Jones & Henry Engineers, Ltd.

Village of Ashville, Ohio

New Water Treatment Plant

ADDENDUM 1

November 25, 2025

Planholders of the Village of Ashville, Water Treatment Plant Improvement, project are hereby notified of the following amendments to the Contract Documents. This Addendum is hereby made a part of the Contract Documents.

SPECIFICATIONS

Add C-800-3, Exhibit 3 to the Supplementary Conditions. Exhibit 3 includes documents listed in the Supplementary Conditions, paragraph SC-5.03.

Attachments: Specification C-800, Exhibit 3

RECEIPT OF THIS ADDENDUM MUST BE ACKNOWLEDGED ON PAGE C-410 - 1 OF THE BID.

EXHIBIT 3

Subsurface and Physical Conditions
(Addendum 1, Issued 11/25/2025)

GEOTECHNICAL
CONSULTANTS INC.

MAIN OFFICE
720 Green Crest Drive
Westerville, OH 43081
614.895.1400 **phone**
614.895.1171 **fax**

YOUNGSTOWN OFFICE
8433 South Avenue
Building 1, Suite 1
Boardman, OH 44514
330.965.1400 **phone**
330.965.1410 **fax**

DAYTON OFFICE
2155 Bellbrook Avenue
Xenia, OH 45385
937.736.2053 **phone**

www.gci2000.com

GEOTECHNICAL
CONSULTANTS INC.

GCI PROJECT No. 24-G-28869

Subsurface Exploration and Geotechnical Engineering Report

Water Treatment Plant
140 Park Street
Ashville, Ohio

Prepared for:
Jones & Henry Engineers, Ltd

August 23, 2024
Revised October 09, 2024

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August 23, 2024
Revised October 09, 2024 to add clarification on expected settlement tolerances

Mr. Jake Meinerding, PE
Jones & Henry Engineers, Ltd
4357 Ferguson Drive
Cincinnati, Ohio 45245

Reference: Subsurface Exploration and Geotechnical Engineering Report
Water Treatment Plant
140 Park Street - Ashville, Ohio
GCI Project No. 24-G-28869

Dear Mr. Meinerding:

As requested and authorized, Geotechnical Consultants, Inc. (GCI) performed a subsurface exploration and prepared a geotechnical engineering report for the above referenced project. In summary, the borings generally encountered existing fill in five of the borings over natural lean clay, including glacial till and deeper granular soils. We encountered groundwater seepage in four of our borings at depths of 25 to 28 feet. We did not encounter bedrock within the boring depths (maximum drilled depth was 60 feet).

It is GCI's opinion that the site is suitable for the proposed development with proper site preparation. Geotechnical considerations that will impact site development include the existing development, topsoil cover, subgrade stability, and new fill placement and compaction. We discuss geotechnical considerations and provide foundation, slab, and site preparation recommendations in the report.

After you have reviewed the report, feel free to contact us with any questions you may have. We appreciate the opportunity to provide our services for this project and hope to continue providing our services through construction.

Respectfully submitted,
Geotechnical Consultants, Inc.

Farouk Benmammar
Project Manager

Ryan D. Folsom, P.E.
In-house Reviewer

Distribution: Mr. Jake Meinerding @ Jones & Henry Engineers, Ltd – pdf email
Mr. Peter A. Latta @ Jones & Henry Engineers, Ltd – pdf email
GCI File: 24-G-28869

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INTRODUCTION

As requested by Mr. Jake Meinerding and authorized by Mr. Peter A. Latta both representing Jones & Henry Engineers, Ltd, Geotechnical Consultants, Inc. (GCI) performed a subsurface exploration and prepared this geotechnical engineering report for the proposed water treatment facility to be located in Ashville, Ohio. Prior to drilling, GCI was provided a scope of services with revised plan, prepared by Jones & Henry Engineers, Ltd (dated 7/1/2024), showing the requested boring locations and proposed pavement/water treatment facilities layout locations.

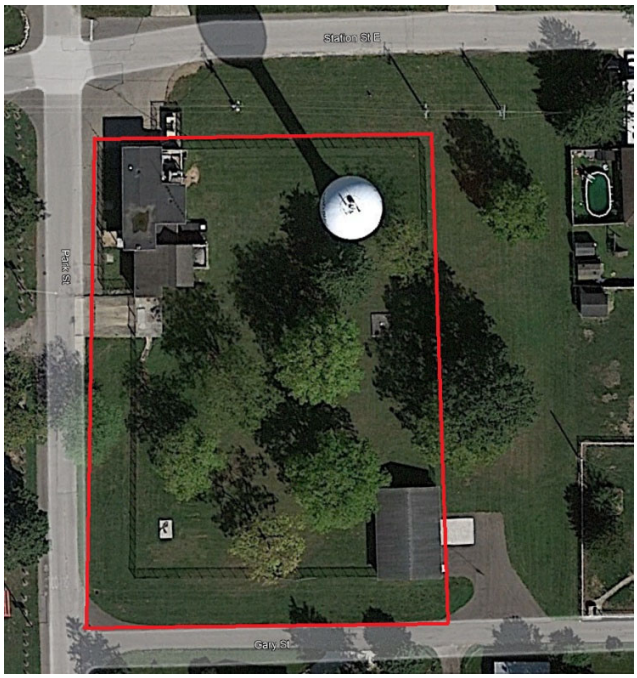
Our study consisted of six (6) standard penetration borings within the proposed building and ancillary structure areas. The boring locations were staked prior to our drilling operations. We did not determine ground elevations at the boring locations within our scope of services. We attach a plan showing the approximate boring locations and the test boring logs in the appendix.

The intent of this study was to evaluate subsurface conditions and offer geotechnical recommendations relative to earthwork, foundations, slabs, and pavements for the proposed project. We issue this report prior to the receipt of final site layout and grading plans. GCI should review these plans when available, and provide additional recommendations and borings, if necessary.

We prepared this report for the exclusive use of Jones & Henry Engineers, Ltd and their client for specific application to the above referenced project in Ashville, Ohio in accordance with generally accepted soil and foundation engineering practices. We make no warranty, expressed or implied.

SITE LOCATION AND PROJECT DESCRIPTION

The project site is an existing water treatment plant facility with one to two-story structure in the northwest region of the parcel, a garage structure southeast, water tower and assumed well vault to the northeast. The remainder is mostly grass covered areas with isolated trees. The project site is located southeast of the intersection of Station Street and Park Street in Ashville, Ohio. Using publicly available topographic information, the existing site elevations vary in the range of elevation 712 feet to 716 feet. A *General Site Location Map* is included in the appendix. The aerial photograph below shows the approximate site boundary and existing site features similar to those at the time of drilling.



Aerial photograph (Google Earth, September 2021)

The proposed development consists of constructing a one-story, slab-on-grade facility. The provided plan indicates the structure will house chemicals used in water treatments and will have some mechanical/electrical rooms. It was not clear if below-grade spaces were planned. Based on the existing topography and surrounding grades, we do not expect significant cuts or fills (greater than 5 feet) will be needed to reach design grades.

SUBSURFACE CONDITIONS

GCI mobilized two truck-mounted, rotary drill rigs (with automatic sampling hammers) to the site on July 15 and 16, 2024. We drilled six (6) standard penetration borings (B-1 to B-6) in accessible locations. Borings B-3 to B-6 were drilled in the proposed building area to depths of 30 to 60 feet, borings B-1 was drilled in an assumed water well area to a depth of 30 feet, and borings B-2 was drilled in an assumed tank area to a depth of 30 feet.

We attach boring logs, a boring location plan, and a summary table of encountered subsurface conditions in the appendix. We summarize the subsurface findings below. Refer to the individual boring logs for more detailed subsurface information at specific boring locations.

Surface Cover

Borings B-2 to B-6 encountered a topsoil cover ranging in thickness from 0.4 feet to 0.7 feet. Below the topsoil in these borings we encountered existing fill. The encountered fill contained mostly moderate plasticity lean clay with sand (designated as CL in the ASTM/Unified Soil Classification System). Standard penetration testing N-values indicated material of medium stiff to hard cohesive consistency. The fill extended to depths of 2 to 4 feet below existing grade in these borings.

Natural Soils

At the surface of boring B-1 and below the fill in borings B-3 and B-5, we encountered moderately plastic, brown lean clay with sand (classified as CL under the ASTM/Unified Soil Classification System). Standard penetration testing N-values indicate the upper

lean clay was variably soft to very stiff in cohesive consistency. This layer extended to the depths of 3 to 5.5 feet below existing grade.

At depths of 2 to 5.5 feet, the borings encountered moderately plastic brown glacial till classified as lean clay with sand to sandy lean clay (CL). The till changed color from brown to gray in borings from B-1, B-2, B-3, and B-6 at depths of 10 to 21 feet below existing grade, and within the granular soil in boring B-4 at a depth from 19 to 22 feet. The gray till was classified as sandy lean clay, sandy lean clay with gravel, and gravely lean clay with sand (CL). The gray till was noted as less plastic when compared to the overlying brown glacial till. Standard penetration testing indicated the glacial till was generally medium stiff to hard in cohesive consistency.

Within the brown glacial till in borings B-3, at a depth of 13 to 16 feet, below the brown till in borings B-4, B-5, and below the gray till in borings B-1, B-2, B-3, B-6 at depths from 17 to 27 feet, we encountered granular soil classified as silty sand (SM) and poorly-graded sand with silt (SP-SM). We noted isolated layers of lean clay with depth in a few borings. Standard penetration testing indicated the granular soils were loose to dense in cohesionless density. The borings terminated in the granular soil at depths of 30 to 60 feet below existing grade.

Bedrock

We did not encounter bedrock within the maximum drilled depth of our borings (60 feet).

Groundwater and Soil Moisture Conditions

We encountered groundwater seepage in borings B-3 to B-6 at depths of 25 and 28 feet below existing grade. Upon completion of drilling, water levels were measured at 20 to

27 feet. The remaining two (2) borings were dry during and upon completion of drilling operations.

