

The United Illuminating Company

Part 1

Development and Management Plan

for the Construction of

Singer Substation

and

115kV Generation Interconnections

Docket No. 272

The United Illuminating Company and the Connecticut Light & Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction of a 345kV electric transmission line and associated facilities between the Scovill Rock Switching Station in the Town of Middletown and the Norwalk Substation in the City of Norwalk, Connecticut.

April, 2005



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Development and Management Plan Singer Substation Bridgeport, CT

The United Illuminating Company (“UI”) hereby submits Part 1 of the Development and Management (“D&M”) Plan. This D&M Plan part relates to Singer Substation in the City of Bridgeport, Connecticut. Singer Substation is part of UI’s portion of a new 345kV electric transmission line facility to be constructed between Connecticut Light & Power’s existing Scovill Rock Switching Station, located in the Town of Middletown, and the existing Connecticut Light & Power Norwalk Substation in the City of Norwalk (the “Middletown-Norwalk Project”), certificated by the Connecticut Siting Council (“CSC”) in Docket 272 on April 7, 2005. UI’s portion of the Middletown-Norwalk Project will consist of three basic components:

- 1) Construction of the new 345/115kV Singer Substation and 115kV underground interconnection to the Bridgeport Energy Switchyard and the Pequonnock Substations;
- 2) Construction of several miles of underground 345kV transmission line between Bridgeport and Milford; and
- 3) Construction of several water and rail crossings utilizing a variety of construction methods.

This part of the D&M Plan addresses the construction of the new 345/115kV Singer Substation, along with modifications to the existing Bridgeport Energy Switchyard and to UI’s existing Pequonnock Substation. It also addresses the construction of several thousand circuit feet of underground 115kV cross linked polyethylene (XLPE) solid dielectric cable transmission line circuits to interconnect the Singer Substation with the Bridgeport Energy Switchyard and Pequonnock Substation.

This D&M Plan Part 1 consists of the following sections and appendices:

- 1) Introduction
- 2) Conditions and Comments
- 3) Project Description
- 4) Utility Relocation Work
- 5) Development and Management Plan Details
- 6) 115kV Transmission Line Interconnections
- 7) Project Schedule

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8) Appendices

Appendix A Erosion and Sediment Control Plan

Appendix B Architectural Renderings

Appendix C Substation Drawings

Appendix D Transmission Line Drawings

**SECTION 1
INTRODUCTION**

This D&M Plan was prepared in accordance with the D&M Plan requirements contained within the Regulations of Connecticut State Agencies (RCSA), Sections 16-50j-60 through 16-50j-62, as they pertain to construction of a new substation project and in accordance with the Decision and Order received from the CSC for the Middletown to Norwalk Project.

**SECTION 2
CONDITIONS AND COMMENTS**

The selection of the final site for the 345/115kV Singer Substation was the subject of several discussions with the City of Bridgeport, and included consultation meetings with representatives of the Bridgeport Planning and Zoning Commission. UI originally identified eleven potential substation sites near Bridgeport Harbor Station and the Bridgeport Energy generating facility. Through working meetings with City officials, planning staff, and PSEG Connecticut LLC ("PSEG") it was determined that Site No. 8 should be the site for the new 345/115kV substation.

UI intends to purchase a portion of Site No. 8 from PSEG and has executed a Purchase & Sale Agreement to that effect. PSEG is the owner of the site and owner and operator of the adjacent Bridgeport Harbor Station.

SECTION 3 PROJECT DESCRIPTION

The Singer Substation site is located on a mostly vacant parcel of land in a mixed residential-industrial area in the southern part of the City of Bridgeport. It is bounded by city streets on all four sides: Main Street to the west, Atlantic Street to the north, Russell Street to the east, and Henry Street to the south. UI will acquire approximately 1.54 acres of Site 8. The site is currently fenced with an eight-foot high chain link fence. The site has previously been graded and leveled. The western half of the site contains approximately 6-8 mature trees that will require removal, but the majority of the site remains as open field that is periodically mowed. Industrial and warehouse facilities (including the Bridgeport Harbor and Bridgeport Energy generating facilities) surround the site on three sides, with single family residences located along the west side of Main Street.

Site development will consist of the construction of a new 345kV indoor Gas Insulated Switchgear (GIS) substation facility and 345kV and 115kV line terminations. The substation will consist of two 345/115kV autotransformers and four 345kV shunt reactors, a control building, and the GIS enclosure. A spare 345/115kV autotransformer and 345kV shunt reactor will also be located on site. Two 115kV transmission lines will exit the new substation underground, with one connecting to the nearby Bridgeport Energy Switchyard and another to UI's existing Pequonnock Substation. All transmission lines will be placed underground, with the 345kV transmission line design being XLPE cables in a concrete duct bank, and the two 115kV transmission lines using XLPE cables in a concrete duct bank. The substation equipment will be enclosed on three sides by an architectural wall/building to minimize visual impacts, provide security and reduce noise emissions from the site, and a 14-foot chain link fence along the east property line to provide security. The outside wall of the new GIS enclosure and control building will be integrated into the substation's perimeter wall design. The GIS enclosure height will be 40 feet. A maximum 35 foot high "wing wall" will be installed along the northern property boundary along Atlantic Street and the southern boundary along Henry Street (see Appendices B and C).

Actual construction on the site will consist of minimal clearing, grading, and foundation construction followed by site surfacing. Installation of an architectural wall, buildings (see Appendix C), equipment installation and yard construction will follow.

Bridgeport Energy Switchyard and Pequonnock Substation will be modified to terminate the 115kV transmission lines extending from Singer Substation. At the Bridgeport Energy Switchyard, outdoor gas insulated cable termination equipment will be added to terminate the underground transmission line. This modification will be completed within the existing switchyard fence line. Pequonnock Substation will be extended by one bay of approximately thirty-two feet and will include the associated bus work, two 115kV circuit breakers, disconnect switches, and support steel. Further, 115kV outdoor, gas insulated cable termination equipment will be added to interconnect the underground

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transmission line extending from Singer Substation. The fence will be moved within the existing property line to accommodate the new bay and these modifications.

SECTION 4 UTILITY RELOCATION WORK

No existing major overhead or underground utilities will require removal or relocation as a result of construction and operation of the Singer Substation. UI has executed a Purchase and Sale agreement with PSEG for the Singer Substation site. As part of this agreement, the existing multifamily house located in the south west corner of the site will be removed prior to UI taking ownership of the site. UI is expecting to purchase the land from PSEG by the end of August 2005. Until UI secures possession of the property and conducts the necessary survey work, it cannot determine the extent of remaining underground water, sewer and gas laterals that may be beneath the site from the row houses that were previously located on the site. If such laterals exist, they will require removal. However, their removal should not disrupt water, sewer and gas service to surrounding residential and industrial customers.

SECTION 5 DEVELOPMENT AND MANAGEMENT PLAN DETAILS

The following section provides details for the new 345/115kV Singer Substation and the required modification work to the existing Bridgeport Energy Switchyard and to UI's existing Pequonnock Substation.

A. Key Map

A map of the new Singer Substation site is included with this D&M Plan (Figure 5-1). The base map used to depict the location of the new substation site is aerial photography of the locations discussed in this D&M plan. The Bridgeport Energy Switchyard is approximately 580 feet north of the new substation site, while the existing Pequonnock Substation is approximately 1,450 feet (0.3 mile) to the north. Both existing facilities fall within the project area depicted on the enclosed key map.



Legend

	pequg
	115kv
	<all other values>
	UI Co. Peajungnock Sub.
	PSE & G Bridgeport Harbor Station
	Bridgeport Energy Corp.
	CT D.O.T.



Singer Substation Site Location
 UI - Graphics Dept.
 February 2003

Figure 5-1

B. Plan Drawings

The D&M Plan includes several drawings at a scale of 1"=200' or larger that identify the location of the Singer Substation site, public roads, the probable location of all substation equipment, GIS enclosure, control building and the proposed screening/security wall, access points, and existing vegetation that must be removed. Additional detailed drawings are included that depict the required modifications at the existing Bridgeport Energy Switchyard, the existing Pequonnock Substation, and underground 115kV cable circuit routing.

C. Land Ownership

PSEG is partitioning its property in order to sell a portion to UI for the substation. Singer Substation will be located on the western portion of the newly subdivided Site No. 8. The site will encompass approximately 1.54 acres with frontage along Main Street. UI and PSEG have completed negotiations for the purchase of this property and have executed a Purchase and Sale Agreement. No additional private or public property beyond this 1.54 acre site will be required to construct and operate the new substation.

Modifications to the existing Bridgeport Energy Switchyard and the existing Pequonnock Substation will occur on property owned by Bridgeport Energy and UI, respectively.

UI is presently in negotiations with Bridgeport Energy to obtain a small easement along Bridgeport Energy's western-most property line for the underground 115kV cable circuit extending from Singer Substation to the Bridgeport Energy Substation.

No additional land acquisition will be required.

D. Public Roads and Lands

The Singer Substation site is bounded by public roads on three sides with frontage on Main Street on the west, Atlantic Street to the north and Henry Street to the south. These roads can be defined as city residential and secondary collector streets. All streets are paved with curb and gutter and are in good condition. Main Street experiences more daily traffic than the two adjacent streets.

No public lands are adjacent to the site. The nearest public land consists of the City of Bridgeport's Seaside Park, located approximately 1,500 feet (0.3 mile) south of the site on the shores of Long Island Sound.

E. Grading Plan

The Singer Substation site is located at an elevation of approximately 8-10 feet above sea level. Contour variation across the entire site is minimal, as the site was graded and leveled several years ago. The site was not developed subsequently. Contour intervals may vary by no more than a foot or two from west to east on the site. A Grading Plan is included in this D&M Plan that shows the existing and new contours on the site in one-foot contour intervals. The Grading Plan will be used in the development of a drainage plan for the site, along with the site's Erosion and Sediment Control Plan (see Appendix A).

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Modifications to the existing Pequonnock Substation will include a bay extension and cable terminations but existing grades should not require any alterations.

Modifications to the existing Bridgeport Energy Switchyard site will include cable terminations and all existing grades will be maintained.

F. Structure and Foundation Locations

The probable location and type of support structures and buildings and their corresponding foundations at the Singer Substation site, at the Bridgeport Energy Switchyard, and the Pequonnock Substation are shown on the General Arrangement Drawings included with this D&M Plan (see Appendix C). These drawings depict the site plans and cross-sections of the new substation and the modifications to the existing facilities. Detailed foundation plans for Singer Substation are also included in these drawings.

All transmission lines entering and exiting Singer Substation will be underground. Thus, the new substation will not contain any of the typical above ground transmission line conductor dead end (takeoff) structures when overhead transmission lines are used. The underground 345kV transmission lines will enter and exit the substation inside the substation's GIS enclosure. At Singer Substation, the two 115kV XLPE cable transmission lines to the Bridgeport Energy Switchyard and to the Pequonnock Substation will transition from underground to the 345/115kV autotransformers via separate outdoor, gas insulated cable termination facilities adjoining the autotransformers. These facilities will be located within the substation site and will be screened by the substation's architectural security wall.

Outdoor gas insulated cable termination facilities will be installed at the Bridgeport Energy Switchyard and at the Pequonnock Substation to accommodate the two new interconnecting underground 115kV XLPE cable transmission lines. At the Bridgeport Energy site, the termination facility will connect directly to the existing air insulated bus work. At Pequonnock Substation, in addition to the gas insulated cable termination facility, the work will include an air insulated breaker and a half bay extension with two circuit breakers, associated disconnect switches, bus, and support steel.

G. Access Points for Construction

Construction access to the Singer Substation site will extend south down Main Street from the major roadways and the interstate highway to the north. Once at the site, access points will be available from Atlantic Street and Henry Street.

Temporary construction roads across private property will not be required. Preliminary access points are shown on the drawings (see Appendix C).

For the required modification work at the Bridgeport Energy Switchyard and the Pequonnock Substation, existing public streets and private roads and driveways under the control of UI, Bridgeport Energy or PSEG will be used to gain access to each facility. Portions of the existing security fence will be removed to accommodate required modifications and will be replaced once construction is completed. Access to each of

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these facilities will be controlled by the controlling entity (UI, Bridgeport Energy or PSEG). Temporary security fencing will be installed and secured at the end of each work day.

H. Material Laydown Areas

The actual site for the Singer Substation will be too small to accommodate the required construction activities and provide suitable space for a materials laydown area. UI is in the process of negotiating the temporary use of the former Remington parking lot across Henry Street from the site. This site is paved, lighted, fenced, and presently not in use. UI intends to temporarily locate construction trailers, material storage trailers, and large pieces of material and equipment on that site.

I. Vegetation

Limits of Clearing - All vegetation will need to be removed at the Singer Substation site for construction. Approximately 6-8 large native deciduous trees are currently located on the site. Some are located along Main Street, while others are located along Henry Street. In addition, small ornamental vegetation can also be found within the new substation site boundaries. Woody vegetation on the site is sparse and of minimal quality.

Clearing will be accomplished by conventional methods, using a combination of chain saws, hand labor and mechanized equipment. Tree and stump removal will be similar to urban forestry techniques employed when a tree is removed from a property located within a city landscape. All materials will be removed from the site.

No trees outside of the substation site will require removal for construction or access during construction. Construction equipment and vehicles will not be parked within the drip line of trees near or adjacent to the final site.

Modifications at the existing Bridgeport Energy Switchyard and at the existing Pequonnock Substation will occur on property that has already been cleared of existing vegetation, except for possibly some small grassy areas. These grassy areas, if affected, will be restored after construction. No additional clearing of vegetation will be required to complete the proposed modifications.

J. Environmentally Sensitive Areas

There are no environmentally sensitive areas or features on the new Singer Substation site. Bridgeport Harbor is approximately 800 feet to the south of the site at its closest point and over 1,000 feet to the east, while Long Island Sound is approximately 2,700 feet (0.5 mile) south of the site. Existing residential and industrial land uses separate the substation site from these bodies of water. There are no areas of high erosion potential on or near the site, and no known locations of critical habitat or sites identified as having threatened, endangered or rare plant or animal species as listed by federal or state governments on or adjacent to the site.

Pequonnock Substation is approximately 60 feet from the banks of Bridgeport Harbor. As the facility is expanded to accommodate the required modifications, the potential for soil erosion into the harbor will require monitoring and control that will be in accordance with the Erosion and Sediment Control Plan (see Appendix A) developed for the project.

K. Existing Underground Utilities

Until such time as UI completes the purchase of the site from PSEG, accurate survey work to determine the existence of existing underground utilities cannot be completed. However, it is believed that no underground utilities currently exist on the site. Any that do remain will require removal.

The surrounding public streets contain several underground utilities that provide sewer, water and gas service to adjoining residential and industrial land uses. These utilities will not be disrupted by construction of the Singer Substation. In addition, a large natural gas pipeline is located in Atlantic Street that provides fuel to the Bridgeport Energy generating facility. This pipeline, and the other existing underground utilities, will not be impacted by construction of the substation, as none of the substation construction activities will extend out into any of the city streets.

L. Erosion and Sediment Control Plan

Erosion and sediment control measures to contain runoff at Singer Substation are depicted on the Erosion and Sediment Control Plan drawings (Appendix A). These drawings contain a narrative statement, a description of the anticipated construction phases, and detailed information on the location, type and design of erosion and sediment control measures that UI will employ during construction. Appendix D includes the erosion and sediment control plans for the construction of both 115kV circuits extending from Singer Substation to Bridgeport Energy Switchyard and Pequonnock Substation.

1. Singer Substation

Singer Substation will be located on land which was formerly comprised of residential housing. There is no known soil contamination on the site. Most of the excavated material will be trucked from the site to an approved land fill area. A smaller quantity of excavated soil may be used as back fill material if found to be acceptable. In the unlikely event that contaminated soil is encountered, excavated soils will be moved to the Soil Stockpile Area (SSA) which is designated on the drawing and where contaminated soil will be temporarily stored until it can be tested and disposed of at an approved facility. A silt fence will be constructed around the site and will be inspected on a daily basis, and repaired or replaced as necessary, until the site is surfaced with crushed stone. The silt fence shall remain until all earth work is complete.

Anti-tracking pads will be installed at both construction access ways. If dewatering is required, the discharge will be directed into a Temporary Sediment Basin which will be constructed and maintained on site. A General Dewatering Permit will be obtained from the City of Bridgeport, if required.

2. Bridgeport Energy

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Minimal excavation will take place at the Bridgeport Energy site. It is anticipated that drilled pier foundations will be utilized. This construction will generate a minimal amount of soil, which is expected to remain on site. An SSA has been designated to stockpile the soil temporarily until backfilling and final grading has been completed. Silt fencing will be installed around the western and northern fence line of the existing switchyard. The silt fence will protect the local street and the abutting property owner from construction run off. The silt fence will be inspected daily and maintained as required until the earthwork is complete and the switchyard is restored to its present condition.

Since the location of the work is within an existing fence line covered with crushed stone, anti-tracking pads will not be required for this site. No de-watering is anticipated for this work.

3. *Pequonnock Substation*

The construction work at Pequonnock Substation will be primarily at the northeast end of the facility. The construction area lies within 60 feet of Long Island Sound. Excavation for support steel and circuit breaker foundations is required. The soils removed during excavation will be stockpiled in the designated SSA shown on the drawings in Appendix A. These soils will be tested and disposed of at an approved facility.

Siltation fencing will be used to protect the harbor and the abutting property from construction run off. This fence will be inspected daily and repaired immediately, as necessary, and will be in place until the earthwork is complete and the crushed stone surfacing has been installed. A General Dewatering Permit will be obtained from the City of Bridgeport, if required.

4. *In Street Work*

During street excavation, haybales will be placed around storm drains and will remain in place until the adjacent trench work is completed and the disturbed areas are temporarily paved.

M. *Endangered Species, Critical Habitats*

There are no known locations or critical habitat or sites identified as having threatened, endangered or rare plant or animal species as listed by federal or state governments on or adjacent to the new substation site or at the two existing switchyard/substation facilities that will be modified.

N. *Underground Facilities*

As indicated earlier, no operating underground facilities are known to be located on the Singer Substation site. Utility laterals that may exist from previous land uses would no longer be providing service and will be removed if encountered during construction. Underground facilities in city streets will not be impacted by construction of the new substation. Procedures for crossing over or under such underground facilities by the Project transmission lines will be addressed in the Section 6, Paragraph N.

O. Construction and Rehabilitation

Construction procedures are summarized below for the GIS enclosure, control building, switchyards, and for the electrical connections at the new Singer Substation and at the Bridgeport Energy Switchyard and the Pequonnock Substation.

1. Razing – Certain existing structures and materials will require removal in order to construct and complete modifications at the Bridgeport Energy Switchyard and the Pequonnock Substation. Some materials and equipment will be reusable by UI, while remaining salvageable materials, along with debris and rubbish, will be promptly removed from the site by the construction contractor. The debris will be removed from the site to a state-approved area landfill.

No major items from the Bridgeport Energy Switchyard and the Pequonnock Substation will require removal and disposal. Possible items for razing and disposal from all three project sites could include the following:

- Chain link fencing.
- Broken concrete or asphalt.
- Miscellaneous pieces of structural steel.
- Miscellaneous conduit and cable.

During concrete removal, dust will be controlled by means of water spray, vacuum cleaners or other industry-accepted measures.

When flame cutting must be performed at the two existing substations, flame resistant blankets will be used to protect combustible materials and finished surfaces. Dry chemical fire extinguishers will be provided in these areas and workers will be trained to use them.

2. Earthwork – Earthwork will occur primarily at the Singer Substation site, with some trenching and foundation excavation required at the Bridgeport Energy Switchyard and the Pequonnock Substation. Trenching for the 115kV transmission line interconnections will occur in Water Street, the Bridgeport ferry access road, Main Street and Atlantic Street.

a. Site Preparation

Ground surfaces within the construction areas will be cleared of all debris, surface vegetation and paving. Material will be removed from the sites and disposed of at a state-approved landfill. Since the Singer Substation site is located in an urban, highly developed section of the City of Bridgeport, it is surrounded by city streets and sidewalks. These streets and sidewalks will remain open during construction. If earthwork requires cutting and removal of street or sidewalk pavement, the opening will be covered with steel plates to permit access and traffic flow, and such openings will be temporarily resurfaced until final finished paving can be accomplished. Appropriate signs, barricades, warning devices, and temporary sidewalks will be used on streets and sidewalks if construction and/or construction equipment encroaches on these public rights-

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of-way. If temporary lane or sidewalk closures are required, such closures will be coordinated with and approved by City of Bridgeport officials before closures are instituted.

b. Excavation and Backfilling

Excavation will be required for grounding, conduit, building and equipment foundations, and duct bank and conduit trenches. Mechanical equipment will be used for excavating. Stability will be provided by sheeting, shoring and bracing techniques. All excavations will be kept dry through the use of appropriate dewatering equipment and temporary surface diversions to prevent surface water and runoff from entering excavations. Surface water flow will be diverted away from Bridgeport Harbor.

Earth fill will be required as backfill for foundations and trenches. Materials from site excavations will be used as fill when possible. Compacted rock and clean natural sand may also be used as fill. Crushed rock and sand, when used as fill, will be mechanically compacted. At the new transformer and shunt reactor locations at Singer Substation, equipment oil spillage and leakage will be contained in an open basin.

Compacted sand embedment will be used as fill in excavated trenches for conduit and pipe. It is typically spread on the trench bottom, and compacted by vibration after conduit or pipe installation. Deposition and compaction will be performed in a manner to prevent lateral displacement of the pipe or conduit. Backfill will consist of excavated materials from the site or be furnished by the construction contractor.

Trenches for duct banks will be excavated in such a manner to permit the duct bank to rest on undisturbed earth.

It is not expected that blasting will be required for excavations.

c. Final Grading

All ground surface areas disturbed by construction activities will be graded after all construction work has been completed. Final grading will leave the surface matching the contours and elevations of the original undisturbed ground surface except when modifications are required by the individual site plan. The graded surface will be smooth and uniform and have effective drainage.

If, during construction, pavement, curbs, gutters, and sidewalks are damaged or require cutting or removal, they will be repaired, replaced and/or resurfaced to match the existing surfaces. They will be finished flush with the adjoining pavement. If fills, embankments and backfills settle or erode before construction is complete, such areas will be repaired, filled, compacted and/or graded to meet the original project specifications.

d. Disposal of Non-Contaminated Soil

Excess non contaminated soils, not suitable for re-use during construction, will be temporarily stockpiled off-site and later removed. Soil piles will be protected from wind and water erosion by such means as hay bales, silt fences, and/or temporary diversion runoff channels.

e. Dust Control

Control of fugitive dust during construction will be the responsibility of the construction contractors. On-site movement of equipment and vehicles will be restricted to predetermined routes where possible. Dust suppression may use water, calcium chloride or a temporary crushed stone cover. Dust control of earthen stockpiles will use water spray, a crusting agent, or a material covering, whichever is most feasible and effective given the size and location of the stockpile.

f. Sedimentation and Erosion Control

Soil erosion and sediment control during construction activities will be consistent with State of Connecticut Guidelines for Soil Erosion and Sediment Control, 2002. Specific erosion control measures are defined on the Erosion and Sediment Control Plan drawings in Appendices A and D.

Of primary concern will be the construction activities at UI's existing Pequonnock Substation. As this facility is located approximately 60 feet from the western bank of Bridgeport Harbor, UI and its construction contractors will implement and enforce strict erosion control procedures for work at this site. Land disturbance will be kept to a minimum. Disturbed areas will be stabilized as soon as possible. Given the flat character of the existing substation terrain, runoff volume and velocity is expected to be minimal. Nevertheless, sediment barriers such as straw or hay bales or fabric filter fences will be installed between the substation modification work area and the bank of the harbor to intercept and retain any sediment before it enters the harbor.

At Pequonnock Substation, one sediment barrier will encompass the construction activities. A second sediment barrier will be installed approximately five feet from the shore line. Straw or hay bales will be placed in a single row, lengthwise, with the ends of the adjacent bales tightly abutting one another. Bales will be either wire-bound or string-tied around the sides rather than along the tops and bottoms to prevent deterioration of the bindings. Each bale will be securely anchored by at least two stakes or rebar driven through the bale into the ground. Any gaps remaining between the secured bales will be filled in by wedging loose straw in the gaps. Straw or hay bales that are used during construction will be replaced with new bales every 60 days.

If a sediment filter fence is used (at the discretion of the contractor), it will consist of burlap or a synthetic filter fabric that consists of a pervious sheet of propylene, nylon, polyester, or ethylene filaments. The fence will be anchored to the ground with wood or metal stakes placed a maximum of 8 feet apart. The fabric fence

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will not exceed 36 inches in height and will have a minimum 6-inch overlap at all joints. Fabric filter barriers will be inspected immediately after each rainfall event, and at least daily during prolonged rainfall. Decomposed or ineffective fabric will be replaced immediately. Sediment buildup which reaches one-half the height of the barrier will be removed, and the fabric fence at that location will be replaced.

3. Foundations – Foundations at the Singer Substation and at the two existing switchyard/substations will be drilled piers, spread footing or mat type foundations. If drilled pier holes are unstable, steel casings may be employed to stabilize sides. Installation will occur immediately after the auger is withdrawn, and casings will be removed using a vibratory extractor while concrete is being placed.

The foundation for the GIS enclosure at the Singer Substation will be excavated with a backhoe. Sheet piling and shoring will be used to stabilize the sides of the foundation trench. Forms will be constructed on-site, incorporating rebar, followed by concrete installation.

Ready mix concrete will be placed in the pier holes on the same date that the holes are drilled. It will be delivered by truck to each substation site. For the GIS enclosure foundation, concrete will be poured once all the forms and rebar have been installed. The concrete will be delivered to the Singer Substation by truck, with numerous deliveries being required for the building foundation.

4. Below Grade Facilities – At the Singer Substation, Bridgeport Energy, and Pequonnock sites, below grade facilities will consist of the grounding grid (grounding conductors and rods), PVC conduit, and the 115kV duct bank for the interconnections to the Bridgeport Energy Switchyard and the Pequonnock Substation. The proposed underground 345kV transmission lines will enter the substation in the GIS enclosure, requiring that the necessary concrete duct bank be installed beneath the building. Methods used for excavation, embedment and backfill for such below grade facilities are discussed above.

5. Crushed Rock Surfacing – The Singer Substation site will be covered with a 6-inch layer of crushed rock. As required, additional crushed rock will be added to the expanded areas of the Bridgeport Energy Switchyard and the Pequonnock Substation as part of the modification construction.

The surfacing will consist of crushed rock uniformly graded from ¾ inch to crusher fines having a total compacted thickness of 6 inches. Compaction will be accomplished by at least two passes of road type vibratory compactor or pneumatic-tired roller.

After subgrade preparation, but prior to application of the crushed rock, the entire area to be surfaced at each substation site will be treated with a weed inhibitor. A licensed applicator will complete this work task. Inhibitors will be approved by UI and application will be restricted to times when conditions will not cause drifting to areas that are not to be treated or are off-site.

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6. Fencing and Perimeter Wall – The Singer Substation will have an architectural wall along Main Street, and for approximately 130 feet along Henry and Atlantic Streets. The architectural wall will provide site security and a visual and noise screen to nearby residents, workers and passing motorists. The wall will be made of precast concrete. An Exterior Insulated Finishing System (EIFS) will be installed on the precast panels. The wall will measure from 35 to 40 feet in height. The outside wall of the GIS enclosure and control building will serve as a portion of the security wall for the substation. Two coats of a weatherproofing and graffiti resistant sealer will be applied to all exposed exterior surfaces of precast members after caulking, sealing, repair work, and final cleaning are completed. The remainder of the property will be enclosed by 14 feet high chain link fencing including 3 strands of barb wire. Two gates, measuring approximately 20 feet in width, will be installed at opposite ends of the substation. Each gate will also be constructed of chain link fence. The construction of the Singer Substation wall, gates and fencing is described on the attached drawings, located in Appendices B and C. The City of Bridgeport has reviewed and commented on the preliminary wall treatments. These comments will be incorporated in the final design.

Fencing at the Bridgeport Energy Switchyard and at the Pequonnock Substation consists of an 8-foot chain link security fence with three strands of barbed wire at the top. The west side of the Bridgeport Energy Switchyard parallel to the property line has a 14-foot chain link security fence. For the required modifications at each substation, the existing fence will be removed as needed to allow for the planned modifications of each yard. Temporary fencing will be installed and secured at the end of each work day. Upon completion of the substation modification work, a permanent chain link security fence with three strands of barbed wire at the top will be installed to match the existing fence. Access to the two existing substations will use existing gates.

7. Buildings – A new GIS enclosure will be constructed at the Singer Substation. A control building will be constructed at one end of the GIS enclosure. The GIS enclosure will be a structure measuring approximately 75 feet by 309 feet. The control building, measuring approximately 65 feet by 35 feet, will be a single story structure (see Appendix C).

The GIS enclosure will consist of a cast-in-place concrete floor and precast concrete wall panels. All four walls will have sound reduction capabilities. The wall adjacent to major electrical equipment will be fire-rated. The roof will be basically flat, with a slight pitch for drainage. The roof system may consist of an insulated metal roof deck, with flashings and aluminum gutters and downspouts. The GIS enclosure will be windowless, and have equipment access doors at the ends.

All required electrical equipment, heating, ventilating, and air conditioning equipment will be installed once the GIS enclosure and Control Building are weather tight. Metal doors and frames (interior and exterior) will be painted consistent with the color depicted in the Architects renderings.

Construction of the Singer Substation GIS enclosure is described on the attached drawings for the substation shown in Appendices B and C.

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Modifications to the Bridgeport Energy Switchyard and the Pequonnock Substation will not require physical changes to the exterior of the existing control/switchgear buildings. Any changes that do occur will be to equipment inside each building.

8. Switchyard Structures, Bus and Equipment – The majority of the substation switchyard components will be housed inside the GIS enclosure at the Singer Substation, while additions and modifications will be made to the existing outdoor facilities at the Bridgeport Energy Switchyard and to the existing Pequonnock Substation.

As previously indicated, once the GIS enclosure is weather tight, the gas insulated switchgear (GIS) equipment will be installed. The GIS equipment will be anchored to the building floor. Control and power cabling will be installed between the indoor GIS equipment and the control building. Outside of the GIS enclosure, after underground facilities and foundations are installed, the two 345/115kV autotransformers and the four shunt reactors will be installed, along with bus duct connecting the autotransformers and shunt reactors to the indoor GIS equipment. Cable termination facilities for the two underground 115kV transmission lines to the Pequonnock Substation and to the Bridgeport Energy Switchyard will be constructed adjacent to the autotransformers. A spare 345kV autotransformer and spare 345kV shunt reactor will be located on the Singer Substation site.

At the Bridgeport Energy Switchyard and the Pequonnock Substation, modifications will be made to the existing buswork at the Bridgeport Energy Switchyard and two circuit breakers, associated switches, and other equipment will be added at the Pequonnock Substation.

9. Transformer Oil Containment – The two 345/115kV autotransformers to be installed at the Singer Substation will be surrounded by oil containment basins. Likewise, the four 345kV shunt reactors will also be constructed with oil containment basins around them. The purpose of these basins will be to collect and contain transformer/shunt reactor oil that may spill as a result of equipment failure. Each basin is designed to contain all of the oil for the equipment installed within that basin, plus a 10 percent safety margin. Oil containment basins will be constructed of concrete, with sumps, monitors, level alarms, and pumps located in each basin to remove excess rain water when no oil is present. UI personnel will periodically perform a visual inspection of each containment basin to determine the presence of oil. If oil is present, it will be pumped through an oil/water separator before the water is discharged. Oil will be removed by a contractor and disposed of according to state and federal regulations.

The location and construction of each oil containment basin is shown on drawings that are included in Appendix C.

10. Landscaping – UI has consulted with the City of Bridgeport regarding landscaping treatments. A mix of coniferous and deciduous trees along with ornamental shrubbery will be planted at selected locations outside of the perimeter wall. Trees will be spaced according to the final landscaping plan. Planting will occur after construction is complete during the next appropriate planting season (spring or fall).

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No additional landscaping will occur at the existing Bridgeport Energy Switchyard or the existing Pequonnock Substation.

P. Worksite Health and Safety Plan

All contractors will be required to submit a "Worksite Health and Safety Plan" for UI's review and approval prior to commencing work.

Q. Maintenance

After construction, UI will implement its standard Operations/Maintenance Program for substations. The Singer and Pequonnock Substations will be periodically inspected for weed control and rodent damage to equipment. Transformer oil containment basins will be inspected monthly and cleaned twice a year, and pavement will be swept on an as-needed basis. Snow will be removed from sidewalks and driveways as needed. Debris will be removed from the substation yards during inspections. Planted landscape materials and ground cover will be watered, if needed. Dead plantings will be replaced during the next appropriate growing season.

Bridgeport Energy will be responsible for maintenance at the Bridgeport Energy Switchyard.

R. Site Security

Each site will have a permanent security fence totally enclosing the area under construction. The Singer Substation site already has an 8-foot chain link fence surrounding the site, and the Bridgeport Energy Switchyard and Pequonnock Substation have permanent security fencing in place. All gates, existing and proposed, will be lockable until the final security wall with lockable gates is constructed.

During construction, all gates will remain locked during construction activities and will also be locked at the end of each workday. UI and its construction contractors will have the only keys to the gates at the Singer Substation site and at Pequonnock Substation, while Bridgeport Energy will also have a set of keys for gates at its Bridgeport Energy Switchyard. Bridgeport Energy will have responsibility for site security at their Bridgeport Energy facility and UI will have responsibility for site security at its existing Pequonnock Substation. The construction contractor will be responsible for site security at Singer Substation until the contractor turns the completed facility over to UI.

S. Permits

Additional permits required for the construction of Singer Substation, modifications to the Bridgeport Energy Switchyard and Pequonnock Substation, and underground 115kV cable circuit interconnections include:

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- Coastal Management Approval
- Building Permit for the Control Building of Singer Substation
- Local Excavation Permit for the 115kV Interconnections
- Curb Cut / Sidewalk Permit

In addition to the above, a General Permit for dewatering activities at the Singer Substation site may be required.

T. Procedures for Notices and Reports - The procedure governing notices of the beginning and completion of construction activities, and of any changes in the D&M Plan during construction activities, will be as follows:

- 1. Advance Notice on Construction Activities** – UI will provide the CSC, in writing, with a minimum of two weeks advance notice of the beginning of construction activities at the Singer Substation site and at the Bridgeport Energy Switchyard and at the Pequonnock Substation.
- 2. Municipal Notification** – UI will provide the City of Bridgeport, in writing, with a minimum of two weeks advance notice of the beginning of construction activities at the three switchyard/substation areas.
- 3. Landowner Notification** – UI will notify each adjoining landowner, in writing, with a minimum of two weeks advance notice of the beginning of construction activities at the Singer Substation site.
- 4. Notice of Completion** – UI will provide the CSC with written notice of completion of construction activities as the work at each switchyard/substation is completed.
- 5. Modifications to D&M Plan** – If any significant changes to the D&M Plan are required, UI will submit proposed changes to the CSC in writing. Upon Council approval of any such changes, UI will undertake actions to implement these changes. If any changes to the D&M Plan are required which are deemed by UI not to be significant, UI will notify the Council either by telephone or in writing of those changes and will undertake actions to implement these changes following such notification.
- 6. Quarterly Progress Reports** – UI will submit to the CSC quarterly progress reports concerning the construction phase at each switchyard/substation. Any changes and deviations from the approved D&M Plan will be included in the quarterly progress reports.
- 7. Final Report** – UI will provide the CSC with a final report for UI's substation construction phase of the Project after completion of all construction activities at each of the substation construction sites. The final report will include any significant changes to the D&M Plan that were required during the course of construction. It will also provide the final cost of substation construction and modifications at the Bridgeport Energy Switchyard, the Pequonnock Substation, and the 115kV Generation Interconnection for the Project.

SECTION 6 115kV TRANSMISSION LINE INTERCONNECTIONS

A. Introduction

The UI portion of the Middletown-Norwalk Project includes the construction of two 115kV transmission lines (circuits) that will interconnect the new Singer Substation with the Bridgeport Energy Switchyard and with UI's Pequonnock Substation in the City of Bridgeport. Each circuit will be placed underground, with lengths of approximately 900 route feet from the new Singer Substation to the Bridgeport Energy Switchyard and approximately 2,300 route feet from the new Singer Substation to the Pequonnock Substation. The circuit from the new Singer Substation to the Bridgeport Energy Switchyard will be mostly located on Bridgeport Energy property however it will cross Atlantic Street and enter the Singer Substation Site. The circuit from Singer Substation to the Pequonnock Substation will be located in public road right-of-way and on UI property.

B. Transmission Line Requirements

The two circuits will consist of XLPE insulated cables. Each cable will measure approximately 4 inches in diameter and will be placed in PVC conduit that will be encased in a concrete duct bank. Each concrete duct bank will be approximately 48 inches wide and 42 inches high. It will contain a minimum of twelve (12) PVC conduits, each being approximately 6 inches in diameter, and three (3) conduits 2 inches in diameter. Additionally, PVC conduits 4 inches in diameter will extend to Pequonnock Substation for station service cables. Depths will vary depending on topography and underground utilities or obstructions. Typically, the distance from the top of the duct bank to the surface will be a minimum of 30 inches. Typical cross-sections of the circuits appear in Appendix D.

The Pequonnock circuit will require one underground splicing chamber for cable pulling and splicing. Splicing chambers typically measure approximately 9 feet wide by 40 feet long by 8 feet high, and will be constructed of precast concrete panels and sections, or it will be cast-in-place.

C. Special Construction Schedule Coordination

No special construction schedule coordination, other than switchyard/substation outage requirements to accommodate the addition of the proposed 115kV facilities, is anticipated for construction and operation of the two circuits.

D. Communication System

Fiber optic communication cable will be included in the duct bank system of the two 115kV circuits.

E. Temperature Monitoring System

The two circuits will have a cable temperature monitoring system.

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F. Access Roads

The two circuits will not require any new access roads. Construction access will utilize city streets and existing private drives and lanes owned by or under the control of Bridgeport Energy, PSEG and UI.

G. Vehicular Parking

Construction workers involved with the installation of the two circuits will park personal and company vehicles at the Singer Substation site or at its nearby staging yard.

H. Land Requirements

UI is franchised to locate its electric facilities in public streets therefore no land must be acquired for the portion of these circuits which travel along the City streets. UI is presently negotiating with Bridgeport Energy and PSEG to acquire easement rights for the limited amount of the circuits that traverse their properties.

I. Proposed Rights-of-Way

For the two circuits, a 40-foot easement will also be required for installation and maintenance when on private property.

J. Clearing

No vegetation removal will be required for the circuit from Singer Substation to the Pequonnock Substation. However, minimal removal and replacement of small trees will be required from the Singer Substation to the Bridgeport Energy Switchyard.

K. Wetlands, Rivers, and Streams

Approximately 800 circuit feet along the route from Singer Substation to Pequonnock Substation will be located in the Coastal Management Zone, while approximately 100 circuit feet along the route from Singer Substation to the Bridgeport Energy Switchyard will fall within the designated Coastal Management Zone.

L. Below Grade Facilities

Below grade facilities for the circuits will consist of a concrete-encased duct bank for the 115kV XLPE cable systems. The Singer Substation to the Pequonnock Substation circuit only will require one below ground splicing chamber. Once the duct bank is installed, the 115kV XLPE cables will be pulled through the PVC conduits and will be spliced together within the splicing chamber. Fiber optic facilities embedded in the cable for temperature monitoring purposes will also be spliced within the 115kV XLPE cable splicing chamber. The 15kV electric conductors used for AC station service supply to Singer Substation and fiber optic cable used for Protection & Control and communication will be routed around the exterior of the 115kV cable splicing chamber.

M. Cable System Installation

1. Receiving and Handling - The XLPE cable will most likely be delivered to the project area by truck. However, given the project area's proximity to port facilities, cable may be delivered to the area by ship, and then by truck to a materials storage yard. Once in the project area, it will be received, thoroughly inspected, unloaded, and properly stored. The cable will be shipped on sealed reels, with the ends of each cable sealed by the manufacturer to protect the cable from the elements. Cable storage will likely be at a nearby temporary marshalling yard. Cable reels will be unloaded by boom trucks. Reels will not be rolled down skids, runways, or along the pavement.

2. Pulling Apparatus - The cable will be pulled through the PVC conduit in the concrete-encased duct bank. At the splicing chamber, feed-in tubes will be used to ensure that the cable is properly fed into the duct bank. The following equipment will be used for all cable pulling operations:

- A variable speed pulling winch with at least a 50,000 pound pulling capacity at speeds of 10 to 30 feet per minute.
- An accurately calibrated dynamometer with the capability to indicate tension up to 50,000 pounds and to chart recording of pulling tension with respect to length pulled.
- Reliable radio and/or telephone communications between all strategic pulling positions.
- A pulling rope of strength compatible with the winch capabilities and of a size and stranding to securely pull each XLPE cable. The rope will have a minimum diameter of one inch and will be kept clean and dry at all times.
- An accurate footage indicator.
- Guide troughs, guide reels and rollers, and feed-in tubes necessary to feed the cable directly into each PVC conduit within the duct bank.
- Sufficient caps to enclose cable ends at the end of each work day in each splicing chamber and at the terminations.
- A suitable pulling yoke for the XLPE cable.

3. Cable Pulling - The XLPE cable will be installed only during clear and unthreatening weather. A single reel of cable will be set in such a manner to allow for feeding the cable into the PVC conduit with a minimum of cable bending. While the XLPE cable is sealed during the manufacturing process, the cable and pulling apparatus will be protected from wind driven rain. Cable will be pulled in specified directions only.

UI and the contractor will jointly determine cable pulling locations relative to splicing chambers and the terminal locations. During pulling, the cable will not be allowed to touch the ground or form loops having a radius of less than 20 times cable outside diameter. A braking device at each reel will control cable slack during pulling. Adequate ventilation will be provided at the splicing chamber to avoid dangerous gases. The pulling winch operator will be in direct and continuous communications with inspectors as the cable is unreeled. Once the cable installation is started, it will proceed without interruption until the installation is complete for that section of duct bank.

4. Cable Joining - Cable joining, or splicing, will be performed only in a splicing chamber. The chamber will have sealed splash rings installed along with a waterproof shelter over the openings in the chamber roof during cable joining. Carbon dioxide type fire extinguishers and adequate lighting will be provided in the chamber and shelter. The chamber will be checked for dangerous gas levels just before personnel are permitted to enter, and will be checked continuously while work is being performed. The contractor will have a suitable safety program in force relative to asphyxiation. In addition, emergency resuscitation facilities and equipment will be provided near the chamber.

All splices will be made by at least two experienced workers (cable-splicers) in strict accordance with the cable manufacturer's instructions, specifications, and drawings.

5. Cable Terminations - The 115kV cable will be terminated at the 115kV GIS equipment and cable termination facilities located at the Singer Substation, Pequonnock Substation, and Bridgeport Energy Switchyard. Weatherproof shelters will be necessary during termination activities. Work areas and shelters will be adequately lighted and carbon dioxide type fire extinguishers will be required at each termination work site. Once the temporary cable cap is removed from the end of the cable, terminator installation will proceed to completion without interruption. All terminations will be installed in strict accordance with the manufacturer's instructions, specifications and drawings.

