



Community Outreach Meeting: Independent Testing Laboratory

790 Main Street
Wareham, MA 02571



Ron Biever

Vice President, North America

- MS in Wildlife & Fisheries Science from Texas A&M
- Has lived in Wareham since joining Smithers in 1986
- 10+ years of leading the North American business from here in Wareham
- Has been active in Church & Youth Sports activities within the community & local area





Eric Steele

Director, Analytical & Microbiology Services

- BS in Chemistry from UMASS Dartmouth
- Joined Smithers in 2008
- 5+ years in Quality and Safety leadership

- Grew up in Dartmouth, now resides in Fairhaven
- 13-year member of US Coast Guard Auxiliary



Who is Smithers?

- The ERS division of Smithers provides **environmental safety testing** for companies developing new **pesticide, pharmaceutical and chemical** products
- **By law**, these products require testing to evaluate the **movement** of a chemical in the environment, how it **breaks down**, and whether there are any **harmful effects** to the environment

What Type of Testing Does Smithers Perform?

Where does
it go?

Environmental
Fate



Does it
break
down?

Metabolism



What is it?

Product
Chemistry



Does it do
any harm?

Ecotoxicology



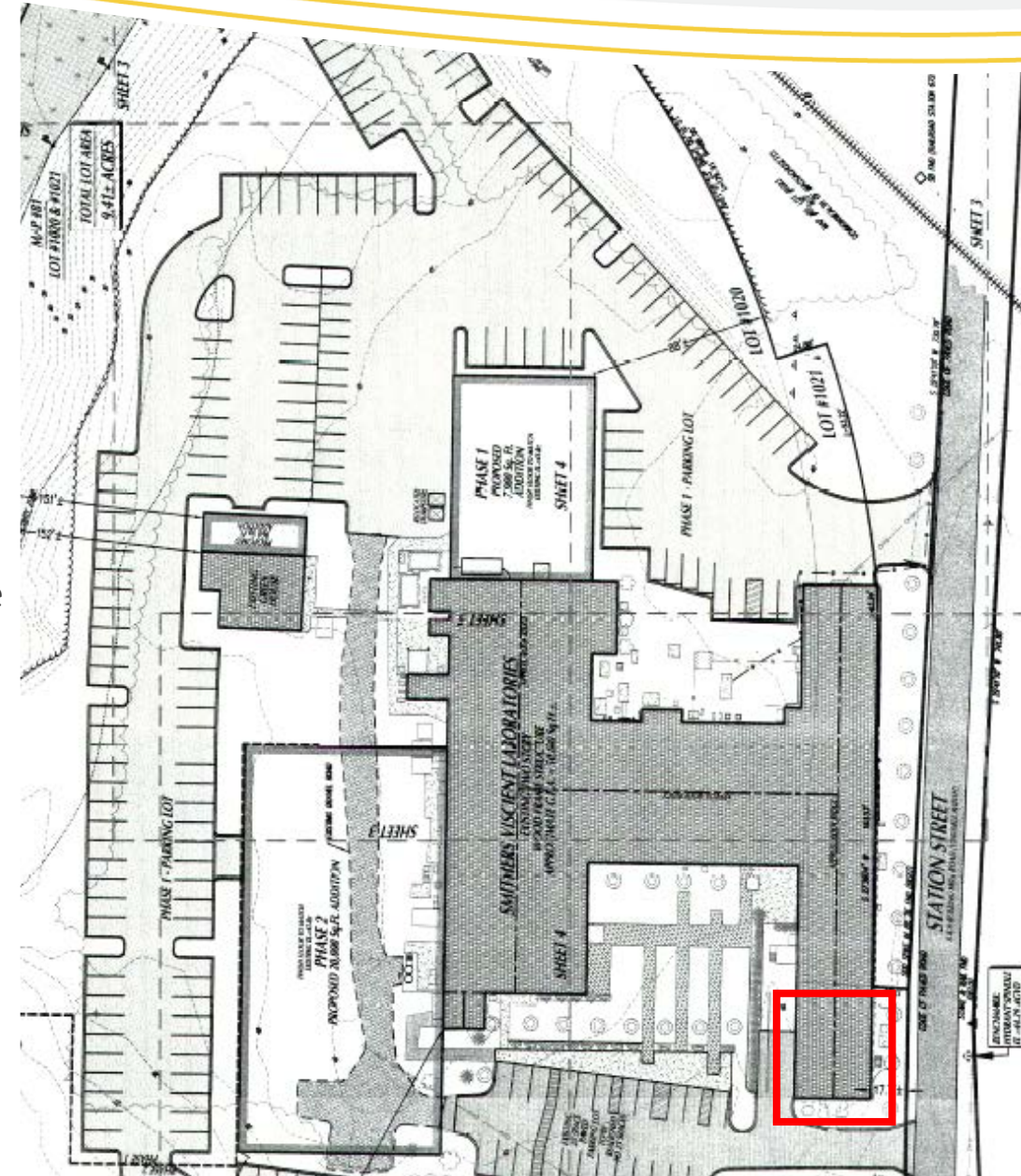
How much is
on the food
we eat?