We generally described the site soils as moist above the groundwater seepage levels with very moist and wet zones below where groundwater seepage was encountered. Some damp/dry zones were noted in the near-surface clay soils due to prevailing dry weather patterns at the time of drilling. Soil moisture conditions and groundwater levels fluctuate in response to precipitation events, stabilization time, and other factors that may differ from the time the measurements were made.

As part of our scope of services, we installed a groundwater monitoring well in boring B-6. The well consisted of 2-inch slotted PVC pipe with pea gravel in the annular space surrounding and was installed to a depth of about 31 feet, or about 10 feet into what appeared to the stabilized water level in that boring at the time. After developing the well, the groundwater level was measured at about 25 feet below the ground surface. We installed a pressure transducer which logged the water level for a period of approximately one month. Assuming a ground surface elevation of about 716 feet at the boring location, the water level remained generally static with a slight downward trend from elevation 690 feet on July 17, 2024 to about 689.4 feet on August 20, 2024. We noted a drawdown event around August 12, 2024 where the water level appeared to drop below the level of the transducer and returned to the static level in a period of about 24 hours. We have attached a plot of the groundwater elevations in the appendix. We note that little to no precipitation occurred over the duration of our monitoring.

LABORATORY TESTING

GCI performed lab testing on select samples consisting of moisture contents, Atterberg Limits and grain size analysis. The results have been incorporated into our borings logs and used in our analysis. The test results are attached to this report.

In addition, GCI performed soil corrosivity testing in accordance with publication ANSI/AWWA C105/A21.5-99 specifications. Table 3 on the following page (ANSI/AWWA C105/A21.5-99 Table A.1 from the publication) shows the rating system based on laboratory test findings. Results of the testing are summarized in the table below.

TABLE 1 – Lab Test Results

Boring	Depth (ft)	pH	Resistivity (ohm-cm)	Redox Potential*(mV)	Sulfides	Chlorides (mg/kg)	Moisture
B-6	2.0 to 10.0	8.6	4.050	280	0	<3.00	Fair
B-6	18.5 to 25.0	8.2	1,800	250	10	<3.00	Fair
B-6	38.5 to 45.0	8.5	1,900	220	10	15.08	Fair

TABLE 2 – ANSI/AWWA Point Summary

Sample	pH	Resistivity	Redox Potential**	Sulfides	Moisture	Sum
2.0 to 10.0	3	0	0	0	1	4
18.5 to 25.0	0	8	0	3.5	1	**12.5**
38.5 to 45.0	0	5	0	3.5	1	9.5

Using the ANSI/AWWA Table A.1 soil test evaluation system (Table 3 below), the tested soil samples had total points of between 4 and 12.5. Per the ANSI/AWWA rating system, soils with a sum of 10 points or higher are indicative of a corrosive environment to ductile iron pipe and protection would be needed. ***The testing in boring B-6 at depth of 18.5 to 27 feet showed total points above the 10-point threshold. As such, the testing does indicate a corrosive environment and the need for special protective measures due to corrosion***.

TABLE 3 - ANSI/AWWA C105/A21.5-99 Table A.1

Table A.1 Soil-test evaluation

Soil Characteristics Based on Samples Taken Down to Pipe Depth	Points*
Resistivity—ohm-cm (based on water-saturated soil box)	
<1,500	10
≥1,500–1,800	8
>1,800–2,100	5
>2,100–2,500	2
>2,500–3,000	1
>3,000	0
pH:	
0–2	5
2–4	3
4–6.5	0
6.5–7.5	0†
7.5–8.5	0
>8.5	3
Redox potential:	
> +100 mV	0
+50 to +100 mV	3.5
0 to +50 mV	4
Negative	5
Sulfides:	
Positive	3.5
Trace	2
Negative	0
Moisture:	
Poor drainage, continuously wet	2
Fair drainage, generally moist	1
Good drainage, generally dry	0

*Ten points indicates that soil is corrosive to ductile-iron pipe; protection is needed.

†If sulfides are present and low or negative redox-potential results are obtained, add three points for this range.

ANALYSES AND CONCLUSIONS

GEOTECHNICAL EVALUATION

Based on our borings, it is GCI's opinion that the site geotechnical conditions are suitable to support the proposed building using conventional shallow foundations and slab-on-grade construction and flexible or rigid pavement, provided the site is properly prepared as discussed in the following paragraphs.

Site Stripping

The borings encountered about 0.4 feet to 0.7 foot of surface topsoil. Topsoil, vegetation, trees, root matter, and other organic materials are not suitable for foundation, slab, or

pavement support. The unsuitable material should be completely removed to expose non-organic soils prior to placing new fill, underslab aggregate, or pavement base aggregate. Stripping should extend to a minimum of 5 feet laterally beyond proposed building and pavement areas. Topsoil and organic matter can be stockpiled for reuse in landscaping mounds, redistributed in proposed green space areas, or disposed at an off-site location.

Existing Fill

We encountered existing clay-based fill that extended to depths of 2 to 4 feet at borings B-2 to B-6. N-values indicated the fill was generally medium stiff to hard in cohesive consistency.

We anticipate relatively shallow existing fill will be encountered in the building area. Without documentation that the fill was properly placed and compacted, GCI recommends that foundations extend through existing fill to bear on the underlying stable natural soils. However, slabs can be supported on the existing fill. There is some risk of slab cracking and settlement due to the existing fill that would remain in place. In our opinion, this risk is low, provided the subgrade is brought to a firm and stable condition, as judged by a proof-roll and provided fill with organic content is removed. The owner must assume the low risk of possible settlement and slab cracking when constructing over the existing fill materials. If settlement sensitive equipment is planned to be supported by the slab of the owner is unwilling to assume the risk, we recommend the fill be removed and replaced from below the building area plus 5 feet laterally beyond. The resulting excavation should be backfilled in a controlled manner as discussed later in the report. Non-organic portions of the removed fill can be used as new controlled fill with proper moisture control.

Subgrade Stability

We recommend that the site earthwork contractor proof-roll the exposed soil subgrades using a fully-loaded, tandem-axle dump truck (or equivalent) after performing site stripping and prior to fill placement or construction of slabs and pavement. The purpose of the proof-roll is to identify potential soft, yielding subgrade areas. Soft spots identified during the proof-roll should be undercut to firm, stable conditions or otherwise stabilized prior to placing controlled fill to finished subgrade elevation.

The severity of soft, very moist subgrade conditions will depend on the time of year earthwork is performed, and the amount of moisture within the subgrade soils. We expect fewer problems with soft subgrades if earthwork and mass grading operations are performed during traditionally drier times of the year (i.e., late spring, summer, and early fall).

Stabilization of soft subgrades by disking, aerating/drying, and re-compaction may be feasible during traditionally drier times of the year. During wet seasons, partial undercutting and replacing of wet soils with structural fill, drying with soil additives such as lime, or use of geosynthetics may be needed to create a stable subgrade before placing controlled fills. The use of soil additives such as lime and flyash or installation of geosynthetics should be reviewed by our office prior to use in the field.

Fill Placement and Compaction

Structural fill can be placed to design grade once the subgrades are brought to firm and stable conditions. Non-organic, clay-based or granular site soils are suitable for reuse in new, controlled fills provided proper moisture control is maintained. Depending on the time of year of earthwork, the site soils may require drying to achieve compaction. Fill

materials within building pad and pavement areas should be placed in a controlled manner as described in the *Site Preparation and Earthwork* section of this report.

FOUNDATIONS

Provided the site is properly prepared as stated above, it is GCI's opinion that the proposed building and ancillary structures can be constructed on conventional spread footings and continuous wall foundations. All footings should bear on stable, natural soils or new controlled fill placed directly over stable natural soils. Footings bearing on acceptable soils can be designed using a maximum allowable bearing capacity not to exceed 3,000 pounds per square foot. Provided the earthwork is properly performed and foundations have been properly design, we estimate post-construction settlements should be 1-inch total settlement and ½ inch or less differential movement for the building. If more-heavily loaded or settlement sensitive structures are planned (such as large tanks or a water tower) it may be necessary to revise these recommendations. Contact GCI if this is the case.

We recommend minimum sizes of 16 inches wide for wall footings and 30 inches square for column pads to prevent a "punch" effect. All exterior footings should extend to local frost bearing depth (32 inches) or to stable bearing (as stated above), whichever is deeper. Interior footings in heated areas may be placed as shallow as feasible, if bearing on acceptable soils.

Typical to local practice, if soft or unstable, natural soils are encountered at footing subgrade, undercut to stable soils. Undercut areas can be backfilled to design bottom-of-footing elevation using controlled density fill (CDF) to allow footing construction at design grade. Soft, unstable bearing soils should be reviewed by the soil engineer prior to

undercuts. Alternatively, the foundations can be constructed on firm, stable site soils at the bottom-of-footing undercut.

FLOOR SLAB

A conventional concrete slab-on-grade is suitable for the proposed building. The subgrade should be thoroughly proof rolled and any soft, yielding areas brought to a stable condition prior to slab construction or placement of aggregate base. A subgrade modulus of 150 pci (based on a 1' by 1' plate load test) can be used with 6 inches of crushed, graded limestone stone such as ODOT Item 304 or equivalent. Chemical stabilization of the subgrades would yield a higher subgrade modulus of about 200 pci in conjunction with 6 inches of stone (again based on a 1' by 1' plate load test).

The actual modulus of subgrade reaction value will depend on subsurface conditions and the stiffness of the structural element (slabs or mats) to transfer how the load is applied, and is an iterative process between the structural and geotechnical engineers. The value for slab/mat design (including equipment pads, pallets, and storage racks), should be adjusted for areas larger than the noted 1' by 1' plate load test values using the following expression for cohesive and cohesionless soil:

Modulus of Subgrade Reaction, $k_s = (\frac{k}{B})$ for cohesive soil and

$k_s = k\,(\frac{B+1}{2B})^2$ for cohesionless soil

where: k_s = coefficient of vertical subgrade reaction for loaded area,
k = coefficient of vertical subgrade reaction for 1x1 square foot area
B = width of area loaded, in feet

If a higher modulus of subgrade reaction is needed, due to the loading condition or loaded area, additional well-graded crushed stone, can be placed and compacted under the slab. Placement of a vapor retarder directly below the slab is recommended in areas where floor coverings can be adversely affected by water vapor.