N. Underground Facilities Crossings

The two underground 115kV transmission lines will cross existing underground facilities, such as natural gas pipelines, sanitary and storm sewers, water lines, laterals to residences and businesses for these services, cable television, telephone lines, etc. Prior to scheduling any excavation activities "Call Before You Dig" will be contacted to perform a survey of the existing underground facilities in a particular area. The existing underground facilities will be located, identified, and flagged before construction excavation commences. While mechanical trench excavation is proposed, hand excavation will occur when within 24 inches of any underground facility. A 12-inch minimum clearance will be maintained from the outside of the concrete duct bank to the outside of the existing underground facility. If such a clearance cannot be maintained, other measures will be employed to ensure there is adequate protection between the existing underground facility and the 115kV underground transmission lines.

**SECTION 7
PROJECT SCHEDULE**

The proposed project schedule follows.

Singer Substation Construction Schedule

ID	Task Name	Duration	Start	Finish	2006												2007												2008								
					M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J						
1	Singer Substation Construction	510 days	6/20/06	6/2/08																																	
2	Contractor Mobilize	17 days	6/20/06	7/12/06																																	
3	Substation Construction	486 days	7/13/06	5/22/08																																	
4	Site Preparation & Grading	10 days	7/13/06	7/26/06																																	
5	Foundation Installation	128 days	7/27/06	1/22/07																																	
6	Singer Building Erection	100 days	1/23/07	6/11/07																																	
7	Equipment Installation	185 days	6/12/07	2/25/08																																	
8	Testing and Check Out	63 days	2/26/08	5/22/08																																	
9	Underground 115kV XLPE Installation	204 days	6/12/07	3/21/08																																	
10	Ductbank Installation	120 days	6/12/07	11/26/07																																	
11	Cable Installation	44 days	11/27/07	1/25/08																																	
12	Testing and Check Out	40 days	1/28/08	3/21/08																																	
13	Energize Substation	7 days	5/23/08	6/2/08																																	

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**SECTION 8
APPENDICES**

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APPENDIX A

EROSION AND SEDIMENT CONTROL PLAN

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APPENDIX A TABLE OF CONTENTS DRAWINGS

SINGER SUBSTATION

<u>Drawing No.</u>	<u>Drawing Title</u>
25251-530	Singer Substation Soil Erosion and Sediment Control Plan
25251-531	Singer Substation Soil Erosion and Sediment Control Details

PEQUONNOCK SUBSTATION

<u>Drawing No.</u>	<u>Drawing Title</u>
25247-800	Pequonnock Substation Soil Erosion and Sediment Control Plan
25247-801	Pequonnock Substation Soil Erosion and Sediment Control Details

BRIDGEPORT ENERGY SWITCHYARD

<u>Drawing No.</u>	<u>Drawing Title</u>
25250-800	Bridgeport Energy Switchyard Soil Erosion and Sediment Control Plan
25250-801	Bridgeport Energy Switchyard Soil Erosion and Sediment Control Details

PROJECT NO. 136745
BLACK & VEATCH

CHECKED	No	Date	Revision
APPROVED	04-20-05	INITIAL ISSUE	
DESIGNED			
DRAWN			

Drawn	By	Chkd.	Engr.	Supv.	Chkd.	Supv.	Design	Engr.	Design	Supv.
Date	CC	ACM								
Scale: 1"=40'-0"										

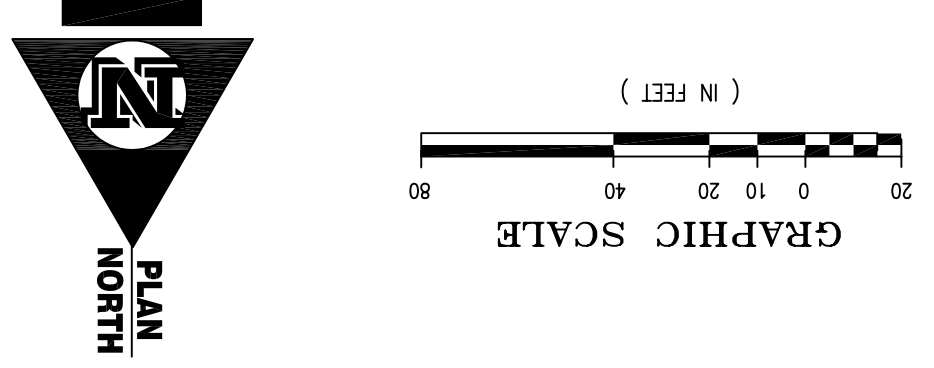
The United Illuminating Company
 157 Church St. New Haven, Ct. 06506

**SINGER SUBSTATION
 SOIL EROSION AND SEDIMENT
 CONTROL PLAN**

CAD FILE NAME
 SEQUENCE NO.
 DRAWING NUMBER 25251-530

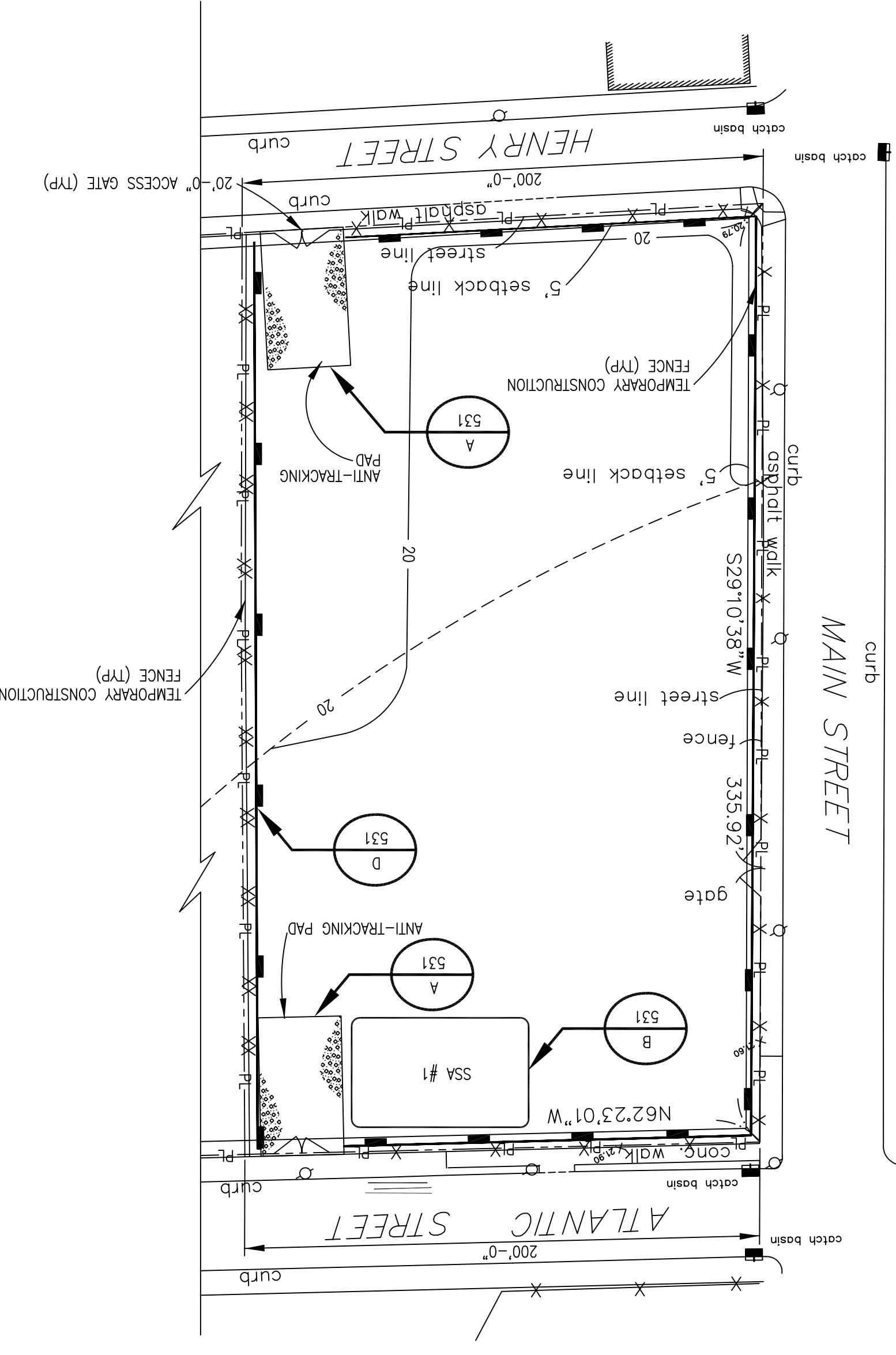
CLARENCE BLAIR ASSOCIATES INC. DWG 04-171, DATED 11-29-2004

PRELIMINARY
 NOT TO BE USED FOR CONSTRUCTION



LEGEND:

EXISTING CONTOURS	--- 20 ---
NEW CONTOURS	— 20 —
TEMPORARY SILTATION FENCE	— X — X —
EXISTING FENCE	- - - X - - -
TEMPORARY CONSTRUCTION FENCE	- - - XX - - -
PROPERTY LINE	— PL —
EXCESS SOIL STOCKPILE AREA	SSA #1



- EROSION CONTROL NOTES**
1. ALL UTILITIES ARE APPROXIMATE. CONTRACTOR TO VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION. CONTACT "CALL-BEFORE-YOU-DIG" AT 1-800-922-4455 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION.
 2. THE INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL MEASURES WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 3. THE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION, DEP BULLETIN 34, SHALL BE USED FOR INSTALLING AND MAINTAINING ALL EROSION CONTROL MEASURES. THE CONTRACTOR SHALL INSTALL ADDITIONAL MEASURES AS NECESSARY IF DIRECTED BY THE REMEDIATION ENGINEER OR THE CITY OF BRIDGEPORT STAFF.

- CONSTRUCTION SEQUENCE**
1. OBTAIN ANY REQUIRED PERMITS.
 2. CLEAR VEGETATION IN THE AREA OF CONSTRUCTION. INSTALL ANTI-TRACKING PAD AND SEDIMENT FENCE AT LOCATIONS SHOWN PRIOR TO COMMENCEMENT OF ANY EXCAVATION OPERATIONS. THE REMEDIATION ENGINEER SHALL VERIFY THE PROPER LOCATION AND INSTALLATION OF ALL EROSION CONTROL MEASURES.
 3. PROPERLY DISPOSE OF ALL VEGETATION.
 4. PLACE AND COMPACT FILL UP TO WITHIN 6" OF THE ORIGINAL EXISTING GRADE.
 5. PLACE A 6" COURSE OF COARSE GRAVEL OR CRUSHED STONE.
 6. AFTER ALL AREAS HAVE BEEN PERMANENTLY RESTORED TO EXISTING CONDITIONS, REMOVE EROSION CONTROL MEASURES.

NARRATIVE

ALL DISTURBED AREAS SHALL BE COVERED WITH A MINIMUM OF 6" OF COARSE GRAVEL OR CRUSHED STONE AND RESTORED TO MATCH EXISTING CONDITIONS. AN ANTI-TRACKING PAD WILL BE INSTALLED AT THE EXIT FROM THE PORTION OF THE SITE PRIOR TO ALL EXCAVATIONS. SILTATION FENCE WILL BE INSTALLED AROUND THE SITE PRIOR TO ANY EXCAVATION OPERATIONS AND WILL BE MAINTAINED UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY RESTORED. THE REMEDIATION ENGINEER SHALL VERIFY THE PROPER LOCATION AND INSTALLATION OF ALL EROSION CONTROL MEASURES.

ALL SOILS REMOVED SHALL BE EITHER PUT DIRECTLY INTO TRUCKS AND SHIPPED OFF SITE OR STORED WITHIN A CONSTRUCTED SOIL STOCKPILE AREA (SSA) AS INDICATED ON THIS PLAN. SSAs SHALL BE KEPT COVERED AT ALL TIMES EXCEPT WHEN SOIL IS BEING ADDED OR REMOVED. THE TOP LAYER SHALL PREVENT PRECIPITATION FROM CONTACTING CONTAMINATED SOILS AND SHALL BE SECURED TO PREVENT IT FROM BEING DISLOADED BY WIND. SOILS POTENTIALLY TO BE REUSED AS BACKFILL AFTER CHARACTERIZATION TESTING SHALL BE STORED IN SEPARATE SSAs.

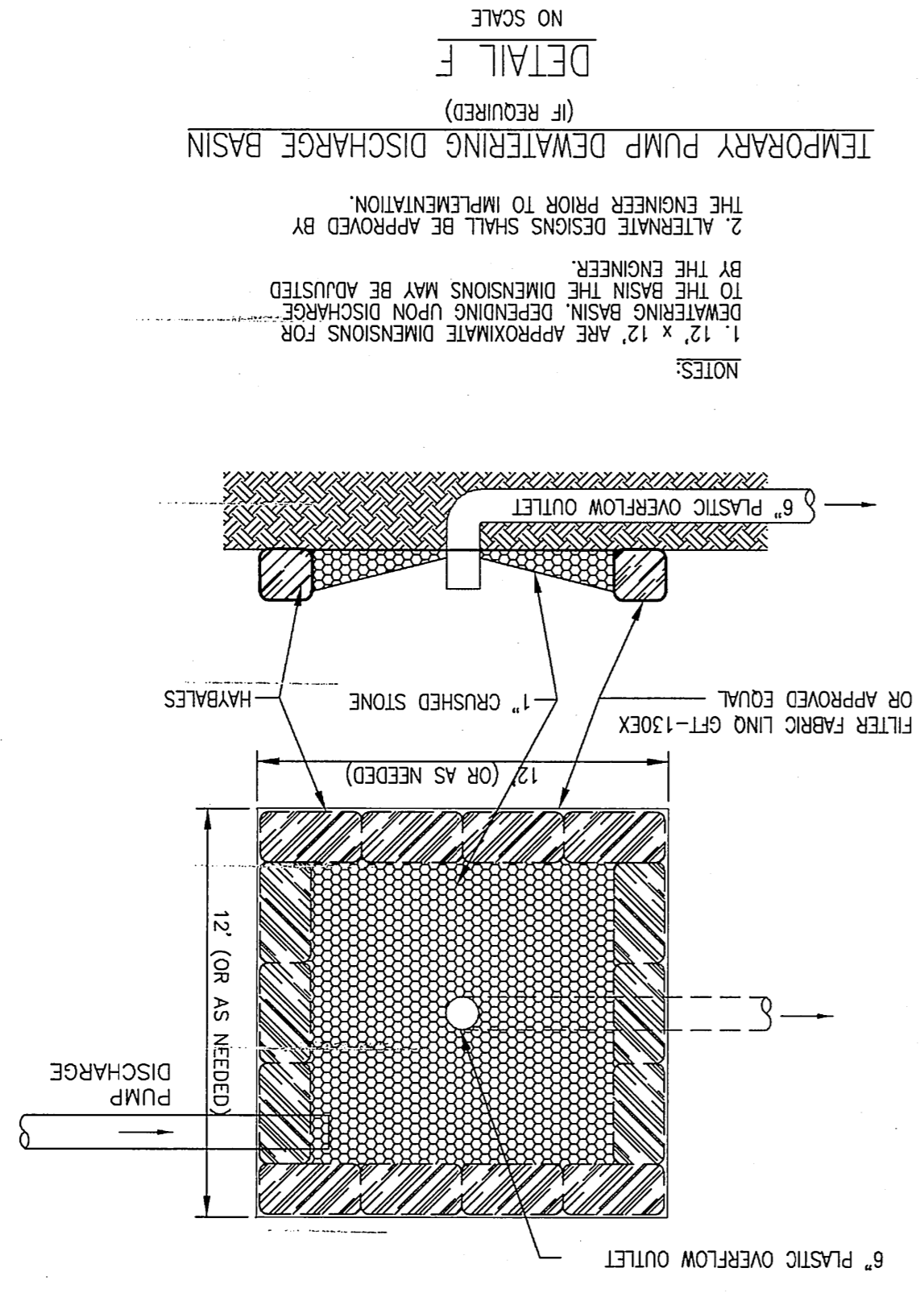
- NOTES**
1. ELEVATIONS BASED ON BRIDGEPORT MUNICIPAL DATUM.
 2. REFER TO DRAWING 25251-531 FOR SOIL EROSION AND SEDIMENT CONTROL DETAILS.

No.	Date	Revision	By	Chkd.	Engr.	Supv.	Chkd.	Design Engr.	Design Supv.
0	04-20-05	INITIAL ISSUE							

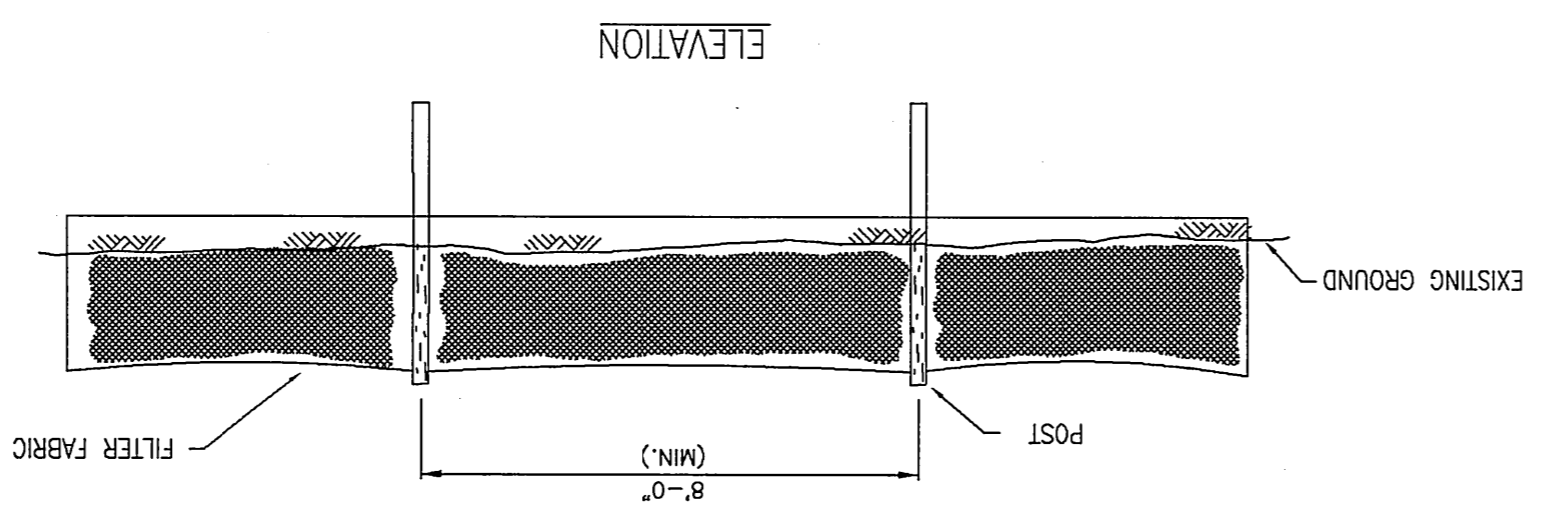
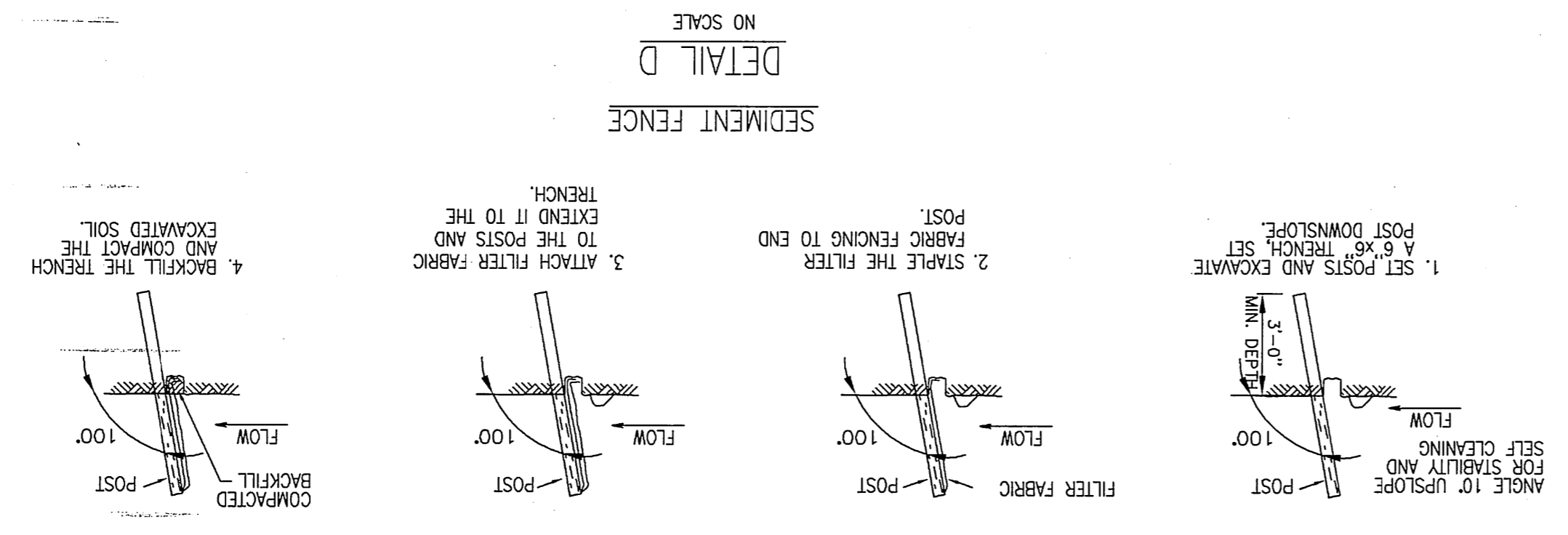
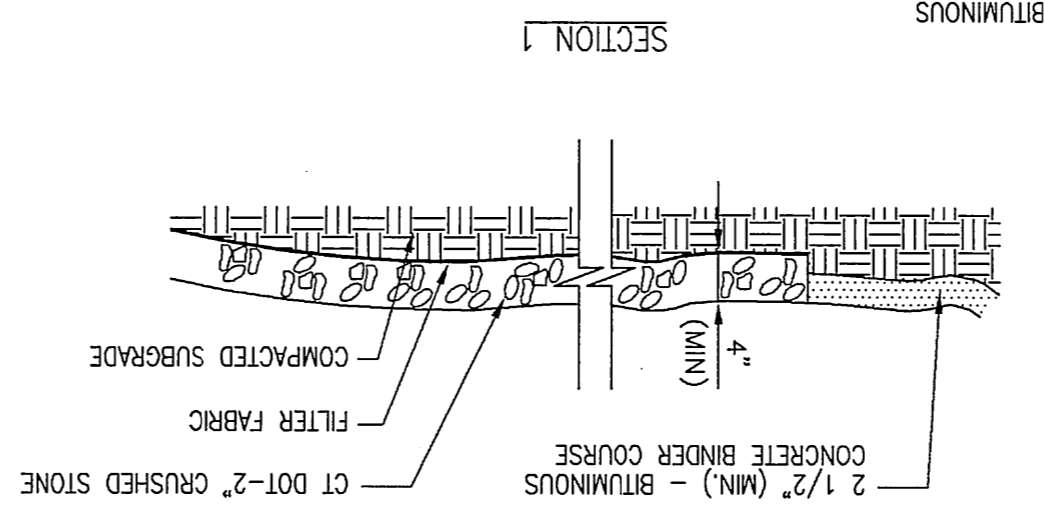
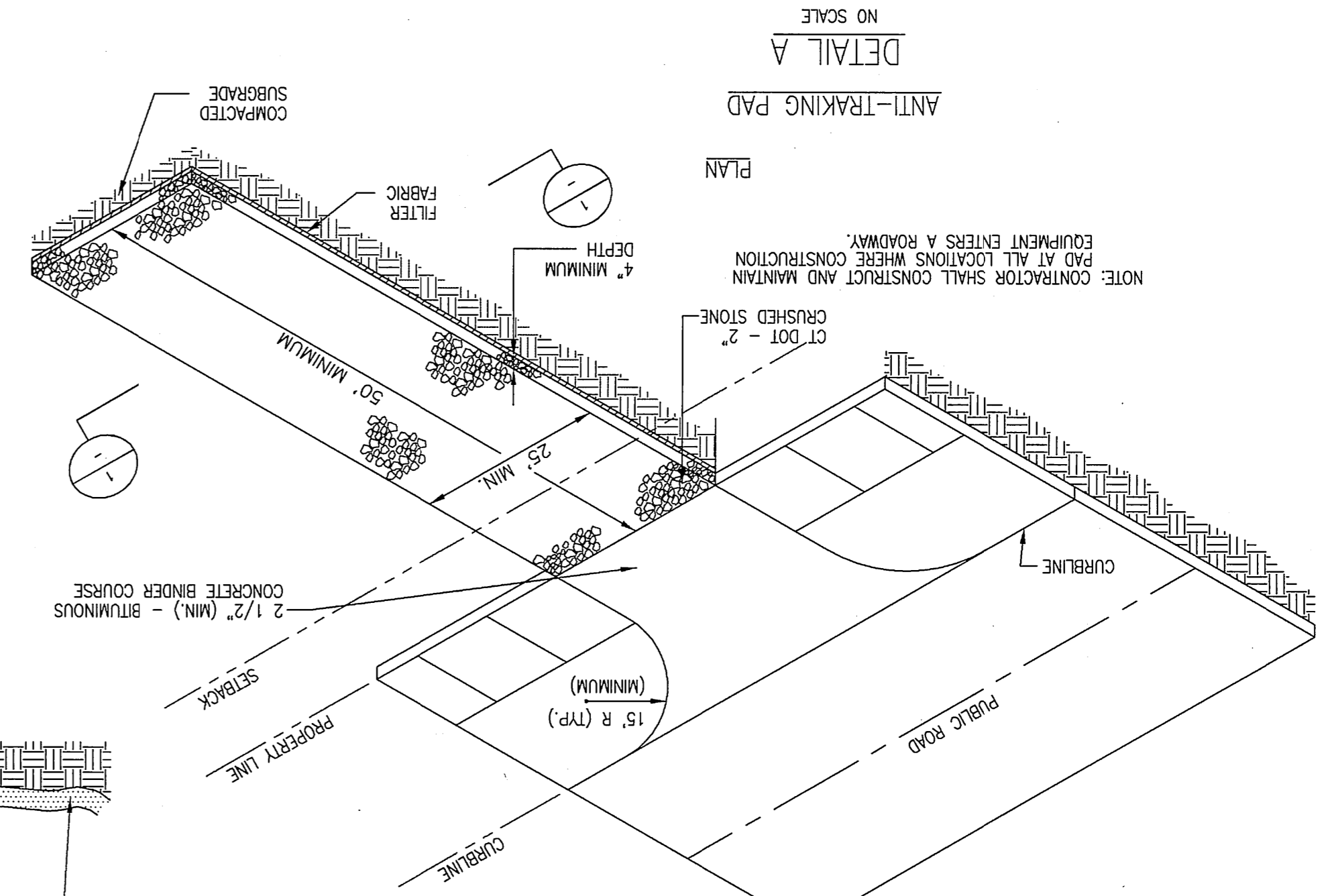
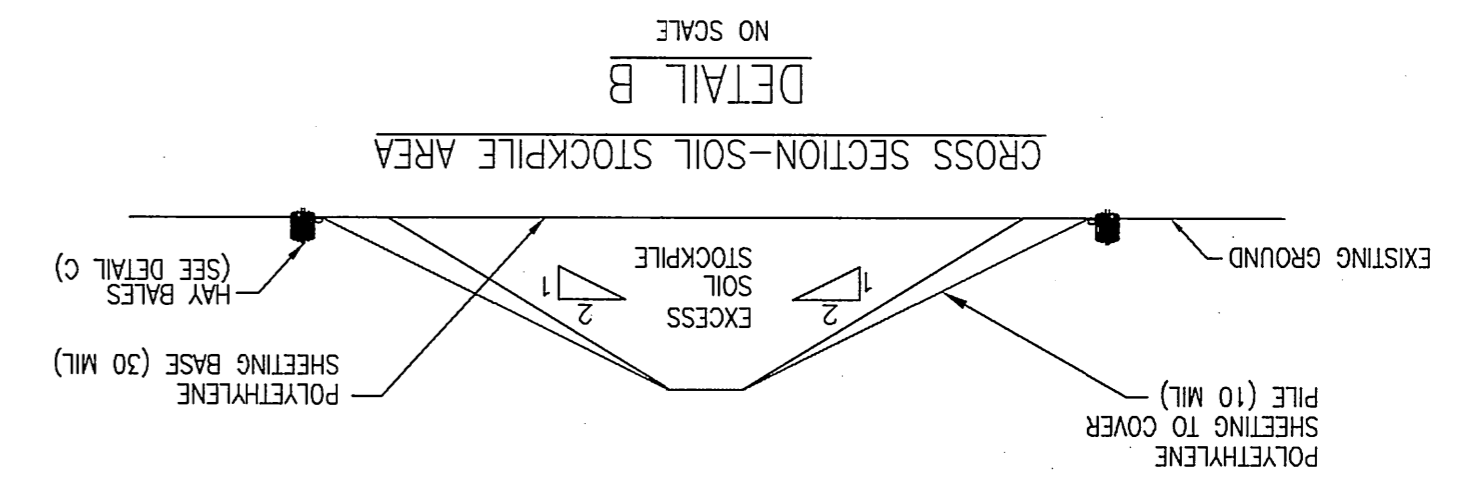
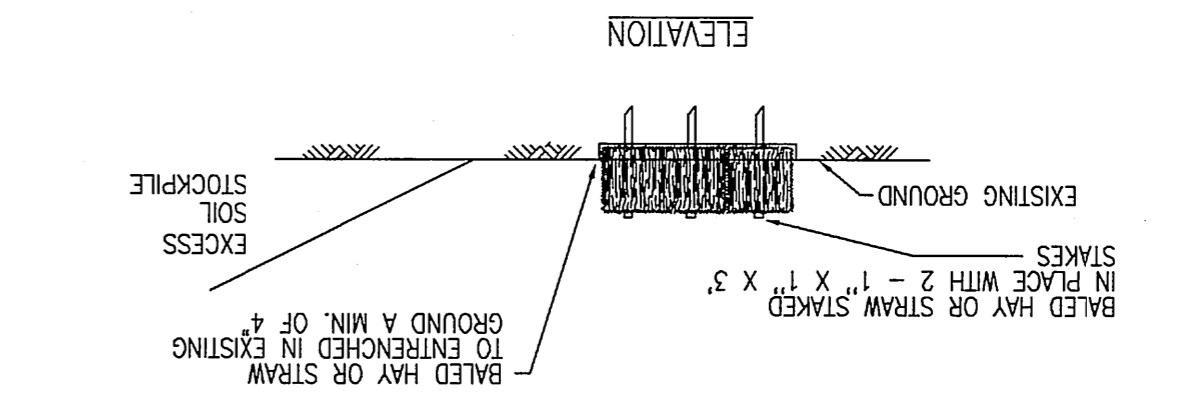
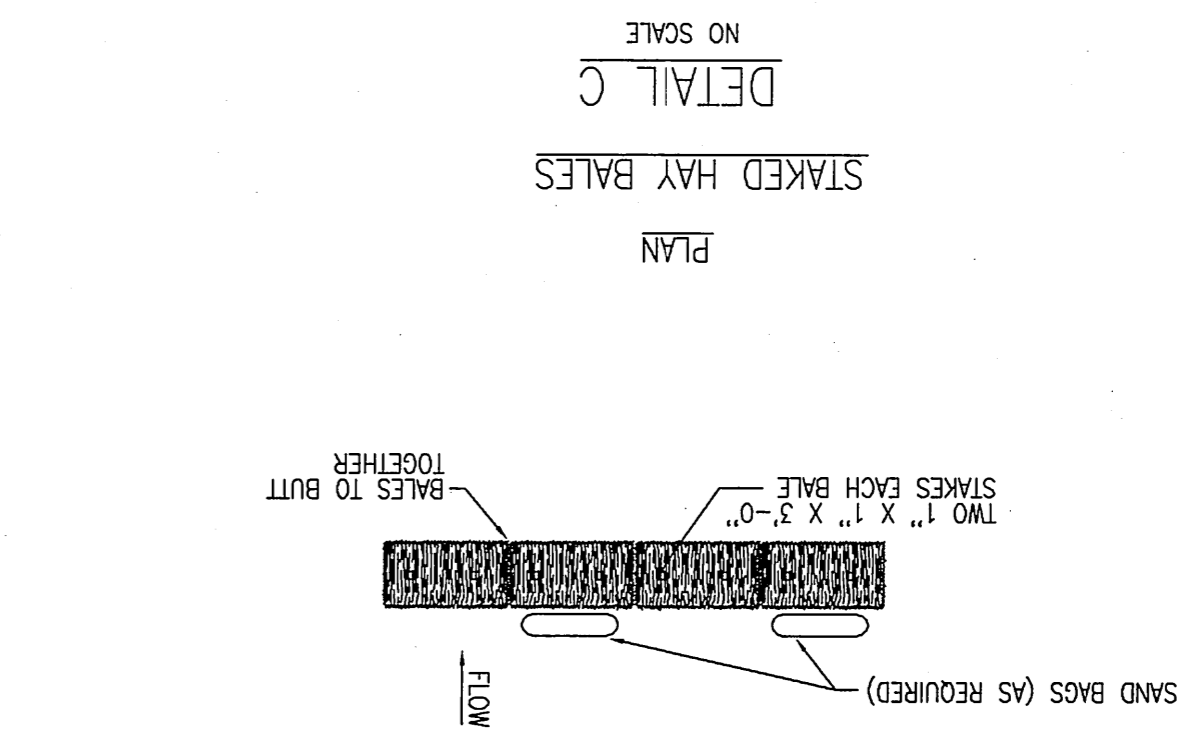
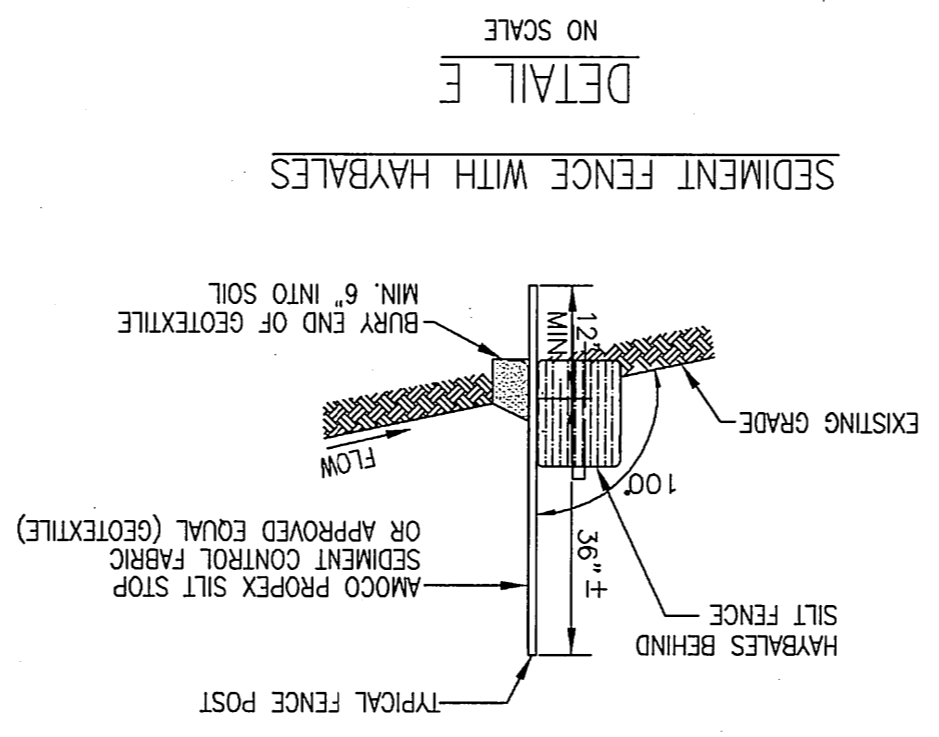
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		25251-531

SINGER SUBSTATION
SOIL EROSION AND SEDIMENT CONTROL
DETAILS

UI
The United Illuminating Company
157 Church St. New Haven, Ct. 06506



PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION



Docket No. 272

The United Illuminating Company and the Connecticut Light & Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction of a 345kV electric transmission line and associated facilities between the Scovill Rock Switching Station in the Town of Middletown and the Norwalk Substation in the City of Norwalk, Connecticut.

APPENDIX B

**ARCHITECTURAL RENDERINGS
(6 Pages)**

VIEW FROM ATLANTIC AND MAIN ST. - EXISTING

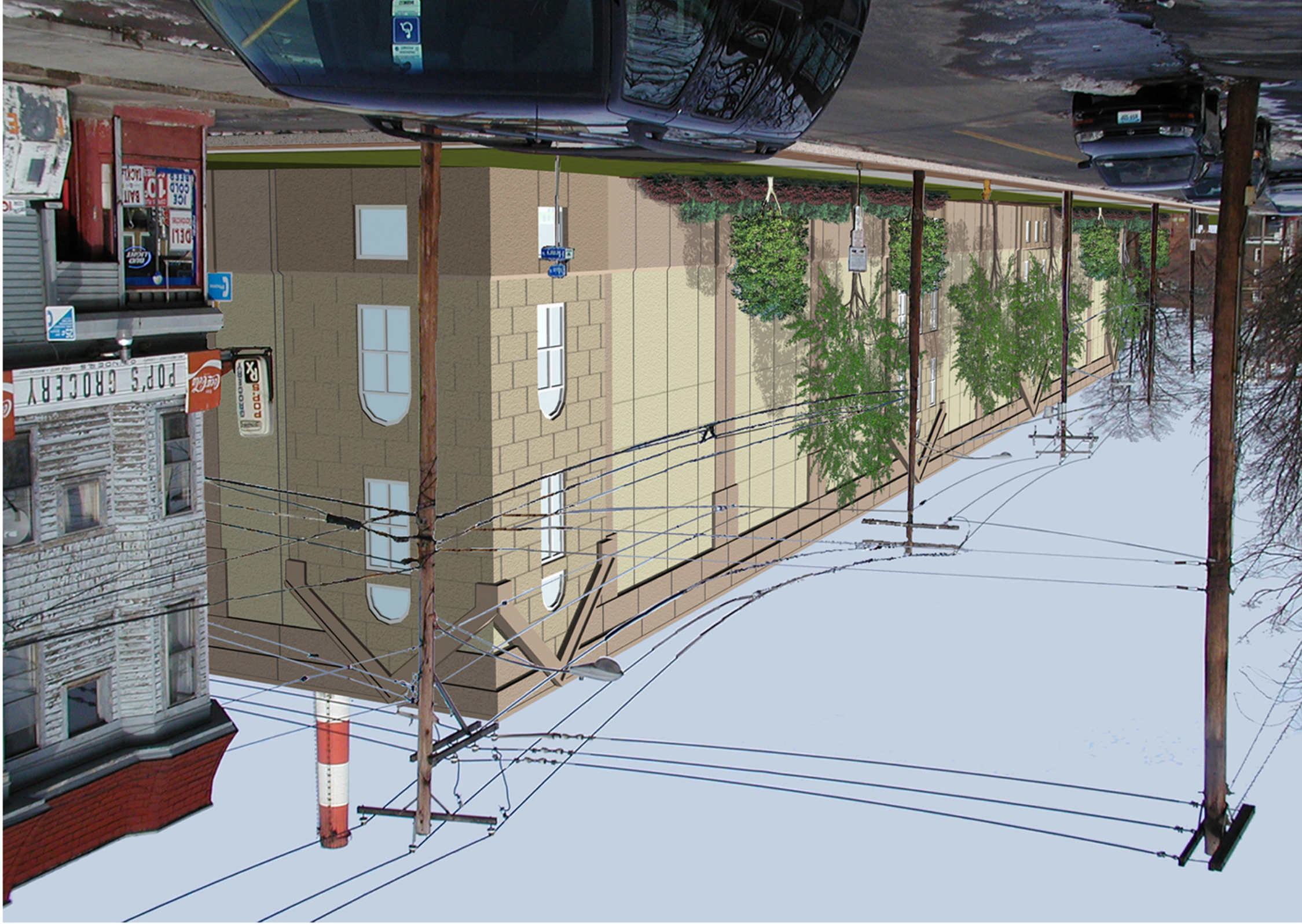


VIEW FROM ATLANTIC AND MAIN ST. - PROPOSED SINGER SUBSTATION



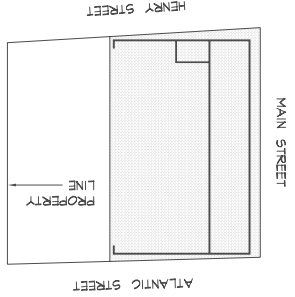


VIEW FROM HENRY AND MAIN ST. - EXISTING



VIEW FROM HENRY AND MAIN ST. - PROPOSED SINGER SUBSTATION

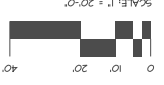
This drawing and details are, as an instrument of service, the property of the architect and may be copied or reproduced without written consent of the architect.



PROJECT MANAGER: J. IRELAND
 ARCHITECT / DESIGNER:
 ENGINEER / DESIGNER:
 DRAWN BY: M. PALUZZI

ARCHITECTURE / ENGINEERING / INTERIOR DESIGN
FLETCHER THOMPSON
 FLETCHER THOMPSON, INC.
 THREE CORPORATE DRIVE
 SHELTON, CT 06484-6244

LANDSCAPE PLAN



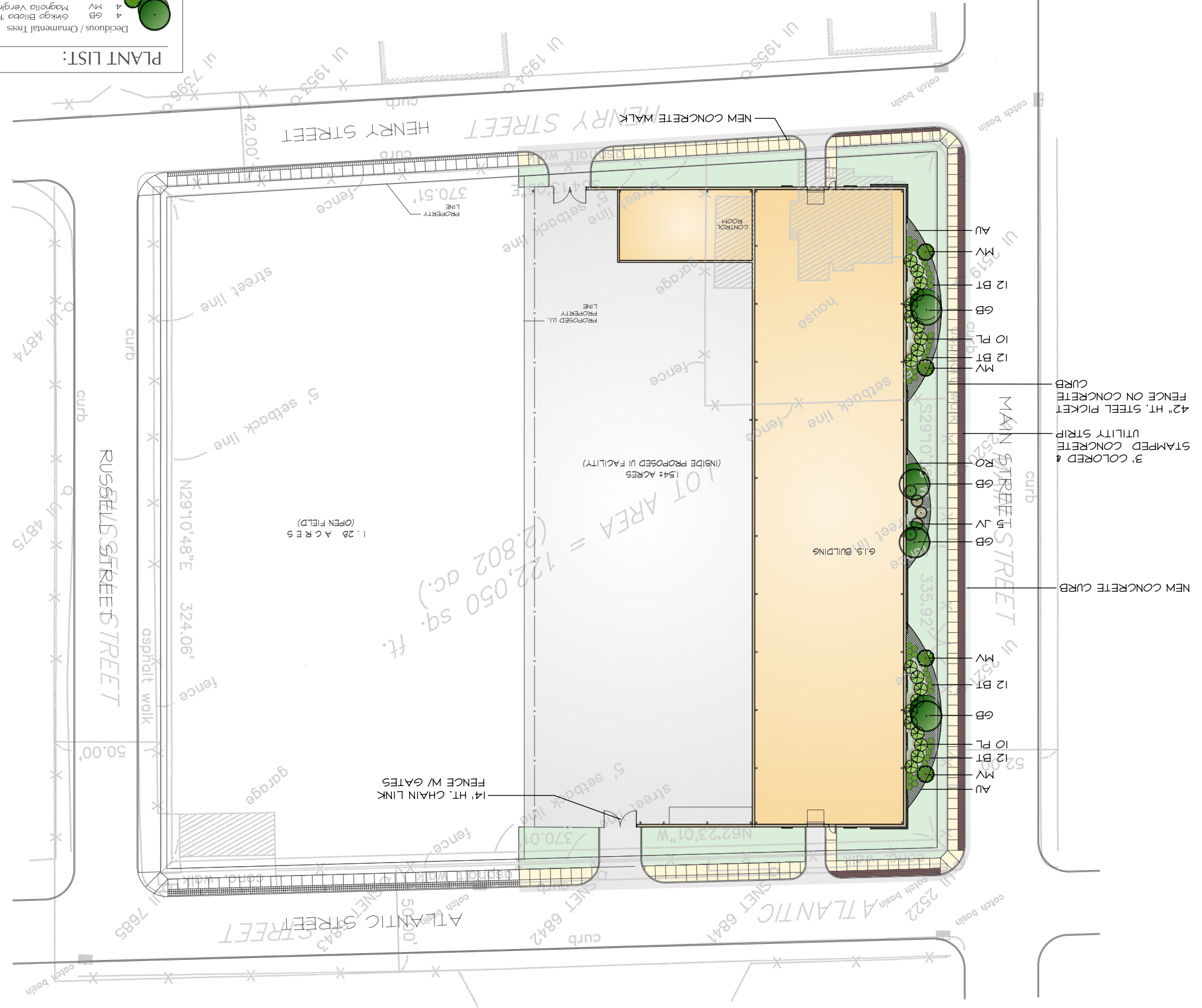
DATE: DECEMBER 12, 2004
 REGION:
 SHEET:

PROJECT NO.: S040350.05
 SCALE: 1" = 20'-0"

DRAWING NO.: C101

PLANT LIST:

Deciduous / Ornamental Trees	4 GB Ginkgo Biloba	4 MV Magnolia Virginia
Evergreen / Deciduous Shrubs	48 BT Berberis Thunbergii 'Crimson Pigmy'	5 JV Juniperus Virginiana 'Glenn Dale'
	5 PL Prunus Lanceolata 'Schickania'	20 PL Frunus Lanceolata 'Schickania'
	18 RO Rhododendron x Obtusum 'Hinodegril'	20 AU Arctostaphylos Uva-Ursi 'Microphylla'
		20 BE Bearberry



ELEVATION ALONG MAIN STREET



Docket No. 272

The United Illuminating Company and the Connecticut Light & Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction of a 345kV electric transmission line and associated facilities between the Scovill Rock Switching Station in the Town of Middletown and the Norwalk Substation in the City of Norwalk, Connecticut.

