

# Excavation Work Plan

## BelGioioso Cheese, Inc. Glenville Business & Technology Park Expansion Project

NYSDEC Site No.: 447023

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CHA Project Number: 072605.000

*Prepared for:*



**BelGioioso Cheese, Inc.**  
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*Prepared by:*



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**October 6, 2022**

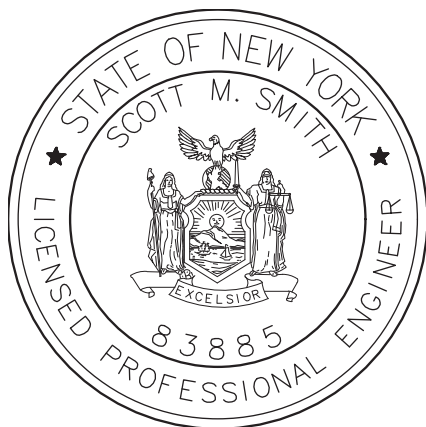
## CERTIFICATION

I, Scott M. Smith, certify that I am currently an NYS registered professional engineer and that this Soil Reuse Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, the undersigned, of CHA Consulting, Inc. have been designated by the Site owner to sign this certification for the Site.

**For CHA Consulting, Inc.:**

(Professional Seal)



Scott M. Smith, P.E.

Printed Name of Certifying Engineer

A handwritten signature in black ink, appearing to read "Scott M. Smith", written over a horizontal line.

Signature of Certifying Engineer

October 6, 2022

Date of Certification

083885

NYS Professional Engineer Registration Number

CHA Consulting, Inc.

Company

Vice President

Title

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## LIST OF ACRONYMS & ABBREVIATIONS

AECOM	AECOM Technical Services
AMC	Army Material Command
AMSL	Above Mean Sea Level
BelGioioso	BelGioioso Cheese, Inc.
bgs	Below the Ground Surface
BUD	Beneficial Use Determination
C&D	Construction & Demolition
CDEC	Consolidated Diesel Electric Company
CAMP	Community Air Monitoring Program
CHA	CHA Consulting, Inc.
COC	Contaminants of Concern
Depot	Scotia Depot
DER	Division of Environmental Remediation
ELAP	Environmental Laboratory Approval Program
EPA	United States Environmental Protection Agency
ESC	Erosion and Sediment Control
EWP	Excavation Work Plan
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GSA	General Services Administration
HASP	Health and Safety Plan
NOI	Notice of Intent
NYCRR	New York Codes, Rules and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethene
PE	Professional Engineer
PFAS	Per- or Polyfluoroalkyl Substances
PID	Photoionization Detector
POTW	Publicly-Owned Treatment Works
ppm	Parts per Million
PRB	In-situ permeable reactive barrier
QEP	Qualified Environmental Professional
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SOP	Standard Operating Procedure

## LIST OF ACRONYMS & ABBREVIATIONS

(CONTINUED)

SVOC	Semivolatile Organic Compound
SWPPP	Stormwater Pollution Prevention Plan
TAGM	NYSDEC's Technical and Guidance Memorandum
TAL	Target Analyte List
TCA	Trichloroethane
TCE	Trichloroethene
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
USACE	United States Army Corps of Engineers
USDOT	United States Department of Transportation
UST	Underground Storage Tank
VOC	Volatile Organic Compound
ZVI	Zero-valent iron

## 1.0 INTRODUCTION

The BelGioioso Cheese, Inc. (BelGioioso) facility (Site) is part of the Glenville Business and Technology Park located at 2165 Amsterdam Road, in the Town of Glenville, New York. The Site was historically part of the Scotia Depot (Depot), commissioned as a United States Navy facility, and served as a storage and supply depot for naval forces along the Atlantic Coast and Europe, and as a storage and distribution point for National Stockpile materials. The entire former Depot property is currently listed in the New York State Inactive Hazardous Waste Disposal Site Remedial Program, Site No. 447023, which is administered by the New York State Department of Environmental Conservation (NYSDEC). The Site consists of approximately 40.4-acres of the former Depot. Figure 1 shows the Site location and Figure 2 depicts the location of the proposed plant expansion. Additionally, the Site Plan and Architectural Drawings (Appendix A) provide details on a proposed expansion to the plant.

### 1.1 PURPOSE

This Excavation Work Plan (EWP) was prepared to address the management of soils to be excavated during the construction of an addition of approximately 3,864 square feet to the existing plant at the Site. This addition, hereby known as “the Expansion”, will be constructed in an area of the Site that is currently paved. The original EWP prepared by CHA Consulting, Inc. (CHA) on May 7, 2019, and approved by NYSDEC on May 8, 2019, was prepared to address the management of soils and quarried materials to be excavated during the initial construction of the BelGioioso facility. This EWP represents an update to the previously-approved plan that has been modified to address the specific requirements of the expansion project.

This EWP aims to define the requirements for proper management of on-site materials and imported materials to the Site per New York State (NYS) and Federal environmental regulations and governing Site documents. Upon NYSDEC’s approval of this document, the procedures outlined in this EWP be followed when conducting any intrusive activity or soil disturbance associated with the construction of the plant expansion. This EWP provides requirements and guidance to BelGioioso personnel and outside contractors performing the work and describes provisions for the following:

- Site controls (e.g. work zone access/security);
- Procedures for excavating, screening, and segregating excavated material;
- Requirements for reuse of soils/materials on-Site;

- Sampling and characterization for final disposition of materials (e.g. off-site disposal);
- Fluids management;
- Cover system restoration;
- Backfill and imported fill requirements;
- Stormwater pollution prevention;
- Contingency plan;
- Community Air Monitoring; and
- Dust and Odor Controls.

The construction of the Expansion will include the removal of existing asphalt pavement and approximately 12-inches of previously imported run-of-crush stone. After completing the excavation of the run-of-crush material as well as trenching to install a foundation system for the expansion, the Site will be restored as further described in Section 10. The excavated asphalt will be taken to an NYSDEC-approved recycling facility, while the soil and quarried aggregate material will remain within the confines of the 42.24-acre Site.

All work conducted for this project will comply with this EWP. A copy of the EWP will be provided to all contractors performing work at the Site and all construction activities will be performed under the observation of CHA.

A copy of the Site Plan and Architectural Drawings for the Expansion is included in Appendix A.

## **1.2 ABBREVIATED SITE HISTORY & SITE OWNERSHIP**

The Site is located on a portion of the former Scotia Depot, a 337-acre parcel that served as a storage and supply depot for naval forces along the Atlantic coast and Europe and a storage and distribution point for National Stockpile materials. The Depot stored items such as boilers, turbines, and reduction gears and housed the Navy's Landing craft Maintenance and Battle Damage Program, and the Navy's Automotive Handling Equipment Spare Parts Program. In 1960 the property was turned over to the General Services Administration (GSA) at which time buildings were leased to the United States Army Corps of Engineers (USACE) Army Material Command (AMC) and their contractor, Consolidated Diesel Electric Company (CDEC). The USACE AMC and CDEC utilized the buildings for the fabrication and storage of vehicles and military equipment, open surface dip tank operations, and the preservation, storage, and rail loading of trucks.

In the late 1980s, trichloroethene (TCE) was detected in low concentrations in the drinking water well fields in the nearby Town of Rotterdam and the City of Schenectady. The New York State Department of Health (NYSDOH) performed sampling of the residents' private water supply wells located hydraulically downgradient of the Depot and observed levels of TCE, 1,1,1-trichloroethane (1,1,1-TCA), and tetrachloroethene (PCE) at detections consistent with those at the Depot.

The proposed plant expansion area is located at the former lead/zinc and ferrochrome open storage areas. Past soil sampling in this area, as documented in the *Soil and Dry Well Removal Documentation Report* (Parsons, 2006) indicates that arsenic remains in the soils in this portion of the Site at concentrations of up to 57.5 milligrams per kilogram (mg/kg), which is over three times the Commercial Use Soil Cleanup Objective (SCO) concentration of 16 mg/kg.

The NYSDEC approved a Record of Decision (ROD) in March 2010 required a remedy that addresses groundwater contamination at the Depot through the installation of an in-situ permeable reactive barrier (PRB). The PRB was installed through direct injection of zero-valent iron (ZVI) to reduce the mass of on-Site contamination via abiotic degradation and reduce the migration of contaminated groundwater off-Site.

The current Site owner, BelGioioso, has made several improvements to the Site in recent years as part of an effort to redevelop the Site for the current cheese manufacturing plant.

## **1.3 GEOLOGY/HYDROGEOLOGY**

### **1.3.1 Site Topography**

The Site is relatively flat, with a low-lying area located along the northern Site boundary adjacent to the railroad tracks at an average of 293 feet above mean sea level (AMSL), and a high point located near the center of the proposed development, an average 296 feet AMSL. These conclusions are based upon available survey mapping of the Site.

### **1.3.2 Floodplain Mapping**

A review of the *Flood Insurance Rate Map* (FIRM) developed for the Site (Community Panels 36093C0153D and 36093C0151D) by the Federal Emergency Management Agency (FEMA), indicates that the Site is located in Zone X. This zone is considered to be a minimal risk area outside the 1-percent and 0.2-percent-annual-chance floodplains.

### 1.3.3 Abbreviated Site Geology & Hydrogeology

Information provided in the Site Management Plan (SMP) prepared by AECOM Technical Services (AECOM) in October 2017 indicates that the ZVI PRB is installed within the Great Flats Aquifer system, the thickest portion of which is near the Site where sand and gravel deposits are approximately 200 feet thick. The unconsolidated deposits beneath the Site include ice-proximal end moraine and esker gravel units, varying in thickness, and overlie basal till. Groundwater is typically encountered at a depth of 65 feet below ground surface (bgs) and typically flows to the west-southwest towards the Mohawk River.

### 1.3.4 Contaminants of Concern

As previously indicated, the primary contaminants of concern (COCs) at the Site include TCE, 1,1,1-TCA, and PCE.

## 1.4 NOTIFICATION REQUIREMENTS

“Change of Use” is defined by Title 6 of the New York Codes, Rules and Regulations (NYCRR) Part 375 as “the erection of any structure on a Site, the paving of a Site for use as a roadway or parking lot, the creation of a park or other recreational facility on a site, any activity that is likely to disrupt or expose contamination or increase direct human or environmental exposure, or any other conduct that will or may tend to prevent or significantly interfere with a proposed, ongoing, or completed remedial program.” At least 60 days before any change of use at the Site, the NYSDEC will be notified via written correspondence. As the construction of the Expansion meets the definition described above, and per the requirements described in the NYSDEC approved SMP prepared by AECOM in October 2017, CHA (on behalf of Belgioioso) notified NYSDEC with a 60-day notification for the Site Change of Use on September 30, 2022.

Table 1-2 in the SMP provides a complete listing of Site-related contact information; however, at a minimum, the contacts from Table 1 below, will be notified.

**Table 1: Site Contact List**

NAME	TITLE	TELEPHONE NUMBER	EMAIL ADDRESS
Kyle Forster	NYSDEC Project Manager	(518) 402-8644	<a href="mailto:kyle.forster@dec.ny.gov">kyle.forster@dec.ny.gov</a>
Sarah Quandt	NYSDEC Section Chief	(518) 902-9116	<a href="mailto:Sarah.Quandt@dec.ny.gov">Sarah.Quandt@dec.ny.gov</a>

NAME	TITLE	TELEPHONE NUMBER	EMAIL ADDRESS
Gerard Burke	NYSDEC Remedial Bureau B	(518) 402-9817	<a href="mailto:gerard.burke@dec.ny.gov">gerard.burke@dec.ny.gov</a>
Christopher O'Neill	NYSDEC Region 4	(518) 357-2394	<a href="mailto:christopher.oneill@dec.ny.gov">christopher.oneill@dec.ny.gov</a>
Anthony Perretta	NYSDOH Bureau of Environmental Exposure Investigation	(518) 402-7860	<a href="mailto:anthony.perretta@health.ny.gov">anthony.perretta@health.ny.gov</a>
Justin Deming	NYSDOH Bureau of Environmental Exposure Investigation	(518) 402-7860	<a href="mailto:justin.deming@health.ny.gov">justin.deming@health.ny.gov</a>
Timothy Cronin	BelGioioso General Manager	(518) 374-5064	<a href="mailto:timothy.cronin@belgioioso.com">timothy.cronin@belgioioso.com</a>
Keith Cowan	CHA Project Manager	(518) 453-2899	<a href="mailto:kcowan@chacompanies.com">kcowan@chacompanies.com</a>
Scott Smith, PE.	CHA Project Engineer	(315) 257-7277	<a href="mailto:ssmith2@chacompanies.com">ssmith2@chacompanies.com</a>
TBD	CHA Environmental Site Representative	TBD	TBD

In the event of any environmentally related issue or unplanned occurrence requiring assistance, the Owner or Owner's Representative(s) should contact the appropriate party from the contact list in Table 2, below. For emergencies, appropriate emergency response personnel should be contacted. The emergency contact list must be maintained in an easily accessible location at the Site. Prompt contact should also be made to CHA, Belgioioso, and the NYSDEC at the numbers in Table 1.

**Table 2: Emergency Contact List**

PERSONNEL	CONTACT INFORMATION
Medical, Fire & Police	911
NYSDEC Spills Hotline	(800) 457-7362
National Response Center (for Pollution Toxic Chemical Oil Spills)	(800) 424-8802
Poison Control Center	(800) 222-1222
Dig Safely New York – Utility Clearance (3-day notice required for utility mark-out)	(800) 962-7962 or 811

*Note: Contact numbers are subject to change and should be updated as necessary.*

## **1.5 HEALTH & SAFETY PLANS**

The remaining potential contamination still poses a potential risk to worker safety when handling the Site soils. Per DER-10 a site-specific Health and Safety Plan (HASP) is required for any person conducting intrusive Site activities that may have the potential to encounter contamination and must be adhered to by all personnel involved in these activities at the Site. The HASP is also a requirement of the federal Occupational Safety and Health Administration (OSHA). The HASP provided in Appendix B provides the minimum guidelines for worker safety for the project, each contractor must develop a detailed plan that addresses the specific job hazards their personnel will encounter during the implementation of the soil management activities (e.g. operation of heavy equipment).



## **2.0 SOIL SCREENING & SAMPLING METHODS**

### **2.1 SOIL SCREENING**

Visual, olfactory, and instrument-based (e.g. photoionization detector) soil screening will be performed during all excavations into known or potentially contaminated, stockpiled material. A qualified environmental professional (QEP) as defined in 6 NYCRR Part 375, a professional engineer (PE) who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State will perform the screening. Specifically, soil screening will be performed daily by a CHA environmental engineer or scientist when invasive work is performed. Field screening will include observation/examination for evidence of contamination (e.g. staining, odor) using a photoionization detector (PID) equipped with a 10.6eV strength lamp or higher. The PID should have a minimum detection range of 0.1 parts per million (ppm) to 9,000 ppm and be calibrated daily (or before each use) according to manufacturer specifications.

Soils that exhibit no chemical/petroleum odors, visual evidence of staining/discoloration, or PID readings of less than 20 ppm will be loaded into on-Site trucks for reuse on-site based on previous analytical testing (refer to Section 7.0 for additional details). Any soils exhibiting strong chemical/petroleum odors, visual evidence of staining/discoloration, or PID readings of 20 ppm or greater will be stockpiled for additional analytical testing and off-site disposal. If soil is discovered that is grossly contaminated, stained, exhibits odors consistent with solvents or petroleum, generates elevated PID readings (20 ppm or greater), or shows any other signs of being impacted, the material will be segregated, staged per Section 3.0, and the QEP will notify the NYSDEC and responsible party within 24 hours of the discovery of such impacts.

As indicated, removed asphalt material will be segregated from other excavated materials for off-site recycling/disposal at an NYSDEC-approved asphalt recycling facility.

### **2.2 ANALYTICAL TESTING**

As previously stated, it is anticipated that excavated soil will remain on Site. However, in the event that soil is to be removed from the Site for off-site disposal based on field screening or a surplus of material, it will be analyzed for waste characterization purposes by the quantity and parameters specified by the disposal facility.

Typically, one waste characterization sample will be required for up to 200 tons of material requiring disposal, although this frequency may be increased with authorization of the disposal facility. Unless otherwise specified by the disposal facility, samples collected for volatile organic compound (VOC) analysis will be discrete grab samples and other analyses will be performed on composite samples. The basic sampling methodology, as well as the analytical requirements, are described below.

### Grab Samples

The grab sample(s) will be collected by personnel wearing a freshly donned pair of nitrile gloves (or equivalent) and appropriately decontaminated, stainless steel hand tools or disposable sampling tools. The samples will be immediately placed into appropriately pre-preserved laboratory containers and labeled.

### Composite Sampling

The composite sample(s) will be collected from various depths and locations for each stockpile of segregated material. Each composite will be formed from five equally sized, discrete sub-sample soil samples. The samples will be collected by hand with a fresh pair of gloves or with appropriately decontaminated stainless steel hand tools or disposable sampling tools. The sub-samples will then immediately be placed into a stainless-steel bowl and covered with aluminum foil between the additions of each subsample. While composite sampling will not be utilized for samples collected for VOC analysis, the bowl will be covered between the additions of each sub-sample to minimize the potential for volatilization of any semivolatile contaminants that may have been present in the soil.

Once all five of the sub-samples are added to the bowl, the soil samples will be thoroughly homogenized using a stainless-steel spoon/scoop and immediately transferred to the appropriate laboratory containers and managed similarly to the grab samples. The locations of each soil sub-sample will be identified on a map or sketch in the daily log which will be provided to NYSDEC, along with the analytical results, in the final report.

The soil samples will be submitted to a laboratory certified under the NYSDOH Environmental Laboratory Approval Program (ELAP) for analysis following appropriate chain-of-custody protocols. Soil samples are anticipated to be delivered to Alpha Analytical, Inc. in Westborough, Massachusetts, with ELAP Certification Number 11627 for New York State, for analysis. The parameters required for waste disposal characterization are:

- Target Compound List (TCL) VOCs by United States Environmental Protection Agency (EPA) Method 8260.
- Toxicity Leaching Characteristic Procedure (TCLP) VOCs EPA Method 8260.
- TCLP Semivolatile Organic Compounds (SVOCs) by EPA Method 8270.
- Total Polychlorinated biphenyls (PCBs) by EPA Method 8082
- TCLP metals and cyanide by EPA Methods 6010/7471
- Hazardous Waste Characteristics as defined under the Resource Conservation and Recovery Act (RCRA) including ignitability, corrosivity (pH), and reactivity
- Total pesticides/herbicides
- Additional parameters required by the selected disposal facility

Soil sampling will be collected following the sampling and handling protocols described in CHA's standard operating procedures (SOPs) which are attached in Appendix C. These procedures follow industry standards and NYSDEC Division of Environmental Remediation Program Policy 10 (DER-10). Other observations (e.g., location, color, PID reading, etc.) will be noted on the soil sampling log or daily observation log. Table 3 indicates the sampling activity and its corresponding SOP.

**Table 3: List of Standard Operating Procedures**

Activity	SOP #
Chain of Custody	105
Soil Sampling	405
Decontamination	501
Sample Containers, Volumes, Preservations, and Holding Times	603
Field Handling, Packaging, and Shipping	607
Observation Report	903

Since the COCs for the Site include compounds that are listed hazardous wastes per 6 NYCRR Part 371, the TCL VOC analytical results will be compared to the Contained-In Action Levels identified in NYSDEC's Technical and Guidance Memorandum (TAGM) 3028. If the action levels are not exceeded and the material is not characteristic hazardous waste, a Contained-In request will be submitted to the NYSDEC to allow the material to be disposed of as non-hazardous waste in an appropriately permitted disposal facility rather than being disposed of off-site as hazardous waste. If a Contained-In determination is not received from the Department, material requiring off-site disposal, if any, would be managed as hazardous waste.

### 3.0 SOIL STAGING METHODS

Soil exhibiting field evidence of contamination as defined in Section 2.1, will be segregated from other soil proposed for reuse on-site and placed into a new, separate stockpile while awaiting the results of the waste characterization testing and profiling. If stockpiling is required, temporary soil containment pads will be constructed per the following:

- The subgrade will be prepared and will consist of a stable subgrade where all visible sharps have been removed. The temporary soil containment area(s) shall be sufficiently large to contain all stockpiled material and be accessible to excavation equipment and trucks for eventual loading.
- A low point or sump shall be constructed on the temporary soil containment pad to collect any water generated from the dewatering of the materials placed on the pad and the pad will be graded toward the low point.
- Any liquid that accumulates on the temporary soil containment pad will be containerized and characterized for evaluating off-site disposal options.
- A minimum of 20-mil polyethylene sheeting, with at least two feet of overlap at all seams, will be placed on the subgrade. The top sheet will be lapped over the bottom sheet in a shingle-type pattern.
- A minimum of a one-foot-high soil berm, hay bales, wood timbers, or similar will be placed around the perimeter of the containment area to prevent saturated soil and/or water from migrating off the containment pad. The edges of the sheets will be secured to keep the polyethylene sheeting in place.
- Erosion and sediment controls will be erected around the perimeter of stockpiles, including silt fence/silt socks at a minimum. Stormwater runoff will be directed around all stockpiles and excavations. No runoff from the stockpiles will be allowed to enter the on-Site stormwater catch basins.
- The stockpiles will be limited to a maximum height of 15 feet and will be constructed with side slopes no steeper than 2H:1V.
- Stockpiles will be kept covered at all times with appropriately anchored 10-mil polyethylene sheeting (minimum) or waterproof tarpaulins until the material is disposed of off-site. Stockpiles shall be routinely inspected, and damaged tarp covers will be promptly replaced. Stockpiles will be inspected a minimum of once each week and after every major storm event. Results of inspections will be recorded in a logbook and maintained at the Site, available for inspection by the NYSDEC, and will be included in the project report submitted to NYSDEC.

## 4.0 MATERIAL EXCAVATION & LOAD-OUT

A QEP as defined in 6 NYCRR Part 375 as a PE who is licensed and registered in New York State or a qualified person who directly reports (i.e., in chain-of-command of the PE of record) to a PE who is licensed and registered in New York State will oversee all invasive work including the excavation and load-out of all excavated material.

The QEP will maintain a log of all material leaving the Site for off-site disposal if any. The log will include the date, type of material, licensed hauler, license plate number of the dump truck, Part 364 permit, disposal landfill, and time of departure. All asphalt and debris will be disposed of off-site at a properly permitted facility. As previously stated, it is anticipated that excavated soil will remain on the Site and be reused; however, should soil that is identified to be contaminated based on the soil screening and sampling methods identified in Section 2.0, the following characterization and profiling procedures will be followed.

The owner of the Site and its contractors are responsible for the safe execution of all invasive and other work performed under this Plan.

### 4.1 GENERAL REQUIREMENTS

The following minimum procedures will be required for all intrusive activities for this Project:

1. Establish Site Controls, including, but not limited to the following:
  - Installation of appropriate sediment and erosion controls (e.g. silt fence/silt socks/hay bales) around the proposed excavation area as well as any fill placement areas. Erosion and sediment controls will be designed and installed per the NYSDEC's Standards and Specifications for Erosion and Sediment Control, dated November 2016. As indicated in Section 11.1, the overall project disturbance will be less than one acre in size. Therefore, the preparation of a Stormwater Pollution Prevention Plan (SWPPP) and filing of a Notice of Intent (NOI) will not be required for this project; however, best management practices for stormwater pollution prevention will be followed.
  - A minimum of a 4-foot-tall temporary construction fence will be placed around the perimeter of excavations/trenches left open overnight.
  - Setup of air monitoring stations as required to comply with the requirements of the CAMP – Refer to Section 13.0 for details.
  - Construction of containment pads (upon discovery of material requiring waste characterization testing).

- Construction of a decontamination pad.
  - Dust emissions may occur at the project Site during intrusive activities, including but not limited to, excavation and loading activities. Therefore, fugitive dust control measures will be implemented as necessary during all intrusive excavation/construction activities following the CAMP in Section 13.0.
2. Excavate Site soils to facilitate foundation construction utilizing field screening procedures outlined in Section 2.1. To minimize potential cross-contamination to other portions of the Site via tracking and reduce the amount of required decontamination, the following work practices will be implemented:
    - Efforts will be made to advance the excavation face towards the excavator such that the tracks on the machine do not come into contact with the impacted or potentially impacted soils. The excavator will be maintained as dedicated equipment for trenching of Site soils until it is properly decontaminated.
    - Where possible, all trucks will be loaded adjacent to the stockpile being excavated. Care will be taken to ensure that potentially impacted soil is not spilled on the sides of the trucks as they are loaded and that the trucks do not drive through contaminated soils. Saturated soils are not expected to be encountered but the use of any stabilization additives beyond Portland cement would be submitted to the NYSDEC for approval before the use of alternative stabilization methods.
    - Efforts will be made to minimize the amount of equipment and machinery that comes into contact with the impacted soils.
  3. Asphalt will be segregated and recycled/disposed of off-site as further described in subsequent sections. Existing Site soils and previously imported quarried stone materials will be segregated as well and reused on-site at the locations shown in Figure 2.
  4. If field screening processes indicate a material change is encountered (e.g. change in color, noticeable odors, etc.), the newly encountered material will be stockpiled and characterized separately, as previously described.
  5. Loaded vehicles leaving the Site for off-site disposal will be appropriately lined, tarped, securely covered, manifested, and placarded per appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements). Additionally, all trucks hauling waste will have a valid Part 364 waste transporter permit.
  6. Locations, where vehicles enter or exit the Site, shall be inspected periodically for evidence of off-site soil tracking. Impacted soil which is deposited/tracked/spilled beyond the immediate vicinity of the loading area will be swept/collected immediately upon discovery.

## 4.2 DECONTAMINATION PAD REQUIREMENTS

Equipment coming into contact with existing Site soils will be decontaminated before handling clean, imported materials or before demobilization. A truck wash/decontamination pad will be operated on-site, as appropriate. Decontamination fluid/wash waters will be collected and

appropriately disposed of off-site. The QEP will be responsible for verifying that all egress points for truck and equipment transport from the Site are clean of dirt and other materials derived from the Site during intrusive excavation activities. The QEP and the Site owner will require the contractor performing the work to maintain all egress points in a clean condition.

## 5.0 MATERIALS TRANSPORT OFF-SITE

The following requirements have been established for all waste materials, if any, being transported off-site:

1. All transport of waste materials, if any, will be performed by licensed haulers following appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded. In addition to the Part 364 permit, all haulers will maintain appropriate shipping papers and/or waste manifests (6 NYCRR Part 372). Emergency response procedures and emergency telephone numbers will be maintained in all vehicles, and operators will be trained in emergency response procedures.
2. Loaded vehicles will comply with load height and weight regulations.
3. Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded following appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).
4. Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.
5. The portion of all trucks which come into contact with potentially contaminated material will be washed before leaving the Site. Truck wash waters will be collected and appropriately disposed of off-Site.
6. Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site.
7. Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during Site remediation and development.
8. Queuing of trucks will be performed on-Site to minimize off-site disturbance. Off-site queuing will be prohibited.

Truck transport routes will be determined taking into the following: (a) limiting transport through residential areas and past sensitive sites; (b) use of city-mapped truck routes; (c) limiting total distance to major highways; (d) promoting safety in access to highways; and (e) overall safety in transport. The primary point of ingress and egress for truck traffic will be off C Street and out of the industrial park to New York State Route 5.



## **6.0 MATERIALS DISPOSAL OFF-SITE**

Based on the waste characterization sampling performed (refer to Section 2.2), if any, a waste profile will be approved by the receiving disposal facility before any material is permitted to leave the Site. No materials will be transported off-site for unregulated off-site disposal or reuse. All asphalt material will be loaded into trucks for transport off-site to a permitted disposal facility following all local, State, and Federal regulations. The asphalt that is removed from the Site will be shipped to an asphalt recycler/plant that is registered/permitted as a construction and demolition (C&D) debris handling and recovery facility, pursuant to 6 NYCRR Part 360 and Part 361-5, for incorporation into new asphalt per 6 NYCRR Part 360.12(c)(3).

Any soil that is segregated during the excavation of the stockpiles based upon visual, olfactory, or photoionic field evidence of contamination will also be disposed of off-site at a permitted disposal facility as previously described. CHA will notify the NYSDEC of the selected disposal facility for any material deemed hazardous waste at least seven days before shipping of such material, should off-site disposal be necessitated.

Actual disposal quantities and associated documentation will be reported to the NYSDEC in a project report. This documentation will include, but will not be limited to waste profiles, test results, facility acceptance letters, manifests, bills of lading, and facility receipts, as applicable.

Non-hazardous historic fill and contaminated soils that are taken off-site will be handled consistent with 6 NYCRR Parts 360, 361, 362, 363, 364, and 365. Material that does not meet Unrestricted Soil Cleanup Objective (SCO) concentrations (6 NYCRR Part 375) is prohibited from being taken to an NYS C&D debris recovery facility (6 NYCRR Subpart 360-15 registered or permitted facility).

## 7.0 MATERIALS REUSE ON-SITE

“Reuse On-Site” means reuse on-Site of material that originates from the project Site and which does not leave the project area during the excavation. Soil that exhibits no significant contamination AND is consistent with typical Site soil, will be reused on the Site. Excavated material that exhibits gross contamination (i.e. staining, discoloration, produces elevated PID readings) or is inconsistent with typical Site soil, will be stockpiled in an area away from the primary work activities and then sampled as described in Section 2.0.