Residue
Chemistry



Proximity to Decas School

- Small quantities compared to cultivation or retail facilities
 - Teaspoon equivalent sample sizes, expectation is to process 8 samples per day
 - Sample is either destroyed during testing process or rendered unusable prior to disposal
- Facility must follow heavily regulated security protocols (discussed later)
- Previous examples of buffer zone reduction
 - Tremont Nail Factory product manufacturing facility granted 0 ft. buffer at Fall 2018 Town Meeting, adjacent to Little People’s College
 - This is a laboratory, not a cultivation or retail facility
- Town intends to decommission Decas School at end of 2021
 - Operational overlap of approximately 5 months within calendar year 2021
- Town has not yet approved adding the proposed zoning change to the Fall 2020 Town Meeting warrant
 - Planning Board public hearing scheduled on August 17



Adding Cannabis Testing to our Facility

Just like pharmaceuticals, all cannabis products are tested before sale to ensure their safety

- Cannabinoid potency
- Pesticide Residues
- Heavy Metals
- Bacterial and fungal contamination
- Residual chemicals from the manufacturing process

Same types of testing for cannabis that we do on food crops, just in a different plant species

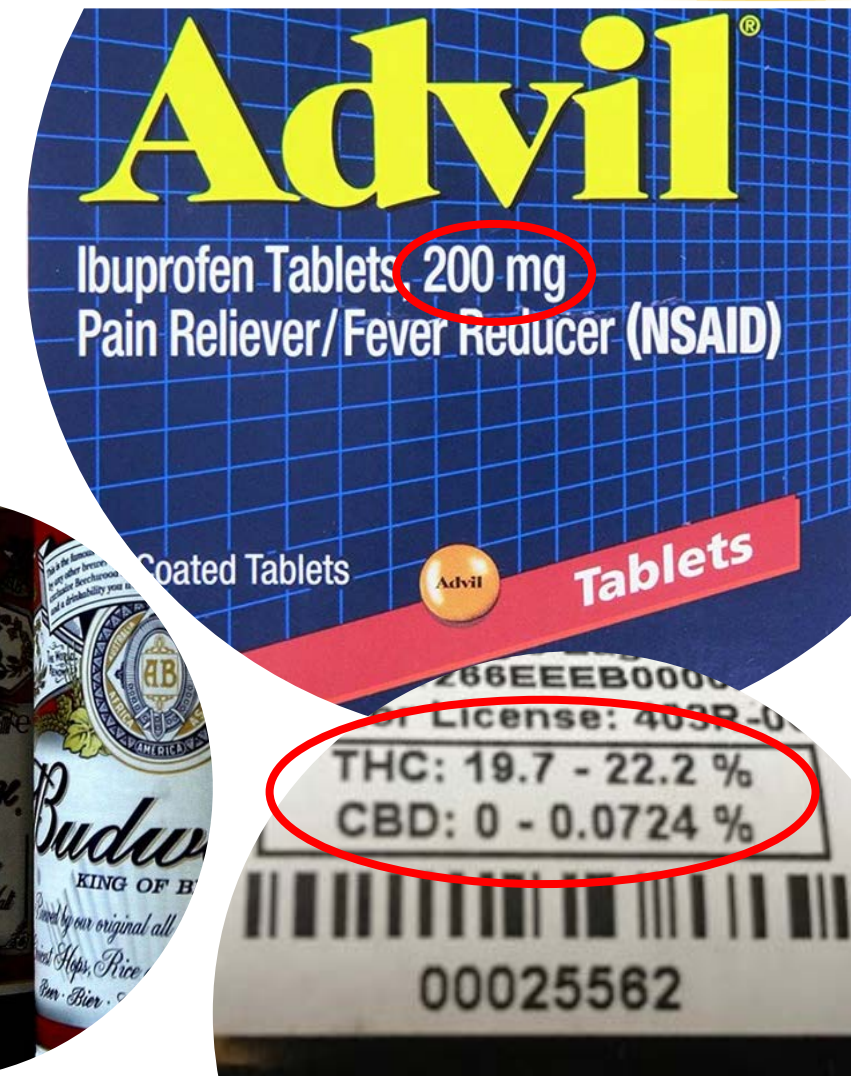
This testing is done in a secure facility, closed to the public and other Smithers employees – testing very small samples of cannabis products

