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Office of Portfolio Assessment  
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**SAMPLE**

**Portfolio Assessment**

**for**

**CET-151**

**Construction Methods  
and Materials I**

***Note from the Office of Portfolio Assessment***

*This portfolio does a fine job of describing the knowledge of the subject, and provides you with a number of appropriate items of evidence. However, some students may have similar construction-related knowledge that came from a different background and may not have the credentials of this student. This is expected. Not everyone acquires their knowledge of a subject in the same way.*

### **Course Description**

A basic course covering materials, equipment and procedures used in the construction industry. Topics include interpretation of plans and specifications, properties of building materials, project planning and scheduling.

### **Learning Outcomes**

Through the Portfolio Assessment process, students will demonstrate that they can appropriately address the following outcomes:

- Describe your involvement in the building process and list evidence of your direct understanding of the following: building loads, thermal properties, fire related properties, acoustical properties, sustainable building material properties, embodied energy of materials (concept).
- Specialized nomenclature and language of construction documentation: Demonstrate knowledge and understanding of the very specialized language of construction materials. This understanding should include evidence of direct involvement in the preparation or writing or review or compliance with specifications for building or civil works construction.
- Describe differences in the use of wood, metals, concrete and composite materials in construction projects. Give examples of decision-making factors when selecting materials for structural systems of construction.
- Safety in the construction industry: Demonstrate knowledge and understanding of some factors impacting construction safety, including knowledge of basic statistics and evolution of construction safety regulations. Provide specific examples of how construction methods selected for your projects impact worker safety.
- Provide an example, using your prior work product or experience, of how building materials are categorized & classified for marketing, sales, hazard communication, pricing, estimating. This is best accomplished by selecting one material, and then locating the aforementioned information for that material or product. Examples: sales literature, MSDS sheets, pricing lists & catalogs, engineering data, etc.
- Provide evidence in the form of a simple, hand-drawn or computer-generated project schedule.
- Provide examples or demonstrate your understanding of material classification systems in construction, including standard specifications, classification and cataloging systems, etc. For the purposes of this PLA, latitude will be given for a variety of perspectives, such as owner, agency, contractor, construction manager, subcontractor, material supplier or project field supervisor experience or learning.

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### **Introduction:**

I have a variety of experience related to construction methods and materials, initially gained from early experiences as a kid working on projects with my father, playing on construction sites in the neighborhood, and tagging along with surveyors developing property behind the house I grew up in. Working and learning as a 20-year-old on my first house and acting as general contractor on my second, while working my day job, was good use of my earlier on the job training.

My career as a resident engineer gave me great exposure to road and bridge construction. Methods were learned observing various contractors; different approaches often reach the same goal. Materials incorporated in the project were monitored for adherence to strict specifications.

## Narrative

**Outcome 1.** Describe your involvement in the building process and list evidence of your direct understanding.

### a. RESIDENTIAL CONSTRUCTION

Upon completion of my Associates Degree in Civil Engineering Technology, I was employed as a rodman for a small engineering company and land surveyor that exposed me to residential construction. This was back before computers and hand held calculators, so I had time to observe all the various construction performing hand calculations. Here I learned drywall installation, taping and finishing. Site work was learned watching sanitary sewers and storm sewer construction. I viewed masons build foundation walls and fireplaces. Plumbing, electrical, roofing and insulation are all included in projects that I would someday perform myself (Evidence 1).

My first real hands-on house construction was the first house my wife and I lived in. The builder and property owner was a friend of a friend and I was fortunate to be working there learning and trading my time and labor for a reduced closing price. We did almost everything. Forming and pouring the footings, block construction, framing, sheeting, roofing, siding, doors and windows, insulation, drywall, driveway and basement slabs. Only electrical and plumbing duties were performed by subcontractors and I was there viewing it all. A year after completion, I added an enclosed back porch and patio using my newly acquired knowledge.

I was the General Contractor on the construction my second house and where I currently reside. The house is a two story expanded cape style home with 2800 square feet of living space along with an attached three car garage, enclosed breezeway and multilevel deck. I did everything from acquiring the real estate, to working with an architect to interviewing and hiring subcontractors.

I received 3 PLA credits from TESC for my portfolio in the June 2013 semester for Residential Construction, CET-150.

### b. ROADS AND BRIDGES - HEAVY HIGHWAY: 1

Working for the New Jersey Department of Transportation, I began my career as a staff member on a bridge replacement and highway widening project on a heavily traveled State highway where I learned everything from work zone safety, to concrete and asphalt construction as well as construction planning and methods. Representing the owner of the project (the people of New Jersey), and as a staff member working for a resident engineer, my job was to administer the contract, that is to observe the contractor's progression of the work, insuring that the materials and methods are in conformance with the contract documents. Here I learned both on the job and in the classroom. On the job site I witnessed sheet pile driving, bridge demolition over Amtrak's northeast corridor, bridge construction, drainage, natural gas pipe line construction, electrical and communications conduit construction, curb work and paving. Safety was an everyday concern. I received certificated of training in various safety programs. (Evidence 8 & 10).

Three years later I was promoted to Resident Engineer with the knowledge gained above. In this position I was responsible for enforcing all the contract's provisions including lane closures, working hours and work zone safety. Material quality was tested by my support staff. Concrete was tested before it left the plant and witnessed by my staff. He or she observed and sampled the aggregate stock piles used in our mixes as to gradations that were previously approved and assures that the proper cement water ration is in accordance with the design mix specified. On site, slump and air are checked before the concrete is to be incorporated on the project. My staff and I received regular training in materials methods and placement and received certificates. Besides concrete, training is ongoing for asphalt. After the initial course in asphalt, periodic refresher courses were mandatory for inspectors and resident engineers to keep current. (Evidence 6).

I learned pile driving and monitoring in a 16 hour course. Here topics included an overview of the pile design, pile types (timber, concrete, steel), pile driving equipment, hammers, installation, and pile testing. (Evidence 12).

