Cedar Rapids Community School District

Every Learner: Future Ready

Confined Space Program

Buildings & Grounds Department

Revised 8/15/2019

The goal of this program is to ensure that Cedar Rapids Community Schools (CRCSD) staff and contractors remain safe while working in our facilities. Outlined below is the District's intent to ensure we provide a safe working environment.

FOREWORD

Employers are responsible for providing a safe and healthy workplace for their employees. Many workplaces contain areas that are considered "confined spaces" because while they are not necessarily designated for people, they are large enough for workers to enter and perform certain jobs.

In an effort to make this document user-friendly, the program has been divided into two main categories:

1) **Non-permit** required confined spaces
2) **Permit** required confined spaces

While "confined spaces" generally speaking, may hinder the activities of those who perform work by entering into and exiting from, it is noteworthy to understand the categories are just as distinct and varied as the hazards inherent to each.

1.0 PURPOSE, SCOPE, ADMINISTRATION

Purpose – CRCSD has established this written program in accordance with Occupational Safety and Health Administration (OSHA) requirements as outlined in 29 CFR 1910.146. The primary purpose of this program is to protect the safety and health of all personnel who enter confined spaces. This is accomplished by establishing procedures that ensure hazards are eliminated or minimized, and employees involved with confined space entry have knowledge of these procedures.

Scope – All confined space entries conducted by CRCSD employees shall be performed as outlined in this program. Contractors and their employees who plan to enter a CRCSD owned or controlled confined space are responsible for compliance with all OSHA requirements as outlined in 29 CFR 1910.146 and this written program.

Administration – The maintenance and administration of a successful Confined Space Program requires participation from various CRCSD groups and departments. The Safety Committee is the group which will assure the program is reviewed on an annual basis, or when circumstances dictate otherwise.

The CRCSD competent person is responsible for the on-site administration of the Confined Space Program. Departments that could reasonably be expected to perform confined space entries include, but are not limited to; communications, carpentry, painting, buildings & grounds, custodial & grounds, and technology.

2.0 TYPES OF CONFINED SPACES

A confined space is a space that:

- Is large enough and so configured that an employee can enter and perform assigned work.
- Limited or restricted means for entry and exit.
- Is not designed for continuous employee occupancy.
- Such spaces include, but are not limited to; pipe chases/systems, manholes, tanks/containers, silos, utility systems, walk-in coolers and freezers, and attics and crawl spaces.

Each confined space shall be evaluated and classified as either a non-permit required confined space or permit required confined space. The inventory of Permit-Required Confined Spaces (Appendix A) shall be reviewed by the Safety Committee no less than annually.

A non-permit required confined space is a space that:

- Does not contain an atmospheric hazard.
- Does not have the potential to contain any hazard capable of causing death or serious physical harm.

Though non-permit confined spaces do not present the level of hazards that a permit-required confined space may, special precautions shall be taken prior to entry. If a confined space has not been thoroughly evaluated, it shall be considered to be a permit-required confined space until deemed otherwise.

Specific requirements for non-permit confined space entry include:

- Complete and thorough evaluation for the space to determine that a hazard is not present.
- Contacting the CRCSD confined space Supervisor for guidance.

A permit-required confined space is a space that:

- Contains or has the potential to contain a hazardous atmosphere.
- Contains a material that has the potential for engulfing an entrant.
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls, or by a floor which may slope downward and taper to smaller cross-sections.
- Contains any other recognized serious safety or health hazard.

Non-Permit Required Confined Spaces

3.0 NON-PERMIT REQUIRED CONFINED SPACE

This program regulates entry into confined spaces that do not require a permit. Employees, subcontractors, etc., should always ask questions and present concerns to the Safety Committee about entering non-permit required confined spaces. If a confined space is not labeled, it shall be assumed that the space is a permit required confined space.

3.1 INVENTORY OF CRCSD NON-PERMIT REQUIRED CONFINED SPACES

See attached appendix.

3.2 NON-PERMIT CONFINED SPACE ENTRY AUTHORIZATION FORM

Printable copy on page 7

INSTRUCTIONS FOR COMPLETING THE NON-PERMIT CONFINED SPACE ENTRY AUTHORIZATION FORM

Identify Permit Space: Record the date and time period for the entry along with a uniquely recognizable location for the confined space. Also record the reason or purpose for entering the confined space along with any known or suspected hazards that may be present in the confined space.

Record Monitoring Results: Record the initial readings for oxygen levels, flammable levels, and toxic levels. Oxygen levels must be between 19.5% -- 23.5% oxygen by volume. Personnel will not be permitted to enter if the oxygen levels are lower than 19%, or if the oxygen levels are higher than 23.5%. Flammable levels must not exceed 10% of the lower explosive limit. Personnel must be removed from the space if the LEL is 10% or higher. Toxic levels that reach the PEL will have an adverse effect on the body and personnel will be required to wear respiratory equipment. No person will be permitted in the confined space if the oxygen level is not between 19.5% -- 23.5%, greater than 10% of the LEL, or above the PEL without appropriate respiratory protection. Record periodic readings while personnel are operating in the confined space to ensure the standards are met.

To achieve an environment that will permit entry, ventilation may be introduced into the space(s). A permit will be required to enter the space unless it can be demonstrated the space is safe using engineering controls such as ventilation. To demonstrate the safe levels, this form must be completed. Once the initial readings are completed, insert the ventilation and take readings at 5, 10, 15, and 30 minute times. If the readings demonstrate acceptable levels, the space may be demonstrated safe by duplicating the process.

Ventilation: Forced air ventilation equipment must be identified to ensure the same rated equipment is used to duplicate the process. Record the model/size, the type (gas/electric), backup equipment, and the flow period prior to entry.

Safe Entry Procedures: Standard, unless additional information is added, such as lockout/tagout or other procedures to eliminate hazards.

Signature: The permit must be signed by the supervisor in charge and indicate the date/time when permit was cancelled.

NON-PREMIT CONFINED SPACE AUTHORIZATION

DATE: _____

Permit Space:
Identity: _____
Purpose: _____
Hazards: _____

Monitoring: List readings of monitoring instruments. Tester Signature_____

	Oxygen (%)	Explosive (% LEL)	Toxic (ppm)
Initial Reading			
5 Minute w/ Ventilation			
10 Minute w/ Ventilation			
15 Minute w/ Ventilation			
30 Minute w/ Ventilation			

Forced-Air Ventilation: Size, power source of blower, length of time before entry, backup

Model/Size:
Gas/Electric:
Backup:
Initial entry waiting period:

Safe Entry Procedures:

Entrance Covers--when removed, ensure proper fall protection is in place.
Testing--before entering the space, the internal atmosphere shall be tested with a calibrated direct-reading instrument of oxygen contact, flammable gases and vapors, and for potential toxic air contaminants (in that order). Allow entrant to review pre-entry testing.
Ventilation--before entering the space, ensure the forced air ventilation has eliminated any hazardous environment. Continue the ventilation until all employees have left the space. Ensure the intake air supply for the blower is not drawing airborne contaminants and blowing these contaminants into the confined spaces.

Emergency Procedures: Emergency Rescue Number:_____

If a hazardous atmosphere is detected during entry:
-Evacuate all personnel from the space immediately
-Determine source of contaminated atmosphere
-Revise safe entry procedures or reclassify to permit-required confined space.

Recordkeeping Requirement: Maintain completed copies on file for one year from the date of entry.

Authorized Signature: _____

4.0 DEFINITIONS

Acceptable Entry Conditions: Conditions that must exist in a permit space to allow entry and to ensure that employees involved with a confined space entry can safely enter into and work within the space.

Attendance: An approved CRCSD employee stationed outside one or more permit spaces who monitors the authorized entrants, and who also performs all attendant's duties assigned in CRCSD's permit space program.

Authorized Entrant: A CRCSD employee or a CRCSD approved contractor who is authorized by CRCSD's permit space program.

Blanking or Blinding: The absolute closure of a pipe, line, or duct by fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore while also being capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.

Confined Space: A space that is large enough and so configured that an employee can enter and perform assigned work, but is not designed for continuous employee occupancy. This space has limited or restricted means for entry or exit (i.e. tanks, vessels, silos, storage bins, hoppers, vaults, and pits).

Double Block and Bleed: The closure of a line, duct, or pipe by closing and locking and/or tagging two in-line valves, and by opening and locking and/or tagging a drain or vent valve in the line between the two closed valves.

Emergency: Any occurrence (including any failure of hazard control or monitoring equipment) or event, internal or external, to the permit space that could endanger entrants.

Engulfment: The surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system, or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

Entry: The action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

Entry Permit (permit): The written or printed document that is provided by CRCSD to allow and control entry into a permit space and that contains the information specified in paragraph (f) of this section.

Entry Supervisor: The CRCSD employee responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.

An entry supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by this section for each role he or she fills. Also, the duties of entry supervisor may be passed from one individual to another during the course of an entry operation.

Hazardous Atmosphere: An atmosphere that may expose employees to the rise of death, incapacitation, impairment of ability to self-rescue (escape unaided from a permit space), injury, or acute illness from one or more of the following causes:

- Flammable gas, vapor, or mist in excess of 10% of its lower flammable limit (LFL).
- Airborne combustible dust at a concentration that meets or exceeds it flammable limit (FL) *Note: This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet (1.52 m) or less*.
- Atmospheric oxygen concentration below 19.5% or above 23.5%.
- Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in Subpart G, Occupational Health and Environmental Control, or in Subpart Z, Toxic and Hazardous Substances, of this part and which could result in employee exposure in excess of its dose or permissible exposure limit.

  Note: An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this provision.

- Any other atmospheric condition that is immediately dangerous to life or health.

  Note: For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources can provide guidance in establishing acceptable atmospheric conditions.

Hot Work Permit: CRCSD's written authorization to perform operations (i.g. riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.

Immediately Dangerous to Life or Health (IDLH): Any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a permit space.

Note: Some materials (i.g. hydrogen gas and cadmium vapor) may produce immediate transient effect that, even if severe, may pass without medical attention but are followed by sudden, possibly fatal collapse 12-72 hours after exposure. The victim "feels normal" from recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be "immediately" dangerous to life or health.

Inerting: The displacement of the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible.

Note: This procedure produces an IDLH oxygen-deficient atmosphere.

Isolation: The process by which a permit space is removed from service and completely protected against the release of energy and material into the space by such means as: blanking or binding; misaligning or removing sections of lines, pipes or ducts; a double bock and bleed system; lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages.

Line Breaking: The intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.

Non-Permit Confined Space: A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Oxygen Deficient Atmosphere: An atmosphere containing less than 19.5% oxygen by volume.

Oxygen Enriched Atmosphere: An atmosphere containing more than 23.5% oxygen by volume.

Permit-Required Confined Space (Permit Space): A confined space that has one or more of the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere
- Contains a material that has the potential for engulfing an entrant
- Has in internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section
- Contains any other recognized serious safety or health hazard

Permit-Required Confined Space Program (Permit Space Program): CRCSD's overall program for controlling and, where appropriate, protecting employees from permit space hazards and for regulating employee entry into permit spaces.

Permit System: CRCSD's written procedure for preparing and issuing permits for entry and for returning the permit space to service following termination of entry.

Prohibited Condition: Any condition in a permit space that is not allowed by the permit during the period when entry is authorized.

Rescue Service: The personnel designated to rescue employees from permit spaces.

Retrieval System: The equipment (including a retrieval line, chest or full-body harness, wristlets if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from permit spaces.

Testing: The process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

> *Note: Testing enables CRCSD to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately, prior to, and during entry.*

Permit Required Confined Spaces

5.0 PERMIT REQUIRED CONFINED SPACES

CRCSD Shall Also take effective measures to prevent unauthorized entry into all known and recognized permit required confined spaces. Permit-required confined space entry presents the greatest risk for injury or death. Extreme caution shall be taken prior to entry. All requirements must be thoroughly understood and followed.

5.1 INVENTORY OF CRCSD PERMIT REQUIRED CONFINED SPACES

Note: All confined spaces shall be considered permit-required confined spaces until an evaluation is performed and determined otherwise.

5.2 PERMIT REQUIRED CONFINED SPACE ENTRY AUTHORIZATION FORM

Permit can be found on page 15.

INSTRUCTIONS FOR COMPLETING THE CONFINED SPACE ENTRY PERMIT

Identify Permit Space: Record the date and time period for the entry. Record a uniquely recognizable location for the confined space along with recording the reason or purpose for entering the confined space. Additionally, record the known or suspected hazards that may be present in the confined space.

Identify Personnel: List the supervisor in charge of the entry. Also list the name(s) of the entrant(s), attendant(s), and the emergency response personnel.

Record Monitoring Results: Record the initial readings for oxygen levels, flammable levels, and toxic levels. Oxygen levels must be between 19.5% - 23.5% oxygen by volume. Personnel will not be permitted to enter if the oxygen levels are lower than 19.5%, or if the oxygen levels are higher than 23.5%. Flammable levels must not exceed 10% of the lower explosive limit. Personnel must be removed from the space if the LEL is 10% or higher. Toxic levels that reach the PEL will have an adverse effect on the body and personnel will be required to wear respiratory equipment. No person will be permitted in the confined space if the oxygen level is not between 19.5% - 23.5%, greater than 10% of the LEL, or above the PEL without appropriate respiratory protection. Record periodic readings while personnel are operating in the confined space to ensure the standards are met.

Record Pre-Entry Checklist: Prior to entry into permit-required spaces, energy sources must be locked out--this includes electrical, pressure lines, hydraulics, power drives, and other sources that could cause potential hazards. The space may need to be purged of airborne hazards and liquid hazards which may require ventilation. The area may require barriers and signs to deny access to unauthorized personnel. Equipment for entry into the space must be inventoried and checked for performance. If welding or cutting is to be performed in the space, a "hot work" permit must be completed and approved prior to entry. Ensure medical aid is adequate.

Communications: Communications is critical to safe operations in confined space with potential hazards. Communications procedures must be outlined prior to entry to ensure signals are understood, withdrawal conditions are understood, and emergency rescue communications are understood.

Ventilation: Engineering controls may be required if the oxygen levels are not between 19.5% - 23.5%, flammable levels are greater than 10% of the lower explosive limits (LEL), and/or toxic levels exceed the permissible exposure limits.

Rescue Procedures: Emergency responders must be on standby during the entry period. Determine what circumstances or communications will trigger response, how the response will be performed, and where the potential victims will be evacuated. Indicate the emergency response number, whether on-site response or external responders.

Signature: The permit must be signed by the supervisor in charge. Also indicate the date/time when the permit is cancelled.