Testing is highly regulated by the Massachusetts Cannabis Control Commission (CCC) Regulations, 935 CMR 500, and ISO 17025 Standards (International Organization for Standardization)



Cannabinoid Potency

- Tetrahydrocannabinol (THC) is the psychoactive ingredient in cannabis
- Cannabidiol (CBD) is a non-psychoactive ingredient
- Quantify the amount of THC and CBD
 - % THC & CBD used to establish dose levels for medical and recreational uses
- CCC requires THC & CBD potency to be labeled on all products



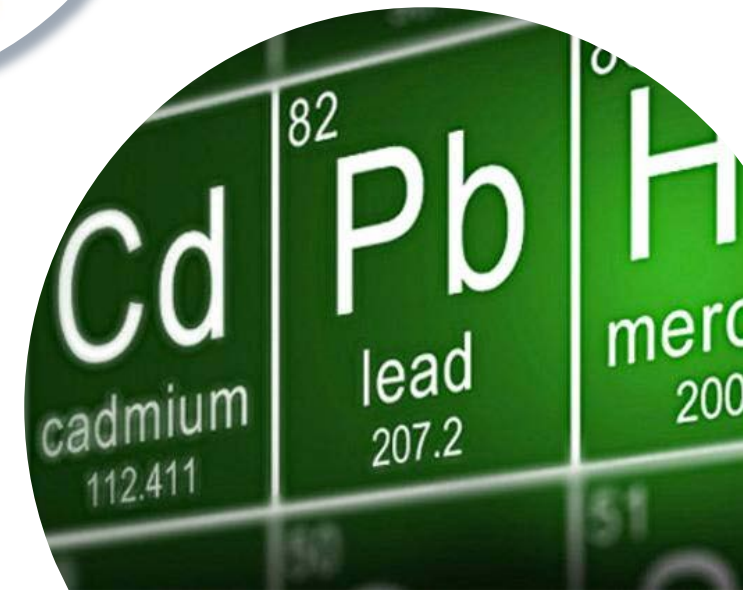
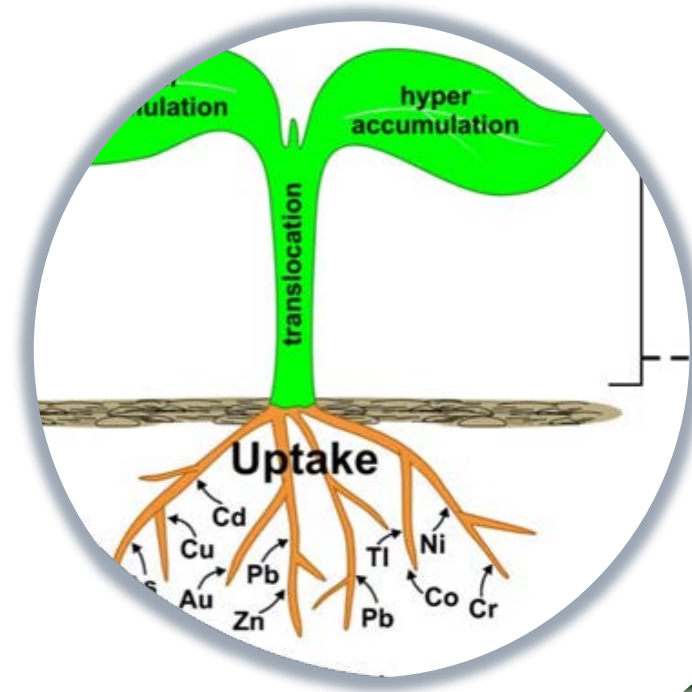


Pesticide Residues

- Pesticides are used to control:
 - Insects (insecticide)
 - Weeds (herbicide)
 - Fungus (fungicide)
- Pesticides must be registered on a specific crop before they can be legally applied to that crop
- No conventional pesticides are currently registered for use on cannabis and therefore no maximum residue levels (MRL) are established
- Pesticide residues are commonly measured on a representative sample of all commercially grown crops that you purchase at the market, so it is a well-established practice
- CCC requires cannabis products are analyzed to assure there are no pesticide residues present