I learned Drilled Shaft Inspection from a 20 hour course which was useful when I worked for a private contractor on a project with drilled shafts. This course was intense with homework and a certification exam. I learned shaft construction in both wet and dry conditions, soil and rock identifications, auger rigs and equipment, shaft excavation and cleaning, reinforcing, pouring concrete, and safety. (Evidence 11).

I earned 3.0 CEUs for a 40 hour course in Value Engineering. Value Engineering is a method of applying construction experiences to proposed projects to either cut costs or add more value or use to the project. Alternatives are considered both in design and scope. I benefited from this course as it lead me to 'think out of the box' especially when I joined the private sector where saving dollars is always the goal. (Evidence 9).

#### c. ROADS AND BRIDGES - HEAVY HIGHWAY: 2

I chose early retirement from N.J.D.O.T. which gave me an opportunity to work in the private sector for a contractor as an Assistant Superintendent on a bridge replacement project for my former employer, state government. I learned scheduling subcontractors, utility relocation from the contractor's perspective, material ordering, and construction sequencing. I provided updated construction data for our project manager as to the status of all activities.

**Outcome 2.** Specialized nomenclature and language of construction documentation: Demonstrate knowledge and understanding of the very specialized language of construction materials. This understanding should include evidence of direct involvement in the preparation or writing or review or compliance with specifications for building or civil works construction.

#### a. Evidence of construction understanding - materials and methods

Before paving commences on a State government project, a pre-paving meeting is held by the Resident Engineer in his field office with the contractor and paver along with materials personnel from the State. The purpose is to review the job specific concerns with the project, review safety, weather issues, staffing, etc. A typical copy of meeting minutes I prepared is attached. Note the references to specifications for materials, certifications required of the foreman, compaction, air-void range and penalties. (Evidence 17).

- Compliance letters of reject materials detailing the nature of the rejected material.
- Reviewing of asphalt core data for pay bonuses or noncompliance.
- Review and enforcement of contractor's cold weather concrete placement plan as per the contract specifications. (Evidence 15).

Seasonal weather is a concern when pouring concrete. Hot dry sunny summer days are not ideal for pouring a bridge deck. Proper curing of concrete is essential for a quality deck that is within the specifications. Sometimes a contractor chooses to work at night on a hot day. Other options are constructing wind blocks along the pour or adding misting sprayers to add humidity on a dry day. I was trained in placing and curing concrete. Options for cold weather concreting include preheating the aggregate at the plant and using warm water. Blankets are routinely used to cover pours. (A blanket over a mass bridge footing can contain 80° air temperature, in the tent, when the ambient temperature is below freezing. Concrete does not dry, it cures which is a chemical reaction started when water is added to the mix.) I've seen contractors "tent" the underside of a deck and add heaters below the deck. More recently, contractors bring large portable boilers to the site and run lines throughout the deck or parapet carrying warm water, just like baseboard heat in homes. (Evidence 4, 5 & 7).

Choosing the correct material does not ensure that the proper construction method is applied. As a Resident Engineer, I witnessed a contractor in process of constructing Borrow Excavation Bridge Foundation (BEBF) using the correct material (I-9). However, construction must be made "in the dry". He was dumping the material in the excavation full of ground water. I wrote the letter in evidence which instructs the contractor to refer to the specifications. Lift thickness, compaction, and density testing cannot be ignored. I have no idea how the contractor planned on constructing a bridge abutment on a multi-lane highway on a foundation of 6 feet of non-compacted BEBF (I-9 and ground water = slop.) Amazing! (Evidence 16).

**Outcome 3.** Describe differences in the use of wood, metals, concrete and composite materials in construction projects. Give examples of decision-making factors when selecting materials for structural systems of construction.

a. Material Differences

### 1. Choosing Concrete Beams vs. Steel Beams - heavy highway

Concrete and steel beams both have positives and negatives. Concrete beams do not require the maintenance that steel beams require - periodic painting. The strength of steel beams can allow for longer spans. Concrete is sometimes chosen to cross water courses because of the reduced maintenance factor. The I-295 bridges over Crosswicks Creek in New Jersey use concrete beams for the majority of the length and steel over the channel. The steel here provides a wider clearance for navigation on the creek and a higher clearance too because the web of the steel is less than the concrete precast beams. Another use for reduced maintenance would be for a bridge crossing the Northeast corridor (Amtrak). The elimination of periodic painting is a tremendous long term savings for the owner. Staging a painting operation over an electrified railroad presents numerous problems.

My company bid a bridge replacement project with the intent on submitting a major value engineering proposal. A proposed two span steel beam bridge was value engineered using concrete box beams. Dollars were saved, construction of a center pier was eliminated and a dangerous contraflow lane staging proposed in the original contract was eliminated.

### 2. Choosing prefabricated wood trusses vs. stick built - residential

I've note to date both prefabricated wood trusses and stick building still exist, perhaps equally. Wood trusses require the use of less "raw material" to attain the same strength using traditional stick built. There are extra costs associated with trusses, associated with the need for a crane and operator on site. Also, the home owner loses potential attic storage space when trusses are used. Some of the extra costs, when trusses are chosen, are offset with the time savings.

Some builders assemble walls in a factory setting, complete with sheeting and cut outs for windows and doors, than the panels are trucked to the site for assembly.

In both cases, I would, as the contractor, run the numbers to determine the economics when choosing the method and materials. A custom house out in the country may lead to traditional stick build while a large subdivision is likely to benefit from the uses of prefabricated trusses.

### 3. Choosing micro-lams and glued-laminated timber vs. standard dimensional lumber or steel - residential

The same arguments above regarding steel vs. concrete beams can be made. Micro-lams are an engineered product that can take more load than its counterpart 2 X lumber. This applies to span length too. Often, the architect choses the building material based on his or her design. Today's open-floor concept requires the use of products that can handle large loads while maintaining clear sight lines inside the structure. Micro-lams and glued laminated products suit this need well in residential construction.