CONFINED SPACE ENTRY PERMIT DATE: _____ ENTRY PERIOD: _____

Permit Space: Identity: _____ Purpose: _____ Hazards: _____

Personnel: Enter Names of Qualified Personnel			
Supervisor	Entrant(s)	Attendant(s)	Emergency Responders

Monitoring: List readings of monitoring instruments. Tester Signature_____			

Requirements: Completed prior to entry.			
Requirements Completed	**DATE/TIME/INITIALS**	**Requirements Completed**	**DATE/TIME/INITIALS**
LOCKOUT/TAGOUT & DE-ENERGIZE		**ESCAPE HARNESS**	
LINES BROKEN-CAPPED/BLANKED		**TRIPOD EMERGENCY ESCAPE UNIT**	
PURGE-FLUSH AND VENT		**LIFELINES**	
VENTILATION		**FIRE EXTINGUISHERS**	
SECURE AREA (POST AND FLAG)		**LIGHTING (EXPLOSION PROOF)**	
BREATHING APPARATUS		**PROTECTIVE CLOTHING**	
RESUSCITATOR-INHALATOR		**RESPIRATOR**	
STANDBY SAFETY PERSONNEL		**MEDICAL REQUIREMENTS**	
HOT-WORK PERMIT (ATTACHED)			

Communication: Outline Procedures.

Ventilation Procedures: Outline Procedures.

Rescue Procedures: Outline Procedures. Emergency Rescue Number: _____

INSTRUCTIONS FOR COMPLETING THE TRAINING FOR CONFINED SPACE

Employee Identification: Record the date for the training. Record the name of the employee and any company identification number/payroll number.

Record Training Topics: The topics listed in the "certificate of training" are covered in the CRCSD program and most topics can be covered as the trainer goes through the CRCSD confined space program. Specific training (on-site) will be conducted using the designated equipment, PPE, and procedures for entering permit spaces. Each topic that applies to the entry should be dated and initialized by the trainer. Specific training includes:

- Entrant training includes PPE, monitoring, communications, escape equipment, ladders, ventilation.
- Attendant training includes PPE, monitoring, LO/TO communications, escape/retrieval, ventilation, emergency response, permitting.
- Supervisor training includes PPE, monitoring, LO/TO, communications, escape/retrieval, ventilation, emergency response, permitting.
- Emergency responder training includes PPE, monitoring, communications, escape/retrieval, ventilation, emergency response, permitting, first aid, CPR.

Each member of the rescue service shall be trained to perform the assigned rescue duties. Each member of the rescue service shall also receive the training required of authorized entrants.

Each member of the rescue service shall practice making permit space rescues at least once every 12 months, by means of simulated rescue operations in which they remove dummies, mannequins, or actual persons from the actual permit spaces or from representative permit spaces.

Each member of the rescue service shall be trained in basic first-aid and in cardiopulmonary resuscitation (CPR). At least one member of the rescue service holding current certification in first aid and CPR shall be available.

Job Description: Enter a description of the job duties and responsibilities of the person involved in the entry.

Signature: The permit must be signed by the authorized trainer.

CERTIFICATE OF TRAINING FOR CONFINED SPACE ENTRY

DATE: _____

Employee Name: _____
Employee Number: _____

Training Topic: Acquired understanding, knowledge, and skills applicable to Confined Space

Initial Training	DATE	TRAINER INITIALS	TRAINING	DATE	TRAINER INITIALS
WRITTEN CONFINED SPACE PROGRAM			ESCAPE HARNESS/ LIFELINES		
IDENTIFYING HAZARDOUS ENVIRONMENT			TRIPOD EMERGENCY ESCAPE		
COMMUNICATION PROCEDURES			LADDERS		
RESCUE PROCEDURES			FIRE EXTINGUISHERS		
VENTILATION PROCEDURES			LIGHTING (EXPLOSION PROOF)		
PURGING, INERTING, FLUSHING			PERSONAL PROTECTION		
MONITORING PROGRAMS			CHEMICAL CLOTHING		
RESPIRATORY PROTECTION			HOT WORK		
LOCKOUT/TAGOUT			FIRST AID/CPR		

Job Description: Specific training for this area of responsibility

I certify the above training was performed in accordance with (g)(1)-(g)(3) of 29 CFR 1910.146, and that the training is current for the Permit-Required Space Entry.
Supervisor of Authorized Trainer _____

Recordkeeping Requirement: Attach to Confined Space Entry Permit

TRAINING CHECLIST FOR CONFINED SPACE PERSONNEL

TOPIC	DESCRITION OF	ENTRANT	ATTENDANCE	SUPERVISOR	RESPONDER	HOTWORK	CONTRACTOR
Hazard Identification	Oxygen levels, Combustibles, Toxic Levels, Engulfment, Configuration	X	X	X	X	X	X
Confined Space, Intro	Introduction to PRCS	X	X	X	X	X	X
Confined Space, Supr	In-depth knowledge of PRCS and Hot work	X	X	X	X	X	X
Written PRCS Program	Site-specific training on the contents of the written confined space program for the PRCS to be entered	X	X	X	X	X	X
Permit	Pre-entry training on a specific confined space	X	X	X	X	X	X
Fall Protection	Confined spaces where there is a potential fall of 6 feet	X	X	X	X	X	X
Excavation	Confined space in an excavation 5 feet or more deep	X	X	X	X	X	X
Respiratory Protection	Confined space where respiratory equipment is required	X	X	X	X	X	X
Monitoring	Direct reading air-monitoring use, maintenance	X	X	X	X	X	X
Hot work, Welding	Written Program, welding safety, hot work in confined spaces	X	X	X	X	X	X
Equipment	Hoisting equipment, harness, retrieval lines	X	X	X	X	X	X
Ladder Safety	Ladder safety for entry and exit of confined spaces	X	X	X	X	X	X
Site Security	Exclusion zone, barriers, fences, gates, signs	X	X	X	X	X	X
Rescue	Emergency response	X	X	X	X	X	X
First Aid/CPR	First Aid/CPR	X	X	X	X	X	X
Fire Safety	Fire extinguisher Training	X	X	X	X	X	X
control of Energy Sources	Specific to the PRCS to be entered. Purging, inerting, flushing may be considered part of the LO/TO program.	X	X	X	X	X	X
Communications	Radios, hand signals	X	X	X	X	X	X
HazCom-MSDS	Hazcom course and MSDS training	X	X	X	X	X	X
Lighting	Basic light levels	X	X	X	X	X	X
Hearing	Basic recognition of site sound levels, measurement of	X	X	X	X	X	X
Ventilation	Basic	X	X	X	X	X	X
Electrical Safety	LO/TO, GFCI, Grounding, Static Charges, Intrinsic Safety, Power Transmission in Confined Space	X	X	X	X	X	X
Recordkeeping	Injuries, Permits, Training			X			X
HazMat Training	Necessary for hazard recognition			X			X
Hazwoper Training	Areas where hazardous waste is present	X	X	X	X	X	X
Fire Safety	Flammable and combustible materials	X	X	X	X	X	X
Ergonomics	Lifting, repetitive motions, twisting, static situations	X	X	X	X	X	X
Bloodborne Pathogens	Cuts, injuries	X	X	X	X	X	X

PREPARATON FOR PERMIT REQUIRED CONFINED SPACES

1. Barriers--Erect/install barriers and other devices to prevent entry by unauthorized personnel.
2. Testing-test the space for oxygen levels, combustible levels, and toxic levels.
3. Vacate--purge, inert, flush or ventilate the permit space to eliminate or control atmospheric hazards.
4. Control energy--sources such as electrical, steam, gears, water, belts, etc. during the entry period.
5. Equipment--ensure that necessary equipment is available on location, that the equipment is in proper operating condition, and that personnel operating/using the equipment have been properly trained.
6. Prepare permit--the supervisor will prepare the entry permit (see permit), and brief the entrants, monitoring personnel, attendants, and the emergency responders of the potential hazards. When preparing, be sure to include the following information:
    - The permit space identification
    - Purpose for entry and work to be accomplished
    - Date and authorized duration of permit (cancel when completed)
    - Names of entrants, monitoring personnel, supervisor, and ER
    - Identify hazards present
    - Isolation measures-LO/TO, purging, inerting, ventilation, etc.
    - Acceptable entry provisions
    - Monitoring tests
    - Emergency rescue procedures/services
    - Communications procedures
    - Equipment utilized-PPE, testing, communications, alarm, rescue
    - Hot work permits associated with this entry.
7. Response—review the emergency response procedures before entering the permit-required confined space.
8. Review—the entrants must participate in the entry review and sign the permit.

Entry Procedures

- Permit—if the employees of CRCSD will enter permit-space(s), they will do so by following the procedures outlined in this permit-required confined space program.
- Ventilate—the confined space to eliminate airborne contaminants.
- Monitor—the confined space for oxygen, flammables, and toxic substances.
- PPE—outfit the entrant with the proper respiratory protection, chemical protection, fall protection, retrieval and other personal protection.
- Communications—Check communications equipment for reliability.
- Rescue—set up necessary rescue equipment, such as tripod and harness systems.
- Permit—sign the permit (supervisor) when all conditions are met and the entrant, attendant, and emergency response personnel are in place
- Lighting—entrants use lighting to enable personnel to see well enough to work safely and to exit the space quickly in an emergency.
- Multiple departments—The Safety Committee shall establish working procedures is more than one department is operating in the confined space.

Operating in Permit-Required Confined Spaces

- Communications—attendant will maintain communications with the entrant at all times. Failure to maintain contact requires emergency exit. Maintain communications with the supervisor and emergency response personnel.
- Monitoring—The space to ensure the oxygen level is between 19.5% and 23.5%, combustible gases not to exceed 10% of the LEL, and toxics below the PEL
- No smoking is permitted in the permit area.
- Never enrich a confined space with pure oxygen.
- Hot Work Permit—welding and cutting ina permit-required confined space requires a hot work permit.
- Restricted—prevent entry of unauthorized personnel.
- Coordination—Coordinate operations with other companies operating in the confined space.
- Termination—if hazardous conditions are detected during entry, employees must immediately leave the space and the space must be evaluated to determine the cause of the hazardous conditions.
- Emergency Response—summon emergency response personnel when the entrant(s) fail to respond or when the entrant(s) call for assistance.

Exit Procedures

- Termination—the entry supervisor shall terminate entry and cancel the entry permit when:
  a. Entry operations covered by the entry permit have been completed
  b. The entrant recognizes any warning sign or symptom of exposure to a dangerous situation
  c. The entrant detects a prohibited condition
  d. An evacuation alarm is activated.
- Completion—upon completion of entry activities and normal retrieval of the personnel, cancel the permit. Cancel the permit if the activity extends for longer than a work period, cancel the permit and reissue a new permit
- Emergency Retrieval—requires immediate cancellation of the permit by the supervisor, at the time the emergency response is initiated.
- Security—prevent unauthorized personnel from entering the confined space during rescue operations.
- Recordkeeping—cancel the permit and maintain permits for one year.

Emergency Rescue Procedures

- Supervisor—the supervisor immediately takes charge of the rescue operation.
- Emergency Responders—summoned and briefed for rescue. Outside responders are called, then briefed prior to entry.
- Attendant—the attendant maintains communication with the emergency responders. The attendant monitors the area near the entrance for hazardous environments that would cancel rescue operations.
- Emergency Medical Services—notified for transport of injured or ill personnel to medical facilities.
- Security—once the personnel have been rescued, secure the confined space until released for entry by management.
- Treatment—if an injured entrant is exposed to a substance for which an SDS sheet or other similar written information is required to be kept the worksite, that SDS or written information shall be made available to the medical facility treating the exposed entrant.

Review of Confined Space Operations

- Review—permit-required confined space entry procedures upon completion of each entry and each cancelled permit.
- Correct Discrepancies—and any procedures in addition to revising/updating the written plan.
- Retrain Personnel—to reflect any changes in procedures.

Personal Protective Equipment

- Personal Protection—standard safety equipment is required, where necessary, including hardhat, fall protection, hearing protections, eye protections, and foot protections.
- Respiratory Protection—Wear the proper respiratory protections required for protection from particulate and gas exposures.
- Safety harness—You must use a safety harness with an attached life line unless it will make entry hazardous. Use it properly in accordance with the rules of entering identified confined spaces. These protective devises are also to be used whenever you of the supervisor decide they are necessary. Carefully inspect this equipment before each use. If you have any doubt as to its safe condition, replace the equipment immediately.

6.0 PERSONNEL RESPONSIBILITIES

CRCSD Designated Competent Person Responsibilities:

- Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure
- Verifies, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin
- Terminate the entry and cancels the permit as required
- Verifies that rescue services are available and that the means for summoning them are operable
- Removes unauthorized individuals who enter or who attempt to enter the permit space during entry operations
- Determines, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.

Attendant Responsibilities:

- Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure
- Is aware of possible behavioral effects of hazard exposure in authorized entrant
- Continuously maintains an accurate count of authorized entrants in the permit space
- Remains outside the permit space during entry operations until relieved by another attendant
- Communicates with authorized entrant as necessary to monitor entrant status and to alert entrants of the need to evacuate the space
- Monitors activities inside and outside the space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the permit space immediately under the following conditions:
    1. If the attendant detects a prohibited condition
    2. If the attendant detects the behavioral effects of hazard exposure in the authorized entrant
    3. If the attendant detects a situation outside the space that could endanger the authorized entrant
    4. If the attendant cannot effectively and safely perform all of the duties
- Summon rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards
- Performs non-entry rescues as specified by CRCSD's rescue procedures
- Performs no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants.

- Takes the following actions when unauthorized people approach or enter a permit space while entry is underway
    1. Warn the unauthorized person that they must stay away from the permit space

2. Advise the unauthorized person that they must exit immediately if they have entered the space
3. Inform the authorized entrants and the entry supervisor if unauthorized people have entered the permit space

Entrant Responsibilities:

- Know the hazards that may be faced during entry, including information on the mode, signs or symptoms and consequences of the exposure
- Properly use equipment as required
- Communicate with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space as required

Alert the attendant whenever:

1. The entrant recognizes and warning sign or symptom of exposure to a dangerous situation
2. The entrant detects a prohibited condition

Exit from the permit space as quickly as possible whenever:

1. An order to evacuate is given by the attendant of the entry supervisor
2. The entrant recognizes any warning sign or symptom of exposure to a dangerous situation
3. The entrant detects a prohibited condition
4. An evacuation alarm is activated

7.0 MEDICAL SURVEILLANCE

Exposure Controls

Toxic Exposures—Based on the presence of toxic chemicals or toxic fibers, at or above the PEL or TLV or other applicable exposure limit, exposure protection will be applied in the form of respiratory protection or chemical clothing. Exposure records will be maintained indication the exposure levels and the exposure duration.