APPENDIX C
SUBSTATION DRAWINGS

Docket No. 272

The United Illuminating Company and the Connecticut Light & Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction of a 345kV electric transmission line and associated facilities between the Scovill Rock Switching Station in the Town of Middletown and the Norwalk Substation in the City of Norwalk, Connecticut.

APPENDIX C TABLE OF CONTENTS SUBSTATION DRAWINGS

SINGER SUBSTATION

<u>Drawing No.</u>	<u>Drawing Title</u>
25251-400	Singer Substation Arrangement Plan
25251-401	Singer Substation Sections 1 and 2
25251-402	Singer Substation Section 3 - GIS Enclosure
25251-500	Singer Substation Grading Plan
25251-501	Singer Substation Foundation Plan
25251-502	Singer Substation Foundation Details GIS Enclosure
25251-503	Singer Substation Foundation Details Control Building
25251-504	Singer Substation Foundation Details 345kV Shunt Reactor
25251-505	Singer Substation Foundation Details 345/115kV Autotransformer
25251-506	Singer Substation Foundation Details Foundations 5,6,7, & 8

Docket No. 272

The United Illuminating Company and the Connecticut Light & Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction of a 345kV electric transmission line and associated facilities between the Scovill Rock Switching Station in the Town of Middletown and the Norwalk Substation in the City of Norwalk, Connecticut.

PEQUONNOCK SUBSTATION

<u>Drawing No.</u>	<u>Drawing Title</u>
25247-001	Pequonnock Substation Electrical Site Plan
25247-400	Pequonnock Substation 115kV Equipment Plan Elev. 57'-0" & Below
25247-400SH2	Pequonnock Substation 115kV Equipment Plan Elev. 57'-0" & Below (Bay 50 Extension)
25247-401	Pequonnock Substation Plan Elev. 66'-6"
25247-401 (SH2)	Pequonnock Substation Plan Elev. 66'-6" (Bay 50 Extension)
25247-405	Pequonnock Substation Sections A – A & B – B
25247-406	Pequonnock Substation Sections C – C & D – D
25247-406SH2	Pequonnock Substation Sections C – C & D – D (Con't) (Bay 50 Extension)
25247-407	Pequonnock Substation Section E – E
25247-430	Pequonnock Substation Section 6 – 6 (Bay 50 Extension)

Docket No. 272

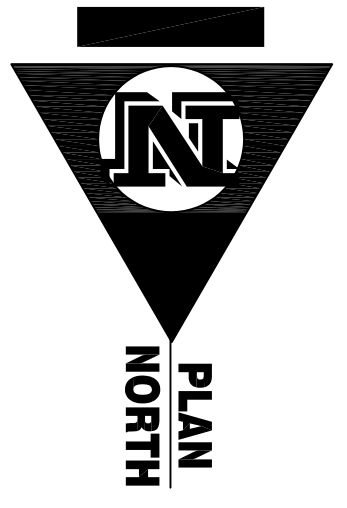
The United Illuminating Company and the Connecticut Light & Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction of a 345kV electric transmission line and associated facilities between the Scovill Rock Switching Station in the Town of Middletown and the Norwalk Substation in the City of Norwalk, Connecticut.

BRIDGEPORT ENERGY SWITCHYARD

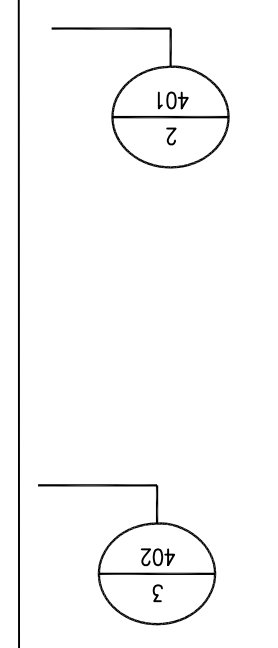
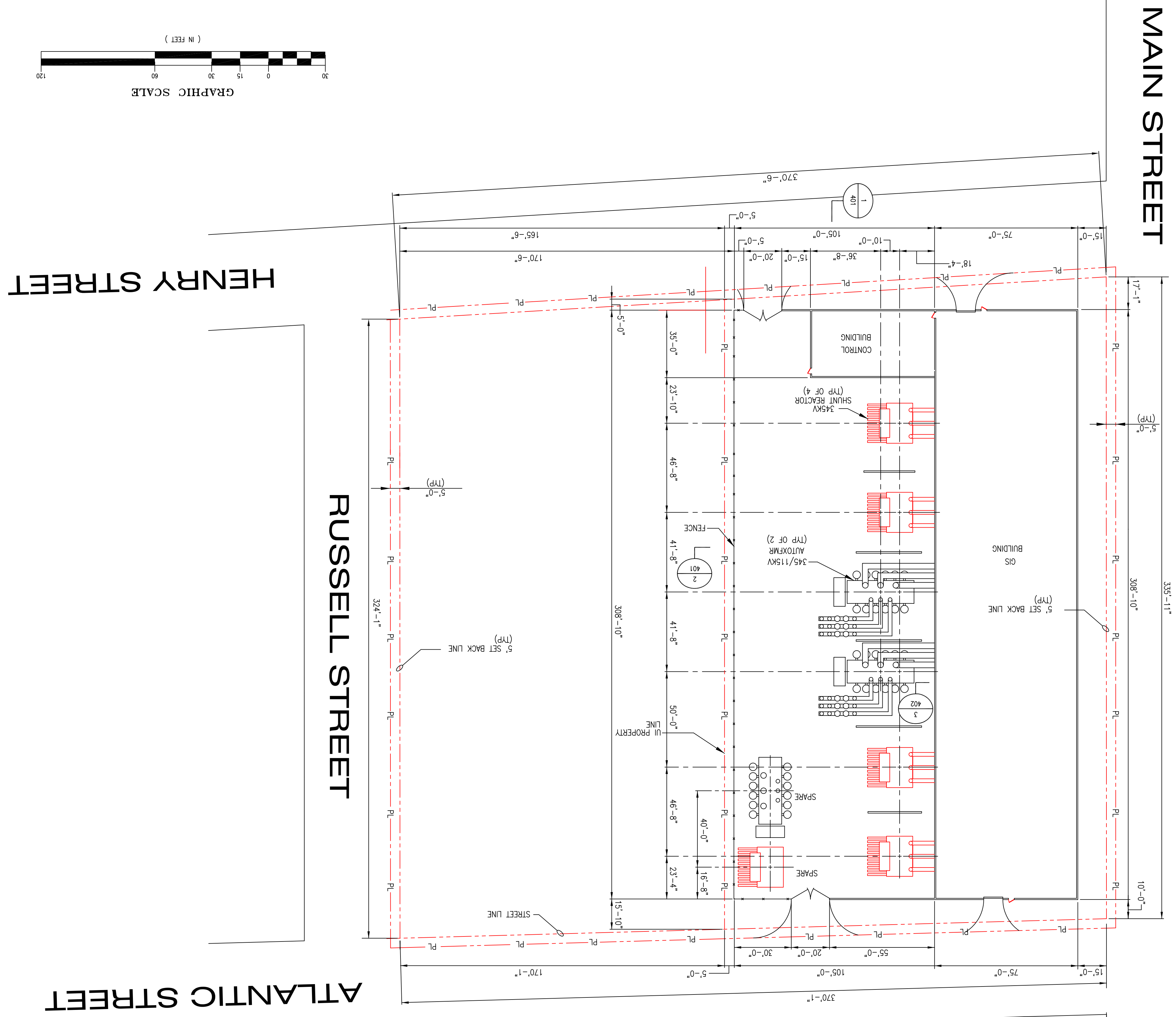
<u>Drawing No.</u>	<u>Drawing Title</u>
25250-400	Bridgeport Energy Switching Station Switchyard Bus & Equipment Plan
25250-401	Bridgeport Energy Switching Station 115kV Switchyard Sections
25250-401 SH2	Bridgeport Energy Switching Station 115kV Switchyard Sections

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APPROVED		CHECKED	
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By	CC	Chkd.	Engr.
Chkd.	ACM	Supv.	Supv.
Drawn	Date	Scale: 1"=30'-0"	Design Supv.
CAD FILE NAME		SEQUENCE NO.	
SINGER SUBSTATION ARRANGEMENT PLAN		25251-400	

The United Illuminating Company
157 Church St. New Haven, Ct. 06506



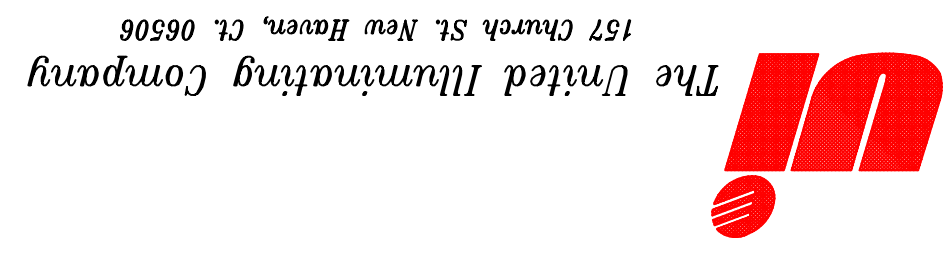
PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION



NOTE:
1. ALL DIMENSIONS ARE PRELIMINARY AND WILL BE FINALIZED AFTER REVIEW OF APPROVED A-2 SURVEY AND MANUFACTURER'S DRAWING WITH INFORMATION.

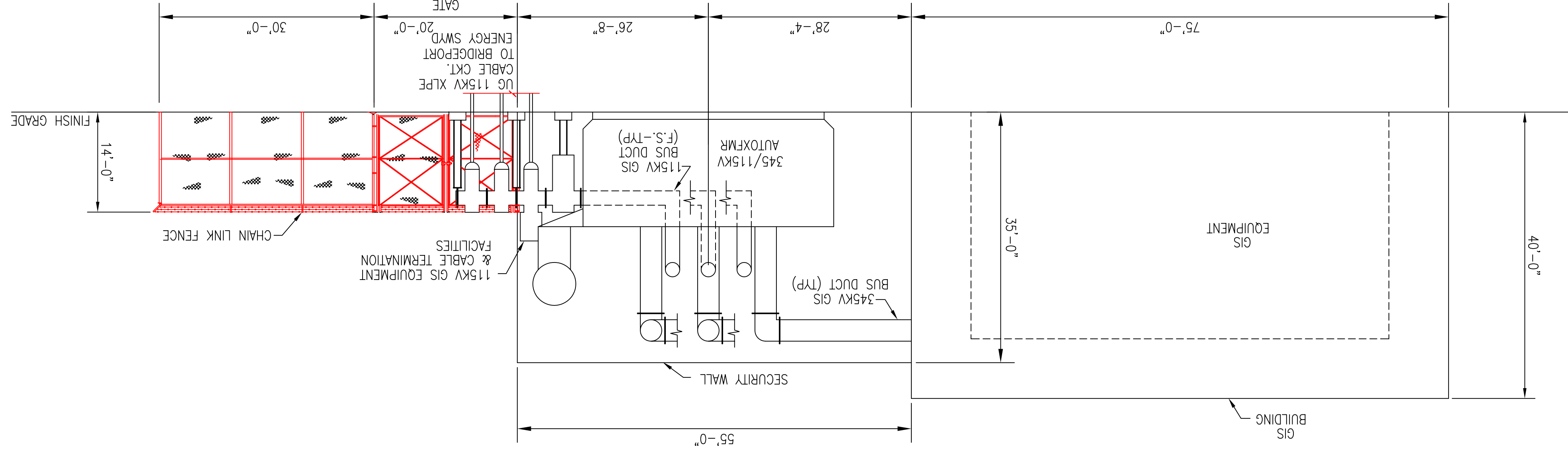
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By	CC	Chkd.	Eng.	Supv.	Chkd.
AM					
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SINGER SUBSTATION
SECTIONS 1 AND 2

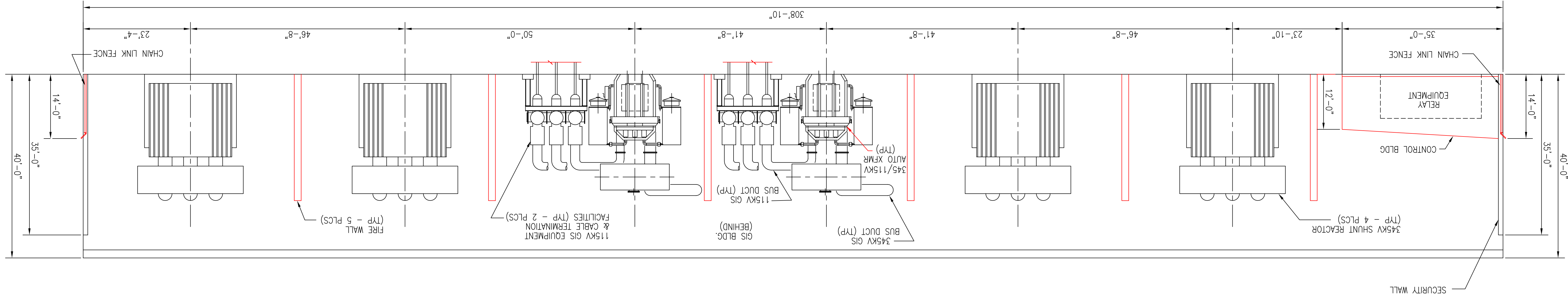


PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

SECTION 2



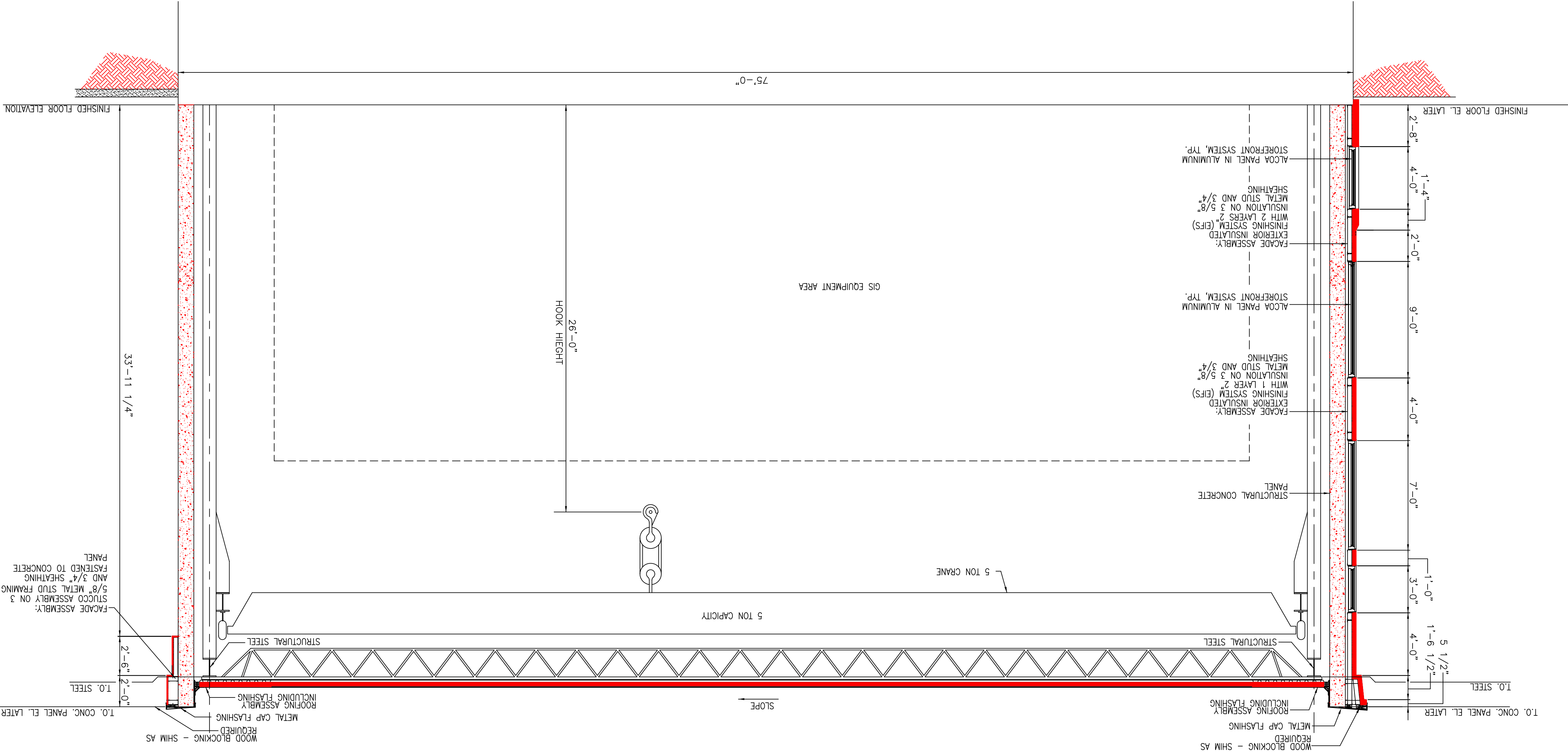
SECTION 1



NOTE:
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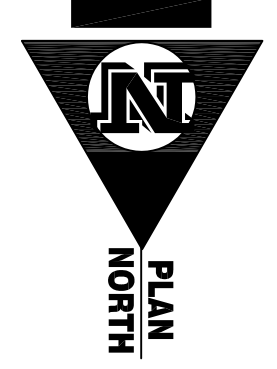
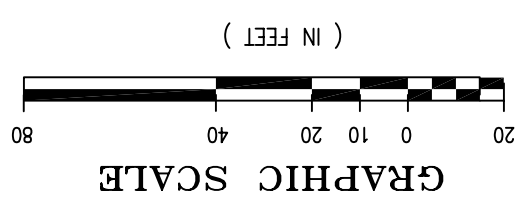
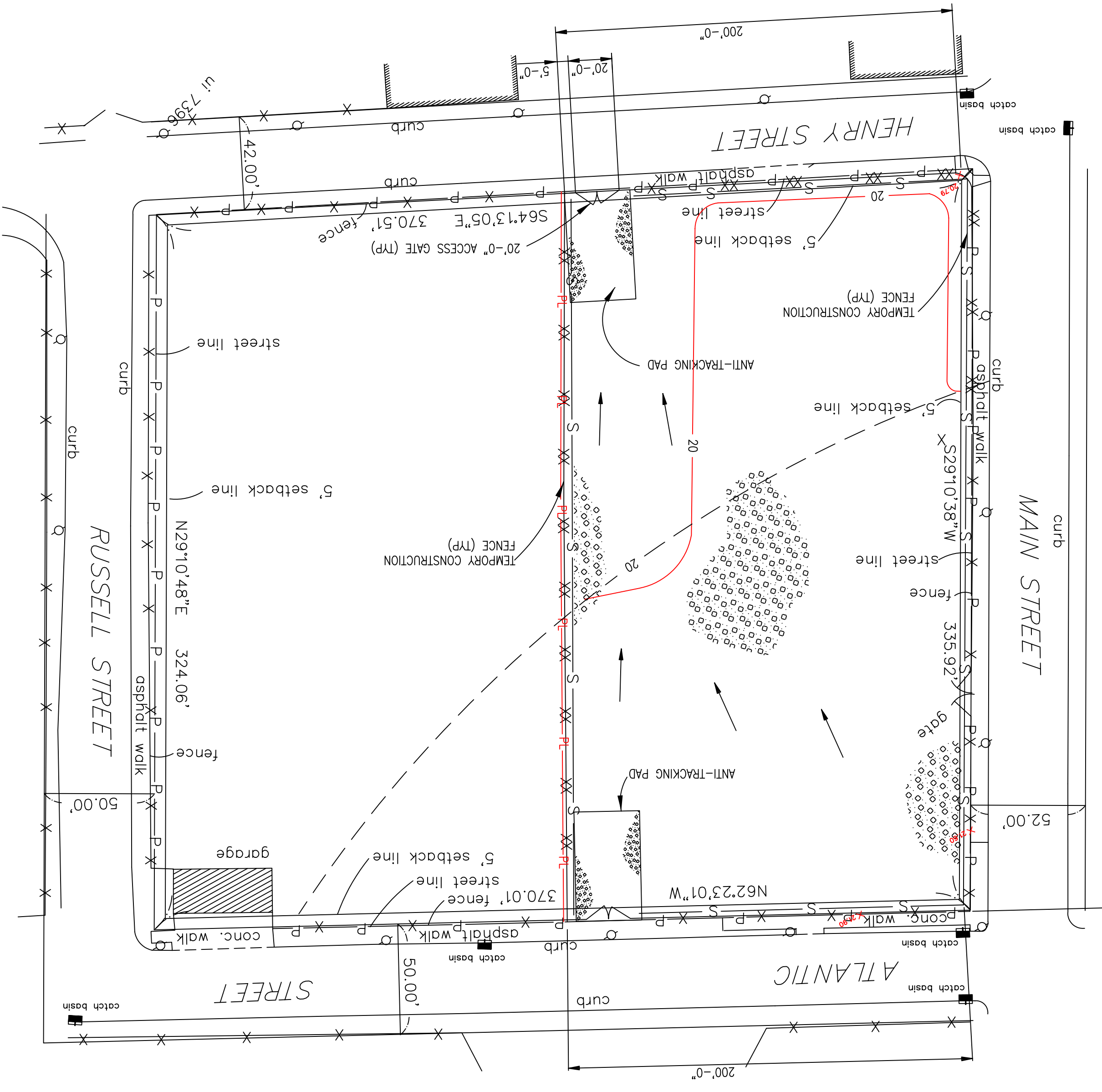
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CC																							
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BLACK & VEATCH																							
DRAWING NUMBER		25251-402																					

SINGER SUBSTATION
SECTION 3-GIS ENCLOSURE



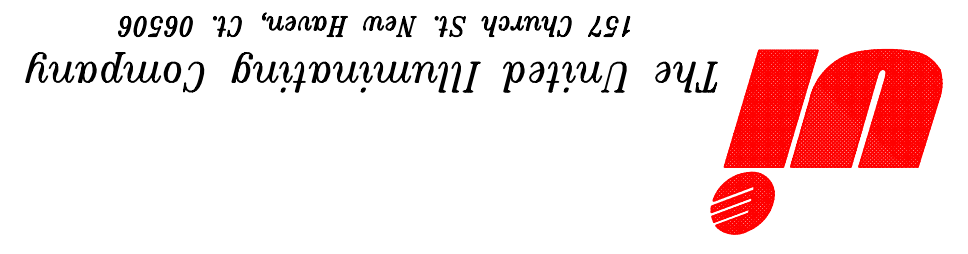
PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

NOTE:
1. ALL DIMENSIONS ARE PRELIMINARY AND WILL BE FINALIZED AFTER REVIEW OF APPROVED A-2 SURVEY, AND MANUFACTURERS' DRAWING AND INFORMATION.



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DESIGNED		DESIGNED		DESIGNED		DESIGNED		PROJECT NO.		DATE	
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By		By		By		By		PROJECT NO.		DATE	
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ACM		ACM		ACM		ACM		136745		04-11-05	
Engr.		Engr.		Engr.		Engr.		PROJECT NO.		DATE	
Supv.		Supv.		Supv.		Supv.		136745		04-11-05	
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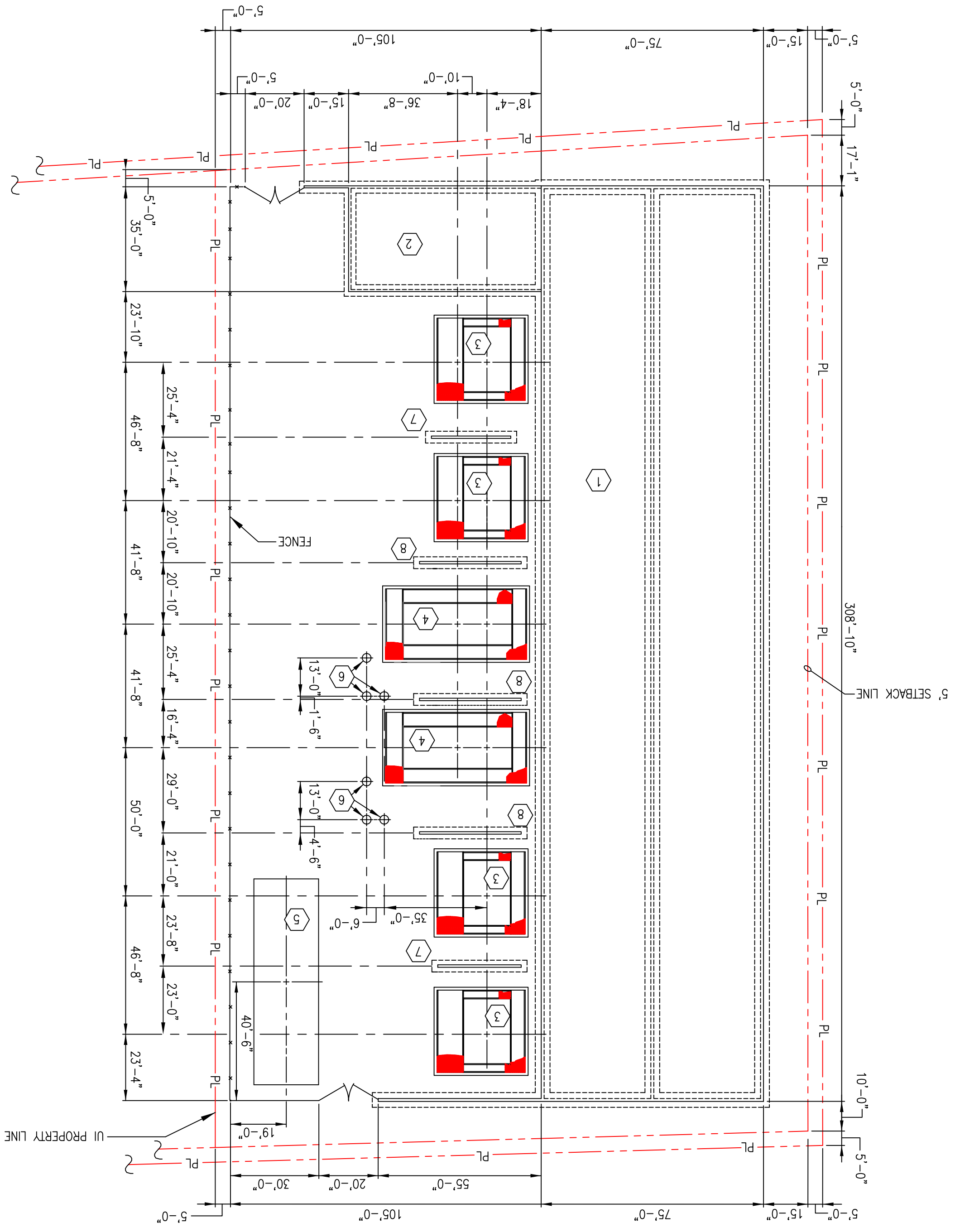


NOTES:

- THIS MAP AND SURVEY HAVE BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300B-1 THROUGH 20-300B-20. THE TYPE OF SURVEY IS A PROPERTY SURVEY. THE DETERMINATION CATEGORY IS A RESURVEY AND THE CLASS OF ACCURACY IS A-2.
- REFERENCE IS MADE TO THE FOLLOWING MAP:
A) MAP #529, BLOCK MAP, CITY OF BRIDGEPORT
B) UNITED ILLUMINATING COMPANY, BRIDGEPORT HARBOR STATION, BRIDGEPORT, CONNECTICUT, SCALE 1"=100', REVISED TO APRIL 12, 1999 AS PREPARED BY CLARENCE BLAIR ASSOCIATES, INC., NEW HAVEN, CONNECTICUT.
- PROPERTY IS ZONED I-HI (INDUSTRIAL HEAVY ZONE) MAXIMUM LOT COVERAGE = 100% (SEE TABLE 7.2.3 CITY OF BRIDGEPORT ZONING REGULATIONS) BEARINGS ARE BASED ON UNIT 3, BRIDGEPORT HARBOR STATION BASE LINE
- CONTOURS SHOWN REPRESENT SUBGRADE ELEVATIONS. SUBGRADE OR ROAD SURFACING.
- AGGREGATE SURFACING SHALL EXTEND TO FENCE OR AS DIRECTED BY UNITED ILLUMINATING CO.
- AGGREGATE SURFACING (6" LAYER)

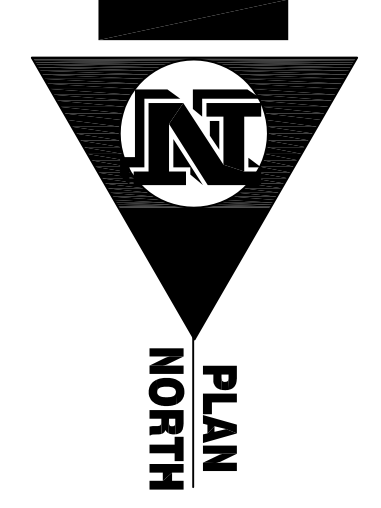
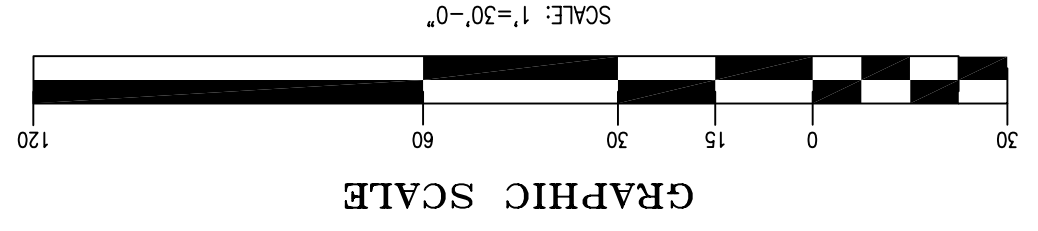
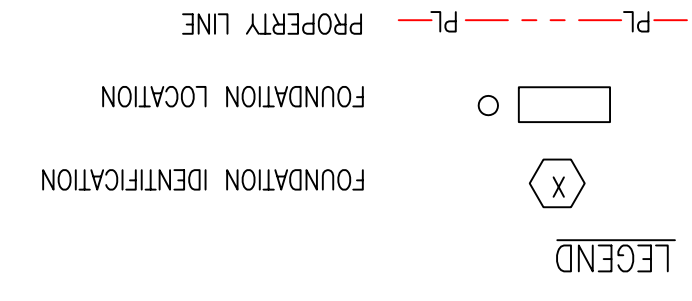
BENCHMARKS
(LATER)

- LEGEND**
- SPOT ELEVATION
 - AGGREGATE SURFACING (6" LAYER)
 - EXISTING CONTOURS
 - NEW CONTOURS
 - EXISTING FENCE
 - NEW FENCE
 - TEMPORARY SEDIMENT FENCE
 - PROPERTY LINE
 - DRAINAGE FLOW PATH



FON NO.	DESCRIPTION
1	GIS BUILDING FOUNDATION
2	CONTROL BUILDING FOUNDATION
3	345KV SHUNT REACTOR FOUNDATION
4	345/115KV AUTOTRANSFORMER FOUNDATION
5	SPARE REACTOR AND TRANSFORMER FOUNDATION
6	115KV GIS EQUIPMENT TERMINATION FOUNDATION
7	345KV SHUNT REACTOR FIREWALL FOUNDATION
8	345/115KV AUTOTRANSFORMER FIREWALL FOUNDATION

- NOTES**
- FOUNDATION CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE UI CONSTRUCTION SPECIFICATION.
 - MINIMUM STRENGTH OF CONCRETE AT 28 DAY TESTING (F_c) SHALL BE 4000 PSI.
 - ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60.
 - ALL FOUNDATION TOP OF CONCRETE ELEVATIONS (TOC EL.) AS NOTED.
 - ALL DIMENSIONS ARE PRELIMINARY AND WILL BE FINALIZED AFTER REVIEW OF APPROVED MANUFACTURER'S DRAWINGS AND INFORMATION.



PRELIMINARY

NOT TO BE USED FOR CONSTRUCTION

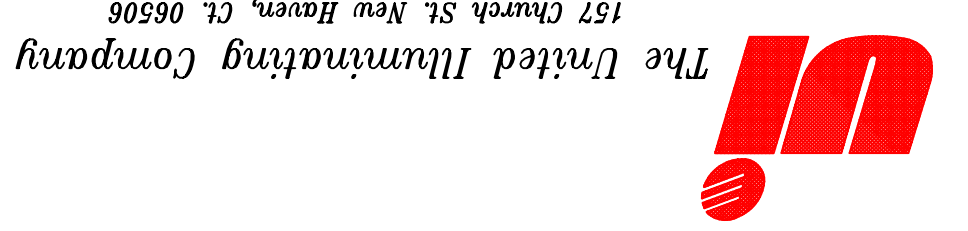
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BLACK & VEATCH		Revision		By		Chkd.		Engr. Supv.		Chkd.		Dwn		Date		Design Engr.		Design Supv.		Scale: 1"=30'-0"		CAD FILE NAME		SEQUENCE NO.		DRAWING NUMBER			

SINGER SUBSTATION
FOUNDATION PLAN

25251-501

DRAWN CC			PROJECT NO. 136745		
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CHECKED					
No	Date	Revision	By	Chkd	Engr. Suprv
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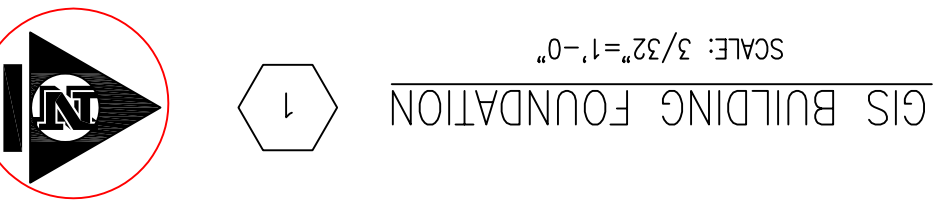
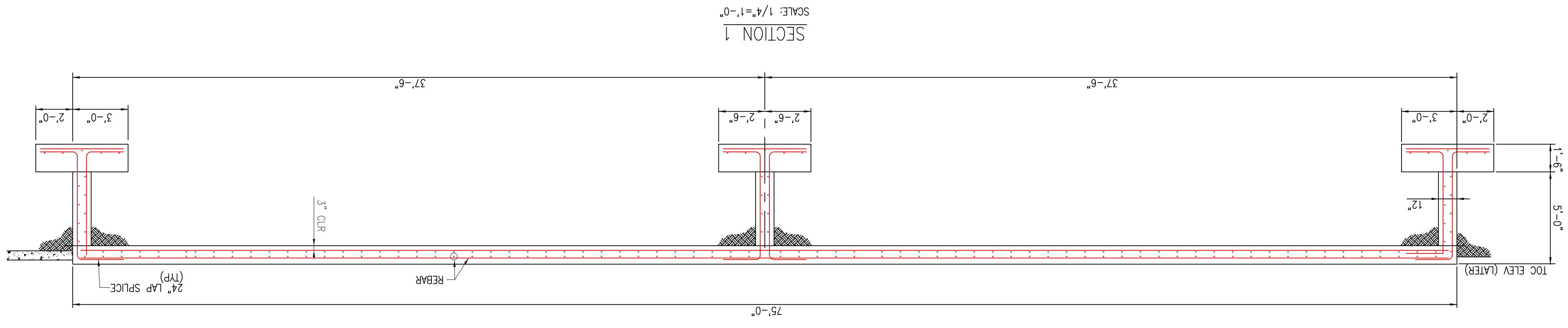
BLACK & VEATCH



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157 Church St. New Haven, Ct. 06506

SINGER SUBSTATION
FOUNDATION DETAILS
GIS ENCLOSURE

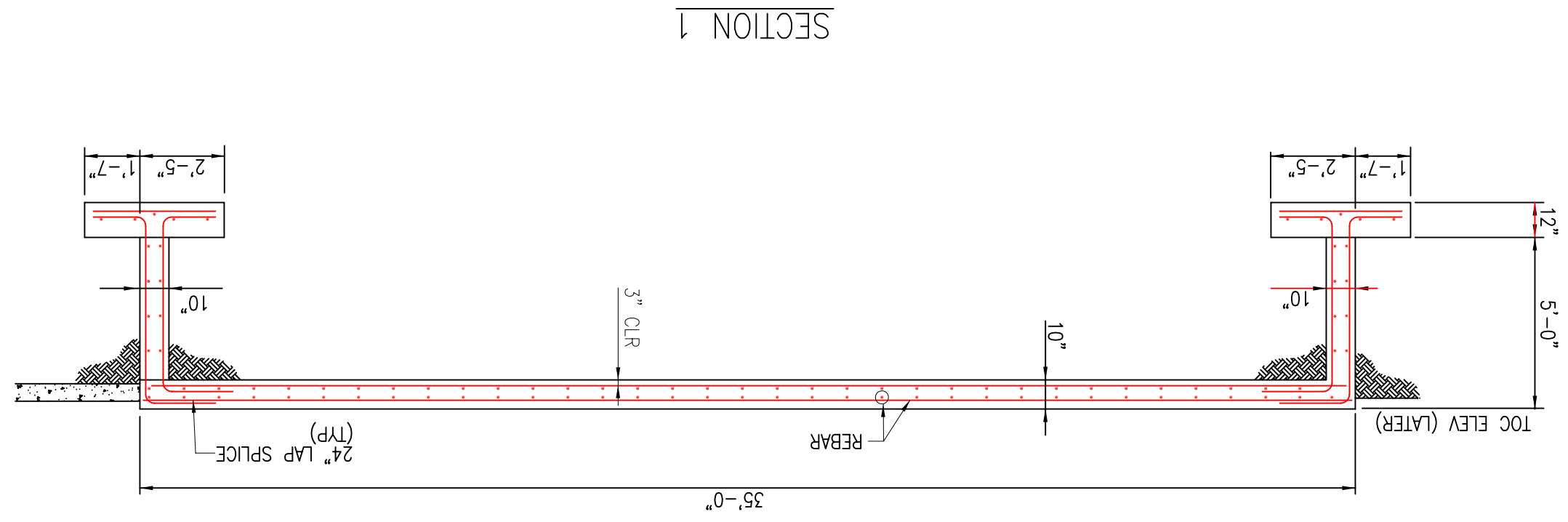
PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION



- NOTES:
1. ALL ABOVE GRADE FOUNDATION EDGES SHALL HAVE A 1" CHAMFER UNLESS NOTED OTHERWISE.
 2. ALL ABOVE GRADE FOUNDATIONS SLABS SHALL RECEIVE A LIGHT BROOM FINISH.
 3. CONTRACTOR SHALL MOISTEN EXISTING SOIL PRIOR TO PLACING CONCRETE TO PREVENT MOISTURE LOSS FROM CONCRETE.
 4. PIERS SHALL BE CONSTRUCTED MONOLITHICALLY WITH THE TOP SECTION FORMED AS INDICATED ON DETAIL.
 5. CONTRACTOR SHALL PLACE REINFORCING BARS TO PREVENT INTERFERENCE WITH LOCATION OF ANCHOR BOLTS.
 6. ALL DIMENSIONS ARE PRELIMINARY AND WILL BE FINALIZED AFTER REVIEW OF APPROVED MANUFACTURERS DRAWINGS AND INFORMATION.

25251-503 DRAWING NUMBER	SEQUENCE No.	CAD FILE NAME	Scale: 1/4"=1'-0" Design Supv.	Date	Design Engr.	Drwn	Chkd.	Engr. Supv.	By	Chkd.	Engr.	ACM	Rev	CC	Revision	No	Date	04-11-05	INITIAL ISSUE	APPROVED	CHECKED
SINGER SUBSTATION FOUNDATION DETAILS CONTROL BUILDING			The United Illuminating Company 157 Church St. New Haven, Ct. 06506																		
						DRAWN CC DESIGNED ACM PROJECT NO. 136745 BLACK & VEATCH															

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NOTES:
1. REFER TO DWG 25251-502 FOR NOTES.

