast, have no equivalent organizing framework or dedicated literature. Relevant concepts are distributed across the work analysis ([Sanchez & Levine, 2012](#)), work design ([Humphrey et al., 2007](#); [Morgeson & Humphrey, 2006](#)), psychosocial work environment ([Kop et al., 2016](#); [Kristensen et al., 2005](#)), occupational health, human factors, and organizational climate (Harman, 2012; [Johns, 2006, 2018](#)) literatures. Consequently, at the outset of the study, we were not aware of any consensually agreed-upon Work Context taxonomy comparable to RIASEC/Basic Interests for career interests or the Big Five/HEXACO for personality. The original O\*NET taxonomy organized Work Contexts into Interpersonal Relationships, Physical Work Conditions, and Structural Job Characteristics, and we believed this structure remained a useful framework to maintain throughout the revision process ([McPhail et al., 1995](#); [Peterson et al., 2001](#); [Strong et al., 1999](#)).

Nonetheless, when beginning the project, we were aware of several theoretical developments in the Work Context domain that were potentially relevant. Trait activation theory suggests that worker attributes are expressed when situational cues make them relevant, implying that Work Contexts can help explain when particular Work Styles or other individual differences matter for performance ([Tett & Burnett, 2003](#); [Tett & Guterman, 2000](#); [Tett et al., 2021](#)). Situational strength theory similarly proposes that situations vary in clarity, consistency, constraints, and consequences, thereby shaping the extent to which behavior is guided by situational demands rather than by psychological individual differences ([Meyer et al., 2010](#)). More general situational taxonomy work has shown that situations can be described in terms of psychologically meaningful characteristics such as duty, adversity, intellect, deception, complexity, and sociality ([Parrigon et al., 2017](#); [Rauthmann et al., 2014](#); [Rauthmann & Sherman, 2020](#)). These perspectives reinforce the importance of context in general, but they do not provide practical guidance for revising the Work Contexts, as O\*NET is intended to be informative and useful for a broad audience (e.g., job-seekers, businesspeople, academics, vocational counselors), and we considered the concepts enumerated above too abstract and jargon-heavy to directly inform revision of the taxonomy.

At the same time, clearly, the world of work has changed substantially since the Work Context taxonomy was created in the mid-1990s. Technological change has altered the task content, communication structure, location, timing, monitoring, and coordination of work across many occupations ([Autor, 2015](#); [World Bank, 2019](#)). Remote and hybrid work — now prevalent across knowledge worker occupations globally ([Aksoy et al., 2022](#); [Barrero et al., 2023](#)) — have made work location, onsite presence, and digitally mediated coordination far more salient than they were when the taxonomy was originally created ([Bloom et al., 2015](#); [Dingel & Neiman, 2020](#); [Eurofound & International Labour Office, 2017](#)). The rise of gig work has necessitated heightened consideration of electronic performance monitoring and variability in scheduling ([Kellogg et al., 2020](#); [Wood et al., 2019](#)), as well as recognition of their sometimes ambiguous consequences for the continuum of autonomy to control ([Duggan et al., 2020](#); [International Labour Office, 2021](#)). Most recently, automation and AI have shifted attention from simple mechanization to algorithmic management and generative AI tools ([Dell'Acqua et al., 2023](#); [Eloundou et al., 2024](#)), along with increased emphasis on the need for human oversight of automated outputs ([Theofanos et al., 2024](#)).

These developments do not, by themselves, dictate a new taxonomy. Rather, they make clear that a taxonomy developed in the mid-1990s may omit or not sufficiently differentiate contextual conditions that are now important to many occupations. The rationale for the present effort is therefore not that a new consensus Work Context framework has emerged and must be incorporated. Instead, the relevant literature has expanded, theoretical perspectives have

clarified why context matters, and the conditions under which work is performed have changed markedly since the original O\*NET taxonomy was developed.

## Developing a Draft Set of Revised Work Contexts

Our approach to developing a draft set of revised Work Context dimensions consisted of the following four steps that we detail in the sections that follow.

- Step 1. Identify Preexisting Data Sources That Might Inform Work Context Revision and Code for Work Context Coverage
- Step 2. Literature Search to Identify Articles That Might Yield New or Revised Work Contexts
- Step 3. Review Organizational Context Dimensions for Potential Inclusion in the Revised Work Context Taxonomy
- Step 4. Create Draft of Revised Work Context Taxonomy

### Step 1. Identify Preexisting Data Sources That Might Inform Work Context Revision and Code for Work Context Coverage

The first step in developing a revised Work Context taxonomy was to identify existing data sources that might contain information relevant to the current or potential new dimensions. The purpose was not to identify a single external source that could replace the Work Contexts wholesale, but to determine whether existing federal, nonfederal, academic, and other types of datasets contained variables that could help identify gaps in the current taxonomy or suggest refinements to existing dimensions.

Candidate sources were identified through a combination of the project team's prior knowledge of occupational, labor market, public health, and psychology datasets, along with AI-assisted search methods (e.g., ChatGPT's Deep Research functions). The inventory resulting from the searches consisted of 26 candidate data sources (Table 2), drawn predominantly from federal statistical and regulatory agencies. The U.S. Bureau of Labor Statistics (BLS) was most heavily represented (eight sources), followed by the Occupational Safety and Health Administration (OSHA; five sources) and the National Institute for Occupational Safety and Health (NIOSH; five sources).

In addition to the data sources listed in Table 2, we considered sourcing new Work Contexts from Lightcast and National Labor Exchange job vacancy announcements. However, we quickly eliminated both sources from consideration, as neither offered any preexisting Work Context dimensions, unlike the datasets presented in Table 2. Any Work Context that we would attempt to obtain from these sources would first need to be distilled from open-ended job descriptions in the vacancies these sources offer, which was beyond the focus and scope of this effort. These sources instead may be revisited during the data population efforts.

Each of the 26 sources was screened for information relevant to Work Contexts. Of the 26 sources in the working set, only one (Occupational Requirements Survey; ORS) offered *occupation-level data* that could be linked to the O\*NET-SOC 2019 taxonomy through preexisting crosswalks (e.g., via Standard Occupational Classification (SOC) 2019 codes, or Census Occupational Codes [OCC]). By *occupation-level data*, we mean data available for individual occupations (i.e., not clusters or groupings of occupations such as job families or career clusters).

The remaining 25 sources could not be linked to the O\*NET-SOC 2019 taxonomy, due to a lack of publicly available data or being maintained at a level different than the occupation-level (e.g., job family, occupational group, worksite- or industry-level). For example, some sources maintained data at the job family level (e.g., first few digits of a SOC), for clusters of occupations, or the industry-level (e.g., North American Industry Classification System [NAICS]). A source needed to offer data at the occupation-level as it was critical for subsequent development and evaluation of *occupation-level* Work Context ratings for the O\*NET Database.

**Table 2. Candidate Data Sources for Work Context Coverage**

| Full Dataset Name & Acronym                                                                                             | Sponsoring Organization/Agency                                                                                                           | Occupation-Level Data Can Be Crosswalked to O*NET-SOC 2019? | Approx. # Current Work Contexts | Approx. # Potential New Work Contexts | Sample Potential New Work Contexts |
|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------|---------------------------------------|------------------------------------|
| Occupational Requirements Survey (ORS)                                                                                  | U.S. Bureau of Labor Statistics                                                                                                          | Yes                                                         | 8                               | 32                                    | Humidity, Telework                 |
| Current Population Survey (CPS) Telework or Work at Home for Pay Questions                                              | U.S. Bureau of Labor Statistics, U.S. Census Bureau                                                                                      | No                                                          | 0                               | 1                                     | Hours Teleworked                   |
| Panel Study of Income Dynamics (PSID)                                                                                   | University of Michigan Institute for Social Research                                                                                     | No                                                          | 2                               | 11                                    | Commute Time, Overtime Hours       |
| National Longitudinal Survey of Youth 1997 (NLSY97)                                                                     | U.S. Bureau of Labor Statistics                                                                                                          | No                                                          | 3                               | 10                                    | Commute Time, Work Onsite          |
| National Longitudinal Survey of Youth 1979 (NLSY79)                                                                     | U.S. Bureau of Labor Statistics                                                                                                          | No                                                          | 3                               | 5                                     | Problem Solving, Stress            |
| American Time Use Survey (ATUS)                                                                                         | U.S. Bureau of Labor Statistics, U.S. Census Bureau                                                                                      | No                                                          | 1                               | 3                                     | Overtime Pay, Travel               |
| National Health Interview Survey (NHIS) Occupational Health Supplement (OHS)                                            | National Institute for Occupational Safety and Health, National Center for Health Statistics, Centers for Disease Control and Prevention | No                                                          | 2                               | 9                                     | Safety, Smoke Exposure             |
| Mine Safety and Health Administration (MSHA) Mine Data Retrieval System (MDRS) and Accident Injuries Data               | Mine Safety and Health Administration, U.S. Department of Labor                                                                          | No                                                          | 1                               | 0                                     | N/A                                |
| Survey of Income and Program Participation (SIPP)                                                                       | U.S. Census Bureau                                                                                                                       | No                                                          | 0                               | 1                                     | Number Employed at Work Location   |
| General Social Survey (GSS) Quality of Worklife (QWL) Survey Module                                                     | National Institute for Occupational Safety and Health, National Science Foundation                                                       | No                                                          | 1                               | 11                                    | Gossip, Hostile Environment        |
| Occupational Safety and Health Administration (OSHA) Chemical Exposure Health Data (CEHD)                               | Occupational Safety and Health Administration, U.S. Department of Labor                                                                  | No                                                          | 0                               | 4                                     | Nature of Chemical                 |
| Occupational Safety and Health Administration (OSHA) Fatality Inspection Data/Work-Related Fatalities Inspected by OSHA | Occupational Safety and Health Administration, U.S. Department of Labor                                                                  | No                                                          | 0                               | 1                                     | Nature of Fatality                 |
| Environmental Protection Agency (EPA) Enforcement and Compliance History Online (ECHO)                                  | U.S. Environmental Protection Agency, Office of Enforcement and Compliance Assurance                                                     | No                                                          | 0                               | 4                                     | Air Emissions, Hazardous Waste     |

**Table 2. (Continued)**

| Full Dataset Name & Acronym                                                                                                                                     | Sponsoring Organization/Agency                                                                                    | Occupation-Level Data Can Be Crosswalked to O*NET-SOC 2019? | Approx. # Current Work Contexts | Approx. # Potential New Work Contexts | Sample Potential New Work Contexts |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------|---------------------------------------|------------------------------------|
| American Time Use Survey (ATUS) 2017–18 Leave and Job Flexibilities Module                                                                                      | U.S. Department of Labor, U.S. Bureau of Labor Statistics                                                         | No                                                          | 0                               | 15                                    | Flexibility, Telework              |
| Health and Retirement Study (HRS) Core Survey                                                                                                                   | University of Michigan Institute for Social Research, National Institute on Aging, Social Security Administration | No                                                          | 3                               | 13                                    | Insecurity, Overtime               |
| Medical Expenditure Panel Survey (MEPS)                                                                                                                         | Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services                          | No                                                          | 0                               | 0                                     | N/A                                |
| Inspection/Occupational Safety and Health Administration (OSHA) Inspection Data                                                                                 | Occupational Safety and Health Administration, U.S. Department of Labor                                           | No                                                          | 0                               | 1                                     | Nature of Violation                |
| Occupational Safety and Health Administration (OSHA) Injury Tracking Application (ITA) Data: Establishment and Case Detail Work-Related Injury and Illness Data | Occupational Safety and Health Administration, U.S. Department of Labor                                           | No                                                          | 0                               | 1                                     | Injury Type                        |
| Occupational Safety and Health Administration (OSHA) Severe Injury Report (SIR) Data                                                                            | Occupational Safety and Health Administration, U.S. Department of Labor                                           | No                                                          | 0                               | 6                                     | Illness, Injury                    |
| American Working Conditions Survey (AWCS) 2015                                                                                                                  | RAND Corporation, Alfred P. Sloan Foundation, Social Security Administration                                      | No                                                          | 29                              | 107                                   | Job Sharing, Telework              |
| Census of Fatal Occupational Injuries (CFOI)                                                                                                                    | U.S. Bureau of Labor Statistics                                                                                   | No                                                          | 0                               | 5                                     | Injury Location, Injury Type       |
| Survey of Occupational Injuries and Illnesses (SOII)                                                                                                            | U.S. Bureau of Labor Statistics                                                                                   | No                                                          | 0                               | 5                                     | Hours Worked, Injury               |
| National Occupational Mortality Surveillance (NOMS)                                                                                                             | National Institute for Occupational Safety and Health, National Center for Health Statistics                      | No                                                          | 0                               | 0                                     | N/A                                |
| Environmental Protection Agency (EPA) Toxics Release Inventory (TRI)                                                                                            | U.S. Environmental Protection Agency                                                                              | No                                                          | 0                               | 0                                     | N/A                                |
| National Institute for Occupational Safety and Health (NIOSH) Adult Blood Lead Epidemiology and Surveillance (ABLES)                                            | National Institute for Occupational Safety and Health                                                             | No                                                          | 0                               | 0                                     | N/A                                |
| Behavioral Risk Factor Surveillance System (BRFSS) Industry and Occupation (I&O) Module                                                                         | National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention                 | No                                                          | 0                               | 0                                     | N/A                                |

Of the 26 sources, 21 covered at least one current or potential new Work Context element, while five contained no relevant information. At the broadest level, our review identified approximately 53 links to current Work Contexts and 245 potential new Work Contexts. On average, each source contributed approximately nine new potential Work Contexts. However, the median contribution per source was only 4.0, reflecting the fact that this coverage was highly concentrated: the American Working Conditions Survey (AWCS) contributed 107 potential new Work Contexts, and the ORS contributed 32, meaning that these two sources together accounted for 56.7% of the potential new dimensions.