Heavy Metals

- Heavy metals are naturally occurring elements
- Plants uptake toxic heavy metals if present in the soil
- Heavy metal poisoning can lead to:
 - Tremors/neurological symptoms
 - Infertility
 - Digestive problems
 - Kidney damage
 - Poor immune function
- CCC requires all cannabis products are analyzed to determine if heavy metals (arsenic, cadmium, lead & mercury) are below established safety thresholds



- SALMONELLA OUTBREAK
- 285 SICKENED, 1 PERSON KILLED
- TEXAS AND 26 OTHER STATES
- CUCUMBERS FROM SAN DIEGO
- GROWN IN MEXICO

CUCUMBER RECALL

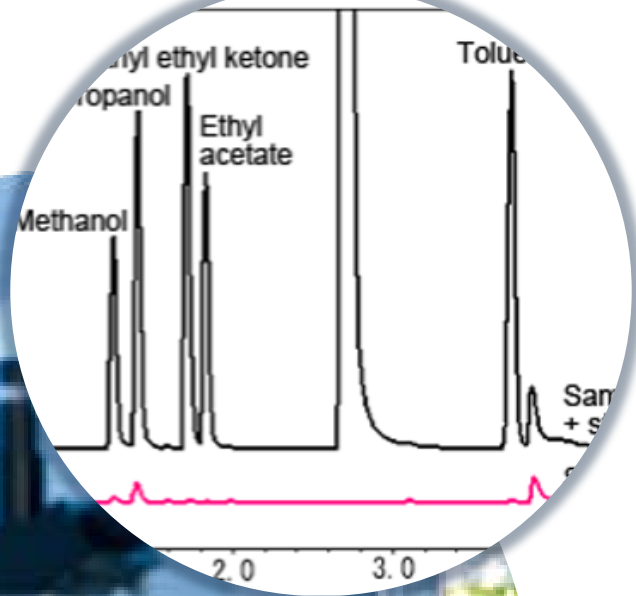
Microbiological Contaminants & Mycotoxins

- Prove the absence of harmful bacteria and fungi
 - E. coli
 - Salmonella
- Assure total yeast & mold counts are below regulatory threshold
- Mycotoxins are toxins produced by fungi
- Testing is based on USDA and FDA procedures for food safety testing
- CCC requires testing of cannabis products to assure they meet established safety thresholds



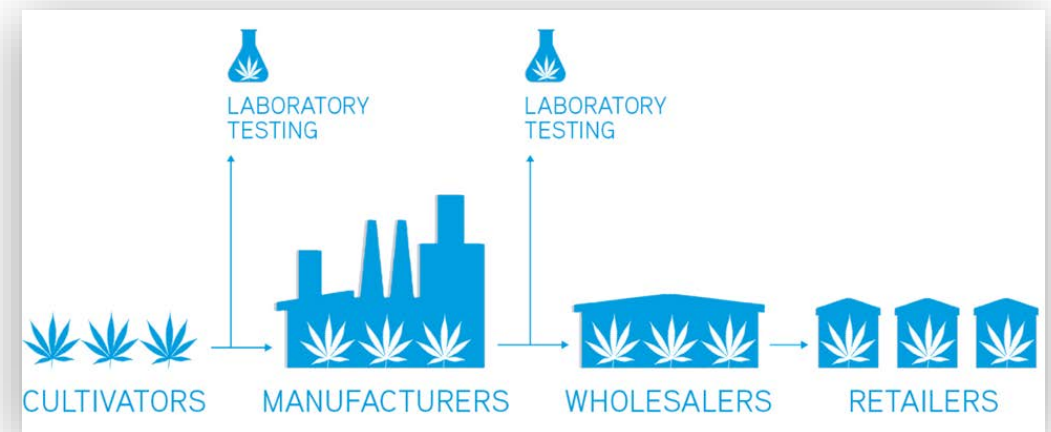
Residual Solvents

- Common laboratory solvents (e.g., methanol, butane) are used to extract THC and CBD from cannabis flower
- Extracts are used to produce Marijuana Infused Products (MIPs):
 - Edibles
 - Oils
 - Salves
 - Vape liquid
- All MIPs must be analyzed and shown to be free of residual solvents
- CCC requires testing of any cannabis product that uses solvents in the manufacturing process