SDS—If SDS sheets are present for the hazardous materials, they may be retained as part of the exposure record.

Physicals/Medical Examinations

Medical Examinations—Prior to exposures to hazardous materials at or above the exposure limits for 30 days or more will require a physical examination by a licensed health care professional.

Physicals—Wearing a respirator will require a physical examination at CRCSD's expense and time off to get the exam will be provided.

Medical Records

Retention—Exposure records will be maintained with medical records for 30 years after the employee leaves employment (40 years for lead exposures).

Access—Employees will have access to their medical records upon written requires.

8.0 ENGINEERING CONTROLS, EQUIPMENT

Ventilating Equipment

Permit-Required Confined Space—requires the use of blowers, fans, exhausts and other ventilation means to maintain safe levels of oxygen, combustibles, and toxics while working in the space.

Non-Permit Confined Space—requires the use of blowers, fans, exhausts, and other ventilation means to maintain an atmosphere free of airborne contaminants in the space.

Equipment: Testing and Monitoring Equipment (Ventis MX4)

Various types of instruments are available for determining the presence of dangerous gases. Some of the more familiar test instruments are as follows:

- **Oxygen Meter**—This instrument measures oxygen content to determine if it is sufficient to support life
- **Combustible gas indicator**—This instrument registers the explosiveness of the mixture of various gases and air
- **Carbon monoxide detector**—This test gives a reading of the carbon monoxide present in the confined space
- **Hydrogen sulfide detector**—This test gives a reading of the hydrogen sulfide levels present in the confined space

Employees of CRCSD or subcontractors who are designated to use testing or monitoring equipment shall be properly trained to know the type of gas that may be

encountered in typical confined spaces and how to properly use the gas detection equipment.

Note: All testing equipment will be calibrated according to manufacturer's specifications.

Communication Equipment

Appropriate communications equipment (intrinsically safe) shall be used to maintain contact between authorized entrants and the attendant, to monitor the status of the entrant(s) and to alert them if the need arises for them to evacuate the space. The type of communication shall be based on the conditions in the permit space and may include one of the following:

1. Visual (observation)
2. Voice
3. Telephone
4. Two-way radio
5. Other means as appropriate

Lighting Equipment

CRCSD shall provide lighting (intrinsically safe) needed to enable employees to see well enough to work safely and to exit the space quickly in an emergency.

Barriers and Shields

CRCSD shall provide pedestrian, vehicle, or other barriers as necessary to protect entrants from external hazards and to restrict access to authorized personnel.

Ladders

CRCSD shall provide ladders (intrinsically safe) needed for safe entry and exit by authorized entrants.

Rescue and Emergency Equipment

Work/rescue equipment, including lifelines, belts, stretchers, mobile cranes, hoists or other suitable equipment needed to rescue an individual from the confined space shall be available at all times. Since the conditions and space characteristics very from one situation to another, the necessary equipment shall be selected based on the potential hazards and possible contingencies expected to occur during the entry operations.

A properly trained attendant shall be positioned outside the permit space to observe the status of the entrants. The attendant shall be equipped with a two-way radio or have immediate access to a telephone so he/she can summon rescue and emergency services.

To facilitate non-entry rescue, retrieval systems or methods shall be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant. Retrieval systems shall meet the following requirements:

- Each authorized entrant shall use a chest or full body harness, with a retrieval line attached at the center of the entrants back near shoulder level, or above the entrant's head. Wristlets may be used in lieu of the chest or full body harness if CRCSD can demonstrate that the use of a chest or full body harness is infeasible or creates a greater hazard and that the use of wristlets is the safest and most effective alternative.
- The other end of the retrieval line shall be attached to a mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device shall be available to retrieve personnel from vertical type permit spaces more than 5 feet (1.52m) deep.

9.0 INFORMATION/TRAINING

CRCSD shall provide the understanding, knowledge, and skills necessary for the safe performance of their duties prior to initial assignment, changes in assignment, new environments, and changes in procedures.

Retrain personnel as deficiencies in written procedures and/or personnel proficiencies are experienced.

Instructors conducting the training shall be competent in permit-required confined space entry either through education or experience, and have thorough knowledge of confined spaces, hazards associated with toxic atmospheres, monitoring equipment, personal protective equipment, and emergency rescue planning.

Record training on the Confined Space Entry Training Form and maintain in the training records.

Emergency responder training includes PPE, monitoring, communications, escape/retrieval, ventilation, emergency response, permitting, first aid, CPR.

- Each member of the rescue service shall be trained to perform the assigned rescue duties. Each member of the rescue service shall also receive the training required of authorized entrants.
- Each member of the rescue service shall practice making permit space rescues at least once every 12 months, by means of simulated rescue operations in which they remove dummies, mannequins, or actual persons from the actual permit spaces or from representative permit spaces.
- Each member of the rescue service shall be trained in basic first aid and in cardiopulmonary resuscitation (CPR). At least one member of the rescue service holding current certification in first aid and in CPR shall be available.

Contractor/Subcontractor Training

When contractors and employees plan to enter a CRCSD owner or controlled confined space, the CRCSD confined space supervisor shall:

1. Advise of permit spaces. CRCSD must advise contractors of any permit spaces on the premises that the contractor's employees may have reason to enter.
2. Compel Compliance. CRCSD shall compel compliance by informing contractors that permit spaces can only be entered under the auspices of a written program that meets the requirements of 29 CFR 1910.146 (d). CRCSD and the contractor must also agree as to exactly what program will be followed.
3. Request documentation of the contractor's confined space program and training records for each employee participating in the permit-required confined space entry.
4. Inform of hazards. CRCSD shall inform the contractor of any known hazards and inform of any previous experience with the space that make the space a permit space.
5. Inform of precautions. CRCSD shall inform contractors of any entry precautions that have been implemented such as draining, flushing and rinsing a space, isolating the space by disconnecting lines, blanking or providing a double block-and-bleed system, locking out mechanical equipment, providing temporary lighting, purging and ventilating the space, and performing initial atmospheric testing.
6. Coordinate entry. CRCSD shall coordinate operations with the contractor when hose and contractor employees will be working in or near permit spaces.
7. Conduct debriefing. At the conclusion of the entry, the contractor must debrief CRCSD regarding the permit program and any hazards confronted in the space during entry operations.

Contractor's representative shall, in addition to complying with all of the other requirements governing confined space entry:

1. Obtain any available information regarding permit space hazards and entry operations from CRCSD confined space supervisor.
2. Inform CRCSD confined space supervisor of the provisions of the contractor's written permit program if it is agreed that the contractor's program will be followed rather than CRCSD Permit Required Confined Space Program.
3. Provide documentation of the contractor's confined space program and training records for each employee participating in the permit-required confined space entry.
4. Coordinate entry operations when CRCSD and the contractor's employees will be working in or near permit spaces.
5. Report hazards confronted or created during the entry to the hose, either at the debriefing session or when they occur.

The training will be recorded on the Confined Space Training Form. The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training. The certification shall be available for inspection by employees and their authorized representatives.

Training will be recertified and recorded based on the following:

- New job-when job duties change
- New environment-when new permit spaces are identified
- New hazards-new toxics and other hazards are identified
- Job performance deficiencies

10.0 REPORTING/POSTING

CRCSD shall retain each canceled entry permit for at least 1 year to facilitate the review of the permit-required confined space program. Any problems encountered during an entry operation shall be noted on the pertinent permit so that appropriate revisions to the permit space program can be made.

If permit required spaces are found to exist, the CRCSD designated representative will make a note of the exact location of this space and post or have posted danger signs, or identify the manner in which this space is already posted.

11.0 HOT WORK PERMIT PROGRAM

1.0 PURPOSE, SCOPE

Provide procedures for activities which result in sparks, fire, molten slag, or hot material which has the potential to cause fires or explosions. This includes cutting, brazing, soldering, thawing pipes, torch applied roofing, grinding, and welding.

2.0 DEFINITIONS

Hot Work: Performing welding or cutting in a permit required confined space.

Permit Required Confined Space: A confined space that has one or more of the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere
- Contains a material that has the potential for engulfing an entrant
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross section

Hot Work Permit: CRCSD's written authorization to perform operations (for example, riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.

3.0 IDENTIFICATION OF HOW WORK PERMIT SPACES

A permit required confined space is defined as one with a potential hazard, including:

- Combustible/flammable environment

- Toxic gases given off by welding
- Electrical Hazard

Performing hot work in a permit required confined space requires both a hot work permit and a confined space permit.

4.0 PERSONNEL RESPONSIBLITIES

Operator Responsibilities

- Must be properly trained on their equipment, including personal protective equipment
- Must have authority from supervisor to perform the work
- Must be familiar with communications, including stopping operations
- Report defective equipment or safety hazards

Fire Watch Responsibilities

- Watch for fires in all exposed areas
- Extinguish fires within the capacity of the equipment
- Maintain fire watch for ½ hour after hot work in completed to ensure all fires are out

Supervisor Responsibilities

- Inspect the area prior to authorizing operations
- Must get authorization from upper management to perform hot work operations
- Designate precautions to be followed in granting authorization in the form of a written permit
- Ensure the fire watch is present
- Cancel permits upon completion or when a dangerous situation occurs
- Ensure proper ventilation in the space
- Ensure proper monitoring of the space while the operation is taking place

Contractors Responsibilities

- Ensure proper authority before beginning operations
- Ensure hot work permit is completed

5.0 HOT WORK PROCEDURES

Required Fire Prevention Actions for Welding/Hot Works

- Where practicable, all combustibles shall be relocated at least 35 feet from the work site. Where relocation is impractical, combustibles shall be protected with flame proof covers, shielded with metal, guards, curtains, or wet down material to help prevent ignition of material.
- Ducts, conveyor systems, and augers that might carry sparks to distant combustibles shall be protected or shut down.
- Where cutting or welding is done near walls, partitions, ceilings, or a roof of combustible construction, fire-resistant shields or guards shall be provided to prevent ignition.
- If welding is to be done on a metal wall, partition, ceiling, or roof, precautions shall be taken to prevent ignition of combustibles on the other side due to conduction or radiation of heat. Where combustibles cannot be relocated on the opposite side of the work, a fire watch person shall be provided on the opposite side of the work.
- Welding shall not be attempted on a metal partition, wall, ceiling, or roof having a covering, nor on walls having combustible sandwich panel construction.
- Cutting or welding on pipes or other metal in contact with combustible walls, partitions, ceilings, or roofs shall not be undertaken if the work is close enough to cause ignition by combustion.
- Cutting or welding shall not be permitted in the following situations:
    1. In areas not authorized by management
    2. In sprinkled buildings while such protection is impaired
    3. In the presence of potentially explosive atmospheres
    4. In areas near the storage of large quantities of exposed, readily ignitable materials
    5. In areas where there is dust accumulation of greater than 1/16 inch within 35 feet of the area where welding/hot works will be conducted. All dust accumulation should be cleaned up following the housekeeping program of the facility before welding/hot works are permitted
- Suitable extinguishers shall be provided and maintained ready for instant use.
- A fire watch person shall be provided during and for 2 hours past the completion of the welding project.
- A cutting/welding permit will be issued on all welding or cutting outside of the designated welding area.

Welding & Hot Work Fire Prevention Measures

- A designated welding area should be established to meet the following requirements:
    1. Floors swept and cleaned of combustibles within 35 feet of work area

2. Flammable and combustible liquids and material will be kept 35 feet from work area
3. Adequate ventilation providing 20 air changes per hour, such as a suction hood system should be provided to the work area
4. At least one 10-pound dry chemical fire extinguisher should be within access of the 35 feet of work area
5. Protective dividers such as welding curtains or non-combustible walls will be provided to contain sparks and slag to the combustible free area

- Requirements for welding conducted **outside** the designated welding area:
  1. Portable welding curtains or shields must be used to protect other workers in the welding area
  2. A hot works permit must be completed and complied with prior to welding operation
  3. Respiratory protection is mandatory unless an adequate monitored air flow away from the welder and others present can be established and maintained
  4. Plastic materials be covered with welding tarps during welding procedures
  5. Fire watch must be provided for all hot work operations

Welding Standard Operating Procedures

- The following pages list the Welding Standard Operating Procedures (SOP) and are applicable for all electric and gas welding. These SOPs are to be posted at each Designated Welding & Hot Work Area for quick reference and review.

6.0 SOP—ELECTRIC WELDING

Perform Safety Check On All Equipment

- Ensure fire extinguisher is charged and available.
- Ensure electrical cord, electrode holder and cables are free from defects (no cable splices are allowed within 10 feet of the electrode holder).
- Ensure PPE (welding hood, gloves, rubber boots/soled shoes, aprons) are available and have no defects.
- Ensure respirators and ventilation is required where fumes are produced.
- Ensure the welding unit is properly grounded.
- All defective equipment must be repaired or replaced **before use.**

Remove flammables and combustibles

- No welding is permitted on or near containers of flammable material, combustible material, or unprotected flammable structures.

- Place welding screen or suitable barricade around work area to provide a fire safety zone and prevent injuries to passerby (do not block emergency exits or restrict ventilation).

Ensure Adequate Ventilation and Lighting

Execute Hot Work Permit Procedures

Set Voltage Regulator

- No higher than the following:
  1. Manual Alternating Current Welders—80 Volts
  2. Automatic Alternating Current Welders—100 Volts
  3. Manual or Automatic Direct Current Welders—100 Volts

Uncoil and Spread out Welding Cable

- To avoid overheating, ensure proper contact of work leads and connections, remove any metal fragments from magnetic work clamps (to avoid electric shock do not wrap welding cables around a body part and void welding in wet conditions).

Fire Watch for One Hour After Welding & Until All Welds Have Cooled

Perform Final Fire Watch and Terminate Permit

7.0 SOP: GAS WELDING

Perform Safety Check on all Equipment

- Ensure tanks have gas and fittings are tight.
- Ensure fire extinguisher is charged and available.
- Ensure hoses have no defects.
- Ensure PPE (welding hood, gloves, rubber boots/soled shoes, aprons) are available and have no defects.
- Ensure respirators and ventilation are used where fumes are produced.
- All defective equipment must be repaired or replace **before uses**.
- Ensure oxygen cylinders are stored in an upright position 20 feet from any flammable gases or petroleum products.

Remove Flammables and Combustibles

- No welding is permitted on or near containers of flammable material, combustible material, or unprotected flammable structures.

- Place welding screen or suitable barricade around work area to provide a fire safety zone and prevent injuries to passerby (do not block emergency exits or restrict ventilation).