Soil reused on-Site will be managed using the following general procedure:

1. Soil material generated from the excavation of trenches to facilitate foundation installation and that is not segregated based upon the field screening process will be direct loaded into dump trucks for on-site transport.
2. Soil and aggregate materials will be transported to the designated fill placement area using dump trucks as shown in Figure 2. Trucks will be maintained on property owned by BelGioioso and will not enter a public right-of-way at any time.
3. Material will be placed with small excavators, dozers, and/or skid steer loaders.
4. Following completion of the placement of the reused soil and grading activities, the on-Site truck pathways will be inspected for soil and debris that may have fallen off the transport trucks and onto the asphalt. Any such material will be broomed swept and placed within the designated fill areas before placement of the cover system over the disturbed areas per Section 10.0 of this document.

The run-of-crush structural fill that was previously imported to the Site for use under the pavement system will be segregated from the Site soils. A portion of this imported material will be utilized to backfill the foundation system following the pouring/curing of the concrete. Any surplus material will be transported to the northeast corner of the existing berm as shown in Figure 2 for future reuse. This material will be placed on a minimum of 10-mil polyethylene sheeting and covered with additional sheeting.

## 8.0 FLUIDS MANAGEMENT

All liquids to be removed from the Site, including but not limited to, excavation dewatering, decontamination waters, and groundwater monitoring well purge and development waters, will be handled, transported, and disposed of off-site at a permitted facility by applicable local, State, and Federal regulations. Dewatering and decontamination fluids will not be recharged back to the land surface or subsurface of the Site and will be managed off-site unless prior approval is obtained from NYSDEC.

The only water anticipated to require collection and treatment for this project includes decontamination wash waters associated with the decontamination of heavy equipment. The collected water will be pumped and stored in drums or temporary storage totes that are approved and labeled by United States Department of Transportation (USDOT) requirements. The water collected will be sampled on a minimum frequency of one representative sample per every ten drums or one sample per every 2,000 gallons of water collected in larger vessels. However, more frequent sampling may be directed by the NYSDEC or the disposal facility (e.g. a local publicly-owned treatment works (POTW)), should observable changes in the water quality be identified in the field. The water samples will be analyzed for TCL VOCs, TCL SVOCs, total PCBs, pesticides, herbicides, Target Analyte List (TAL) metals, and any other parameters required by the selected disposal facility for characterization purposes.

Additionally, appropriate controls will be used to prevent spills and overflows, including but not limited to, monitoring, gauging, quick-close shut-off valves, and secondary containment. All storage containers will be decontaminated following disposal or discharge activities. Any residual sediment in the storage containers will be dewatered/stabilized, if necessary, and similarly disposed of off-site as other materials requiring off-site disposal.

Water from construction activities will not be discharged to surface waters or Site stormwater drains during this project.

## 9.0 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import for this project will be approved by the qualified environmental professional and NYSDEC, as defined in 6 NYCRR Part 375. A Request to Import/Reuse Fill or Soil form will be submitted for NYSDEC review and approval once a source of imported fill has been selected. Currently, a 50:50 mixture of New York State Department of Transportation (NYSDOT) No. 1 and No. 2 stone is the only anticipated material that will be imported for the proposed expansion. It is anticipated that a particle size analysis will demonstrate that the material contains less than ten percent by weight of material which would pass through a Size 80 sieve. The completed Request to Import/Reuse Fill form will be submitted along with the supporting documentation (e.g. particle size analysis or analytical data) to NYSDEC before starting the importation of the material. A copy of the form can be found in Appendix D as well as the hyperlink below:

[https://www.dec.ny.gov/docs/remediation\\_hudson\\_pdf/requesttoreusesoil.pdf](https://www.dec.ny.gov/docs/remediation_hudson_pdf/requesttoreusesoil.pdf)

The QEP will maintain a log of all material imported to the Site including the date, source of the material, type of material, licensed hauler, and time of arrival. Each load shall be accompanied by a weight ticket (or bill of lading, if available) indicating the material originated from the approved source.

Material from industrial sites, spill sites, other environmental remediation sites, or potentially contaminated sites will not be imported to the Site. Additionally, any materials classified as solid waste will not be imported onto the Site. All imported soils will meet the backfill and cover soil quality standards established in 6 NYCRR 375-6.7(d), DER-10 Appendix 5, and NYSDEC Commissioner Policy CP-51 Supplemental Soil Guidance Values. Based on an evaluation of the 6 NYCRR Part 375, DER10, and CP-51 soil cleanup objectives for commercial use, protection of groundwater, and protection of ecological resources criteria, the resulting soil quality standards are listed in Table 6.8(b). Soils that meet 'general' fill requirements under 6 NYCRR Part 360.13, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by the NYSDEC project manager. Soil material will be sampled for the full suite of analytical parameters (identified below), including per-and polyfluoroalkyl substances (PFAS) and 1, 4-dioxane.

The following documentation will be submitted to the NYSDEC to demonstrate compliance with these requirements and with the NYSDEC's DER-10:

1. **General documentation for all sources of fill:**

- a. The name of the person providing the documentation and relationship to the source of the fill.
- b. The location of where the fill is to be obtained.
- c. Identification of any state or local approvals as a fill source.
- d. A brief history of the use of the property for the proposed fill source.

2. **Imported soil for use as backfill material:** Imported soil for this work consists of topsoil cover soils for the newly landscaped areas. Soil imported for use as backfill must be:

- a. Free of extraneous debris and solid waste.
- b. Be recognizable soil or other unregulated material as outlined in 6 NYCRR Part 360 and materials for which the NYSDEC has issued a beneficial use determination (BUD). Soils that meet ‘exempt’ fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Solid waste will not be imported onto the Site.
- c. Free of contaminant concentrations exceeding the lower of the NYSDEC’s SCOs for the protection of groundwater and the SCOs for the protection of public health for commercial use as established in Table 375-6.8(b) of 6 NYCRR Subpart 375-6.

Sampling is also required for all imported soils, with a minimum of one (1) sample analyzed for every new source of material, at the following frequency:

- a. Soil or sand imported from a “virgin” mine or pit, at least one round of characterization samples for the initial 100 cubic yards of material imported per Table 4. For material designated as “virgin,” written documentation shall be provided to the Site owner or owner’s representative and the NYSDEC to document that the soil is native material from areas not having supported any known prior industrial or commercial development or agricultural use and is not now, nor has ever been, identified as a suspected depository for chemical, toxic, hazardous, or radioactive wastes.
- b. Material sources other than virgin mine/pit (e.g. a formerly developed site) must be sampled per Table 4.
- c. The sampling frequency can be reduced from those specified in the table below for projects involving large amounts of cover material and/or backfill, once a trend of compliance is established and the NYSDEC provides written authorization to reduce the sampling frequency.

**Table 4: Sampling Frequency Requirements for Imported Soils**

Analysis Required	VOCs	SVOCs, PCBs, Pesticides & Inorganics	
Soil Quantity (Cubic Yards)	Discrete Samples	Composite Samples	Requirements for Preparation of Composite Samples
0-50	1	1	Five (5) discrete samples from different locations within the fill being provided will comprise a composite sample for analysis. Additional requirements for composite sampling are described in Section 2.2.2 of this EWP.
50-100	2	1	
100-200	3	1	
200-300	4	1	
300-400	4	2	
400-500	5	2	
500-800	6	2	
800-1,000	7	2	
>1,000	Add two (2) VOC grab samples and one (1) composite sample for each additional 1,000 cubic yards of material required unless otherwise approved in writing by the NYSDEC.		

As indicated in Table 4, VOC analysis must be performed on discrete samples only, while all other testing parameters will be analyzed from composite samples. The testing frequency may be modified by the NYSDEC project manager per Section 1.6 of the NYSDEC's DER-10.

The following analyses will be performed on the imported fill characterization samples:

- TCL VOCs by EPA Method 8260 (grab samples only)
- TCL SVOCs by EPA Method 8270
- Total PCBs by EPA Method 8082
- Pesticides by EPA Method 8081
- TAL metals and cyanide by EPA Methods 6010 and 7471
- Per-and polyfluoroalkyl substances by EPA Method 537.1 modified
- 1,4-Dioxane by EPA Method 8270 SIM

The results of this chemical testing will be compared to the lower of the NYSDEC's SCOs for the protection of groundwater and protection of public health for commercial use as established in Table 375-6.8(b) of 6 NYCRR Subpart 375-6 as well as the supplemental soil cleanup objectives in the NYSDEC's *CP-51: Soil Cleanup* Guidance dated October 2010 and/or any future pertinent soil cleanup guidance document. The source shall be rejected if any of these SCOs are exceeded.

## 10.0 COVER SYSTEM & SITE RESTORATION

The Expansion will require the removal of existing asphalt and approximately 12 inches of previously imported run-of-crush stone. The cover system for the excavated area will consist of the following layers placed in the following order:

- A 12-inch layer of 50:50 mix NYSDOT No.1 and No. 2 crushed.
- A 15-mil Class A vapor barrier (e.g. StegoWrap) with pressure-sensitive tape (e.g. StegoTape).
- A 6-inch thick concrete slab.

Additionally, consistent with the existing plant, the following components will be installed during the construction of the expansion to mitigate the potential for vapor intrusion into the expansion:

- A 6-inch diameter, Schedule 40 PVC perforated pipe will be placed down the center of the excavated area beneath the proposed concrete slab. The layout of the perforated pipe and the exhaust stack is shown on a schematic diagram included as the last drawing in Appendix A.
- A 6-inch diameter, Schedule 40 PVC stack will be routed above the new expansion roof. A 6-inch quarter-turn ball valve will be installed on the stack to allow throttling of the vacuum applied, if necessary to balance the system with the existing SSDS systems.
- A RadonAway RP265 fan will be mounted above the roof to draw a vacuum beneath the slab. A rain cap or a 180-degree elbow will be placed above the fan to limit water intrusion into the stack.
- A Dwyer Magnehelic vacuum gauge will be installed on the vertical stack, inside the building to allow verification of the total vacuum within the system.
- A gauge will be mounted with a “red” LED light to alert personnel should a fan failure occur.

It is currently anticipated that the pavement will be saw-cut a few feet beyond the limits of the proposed foundation system to facilitate construction methods. Following the completion of the foundation system, the previously imported run-of-crush structural fill will be used as backfill against the foundation system and new asphalt will be installed between the saw-cut pavement edges and the new structure. The surplus run-of-crush aggregate will be placed near the northeast corner of the existing berm southeast of the plant as shown in Figure 2 and previously described. The material will be staged on and covered with polyethylene sheeting to keep it segregated from Site soils.

The Site soils excavated to facilitate the foundation excavation will be placed near the west end of the existing berm shown in Figure 2. Following placement/grading of this material, it will be seeded and mulched to establish vegetation.

No significant restoration outside of the excavation and fill placement areas is anticipated for the proposed Expansion. All areas traversed by construction vehicles will be swept following the removal of construction materials and equipment if deemed necessary by the QEP. After the project, all erosion and sediment controls will be removed and disposed of at a permitted facility where applicable. Additionally, any polyethylene sheeting utilized under or to cover excavated material will be disposed of at a permitted facility.



## **11.0 PERMITTING**

BelGioioso and its consultants and contractors will comply with all applicable laws, rules, and regulations and obtain and comply with all necessary permits and approvals.

### **11.1 STORMWATER POLLUTION PREVENTION**

The overall project disturbance will be less than one acre in size. Therefore, the preparation of a Stormwater Pollution Prevention Plan (SWPPP) and filing of a Notice of Intent (NOI) will not be required for this project; however, best management practices for stormwater pollution prevention will be followed.

Before soil disturbance activities at the Site, erosion and sediment control (ESC) measures will be installed. Barriers such as silt fence or silt socks will be installed around any stockpiles and fill placement areas. These controls will be inspected once a week during active construction and after every storm event to verify that they are operating correctly. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by the NYSDEC. All necessary repairs will be made immediately. The inspection/repair records will be included in the project report submitted to the NYSDEC but will also be maintained at the Site and available for inspection by the NYSDEC.

Accumulated sediments will be removed as required to keep the barrier and silt fence/sock systems functional. All undercutting or erosion of the silt fence to the anchor shall be repaired immediately with appropriate backfill materials. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts on receiving waters.

Temporary erosion and sediment controls (e.g. silt fence/silt socks) will be removed once vegetation is established in the two areas of fill placement and the silt fence/socks will be disposed of off-site as solid waste.

## **12.0 EXCAVATION CONTINGENCY PLAN**

The contractor is not expected to encounter underground storage tanks (USTs) or other previously unidentified contaminant sources. However, as previously indicated, while not anticipated, any material that is identified as grossly contaminated, stained, exhibits odors consistent with solvents or petroleum, generates elevated PID readings (20 ppm or greater), or shows any other signs of being impacted will be segregated, staged per Section 3.0, and the QEP will notify the NYSDEC and responsible party within 24 hours of the discovery of such impacts. The material will be sampled for waste characterization purposes and disposed of off-site at a properly permitted facility following waste profiling and approval.

In the unlikely event that unknown or unexpected contaminated media are identified by screening during invasive Site work suggesting a new source of contamination has been identified, such findings will be promptly communicated by phone within two hours to NYSDEC's Project Manager. Reportable quantities of petroleum products or other chemicals will also be reported to the NYSDEC Spills Hotline at 800-457-7362.

### 13.0 COMMUNITY AIR MONITORING PLAN

Community air monitoring for this project will be performed during all intrusive activities and open-air waste soil handling per the NYSDOH *Generic Community Air Monitoring Plan (CAMP)*, and Appendix 1A and 1B of DER-10. All air monitoring will be conducted on a real-time basis using both hand-held field instruments and perimeter air monitoring stations. All air monitoring readings will be recorded in a logbook and/or recorded by data loggers and made available for review by both the NYSDEC and NYSDOH. The air monitoring records will be included in the Project Report submitted to the NYSDEC.

A copy of the CAMP is provided in Appendix E. It is anticipated that one station will be set up downwind of the active excavation areas and one will be placed upwind of the work area (based on prevailing wind conditions) to represent background conditions. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and a downwind monitoring station. Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

## 14.0 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors off-site. Specific odor control methods to be used on a routine basis will include the following:

1. Limiting the area of open excavations and the size of soil stockpiles, if any.
2. Reducing the speed of excavation/hauling activities.
3. Shrouding open excavations with tarps and other covers.
4. Consider weather factors when planning daily activities (e.g. wind direction).
5. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include:
  - a. Direct load-out of soils to trucks for off-site disposal, if any.
  - b. Covering stockpiles with polyethylene sheeting.
  - c. Use of staff to monitor odors leaving the Site, if any.

If nuisance odors are identified at the Site boundary, or if odor complaints are received, work will be halted, and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and any other complaints about the project.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-Site conditions or proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

## 15.0 DUST CONTROL PLAN

Particulate monitoring must be conducted according to the CAMP described in Section 13.0 and provided in Appendix E. If particulate levels at the Site exceed the thresholds listed in the CAMP or if airborne dust is observed on the Site or leaving the Site, the dust suppression techniques listed below will be employed. The remedial party will also take the measures listed below to prevent dust production on the Site. Controlling dust levels during the proposed construction activities will reduce the potential exposure to the potentially elevated levels of arsenic documented in the area of the proposed expansion as documented in the Parsons *Soil and Dry Well Removal Documentation Report*, dated June 2006.

A dust suppression plan that addresses dust management during invasive on-Site work will include, at a minimum, the items listed below:

- When necessary, dust suppression will be achieved using fire hoses and/or garden hoses equipped with sprayers for this project. All water utilized for dust control will be potable water from municipal water systems. The use of groundwater from the Site is not permitted.
- On-Site haul roads will be limited in total area to minimize the area required for water truck sprinkling. Other than the area for the proposed placement of the on-site stockpiled soils, the haul trucks will be maintained on existing paved surfaces.
- Paved areas will be swept clean as needed, to reduce the potential for dust generation.
- Stockpiles and excavations will be covered with tarps and polyethylene sheets will be used to reduce the potential for dust generation, as necessary.

## **16.0 OVERSIGHT, REPORTING & SCHEDULE**

### **16.1 QEP OVERSIGHT & CONSTRUCTION REPORTING**

A QEP representative will be on-Site during all intrusive activities including excavation to facilitate the foundation installation, excavation of the existing run-of-crush material under the existing asphalt, and restoration of the Site. The QEP representative will also visit the Site periodically during the installation of the SSDS system (e.g. the installation of the sub-slab stone and piping, installation of the vapor barrier, and a final visit once the system is complete and operational). The QEP will maintain daily observation reports that will include the following information:

- Date, start and end times;
- Weather conditions;
- Tasks conducted;
- Contractors on-Site;
- Equipment utilized;
- Visitors;
- CAMP station equipment locations;
- Problems encountered; and,
- Any other pertinent information.

The QEP will be in direct contact with the CHA Project Manager at least once daily to provide updates on progress at the Site. As previously indicated in Sections 4.0 and 9.0, the QEP will maintain a log of all materials leaving the Site for off-site disposal and materials imported to the Site, respectively.

### **16.2 PROJECT REPORTING**

A project report will be prepared and will be submitted to the NYSDEC within 90 days after completion of the ground-intrusive portion of the Site redevelopment. At a minimum the report will include:

- An as-built figure depicting the location of fill placement;
- As-built drawings for the completed SSDS along with a description of the proposed air monitoring for the plant expansion.
- Copies of daily observation reports;

- A description of excavation activities conducted, health and safety monitoring (including Site-specific plans and CAMP), quantities and locations of soil excavated, characterization sample results for soil to be disposed of off-Site, disposal locations, waste profiles, receiving facility acceptance documentation, and manifests for the soil disposal, on-Site truck logs, sampling locations, and associated results;
- Documentation of imported fill weight tickets and the initial “Request to Import/Reuse Fill or Soil” including the analytical data supporting the request and the QEPs truck log;
- A description of problems encountered, location and acceptability of analytical results for backfill sources, and other pertinent information necessary to document Site excavation activities were conducted properly; and
- A certification that work activities completed after approval of this EWP were conducted in conformance with this document.

### 16.3 PROJECT SCHEDULE

The following provides a proposed schedule for the completion of the Expansion project specified in this EWP:

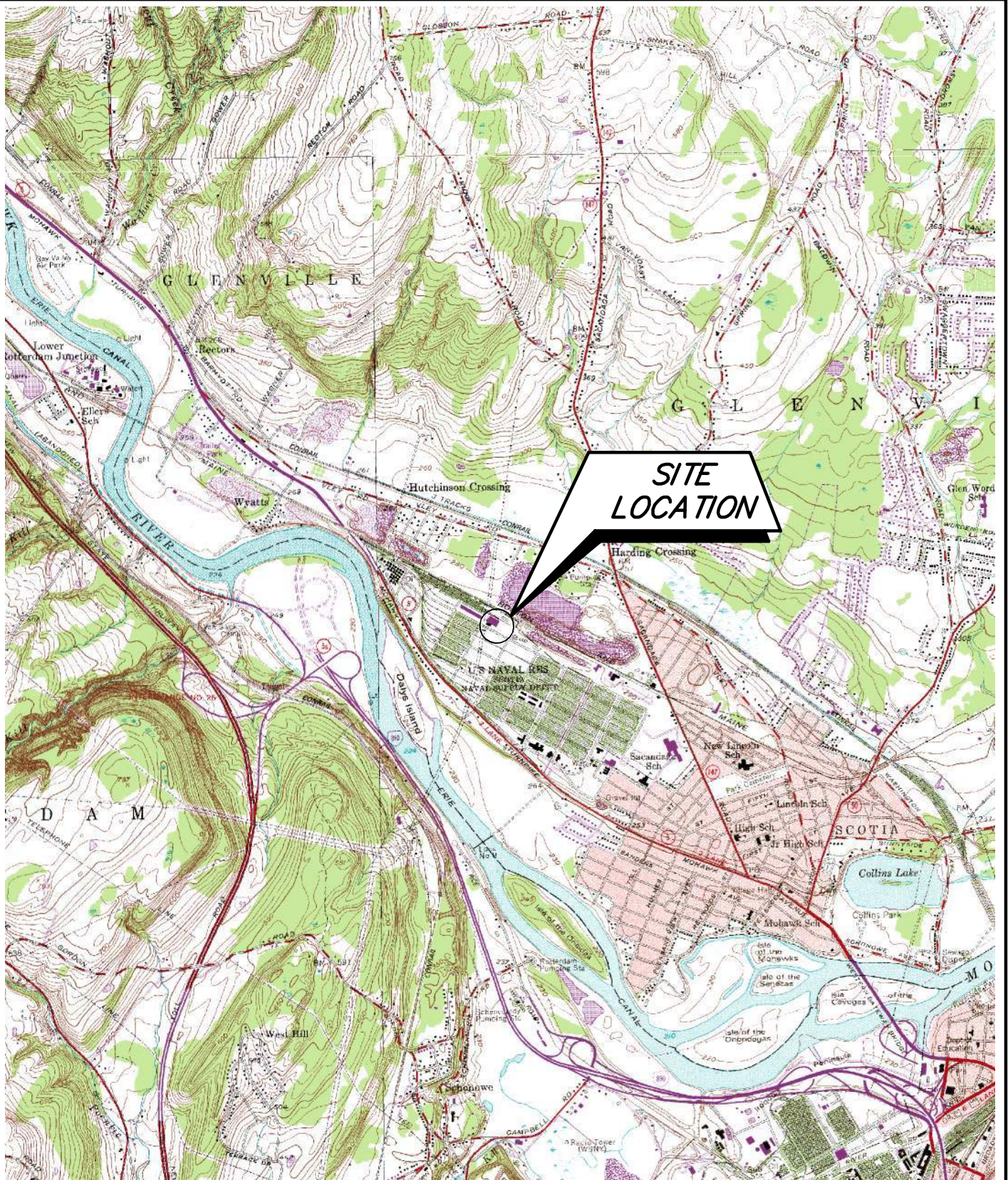
**Table 5: Estimated Project Schedule**

Description	Estimated Date
Submission of Excavation Work Plan and 60-Day Notice filed with NYSDEC	October 6, 2022
NYSDEC review and approval of the Excavation Work Plan	October 14, 2022
Anticipated commencement of intrusive activities	October 17, 2022
Completion of intrusive activities	November 18, 2022
Preparation and submission of Project Report	January 31, 2023

The overall progress of these activities will be dependent on several factors including, but not limited to NYSDEC review periods, weather conditions at the time of construction, etc.

## **FIGURES**





SOURCE: U.S.G.S. 7.5' Topographic  
QUADRANGLE: SCHENECTADY, NY

SCALE: 1"=1000'

Drawing Copyright © 2022



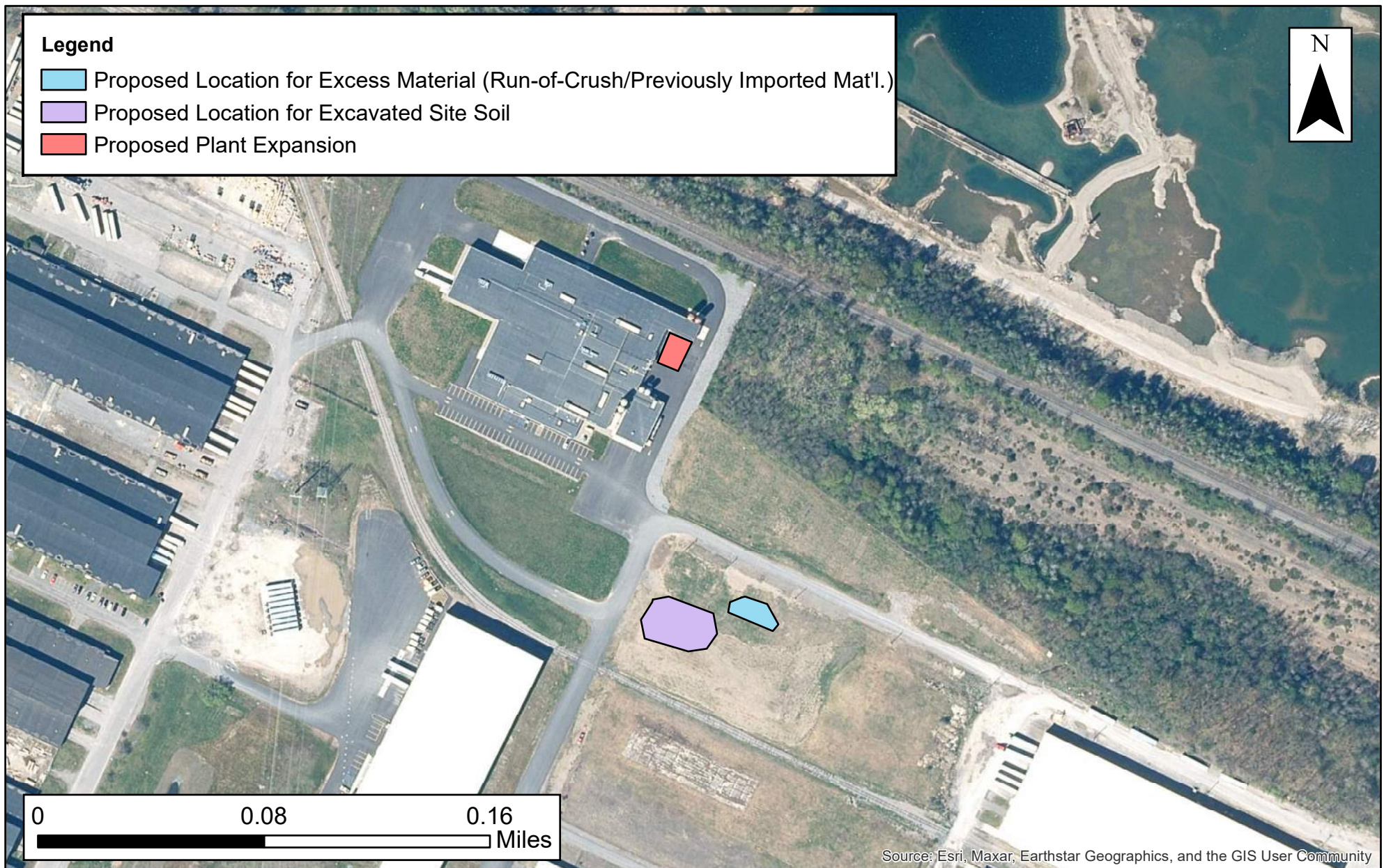
**SITE LOCATION MAP**  
BELGIOIOSO CHEESE, INC.  
GLENVILLE BUSINESS & TECHNOLOGY PARK  
SCHENECTADY COUNTY, NEW YORK

PROJECT NO.  
072605

DATE: 06/2022

FIGURE 1





SITE LAYOUT MAP  
 BELGIOIOSO CHEESE, INC.  
 GLENVILLE BUSINESS & TECHNOLOGY PARK  
 SCHENECTADY COUNTY, NEW YORK

PROJECT NO. 072605

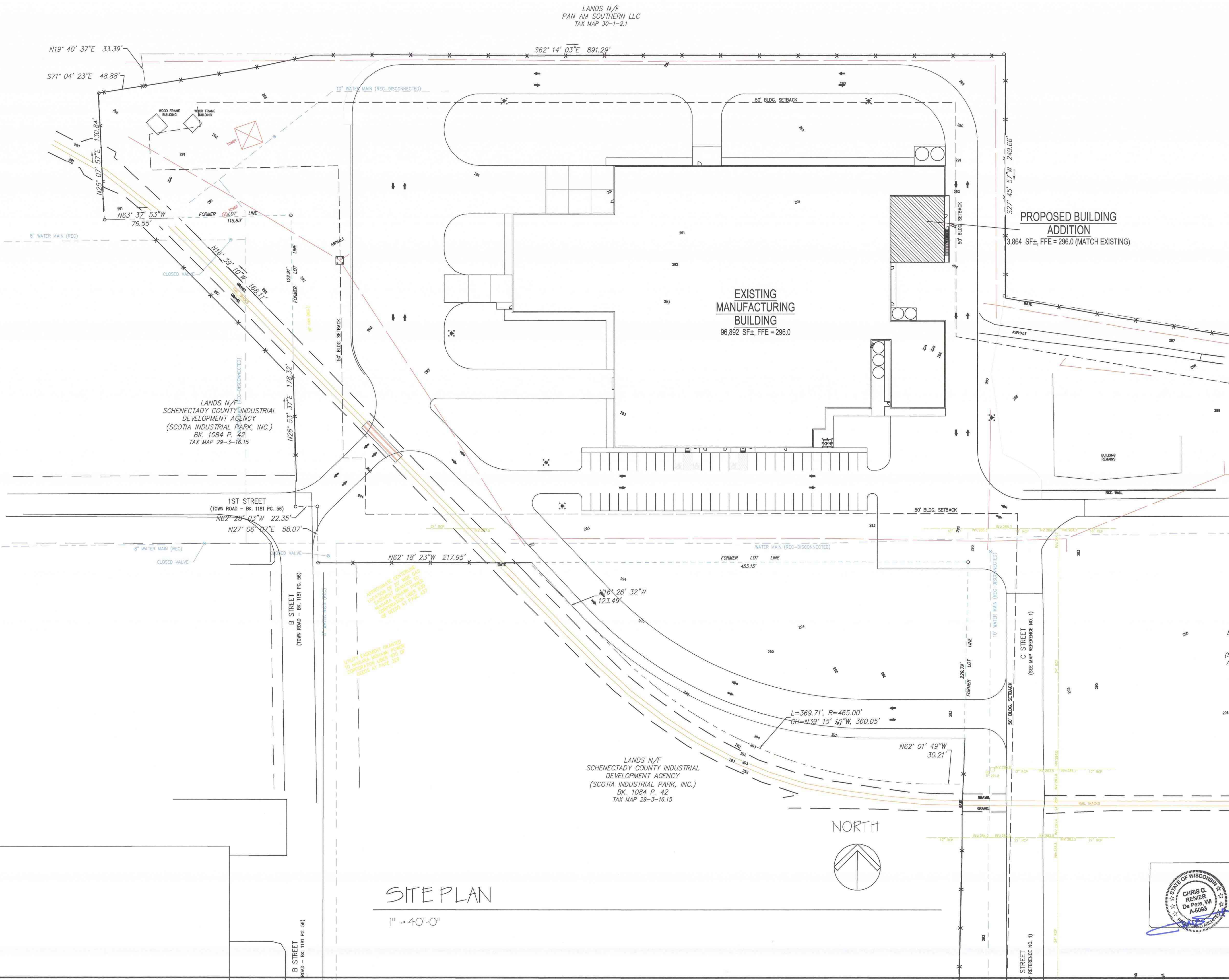
DATE: 10/2022

FIGURE 2

## **APPENDIX A**

### **SITE PLAN AND ARCHITECTURAL DRAWINGS**





<b>NEW PLANT ADDITION FOR BELGIOIOSO CHEESE</b> GLENVILLE, NEW YORK	DRAWN: CCR	<b>SITE PLAN</b>	<b>C. RENIER ARCHITECTS, INC.</b> 348 MAIN AVE. SUITE 1115 DE PERE, WISCONSIN 54931 PHONE: (920) 338-6500
	CHECKED: CCR		
DATE: 7/20/2022		SHEET: C1.0	
PROJ. NO.			