The variables flagged as potential additions were heterogeneous rather than falling cleanly into a small number of discrete categories. Some pointed to contemporary arrangements around where and when work occurs, including telework and hours teleworked, work onsite, schedule flexibility, advance schedule notice, and commute time, variables surfaced primarily by the AWCS, the ORS, the Current Population Survey, and the National Longitudinal Survey of Youth 1997. Others reflected more granular physical, ergonomic, and environmental conditions than are currently represented in the taxonomy, such as lifting and carrying demands, reaching, humidity, and smoke exposure, drawn largely from the Occupational Requirements Survey, the National Health Interview Survey Occupational Health Supplement, and the American Working Conditions Survey. A further set addressed social and safety-related features of the work setting, including hostile work environment, safety climate, and injury type, sourced from the General Social Survey Quality of Worklife module, the Census of Fatal Occupational Injuries, and the Survey of Occupational Injuries and Illnesses. Rather than representing a single coherent expansion area, these variables identified several points where existing Work Context descriptors may be too coarse or where adjacent constructs touch the domain's boundaries.

Overall, these variables should be treated as a candidate pool for adjudication rather than as a final set of recommended additions. The most defensible candidates are those that can be defined as durable, occupation-relevant features of the work setting, particularly work location, temporal control and predictability, supervisory monitoring, and more specific physical or environmental exposures. By contrast, variables involving compensation, overtime pay, injury surveillance records, or individual job-quality outcomes may be valuable for understanding work but fit less clearly within the Work Context domain. The main implication for the revision effort is therefore not that all partially overlapping variables should be added, but that the Work Context taxonomy may need targeted refinement in areas where contemporary work arrangements, environmental conditions, and social-organizational exposures are not adequately captured by existing descriptors.

## **Step 2. Literature Search to Identify Articles That Might Yield New or Revised Work Contexts**

In parallel with the review of external data sources, the project team conducted a targeted literature review to identify constructs that might inform revisions to existing Work Context dimensions or suggest potential new dimensions. This step was necessary because Work Contexts are not organized around a single mature external taxonomy that could be adopted wholesale. Instead, potentially relevant constructs are distributed across literatures on work design, job characteristics, situational theory, communication media, technology-mediated work, telecommuting, and electronic performance monitoring.

Candidate constructs were identified using several complementary search strategies. The team used ChatGPT and Gemini's Deep Research functions, along with other AI-assisted search methods, to identify potentially relevant constructs and literatures, Google Scholar searches to identify peer-reviewed articles, and targeted searches based on citations of core O\*NET Work Context articles and chapters, including [Strong et al. \(1999\)](#) and related O\*NET Content Model sources. The team also used forward and backward snowball searches from sources judged especially relevant, followed references cited by those sources, and reviewed later articles that cited them. Sources were retained when they described the conditions under which work is performed and when the resulting constructs were deemed capable of plausibly distinguishing occupations from organizations, supervisors, or individual positions. This search yielded 9 relevant articles, from which 17 candidate Work Context variables were distilled (Table 3).

The variables in Table 3 clustered into three broad areas: structural features of work design such as variety and feedback ([Barrick et al., 2013](#); [Morgeson & Humphrey, 2006](#)), situational structure and communication, including the clarity of work requirements and the modality through which interactions occur ([Fernández-Macías & Bisello, 2022](#); [Johns, 2018](#); [McFarland & Ployhart, 2015](#)), and technology-mediated and remote work, including screen-based communication, remote work arrangements, and electronic performance monitoring ([Gajendran et al., 2015, 2022](#); Parker & Ohly, 2008). The first cluster was useful because it describes how work is structured and experienced rather than only the activities performed or attributes required. The second category raised boundary questions about whether some dimensions reflect organizational practices more than occupation-level conditions. The third was especially relevant to the contemporary world of work. At the same time, several variables overlapped with adjacent O\*NET domains, including Software Skills, Organizational Contexts, Work Activities, and Essential/Transferable Skills, meaning subsequent adjudication would be needed to determine whether each candidate could be defined as a Work Context dimension rather than a tool, worker requirement, or organizational practice.

**Table 3. Literature-Derived Candidate Work Context Variables Retained for Further Consideration**

| Candidate Variable    | Definition                                                                                                | Source(s)                                                            |
|-----------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Skill Variety         | The extent to which a job requires an individual to use a variety of skills to complete the work          | Barrick et al. (2013), Morgeson & Humphrey (2006)                    |
| Feedback from the Job | Degree to which the job provides direct and clear information about the effectiveness of task performance | Barrick et al. (2013), Kop et al. (2016), Morgeson & Humphrey (2006) |
| Task Variety          | Degree to which a job requires employees to perform a wide range of tasks                                 | Morgeson & Humphrey (2006)                                           |
| Task Identity         | Degree to which a job involves a whole piece of work, the results of which are easily identified          | Morgeson & Humphrey (2006)                                           |
| Clarity               | Extent to which work requirements and responsibilities are clear and understandable                       | Johns (2018)                                                         |
| Consistency           | Extent to which work requirements and responsibilities are compatible                                     | Johns (2018)                                                         |
| Constraints           | Extent to which work decisions or actions are limited by external forces                                  | Johns (2018)                                                         |
| Uncertainty           | Extent to which a worker needs to respond to unforeseen situations                                        | Fernández-Macías & Bisello (2022)                                    |

**Table 3. (Continued)**

| Candidate Variable                | Definition                                                                                                                                                                                                                                                                                                                                                                                       | Source(s)                         |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Communication                     | Interactions on a continuum ranging from physical communication (e.g., face-to-face) to digital communication (e.g., text or email) to socially digital communication (e.g., Facebook or LinkedIn). Eight more proximal ambient contextual features distinguish among these media: physicality, accessibility, latency, interdependence, synchronicity, permanence, verifiability, and anonymity | McFarland & Ployhart (2015)       |
| Technology Use                    | Types of technology used at work, including non-digital machinery, autonomous technology such as robots, and non-autonomous technology, including basic information and communication technology [ICT], such as generic office applications, advanced ICT such as programming, and specialized ICT                                                                                               | Fernández-Macías & Bisello (2022) |
| Equipment Use                     | Variety and complexity of the technology and equipment used on the job                                                                                                                                                                                                                                                                                                                           | Morgeson & Humphrey (2006)        |
| Asynchronous Communication        | Text-based computer-mediated communication with lags between exchanges                                                                                                                                                                                                                                                                                                                           | Gajendran et al. (2022)           |
| Screen Time                       | Amount of time spent interacting with computers or similar devices                                                                                                                                                                                                                                                                                                                               | Gajendran et al. (2022)           |
| Telecommuting                     | Whether an employee works in one of three telecommuting environments: (1) from home during regular office hours, (2) from a virtual office (work from anywhere), or (3) from a satellite office/telework center                                                                                                                                                                                  | Gajendran et al. (2015)           |
| Telecommuting Intensity           | How many hours are telecommuted each week                                                                                                                                                                                                                                                                                                                                                        | Gajendran et al. (2015)           |
| Electronic Performance Monitoring | The use of systems (electronic equipment such as video cameras, computers, and phones) to collect, store, analyze, and report the actions or performance of individuals or groups                                                                                                                                                                                                                | Parker & Ohly (2008)              |
| Emotion Management                | The requirement to regulate emotions and to display organizationally desired emotions in work interaction                                                                                                                                                                                                                                                                                        | Parker & Ohly (2008)              |

Overall, the literature-derived table served as an input for the Work Context revision process rather than a final list of recommended additions. The retained variables identified areas where the current Work Context taxonomy may be underdeveloped, especially technology-mediated work, screen-mediated work, remote work, communication modality, electronic monitoring, and structural features of task enactment.

### Step 3. Review Organizational Context Dimensions for Potential Inclusion in the Revised Work Context Taxonomy

Up until recently, Organizational Contexts were included in the O\*NET Content Model as part of the Occupational Requirements domain, alongside Generalized Work Activities and Work Contexts. Historically, the O\*NET Content Model Summary Outline defined Organizational Context as “Characteristics of the organization that influence how people do their work,” rooted in the foundational definition articulated by [Arad et al. \(1999\)](#): “characteristics of the organization that affect all jobs within the organization” (p. 471). Together, these definitions indicate that Organizational Contexts were intended to capture features that shape how work is structured, coordinated, managed, and experienced across jobs within organizations. Drawing on organization theory, organizational design, and organizational psychology, the previous

Organizational Context taxonomy was organized around two major branches, Structural Characteristics and Social Processes, encompassing dimensions related to the type of industry, organizational structure, human resource systems and practices, organizational culture, goals, roles, and leadership. The underlying rationale for creating the Organizational Context taxonomy was that organizational conditions can shape how nominally similar occupations are enacted across settings. For example, differences across organizations' structures, human resources practices, and cultures may influence a wide variety of employees' behaviors and experiences (e.g., autonomy, coordination, demands), even among those sharing the same job title. Although the boundaries between Organizational and Work Contexts were porous, the original O\*NET developers attempted to resolve this boundary by level and focus: Work Context elements were intended to capture conditions specific to a job or set of jobs (i.e., occupations), including the impact of the job on the worker, the task, or the immediate conditions of work, whereas Organizational Context dimensions were intended to describe pervasive characteristics that cut across all jobs in an organization, regardless of occupational category ([Arad et al., 1999](#); [McPhail et al., 1995](#); [Peterson et al., 2001](#)).

The now-retired Organizational Context domain was reviewed in the present effort because several of its constructs sit near the boundary between organizational attributes and occupation-level work conditions, such as dimensions of skill variety, task significance, and role overload. The review did not treat the Organizational Context taxonomy as a functioning parallel data source. Rather, it treated the taxonomy as an inventory of adjacent constructs that could help identify whether any dimensions might be reframed as an occupation-level Work Context. In the course of revising the current Work Contexts, the Center requested that we take into account the Organizational Context dimensions in revising Work Context. Specifically, we were tasked with evaluating whether any of the Organizational Context dimensions could be migrated to the Work Contexts domain, either in their current or modified form. This request was driven by the recognition that the Organizational Context domain was removed from the most current Content Model.

To fulfill this request, three members of the project team independently reviewed the complete Organizational Context taxonomy (100 dimensions). For each dimension, these subject matter experts (SMEs) indicated "Yes," "No," or "Maybe" regarding whether it should be considered for inclusion in the revised Work Context taxonomy. SMEs considered multiple decision criteria when making their judgments. First, SMEs considered whether the dimensions were characteristics of occupations or characteristics of organizations (as our interest was in dimensions that were more clearly characteristics of occupations). Second, SMEs considered whether variation in the dimension could reasonably arise from the work's intrinsic properties at least as much as from organization-specific policies, practices, or climate. Dimensions that describe the structural features of how occupational tasks are enacted (e.g., variety, completeness) were distinguished from those that describe how organizations manage workers performing those tasks. Third, SMEs considered whether the dimension overlapped substantially with other O\*NET Content Model domains (e.g., Work Activities), including Work Contexts themselves. Finally, SMEs considered whether each dimension captured a condition that, even if not currently important, might become more important in the future world of work as it is currently foreseen to develop.

The intent was for SMEs' judgments to serve as an initial screening mechanism rather than as the sole basis for ultimate inclusion or exclusion in the revised Work Context taxonomy; retained Organizational Contexts would be subject to additional consideration during Step 4. Thus, we adopted a relatively lenient rule for deciding whether to reject or retain Organizational Context dimensions for further review: a dimension was retained if at least two SMEs indicated "Maybe"

or “Yes.” Even with this lenient rule, only 16 Organizational Context dimensions were retained for further review (Table 4).