SEISMIC FACTOR

Our borings encountered medium stiff to very stiff clay-based soils, with medium dense granular soil zones. In accordance with the Ohio Building Code, we estimate the site has a Site Class D – stiff soil profile.

EXCAVATIONS

The existing clay-based and granular natural site soils can be excavated using conventional track-hoe equipment. Based on the borings, bedrock will not be encountered during normal excavations associated with the shallow foundations and utilities. There are layers of granular soils (silts, sands, gravels, etc.) within the glacial tills that may become unstable in open excavations, particularly if saturated. Excavations (i.e., deeper sewer, utility lines, vaults, pits, etc.) that encounter these granular layers may need to be laid back or braced to maintain stability. **All site excavations should comply with current OSHA requirements**.

GROUNDWATER

We encountered groundwater seepage in borings B-3 to B-6 at depths of 25 and 28 feet below existing grade. Upon completion of drilling, water levels were measured at 20 to 27 feet. Our monitoring well, as discussed earlier, indicates that a static water table around elevation 690 (about 27 feet below grade) should be expected. It is GCI's opinion that

groundwater will not have a significant impact on shallow foundation excavations and shallow utility trench excavations associated with the proposed building footprint. If water is encountered in site excavations, the excavations should be dewatered to allow footing construction and utility trench backfilling in dry conditions. We expect groundwater seepage flows in shallow excavations can be handled with portable sump pumps and working mats of crushed stone, as needed. Contact GCI for additional recommendations if excessive groundwater conditions are encountered or if excavations below about 25 feet are planned. This may necessitate specialized dewatering techniques such as well points.

SITE PREPARATION AND EARTHWORK

We provide general guidelines for site preparation and earthwork operations below.

1. Remove topsoil, vegetation, trees, and root mat systems from below the proposed building footprint and pavement areas plus a minimum of 5 feet beyond. Stockpile topsoil for redistribution in proposed green space areas, reuse in landscaping mounds, or to backfill on-site borrow pits, otherwise haul the topsoil off-site.

2. If the client elects to, remove and replace the existing fill at this time.

3. Proof-roll the exposed soil subgrades (existing fill or natural) with a fully-loaded, tandem-axle dump truck (or equivalent) to identify potential soft subgrade areas. Undercut soft areas or otherwise stabilize soft spots identified during the proof-roll prior to placing controlled fill to design grade.

4. Place controlled fills to design grade within the proposed building footprint, as required. Non-organic natural soils and non-organic existing fills are suitable for reuse in controlled fills. **Off-site borrow materials should be reviewed by our office prior to use.**

5. Place controlled fills in maximum 8-inch thick loose lifts and compact each lift to a minimum of 98% of the maximum Standard Proctor dry density (ASTM D-698). The moisture in the fill soils should be controlled to within ±3% of the optimum Standard Proctor moisture content. **Depending on the time of year of earthwork, moisture adjustment of the site soils may be required to achieve proper compaction.** Cohesive soils will compact best with a sheepsfoot roller. Granular soils compact best with a vibratory smooth-drum compactor.

6. Construct foundations and start building construction after the building pad is filled to grade. Refer to the *Foundations* section of this report for specific foundation design parameters.

7. The building pad and pavement areas should be steel-wheel rolled to a smooth surface prior to placement of the underslab aggregate course. Subgrade preparation during wet seasons may require the use of engineering fabric or geogrid.

8. It is recommended that GCI be retained to observe proof-rolling operations, cut and fill operations, and foundation excavations.

9. Precautions should be taken when performing earthwork operations during winter weather or when freezing temperatures may occur. Contact GCI for additional recommendations on cold-weather earthwork operations, if applicable.

CONSTRUCTION MATERIALS ENGINEERING AND TESTING

GCI provides construction materials engineering and testing services. For project continuity throughout construction, we recommend that GCI be retained to observe, test, and document:

- earthwork procedures (stripping, fill placement, compaction, utility trench backfill, etc.),
- slab preparation (proof-rolling, excavations, undercuts, etc.),
- concrete placement and compressive strength testing (footings, slabs, pavements, etc.), and
- structural steel (welds, bolts, etc.).

The purpose of this work is to assess that the intent of our recommendations is being followed and to make timely changes to our recommendations (as needed) in the event site conditions vary from those encountered in our borings. Please contact our field department to initiate these services.

FINAL

We recommend that GCI review final site layout and grading plans. Recommendations contained in this report may be changed based on review of final site plans. If any changes in the nature, design or locations of the construction are planned, conclusions and recommendations should not be considered valid unless verified in writing by GCI.

The recommendations contained in this report are the opinion of GCI based on the subsurface conditions found in the borings and available development information.

It should be noted that the nature and extent of variations between borings might not become evident until construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations of this report. This report has been prepared for design purposes only and should not be considered sufficient to prepare an accurate bid document.

If you have any questions or need for any additional information, please contact our office. It has been a pleasure to be of service to you on this project, and we hope to continue our services through construction.

GEOTECHNICAL
CONSULTANTS INC.

APPENDIX – Water Treatment Plant – Ashville, OH

General Notes for Soil Sampling and Classifications
Site Location Map and Boring Location Plan
Summary of Encountered Subsurface Conditions
Test Boring Logs (B-1 to B-6)
Laboratory Test Results
Groundwater Level Plot

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720 Green Crest Drive
Westerville, OH 43081
614.895.1400 **phone**
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GENERAL NOTES FOR SOIL SAMPLING AND CLASSIFICATIONS

BORINGS, SAMPLING AND GROUNDWATER OBSERVATIONS:

Drilling and sampling were conducted in accordance with procedures generally recognized and accepted as standard methods of exploration of subsurface conditions. The borings were drilled using a truck-mounted drill rig using auger boring methods with standard penetration testing performed in each boring at intervals ranging from 1.5 to 5.0 feet. The stratification lines on the logs represent the approximate boundary between soil types at that specific location and the transition may be gradual.

Water levels were measured at drill locations under conditions stated on the logs. This data has been reviewed and interpretations made in the text of the report. Fluctuations in the level of the groundwater may occur due to other factors than those present at the time the measurements were made.

The Standard Penetration Test (ASTM-D-1586) is performed by driving a 2.0 inch O.D. split barrel sampler a distance of 18 inches utilizing a 140 pound hammer free falling 30 inches. The number of blows required to drive the sampler each 6 inches of penetration are recorded. The summation of the blows required to drive the sampler for the final 12 inches of penetration is termed the Standard Penetration Resistance (N). Soil density/consistency in terms of the N-value is as follows:

COHESIONLESS DENSITY		COHESIVE CONSISTENCY	
0-10	Loose	0-4	Soft
10-30	Medium Dense	4-8	Medium Stiff
30-50	Dense	8-15	Stiff
50 +	Very Dense	15-30	Very Stiff
		30 +	Hard

SOIL MOISTURE TERMS

Soil Samples obtained during the drilling process are visually characterized for moisture content as follows:

MOISTURE CONTENT	DESCRIPTION
Damp	Soil moisture is much drier than the Atterberg plastic limit (where soils are cohesive) and generally more than 3% below Standard Proctor “optimum” moisture conditions. Soils of this moisture generally require added moisture to achieve proper compaction.
Moist	Soil moisture is near the Atterberg plastic limit (cohesive soils) and generally within ±3% of the Standard Proctor “optimum” moisture content. Little to no moisture conditioning is anticipated to be required to achieve proper compaction and stable subgrades.
Very Moist	Soil moisture conditions are above the Atterberg plastic limit (cohesive soils) and generally greater than 3% above Standard Proctor “optimum” moisture conditions. Drying of the soils to near “optimum” conditions is anticipated to achieve proper compaction and stable subgrades.
Wet	Soils are saturated. Significant drying of soils is anticipated to achieve proper compaction and stable subgrades.

SOIL CLASSIFICATION PROCEDURE:

Soil samples obtained during the drilling process are preserved in plastic bags and visually classified in the laboratory. Select soil samples may be subjected to laboratory testing to determine natural moisture content, gradation, Atterberg limits and unit weight. Soil classifications on logs may be adjusted based on results of laboratory testing.

Soils are classified in accordance with the ASTM version of the Unified Soil Classification System. ASTM D-2487 “Classification of Soils for Engineering Purposes (Unified Soil Classification System) describes a system for classifying soils based on laboratory testing. ASTM D-2488 “Description and Identification of Soil (Visual-Manual Procedure) describes a system for classifying soils based on visual examination and manual tests.