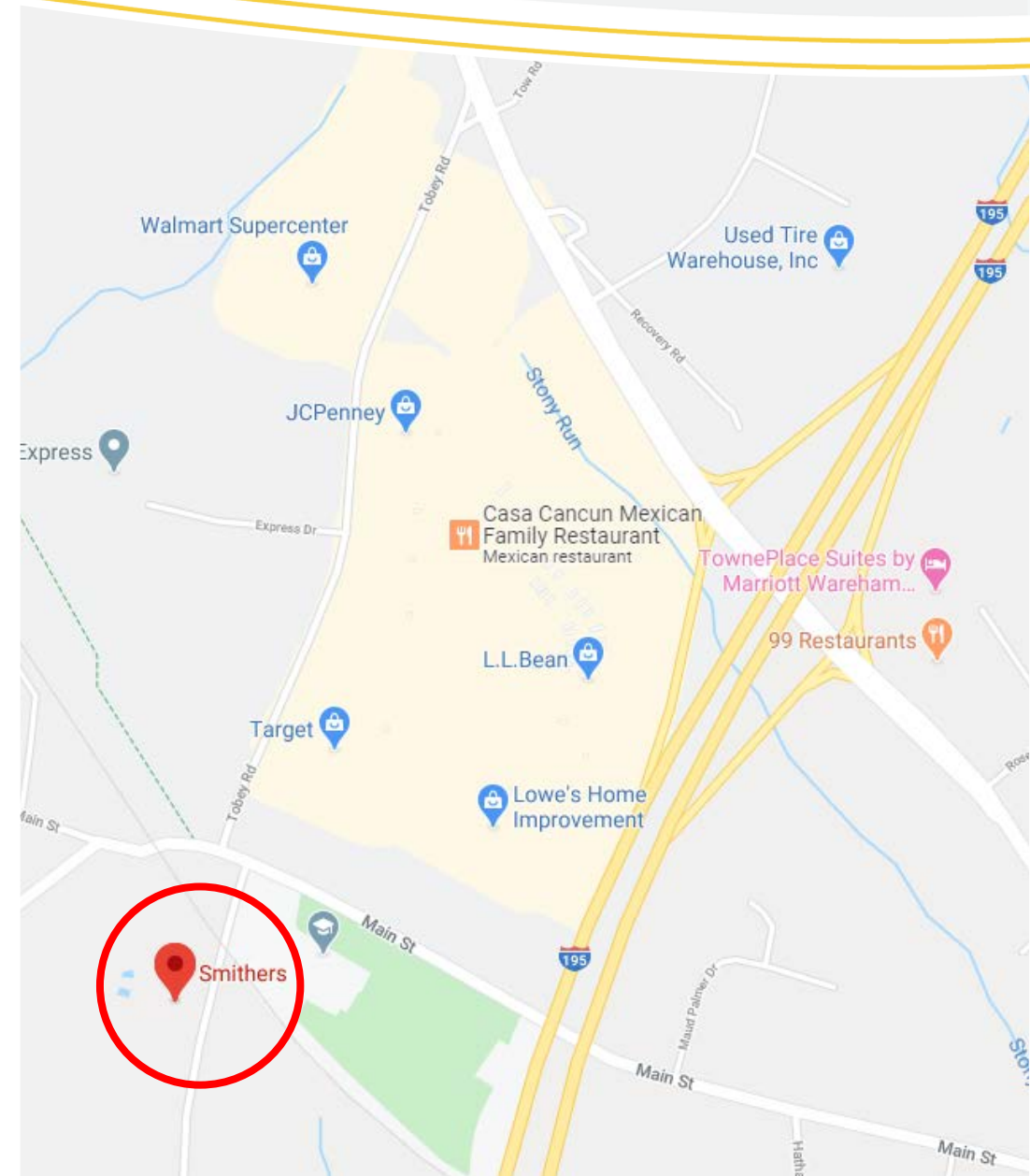
Business to Business model - no “walk-in” consumers

- Smithers customers will be companies, not the general public
 - Cultivators (flowers, trimmings)
 - Manufacturers (edibles, concentrates, etc.)
- No external signage on site indicating cannabis testing
- Small quantities on hand compared to a cultivation or retail facility
 - Sample size 5g or less (90-100 samples per lb.)
- Samples will be delivered to Smithers by CCC licensed employees in GPS-tracked vehicles, by CCC licensed companies
- Excess sample after testing will be destroyed prior to waste disposal, in accordance with CCC regulations