**Table 4. Organizational Context Dimensions Retained for Further Consideration**

| Element ID    | Dimension                                  | Description                                                                                                                                                              |
|---------------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.B.1.a.1.a.4 | Determine Work Flow or Order of Tasks      | You determine work flow or the order in which tasks are performed                                                                                                        |
| 4.B.1.a.2.a   | Skill Variety                              | The variety of skills required of people in this job                                                                                                                     |
| 4.B.1.a.2.a.1 | Job Variety                                | How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents? |
| 4.B.1.a.2.a.2 | Complex or High Level Skills Required      | Your job requires you to use a number of complex or high-level skills                                                                                                    |
| 4.B.1.a.2.a.3 | Variety of Tasks Required                  | Your job requires you to perform a variety of tasks                                                                                                                      |
| 4.B.1.a.2.b.1 | Significance or Importance of Job          | In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?      |
| 4.B.1.a.2.b.2 | Job Quality Affects Lots of People         | Your job is one where a lot of people can be affected by how well the work gets done                                                                                     |
| 4.B.1.a.2.b.3 | Job Itself Is Very Significant             | Your job itself is very significant and important in the broader scheme of things                                                                                        |
| 4.B.1.a.2.c.2 | Can Do Entire Piece of Work                | Your job is arranged so that you can do an entire piece of work from beginning to end                                                                                    |
| 4.B.1.a.2.e.2 | Doing Job Provides Chances for Feedback    | Just doing the job provides many chances for you to figure out how well you are doing                                                                                    |
| 4.B.1.a.2.e.3 | After Finishing Job, Know Own Performance  | After you finish a job, you know whether you performed well                                                                                                              |
| 4.B.2.b.3.a   | Get Assignments without Adequate Resources | You receive assignments at work without adequate resources and materials to complete them properly                                                                       |
| 4.B.2.b.3.b   | Given Enough Time to Do Work               | You are given enough time to do what is expected of you at work                                                                                                          |
| 4.B.2.b.3.c   | Too Much for One Person to Do              | It often seems like you have too much work for one person to do                                                                                                          |
| 4.B.2.b.1.a   | Often Receive Conflicting Requests         | You often receive conflicting requests from two or more people at work.                                                                                                  |
| 4.B.2.b.1.b   | Work With Groups With Different Focuses    | You work with two or more groups who want you to focus on different things.                                                                                              |

The retained dimensions clustered into four substantive areas. The first concerned the variety or complexity of work (e.g., Skill Variety, Variety of Tasks Required). The second concerned task significance or the consequences of work for others (e.g., Significance or Importance of Job, Job Quality Affects Lots of People). The third addressed task identity and feedback inherent in the job itself and the tasks comprising it (e.g., Doing Job Provides Chances for Feedback, After Finishing Job, Know Own Performance). The fourth dealt with conflicting demands (e.g., Often Receive Conflicting Requests). The last cluster reflected potential role overload or overwork (e.g., Get Assignments without Adequate Resources, Too Much for One Person to Do). In sum, these remaining dimensions appeared potentially relevant to Work Contexts, in their current or potentially modified form, because they describe conditions under which occupational tasks are

enacted or properties of the tasks themselves. Interestingly, many of the retained constructs are aligned with the motivational characteristics identified in [Hackman and Oldham's \(1976\)](#) classic Job Characteristics Theory, which were subsequently elaborated by [Morgeson and Humphrey \(2006\)](#). The prospect of including these elements provided the opportunity for the revised Work Context taxonomy to feature more complete coverage of the structural work design properties that decades of meta-analytic evidence have linked to satisfaction, motivation, and performance ([Humphrey et al., 2007](#)).

#### Step 4. Create Draft of Revised Work Context Taxonomy

The revised Work Context taxonomy differs from the current version in its structure, scope, and how individual dimensions are defined. This section describes those changes and the reasoning behind them. The revision process consisted of multiple steps. First, the revision team lead revised the current Work Contexts in light of the sources described in Steps 1-3, along with giving consideration to the current state of, and potential future changes to, the world of work (see “Developments” section) and the deleted dimensions originally in the taxonomy ([Hubbard et al., 2000](#)). Second, other team members reviewed the proposed revisions and provided comments and additional revisions. Third, the revision team lead then made additional revisions in light of team members’ feedback. Lastly, our core project team provided a final review of all candidate changes to the taxonomy, made final edits, and finalized them. The revised draft taxonomy was formalized by adding element IDs, which moved the domain's position in the Content Model from 4.C to 4.F, although it remains within the Occupational Requirements section. In the following, we describe the changes that brought about the revised taxonomy. For the sake of parsimony, we describe only the differences between the current Work Context and the revised taxonomy, rather than the iterative changes made across multiple rounds of team review.

**Domain-Level Changes.** Near the outset of our revisions, we adopted a new definition for Work Contexts: “Social, physical, and structural features that describe the conditions of work.” This revised definition serves to both clarify the nature of what Work Contexts are and broaden their scope to encompass both the conditions under which work occurs and the properties of the work itself. It also cascades to the revised labels of and definitions for the three superordinate categories that structure the domain: Interpersonal Relationships became Social Work Context, Physical Work Conditions became Physical Work Context, and Structural Job Characteristics became Structural Work Context. The revised definitions of these dimensions all refer to “features of work,” emphasizing the descriptive nature of Work Contexts, both in general and at the data level.

**Systematic Definitional and Structural Cleanup.** Across all retained elements, the revision separated construct definitions from rating scales. In the current taxonomy, definitions and scaling are typically fused into a single question stem (e.g., “How often does this job require working indoors in environmentally controlled conditions?”). In the revised taxonomy, each definition is a declarative statement describing the condition (e.g., “Work is performed indoors in environmentally controlled circumstances”). Many of the changes were influenced by [Rounds et al.'s \(2023\)](#) revision of Career Interest Types, which yielded definitions beginning with “Work involves...”; we adopted this phrasing when possible. Broadly, these changes to the definitions address concerns identified in the literature (e.g., [Lambert & Newman, 2023](#)) and noted in the Overview: conflating a construct's definition with its response scaling can compromise its interpretability and constrain its measurement. The revision also simplified the domain by eliminating Subcategories (e.g., Communication Methods, Frequency in Environmental

Conditions, Time Spent in Body Positions), leaving only Intermediate Categories between Primary Categories and data-level dimensions.

**Dimensions Dropped.** Three of the 57 rated data-level dimensions were dropped (see Table 5). Written Letters and Memos was judged to be dated and redundant with written communication coverage elsewhere in the Content Model. Contact With Others was judged to be adequately covered by the retained communication mode dimensions (e.g., Face-to-Face Discussions, the new Virtual Meeting or Chat Applications). Frequency of Decision Making was deleted as an independent dimension but its rating scale absorbed into the consolidated Impact of Decisions dimension (see the later section on populating Work Context ratings). Additionally removed were the Work Context Subcategories noted above, along with the Likelihood of Injury From Job Hazards and Degree of Injury dimensions (which are data-level elements in the Content Model but evaluations are not gathered for).

**Table 5. Deleted Work Context Dimensions**

| Deleted Work Context                  | Description                                                                                                                                                     | Type         |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Communication Methods                 | How frequently does this job require the use of the following communication methods?                                                                            | Subcategory  |
| Contact With Others                   | How much does this job require the worker to be in contact with others (face-to-face, by telephone, or otherwise) in order to perform it?                       | Data Level   |
| Written Letters and Memos             | How often does the job require written letters and memos?                                                                                                       | Data Level   |
| Job Interactions                      | How important are interactions requiring the worker to:                                                                                                         | Subcategory  |
| Responsibility for Others             | Amount of responsibility the worker has for other workers as a part of this job                                                                                 | Intermediate |
| Frequency Required to Work:           | How frequently does this job require the worker to work:                                                                                                        | Subcategory  |
| Frequency in Environmental Conditions | How often during a usual work period is the worker exposed to the following conditions:                                                                         | Subcategory  |
| Frequency of Exposure to Job Hazards  | How often does this job require the worker to be exposed to the following hazards?                                                                              | Subcategory  |
| Likelihood of Injury From Job Hazards | What is the likelihood that the worker would be injured as a result of being exposed to the following hazards while performing this job?                        | Data Level*  |
| Degree of Injury                      | If injury, due to exposure to the following hazards, were to occur while performing this job, how serious would be the likely outcome?                          | Data Level*  |
| Time Spent in Body Positions          | How much time in a usual work period does the worker spend:                                                                                                     | Subcategory  |
| Frequency of Wearing Work Attire      | How often does the worker wear:                                                                                                                                 | Subcategory  |
| Impact of Decisions                   | The frequency and nature of the impact of worker's decisions on the organization                                                                                | Subcategory  |
| Frequency of Decision Making          | How frequently is the worker required to make decisions that affect other people, the financial resources, and/or the image and reputation of the organization? | Data Level   |
| Competition                           | Amount of competition that the worker will face as part of this job                                                                                             | Intermediate |

*Note.* \*Although these dimensions are data-level, data are not gathered for them. Row shadings are identical to those described in Table 1's Note.

**Dimensions Added.** Twenty-seven data-level elements were added (Table 6), drawing on the evidence streams developed in Steps 1 through 3 as well as post-deliberation refinements. The additions fell into several categories.

Seven elements were transported from the Organizational Context domain, either in their original or modified form. From the Role Conflict cluster, the dimensions capturing conflicting

interpersonal requests and competing group demands were reframed as Deal with Conflicting Requests and Deal with Competing Group Priorities. From the Task Significance cluster, three dimensions capturing the breadth and importance of a job's impact on others were consolidated into a single Work Significance element under Criticality of Work. From the Job Characteristics cluster, the Skill Variety, Task Variety, and Task Identity constructs were each brought forward as individual elements under Work Design and Task Organization. The Feedback construct, which included two dimensions reflecting the extent to which the job itself provides performance information, was reframed as Feedback from the Work Itself under a new Performance Feedback and Monitoring Intermediate Category. These seven transported elements were selected because they could be construed as varying meaningfully across occupations rather than primarily across organizations within the same occupation.

Two elements were drawn primarily from the research literature identified in Step 2. Emotion Management, defined as work involving the management or control of one's own emotions when interacting with others, was placed under Interpersonal Interaction Types, drawing on research on emotional labor and emotional demands (Parker & Ohly, 2008), and was further supported by the presence of a relevant variable in AWCS. Electronic Performance Monitoring, defined as work subject to electronic monitoring via video, computers, or cameras, was placed under the new Performance Feedback and Monitoring category, drawing on Parker and Ohly (2008).

Three dimensions recover constructs that were present in the O\*NET Prototype Work Context questionnaire but dropped during the 2000 instrument reduction ([Hubbard et al., 2000](#)). Virtual Meeting or Chat Applications restore the prototype's video conferencing and interactive computer communication features, updated to account for contemporary technology. Shift Work recovers the prototype's "Usual Work Shift" concept, and Work-Specific Uniform recovers a prototype attire concept distinct from safety equipment.

Ten elements were informed primarily by the external data sources identified in Step 1. Six addressed work setting and location conditions: Onsite Work, Working Alone, Geographically Dispersed Coworkers, Work-Related Non-Local Travel, Work-Related Local Travel, and Digital Connectivity capture dimensions of where, how remotely, and how connectedly work is performed, dimensions that have become substantially more salient with the growth of remote and hybrid work arrangements ([Aksoy et al., 2022](#); [Barrero et al., 2023](#)). These drew on sources including AWCS, ORS, the Current Population Survey, the Panel Study of Income Dynamics, the American Time Use Survey, and the remote work literature ([Gajendran et al., 2015, 2022](#)). The remaining four address physical demands not differentiated in the current taxonomy: Lifting or Carrying, Pushing or Pulling, Reaching, and Screen Exposure, the last of which captures the extent to which work is performed in front of computer screens or other digital displays. These drew on ORS, AWCS, and several longitudinal and health surveys.

Three elements in the Pace and Scheduling Intermediate Category were informed by a combination of prior sources and team deliberation. Work Interruptions captures the extent to which work involves dealing with interruptions from people, devices, and digital systems, drawing on deleted content from the prototype ([Hubbard et al., 2000](#)). Pace Determined by Non-Equipment Demands complements the existing Pace Determined by Speed of Equipment by capturing pace set by customer demand, supervisory direction, or quota fulfillment. Freedom to Determine Work Hours captures schedule autonomy, complementing the existing decision-making and task-determination freedoms already in the taxonomy.

Two additional dimensions were added, each drawing on multiple prior sources. Work In Free Time captures the extent to which the job requires working outside of scheduled hours to meet

demands, drawing on external data sources and deleted content from the prototype ([Hubbard et al., 2000](#)). Workload Demand captures the extent to which the amount of work on the job makes it difficult for workers to complete tasks well or on time, consolidating several concepts related to role overload, time adequacy, and resource insufficiency that had been considered individually and rejected as too position-specific during deliberation. This dimension drew on the research literature and Organizational Context Role Overload items.

**Table 6. Data-Level Dimensions Added to Revised Work Context Taxonomy**

| Dimension                            | Description                                                                                                                      | Data-Level | Source(s)                                        |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------------------------------|
| <b>Social Work Context</b>           | <b>Features of work involving communication, interpersonal interaction, and conflict with others</b>                             |            |                                                  |
| Communication Types                  | Features of work involving different types of communication with others                                                          |            |                                                  |
| Virtual Meeting or Chat Applications | Work involves communicating via virtual meeting or chat applications                                                             | X          | Hubbard et al. (2000)                            |
| Interpersonal Interaction Types      | Features of work that involve different types of interactions with others                                                        |            |                                                  |
| Emotion Management                   | Work involves workers having to manage or control their own emotions when interacting with others                                | X          | External Data Source Review, Literature Review   |
| Conflict Types                       | Features of work that involve different types of conflict with others                                                            |            |                                                  |
| Deal with Conflicting Requests       | Work involves dealing with conflicting or incompatible requests from two or more people                                          | X          | Literature Review, Organizational Context Review |
| Deal with Competing Group Priorities | Work involves dealing with demands from groups with differing or competing priorities                                            | X          | Literature Review, Organizational Context Review |
| <b>Physical Work Context</b>         | <b>Features of work that involve different types of physical conditions encountered on the job</b>                               |            |                                                  |
| Physical Work Setting                | Features of work that involve different types of physical work settings                                                          |            |                                                  |
| Onsite Work                          | Work requires being physically present at a worksite (not at home)                                                               | X          | External Data Source Review, Literature Review   |
| Working Alone                        | Work is performed while alone, without nearby coworkers and/or direct supervisors                                                | X          | External Data Source Review                      |
| Geographically Dispersed Coworkers   | Work is performed in settings where coworkers, supervisors, and/or collaborators are dispersed rather than physically co-located | X          | External Data Source Review                      |
| Work-Related Non-Local Travel        | Work involves travel outside of the local area to perform the job                                                                | X          | External Data Source Review                      |
| Work-Related Local Travel            | Work involves travel to different local work sites or job-related locations to perform the job                                   | X          | External Data Source Review                      |
| Digital Connectivity                 | Work requires continuous, reliable digital connectivity in order for tasks to be carried out                                     | X          | External Data Source Review                      |