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DESIGNED	ACM
DRAWN	CC
PROJECT NO.	136745
BLACK & VEATCH	

No	Date	INITIAL ISSUE	Revision
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By	Chkd	Engr	Supv
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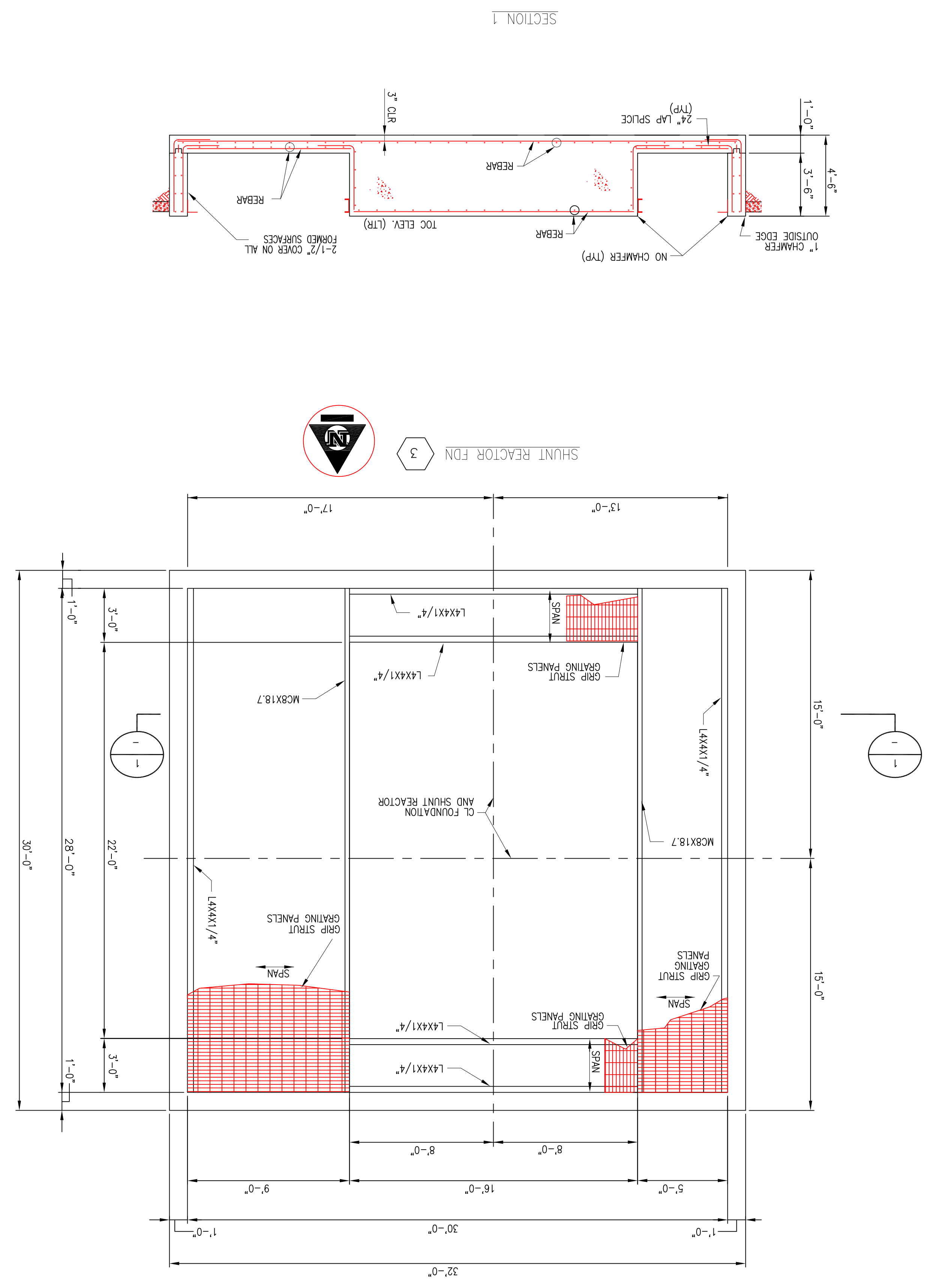
The United Illuminating Company
 157 Church St. New Haven, Ct. 06506



CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
		25251-504

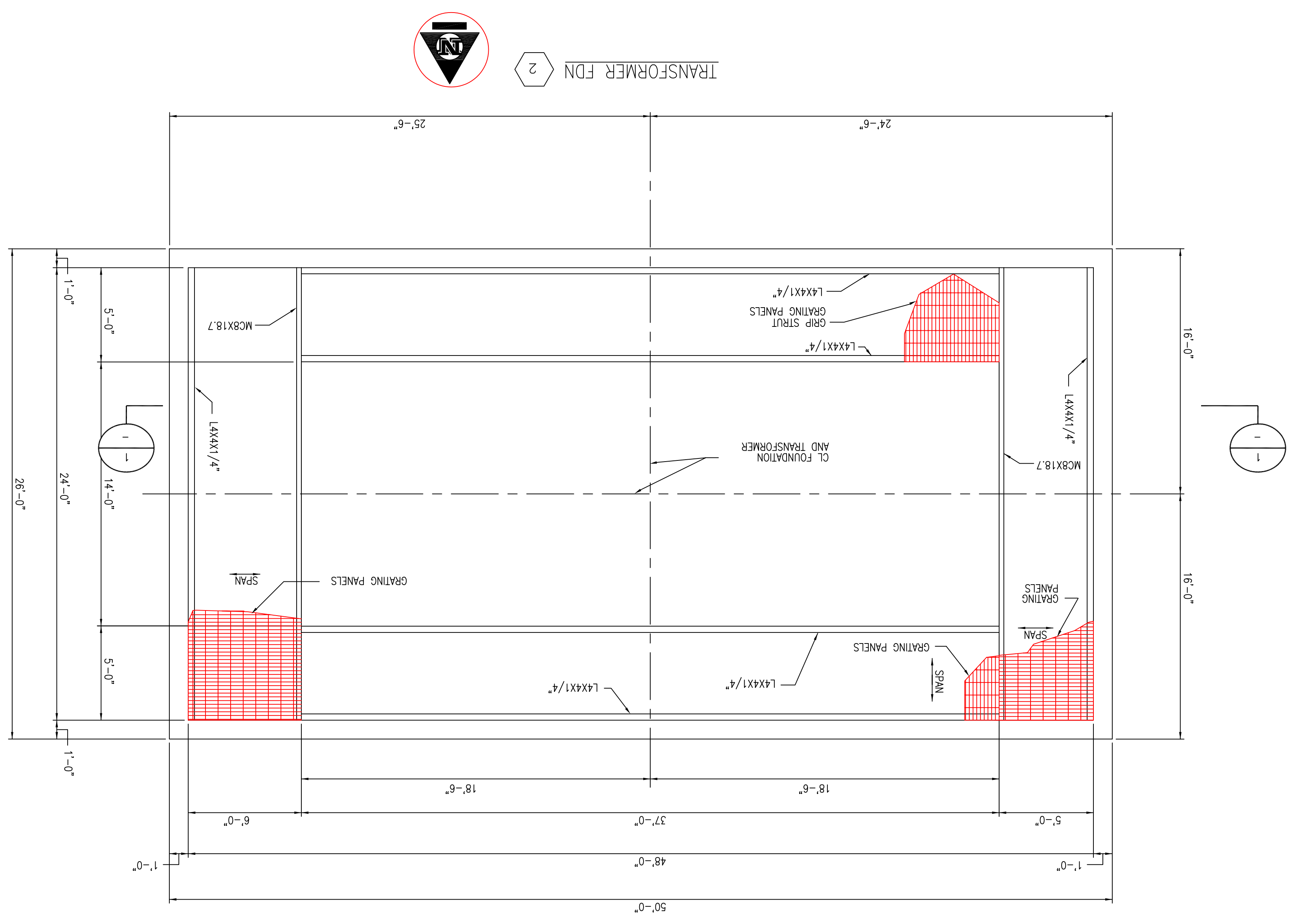
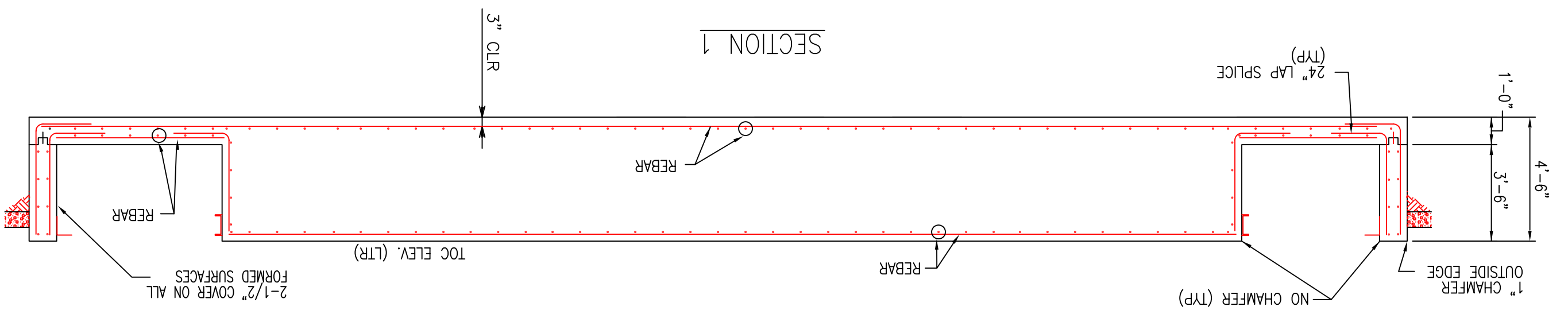
PRELIMINARY
 NOT TO BE USED FOR CONSTRUCTION

SINGER SUBSTATION
 FOUNDATION DETAILS
 345KV SHUNT REACTOR



NOTES:
 1. FOR FOUNDATION NOTES, SEE DRAWING 25251-502.

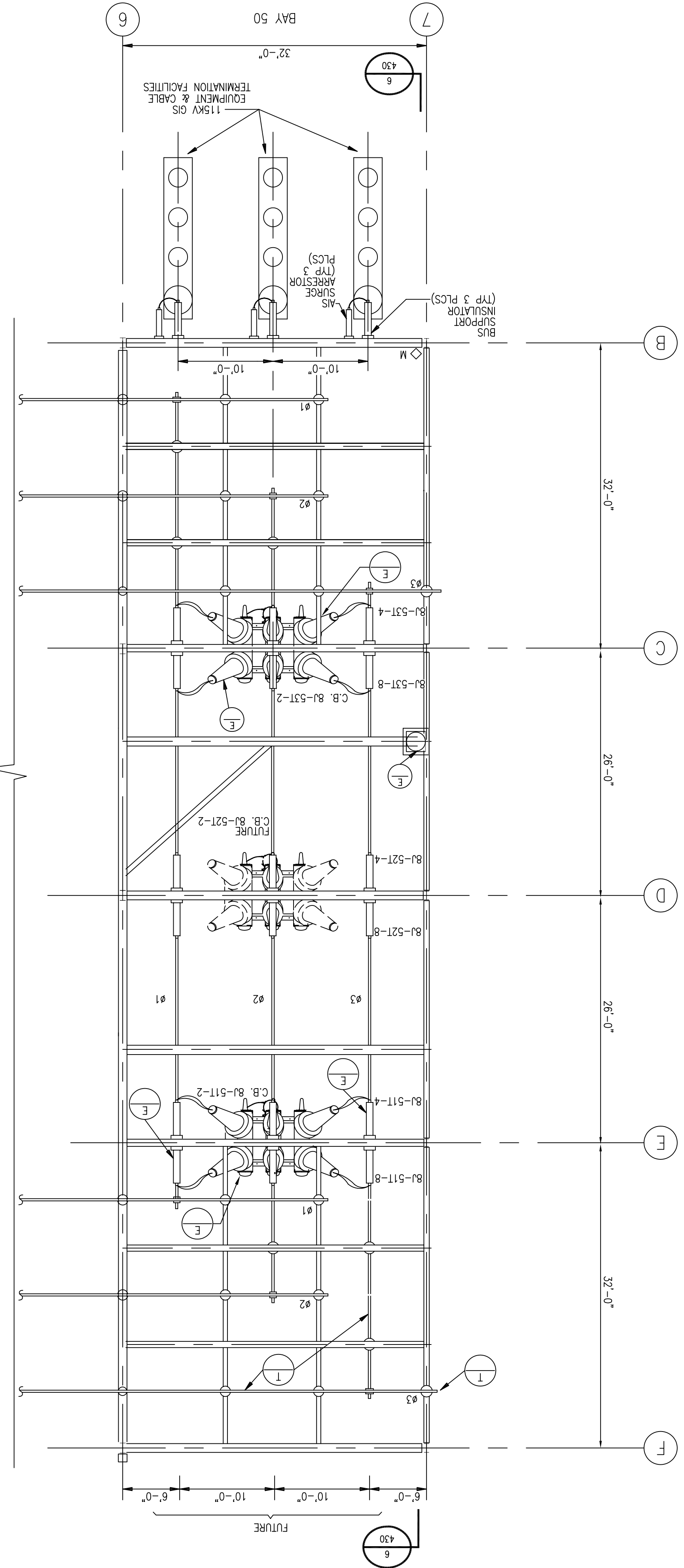
CHECKED		APPROVED		DESIGNED		DRAWN		PROJECT NO.		BLACK & VEATCH	
04-11-05		04-11-05		ACM		CC		136745		PROJECT NO. 136745	
INITIAL ISSUE		INITIAL ISSUE		ACM		CC		136745		PROJECT NO. 136745	
Revision		Revision		By		Chkd		Engr.		Suprv	
Date		Date		Chkd		Engr.		Suprv		Chkd	
Drwn		Date		Design Engr.		Scale: 1/4"=1'-0"		CAD FILE NAME		SEQUENCE NO.	
157 Church St. New Haven, Ct. 06508		157 Church St. New Haven, Ct. 06508		The United Illuminating Company		The United Illuminating Company		SINGER SUBSTATION		FOUNDATION DETAILS	
345/115KV AUTO TRANSFORMER		345/115KV AUTO TRANSFORMER		25251-505		25251-505		DRAWING NUMBER		DRAWING NUMBER	



PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

NOTES:
1. FOR FOUNDATION NOTES, SEE DRAWING 25251-502.

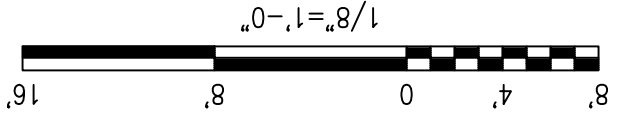
CHECKED		No	Date	Revision	By	Chkd.	Engr.	Supv.	Chkd.	Dwn	Date	Design Engr.	Design Supv.	Scale: 1/8"=1'-0"	CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
APPROVED		0	04-11-05	INITIAL ISSUE-50 BAY EXTENSION	CC										047787SH2		25247-400SH2
DESIGNED JDC																	
DRAWN CC																	
PROJECT NO. 136745																	
BLACK & VEATCH																	
The United Illuminating Company																	
137 Church St. New Haven, Ct. 06506																	



PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

NOTES:
1. SEE DWG. #25247-400 FOR LEGEND.
2. SEE DWG. #25247-400 FOR BAY'S 40, 30, 20, 10 & 1.

- REFERENCE DRAWINGS:
- 25247-400 PLAN ELEV. 57'-0"
 - 25247-401 PLAN ELEV. 66'-0"
 - 25247-405 SECTIONS A-A & B-B
 - 25247-406 SECTIONS C-C & D-D
 - 25247-406 SECTIONS C-C & D-D (CONT)
 - 25247-407 SECTION E-E
 - 25247-402 SECTIONS 1-1, 1A-1A & 2-2
 - 25247-403 SECTIONS 3-3 & 4-4
 - 25247-404 SECTION 5-5
 - 25247-499 SITE PLAN
 - 25247-001 MATERIAL LIST
 - 25247-499 ASSEMBLIES & DETAILS
 - 25247-411 SECTION 6-6



PROJECT NO.	16341
DRAWN CAD	
DESIGNED TYP	
APPROVED DJK	
CHECKED TJJ	

No	Date	Revision
10	04-11-05	BAY 50 EXTENSION
9	08-31-93	CONFORMED TO CONSTRUCTION RECORDS

By	JPC	CC
Chkd	JPC	
Engr.	JPC	
Suprv.	JPC	

The United Illuminating Company
 157 Church St. New Haven, Ct. 06506

Scale: 1/8"=1'-0"
 Design Supv. S.SIEDZIK
 Design Engr. J. LONG
 Date 04-02-89

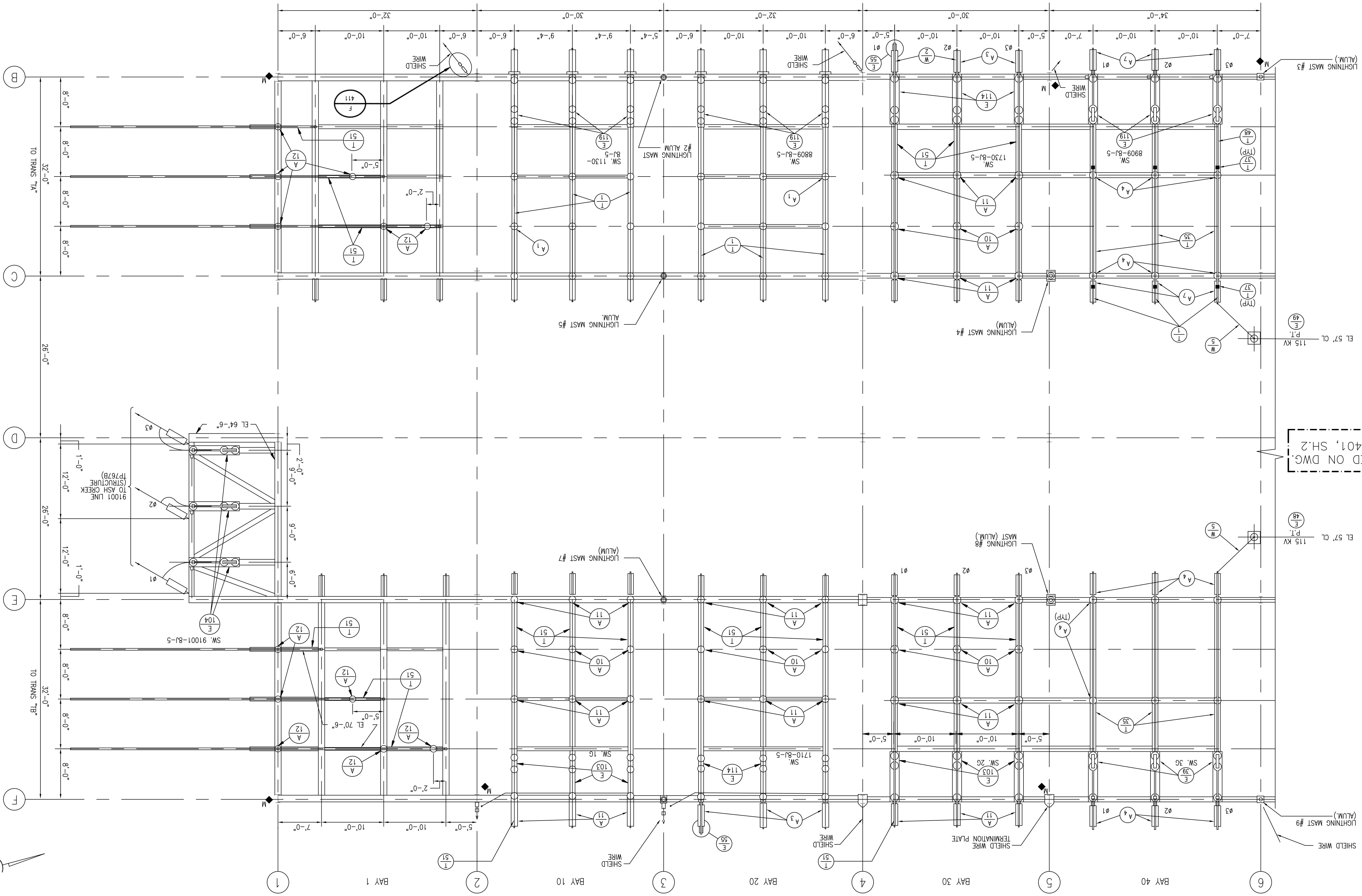
CAD FILE NAME	047788
SEQUENCE NO.	047788
DRAWING NUMBER	25247-401

PRELIMINARY

NOT TO BE USED FOR CONSTRUCTION

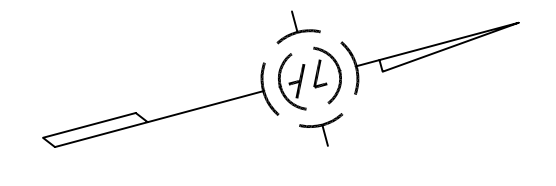
7. SEE DWG #25247-401 SH2 FOR BAY 50 EXTENSION PLAN AT ELEVATION 66'-6".
 BUS: 795 MCM IN 5 INCH BUS.
 BUS RUNS, USE 336.4 MCM IN 3 INCH.

6. DAMPING CABLE IN ALL NEW HORIZONTAL.
 5. CHANGED ON LINE SWITCHES 1710 AND 1730.
 4. SEE DWG 25247-400 FOR LEGEND
 3. THIS DWG PREVIOUSLY NUMBERED 24301-185
 2. PLAN ELEV. 83.0 SEE DWG # 25247-402 (SEC. 1-1 & 2-2)
 1. SEE ASSEMBLIES & DETAILS DWG # 25247-409



CONTINUED ON DWG. #25247-401, SH.2

- GENERAL NOTES:**
- SEE ASSEMBLIES & DETAILS DWG # 25247-409
 - PLAN ELEV. 83.0 SEE DWG # 25247-402 (SEC. 1-1 & 2-2)
 - THIS DWG PREVIOUSLY NUMBERED 24301-185
 - SEE DWG 25247-400 FOR LEGEND
 - CHANGED ON LINE SWITCHES 1710 AND 1730.
 - DAMPING CABLE IN ALL NEW HORIZONTAL.
BUS RUNS, USE 336.4 MCM IN 3 INCH.
BUS: 795 MCM IN 5 INCH BUS.
 - SEE DWG #25247-401 SH2 FOR BAY 50 EXTENSION PLAN AT ELEVATION 66'-6".
- REFERENCE DRAWINGS:**
- 25247-400 PLAN ELEV. 57'-0"
 - 25247-400 SH2 PLAN ELEV. 66'-0"
 - 25247-405 SECTIONS A-A & B-B
 - 25247-406 SECTIONS C-C & D-D (CONT.)
 - 25247-407 SECTION E-E
 - 25247-402 SECTIONS 1-1, 1A-1A & 2-2
 - 25247-404 SECTIONS 5-5
 - 25247-401 MATERIAL LIST
 - 25247-409 ASSEMBLIES & DETAILS
 - 25247-411 SECTION 6-6
 - 25247-430

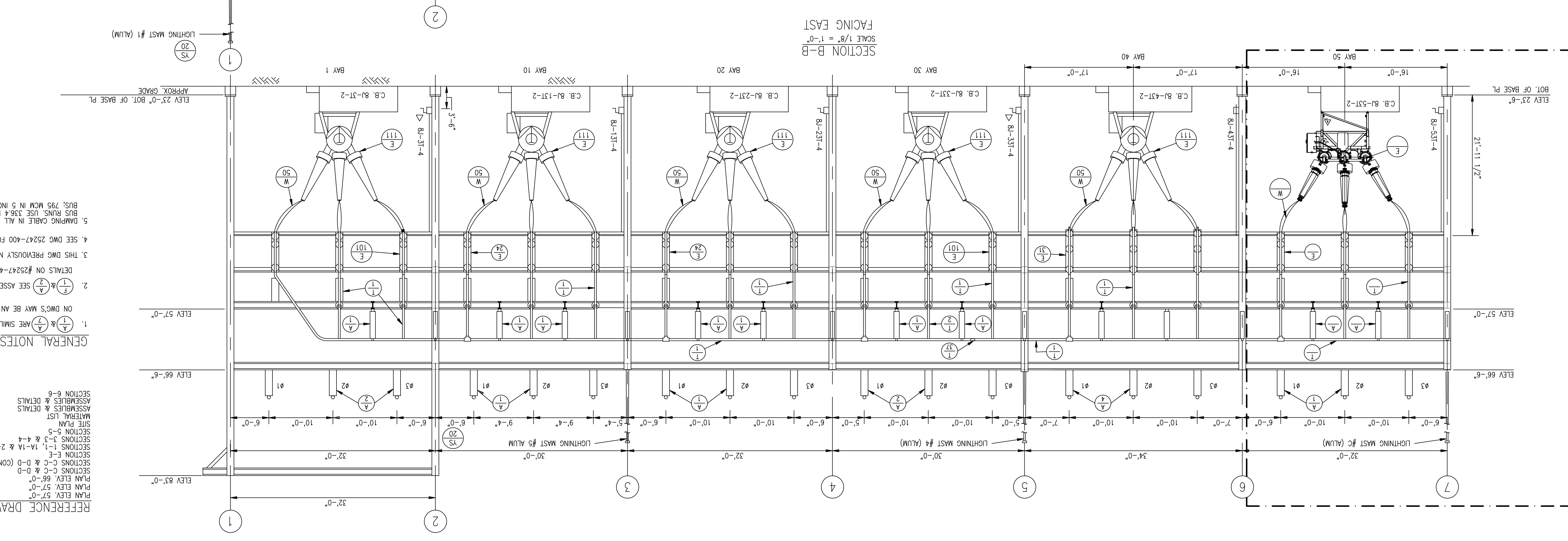
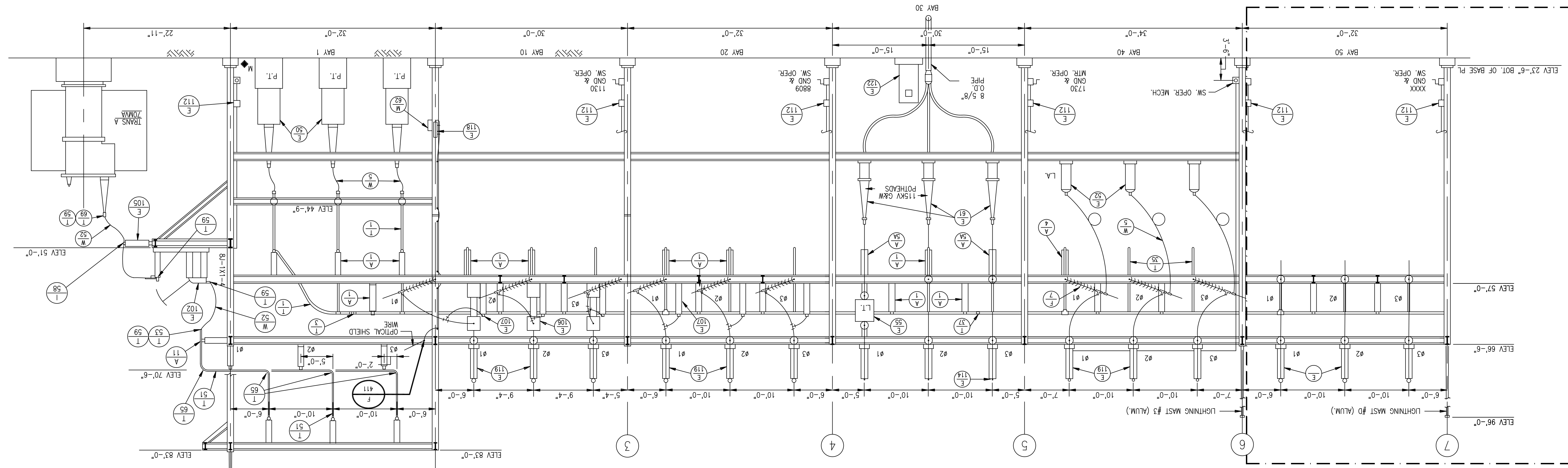


25247-405	SEQUENCE NO.	047792	CAD FILE NAME	Design Supv. S.SIEDZIK	Design Engr. J. LONG	Date 04-02-87	Scale: 1/8"=1'-0"	157 Church St. New Haven, Ct. 06506	The United Illuminating Company	SECTION A-A & B-B
25247-400	SEQUENCE NO.	047792	CAD FILE NAME	Design Supv. S.SIEDZIK	Design Engr. J. LONG	Date 04-02-87	Scale: 1/8"=1'-0"	157 Church St. New Haven, Ct. 06506	The United Illuminating Company	SECTION A-A & B-B
25247-401	SEQUENCE NO.	047792	CAD FILE NAME	Design Supv. S.SIEDZIK	Design Engr. J. LONG	Date 04-02-87	Scale: 1/8"=1'-0"	157 Church St. New Haven, Ct. 06506	The United Illuminating Company	SECTION A-A & B-B
25247-402	SEQUENCE NO.	047792	CAD FILE NAME	Design Supv. S.SIEDZIK	Design Engr. J. LONG	Date 04-02-87	Scale: 1/8"=1'-0"	157 Church St. New Haven, Ct. 06506	The United Illuminating Company	SECTION A-A & B-B
25247-403	SEQUENCE NO.	047792	CAD FILE NAME	Design Supv. S.SIEDZIK	Design Engr. J. LONG	Date 04-02-87	Scale: 1/8"=1'-0"	157 Church St. New Haven, Ct. 06506	The United Illuminating Company	SECTION A-A & B-B
25247-404	SEQUENCE NO.	047792	CAD FILE NAME	Design Supv. S.SIEDZIK	Design Engr. J. LONG	Date 04-02-87	Scale: 1/8"=1'-0"	157 Church St. New Haven, Ct. 06506	The United Illuminating Company	SECTION A-A & B-B
25247-405	SEQUENCE NO.	047792	CAD FILE NAME	Design Supv. S.SIEDZIK	Design Engr. J. LONG	Date 04-02-87	Scale: 1/8"=1'-0"	157 Church St. New Haven, Ct. 06506	The United Illuminating Company	SECTION A-A & B-B

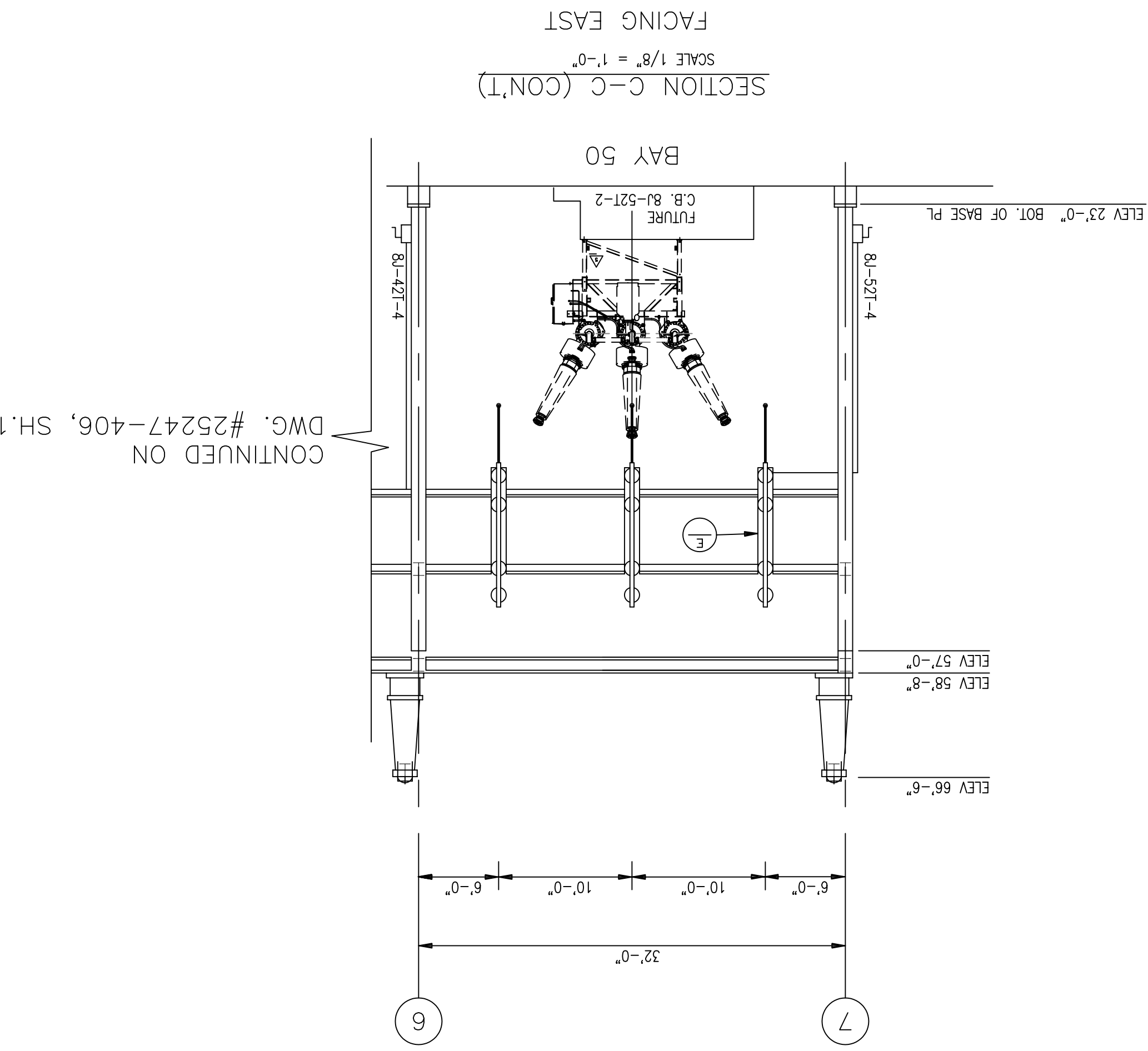
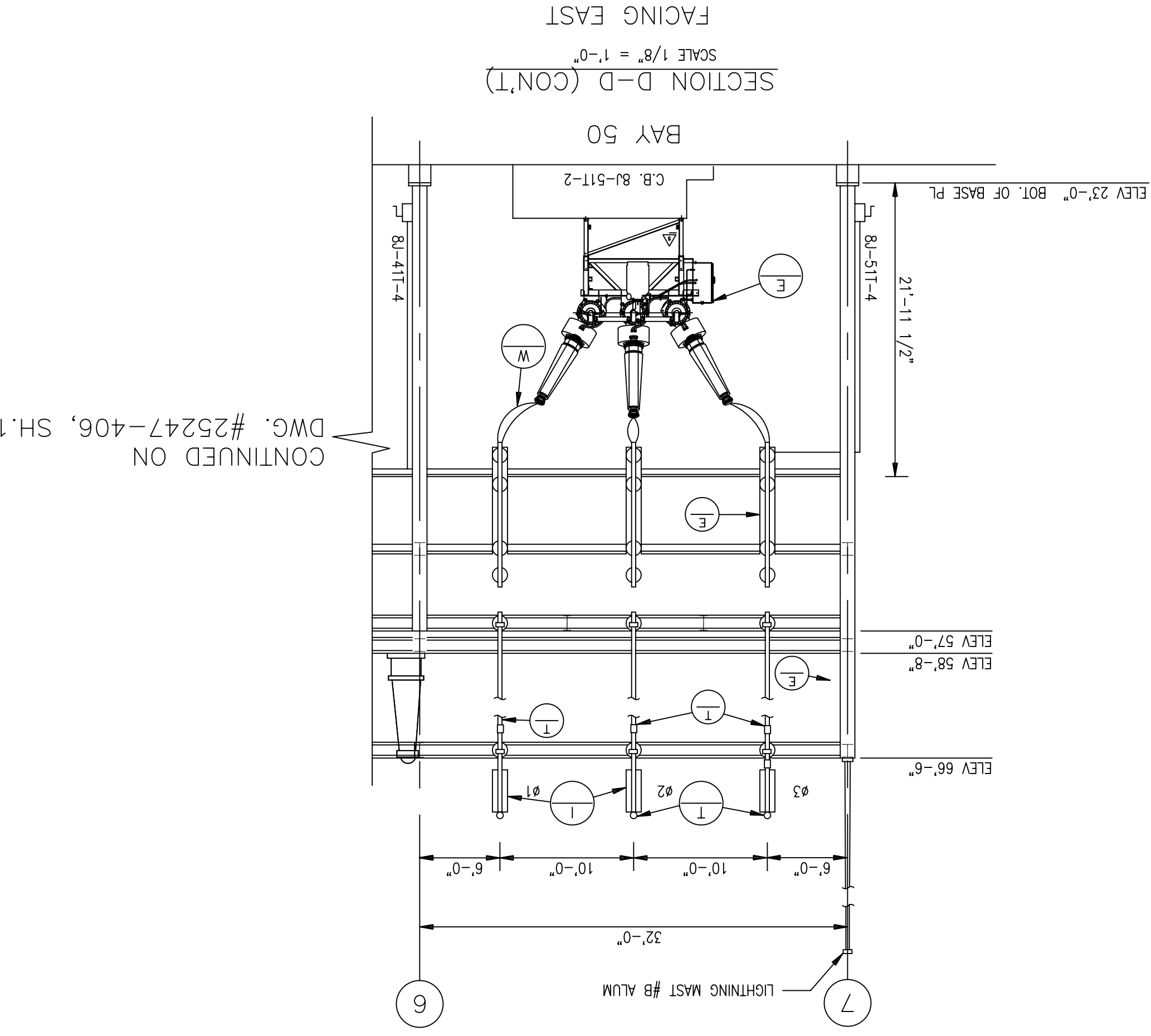
DRAWING JSF
 DESIGNED TYP
 10 04-11-05 BAY 50 EXTENSION
 APPROVED DJK
 9 08-31-93 CONFORMED TO CONSTRUCTION RECORDS
 CHECKED TJU
 PROJECT NO. 16341
BLACK & VEATCH

SCALE 1/8" = 1'-0"
 SECTION A-A
 FACING EAST

NOT TO BE USED FOR CONSTRUCTION
PRELIMINARY



- GENERAL NOTES**
1. $\frac{1}{4}$ " & $\frac{1}{8}$ " ARE SIMILAR $\frac{1}{4}$ "
 2. $\frac{1}{4}$ " & $\frac{1}{8}$ " SEE ASSEMBLIES & DETAILS ON DWG'S MAY BE AN $\frac{1}{4}$ "
 3. THIS DWG PREVIOUSLY NUMBERED 24301-189
 4. SEE DWG 25247-400 FOR LEGEND
 5. DAMPING CABLE IN ALL NEW HORIZONTAL BUS RUNS. USE 336.4 MCM IN 3 INCH BUS. 795 MCM IN 5 INCH BUS.
- REFERENCE DRAWINGS:**
- 25247-400 PLAN ELEV. 57'-0"
 - 25247-401 PLAN ELEV. 66'-0"
 - 25247-406 SECTIONS C-C & D-D
 - 25247-407 SECTIONS E-E
 - 25247-402 SECTIONS 1-1, 1A-1A & 2-2
 - 25247-403 SECTIONS 3-3 & 4-4
 - 25247-404 SECTIONS 5-5
 - 25247-405 SITE PLAN
 - 25247-001 MATERIAL LIST
 - 25247-499 ASSEMBLIES & DETAILS
 - 25247-411 SECTION 6-6
 - 25247-430



PROJECT NO.	136745
DRAWN CC	
DESIGNED JDC	
APPROVED	
CHECKED	

No	Date	Revision
0	04-11-05	INITIAL ISSUE - BAY 50 EXTENSION

The United Illuminating Company
157 Church St. New Haven, Ct. 06506

Scale: 1/8"=1'-0"

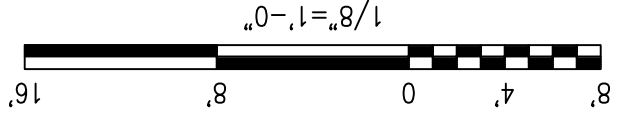
Design Supv. CAD FILE NAME

SEQUENCE No.	047793SH2
DRAWING NUMBER	25247-406SH2
PEQUONNOCK SUBSTATION (BAY 50 EXTENSION)	
SECTIONS C-C & D-D (CONT)	

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

- REFERENCE DRAWINGS:**
- PLAN ELEV. 57'-0"
 - PLAN ELEV. 57'-0"
 - PLAN ELEV. 66'-0"
 - SECTIONS C-C & D-D
 - SECTIONS A-A & B-B
 - SECTIONS C-C & D-D (CONT)
 - SECTION E-E
 - SECTIONS 1-1, 1A-1A & 2-2
 - SECTIONS 3-3 & 4-4
 - SECTION 5-5
 - SITE PLAN
 - MATERIAL LIST
 - ASSEMBLIES & DETAILS
 - ASSEMBLIES & DETAILS
 - 25247-400

- NOTES:**
1. SEE DWG 25247-400 FOR LEGEND
 2. DAMPING CABLE IN ALL NEW HORIZONTAL BUS RUNS. USE 336 4 NOM IN 3 INCH BUS. 795 NOM IN 5 INCH BUS.



