

HAZARDOUS MATERIALS BUSINESS PLAN SUMMARY DOCUMENT

University of California Riverside Main Campus and West Campus Hazardous Materials Business Plan Summary Document is an internal document intended to be a summary of the components and elements of the Hazardous Materials Business Plan filed with state and local oversight agencies. The content within is designed as a reference for students, staff, and faculty and is the foundation of multiple learning opportunities for the campus.

*University of
California
Riverside*

Hazardous Materials Business Plan Summary Document
University of California Riverside
Main Campus and West Campus

Plan Overview

Introduction

Federal, State and local laws require a Hazardous Materials Business Plan (HMBP) be prepared and submitted by owners and/or operators of facilities that store hazardous materials at or above reportable threshold quantities. The County of Riverside and the City of Riverside are the local oversight agencies responsible for the regulation of these compliance programs. An HMBP is a written set of procedures and information created to help minimize the effects and extent of a release of a hazardous material. The goal of the HMBP, and the necessary trainings related to the HMBP, is to provide both general and detailed information for use by those who may be exposed to hazardous materials on campus, those that handle hazardous materials as a part of tasks assigned or completed on campus, and emergency responders and to satisfy federal and state Community Right-To-Know laws.

Summary

The HMBP outlines specific information related to the storage and use of hazardous materials.

Specific information includes:

- Facility identification.
- Activities declaration.
- Necessary contact information.
- Emergency response and plan procedures.
- Prevention, mitigation, and abatement measures for a hazardous release.
- Evacuation procedures.
- Earthquake vulnerability.
- Hazardous waste contingency.
- Unauthorized release response plan.
- Site security.
- Site plan.

Authority

The UC Riverside Hazardous Materials Business Plan is created and distributed in accordance with California Health and Safety Code (HSC), Chapter 6.95, Section 25500 – 25532, California Code of Regulations (CCR) Title 19, Division 2 and Title 22, Division 4.5, and the federal Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986.

Purpose

Every member of the staff and faculty, along with required students and visitors to the University, will be informed of general information about the HMBP to increase awareness and preparedness in the event of a release of hazardous materials. Specific information regarding the HMBP will be provided to selected audiences based off of potential exposure to hazardous materials and level of involvement in the event of a release or threatened release of a hazardous material.

Approvals

This University of California Riverside Hazardous Materials Business Plan summary document has been reviewed and approved by:

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Director of Environmental Health & Safety

Implementation Date: <insert date>

Date of last Revision: 3/15/2016

Handling Hazardous Materials

Other Related Programs and Plans

Hazard Communication Program

The information communicated in the written Hazard Communication Program (HAZCOM), which is required by different regulations, supports the HMBP by establishing a baseline of knowledge for trained students, staff and faculty. The general hazard awareness information included in this program is often referenced while handling hazardous materials or identifying the nature of a material involved in a release or threatened release.

For more information on HAZCOM, please visit: http://ehs.ucr.edu/safety/Haz_Com/hazard_communication.html.

Chemical Hygiene Plan

A department specific Chemical Hygiene Plan (CHP) is a requirement for all laboratories covered by the UC? Laboratory Standard. The information contained within these plans is developed and maintained by the department and lists out specific information as it relates to the chemicals used in the laboratory and the hazards associated with those chemicals. This information is often referenced during auditing or in the event of a release of a hazardous material.

Chemical Inventory

The HMBP requires the creation of and maintenance of a comprehensive chemical inventory for UCR to ensure that all hazardous materials are disclosed and accounted for. This online database of all chemicals on campus, often referred to as the Chemical Inventory System, or CIS, is organized by building and room. It is the responsibility of the Principle Investigator, or designate, to update this inventory as it changes. This inventory is reported electronically to the necessary regulatory agencies on an annual basis and is also accessible by local fire personnel. Additional hazard information is available through our eContact safety placard system.

Personal Protective Equipment

The safe handling of hazardous materials depends on utilizing Control Measures suited for the hazard. Personal Protective Equipment (PPE), as a Control Measure, is considered the last line of defense for a person handling hazardous materials. PPE is used in conjunction with another Control Measure such as a fume hood, which is an Engineering Control, or while following a department or laboratory specific Standard Operating Procedure (SOP), which is an Administrative Control. The University is responsible for providing those working with hazardous materials with the appropriate PPE and the person handling the hazardous materials is responsible for donning and doffing the PPE properly.

The following is a list of specific types of PPE used while handling hazardous materials:

- Flame resistant lab coat
- Safety eye glasses
- Face shield
- Gloves suited for the task and hazard
- Pants
- Shoe covers

For more information on PPE, please visit <http://ehs.ucr.edu/safety/ppe.html>.

In the Event of an Incident

In the Event of a Spill

A timely response is critical to the safety of anyone that may be exposed to hazards associated with a spill of a hazardous material.

If you spill a hazardous material, or discover a spill of a hazardous material, act promptly and take the following steps:

- Ensure the safety of others.
- Isolate the spill.
- Deny entry to the spill area.
- Perform the necessary notifications.

For more information on spills, please see the summarized Spill and Reporting Procedures, Spill Checklist and Spill Size Guidelines in the Appendix.

Who to Call

Once you are made aware of a release, immediately notify the necessary parties. Determining who to call will depend on both the time of day and nature and size of the spill. Please contact the Environmental Health & Safety (EH&S) department Monday – Friday, from 8:00am until 5:00pm at (951) 827-5528. If you are making this call outside of these hours, or if EH&S is not available, dial 911 from a landline or (951) 827-5222 from a cell phone to notify the UC Police Department (UCPD).

The following is a list of additional contact information to be aware of:

Environmental Health & Safety	
ehs@ucr.edu	Phone: (951) 827-5528
http://ehs.ucr.edu	Fax: (951) 827-5122
EH&S Director	Phone: (951) 827-5119
EH&S Campus Fire Marshal	Phone: (951) 827-6309
EH&S Environmental Programs Manager	Phone: (951)827-2416
EH&S Hazardous Materials Specialist	Phone: (951)827-6311
Office of Emergency Management Campus Emergency Manager	Phone: (951)827-4255

Assisting Responders

During an incident involving a release or a threatened release of a hazardous material you may be called upon to assist those that respond by providing detailed and specific information related to the incident.

Be prepared to provide the following information:

- Name
- Phone
- Address (Building, Room #)
- Time
- Type of release
- Name of material
- Quantity
- Injuries
- Actions taken to mitigate potential hazards

Where to Seek Medical Help

Each University of California Riverside location has a local medical facility designated in the HMBP to be used in the event of an injury caused by the release of a hazardous material.

The designated medical facility for the main campus is:

Riverside Community Hospital
4445 Magnolia Avenue
Riverside, CA 92501
Phone Number: (951)788-3000

Earthquakes

The HMBP requires identification of certain areas of the facility that will require immediate inspection and or isolation in the event of an earthquake. Please be aware that that size, age, and nature of the contents of campus buildings are all things to consider in the event of an earthquake. Ensure that any hazardous materials in your area are properly stored and secured in accordance with policies and regulations to minimize the risk of spillage during an earthquake.

In the Event of an Incident

Evacuation

Certain situations involving hazardous materials may require immediate action, including building evacuation. In the event of an evacuation due to a release or threatened release of a hazardous material, the Building Supervisor for Emergency Conditions (BSEC) – the lead contact for all emergency program activities for the building – and the Incident Commander (IC) – the person responsible for the incident, command post, response, and strategic decisions – will step into those defined roles. Please follow your set building evacuation procedures and ensure that you are aware of your building’s designated Employee Assembly Area (EAA), if needed, you can refer to the interactive campus map (<http://campusmap.ucr.edu>).

Refer to the following summarized and simplified evacuation procedures:

- Activate the alarm to initiate evacuation of occupants.
 - Follow up the alarm activation with a 911 call.
- Evacuees will meet in the designated EAA and remain there until given permission to leave or return to the building.
- The BSEC will conduct a roll call.
 - Missing persons will be reported to the IC.
 - Only trained emergency responders may enter into an evacuated building or facility.
 - Only the IC may signal the all clear.

Site Map

The HMBP requires the University to have a map of the campus with overview information regarding the location of hazardous materials. The campus buildings have been color coded to represent the level of hazard present in each building with each level having set criteria used for making the determination.

The following is a listing of the color coding and criteria system:

- Green = low hazard | consumer grade chemicals: bleach, ammonia cleaners, floor wax, soap
- Yellow = medium hazard | industrial grade chemicals: flammables, CO₂, oil and latex paint
- Red = high hazard | research grade chemicals: pyrophorics, water reactives, cryogenics, toxics, flammables, oxidizers, and corrosives

Additional information is noted on the site map to include:

- Campus entrances
- Emergency assembly areas (EAAs)
- Sewer manholes
- Storm water manholes
- Natural gas control valves
- Condensate Control valves
- Loading docks

Control Measures

The HMBP mandates the identification of Control Measures to take that will prevent the release of a hazardous material, minimize the impact of a release, or potentially eliminate the risks associated with a release. There is a key level of awareness that handlers of hazardous materials must have prior to working with those materials, i.e. the nature of a chemical, either organic or inorganic, SDS information, SOP for handling, storing, disposing of a chemical. The HMBP and training increase this level of awareness.

Prevention

Information regarding measures taken or policies and procedures now in place to help prevent an accidental release of a hazardous material must be listed in the HMBP.

Universal Prevention Measures

A release of a hazardous material is prevented by:

- Segregating hazardous materials correctly.
- Storing hazardous materials in accordance with procedure.
- Properly disposing of materials within the timeframes designated.
- Documenting the date certain materials are initially opened for use.
- Adhering to all expiration dates, whether printed or determined based on the date the material was opened for use.
- Using a fume hood or glove box while handling hazardous materials.
- Transporting hazardous materials in accordance with SOPs, best practices, and related regulations.

Mitigation

Specific information regarding procedures followed to minimize the severity of a release of a hazardous material must be listed in the HMBP.

Universal Mitigation Measures

A release of a hazardous material is mitigated by:

- Following the containment procedures for the material outlined in the SOP.
- Setting and adhering to volume or quantity limits.
- Properly disposing of all hazardous materials in accordance with procedure.
- Utilizing provided spill containment kits.
- Following spill containment procedures as outlined in the SOP.

Abatement

The HMBP requires that specific information and process be outlined that abate the risks associated with a release of a hazardous material.

Universal Abatement Measures

Abatement of the risks of a release of a hazardous material is achieved by:

- Wearing PPE designed to minimize the risks associated with the specific hazardous material.
- Utilizing provided spill kits.
- Following proper disposal procedures outlined in the SOP.
- Using physical barriers to prevent the spread of the spill
- Neutralizing acids and bases.
- Following spill and reporting procedures (see appendix).

Control Measures

Hazardous Waste Contingency

What is Hazardous Waste?

Hazardous waste cannot be drain disposed, evaporated in fume hoods, or disposed of in the normal trash. Determining if a waste is “hazardous waste” can be difficult. It is a best practice to treat all chemical waste as hazardous. Disposal occurs via a pick-up of the waste. A waste pick-up is initiated in the WASTE system. Information and instructions for using the WASTE system are available at: <http://ehs.ucr.edu/services/waste.html>.

UCR is a hazardous waste generator and is required by the HMBP to identify specific procedures for the prevention, mitigation, and abatement of a release of hazardous waste generated in the facility.

All hazardous waste containers shall be kept in a secondary containment capable of holding at least 110% of the largest container. Should a release occur, utilize the abatement procedures previously outlined.

Training

The HMBP training is multi-tiered, focusing on general awareness, safety precautions, protection, and preparedness. Every member of the staff and faculty, along with required students and visitors to the University, will be trained on general information about the HMBP. Where required and appropriate, training will be expanded to include in depth, job and site specific training on the HMBP. The training considers the responsibilities of those trained, what hazardous materials are worked with, and any other site specific information that is relevant.

The training will, at a minimum, cover:

- General information on the HMBP.
- Procedures for ensuring that appropriate personnel receive initial and annual refresher training.
- Methods for safe handling of hazardous materials stored, including familiarity with the characteristics and hazards of each material and measures employees can take to protect themselves from chemical hazards.
- Proper use of personal protective equipment.
- The prevention, mitigation, and abatement procedures developed and explained in the HMBP, including proper use of emergency equipment and supplies.
- The Emergency Action Plan (EAP) for the specific site, the notification procedure used to alert people to evacuate, and the closest location to obtain appropriate emergency medical care.
- Who and how to call for immediate assistance in the event of an accident involving hazardous materials.
- Procedures for coordinating and assisting local emergency response organizations, and emergency personnel that may respond in the event of a hazardous materials release.
- Written resource information, via a webpage and other supplemental resource documents designed with user-friendly access and application in mind.

Unauthorized Release Response Plan

UCR currently has underground storage tanks (UST) on campus. The HMBP requires specific procedures be in place for the mitigation, abatement, and reporting of an unauthorized release from both single walled and double walled tank systems, as applicable. Appropriate personnel are trained on these procedures to minimize the negative impact on the environment in the event of an unauthorized release.

Site Security

The HMBP requires the University, as a facility, to assess its security and vulnerability from intentional destructive acts, both internally via sabotage and externally via vandalism or acts of terrorism. Establishment of a security plan is advised, along with setting up a procedure for testing said system.

Appendix

Summarized Spill and Reporting Procedures

In the event that you spill a chemical or discover a spill, please adhere to the following chemical spill procedures:

- Alert people in the immediate area of the spill
- Get people out of the area and keep them out
- Determine the chemical nature of the spill and check the SDS for necessary information
- If the material is highly toxic or hazardous, alert the necessary parties by following the instructions detailed in “Who to Call” section of this document.
- If a volatile, toxic, or flammable material is spilled, immediately warn everyone to evacuate the area and turn off all electrical and spark producing equipment if possible
- If properly trained, use a fire extinguisher to extinguish any flames.

