



A'24 MN

The Minnesota Conference
on Architecture
November 11-13, 2024



Share your A'24MN experiences and connect with others. #A24MN



Through the Lens of Trauma Informed Design

Cunningham





Allison Mastel
AIA, NCARB, ALEP,
LEED Green Associate
amastel@cunningham.com



Hailey Wrasman
CID, IIDA, WELL AP
Project Interior Designer
hwrasman@cunningham.com



Heidi Neumueller
AIA, NCARB, LEED AP
Principal,
Cunningham



We'd love to connect
with you!

Presentation Outline

1

Understanding Trauma and Trauma Informed Design

- Defining Trauma and Why It Matters
- Adverse Childhood Experiences
- What is Trauma Informed Design and How to Practice it

2

Applying a Trauma Informed Design Approach

- Impacts on Design Process
- Aquila Elementary School Case Study





RISE EARLY LEARNING CENTER



Play



Equity



Trauma Informed Design

Latané

Schools That Heal



WISE

DESIGN FOR BELONGING

HM
683
.W57
2022

Steve Maslin **Designing Mind-Friendly Environments**



PETER
BLOCK

COMMUNITY

THE STRUCTURE
OF BELONGING

HM
756
.B56
2018

FOSTERING RESILIENT LEARNERS Kristin Souers with Pete Hall

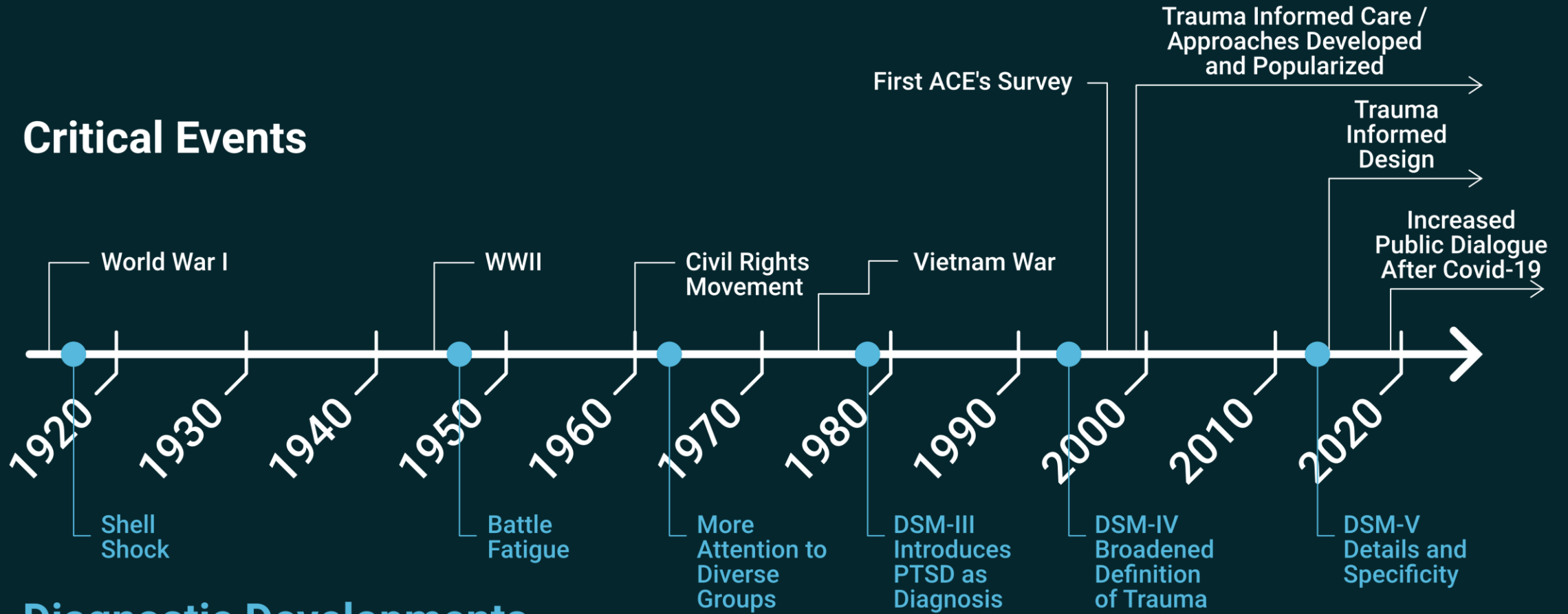


THE HAPPY DESIGN TOOLKIT

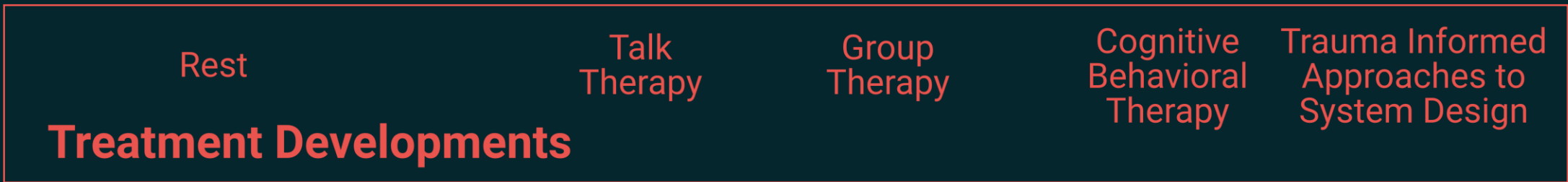
Ben Channon



Critical Events



Diagnostic Developments





“Individual trauma results from an **event, series of events, or set of circumstances** that is **experienced** by an individual as physically or emotionally harmful or life threatening and that has **lasting adverse effects** on the individual’s functioning and mental, physical, social, emotional, or spiritual **well-being**”

SAMHSA’s Concept of Trauma

A landscape photograph showing a dense forest of evergreen trees in the foreground, with a range of mountains in the background. The sky is filled with large, white, fluffy clouds, and the lighting suggests a soft, hazy atmosphere, possibly during sunrise or sunset. The overall color palette is muted, with blues, greys, and soft pinks/peaches.

Adverse Childhood Experiences (ACEs)

Extreme stress experienced between ages 0-17
categorized into three groups: abuse, neglect, and
household challenges



ACE Categories

1. Emotional / Psychological Abuse
2. Physical Abuse
3. Sexual Abuse
4. Parents in Abusive Relationship
5. Household Substance Abuse
6. Mental Illness in Household
7. Incarcerated Householder Member
8. Emotional Neglect
9. Physical Neglect
10. Parental Separation or Divorce
11. Bullying *

* added after original survey, assessed with CDC Bully Scale Survey




2 in 3

Americans have an ACE score of 1 +

1 in 6

Americans have an ACE score of 4 +

A close-up photograph of a green leaf with several water droplets. The leaf's surface shows fine, parallel veins. The lighting is soft, creating a gentle glow on the leaf's surface. The text is overlaid on the left side of the image.

“When a person experiences **strong, frequent, or prolonged adversity**, it can have profound negative effects on the mind and body.”

- Kaiser Permanente

| Category | No Adverse Experiences | One | Two | Three | Four or More |
|------------------------------------|------------------------|------|------|-------|--------------|
| Past Suicide Attempt | 1.00 | 1.80 | 3.00 | 6.60 | 12.20 |
| Injected Drug Use | 1.00 | 1.30 | 3.80 | 7.10 | 10.30 |
| Alcoholism | 1.00 | 2.00 | 4.00 | 4.90 | 7.40 |
| Illicit Drug Use | 1.00 | 1.70 | 2.90 | 3.60 | 4.70 |
| Depression | 1.00 | 1.50 | 2.40 | 2.60 | 4.60 |
| 50+ Sexual Partners Over Lifetime | 1.00 | 1.70 | 2.30 | 3.10 | 3.20 |
| Had a Sexually Transmitted Disease | 1.00 | 1.40 | 1.50 | 1.90 | 2.50 |
| Current Smoker | 1.00 | 1.10 | 1.50 | 2.00 | 2.20 |
| Severe Obesity | 1.00 | 1.10 | 1.40 | 1.40 | 1.60 |
| Limited Physical Activity | 1.00 | 1.20 | 1.20 | 1.40 | 1.30 |
| Chronic Bronchitis / Emphysema | 1.00 | 1.60 | 1.60 | 2.20 | 3.90 |
| History of Hepatitis or Jaundice | 1.00 | 1.10 | 1.80 | 1.60 | 2.40 |
| Fair or Poor Self-Rated Health | 1.00 | 1.20 | 1.40 | 1.40 | 2.20 |
| Heart Disease | 1.00 | 0.90 | 0.90 | 1.40 | 2.20 |
| Cancer | 1.00 | 1.20 | 1.20 | 1.00 | 1.90 |
| Past Skeletal Fracture | 1.00 | 1.10 | 1.40 | 1.20 | 1.60 |
| Stroke | 1.00 | 0.90 | 0.70 | 1.30 | 2.40 |
| Diabetes | 1.00 | 1.00 | 0.90 | 1.20 | 1.60 |