**Outcome 4.** Safety in the construction industry: Demonstrate knowledge and understanding of some factors impacting construction safety, including knowledge of basic statistics and evolution of construction safety regulations.

a. Evidence # 8 & 10 show some of the safety seminars that I received certification including Work Zone Safety and Traffic Control Coordinator. I participated in numerous OSHA seminars which were geared towards open trench construction, personal protection equipment and air quality in pipes and tunnels. Worker safety in a pipe trench is always critical. Learning about air monitoring served me well when I was a Resident Engineer on a micro-tunneling project that consisted of driving a 84" diameter pipe 1000'. I always took readings before entering the pipe.

b. A routine letter to a contractor, shown in evidence, tells of a problem with his work from the previous day. He left the site of a "boxing-out" operation at day's end without proving escape ramps as required. Escape ramps are necessary for an errant vehicle to regain access back onto the highway. Overnight, a vehicle entered the work zone and had to be towed out of the subbase. The contractor was called to come out at night to secure the area and reset the safety devices. All of this was unnecessary; luckily no one was injured (this time). (Evidence 13).

c. I conducted weekly tool-box safety when I was the Assistant Superintendent.

The first few weeks I'd address routine safety issues, a review of the basics which includes handling of oxygen tanks and acetylene and their proper transportation. I addressed hazardous materials and procedures for spills and cleanups as well as where the spill kit is stored.

In later weeks, I addressed a safety issue to a specific construction operation for the upcoming week. Our bridge replacement project crossed a water course. Water safety was addressed, boats were equipped with life preservers all were a requirement for working on the water.

Other weeks I followed the various sections in the project safety manual sequentially covering the whole manual in the job's course. Reminding folks that someone will miss them if they don't come home is a powerful tool.

d. As a Resident Engineer I attended various safety courses and enforced job site safety.

e. I reviewed contractor's safety plans both the general plan and specific plans for setting steel beams, traffic detours and staging plans.

f. I reviewed inspectors' daily safety reports and environmental reports.

- Each day on a State project, a safety report is written after the project is reviewed. The report contains information as to what stage the project is in, are there lane closures or shoulder closure. Construction signs are checked to make sure they are in place and visible. Traffic devices are checked for location and cleanliness. Were they hit by traffic or moved by business owners? All of this and more is tabulated each day. Dangerous infractions are directed to the contractor immediately for corrective action.

- Enforced the Traffic Control and Staging Plan (TCP).

Sometimes a Resident Engineer needs to enforce the Traffic Control and Staging Plan (TCP) with written notice. (Evidence 19). Only once did I have to apply the specification regarding lane closures. Here the contractor exceeded the time allowed for a lane take any was assessed a penalty of \$4,650. The amount is different for each project and is based on traffic counts for that roadway for the time of day the violation occurred.

- Letters detailing safety deficiencies.

Horse-play on the job occurs and is discouraged. Sometimes things go too far and serious action needs to be taken. I wrote a letter to the contractor (Evidence 14) which leads to the removal of the project's dockworker foreman. On one of two previous incidents, I documented that he was launching a basketball from a makeshift cannon, aimed straight into the air alongside two State highways and the Parkway; the average daily traffic in this vicinity exceeded 200,000 vehicles per day. His third strike and removal was a reaction of his action of picking up one of my inspectors and turning him upside down and then back on his feet again. The inspector was lifted, turned 180° and back on his feet.

**Outcome 5.** Provide an example, using your prior work product or experience, of how building materials are categorized & classified for marketing, sales, hazard communication, pricing, estimating. This is best accomplished by selecting one material, and then locating the aforementioned information for that material or product. Examples: sales literature, MSDS sheets, pricing lists & catalogs, engineering data, etc.

## Building Materials

- a. Example of a building material: Cement.

I chose to discuss cement because it is a basic building material component to just about all civil projects world-wide. Cement is a component of concrete. It is the "glue" that connects the small and large aggregate making concrete when water is mixed in and the chemical reaction commences.

1. Home Depot - 94 lb. Portland Cement product overview w/price, availability and consumer product comments

<http://www.homedepot.com/p/Quikrete-94-lb-Portland-Cement-112494/100570364>

Above, the Home Depot website shows the industry standard 94 pound bag of cement for sale. 94 pounds of cement equals the volume of one cubic foot. Ready-mix concrete is mixed in pounds and sold by the cubic yard.

### 2. Product Description

<http://www.homedepot.com/catalog/pdfimages/61/61c1124b-5cef-4d6d-a0d1-3d6d2c0b66d9.pdf>

Above, the product is described for various uses. There are several types of cement. For D.O.T. projects I've worked on, some called for a "high-early" strength concrete. This was usually specified for on bridge deck patching projects that had limited work hours on high traffic highways. This

concrete has to be sufficiently cured within a few hours and be able to support heavy truck loads. Other concrete on government projects are specified by their yield strength. For example, an abutment might call for a Class "B" concrete. This concrete yields about 5000 psi. HPC or "High Performance Concrete" is specified for super structures (bridge decks). Here, 10,000 psi is often achieved but unnecessary. The extra high strength is a byproduct of a designed concrete to prevent road salt infiltration into the slab; salt is a corrosive to reinforcing steel.

### 3. MSDS (Material Safety Data Sheet)

<http://www.homedepot.com/catalog/pdfimages/8f/8f333aa2-2c41-42a8-8978-0e917cedd111.pdf>

Above, this cement product lists hazardous and potentially hazardous properties of the product. It also contains recommendations as to safely handling the product, ingredients, toxicity, medical emergency and more. Contractors are responsible for having this data on the construction site for reference.

**Outcome 6.** Provide evidence in the form of a simple, hand-drawn or computer-generated project schedule. (Evidence 18).