**Table 6. (Continued)**

| Dimension                             | Description                                                                                                                                  | Data-Level | Source(s)                                                                     |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------|
| Physical Movements and Body Positions | Features of work that involve different types of bodily positions and movements                                                              |            |                                                                               |
| Lifting or Carrying                   | Work involves lifting or carrying of objects heavier than 50 pounds                                                                          | X          | External Data Source Review                                                   |
| Pushing or Pulling                    | Work involves pushing or pulling of objects heavier than 50 pounds                                                                           | X          | External Data Source Review                                                   |
| Reaching                              | Work involves reaching overhead, at shoulder level, and/or below shoulder level                                                              | X          | External Data Source Review                                                   |
| Screen Exposure                       | Work is performed in front of computer screens or other digital displays                                                                     | X          | External Data Source Review, Literature Review                                |
| Work Attire                           | Features of work that involve different types of equipment or clothing worn on the job                                                       |            |                                                                               |
| Work-Specific Uniform                 | Work involves wearing a uniform or other specialized attire that is unrelated to safety                                                      | X          | Hubbard et al. (2000)                                                         |
| <b>Structural Work Context</b>        | <b>Features of work that reflect structural characteristics of the work itself</b>                                                           |            |                                                                               |
| Criticality of Work                   | Features of work that reflect the impact or significance of the work performed in the occupation                                             |            |                                                                               |
| Work Significance                     | Work involves carrying out activities that impact the well-being or livelihood of large numbers of people                                    | X          | Literature Review, Organizational Context Review                              |
| Work Design and Task Organization     | Features of work that reflect how tasks are designed, organized, and carried out                                                             |            |                                                                               |
| Skill Variety                         | Work involves using a large variety of skills and/or knowledge                                                                               | X          | External Data Source Review, Literature Review, Organizational Context Review |
| Task Variety                          | Work involves performing a large variety of different tasks                                                                                  | X          | Literature Review, Organizational Context Review                              |
| Task Identity                         | Work involves having responsibility for a complete, identifiable piece of work or work product that the worker produced from start to finish | X          | Literature Review, Organizational Context Review                              |
| Performance Feedback and Monitoring   | Features of work that reflect different ways performance feedback and monitoring occur                                                       |            |                                                                               |

**Table 6. (Continued)**

| Dimension                                | Description                                                                                                                     | Data-Level | Source(s)                                          |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------|----------------------------------------------------|
| Electronic Performance Monitoring        | Work involves carrying out activities subject to electronic monitoring (such as by video, computer, camera)                     | X          | Literature Review                                  |
| Feedback from the Work Itself            | Work offers incumbents clear feedback about their performance (such as visible outputs, immediately observable results)         | X          | Literature Review, Organizational Context Review   |
| Pace and Scheduling                      | Features of work reflecting the pace and scheduling of the work being carried out                                               |            |                                                    |
| Shift Work                               | The job involves shift work (such as day, evening, night, or rotating shifts)                                                   | X          | External Data Source Review, Hubbard et al. (2000) |
| Work In Free Time                        | The job requires one to work in their free time to meet job demands                                                             | X          | External Data Source Review, Hubbard et al. (2000) |
| Work Interruptions                       | Work involves dealing with interruptions from people, devices, and/or digital systems                                           | X          | Hubbard et al. (2000)                              |
| Pace Determined by Non-Equipment Demands | Work involves performing at a pace determined by non-equipment related demands (such as customer demand, supervisory direction) | X          | Final Review & Adjudication                        |
| Freedom to Determine Work Hours          | Work involves flexibility to set one's own work hours or schedule                                                               | X          | Final Review & Adjudication                        |
| Workload Demand                          | The amount of work on the job makes it difficult for workers to complete tasks well or on-time                                  | X          | Literature Review, Organizational Context Review   |

**Dimensions Retained.** As seen in Table 7, the great majority of the current taxonomy's 57 rated data-level elements were retained – 54 in total. Although many experienced no substantive changes beyond the definitional edits mentioned above, others were renamed or conceptually broadened. For example, Exposed to Minor Burns, Cuts, Bites, or Stings was broadened to Exposed to Minor Hazards to encompass a wider range of minor-injury sources, and Work Schedules was renamed Regularity of Work Schedule and redefined to emphasize the consistency and predictability of schedule rather than simply its regularity. Additionally, several dimensions were moved across Intermediate Categories to improve conceptual coherence: Freedom to Make Decisions moved from Criticality of Position to Work Design and Task Organization, alongside the related Freedom to Determine Tasks, Priorities, and Goals; Level of Competition was moved into Work Design and Task Organization; and Cramped Work Space, Awkward Positions moved from Environmental Conditions to Physical Movements and Body Positions, where it better fits conceptually alongside other body positioning and movement elements.

**Table 7. Data-Level Dimensions Retained in Revised Work Context Taxonomy**

| Original Name                              | Original Definition                                                                                                              | New Label                                    | New Definition                                                                         |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------------------------------------------|
| <b>Social Work Context</b>                 |                                                                                                                                  |                                              |                                                                                        |
| Communication Types                        |                                                                                                                                  |                                              |                                                                                        |
| Public Speaking                            | How often do you have to perform public speaking in this job?                                                                    | N/A                                          | Work involves speaking in public                                                       |
| Telephone Conversations                    | How often do you have telephone conversations in this job?                                                                       | Telephone                                    | Work involves communication by phone                                                   |
| E-Mail                                     | How often do you use e-mail in this job?                                                                                         | N/A                                          | Work involves communication by e-mail                                                  |
| Face-to-Face Discussions                   | How often do you have to have face-to-face discussions with individuals or teams in this job?                                    | N/A                                          | Work involves face-to-face discussions with individuals or teams                       |
| Interpersonal Interaction Types            |                                                                                                                                  |                                              |                                                                                        |
| Work With Work Group or Team               | How important is it to work with others in a group or team in this job?                                                          | Work with Work Group or Team                 | Work involves interacting with others in a group or team                               |
| Deal With External Customers               | How important is it to work with external customers or the public in this job?                                                   | Deal with External Customers                 | Work involves interacting with external customers or the public                        |
| Coordinate or Lead Others                  | How important is it to coordinate or lead others in accomplishing work activities in this job?                                   | N/A                                          | Work involves coordinating or leading others                                           |
| Health and Safety of Other Workers         | How much responsibility is there for the health and safety of others in this job?                                                | Responsibility for Others' Health and Safety | Work involves having responsibility for the health and safety of others                |
| Work Outcomes and Results of Other Workers | How responsible is the worker for work outcomes and results of other workers?                                                    | Responsibility for Outcomes and Results      | Work involves having responsibility for the work outcomes and results of other workers |
| Conflict Types                             |                                                                                                                                  |                                              |                                                                                        |
| Frequency of Conflict Situations           | How often are there conflict situations the employee has to face in this job?                                                    | Deal with Conflict Situations                | Work involves dealing with conflict situations                                         |
| Deal With Unpleasant or Angry People       | How frequently does the worker have to deal with unpleasant, angry, or discourteous individuals as part of the job requirements? | Deal with Unpleasant or Angry People         | Work involves dealing with unpleasant, angry, or discourteous individuals              |
| Deal With Physically Aggressive People     | How frequently does this job require the worker to deal with physical aggression of violent individuals?                         | Deal with Physically Aggressive People       | Work involves dealing with physical aggression from violent individuals                |

**Table 7. (Continued)**

| Original Name                                         | Original Definition                                                                                                        | New Label | New Definition                                                                                           |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------------------------------------------------------------------------|
| <b>Physical Work Context</b>                          |                                                                                                                            |           |                                                                                                          |
| Physical Work Setting                                 |                                                                                                                            |           |                                                                                                          |
| Indoors, Environmentally Controlled                   | How often does this job require working indoors in environmentally controlled conditions?                                  | N/A       | Work is performed indoors in environmentally controlled circumstances                                    |
| Indoors, Not Environmentally Controlled               | How often does this job require working indoors in non-controlled environmental conditions (e.g., warehouse without heat)? | N/A       | Work is performed indoors in non-controlled environmental circumstances (such as warehouse without heat) |
| Outdoors, Exposed to Weather                          | How often does this job require working outdoors, exposed to all weather conditions?                                       | N/A       | Work is performed outdoors, exposed to all weather conditions                                            |
| Outdoors, Under Cover                                 | How often does this job require working outdoors, under cover (e.g., structure with roof but no walls)?                    | N/A       | Work is performed outdoors, under cover (such as structure with roof but no walls)                       |
| In an Open Vehicle or Equipment                       | How often does this job require working in an open vehicle or equipment (e.g., tractor)?                                   | N/A       | Work is performed in an open vehicle or piece of equipment (such as a tractor)                           |
| In an Enclosed Vehicle or Equipment                   | How often does this job require working in a closed vehicle or equipment (e.g., car)?                                      | N/A       | Work is performed in an enclosed vehicle or piece of equipment (such as a car)                           |
| Physical Proximity                                    | To what extent does this job require the worker to perform job tasks in close physical proximity to other people?          | N/A       | Work is performed in close physical proximity to other people                                            |
| Extreme Physical Work Conditions                      |                                                                                                                            |           |                                                                                                          |
| Sounds, Noise Levels Are Distracting or Uncomfortable | How often does this job require working exposed to sounds and noise levels that are distracting or uncomfortable?          | N/A       | Work involves exposure to sounds and noise levels that are distracting or uncomfortable                  |
| Very Hot or Cold Temperatures                         | How often does this job require working in very hot (above 90 F degrees) or very cold (below 32 F degrees) temperatures?   | N/A       | Work involves exposure to very hot (above 90°F) or very cold (below 32°F) temperatures                   |
| Extremely Bright or Inadequate Lighting               | How often does this job require working in extremely bright or inadequate lighting conditions?                             | N/A       | Work involves exposure to extremely bright light or inadequate lighting                                  |
| Exposed to Contaminants                               | How often does this job require working exposed to contaminants (such as pollutants, gases, dust, or odors)?               | N/A       | Work involves exposure to contaminants (such as pollutants, gases, dust, or odors)                       |
| Exposed to Whole Body Vibration                       | How often does this job require exposure to whole body vibration (e.g., operate a jackhammer)?                             | N/A       | Work involves exposure to whole body vibration (such as when operating a jackhammer)                     |

**Table 7. (Continued)**

| Original Name                                                                       | Original Definition                                                                                      | New Label                | New Definition                                                                                 |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------|
| <b>Job Hazards</b>                                                                  |                                                                                                          |                          |                                                                                                |
| Exposed to Radiation                                                                | How often does this job require exposure to radiation?                                                   | N/A                      | Work involves exposure to radiation                                                            |
| Exposed to Disease or Infections                                                    | How often does this job require exposure to disease/infections?                                          | N/A                      | Work involves exposure to diseases or infection-causing hazards                                |
| Exposed to High Places                                                              | How often does this job require exposure to high places?                                                 | N/A                      | Work involves exposure to high places                                                          |
| Exposed to Hazardous Conditions                                                     | How often does this job require exposure to hazardous conditions?                                        | N/A                      | Work involves exposure to hazardous conditions                                                 |
| Exposed to Hazardous Equipment                                                      | How often does this job require exposure to hazardous equipment?                                         | N/A                      | Work involves exposure to hazardous equipment                                                  |
| Exposed to Minor Burns, Cuts, Bites, or Stings                                      | How often does this job require exposure to minor burns, cuts, bites, or stings?                         | Exposed to Minor Hazards | Work involves exposure to hazards that may cause minor injury                                  |
| <b>Physical Movements and Body Positions</b>                                        |                                                                                                          |                          |                                                                                                |
| Spend Time Sitting                                                                  | How much does this job require sitting?                                                                  | N/A                      | Work involves sitting                                                                          |
| Spend Time Standing                                                                 | How much does this job require standing?                                                                 | N/A                      | Work involves standing                                                                         |
| Spend Time Climbing Ladders, Scaffolds, or Poles                                    | How much does this job require climbing ladders, scaffolds, or poles?                                    | N/A                      | Work involves climbing ladders, scaffolds, or poles                                            |
| Spend Time Walking and Running                                                      | How much does this job require walking and running?                                                      | N/A                      | Work involves walking or running                                                               |
| Spend Time Kneeling, Crouching, Stooping, or Crawling                               | How much does this job require kneeling, crouching, stooping, or crawling?                               | N/A                      | Work involves kneeling, crouching, stooping, or crawling                                       |
| Spend Time Keeping or Regaining Balance                                             | How much does this job require keeping or regaining your balance?                                        | N/A                      | Work involves keeping or regaining balance                                                     |
| Spend Time Using Your Hands to Handle, Control, or Feel Objects, Tools, or Controls | How much does this job require using your hands to handle, control, or feel objects, tools, or controls? | N/A                      | Work involves use of hands to handle, control, manipulate, or feel objects, tools, or controls |