Ensure Adequate Ventilation and Lighting

Execute Hot Work Permit Procedures

Open Valves on Oxygen and Gas Tanks to Desired Flow

Shut Tank Valves & Relieve Hose Pressure. Store Hoses

Fire Watch for One Hour After Welding & Until all Welds Have Cooled

Perform Final Fire Watch and Terminate Permit

8.0 TRAINING

Training Shall Include:

- Supervisor training
    1. Review of requirements listed in OSHA 1910.252
    2. Use of Hot Work Permit System
    3. Air Monitoring of oxygen, combustibles, and toxics
    4. Combustible/flammable recognition
    5. Use of first aid
    6. Documentation requirements
    7. Lockout/Tagout procedures
    8. Lighting
    9. Competency in oxygen or fuel-gas supply equipment

Fire Watch Training—Specifically, The Fire Watch Must Know:

1. How to use the provided fire extinguisher—pull the pin, aim at the base of fire, squeeze handle to release extinguishing material, and move from side to side
2. How to activate fire alarm if fire is beyond the incipient stage
3. Use of first aid

Operator Training:

1. Welding training
2. Respirator training

3. Air monitoring
4. Ventilation
5. Communication for emergencies
6. Screens and barricades
7. Lockout/Tagout
8. Lighting
9. Use of first aid
10. Familiarity with AWS Standard A6-1-1966

Contractors Responsibility

1. Hazard recognition
2. Hot Work Procedures
3. Emergency Procedures

HOT WORK PERMIT **DATE _____**

Designated Area:
Identity: _____
Purpose: _____
Hazards: _____

Personnel: Enter Names of Qualified Personnel

Welder/Cutter	Fire Watch	Supervisor	Contractor

Safety Checks: Completed prior to hot work activity.

Safety Check	Date/Time	Safety Check	Date/Time
Working fire extinguisher available		Gas fittings tight/defect-free hoses	
Splice-free electric cords and cables		Ventilation in place	
Defect-free personal protective equipment		Proper lighting	
Welding unit is grounded		Fire Watch	
Flammable/combustible material removed		Lockout/Tagout	
Welding screen/barricade in place		Barriers, signs	

Fire Watch: Outline Procedures.

Personnel who act as "fire watch" are trained to use hand held fire extinguishers and in the procedures to activate the fire alarm if the fire is beyond the incipient stage. The fire watch is their only duty or responsibility during the period of welding and cutting. The fire watch will maintain their watch for one hour after welding and until all welds have cooled.

Emergency Procedures:

Fire Emergency:_____ Medical Emergency: _____

Certification:

I certify the above persons were trained in accordance with 29 CFR 1910.252, and that the training is current for the Hot Work Permit.

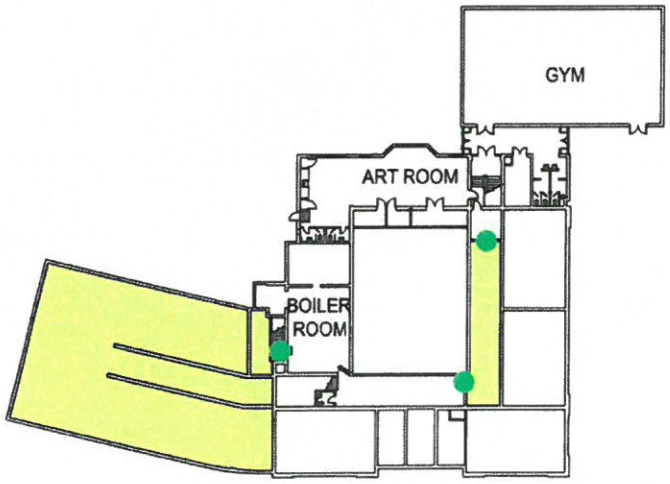
Recordkeeping Requirement: Maintain completed copies on file for one year from the date of entry.

Supervisor Signature _____

AFTER ACTION REPORT			
CAGEGORY	**DEFICIENCY**	**RECOMMENDATION**	**COMPLETED**
PRCS Written Program			
Permit Form			
Lockout/Tagout			
Ventilation			
Monitoring			
Retrieval			
Communication			
Personnel			
Lighting			
Rescue			
Decontamination			
Hot Work Programs			
Hot Work Permit			
Emergency Response			
Site Security			
Respiratory Equipment			
Entry Plan			
Training			
Engulfment Hazard			
Configuration Hazards			
Contingencies			
Weather			

CONFINED SPACE

TUNNEL ACCESS



N

1 LOWER LEVEL FLOOR PLAN

Cedar Rapids Community School District

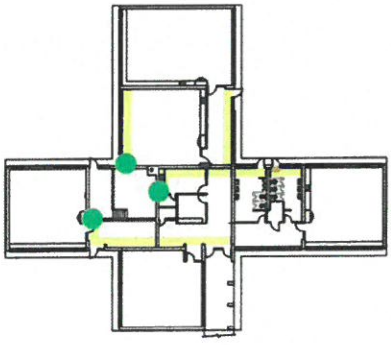
Excellence for All

Confined Spaces
Arthur Elementary School

2630 B Avenue NE, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS



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1 FLOOR PLAN

Cedar Rapids Community School District

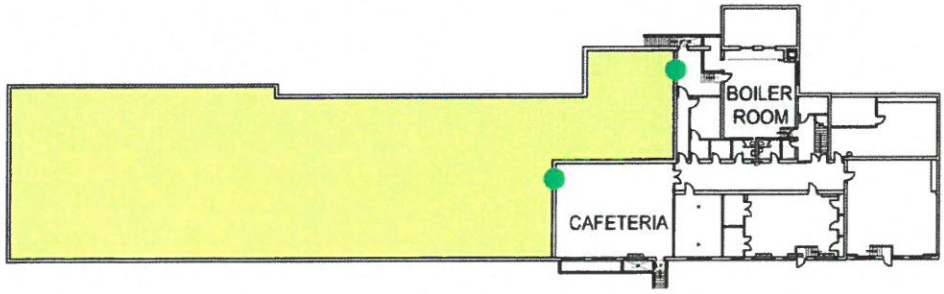
Excellence for All

Confined Spaces
Arthur Annex

300 27th Street NE, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS



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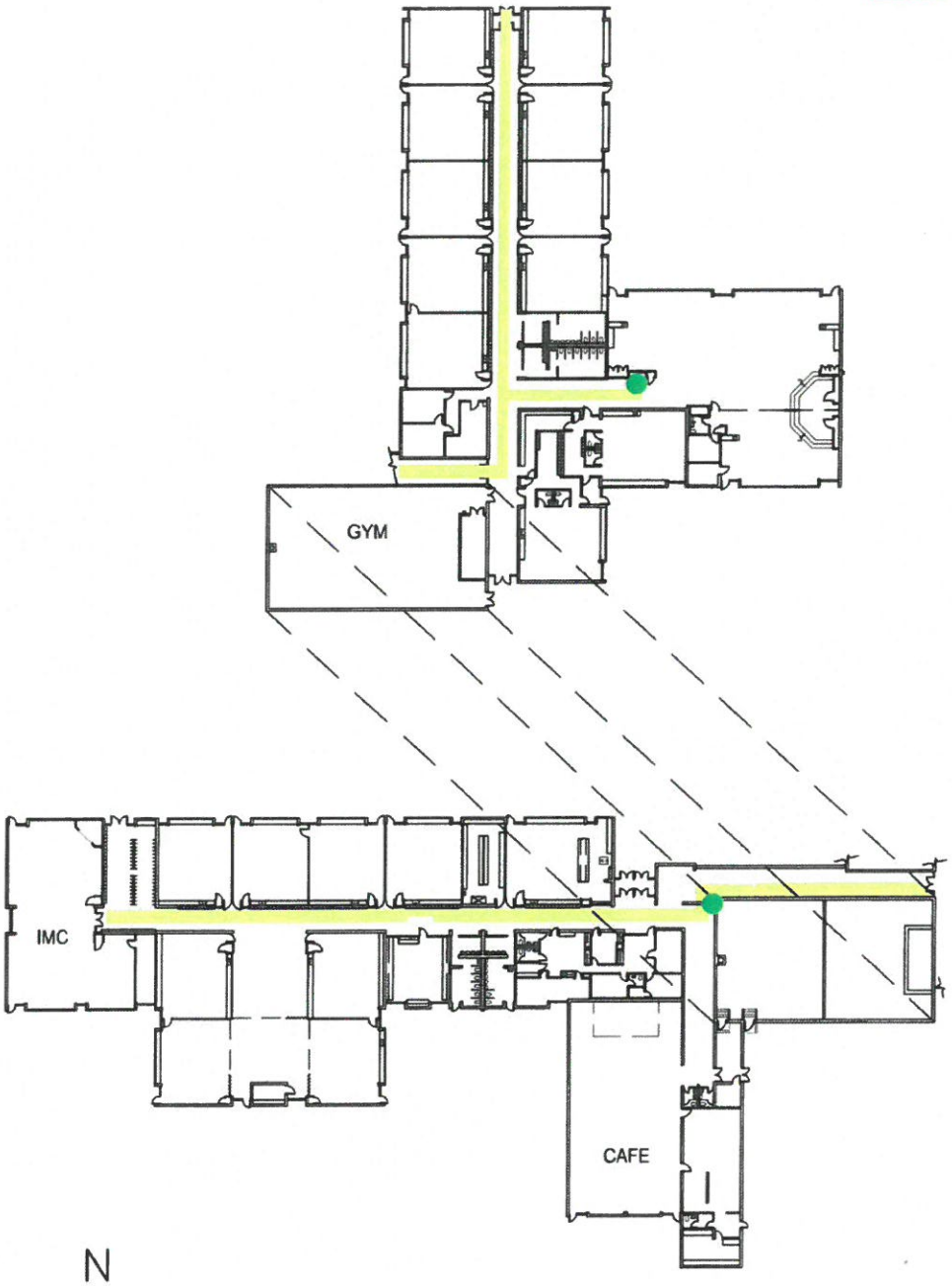
1 LOWER LEVEL FLOOR PLAN

Cedar Rapids Community School District

Excellence for All

Confined Spaces
Cleveland Elementary School

2200 1st Avenue NW, Cedar Rapids, IA



1 FLOOR PLAN

Cedar Rapids Community School District
Excellence for All

Confined Spaces
Coolidge Elementary School
6225 1st Avenue SW, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS

N

1 LOWER LEVEL FLOOR PLAN

Cedar Rapids Community School District

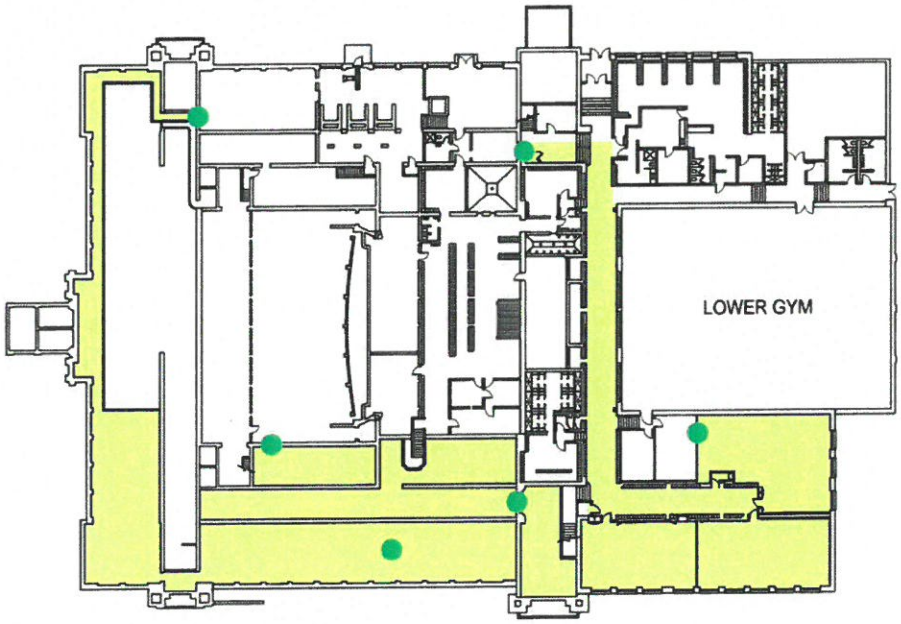
Excellence for All

Confined Spaces
Erskine Elementary School

600 36th Street SE, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS



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1 FIRST LEVEL FLOOR PLAN

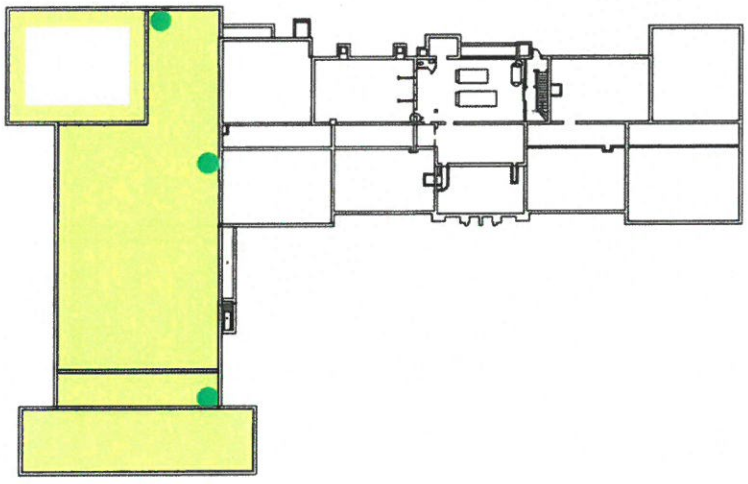
Cedar Rapids Community School District

Excellence for All

Confined Spaces
Franklin Middle School
300 20th Street NE, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS



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1 LOWER LEVEL FLOOR PLAN

Cedar Rapids Community School District

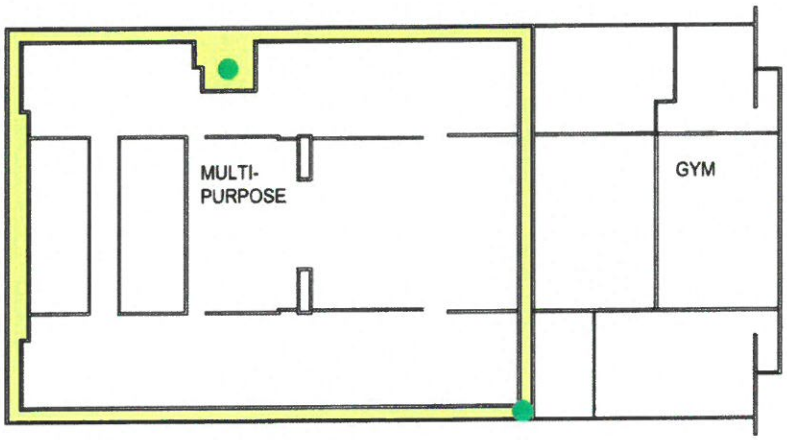
Excellence for All!