- My simple Project Schedule for a small ranch style house construction is included in the "evidence folder" labeled "Project Schedule". It's a very basic schedule that does not consider weekends or holidays. Concurrent work is not shown as well as intermediate steps. Examples: HVAC, plumbing and electrical usually have some overlap and concurrency. Basement slabs before HVAC was omitted, exterior service walks and other landscaping were not shown nor were time set aside for various intermediate town inspections.
- When I worked as a Resident Engineer, I reviewed and approved contractor supplied Primavera Schedules. Some projects had hundreds of inputs and additional detail that includes early starts, late starts, early finish and late finish dates. Also included are administrative items such as procuring various required permits.

**Outcome 7.** Provide examples or demonstrate your understanding of material classification systems in construction, including standard specifications, classification and cataloging systems, etc.

### Material Classification Systems - Soils

There are several soil classification systems in use. The most common is ASTM International. An earlier classification system was instituted by the USDA back in the 1800s. The United Nations developed its own system. All systems classify soil by particle size. For example: gravel can be described to be between 60 and 2 mm with coarse or flat sides that are round or angular as compared to clay which has a particle size less than 0.002 mm which is smooth and greasy to the touch and holds together when dry and is sticky when moist.

- Bridge Construction

- a) Knowing the soil type on the proposed construction site before a project is designed is imperative for successful construction of a structure, particularly in bridge construction. I've worked on bridge projects requiring driven timber piles. On another project, drilled shafts were a value engineering decision to reduce the number of piles, thus reducing project time and savings in construction dollars. My last bridge project was designed using a spread footing requiring an undercut of 2 meters and was replaced the poor soil with a select backfill. The material and methods of placing and compaction were strict. My inspectors constantly monitor the operation and made the contractual required density checks before subsequent layers were constructed using a nuclear density gauge.

- Residential Construction

Knowing the type of soils to be encountered is important in single family homes even though the loads are vastly less than in bridge construction. I first observed the soil on the property I purchased was the initial soil log and perc test necessary for the design of the onsite septic system. The various soil layers were noted as well as any water table. The area of the proposed drainage field showed a sandy clay substance at lower levels. The design required the removal of the upper layer of clay and replacing with a select borrough material.

Also, I made a decision during construction to construct a separate system for gray water (laundry). This change was a result of observing more clay at the house excavation than was initially observed during the soil logs. I received concurrence from the township health inspector. I built two separate systems that function well today, 25 years later.

I noted that the soil condition changed significantly at the site of the proposed house when I excavated for the foundation. I made two changes in the design. I added rebar to the footings and added a perimeter drain around the foundation and used a select backfill against the foundation, thus keeping the existing heavy clay away from the house's foundation, allowing for drainage and ensuring a dry basement.

**Conclusion:**

The numerous training seminars and courses I've completed are in harmony with knowledge gained from my experiences. I attained a land surveyors license along the way, mastered the position of resident engineer where means, methods and materials are an everyday responsibility. I'm proficient in both heavy highway construction and residential construction.

## **Evidence**

### **Certifications:**

NJ Professional Land Surveyors License  
Associate Engineering Technician (ICET)  
ACI – concrete certification  
Concrete Field Testing Technician  
Asphalt Technology Certification  
Evaporation Rate  
Traffic Control Coordinator  
Value Engineering  
Work Zone Safety  
Drilled Shafts  
Construction Monitoring of Driven Pile Foundations

### **Letters of Support**

Escape Ramp (Safety)  
Dock Builder Conduct (Safety)  
Cold Weather Concrete (Materials)  
BEBF (Materials)

Residential Home Construction Project Schedule  
Lane Occupancy Charges

State Of New Jersey  
New Jersey Office of the Attorney General  
Division of Consumer Affairs

THIS IS TO CERTIFY THAT THE  
Board of Prof Engineers & Land Surveyors

HAS LICENSED

ROBERT  
Street Address  
Cream Ridge, NJ 08514

FOR PRACTICE IN NEW JERSEY AS A(N): Professional Land Surveyor

2/22/2020  
Valid

24GS03XXXXXX  
Lic. Reg. Cert. #



*Robert*

Signature of License Holder

*Tran Sitman*

Acting Director

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The Institute for the  
Certification of Engineering Technicians

*Hereby certifies*

Robert

*As being*

Associate Engineering Technician

*And recognizes that through education, experience and knowledge*

*This person has met the standards set forth by this Institute*

*Lee Vitalone*

May 1, 2012

*Harry McDiddit*

May 1, 2012

Number XO3439

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# NEW JERSEY CHAPTER

American Concrete Institute

This is to certify that

**ROBERT**

*Has demonstrated knowledge and ability by successfully  
Completing the New Jersey Chapter ACI certification  
Requirements of the Concrete Construction  
Technology Course.*



Examiner *Harold T. Stone*

Date February 23, 2011

Expires February 23, 2021

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In this 40 hour course I learned the latest concrete technology, reviewed mix designs and admixtures. Proper placement of concrete was discussed as well as finishing and curing methods. Cold and hot weather conditions were learned plus a review of testing procedures and corrective action tips were provided. This certificate was contingent on passing a 2-hour exam, which was passed.



National Highway Institute  
*Certificate of Training*

Robert

Has satisfactorily completed training in

Construction Monitoring of  
Driven Pile Foundations

Conducted by

Ryan R. Berg & Associates

Location	NJ DOT, Freehold, NJ	Hours	16
Date	March 15, 2001	CEUs	1.2
Instructor	<i>Ron Rockadera</i>	Coordinator	<i>O.R. Ganizer</i>
Director National Highway Inst	<i>Della Street</i>	DOT Administrator	<i>Meta Kahn-Crete</i>

I earned this certificate for a 16-hour course on Construction Monitoring of Driven Piles



The New Jersey  
Department of Transportation  
Certificate of Achievement

This is to certify that *Robert* has successfully  
Demonstrated knowledge and ability by completing the certification  
Requirements of the Bureau of Materials Engineering and Testing  
And is hereby recognized as a  
**CONCRETE FIELD TESTING TECHNICIAN**



*Michael Brickhouse*

Signature

Date

This 8-hour certificate was earned spending the day in a lab mixing concrete and testing it for slump and air. I learned to perform these field tests as well as related methods and record keeping.