BLACK & VEATCH

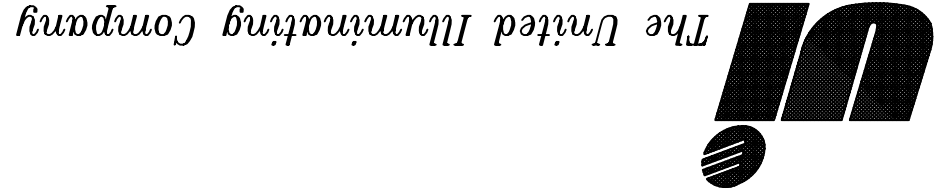
PROJECT NO. 16341

DESIGNED	TVP
APPROVED	DJK
CHECKED	TJJ

No	Date	Revision
6	05-26-92	CONFORMED TO CONSTRUCTION RECORDS
7	04-11-05	BAY 50 EXTENSION

By	Chkd	Engr.	Suprv.
CC	JSF	DJK	MP
		JDC	DJK

Drawn	
Date	04-02-87
Design Engr.	d. LONG
Design Supv.	S.SIEDZIK
Scale	1/8"=1'-0"



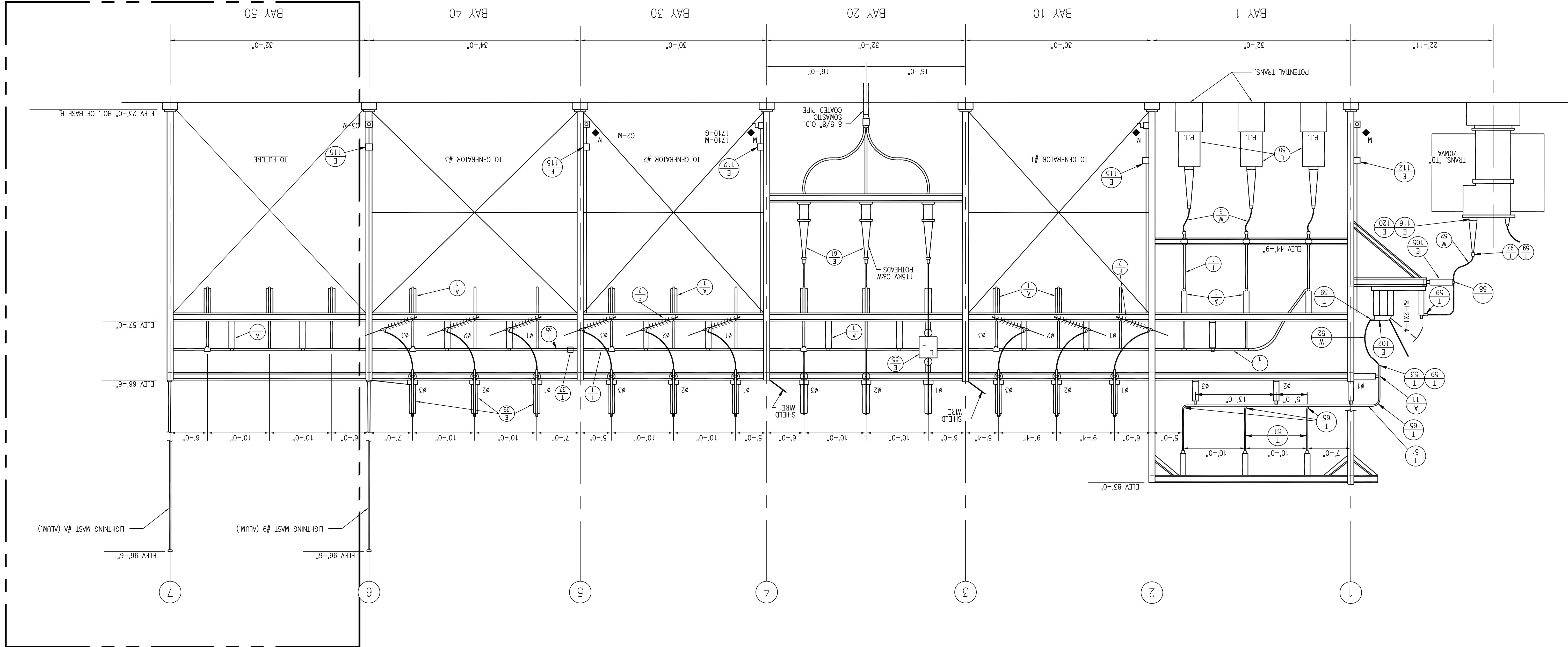
PEQUONNOCK SUBSTATION
SECTION E-E

CAD FILE NAME	047794
SEQUENCE NO.	047794
DRAWING NUMBER	25247-407

PRELIMINARY

NOT TO BE USED FOR CONSTRUCTION

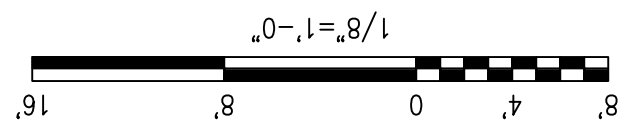
SECTION E-E
SCALE: 1/8"=1'-0"
FACING WEST



GENERAL NOTES:

- SEE ASSEMBLIES & DETAILS
DWG # 25247-409
- THIS DWG PREVIOUSLY NUMBERED 24301-191
- SEE DWG 25247-400 FOR LEGEND

- REFERENCE DRAWINGS:
- 25247-400 PLAN ELEV. 57'-0"
 - 25247-400 SH2 PLAN ELEV. 57'-0"
 - 25247-401 PLAN ELEV. 66'-0"
 - 25247-401 SH2 SECTIONS C-C & D-D
 - 25247-405 SECTIONS A-A & B-B
 - 25247-406 SECTIONS C-C & D-D (CONT)
 - 25247-408 SECTIONS C-C & D-D
 - 25247-402 SECTIONS 1-1, 1A-1A & 2-2
 - 25247-403 SECTIONS 3-3 & 4-4
 - 25247-404 SECTION 5-5
 - 25247-001 SITE PLAN
 - 25247-499 MATERIAL LIST
 - 25247-408 ASSEMBLIES & DETAILS
 - 25247-411 ASSEMBLIES & DETAILS
 - 25247-430 SECTION 6-6



CHECKED	
APPROVED	
DESIGNED	JDS
DRAWN	CC
PROJECT NO.	136745

No	Date	Revision
0	04-11-05	INITIAL ISSUE - BAY 50 EXTENSION

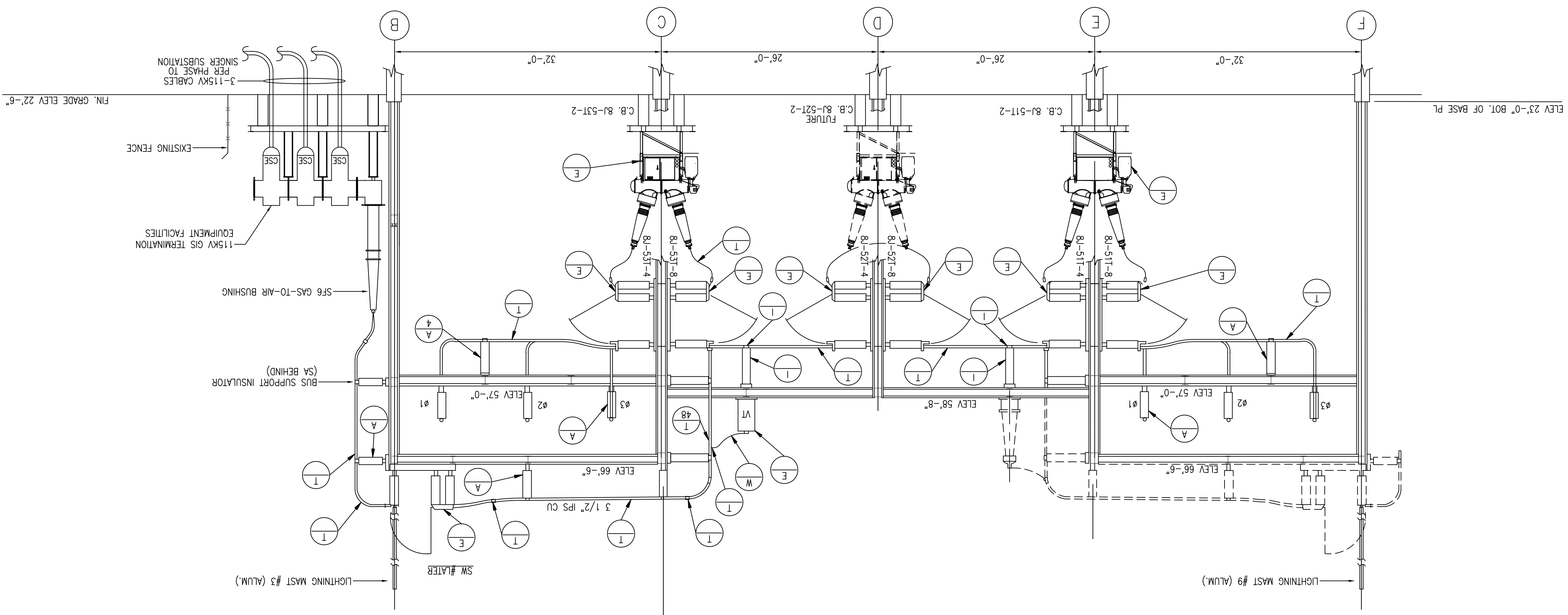
Drawn CC	Date	Scale: 1/8"=1'-0"
Design Engr.		
Design Supv.		



The United Illuminating Company
157 Church St. New Haven, Ct. 06506

PEQUONNOK SUBSTATION
SECTION 6-6
(BAY 50 EXTENSION)
DRAWING NUMBER 25247-430

BAY 50
SECTION 6-6
SCALE 1/8" = 1'-0"



PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

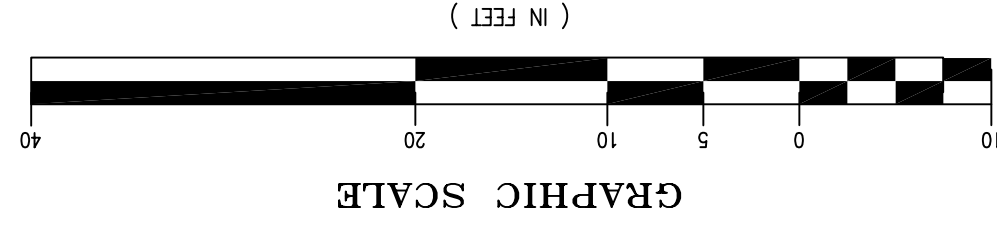
GENERAL NOTES:

1. SEE DWG 25247-400 FOR LEGEND

REFERENCE DRAWINGS:

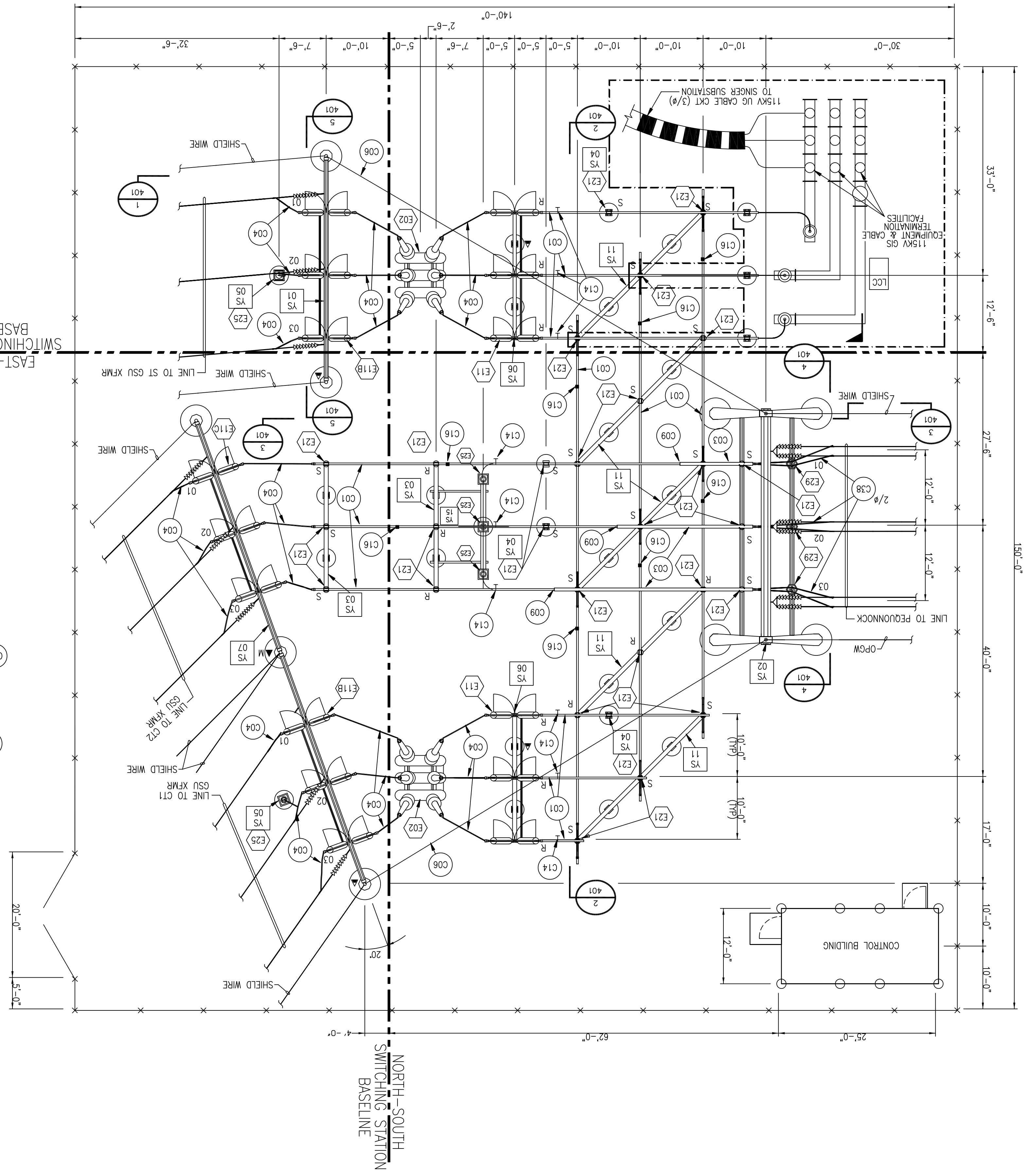
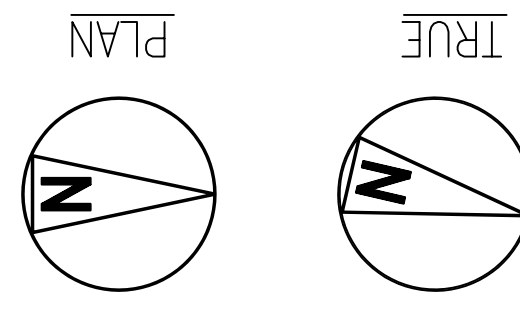
- 25247-400 SH2 PLAN ELEV. 57'-0"
- 25247-401 SH2 PLAN ELEV. 66'-0"
- 25247-401 SH2 SECTIONS C-C & D-D
- 25247-405 SECTIONS A-A & B-B
- 25247-406 SECTIONS C-C & D-D
- 25247-406 SH2 SECTIONS C-C & D-D (CONT)
- 25247-407 SECTIONS E-E
- 25247-407 SECTIONS 1-1, 1A-1A & 2-2
- 25247-403 SECTIONS 3-3 & 4-4
- 25247-404 SECTIONS 5-5
- 25247-001 SITE PLAN
- 25247-499 MATERIAL LIST
- 25247-409 ASSEMBLES & DETAILS
- 25247-411 SECTION 6-6

PROJECT NO. 39602		BLACK & VEATCH	
6 04-11-05 REVISED FOR SINGER 115KV CRT TERMINATION 5 08-11-99 CCVT STRUCTURE MODIFICATIONS 4 08-18-98 BRIDGEPORT ENERGY (AS BUILT) 3 02-23-98 GENERAL REVISIONS 2 11-11-97 ISSUED FOR CONSTRUCTION 1 10-28-97 ISSUED FOR FABRICATION 0 09-26-97 APPROVED DJK CHECKED ESF			
No	Date	Revision	By
6	04-11-05	REVISED FOR SINGER 115KV CRT TERMINATION	CC
5	08-11-99	CCVT STRUCTURE MODIFICATIONS	JM
4	08-18-98	BRIDGEPORT ENERGY (AS BUILT)	M.M.
3	02-23-98	GENERAL REVISIONS	B.L.
2	11-11-97	ISSUED FOR CONSTRUCTION	R.F.P.
1	10-28-97	ISSUED FOR FABRICATION	B.L.
0	09-26-97	APPROVED DJK	R.F.P.
DRAWN RLP DESIGNED MJP PROJECT NO. 39602 PROJECT NO. 39602 PROJECT NO. 39602			



PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

BUS AND EQUIPMENT PLAN
SCALE: 1"=10'-0"



CONSTRUCTION NOTES:
1. ALL SITEWORK, FENCING, FOUNDATIONS AND BELOW GRADE GROUNDING AND RACEWAY WILL BE INSTALLED BY THE CONTRACTOR.
2. COORDINATES FOR PARTIAL PLANS ARE BASED ON SIEMENS LOCAL PLANT AND RACEWAY WILL BE INSTALLED BY THE CONTRACTOR.

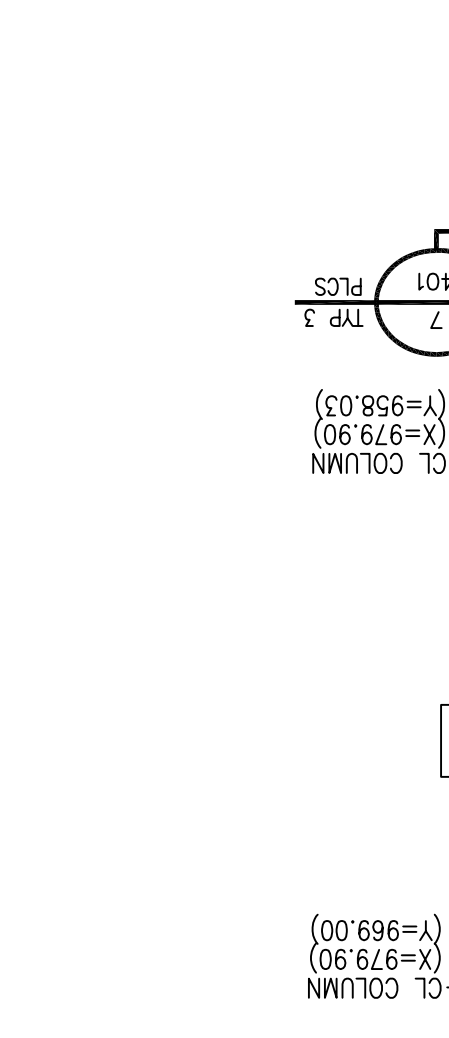
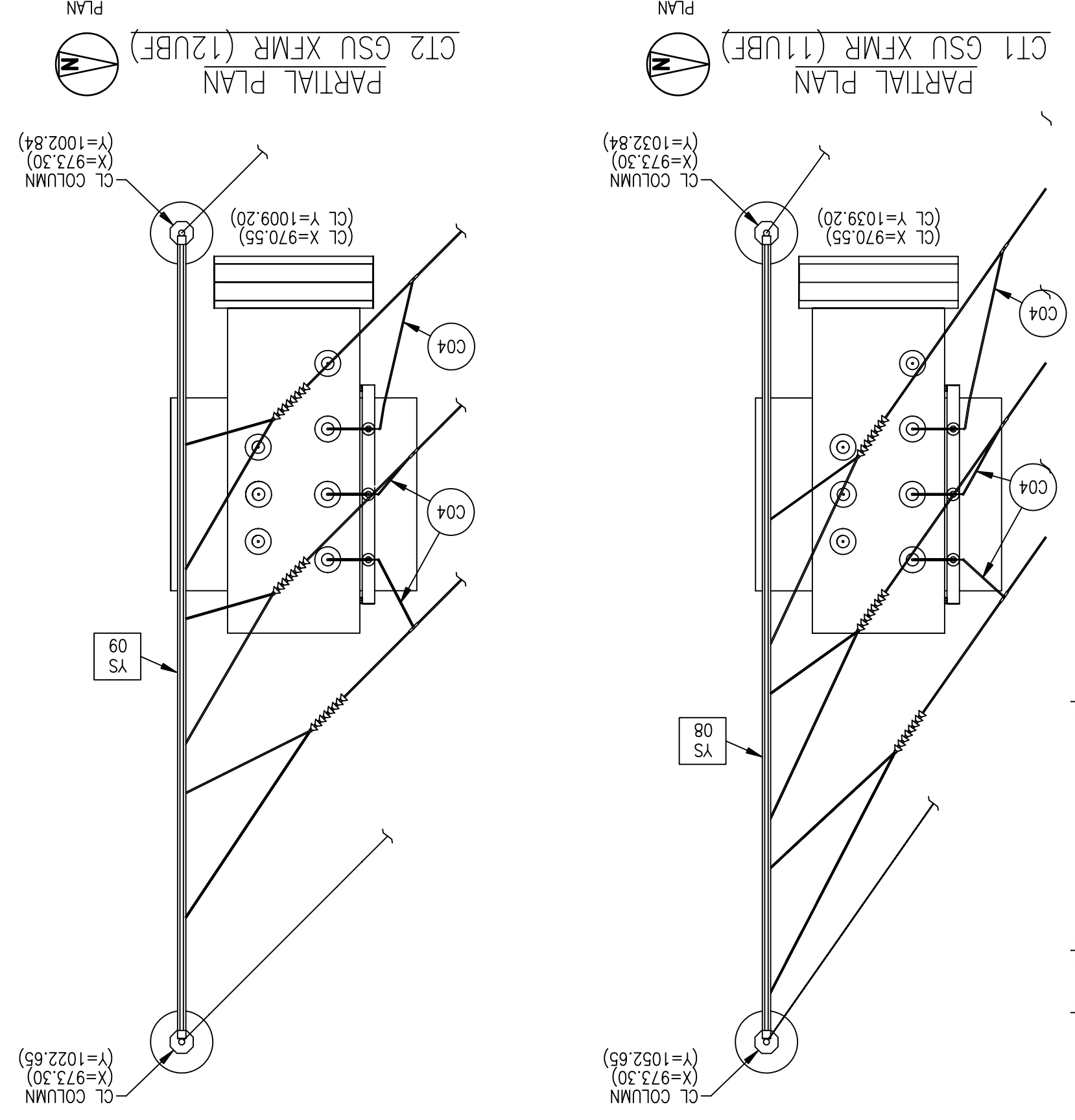
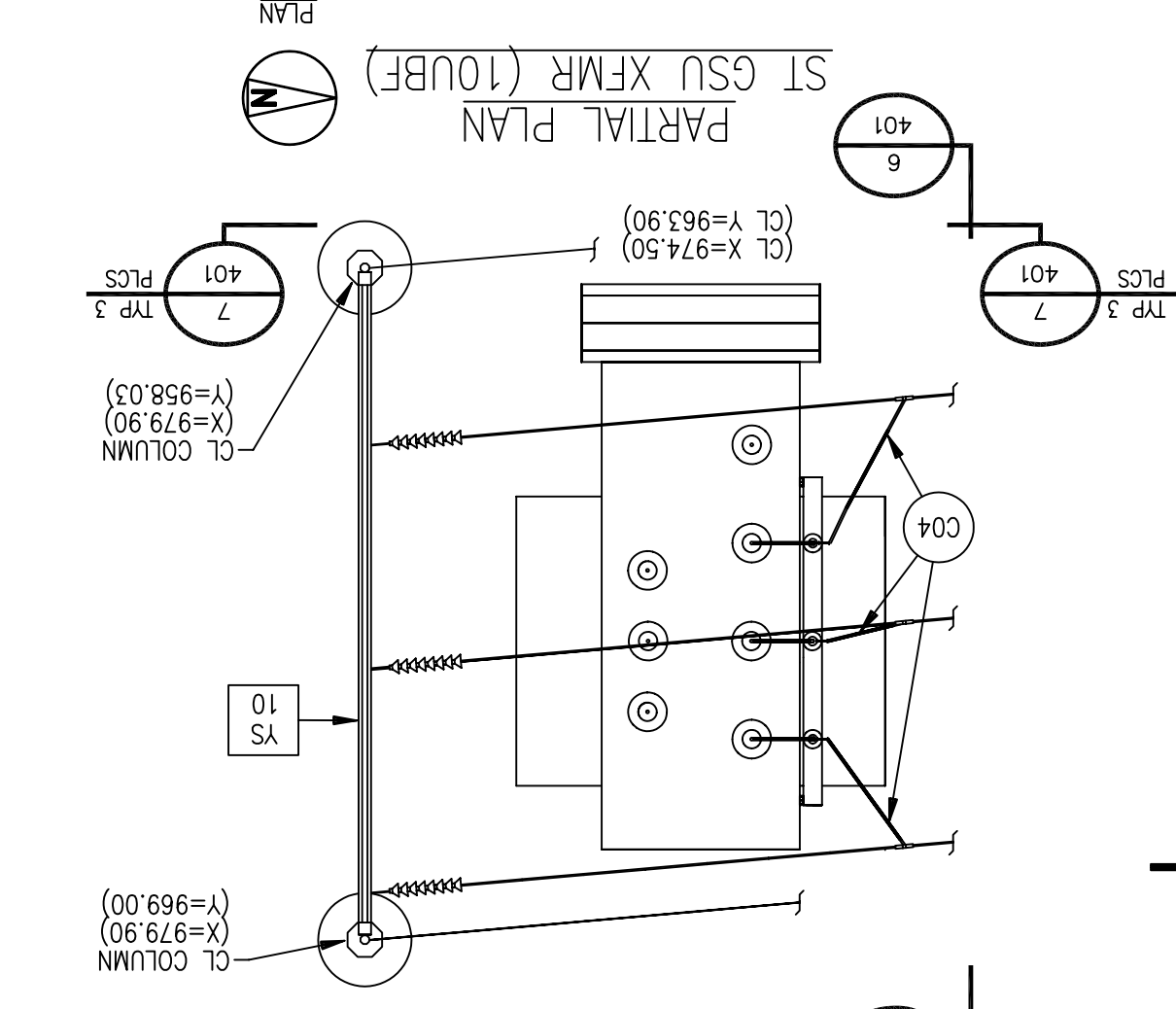
CONDUCTOR LEGEND

- C01 3" ALUMINUM BUS
- C03 5" ALUMINUM BUS
- C04 1500 MCM ACSR
- C05 556.5 MCM ACSR
- C06 7-#6 ALUMINUM ELDT
- C38 2156 MCM ACSR

- ▲ M MOTORIZED SWITCH OPERATOR LOCATION
- ▼ MANUAL SWITCH OPERATOR LOCATION, WITH KIRK KEY INTERLOCK
- 1/4" CHAIN LINK FENCE
- BUS OR JUMPER FITTING
- GROUNDING STUD
- S SUP (NON-WELDED) BUS FITTING
- R RIGID (WELDED) BUS FITTING

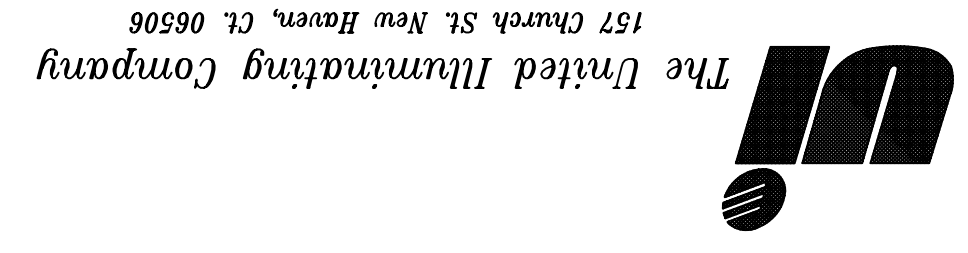
- REFERENCE DRAWINGS
- 25250-001 ELECTRICAL SITE PLAN
 - 25250-002 SITE GRADING
 - 25250-401 115KV SWITCHBOARD SECTIONS
 - 25250-401 115KV SWITCHBOARD DETAILS
 - 25250-402 115KV SWITCHBOARD PLAN
 - 25250-411 SWITCHBOARD GROUNDING PLAN
 - 25250-412 SWITCHBOARD RACEWAY PLAN
 - 25250-410 LIGHTING & COMMUNICATIONS PLAN
 - 25250-430 SWITCHBOARD FOUNDATION PLAN

- GENERAL NOTES:
- SEE MATERIAL LISTS FOR DESCRIPTIONS OF EQUIPMENT, STRUCTURES, AND FITTINGS.
 - 556.5 MCM ACSR (ITEM C05) VIBRATION DAMPING CONDUCTOR SHALL BE INSTALLED INSIDE EACH HORIZONTAL RUN OF TUBULAR BUS LONGER THAN 15 FEET.
 - GSU TRANSFORMER AND DEPENDENT TOWER LOCATIONS ARE BASED ON SIEMENS LOCAL PLANT (X,Y) COORDINATE SYSTEM. VALUES INDICATED ARE IN METERS.



2. COORDINATES FOR PARTIAL PLANS ARE BASED ON SIEMENS LOCAL PLANT AND RACEWAY WILL BE INSTALLED BY THE CONTRACTOR.

BRIDGEPORT ENERGY	CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
SWITCHING STATION	095297		25250-400
EQUIPMENT PLAN			

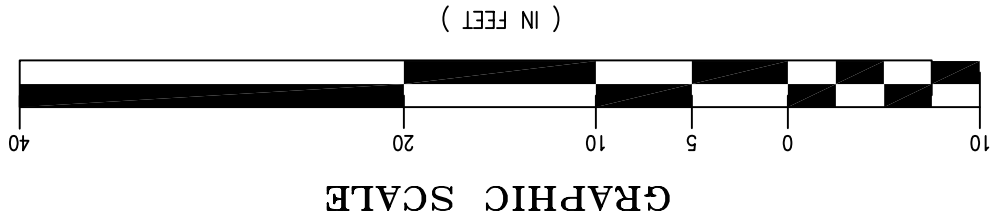


1. SEE DWG 25250-400 FOR CONSTRUCTION NOTES.

CONSTRUCTION NOTES:

1. SEE MATERIAL LISTS FOR DESCRIPTIONS OF EQUIPMENT, STRUCTURES, AND FITTINGS.
2. SEE DWG 25250-400 FOR ADDITIONAL NOTES AND LEGEND.
3. SEE DWG 25250-422 THRU 426 FOR SHIELD WIRE AND CONDUCTOR TERMINATION DETAILS AND MATERIAL LIST.
4. SEE DWG 24302-600 FOR ASSEMBLY DETAIL CTA-1.

GENERAL NOTES:



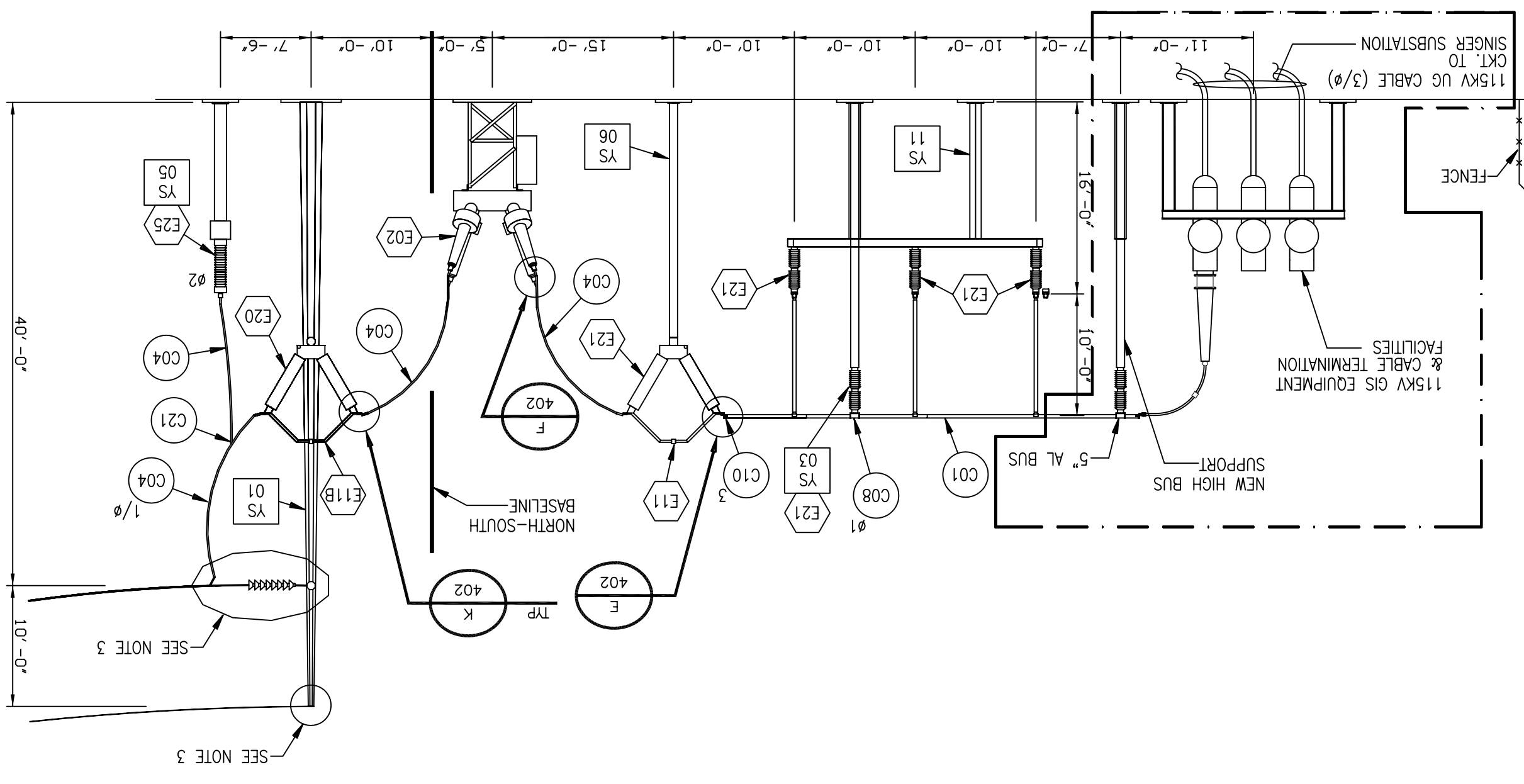
PROJECT NO. 39602	BLACK & VEATCH	
NO	DATE	REVISION
5	04-11-05	REVISED FOR SINGER 115KV CKT TERMINATION
4	08-11-99	CKT STRUCTURE MODIFICATIONS
3	08-18-98	BRIDGEPORT ENERGY (AS BUILT)
2	11-11-97	ISSUED FOR CONSTRUCTION
1	10-28-97	ISSUED FOR FABRICATION
0	09-26-97	APPROVED
		CHECKED ESF

Drawn	R.L.P.	Date	9/26/97	Scale	1"=10'-0"
Design	Eng.				
Design	Supv.				
Chkd.	Supv.				
By	Chkd.	Eng.			
R.P.	R.P.	M.P.			
R.P.	R.P.	B.P.L.			
R.P.	R.P.	D.K.			
W.J.	K.L.K.	M.M.			
A.M.B.	J.M.	J.D.S.			
CC					

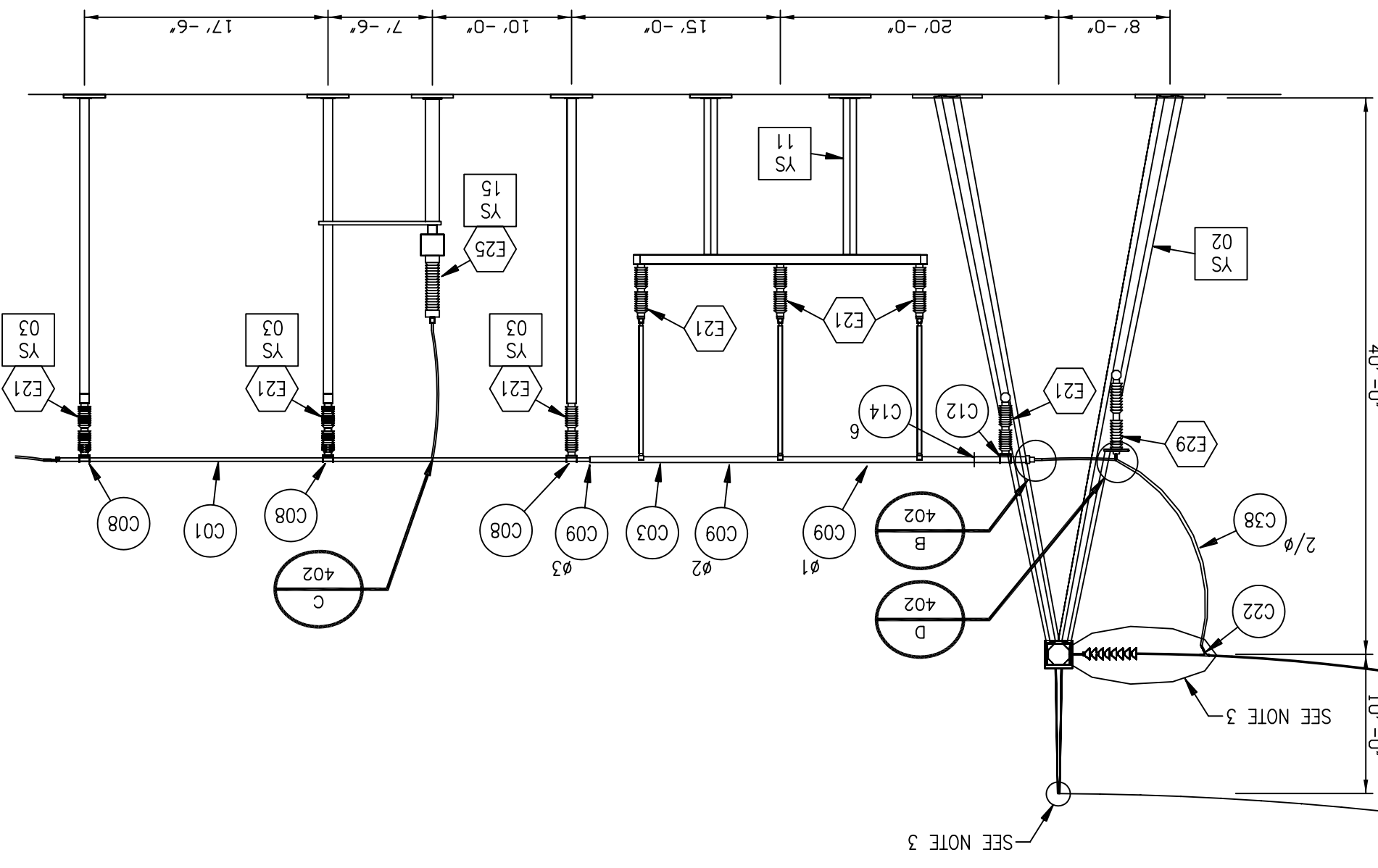
The United Illuminating Company
157 Church St. New Haven, Ct. 06506

BRIDGEPORT ENERGY SWITCHING STATION
115KV SWITCHARD SECTIONS
DRAWING NUMBER 25250-401
SEQUENCE NO. 059298
CAD FILE NAME

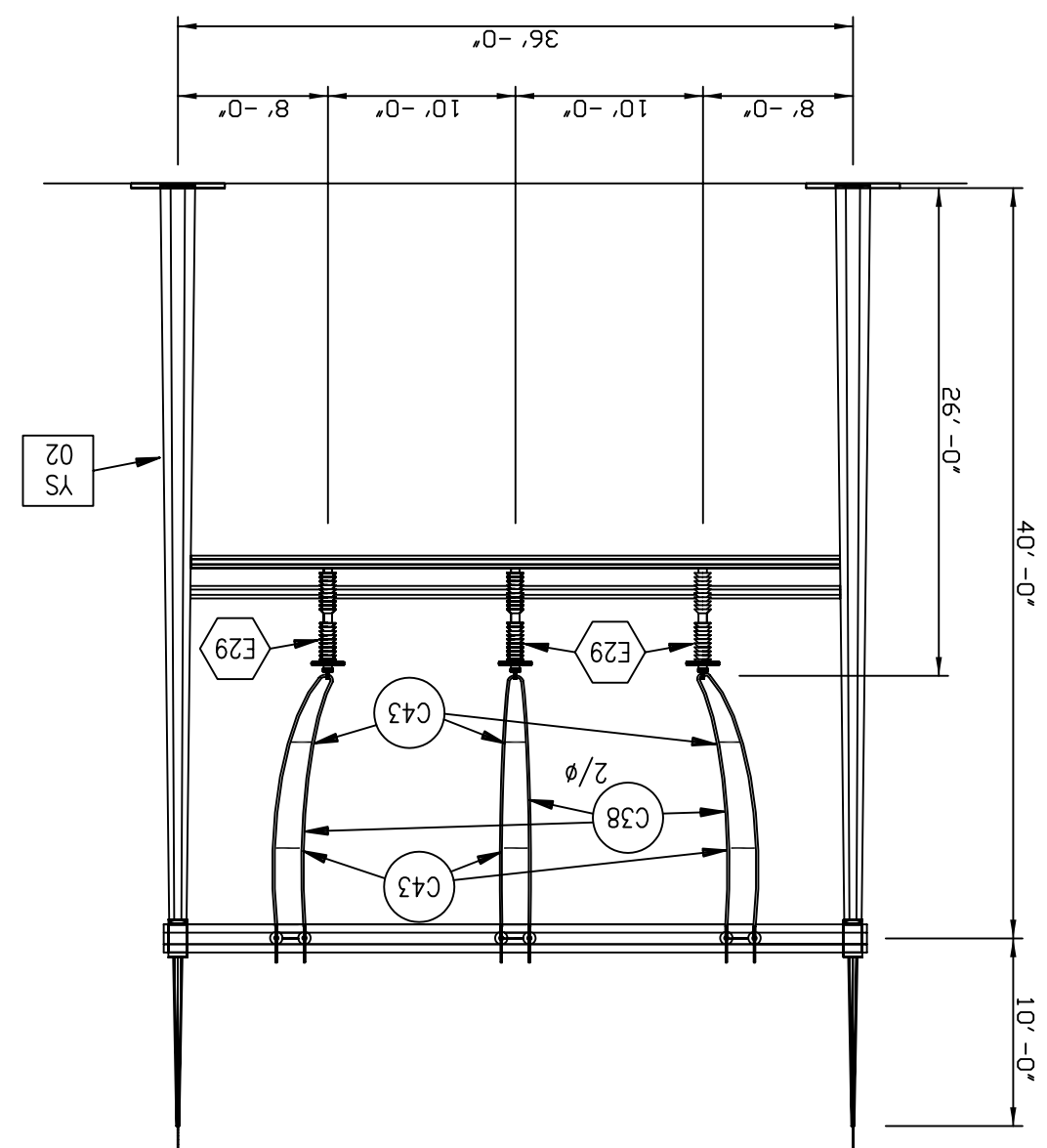
PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION



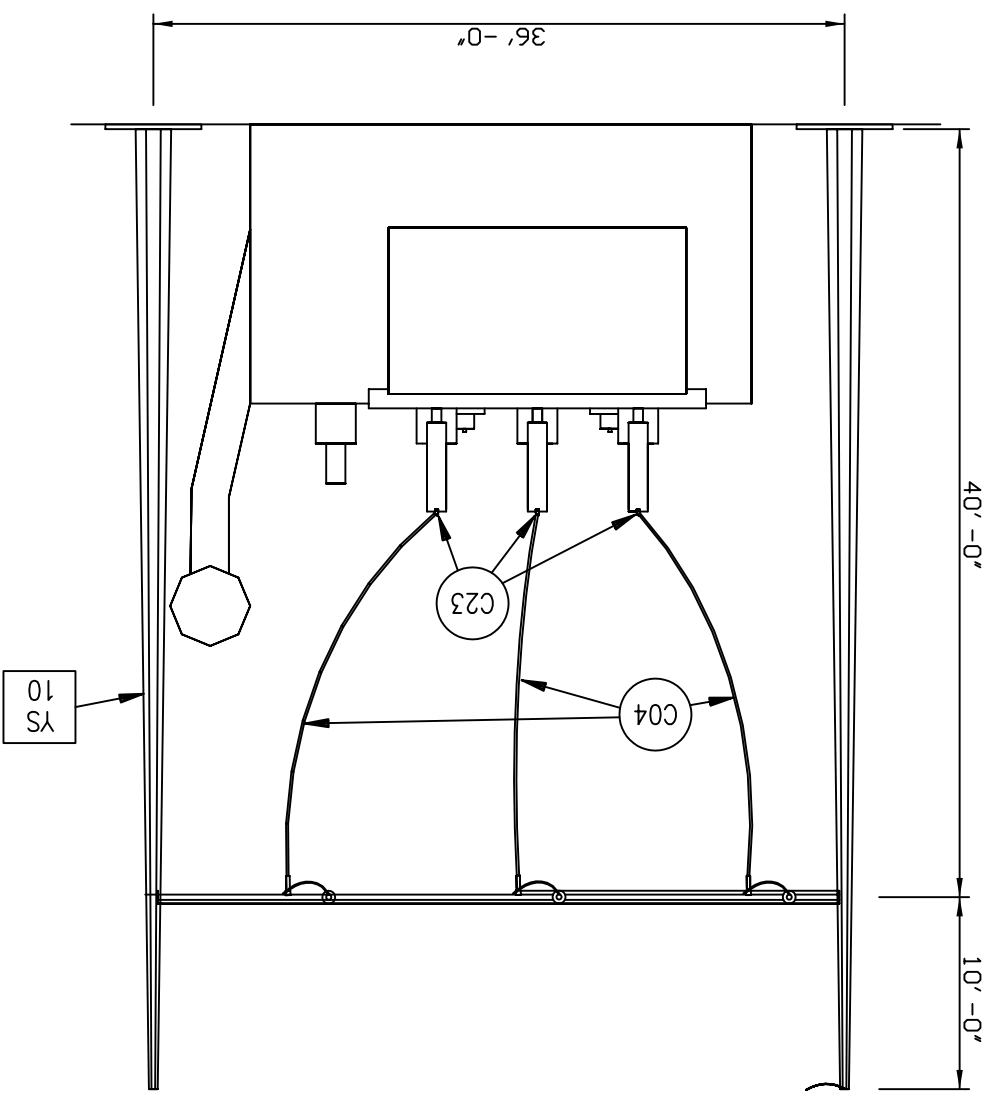
SECTION 1
SCALE: 1"=10'-0"