Students with 3 or more ACEs

5x

more likely to have attendance issues

6x

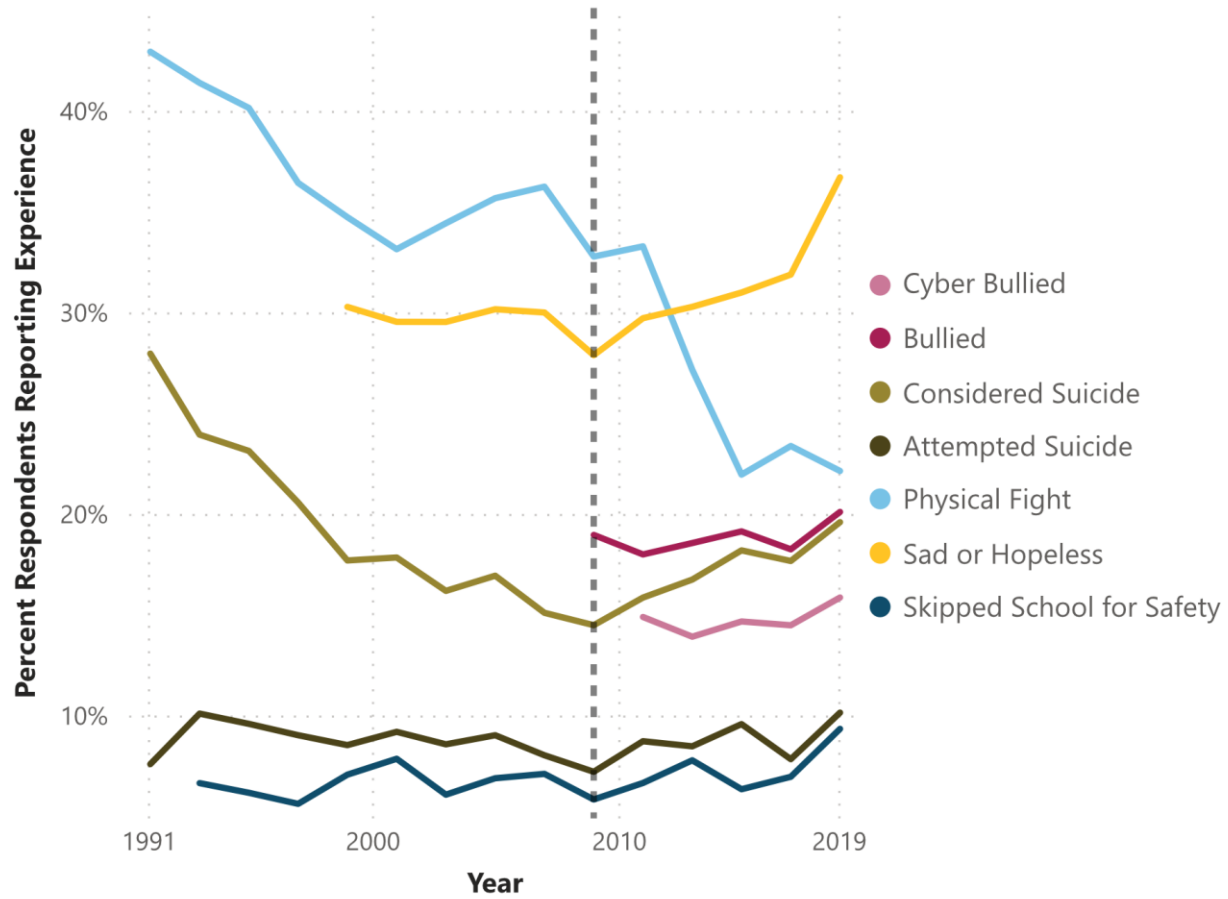
more likely to have behavior problems

3x

more likely to experience academic failure

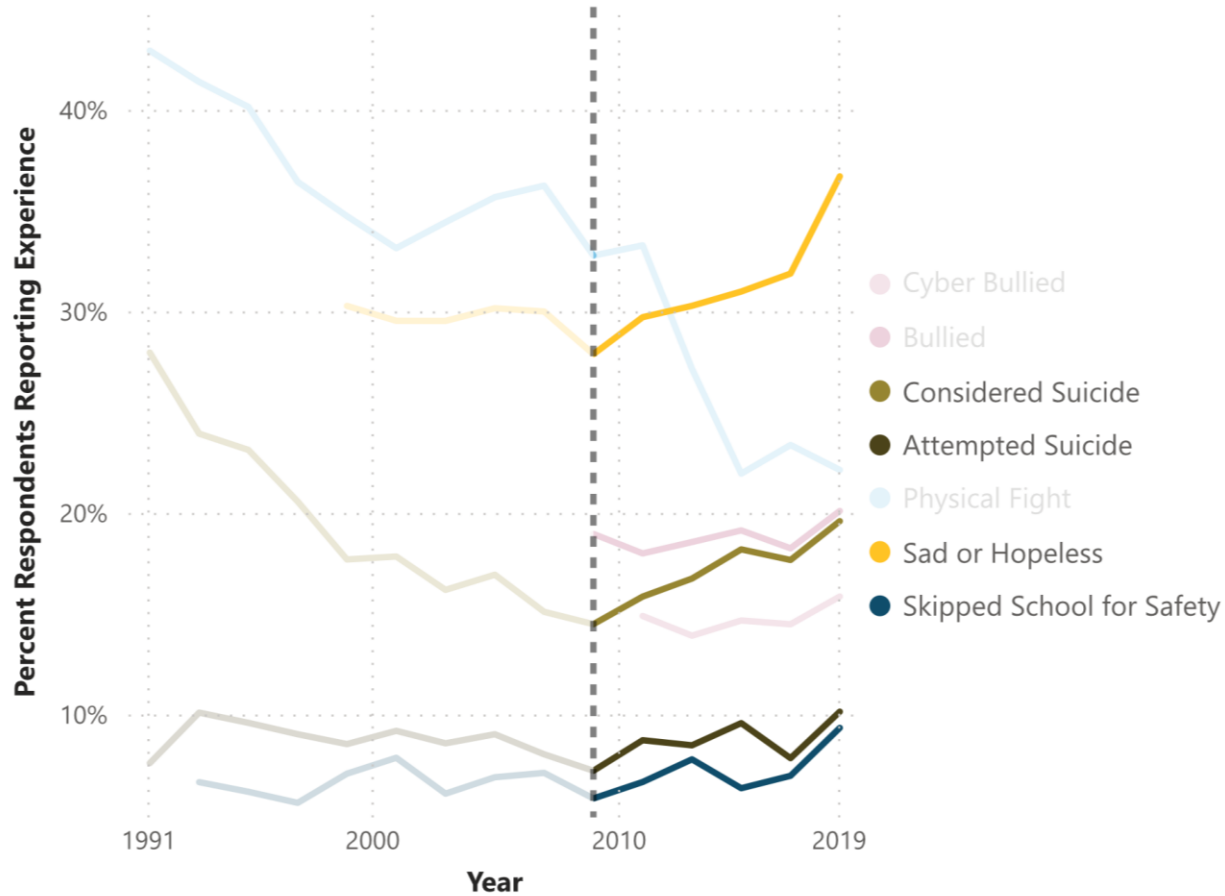
Increasing Prevalence of Mental Health / Safety Indicators

Youth Risk Behavior Surveillance System Trends



Increasing Prevalence of Mental Health / Safety Indicators

Youth Risk Behavior Surveillance System Trends



“In 2021, 42% of high school students felt so sad or hopeless almost every day for at least two weeks that they stopped doing their usual activities”

- CDC Youth Risk Behavior Survey

Students in high-achieving schools are now named an ‘at-risk’ group, study says

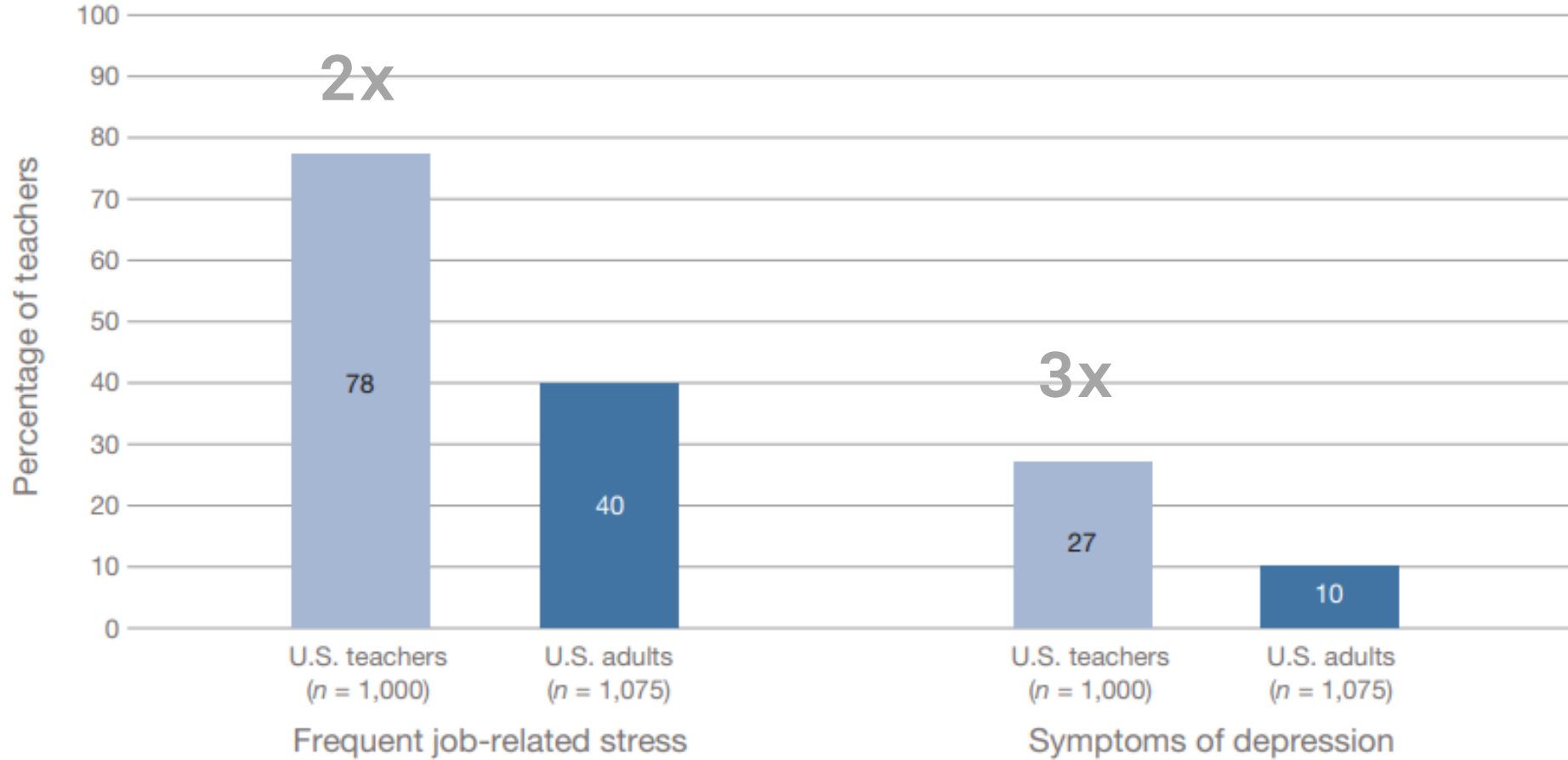
Perspective by Jennifer Breheny Wallace

September 26, 2019 at 9:00 a.m. EDT

“A consensus study report on advancing health equity among American children published this summer by the National Academies of Sciences, Engineering and Medicine added youths in “high achieving schools” to their list of “at-risk” groups, along with kids living in poverty and foster care, recent immigrants and those with incarcerated parents.