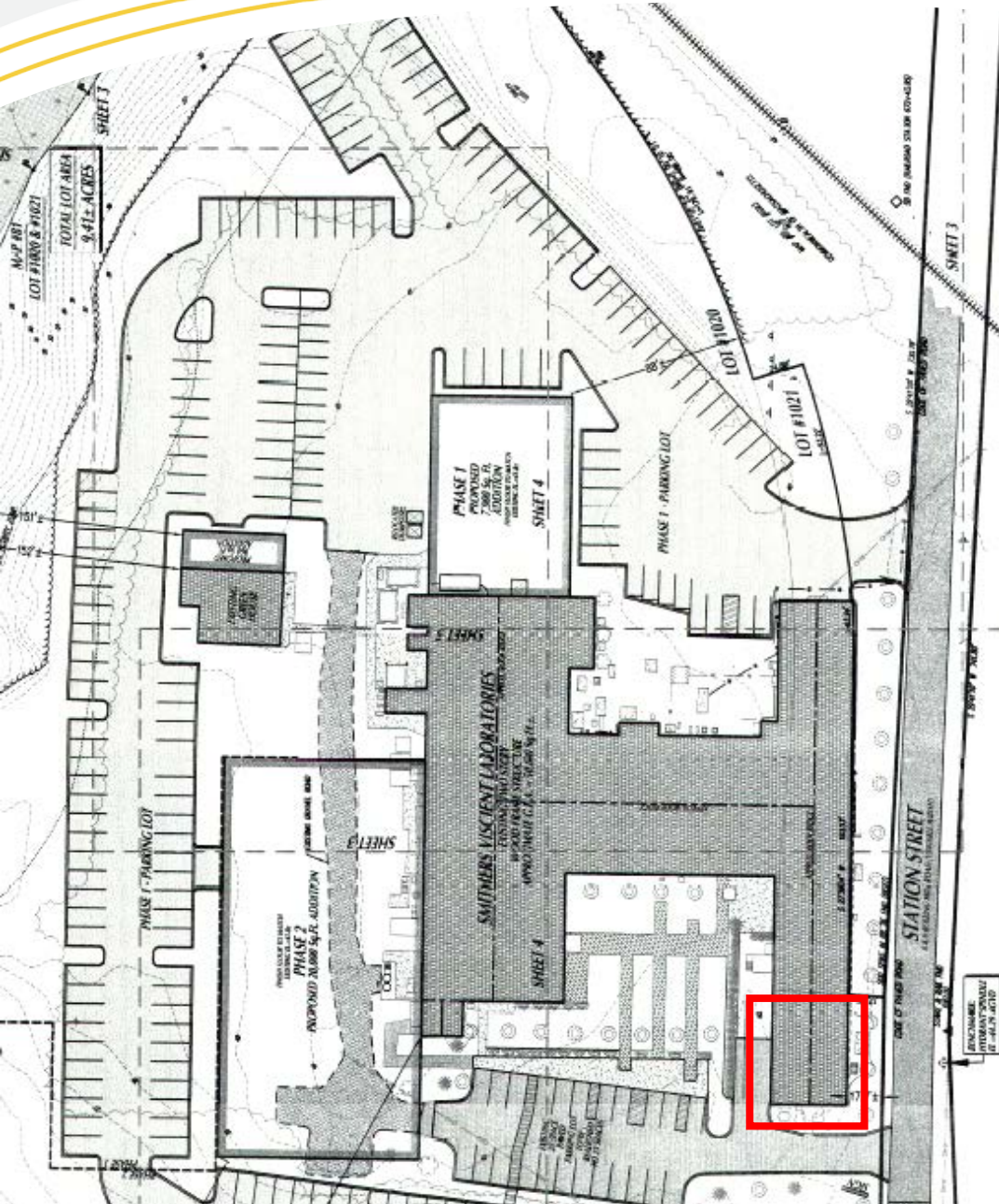
Site Details

- 790 Main Street
 - Off Station Street, directly behind Target
- Within 500 ft of Decas School
 - Railroad tracks between school and facility
 - Town plans to decommission school at end of 2021
 - Town has previous history of reducing buffer zone (e.g., proposed Tremont Nail Factory manufacturing facility)
- Reduction of buffer zone allowed with Special Permit from the Town
 - Planning Board public hearing to be held on August 17 to reduce buffer zone