Reportable Spill Guiding Questions

Handlers of hazardous materials are required to report releases. The following is a portion of an available tool, adapted from California form HM-9511 (2/11), that can be used for assessing if a release is reportable. The full form is available (location)

Questions for Incident Assessment:		Yes	No
1.	Was anyone killed or injured, or did they require medical care or being admitted to a hospital for observation?		
2.	Did anyone other than employee in the immediate area of the release evacuate?		
3.	Did the release cause off-site damage to public or private property?		
4.	Is the release greater than or equal to a reportable quantity (RQ)?		
5.	Was there an uncontrolled or unpermitted release to the air?		
6.	Did an uncontrolled or unpermitted release escape secondary containment or extend into any sewers, storm water conveyance systems, utility vaults and conduits, wetlands, waterways, public roads, or off site?		
7.	Will control, containment, decontamination, and/or clean up require the assistance of federal, state, county, or municipal response teams?		
8.	Was the release or threatened release involving an unknown material or contains an unknown hazardous constituent?		
9.	Is the incident a threatened release (a condition creating a substantial probability of harm that requires immediate action to prevent, reduce, or mitigate damages to persons, property, or the environment)?		
10.	Is there an increased potential for secondary effects including fire, explosion, line rupture, equipment failure, or other outcomes that may endanger or cause exposure to employees, the general public, or the environment?		

If the answer is YES to *any* of the above questions – report the release to the California Emergency Management Agency at 800.852.7550 and the local CUPA daytime: (phone #), after hours (phone #). Note: other state and federal agencies may require notification depending on the circumstance

Appendix

Spill Size Guidelines

Use the following guidelines to assist you in making the best decision regarding what to do, how to clean up, and who to contact if you are involved in a spill or discover a spill.

Small Spills

Knowledgeable and trained University laboratory staff and workers will clean-up spills approximately 3 gallons or smaller. The typical metric is if you can step over the spill, and are trained, then you can clean up the spill. Small spill supplies include: PPE, absorbent pads, waste containers, and labels.

Trained laboratory staff small clean-up response actions will include:
Remove the source of the spill (e.g. upright tipped containers, place leaking container in secondary containment).
Absorb liquid residue using appropriate materials or materials specifically engineered for the clean-up and containment of the spilled substance.
Place waste materials in an appropriate, sealed container, or double bag, and label all materials.
Report the hazardous spill incident to EH&S.
Submit an waste pick-up request to EH&S.

Medium or Large Spills

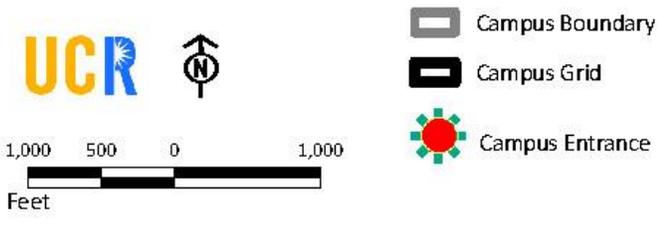
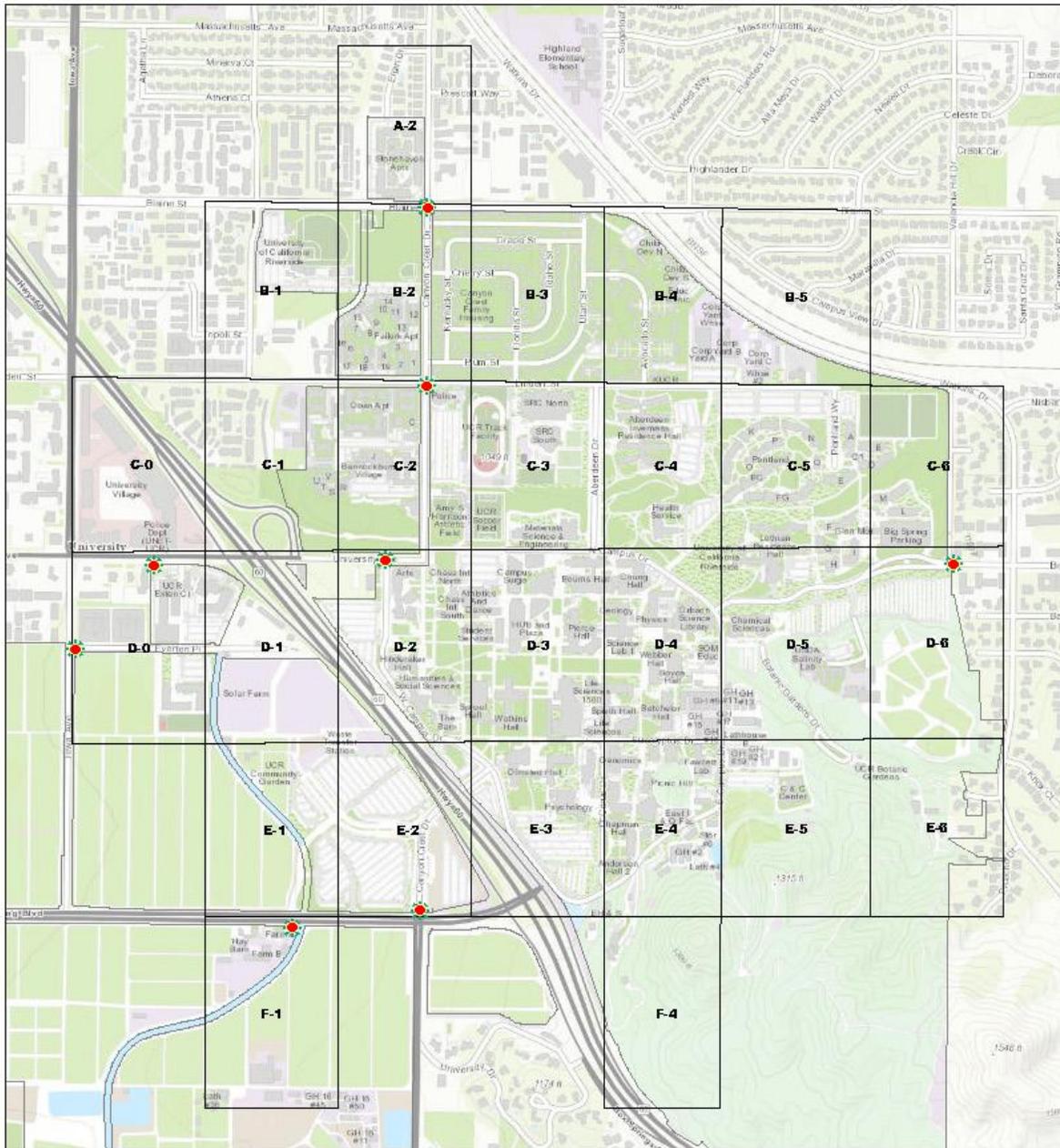
EH&S staff will handle spill incidents greater than 3 gallons in volume. EH&S staff may contact the Riverside City Fire Department for assistance, as deemed necessary.

Spill responders' medium to large spill clean-up actions will include:
Report the spill to the appropriate agencies when or where applicable.
Place physical barriers around the spill to prevent the spread of the spilled material to storm drains or sewers.
Neutralize acids and bases.
Vacuum freestanding liquids using appropriate hand pumps or electromechanical devices specifically designed for the material spilled.
Absorb liquid residues with appropriate absorbent. Citric acid will be utilized for basic spills and sodium bicarbonate for acid spills.
Collect solid wastes in a manner that minimizes dust formation.
Wash area and test for remaining contamination to verify clean-up efforts.
Evaluate the clean-up efforts.

Appendix

Site Map

Overview - Campus & Areas



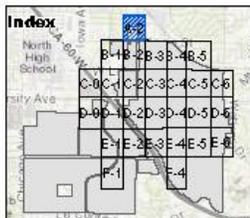
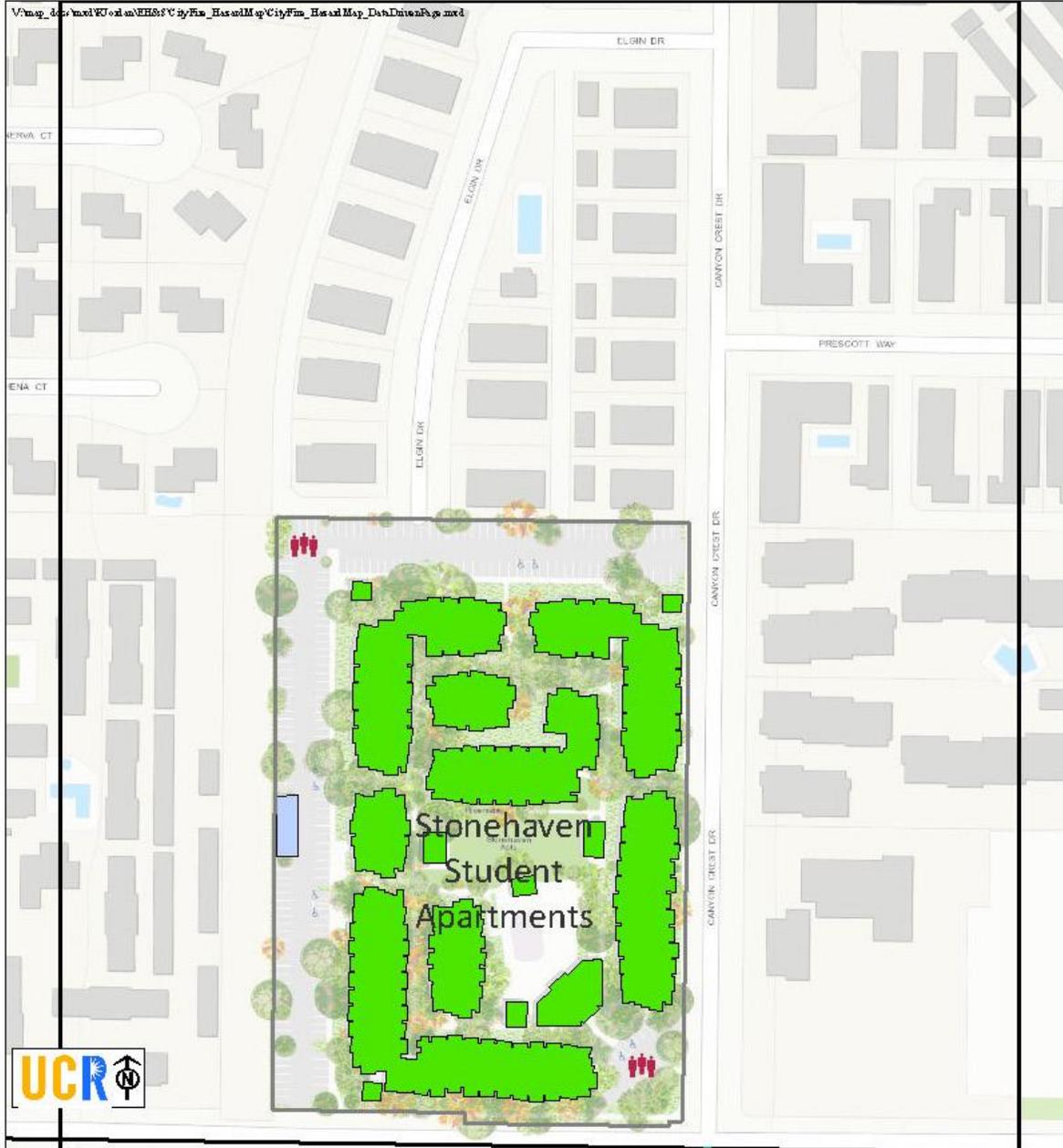
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Appendix

Site Map

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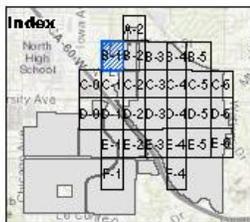
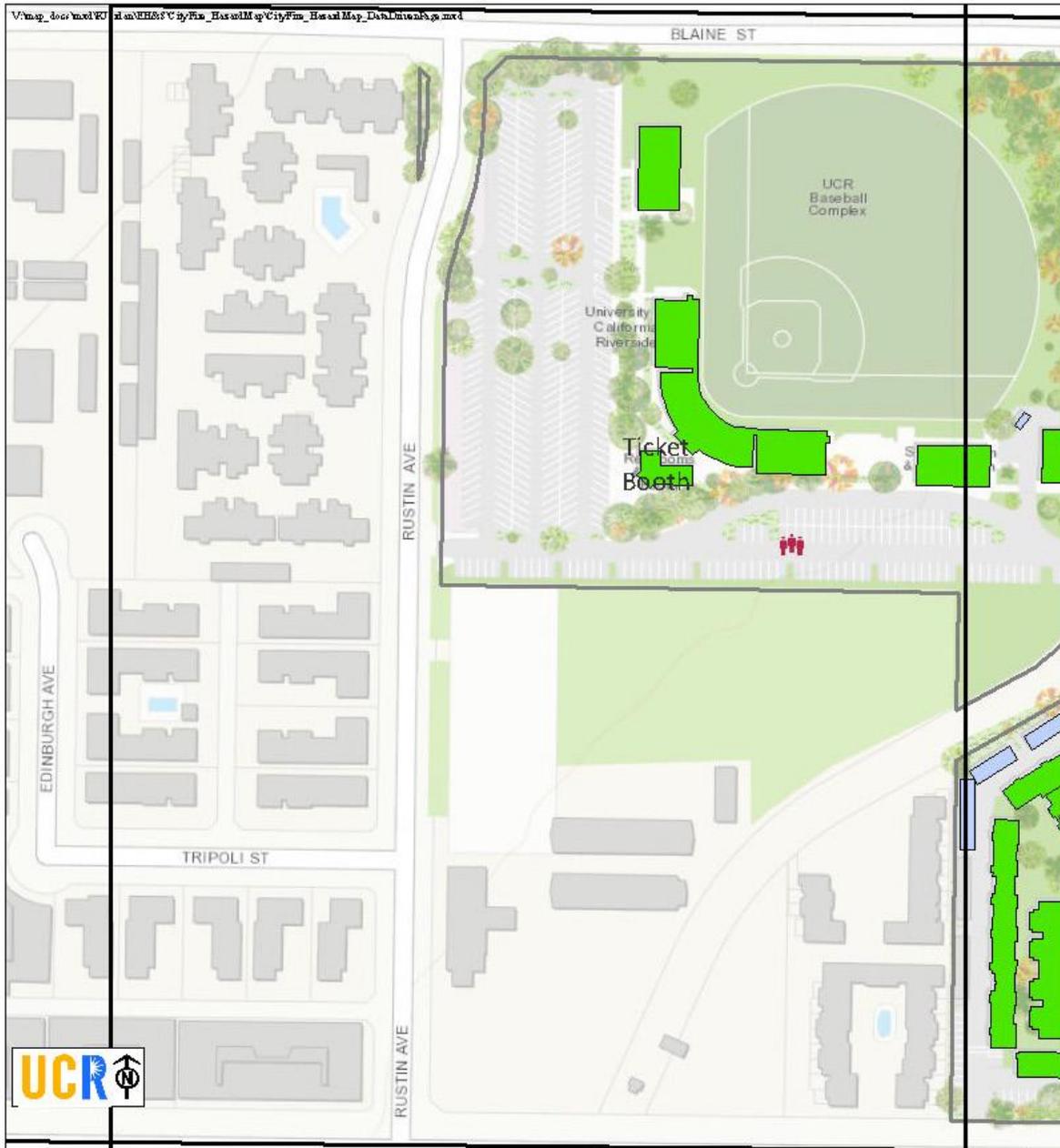
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- Condensate Control Valves
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- HMBP Building - Industrial Grade Chemicals
- HMBP Building - Consumer Grade Chemicals
- HMBP Building - Uncategorized
- Loading Docks
- Campus Boundary