**Table 7. (Continued)**

| Original Name                                                                                                                               | Original Definition                                                                                                                                                            | New Label                                       | New Definition                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Spend Time Bending or Twisting the Body                                                                                                     | How much does this job require bending or twisting your body?                                                                                                                  | N/A                                             | Work involves bending or twisting the body                                                                                                                     |
| Spend Time Making Repetitive Motions                                                                                                        | How much does this job require making repetitive motions?                                                                                                                      | N/A                                             | Work involves making repetitive motions                                                                                                                        |
| Cramped Work Space, Awkward Positions                                                                                                       | How often does this job require working in cramped work spaces that requires getting into awkward positions?                                                                   | N/A                                             | Work involves performing activities in cramped spaces that require getting into awkward positions                                                              |
| <b>Work Attire</b>                                                                                                                          |                                                                                                                                                                                |                                                 |                                                                                                                                                                |
| Wear Common Protective or Safety Equipment such as Safety Shoes, Glasses, Gloves, Hearing Protection, Hard Hats, or Life Jackets            | How much does this job require wearing common protective or safety equipment such as safety shoes, glasses, gloves, hard hats or life jackets?                                 | Wear Common Protective or Safety Equipment      | Work involves wearing common protective or safety equipment (such as safety shoes, glasses, gloves, hard hats, or life jackets)                                |
| Wear Specialized Protective or Safety Equipment such as Breathing Apparatus, Safety Harness, Full Protection Suits, or Radiation Protection | How much does this job require wearing specialized protective or safety equipment such as breathing apparatus, safety harness, full protection suits, or radiation protection? | Wear Specialized Protective or Safety Equipment | Work involves wearing specialized protective or safety equipment (such as breathing apparatus, safety harness, full protection suits, or radiation protection) |
| <b>Structural Work Context</b>                                                                                                              |                                                                                                                                                                                |                                                 |                                                                                                                                                                |
| <b>Criticality of Work</b>                                                                                                                  |                                                                                                                                                                                |                                                 |                                                                                                                                                                |
| Consequence of Error                                                                                                                        | How serious would the result usually be if the worker made a mistake that was not readily correctable?                                                                         | N/A                                             | Work involves carrying out actions that have serious consequences if mistakes are made that are not readily correctable                                        |
| Impact of Decisions on Co-workers or Company Results                                                                                        | What results do your decisions usually have on other people or the image or reputation or financial resources of your employer?                                                | Impact of Decisions                             | Work involves making decisions that impact other people and/or the image, reputation, or financial resources of the employer                                   |
| <b>Work Design and Task Organization</b>                                                                                                    |                                                                                                                                                                                |                                                 |                                                                                                                                                                |
| Degree of Automation                                                                                                                        | How automated is the job?                                                                                                                                                      | N/A                                             | Work involves engaging in activities that are highly automated                                                                                                 |
| Importance of Being Exact or Accurate                                                                                                       | How important is being very exact or highly accurate in performing this job?                                                                                                   | Being Exact or Accurate                         | Work involves being very exact or highly accurate                                                                                                              |

**Table 7. (Continued)**

| Original Name                         | Original Definition                                                                                                                                                                          | New Label                                         | New Definition                                                                                                                                                       |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Importance of Repeating Same Tasks    | How important is repeating the same physical activities (e.g., key entry) or mental activities (e.g., checking entries in a ledger) over and over, without stopping, to performing this job? | Repeating the Same Tasks                          | Work involves repeating the same physical activities (such as key entry) or mental activities (such as checking entries in a ledger) over and over, without stopping |
| Freedom to Make Decisions             | How much decision making freedom, without supervision, does the job offer?                                                                                                                   | N/A                                               | Work involves freely making decisions without supervision                                                                                                            |
| Determine Tasks, Priorities and Goals | To what extent is this job structured for the worker, rather than allowing the worker to determine tasks, priorities, and goals?                                                             | Freedom to Determine Tasks, Priorities, and Goals | Work involves having the freedom to determine one's tasks, priorities, and goals                                                                                     |
| Level of Competition                  | To what extent does this job require the worker to compete or to be aware of competitive pressures?                                                                                          | N/A                                               | Work involves competition or awareness of competitive pressures                                                                                                      |
| <b>Pace and Scheduling</b>            |                                                                                                                                                                                              |                                                   |                                                                                                                                                                      |
| Time Pressure                         | How often does this job require the worker to meet strict deadlines?                                                                                                                         | N/A                                               | Work involves meeting strict deadlines                                                                                                                               |
| Pace Determined by Speed of Equipment | How important is it to this job that the pace is determined by the speed of equipment or machinery? (This does not refer to keeping busy at all times on this job.)                          | N/A                                               | Work involves engaging in activities whose pace is determined by the speed of equipment or machinery                                                                 |
| Work Schedules                        | How regular are the work schedules for this job?                                                                                                                                             | Regularity of Work Schedule                       | Consistency and predictability of the job's work schedule                                                                                                            |
| Duration of Typical Work Week         | Number of hours typically worked in one week.                                                                                                                                                | N/A                                               | The number of hours worked in a week                                                                                                                                 |

**Net Effect.** The revised taxonomy contains 81 data-level elements organized under 12 Intermediate Categories within the three renamed Primary Categories, compared to the current taxonomy's 57 data-level elements under 13 Intermediate Categories (plus eight more specific Subcategories, such as Communication Methods and Job Interactions). Social Work Context contains 16 elements (up from 14), Physical Work Context contains 41 (up from 30), and Structural Work Context contains 24 (up from 13). The net gain of 24 data-level elements reflects 27 additions and 3 deletions. The proportional growth is largest in the Structural Work Context, which nearly doubled, primarily through the addition of the Organizational Context job characteristics constructs, the Performance Feedback and Monitoring Subcategory, and the expanded Pace and Scheduling Subcategory. Physical Work Context grew substantially through new work settings, increased physical demands, and digital exposure. Social Work Context grew modestly, with the additions (Virtual Meeting or Chat, Emotion Management, Conflicting Requests, Competing Group Priorities) largely offset by the removal of two elements and two organizing rows. See Table A.1 for a crosswalk linking the dimensions in the current Work Context taxonomy to those in the proposed revision and Table A.2 for a comprehensive detailing of the revised taxonomy.

## Preparing to Explore Alternative Approaches for the Population of Work Context Ratings

As noted in the Introduction, the Center has expressed interest in exploring approaches for generating Work Context ratings that are less dependent on ratings provided by job incumbents or Occupational Experts and that, in doing so, lessen the public burden of the O\*NET Data Collection Program. Several approaches could potentially support this objective, including LLM-based methods, supervised machine learning (ML), and analyst-based rating approaches. To facilitate future development and evaluation of such methods, we developed preliminary rating questions and scales for each anticipated data-level dimension in the revised Work Context taxonomy.

The proposed taxonomy contains 81 data-level Work Context dimensions that can largely be grouped into two broad categories based on source of dimension and further differentiated by source of the proposed rating/question scale for the dimension, specifically:

- 54 dimensions are from the existing O\*NET Work Context taxonomy:
  - 51 would use their existing rating scales without substantive modification
  - 2 would use revised rating scales
  - 1 (Impact of Decisions) would potentially use two alternative rating scales (level and frequency)
- 27 dimensions are newly added and informed by external sources or literature review
  - 3 would use existing scales derived from their original source
  - 1 would use a new scale different from its original source
  - 21 would use newly developed rating questions and scales
  - 2 (Skill Variety, Task Variety) would involve deriving values directly from existing O\*NET data (e.g., quantifying observed variety in skills and tasks for an occupation)

For all but the last two Work Contexts mentioned above, proposed future data population approaches would presumably involve use of LLM-based methods or supervised ML models, where either (a) analyst ratings, (b) existing Work Context ratings from the O\*NET database, or

(c) data from an external source would be used to evaluate the quality of the new alternative approaches.

To facilitate future development and evaluation of alternative rating approaches for Work Contexts, we identified (from a preexisting source) or developed preliminary rating questions and rating scales. These were designed for potential use with LLMs, analysts, or other rating approaches while keeping the construct definitions independent of particular scales. For example, for Shift Work, we developed the question, “How often do incumbents in this occupation engage in shift work (e.g., day/evening/night shifts, rotating shifts)?” For Workload Demand, we developed the question, “To what extent does the level of workload in this occupation make it difficult for incumbents to complete their tasks well or on time?”

For the 54 data-level dimensions retained from the current Work Context taxonomy, the research team assessed whether their existing rating questions and scales remained appropriate given the revised construct definitions. Thirty-seven currently use Frequency scales, with the remainder using Importance scales or scales customized for individual dimensions. Existing scales were retained wherever they continued to correspond appropriately to the revised constructs, resulting in 51 retained dimensions continuing to use their existing O\*NET scales.

Revised scales were recommended for Repeating the Same Tasks and Pace Determined by Speed of Equipment. For both, we recommended replacing the existing Importance continuum, ranging from “Not important at all” to “Extremely important,” with an extent continuum ranging from “Not at all” to “To a very great extent.” This scaling more directly represents the conditions described by the revised construct definitions.

Impact of Decisions required different treatment. In the current taxonomy, related content is represented through ratings addressing both the level of impact associated with decisions and the frequency of consequential decision-making. In the revised taxonomy, these are consolidated into a single dimension defined as “Work involves making decisions that impact other people and/or the image, reputation, or financial resources of the employer.” Rather than selecting a single scale in advance, we recommended comparing two alternatives: a Frequency scale ranging from “Never” to “Every day” and a Level of Impact scale ranging from “No impact” to “Very large impact.” Subsequent rating method research can determine which better represents the intended construct while maintaining continuity with existing O\*NET ratings.

We also identified or developed preliminary rating questions and scales for the 25 newly added dimensions that were informed by external sources or review and that we anticipate potentially being populated via LLM- or ML-based ratings. These were classified according to whether potentially usable preexisting occupation-level data were available and, when available, whether the associated source scale was appropriate. Candidate data were considered potentially viable when they could be linked to the O\*NET-SOC 2019 taxonomy at the occupation-level, were sufficiently current, and otherwise appeared suitable for further evaluation.

For Lifting or Carrying, Pushing or Pulling, and Reaching, potentially usable occupation-level data were identified and the source scaling was retained. For Pace Determined by Non-Equipment Demands, potentially usable data were identified, but a different rating scale was proposed. For the remaining 21 dimensions, no suitable preexisting rating approach was identified, so new questions and scales were developed.

The remaining two added dimensions, Skill Variety and Task Variety, were identified as candidates for more direct derivation from existing O\*NET data rather than direct rating. For example, Task Variety could potentially be estimated from the range and distribution of tasks associated with an occupation, and Skill Variety from the range of associated skills and knowledge. Specific derivation procedures would need to be developed and validated in subsequent work.

Table B.1 in Appendix B summarizes relevant information pertaining to the 30 Work Contexts that would involve use of anything other than the current O\*NET rating question and scale for a current Work Context. Note, Appendix B contains 31 rows, as Impact of Decisions has two rating questions/scales associated with it, one for frequency and one for level. Table B.1 identifies the dimension, the source of the dimension and source of its proposed rating question/scale, its proposed rating question and scale, and information about its proposed scaling (e.g., existing scale, modified scale). The 51 retained dimensions for which existing O\*NET rating scales were recommended for use without substantive modification are not displayed.

### **Finalizing Work Context Dimensions for the O\*NET Content Model**

Upon completing the activities summarized above, a revised Work Context taxonomy, containing 81 data-level elements organized into three renamed categories (Social Work Context, Physical Work Context, Structural Work Context), was recommended for adoption into the O\*NET Content Model. The revised taxonomy reflects a net gain of 24 data-level elements relative to the current taxonomy's 57, resulting from 27 additions and three deletions. The retained dimensions received updated definitions that separate construct meaning from rating scale language, consistent with measurement best practices ([Lambert & Newman, 2023](#)).

The revision preserves useful continuity with the existing O\*NET framework while addressing limitations that have become more apparent over time. In particular, the revised taxonomy

- (a) removes non-substantive Subcategories that added little value to the taxonomy;
- (b) provides declarative definitions for all dimensions that are independent of any particular response scale;
- (c) reorganizes dimensions across Intermediate Categories to improve conceptual coherence;
- (d) adds new dimensions that reflect contemporary work conditions and potential future work conditions;
- (e) incorporates viable Organizational Context dimensions; and
- (f) adopts a broadened domain definition that encompasses both the conditions under which work occurs and the structural properties of the work itself.

The additions were informed by multiple complementary evidence streams: a systematic review of 26 preexisting data sources, a targeted literature review that identified 16 candidate constructs, an independent SME review of 100 Organizational Context dimensions (14 retained for further consideration), and iterative team deliberation and adjudication. This multi-source approach was necessary because, unlike domains such as Work Styles, the O\*NET Work Contexts lack a single, consensually accepted taxonomy against which they can be evaluated. The convergence of evidence across these diverse sources provides confidence that the additions address genuine gaps in the current taxonomy rather than reflecting the preferences of any single literature or dataset.

Additionally, preliminary work was conducted to align rating scales with the revised definitions and to prepare prototype rating questions suitable for potential use in primarily LLM- or ML-based approaches to generating occupation-level ratings. For the 54 retained dimensions, current rating scales were judged suitable, with only three exceptions requiring scale modifications. For the 27 added dimensions, preliminary rating scales were proposed on a case-by-case basis, balancing compatibility with external data sources against consistency with existing O\*NET scaling conventions. These preliminary scales and prototype questions are intended to serve as a foundation for upcoming investigations into alternative methods for populating the Work Context dimensions.