# NEW PLANT ADDITION FOR BELGIOIOSO CHEESE

GLENVILLE, NEW YORK

PROPERTY OWNER:

BELGIOIOSO CHEESE, INC.  
4200 MAIN STREET  
GREEN BAY, WI 54115  
(920) 863-2123

ARCHITECT:

CHRIS RENIER  
C. RENIER ARCHITECTS, INC.  
348 MAIN AVENUE  
DE PERE, WI 54115  
(920) 330-0500

Design No. U904  
Bearing Wall Rating—3 HR.  
Nonbearing Wall Rating—3 HR.

Horizontal Section

- 1. **Concrete Blocks\***—Various designs. Classification C-3 (3 hr). See **Concrete Blocks** category for list of eligible manufacturers.
- 2. **Mortar**—Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.
- 3. **Portland Cement Stucco or Gypsum Plaster**—Add 1/2 hr to Classification if used. Attached to concrete blocks (Item 1).
- 4. **Loose Masonry Fill**—If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellant vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 1 hr to Classification.
- 5. **Foamed Plastic\***—(Optional-Not Shown)—1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).

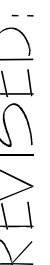
**Celotex Corp.**—Type Thermax  
\*Bearing the UL Classification Marking

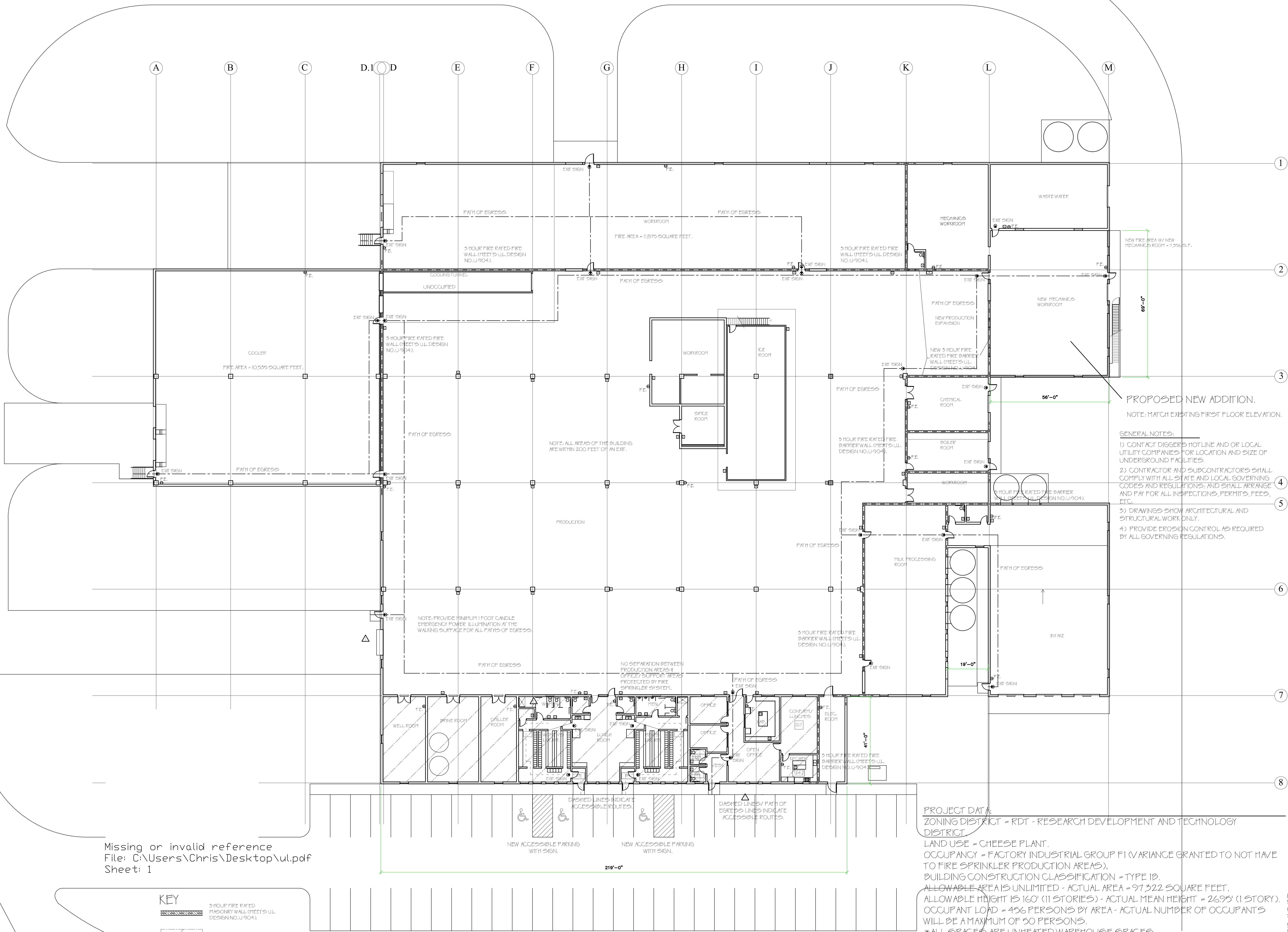
SHEET INDEX

- T1 TITLE SHEET
- D1.1 PARTIAL MAIN FLOOR DEMOLITION PLAN
- A1.0 OVERAL MAIN FLOOR PLAN
- A1.1 PARTIAL MAIN FLOOR PLAN
- A2.1 PARTIAL ROOF PLAN
- A3.1 BUILDING ELEVATIONS & SECTIONS
- A4.1 ROOM FINISH & DOOR SCHEDULES
- A5.1 WALL SECTIONS
- S1.1 FOUNDATION PLAN
- S2.1 ROOF FRAMING PLAN
- S3.1 STRUCTURAL NOTES









Missing or invalid reference  
File: C:\Users\Chris\Desktop\ul.pdf  
Sheet: 1

**KEY**

3 HOUR FIRE RATED MASONRY WALL (MEETS U.L. DESIGN NO. U-904).

AREA PROTECTED BY FIRE SPRINKLER SYSTEM.

MAIN FLOOR PLAN  
1/16" = 1'-0"

**NOTE:**

1) REFER TO SHEET AS FOR ELEVATIONS.

2) INDICATES EXIT SIGN/ LIGHT. PROVIDE BATTERY BACK-UP & EMERGENCY ILLUMINATION POWER AT INTERIOR AND EXTERIOR OF ALL EXIT LOCATIONS - TYPICAL.

3) FIRE EXTINGUISHER TYPES SHALL COMPLY W/ STATE AND LOCAL CODES.

**PROPOSED NEW ADDITION.**  
NOTE: MATCH EXISTING FIRST FLOOR ELEVATION.

- GENERAL NOTES:**
- 1) CONTACT DIGGERS HOTLINE AND/OR LOCAL UTILITY COMPANIES FOR LOCATION AND SIZE OF UNDERGROUND FACILITIES.
  - 2) CONTRACTOR AND SUBCONTRACTORS SHALL COMPLY WITH ALL STATE AND LOCAL GOVERNING CODES AND REGULATIONS; AND SHALL ARRANGE AND PAY FOR ALL INSPECTIONS, PERMITS, FEES, ETC.
  - 3) DRAWINGS SHOW ARCHITECTURAL AND STRUCTURAL WORK ONLY.
  - 4) PROVIDE EROSION CONTROL AS REQUIRED BY ALL GOVERNING REGULATIONS.

**PROJECT DATA:**

ZONING DISTRICT = RDT - RESEARCH DEVELOPMENT AND TECHNOLOGY DISTRICT

LAND USE = CHEESE PLANT.

OCCUPANCY = FACTORY INDUSTRIAL GROUP F1 (VARIANCE GRANTED TO NOT HAVE TO FIRE SPRINKLER PRODUCTION AREAS).

BUILDING CONSTRUCTION CLASSIFICATION = TYPE 1B.

ALLOWABLE AREA IS UNLIMITED - ACTUAL AREA = 97,322 SQUARE FEET.

ALLOWABLE HEIGHT IS 160' (11 STORIES) - ACTUAL MEAN HEIGHT = 26.95' (1 STORY).

OCCUPANT LOAD = 456 PERSONS BY AREA - ACTUAL NUMBER OF OCCUPANTS WILL BE A MAXIMUM OF 50 PERSONS.

\*ALL SPACES ARE UNHEATED WAREHOUSE SPACES.

REFER TO SHEET S12 FOR ALL STRUCTURAL DESIGN LOADS.

5) UNLESS NOTED OTHERWISE, ALL WALLS ARE 12" OR 8" CONCRETE BLOCK WALLS AS SHOWN ON THE PLANS. ALL EXTERIOR WALLS SHALL BE 2 HOUR U.L. FIRE RATED (DESIGN NO. U-904). ALL INTERIOR BEARING WALLS SHALL BE 2 HOUR U.L. FIRE RATED (DESIGN NO. U-904).

6) ALL CONCRETE BLOCK WALLS SHALL EXTEND TO THE UNDERSIDE OF THE PRECAST CONCRETE PLANK UNLESS NOTED OTHERWISE. PROVIDE COR. METAL MASONRY TIES, 1/8" O.C. AT CONNECTION BETWEEN PARTITION AND BEARING WALLS. ALL CONCRETE BLOCK SHALL BE STANDARD WEIGHT W/ DRY BLOCK ADDITIVE AT BLOCK & MORTAR. REFER TO SHEET AD1- ELEVATIONS FOR MASONRY CONTROL JOINTS.



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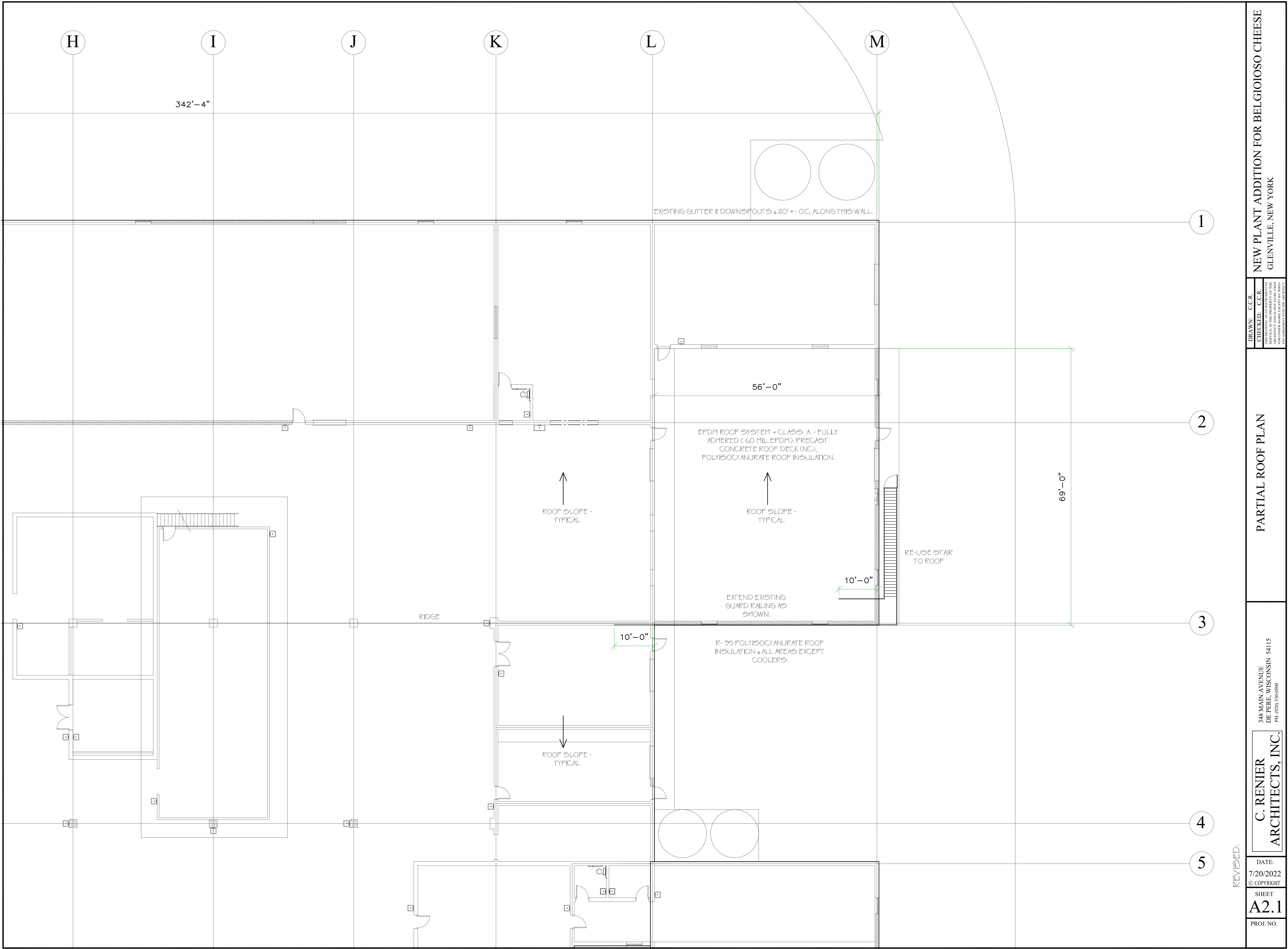
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## PARTIAL MAIN FLOOR PLAN

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PARTIAL ROOF PLAN

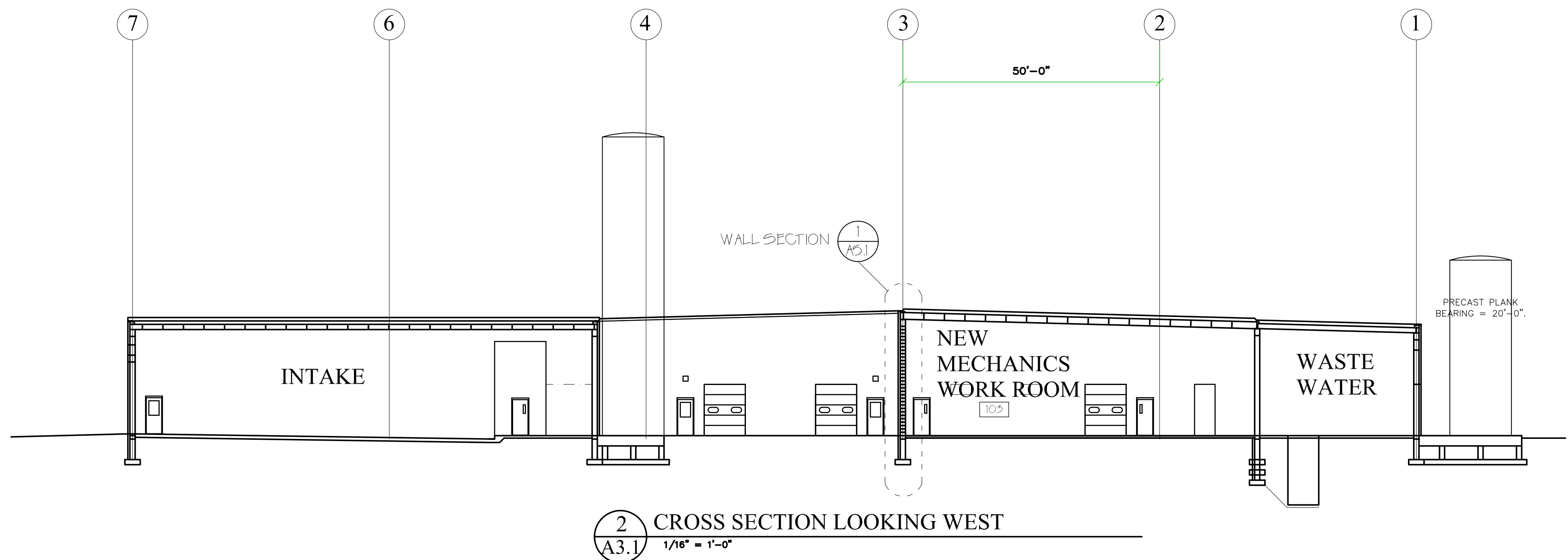
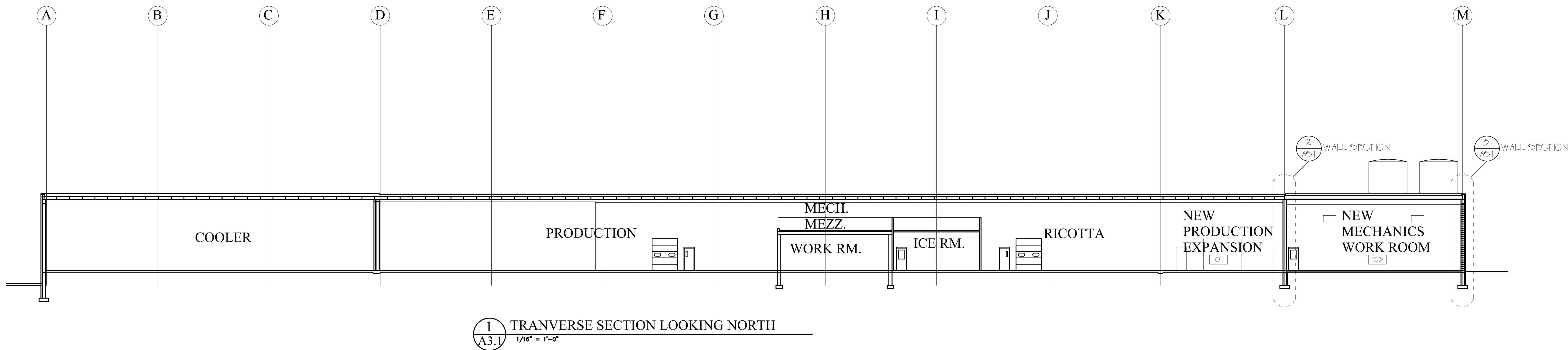
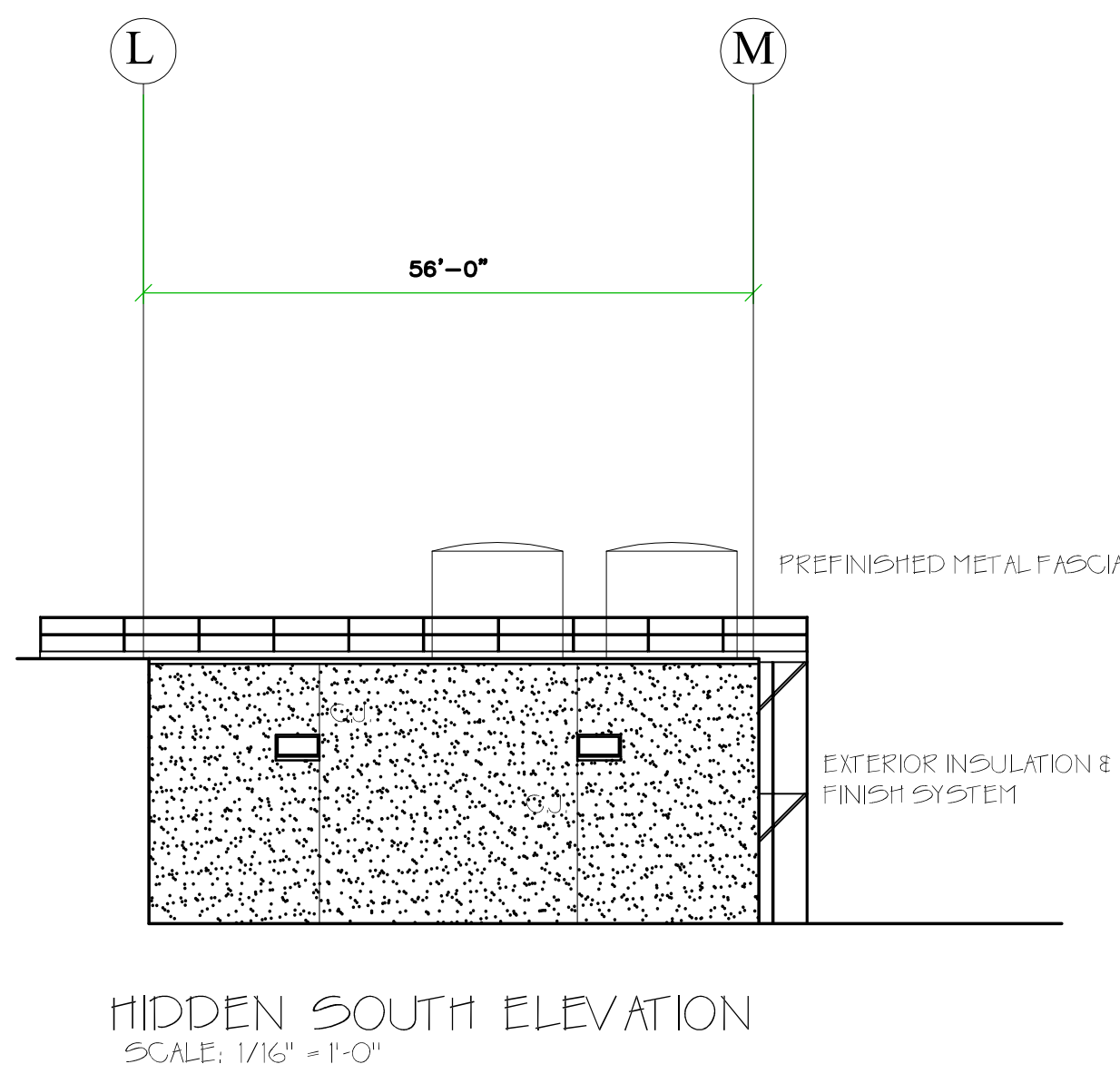
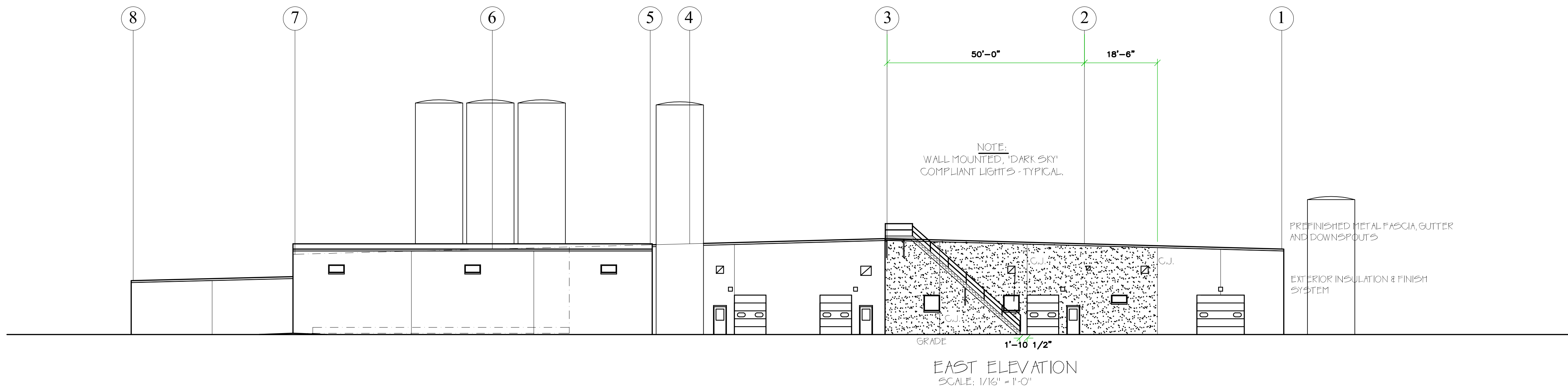
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- EXTERIOR MATERIALS:  
\*PREFINISHED METAL ROOF EDGE  
\*EXTERIOR INSULATION & FINISH SYSTEM (EIFS) WALLS  
\*VINYL WINDOWS  
\*ANNOIDIZED ALUMINUM FRAMED/GLAZED MAIN ENTRY DOOR SYSTEMS  
\*PIPERLASS SECONDARY ENTRY/EXIT DOORS  
\*INSULATED METAL OVERHEAD DOORS



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BUILDING ELEVATIONS

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ROOM FINISH SCHEDULE.						
NUMBER	ROOM	FLOOR	BASE	WALLS	Ceiling	REMARKS
101	NEW PRODUCTION EXPANSION	SEALED CONCRETE	NONE	CMU W/ TAPOSEAL	EXPOSED STRUCTURE W/ TAPOSEAL	VARIES
102	EXISTING TOILET ROOM	SEALED CONCRETE	NONE	CMU W/ TAPOSEAL	EXPOSED STRUCTURE W/ TAPOSEAL	VARIES
103	NEW MECHANICS WORKROOM	SEALED CONCRETE	NONE	CMU W/ TAPOSEAL	EXPOSED STRUCTURE W/ TAPOSEAL	VARIES

GENERAL ROOM FINISH NOTES:

- ALL CONCRETE FLOORS TO HAVE A ROOM FINISH.
- ALL JOINTS AT PRECAST CONCRETE ROOF PLANKS SHALL BE CAULKED AFTER TAPOSEAL HAS BEEN APPLIED.
- CONCRETE FLOOR SEALER - YARBROCK.
- PROVIDE 2" x 2" ANGLED WALL BASE DETAIL WITH NON-SHRINK GROUT AT ALL ROOMS UNLESS NOTED OTHERWISE.

DOOR SCHEDULE.									
DOOR NUMBER	SIZE	DOOR MATERIAL	TYPE	FIN	FRAME MATERIAL	TYPE	FINISH	HOWE GRP	REMARKS
101A	3'-0" x 7'-0"	METAL	A	A	METAL	B	A		2 HOUR FIRE RATED RE-USE EXISTING
101B	8'-0" x 10'-0"	METAL	1	3	-	-	-		RE-USE EXISTING
101C	8'-0" x 10'-0"	METAL	3	4	-	-	-		2 HOUR FIRE RATED RE-USE EXISTING
101D	3'-0" x 7'-0"	METAL	A	A	METAL	B	A		2 HOUR FIRE RATED RE-USE EXISTING
102A	3'-0" x 7'-0"	FIBERGL	2	1	FIBERGL	A	1		PRIVACY RE-USE EXISTING
103A	3'-0" x 7'-0"	FIBERGL	2	1	FIBERGL	A	1		ENTRANCE LOCKSET RE-USE EXISTING
103B	8'-0" x 10'-0"	METAL	1	3	-	-	-		RE-USE EXISTING

- FINISH NOTES:
- FACTORY FINISH TO BE WHITE.
  - INTERIOR FINISH TO BE CHAMPAGNE.
  - FACTORY PAINTED NON-CORROSIVE FINISH - WHITE.
  - STAINLESS STEEL.