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Site Map

B1



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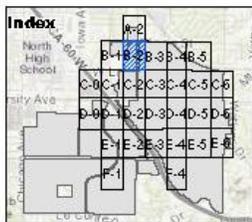
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Site Map

B2



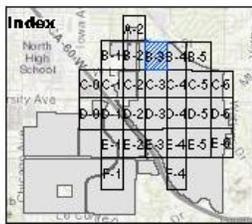
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Site Map

B3



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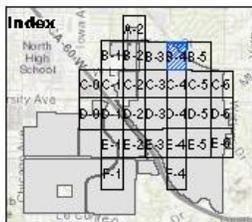
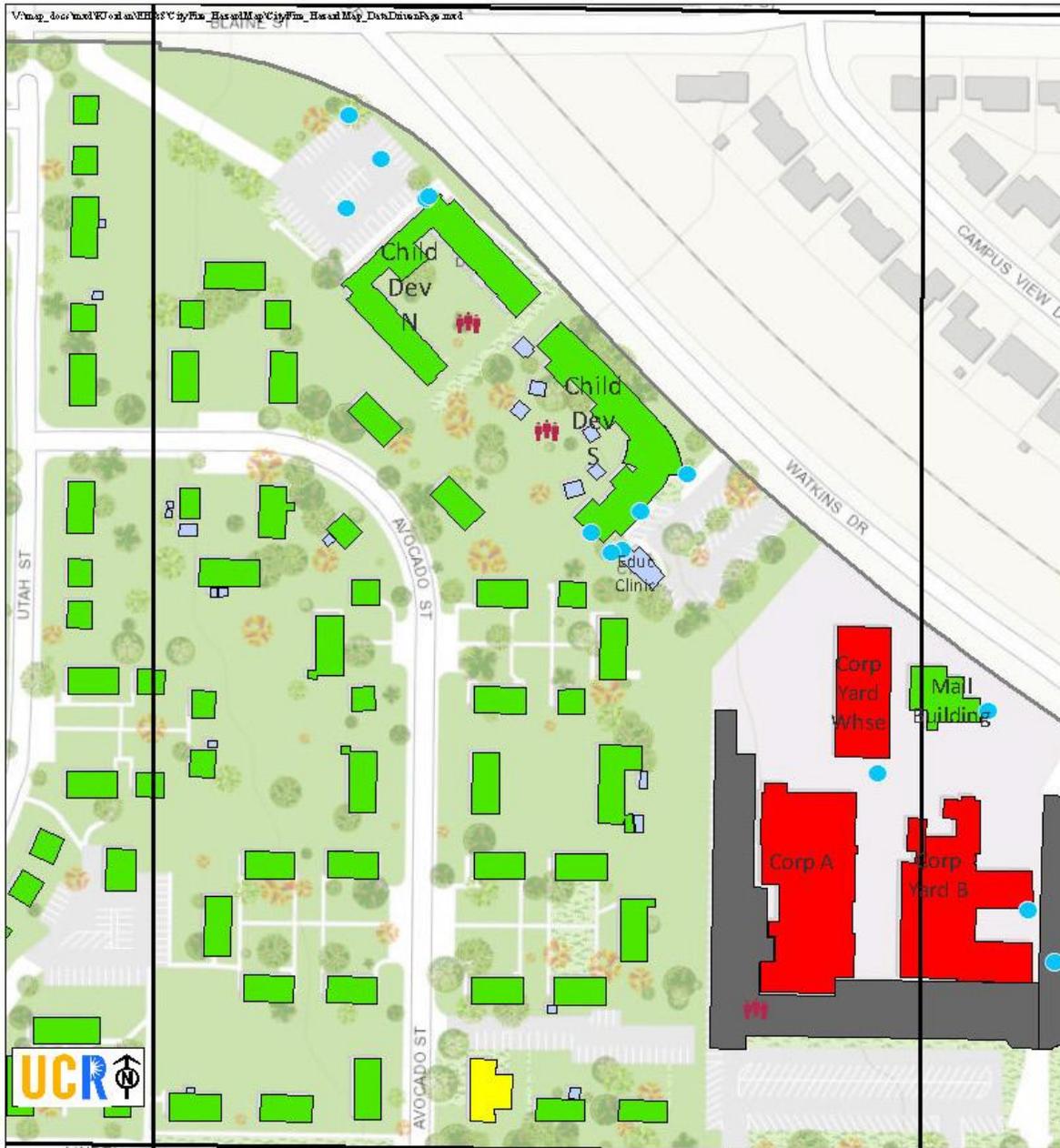
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Site Map

B4



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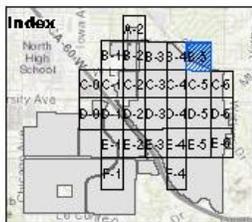
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Site Map

B5



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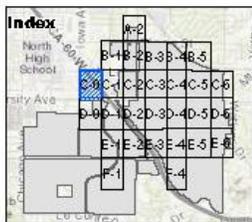
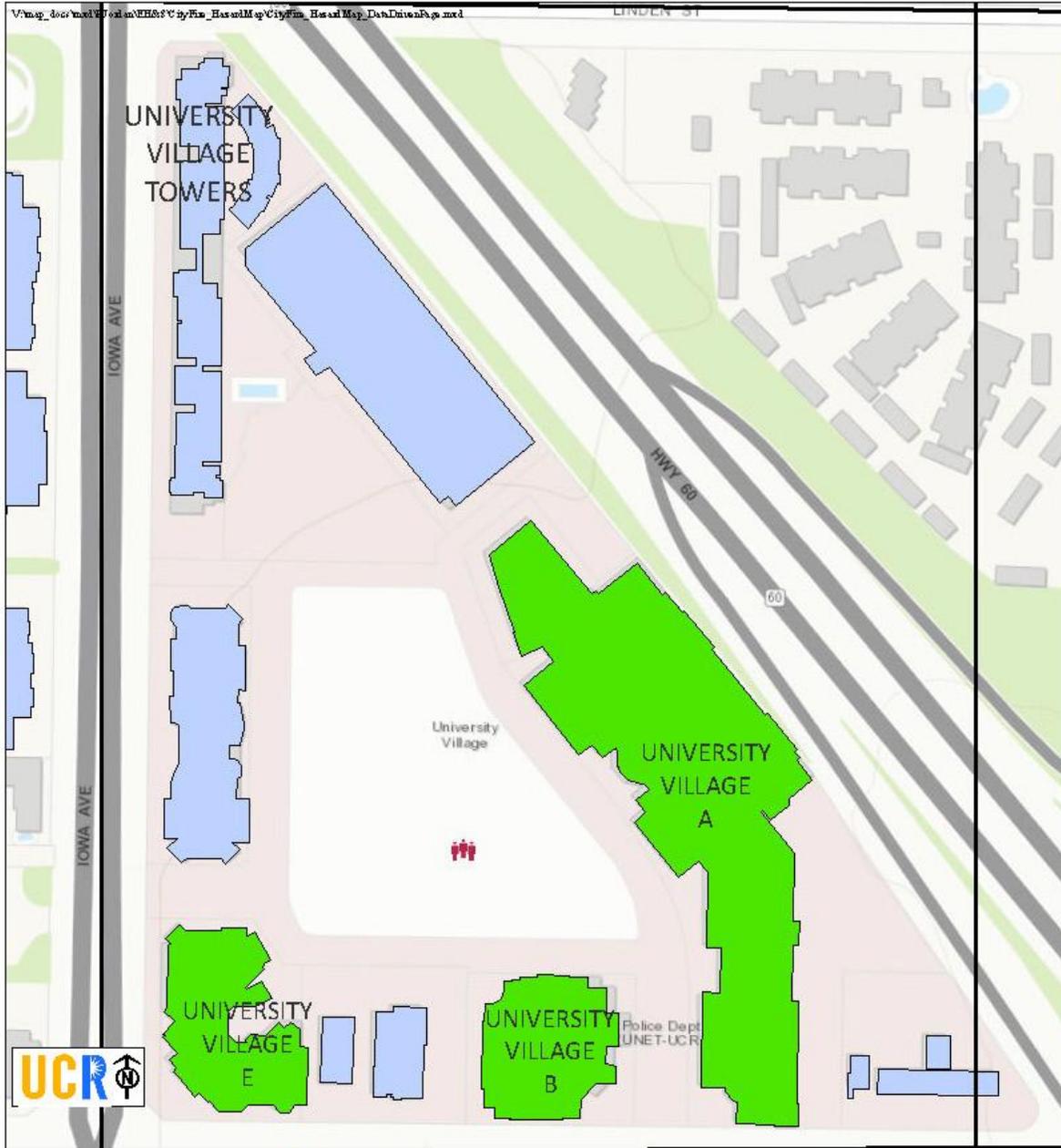
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Site Map

C0



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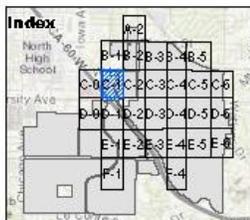
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Site Map

C1



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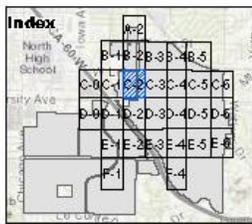
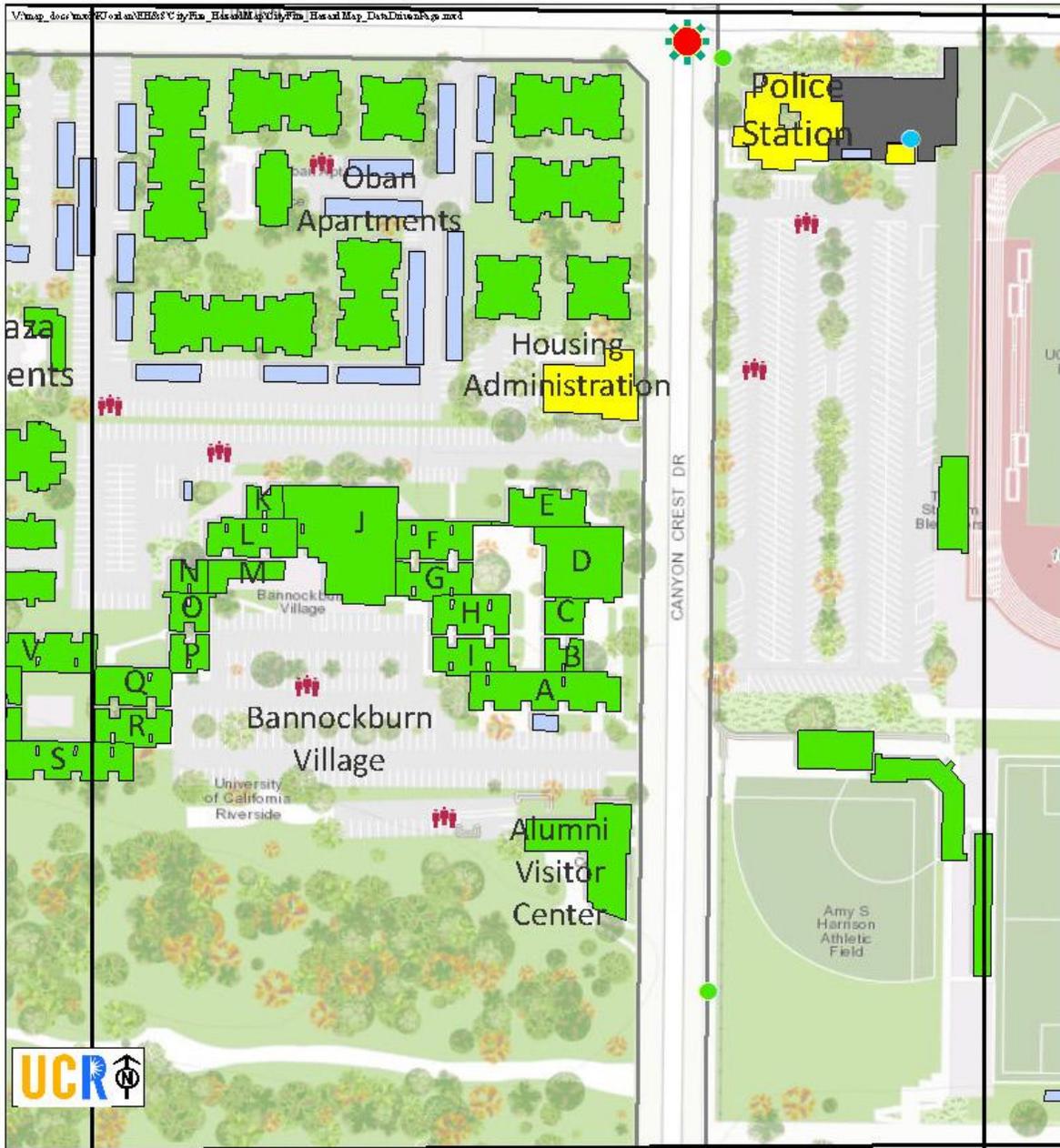
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Site Map