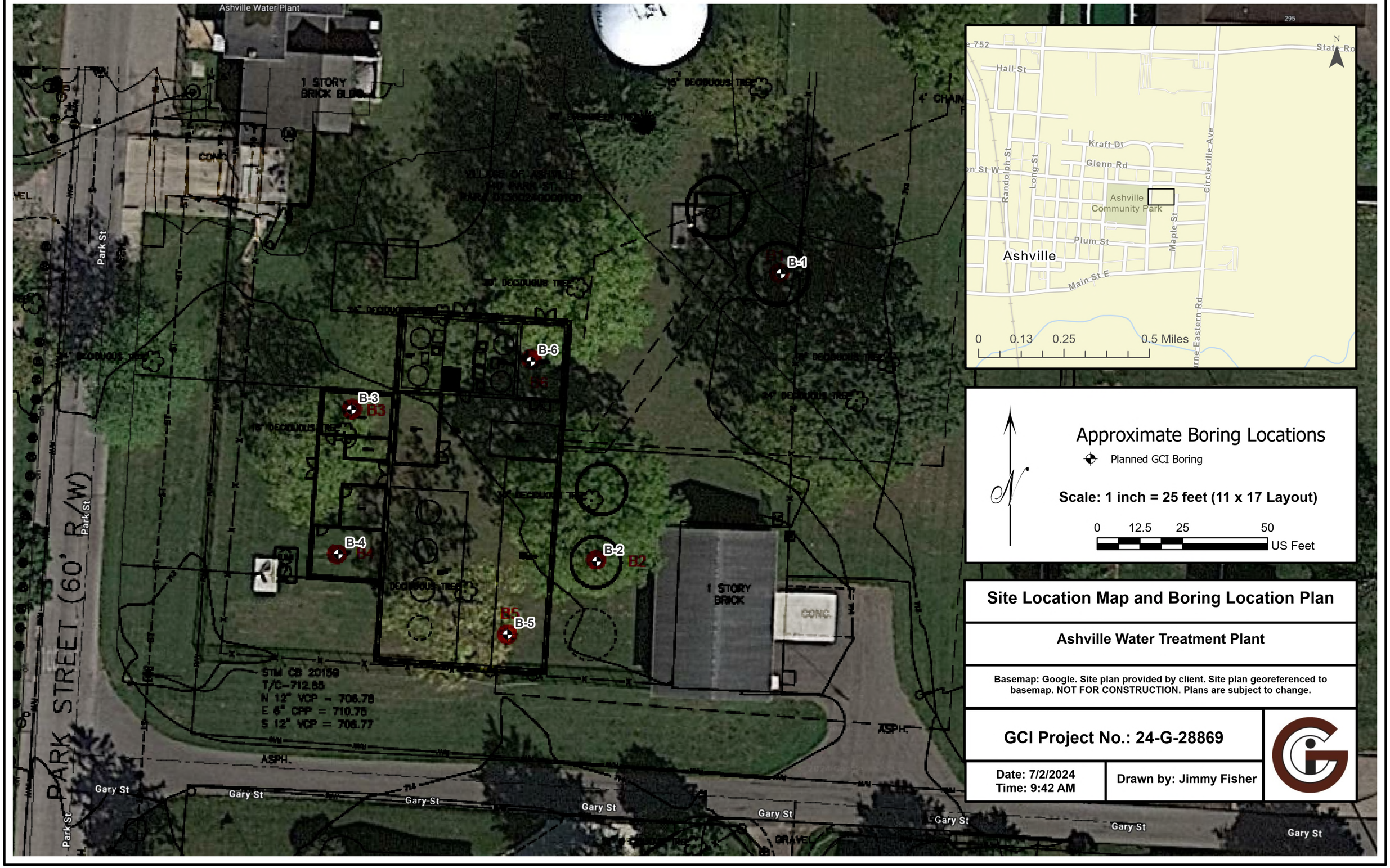
Soil classifications are based on the following tables (see reverse side):

GENERAL NOTES FOR SOIL SAMPLING AND CLASSIFICATIONS

PARTICLE SIZE DEFINITION		
Boulders:		>12"
Cobbles:		3" to 12"
Gravel:	Coarse:	3/4" to 3"
	Fine:	No. 4 (3/16") to 3/4"
Sand:	Coarse	No. 10 (2.0mm) to No. 4 (4.75mm)
	Medium	No. 40 (0.425mm) to No. 10 (2.0mm)
	Fine	No. 200 (0.074mm) to No. 40 (0.425mm)
Silt & Clay		<0.074mm; classification based on overall plasticity; in general clay particles <0.005mm.

CONSTITUENT MODIFIERS	
Trace	Less than 5%
Few	5-10%
Little	15-25%
Some	30-45%
Mostly	50-100%

ASTM/UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART		
COARSE-GRAINED SOILS (more than 50% of materials is larger than No. 200 sieve size)		
GRAVELS More than 50% of coarse fraction larger than No. 4 sieve size	*Clean Gravel (less than 5% fines)*	
	GW	Well-graded gravel, gravel-sand mixtures, little or no fines
	GP	Poorly-graded gravels, gravel sand mixtures, little or no fines
	Gravels with fines (more than 12% fines)	
	GM	Silty gravels, gravel-sand-silt mixtures
	GC	Clayey gravels, gravel-sand-clay mixtures
SANDS More than 50% of coarse fraction smaller than No. 4 sieve size	*Clean Sands (Less than 5% fines)*	
	SW	Well-graded sands, gravelly sands, little or no fines
	SP	Poorly-graded sands, gravelly sands, little or no fines
	Sands with fines (More than 12% fines)	
	SM	Silty sands, sand-silt mixtures
	SC	Clayey sands, sand-clay mixtures
Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows: Less than 5 percent ……GW, GP, SW, SP Greater than 12 percent ……GM, GC, SM, SC 5 to 12 percent ……Borderline cases requiring dual symbols: SP-SM, GP-GM, etc.		
FINE-GRAINED SOILS (50% or more of material is smaller than No. 200 sieve size)		
SILTS AND CLAYS Liquid Limit less than 50%	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
	CL	Inorganic clays or low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
	CL-ML	Inorganic silty clay of slight plasticity, P.I. between 4 and 7
	OL	Organic silts and organic silty clays of low plasticity
SILTS AND CLAYS Liquid Limit 50% or greater	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
	CH	Inorganic clays of high plasticity, fat clays
	OH	Organic clays or medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS	PT	Peat and other highly organic soils



Site Location Map and Boring Location Plan

Ashville Water Treatment Plant

Basemap: Google. Site plan provided by client. Site plan georeferenced to basemap. NOT FOR CONSTRUCTION. Plans are subject to change.

GCI Project No.: 24-G-28869

Date: 7/2/2024
Time: 9:42 AM

Drawn by: Jimmy Fisher

Summary of Encountered Subsurface Conditions

Water Treatment Plant
Ashville, Ohio
GCI Job Number: 24-G-28869

Borehole	Topsoil Thickness (ft.)	Bottom of Fill Cover (feet)	Groundwater: Level Encountered (ft)	Groundwater: Level at Completion (ft)	Depth to Top of Lean Clay (ft)	Depth to Top of Brown Till (ft)	Depth to Top of Gray Till (ft)	Depth to Top of Sand/Gravel (ft)	Bottom of Boring Depth (ft)
			Depth	Depth					
B-1	--	--	--	--	0.0	3.0	15.0	23.0	30.0
B-2	0.5	4.0	--	--	--	4.0	21.0	23.0	30.0
B-3	0.4	4.0	28	27	4.0	5.5	19.0	23.0	30.0
B-4	0.7	2.0	27	26	--	2.0	19.0	22.0	30.0
B-5	0.6	3.0	25	25	3.0	5.0	--	17.0	30.0
B-6	0.7	3.0	27	20	--	3.0	10.0	27.0	60.0

Average Topsoil Depth at boring locations: 0.6 feet

TEST BORING LOG

PROJECT NAME **Water Treatment Plant - Ashville, Ohio** BORING NO. **B-1**

PROJ. SURF. ELEV.

CLIENT **Jones & Henry Engineers** NO. **24-G-28869** DATE DRILLED **7/16/2024**

GROUND WATER OBSERVATION

None FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT ____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
	4.0	0.0-1.5	SS	6	6	7	Moist		Brown Lean Clay with Sand (CL) - moderate plasticity, little sand
	4.5+	2.0-3.5	SS	12	13	15	Moist	3.0	
	4.5+	4.0-5.5	SS	9	14	16	Moist		Brown Lean Clay with Sand to Sandy Lean Clay (CL); glacial till - moderate plasticity, little to some sand, few gravel
5									
	4.5	8.5-10.0	SS	26	8	9	Moist		
10									
	4.5	13.5-15.0	SS	25	18	19	Moist		
15								15.0	
	4.5+	18.5-20.0	SS	19	23	20	Moist		Gray Sandy Lean Clay with Gravel (CL); glacial till - moderate plasticity, some sand, little gravel
20									
	- -	23.5-25.0	SS	15	17	20	Very Moist	23.0	Gray Silty Sand (SM) - mostly fine sand
25									
	- -	28.5-30.0	SS	17	16	23	Very Moist		
								30.0	BOTTOM OF BORING: 30.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

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TEST BORING LOG

PROJECT NAME **Water Treatment Plant - Ashville, Ohio** BORING NO. **B-2**

PROJ. SURF. ELEV.

CLIENT **Jones & Henry Engineers** NO. **24-G-28869** DATE DRILLED **7/16/2024**

GROUND WATER OBSERVATION

None FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT _____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
	2.5	0.0-1.5	SS	5	7	5	Damp	0.5	Topsoil
									Fill: Brown Lean Clay with Sand to Sandy Lean Clay (CL)- moderate plasticity, little to some sand, few gravel
	- -	2.0-3.5	SS	9	15	24	Damp to Moist		layer of brown silty sand with gravel from 1 foot to 3 feet
								4.0	
	4.5+	4.0-5.5	SS	8	27	6	Moist		Brown Sandy Lean Clay with Gravel (CL); glacial till - moderate plasticity, some sand, little gravel
5									
	4.5+	8.5-10.0	SS	5	5	12	Moist		
10									low to moderate plasticity
	4.5+	13.5-15.0	SS	13	20	30	Moist		
15									
	4.5+	18.5-20.0	SS	30	35	50/5.5	Moist		
20								21.0	
									Brown and Gary Gravely Lean Clay with Sand (CL); glacial till - low to moderate plasticity, some gravel, little sand
								23.0	
	- -	23.5-25.0	SS	11	11	13	Moist		Gray Silty Sand (SM) - mostly fine sand
25									
	- -	28.5-30.0	SS	13	15	16	Moist		
								30.0	BOTTOM OF BORING: 30.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

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TEST BORING LOG

PROJECT NAME **Water Treatment Plant - Ashville, Ohio** BORING NO. **B-3**

PROJ. SURF. ELEV.