Confined Spaces
Garfield Elementary School

1201 Maplewood Drive NE, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS



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1 FLOOR PLAN

Cedar Rapids Community School District

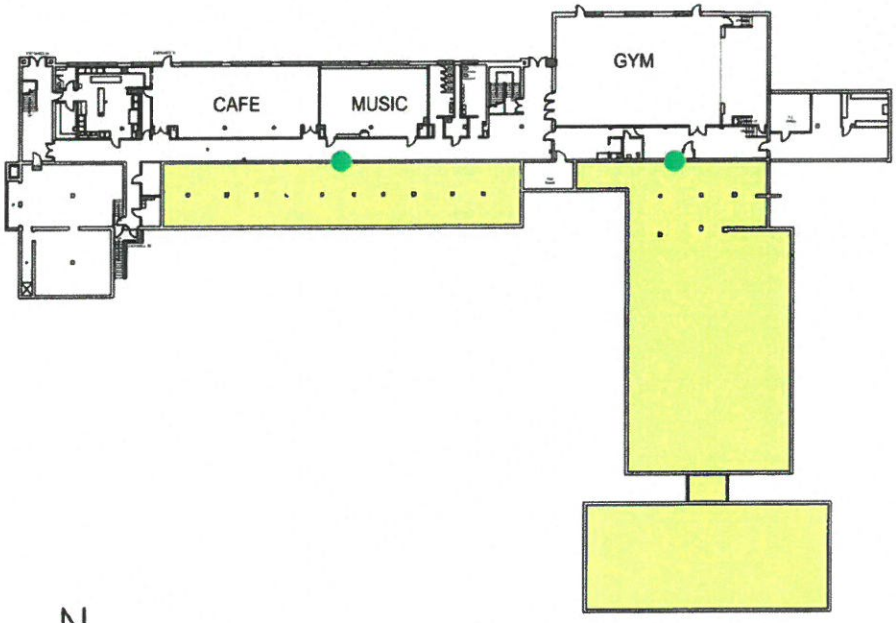
Excellence for All

Confined Spaces
Grant Elementary School

254 Outlook Drive SW, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS



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1 FLOOR PLAN

Cedar Rapids Community School District

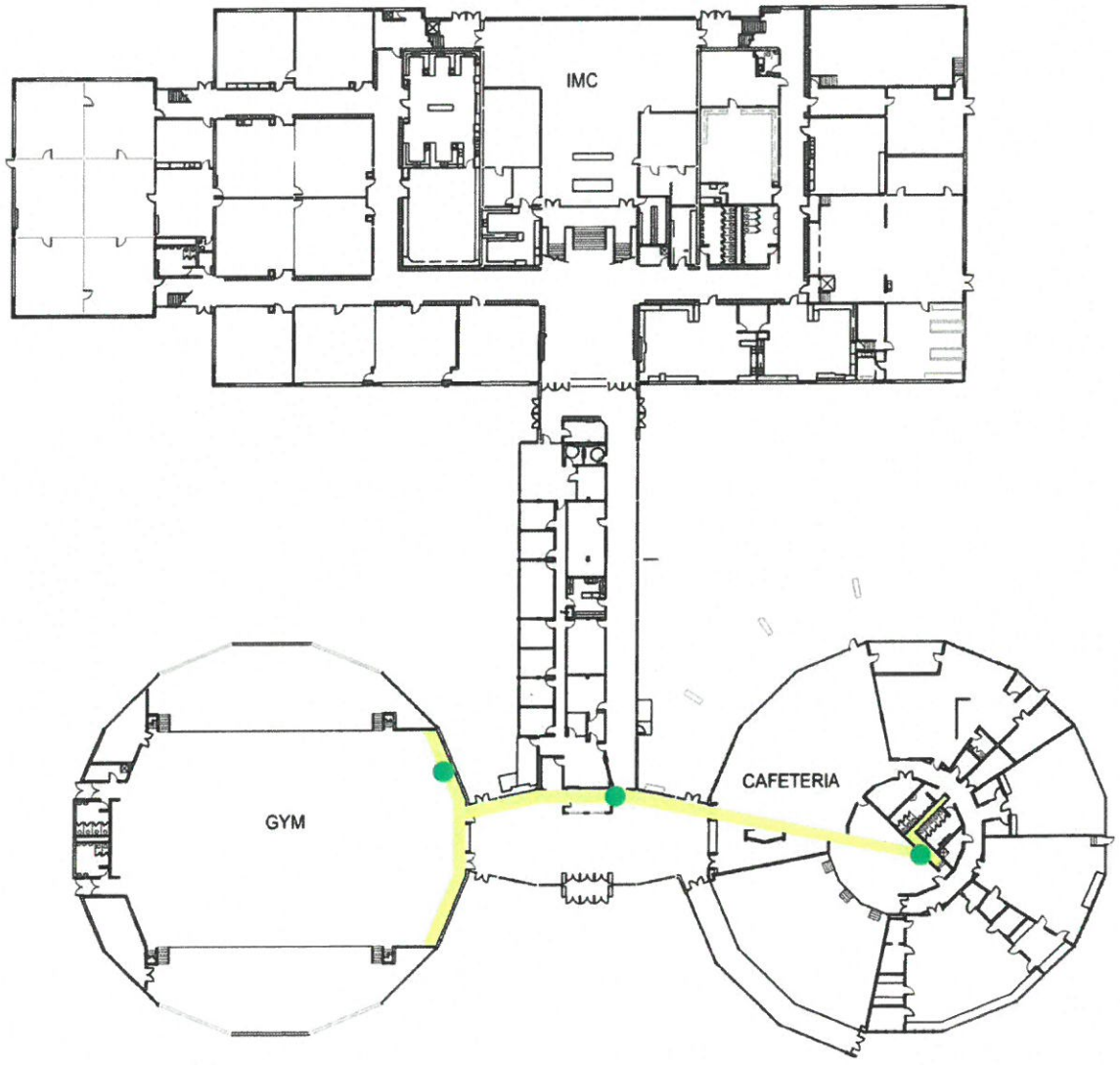
Excellence for All

Confined Spaces
Grant Wood Elementary School

645 26th Street SE, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS



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1 FIRST LEVEL FLOOR PLAN

Cedar Rapids Community School District

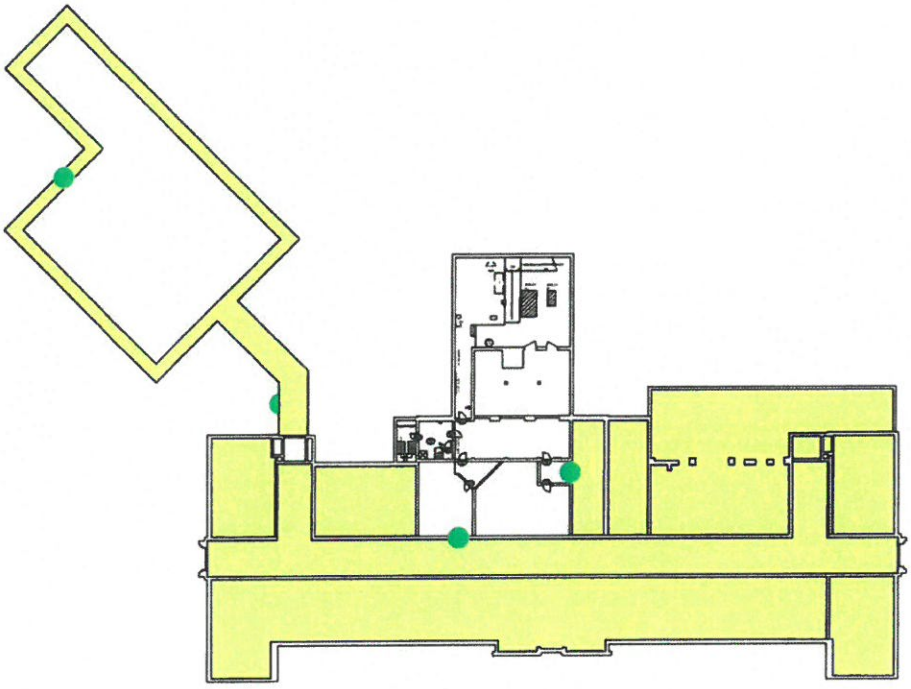
Excellence for All

Confined Spaces
Harding Middle School

4801 Golf Street NE, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS



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1 LOWER LEVEL FLOOR PLAN

Cedar Rapids Community School District

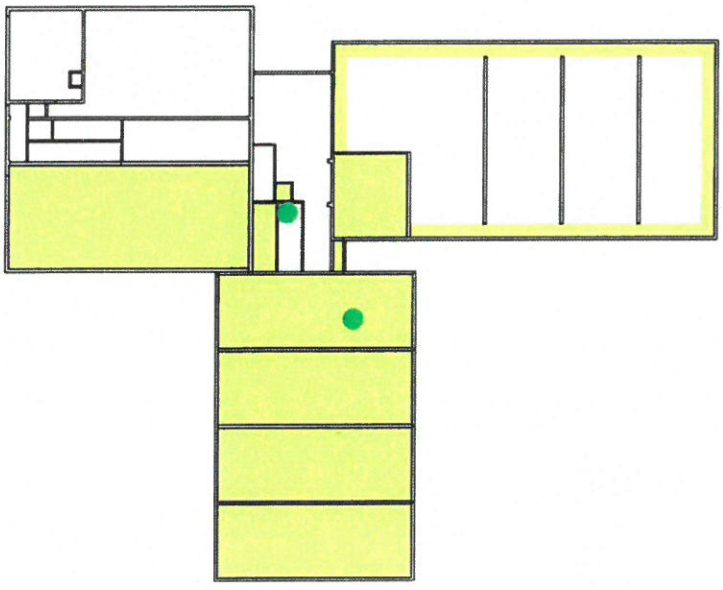
Excellence for All

Confined Spaces
Harrison Elementary School

620 10th Street SE, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS



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1 FLOOR PLAN

Cedar Rapids Community School District

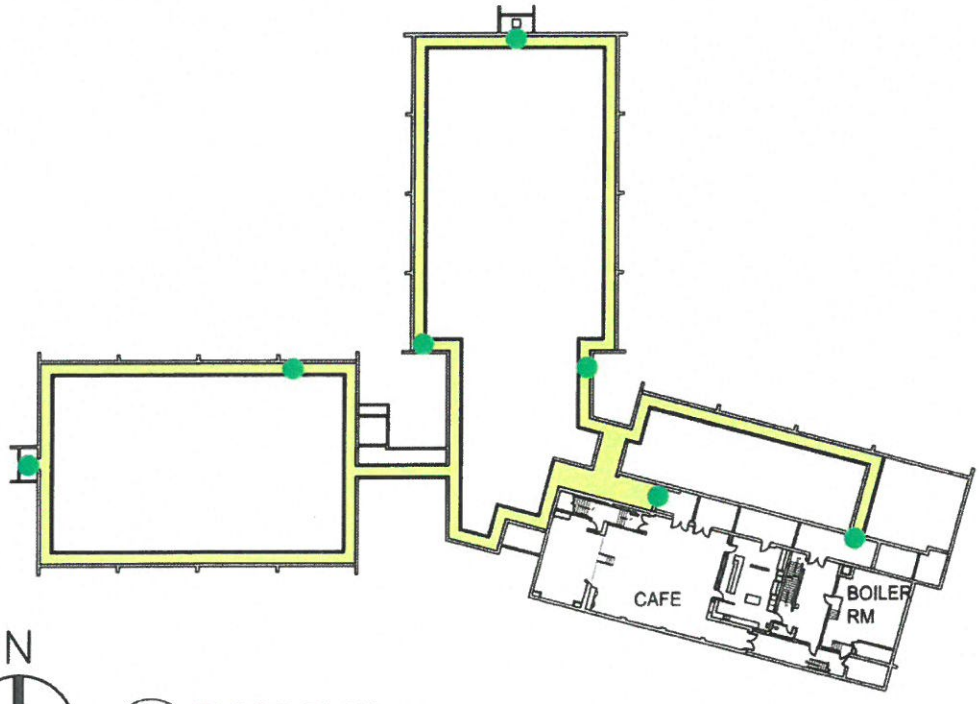
Excellence for All

Confined Spaces
Hiawatha Elementary School

603 Emmons Street, Hiawatha, IA

CONFINED SPACE

TUNNEL ACCESS



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1 FLOOR PLAN

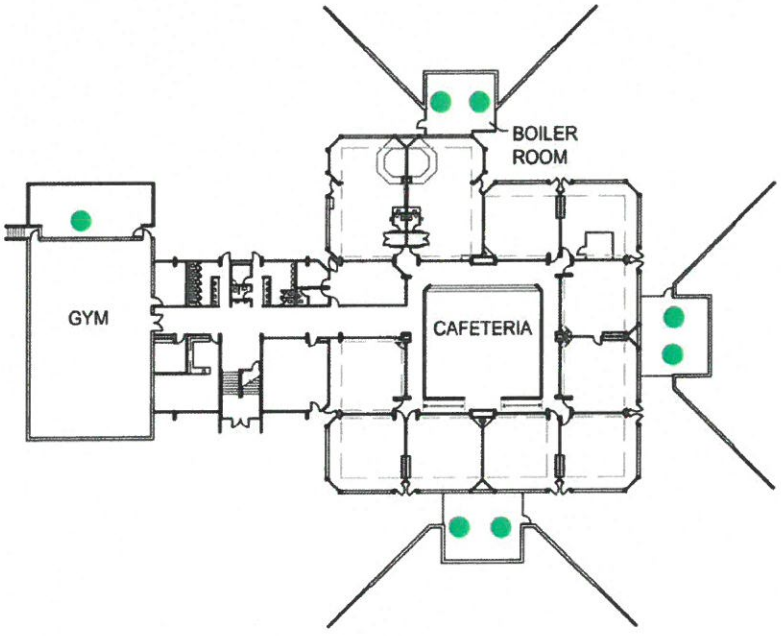
Cedar Rapids Community School District

Excellence for All

Confined Spaces
Hoover Elementary School

4141 Johnson Avenue NW, Cedar Rapids, IA

UNDERGROUND
DUCTWORK ACCESS

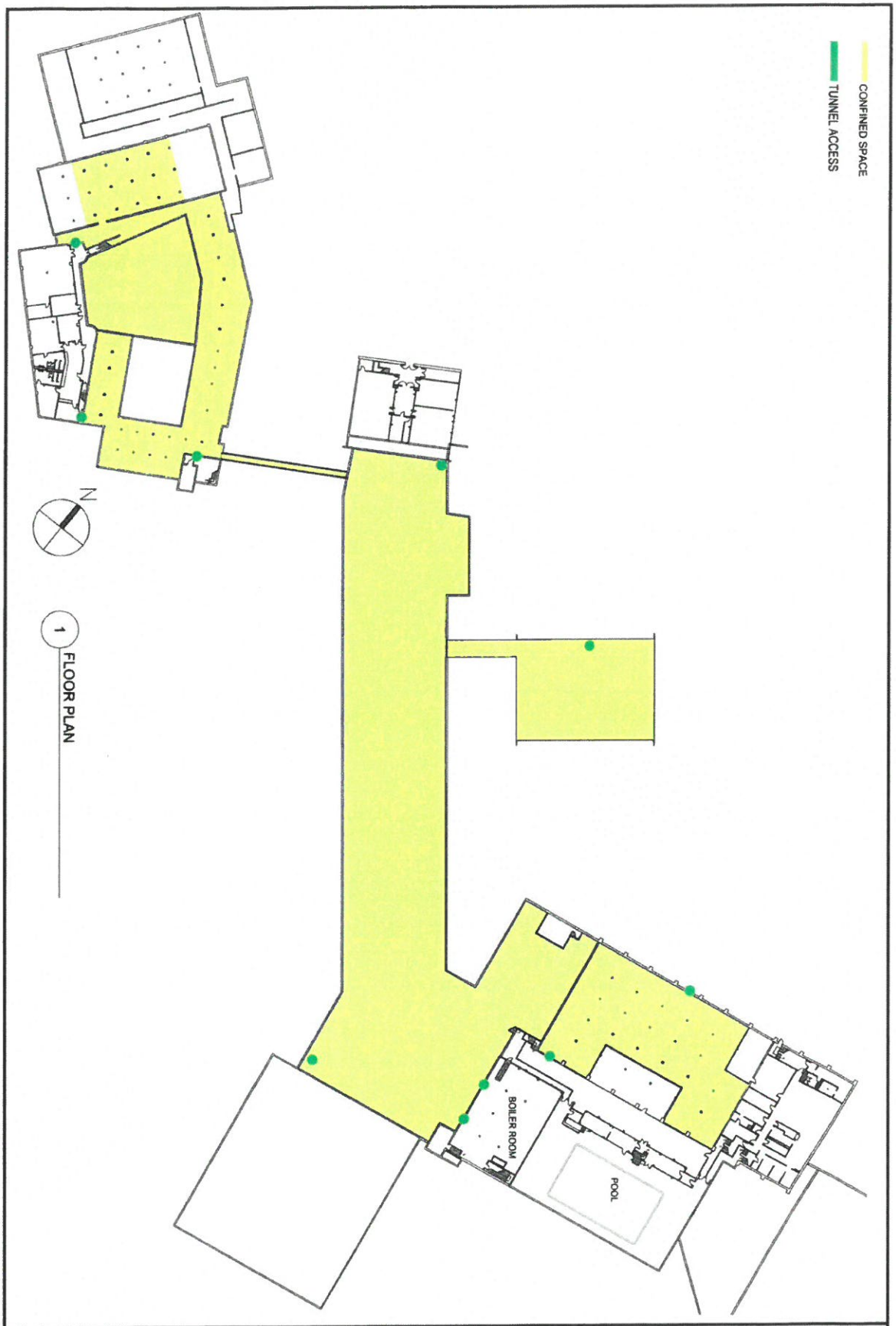


N

1 FLOOR PLAN

Cedar Rapids
Community School District
Excellence for All

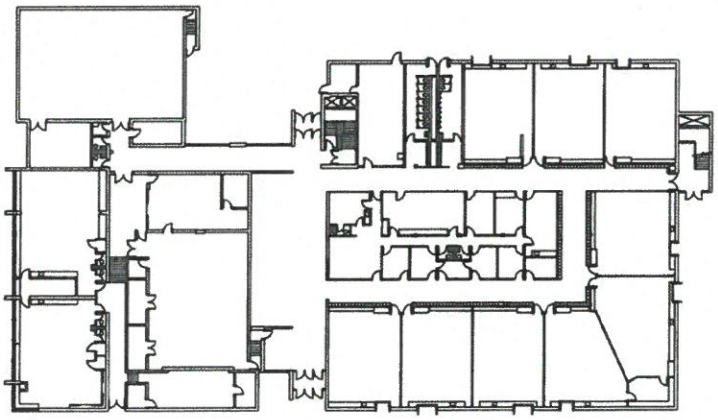
Confined Spaces
Jackson Elementary School
1300 38th Street NW, Cedar Rapids, IA