Last year, a report by the Robert Wood Johnson Foundation came to a similar conclusion when it named the **top environmental conditions harming adolescent wellness – among them were poverty, trauma, discrimination and “excessive pressure to excel, often, but not exclusively, occurring in affluent communities.”**

Job-Related Stress and Symptoms of Depression Among Teachers and the General U.S. Adult Population



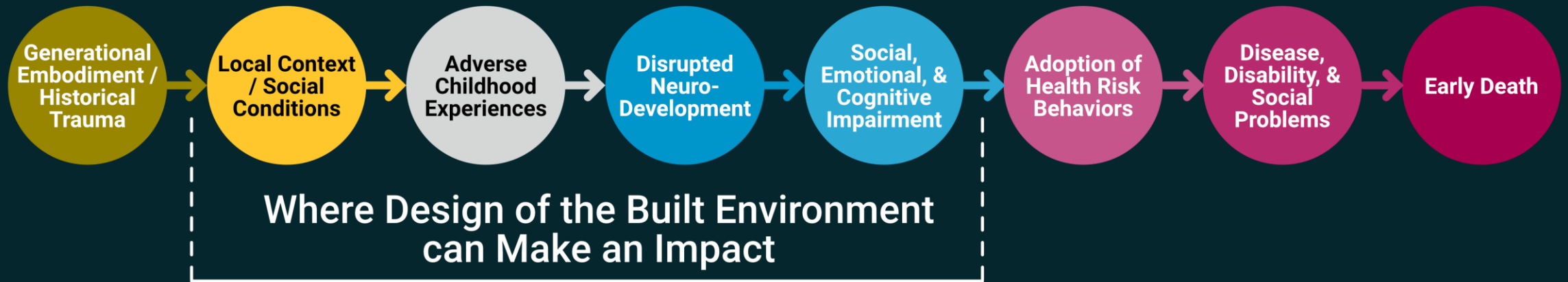
SOURCES: Data for U.S. teachers are from our ATP survey. Data for frequent job-related stress among U.S. adults are from our ALP survey. Data for symptoms of depression among U.S. adults are from the Understanding America Study (University of Southern California Dornsife Center for Economic and Social Research, undated-a).

The National Center of Safe Supportive Learning Environments notes the following possible triggers related to the built environment:

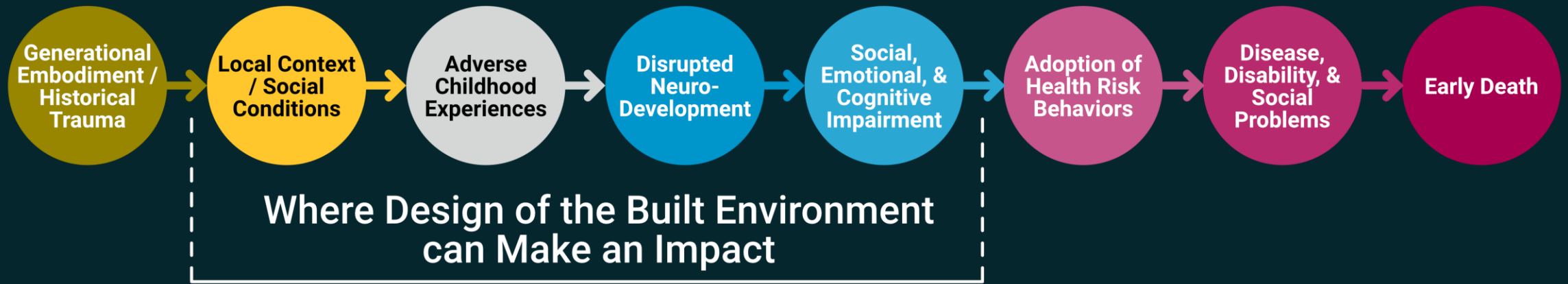
- Loud, chaotic environments
- Odors
- Physical touch
- Confinement
- Witnessing violence between other individuals, such as peers fighting
- Areas of school experienced as unsafe, such as bathrooms or less well-monitored areas
- Emergency vehicles and police or fire personnel