CLIENT **Jones & Henry Engineers** NO. **24-G-28869** DATE DRILLED **7/16/2024**

GROUND WATER OBSERVATION

27.0 FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT ____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
	4.0	0.0-1.5	SS	6	7	7	Damp to Moist	0.4	Topsoil
									Fill: Brown Lean Clay with Sand (CL) - moderate plasticity, little sand
	2.0	2.0-3.5	SS	2	2	4	Moist		
								4.0	trace of topsoil
	4.0	4.0-5.5	SS	4	1	1	Moist		Brown Sandy Lean Clay (CL) - moderate plasticity, some sand
5								5.5	
									Brown Sandy Lean Clay with Gravel (CL); glacial till - moderate plasticity, some sand, little gravel
	- -	8.5-10.0	SS	9	13	13	Moist		
10									
								13.0	
	- -	13.5-15.0	SS	9	10	12	Moist		Brown Silty Sand (SM) - mostly fine sand
15								16.0	
									Gray Sandy Lean Clay with Gravel (CL); glacial till - moderate plasticity, some sand, little gravel
	4.5	18.5-20.0	SS	15	16	20	Moist	19.0	
20									Gray Sandy Lean Clay with Gravel (CL); glacial till - moderate plasticity, some sand, little gravel
								23.0	
	4.5	23.5-25.0	SS	4	4	5	Very Moist		Gray Silty Sand (SM) - mostly fine sand
25									
									Water Seepage at 27 feet
	- -	28.5-30.0	SS	6	3	2	Very Moist		
								30.0	BOTTOM OF BORING: 30.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

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TEST BORING LOG

PROJECT NAME **Water Treatment Plant - Ashville, Ohio** BORING NO. **B-4**

PROJ. SURF. ELEV.

CLIENT **Jones & Henry Engineers** NO. **24-G-28869** DATE DRILLED **7/16/2024**

GROUND WATER OBSERVATION

26.0 FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT _____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
	2.0	0.0-1.5	SS	3	5	6	Moist	0.7	Topsoil
								2.0	Fill: Brown Lean Clay with Sand (CL) - moderate plasticity, little sand
	3.5	2.0-3.5	SS	5	3	3	Moist		Brown Sandy Lean Clay (CL); glacial till - moderate plasticity, some sand, few gravel
	3.5	4.0-5.5	SS	5	2	3	Moist		
5									
	3.5	8.5-10.0	SS	6	5	5	Moist		
10								13.0	
	- -	13.5-15.0	SS	13	8	11	Moist		Brown Silty Sand (SM) - mostly fine sand
15									
	4.5	18.5-20.0	SS	14	15	16	Moist	19.0	
20									Gray Sandy Lean Clay with Gravel (CL); glacial till - moderate plasticity, some sand, little gravel; with layer of fine sand
								22.0	
	- -	23.5-25.0	SS	17	16	17	Moist		Brown and Gray Poorly Graded Sand with Clay (SP-SC) - mostly sand; with thin layer of lean clay
25								26.0	
	- -	28.5-30.0	SS	17	16	18	Moist to Very Moist		Gray Silty Sand (SM) - mostly fine sand **Water Seepage at 27 feet**
								30.0	BOTTOM OF BORING: 30.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

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TEST BORING LOG

PROJECT NAME **Water Treatment Plant - Ashville, Ohio** BORING NO. **B-5**

PROJ. SURF. ELEV.

CLIENT **Jones & Henry Engineers** NO. **24-G-28869** DATE DRILLED **7/16/2024**

GROUND WATER OBSERVATION

25.0 FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT ____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
	1.0	0.0-1.5	SS	4	8	12	Damp to Moist	0.6	Topsoil
									Fill: Brown Lean Clay with Sand (CL) - moderate plasticity, little sand
	2.5	2.0-3.5	SS	5	10	10	Damp to Moist	3.0	
									Brown Lean Clay with Sand (CL) - moderate plasticity, little sand
	4.5	4.0-5.5	SS	8	15	19	Damp to Moist	5.0	
5									Brown Sandy Lean Clay (CL); glacial till - moderate plasticity, some sand, few gravel
	4.5+	8.5-10.0	SS	5	9	9	Moist		
10									
	4.5+	13.5-15.0	SS	17	18	20	Moist		
15								17.0	
									Gray Poorly Graded Sand with Silt (SP-SM) - mostly fine sand
	- -	18.5-20.0	SS	12	15	18	Moist		
20								23.0	
	- -	23.5-25.0	SS	8	10	10	Very Moist		Gray Silty Sand (SM) - mostly fine sand
25									**Water Seepage at 25 feet**
	- -	28.5-30.0	SS	17	17	17	Wet		
								30.0	BOTTOM OF BORING: 30.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

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TEST BORING LOG

PROJECT NAME **Water Treatment Plant - Ashville, Ohio** BORING NO. **B-6**

PROJ. SURF. ELEV.

CLIENT **Jones & Henry Engineers** NO. **24-G-28869** DATE DRILLED **7/16/2024**

GROUND WATER OBSERVATION

20.0 FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT ____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
	2.0	0.0-1.5	SS	3	5	5	Damp	0.7	Topsoil
									Fill: Brown Lean Clay with Sand (CL) - moderate plasticity, little sand
	4.5	2.0-3.5	SS	5	5	5	Moist	3.0	
									Brown Sandy Lean Clay (CL); glacial till - moderate plasticity, some sand, few gravel
	4.5+	4.0-5.5	SS	9	9	9	Moist		
5									
	4.5	8.5-10.0	SS	5	6	7	Moist		
10								10.0	
									Gray Sandy Lean Clay (CL); glacial till - moderate plasticity, some sand, few gravel; with thin layers of sand
	4.5	13.5-15.0	SS	13	16	23	Moist		
15									
	4.5	18.5-20.0	SS	44	34	25	Moist		low to moderate plasticity
20									
	4.5	23.5-25.0	SS	17	19	24	Moist		
25									
								27.0	**Water Seepage at 27 feet**
									Gray Silty Sand (SM) - mostly fine sand
	- -	28.5-30.0	SS	8	11	11	Very Moist to Wet		

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

Continued Next Page

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TEST BORING LOG

PROJECT NAME **Water Treatment Plant - Ashville, Ohio** BORING NO. **B-6**

PROJ. SURF. ELEV.

CLIENT **Jones & Henry Engineers** NO. **24-G-28869** DATE DRILLED **7/16/2024**

GROUND WATER OBSERVATION

20.0 FEET BELOW SURFACE AT COMPLETION

_____ FEET BELOW SURFACE AT 24 HOURS

_____ FEET BELOW SURFACE AT _____ HOURS

Proportions Used

Trace	Less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density

0 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30 +	Hard

LOCATION OF BORING **See Boring Location Plan**

DEPTH	Pocket Penetrometer (tsf)	Sample Depths From To	Type of Sample	Blows per 6" on Sampler From To 0-6	6-12	12-18	Moisture Density or Consist.	Strata Change Depth*	SOIL IDENTIFICATION Remarks include color, type of soil, etc. Rock-color, type, condition, hardness
	- -	33.5-35.0	SS	8	12	17	Wet		thin layers of lean clay (CL)
35									
	- -	38.5-40.0	SS	20	21	21	Very Moist		
40									
	- -	43.5-45.0	SS	20	19	24	Moist to Very Moist		
45									
	- -	48.5-50.0	SS	17	20	19	Very Moist		
50									
	- -	53.5-55.0	SS	16	15	15	Very Moist		
55									
	- -	58.5-60.0	SS	19	21	22	Moist		
								60.0	BOTTOM OF BORING: 60.0 feet

*** The stratification lines represent the approximate boundary between soil types and the transition may be gradual.**

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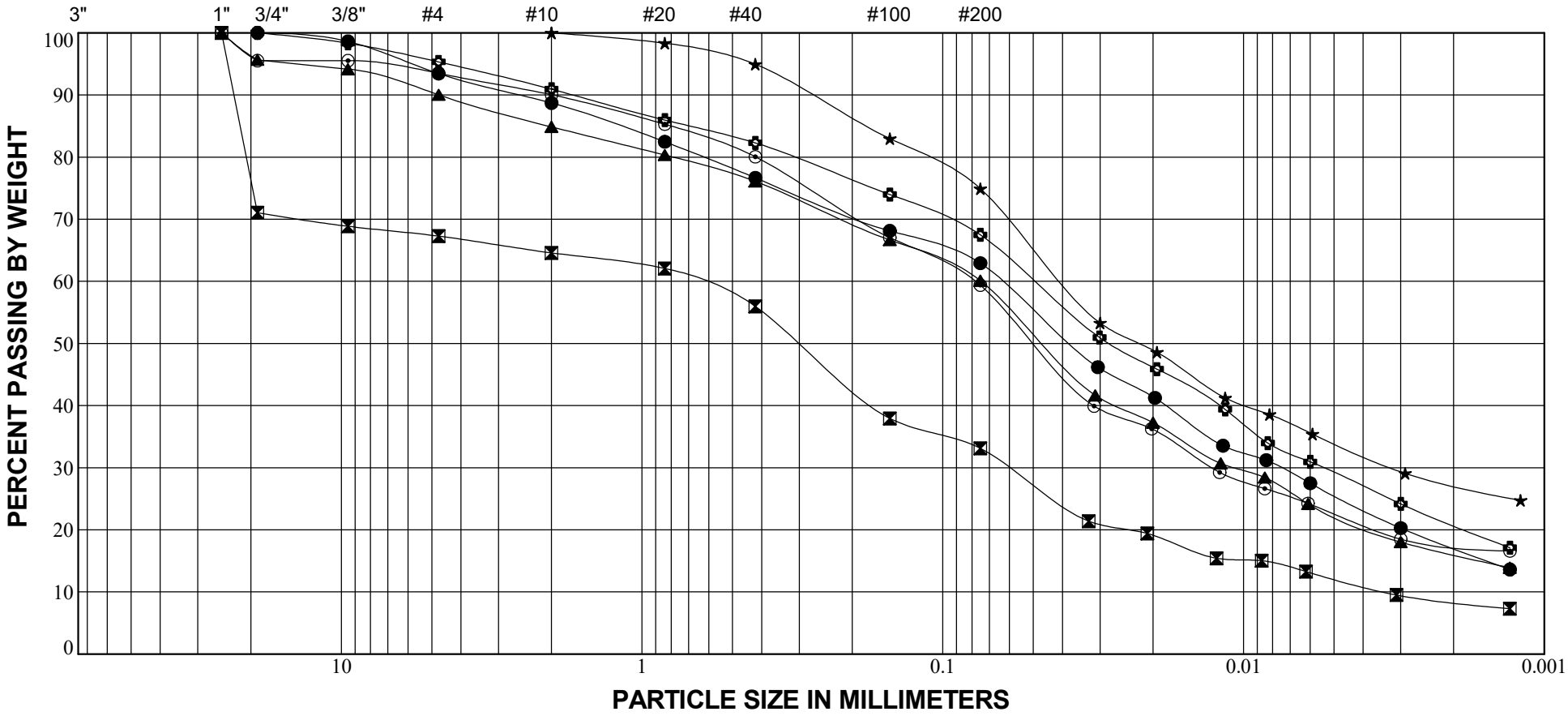
Summary of Laboratory Results