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## Appendix A

**Table A.1. Crosswalk Between Original and Revised Work Context Dimensions**

| Original Element ID | Original Dimension Name                                    | Revised Element ID | Revised Dimension Name                       |
|---------------------|------------------------------------------------------------|--------------------|----------------------------------------------|
| <b>4.C</b>          | <b>Work Context</b>                                        | <b>4.F</b>         | <b>Work Context</b>                          |
| <b>4.C.1</b>        | <b>Interpersonal Relationships</b>                         | <b>4.F.1</b>       | <b>Social Work Context</b>                   |
| 4.C.1.a             | Communication                                              | 4.F.1.a            | Communication Types                          |
| 4.C.1.a.2           | Communication Methods                                      | —                  | Deleted                                      |
| 4.C.1.a.2.c         | Public Speaking                                            | 4.F.1.a.1          | Public Speaking                              |
| 4.C.1.a.2.f         | Telephone Conversations                                    | 4.F.1.a.2          | Telephone                                    |
| 4.C.1.a.2.h         | E-Mail                                                     | 4.F.1.a.3          | E-Mail                                       |
| 4.C.1.a.2.j         | Written Letters and Memos                                  | —                  | Deleted                                      |
| 4.C.1.a.2.l         | Face-to-Face Discussions with Individuals and Within Teams | 4.F.1.a.4          | Face-to-Face Discussions                     |
| —                   | —                                                          | 4.F.1.a.5          | Virtual Meeting or Chat Applications         |
| 4.C.1.a.4           | Contact With Others                                        | —                  | Deleted                                      |
| 4.C.1.b             | Role Relationships                                         | 4.F.1.b            | Interpersonal Interaction Types              |
| 4.C.1.b.1           | Job Interactions                                           | —                  | Deleted                                      |
| 4.C.1.b.1.e         | Work With or Contribute to a Work Group or Team            | 4.F.1.b.1          | Work with Work Group or Team                 |
| 4.C.1.b.1.f         | Deal With External Customers or the Public in General      | 4.F.1.b.2          | Deal with External Customers                 |
| 4.C.1.b.1.g         | Coordinate or Lead Others in Accomplishing Work Activities | 4.F.1.b.3          | Coordinate or Lead Others                    |
| 4.C.1.c             | Responsibility for Others                                  | —                  | Merged into 4.F.1.b                          |
| 4.C.1.c.1           | Health and Safety of Other Workers                         | 4.F.1.b.4          | Responsibility for Others' Health and Safety |
| 4.C.1.c.2           | Work Outcomes and Results of Other Workers                 | 4.F.1.b.5          | Responsibility for Outcomes and Results      |
| —                   | —                                                          | 4.F.1.b.6          | Emotion Management                           |
| 4.C.1.d             | Conflictual Contact                                        | 4.F.1.c            | Conflict Types                               |
| 4.C.1.d.1           | Conflict Situations                                        | 4.F.1.c.1          | Deal with Conflict Situations                |
| 4.C.1.d.2           | Dealing With Unpleasant, Angry, or Discourteous People     | 4.F.1.c.2          | Deal with Unpleasant or Angry People         |
| 4.C.1.d.3           | Dealing with Violent or Physically Aggressive People       | 4.F.1.c.3          | Deal with Physically Aggressive People       |
| —                   | —                                                          | 4.F.1.c.4          | Deal with Conflicting Requests               |
| —                   | —                                                          | 4.F.1.c.5          | Deal with Competing Group Priorities         |

| Original Element ID | Original Dimension Name                                               | Revised Element ID | Revised Dimension Name                                |
|---------------------|-----------------------------------------------------------------------|--------------------|-------------------------------------------------------|
| <b>4.C.2</b>        | <b>Physical Work Conditions</b>                                       | <b>4.F.2</b>       | <b>Physical Work Context</b>                          |
| 4.C.2.a             | Work Setting                                                          | 4.F.2.a            | Physical Work Setting                                 |
| 4.C.2.a.1           | Frequency Required to Work:                                           | —                  | Deleted                                               |
| 4.C.2.a.1.a         | Indoors, Environmentally Controlled                                   | 4.F.2.a.1          | Indoors, Environmentally Controlled                   |
| 4.C.2.a.1.b         | Indoors, Not Environmentally Controlled                               | 4.F.2.a.2          | Indoors, Not Environmentally Controlled               |
| 4.C.2.a.1.c         | Outdoors, Exposed to All Weather Conditions                           | 4.F.2.a.3          | Outdoors, Exposed to Weather                          |
| 4.C.2.a.1.d         | Outdoors, Under Cover                                                 | 4.F.2.a.4          | Outdoors, Under Cover                                 |
| 4.C.2.a.1.e         | In an Open Vehicle or Operating Equipment                             | 4.F.2.a.5          | In an Open Vehicle or Equipment                       |
| 4.C.2.a.1.f         | In an Enclosed Vehicle or Operate Enclosed Equipment                  | 4.F.2.a.6          | In an Enclosed Vehicle or Equipment                   |
| 4.C.2.a.3           | Physical Proximity                                                    | 4.F.2.a.7          | Physical Proximity                                    |
| —                   | —                                                                     | 4.F.2.a.8          | Onsite Work                                           |
| —                   | —                                                                     | 4.F.2.a.9          | Working Alone                                         |
| —                   | —                                                                     | 4.F.2.a.10         | Geographically Dispersed Coworkers                    |
| —                   | —                                                                     | 4.F.2.a.11         | Work-Related Non-Local Travel                         |
| —                   | —                                                                     | 4.F.2.a.12         | Work-Related Local Travel                             |
| —                   | —                                                                     | 4.F.2.a.13         | Digital Connectivity                                  |
| 4.C.2.b             | Environmental Conditions                                              | 4.F.2.b            | Extreme Physical Work Conditions                      |
| 4.C.2.b.1           | Frequency in Environmental Conditions                                 | —                  | Deleted                                               |
| 4.C.2.b.1.a         | Exposed to Sounds, Noise Levels that are Distracting or Uncomfortable | 4.F.2.b.1          | Sounds, Noise Levels Are Distracting or Uncomfortable |
| 4.C.2.b.1.b         | Exposed to Very Hot or Cold Temperatures                              | 4.F.2.b.2          | Very Hot or Cold Temperatures                         |
| 4.C.2.b.1.c         | Exposed to Extremely Bright or Inadequate Lighting Conditions         | 4.F.2.b.3          | Extremely Bright or Inadequate Lighting               |
| 4.C.2.b.1.d         | Exposed to Contaminants                                               | 4.F.2.b.4          | Exposed to Contaminants                               |
| 4.C.2.b.1.e         | Exposed to Cramped Work Space, Awkward Positions                      | 4.F.2.d.13         | Cramped Work Space, Awkward Positions                 |
| 4.C.2.b.1.f         | Exposed to Whole Body Vibration                                       | 4.F.2.b.5          | Exposed to Whole Body Vibration                       |
| 4.C.2.c             | Job Hazards                                                           | 4.F.2.c            | Job Hazards                                           |
| 4.C.2.c.1           | Frequency of Exposure to Job Hazards                                  | —                  | Deleted                                               |
| 4.C.2.c.1.a         | Exposed to Radiation                                                  | 4.F.2.c.1          | Exposed to Radiation                                  |
| 4.C.2.c.1.b         | Exposed to Disease or Infections                                      | 4.F.2.c.2          | Exposed to Disease or Infections                      |
| 4.C.2.c.1.c         | Exposed to High Places                                                | 4.F.2.c.3          | Exposed to High Places                                |
| 4.C.2.c.1.d         | Exposed to Hazardous Conditions                                       | 4.F.2.c.4          | Exposed to Hazardous Conditions                       |

| Original Element ID | Original Dimension Name                                                             | Revised Element ID | Revised Dimension Name                                                              |
|---------------------|-------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------|
| 4.C.2.c.1.e         | Exposed to Hazardous Equipment                                                      | 4.F.2.c.5          | Exposed to Hazardous Equipment                                                      |
| 4.C.2.c.1.f         | Exposed to Minor Burns, Cuts, Bites, or Stings                                      | 4.F.2.c.6          | Exposed to Minor Hazards                                                            |
| 4.C.2.c.2           | Likelihood of Injury From Job Hazards                                               | —                  | Deleted                                                                             |
| 4.C.2.c.3           | Degree of Injury                                                                    | —                  | Deleted                                                                             |
| 4.C.2.d             | Body Positioning                                                                    | 4.F.2.d            | Physical Movements and Body Positions                                               |
| 4.C.2.d.1           | Time Spent in Body Positions                                                        | —                  | Deleted                                                                             |
| 4.C.2.d.1.a         | Spend Time Sitting                                                                  | 4.F.2.d.1          | Spend Time Sitting                                                                  |
| 4.C.2.d.1.b         | Spend Time Standing                                                                 | 4.F.2.d.2          | Spend Time Standing                                                                 |
| 4.C.2.d.1.c         | Spend Time Climbing Ladders, Scaffolds, or Poles                                    | 4.F.2.d.3          | Spend Time Climbing Ladders, Scaffolds, or Poles                                    |
| 4.C.2.d.1.d         | Spend Time Walking or Running                                                       | 4.F.2.d.4          | Spend Time Walking and Running                                                      |
| 4.C.2.d.1.e         | Spend Time Kneeling, Crouching, Stooping, or Crawling                               | 4.F.2.d.5          | Spend Time Kneeling, Crouching, Stooping, or Crawling                               |
| 4.C.2.d.1.f         | Spend Time Keeping or Regaining Balance                                             | 4.F.2.d.6          | Spend Time Keeping or Regaining Balance                                             |
| 4.C.2.d.1.g         | Spend Time Using Your Hands to Handle, Control, or Feel Objects, Tools, or Controls | 4.F.2.d.7          | Spend Time Using Your Hands to Handle, Control, or Feel Objects, Tools, or Controls |
| 4.C.2.d.1.h         | Spend Time Bending or Twisting Your Body                                            | 4.F.2.d.8          | Spend Time Bending or Twisting the Body                                             |
| 4.C.2.d.1.i         | Spend Time Making Repetitive Motions                                                | 4.F.2.d.9          | Spend Time Making Repetitive Motions                                                |
| —                   | —                                                                                   | 4.F.2.d.10         | Lifting or Carrying                                                                 |
| —                   | —                                                                                   | 4.F.2.d.11         | Pushing or Pulling                                                                  |
| —                   | —                                                                                   | 4.F.2.d.12         | Reaching                                                                            |
| —                   | —                                                                                   | 4.F.2.d.14         | Screen Exposure                                                                     |
| 4.C.2.e             | Work Attire                                                                         | 4.F.2.e            | Work Attire                                                                         |
| 4.C.2.e.1           | Frequency of Wearing Work Attire                                                    | —                  | Deleted                                                                             |
| 4.C.2.e.1.d         | Wear Common Protective or Safety Equipment...                                       | 4.F.2.e.1          | Wear Common Protective or Safety Equipment                                          |
| 4.C.2.e.1.e         | Wear Specialized Protective or Safety Equipment...                                  | 4.F.2.e.2          | Wear Specialized Protective or Safety Equipment                                     |
| —                   | —                                                                                   | 4.F.2.e.3          | Work-Specific Uniform                                                               |
| <b>4.C.3</b>        | <b>Structural Job Characteristics</b>                                               | <b>4.F.3</b>       | <b>Structural Work Context</b>                                                      |
| 4.C.3.a             | Criticality of Position                                                             | 4.F.3.a            | Criticality of Work                                                                 |
| 4.C.3.a.1           | Consequence of Error                                                                | 4.F.3.a.1          | Consequence of Error                                                                |
| 4.C.3.a.2           | Impact of Decisions                                                                 | —                  | Deleted                                                                             |
| 4.C.3.a.2.a         | Impact of Decisions on Co-workers or Company Results                                | 4.F.3.a.2          | Impact of Decisions                                                                 |
| 4.C.3.a.2.b         | Frequency of Decision Making                                                        | —                  | Deleted                                                                             |

| Original Element ID | Original Dimension Name               | Revised Element ID | Revised Dimension Name                            |
|---------------------|---------------------------------------|--------------------|---------------------------------------------------|
| —                   | —                                     | 4.F.3.a.3          | Work Significance                                 |
| 4.C.3.a.4           | Freedom to Make Decisions             | 4.F.3.b.4          | Freedom to Make Decisions                         |
| 4.C.3.b             | Routine versus Challenging Work       | 4.F.3.b            | Work Design and Task Organization                 |
| 4.C.3.b.2           | Degree of Automation                  | 4.F.3.b.1          | Degree of Automation                              |
| 4.C.3.b.4           | Importance of Being Exact or Accurate | 4.F.3.b.2          | Being Exact or Accurate                           |
| 4.C.3.b.7           | Importance of Repeating Same Tasks    | 4.F.3.b.3          | Repeating the Same Tasks                          |
| 4.C.3.b.8           | Determine Tasks, Priorities and Goals | 4.F.3.b.5          | Freedom to Determine Tasks, Priorities, and Goals |
| 4.C.3.c             | Competition                           | —                  | Merged into 4.F.3.b                               |
| 4.C.3.c.1           | Level of Competition                  | 4.F.3.b.6          | Level of Competition                              |
| —                   | —                                     | 4.F.3.b.7          | Skill Variety                                     |
| —                   | —                                     | 4.F.3.b.8          | Task Variety                                      |
| —                   | —                                     | 4.F.3.b.9          | Task Identity                                     |
| —                   | New Intermediate Category             | 4.F.3.c            | Performance Feedback and Monitoring               |
| —                   | —                                     | 4.F.3.c.1          | Electronic Performance Monitoring                 |
| —                   | —                                     | 4.F.3.c.2          | Feedback from the Work Itself                     |
| 4.C.3.d             | Pace and Scheduling                   | 4.F.3.d            | Pace and Scheduling                               |
| 4.C.3.d.1           | Time Pressure                         | 4.F.3.d.1          | Time Pressure                                     |
| 4.C.3.d.3           | Pace Determined by Speed of Equipment | 4.F.3.d.2          | Pace Determined by Speed of Equipment             |
| 4.C.3.d.4           | Work Schedules                        | 4.F.3.d.3          | Regularity of Work Schedule                       |
| 4.C.3.d.8           | Duration of Typical Work Week         | 4.F.3.d.4          | Duration of Typical Work Week                     |
| —                   | —                                     | 4.F.3.d.5          | Shift Work                                        |
| —                   | —                                     | 4.F.3.d.6          | Work In Free Time                                 |
| —                   | —                                     | 4.F.3.d.7          | Work Interruptions                                |
| —                   | —                                     | 4.F.3.d.8          | Pace Determined by Non-Equipment Demands          |
| —                   | —                                     | 4.F.3.d.9          | Freedom to Determine Work Hours                   |
| —                   | —                                     | 4.F.3.d.10         | Workload Demand                                   |