Confined Spaces
Jefferson High School
1243 20th Street SW, Cedar Rapids, IA

Cedar Rapids Community School District
Excellence for All

NO CONFINED SPACE

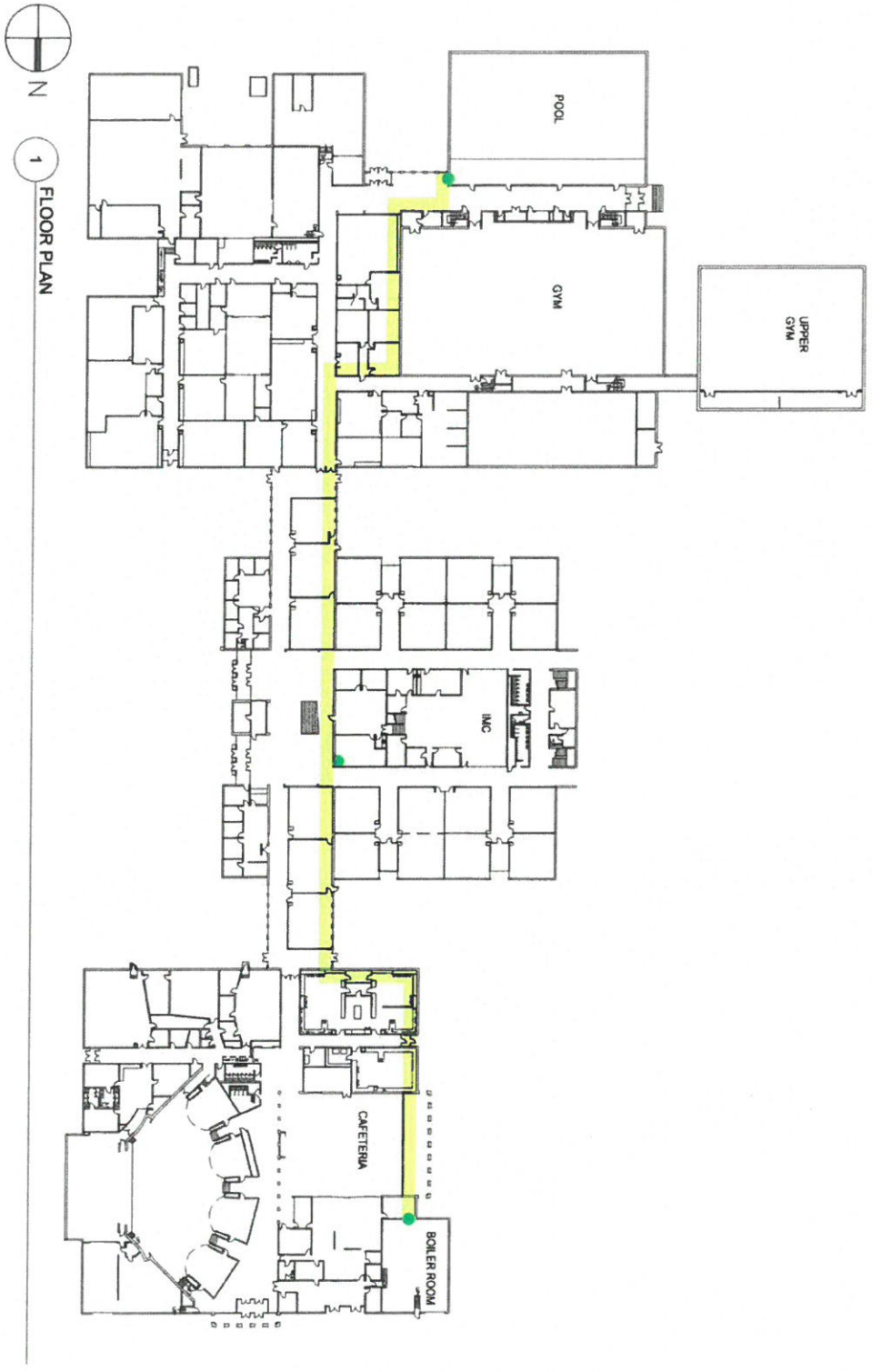


N

1 FIRST LEVEL FLOOR PLAN

Cedar Rapids Community School District
Excellence for All

Confined Spaces
Johnson Elementary School
355 18th Street SE, Cedar Rapids, IA

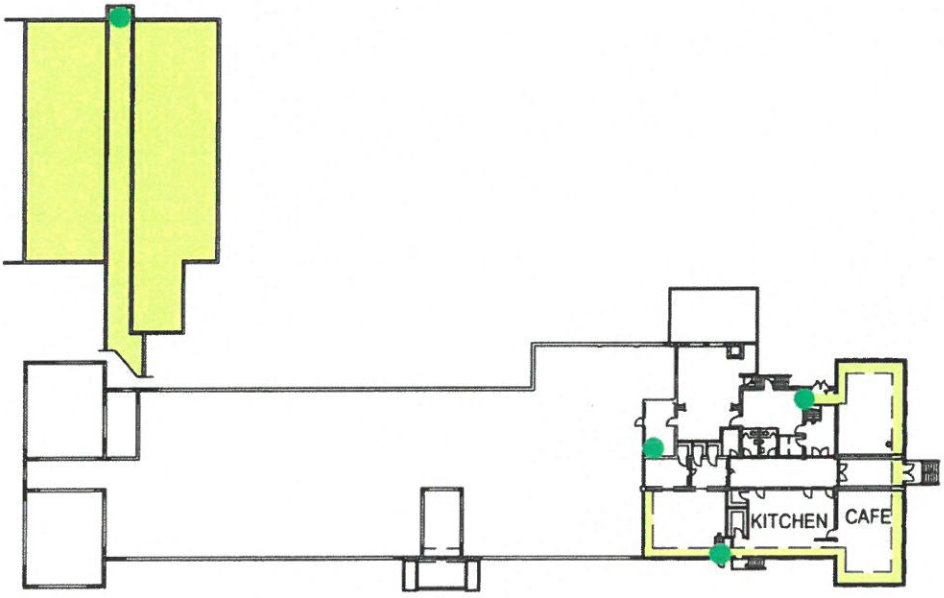


Confined Spaces
Kennedy High School
4545 Wenig Road NE, Cedar Rapids, IA

Cedar Rapids Community School District
Excellence for All

CONFINED SPACE

TUNNEL ACCESS



N

1 LOWER LEVEL FLOOR PLAN

Cedar Rapids Community School District

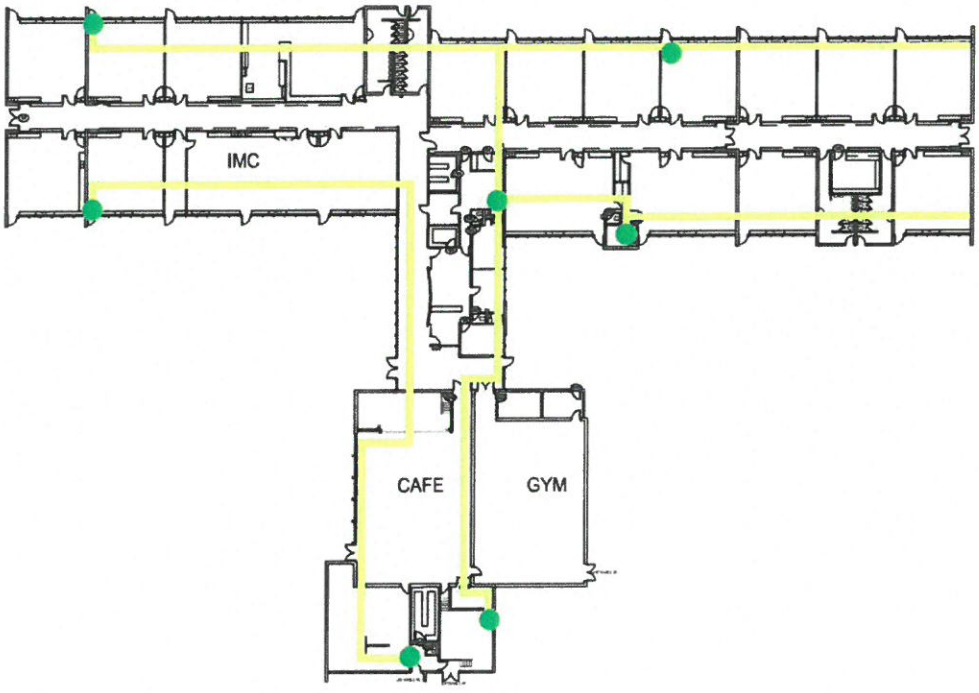
Excellence for All

Confined Spaces
Kenwood Elementary School

3700 E Avenue NE, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS



N

1 FLOOR PLAN

Cedar Rapids Community School District

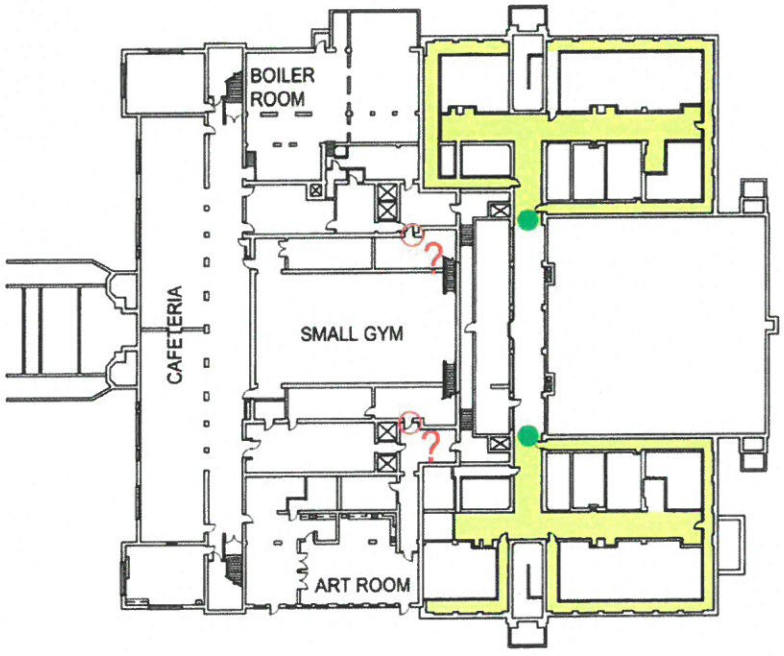
Excellence for All

Confined Spaces
Madison Elementary School

1341 Woodside Drive NW, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS



N

1 LOWER LEVEL FLOOR PLAN

Cedar Rapids Community School District

Excellence for All

Confined Spaces
McKinley Middle School

620 10th Street SE, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS

N

1 LOWER LEVEL FLOOR PLAN

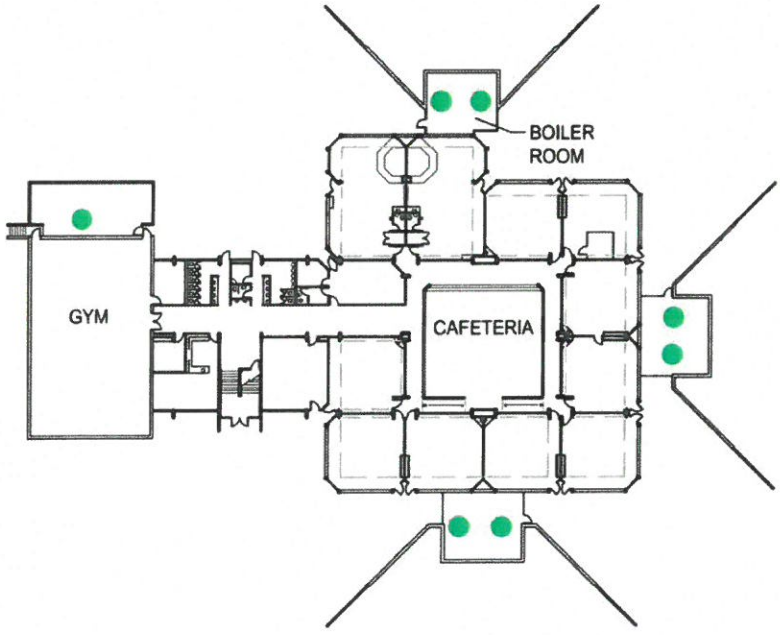
Cedar Rapids Community School District

Excellence for All

Confined Spaces
Metro High School

1212 7th Street SE, Cedar Rapids, IA

UNDERGROUND
DUCTWORK ACCESS

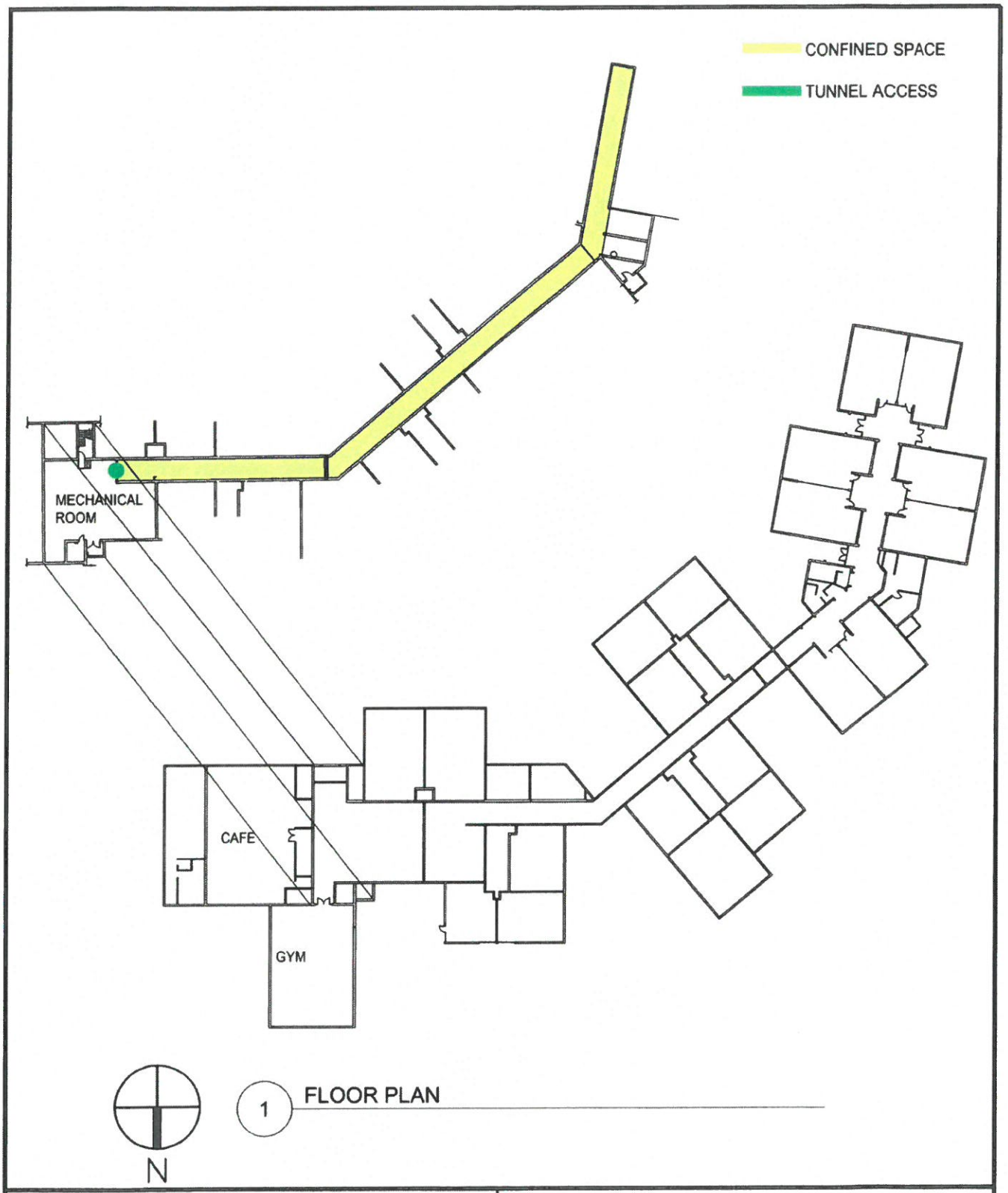


N

1 FLOOR PLAN

Cedar Rapids
Community School District
Excellence for All

Confined Spaces
Nixon Elementary School
200 Nixon Drive, Hiawatha, IA



1 FLOOR PLAN

Cedar Rapids Community School District
Excellence for All

Confined Spaces
Pierce Elementary School
4343 Marilyn Drive, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS

N

1 FLOOR PLAN

Cedar Rapids Community School District

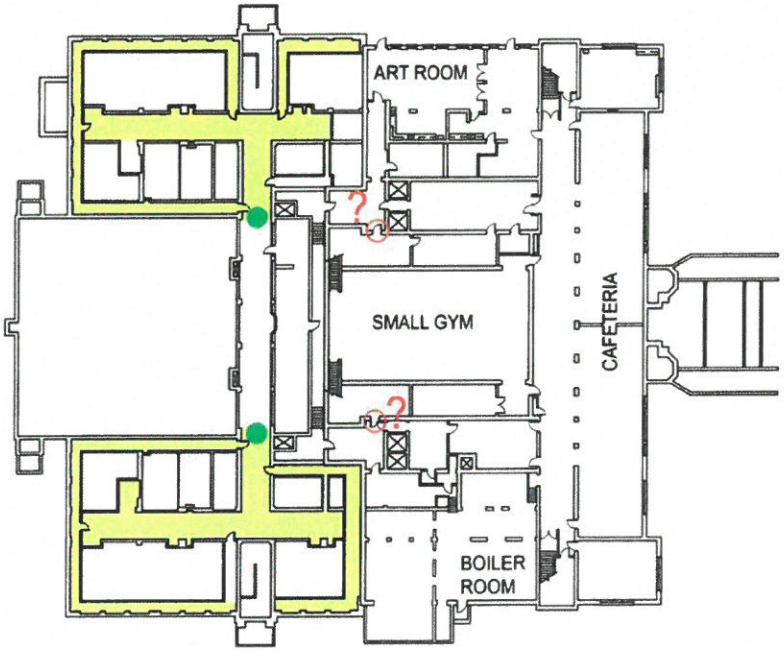
Excellence for All

Confined Spaces
Polk Elementary

1500 A Avenue Northeast, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS



N

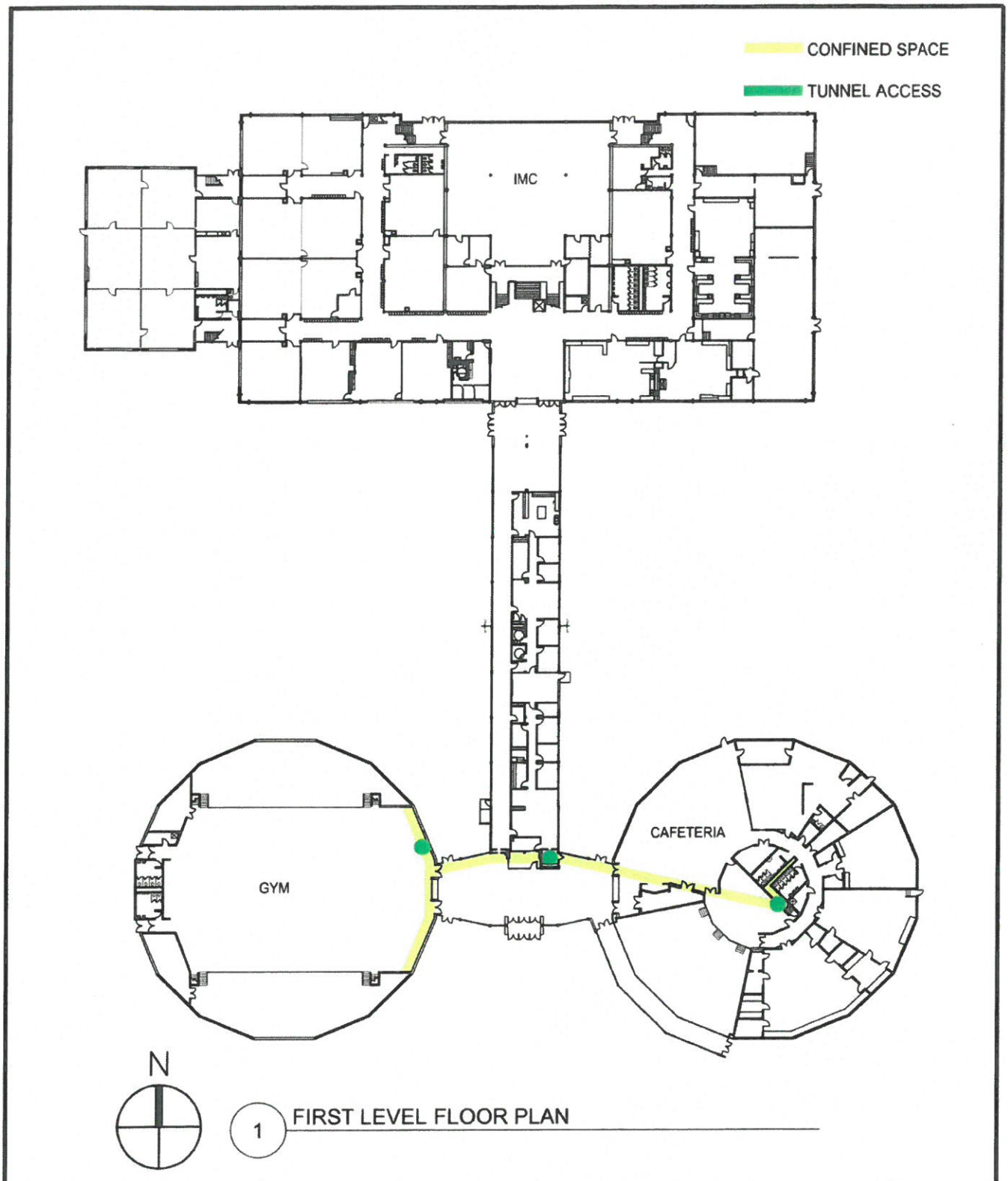
1 LOWER LEVEL FLOOR PLAN

Cedar Rapids Community School District

Excellence for All

Confined Spaces
Roosevelt Middle School

300 13th Street NW, Cedar Rapids, IA

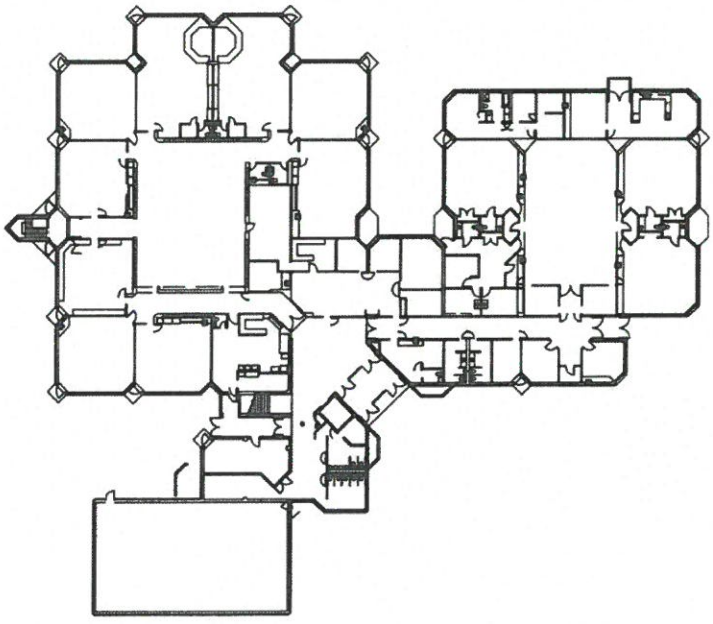


1 FIRST LEVEL FLOOR PLAN

Cedar Rapids Community School District
Excellence for All

Confined Spaces
Taft Middle School
5200 E Avenue NW, Cedar Rapids, IA

NO CONFINED SPACE



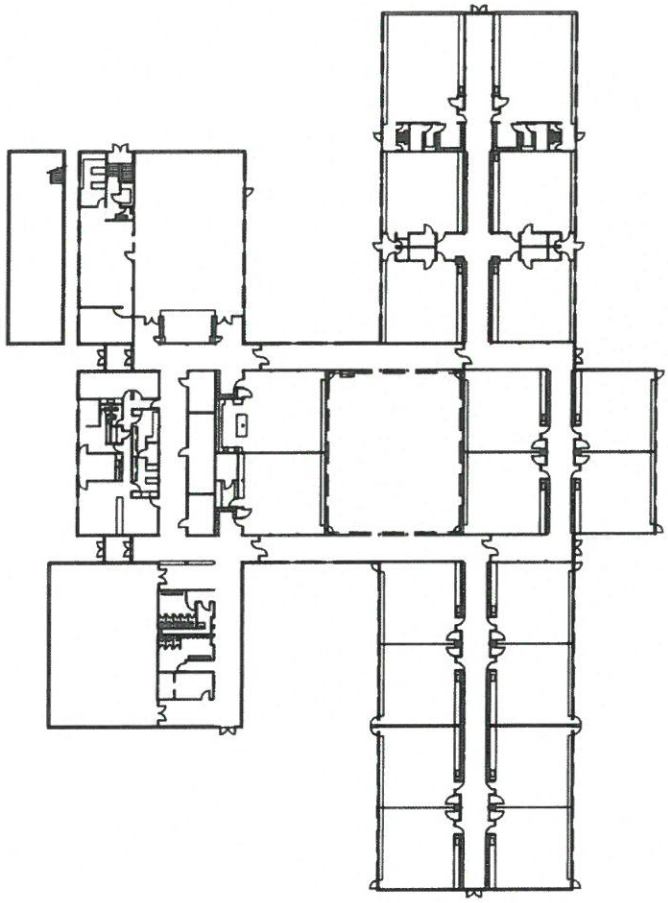
N

1 FIRST LEVEL FLOOR PLAN

Cedar Rapids Community School District
Excellence for All

Confined Spaces
Taylor Elementary School
720 7th Avenue SW, Cedar Rapids, IA

NO CONFINED SPACE



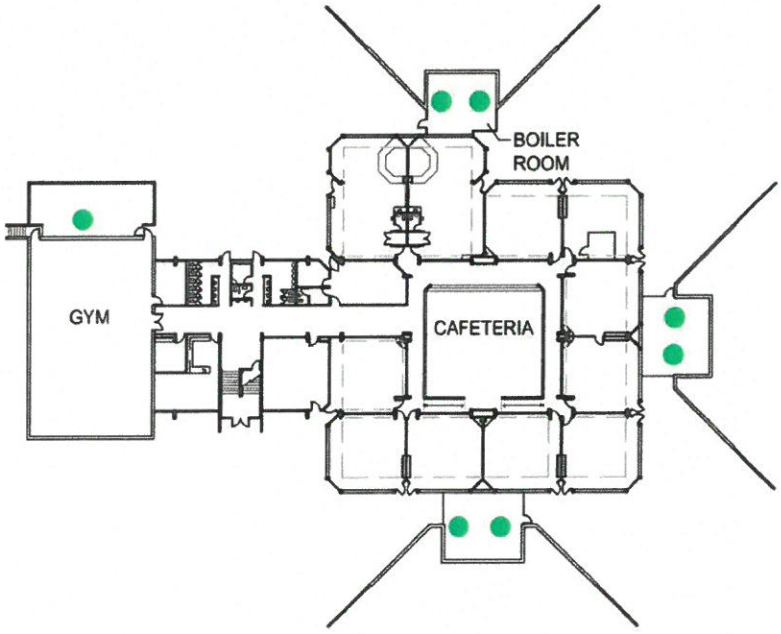
N

1 FIRST LEVEL FLOOR PLAN

Cedar Rapids Community School District
Excellence for All

Confined Spaces
Truman Elementary School
441 West Post Road NW, Cedar Rapids, IA