Water Treatment Plan
Ashville, Ohio
GCI Job Number: 24-G-28869

Test Hole	Depth	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Fines (< #200 Sieve)	% Clay (< 0.005 mm)	pH	Resist-ivity (ohm-cm)	Redox Potential (mV)	Sulfate (ppm)	ASTM Class-ification	ASTM Description
B-1	4.5	10.9	26	16	10	62.9	26	-	-	-	-	CL	Sandy Lean Clay
B-2	2.5	5.6	NP	NP	NP	33.1	12	-	-	-	-	SM	Silty Sand With Gravel
B-2	4.5	10.1	29	16	13	60.1	22	-	-	-	-	CL	Sandy Lean Clay
B-3	2.5	18.6	33	16	17	74.9	34	-	-	-	-	CL	Lean Clay With Sand
B-3	4.5	19.7	28	15	13	59.4	23	-	-	-	-	CL	Sandy Lean Clay
B-4	2.5	15.1	29	16	13	67.5	29	-	-	-	-	CL	Sandy Lean Clay
B-6	6.0	11.8						8.6	4,050	-	-		
B-6	22.5	8.2						8.2	1,800	-	-		
B-6	29.0	16.0	NP	NP	NP	21.9		-	-	-	-	SM	Silty Sand
B-6	42.0	13.0						8.5	1,900	-	-		

August 2024



GRAVEL		SAND			SILT	CLAY
coarse	fine	coarse	medium	fine		

LEGEND:

	TEST HOLE	DEPTH	LL	w_n	PL	ASTM CLASSIFI-CATION	ASTM SOIL DESCRIPTION
●	B-1	4.5	26	10.9	16	CL	Sandy Lean Clay
⊠	B-2	2.5	NP	5.6	NP	SM	Silty Sand With Gravel
▲	B-2	4.5	29	10.1	16	CL	Sandy Lean Clay
★	B-3	2.5	33	18.6	16	CL	Lean Clay With Sand
⊙	B-3	4.5	28	19.7	15	CL	Sandy Lean Clay
✿	B-4	2.5	29	15.1	16	CL	Sandy Lean Clay

Job No.: *24-G-28869*

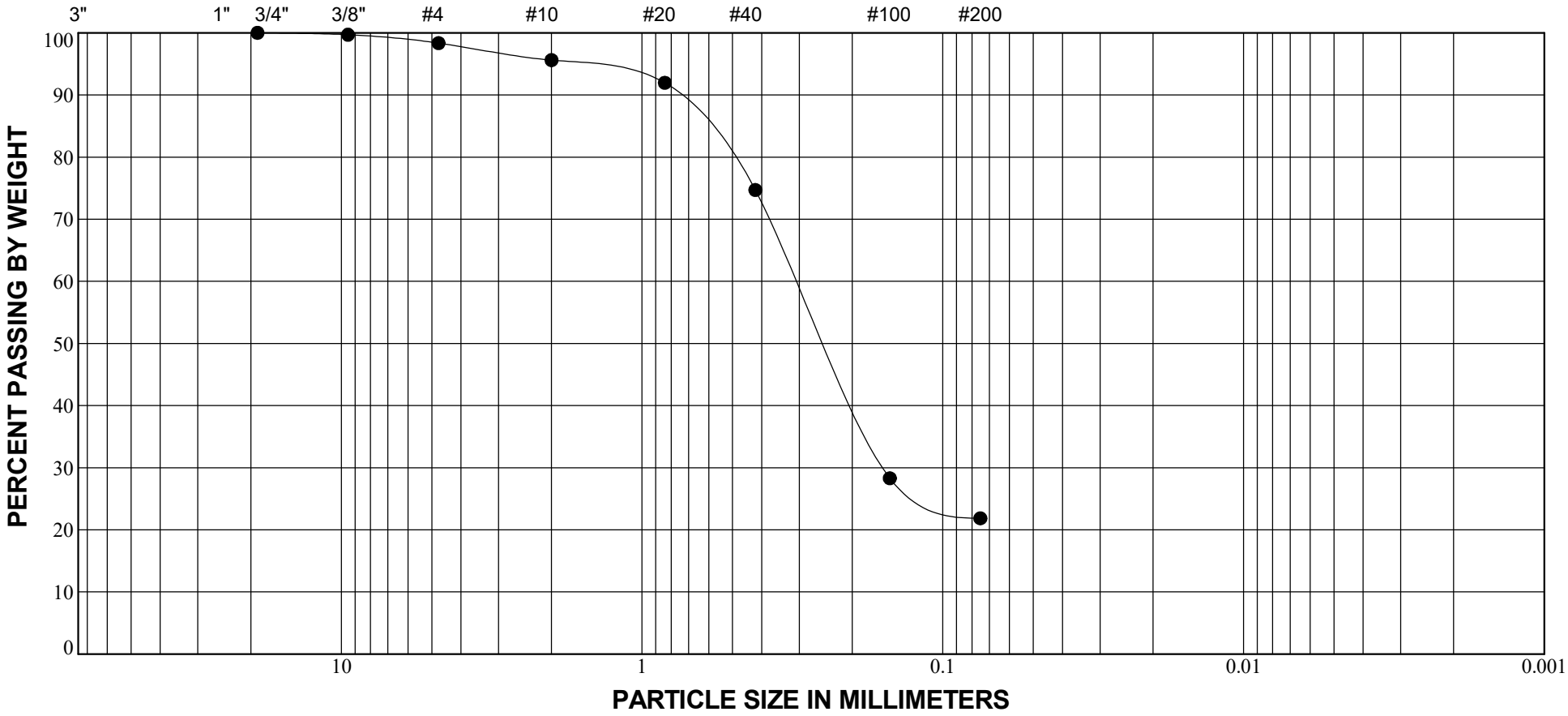
Method: *ASTM D421 D422*

Date: *August 2024*

COMBINED PARTICLE SIZE DISTRIBUTION

Water Treatment Plan - Ashville, Ohio

Geotechnical Consultants, Inc. - Westerville, Ohio 43081



GRAVEL		SAND			SILT	CLAY
coarse	fine	coarse	medium	fine		

LEGEND:

	TEST HOLE	DEPTH	LL	w_n	PL	ASTM CLASSIFI-CATION	ASTM SOIL DESCRIPTION
●	B-6	29.0	NP	16.0	NP	SM	Silty Sand

Job No.: *24-G-28869*

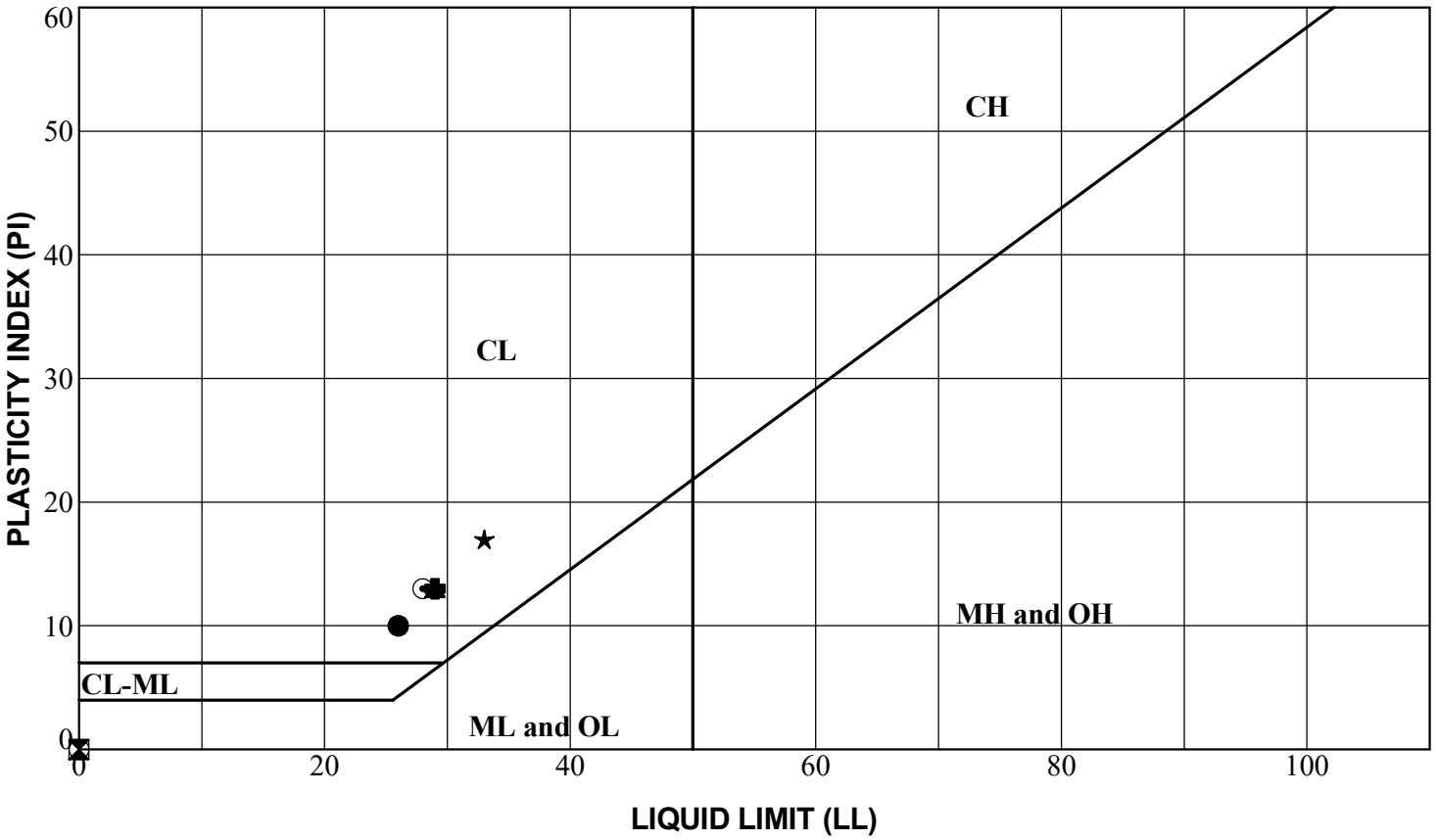
Method: *ASTM D421 D422*

Date: *August 2024*

COMBINED PARTICLE SIZE DISTRIBUTION

Water Treatment Plan - Ashville, Ohio

Geotechnical Consultants, Inc. - Westerville, Ohio 43081



LEGEND:

	TEST HOLE	DEPTH	w_n	LL	PL	PI	ASTM CLASSIFICATION
●	B-1	4.5	10.9	26	16	10	CL
⊠	B-2	2.5	5.6	NP	NP	NP	SM
▲	B-2	4.5	10.1	29	16	13	CL
★	B-3	2.5	18.6	33	16	17	CL
⊙	B-3	4.5	19.7	28	15	13	CL
✿	B-4	2.5	15.1	29	16	13	CL
○	B-6	29.0	16.0	NP	NP	NP	SM

Job No: *24-G-28869*

Method: *ASTM D4318*

Date: *August 2024*

ATTERBERG LIMITS TEST RESULTS

Water Treatment Plan
Ashville, Ohio

Geotechnical Consultants, Inc. - Westerville, Ohio 43081

ANALYTICAL REPORT

Lab Project # 2427992

Received: 7/30/2024
Reported: 8/19/2024

Geotechnical Consultants, Inc.
Attn: Faroule Benmammar
740 Gleencrest Dr.
Westerville, OH 43081

Date Sampled: 07/23/2024
Sampled By: Not Provided
Sampled Matrix: Other
Containers: 1

Project Name: **WTP Ashville, OH**

Sample ID: **B-6 S-2,3,4**
Lab Sample # **2427992-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Oxidation Reduction Potential (Estimate)	280	mV		SM 2580B-97	DAW		08/19/2024
Temperature, C	23	o C		SM 2580B-97	DAW		08/19/2024
Chloride	<3.00	mg/Kg	3.00	AASHTO T291	BRM		08/19/2024
Sulfide, AWWA	0 0- no bubbling			AWWA	BRM		08/19/2024

Analysis Certified By: Megan H. Hued

ANALYTICAL REPORT

Lab Project # 2427992
Received: 7/30/2024
Reported: 8/19/2024

Geotechnical Consultants, Inc.
Attn: Faroule Benmammar
740 Gleencrest Dr.
Westerville, OH 43081

Date Sampled: 07/23/2024
Sampled By: Not Provided
Sampled Matrix: Other
Containers: 1

Project Name: **WTP Ashville, OH**

Sample ID: **B-6 S-6,7**
Lab Sample # **2427992-02**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Oxidation Reduction Potential (Estimate)	250	mV		SM 2580B-97	DAW		08/19/2024
Temperature, C	23	o C		SM 2580B-97	DAW		08/19/2024
Chloride	<3.00	mg/Kg	3.00	AASHTO T291	BRM		08/19/2024
Sulfide, AWWA	10			AWWA	BRM		08/19/2024
	10- excessive bubbling						

Analysis Certified By: Megan H. Hued

ANALYTICAL REPORT

Lab Project # 2427992
Received: 7/30/2024
Reported: 8/19/2024

Geotechnical Consultants, Inc.
Attn: Faroule Benmammar
740 Gleencrest Dr.
Westerville, OH 43081

Date Sampled: 07/23/2024
Sampled By: Not Provided
Sampled Matrix: Other
Containers: 1

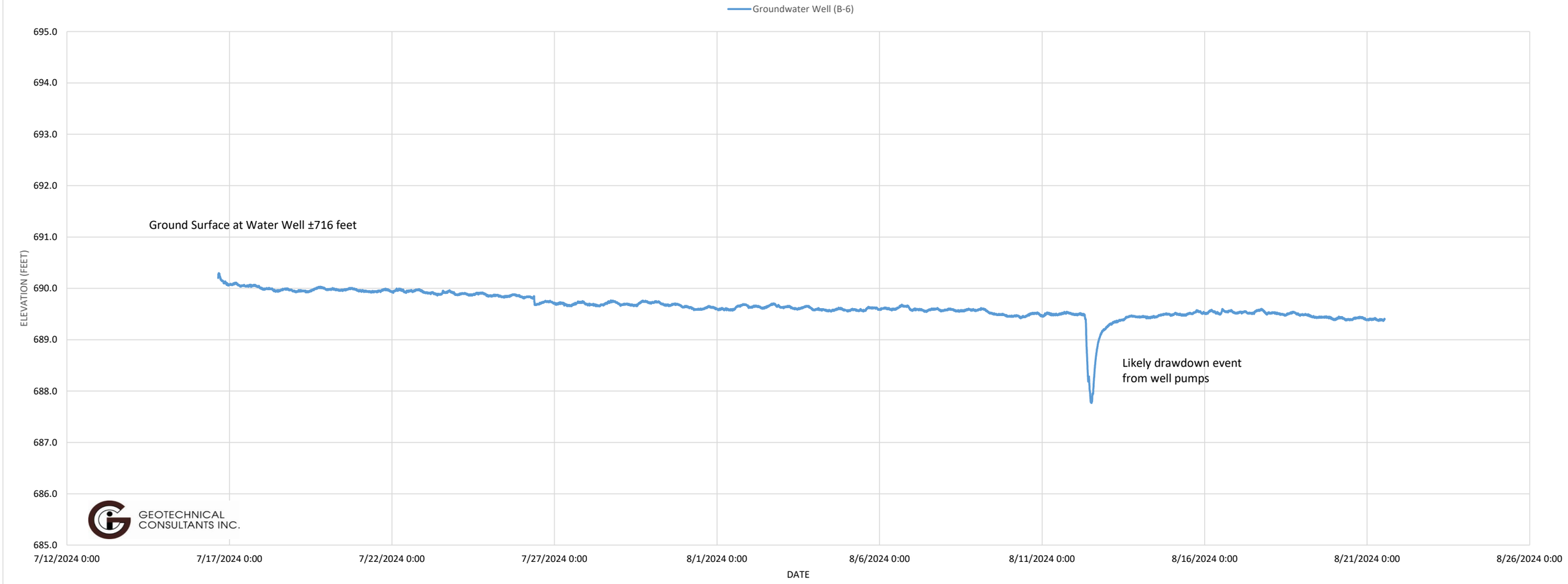
Project Name: **WTP Ashville, OH**

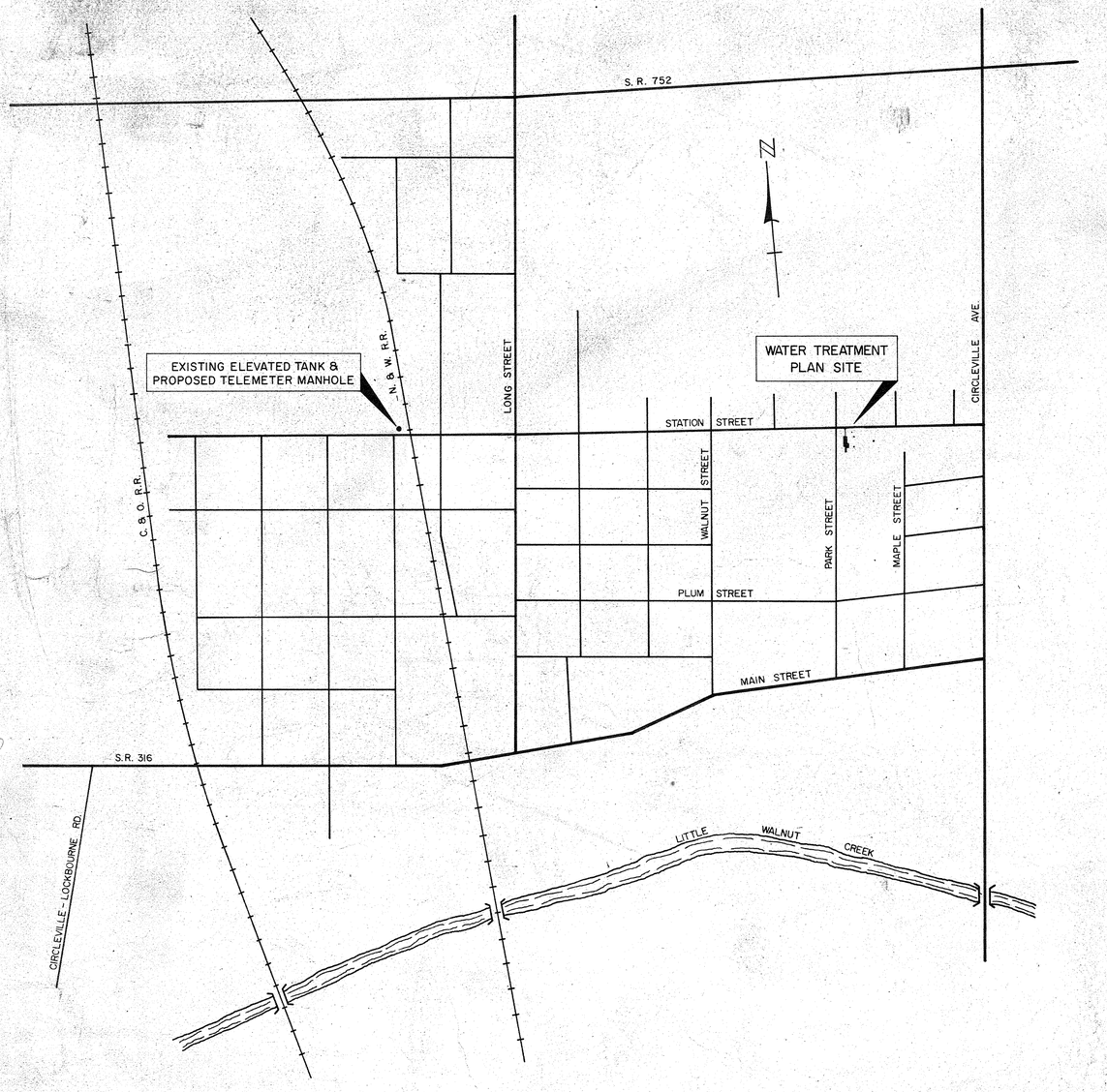
Sample ID: **B6 S-10,11**
Lab Sample # **2427992-03**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Oxidation Reduction Potential (Estimate)	220	mV		SM 2580B-97	DAW		08/19/2024
Temperature, C	23	o C		SM 2580B-97	DAW		08/19/2024
Chloride	15.08	mg/Kg	3.00	AASHTO T291	BRM		08/19/2024
Sulfide, AWWA	10			AWWA	BRM		08/19/2024
	10- excessive bubbling						