Tracing Causation - from ACEs to Negative Outcomes

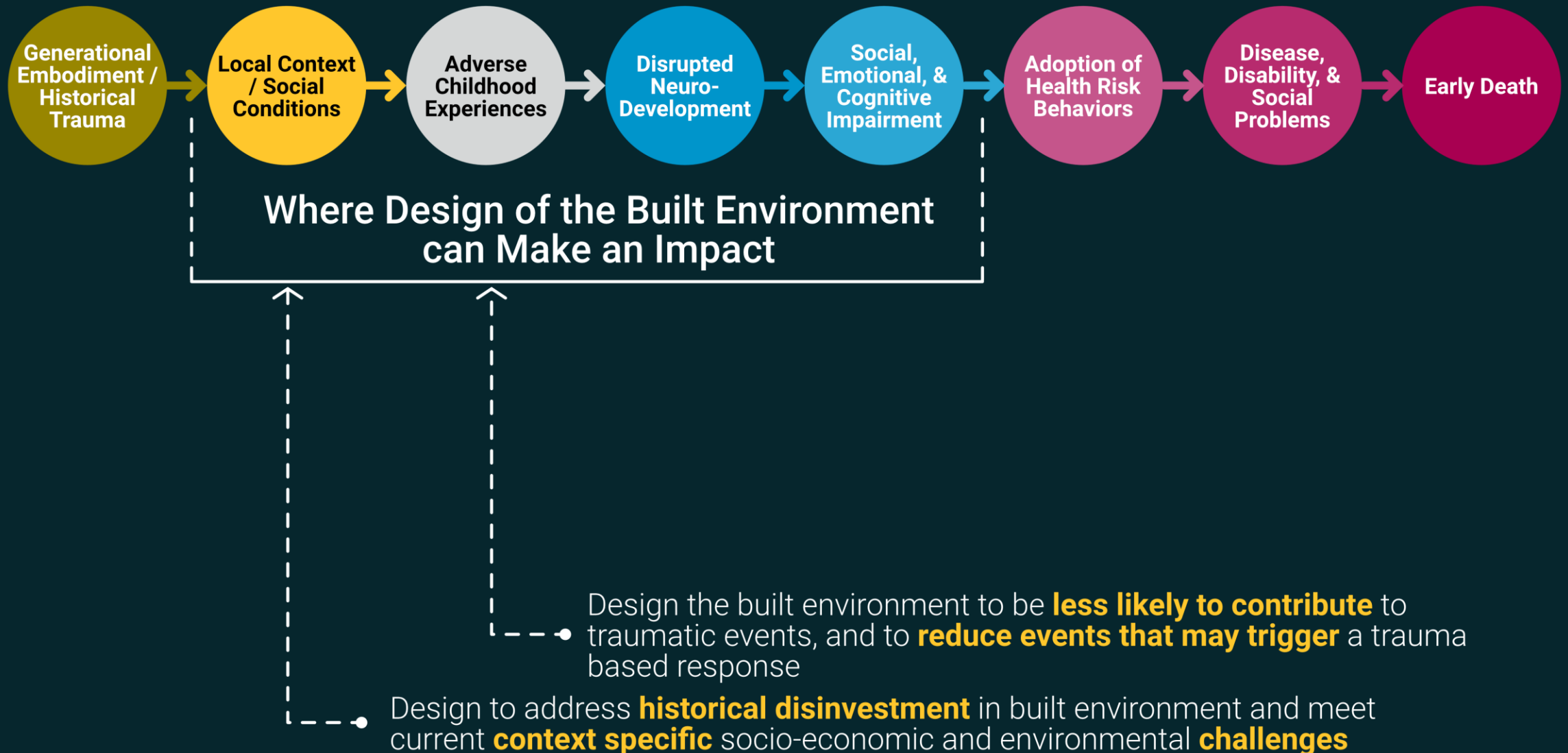


Tracing Causation - from ACEs to Negative Outcomes

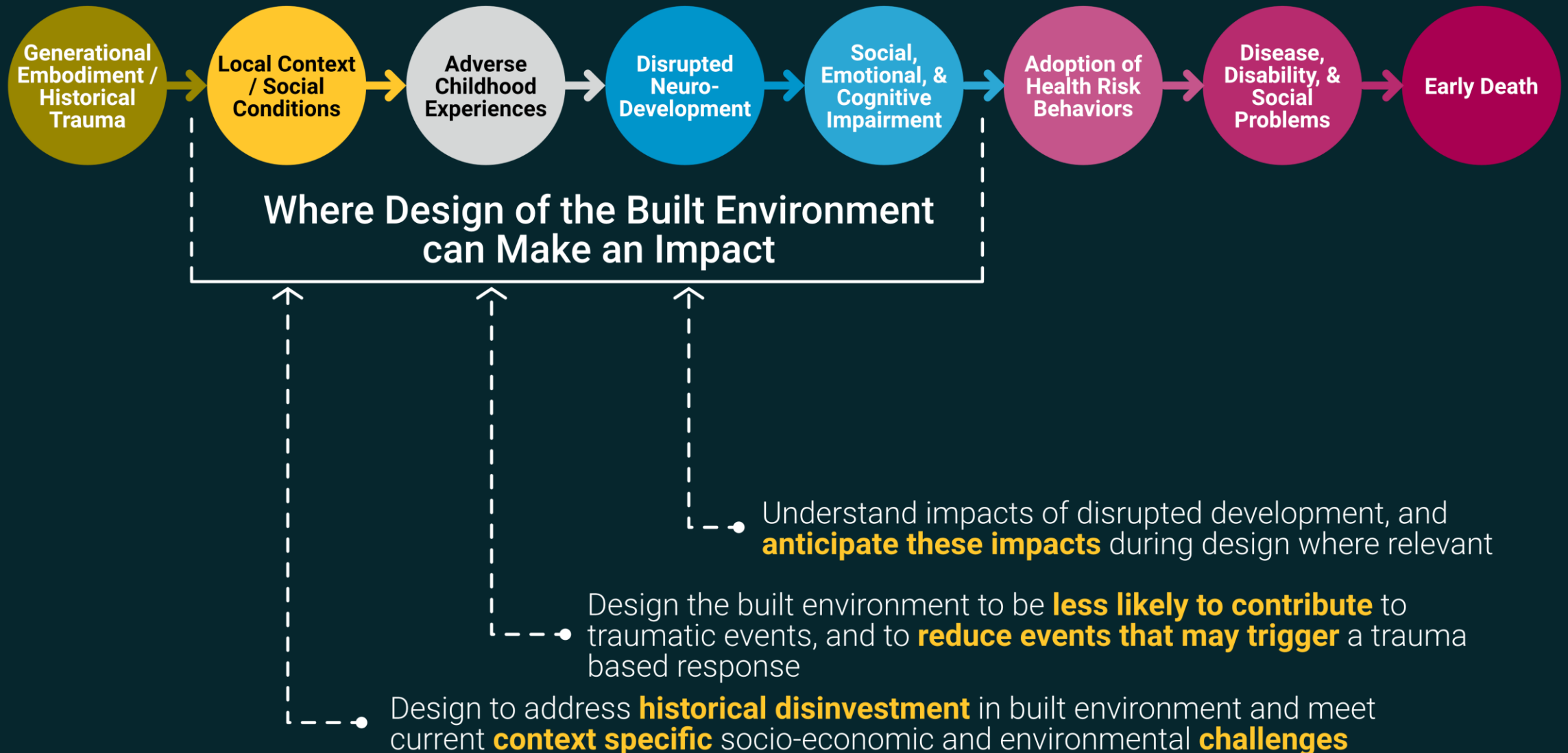


Design to address **historical disinvestment** in built environment and meet current **context specific** socio-economic and environmental **challenges**

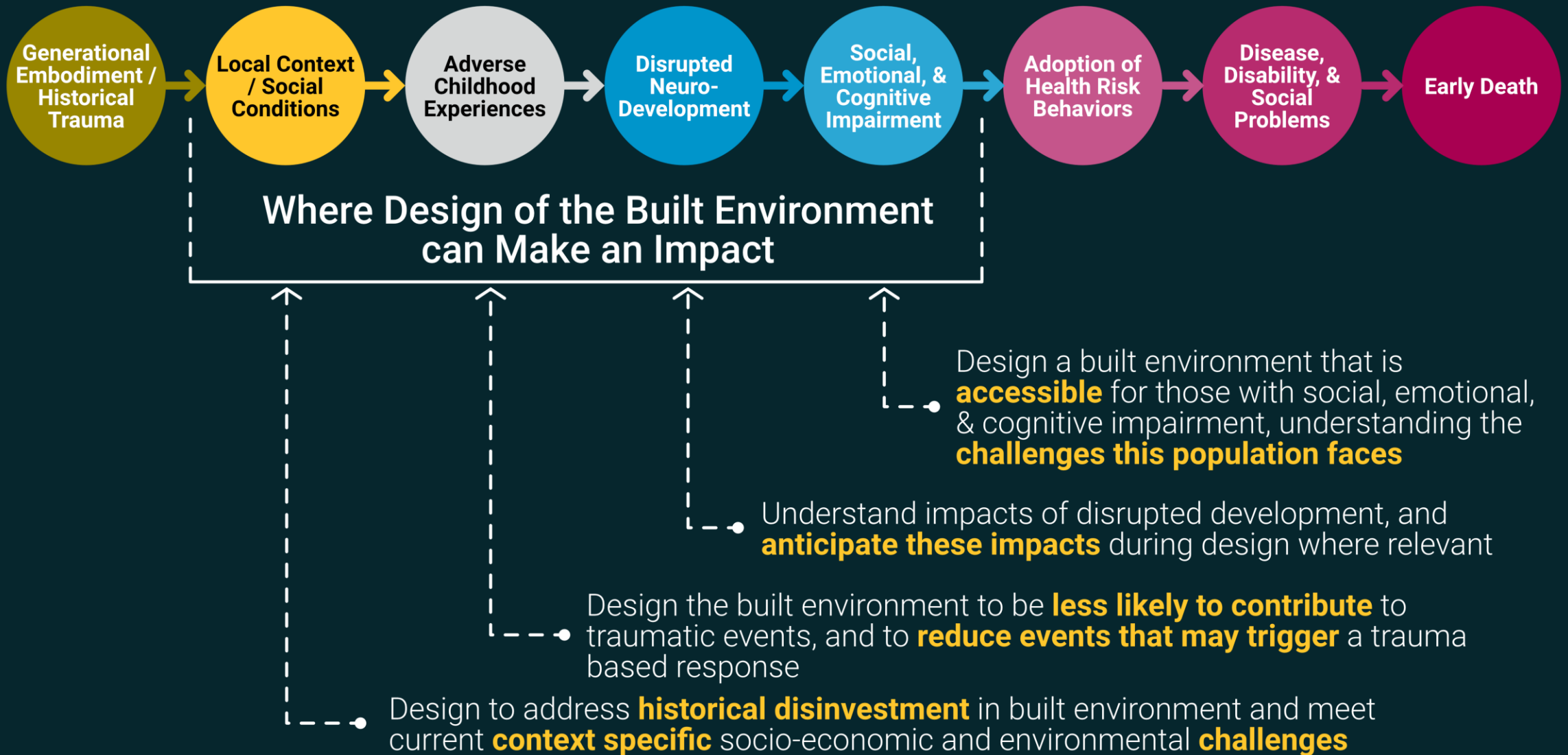
Tracing Causation - from ACEs to Negative Outcomes



Tracing Causation - from ACEs to Negative Outcomes



Tracing Causation - from ACEs to Negative Outcomes



Passive

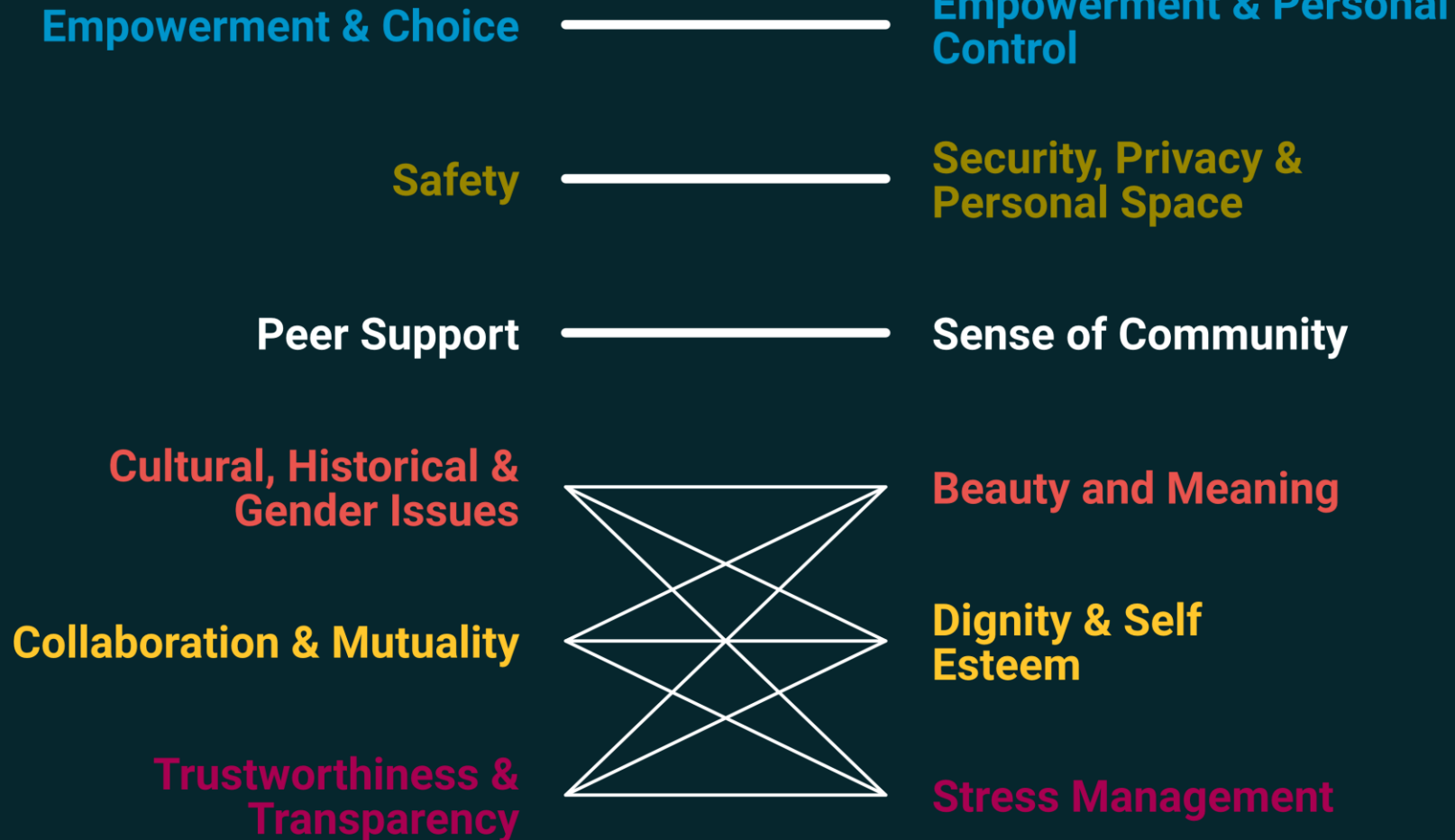
Spaces designed to be **less likely to trigger** trauma-based reactions by the nature of what is included in them and what is not