C2



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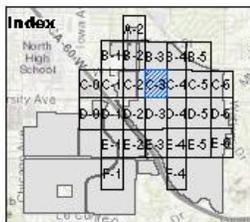
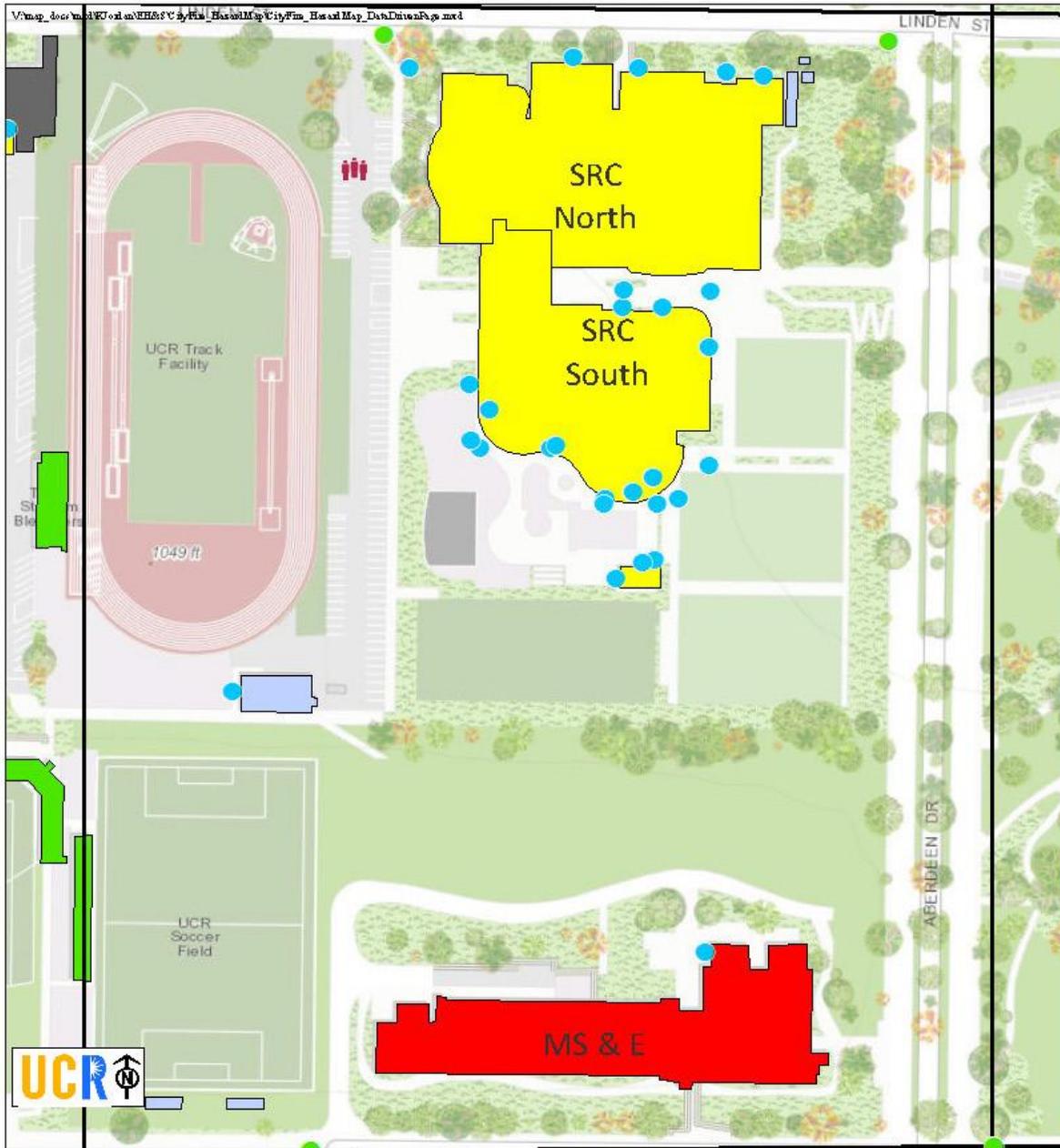
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Site Map

C3



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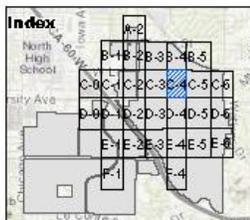
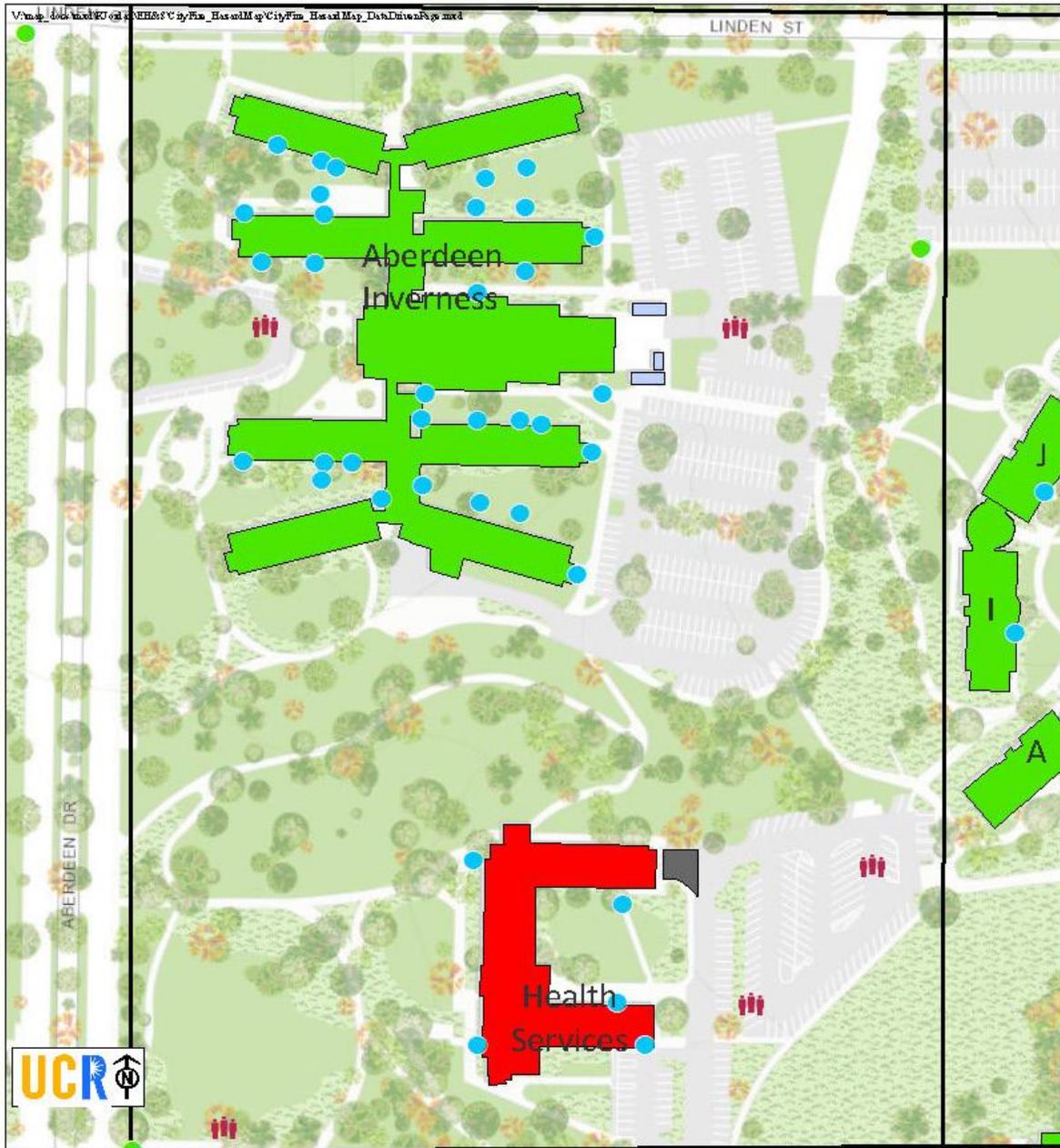
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Site Map

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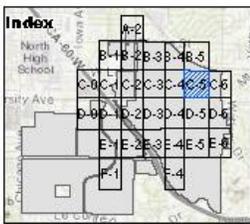
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Site Map

C5



Map not to scale

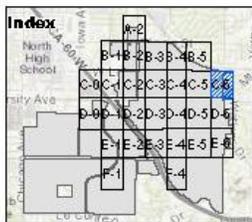
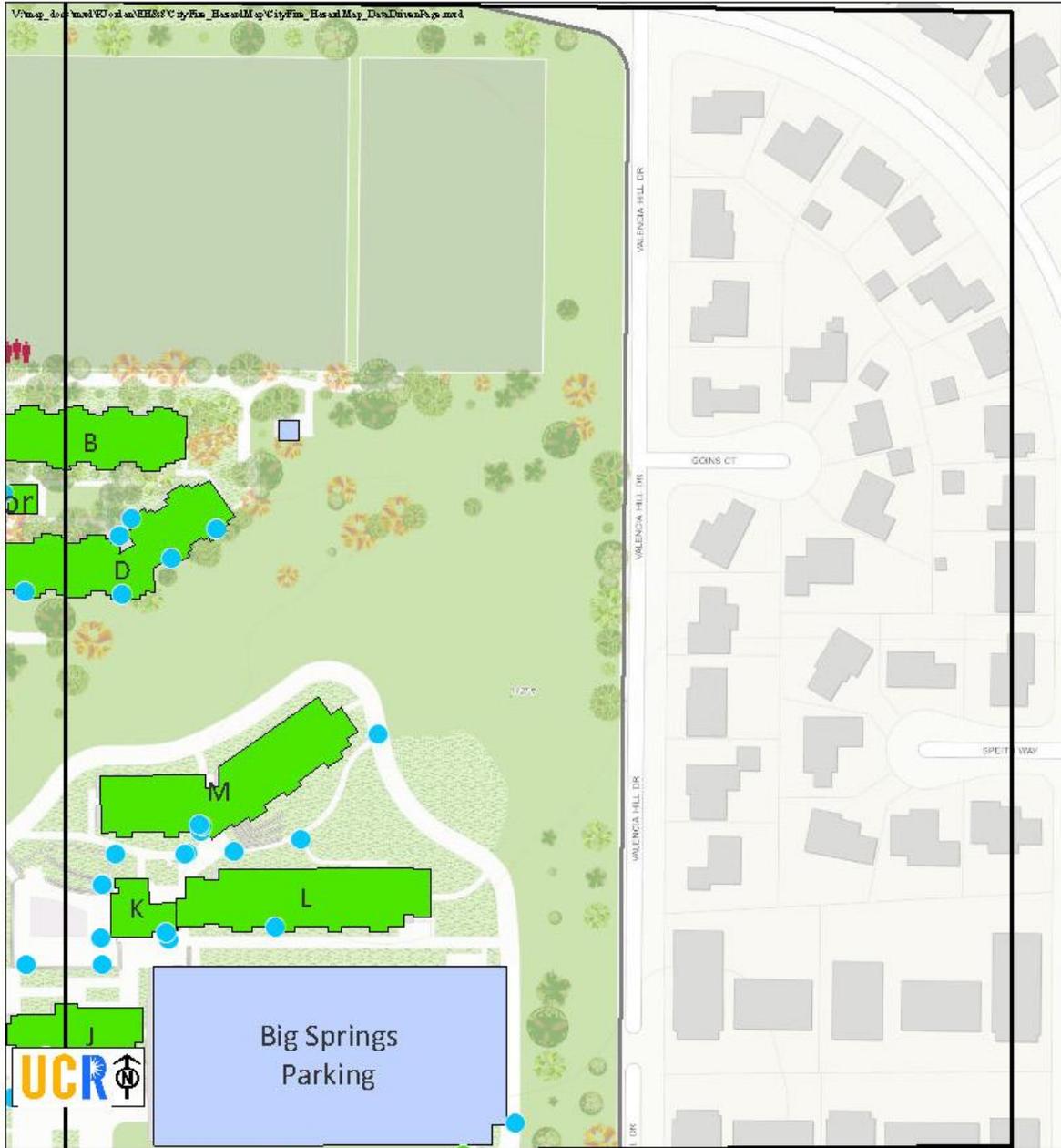
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Site Map

C6



Map not to scale

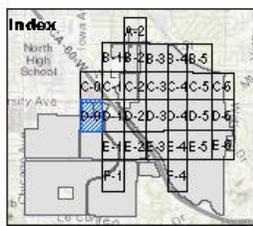
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Site Map