***New Jersey Society of Asphalt Technologists, Inc.***

***Presents this***

***Asphalt Technology Certificate***

***To: Robert***

***In recognition of Successfully Completing the Re-certification  
Requirements as an Asphalt Paving Construction Technologist***

Date: January 1, 2001

Expires: July 1, 2006

***Jvana Flatroad***

President

***U. R. Passing***

Chair, Certification Board

This 8-hour seminar provides a general overview of asphalt paving. Today's Superpave mixes present a challenge to the industry in construction, offering a longer lasting, better riding higher at the same time more truck traffic was added and heavier trucks were deemed permissible.

As a Resident Engineer, I was also required to take a 2-hour annual refresher course

# New Jersey Department of Transportation Evaporation Rate Training

*Robert*

*Has successfully completed  
All the requirements of the  
Evaporation Rate Determination Training  
And is now **certified***



Date: August 1, 2010

*Ronin Arcundit*

Expires: July 30, 2015

Training Coordinator

In this 4-hour certificate program I learned the methods necessary to produce quality HPC (High Performance Concrete). This learning was geared specifically to evaporation rates and how to minimize the effect of low humidity, sunlight, and wind.

Rutgers, the State University of New Jersey  
Center for Advanced Infrastructure & Transportation  
Local Technical Assistance Program

*This certifies that*

*Robert*

*Has satisfactorily completed the prescribed course of study in the*

**Traffic Control Coordinator**

Course #623  
December 2004  
Freehold, NJ

*Paul Lecceman*

Director, Center for Advanced  
Infrastructure & Transportation

*Gerard Helper, PhD*

Director, Local Technical  
Assistance Program (LTAP)

---

The State University of New Jersey

**RUTGERS**

*Edward J. Bloustein School of Planning and Public Policy*

***CENTER FOR GOVERNMENT SERVICES***

This certificate is awarded to

*Robert*

For the completion of

**Work Zone Safety Three-Day Seminar**

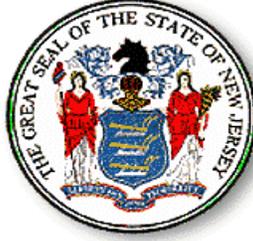
March 1998

*Alfred J. Penneyworth*

Director, Center for Government

Services

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**State of New Jersey**  
Department of Transportation  
Central Region Construction  
100 Daniels Way  
Freehold, NJ 07728

James McGreevey  
Governor

John F. Letiere  
Commissioner

April 22, 2003

Attention, Mr. XXXXXXXXXXXXXXXX  
Vice President, Project Management

Re: Victory Circle Elimination  
Rt. 9 & 35 section 25C, Rt. 9 Section 25L  
Escape Ramp (safety)

Sir:

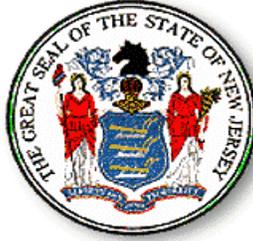
Last night a vehicle left the roadway into an area excavated earlier in the day (Rt. 9 & 35 southbound in the vicinity of Kearny Road – “boxing out” operation). The vehicle was prohibited from reentering the roadway due to the lack of an escape ramp. It is my understanding that a Department Maintenance crew met with your superintendent and Department traffic cones were set in the previously unprotected area.

Please ensure that this does not happen again by always providing an escape ramp and further protecting the area with traffic control devices in accordance with the contract documents.

Sincerely,

Robert XXXXXX  
Resident Engineer

This letter was written to document a safety violation with the emphasis on improving safety to a level required by the contract documents. Unfortunately, the inspector assigned did not take steps to ensure the job site was “safe” as required, so this letter became necessary.



**State of New Jersey**  
**Department of Transportation**  
**Central Region Construction**  
**100 Daniels Way**  
**Freehold, NJ 07728**

**James McGreevey**  
**Governor**

**John F. Letiere**  
**Commissioner**

**December 18, 2003**

**Attention, Mr. XXXXXXXXXXXXXXXX**  
**Vice President, Project Management**

**Re: Victory Circle Elimination**  
**Rt. 9 & 35 section 25C, Rt. 9 Section 25L**  
**BRF-1 (213)**  
**Cold Weather Concrete**

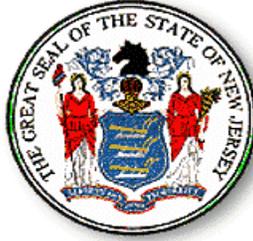
**Sir:**

**As discussed with your superintendent today, please submit a plan showing you you pplan to adhere to Subsection 501.11 of the Standard Specifications regarding cold weather concrete.**

**Please submit your plan of action for review and approval.**

**Sincerely,**

**Robert XXXXXX**  
**Resident Engineer**



**State of New Jersey**  
Department of Transportation  
Central Region Construction  
100 Daniels Way  
Freehold, NJ 07728

James McGreevey  
Governor

John F. Letiere  
Commissioner

August 13, 2003

Attention, Mr. XXXXXXXXXXXXXXXX  
Vice President, Project Management

Re: Victory Circle Elimination  
Rt. 9 & 35 section 25C, Rt. 9 Section 25L  
Borrow Excavation Bridge Foundation (materials)

Sir:

The *Borrow Excavation Bridge Foundation* placed to date does not meet the contract specifications and must be removed and reconstructed as per the Standard Specifications. Construction should have taken place in the dry, lift thicknesses were not adhered to, and density testing was omitted.

Special attention is directed to Subsection 204.02, 203.03 and 204.03.

Table 203.01 in Subsection 203.03 states the gradation required for Borrow Excavation Bridge Foundation (underwater area) as I-9. Note 2 states in part: ...Borrow Excavation Bridge Foundation (underwater area) shall be placed in the dry and compacted according to Subsection 204.01.