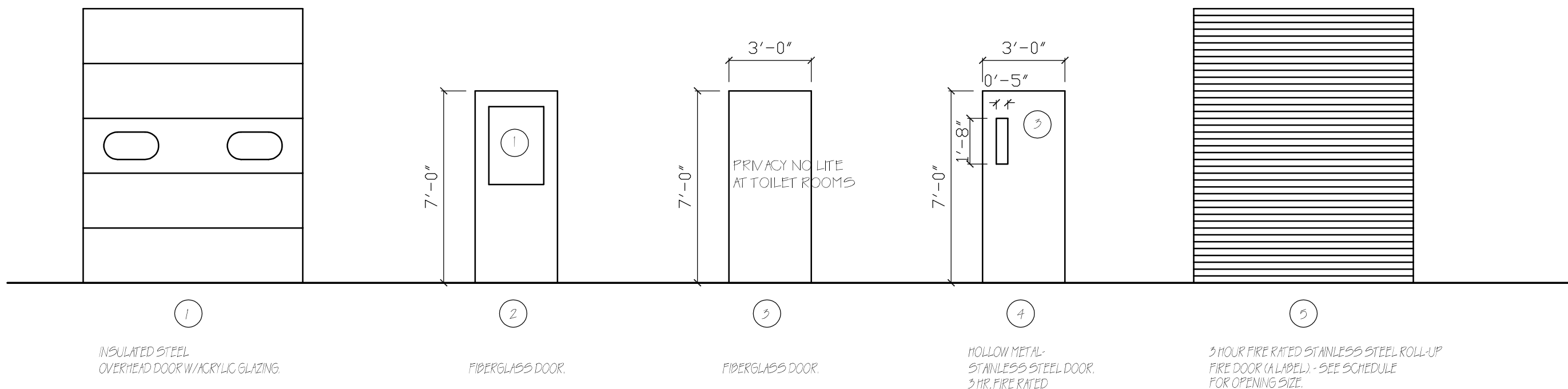


WINDOW ELEVATIONS

Scale 1/4" = 1'-0" UNLESS NOTED OTHERWISE

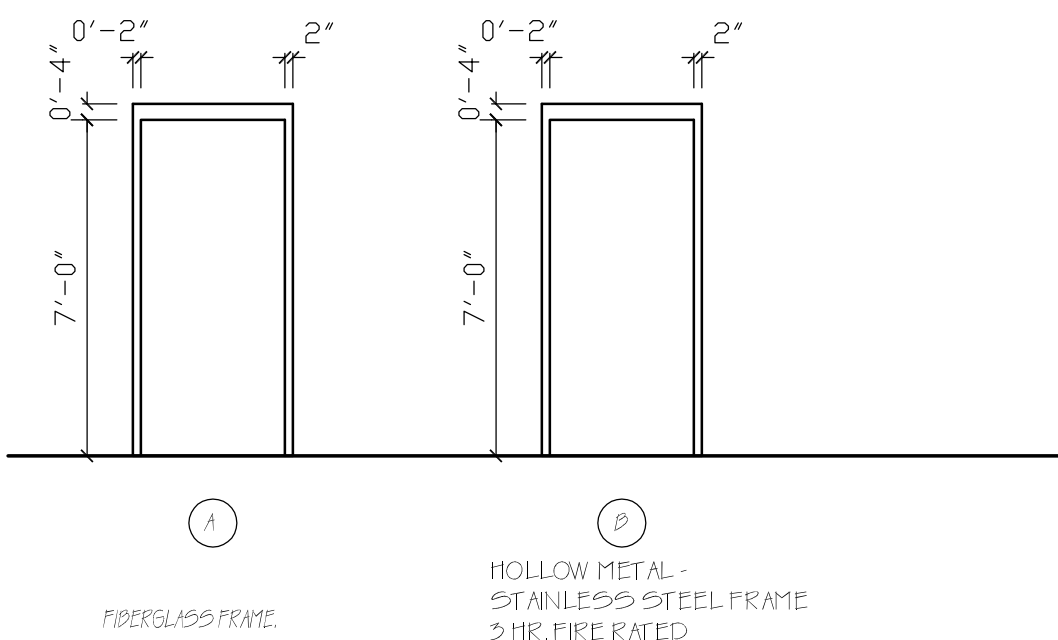
GENERAL WINDOW NOTES:

ALL WINDOWS ARE "PRO-FINISH" VINYL WINDOW UNITS AS MANUF. BY SIMONON WINDOWS. ALL GLAZING SHALL BE LAMINATED SAFETY INSULATING GLASS. COLOR OF ALL WINDOW UNITS TO BE MANUF. STANDARD WHITE. APPLY SEALANT TO PERIMETER OF ALL WINDOW FRAMES.



DOOR ELEVATIONS

Scale 1/4" = 1'-0" UNLESS NOTED OTHERWISE



FRAME ELEVATIONS

Scale 1/4" = 1'-0"

**DOOR / FRAME NOTES:**

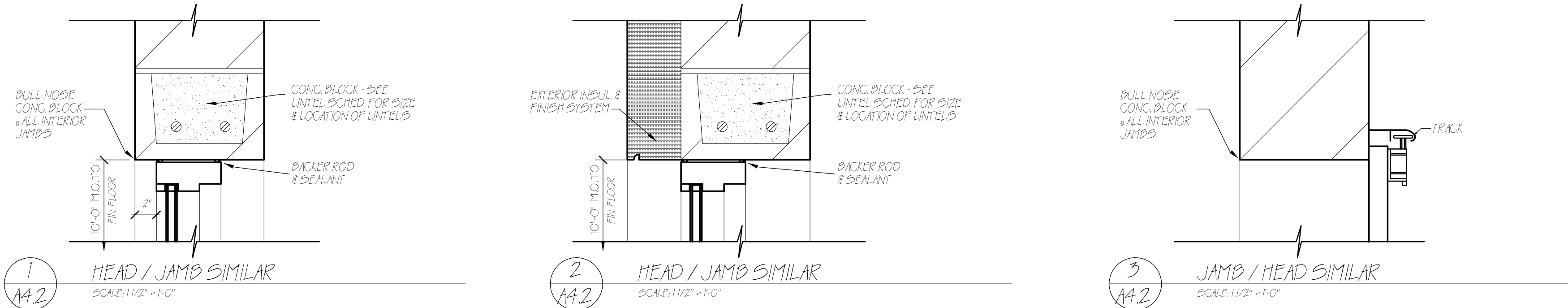
- 1) LAMINATED SAFETY INSULATING GLASS
- 2) HOLLOW METAL (STAINLESS STEEL) PANEL
- 3) FIRE RATED GLASS

**GENERAL NOTES:**

- 1) DOOR WEATHERSTRIPPING - THRESHOLD - REESE #4002 ALUM W/ 1/2" SOLID NEOPRENE - JAMB - REESE #0570 ALUM W/ VINYL BULB - HEAD JAMB DRIP - REESE #R199B
- 2) ALL HARDWARE SHALL BE STAINLESS STEEL OR A NON-CORROSIVE FINISH IF NOT AVAILABLE IN STAINLESS STEEL
- 3) ALL DOOR HARDWARE SHALL BE ADA COMPLIANT
- 4) EXIT HARDWARE IS REQUIRED AT ALL EXITS/INGRESS MAN DOORS

GENERAL NOTES:

- 1) UNLESS NOTED OTHERWISE ALL OPENING WITHOUT DOORS SHALL BE 10'-0" ABOVE FINISHED FLOOR.
- 2) ALL FIBERGLASS DOORS SHALL HAVE THE FOLLOWING HARDWARE REQUIREMENTS UNLESS NOTED OTHERWISE:
  - A) STAINLESS STEEL HINGES
  - B) STAINLESS STEEL PUSH PLATES, PULLS & LOCK PLATES
  - C) DOOR CLOSERS AS REQUIRED SHALL BE LIGHTHEAVY DUTY 4000 SERIES WITH STAINLESS STEEL PLATED FINISH
  - D) LOCK & LATCHSETS AS REQUIRED AND OR WHERE INDICATED BY OWNER SHALL BE SOLID REAR DUTY CYLINDRICAL LEVER SETS WITH PRESSURE CASE ZINC EXPOSED TRIM AND CORROSION TREATED STEEL HOUSING AND MECHANISMS, BRASS KEY CYLINDER AND PARTS
- 3) ALL OVERHEAD DOORS SHALL BE EQUAL TO EZ THERM AS MANUF. BY ESSENTIAL PRODUCTS CORPORATION. ALL DOORS SHALL BE VERTICAL LIFT OR HIGH LIFT IF VERTICAL LIFT IS NOT POSSIBLE. ALL OVERHEAD DOORS SHALL HAVE THE FOLLOWING REQUIREMENTS:
  - A) GALVANIZED TORSION SPRINGS AND SHAF
  - B) WEATHERSEAL
  - C) STAINLESS STEEL HARDWARE - STAINLESS STEEL HINGES AND SCREWS
  - D) CAR WASH ROLLERS AND STAINLESS STEEL SHAFTS
  - E) STAINLESS STEEL ANCHORING LAGS
  - F) FOLLOW BLOCK SEALED HEAD BEARINGS
  - G) WITH 1/4" SHAFTEY KEY DRIVING PHOTO EYES AND TYMER TO CLOSE DOOR
  - H) LIFTMASTER CAR WASH MODIFIED JACKSHAF OPERATOR WITH 1/2 HP 115 VOLT TFC CONTINUOUS DUTY MOTOR
  - I) EXTERIOR DOORS SHALL HAVE DOUBLE THERMAL ACRYLIC INSULATED LITES AS SHOWN AND INTERIOR DOORS SHALL HAVE THIRD PANEL WITH ALL ALUMINUM FRAME AND THERMAL TEMPERED SAFETY GLASS AS SHOWN
- 4) ROLLING FIRE DOORS SHALL BE EQUAL TO HAYON - FC SERIES CHAN OPERATED WITH PUSHABLE LINK. ALL COMPONENTS STAINLESS STEEL
- 5) ROLLING SHUTTERS SHALL BE EQUAL TO PRODUCTS BY MAYON. MANUAL PUSHUP - FACE OF WALL MOUNTED W/ ALL COMPONENTS STAINLESS STEEL
- 6) ALL DOORS NOT REQUIRED TO HAVE LATCH OR LOCKSET SHALL RECEIVE STAINLESS STEEL PUSH-PULL SET WITH NO STRIKE. EXTERIOR EXTERIOR DOORS AT OFFICE AND LUNCHROOM - DOORS REQUIRING LATCHSET BY CODE SHALL BE EQUIPPED WITH ADA COMPLIANT LEVER TYPE HARDWARE. ALL SINGLE PICTURE TOILET ROOMS SHALL HAVE PRIVACY LOCKSETS AND CLOSERS
- 7) GROUT ALL HOLLOW METAL FRAMES SOLID
- 8) APPLY SEALANT TO PERIMETER OF ALL DOOR FRAMES



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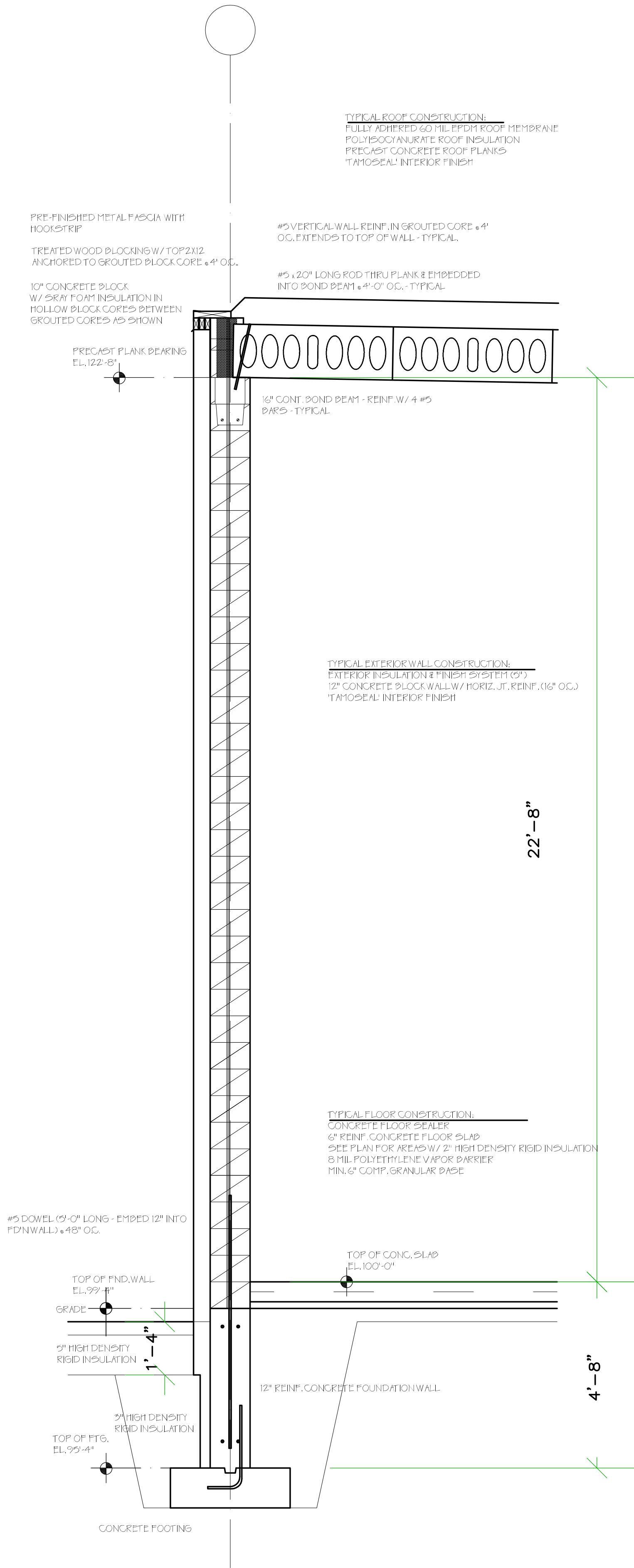
ROOM FINISH & DOOR  
SCHEDULES

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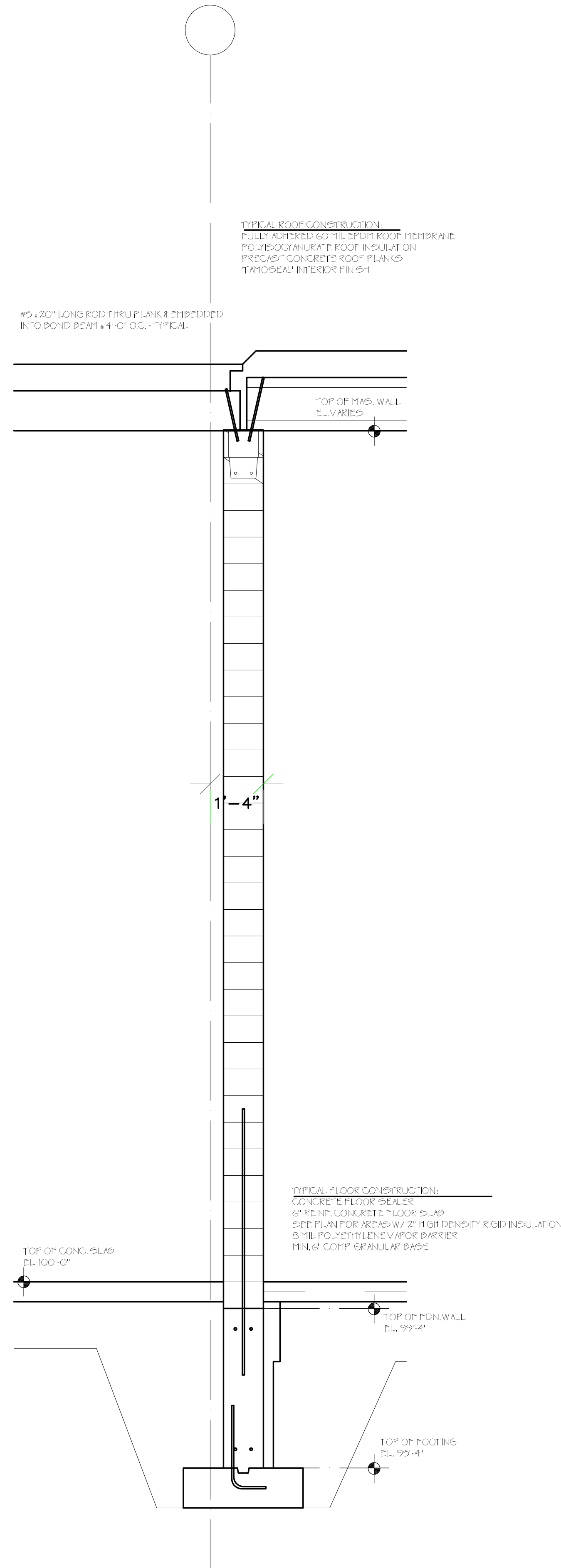
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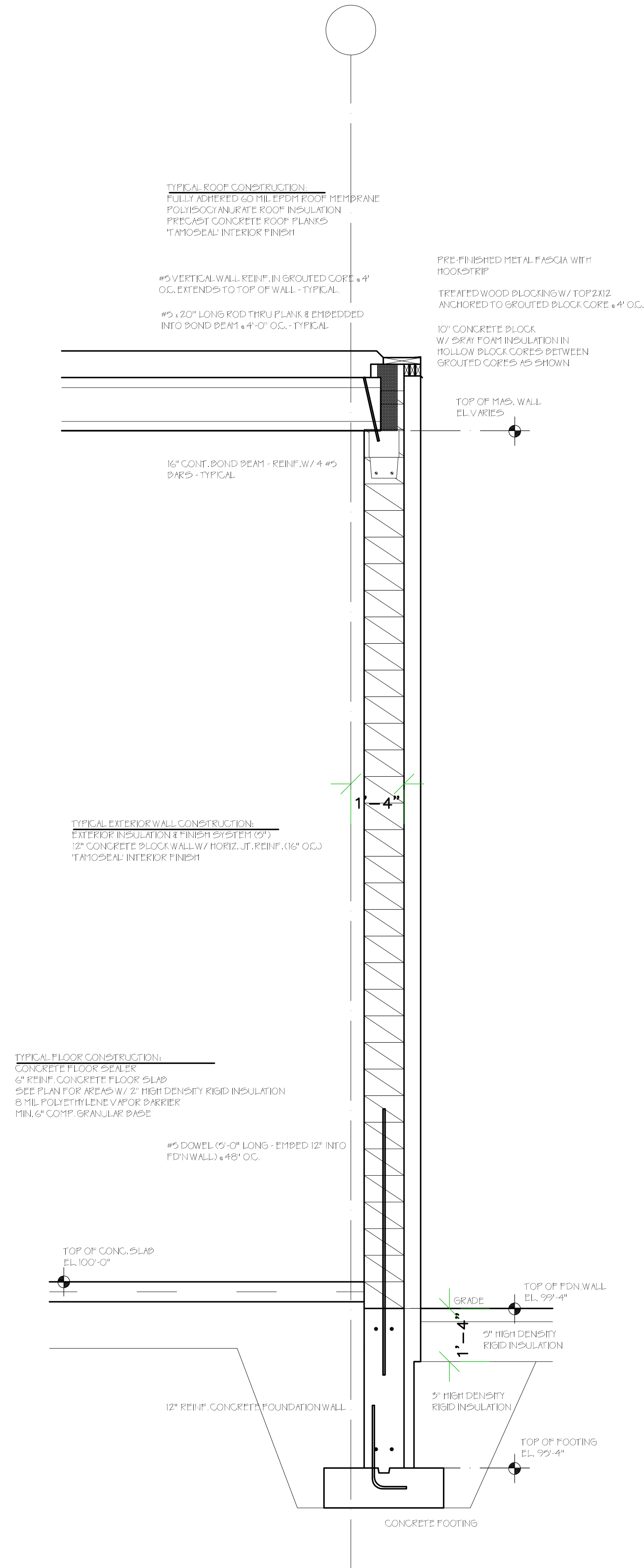
1 WALL SECTION  
SCALE 1/2" = 1'-0"

NOTES:  
1) FIELD VERTICAL FOOTING ELEVATIONS - ALL FOOTINGS  
SHALL BE PLACED ON UNDISTURBED SOIL



2 WALL SECTION  
SCALE 1/2" = 1'-0"

NOTES:  
1) FIELD VERTICAL FOOTING ELEVATIONS - ALL FOOTINGS  
SHALL BE PLACED ON UNDISTURBED SOIL



3 WALL SECTION  
SCALE 1/2" = 1'-0"

NOTES:  
1) FIELD VERTICAL FOOTING ELEVATIONS - ALL FOOTINGS  
SHALL BE PLACED ON UNDISTURBED SOIL

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WALL SECTIONS

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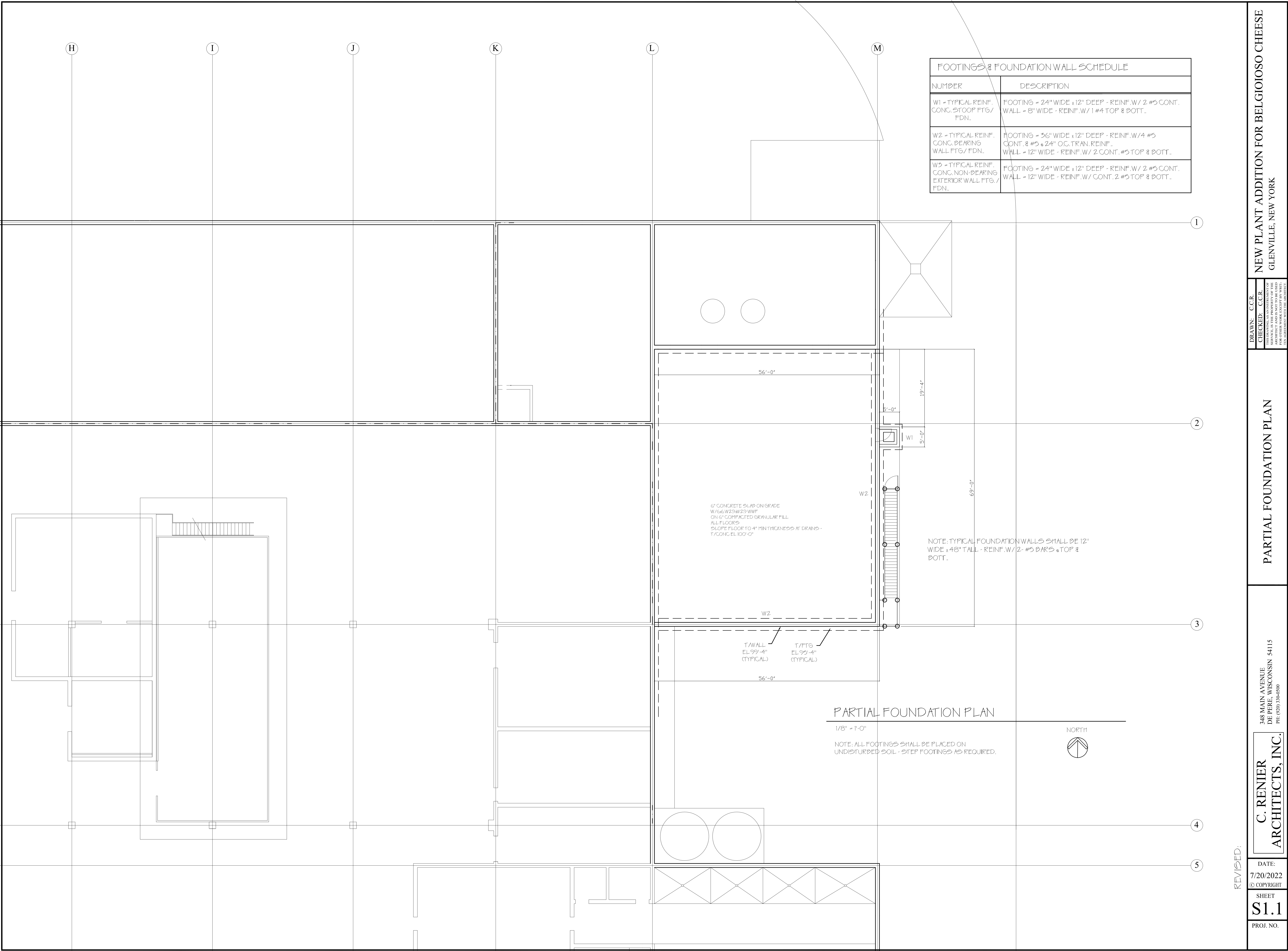
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FOOTINGS & FOUNDATION WALL SCHEDULE	
NUMBER	DESCRIPTION
W1 - TYPICAL REINF. CONC. STOOP FTG./FDN.	FOOTING = 24" WIDE x 12" DEEP - REINF. W/ 2 #5 CONT. WALL = 8" WIDE - REINF. W/ 1 #4 TOP & BOTT..
W2 - TYPICAL REINF. CONC. BEARING WALL FTG./FDN.	FOOTING = 36" WIDE x 12" DEEP - REINF. W/ 4 #5 CONT. & #5 @ 24" OC. TRAN. REINF.. WALL = 12" WIDE - REINF. W/ 2 CONT. #5 TOP & BOTT..
W3 - TYPICAL REINF. CONC. NON-BEARING EXTERIOR WALL FTG./FDN.	FOOTING = 24" WIDE x 12" DEEP - REINF. W/ 2 #5 CONT. WALL = 12" WIDE - REINF. W/ CONT. 2 #5 TOP & BOTT..

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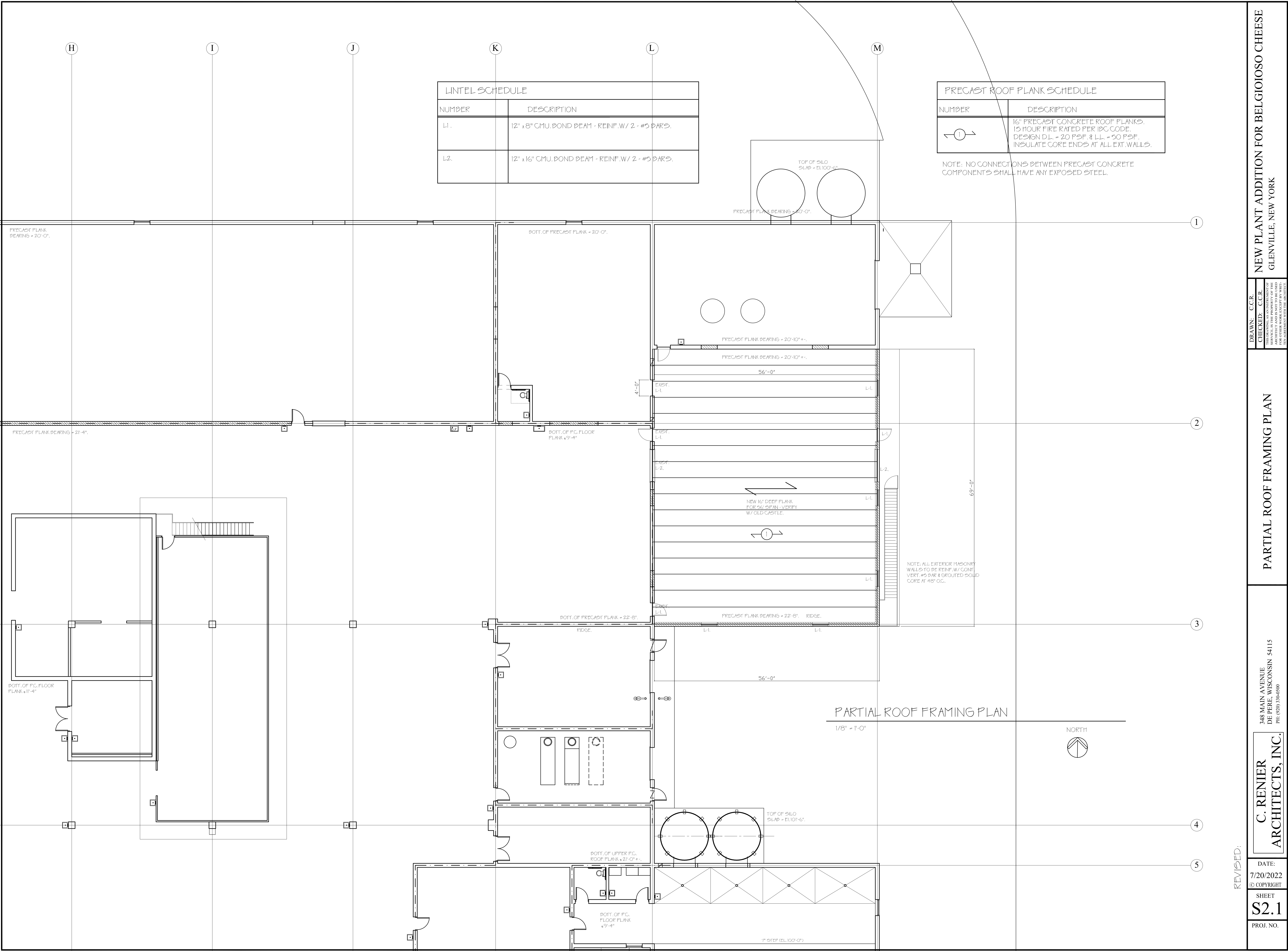
PARTIAL FOUNDATION PLAN

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PARTIAL ROOF FRAMING PLAN

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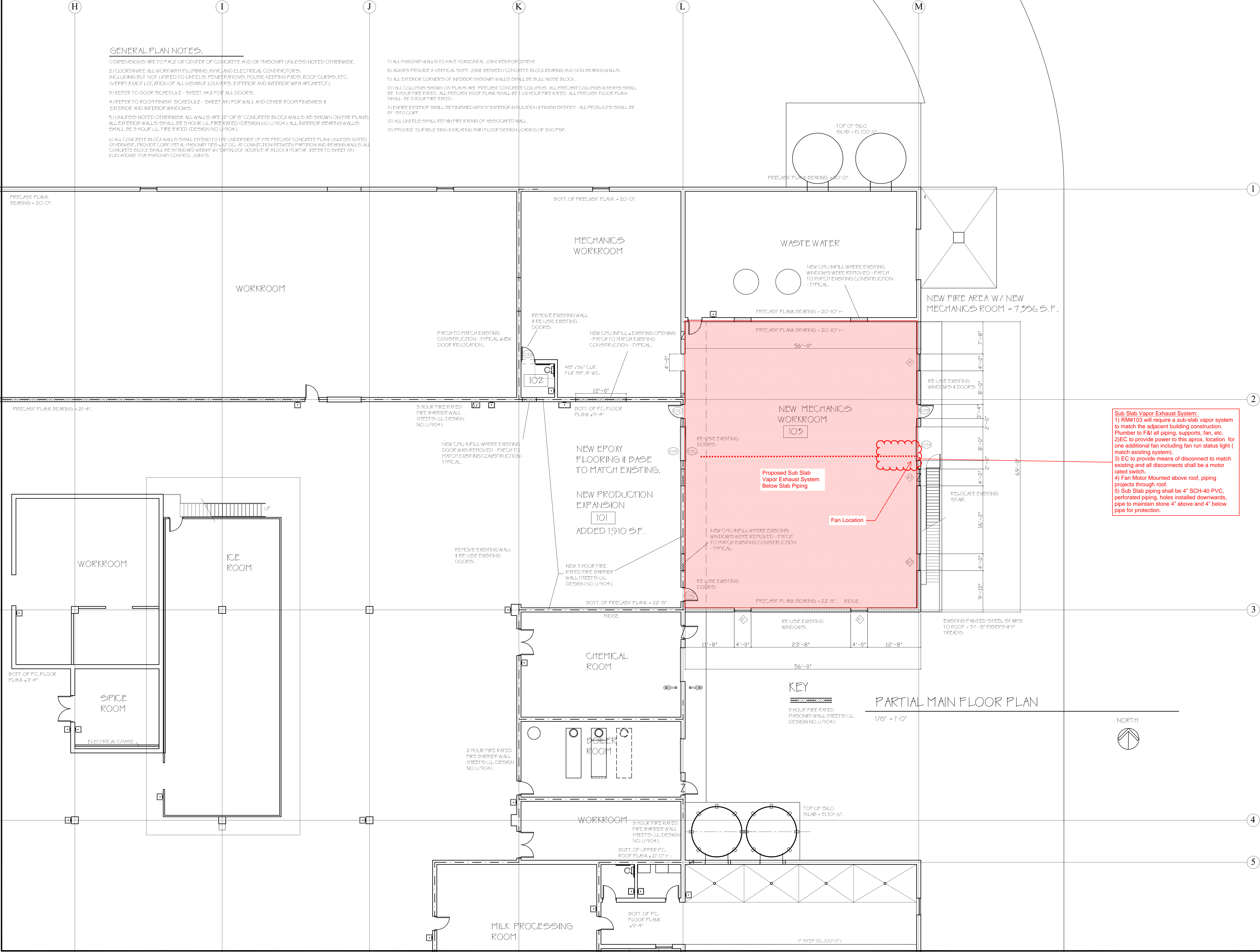
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Exhibit G- Sub Slab Vapor System - NEW WORK SCHEMATIC



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**APPENDIX B**

**HEALTH AND SAFETY PLAN**

# HEALTH AND SAFETY PLAN

## **BelGioioso Cheese, Inc. Glenville Business & Technology Park**

**NYSDEC Site No.: 447023**

---

*CHA Project Number: 072605.000*

*Prepared for:*



***BelGioioso Cheese, Inc.***  
*115 Van Guysling Avenue*  
*Schenectady, New York 12305*

*Prepared by:*



*III Winners Circle*  
*Albany, New York 12205*  
*Phone: (315) 453-4500*

***October 7, 2022***

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Hospital Directions and Map  
Incident Report Form  
Job Hazard Analysis Cards

## 1.0 INTRODUCTION

The following Health and Safety Plan (HASP) has been created for the protection of CHA Consulting, Inc. (CHA) staff conducting full-time oversight of the work proposed in the Excavation Work Plan (EWP) for work completed in Fall 2022 at the BelGioioso Cheese, Inc. (BelGioioso) facility (Site) located at 2165 Amsterdam Road, in the Town of Glenville, New York (Figure 1). This project's various assignments require CHA employees to perform tasks where personal safety could be compromised due to chemical, physical, and/or biological hazards. While conducting field work, CHA employees may be exposed to chemical, physical, and/or biological hazards including but not limited to:

- Chemical exposure due to the presence of contaminated soil and/or demolition debris
- Slip/Trips/Falls
- Excessive noise for certain operations (e.g. heavy equipment)
- Heavy equipment operation
- Environmental and Biological hazards (e.g. insects, plants, UV exposure, etc.)
- COVID-19 virus potential exposure

The requirements and guidelines in this HASP are based on a review of available information and an evaluation of potential on-Site hazards, summarized in the Site Management Plan prepared by AECOM Technical Services (AECOM) and dated October 2017.