D0



Map not to scale

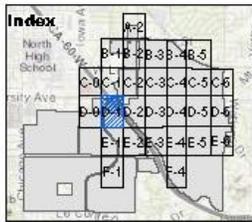
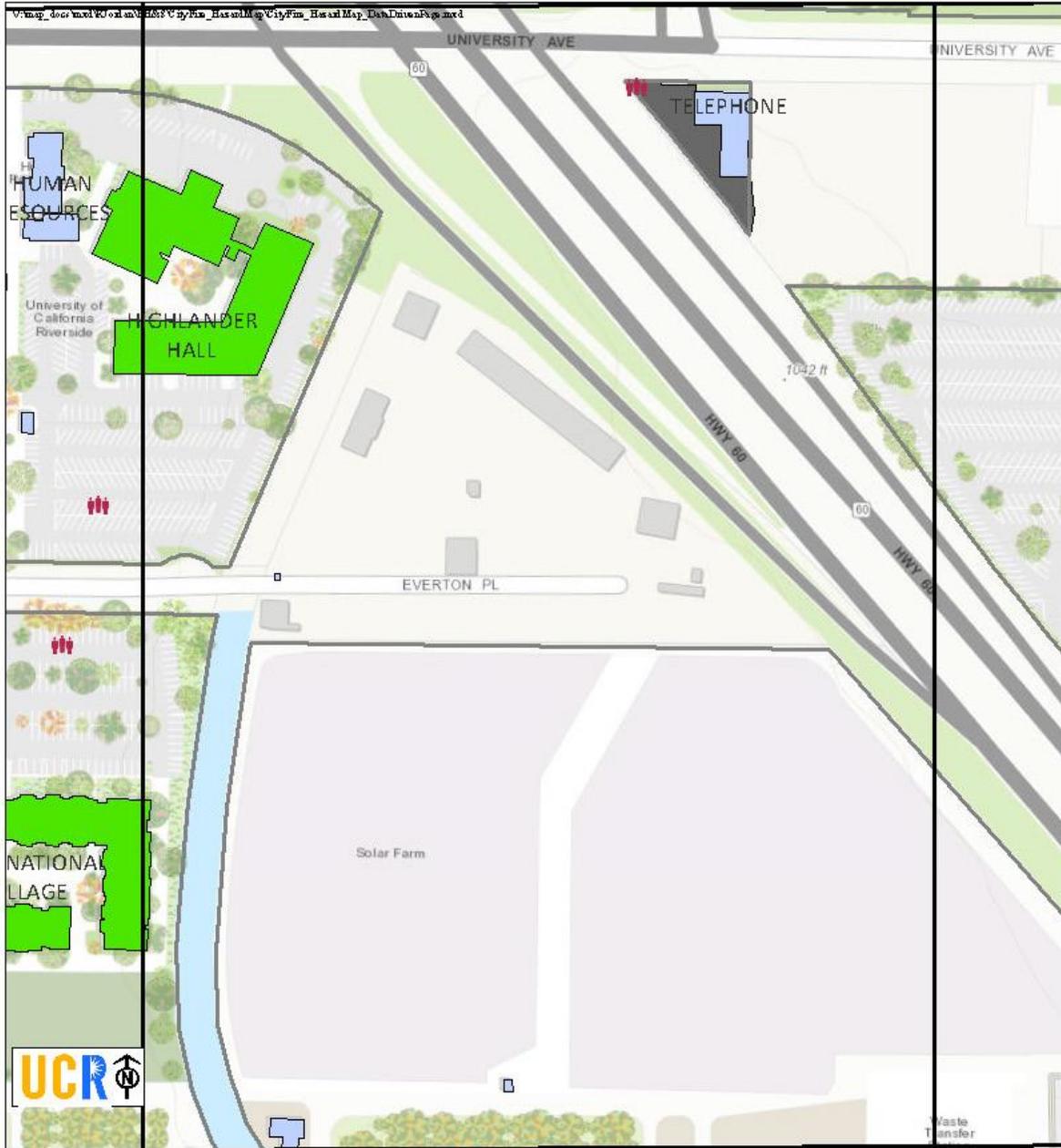
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Site Map

D1



Map not to scale

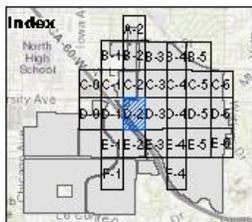
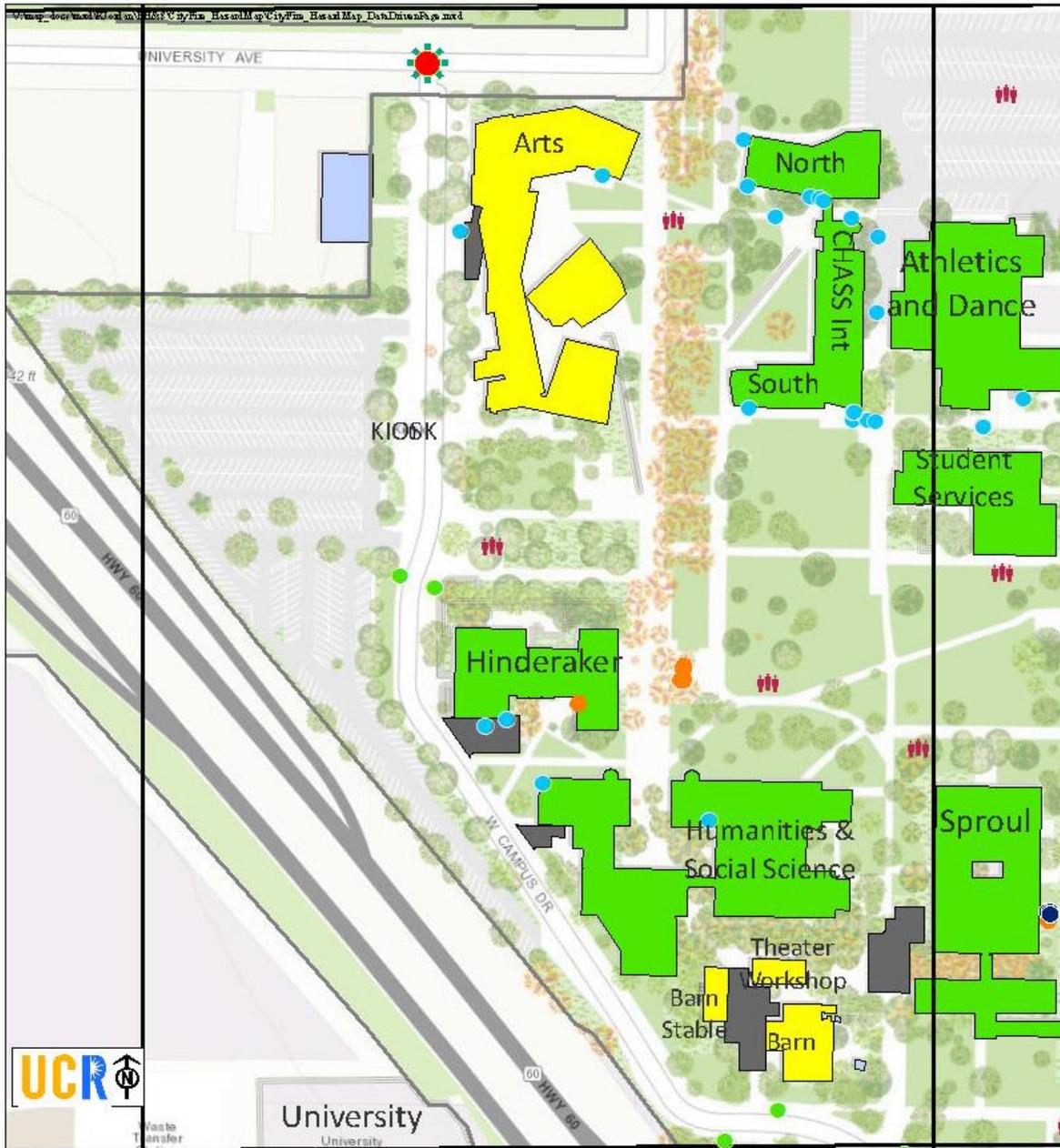
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Site Map

D2



Map not to scale

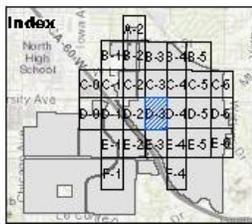
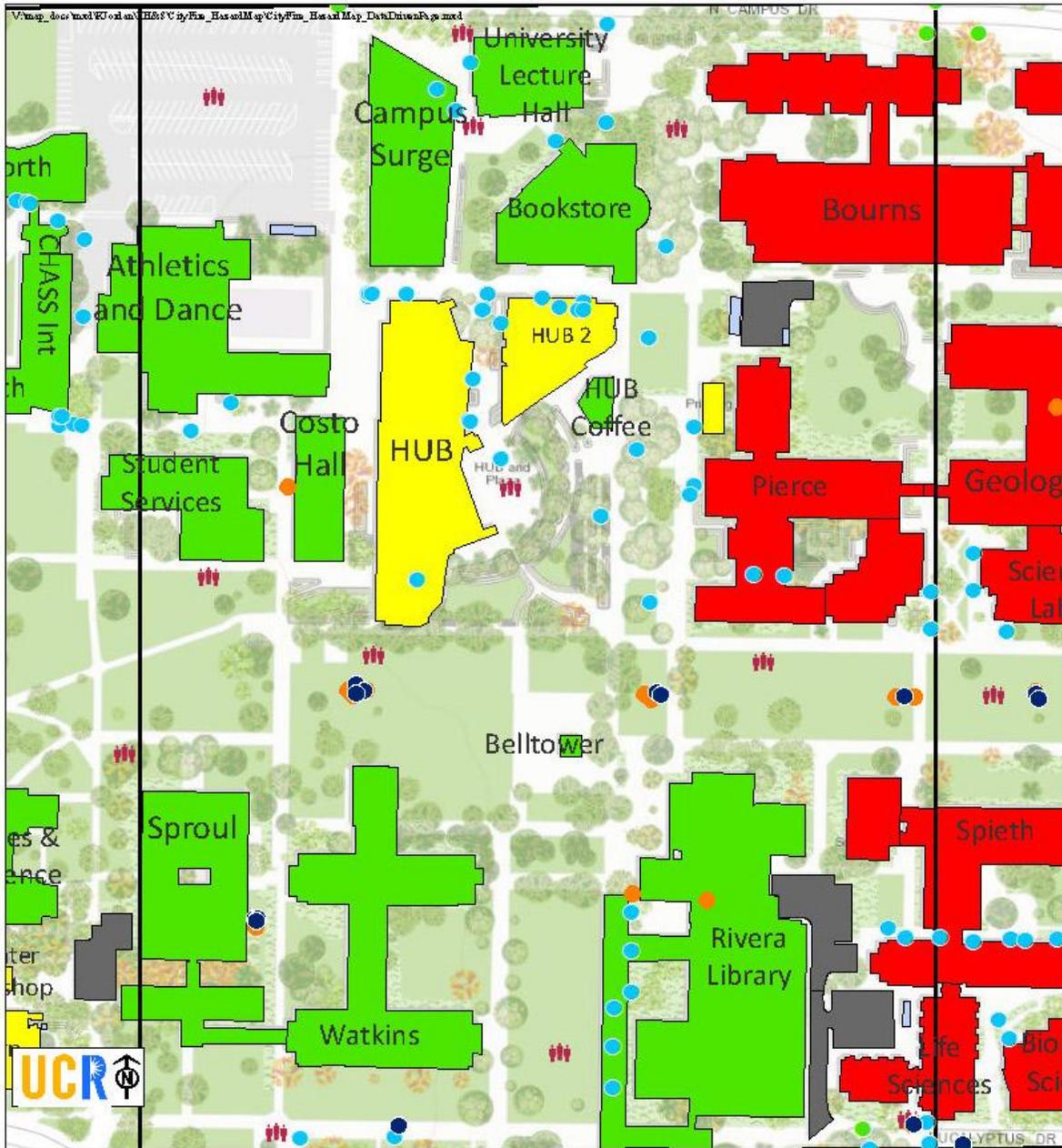
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Site Map

D3



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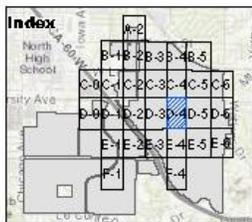
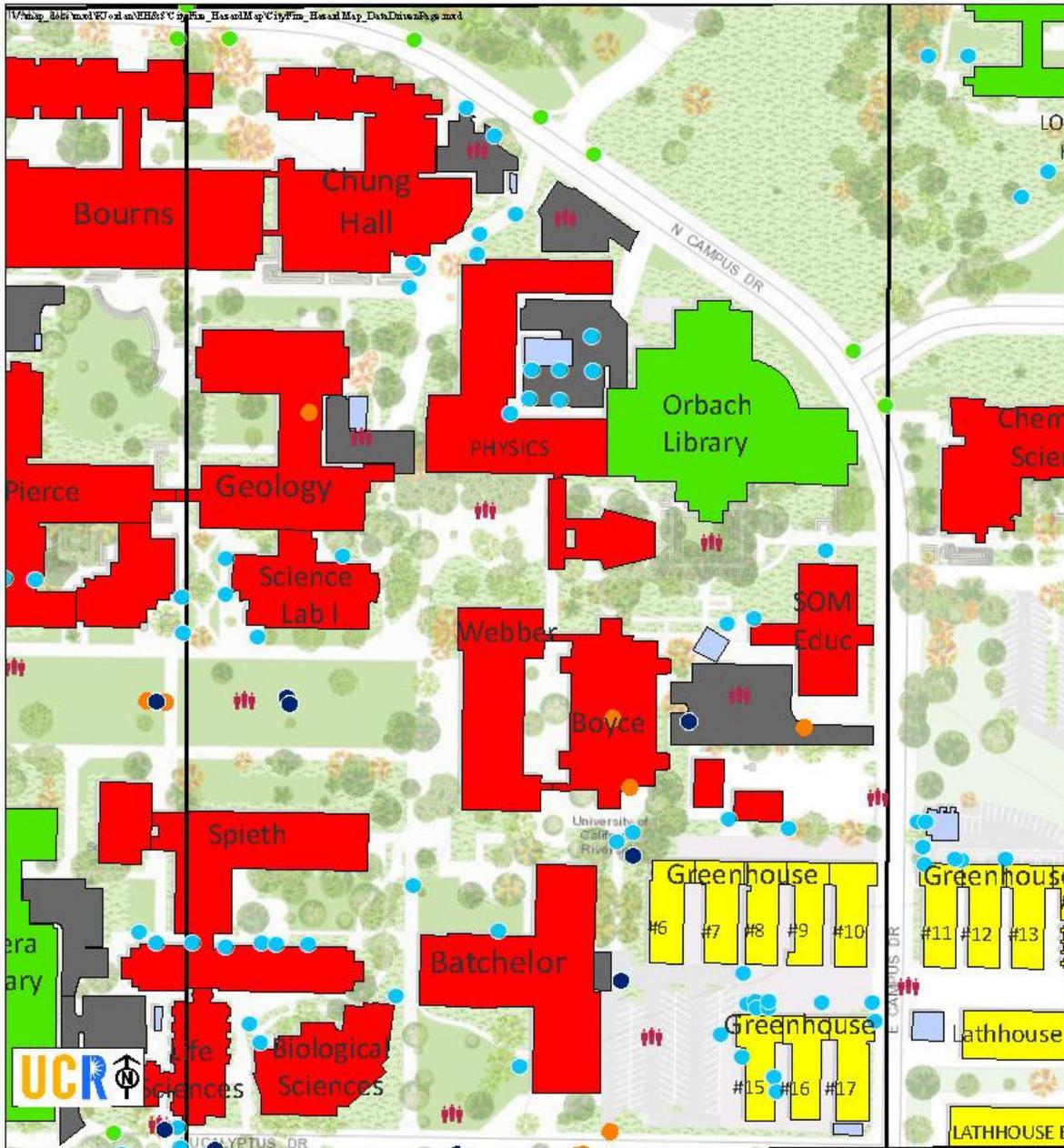
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Site Map