Intervening

Spaces designed to **help** those who are currently experiencing a trauma-based reaction to **recover** in a **healthy and supported** manner

SAMHSA's 6 Principles to a Trauma-Informed Approach

DRH 6 Principles for Trauma-Informed Design



Empowerment & Personal Control

Encourage individual agency, welcome self-expression and offer choice for occupants

This might mean:

- Pinup Space for Personalization
- Choice Between Variety of Furniture Types / Postures
- Operable Windows and Shades
- Interactive Displays
- Writable Surfaces
- Access to Water Filling Stations



Safety, Privacy and Personal Space

Understand that perceived safety is as crucial as basic safety and recognize the role of program staff in creating a sense of safety and security

This might mean:

- Places of Refuge
- Protected Back Seating
- Clear Wayfinding
- Screened Boundary Conditions
- Inclusive Restrooms
- Passive Observation Sightlines
- Dedicated Locking Storage



Sense of Community

Create spaces that build relationships and offer opportunities to belong

This might mean:

- Welcoming Entry Sequence
- Gathering Spaces
- Ties to Neighborhood, Community and Context
- Conversation Pieces
- Tailored Community Spaces
- Spaces for Community Resources
- Furniture Arranged for Groups



Beauty and Meaning

Honor culture and identity while creating spaces that spark and nurture imagination, hope and aspiration

This might mean:

- Culturally Relevant Designs
- Natural Materials and Avoidance of Sterile Aesthetic
- Reduce Visual Complexity
- Calming Color Schemes
- Nature Walks and Learning Trails
- Connection to Nature
- Local Artwork / Murals



Dignity and Self Esteem

Celebrate each individual's value and identity

This might mean:

- Welcoming Entry
- Furniture and fixtures comfortably sized to occupant sizes
- Project Display
- Equitable Accessibility
- Integrated Resources
- Side Lighting at Mirrors



Stress Management

**Cultivate a comfortable, calm
ambiance that supports relaxation,
self-soothing, and coping**

This might mean:

- Plentiful Natural Lighting / Views
- Design for Ease of Cleaning
- Dimmable Lighting
- Window Seats
- Soft Textures and Forms
- Tactile Walls
- Noise Abatement Strategies
- Outdoor Spaces





Impacts on Process

Teacher Surveys

▪ Rate your overall satisfaction:

- Outdoor teaching/learning opportunities (*outdoor classrooms, opportunities to engage with the landscape*) ————— **Stress Management**
- Equitable access (*accessibility, access to resources and space*) ————— **Dignity & Self-Esteem**
- Opportunities to collaborate with other teachers and staff (*shared work spaces, shared resources, time to connect*) ————— **Sense of Community**
- Sense of security and control (*clear wayfinding, sightlines, paths of retreat, refuge spaces, inclusive restrooms*) ————— **Safety, Privacy & Personal Space**
- The school celebrates and represents its occupants (*meaningful symbols and patterns, spaces that spark the imagination*) ————— **Beauty & Meaning**
- Opportunities for personalization (*project display space, classroom display, flexible furniture, variety of settings*) ————— **Empowerment & Personal Control**
- Welcoming and Inclusive (*does the building make you feel welcome?*) ————— **Dignity & Self-Esteem**
- Spaces that Support Student Mental Health (*calming rooms, sensory rooms, accessible staff support*) ————— **Stress Management**

Student Surveys

| | |
|-----------------------------------------------------------------|--------------------------------|
| 1. I can look out the window and see trees and plants at school | 3. I enjoy learning at school |
| | |
| 2. I feel like I belong at school | 4. I'm excited to go to school |
| | |

Stress Management

Beauty & Meaning

Sense of Community / Dignity & Self-Esteem

| | |
|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <p>Answer the following questions as they relate to the indoor spaces at your school</p> | <p>Answer the following questions as they relate to the outdoor spaces at your school</p> |
| 5. There are indoor spaces where I can move and play | 9. There are outdoor spaces where I can move and play |
| | |
| 6. There are indoor spaces where I can make things | 10. There are outdoor spaces where I can make things |
| | |
| 7. There are indoor spaces where I can learn and explore | 11. There are outdoor spaces where I can learn and explore |
| | |
| 8. There are indoor spaces where I can feel calm | 12. There are outdoor spaces where I can feel calm |
| | |

Empowerment & Personal Control

Empowerment & Personal Control

Empowerment & Personal Control

Stress Management

What makes you feel inspired?

Where do you go to relax?

What makes a space feel calming to you?

What types of spaces would the community like to see?

What are you proud of that should be celebrated?

What do you want to be able to do in this space?

Where do you feel like you belong?

What makes you feel (un)comfortable in a space?

What are you curious about?

Potential TID Strategies

SOCIAL SPACES VISIBLE AND ACCESSIBLE FROM MAIN ENTRY

When occupants enter a building and see social interaction happening, there can be a greater sense of belonging and community.

CONVERSATION PIECES

Unique and meaningful design elements or artwork can serve as conversation pieces for occupants to connect and build a sense of community and shared identity.

TAILORED COMMUNITY SPACES

Work with the community to understand what types of activities and events they want to be a part of and design intentional spaces around them.

COLLABORATION SPACE

Provide spaces that encourage group interaction and collaboration. Flexible furniture can be arranged to accommodate a range of group sizes and activities.

CENTRALIZED CHARGING STATION

Locating charging stations in the center of spaces instead of only at the perimeter encourages occupants to mingle and connect to others while using o charging devices.

EQUITABLE AND INTERACTIVE TECHNOLOGY

Ensure that all occupants can see what is being presented or shared. This may mean locating supplemental screens around the space for ease of viewing. Interactive technology can allow occupants to engage and collaborate together, even with people not in the room.

EASILY CLEANABLE MATERIALS

Materials that are easy to clean (and easy to tell that they are clean), such as polyurethane fabric, plastic laminate and solid surface, provide peace of mind that dust, and other debris are not hiding.

CLEAR WAYFINDING

Large educational facilities can have complex floorplans that are hard to navigate. Striving for simple layouts and clear hierarchy of space can make a building more navigable and less intimidating.

SCREENED BOUNDARY CONDITIONS

Screened boundaries allow for passive observation and connection between spaces, while filtering distraction from high activity areas. A screened boundary can create the sense of enclosure while avoiding a sense of constriction from smaller enclosed space.

SIGHTLINES FOR PASSIVE OBSERVATION

Use openness and transparency to allow for passive observation rather than relying on an authority figure. This can make the space feel less surveilled while also keeping eyes on the space for safety.

RETREAT SPACES

Provide spaces that allow occupants to retreat from the stresses of the main space and unwind. This may be an enclosed piece of furniture, a built-in nook, or a small focus room.

INCLUSIVE RESTROOM DESIGNS

Inclusive restrooms embrace the ethics of universal design and provide a private space to recover from stress or triggering events. They serve all occupants equally.

OPERABLE WINDOWS

Provides occupants with a sense of control over the airflow, temperature, humidity and sound in the space.

INDOOR SPACES THAT ENCOURAGE MOVEMENT AND PLAY

Create durable, safe and fun places that spark movement and play. Floor patterns, dynamic lighting, and engaging wall graphics may promote a sense of play.

ZONED AND DIMMABLE LIGHTING

Spaces with different lighting zones allow occupants to change how defined areas are lit and dimmable controls give occupants the ability to modify the brightness to match how the space is being used and how people are feeling in the space.

TOUCH DOWN SPACES

Inspiring, engaging spaces for occupants to transition and connect. Recessed benches or flexible furniture may offer this opportunity.

VARIETY OF FURNITURE TYPES AND ZONES

Provide furniture options with varying degrees of tactility, mobility, and posture. Arrange different types of furniture into zones to give occupants choice of where they want to be.

BRING PLANTS INSIDE

Planting, watering and caring for plants can be therapeutic. In climates with an extended winter season, greenhouses and indoor plants can be used to extend these benefits through the winter.

TRANSITION ZONES BETWEEN SPACES

Create natural and gentle experiences of threshold/transition between spaces of different uses, between interior and exterior, and different levels of social activity.

CURVED FURNITURE FORMS

Soft and organic forms in furniture and finishes can make a space feel more comfortable and reduce stress for occupants.

ACOUSTIC SEPARATION / MITIGATION

Use acoustic separation, like fabric covered space dividers and high STC walls, and mitigation, like sound masking, to reduce unnecessary or overwhelming ambient noise.

HEATED FLOORS

Heated floors provide comfort for learners who occupy the floor space during activities and learning. They can also make spaces feel more welcoming.

QUIET SYSTEMS AND LIGHTS

Equipment and lights that create a buzzing, clicking or subtle sound can be distracting and upsetting. Select quiet fixtures and design acoustic separation from noisy building systems.

LIGHTING FOR CIRCADIAN RHYTHMS

Include lighting that changes intensity and color over the course of the day to correspond to people's natural circadian rhythms. A healthy circadian rhythm is associated with improved long-term health and promotes better sleep habits.

WELCOMING ENTRY SEQUENCE

The entry to the space should be well-lit, warm and welcoming. Natural light, comfortable furniture, and clear wayfinding help people feel like they belong.

CAREFUL AND WELL DESIGNED STORAGE

Storage designed to reduce clutter and visual complexity can improve occupant well being, while allowing occupants to feel agency over their spaces and keep them tidy. Well designed storage can double as display to enrich the character of the space.

FURNITURE OPTIONS FOR ALL BODY TYPES

Intermix furniture in a range of sizes and postures, including bariatric and sensory options, allowing occupants to select what feels more supportive and comfortable to them.

ACHIEVEMENT DISPLAY AREA

Design intentional spaces for 2D, 3D, and digital display.

EQUITABLE ACCESSIBILITY

Sloped floors, ramps and elevators which are centrally located and near stairs create a more equitable path of travel for all occupants.

INDIRECT LIGHTING NEAR MIRRORS

Indirect side lighting creates a more attractive lighting condition when looking in the mirror, helping to support self-image.