**Table A.2. Final Proposed Revision to the Work Context Taxonomy**

| Element ID     | Element Name                                 | Description                                                                                              | Data-Level |
|----------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------|------------|
| <b>4.F</b>     | <b>Work Context</b>                          | <b>Social, physical, and structural features that describe the conditions of work</b>                    |            |
| <b>4.F.1</b>   | <b>Social Work Context</b>                   | <b>Features of work involving communication, interpersonal interaction, and conflict with others</b>     |            |
| <b>4.F.1.a</b> | <b>Communication Types</b>                   | <b>Features of work involving different types of communication with others</b>                           |            |
| 4.F.1.a.1      | Public Speaking                              | Work involves speaking in public                                                                         | Y          |
| 4.F.1.a.2      | Telephone                                    | Work involves communication by phone                                                                     | Y          |
| 4.F.1.a.3      | E-Mail                                       | Work involves communication by e-mail                                                                    | Y          |
| 4.F.1.a.4      | Face-to-Face Discussions                     | Work involves face-to-face discussions with individuals or teams                                         | Y          |
| 4.F.1.a.5      | Virtual Meeting or Chat Applications         | Work involves communicating via virtual meeting or chat applications                                     | Y          |
| <b>4.F.1.b</b> | <b>Interpersonal Interaction Types</b>       | <b>Features of work that involve different types of interactions with others</b>                         |            |
| 4.F.1.b.1      | Work with Work Group or Team                 | Work involves interacting with others in a group or team                                                 | Y          |
| 4.F.1.b.2      | Deal with External Customers                 | Work involves interacting with external customers or the public                                          | Y          |
| 4.F.1.b.3      | Coordinate or Lead Others                    | Work involves coordinating or leading others                                                             | Y          |
| 4.F.1.b.4      | Responsibility for Others' Health and Safety | Work involves having responsibility for the health and safety of others                                  | Y          |
| 4.F.1.b.5      | Responsibility for Outcomes and Results      | Work involves having responsibility for the work outcomes and results of other workers                   | Y          |
| 4.F.1.b.6      | Emotion Management                           | Work involves workers having to manage or control their own emotions when interacting with others        | Y          |
| <b>4.F.1.c</b> | <b>Conflict Types</b>                        | <b>Features of work that involve different types of conflict with others</b>                             |            |
| 4.F.1.c.1      | Deal with Conflict Situations                | Work involves dealing with conflict situations                                                           | Y          |
| 4.F.1.c.2      | Deal with Unpleasant or Angry People         | Work involves dealing with unpleasant, angry, or discourteous individuals                                | Y          |
| 4.F.1.c.3      | Deal with Physically Aggressive People       | Work involves dealing with physical aggression from violent individuals                                  | Y          |
| 4.F.1.c.4      | Deal with Conflicting Requests               | Work involves dealing with conflicting or incompatible requests from two or more people                  | Y          |
| 4.F.1.c.5      | Deal with Competing Group Priorities         | Work involves dealing with demands from groups with differing or competing priorities                    | Y          |
| <b>4.F.2</b>   | <b>Physical Work Context</b>                 | <b>Features of work that involve different types of physical conditions encountered on the job</b>       |            |
| <b>4.F.2.a</b> | <b>Physical Work Setting</b>                 | <b>Features of work that involve different types of physical work settings</b>                           |            |
| 4.F.2.a.1      | Indoors, Environmentally Controlled          | Work is performed indoors in environmentally controlled circumstances                                    | Y          |
| 4.F.2.a.2      | Indoors, Not Environmentally Controlled      | Work is performed indoors in non-controlled environmental circumstances (such as warehouse without heat) | Y          |
| 4.F.2.a.3      | Outdoors, Exposed to Weather                 | Work is performed outdoors, exposed to all weather conditions                                            | Y          |
| 4.F.2.a.4      | Outdoors, Under Cover                        | Work is performed outdoors, under cover (such as structure with roof but no walls)                       | Y          |

| Element ID     | Element Name                                          | Description                                                                                                                      | Data-Level |
|----------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------|
| 4.F.2.a.5      | In an Open Vehicle or Equipment                       | Work is performed in an open vehicle or piece of equipment (such as a tractor)                                                   | Y          |
| 4.F.2.a.6      | In an Enclosed Vehicle or Equipment                   | Work is performed in an enclosed vehicle or piece of equipment (such as a car)                                                   | Y          |
| 4.F.2.a.7      | Physical Proximity                                    | Work is performed in close physical proximity to other people                                                                    | Y          |
| 4.F.2.a.8      | Onsite Work                                           | Work requires being physically present at a worksite (not at home)                                                               | Y          |
| 4.F.2.a.9      | Working Alone                                         | Work is performed while alone, without nearby coworkers and/or direct supervisors                                                | Y          |
| 4.F.2.a.10     | Geographically Dispersed Coworkers                    | Work is performed in settings where coworkers, supervisors, and/or collaborators are dispersed rather than physically co-located | Y          |
| 4.F.2.a.11     | Work-Related Non-Local Travel                         | Work involves travel outside of the local area to perform the job                                                                | Y          |
| 4.F.2.a.12     | Work-Related Local Travel                             | Work involves travel to different local work sites or job-related locations to perform the job                                   | Y          |
| 4.F.2.a.13     | Digital Connectivity                                  | Work requires continuous, reliable digital connectivity in order for tasks to be carried out                                     | Y          |
| <b>4.F.2.b</b> | <b>Extreme Physical Work Conditions</b>               | <b>Features of work that reflect different types of extreme physical conditions</b>                                              |            |
| 4.F.2.b.1      | Sounds, Noise Levels Are Distracting or Uncomfortable | Work involves exposure to sounds and noise levels that are distracting or uncomfortable                                          | Y          |
| 4.F.2.b.2      | Very Hot or Cold Temperatures                         | Work involves exposure to very hot (above 90°F) or very cold (below 32°F) temperatures                                           | Y          |
| 4.F.2.b.3      | Extremely Bright or Inadequate Lighting               | Work involves exposure to extremely bright light or inadequate lighting                                                          | Y          |
| 4.F.2.b.4      | Exposed to Contaminants                               | Work involves exposure to contaminants (such as pollutants, gases, dust, or odors)                                               | Y          |
| 4.F.2.b.5      | Exposed to Whole Body Vibration                       | Work involves exposure to whole body vibration (such as when operating a jackhammer)                                             | Y          |
| <b>4.F.2.c</b> | <b>Job Hazards</b>                                    | <b>Features of work that involve different types of hazards faced on the job</b>                                                 |            |
| 4.F.2.c.1      | Exposed to Radiation                                  | Work involves exposure to radiation                                                                                              | Y          |
| 4.F.2.c.2      | Exposed to Disease or Infections                      | Work involves exposure to diseases or infection-causing hazards                                                                  | Y          |
| 4.F.2.c.3      | Exposed to High Places                                | Work involves exposure to high places                                                                                            | Y          |
| 4.F.2.c.4      | Exposed to Hazardous Conditions                       | Work involves exposure to hazardous conditions                                                                                   | Y          |
| 4.F.2.c.5      | Exposed to Hazardous Equipment                        | Work involves exposure to hazardous equipment                                                                                    | Y          |
| 4.F.2.c.6      | Exposed to Minor Hazards                              | Work involves exposure to hazards that may cause minor injury                                                                    | Y          |
| <b>4.F.2.d</b> | <b>Physical Movements and Body Positions</b>          | <b>Features of work that involve different types of bodily positions and movements</b>                                           |            |
| 4.F.2.d.1      | Spend Time Sitting                                    | Work involves sitting                                                                                                            | Y          |
| 4.F.2.d.2      | Spend Time Standing                                   | Work involves standing                                                                                                           | Y          |
| 4.F.2.d.3      | Spend Time Climbing Ladders, Scaffolds, or Poles      | Work involves climbing ladders, scaffolds, or poles                                                                              | Y          |

| Element ID     | Element Name                                                                        | Description                                                                                                                                                    | Data-Level |
|----------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 4.F.2.d.4      | Spend Time Walking and Running                                                      | Work involves walking or running                                                                                                                               | Y          |
| 4.F.2.d.5      | Spend Time Kneeling, Crouching, Stooping, or Crawling                               | Work involves kneeling, crouching, stooping, or crawling                                                                                                       | Y          |
| 4.F.2.d.6      | Spend Time Keeping or Regaining Balance                                             | Work involves keeping or regaining balance                                                                                                                     | Y          |
| 4.F.2.d.7      | Spend Time Using Your Hands to Handle, Control, or Feel Objects, Tools, or Controls | Work involves use of hands to handle, control, manipulate, or feel objects, tools, or controls                                                                 | Y          |
| 4.F.2.d.8      | Spend Time Bending or Twisting the Body                                             | Work involves bending or twisting the body                                                                                                                     | Y          |
| 4.F.2.d.9      | Spend Time Making Repetitive Motions                                                | Work involves making repetitive motions                                                                                                                        | Y          |
| 4.F.2.d.10     | Lifting or Carrying                                                                 | Work involves lifting or carrying of objects heavier than 50 pounds                                                                                            | Y          |
| 4.F.2.d.11     | Pushing or Pulling                                                                  | Work involves pushing or pulling of objects heavier than 50 pounds                                                                                             | Y          |
| 4.F.2.d.12     | Reaching                                                                            | Work involves reaching overhead, at shoulder level, and/or below shoulder level                                                                                | Y          |
| 4.F.2.d.13     | Cramped Work Space, Awkward Positions                                               | Work involves performing activities in cramped spaces that require getting into awkward positions                                                              | Y          |
| 4.F.2.d.14     | Screen Exposure                                                                     | Work is performed in front of computer screens or other digital displays                                                                                       | Y          |
| <b>4.F.2.e</b> | <b>Work Attire</b>                                                                  | <b>Features of work that involve different types of equipment or clothing worn on the job</b>                                                                  |            |
| 4.F.2.e.1      | Wear Common Protective or Safety Equipment                                          | Work involves wearing common protective or safety equipment (such as safety shoes, glasses, gloves, hard hats, or life jackets)                                | Y          |
| 4.F.2.e.2      | Wear Specialized Protective or Safety Equipment                                     | Work involves wearing specialized protective or safety equipment (such as breathing apparatus, safety harness, full protection suits, or radiation protection) | Y          |
| 4.F.2.e.3      | Work-Specific Uniform                                                               | Work involves wearing a uniform or other specialized attire that is unrelated to safety                                                                        | Y          |
| <b>4.F.3</b>   | <b>Structural Work Context</b>                                                      | <b>Features of work that reflect structural characteristics of the work itself</b>                                                                             |            |
| <b>4.F.3.a</b> | <b>Criticality of Work</b>                                                          | <b>Features of work that reflect the impact or significance of the work performed in the occupation</b>                                                        |            |
| 4.F.3.a.1      | Consequence of Error                                                                | Work involves carrying out actions that have serious consequences if mistakes are made that are not readily correctable                                        | Y          |
| 4.F.3.a.2      | Impact of Decisions                                                                 | Work involves making decisions that impact other people and/or the image, reputation, or financial resources of the employer                                   | Y          |
| 4.F.3.a.3      | Work Significance                                                                   | Work involves carrying out activities that impact the well-being or livelihood of large numbers of people                                                      | Y          |
| <b>4.F.3.b</b> | <b>Work Design and Task Organization</b>                                            | <b>Features of work that reflect how tasks are designed, organized, and carried out</b>                                                                        |            |
| 4.F.3.b.1      | Degree of Automation                                                                | Work involves engaging in activities that are highly automated                                                                                                 | Y          |
| 4.F.3.b.2      | Being Exact or Accurate                                                             | Work involves being very exact or highly accurate                                                                                                              | Y          |