D4



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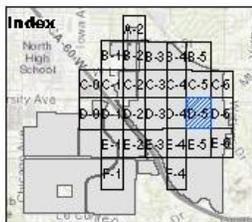
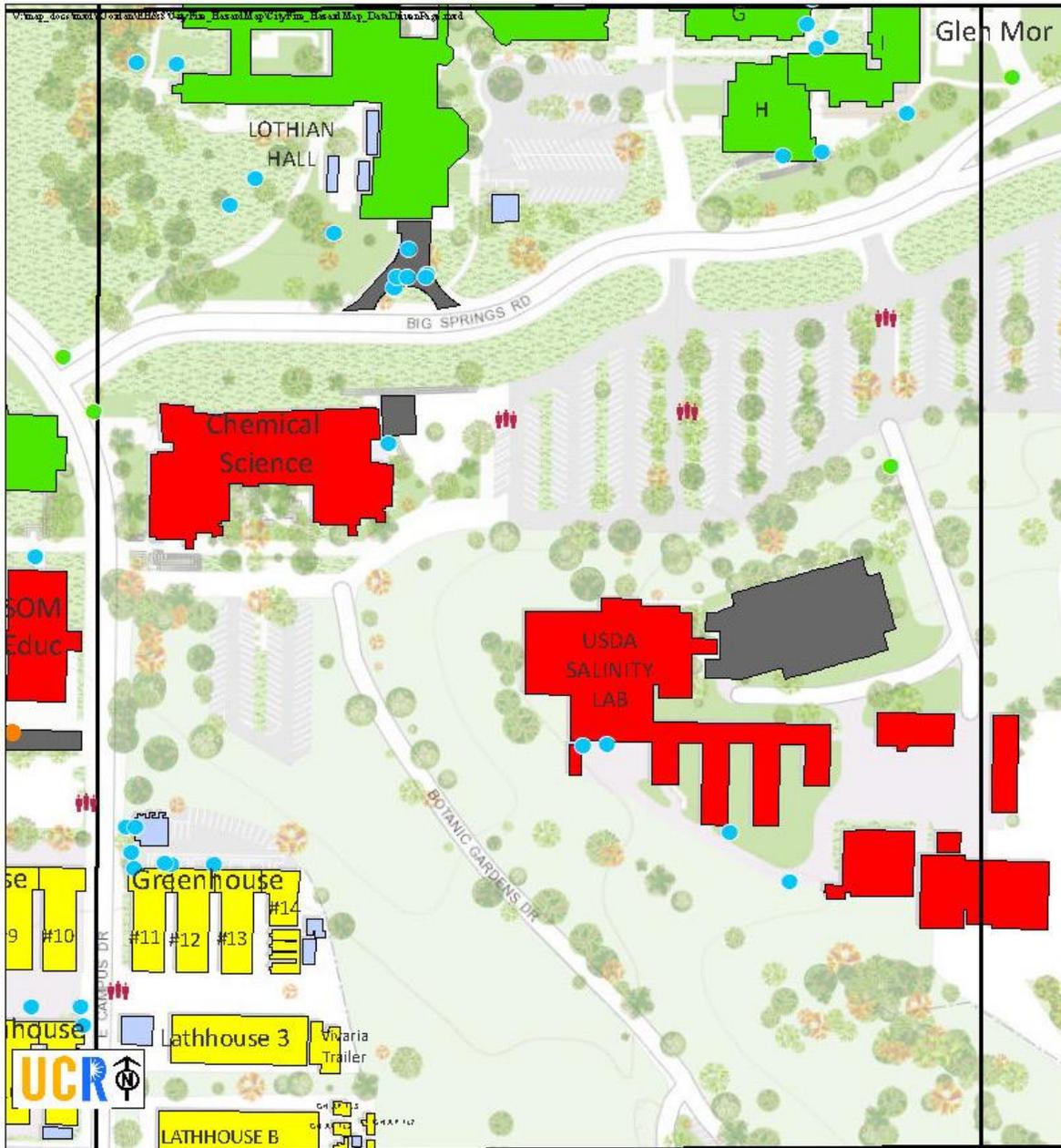
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Site Map

D5



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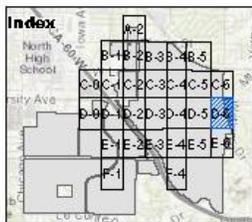
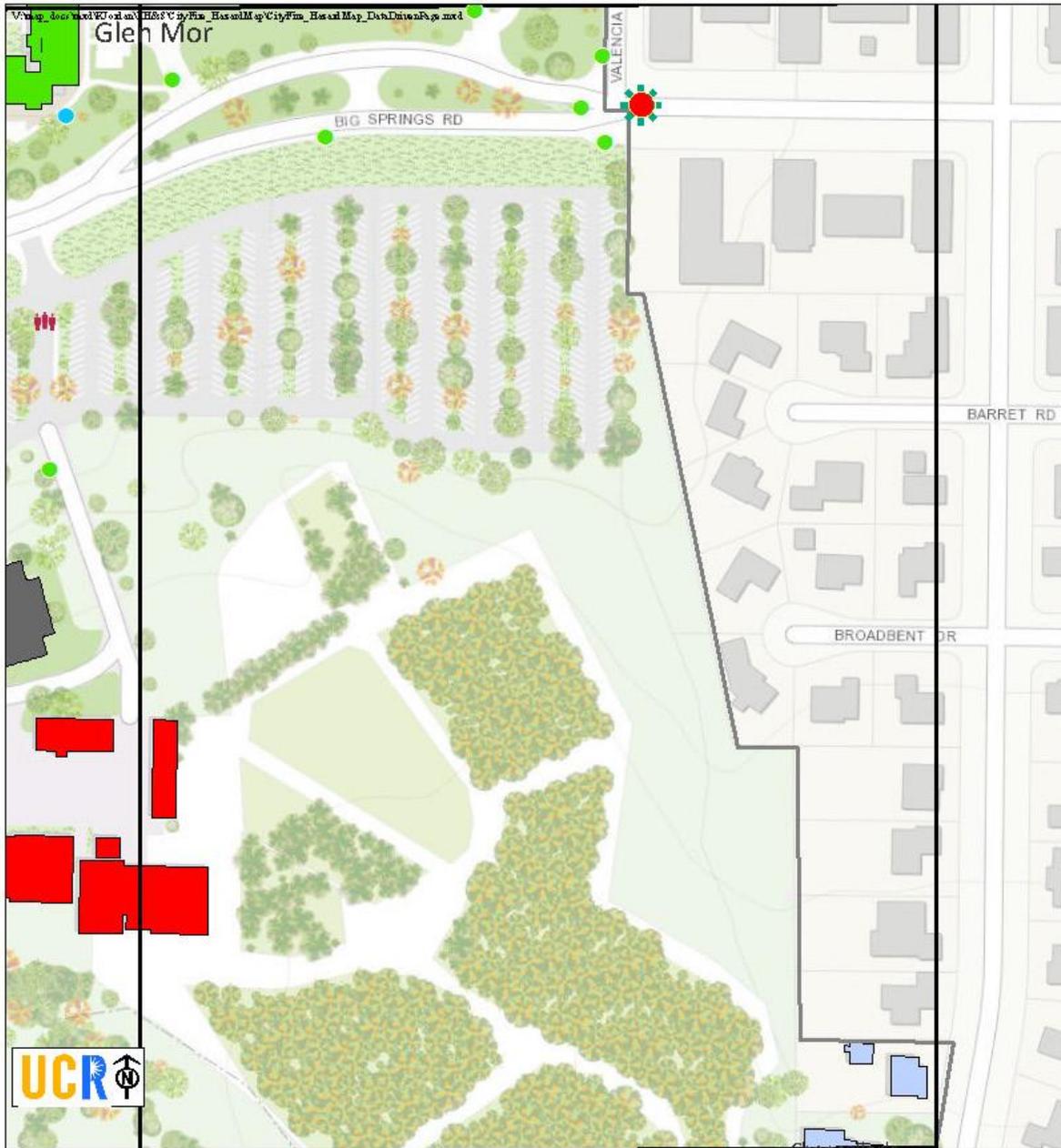
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Site Map

D6



Map not to scale

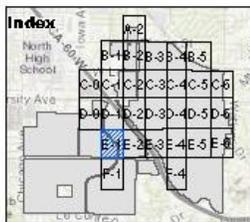
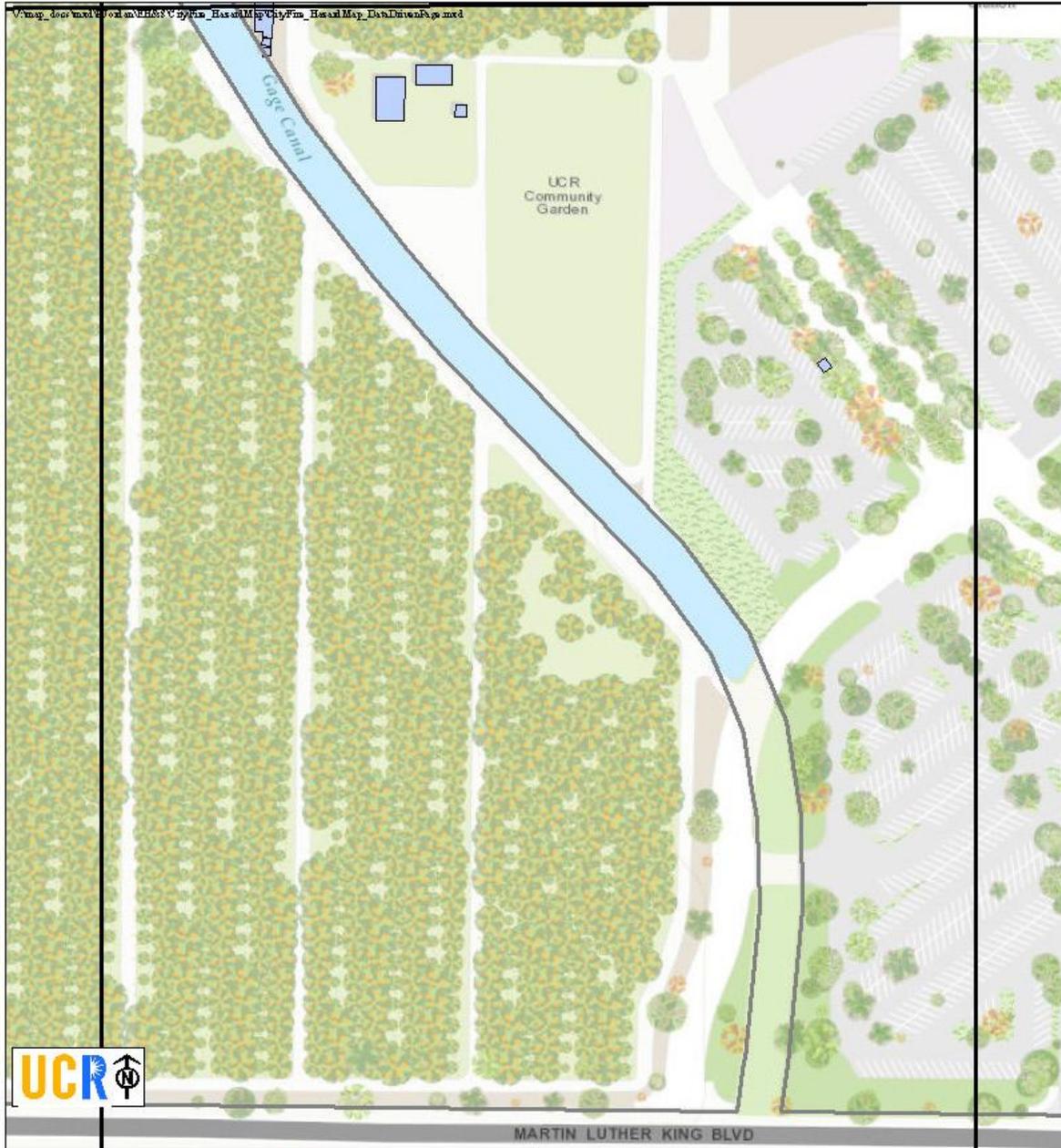
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Site Map

