CU Boulder AED Inventory Work Plan

Generated: 6/6/2025

Prepared for: CU Boulder Division of Public Safety

Total Work Blocks: 1

PROJECT LABOR ESTIMATE

Total Estimated Labor: 3.7 hours

Total Buildings: 10

Total AEDs to Inventory: 16 (assumed)

Average Time per Building: 22.1 minutes

Average Time per AED: 5 minutes

Instructions for Student Worker:

- 1. Each AED check should take approximately 5 minutes
- 2. Follow the building order shown in each work block
- 3. Record any issues or missing AEDs immediately
- 4. Take photos of AED locations for verification
- 5. Contact supervisor if any building is inaccessible
- 6. Walking times are estimates allow extra time for navigation

Work Block Summary:

Block 1: 10 buildings, 16 AEDs, ~221 minutes (3.7 hours)

METHODOLOGY & ASSUMPTIONS

Time Calculation Logic:

BASE ASSUMPTIONS:

- AED Location Buffer: Variable per building (default 8 minutes)
 - Time to search each building section and locate all AEDs
 - Customizable per building based on complexity and size
 - Accounts for buildings with multiple wings/sections
 - First-time inventory requires thorough exploration
 - Includes checking common AED locations (lobbies, hallways, etc.)

• AED Inspection Time: 5 minutes per device

- Includes visual inspection and documentation
- Based on standard safety inspection protocols
- Applied after AEDs are located

· Building Navigation Time: Variable by building size

- Large buildings (>50,000 GSF): +1 minute per 50k sq ft
- Accounts for finding AEDs within complex buildings
- Includes elevator wait times and navigation

• Inter-Building Travel Time:

- Walking speed: 3.1 mph (83 meters/minute)
- Driving speed: 25 mph (671 meters/minute)
- Automatically switches to driving for trips > 20 minutes walking
- Driving time includes 3 minutes for parking and walking to building
- Calculated using GPS coordinates and straight-line distance
- Includes time for building entry/exit

CLUSTERING ALGORITHM:

- Maximum cluster time: 240 minutes (4 hours)
- Geographic proximity prioritized to minimize travel
- Logical building sequences to optimize efficiency

LABOR CALCULATIONS:

- · Each work block assigned to one individual
- Times include all necessary activities:
 - Travel between buildings
 - Building access and navigation

- AED location and inspection
- Documentation and reporting

CONTINGENCY CONSIDERATIONS:

- Add 10-15% buffer for unforeseen delays
- Some buildings may require special access
- Weather conditions may affect travel times
- Student worker may need occasional guidance

STAFFING RECOMMENDATIONS:

- Total work blocks generated: 1
- Available student workers: 10
- Work blocks per worker: 1
- Maximum time per worker: ~3.7 hours
- Total project time: 3.7 hours
- Completion timeline: 1 day (one block per worker)
- Supervision needed: Minimal (after initial briefing)
- Estimated labor cost: 3.7 hours x student hourly rate

Work Block 1

Total Time: ~221 minutes (3.7 hours)

Buildings: 10

Total AEDs: 16 (assumed)

AED Location Time: ~80 minutes (variable per building)

AED Inventory Time: ~80 minutes (5 min/AED)

Building Navigation: ~1 minutes

Travel Time: ~60 minutes

Step-by-Step Instructions:

Step	Activity	Location	Time	Cumulative		
1	Locate AEDs in building	721EMRY	8 min	8 min		
2	Inventory 3 AEDs	721EMRY	15 min	23 min		
	Address: University of Colorado Boulder Ca	mpus, Boulder, CO 80309 (GUARDIAN STORAGE	E LONGMONT (721EM	IRY))		
3	Drive to next building	From 721EMRY to 5425AIR	29 min	52 min		
4	Locate AEDs in building	5425AIR	8 min	60 min		
5	Inventory 3 AEDs	5425AIR	15 min	75 min		
	Address: University of Colorado Boulder Campus, Boulder, CO 80309 (5425 AIRPORT ROAD (5425AIR))					
6	Drive to next building	From 5425AIR to PRL3	6 min	81 min		
7	Locate AEDs in building	PRL3	8 min	89 min		
8	Inventory 3 AEDs	PRL3	15 min	104 min		
	Address: University of Colorado Boulder Campus, Boulder, CO 80309 (4845 PEARL EAST CIRCLE (PRL3))					