CULTURALLY RELEVANT DESIGNS

Work with the community to understand the stories that occupants want to see told in the building.

REDUCE VISUAL COMPLEXITY

Irregular, cluttered, and highly contrasting spaces can be confusing and disorienting. Minimize the interior palette to contain only what is necessary to serve the building and tell the story.

NATURE WALKS AND LEARNING TRAILS

Accessible pathways through natural surroundings can support sense of place and teach occupants about the natural ecosystem.

NATURAL AND TEXTURED MATERIALS

Materials like wood, stone, and textured fabric add warmth, authenticity, and softness to the space.

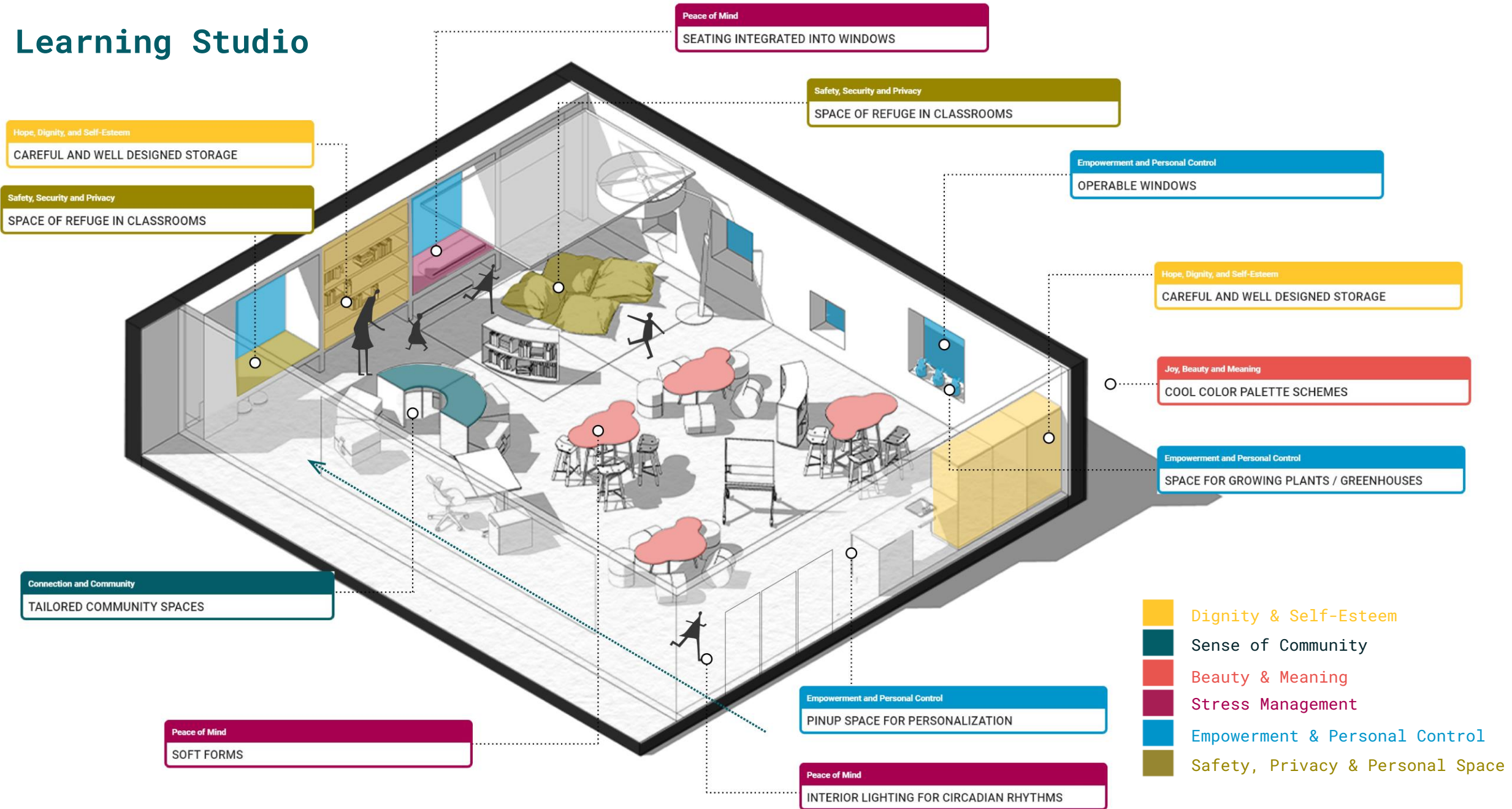
MEANINGFUL COLOR PALETTES

Work with the community to understand what colors are most meaningful and use them to add character to the space.

STORYTELLING AND DISPLAY

Intentional spaces for storytelling and changeable displays infuse the space with identity and meaning.

Learning Studio



Main Entry



Beauty and Meaning
NATURAL LIGHT INTO LEARNING SPACES

Security, Privacy & Personal Space
SPACES FOR "PROSPECT"

Sense of Community
CONVERSATION PIECES

Beauty and Meaning
NATURE WALKS AND LEARNING TRAILS

Stress Management
AUTHENTIC CONSTRUCTION MATERIALS

Sense of Community
COMMUNITY RESOURCES

Empowerment & Personal Control
SPACES THAT ENCOURAGE MOVEMENT AND PLAY

Security, Privacy & Personal Space
SCREENED BOUNDARIES

Security, Privacy & Personal Space
EXTERIOR AWNINGS / SHELTERED SPACES

Security, Privacy & Personal Space
INTENTIONAL SIGHT LINES FROM INTERIOR TO MAIN ENTRY

Sense of Community
DIRECT CONNECTIONS TO THE EXTERIOR

Dignity and Self Esteem
WELCOMING ENTRY SEQUENCE

Stress Management
AUTHENTIC CONSTRUCTION MATERIALS PERIMETER SEATING

Beauty and Meaning
NATIVE LANDSCAPES

Neighborhood Commons



Stress Management
ACOUSTIC SEPARATION / MITIGATION

Security, Privacy & Personal Space
SPACES FOR "PROSPECT"

Beauty and Meaning
TRANSPARENCY BETWEEN SPACES

Dignity and Self Esteem
EQUITABLE ACCESSIBILITY

Beauty and Meaning
WOOD FURNITURE FOR TACTILE AND VISUAL COMFORT

Empowerment & Personal Control
SPACES THAT ENCOURAGE MOVEMENT AND PLAY

Sense of Community
PRIMARY SOCIAL SPACES
VISIBLE AND ACCESSIBLE FROM MAIN ENTRY

Sense of Community
MULTI-LEVEL SPACES

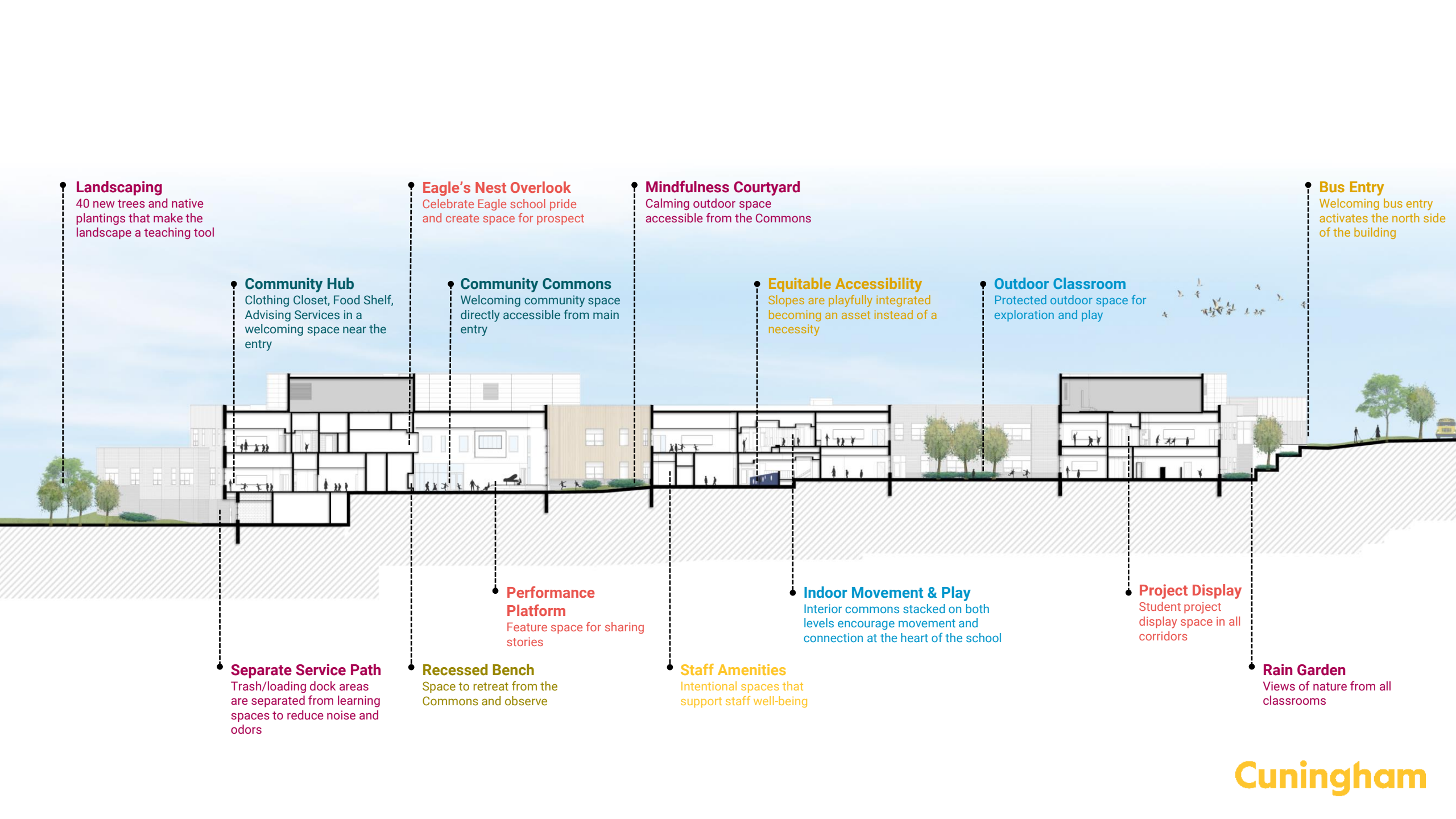
Beauty and Meaning
COOL / SOOTHING COLOR PALETTE