Section 204.03 states additional construction requirements. Attention is directed to the lift thickness and density tests.

Please notify when the correction will be made so that it can be witnessed and our Material Staff can check densities.

Sincerely,

Robert XXXXXX  
Resident Engineer



**State of New Jersey**  
Department of Transportation  
Central Region Construction  
100 Daniels Way  
Freehold, NJ 07728

James McGreevey  
Governor

John F. Letiere  
Commissioner

April 22, 2003

Attention, Mr. XXXXXXXXXXXXXXXX  
Vice President, Project Management

Re: Victory Circle Elimination  
Rt. 9 & 35 section 25C, Rt. 9 Section 25L  
BRF-1 (213)  
Dock Builder Foreman's Conduct (safety)

Sir:

Today I learned that your dock builder foreman picked up one of my inspectors and turned him 180° and back! This action is in violation of the safety program where it is stated that you will *maintain safe and healthful working conditions...ensure the safety and health of site employees and the public at large*. His actions are unacceptable and will not be tolerated.

Your foreman has a history of violations on this project. I ask that you refer to the June 6, 2003 and July 11, 2003 Violation Warning Notice forms and take the corrective action required to rectify this incident.

Sincerely,

Robert XXXXXX  
Resident Engineer

This letter was written regarding extreme "horseplay" on a construction site. I had this foreman removed from the job because this was his third major and documented violation

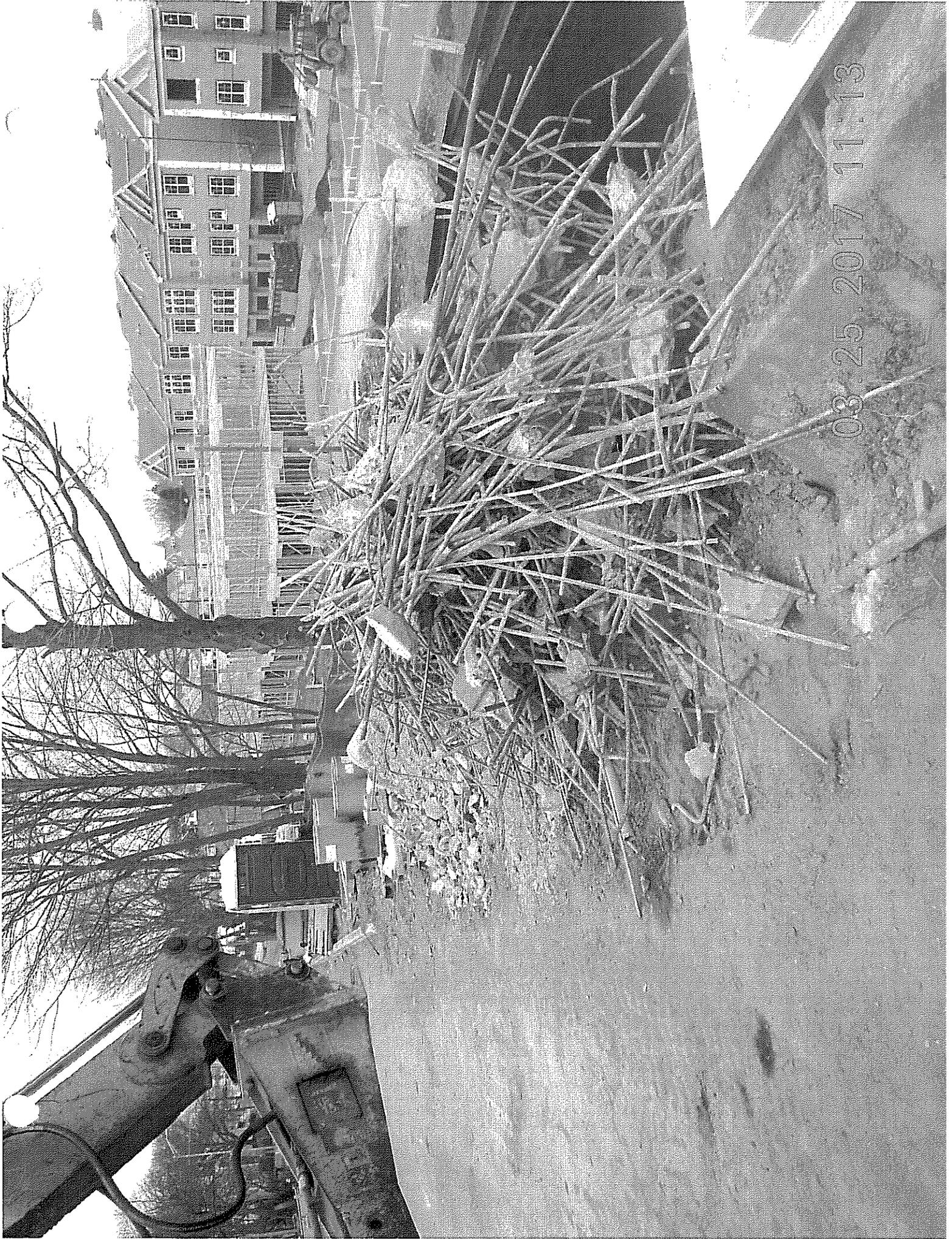
## Residential Home Construction Project Schedule