| Element ID     | Element Name                                      | Description                                                                                                                                                          | Data-Level |
|----------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 4.F.3.b.3      | Repeating the Same Tasks                          | Work involves repeating the same physical activities (such as key entry) or mental activities (such as checking entries in a ledger) over and over, without stopping | Y          |
| 4.F.3.b.4      | Freedom to Make Decisions                         | Work involves freely making decisions without supervision                                                                                                            | Y          |
| 4.F.3.b.5      | Freedom to Determine Tasks, Priorities, and Goals | Work involves having the freedom to determine one's tasks, priorities, and goals                                                                                     | Y          |
| 4.F.3.b.6      | Level of Competition                              | Work involves competition or awareness of competitive pressures                                                                                                      | Y          |
| 4.F.3.b.7      | Skill Variety                                     | Work involves using a large variety of skills and/or knowledge                                                                                                       | Y          |
| 4.F.3.b.8      | Task Variety                                      | Work involves performing a large variety of different tasks                                                                                                          | Y          |
| 4.F.3.b.9      | Task Identity                                     | Work involves having responsibility for a complete, identifiable piece of work or work product that the worker produced from start to finish                         | Y          |
| <b>4.F.3.c</b> | <b>Performance Feedback and Monitoring</b>        | <b>Features of work that reflect different ways performance feedback and monitoring occur</b>                                                                        |            |
| 4.F.3.c.1      | Electronic Performance Monitoring                 | Work involves carrying out activities subject to electronic monitoring (such as by video, computer, camera)                                                          | Y          |
| 4.F.3.c.2      | Feedback from the Work Itself                     | Work offers incumbents clear feedback about their performance (such as visible outputs, immediately observable results)                                              | Y          |
| <b>4.F.3.d</b> | <b>Pace and Scheduling</b>                        | <b>Features of work reflecting the pace and scheduling of the work being carried out</b>                                                                             |            |
| 4.F.3.d.1      | Time Pressure                                     | Work involves meeting strict deadlines                                                                                                                               | Y          |
| 4.F.3.d.2      | Pace Determined by Speed of Equipment             | Work involves engaging in activities whose pace is determined by the speed of equipment or machinery                                                                 | Y          |
| 4.F.3.d.3      | Regularity of Work Schedule                       | Consistency and predictability of the job's work schedule                                                                                                            | Y          |
| 4.F.3.d.4      | Duration of Typical Work Week                     | The number of hours worked in a week                                                                                                                                 | Y          |
| 4.F.3.d.5      | Shift Work                                        | The job involves shift work (such as day, evening, night, or rotating shifts)                                                                                        | Y          |
| 4.F.3.d.6      | Work In Free Time                                 | The job requires one to work in their free time to meet job demands                                                                                                  | Y          |
| 4.F.3.d.7      | Work Interruptions                                | Work involves dealing with interruptions from people, devices, and/or digital systems                                                                                | Y          |
| 4.F.3.d.8      | Pace Determined by Non-Equipment Demands          | Work involves performing at a pace determined by non-equipment related demands (such as customer demand, supervisory direction)                                      | Y          |
| 4.F.3.d.9      | Freedom to Determine Work Hours                   | Work involves flexibility to set one's own work hours or schedule                                                                                                    | Y          |
| 4.F.3.d.10     | Workload Demand                                   | The amount of work on the job makes it difficult for workers to complete tasks well or on-time                                                                       | Y          |

## Appendix B

**Table B.1. Preliminary Rating Categories, Questions, and Scales for Population of Work Context Ratings**

| Element ID | Work Context Dimension                | Source of Dimension and Rating Question/Scale                                       | Proposed Rating Question                                                                                                                                                                                            | Proposed Rating Scale                                                                                                                                      |
|------------|---------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.F.3.a.2  | Impact of Decisions (Frequency)       | Existing O*NET Work Context; new question/scale                                     | How frequently do incumbents in this occupation make decisions that impact other people and/or the image, reputation, or financial resources of the employer?                                                       | Never<br>Once a year or more but not every month<br>Once a month or more but not every week<br>Once a week or more but not every day<br>Every day          |
| 4.F.3.a.2  | Impact of Decisions (Level of Impact) | Existing O*NET Work Context; new question/scale                                     | What level of impact do decisions made by incumbents in this occupation typically have on other people and/or the image, reputation, or financial resources of the employer?                                        | No impact<br>Minor impact<br>Moderate impact<br>Large impact<br>Very large impact                                                                          |
| 4.F.3.b.3  | Repeating the Same Tasks              | Existing O*NET Work Context; revised question/scale                                 | To what extent does incumbents' work in this occupation involve repeating the same physical activities (e.g., key entry) or mental activities (e.g., checking entries in a ledger) over and over, without stopping? | Not at all<br>To a small extent<br>To a moderate extent<br>To a great extent<br>To a very great extent                                                     |
| 4.F.3.d.2  | Pace Determined by Speed of Equipment | Existing O*NET Work Context; revised question/scale                                 | To what extent is incumbents' work in this occupation determined by the speed of equipment or machinery they are using?                                                                                             | Not at all<br>To a small extent<br>To a moderate extent<br>To a great extent<br>To a very great extent                                                     |
| 4.F.2.d.10 | Lifting or Carrying                   | New dimension; preexisting occupation-level data available; source scaling retained | How often do incumbents in this occupation lift or carry objects heavier than 50 pounds?                                                                                                                            | Seldom (up to 2% of the time)<br>Occasionally (2% up to 1/3 of the time)<br>Frequently (1/3 up to 2/3 of the time)<br>Constantly (2/3 or more of the time) |
| 4.F.2.d.11 | Pushing or Pulling                    | New dimension; preexisting occupation-level data available; source scaling retained | How often do incumbents in this occupation push or pull objects heavier than 50 pounds?                                                                                                                             | Seldom (up to 2% of the time)<br>Occasionally (2% up to 1/3 of the time)<br>Frequently (1/3 up to 2/3 of the time)<br>Constantly (2/3 or more of the time) |

| Element ID | Work Context Dimension                   | Source of Dimension and Rating Question/Scale                                       | Proposed Rating Question                                                                                                                                                            | Proposed Rating Scale                                                                                                                                      |
|------------|------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.F.2.d.12 | Reaching                                 | New dimension; preexisting occupation-level data available; source scaling retained | How often do incumbents in this occupation reach overhead, at shoulder level, and/or below shoulder level?                                                                          | Seldom (up to 2% of the time)<br>Occasionally (2% up to 1/3 of the time)<br>Frequently (1/3 up to 2/3 of the time)<br>Constantly (2/3 or more of the time) |
| 4.F.3.d.8  | Pace Determined by Non-Equipment Demands | New dimension; preexisting occupation-level data available; revised question/scale  | To what extent is incumbents' work in this occupation determined by non-equipment-related demands (e.g., customer demand, supervisory direction, team workflow, quota fulfillment)? | Not at all<br>To a small extent<br>To a moderate extent<br>To a great extent<br>To a very great extent                                                     |
| 4.F.1.a.5  | Virtual Meeting or Chat Applications     | New dimension; new question/scale                                                   | How often do incumbents in this occupation typically communicate via virtual meeting or chat applications?                                                                          | Never<br>Once a year or more but not every month<br>Once a month or more but not every week<br>Once a week or more but not every day<br>Every day          |
| 4.F.1.b.6  | Emotion Management                       | New dimension; new question/scale                                                   | How frequently do incumbents in this occupation regulate or suppress emotions when interacting with others in this job?                                                             | Always<br>Most of the time<br>Sometimes<br>Rarely<br>Never                                                                                                 |
| 4.F.1.c.4  | Deal with Conflicting Requests           | New dimension; new question/scale                                                   | How frequently do incumbents in this occupation typically have to deal with conflicting or incompatible requests from two or more people?                                           | Never<br>Once a year or more but not every month<br>Once a month or more but not every week<br>Once a week or more but not every day<br>Every day          |
| 4.F.1.c.5  | Deal with Competing Group Priorities     | New dimension; new question/scale                                                   | How frequently do incumbents in this occupation typically have to deal with demands from groups with differing or competing priorities?                                             | Never<br>Once a year or more but not every month<br>Once a month or more but not every week<br>Once a week or more but not every day<br>Every day          |

| Element ID | Work Context Dimension             | Source of Dimension and Rating Question/Scale | Proposed Rating Question                                                                                                                                    | Proposed Rating Scale                                                                                                                             |
|------------|------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.F.2.a.8  | Onsite Work                        | New dimension; new question/scale             | How often do incumbents in this occupation typically have to be physically present at a worksite (not at home)?                                             | Never<br>Once a year or more but not every month<br>Once a month or more but not every week<br>Once a week or more but not every day<br>Every day |
| 4.F.2.a.9  | Working Alone                      | New dimension; new question/scale             | How often do incumbents in this occupation typically work alone without nearby coworkers or direct supervisors?                                             | Never<br>Less than half the time<br>About half the time<br>More than half the time<br>Continually or almost continually                           |
| 4.F.2.a.10 | Geographically Dispersed Coworkers | New dimension; new question/scale             | How often do incumbents in this occupation work in settings where coworkers, supervisors, or collaborators are dispersed rather than physically co-located? | Never<br>Less than half the time<br>About half the time<br>More than half the time<br>Continually or almost continually                           |
| 4.F.2.a.11 | Work-Related Non-Local Travel      | New dimension; new question/scale             | How often do incumbents in this occupation need to travel outside of their local area for work?                                                             | Daily<br>Several times a week<br>Several times a month<br>Several times during the year or less often<br>Never                                    |
| 4.F.2.a.12 | Work-Related Local Travel          | New dimension; new question/scale             | How often do incumbents in this occupation need to travel to different local work sites or job-related locations to perform their job?                      | Never<br>Once a year or more but not every month<br>Once a month or more but not every week<br>Once a week or more but not every day<br>Every day |
| 4.F.2.a.13 | Digital Connectivity               | New dimension; new question/scale             | To what extent do incumbents in this occupation require continuous, reliable digital connectivity in order to carry out their job?                          | Not at all<br>To a small extent<br>To a moderate extent<br>To a great extent<br>To a very great extent                                            |

| Element ID | Work Context Dimension            | Source of Dimension and Rating Question/Scale | Proposed Rating Question                                                                                                                                     | Proposed Rating Scale                                                                                                                             |
|------------|-----------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.F.2.d.14 | Screen Exposure                   | New dimension; new question/scale             | How often do incumbents in this occupation typically work in front of computer screens or other digital displays?                                            | Never<br>Less than half the time<br>About half the time<br>More than half the time<br>Continually or almost continually                           |
| 4.F.2.e.3  | Work-Specific Uniform             | New dimension; new question/scale             | How often do incumbents in this occupation typically wear a uniform or specialized attire to work that is unrelated to safety?                               | Never<br>Once a year or more but not every month<br>Once a month or more but not every week<br>Once a week or more but not every day<br>Every day |
| 4.F.3.a.3  | Work Significance                 | New dimension; new question/scale             | To what extent does work in this occupation impact the well-being or livelihood of large numbers of people?                                                  | Not at all<br>To a small extent<br>To a moderate extent<br>To a great extent<br>To a very great extent                                            |
| 4.F.3.b.9  | Task Identity                     | New dimension; new question/scale             | To what extent do incumbents in this occupation have responsibility for a complete, identifiable piece of work or work product from start to finish?         | Not at all<br>To a small extent<br>To a moderate extent<br>To a great extent<br>To a very great extent                                            |
| 4.F.3.c.1  | Electronic Performance Monitoring | New dimension; new question/scale             | To what extent is performance of work in this occupation subject to electronic monitoring (e.g., via video, computer, camera)?                               | Not at all<br>To a small extent<br>To a moderate extent<br>To a great extent<br>To a very great extent                                            |
| 4.F.3.c.2  | Feedback from the Work Itself     | New dimension; new question/scale             | To what extent does work in this occupation offer incumbents clear feedback about their performance (e.g., visible outputs, immediately observable results)? | Not at all<br>To a small extent<br>To a moderate extent<br>To a great extent<br>To a very great extent                                            |
| 4.F.3.d.5  | Shift Work                        | New dimension; new question/scale             | How often do incumbents in this occupation engage in shift work (e.g., day/evening/night shifts, rotating shifts)?                                           | Never<br>Rarely<br>Not very often<br>Often<br>Very often                                                                                          |

| Element ID | Work Context Dimension          | Source of Dimension and Rating Question/Scale                | Proposed Rating Question                                                                                                                                                        | Proposed Rating Scale                                                                                                                             |
|------------|---------------------------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.F.3.d.6  | Work In Free Time               | New dimension; new question/scale                            | How often do incumbents in this occupation typically work in their free time in order to meet job demands?                                                                      | Never<br>Once a year or more but not every month<br>Once a month or more but not every week<br>Once a week or more but not every day<br>Every day |
| 4.F.3.d.7  | Work Interruptions              | New dimension; new question/scale                            | How often is work in this occupation characterized by interruptions, task-switching demands, and/or unscheduled incoming requests from people, devices, and/or digital systems? | Very often<br>Fairly often<br>Occasionally<br>Never                                                                                               |
| 4.F.3.d.9  | Freedom to Determine Work Hours | New dimension; new question/scale                            | How often do incumbents in this occupation have the flexibility to set their own work hours or schedule?                                                                        | Frequent Basis<br>Occasionally<br>Rarely                                                                                                          |
| 4.F.3.d.10 | Workload Demand                 | New dimension; new question/scale                            | To what extent does the level of workload in this occupation make it difficult for incumbents to complete their tasks well or on time?                                          | Not at all<br>To a small extent<br>To a moderate extent<br>To a great extent<br>To a very great extent                                            |
| 4.F.3.b.7  | Skill Variety                   | New dimension; potential derivation from existing O*NET data | No question per se. Potentially derive from existing O*NET Skills and Knowledge data.                                                                                           | To be determined 1-5 scale based on observed variation in O*NET Skills and Knowledge associated with an occupation                                |
| 4.F.3.b.8  | Task Variety                    | New dimension; potential derivation from existing O*NET data | No question per se. Potentially derive from existing O*NET Task data.                                                                                                           | To be determined 1-5 scale based on observed variation in O*NET Tasks associated with an occupation                                               |