This HASP will be discussed with Site personnel and will be available on-Site for review while work is underway. CHA personnel will report to the Project Manager (PM) and consult with the Health and Safety Coordinator (HSC) in matters of health and safety. The Site Safety Officer (SSO) and Field Team Leader (FTL) is the same person for this project and is responsible for ensuring compliance with this HASP, stopping work when necessary, and for implementation of this HASP for daily Site activities.

*Non-intrusive activities within CHA's Scope of work are those that do NOT have the potential to jeopardize the health and safety of Site workers, the public, or the environment with respect to Site contaminants. Intrusive activities within CHA's Scope of Work are those that have the potential to cause health and safety concerns to Site workers, the public, or the environment. These activities and any non-intrusive activities conducted in an Exclusion Zone require training per 29 CFR 1910.120 on a NYSDEC hazardous waste site.*

## 2.0 KEY PERSONNEL

### 2.1 OFF-SITE PERSONNEL

**Title: CHA Corporate Director of Health & Safety**

**Description:** Responsible for the CHA's corporate health and safety program and developing procedures, policies, and coordinating training programs. Additionally, provides senior level guidance on development of HASPs and interpretation of regulations.

**Contact:**

Anthony Tremblay  
(518) 302-9452 (Office)  
(617) 908-7058 (Cell)

**Title: Project Manager/Engineer**

**Description:** Guides project team in scientific and engineering aspects of the proposed work. Reports to upper level management, provides sufficient authority and resources to satisfy health and safety requirements, and assumes total control over Site activities. The Project Manager is ultimately responsible for ensuring field implementation of this HASP. The Project Manager may visit the Site from time to time to check status of fieldwork.

**Contact:**

Scott Smith  
(315) 257-7227 (Office)  
(315) 427-1033 (Cell)

### 2.2 ON-SITE PERSONNEL

**Title: Site Safety Officer/Field Team Leader**

**Description:** Advises the field team on all aspects of health and safety issues, recommends stopping work if any operation threatens worker or public health and safety.

Responsible for coordinating project requirements in the field. The Field Team Leader oversees daily activities of the project and are, therefore, responsible for implementing health and safety requirements and following safety procedures in the field. The Field Team Leader will contact the local emergency response organizations to notify concerned affiliates of the hazards associated with this project.

**Contact:**

TBD

---

## 2.3 AS-NEEDED PERSONNEL

### **Title: Fire Department**

**Description:** Responds to fires and performs rescues.

**Contact:**

911

Village of Scotia Fire Department – (518) 381-6115

Beukendaal Fire Department – (518) 377-1788

Schonowe Fire Department – (518) 377-0939

### **Title: Ambulance**

**Description:** Responds to medical emergencies.

**Contact:**

911

Mohawk Ambulance Service (Glenville) - (518) 630-0911

### **Title: Police**

**Description:** Responds to emergencies and performs rescues.

**Contact:**

911

Village of Scotia Police Department – (315) 468-3283

### **Title: EPA National Response Center**

**Description:** Responds to all oil, chemical, radiological, biological and etiological discharges into the environment, anywhere in the United States and its territories.

**Contact:**

(800) 424-8802

### **3.0 SITE ENTRY**

#### **3.1 OBJECTIVES**

The objectives of the Site entry are to provide the following services, as needed/requested by BelGioioso:

1. Oversee the handling and placement of on-site stockpiled soil;
2. Oversee the loading of dump trucks for off-site disposal of stockpiled construction and demolition debris (mainly asphalt);
3. Screen the soils, as necessary;
4. Oversee the installation of the cover system; and,
5. Implement the Community Air Monitoring Plan (CAMP) for the protection of downwind community.

#### **3.2 SAFETY MEETINGS**

To ensure that the HASP is being followed, the SSO shall conduct a safety meeting prior to entry to the Site or the initiation of any Site activity, if any conditions change, and before each workday. The attached Daily Jobsite Safety Brief Form should be utilized to document these daily jobsite briefings.

#### **3.3 SAFETY TRAINING**

The SSO will confirm that every person assigned to a task has had adequate training for that task and that the training is up to date by checking with the CHA Safety Coordinator and online database. CHA staff working on this project shall have a minimum of:

- 40-Hour Initial Hazardous Waste Operations and Emergency Response (HAZWOPER) training in accordance with 29 CFR 1910.120
- Current 8-hour HAZWOPER Refresher Training
- Field equipment safety training where applicable

All training will have been conducted and certified in accordance with OSHA regulations.



### **3.4 MEDICAL SURVEILLANCE**

All CHA personnel will have had a medical surveillance physical consistent with OSHA regulations and performed by a qualified occupational health physician if deemed necessary by project requirements. The SSO shall confirm prior to initiation of work on this Site that every CHA person assigned to a task has had an annual physical, has passed the medical examination, and has been determined medically fit by the occupational health physician for respirator use and this type of work if deemed necessary by the PM.

### **3.5 SITE MAPPING**

Site mapping has been included in the Figures section of the HASP. Figure 1 illustrates the location of the Site. Directions and a map illustrating the route to the nearest hospital from the subject Site is provided in Appendix A of this HASP.

## 4.0 HAZARD EVALUATION

Hazards are generally divided into three (3) categories, exposure to chemicals and hazardous materials, safety/physical hazards, and biological hazards. Safety/physical hazards are generally hazards such as electrical shock, slips/trips/falls, and confined spaces. Chemical hazards are further segregated by their routes of exposure that may cause adverse health effects. Biological hazards typically include plants, animals, and insects.

### 4.1 CHEMICAL HAZARDS

Chemical	OSHA PEL	NIOSH REL	IDLH	Ionization Potential (I.P)	Characteristics	Routes of Exposure	Symptoms of Exposure and Health Effects
Benzene	TWA 1 ppm ST 5 ppm	TWA 0.1 ppm ST 1 ppm	Ca 500 ppm	9.24 eV	Colorless to light-yellow liquid with an aromatic odor.	inhalation, skin absorption, ingestion, skin and/or eye contact	irritation eyes, skin, nose, respiratory system; dizziness; headache, nausea, staggered gait, anorexia, lassitude, dermatitis, bone marrow depression; carcinogenic
Toluene	TWA 200 ppm C 300 ppm 500 ppm (10-minute maximum)	TWA 100 ppm ST 150 ppm	500 ppm	8.82 eV	Colorless liquid with a sweet, pungent, benzene-like odor.	inhalation, skin absorption, ingestion, skin and/or eye contact	irritation eyes, nose; lassitude (weakness, exhaustion); confusion, euphoria, dizziness headache; dilated pupils, lacrimation (discharge of tears); anxiety, muscle fatigue, insomnia; paresthesia; dermatitis; liver, kidney damage.
Ethylbenzene	TWA 100 ppm (435 mg/m <sup>3</sup> )	TWA 100 ppm (435 mg/m <sup>3</sup> )	800 ppm	8.76 eV	Colorless liquid with an aromatic odor	Inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin mucous membrane; headache; dermatitis; narcosis; coma.
Xylenes	TWA 100 ppm (435 mg/m <sup>3</sup> )	TWA 100 ppm (435 mg/m <sup>3</sup> )	900 ppm	8.56 eV	Colorless liquid with an aromatic odor	Inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis.
Trichloroethene	TWA 100 ppm C 200 ppm 5-minute max peak in any 2 hours 300 ppm	25 ppm on a 10-hour TWA	1000 ppm	9.45 eV	Colorless liquid (unless dyed blue) with chloroform-like odor	Inhalation, skin absorption, ingestion, skin and/or eye contact	Irritation of the eyes, skin; headache, visual disturbance, lassitude, dizziness, tremor, drowsiness, nausea, vomiting; dermatitis,

Chemical	OSHA PEL	NIOSH REL	IDLH	Ionization Potential (I.P)	Characteristics	Routes of Exposure	Symptoms of Exposure and Health Effects
							cardiac arrhythmias, paresthesia; liver injury
1,2-Dichloro-ethane	TWA 50 ppm C 100 ppm 200 ppm (5 minute maximum peak in any 3 hours)	Ca TWA 1 ppm ST 2 ppm	Ca 50 ppm	11.05 eV	Colorless liquid with a pleasant, chloroform-like odor	inhalation, ingestion, skin absorption, skin and/or eye contact	irritation eyes, corneal opacity; central nervous system depression; nausea, vomiting; dermatitis; liver, kidney, cardiovascular system damage; carcinogen
Vinyl Chloride	TWA 1 ppm C 5 ppm (15 minute)	Ca	Ca	9.99 eV	Colorless gas or liquid (below 7°F) with a pleasant odor at high concentrations	Inhalation, skin and/or eye contact	Lassitude; abdominal pain, gastrointestinal bleeding; enlarged liver; pallor or cyanosis of extremities; frostbite
Chromium Metal	TWA 1 mg/m <sup>3</sup>	TWA 0.5 mg/m <sup>3</sup>	250 mg/m <sup>3</sup>	NA	Blue-white to steel-gray, lustrous, brittle, hard, odorless solid.	Inhalation, ingestion, skin and/or eye contact	Irritation eyes, skin; lung fibrosis

## Abbreviations:

Ca – Cancerous  
 C – Ceiling value  
 TWA – Time Weighted Average  
 IDLH – Immediately Dangerous to Life and Health  
 OSHA – Occupational Safety and Health Administration  
 PEL – Permissible Exposure Limit  
 NIOSH – National Institute for Occupational Safety and Health  
 REL – Recommended Exposure Limit  
 N/A – Not Available

#### 4.1.1 Dispersion Pathways

The potential exposure mechanism that can transport particulates and VOCs from the areas of the intrusive Site activities to other areas of the Site as well as beyond the boundaries of the Site are:

- Contact with contaminated soil;
- Projection of contaminated material in air;
- Conveyance in stormwater runoff; and,
- Failure to adhere to decontamination procedures.

Emissions can be a problem at any Site that involves intrusive activities and should be controlled to the extent feasible. To monitor VOC and particulate emissions during intrusive work, CHA will implement a Community Air Monitoring Plan (CAMP) in accordance with Section 6.0 below and the NYSDOH generic CAMP. In support of CAMP requirements, and to control VOC and

particulate emissions in the work area, the corrective actions listed in the CAMP may be implemented.

## **4.2 PHYSICAL HAZARDS**

Physical hazards such as the following may be encountered on-Site:

- Explosive atmosphere
- Slip/Trip/Fall
- UV rays
- Lifting (generators, drums, equipment)
- Traffic – on access roadways at the facility
- Moving parts or equipment (including heavy construction equipment)

## **4.3 BIOLOGICAL HAZARDS**

Biological hazards such as the following may be encountered on-Site:

- Ticks, mosquitoes, stinging insects, arachnids, chiggers
- Rodents, snakes, Hantavirus
- Physically damaging plants, poisonous plants
- COVID-19 potential exposure

## **4.4 HAZARD IDENTIFICATION AND CONTROL**

Hazard controls generally consist of following specific safety procedures, training, engineering controls, air monitoring, and PPE selection. CHA employees are required to use the PPE appropriate to their work task and potential exposures as outlined in this HASP.

The levels of PPE assigned to each activity are based on available information on the estimation of exposure potential associated with each work task.

Affected Personnel	Task/Operation	Hazards	Hazard Control
All personnel	Screening on-site soil stockpiles	<ul style="list-style-type: none"> <li>• Skin and/or eye contact with contaminated soil, decontamination solutions, runoff from stockpiles, and sample preservation agents (if needed).</li> <li>• The inhalation of volatile organic vapors, dusts, and other airborne particulates during Site activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct air monitoring in accordance with Section 6.0. Wear the required personal protective equipment when conditions or activities indicate the need for it. Stand upwind to extent possible to reduce inhalation hazard.</li> <li>• Avoid walking through puddles, and contacting other potential sources of contaminants such as drums.</li> <li>• Keep airborne dust levels to a minimum by wetting down surfaces.</li> </ul>
All personnel	All field activities	Slips, trips, & falls	<ul style="list-style-type: none"> <li>• Wear appropriate work boots.</li> <li>• Avoid slippery surfaces.</li> <li>• Remind field personnel to exercise good housekeeping practices</li> <li>• Be observant of activities around.</li> </ul>
All personnel	All field activities	Physical injuries, such as abrasions or cuts	<ul style="list-style-type: none"> <li>• Use safe work practices</li> <li>• Don proper PPE</li> <li>• Have a first aid kit readily available at Site</li> </ul>
All personnel	All field activities	Noise Exposure	<ul style="list-style-type: none"> <li>• Wear hearing protection if you must shout to hear someone who is standing one foot or less away.</li> </ul>
All personnel	All field activities	Contact with heavy equipment and traffic	<ul style="list-style-type: none"> <li>• Do not stand unnecessarily close to the heavy equipment/ drill rig when it is operating</li> <li>• Do not stand in lanes of traffic. Use cones or barricades to delineate work areas when work within access roads is required.</li> <li>• Wear a hard hat and high visibility clothing</li> <li>• Make eye contact with the operator/drivers</li> </ul>
All personnel	All field activities	Security	<ul style="list-style-type: none"> <li>• Stay alert to all on-Site activities</li> <li>• Report suspicious activities to PM</li> </ul>

Affected Personnel	Task/Operation	Hazards	Hazard Control
All personnel	All field activities	Stinging insects (bees, hornets, wasps and yellow jackets)	<ul style="list-style-type: none"> <li>• Do not agitate nests unless absolutely necessary.</li> <li>• Be aware of holes in the ground within the work area.</li> <li>• Avoid wearing bright or patterned clothing.</li> <li>• Avoid wearing/using scented items (e.g., perfume, cologne, soaps).</li> <li>• Inspect food and drinks prior to consumption.</li> </ul>
All personnel	All field activities	Hantavirus	<ul style="list-style-type: none"> <li>• Avoid dermal contact with rodent droppings.</li> <li>• Avoid inhalation of dust that is contaminated with rodent droppings.</li> </ul>
All personnel	All field activities	Mosquitos/West Nile Virus	<ul style="list-style-type: none"> <li>• Eliminate mosquito breeding areas (standing water) at the work Site.</li> <li>• Apply insect repellent containing DEET to exposed, unbroken skin per the manufacturer's instructions.</li> <li>• Wear light colored clothing (pants, long sleeved shirts and socks).</li> </ul>
All personnel	All field activities	Snakes/Rodents/Arachnids	<ul style="list-style-type: none"> <li>• Avoid actions which increase the risk of encountering a snake (e.g., overturning logs, rocks, etc.).</li> <li>• Avoid contact with rodents and burrowing animals.</li> </ul>
All personnel	All field activities	UV Exposure	<ul style="list-style-type: none"> <li>• Cover skin and limit time in sun to extent practical.</li> <li>• Apply sunscreen.</li> </ul>
All personnel	All field activities	COVID-19 exposure	<ul style="list-style-type: none"> <li>• Avoid meeting in groups. Abide by social distancing practices and keep at least 6 feet from others or wear a facemask.</li> <li>• Plan work to minimize close working conditions as much as possible.</li> <li>• Cover cough/sneezes</li> <li>• Wash hands thoroughly and often.</li> <li>• Avoid putting hands near face and eyes.</li> </ul>

## 5.0 AIR MONITORING & ACTION LEVELS

### 5.1 AIR MONITORING

The CAMP will be implemented during the intrusive activities at the Site. The purpose of the CAMP is to provide a measure of protection for the downwind community, more specifically off-Site receptors including residents and workers, from potential airborne contaminant releases as a result of excavation activities performed at the Site. The CAMP will be implemented following NYSDOH's Generic CAMP protocol with one upwind and two downwind air monitoring station.

In support of the CAMP and to monitor air quality in the immediate work area, a photoionization detector (PID) will be available to monitor the breathing zone within the work area. The PID shall be used to detect volatile organic compounds in the ambient air in the work zone.

Monitoring instrument calibration will be tested at the start each full day of equipment usage or more frequently in accordance with manufacturer's recommendations.

### 5.2 ACTION LEVELS

Should action level listed in the table below be reached, work operations shall cease until further evaluation is performed and safe levels are prevalent. If through engineering controls and monitoring, safe levels (below action levels) cannot be achieved, an upgrade in personal protection equipment shall be mandated by the SSO, or operations shall cease in that portion of the Site. The PM will be notified of any changes in PPE.

Contaminant/Method	Frequency	Action Level	SSO Action
Organic Vapors/PID	Continuous	5 ppm sustained for 5 minutes	Stop work and notify PM of elevated organic vapors

## **6.0 COMMUNICATION AND HAZARD COMMUNICATION**

Communication shall be accomplished by person to person verbal conference between the on-Site SSO and the construction manager. All other communication will be via direct phone call. Communication procedures will be reviewed at the Safety Meeting before entering the work zone.

In compliance with 29 CFR 1910.1200, any hazardous materials brought on Site by any personnel (CHA or its sub-contractors) shall be accompanied with the material's Safety Data Sheet (SDS). The SSO shall be responsible for maintaining the SDSs on Site, reviewing them for hazards that working personnel may be exposed to, and evaluating their use on Site with respect to compatibility with other materials including personal protective equipment, and their hazards. Should the SSO deem the material too hazardous for use on the subject Site, the party responsible for bringing the material on Site will be required to remove it from the Site.



## **7.0    CONFINED SPACE**

During this project CHA personnel will not be permitted to enter any confined space. No confined space work is anticipated during this project.

If a confined space entry becomes necessary, this HASP will be revised to outline all confined space entry procedures, techniques, and equipment to be consistent with OSHA regulations in 29 CFR 1910.146. Additionally, all entrants and attendants will be trained in Confined Space Awareness training consistent with 29 CFR 1910.146.

## 8.0 PERSONAL PROTECTIVE EQUIPMENT

At this time, Level A, B and C PPE are not expected to be needed. If Site conditions change and contamination is present at levels above the action level, this HASP will be updated to reflect greater protection of personnel. The following is a list of required PPE at this time.

Task/Operation	Level of PPE	Equipment
General Site observation at a distance greater than 25 feet from intrusive activities. <ul style="list-style-type: none"> <li>• No drums present</li> <li>• No free product visible</li> <li>• 2-Minute Breathing Zone PID Readings &lt; 5 ppm with the 10.6 eV bulb</li> <li>• No strong odors present</li> </ul>	D	<ul style="list-style-type: none"> <li>• Long pants (no shorts)</li> <li>• Hard hat</li> <li>• Safety glasses</li> <li>• Reflective vests or yellow safety shirt</li> <li>• Work boots with safety toe</li> <li>• Hearing protection (if required)</li> <li>• Gloves (as appropriate)</li> </ul>
Site Observation or Soil Screening Activities within the Exclusion Zone <ul style="list-style-type: none"> <li>• No drums present</li> <li>• No free product visible</li> <li>• 2-Minute Breathing Zone PID Readings &lt;5 ppm with the 10.6 eV bulb</li> <li>• Strong, pungent odors noted</li> </ul>	D	<ul style="list-style-type: none"> <li>• Long pants (no shorts)</li> <li>• Hard hat</li> <li>• Safety glasses</li> <li>• Reflective vests or yellow safety shirt</li> <li>• Work boots with safety toe</li> <li>• Hearing protection (if required)</li> <li>• Gloves (as appropriate)</li> </ul>

## 9.0 DECONTAMINATION

Personnel decontamination is not anticipated for this project. Equipment decontamination is discussed below.

### **Small Equipment:**

For soil sampling, dedicated sampling equipment is preferred. However, if non-dedicated equipment is used (i.e. stainless steel soil sampling equipment), the required decontamination procedure for all manual sampling equipment used to collect samples for chemical analysis is:

- Disassemble equipment, as required;
- Remove gross contamination from the equipment by brushing and then rinsing with tap water;
- Wash and scrub with low phosphate detergent (e.g. Alconox®);
- Tap water rinse;
- Distilled water rinse;
- Air dry.

All decontaminated equipment will be placed on or wrapped in polyethylene sheeting in order to avoid contacting a contaminated surface prior to use. Field personnel will use a new pair of outer gloves before handling sample equipment after it is cleaned. During periods of transportation and non-use, all decontaminated sampling equipment will be wrapped in polyethylene sheeting or aluminum foil.

### **Large Equipment:**

CHA personnel are not responsible for the decontamination of large equipment. Information for large equipment decontamination will be provided by the contractor. Decontamination of heavy construction equipment will be performed by the contractor under the contractor's HASP.

## 10.0 EMERGENCY PROCEDURES

911 service is available and confirmed at this location. Call 911 immediately for emergency response. Only if the 911 is unavailable or has a long lead time should someone be driven to the nearest medical facility.

On-site emergencies can range in intensity from minor to serious conditions. Various procedures for responding to site emergencies are listed in this section. The designated SSO is responsible for contacting the CHA Project Manager who will notify the client as appropriate in emergency situations (however, others must assume responsibility if the situation warrants). An injured person shall be accompanied by another worker at all times.

Should an on-site emergency occur at the project Site (related to the project or otherwise) the following procedures shall be followed:

- Call 911 for additional emergency response.
- If the emergency occurs and is project specific, notify your assigned HSC after emergency care is provided to activate the appropriate actions.
- Properly trained personnel will determine if the emergency can be contained or remediated and initiate the appropriate action(s). Personnel shall not respond beyond their level of training.
- Employees are not to risk their health or life in taking aggressive action(s) to fight fire or stop releases. Only defensive actions shall occur until an action plan is resolved.
- Choose an exit route that provides fast, and safe, egress from the work area. The route taken should always be away from obvious obstructions or other hazardous conditions. Consult an evacuation map if you are unsure of where the nearest exit route is located.
- Do not delay evacuation to retrieve personal items or equipment.
- Persons shall exit areas in groups and attempt to stay together during evacuation procedures.
- While evacuating, notice any conditions which should be reported to emergency personnel. Be alert for the location of smoke, fire and/or vapors. Report any of these conditions to emergency personnel.
- Be aware of emergency response vehicles and avoid interference with these.

Remain calm, keep voices low and wait for instructions from the Incident Commander. Do not leave the scene prior to notifying your assigned Project Manager and Field Team Leader. An incident report form is included in Appendix B.

## 11.0 EMERGENCY MEDICAL CARE

911 service is available and confirmed at this location. Only if 911 is unavailable or has a long lead time should someone be driven to the nearest medical facility.

Nearest hospital: Ellis Hospital  
(directions and map are provided in Appendix A of this HASP)

Address: 1101 Nott St  
Schenectady, New York 12308

Emergency Room Telephone Number: (518) 243-4121

### Directions from Site:

1. Turn left on B Street from the Site.
2. Turn left onto 7<sup>th</sup> Street
3. Turn right towards NY Route 5 East (Amsterdam Road)
4. Turn left onto NY Route 5 East (Amsterdam Road)
5. Turn left on Erie Blouvard
6. At the roundabout take the first exit on the right onto Nott Street
7. Turn Left at Lowell Road.
8. The Destination will be on the right

## 11.1 EMERGENCY NOTIFICATION NUMBERS

CHA Contact: Scott Smith, (315) 427-1033 (Cell)

BelGioioso Contact: Timothy Cronin, (518) 374-5064

Fire Dept.: 911

Police Dept.: 911

Department of Emergency Services: 911

Poison Control: (800) 222-1222

## 11.2 ON-SITE FIRST AID

First aid kits will be available in the SSO's vehicle. General first aid procedures include:

**Skin/Eye Contact:** Flush eyes and/or skin thoroughly with water for 15 minutes. Remove contaminated clothing. If skin was contacted with a dry material, brush it off first, then flush with water. Seek medical attention if irritation develops.

**Ingestion:** Do not induce vomiting. Call Poison Control Center. Tell them what was swallowed, if possible. Follow instructions. Have SDS available for reference.

**Inhalation:** Remove person from contaminated environment without risking your own safety. **DO NOT ENTER A CONFINED SPACE. DO NOT ENTER EXCLUSION ZONE UNLESS WEARING ONE LEVEL HIGHER PROTECTION THAN VICTIM WAS WEARING.**  
Administer CPR, if necessary.

**Injuries:** Do not move a victim who may have a back injury. Cover them with coats, blankets, or other appropriate items to keep them warm.

Apply pressure to bleeding wounds. If the victim is able, have the victim apply pressure to the wound. If they are not able, wear gloves to protect from exposure to blood. Put gauze bandages or other clean cloth over the wound. Do not remove blood-soaked bandages or cloth - instead put additional bandages or cloths over the blood-soaked bandages. Elevate the limb with the injury above the heart.

Administer CPR if victim does not have a pulse and if you are currently certified in CPR. Have someone call for an ambulance immediately if there is any possibility that the victim is having or had a heart attack.

Shock is likely to develop in any serious injury or illness. The following are signals of shock: restlessness or irritability; altered consciousness; pale, cool, moist skin; rapid breathing; and/or rapid pulse. In the event of shock, do the following: Immediately have someone call for an ambulance; have the victim lie down; elevate legs 12 inches unless you suspect head, neck, or back injuries; if victim is cool, cover the victim to prevent chilling; do not give the victim anything to drink, even if thirsty.