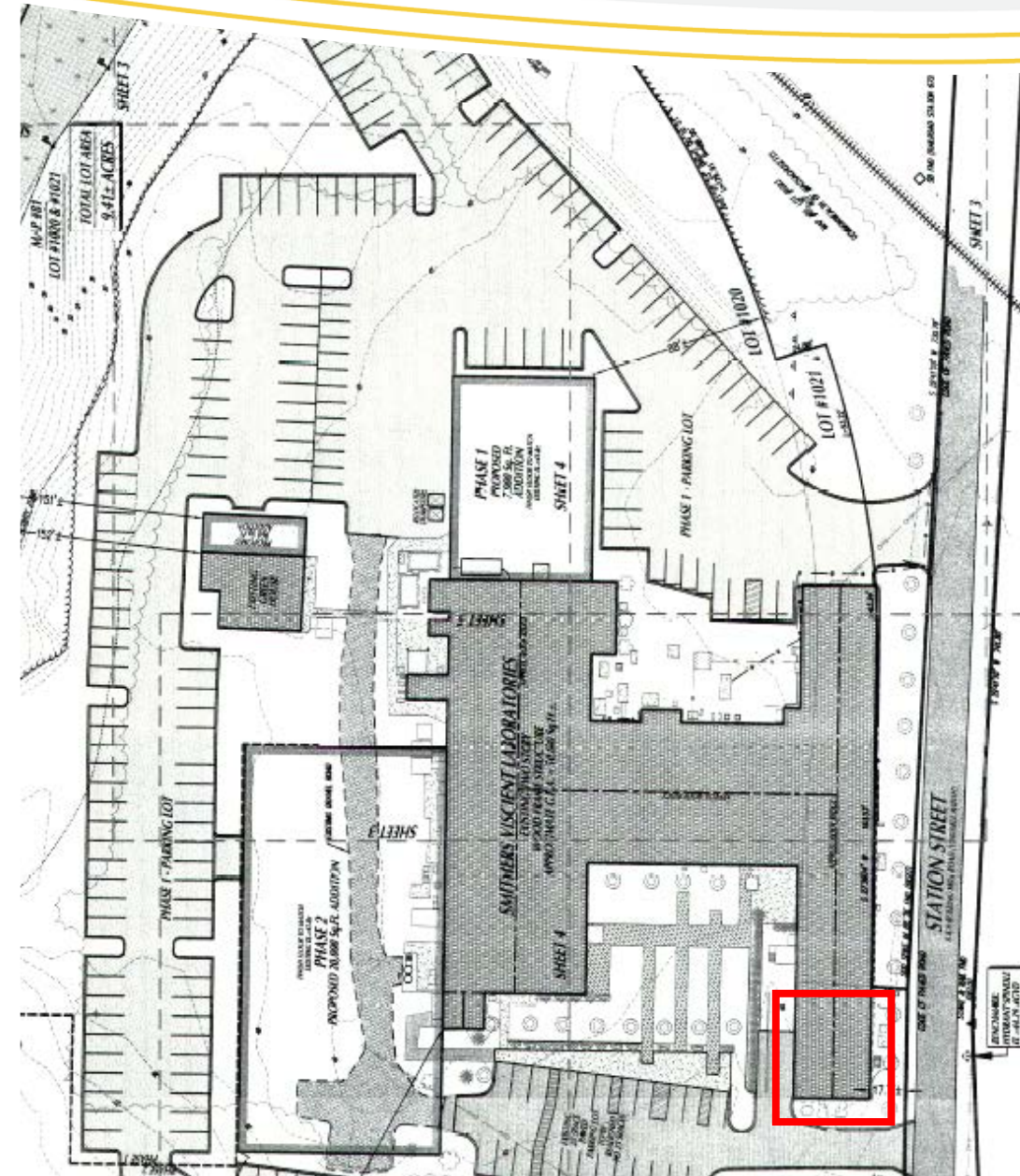
Site Details

- Smithers has occupied this facility since 1969
- No site expansion necessary to accommodate cannabis testing
 - Use of currently vacant lab space
 - Plenty of existing parking
- Security systems will be upgraded to meet state regulations for cannabis facilities