1500 sq ft ranch

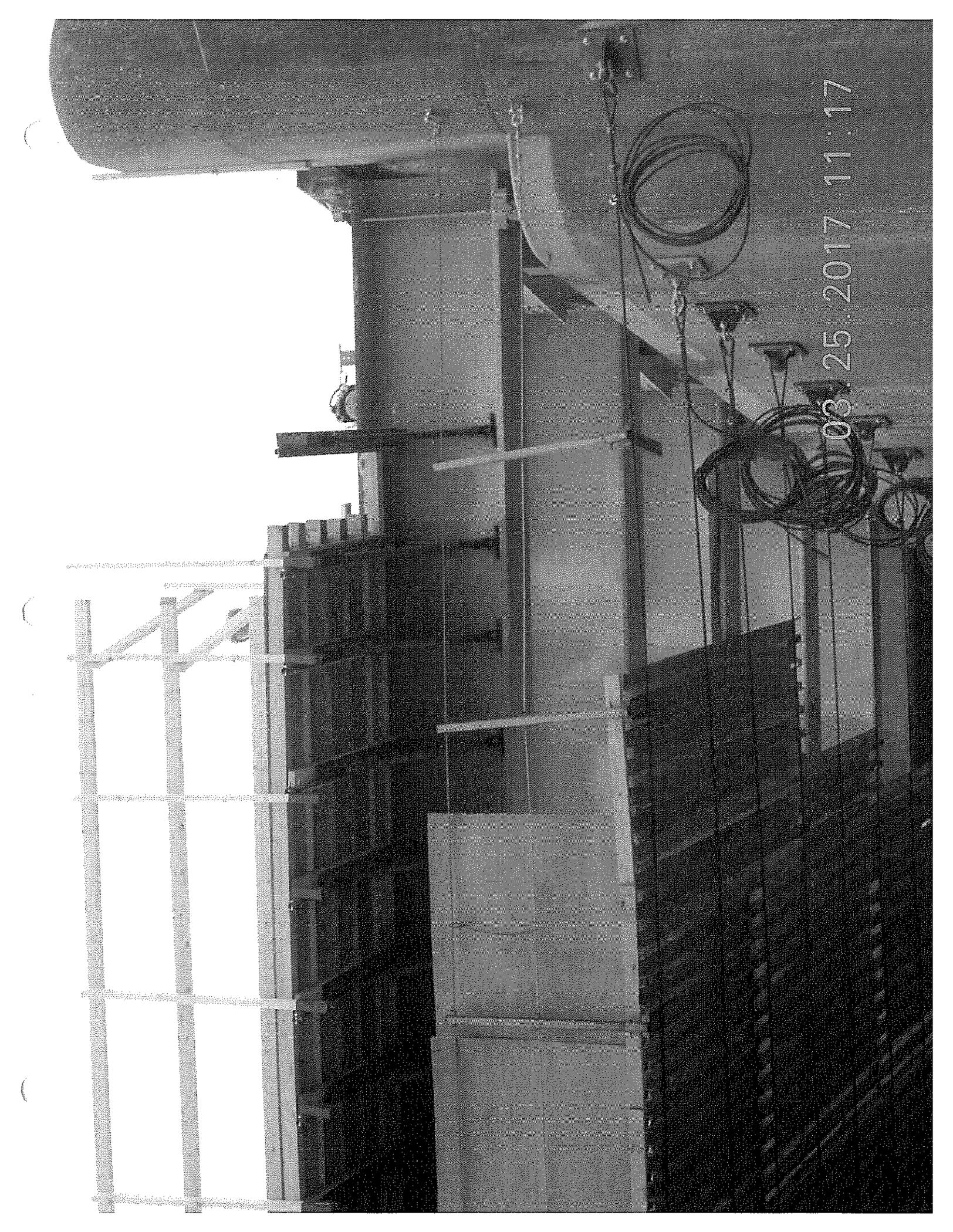
Activity	Days	Start	Finish	Material ordered	Material received	Completed
Clearing site	2	6-1	6-2			
Excavation	1	6-3	6-3			
Footings	1	6-4	6-4			
Foundation	3	6-5	6-8			
Framing/sheeting	4	6-9	6-13			
Roofing, windows, doors	2	6-14	6-16			
Siding	2	6-17	6-18			
HVAC	5	6-20	6-24			
Plumbing	4	6-25	6-28			
Electrical	3	7-1	7-3			
Insulation	1	7-4	7-4			
Dry wall / taping	5	7-5	7-9			
Kitchen / Bath	5	7-10	7-14			
Flooring	2	7-15	7-16			
Interior and Trim	2	7-17	7-18			