Sense of Community
COLLABORATION SPACE

Beauty and Meaning
NATURAL OR SOFT MATERIALS

Stress Management
SOFT FORMS

Beauty and Meaning
MEANINGFUL DESIGNS AND PATTERNS



Landscaping

40 new trees and native plantings that make the landscape a teaching tool

Community Hub

Clothing Closet, Food Shelf, Advising Services in a welcoming space near the entry

Eagle's Nest Overlook

Celebrate Eagle school pride and create space for prospect

Community Commons

Welcoming community space directly accessible from main entry

Mindfulness Courtyard

Calming outdoor space accessible from the Commons

Equitable Accessibility

Slopes are playfully integrated becoming an asset instead of a necessity

Outdoor Classroom

Protected outdoor space for exploration and play

Bus Entry

Welcoming bus entry activates the north side of the building

Separate Service Path

Trash/loading dock areas are separated from learning spaces to reduce noise and odors

Recessed Bench

Space to retreat from the Commons and observe

Performance Platform

Feature space for sharing stories

Staff Amenities

Intentional spaces that support staff well-being

Indoor Movement & Play

Interior commons stacked on both levels encourage movement and connection at the heart of the school

Project Display

Student project display space in all corridors

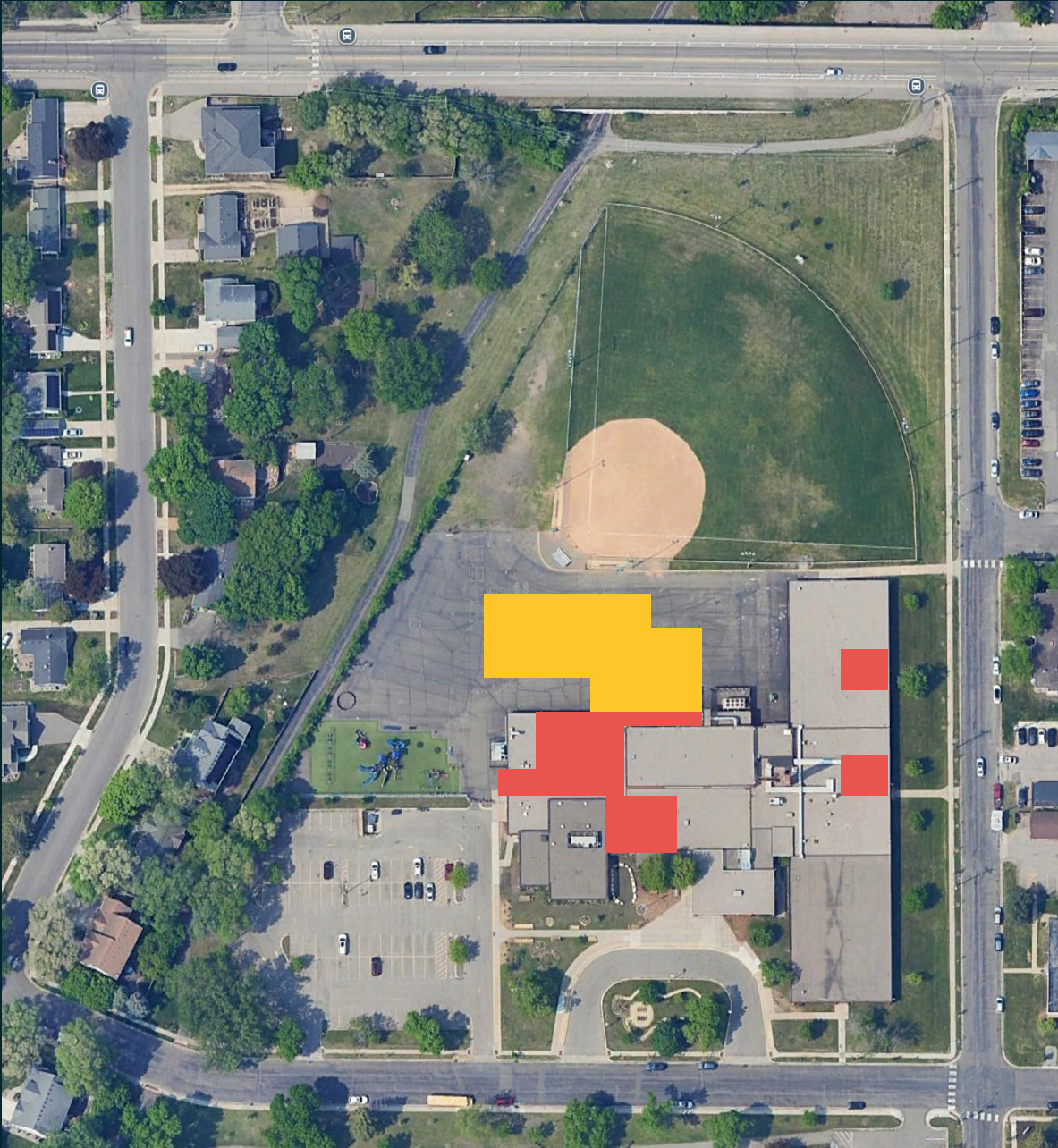
Rain Garden

Views of nature from all classrooms

Aquila Elementary

Applying Trauma Informed Design Concepts

Aquila Elementary School Project Scope



- Provide adequate space for an over-crowded school
- Right-size kindergarten classrooms
- Improve quality and performance of spaces
- Consideration for special education and sensory needs
- Create a welcoming environment for families
- Addition and renovations to be completed in fall of 2025



- **The brilliance of ourselves and others.**

Everyone has the capacity and responsibility to foster the growth and brilliance of others.

- **Authentic community engagement.**

Engaging and supporting our employees, families, and communities will enhance the healthy development of each learner.

- **High expectations.**

Instilling and upholding high expectations empowers students and staff to higher levels of achievement.

- **Collective responsibility.**

Embodying the collective and urgent responsibility of anti-racist practices enriches a work and learning environment and community.

- **Persistent effort.**

Through persistent effort we will create anti-racist schools and academically successful learners.

- **Racial consciousness and cultural competence.**

Racial consciousness and cultural competence are essential to each person's ability to be a catalyst for change.

- **Advocacy for equity.**

Everyone has equal intrinsic worth and we will advocate for the historically marginalized.









Applications

What would most benefit Aquila Elementary School?



SMALL GROUP ROOMS



LARGE COLLABORATIVE SPACES



ACTIVE LEARNING SPACES



ACOUSTICAL UPDATES IN CAFETERIA



OUTDOOR LEARNING



IMPROVED SPECIAL ED RESTROOMS



VARIETY OF FURNITURE



QUIET RETREAT SPACES



SENSE OF BELONGING



STAFF COLLABORATION



SENSORY ROOM



INCLUSIVE RESTROOMS

What would most benefit Aquila Elementary School?