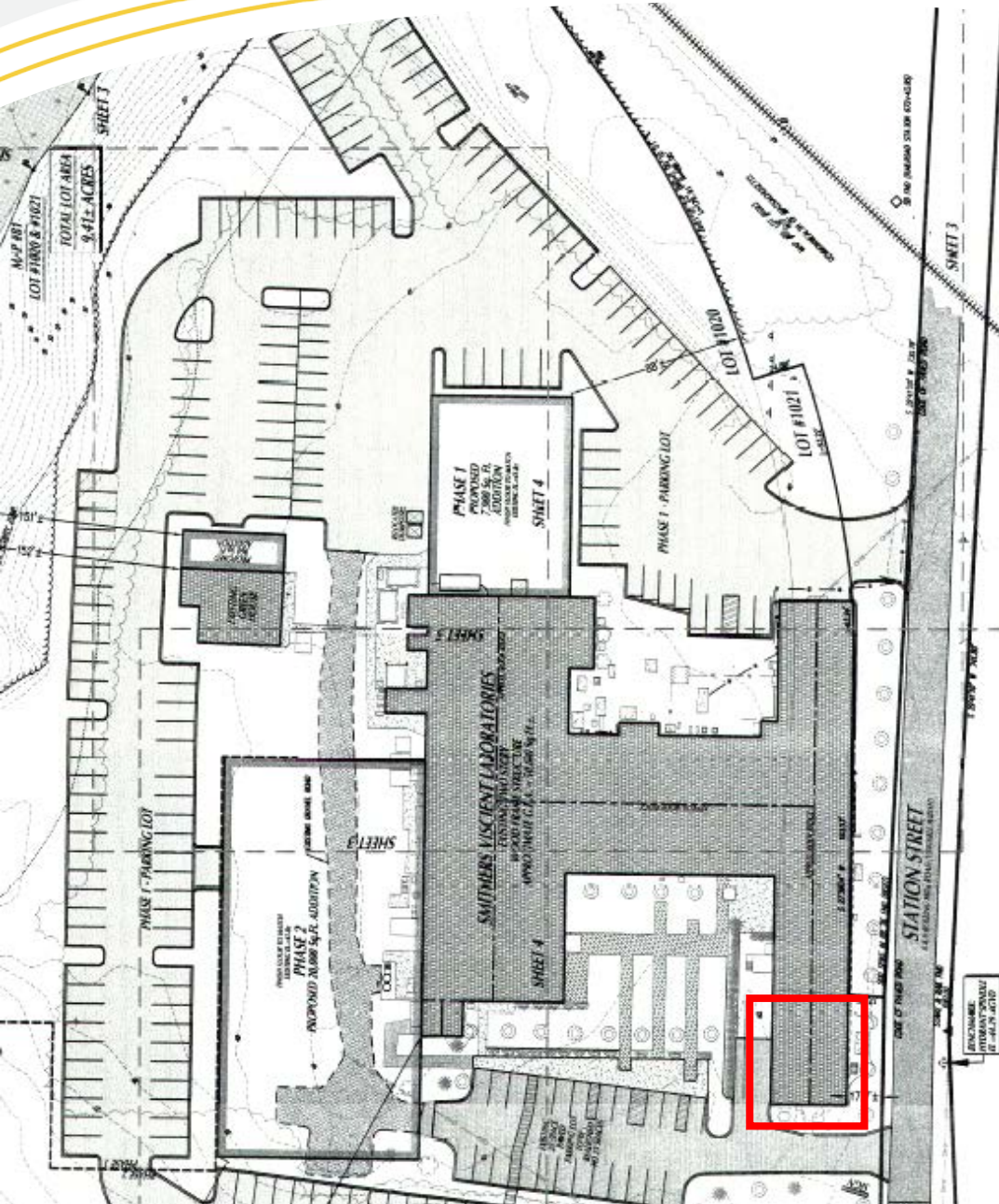
Security to Meet CCC Requirements

- 7 Security cameras (internal and external)
- RFID key card access on all doors
- Windows barred/covered
- Access controlled from internal facility
- Sample storage in locked cage in a locked room (both key card access controlled)
- No internal or external access for other Smithers employees without security keys
- All cannabis employees must undergo background check, fingerprint review by Cannabis Control Commission
- Building alarms



Prevention of Diversion and Nuisance

- Security Features (RFID cards, surveillance cameras)
- Credentialed employees with CCC background checks
- CCC inspectors review all security procedures and operating plans for compliance, and perform spot inspections
- Visitor logs and badges
- Tamper proof and child resistant packaging for testing samples
- Security plans and delivery protocols sent to Wareham PD
- Any cannabis stored on site will be locked
- Vehicle deliveries ~1-4 per day



Positive Impact to Community

- Creates high-paying, scientific jobs (7 new hires over 5 years)
- 51 years in Wareham, strong relationship with town
 - STEM events
 - Internships
 - Local hires
- Bringing professionalism, ethics and scientific expertise to an emerging and evolving industry



Questions?