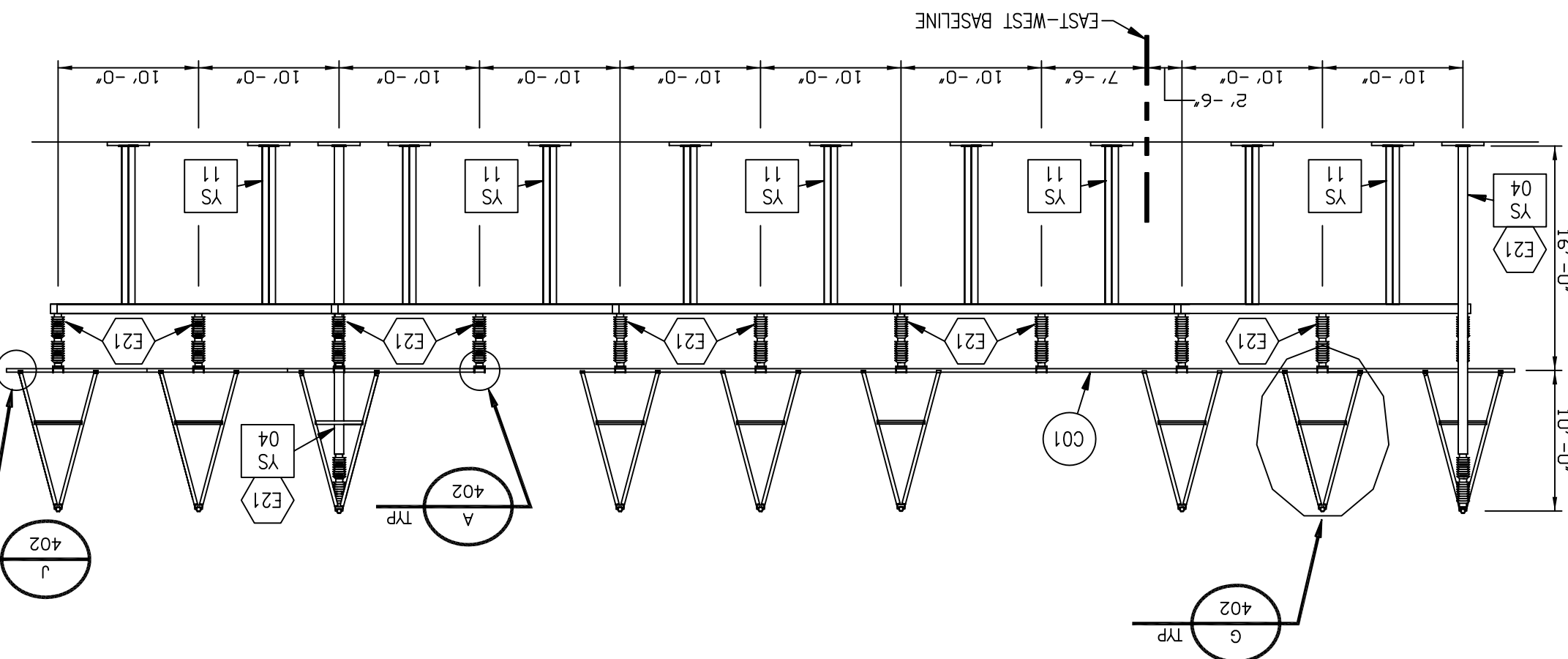
SECTION 3
SCALE: 1"=10'-0"



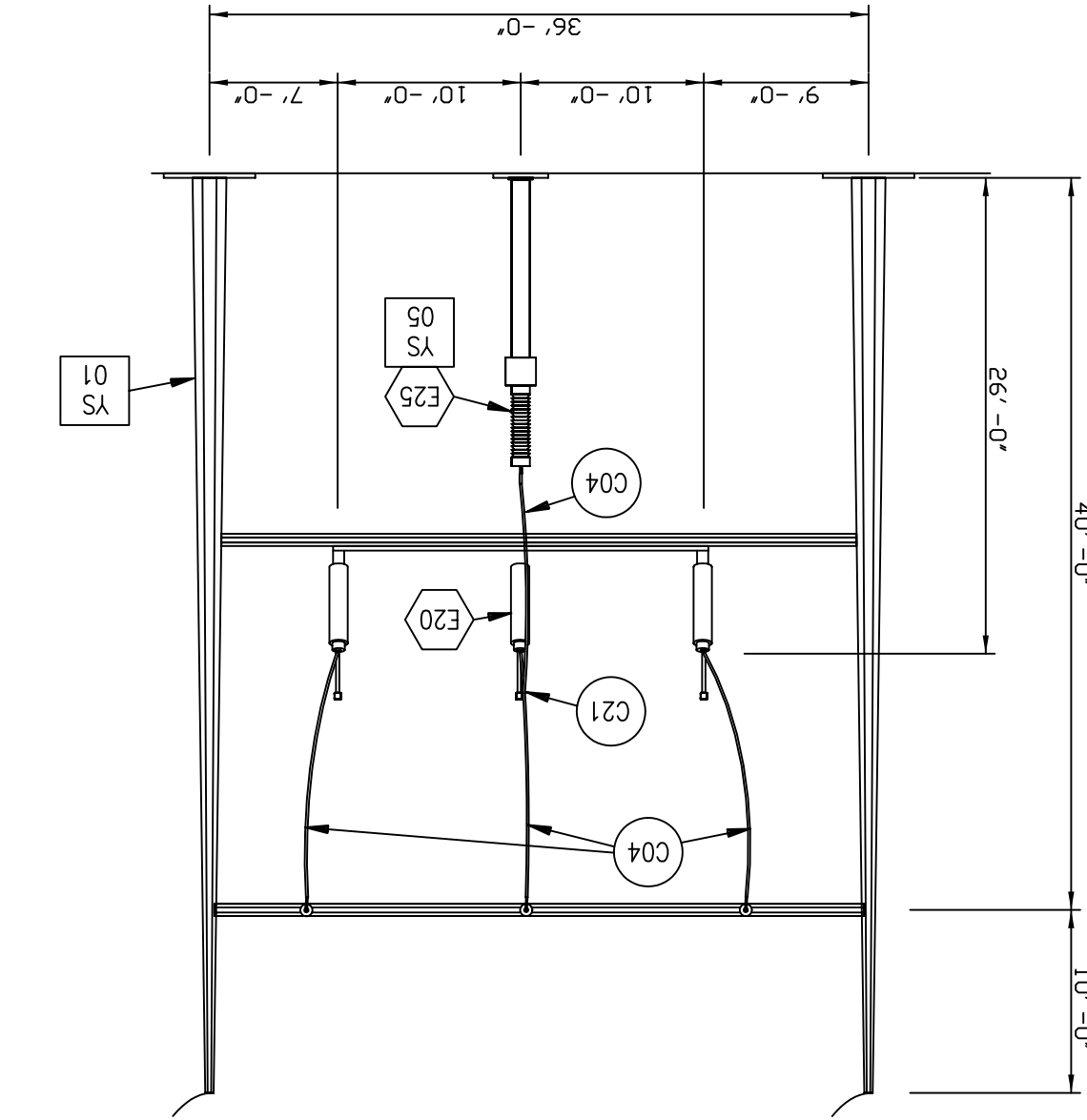
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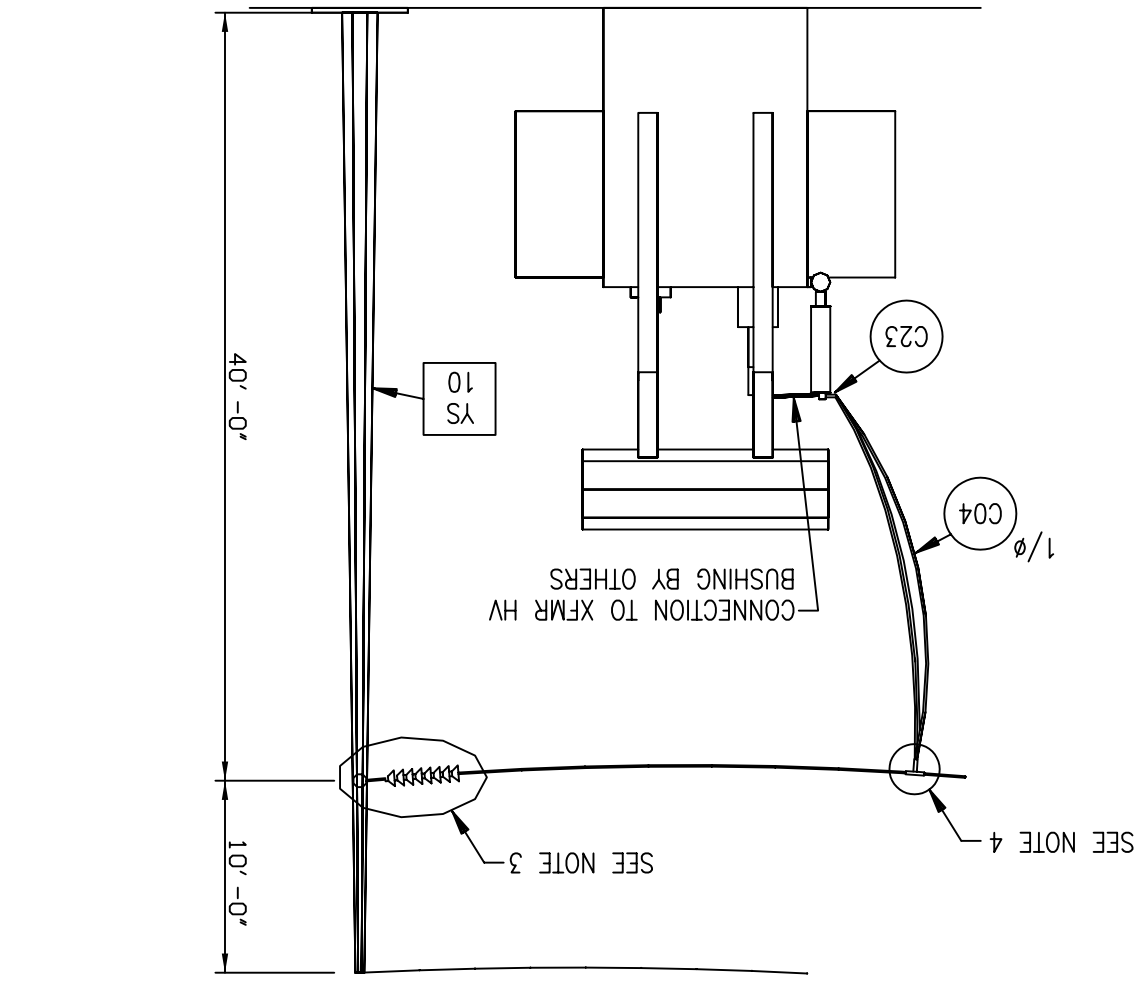
SECTION 6
SCALE: 1"=10'-0"



SECTION 2
SCALE: 1"=10'-0"

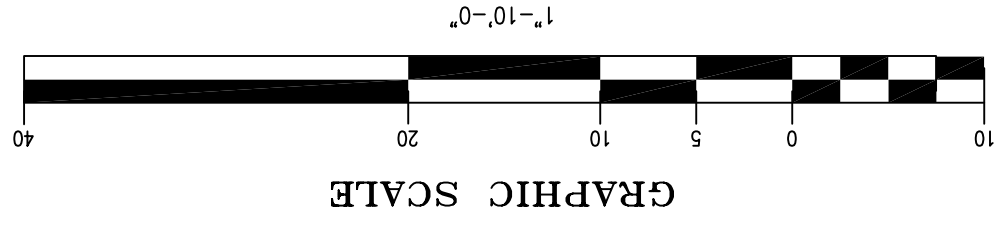


SECTION 5
SCALE: 1"=10'-0"



SECTION 7
SCALE: 1"=10'-0"

CHECKED		No	Date	Revision	By	Chkd.	Engr.	Supv.	Chkd.	Drawn CC	Date	Scale: 1"=10'-0"	Design Supv.	Design Engr.	SEQUENCE No.	CAD FILE NAME	DRAWING NUMBER
APPROVED --		0	04-11-05	INITIAL ISSUE-SINGER 115KV CKT. TERMINATION											25250-401	047791_2B	25250-401 SH2
DESIGNED JDG																	
DRAWN CC																	
PROJECT NO. 136745																	
BLACK & VEATCH																	



PRELIMINARY

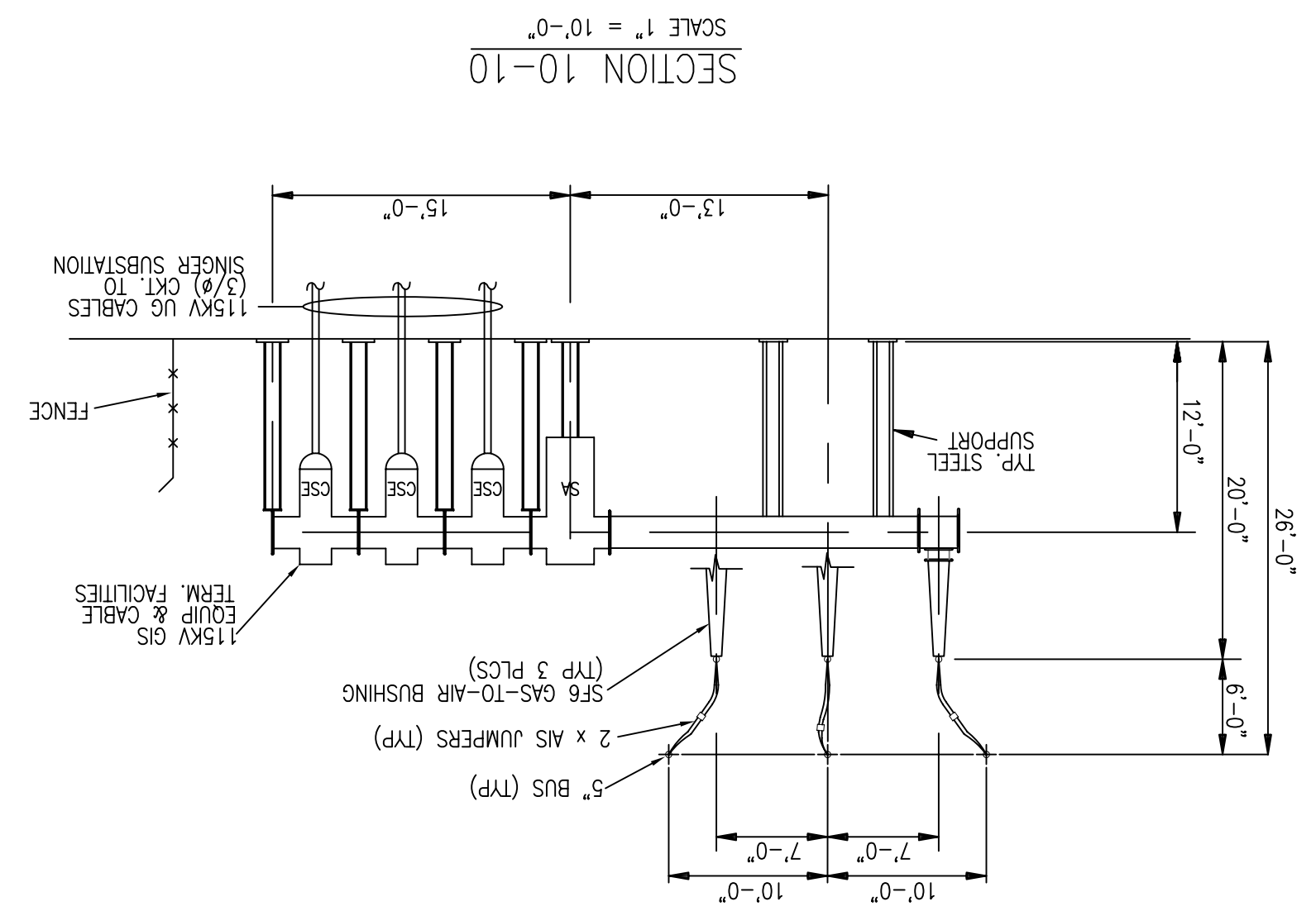
NOT TO BE USED FOR CONSTRUCTION

SWITCHYARD BUS AND EQUIPMENT PLAN
25250-400
115KV SWITCHYARD SECTIONS
25250-401
115KV SWITCHYARD DETAILS
25250-402

REFERENCE DRAWINGS

1. SEE MATERIAL LISTS FOR DESCRIPTIONS OF EQUIPMENT, STRUCTURES, AND FITTINGS.
2. SEE DWG 25250-400 FOR ADDITIONAL NOTES AND LEGEND.

GENERAL NOTES:



BRIDGEPORT ENERGY
SWITCHING STATION
115KV SWITCHYARD
SECTIONS

The United Illuminating Company
157 Church St New Haven, Ct 06506



Docket No. 272

The United Illuminating Company and the Connecticut Light & Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction of a 345kV electric transmission line and associated facilities between the Scovill Rock Switching Station in the Town of Middletown and the Norwalk Substation in the Town of Norwalk, Connecticut.

APPENDIX D
TRANSMISSION LINE DRAWINGS

Docket No. 272

The United Illuminating Company and the Connecticut Light & Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction of a 345kV electric transmission line and associated facilities between the Scovill Rock Switching Station in the Town of Middletown and the Norwalk Substation in the Town of Norwalk, Connecticut.

APPENDIX D TABLE OF CONTENTS TRANSMISSION LINE DRAWINGS

TRANSMISSION LINE

<u>Drawing No.</u>	<u>Drawing Title</u>
24215-700	Singer – Pequonnock 115kV UG Transmission Line Plan & Profile Drawings
24215-701	Singer – Pequonnock 115kV UG Transmission Line Plan & Profile Drawings
24215-702	Singer – Pequonnock 115kV UG Transmission Line Plan & Profile Drawings
24215-703	Middletown – Norwalk Project 115kV UG Transmission Line Sections Cuts
24215-704	Middletown – Norwalk Project Pavement Restoration Details
24215-705	Middletown – Norwalk Project Sediment and Erosion Control Details
24215-706	Middletown – Norwalk Project Maintenance and Protection Of Traffic Plans
24216-700	Singer – Bridgeport Energy 115kV UG Transmission Line Plan & Profile Drawing

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

BLACK & VEATCH
PROJECT NO. 136745

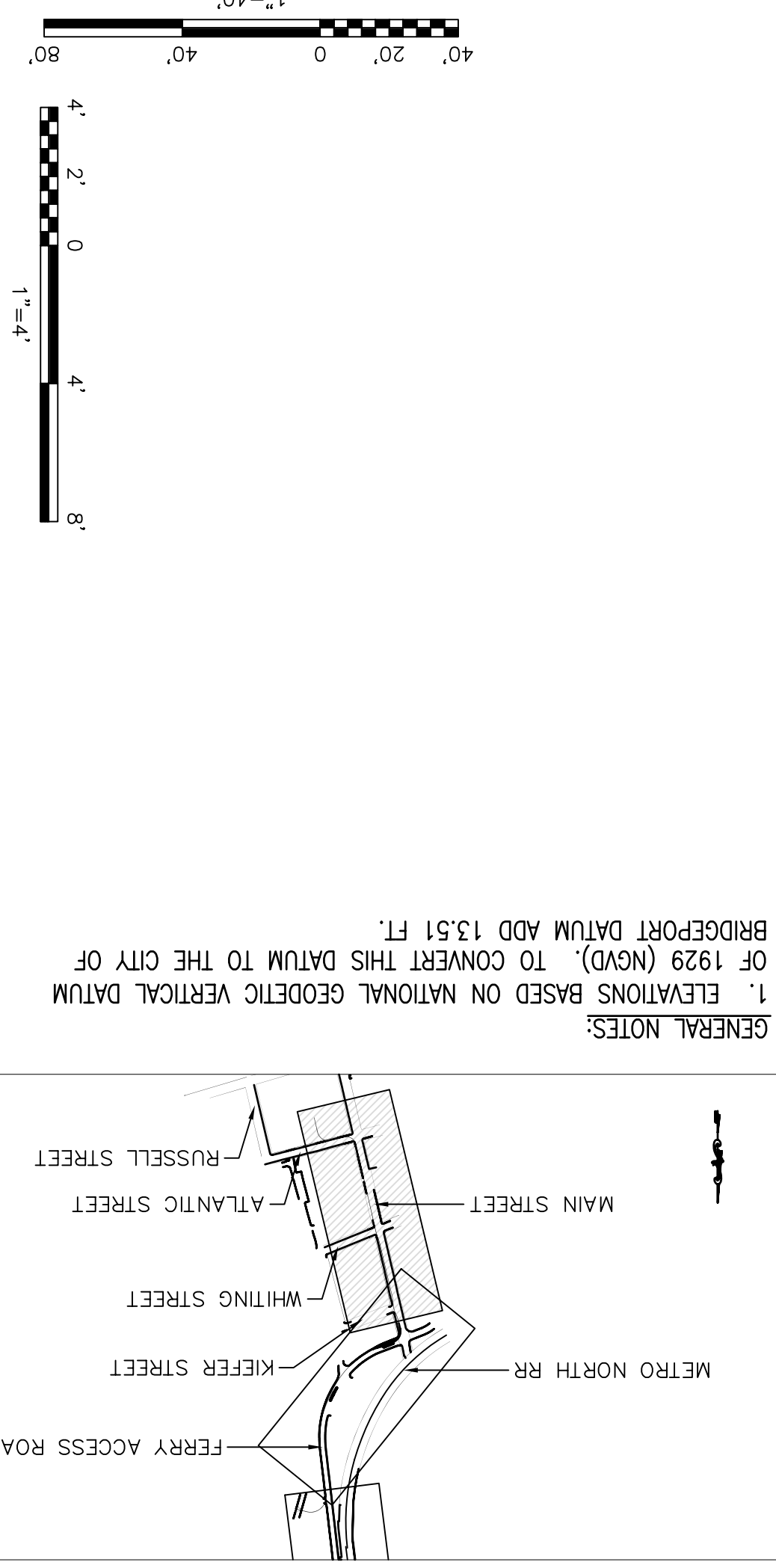
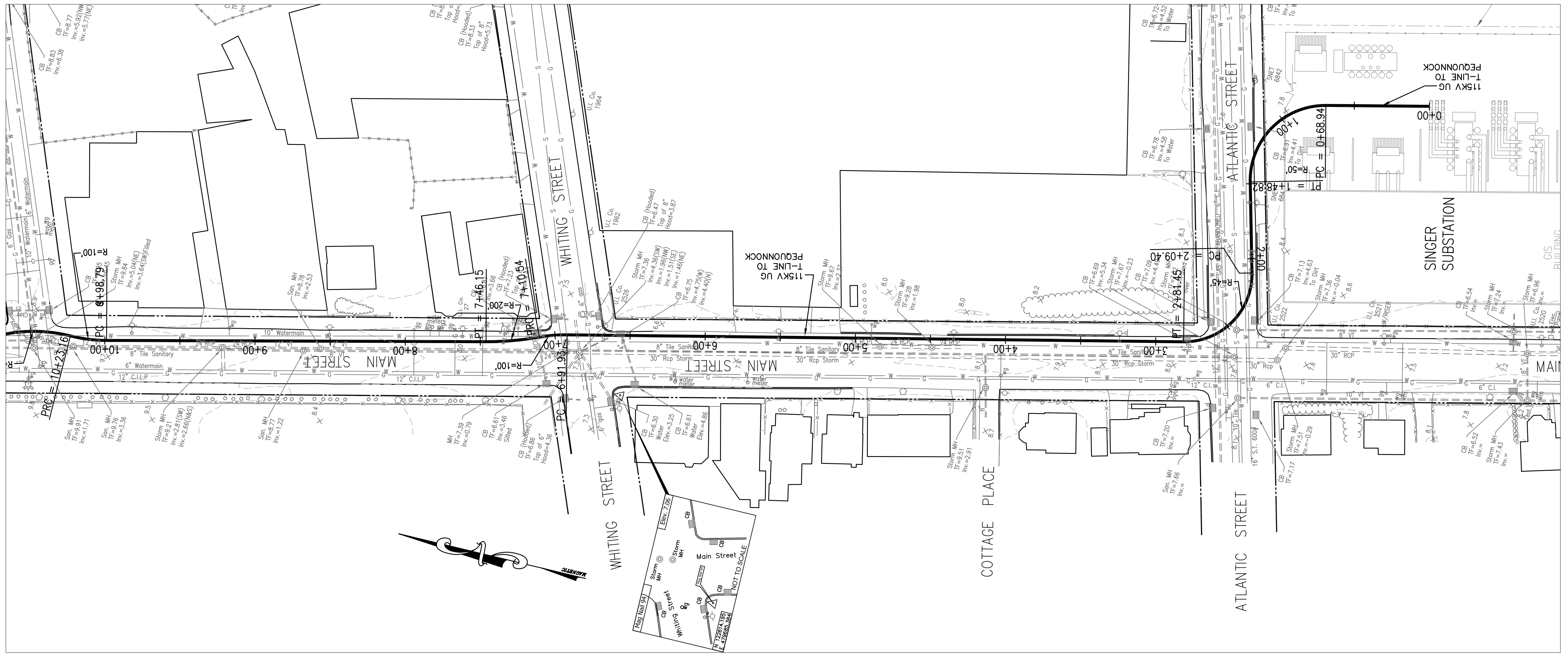
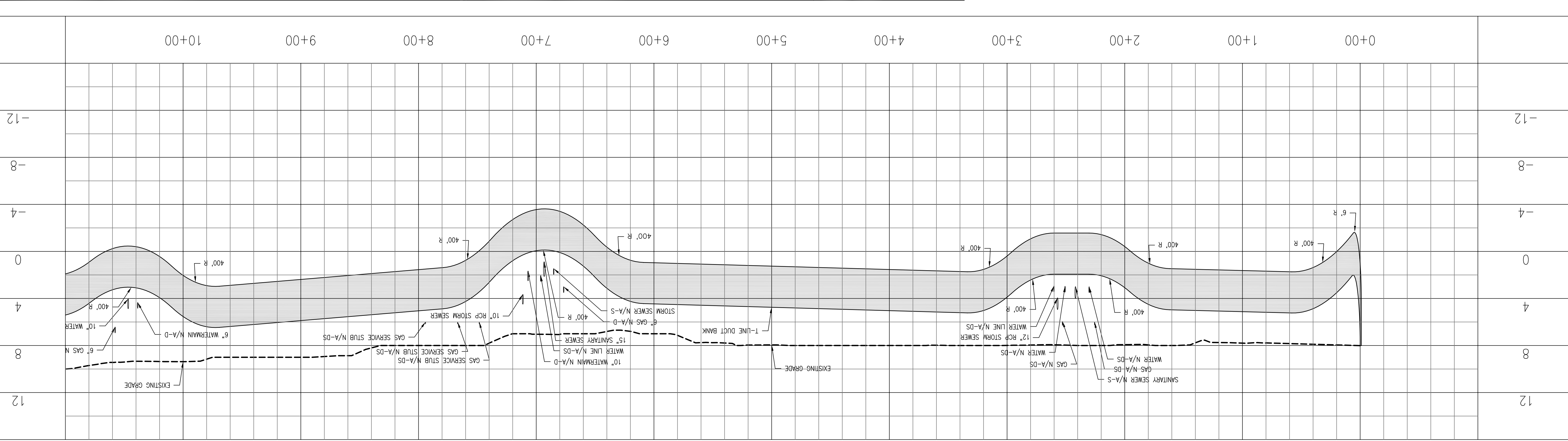
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4/11/2005
A 2/17/2005

Revision
INITIAL ISSUE
ISSUED FOR 30% REVIEW

No	Date	By	Chkd	Engr	Suprv	Chkd	Engr	Suprv
0	4/11/2005	WJB	-	ASM	-	WJB	-	ASM
A	2/17/2005	WJB	-	ASM	-	WJB	-	ASM

The United Illuminating Company
157 Church St. New Haven, Ct. 06506

SINGER-EQUONNOCK
115KV UG TRANSMISSION LINE
PLAN & PROFILE DRAWINGS
DRAWING NUMBER 24215-700



PRELIMINARY

NOT TO BE USED FOR CONSTRUCTION

BLACK & VEATCH
PROJECT NO. 136745

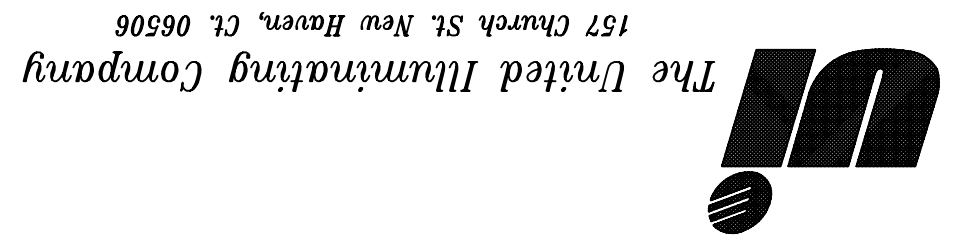
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DESIGNED: ASM
DATE: 4/11/2005

INITIAL ISSUE
ISSUED FOR 30% REVIEW
DATE: 2/17/2005

NO. 0

No.	Date	Revision
0	4/11/2005	INITIAL ISSUE
A	2/17/2005	ISSUED FOR 30% REVIEW

By: WJB
Checked: ASM
Engineer: ASM
Supervisor: -
Drawn: -



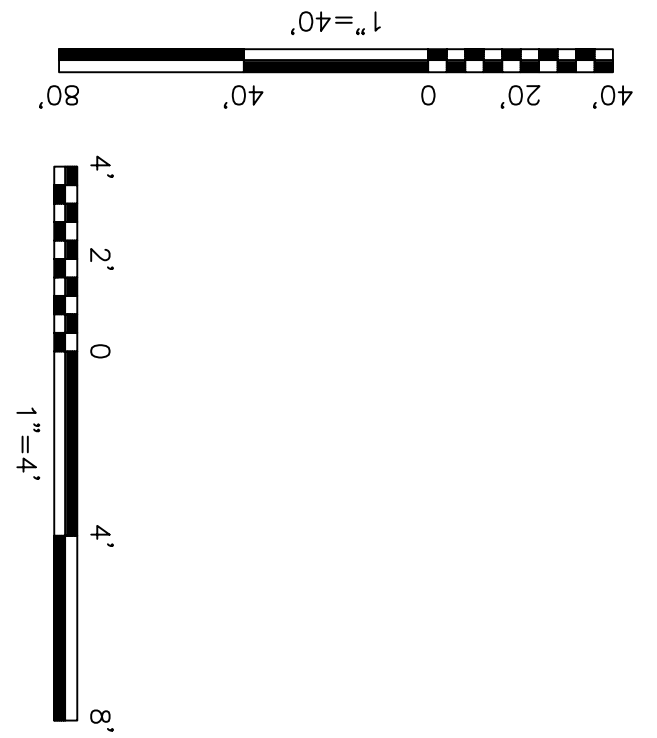
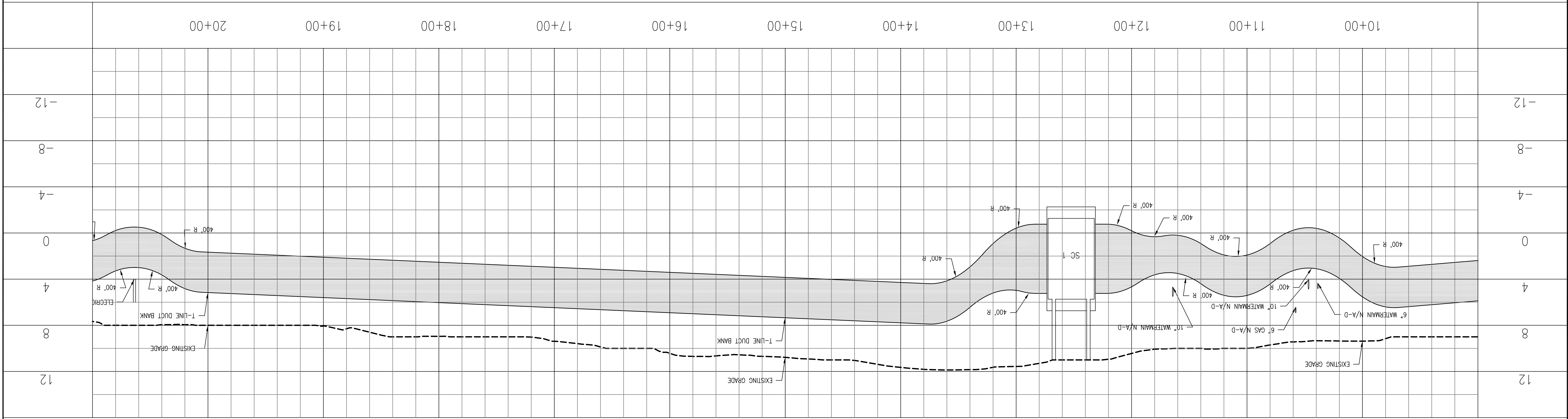
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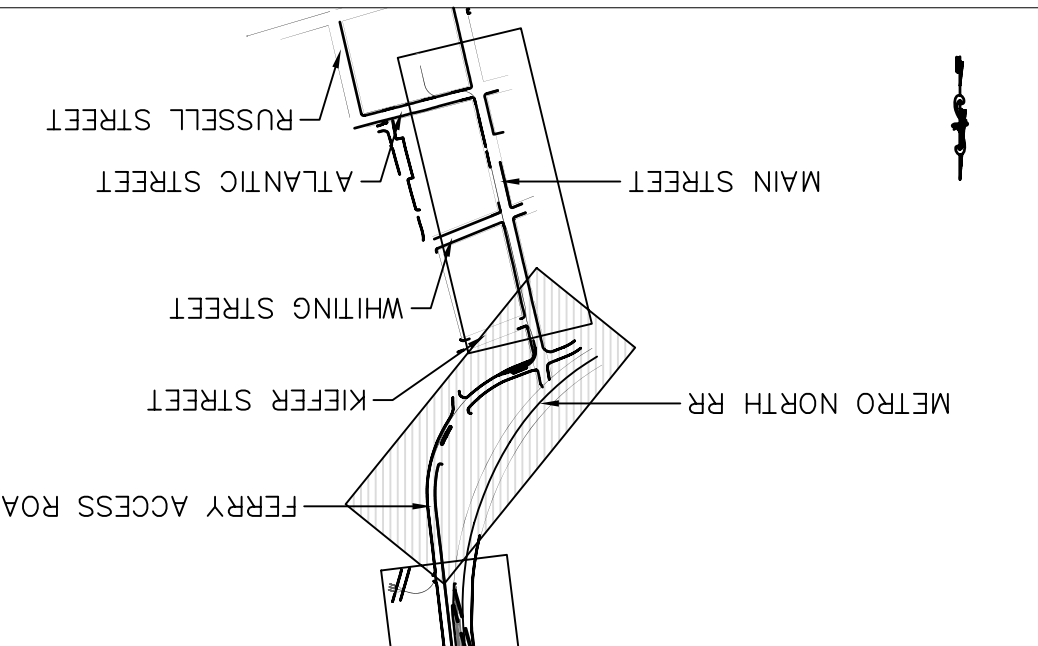
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DRAWING NUMBER: 24215-701

SINGER-EQUONNOCK
115KV UG TRANSMISSION LINE
PLAN & PROFILE DRAWINGS



GENERAL NOTES:
1. ELEVATIONS BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD). TO CONVERT THIS DATUM TO THE CITY OF BRIDGEPORT DATUM ADD 13.51 FT.



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NOT TO BE USED FOR CONSTRUCTION

BLACK & VEATCH
PROJECT NO. 136745

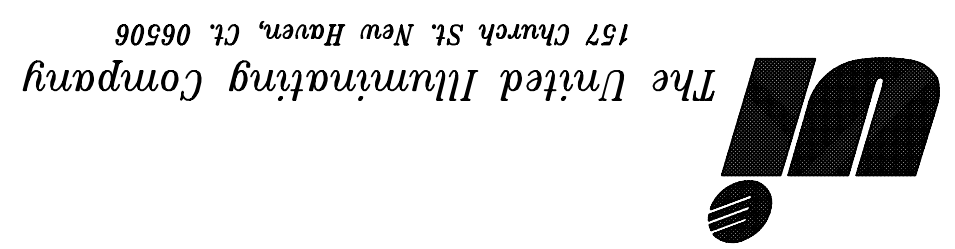
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APPROVED: -
CHECKED: -

No. 0
Date: 4/11/2005
Revision: INITIAL ISSUE

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Checked: -
Engr. Supv: -
Date: 2/17/2005
Revision: ISSUED FOR 30% REVIEW

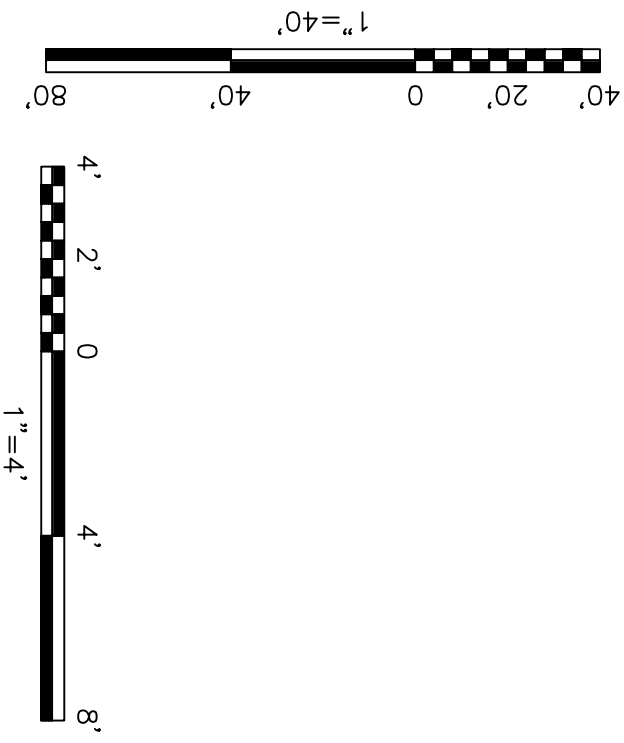
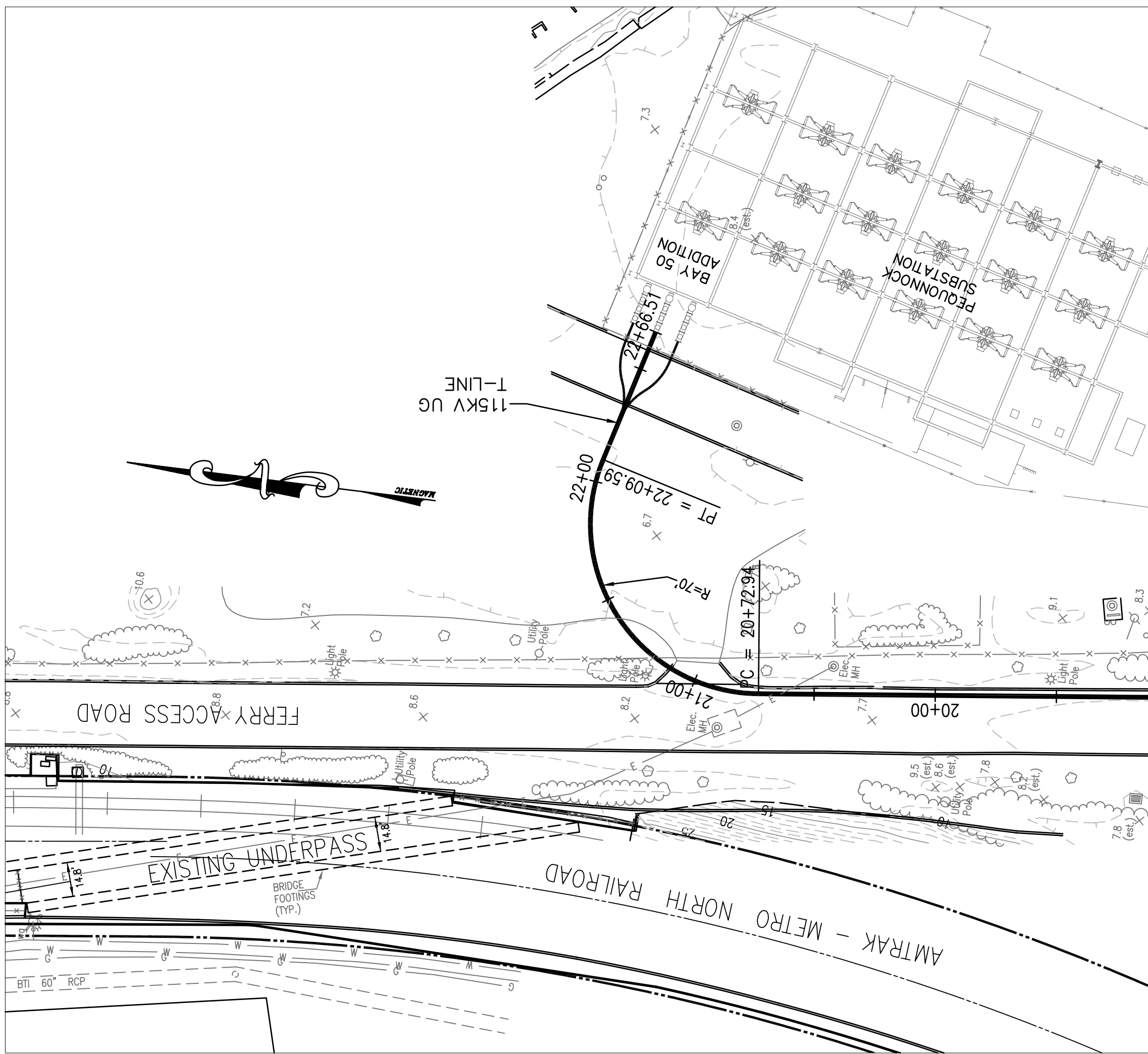
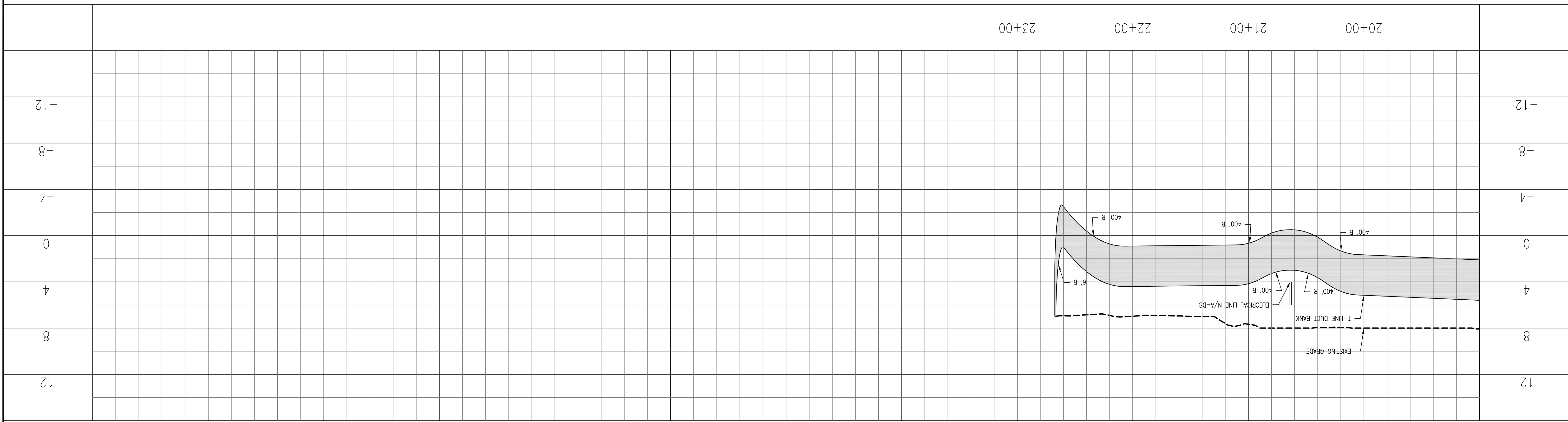
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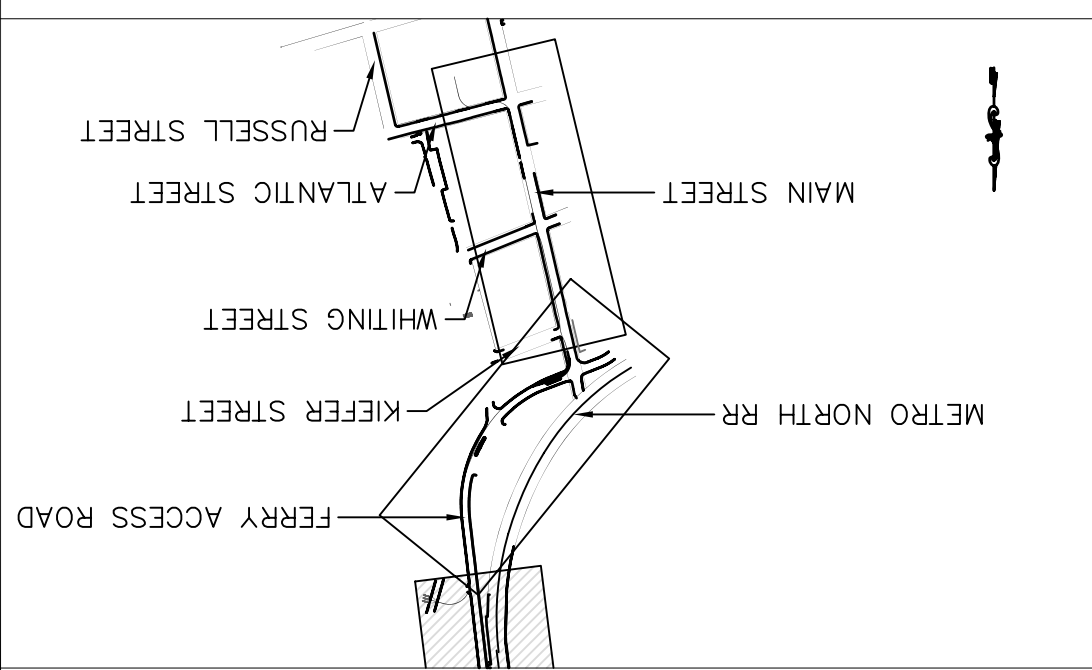


SINGER-PEQUONNOK
115KV UG TRANSMISSION LINE
PLAN & PROFILE DRAWINGS

CAD FILE NAME: MNBASE_01
SEQUENCE NO.: 24215-702
DRAWING NUMBER



GENERAL NOTES:
1. ELEVATIONS BASED ON NATIONAL GEODETIC DATUM OF 1929 (NGVD). TO CONVERT THIS DATUM TO THE CITY OF BRIDGEPORT DATUM ADD 13.51 FT.