E1



Map not to scale

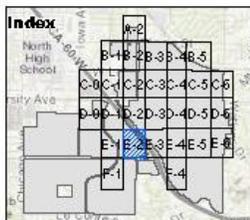
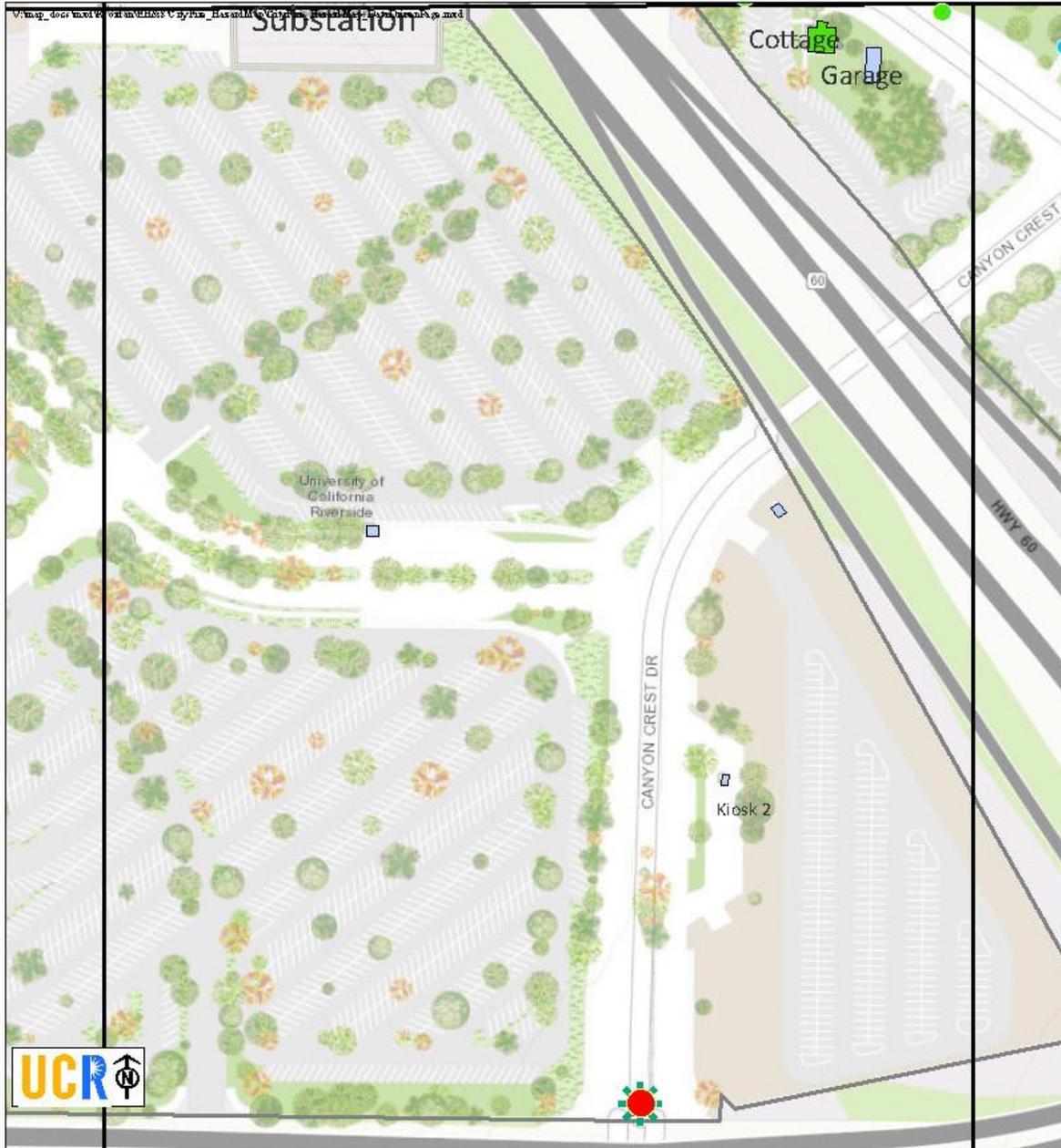
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Site Map

E2



Map not to scale

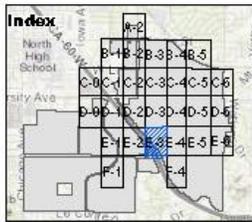
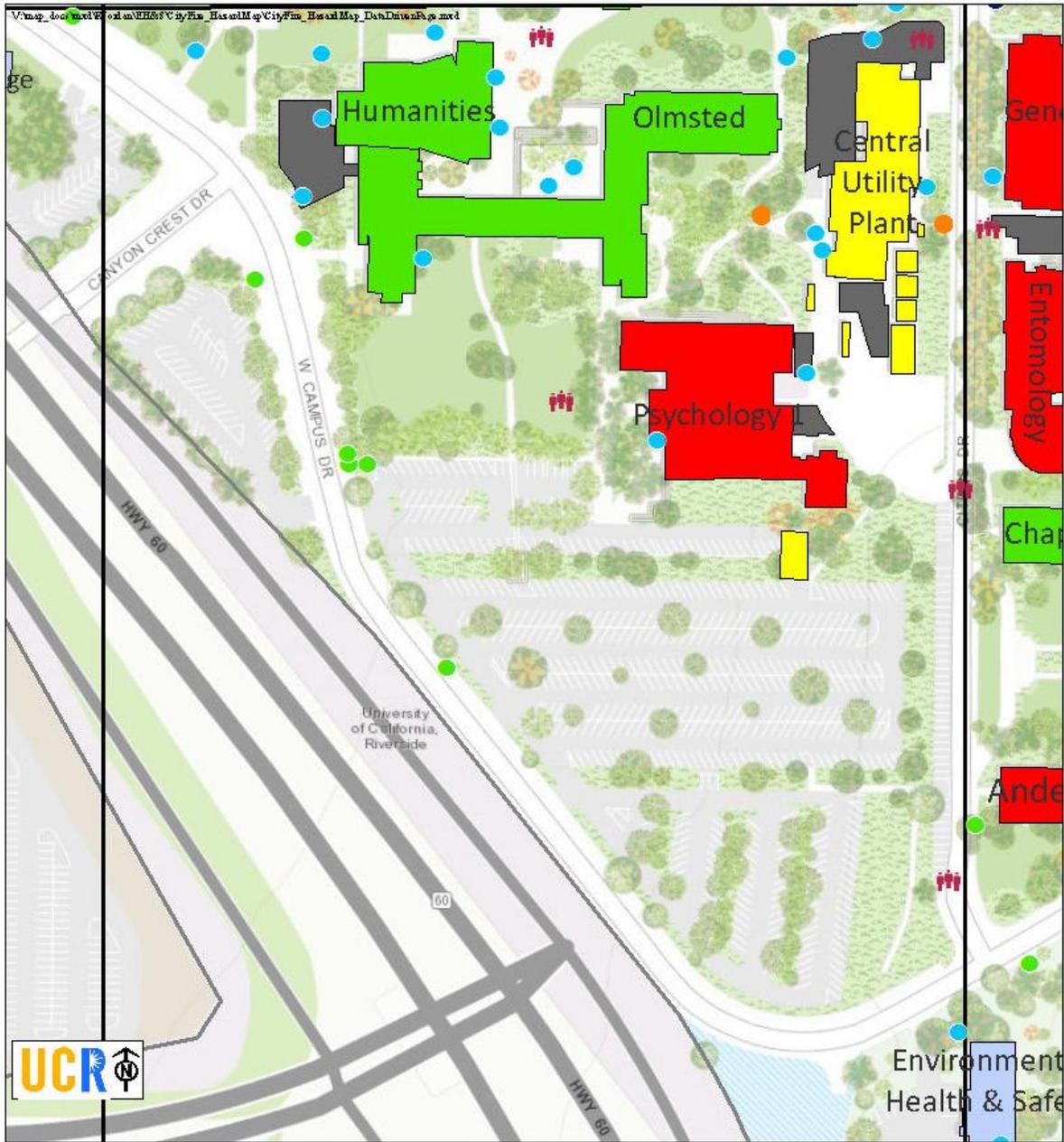
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Site Map

E3



Map not to scale

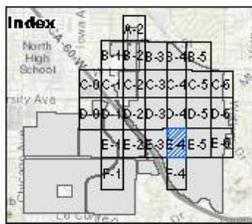
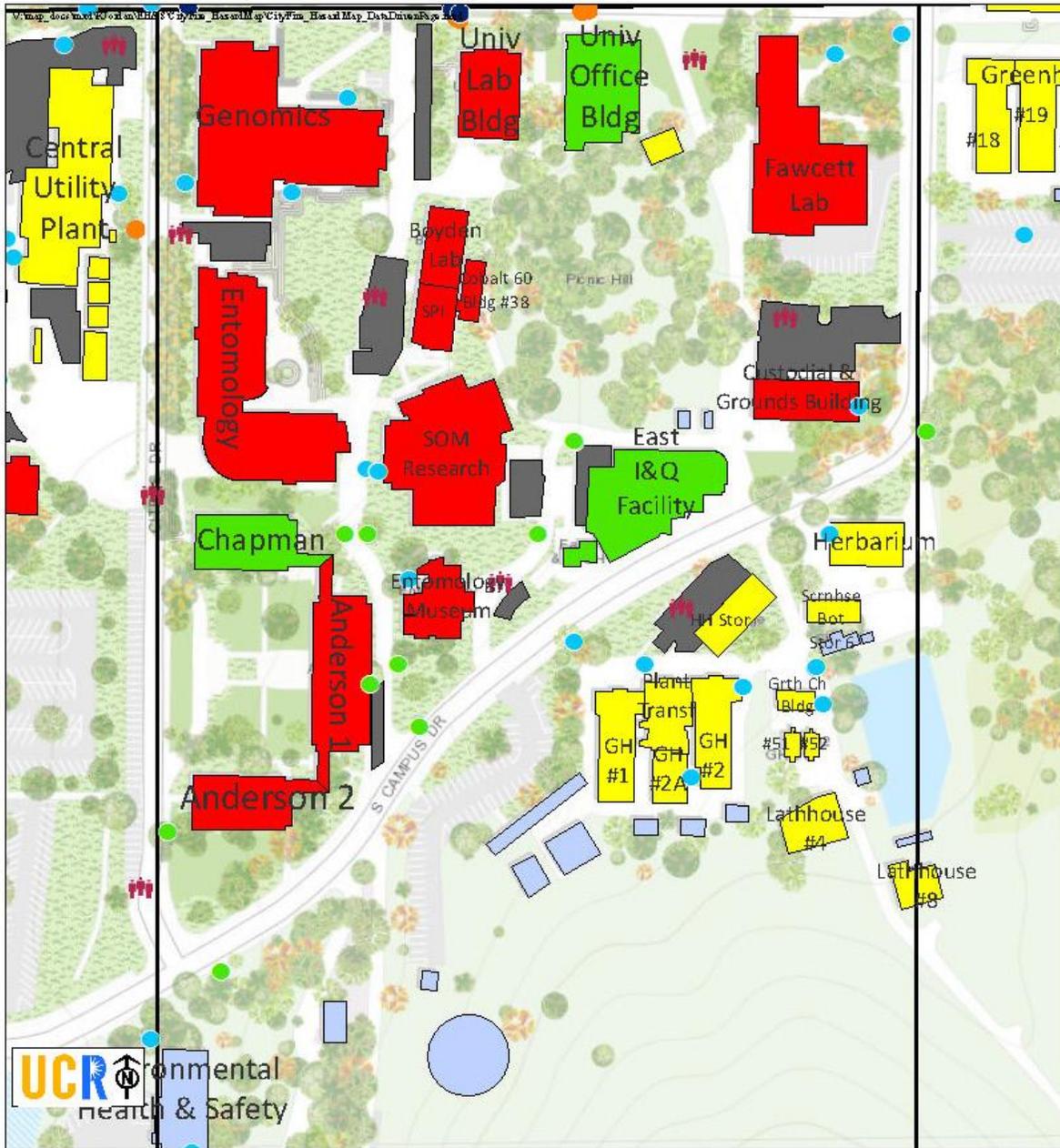
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Site Map

E4



Map not to scale

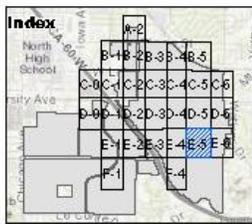
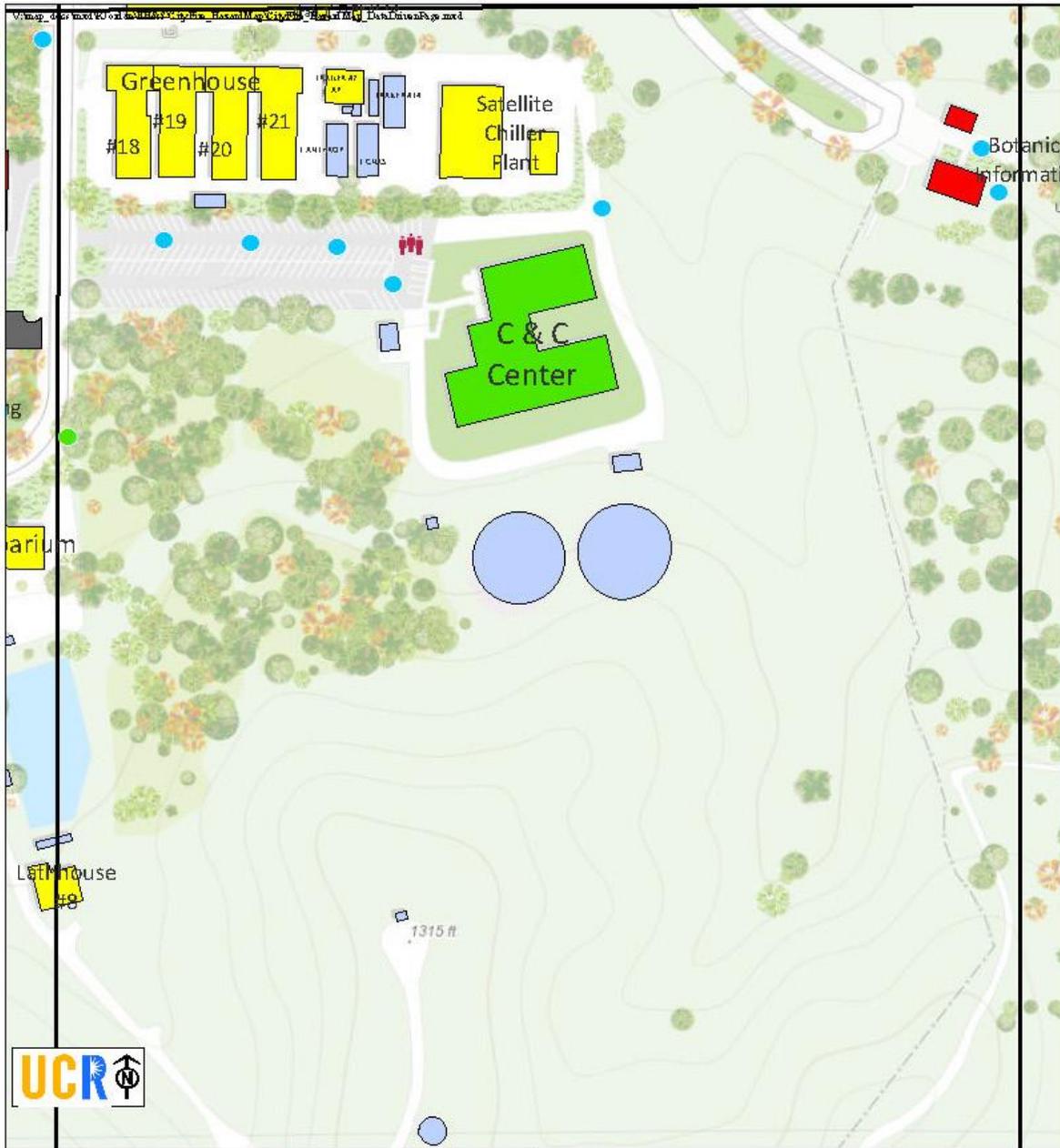
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Site Map