Walk to next building	Activity	Location	Time	Cumulative		
Inventory 1 AED	Walk to next building	From PRL3 to 5555CNT	9 min	113 min		
Address: University of Colorado Boulder Campus, Boulder, CO 80309 (5555 CENTRAL AVENUE (5555CNT)) Walk to next building From 5555CNT to PPCB 16 min 142 min 150 min 150 min 155 min 163 min 164 min 164 min 164 min 165 min 165 min 168 min 168 min 165 min 168 min 1	Locate AEDs in building	5555CNT	8 min	121 min		
Walk to next building From 5555CNT to PPCB 16 min 142 min 150 min 150 min 150 min 164 Inventory 1 AED PPCB 5 min 155 min 166 min 167 min 168 min 163 min 163 min 163 min 164 min 168 min 168 min 169 min 168 min 176 min 169 m	Inventory 1 AED	5555CNT	5 min	126 min		
Locate AEDs in building PPCB	Address: University of Colorado Boulder Campus, Boulder, CO 80309 (5555 CENTRAL AVENUE (5555CNT))					
Inventory 1 AED PPCB S min Address: University of Colorado Boulder Campus, Boulder, CO 80309 (POTTS/PRENTUP CONCESSIONS BUILDING (PPCB)) Walk to next building From PPCB to TB83 O min 165 Locate AEDs in building TB83 S min 168 min Address: University of Colorado Boulder Campus, Boulder, CO 80309 (POTTS FIELD TRACK STORAGE (TB83)) Walk to next building From TB83 to TB84 O min 168 min 176 min 191 Locate AEDs in building TB84 S min 176 min 176 min Address: University of Colorado Boulder Campus, Boulder, CO 80309 (BRYAN BENJAMIN SAX SKI TEAM BUILDING (TB84)) Walk to next building From TB84 to TB85 S min 189 min 201 Walk to next building TB85 S min 189 min Address: University of Colorado Boulder Campus, Boulder, CO 80309 (AUXILARY TRACK STORAGE NORTHWEST OF POTTS FIELD (TB84)) Walk to next building From TB85 to SKIS O min 194 min Address: University of Colorado Boulder Campus, Boulder, CO 80309 (AUXILARY TRACK STORAGE NORTHWEST OF POTTS FIELD (TB84)) Walk to next building From TB85 to SKIS O min 194 min 202 Walk to next building From TB85 to SKIS O min 194 min 203 Locate AEDs in building From TB85 to SKIS O min 194 min 205 Locate AEDs in building SKIS S min 202 min	Walk to next building	From 5555CNT to PPCB	16 min	142 min		
Address: University of Colorado Boulder Campus, Boulder, CO 80309 (POTTS/PRENTUP CONCESSIONS BUILDING (PPCB)) Walk to next building From PPCB to TB83 0 min 155 min Locate AEDs in building TB83 8 min 163 min Inventory 1 AED TB83 5 min 168 min Address: University of Colorado Boulder Campus, Boulder, CO 80309 (POTTS FIELD TRACK STORAGE (TB83)) Walk to next building From TB83 to TB84 0 min 168 min Locate AEDs in building TB84 8 min 176 min Inventory 1 AED TB84 5 min 181 min Address: University of Colorado Boulder Campus, Boulder, CO 80309 (BRYAN BENJAMIN SAX SKI TEAM BUILDING (TB84)) Walk to next building From TB84 to TB85 0 min 181 min Locate AEDs in building TB85 8 min 189 min Inventory 1 AED TB85 5 min 194 min Address: University of Colorado Boulder Campus, Boulder, CO 80309 (AUXILARY TRACK STORAGE NORTHWEST OF POTTS FIELD (TB84)) Walk to next building From TB85 to SKIS 0 min 194 min Address: University of Colorado Boulder Campus, Boulder, CO 80309 (AUXILARY TRACK STORAGE NORTHWEST OF POTTS FIELD (TB84)) Walk to next building From TB85 to SKIS 0 min 194 min Address: University of Colorado Boulder Campus, Boulder, CO 80309 (AUXILARY TRACK STORAGE NORTHWEST OF POTTS FIELD (TB84)) Walk to next building From TB85 to SKIS 0 min 194 min 25 Locate AEDs in building SKIS 8 min 202 min	Locate AEDs in building	PPCB	8 min	150 min		
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26 Inventory 1 AED SKIS 5 min 207 min	Locate AEDs in building	SKIS	8 min	202 min		
	Inventory 1 AED	SKIS	5 min	207 min		
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Step	Activity	Location	Time	Cumulative
27	Walk to next building	From SKIS to SLKR	0 min	207 min
28	Locate AEDs in building	SLKR	8 min	215 min
29	Inventory 1 AED	SLKR	5 min	220 min
	Address: University of Colorado Bou	lder Campus, Boulder, CO 80309 (SOCCER	LOCKER ROOM (SLKR))	
	TOTAL		221 min	(3.7 hours)
Route	• Мар:			
7				