## **13.0 STANDARD OPERATING PROCEDURES**

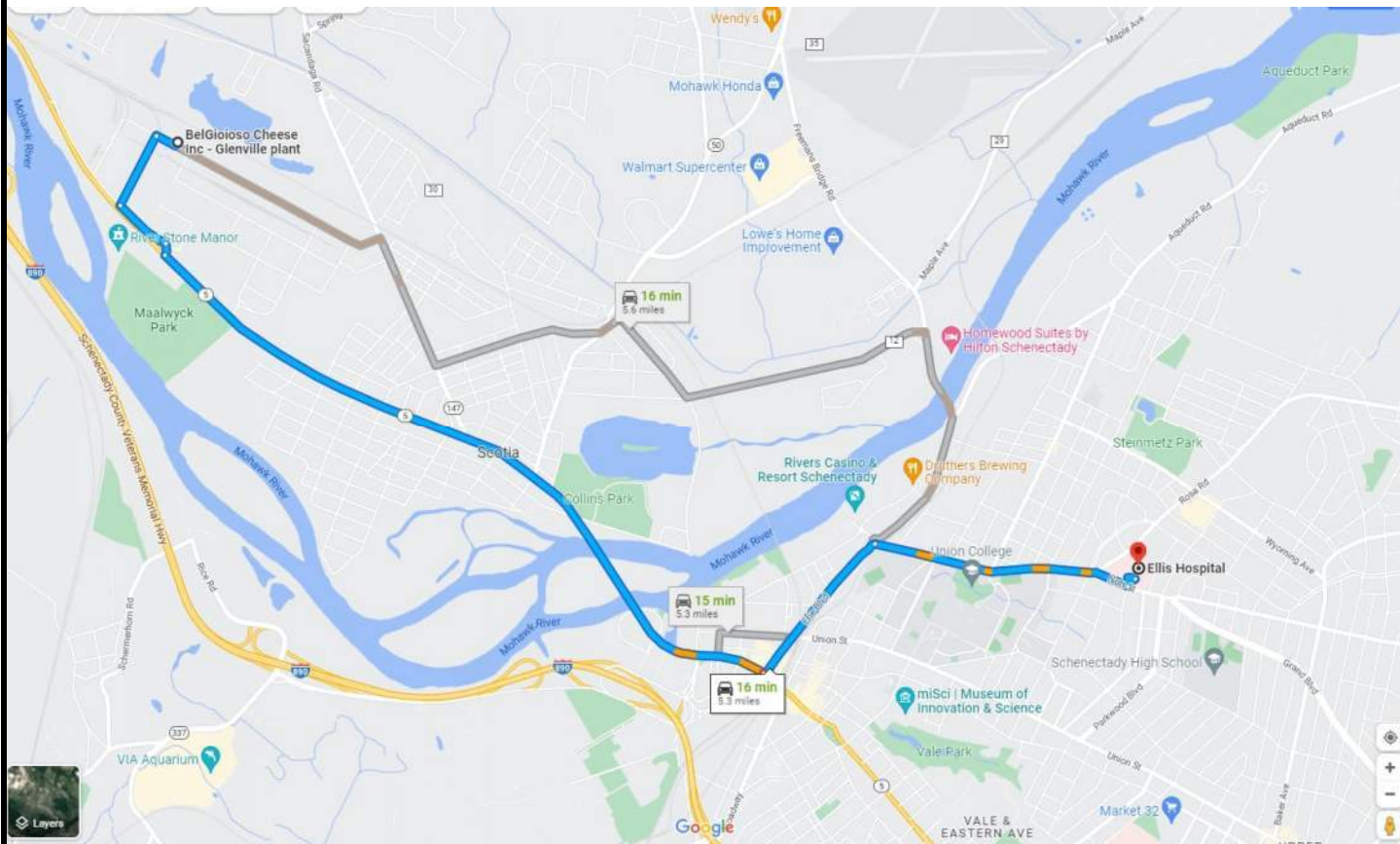
OSHA Quick Cards and applicable standard operating procedures are available in Appendix C of this HASP.



## 14.0 JOB HAZARD ANALYSIS

- |   |  |
|---|--|
| <input type="checkbox"/> Airport Safety   | <input type="checkbox"/> Exposure to Electrical Transmission Lines   |
| <input type="checkbox"/> Asbestos Abatement                                       | <input type="checkbox"/> Hand-Power Tools                            |
| <input type="checkbox"/> ATV-4 Wheeler  | <input checked="" type="checkbox"/> <b>Heat Stress</b>               |
| <input type="checkbox"/> Bridge Inspection  | <input checked="" type="checkbox"/> <b>Heavy Equipment</b>           |
| <input checked="" type="checkbox"/> <b>Cold Stress/Winter Weather</b>             | <input checked="" type="checkbox"/> <b>Noise</b>                     |
| <input type="checkbox"/> Confined Space   | <input type="checkbox"/> Pressurized Cans                            |
| <input type="checkbox"/> Dogs   | <input type="checkbox"/> Rail Safety                                 |
| <input type="checkbox"/> Electrical Safety  | <input checked="" type="checkbox"/> <b>Slips, Trips, Falls</b>       |
| <input checked="" type="checkbox"/> <b>Environmental Sampling/Outdoor Hazards</b> | <input checked="" type="checkbox"/> <b>Working In-Around Traffic</b> |
| <input checked="" type="checkbox"/> Excavation                                    | <input type="checkbox"/> Working Over Water                          |
| <input type="checkbox"/> Explosive atmosphere                                     | <input type="checkbox"/> Working With Ladders                        |
|   | <input checked="" type="checkbox"/> <b>Biological Hazards</b>        |

**APPENDIX A**  
**Hospital Directions and Map**



SOURCE: Google Maps

1. Turn left on B Street from the Site.
2. Turn left onto 7<sup>th</sup> Street
3. Turn right towards NY Route 5 East (Amsterdam Road)
4. Turn left onto NY Route 5 East (Amsterdam Road)
5. Turn left on Erie Blouvard
6. At the roundabout take the first exit on the right onto Nott Street
7. Turn Left at Lowell Road.
8. The Destination will be on the right

Ellis Hospital  
1101 Nott St  
Schenectady, New York 12308



NOT TO SCALE

DATE: October 2022

**FIGURE**  
**DIRECTIONS TO NEAREST HOSPITAL**  
BelGioioso Cheese Inc.  
Town of Glenville, New York

**APPENDIX B**  
**Incident Report**



# Incident Report

Please Note: this form must be completed within **(24) hours** of an employee's injury or illness during the workday. This form can be completed by the employee or supervisor (or a witness if his/her supervisor is unavailable).

<b>EMPLOYEE</b>	<b>Date of Incident</b>		<b>Employee's Name (First, MI, Last)</b>		<b>Full Address Where Incident Occurred</b>		<b>County</b>	
	<b>Time of Incident</b>		<b>Employee's Group</b>		<b>Employee's Occupation / Title</b>			
	<b>Please describe, in detail, what happened to cause the incident</b> (conditions working under, how accident happened, etc.)							
	<b>List the Nature of the Employee's Injury and Body Parts Affected</b> (Indicate whether a similar work-related injury has occurred in the past):							
	<b>What Was Employee Doing When Incident Occurred?</b> (Be specific. If any tools/equipment involved, list them.)							
<b>SUPERVISOR</b>	<b>How Did The Incident or Exposure Occur?</b> (Describe fully the events, which resulted in the injury/illness.)							
	<b>Object or Substance That Directly Injured Employee or Caused Illness?</b> (Describe what caused injury/illness.)							
	Signature:						Date:	
	<b>Hours at Work Before Incident?</b>		<b>Date Stopped Work Because Of This Injury/Illness</b>		<b>Was Employee Paid In Full For Day?</b>		<b>Name &amp; Address of Doctor</b>	
	<b>Did You Provide Medical Care?</b> (If Yes, When?)		<b>Has Employee Returned to Work?</b> (If Yes, When?)		<b>Date You First Knew of Injury/Illness</b>		<b>Name &amp; Address of Hospital</b>	
<b>HR</b>	<b>Type of Treatment Provided</b> (Be specific with procedures performed, medication provided etc.)							
	<b>Apparent Causes</b> (List causes that appear to have directly contributed to the incident - unsafe acts and conditions.)							
	<b>Immediate Actions Taken</b> (List actions that will successfully prevent recurrence.)							
	Print Name (First, MI, Last) _____						Date: _____	
<b>HR</b>	<b>Loss Time</b>		<b>Restricted Duty</b>		<b>Severity of Injury/Illness (Circle One)</b>			
	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Severe</b>		<b>Moderate</b>	
	<b>Date Injury/Illness Became Loss Time/Restricted Duty</b>		<b>Was Incident on Employer's Premises?</b>		<b>Is Case Recordable? (H&amp;S)</b> (If Yes, OSHA Case/File No.)		<b>Date You First Knew Of Injury/Illness</b>	
Comments:								
Print Name (First, MI, Last) _____						Date: _____		
Signature: _____								

RETURN COMPLETED FORM **WITHIN 24 HOURS OF THE INCIDENT** TO RILEY SIMONE IN HUMAN RESOURCES

PHONE NUMBER - (518) 453-4518

E-MAIL ADDRESS – [RSIMONE@CHACOMPANIES.COM](mailto:RSIMONE@CHACOMPANIES.COM)

\*A follow up form will be completed by Health & Safety

cc: M. Platt  
R. Rogers

**APPENDIX C**  
**Job Hazard Analyses**

# CHA Consulting, Inc.

## Job Hazard Analysis

### Heavy Equipment

Task	Hazard Type and Description	Hazard Control
Heavy equipment	Pinch points Struck-by/Caught between	Never work or walk under loads, and only one person is to act as the signal person. Avoid working near swing radius's. Maintain eye contact with operators when approaching equipment. Rigger s and Operators must possess additional safety training for competency. (Competent/Qualified Training)
Road grading and material cleanup	Potential for personnel to be run over with equipment Struck-by/Caught between	Ensure equipment is operated by qualified operator, and all personnel working on or near roadway wear reflective vests. Be sure that equipment back-up alarms are working properly. Always make eye contact with equipment operators prior to approaching
Personnel working near heavy equipment	Slips and falls Struck-by/Caught between	Make sure there is a good working surface. Cover or barricade excavations as soon as practical. Wear a hard hat, safety glasses, ear plugs, a Class II ANSI safety vest as well as steel toed boots when necessary
Operation	Strains and sprains	Think about your body position; avoid over- reaching, hyper-extending, location/ position of extremities, and think if you are in the best position for leverage

## Protecting Workers from Heat Stress

### Heat Illness

Exposure to heat can cause illness and death. The most serious heat illness is heat stroke. Other heat illnesses, such as heat exhaustion, heat cramps and heat rash, should also be avoided.

There are precautions your employer should take any time temperatures are high and the job involves physical work.

### Risk Factors for Heat Illness

- High temperature and humidity, direct sun exposure, no breeze or wind
- Low liquid intake
- Heavy physical labor
- Waterproof clothing
- No recent exposure to hot workplaces

### Symptoms of Heat Exhaustion

- Headache, dizziness, or fainting
- Weakness and wet skin
- Irritability or confusion
- Thirst, nausea, or vomiting

### Symptoms of Heat Stroke

- May be confused, unable to think clearly, pass out, collapse, or have seizures (fits)
- May stop sweating

### To Prevent Heat Illness, Your Employer Should

- Establish a complete heat illness prevention program.
- Provide training about the hazards leading to heat stress and how to prevent them.
- Provide a lot of cool water to workers close to the work area. At least one pint of water per hour is needed.



U.S. Department of Labor



[www.osha.gov](http://www.osha.gov) (800) 321-OSHA (6742)

For more information:

Occupational  
Safety and Health  
Administration

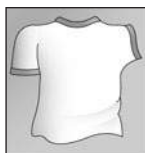


- Modify work schedules and arrange frequent rest periods with water breaks in shaded or air-conditioned areas.
- Gradually increase workloads and allow more frequent breaks for workers new to the heat or those that have been away from work to adapt to working in the heat (acclimatization).
- Routinely check workers who are at risk of heat stress due to protective clothing and high temperature.
- Consider protective clothing that provides cooling.



## How You Can Protect Yourself and Others

- Know signs/symptoms of heat illnesses; monitor yourself; use a buddy system.
- Block out direct sun and other heat sources.
- Drink plenty of fluids. Drink often and BEFORE you are thirsty. Drink water every 15 minutes.
- Avoid beverages containing alcohol or caffeine.
- Wear lightweight, light colored, loose-fitting clothes.



## What to Do When a Worker is Ill from the Heat

- Call a supervisor for help. If the supervisor is not available, call 911.
- Have someone stay with the worker until help arrives.
- Move the worker to a cooler/shaded area.
- Remove outer clothing.
- Fan and mist the worker with water; apply ice (ice bags or ice towels).
- Provide cool drinking water, if able to drink.

**IF THE WORKER IS NOT ALERT or seems confused, this may be a heat stroke. CALL 911 IMMEDIATELY and apply ice as soon as possible.**

**If you have any questions or concerns, call OSHA at 1-800-321-OSHA (6742).**



U.S. Department of Labor

**For more information:**



**Occupational  
Safety and Health  
Administration**

**[www.osha.gov](http://www.osha.gov) (800) 321-OSHA (6742)**

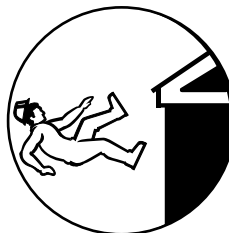


## Top Four Construction Hazards

The top four causes of construction fatalities are:  
Falls, Struck-By, Caught-In/Between and  
Electrocutions.

### Prevent Falls

- Wear and use personal fall arrest equipment.
- Install and maintain perimeter protection.
- Cover and secure floor openings and label floor opening covers.
- Use ladders and scaffolds safely.



### Prevent Struck-By

- Never position yourself between moving and fixed objects.
- Wear high-visibility clothes near equipment/vehicles.



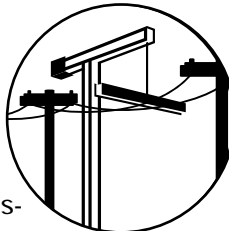
### Prevent Caught-In/Between

- Never enter an unprotected trench or excavation 5 feet or deeper without an adequate protective system in place; some trenches under 5 feet deep may also need such a system.
- Make sure the trench or excavation is protected either by sloping, shoring, benching or trench shield systems.



### Prevent Electrocutions

- Locate and identify utilities before starting work.
- Look for overhead power lines when operating any equipment.
- Maintain a safe distance away from power lines; learn the safe distance requirements.
- Do not operate portable electric tools unless they are grounded or double insulated.
- Use ground-fault circuit interrupters for protection.
- Be alert to electrical hazards when working with ladders, scaffolds or other platforms.



For more complete information:



Occupational  
Safety and Health  
Administration

U.S. Department of Labor

[www.osha.gov](http://www.osha.gov) (800) 321-OSHA

OSHA 3216-6N-06

# **CHA Consulting, Inc.**

## **Job Hazard Analysis**

### **Slips/Trips/Falls**

#### **Common hazards**

- Slippery surfaces (e.g., wet, oily or greasy)
- Seasonal trip hazards (snow and ice)
- Spills of wet or dry substances
- Changes in walkway levels and slopes
- Unsecured mats
- Poor lighting
- Debris and items stored in walkways
- Trailing cables in pedestrian walkways
- Smoke, steam or dust obscuring view
- Unsuitable footwear

#### **Controlling hazards**

When establishing safe work practices, consider:

- Characteristics of physical work area
- Weather conditions (snow, ice, rain)
- Tasks performed
- Workers' work practices
- Equipment

#### **Hazard Control/Engineering Controls**

- Type of flooring
- Slope of surface (ramps, handrails)
- Surface free of obstructions/holes
- Drainage
- Lighting levels, non-glare, contrast
- Equipment to be used/not carrying too much at once
- Signage
- Sufficient space
- Minimizing environmental influences, e.g., blocking wind to prevent wet surfaces icing at entrances

## **Hazard Control/Administrative Controls**

- Training workers/awareness
- Safe practices such as a procedure for cleaning spills or requirement for two workers to transport a large equipment that one worker cannot see around or can't handle
- Reporting hazards
- Prompt maintenance
- Job design (identifying tasks requiring excessive pushing/pulling, line-of-sight obstruction)
- Equipment readily available
- Addressing poor work practices
- Inspections
- Review slips, trips and same-level fall hazards

## **Hazard Control/Housekeeping**

- Clean spills
- Remove debris, snow and ice
- Keep equipment clean
- Keep wires, etc. controlled, taped, etc.

## **Hazard Control/Personal Protective Equipment**

- Appropriate footwear for task, which may include appropriate heels, soles and anti-slip boots

## Job Hazard Analysis

## Environmental Sampling/Outdoor Hazards

Task	Hazard Type and Description	Hazard Control
Working in hot environments	Heat disorders including heat cramps, heat exhaustion, and heat stroke	Employers can control this hazard by providing heat stress training to exposed employees, providing access to shade, and allowing employees to gradually get used to hot environments. Employees working in hot environments are advised to take breaks in cool rest areas, rotate physically demanding tasks, save most demanding work for cooler times of day, and utilize the heat index chart to determine exposure risk. Be sure that every employee working in the hot environments is drinking one cup of water ever fifteen minutes. Recognize the signs such as above normal body temperature, headaches, nausea, cramping, fainting, increased heart rate, and pale as well as clammy skin
	Sunburn	The risk of sunburn is higher when working at high elevations, or when working around water (from reflection). In these conditions, you can be burned even in overcast conditions; therefore, wear protective clothing and use sunscreen
High wind events	Severe wind events can create	Employees should avoid areas

	“wind throws” where strong winds can blow down trees	during high wind occurrences that exhibit previous wind damage
Working at high altitudes	Altitude sickness	Recognize signs of acute mountain sickness including headaches, light-headedness, inability to catch one’s breath, nausea, and vomiting. Practice prevention by acclimating slowly to high elevations and staying hydrated. If the following symptoms progress, immediately descend to lower elevations and seek medical attention: difficulty breathing, chest pain, confusion, decreased consciousness, and loss of balance
Electrical storms	Being struck by lightning	While working outside, watch the sky for thunderstorms and seek shelter before the weather deteriorates. Stop working in streams and lakes. Someone at the job site must be able to begin revival techniques (i.e. CPR) if someone is struck by lightning. Do not use telephones. If caught in electrical storms, seek shelter inside a vehicle or building. When in a building, keep away from doors, windows, plugged in appliances, and metal. When in a vehicle, avoid contact with metal objects inside. If outside with no shelter, obey the following procedures: do not congregate, do not use metal objects, avoid standing near isolated trees, seek lower elevations such as valleys or canyons, and avoid being on peaks as well as trees. If you feel your hairs standing on end and your skin tingling, this is a sign that lightening might be about to strike so crouch immediately (feet together, hands on knees). Wait a minimum of 20-30 minutes after the last lightning flash to return to the field or outside area.



limited access to clean drinking water		Do not drink untreated water from streams, lakes or springs.
Working outdoors	Rattlesnakes	Be alert and do not put your feet or hands where you cannot see what is on the ground (for example if you are stepping over a log and you cannot see what's on the other side). If you encounter a rattle snake do not pick it up- give it a wide berth and walk around it. If bitten, seek immediate professional medical attention and remove jewelry. If bitten on an extremity lower than the heart, cover wound with a sterile band while seeking medical attention.
	Bears	If you encounter a bear, be alert but stay calm, and give it as much room as possible. Try to leave the area, but DO NOT RUN. Back away slowly. If the bear follows, stop and hold your ground: wave your arms to make yourself look big and talk in a normal voice. Work in teams of two to deter bear attacks. If the bear makes contact, surrender: fall to the ground and play dead (a bear will break off an attack once it feels the threat has been eliminated). If the bear continues to bite after you assume a defensive posture. Their attack is predatory and you should fight back vigorously
	Mountain Lions	Be alert, calm, and do not panic. If you see a mountain lion, do not run as it may stimulate its predatory nature. Instead, shout and wave arms to let it know that you are not prey: fight back



	<p>Tick bites</p> <p>Roughskin Newts</p> <p>Bee stings</p>	<p>Use DEET based repellants on exposed skin and/or permethrin on clothes. Check for ticks during and after field work. If you find a tick remove it with tweezers within 24 hours, preferably immediately: do not leave the head embedded or extract the tick with matches, petroleum jelly, or other coatings (e.g. motor oil)</p> <p>Avoiding handling them as their skin contains a potent neurotoxin. If necessary for the protocol, handle only when wearing gloves. Do not “lick” for “killer buzz” as people have died from attempting to eat roughskin newts</p> <p>If you know or suspect you are allergic to bee stings, carry appropriate allergy kits prescribed by a doctor for treating anaphylactic shock. Carry and take diphenhydramine (Benadryl). Follow the label instructions for allergy control. Inform your supervisor if you suspect you are allergic. Watch for ground nests</p>
Travel movement or work in area with poison oak or poison ivy	Allergic reaction to poison oak/poison ivy plants	<p>Learn to recognize poison oak. Avoid contact by using ivy block and wearing long pants and long-sleeve shirts if traveling in dense areas. If skin contact is made, flush the area with cold water as soon as possible. Do not flush your skin with warm water or soap as it can open your pores and increase the reaction. To wash and rinse use</p>

		Tecnu or similar product with cold water to remove oils
Encountering irrigation pipes, marijuana plantation, or grow operations	Unfriendly encounters with criminal elements	Do not wear uniforms and carry a radio backpack that is not visible. Do not confront strangers and act like a tourist if you must speak. Work in pairs or groups. If working in areas likely to contain operations, check in with park staff when leaving vehicle and returning to vehicle. Watch for black piping or other signs. If you find a definite grow operation, leave immediately, note the location, and report it to the authorities

**APPENDIX C**

**STANDARD OPERATING PROCEDURES**



## COMPLETING A CHAIN-OF-CUSTODY RECORD

### A. PURPOSE/SCOPE:

This protocol provides a standard operating procedure (SOP) for initiating and maintaining a Chain of Custody (COC) document. A COC is a legal document designed to track persons who are responsible for the preparation of the sample container, sample collection, sample delivery, sample storage, and sample analysis. A COC is an appropriate format to record important data associated with each individual sample. In general, a sample requiring a COC will follow a path as follows:

Sample Collector → Sample Courier/Operator → Sample Custodian

Verification of who has possessed the samples and data and where the samples have been is completed when staff follow chain-of-custody procedures.

### B. EQUIPMENT/MATERIALS:

- Chain of Custody form
- Ball-point, permanent pens
- Gallon-Sized Ziploc Bag (to keep COC dry)
- Field Logbook
- Custody seals
- Padlock(s) (optional)

### C. PROCEDURE:

1. Once a sample has been determined to require a COC, the Sample Collector must initiate the COC. The Sample Collector must fill in the fields provided on the COC. The words “Chain of Custody” must be located in a conspicuous location at the top of the document.
2. The form is generally a three-page carbon copy document, including a white, yellow and pink sheet. While CHA generally uses COCs provided by the applicable laboratory, it is important to ensure that the COC from each lab contains places for all necessary information.
3. The COC at that time should include the fourteen-digit CHA project number and phase, the project name and location.
4. The Client Information Section must be completed. In most cases the “client” will be CHA Consulting, Inc.
5. The first field of information is the Sample Identification or Sample Identification Number. This identification/number must match the identification/number located on the sample container.
6. An information line for the date, time, phone number, printed name of Sample Collector, signature of Sample Collector, organization name (no acronyms), organization’s full mailing address, and sample description must also be included.
7. Sampling personnel should enter the sample number(s) (which should correspond with a unique number on a sample container [SOP #103] if applicable, and parameters to be analyzed. The “Sample ID” must be included and must match the number on the sample.



## COMPLETING A CHAIN-OF-CUSTODY RECORD

8. Subsequent fields must be provided to allow for documentation of information about any subsequent Sample Couriers/Operators or Sample Custodians. These fields must contain the date, time, phone number, printed name of person taking custody of sample, signature of person taking custody of sample and organization name (no acronyms).
9. Field Information - The COC must contain places to enter the following field information: sample number, sampling date, and type of sample. Other field information may be recorded as specified in the field sampling plan or proposal for the project. It is imperative that there be only one sample with a particular sample number per project/study so as to prevent duplicates in Excel files and EQuIS databases.
10. Laboratory Information - Once the sample is delivered to the lab, the laboratory personnel will sign and date the "received by" line located at the bottom of the COC. Other laboratory information may be recorded as specified in the project/study work plan/proposal.
11. Signatures - The COC must contain places for all people who handle the sample to sign his/her name. This is a record of persons who had custody of the sample during all steps of the process from container preparation, sample collection, sample storage and transport, and sample analysis. There should be signature lines to relinquish custody of the sample and to receive custody of the sample.

### D. QA/QC REQUIREMENTS:

The Field Team Leader or senior person on the sampling team will review the completed COC form to verify that all fields are properly completed. For purposes of this SOP, signing the form under Collected/Delivered by is considered evidence that the COC form has been checked for accuracy and completeness.

### E. SPECIAL CONDITIONS:

Whenever samples are split with a source or government agency, a separate chain of custody form should be completed for the samples and the relinquisher (sampler) and recipient should sign. If a representative is unavailable or refuses to sign for the samples, this can be noted in the "remarks" area of the form. When appropriate, as in the case where the representative is unavailable, the custody record should contain a statement that the samples were delivered to the designated location at the designated time. A copy of the chain of custody form for split samples must be kept with the project file.

Samples may require short term storage in field locations prior to delivery to the laboratory for analyses. The storage may be in vehicles or lodging locations. The samples must be secured to limit access to them. A locked vehicle is considered controlled access. However, simply a locked lodging room is not secure due to potential custodial access. If an unattended lodging room is used for sample storage, the samples must be further secured. This may entail a padlock on the ice chest, samples in an ice chest secured in an inner bag with a custody seal on it, and/or ice chest taped shut with custody seal on the outside of it.

### F. REFERENCES:

Sampling Guidelines and Protocols, NYSDEC, <http://www.dec.ny.gov/regulations/2636.html>  
Chain of Custody Protocol is in Appendix 5X.2.



**SOP #105**  
**Revision #01**  
**02/13/2013**  
**Page 1 of 3**

**Author: Sarah Newell, Mark Corey**  
**Reviewer: Keith Cowan, Sandy Warner**

## **COMPLETING A CHAIN-OF-CUSTODY RECORD**

Chain of Custody Procedures for Samples and Data, EPA 50 minute Self Instructional Course:  
<http://www.epa.gov/apti/coc/>

SOP for Chain of Custody, EPA Region 1:  
[http://www.epa.gov/region6/qa/qadevtools/mod5\\_sops/misc\\_docs/r1\\_chain-of-custody.pdf](http://www.epa.gov/region6/qa/qadevtools/mod5_sops/misc_docs/r1_chain-of-custody.pdf)

G. **APPENDICES/FORMS:**

CHA COC Form

### **END OF SOP**

Final Check by C. Burns 10/7/15



## SURFACE SOIL SAMPLING

### A. PURPOSE/SCOPE:

The following SOP presents a description of the methods generally employed for the collection of surface soil samples. Surface soils are generally collected to determine risk associated with exposure to potentially contaminated surface soils or to determine whether contaminants are present above applicable standards.

Surficial soil sampling is generally conducted in potentially contaminated areas of concern, whether relating to former or current uses of the site, to determine whether contaminants are present above applicable standards. Locations should be biased to suspected areas of greatest contamination including stressed vegetation, soil discoloration, odor, etc. Sample locations are also chosen based on area specific requirements. This includes sampling in locations that includes past or present usage or hazardous substances or wastes, discharge points of past or present processes, and former and current containers that may contain or previously contained hazardous substances or waste.

### B. EQUIPMENT/MATERIALS:

The equipment needed for this task will vary depending on the exact nature of the project but needed supplies may include:

- Stainless steel trowel or scoop
- Stainless steel spatula
- Shovel
- Stainless steel bowls
- Wooden stakes and flagging, or wire flags
- Hammer or mallet
- Indelible ink pens (sharpies)
- Measuring tape (length appropriate for the project)
- Appropriate sample jars
- Field logs
- GPS unit for referencing sample locations
- Latex or nitrile gloves
- Non-phosphate detergent, distilled water, and paper towels.

### C. PROCEDURE:

1. Use the shovel to clear any surface debris from the sampling location, including grasses or other vegetation.
2. If appropriate to the investigation, screen the soil with a PID or FID and record the results on the Field Log.
3. Sampling Procedure:

#### Discrete Sample Collection:

- a. Collect the sample from 0-6 inches depth (or as specified by the project). In instances where a soil is collected for VOC analysis as well as other non-VOC parameters, the soil for VOC analysis must be collected first to minimize volatilization and biodegradation.



## SURFACE SOIL SAMPLING

- b. When analyzing for VOCs, the soil sample must be collected directly from the soil sample location into the sample container without disturbing the matrix structure.
- c. Once VOC soil sampling is complete, the remaining soil to be analyzed for non-VOC parameters such as SVOCs, pesticides, PCBs, metals, or cyanide must be homogenized to create a representative sample. Prior to homogenization, twigs, roots, leaves, rocks, and miscellaneous debris should be removed from the sample using the decontaminated stainless steel spoon or spatula. The soil should be mixed, quartered (divided into 4), and mixed again until a consistent physical appearance over the homogenized soil has been obtained. The soil should be transferred into the appropriate sample container using the decontaminated stainless steel spoon or spatula.

### Composite Sampling:

- a. For Composite Sampling (applicable to non-VOC's only) where several discrete samples (of equal volume) are mixed together, collect the sample from 0-6 inches depth (or as specified by the project) from the first composite point. Cover the stainless steel bowl with aluminum foil and proceed to the next sampling point. Repeat between locations. If VOC samples are also being collected at each discrete point, the stainless steel spoon/trowel should be decontaminated between locations (Refer to Step 8). Once equal volumes of soil have been collected from each point which will make up the composite sample, the soil must be homogenized to create a representative sample. Prior to homogenization, twigs, roots, leaves, rocks, and miscellaneous debris should be removed from the sample using the stainless steel spoon or spatula. The soil should be mixed, quartered (divided into 4), and mixed again until a consistent physical appearance over the homogenized soil has been obtained. The soil should be transferred into the appropriate sample container using the stainless steel spoon or spatula.
4. Label the sample bottles (if the bottles are not pre-printed) with the sample location name, collection time, project name, analysis to be performed, and any other field required on the label.
  5. Place the properly labeled sample bottles in a cooler with ice and maintain at 4°C for the duration of the sampling and transportation period. Do not allow samples to freeze.

Describe and record the following properties of the sample: basic soil type (e.g., sand, gravel, and clay), structure, texture, sorting, grain size, and grain shape, degree of saturation, color, odor, staining, and presence of foreign material. Refer to SOP#301, Field Description of Soils.