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BLACK & VEATCH
PROJECT NO. 136745

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APPROVED	
DESIGNED	
DRAWN	

No	Date
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Revision	
INITIAL ISSUE	

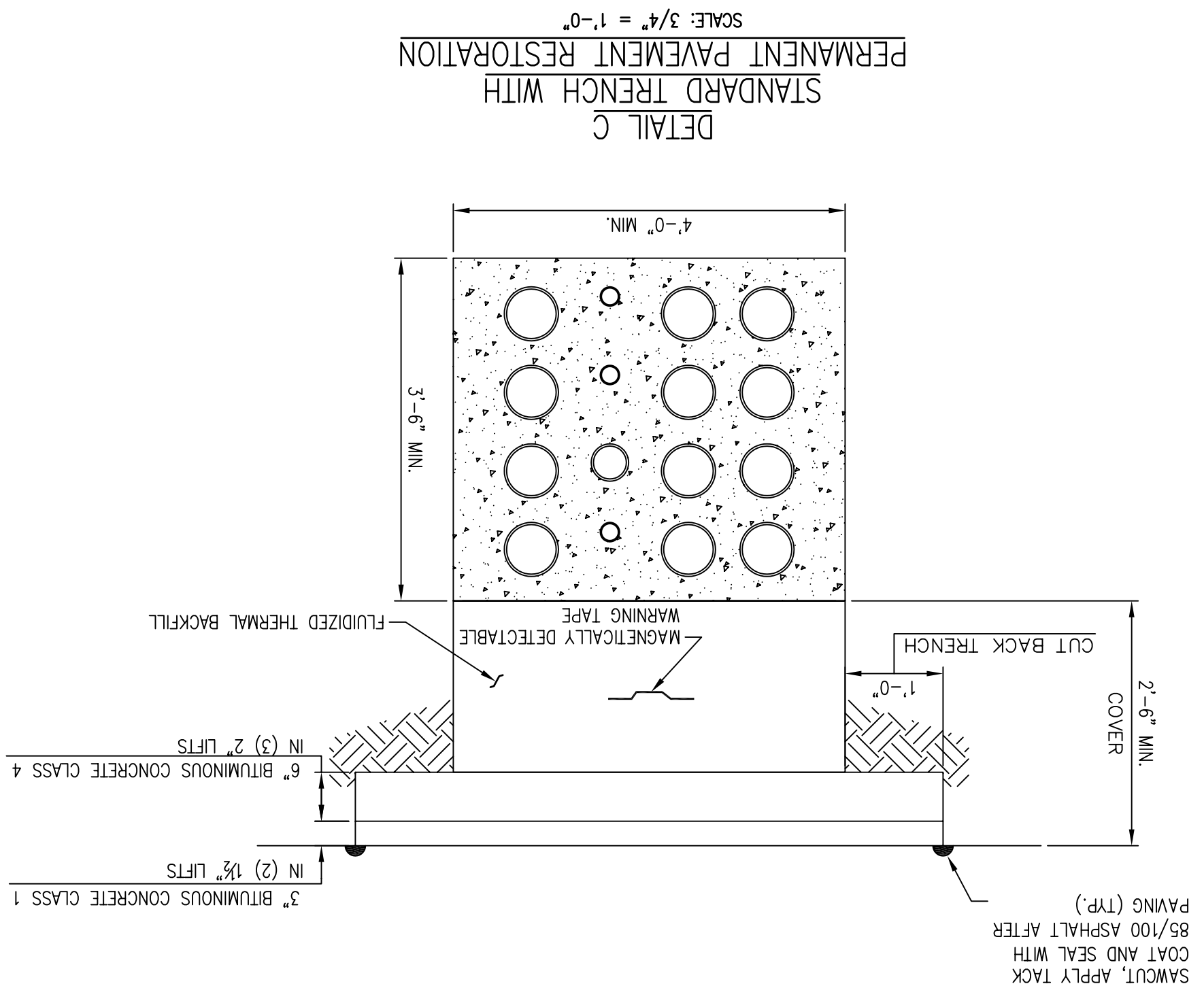
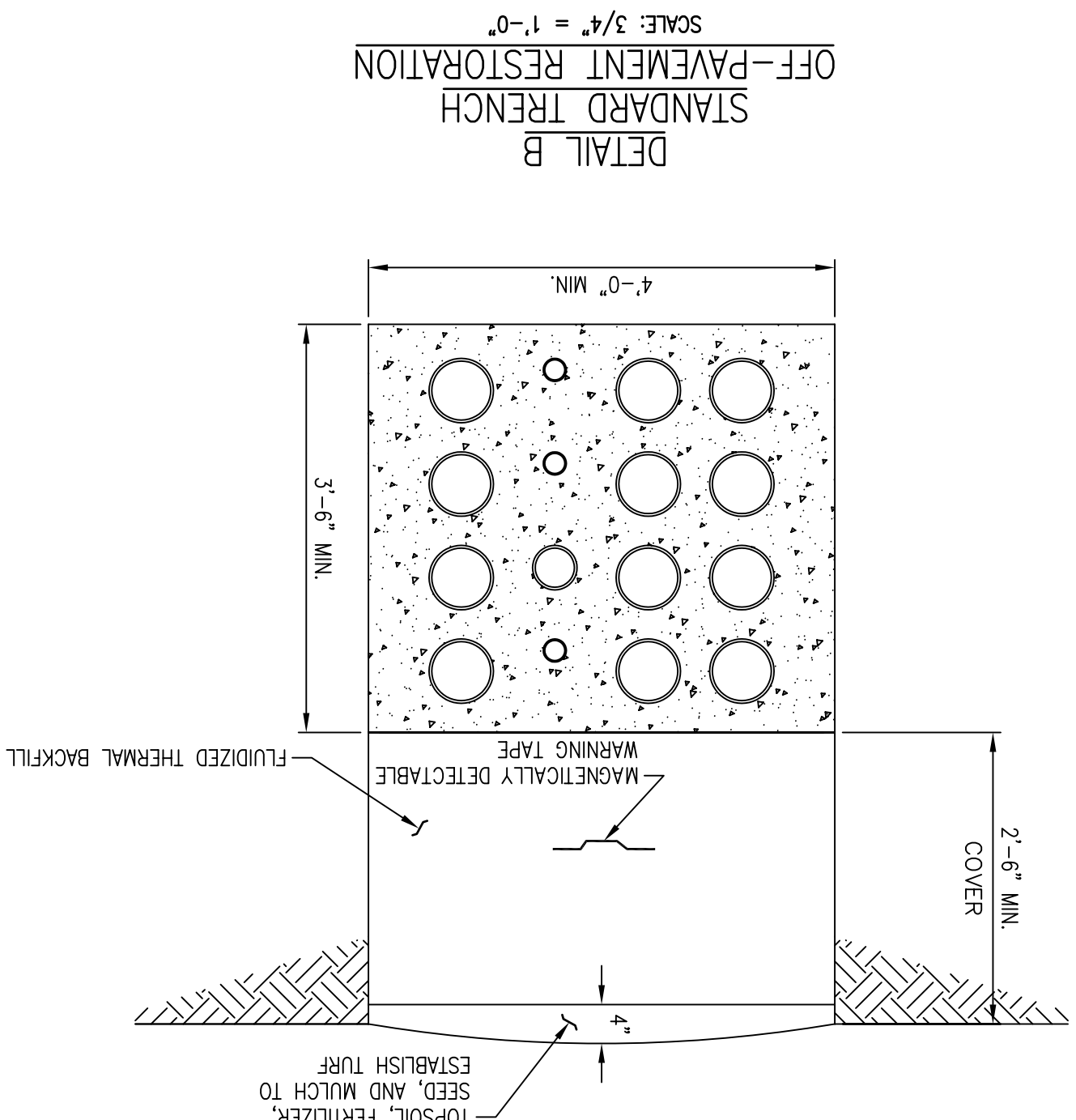
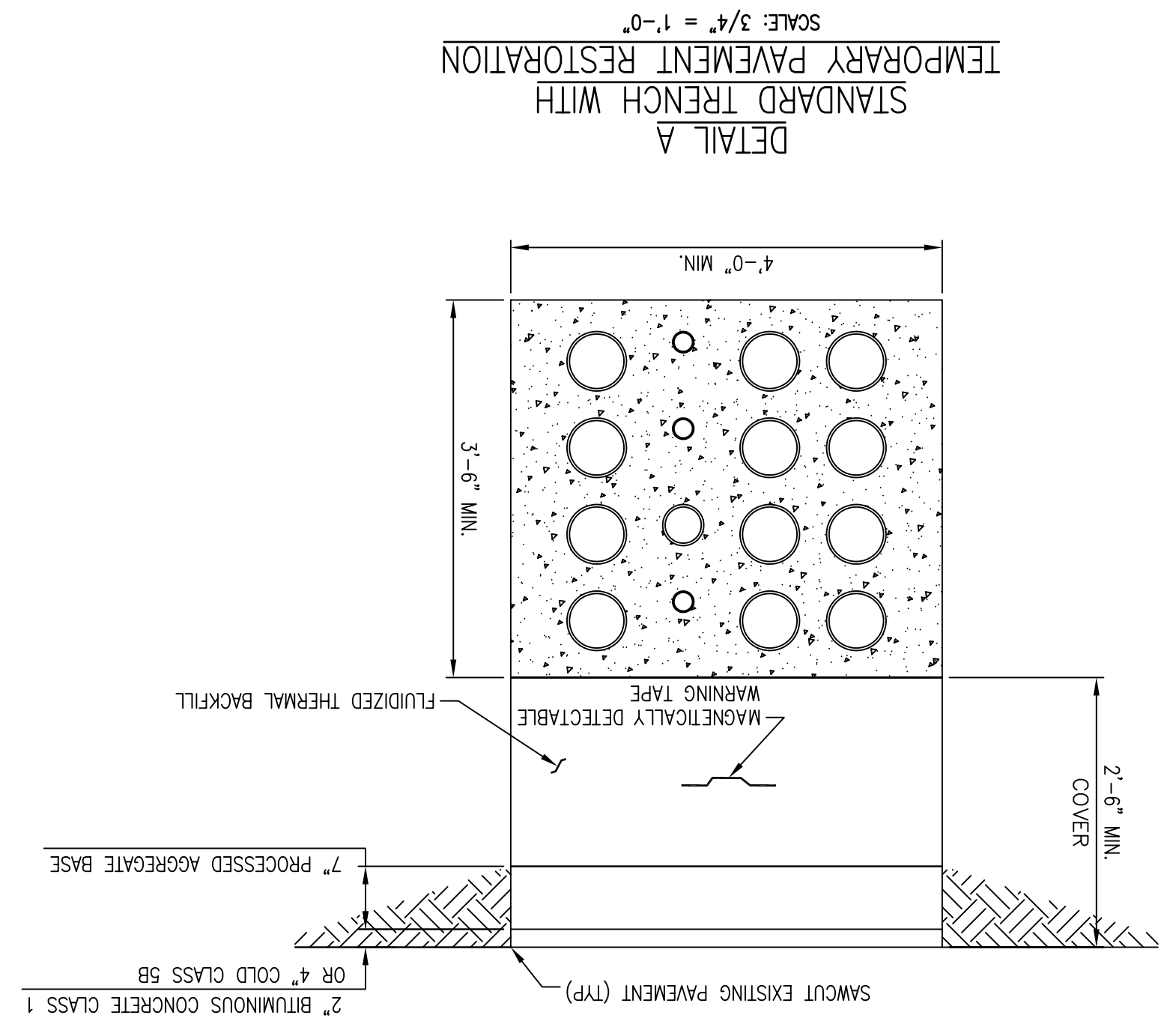
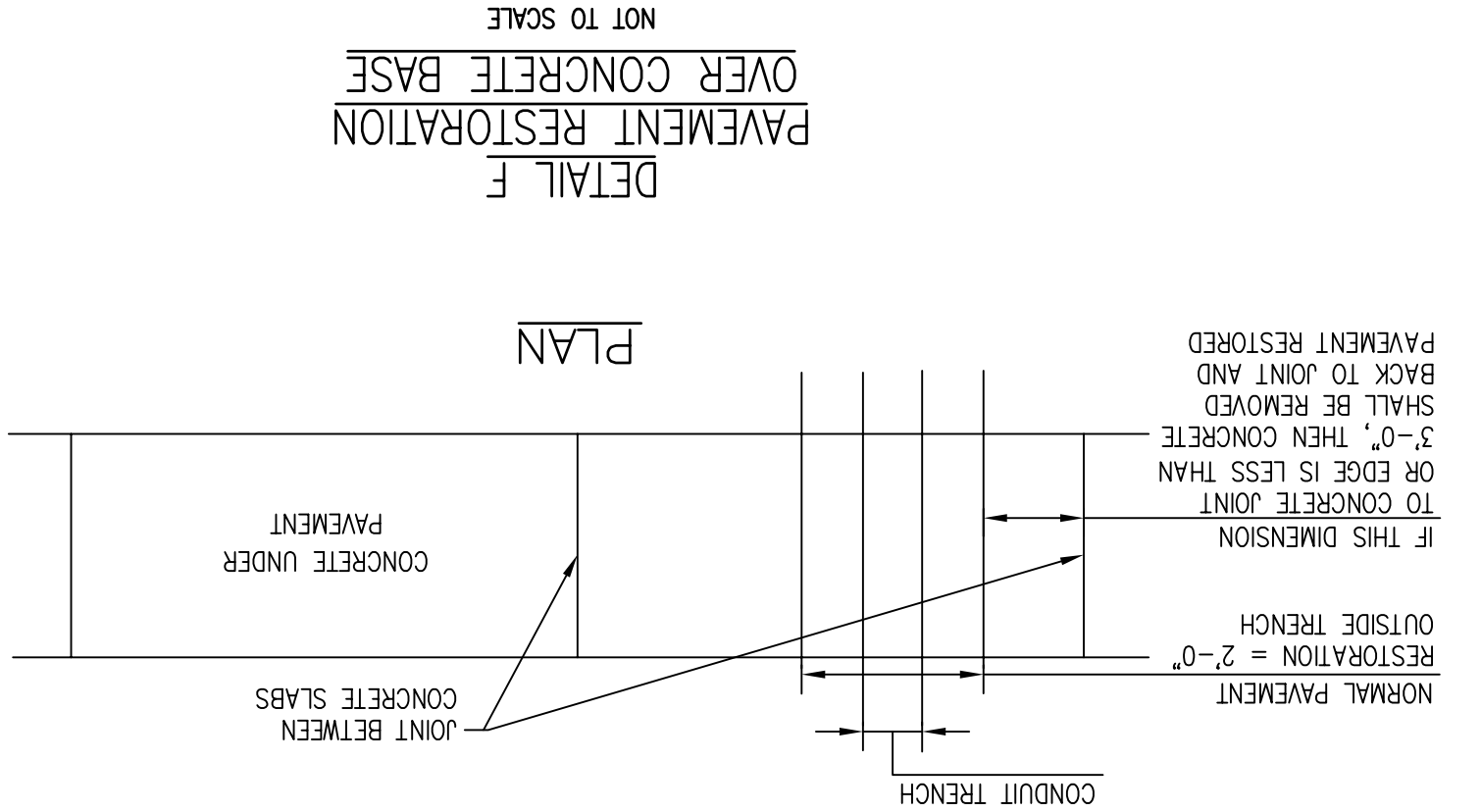
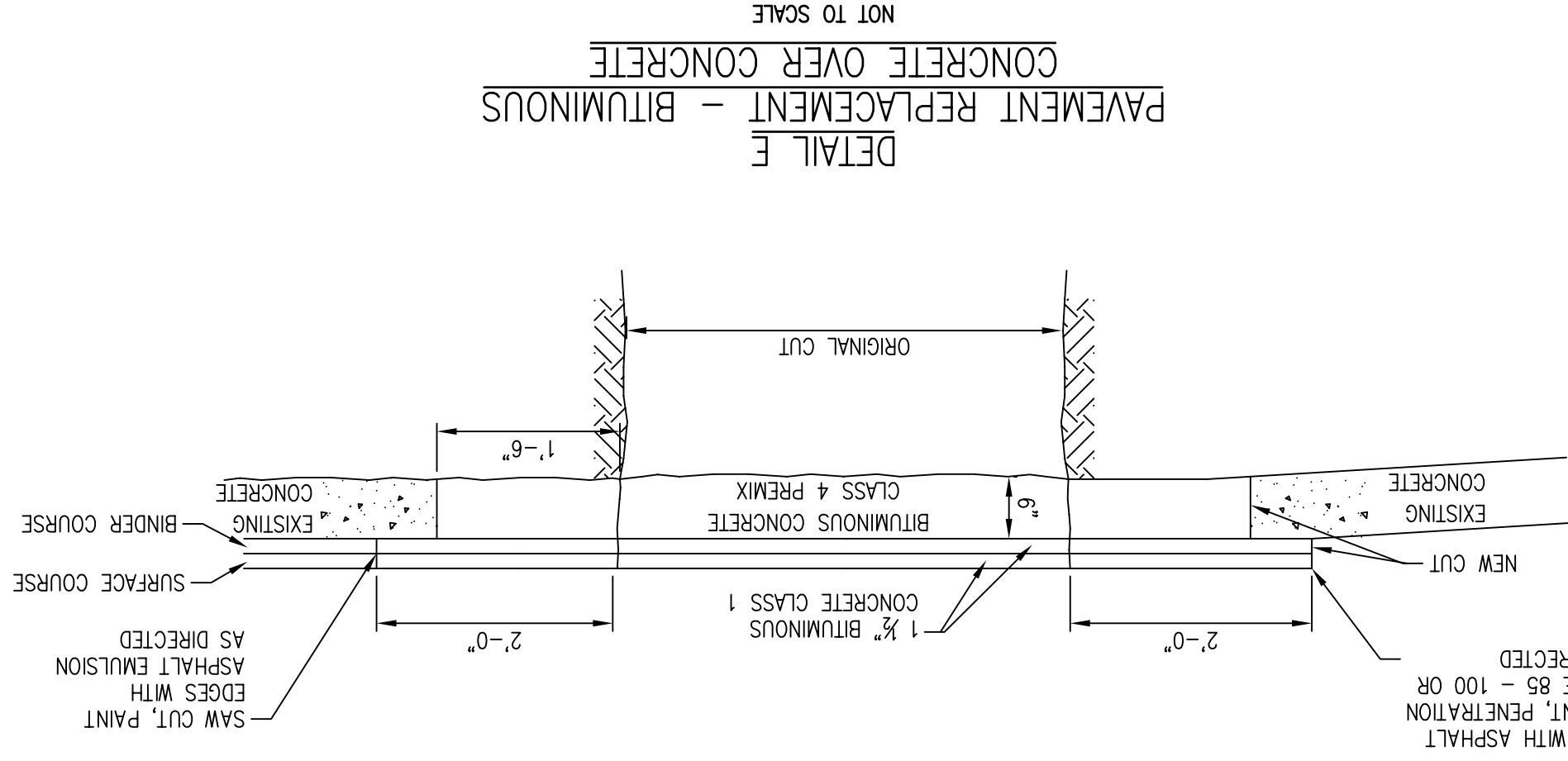
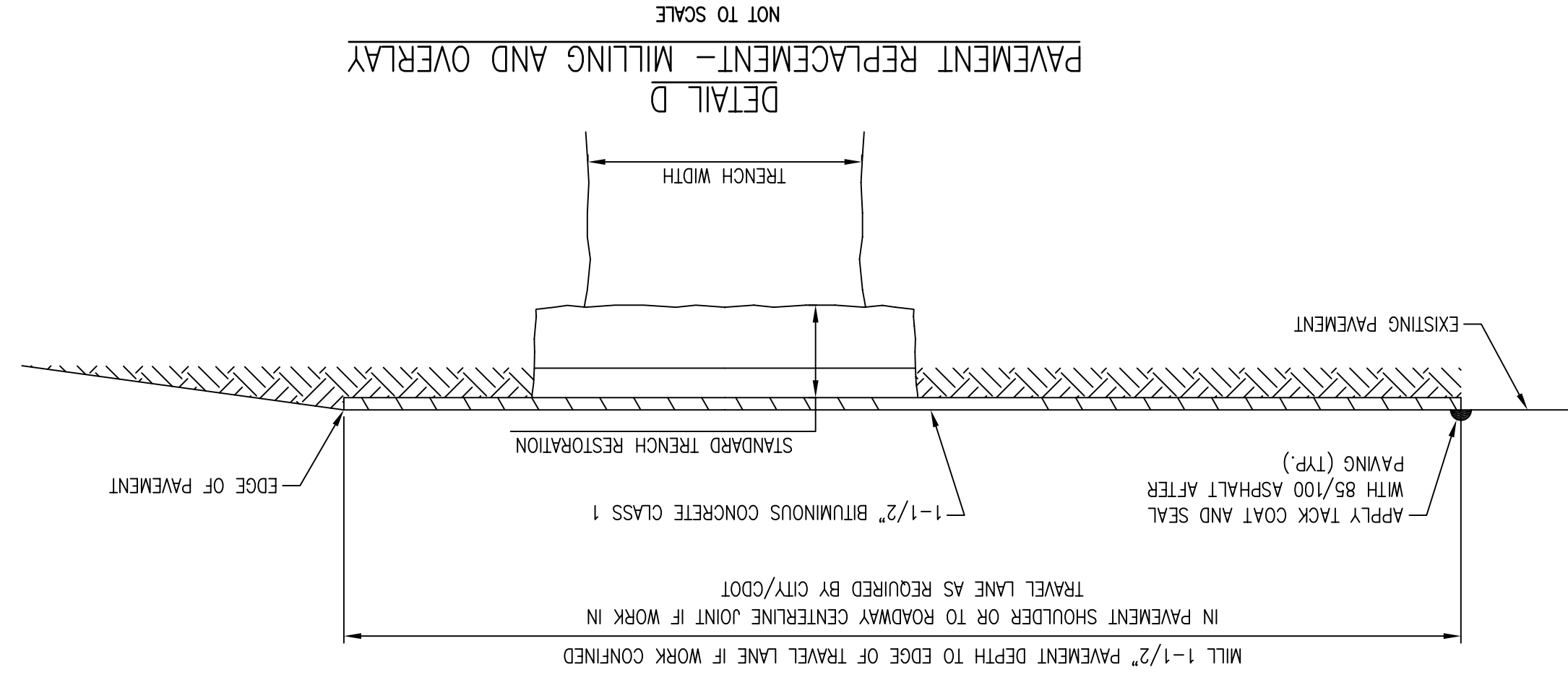
By	Chkd	Engr.	Suprv.
ETK			
RUN			

Drawn	Date	Design Engr.	Scale
			AS NOTED

The United Illuminating Company
157 Church St. New Haven, Ct. 06506

CAD FILE NAME	SEQUENCE NO.	DRAWING NUMBER
24215-704		24215-704

SINGER - PEQUONNOK
115KV UG TRANSMISSION LINE
PAVEMENT RESTORATION DETAILS



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BLACK & VEATCH
PROJECT NO. 136745

CHECKED	
APPROVED	
DESIGNED	ASM
DRAWN	SML
DATE	04-11-05
NO.	0
INITIAL ISSUE	

Revision									
By	SMK								
Chkd	ENR								
Engr. Suprv									
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Drawn									
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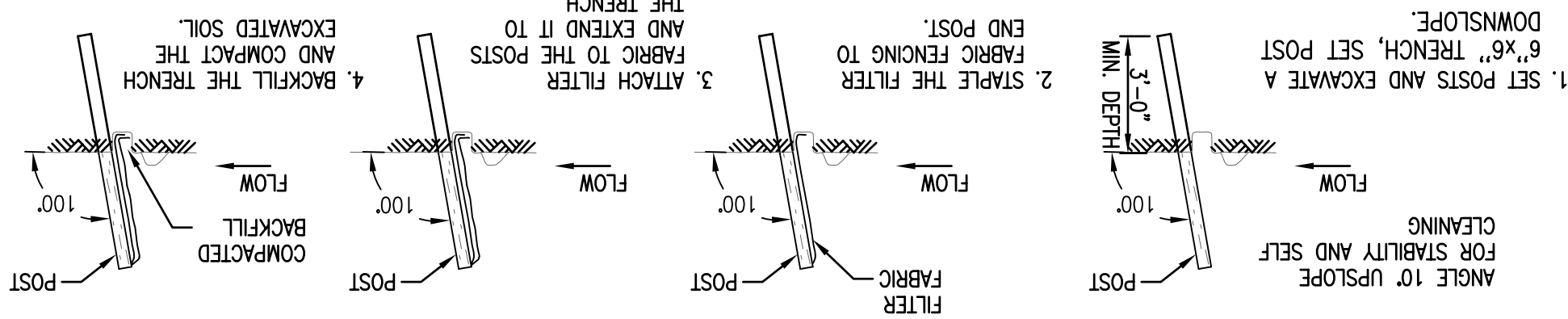
The United Illuminating Company
157 Church St. New Haven, Ct. 06506



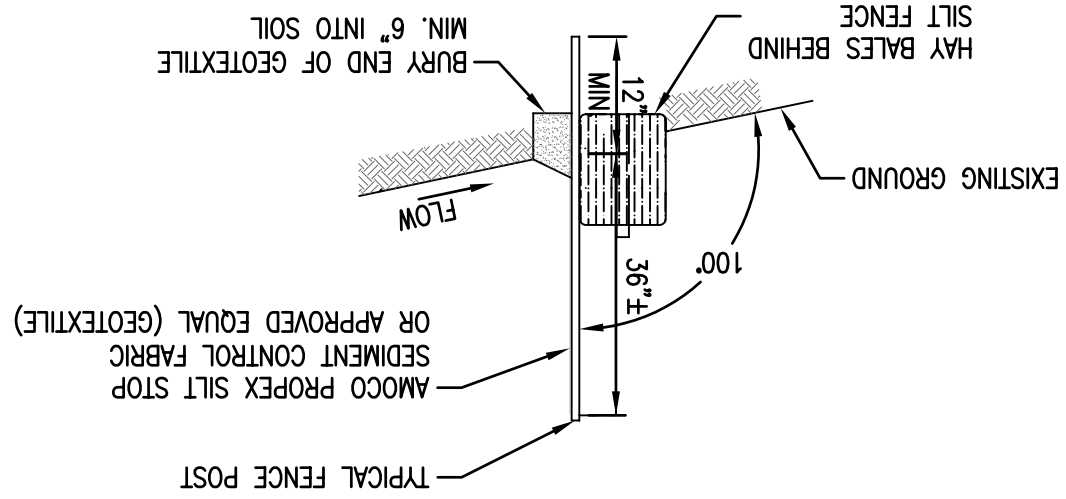
SINGER - PEQUONNOK
115KV UG TRANSMISSION LINE
SEDEMENT AND EROSION
CONTROL DETAILS

CAD FILE NAME	24215-705
SEQUENCE No.	24215-705
DRAWING NUMBER	24215-705

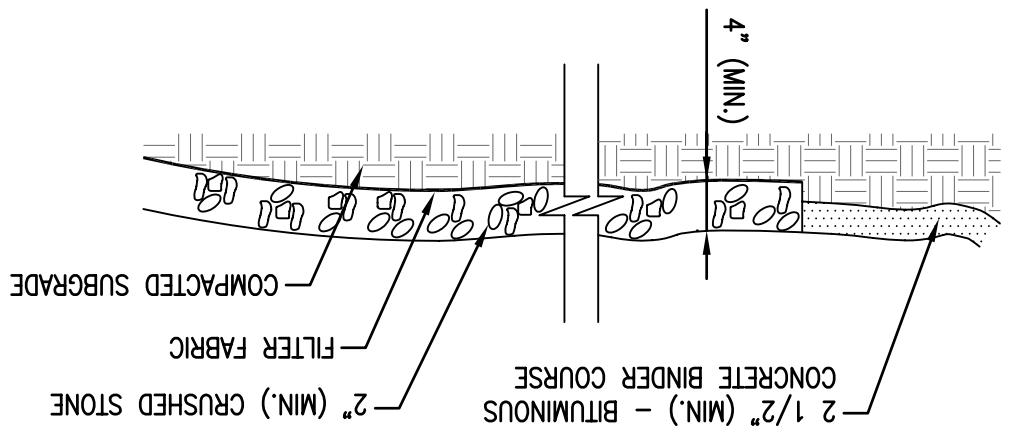
DETAIL E
SILT FENCE
NOT TO SCALE



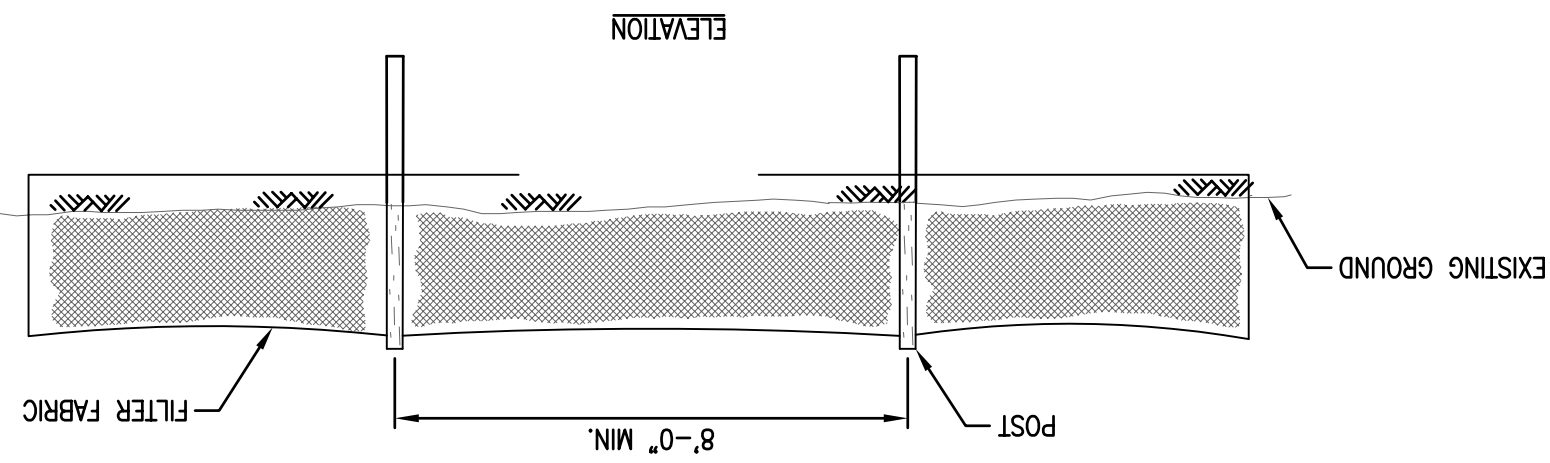
DETAIL F
SILT FENCE WITH HAY BALES
NOT TO SCALE



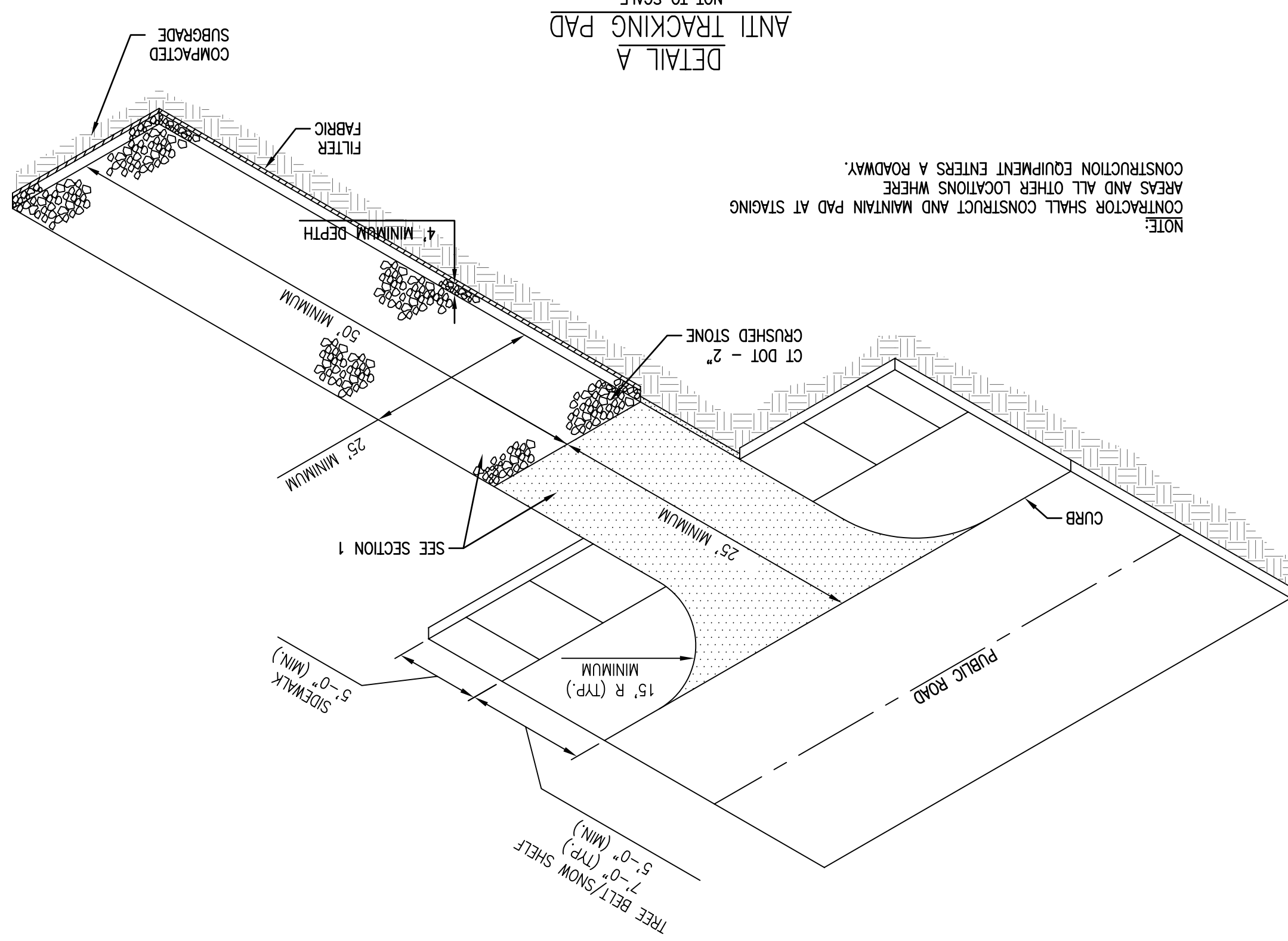
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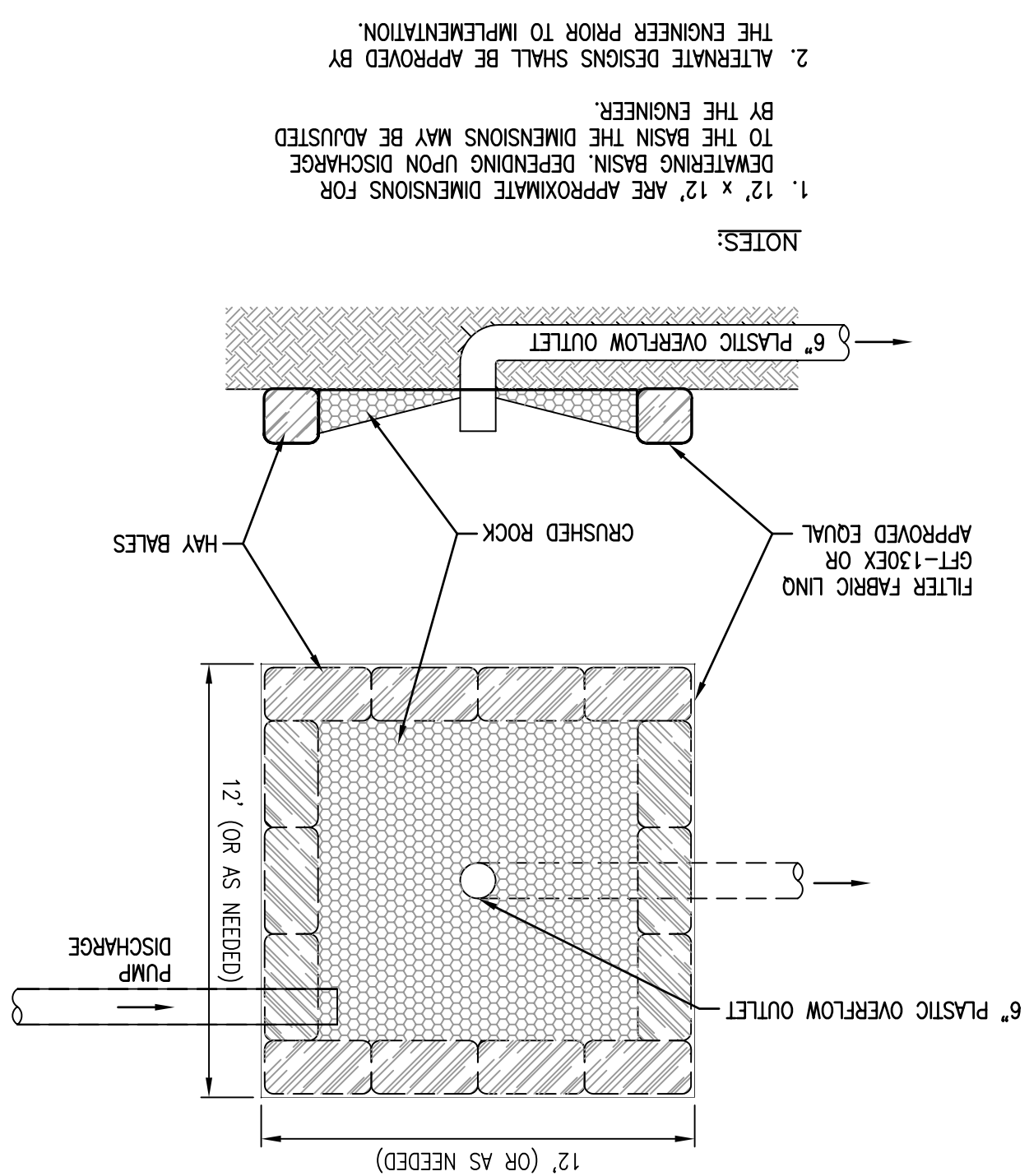
- NOTES:
- HAY BALES SHALL BE A MINIMUM OF 2'-0" IN HEIGHT FROM GRADE TO TOP OF HAY BALE.
 - FILTER FABRIC SHALL BE 2'-0" MINIMUM ABOVE GRADE.