E5



Map not to scale

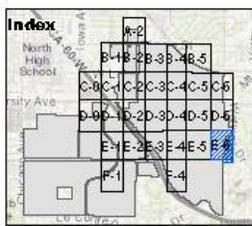
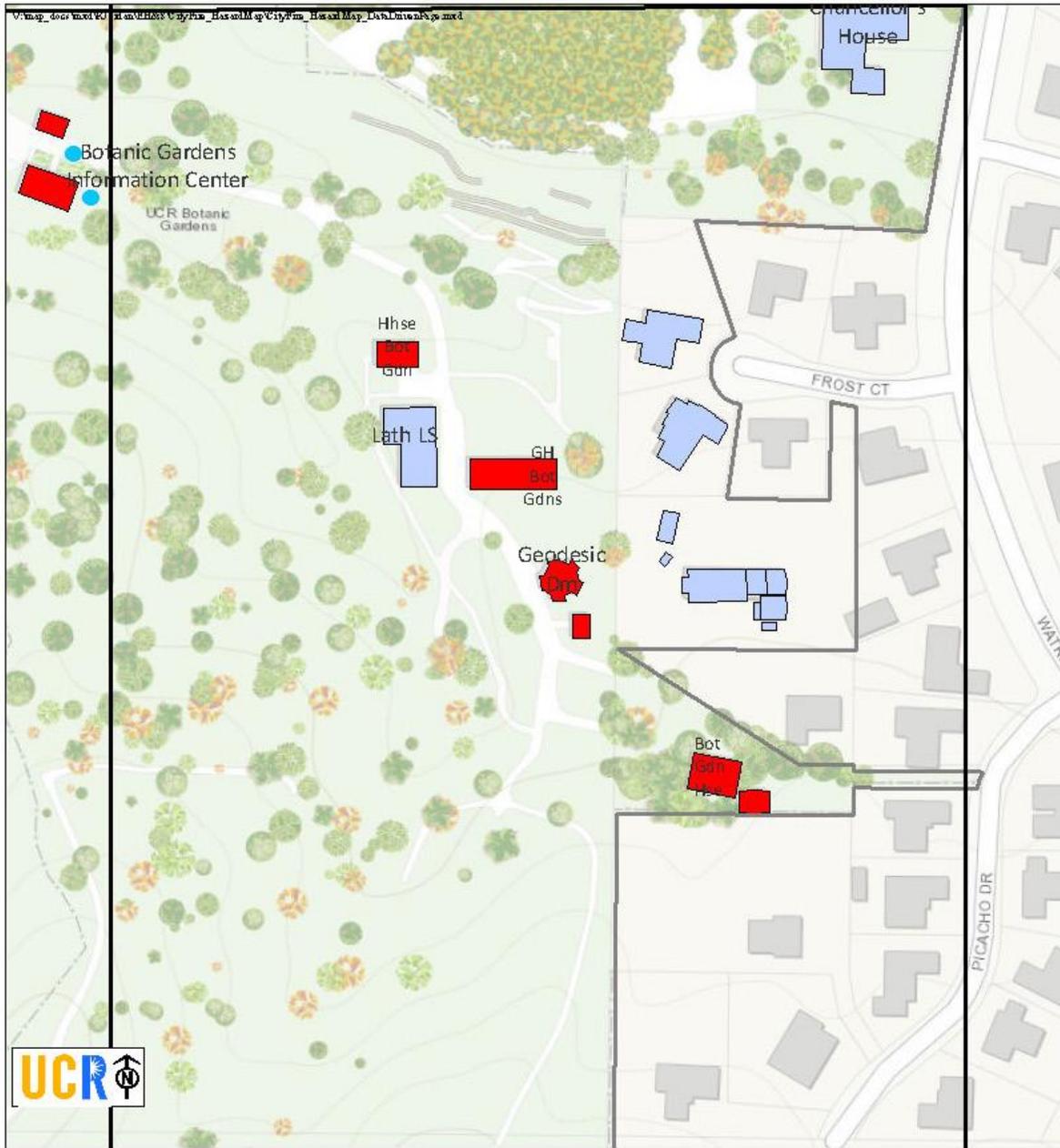
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Site Map

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Map not to scale

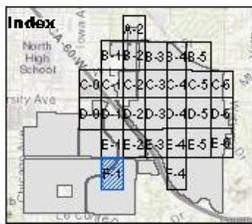
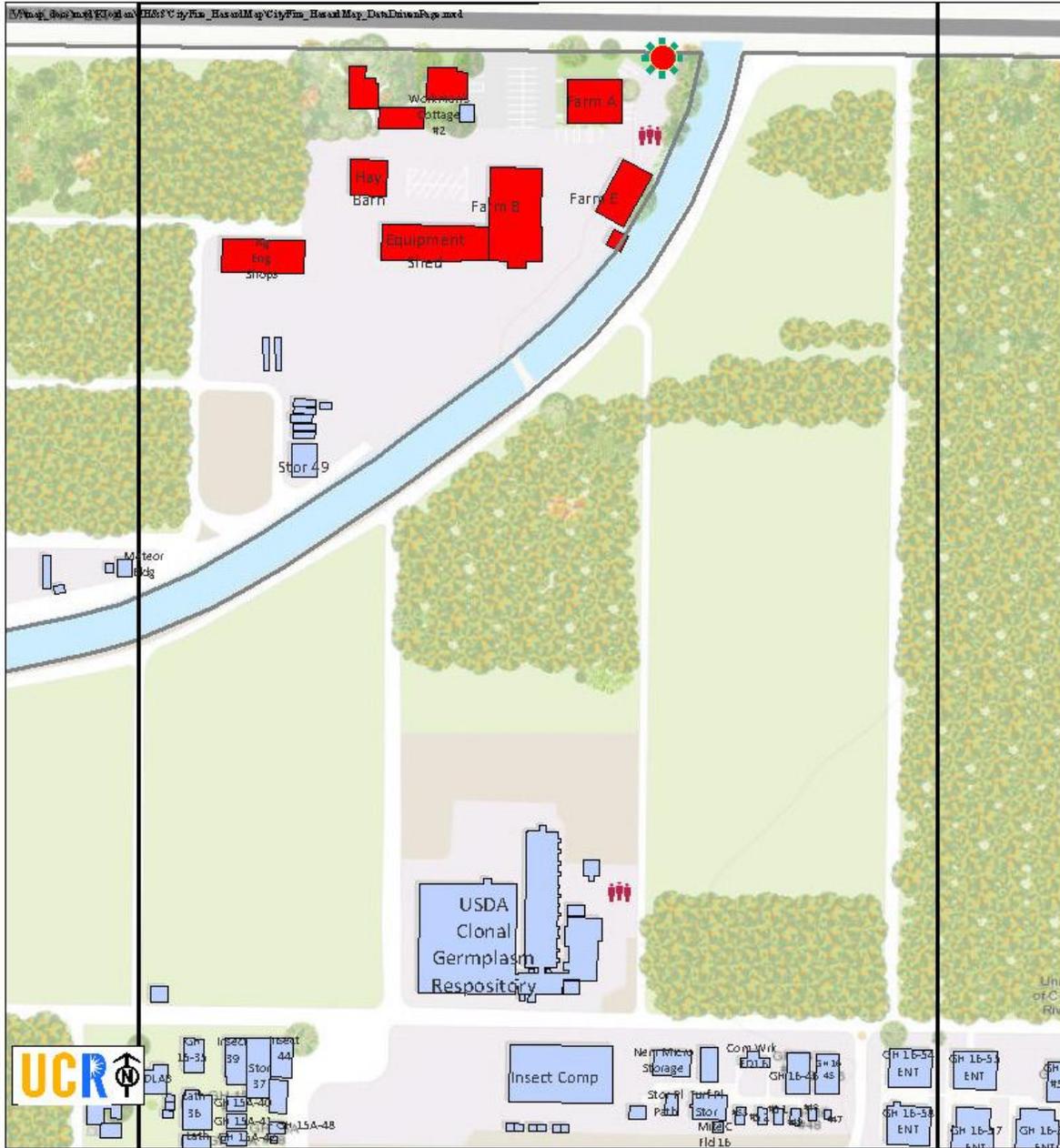
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Site Map

F1



Map not to scale

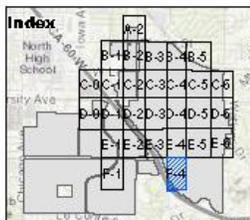
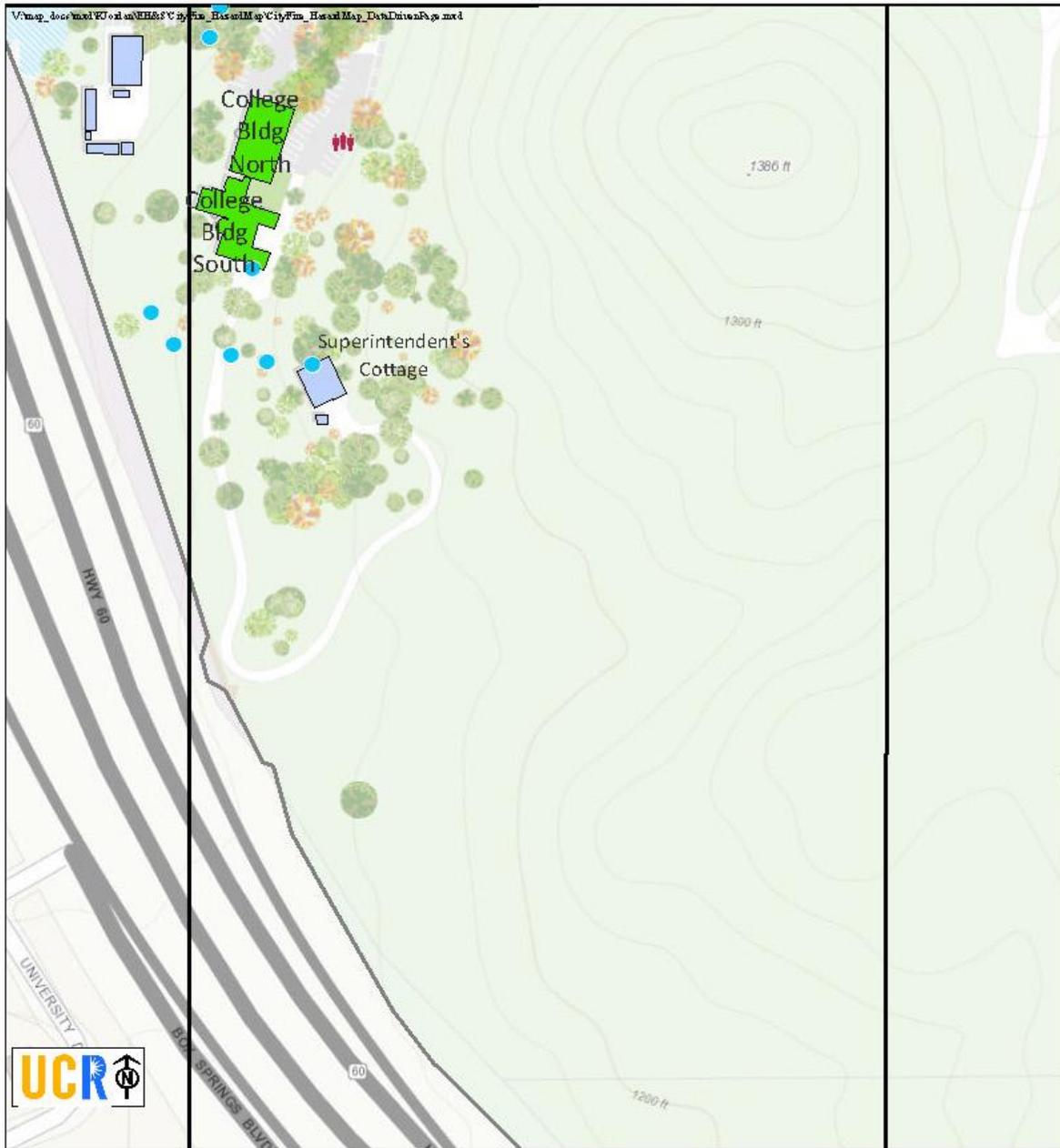
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