6. After sampling is completed, the sampling location should be marked by a wooden stake and flagging and/or wire flag. The station number and date of sampling should be written on the stake using a permanent marker or other waterproof ink. A properly calibrated GPS unit should be used to mark the sample location (Refer to SOP#107).
7. Decontaminate the sampling equipment as specified in SOP #501 and move to the next sampling location. Repeat steps 1 through 7 for subsequent sampling locations.
8. Soil samples should be packed and shipped/prepared for courier pick up according to SOP#607. The Chain of Custody (COC) document should be completed according to SOP#105.





## **SURFACE SOIL SAMPLING**

### **D. QA/QC REQUIREMENTS:**

When possible, the samples should be collected using the same type of equipment and in the same manner to ensure comparability of data. Field quality control samples must be prepared the same as regular investigation samples with regard to sample volume, containers, and preservation.

QA/QC samples should be collected following the same procedures as described above. The type and quantity of QA/QC samples is to be determined by the project scope, and in accordance with SOP# 605.

### **E. SPECIAL CONDITIONS:**

If testing will be performed for metals, it must be recognized that metals can be present naturally and can be present from man-made sources. Moreover, different metals will be present in different concentrations depending on the soil type. Another class of compounds, polycyclic aromatic compounds, can be widely distributed in urban environments. To determine the natural concentrations of metals and PAHs in a particular area, it is important to collect background samples. At a minimum, one background sample should be collected from an area that is near the site, has similar soil types and similar topography. For some applications (e.g., human health risk assessment), it may be necessary to collect three background samples to provide sufficient statistical information.

### **F. REFERENCES:**

New Jersey Department of Environmental Protection (August 2005), *Field Sampling Procedures Manual*, Chap. 6, retrieved January 5, 2009 from <http://www.nj.gov/dep/srp/guidance/fspm/>.

### **G. APPENDICES/FORMS:**

Surface Soil Sampling Log

## **END OF SOP**

Final Check by C. Burns 11/3/15



## SMALL EQUIPMENT DECONTAMINATION

### A. PURPOSE/SCOPE:

Proper decontamination of small equipment prevents cross-contamination of samples, introduction of contaminants to clean sites, and the mixture of incompatible substances. Equipment decontamination also assures the health and safety of all equipment users. Procedures for decontamination procedures vary depending on the matrix sampled, level of contamination, type of contaminants, and the target analytes of the sampling event. The procedure outlined in this SOP is a general procedure for field/ warehouse decontamination of equipment associated with water, soil and other surficial sampling activities.

Decontamination should be performed before sampling work commences and after each sampling event. Decontaminated equipment should be protected from contact with surroundings during storage and transport, and should be handled as little as possible before its use and always with disposable gloves. Note that all waste generated by decontamination procedures including liquids, solids, rags, gloves, etc., will be collected and disposed of properly according to the procedures outlined in SOP #507.

### B. EQUIPMENT/MATERIALS:

- Alconox®
- Tap water
- Distilled and deionized water
- 10% Nitric acid rinse
- Acetone (or other pesticide grade organic solvent)
- 1-Gallon pressure spray bottles
- Long-handled brushes
- 5-Gallon plastic buckets

### C. PROCEDURE:

Note that if it is logistically impractical/ impossible to complete all steps listed below at the field site, Steps 1-4 should be performed prior to transport of equipment to a facility where all steps can be completed if required. All field decontamination should take place over a container and liquids should be properly disposed of.

1. Disassemble equipment as necessary.
2. Remove gross contamination from equipment by scraping, brushing and rinsing with tap water
3. Wash with Alconox® or other laboratory grade detergent to remove all visible particulate matter and residual oils and grease.
4. Rinse with tap water to remove detergent.
5. Rinse with distilled and deionized water.
6. Field personnel will use a new pair of outer gloves before handling sample equipment after it is cleaned.
7. If equipment will not be used immediately, wrap in aluminum foil (unless sampling for metals analysis) or seal in plastic bags (unless sampling for organics analysis) and store.
8. Record the date and method of decontamination on foil/bag and equipment log.



## SMALL EQUIPMENT DECONTAMINATION

### D. QA/QC REQUIREMENTS:

When necessary, field equipment rinsate blanks will be collected by pouring analyte-free water over decontaminated equipment and submitting them to the lab with the other blanks and samples. These blanks are used to assess the quality of equipment decontamination.

### E. SPECIAL CONDITIONS:

Reusable PPE such as respirators, chemical-resistant overboots and gloves shall also undergo the equipment decontamination sequence. See SOP #505 for related information on Personnel decontamination.

If acetone is a known or expected contaminant another solvent may be substituted. Note that methanol cannot be used for decontamination when sampling gasoline or its by-products.

Additional decontamination procedures may be required for particular contaminants or when samples are to be analyzed at very low concentrations. Identify methods as needed but see for example Wilde, 2004.

### F. REFERENCES:

New Jersey Department of Environmental Protection, August 2005. *Field Sampling Procedures Manual*.

USEPA, 1994. Sampling Equipment Decontamination. Environmental Response Team SOP #2006, Revision #0.0. Edison, NJ. <http://www.ert.org>.

USEPA, 1996. *Environmental Investigations Standard Operating Procedures and Quality Assurance Manual*. Region 4, Science and Ecosystem Support Division. Athens, GA.  
<http://www.epa.gov/region04/sesd/eisopqam/eisopqam.html>

Wilde, F.D., ed., 2004. *Cleaning of Equipment for water sampling (ver. 2.0)*: U.S. Geological Survey Techniques of Water-Resources Investigations, book 9, chap. A3, April, accessed January 5, 2009 at <http://pubs.water.usgs.gov/twri9A3/>

### G. APPENDICES/FORMS:

Not Applicable

**END OF SOP**

Final Check by C. Burns 10/27/15

## **SAMPLE CONTAINERS, VOLUMES, PRESERVATIONS AND HOLDING TIMES**

### **A. PURPOSE/SCOPE:**

The following standard operating procedure (SOP) presents general guidelines for sample containers, volumes, preservations and holding times associated with air, water and soil/sediment samples. Field personnel are responsible for ensuring that state-specific standards/guidelines/regulations are followed, where applicable.

Improper preserving, storing and handling of air, water and soil/sediment samples are critical if the integrity of the samples are to be maintained. Samples collected in the field may undergo biological, chemical or physical changes following removal from their environment. In order to minimize those changes, many samples must have preservatives in the form of strong acids or bases added prior to delivery to the laboratory. If samples are to be collected as part of a government program, the governing agency typically must be notified 30 days prior to sample collection.

### **B. EQUIPMENT/MATERIALS:**

Pre-cleaned sample containers along with associated preservations within the sample containers will be provided to CHA from the analytical laboratory. The field geologist/engineer will provide the necessary personal protective equipment to place samples collected within the appropriate sample containers per SOPs 300 through 417. However, if field preservation is required the following equipment and materials shall be obtained:

- Hydrochloric (HCl) Acid Reagent A.S.C. 38%
- Nitric (HNO<sub>3</sub>) Acid Reagent A.S.C. 71%
- Sodium Hydroxide (NaOH) 97%
- 10 mL glass pipettes
- Narrow range (0-3 and 12-14) pH paper
- Nitrile gloves

### **C. PROCEDURE:**

1. Review Table 1 which details typical parameters of interest at environmental sites and the associated methods, preservation, container type, holding time and required sample volume.
2. Obtain pre-cleaned and pre-preserved sample containers from the laboratory. If pre-preserved sample containers were provided skip to Step 7; if not proceed to Step 3.
3. Put on a clean pair of nitrile gloves.
4. In a clean, non-dusty environment, remove the cap of the sample container.
5. Using a clean, 10 mL glass pipette draw the required amount of acid or base and insert into the sample container.
6. Volatile Organic Compounds – 2 mL of HCl acid (water samples).
7. Total and Dissolved Metals (including mercury) – 5 mL Nitric acid (water samples).
8. Cyanide – 15-20 Sodium Hydroxide pellets (water samples).



## **SAMPLE CONTAINERS, VOLUMES, PRESERVATIONS AND HOLDING TIMES**

9. Chemical Oxygen Demand, Oil and Grease, Organic Carbon, Phenolics, Total Dissolved Phosphorous, Hydrolyzable Phosphorus, Ammonia, Nitrate and Nitrite – 5 mL Sulfuric acid (water samples).
10. Immediately replace and tighten the sample container cap.
11. Collect sample using equipment and procedures outlined in other SOPs as appropriate. The volume of the sample collected shall be sufficient to conduct the analysis required, as well as associated quality assurance/quality control samples (QA/QC). QA/QC samples shall be collected in accordance with SOP 605.
12. Place samples immediately in the pre-preserved sample containers.
13. Chill all samples to 4°C from sample collection until laboratory analysis.
14. Package and ship samples per SOP #607.

### **D. QA/QC REQUIREMENTS:**

This section includes QA/QC requirements associated with sample containers, volumes, preservations, and holding times. The following general requirements apply to this SOP:

1. All data must be documented on field data sheets or within site logbooks.
2. All instrumentation must be operated in accordance with operating instructions as supplied by the manufacturer, unless otherwise specified in the work plan.
3. Equipment checkout and calibration activities must occur prior to sampling/operation, and must be documented.
4. QA/QC samples shall be collected in accordance with SOP 605.

The following procedure shall be conducted to provide a QA/QC check of water (aqueous) samples to ensure the samples were preserved to the proper pH prior to shipping for laboratory analysis.

#### **Volatile Organic Compounds:**

1. Collect one additional VOA vial at every third aqueous sampling location.
2. Fill the extra vial with the sample.
3. Using the extra VOA vial, remove the cap and using a clean, 10 mL glass pipette extract approximately 1 mL of water.
4. Place two drops of the water on a 1-inch strip of 0-3 range pH paper.
5. Compare pH strip's color while wet with that of the color key included on the pH paper container.
6. If pH is not less than 2, add additional HCL to the remaining 3 VOA vials prior to collecting the sample.
7. Discard the vial used to check the pH.



## **SAMPLE CONTAINERS, VOLUMES, PRESERVATIONS AND HOLDING TIMES**

Total and Dissolved Metals, Mercury, Ammonia, Nitrate plus Nitrite, Total Dissolved Phosphorus, COD, Oil & Grease, Organic Carbon, Phenolics

1. Collect sample and tightly reseal the cap.
2. Agitate the sample by gently shaking the sample bottle to mix the acid and water.
3. Remove the cap and using a clean, 10 mL glass pipette extract approximately 1 mL of sample.
4. Place approximately two drops of sample on a 1 inch strip of 0-3 range pH paper.
5. Compare pH strip's color while wet with that of the color key included on the pH paper container.
6. If pH is not less than 2, add appropriate additional Sulfuric Acid to the sample using a clean pipette.
7. Recheck sample using steps 2 through 6 until sample pH is less than 2.

### Cyanide

1. Collect sample and tightly reseal the cap.
2. Agitate the sample by gently shaking the sample bottle until the NaOH pellets are dissolved.
3. Remove the cap and using a clean 10 mL glass pipette extract approximately 1 mL of sample.
4. Place approximately two drops of sample on a 1-inch strip of 12-14 range pH paper.
5. Compare pH strip's color while wet with that of the color key included on the pH paper container.
6. If pH is not greater than 12, add additional NaOH to the sample using standard procedures.
7. Recheck sample using steps 2 through 6 until sample pH is greater than 12.

### E. SPECIAL CONDITIONS:

Not Applicable

### F. REFERENCES:

Alpha Analytical Aqueous and Soil/Solid Reference Guides.

### G. APPENDICES/FORMS:

Table 1 Laboratory Analysis: Summarizing parameters, methods, preservations, container type, holding times and minimum sample volumes are included as an attachment to this SOP.

**END OF SOP**

Final Check by C. Burns 10/27/15



Table 1

Laboratory Analysis	EPA Method	Standard Method and/or SW846 Method	Preservation	Container	Holding Time	Minimum Volume
<b>WATER</b>						
Acid Soluble & Insoluble Sulfide	----	9030B	Cool to 4 deg C No Headspace	P or G	7 Days	8 oz.
Acidity as CaCO <sub>3</sub>	305.1	2310B	Cool to 4 deg C	P or G	14 Days	100 mL
Alkalinity	----	2320B	Cool to 4 deg C	P or G	14 Days	100 mL
Alkalinity as CaCO <sub>3</sub>	310.1	2320B	Cool to 4 deg C	P or G	14 Days	100 mL
Ammonia	350.2/3	4500-NH <sub>3</sub> B,E	Cool to 4 deg C, H <sub>2</sub> SO <sub>4</sub> to pH<2	P or G	28 Days	400 mL
Aromatic Hydrocarbons	602	8021B	1:1 HCl to pH <2, Cool to 4 deg C 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if residual chlorine present	G, Vial screw cap with center hole Teflon- faced silicone septum	14 Days	40 mL
Biochemical Oxygen Demand	405.1	5210B	Cool to 4 deg C	P or G	48 Hrs.	500 mL
Bromide	300	-----	None	P or G	28 Days	250 mL
Calcium	----	3120B	HNO <sub>3</sub> to pH<2	P or G	6 Months	100 mL
Calcium- Hardness	200.7	3111B	HNO <sub>3</sub> to pH<2	P or G	6 Months	100 mL
Carbamates	531.1	-----	Cool to 4 deg C, 0.08% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if residual chlorine present	G, screw cap Teflon faced silicone septum	14 Days	100 mL mL
Carbonaceous BOD	----	5210B	Cool to 4 deg C	P or G	48 Hrs.	1000 mL
Chloride	300	4500-CL D 4110	Cool to 4 deg C	P or G	28 Days	100 mL
Chloride, Residual Disinfectant	----	4500Cl-G	Cool to 4 deg C	P or G	Analyze Immediately	200 mL
COD	410.4	5220D	H <sub>2</sub> SO <sub>4</sub> to pH<2, Cool to 4 deg C	P	28 days	250 mL
Color	----	2120B	Cool to 4 deg C	P or G	24 Hrs	100 mL
Conductivity	----	2510B	Cool to 4 deg C	P or G	28 Days	100 mL
Cyanide	335.4	4500-CN C&E	Cool to 4 deg C NaOH pH>12	P or G	14 Days	250 mL
Cyanide	335.2	9010B, 9012A, 9014	Cool to 4 deg C, NaOH to pH>12 0.6 g ascorbic acid if residual chlorine present	P or G	Sulfide absent, 14 days; sulfide present 24 Hrs	250 mL
Cyanide, Amenable	335.1					
Dioxin	----	8280A	Cool to 4 deg C 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if residual chlorine present	G, Amber Teflon-lined screw cap	7 days until extraction 40 days after extraction	1000 mL
DRO	----	8015B	Cool to 4 deg C 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if residual chlorine present	G, Amber Teflon-lined screw cap	7 days until extraction 40 days after extraction	1000 mL
Escherichia Coli	----	9222B	0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if residual chlorine present 0.3 mL/125 mL 15% EDTA if > 0.01 mg/L heavy metals	Sterile P or G	30 Hrs. for Drinking Water 6 Hrs. for Waste Water	125 mL
Extractable Org. Compounds			Cool to 4 deg C, 5store in dark	G, Amber Teflon-lined screw cap	*7 days	4000 mL



Table 1

Laboratory Analysis	EPA Method	Standard Method and/or SW846 Method	Preservation	Container	Holding Time	Minimum Volume
Fecal Coliform	-----	9222B or D	0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if residual chlorine present 0.3 mL/125 mL 15% EDTA if > 0.01 mg/L heavy metals	Sterile P or G	30 Hrs. for Drinking Water 6 Hrs. for Waste Water	125 mL
Fecal Streptococci	-----	9230C	Cool to 4 deg C 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if residual chlorine present	Sterile P or G	30 Hrs. for Drinking Water 6 Hrs. for Waste Water	125 mL
Fluoride	300	4500 F-B,C S	Cool to 4 deg C	P or G	28 Days	300 mL
Foaming Agents (MBAS)	-----	5540C	Cool to 4 deg C	P or G	48 Hrs	250 mL
Gases	-----	3810	Cool to 4 deg C 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if residual chlorine present 1:1 HCl to pH <2	G, Vial screw cap with center hole Teflon- faced silicone septum	7 days without HCl 14 days with HCl	40 mL
GRO	-----	8015B	1:1 HCl to pH <2, Cool to 4 deg C 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if residual chlorine present	G, Vial screw cap with center hole Teflon- faced silicone septum	7 days w/o HCl 14 days w/HCl	40 mL
Hardness			HNO <sub>3</sub> to pH<2	P	6 months	1000 mL
Heterotrophic Plate Count	-----	9215B	Cool to 4 deg C 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if residual chlorine present	Sterile P or G	30 Hrs. for Drinking Water 6 Hrs. for Waste Water	125 mL
Hexavalent Chromium	7196A	3500Cr-D	Cool to 4 deg C	P	24 hours	500 mL
HPLC (Explosive)	-----	8330	Cool to 4 deg C	G, Amber Teflon-lined screw cap	7 days until extraction 40	1000mL
HPLC (Explosive)	-----	8310	Cool to 4 deg C	G, Amber Teflon-lined screw cap	days after extraction	1000mL
Mercury	-----	7470A	Cool to 4 deg C	P or G	28 Days	8 oz.
Metals	200.7	-----	HNO <sub>3</sub> to pH<2	P	6 Months	100 mL
Nitrate	300	-----	Cool to 4 deg C	P or G	48 Hrs.	100 mL
Nitrate (Chlorinated)	353.2	4500-NO3 F	Cool to 4 deg C	P or G	48 Hrs	250 mL
Nitrate (Non- chlorinated)	353.2	4500-NO3 F	H <sub>2</sub> SO <sub>4</sub> to pH<2, Cool to 4 deg C	P or G	14 Days	250 mL
Nitrite	300, 353.2, 354.1	4500-NO3 D	Cool to 4 deg C	P or G	48 Hrs	100 mL
Odor	-----	2150B	Cool to 4 deg C	G only	24 Hrs	200 mL
Oil and Grease		1664	HCl to pH<2, Cool to 4 deg C	G, Amber Teflon-lined screw cap	28 days	1000 mL
Organic Nitrogen	351.1	-----	Cool to 4 deg C, H <sub>2</sub> SO <sub>4</sub> to pH<2	G	28 Days	500 mL

Table 1

Laboratory Analysis	EPA Method	Standard Method and/or SW846 Method	Preservation	Container	Holding Time	Minimum Volume
Organochlorine Pesticides/PCB	608	8081A, 8082	Cool to 4 deg C 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if residual chlorine present If aldrin is to be determined bind to pH 5-9.	G, Amber Teflon-lined screw cap	7 days until extraction 40 days after extraction	1000 mL
Ortho Phosphate	300	4500 P-E	Cool to 4 deg C	P or G	48 Hrs	50 mL
Orthophosphate	365.2	-----	Filter immediately, Cool to 4 deg C	P or G	48 Hrs.	50 mL
pH, Hydrogen ion	-----	4500-H-B	Cool to 4 deg C	P or G	Analyze Immediately	25 mL
Phenols	420.1	9065, 510ABC	Cool to 4 deg C, H <sub>2</sub> SO <sub>4</sub> to pH<2	G	28 Days	500 mL
Pseudomonas Aeruginosa	-----	9213E	Cool to 4 deg C 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if residual chlorine present	Sterile P or G	30 Hrs. for Drinking Water 6 Hrs. for Waste Water	125 mL
Purgeable Halocarbons	601	8021B	Cool to 4 deg C 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if residual chlorine present	G, Vial screw cap with center hole Teflon- faced silicone septum	14 Days	40 mL
Radiological	-----	-----	HNO <sub>3</sub> to pH<2	P or G	6 Months	100 mL
Residue- Settleable (SS)	160.5	-----	Cool to 4 deg C	P or G	48 Hrs.	1000 mL
Residue-filtered (TDS)	160.1	-----	Cool to 4 deg C	P or G	7 Days	100 mL
Residue-non- filtered (TSS)	160.2	-----	Cool to 4 deg C	P or G	7 Days	100 mL
Residue-Total Volatile Solids	160.4	2540 E	Cool to 4 deg C	P or G	7 Days	100 mL
Salinity	-----	2520 C	Cool to 4 deg C	G	28 Days	100 mL
Semivolatile Organic Compounds (Unregulated)	525.2	-----	If residual chlorine is present, add 40-50 mg Sodium Thiosulfate. If not chlorinated, add 6N HCl to pH<2 Cool to 4 deg C	G, Amber Teflon-lined screw cap	7 Days for extraction, 30 after extraction	1000 mL
Semivolatile Organics	625	8270C	Cool to 4 deg C 0.008% Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> if residual chlorine present	G, Amber Teflon-lined screw cap	7 days for extraction 40 days after extraction	1000 mL
Silica	200.7	-----	Cool to 4 deg C	P only	7 Days	50 mL
Specific Conductance	120.1	-----	Cool to 4 deg C	P or G	28 Days	100 mL
Sulfate	300	4500-SO <sub>4</sub>	Cool to 4 deg C	P or G	28 Days	50 mL
Sulfate	375.4	-----	Cool to 4 deg C	P or G	28 Days	50 mL
Sulfide	376.2	9030 B, 4500S2-AD	Cool to 4 deg C, add zinc plus NaOH to pH>9	P or G	7 Days	50 mL
Sulfite (SO <sub>3</sub> )	377.1	-----	None Required	G, Bottle and Top	Analyze immediately	50 mL
Surfactants (MBAS)	425.1	-----	Cool to 4 deg C	P or G	48 Hrs.	250 mL

Table 1

Laboratory Analysis	EPA Method	Standard Method and/or SW846 Method	Preservation	Container	Holding Time	Minimum Volume
TDS			Cool to 4 deg C	P	7 days	500 mL
Temperature	----	2550B	None	P or G	Analyze Immediately	1000 mL
Temperature	170.1	----	None Required	G, Bottle and Top	Analyze immediately	1000 mL
Total Kjeldahl Nitrogen	353.3/1	4500Norg-C	H2SO4 to pH<2 , Cool to 4 deg C	P	28 days	250 mL
Total Coliform	----	9221D	0.008% Na2S2O3 if residual chlorine present 0.3 mL/125 mL 15% EDTA if > 0.01 mg/L heavy metals	Sterile P or G	30 Hrs. for Drinking Water 6 Hrs. for Waste Water	125 mL
Total Dissolved Solids	160.1	2540C	Cool to 4 deg C	P or G	7 Days	100 mL
Total Hardness	130.2 , 200.7	----	HNO3 to pH<2 H2SO4 to pH<2	P or G	6 Months	100 mL
Total Kjeldahl Nitrogen	351.3	----	H2SO4 to pH<2	P or G	28 Days	500 mL
Total Metals	200.7 200.8	6010B, 6020, 7000A	HNO3 to pH<2	P	6 months (Hg 28 days)	500 mL
Total Organic Carbon (TOC)	415.1	9060, 5310C	H2SO4 to pH<2, Cool to 4 deg C	G, Amber Teflon-lined screw cap	28 days	80 mL
Total Organic Halides		5320B	1N H2SO4 to pH<2	P or G	28 Days	50 mL
Total Phosphorus	365.2	----	Cool to 4 deg C, H2SO4 to pH<2	G	28 Days	50 mL
Total Recoverable Oil & Grease	413.1,166 4A	----	Cool to 4 deg C, HCL or H2SO4 to pH<2	G	Petroleum Based 3 Days; Non-Petroleum Based 24 hours	1000 mL
Total-Residue (TS)	160.3	2540B	Cool to 4 deg C	P or G	7 Days	100 mL
Turbidity	180.1	2130B	Cool to 4 deg C	P or G	48 Hrs	100 mL
Volatile Organics	624	8260B	1:1 HCl to pH <2, Cool to 4 deg C 0.008% Na2S2O3 if residual chlorine present	G, Vial screw cap with center hole Teflon-faced silicone septum	7 days w/o HCl 14 days w/HCl	40 mL
Volatiles (Regulated)	524.2	----	Cool to 4 deg C HCl to pH<2	G, Vial screw cap with center hole Teflon-faced silicone septum	14 Days	60-120 mL
<b>SOIL</b>						
Acid Soluble & Insoluble Sulfide	----	9030B	Cool to 4 deg C, no headspace	P or G	7 Days	8 oz.
Amenable Cyanide	----	9213	Cool to 4 deg C	P or G	14 Days	4 oz.
Bromide	----	9211	Cool to 4 deg C	P or G	28 Days	8 oz.
Cation - Exchange Capacity	----	9080, 9081	None	P	----	8 oz.
Chloride	----	9212, 9056, 9253	None	P or G	28 Days	8 oz.
Chlorinated Herbicides	----	8151A	Cool to 4 deg C	G, wide mouth, teflon liner	14 Days	8 oz.
Corrosivity pH Waste>20% water	----	9040B	Cool to 4 deg C	P	Analyze Immediately	4 oz.

Table 1

Laboratory Analysis	EPA Method	Standard Method and/or SW846 Method	Preservation	Container	Holding Time	Minimum Volume
Corrosivity Toward Steel	-----	1110	Cool to 4 deg C	P	14 Days	4 oz.
Cyanide		9010B, 4S00CN	Cool to 4 deg C	G, Amber	14 Days	4 oz.
Dioxin	-----	8280A	Cool to 4 deg C	G	14 Days	8 oz.
DRO	-----	8015B	Cool to 4 deg C	G, Amber	14 Days	4 oz.
Extractable Organic Compounds			Cool to 4 deg C, Store in dark	G	14 days	8 oz.
Extractable Sulfide	-----	9031	Cool to 4 deg C, fill top of sample with 2N Zinc Acetate until moistened	P or G	7 Days	8 oz.
Fluoride	-----	9214	None	P	28 Days	8 oz.
Gases	-----	3810	Cool to 4 deg C	G, Amber	14 Days	8 oz.
Grain Size			N/A	G	N/A	8 oz.
GRO	-----	8015B	Cool to 4 deg C, check state regulations for proper preservative. NJ (methanol), PA (encore samplers) NY (cool to 4 deg C).	G, Amber VOA vial	14 Days	1S Grams
HPLC (PAH)	-----	8310	Cool to 4 deg C	G, Amber Teflon-lined screw cap	14 days until extraction 40 days after extraction	4 oz.
Ignitability	-----	1010	None	P or G	None	8 oz.
Ignitability of Solids		1030	None	P or G	None	8 oz.
Mercury	24S.1	7471A	Cool to 4 deg C	G, Amber	28 Days	4 oz.
Metals	-----	6010B, 6020, 7000A	Cool to 4 deg C	G, Amber	6 Months	8 oz.
Moisture Content			Store in airtight jar 3-30 deg C	G	N/A	8 oz.
Nitrate	-----	9210	Cool to 4 deg C	P or G	48 Hrs	8 oz.
Oil & Grease (Sludge, Sludge- Hem)	-----	9071B	Cool to 4 deg C	G	28 Days	8 oz.
Organochlorine	-----	8081A	Cool to 4 deg C	P or G	14 Days	8 oz.
Paint Filter Liquids Test	-----	9095A	Cool to 4 deg C	P or G	-----	8 oz.
PCBs	-----	8082	Cool to 4 deg C	G, Amber Teflon-lined screw cap	14 Days	4 oz.
pH	-----	904SC	Cool to 4 deg C	G, Amber	Analyze Immediately	4 oz.
pH, Soil and Waste	-----	904SA	Cool to 4 deg C	G	Analyze Immediately	8 oz.
Phenol	-----	906S, 9066, 9067	Cool to 4 deg C	G, Amber	28 Days	4 oz.
Radiological	-----	-----	Cool to 4 deg C	G	6 Months	8 oz.
Reactivity Cyanide	-----	SW-846 7.3.3.2	Cool to 4 deg C	P	14 Days	8 oz.
Reactivity Sulfide	-----	SW-846 7.3.4.2	Cool to 4 deg C	P	14 Days	8 oz.
Semivolatile Organics	-----	8270C	Cool to 4 deg C	G, Amber	14 Days	8 oz.