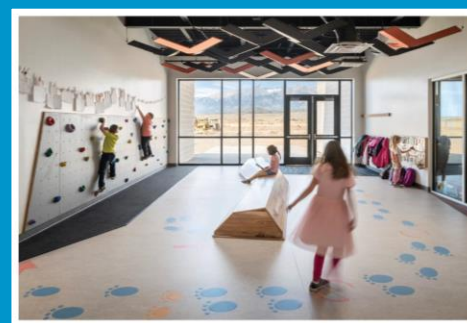
Empowerment & Personal Control



SMALL GROUP ROOMS



LARGE COLLABORATIVE SPACES



ACTIVE LEARNING SPACES



ACOUSTICAL UPDATES IN CAFETERIA

Security, Privacy, & Personal Space



OUTDOOR LEARNING



IMPROVED SPECIAL ED RESTROOMS



VARIETY OF FURNITURE



QUIET RETREAT SPACES

Sense of Community

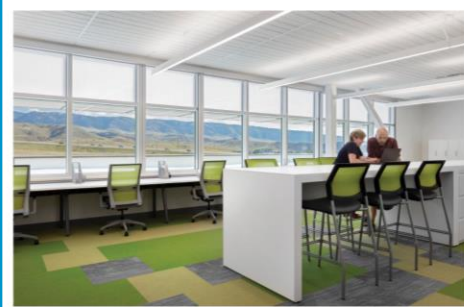
Beauty & Meaning

Dignity & Self Esteem

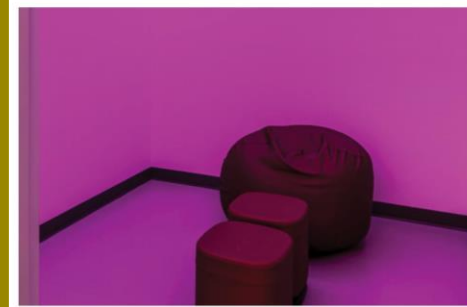
Stress Management



SENSE OF BELONGING



STAFF COLLABORATION

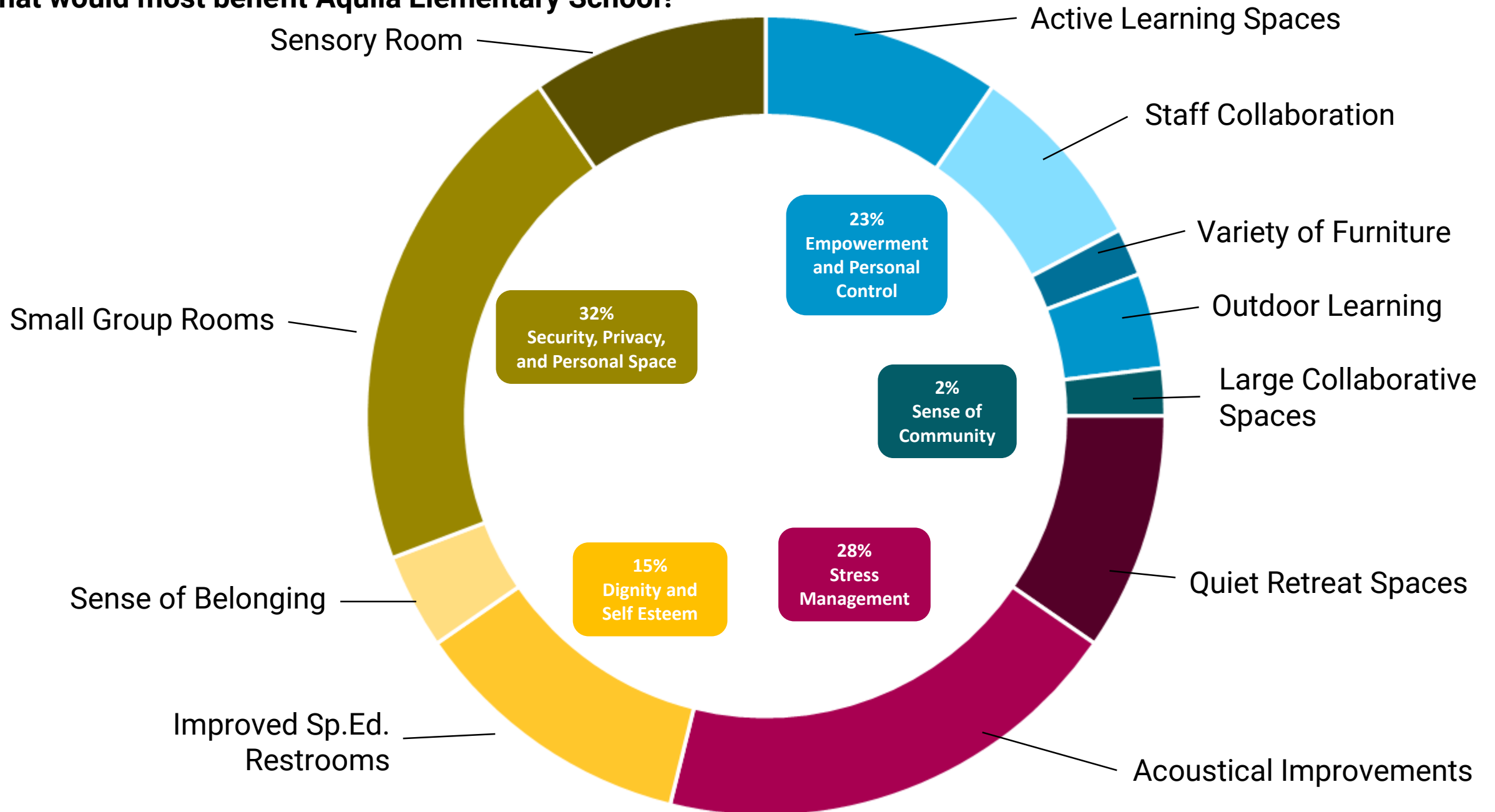


SENSORY ROOM



INCLUSIVE RESTROOMS

What would most benefit Aquila Elementary School?



- Security, Privacy and Personal Space
SPACES FOR "PROSPECT"
- Beauty and Meaning
NATURE WALKS AND LEARNING TRAILS
- Security, Privacy and Personal Space
CLEAR WAYFINDING
- Dignity and Self Esteem
FURNITURE AND FIXTURES SIZED TO YOUNGER OCCUPANTS
- Stress Management
VISUAL CONNECTION TO THE OUTSIDE
- Sense of Community
DIRECT CONNECTIONS TO THE EXTERIOR
- Empowerment and Personal Control
SPACE FOR GROWING PLANTS / GREENHOUSES
- Dignity and Self Esteem
WELCOMING ENTRY SEQUENCE
- Stress Management
ACOUSTIC SEPARATION / MITIGATION
- Sense of Community
COMMUNITY RESOURCES
- Security, Privacy and Personal Space
INCLUSIVE RESTROOM DESIGNS



- Security, Privacy and Personal Space
EXTERIOR AWNINGS / SHELTERED SPACES
- Empowerment and Personal Control
VARIETY OF FURNITURE TYPES AND ZONES
- Beauty and Meaning
WOOD FURNITURE FOR TACTILE AND VISUAL COMFORT
- Sense of Community
COLLABORATION SPACE
- Empowerment and Personal Control
SPACE THAT ENCOURAGES MOVEMENT AND PLAY
- Security, Privacy and Personal Space
QUIET ZONE
- Dignity and Self Esteem
EQUITABLE ACCESSIBILITY
- Security, Privacy and Personal Space
AREA FOR PERSONAL SPACE
- Beauty and Meaning
NATURAL OR SOFT MATERIALS
- Empowerment and Personal Control
TOUCH DOWN SPACES

XYLON AVENUE SOUTH





Trauma Informed Design
is *just good design*.

Thank you!

Q&A



Heidi Neumueller
AIA, NCARB, LEED AP
Principal,
Cunningham



We'd love to connect
with you!



Allison Mastel
AIA, NCARB, ALEP,
LEED Green Associate
amastel@cunningham.com



Hailey Wrasman
CID, IIDA, WELL AP
Project Interior Designer
hwrasman@cunningham.com

Cunningham

References / Bibliography

- American Psychiatric Association, 2022. *Diagnostic and Statistical Manual of Mental Disorders : DSM-5-TR*. 5th edition, text revision ed. Washington, DC: American Psychiatric Association Publishing.
- Anda, R. F. et al., 2006. The Enduring Effects of Abuse and Related Adverse Experiences in Childhood: A Convergence of Evidence from Neurobiology and Epidemiology. *European Archives of Psychiatry and Clinical Neuroscience*, 256(3), pp. 174-186.
- Anda, R. F. et al., 2004. Childhood Abuse, Household Dysfunction, and Indicators of Impaired Adult Worker Performance. *The Permanente Journal*, 8(1), pp. 30-38.
- Berens, M. J., 2015. *A Review of Research: Designing the Built Environment for Recovery from Homelessness*, Tallahassee, FL: Design Resources for Homelessness.
- Blodgett, C., 2014. *ACEs in Head Start Children and Impact on Development*, s.l.: Child & Family Research Unit - Washington State University Extension.
- Center for Substance Abuse Treatment, 2014. Appendix C Historical Account of Trauma. In: *Trauma-Informed Care in Behavioral Health Services: Treatment Improvement Protocol (TIP) Series, No. 57*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Center for Substance Abuse Treatment, 2014. Chapter 1, Trauma-Informed Care: A Sociocultural Perspective. In: *Trauma-Informed Care in Behavioral Health Services: Treatment Improvement Protocol (TIP) Series, No. 57*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Centers for Disease Control and Prevention, 2022. *YRBSS Data & Documentation*. [Online] Available at: <https://www.cdc.gov/healthyyouth/data/yrebs/data.htm> [Accessed 3 October 2022].
- Chafouleas, S. M., Pickens, I. & Gherardi, S. A., 2021. Adverse Childhood Experiences (ACEs): Translation into Action in K12 Education Settings. *School Mental Health*, Volume 12, pp. 213-224.
- Cohen, C. E. & Barron, I. G., 2021. Trauma-Informed High Schools: A Systematic Narrative Review of the Literature. *School Mental Health*, Volume 13, pp. 225-234.
- Felitti, V. J. et al., 1998. Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, 14(4), pp. 245-258.
- Houtepen, L. C. et al., 2020. Associations of Adverse Childhood Experiences with Educational Attainment and Adolescent Health and the Role of Family and Socioeconomic Factors: A Prospective Cohort Study in the UK. *PLOS Medicine*, 17(3).
- Kaiser Permanente. "Adverse Childhood Experiences (ACEs)." *Thriving Schools | a Partnership for Healthy Students, Staff & Teachers*, 2023, thrivingschools.kaiserpermanente.org/mental-health/aces/.
- Metzler, M. et al., 2017. Adverse Childhood Experiences and Life Opportunities: Shifting the Narrative. *Children and Youth Services Review*, Volume 72, pp. 141-149.
- National Center for Injury Prevention and Control, Division of Violence Prevention, 2021. *About the CDC-Kaiser ACE Study*. [Online] Available at: <https://www.cdc.gov/violenceprevention/aces/about.html> [Accessed 31 August 2022].
- National Child Traumatic Stress Network, Schools Committee, 2017. *Creating, Supporting, and Sustaining Trauma-Informed Schools: A System Framework*, Los Angeles, CA and Durham, NC: National Child Traumatic Stress Network.
- Pabel, J. & Ellis, A., 2015. *Trauma-Informed Design: Definitions and Strategies for Architectural Implementation*, Tallahassee, FL: Design Resources for Homelessness.
- Petrone, R. & Stanton, C. R., 2021. From Producing to Reducing Trauma: A Call for "Trauma-Informed" Research(ers) to Interrogate How Schools Harm Students. *Educational Researcher*, 50(8), pp. 537-545.
- Petrone, R. & Stanton, C. R., 2021. From Producing to Reducing Trauma: A Call for "Trauma-Informed" Research(ers) to Interrogate How Schools Harm Students. *Educational Researcher*, 50(8), pp. 537-545.
- Substance Abuse and Mental Health Services Administration, 2014. *SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach*, Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Substance Abuse and Mental Health Services Administration, 2014. *Trauma-Informed Care in Behavioral Health Services: A Review of the Literature*, Rockville, MD: US Department of Health and Human Services.
- Substance Abuse and Mental Health Services Administration, 2014. *Trauma-Informed Care in Behavioral Health Services: A Treatment Improvement Protocol*, Rockville, MD: US Department of Health and Human Services.
- Thomas, M. S., Crosby, S. & Vanderhaar, J., 2019. Trauma-Informed Practices in Schools Across Two Decades: An Interdisciplinary Review of Research. *Review of Research in Education*, Volume 43, pp. 422-452.
- Winninghoff, A., 2020. Trauma by Numbers: Warnings Against the Use of ACE Scores in Trauma-Informed Schools. *Occasional Paper Series*, 43(4).