UNDERGROUND
DUCTWORK ACCESS



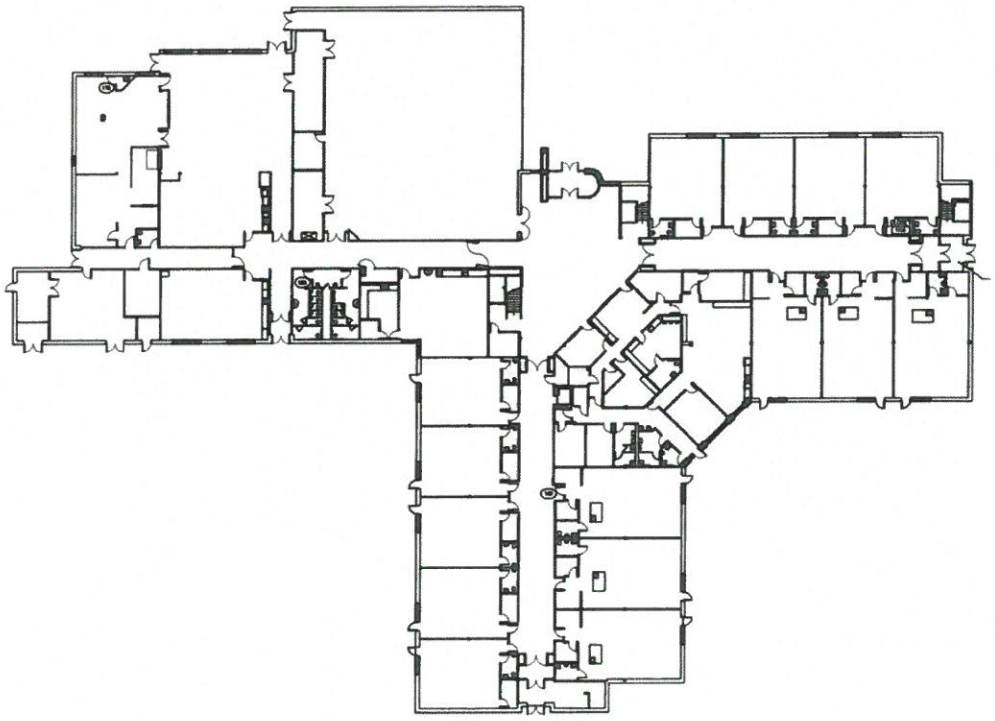
N

1 FLOOR PLAN

Cedar Rapids
Community School District
Excellence for All

Confined Spaces
Van Buren Elementary School
2525 29th Street SW, Cedar Rapids, IA

NO CONFINED SPACE

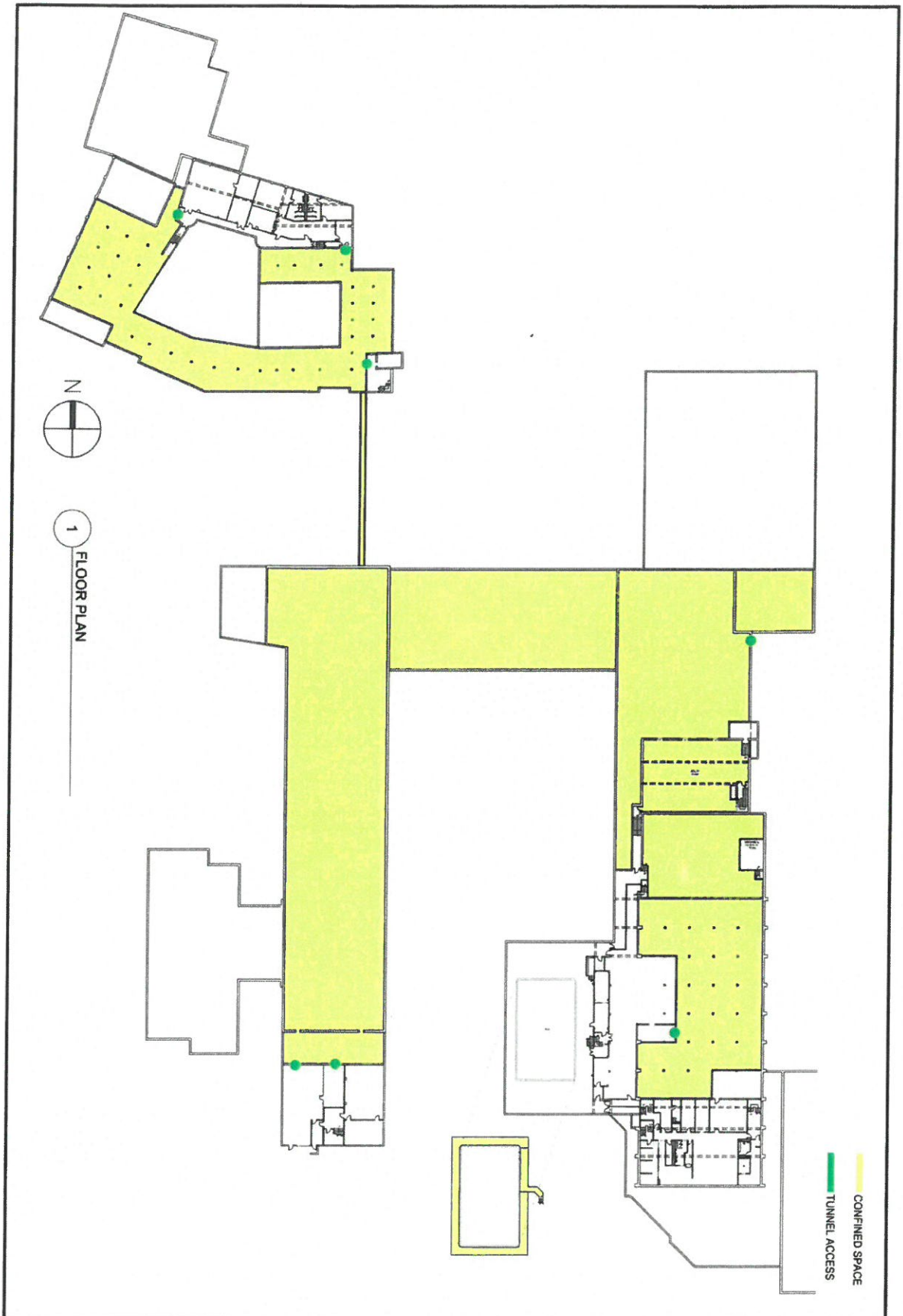


N

1 FIRST LEVEL FLOOR PLAN

Cedar Rapids Community School District
Excellence for All

Confined Spaces
Viola Gibson Elementary School
6101 Gibson Drive NE, Cedar Rapids, IA

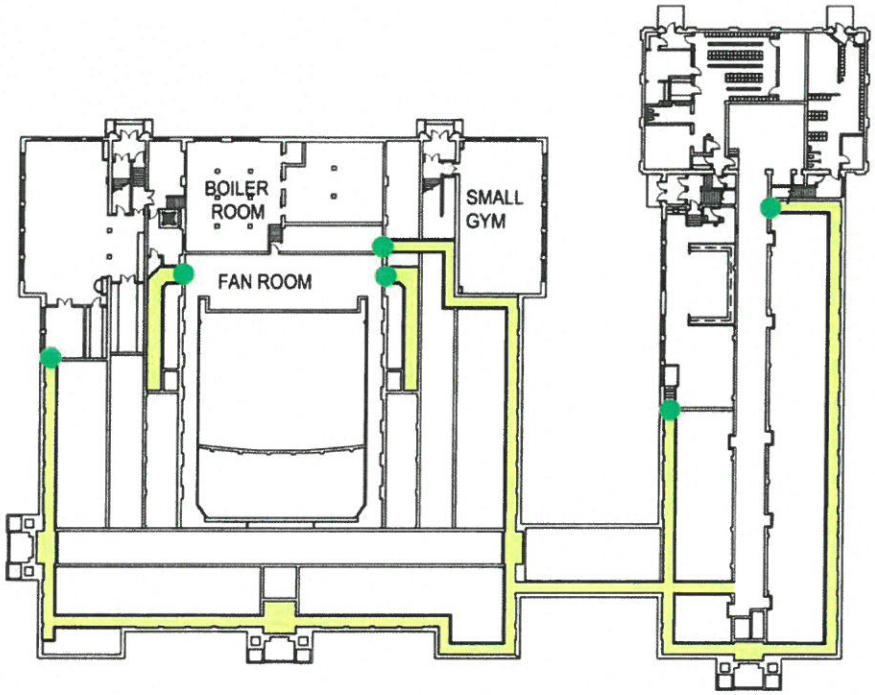


Confined Spaces
Washington High School
2205 Forest Drive SE, Cedar Rapids, IA

Cedar Rapids
Community School District
Excellence for All

CONFINED SPACE

TUNNEL ACCESS



N

2 LOWER LEVEL FLOOR PLAN

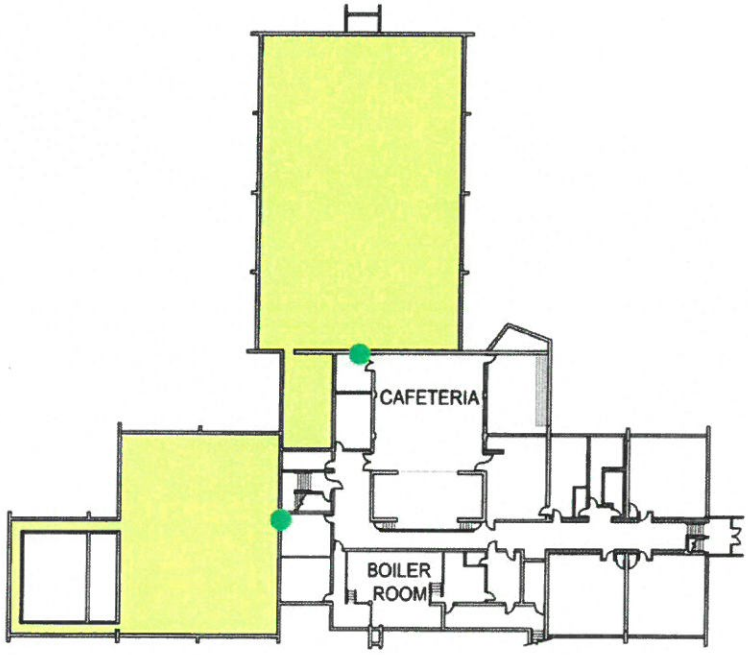
Cedar Rapids Community School District

Excellence For All

Confined Spaces
Wilson Middle School
2301 J Street SW, Cedar Rapids, IA

CONFINED SPACE

TUNNEL ACCESS



N

1 LOWER LEVEL FLOOR PLAN

Cedar Rapids Community School District

Excellence for All!

Confined Spaces
Wright Elementary School

1524 Hollywood Blvd NE, Cedar Rapids, IA