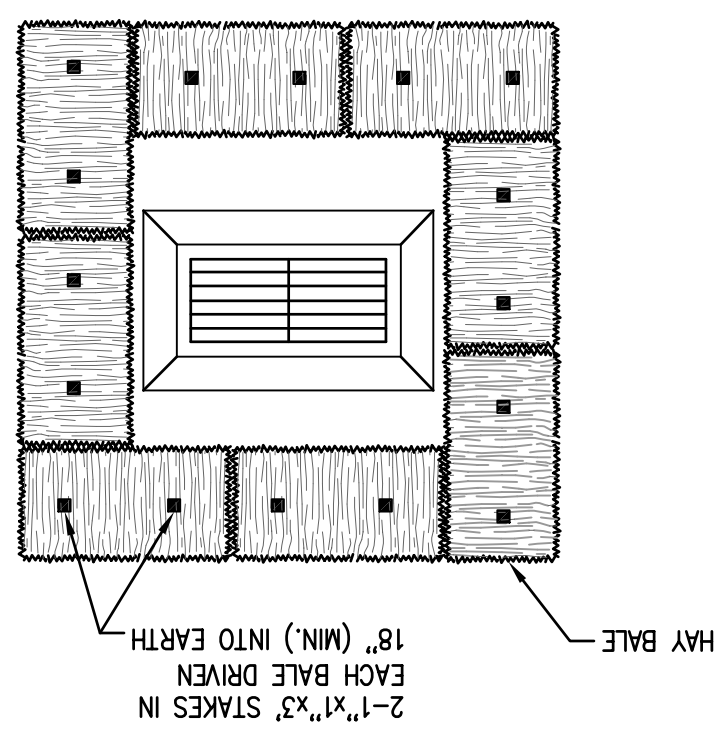
DETAIL A
ANTI TRACKING PAD
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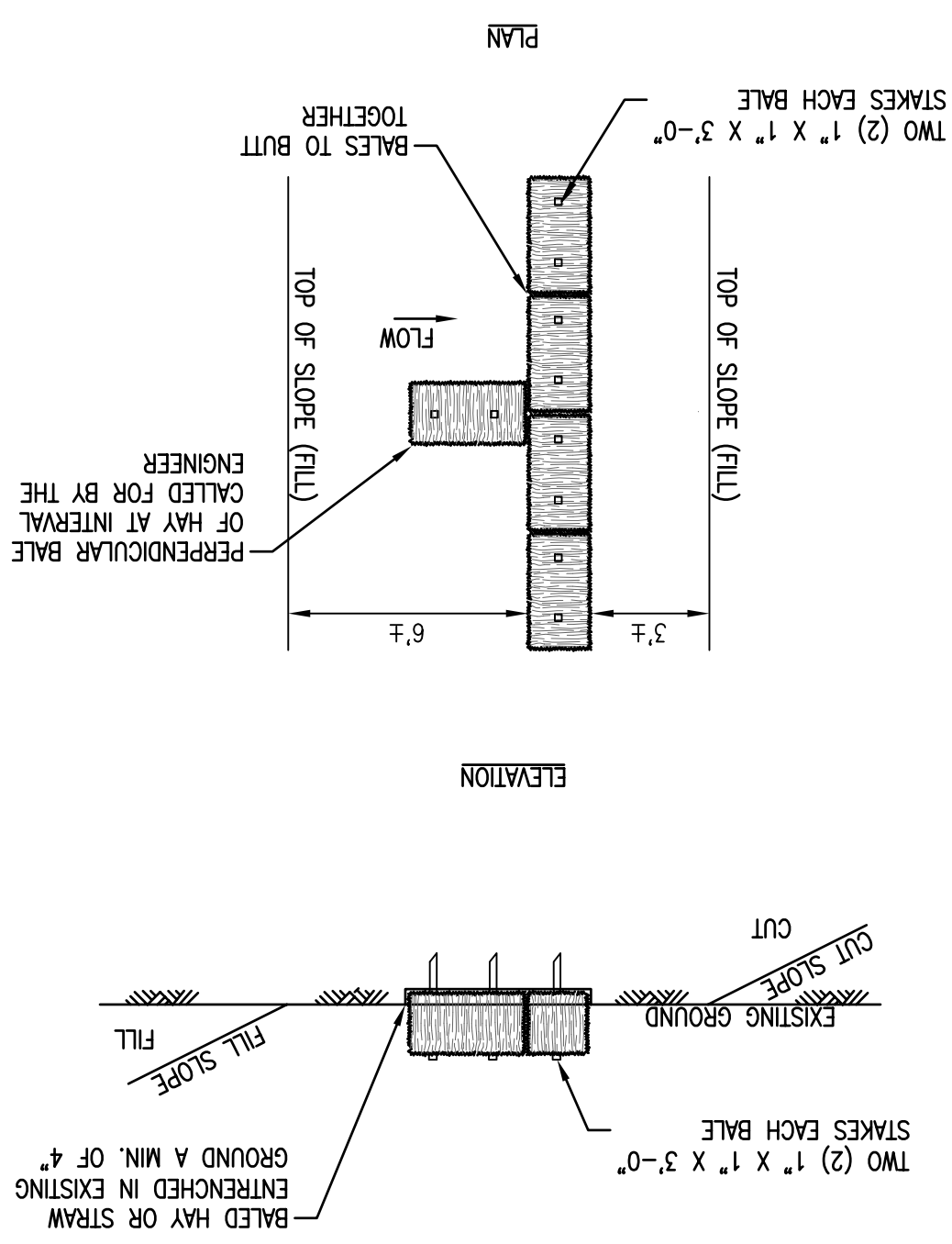
DETAIL B
TEMPORARY PUMP DEWATERING DISCHARGE BASIN
NOT TO SCALE



DETAIL C
SEDIMENTATION CONTROL BALE PLACEMENT AT CATCH BASIN
NOT TO SCALE



DETAIL D
SEDIMENTATION CONTROL HAY BALES AT TOP OR TOE OF SLOPES
NOT TO SCALE



PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

PROJECT NO. 136745
DESIGNED BY: BLACK & VEATCH
APPROVED BY: [Signature]
CHECKED BY: [Signature]
DATE: 04-11-05
INITIAL ISSUE
BY: [Signature]
CHKD. ENGR. [Signature]
Supv. [Signature]
Chkd. [Signature]
Design Engr. [Signature]
Design Supv. [Signature]

The United Illuminating Company
137 Church St. New Haven, Ct 06506

Scale: AS NOTED

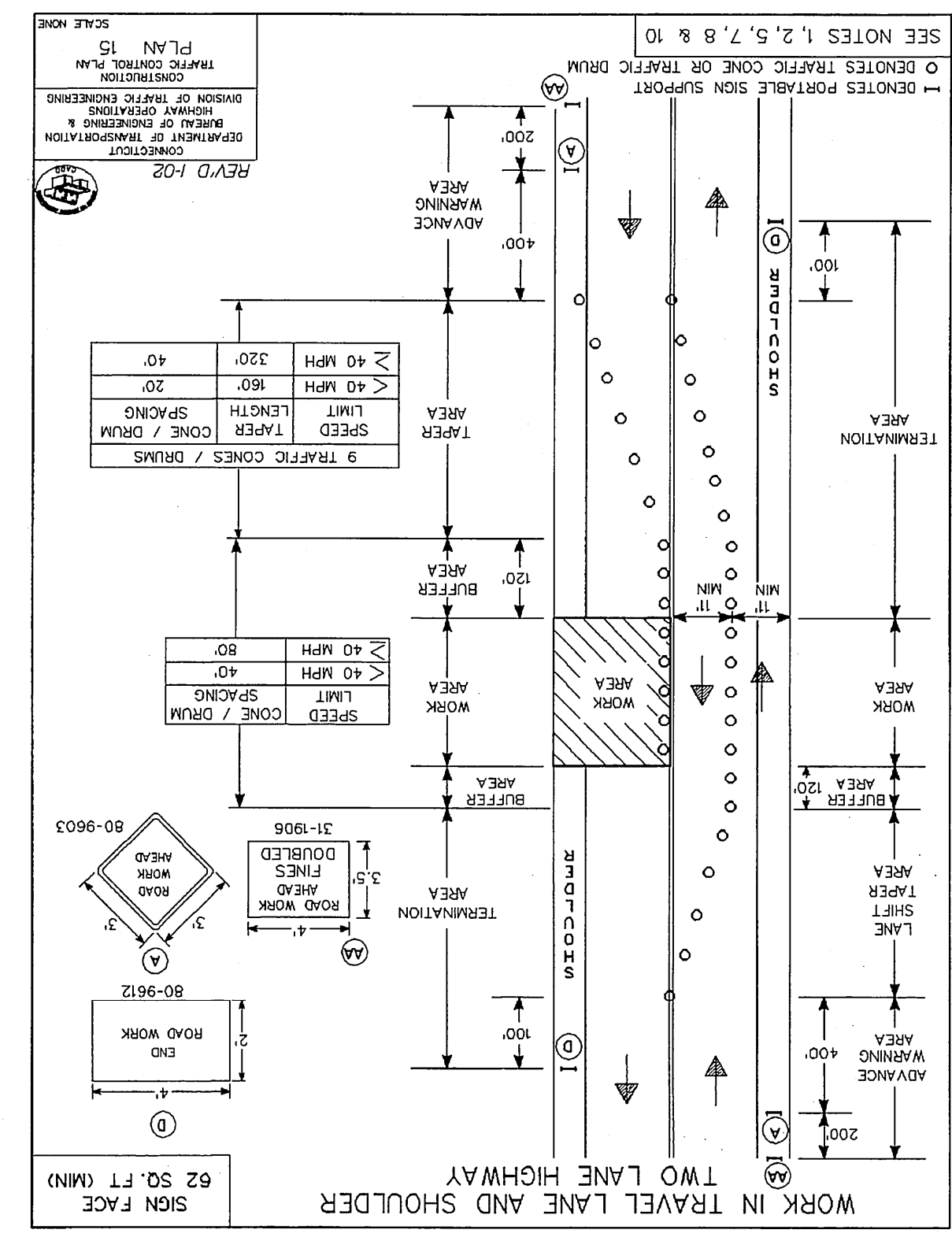
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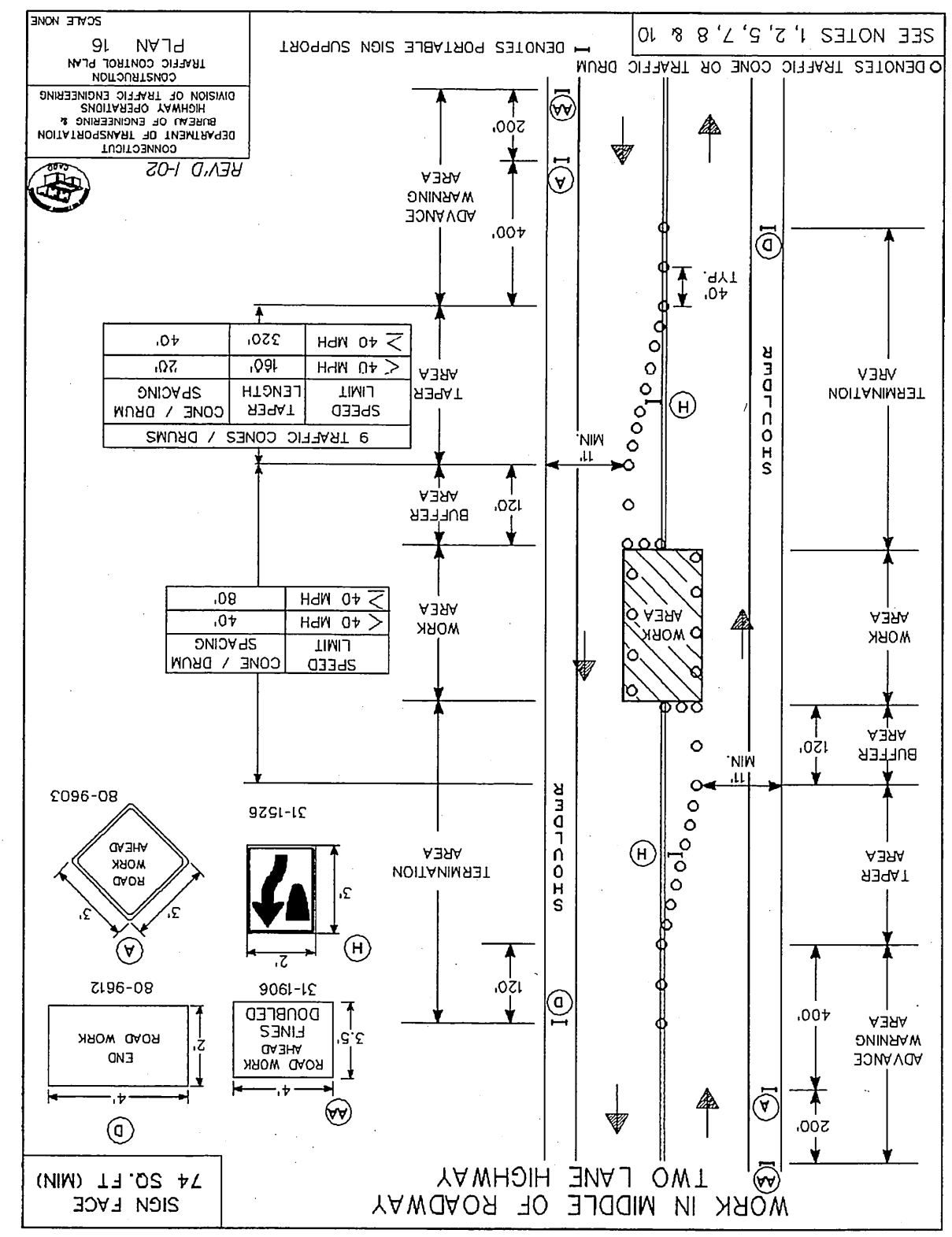
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SINGER - PEQUONNOK
115KV UG TRANSMISSION LINE
MAINTENANCE AND PROTECTION
OF TRAFFIC PLANS

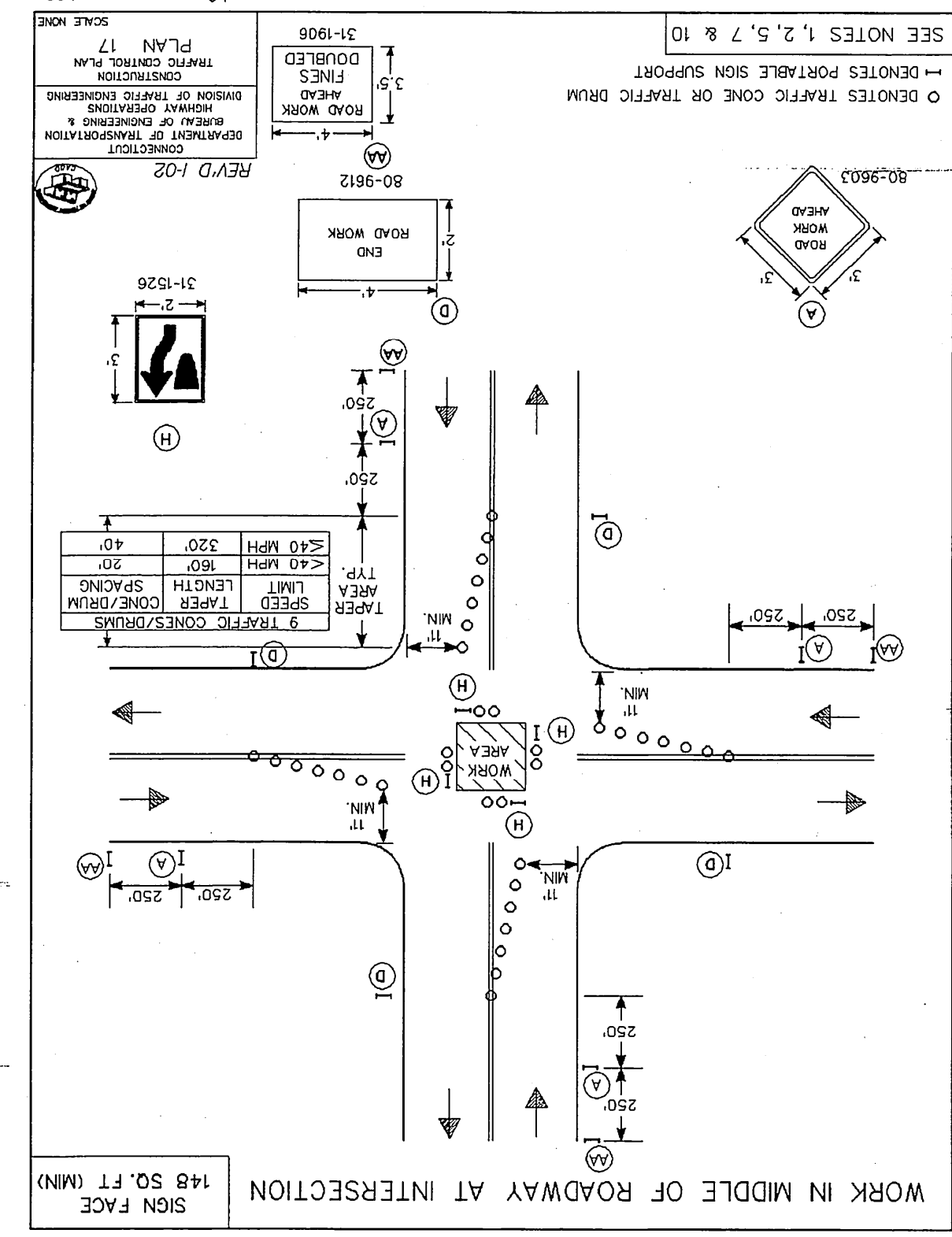
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TWO LANE HIGHWAY
NOT TO SCALE



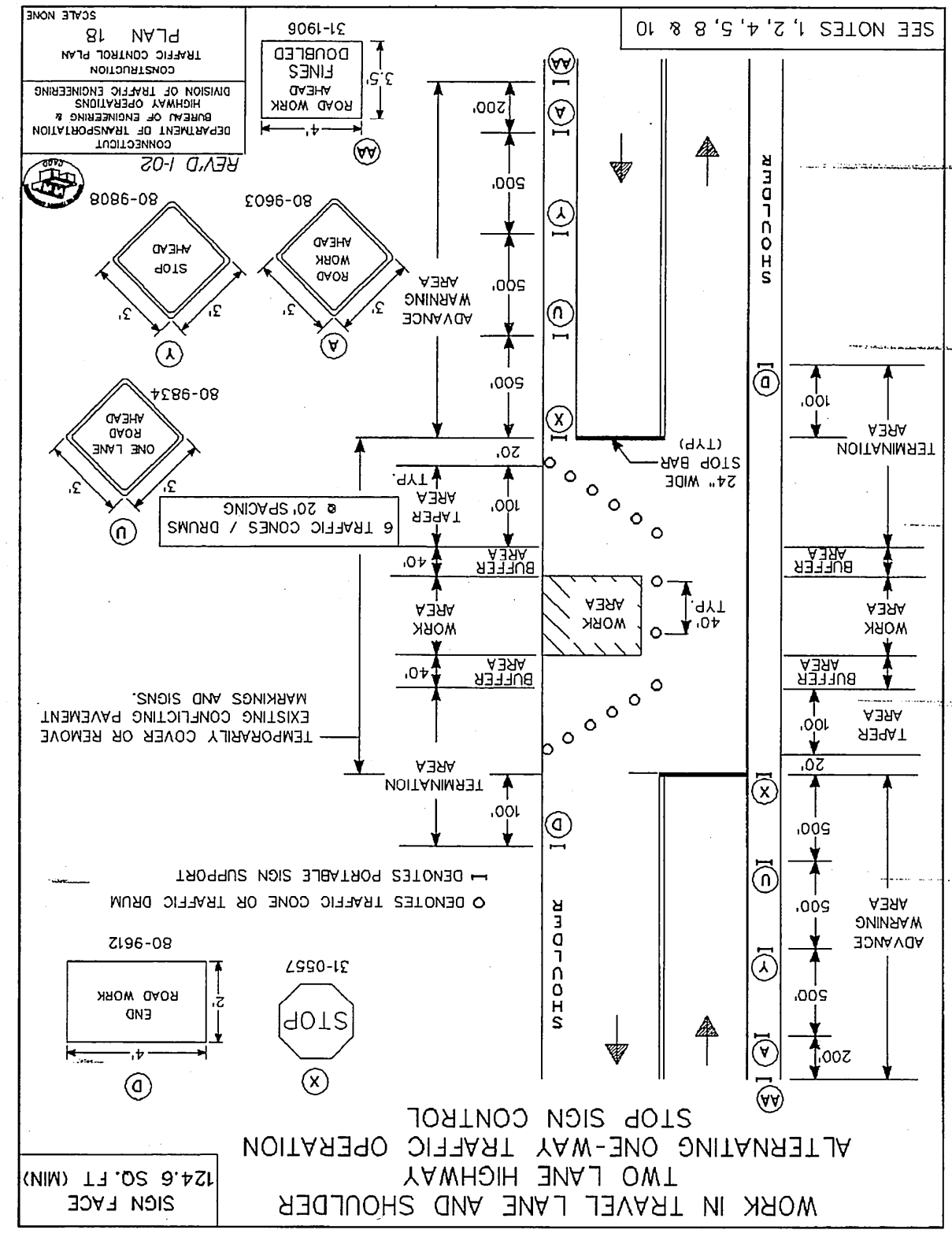
WORK IN MIDDLE OF ROADWAY
TWO LANE HIGHWAY
NOT TO SCALE



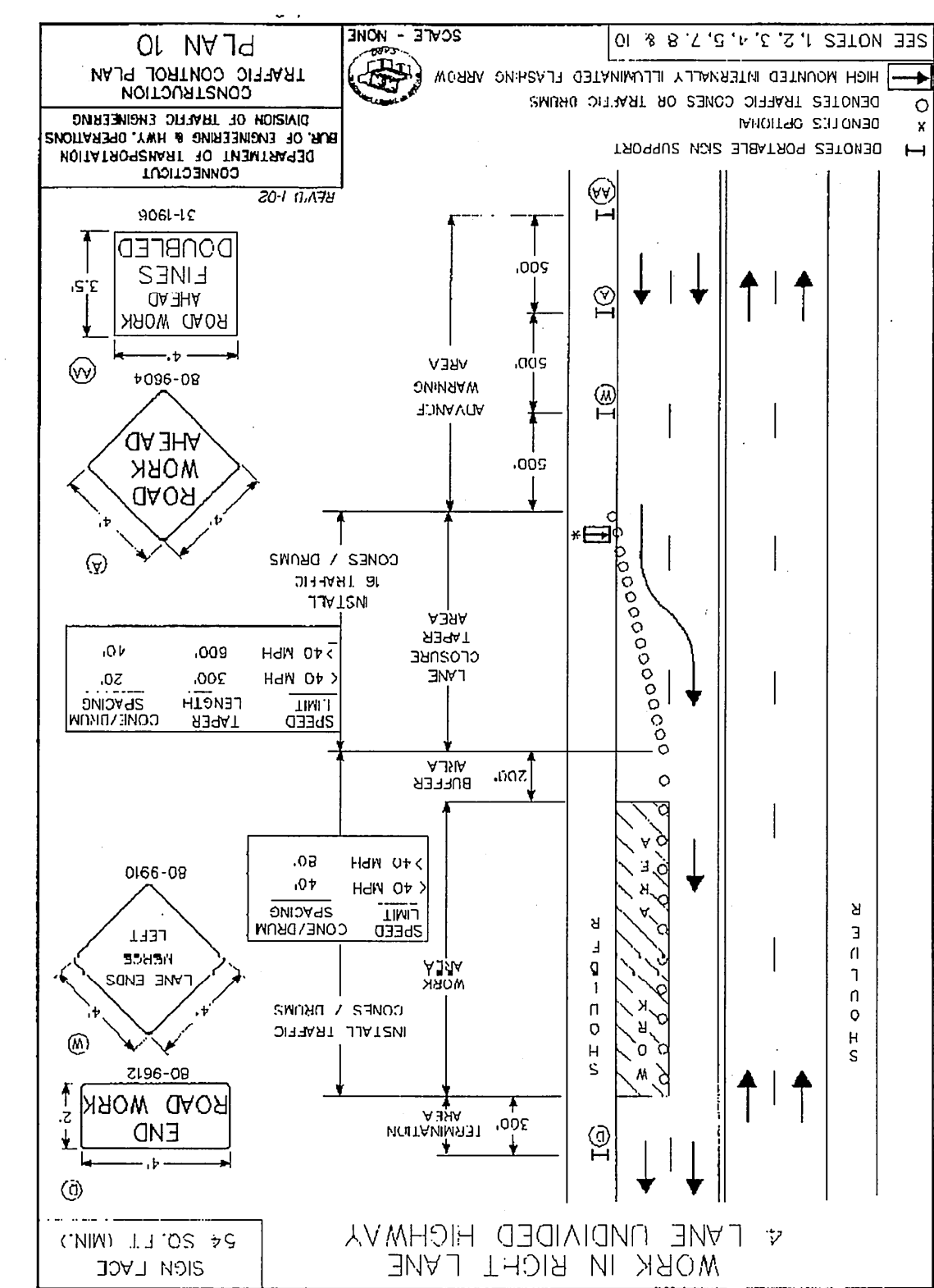
WORK IN MIDDLE OF INTERSECTION
NOT TO SCALE



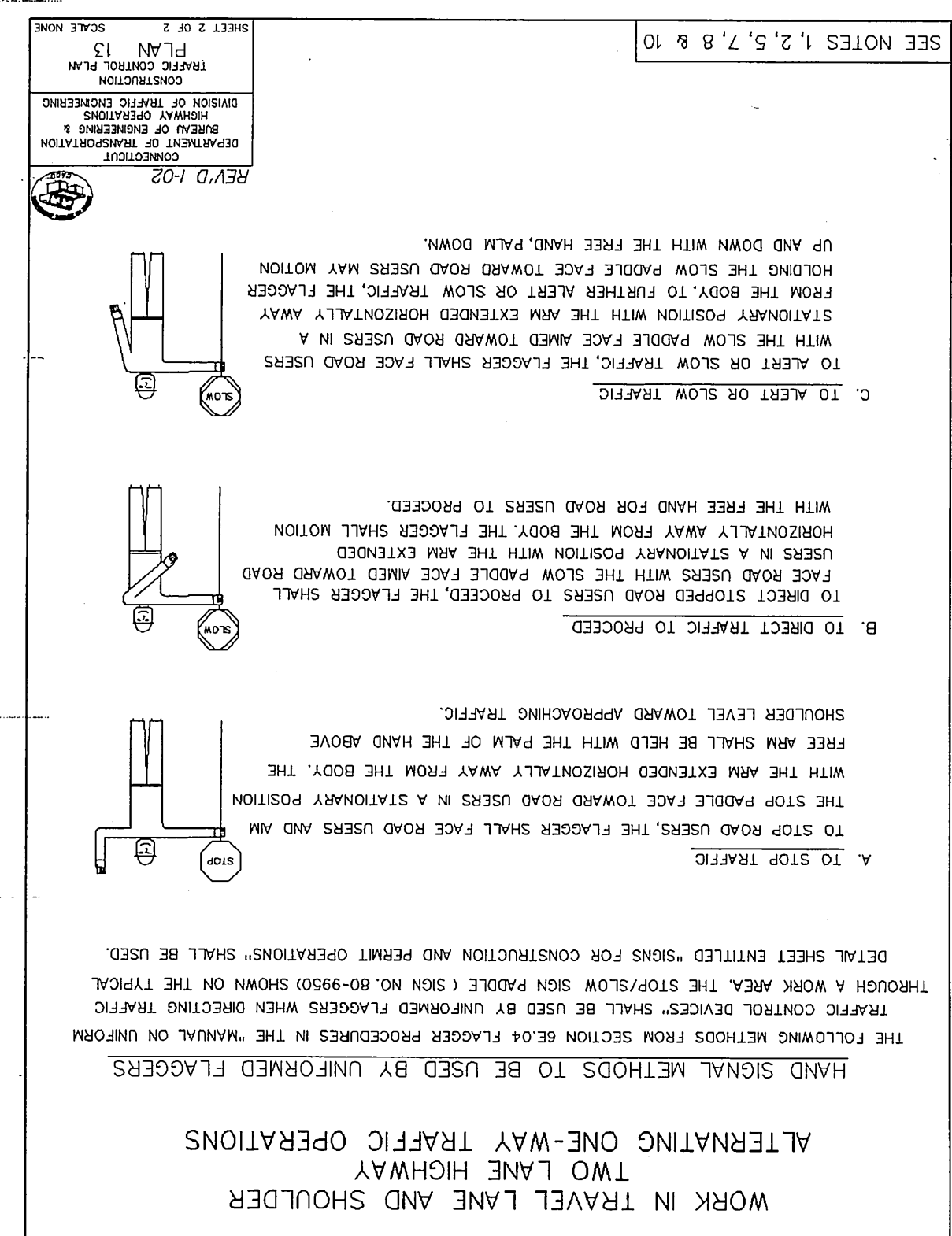
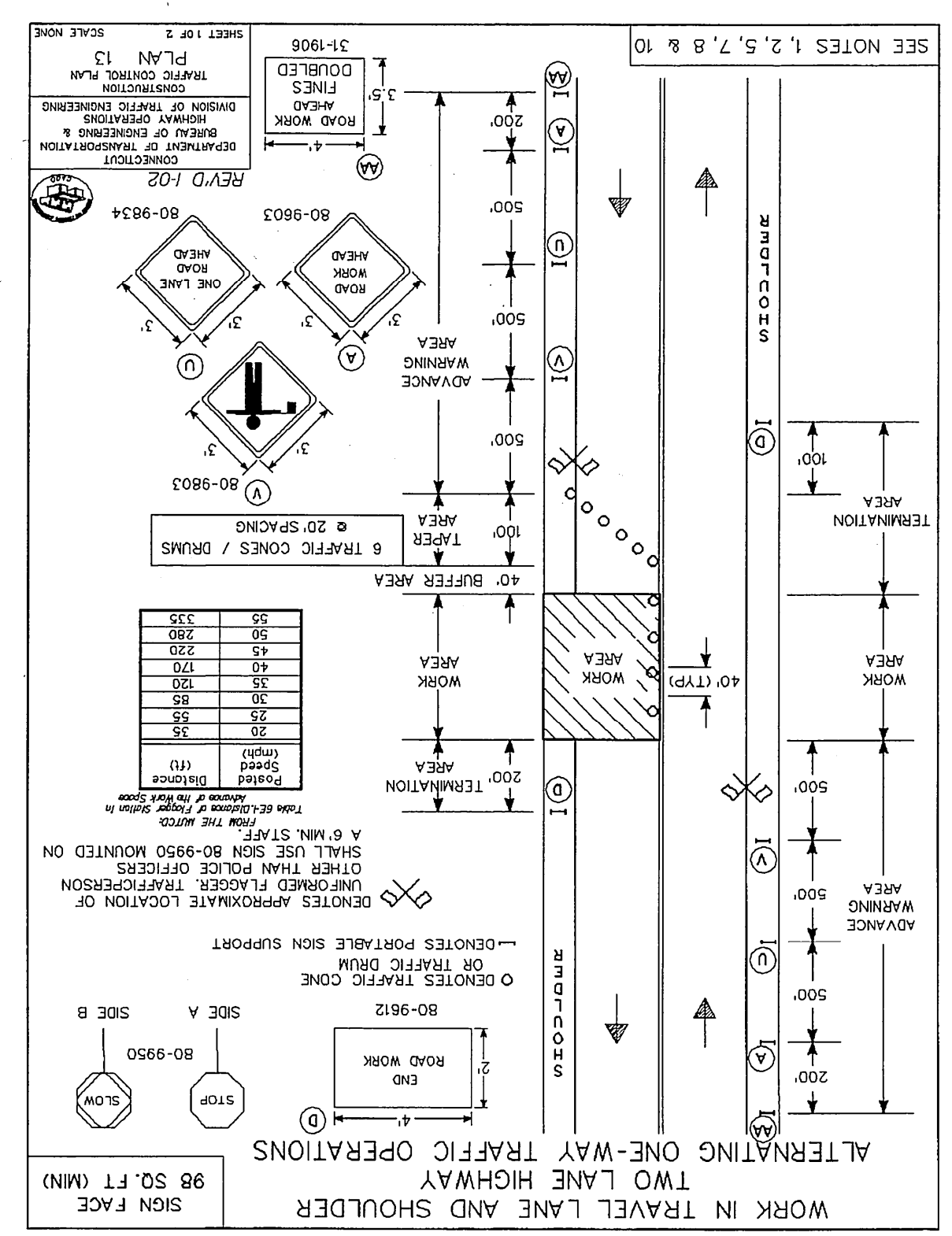
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TWO LANE HIGHWAY
ALTERNATING ONE-WAY TRAFFIC OPERATION
STOP SIGN CONTROL
NOT TO SCALE



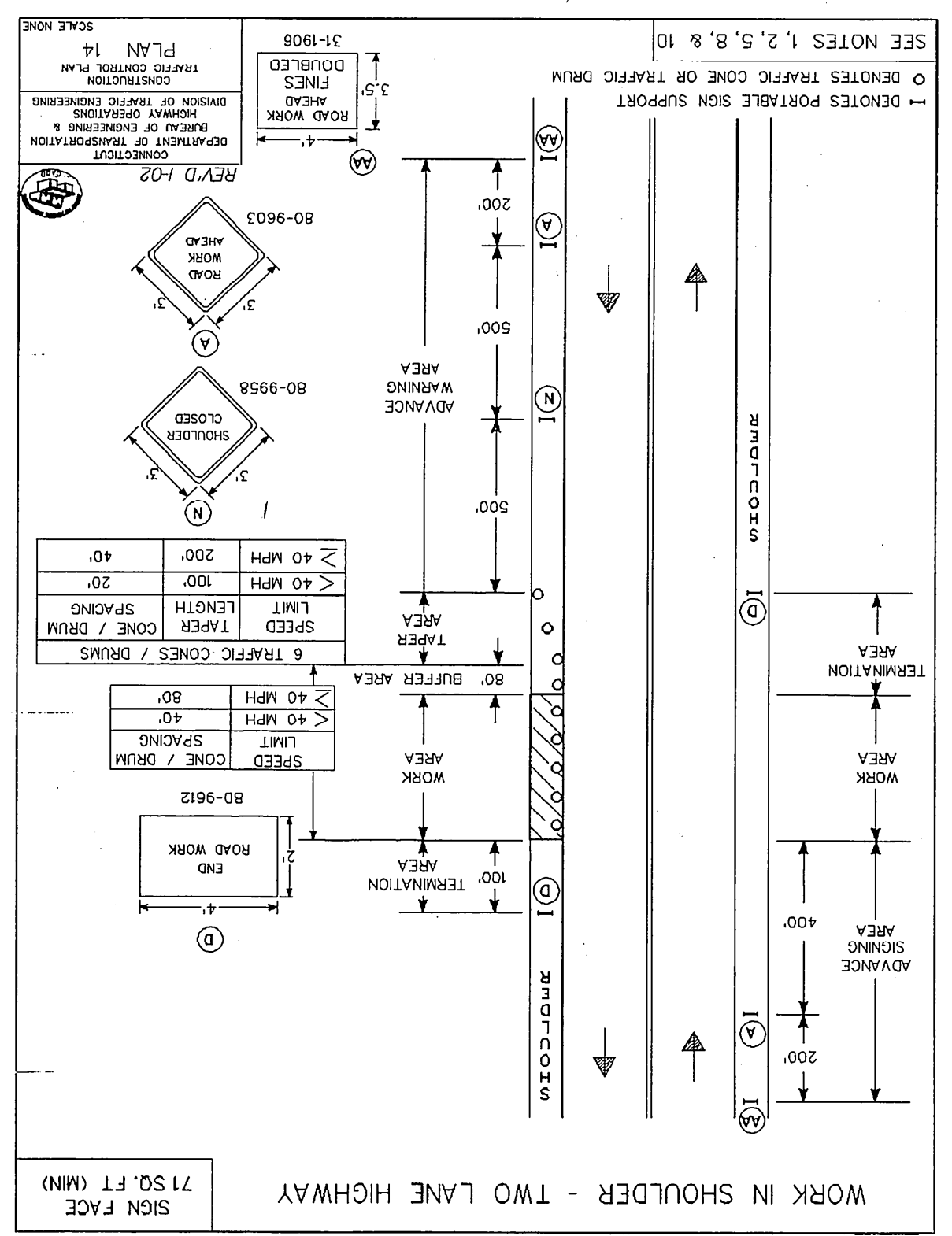
WORK IN RIGHT LANE
4 LANE UNDIVIDED HIGHWAY
NOT TO SCALE



WORK IN TRAVEL LANE AND SHOULDER
TWO LANE HIGHWAY
ALTERNATING ONE-WAY TRAFFIC OPERATION
NOT TO SCALE



WORK IN SHOULDER - TWO LANE HIGHWAY
NOT TO SCALE



NOTE:
CONSTRUCTION SIGNS AND DRUMS SHALL HAVE BARRICADE WARNING LIGHTS
MOUNTED AS REQUIRED FOR NIGHT TIME CONSTRUCTION.

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

BLACK & VEATCH
PROJECT NO. 136745

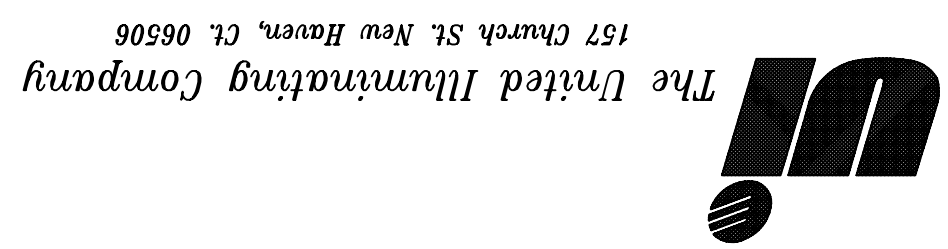
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DESIGNED ASM
APPROVED -
CHECKED -

No Date
A 2/17/2005
0 4/11/2005

Revision
ISSUED FOR 30% REVIEW
INITIAL ISSUE

By	Chkd.	Engr.	Suprv.	Chkd.	Engr.	Suprv.
WJB	-	ASM	-	WJB	-	ASM

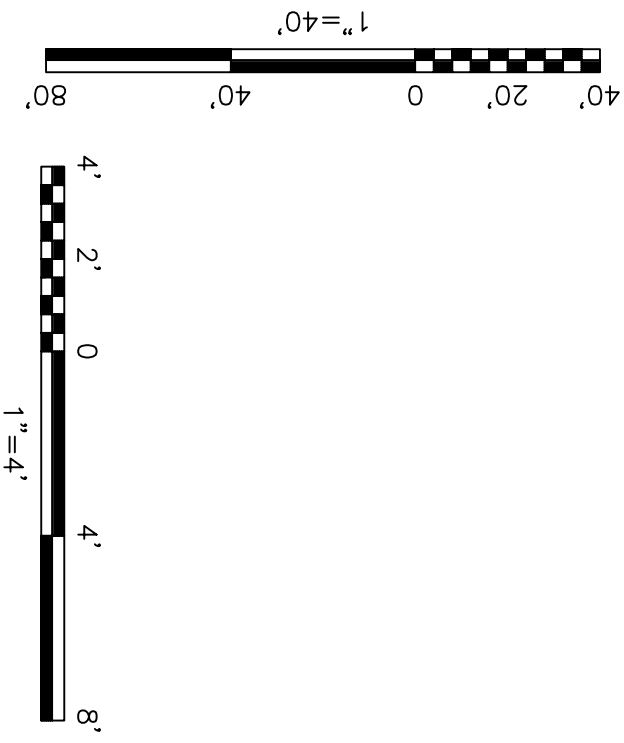
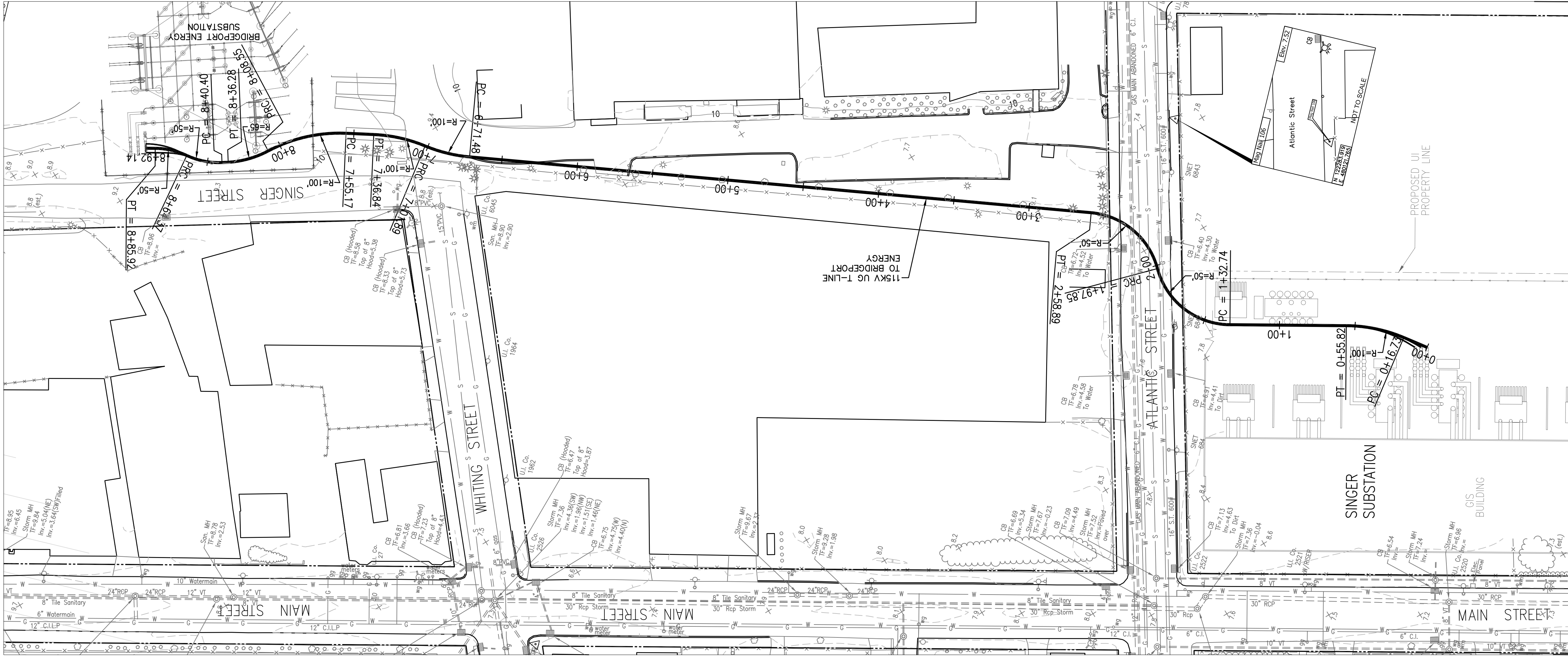
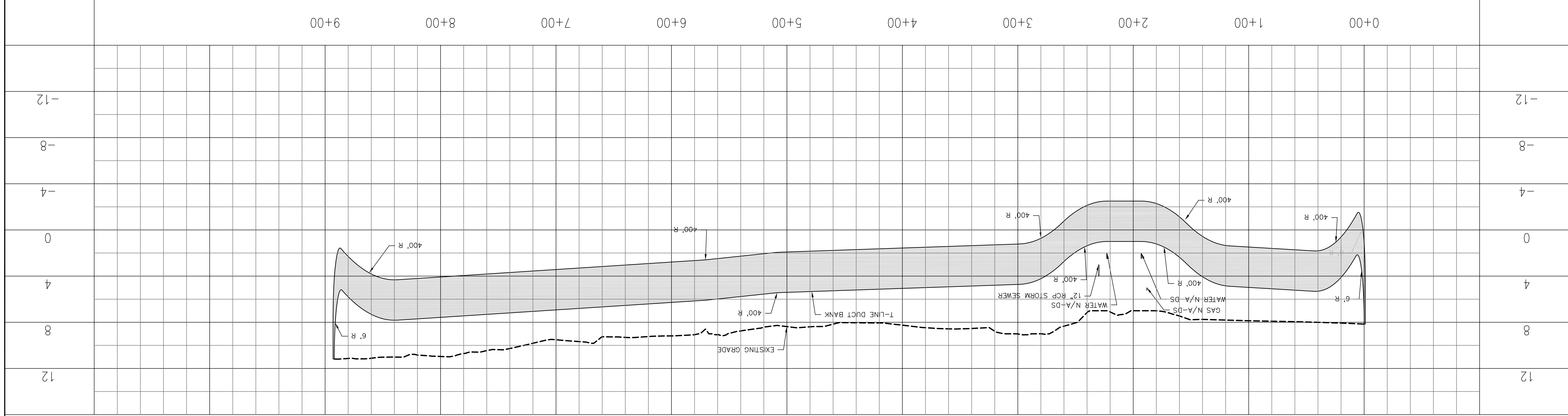
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Design Supv.
Design Engr.
MNBASE_01



SINGER-BRIDGEPORT ENERGY
115KV UG TRANSMISSION LINE
PLAN & PROFILE DRAWING

24216-700
DRAWING NUMBER

SEQUENCE No.
CAD FILE NAME
MNBASE_01



GENERAL NOTES:
1. ELEVATIONS BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD). TO CONVERT THIS DATUM TO THE CITY OF BRIDGEPORT DATUM ADD 13.51 FT.