Table 1

Laboratory Analysis	EPA Method	Standard Method and/or SW846 Method	Preservation	Container	Holding Time	Minimum Volume
Sulfate	----	9035, 9036, 9038	Cool to 4 deg C	P or G	28 Days	8 oz.
Sulfides	----	9215	Cool to 4 deg C	P or G	7 Days	8 oz.
TCLP Metals	----	1311, 6010B, 6020, 7000A, 7470A	Cool to 4 deg C	G, Amber	180 Days (Hg 28 days)	8 oz
TCLP Herbicides	----	1311	Cool to 4 deg C	G, Amber	14 Days	8 oz.
TCLP Pesticides	----	1311	Cool to 4 deg C	G, Amber	14 Days	8 oz.
TCLP Semivolatile Organics	----	1311, 8270C, 8081A, 8151A	Cool to 4 deg C	G, Amber Teflon Lined	14 Days	8 oz.
TCLP Volatile Organics	----	1311, 8260B	Cool to 4 deg C	G, Amber VOA Vial Teflon Lined	14 Days	8 oz.
Temperature	----	2550	----	P	Analyze Immediately	4 oz.
TOC		Lloyd Kahn Method	Cool to 4 deg C	G, Amber	14 days	4 oz.
Total Coliform	----	9131	Cool to 4 deg C	Sterile, P or G	6 Hrs	4 oz.
Total Coliform	----	9132	Cool to 4 deg C	Sterile, P or G	6 Hrs	4 oz.
Total Cyanide	----	9013	Cool to 4 deg C	P or G	14 Days	8 oz.
Volatile Organic Compounds	----	8260B	Cool to 4 deg C Check individual state regulations for proper preservative. NJ (methanol), PA (encore samplers), NY (cool to 4 deg C)	G, wide mouth, teflon liner	14 Days	4 oz.
Volatile Organic Compounds	----	8021		G, wide mouth, teflon liner	14 Days	4 oz.
CLP Sampling and Holding Time Information						
Cyanide (aqueous)	ILM04.1		NaOH to pH>12, Cool to 4 deg C	P	12 Days VTSR	1000ml
Cyanide**	ILM04.1		Cool to 4 deg C	G		8 oz
Mercury (aqueous)	ILM04.1		HNO3 to pH<2, Cool to 4 deg C	P	26 Days VTSR	1000ml
Mercury (solid/soils)	ILM04.1		Cool to 4 deg C	G		8 oz
Metals (aqueous)	ILM04.1		HNO3 to pH<2, Cool to 4 deg C	P	180 Days VTSR	1000ml
Metals (solid/soils)	ILM04.1		Cool to 4 deg C	G		8 oz
PCBs (aqueous)	OLM04.2		Na2S2O3, Cool to 4 deg C	G	See Note 7	1000ml
PCBs (solid/soils)	OLM04.2		Cool to 4 deg C	G	See Note 6	8 oz
Pesticides (aqueous)	OLM04.2		Na2S2O3, Cool to 4 deg C	G	See Note 7	1000ml
Pesticides (solid/soils)	OLM04.2		Cool to 4 deg C	G	See Note 6	8 oz
Semivolatile Organic Compounds (aqueous)	OMLO4.2		Cool to 4 deg C	G	See Note 8	1000ml
Semivolatile Organic Compounds (solid/soils)	OLM04.2		Cool to 4 deg C	G	See Note 6	8 oz
Volatile Organic Compounds (aqueous)	OLM04.2		HCL pH < 2, Cool to 4 deg C	G	W/preservative: 10 days VTSR; W/O: 7 days VTSR	40ml
Volatile Organic Compounds (solid/soils)	OLM04.2		Cool to 4 deg C	G	10 Days VTSR	4 oz

Table 1

Laboratory Analysis	EPA Method	Standard Method and/or SW846 Method	Preservation	Container	Holding Time	Minimum Volume
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**Notes:**

1. P - Plastic.
2. G - Glass.
3. Minimum volume is the minimum volume required by the laboratory to conduct the analysis. The laboratory will likely require additional sample volume.
4. \* Extraction within seven (7) days of collection; analysis within 40 days of extraction.
5. \*\*When chlorine is present ascorbic acid is used to remove the interference (0.6 g ascorbic acid).
6. VTSR - Validated time of sample receipt.
7. Ten (10) days from VTSR for extraction and 40 days following extraction.
8. Five (5) days from VTSR for extraction 14 days after extraction.
9. Five (5) days from VTSR for extraction 40 days after extraction.
10. Holding times are from the time of sample collection unless otherwise noted.





## **FIELD HANDLING, PACKAGING, AND SHIPPING**

### **A. PURPOSE/SCOPE:**

This procedure describes proper methods for the handling, packaging, and shipping of samples from the field to the laboratory. When preparing samples for transportation to the laboratory it is important to maintain the integrity of the samples in order to obtain the most accurate results possible and to prevent possible contamination of other samples or the package itself. These procedures generally apply to samples collected in the field, any state or federal regulations or guidelines applying to the shipment of hazardous samples must be followed. In addition any guidelines provided by the laboratory should be consulted.

These procedures refer to the shipment of soil, sediment or water samples. For the shipment of air canisters refer to section J: Special Conditions.

### **B. EQUIPMENT/MATERIALS:**

The following materials are required to adequately package samples

- Appropriately sized coolers that can accommodate samples and ice
- Plastic bags (i.e. garbage bags) large enough to contain all samples and ice
- Zip lock bags
- Ice sufficient to keep samples cool. **DO NOT USE DRY ICE**
- Bubble wrap or similar padding material
- Bubble bags or a similar padding material for any glassware
- Packing tape. Do not use duct tape inside coolers as it can contain volatile chemicals which could contaminate samples
- Custody seals and/or tamper-evident tape
- Appropriate labels (including 'UP' Arrows, Ice labels, Regulatory Compliance Labels (49 CFR 173.4), Shipping bills/labels).

### **C. PROCEDURE:**

Once the samples have been collected, properly labeled and documented (See SOP's #103 and #105) the following steps should be followed to pack and ship the samples.

For aqueous, sediment, soil or other solid samples:

#### **1. Prepare the cooler for shipment**

- Seal and/or plug the cooler drain if present.
- Place a layer of bubble wrap or other cushioning material on the bottom of the cooler.
- Use a large plastic bag (liner) to line the cooler. It should fill the cooler with little void space between bag and cooler walls, if not use a smaller cooler or additional cushioning material. Double bag the cooler if using thin plastic bags. Place a thin layer of ice in the bottom of the liner.

#### **2. Prepare the sample containers**

- Ensure all caps and lids are securely attached.
- Check that all labels have been properly filled out and attached
- Check that the samples are properly noted on the Chain-of-Custody (COC) and on any applicable field sheets.
- Place sample containers into zip lock bags if they are being used.





### **FIELD HANDLING, PACKAGING, AND SHIPPING**

3. If the sample is in a glass container place that container in a bubble bag or other cushioning material (bubble wrap roll, foam block, etc.) and secure it with tape. Try to avoid having glass in direct contact with ice as this can lead to the glass breaking (because the ice does melt).
4. Place samples in the cooler inside the liner.
  - All containers should be upright in cooler inside the bag liners.
  - Try to place glass containers towards the middle of the cooler.
  - Do not overfill the cooler. Try to keep weight below 60 lbs. to allow for easier maneuvering of the cooler.
  - Add a Trip Blank and a Temperature Blank if required. Include the Trip Blank on the COC. Place the Temperature Blank in the center of the cooler.
5. Add more ice, making sure that all containers are covered. The samples should arrive at the laboratory at 4° Celsius (+/- 2° C).
6. When all samples are in the cooler, or the cooler is full, gather the bags and tie or twist the loose ends to contain the ice and samples. Use packing tape, and a Custody seal if desired, to seal the bag liner.
7. Place another layer of bubble wrap or cushioning material on top of the bag for further protection and insulation of the samples. Make sure any void space in the cooler is filled to prevent the samples from shifting during transportation.
8. Put the COC along with any other required documentation inside a sealed zip lock bag and place it in the cooler.
9. Seal the cooler.
  - Place a signed and dated Custody seal on the cooler (if being used). The seal should extend from the top of the cooler, across the seam between the lid and the front, and down the front of the cooler. Tape over the custody seal using a length of tape continuously around the cooler. The seal should be placed such that it will be broken if the cooler is opened.
  - Using packing tape, tape around the cooler from front to back crossing both the top and the bottom of the cooler, use a continuous length of tape to help maintain integrity. Tape the cooler in at least two locations (i.e. left and right sides to create two bands of tape encircling the cooler.)
10. Place all required labels on the cooler. These can include 'UP' directional arrows, Wet Ice labels and regulatory labels (49 CFR 173.4). Tape them down as needed.
11. Fill out and affix the necessary shipping labels to the lid of the cooler.
12. All samples should be shipped overnight to the laboratory.
13. Alert the laboratory that the samples are en route. This is especially important for samples being delivered on a Saturday or around a holiday as the laboratory may be closed or have different hours. It is good practice to coordinate with the lab ahead of sampling to determine when the lab will receive samples.



## FIELD HANDLING, PACKAGING, AND SHIPPING

For air samples:

1. Remove any regulators or valves from the canister.
2. Replace the canister and associated equipment in the container they were received in.
3. Place the COC in a zip lock bag with any required documentation and seal the bag. Put the COC into the container.
4. Add any necessary padding materials to fill void space and ensure the canister is protected and cannot shift during transport.
5. Seal the cooler with Custody Seals and packing tape.
6. Affix the necessary labels and shipping bills to the container.
7. Alert the laboratory that the samples are en route.

### D. QA/QC REQUIREMENTS:

If aqueous samples for Volatile Organic Compound (VOC) analysis are being shipped use a Trip Blank (See SOP#605).

Some laboratories require Temperature Blanks (See SOP# 605) in each cooler of samples.

### E. SPECIAL CONDITIONS:

These procedures apply to environmental samples only. An environmental sample usually consists of possibly contaminated water, soil, or sediment or air to be analyzed. In order to comply with regulations (ex. 49 CFR 173), no more the 30 mL of a product may be shipped in any one container inside the cooler (For example you can ship 3 containers with 20 mL of an oil to be tested, but not 2 containers with 40 mL of oil in them). Consult state and federal regulatory agencies and the laboratory receiving the samples if you are unsure of the regulations on the samples being taken.

### F. REFERENCES:

United States Environmental Protection Agency (June 2010), *Sample Collection Information Document*, Section 5, retrieved August 31, 2012 from [http://www.epa.gov/sam/sample\\_collection\\_information\\_document\\_SAM\\_companion.pdf](http://www.epa.gov/sam/sample_collection_information_document_SAM_companion.pdf)

United States Environmental Protection Agency (July 2007), *Samplers Guide, Contract Laboratory Program Guidance for Field Samplers*, Section 3.4, retrieved April 6, 2009 from [http://www.epa.gov/superfund/programs/clp/download/sampler/clp\\_sampler\\_guidance.pdf](http://www.epa.gov/superfund/programs/clp/download/sampler/clp_sampler_guidance.pdf)

Tennessee Valley Authority, *Standard Operating Procedure For: Sample Labeling, Packing, and Shipping* (July 2010), retrieved August 31, 2012 from <http://www.tva.gov/kingston/sap/>

### G. APPENDICIES/FORMS:

Not Applicable

**END OF SOP**

Final Check by C. Burns 10/27/15



## REMEDIAL CONSTRUCTION OVERSIGHT AND DOCUMENTATION

### A. PURPOSE/SCOPE:

This SOP is intended to provide guidance and define the responsibility of CHA personnel engaged in construction observation. The objective of construction observation is to document construction activities for compliance with the contract requirements. Since the duty of CHA personnel on-site will vary based on our contractual obligations to our client, size and complexity of the project, project specification requirements and types of activities being observed, performance of the contractor, etc., it is important that the observer be familiar with:

- CHA's contract with the client
- The contract/agreement between the contractor and client
- Project manual/specifications and drawings
- Project plans and/or work plans
- Site-specific HASP.

***Note:** Construction "observation" or "oversight" refers to the action or process of observing something or someone in order to gain information without the higher level of completeness and rigor implied by the term "inspect". The term "inspect" implies a rigorous and complete review of construction relative to what is shown in the contract documents. The industry generally interprets the term "inspector" to imply that this employee has some authority over the contractor to control conformance with plans and specifications. With the exception of work performed under CHATS, CHA typically has no contractual relationship with the contractor performing the work or authority over the contractor, and thus, it is important to refer to our construction phase oversight as "observation" rather than "inspection."*

### B. EQUIPMENT/MATERIALS:

Required Equipment:

- Personal protective equipment (PPE) – Level D at a minimum
- Clothing appropriate for weather anticipated
- Field book
- Indelible pens & markers (e.g. Sharpies)
- Clipboard (preferably one that encloses paperwork)
- Field/Construction Observation Reports
- Digital camera
- 25-foot steel measuring tape (preferably in 100ths)

Optional Equipment (based upon project-specific needs):

- Additional PPE (Level C, personal flotation devices, etc.) – Refer to site-specific HASP
- 100', 200', or 300' measuring tapes or measuring wheel
- 6' folding wood ruler (preferably in 100ths)
- Hand held GPS
- Photoionization detector, combustible gas meter, particulate meter, etc.
- Latex/nitrile gloves
- Sampling equipment and containers



## REMEDIAL CONSTRUCTION OVERSIGHT AND DOCUMENTATION

- Wooden survey stakes and 3-lb. sledge hammer
- Survey tape/flagging/wire stakes
- Survey tape
- Digital audio recorder
- Computer with remote network access (for long duration projects).

### C. GENERAL PROCEDURES/JOB DUTIES:

**Electronic File Storage:** Wherever practical, the below referenced documentation should be stored electronically and routinely uploaded to the project folders on CHA's server. Binders may be used to store paper documentation when appropriate, but CHA personnel should make a reasonable effort to minimize the amount of paper generated for the project and the amount of files stored at the site due to the potential for damage or loss of such documents.

The CHA construction observer will perform the following tasks:

1. Attend a preconstruction meeting whenever possible. If possible, a field visit to the project site should also be made.
2. Establish and maintain lines of communication between all parties. Establish a chain of command with the CHA PM, the client, the contractor, regulators, etc.
3. File all correspondence in the project folder, including e-mails. Letters received in hard copy only should be scanned in PDF format and stored in the project file as well. All correspondence should be stored with the date first followed by a description of the content to facilitate future searches (e.g. 2015-01-01\_CHA to Contractor Re Recent Analytical Results). Conversation Logs and Meeting minutes shall be stored in a similar manner.
4. Monitor that construction work conforms to the provisions of the contract documents and/or project plans (i.e. HASP, QAPP, CAMP, SWPPP, etc.).
5. Prepare daily observation reports and take digital photographs documenting major site activities and observations made. For small, simple projects, complete a **Field Observation Report**. For larger, more complex projects where multiple activities are being observed, a more detailed **Construction Observation Report** should be completed. At a minimum, observation reports will include:
  - Date and weather conditions
  - Name of important visitors
  - Work/activity in progress and location
  - Contractor's means and methods for completing activities
  - Size of contractor's work force and equipment in use
  - Number of hours worked per day for contractor and subcontractor (arrival & departure times)
  - The substance of important conversations with the contractor concerning conduct, progress, changes, test results, interpretations of specifications and all other important details
  - Reporting of any variances made in the field to sampling plans, SOPs or other applicable contract documents
  - Documentation of calibration/maintenance of field instrumentation, field screening observations, samples collected, etc.



## **REMEDIAL CONSTRUCTION OVERSIGHT AND DOCUMENTATION**

6. Maintain digital photographic documentation of all work completed. Sufficient photographs should be taken to depict the location of the activity, the material(s) being placed/installed, the equipment being utilized by the contractor, the means and methods implemented by the contractor, and any issues that may arise.
7. Observe all materials incorporated in the work for compliance with the contract documents and inform the Engineer and contractor of any conflicts.
8. Attend regularly scheduled progress meetings, as appropriate. Prepare meeting minutes and submit to engineer/PM for review. Upon completing any modifications, distribute meeting minutes to the project team.
9. Review project schedules to prepare for upcoming work and anticipate changes or potential conflicts.
10. Computations will be made of quantities of work performed, and materials used on the project by actual field measurements and survey data provided by the Contractor in accordance with the specifications.
11. Track, collect and review all required shop drawings and submittals. Forward to design engineers for review when necessary. Advise the Engineer and Contractor of the commencement of any work requiring a Shop Drawing or sample if the submittal has not been approved by the Engineer.
12. Oversee testing and observation requirements called for in the contract documents. Document that testing required by the contract documents is performed and that commercially manufactured products used on the project are accompanied by numerical test results or a certification from the manufacturer that the material meets applicable standards. QA/QC testing will be provided through the contractor as part of the technical specifications. The contractor will be required to prepare and submit all documentation of both failed and passed QA/QC tests.
13. Review test reports and certifications for conformance with the contract documents. Each test report for material in place should, as a minimum, contain the following:
  - Test performed and dated
  - Applicable standard or project specifications
  - Test location
  - Test result
  - Action taken on failing tests.
14. Maintain a file of all test reports and certifications as provided by the contractor.
15. Inform the contractor in writing, of deficiencies in order that the corrections can be made and retested prior to covering any substandard work with additional material. Document that corrective work and retesting is performed.
16. Coordinate with the contractor the preparation of record or as-built drawings and remind the contractor periodically to collect important record data as the work progresses, particularly for work that will be covered by subsequent tasks.



## **REMEDIAL CONSTRUCTION OVERSIGHT AND DOCUMENTATION**

### **D. QA/QC REQUIREMENTS:**

It is important to read all contract documents and project plans and maintain an understanding of which QA/QC testing will be the responsibility of the contractor versus CHA throughout the duration of the project. QA/QC testing performed by CHA employees (e.g. end point sampling, air monitoring, etc.) shall be completed in accordance with CHA's SOPs. QA/QC testing requirements listed in the project specifications are typically required to be performed by the Contractor and it is often the responsibility of the contractor to retain an independent third party testing agency to meet these testing requirements.

It should be noted that prequalification testing refers to testing results that must be provided to the Engineer for acceptance prior to commencing with a task utilizing the specified material. Conformance testing or field QA/QC testing typically refers to post-installation or placement testing that is completed on-site after the specified material is installed.

### **E. SPECIAL CONDITIONS:**

The field observer must be in frequent communication with the CHA Project Manager or task manager regarding the progress of the project. Circumstances can change quickly on projects and proactive communication can help reduce the potential for larger problems or issues to arise. Depending on the situation, it may become important to record additional information. Examples may include:

1. Detail breakdown of type and number of personnel on-site for each contractor/subcontractor and hours worked by each.
2. Detailed breakdown of heavy equipment on-site and hours each piece of equipment is actually used each day.
3. Material deliveries and quantities.
4. Delays and/or downtime (length of time, people affected, equipment not used, etc.).
5. Detailed weather information (e.g. periodic wind speed and direction throughout day).
6. Length of time spent in upgraded levels of PPE and number of personnel working in exclusion zones.
7. Air monitoring results, dust control issues, air monitoring plan exceedances, etc.
8. Details for erosion and sediment control issues (e.g. tracking onto roadways).
9. Detailed lists of all site visitors (sign in/sign out sheets).

### **F. REFERENCES:**

CHA Total Technical Quality Control Manual, Field Observations Section: <http://chanet.cha-llp.com/manual/tqc/section7/index.cfm>

### **G. APPENDICES/FORMS:**

Field Observation Report – for simple, short duration projects.

Construction Observation Report – for complex, longer duration projects.

**APPENDIX D**

**REQUEST TO IMPORT/REUSE FILL OR SOIL FORM**



**NEW YORK STATE  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**



**Request to Import/Reuse Fill or Soil**

\*This form is based on the information required by DER-10, Section 5.4(e). Use of this form is not a substitute for reading the applicable Technical Guidance document.\*

**SECTION 1 – SITE BACKGROUND**

The allowable site use is:

Have Ecological Resources been identified?

Is this soil originating from the site?

How many cubic yards of soil will be imported/reused?

If greater than 1000 cubic yards will be imported, enter volume to be imported:

**SECTION 2 – MATERIAL OTHER THAN SOIL**

Is the material to be imported gravel, rock or stone?

Does it contain less than 10%, by weight, material that would pass a size 80 sieve?

Is this virgin material from a permitted mine or quarry?

Is this material recycled concrete or brick from a DEC registered processing facility?

**SECTION 3 - SAMPLING**

Provide a brief description of the number and type of samples collected in the space below:

-----  
*Example Text: 5 discrete samples were collected and analyzed for VOCs. 2 composite samples were collected and analyzed for SVOCs, Inorganics & PCBs/Pesticides.*

*If the material meets requirements of DER-10 section 5.4(e)5 (other material), no chemical testing needed.*



### SECTION 3 CONT'D - SAMPLING

Provide a brief written summary of the sampling results or attach evaluation tables (compare to DER-10, Appendix 5):

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*Example Text: Arsenic was detected up to 17 ppm in 1 (of 5) samples; the allowable level is 16 ppm.*

*If Ecological Resources have been identified use the "If Ecological Resources are Present" column in Appendix 5.*

### SECTION 4 – SOURCE OF FILL

Name of person providing fill and relationship to the source:

Location where fill was obtained:

Identification of any state or local approvals as a fill source:

If no approvals are available, provide a brief history of the use of the property that is the fill source:

Provide a list of supporting documentation included with this request:

The information provided on this form is accurate and complete.

---

Signature

---

Date

---

Print Name

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Firm

**APPENDIX E**

**COMMUNITY AIR MONITORING PLAN**

# **Community Air Monitoring Plan BelGioioso Cheese, Inc. Glenville Business & Technology Park**

**NYSDEC Site No.: 447023**

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*CHA Project Number: 072605.000*

***Prepared for:***



***BelGioioso Cheese, Inc.  
115 Van Guysling Avenue  
Schenectady, New York 12305***

***Prepared by:***



***III Winners Circle  
Albany, New York 12205  
Phone: (315) 453-4500***

***October 5, 2022***

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## LIST OF ACRONYMS & ABBREVIATIONS

BelGioioso	BelGioioso Cheese, Inc.
CAMP	Community Air Monitoring Plan
CHA	CHA Consulting, Inc.
DER-10	DER-10: Technical Guidance for Site Investigation and Remediation
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCB	Polychlorinated Biphenyls
PID	Photoionization Detector
PM10	Particulate Matter less than 10 microns
QA/QC	Quality Assurance/Quality Control
STEL	Short Term Exposure Limit
TCE	Trichloroethene
1,1,1-TCA	1,1,1-trichloroethane
PCE	Tetrachloroethene
eV	Electron Volts
g/m <sup>3</sup>	Grams per Cubic Meter
mg/m <sup>3</sup>	Milligrams per Cubic Meter
ppm	Part per Million
µg/m <sup>3</sup>	Micrograms per Cubic Meter
µm	Micrometers/microns

## 1.0 OVERVIEW

On behalf of BelGioioso Cheese, Inc. (BelGioioso), CHA Consulting, Inc. (CHA) has developed this Community Air Monitoring Plan (CAMP) to specify the procedures for measuring, documenting, and responding to potential fugitive emissions during the intrusive activities proposed at the BelGioioso facility (Site) located at 2165 Amsterdam Road, in the Town of Glenville, New York. This CAMP is based on the guidelines provided in the Generic CAMP established by the New York State Department of Health (NYSDOH) and the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation Technical Guidance for Site Investigation and Remediation (DER-10) Appendices 1A and 1B.

A CAMP requires continuous real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. Continuous monitoring will be required for all intrusive activities including, but not limited to, the handling of contaminated soil and demolition debris.

The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, it intends to provide a measure of protection for the downwind community and other adjacent facilities, from potential airborne contaminant releases as a direct result of intrusive investigative and remedial work activities. Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs and dust to a minimum around the work areas. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. The action levels are described in the subsequent sections and presented in Table 1. Additionally, the CAMP helps to confirm the work activities did not spread contamination off-site through the air.

The primary contaminants of concern associated with the Site are trichloroethene (TCE), 1,1-trichloroethane (1,1,1-TCA), and tetrachloroethene (PCE). Additionally, past soil sampling as documented elevated arsenic levels in the vicinity of the proposed expansion. Particulates and total VOCs will be monitored concurrently within a CAMP station containing a DustTrak particulate monitor and photoionization detector (PID), or similar.

Air monitoring readings will be uploaded in real-time and made available for review by both the NYSDEC and NYSDOH. Any exceedances that may occur will be addressed and recorded in the field logbook. Air monitoring will be performed during all ground intrusive activities at one

location upwind and two locations downwind of the work area. The direction of the wind will be monitored daily to determine upwind and downwind locations.

Enclosures will be provided for remote air monitoring stations to reduce potential weather-induced performance issues. The enclosures will be located in areas where they are not subject to damage from vehicular traffic and there is minimal potential for tampering in publicly accessible areas. Additionally, all intake ports on the instruments will be equipped with rain guards/shields to minimize the potential for water intrusion.

To verify that the fugitive dust and VOC measurements are performed correctly, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to conduct periodic instrument calibration, operator training, daily instrument performance checks, and maintain a record-keeping plan.

## 2.0 FUGITIVE DUST AND PARTICULATE MONITORING, RESPONSE LEVELS, & ACTIONS

Fugitive dust is described as discrete particles, liquid droplets, or solids, which become airborne and contribute to air quality as a nuisance and potential threat to human health and the environment. The following fugitive dust suppression and particulate monitoring program will be employed at the Site during intrusive activities which warrant its use.

1. Reasonable fugitive dust suppression techniques must be employed during all Site activities which may generate fugitive dust.
2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on Site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the placement and grading of clean fill. These control measures are not considered necessary for the placement of clean fill.
3. Particulate monitoring will be performed using real-time particulate monitors and will monitor particulate matter less than ten microns (PM<sub>10</sub>) with the following minimum performance standards:
  - a. Objects to be measured: Dust, mists, or aerosols;
  - b. Measurement Ranges: 0.001 to 400 mg/m<sup>3</sup> (1 to 400,000 µg/m<sup>3</sup>);
  - c. Precision (2-sigma) at constant temperature: +/- 10 g/m<sup>3</sup> for one second averaging; and +/- 1.5 g/m<sup>3</sup> for sixty second averaging;
  - d. Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mass median diameter (mmd)= 2 to 3; g=2.5, as aerosolized);
  - e. Resolution: 0.1% of reading or 1g/m<sup>3</sup>, whichever is larger;
  - f. Particle Size Range of Maximum Response: <0.1 to 10 microns (µm);
  - g. Total Number of Data Points in Memory: 10,000 or greater;
  - h. Logged Data: Data will be collected on each instrument via internal memory and via remote telemetry to the online portal Environet, or similar. Each data point with average concentration, time/date, and data point number.
  - i. Run Summary: overall average, maximum concentrations, time/date of maximum, the total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
  - j. Alarm Averaging Time (user selectable): real-time (1-60 seconds) or short-term exposure limit (STEL) (15 minutes), alarms required. Personnel conducting air monitoring must be immediately notified of any alarms by remote sensors, text messaging, or other similar equipment. Utilizing periodic checks of instrumentation in alarm mode only is not acceptable monitoring practice.
  - k. Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
  - l. Operating Temperature: 0 to 50 °C (14 to 122° F); and
  - m. Operating Humidity: 10 to 99 percent Relative Humidity.
4. Particulate levels will be monitored immediately downwind at the working Site and integrated over a period not to exceed 15 minutes. Consequently, instrumentation shall require the necessary averaging hardware to accomplish this task.



5. The action level will be established at  $150 \mu\text{g}/\text{m}^3$  (15-minute average). While conservative, this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected over  $150 \mu\text{g}/\text{m}^3$ , the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than  $100 \mu\text{g}/\text{m}^3$  above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques. Should the action level of  $150 \mu\text{g}/\text{m}^3$  continue to be exceeded, work must stop and Project Managers from CHA Consulting, Inc. (CHA), NYSDEC, and NYSDOH must be notified. The notification shall include a description of the control measures implemented to prevent further exceedances.
6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when the dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed.
7. The following techniques are effective for controlling the generation and migration of dust during construction activities:
  - Applying water on haul roads;
  - Wetting equipment and excavation faces;
  - Spraying water on buckets during excavation and dumping;
  - Hauling materials in properly tarped or watertight containers;
  - Restricting vehicle speeds to 10 miles per hour; and
  - Covering excavated areas and material after excavation activity ceases.

When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be

evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for the protection of health and the environment.

### 3.0 VOLATILE ORGANIC COMPOUND MONITORING, RESPONSE LEVELS, & ACTIONS

VOCs will be monitored at the upwind and downwind locations adjacent to the ground intrusive work area. VOCs will be monitored continuously, concurrently with fugitive dust monitoring. The monitoring work should be performed using a 10.6 electron volts (eV) PID. The equipment should be calibrated at least daily for the contaminant(s) of concern or an appropriate surrogate (e.g. isobutylene). The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over the background, work activities can resume with continued monitoring.
2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels over 5 ppm over the background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average. The CHA Project Manager will be notified of the situation.
3. If the organic vapor level is above 25 ppm at the perimeter of the work area; activities must be shut down. The NYSDEC, NYSDOH, and the CHA Project Manager will be notified of the situation. Emergency Response Contacts identified in the Health and Safety Plan, including the local police and fire departments, may be contacted by CHA. Air monitoring will be conducted at 15-minute intervals at a 20-foot offset from the exclusion zone. If two successive readings below 25 ppm are measured by the field instrument and documented, the work may resume following the previously described monitoring plan.
4. All 15-minute readings will be recorded and available for State (NYSDEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

**Table 1. CAMP Monitoring Approach**

Parameter	Specifications	Documentation	Evaluation	Actions	Notifications
PM10	Continuous real-time 15-minute average PM10 concentrations collected at each CAMP station during working hours.	Data will be collected electronically by on-site data loggers and recorded via remote telemetry to an online portal.	15-minute average PM-10 < 150 ug/m3	No Action	No Notifications Required
		Instruments will be calibrated daily prior to the start of intrusive activities. The results of these calibrations will be documented in the appropriate field log.	15-minute average PM10 > 150 ug/m3	Immediately check the background CAMP station. If the impacted downwind CAMP station is 100 ug/m3 or more than the recorded upwind value, implement dust suppression techniques.	Notify on-site Construction Manager first. Notify CHA Project Manager, NYSDEC, and NYSDOH immediately thereafter.
VOCs	Continuous real-time 15-minute average VOC concentrations collected at each CAMP station during working hours.  Handheld PID for instantaneous readings collected if action levels are met.	Data will be collected electronically by on-site data loggers and recorded via remote telemetry to an online portal.  Instruments will be calibrated daily prior to the start of intrusive activities. The results of these calibrations will be documented in the appropriate field log.  Instantaneous readings used for decision making or notifications shall be recorded in the appropriate field notes.	15-minute average VOC < 5 ppm	No Action	No Notifications Required
			15-minute average VOC $\geq$ 5 ppm and VOC < 25 ppm	Monitor at the downwind perimeter. If levels instantaneous readings readily decline to below 5 ppm, work can resume.	Notify the on-site Construction Manager.
				Monitor at the downwind perimeter. If levels persist in excess of 5 ppm but less than 25 ppm, halt work activities and identify sources of vapors. Take corrective actions to abate emissions.	Notify the on-site Construction Manager and the CHA Project Manager.
			15-minute average VOCs $\geq$ 25 ppm	Stop work.	Notify the on-site Construction Manager first. Notify CHA Project Manager, NYSDEC, and NYSDOH immediately thereafter.