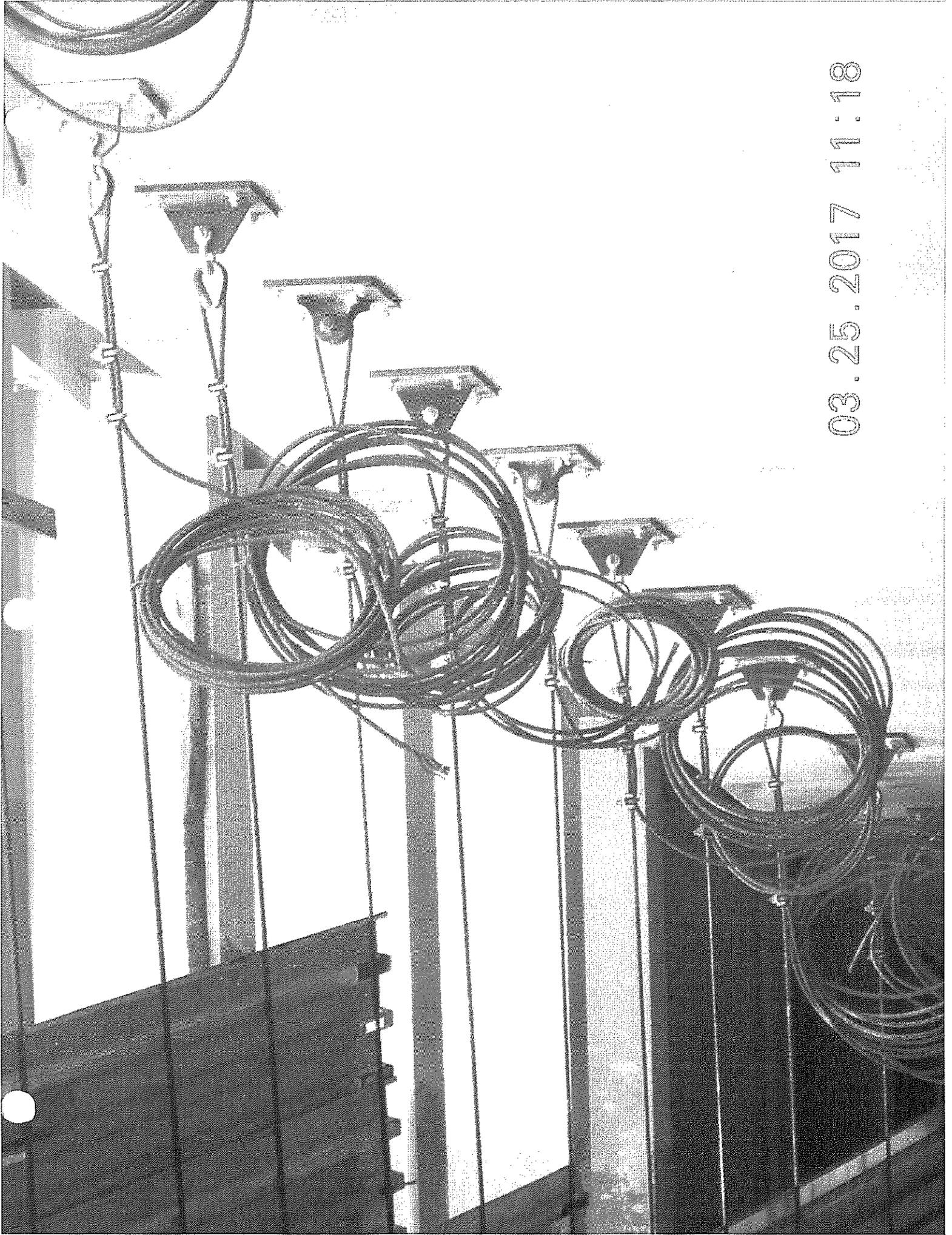
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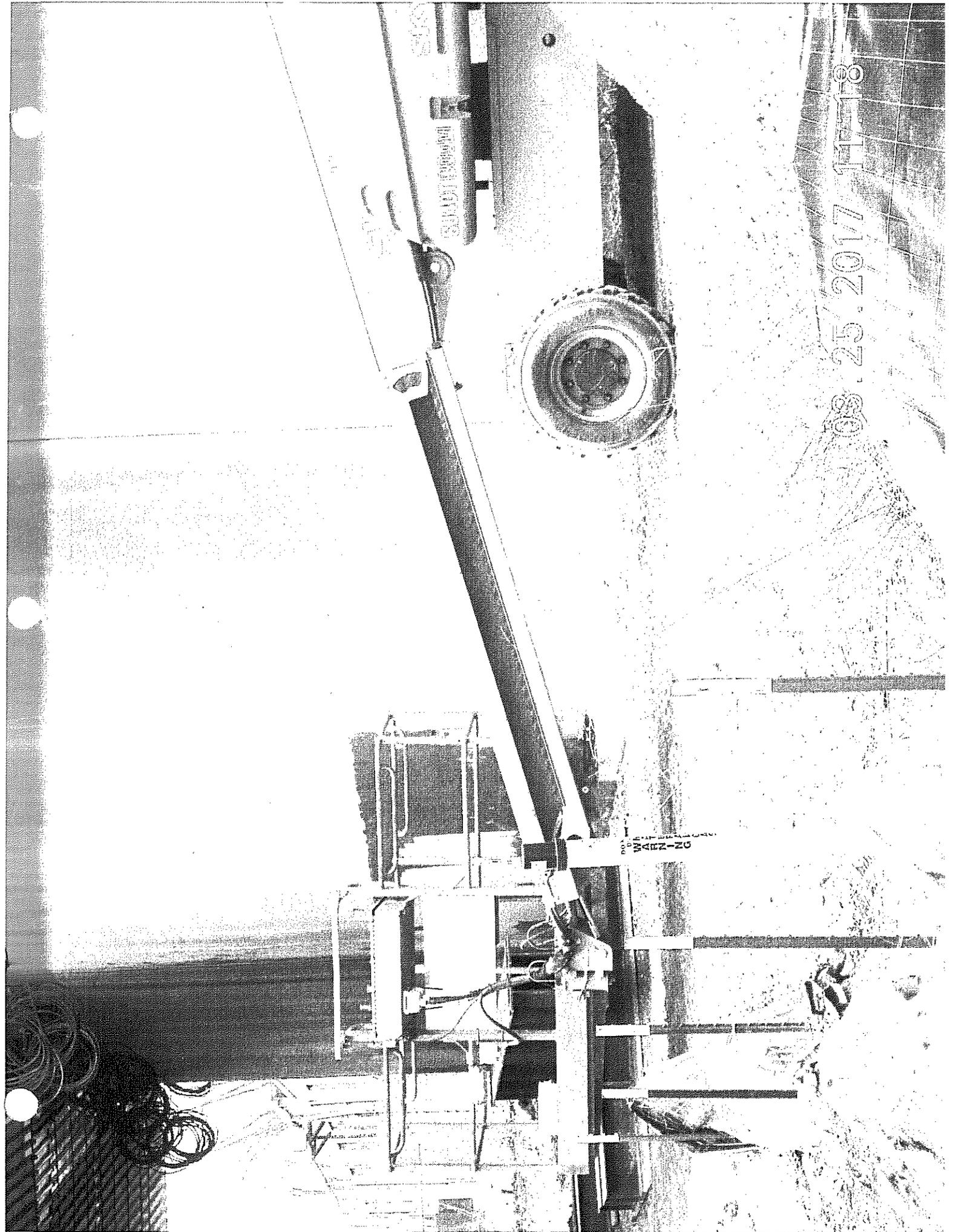


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PROHIBITION OF ENTRY  
WARREN-ZUG

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