Analysis Certified By: Megan H. Hued

ASHVILLE WTP - GROUNDWATER ELEVATION PLOTS





VICINITY MAP
SCALE : 1"=400'

THE VILLAGE OF ASHVILLE, OHIO

WATERWORKS IMPROVEMENTS

CONTRACT 69-1

WATER TREATMENT PLANT IMPROVEMENTS

VILLAGE OFFICIALS

HAROLD HARTLEY ..... MAYOR
ANN LEATHERWOOD ..... CLERK & TREASURER
DAVID KRAFT ..... SOLICITOR

VILLAGE COUNCIL

MAX CORMANY ..... PRESIDENT
JAMES HOPPER — GARRY THROP
NOLO GULICK — ARTHUR MERSHON
MARVIN HICKS

BOARD OF TRUSTEES OF PUBLIC AFFAIRS

EVERETT SEEDS ..... CHAIRMAN
WILLIAM PLUM — RUSSELL HOOVER
STEPHEN COOK ..... SUPERINTENDENT

BURGESS & NIPLE, LIMITED
CONSULTING ENGINEERS
2015 WEST FIFTH AVENUE
COLUMBUS, OHIO
MARCH 1969

DENVER 3

WTP 434 WTP434_001D

434

GENERAL NOTE

THE LOCATION OF UTILITIES AND STRUCTURES, BOTH SURFACE AND SUBSURFACE ARE SHOWN ON THESE PLANS FROM DATA AVAILABLE AT TIME OF SURVEY AND ARE NOT NECESSARILY COMPLETE OR CORRECT. THE EXACT LOCATION AND PROTECTION OF UTILITIES AND STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR. DURING CONSTRUCTION, THE CONTRACTOR SHALL USE DUE DILIGENCE IN PROTECTING FROM DAMAGE ALL EXISTING UTILITIES AND STRUCTURES WHETHER SHOWN IN THESE PLANS OR NOT. IF DAMAGE IS CAUSED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF SAME IN ACCORDANCE WITH THE DIRECTIONS OF THE ENGINEER AND FOR ANY RESULTING CONTINGENT DAMAGE.

PIPE

ALL CAST IRON PIPE SHALL BE A.S.A. THICKNESS CLASS 22 UNLESS OTHERWISE INDICATED. PIPE JOINTS SHALL BE MECHANICAL, SINGLE GLAND TYPE OR BELL AND SPIGOT, SINGLE RUBBER GASKET TYPE, UNLESS SHOWN OTHERWISE. FITTING JOINTS SHALL BE MECHANICAL, SINGLE GLAND TYPE, UNLESS SHOWN OTHERWISE. ALL CAST IRON PIPE (INTERIOR AND EXTERIOR) SHALL HAVE CEMENT MORTAR LINING AND BITUMINOUS SEAL COAT.

ALL PIPING SHALL HAVE A MINIMUM 4' COVER UNLESS SHOWN OTHERWISE. CONTRACTOR SHALL PROVIDE VERTICAL BENDS WHERE NECESSARY.

PIPING SHALL BE SUPPORTED IN ALL EXCAVATED AREAS. IF EXCAVATION EXCEEDS LIMITS OF PROPOSED PIPE SUPPORTS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT FOR APPROVAL HIS SUGGESTED METHOD OF SUPPORT TO THE ENGINEER.

PIPE CROSSING OVER OTHER PIPE SHALL BE SUPPORTED WITH COMPACTED GRANULAR BACKFILL.

TREES AND SHRUBBERY

THE CONTRACTOR SHALL PROTECT FROM DAMAGE THE EXISTING TREES AND SHRUBBERY ON THE CONSTRUCTION SITE. ALL EXISTING SHRUBBERY IN THE CONSTRUCTION AREA SHALL BE REMOVED, TEMPORARILY GROUND PLANTED ON THE SITE, AND REPLANTED, WHERE DIRECTED AT THE COMPLETION OF THE NEW TREATMENT PLANT.

SEEDING

ALL DISTURBED AREAS, EMBANKMENTS, ROADWAY EMBANKMENTS, FILLS AND DITCHES SHALL BE SEEDED. THE COST OF SEEDING SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM NO. 1 OF THE CONTRACT PROPOSAL.

GRAVEL DRIVE DETAIL

WALKWAY DETAIL

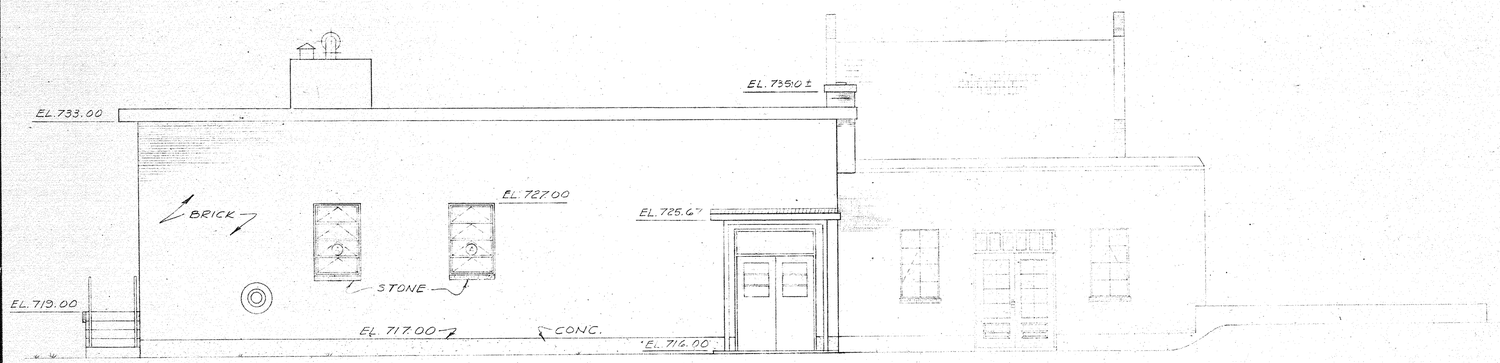
WTP434_002D

BURGESS & NIPLE, LIMITED CONSULTING ENGINEERS
COLUMBUS, OHIO

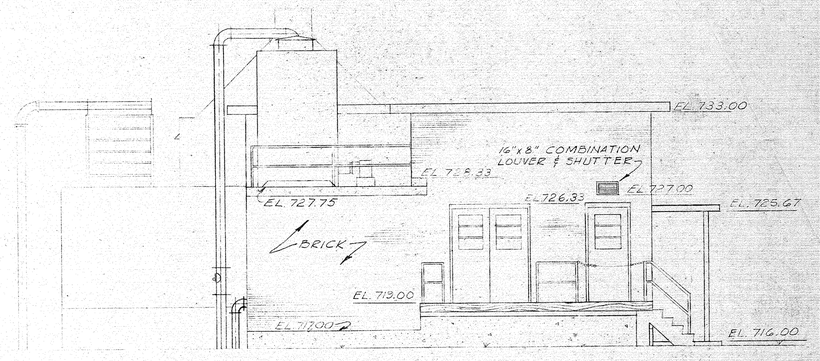
ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS

SITE PLAN

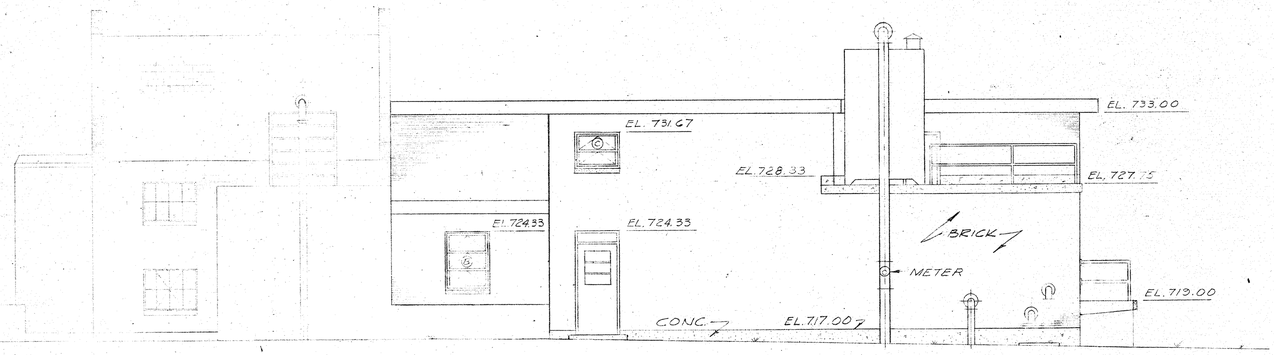
REVISIONS	DRAWN BY H.W.	CHECKED BY
	TRACED BY R.R.R.	APPROVED BY
MARCH 1969	SCALE: 1" = 10'-0"	SHEET 2 OF 17



WEST ELEVATION



NORTH ELEVATION



EAST ELEVATION

GENERAL NOTE:
BRICK BOND AND COURSING SHALL MATCH EXISTING. BRICK SHALL BE REINFORCED AND TIED WITH TRUSS BAR REINFORCING EVERY 6TH COURSE EXCEPT FOR OPENINGS, WHICH SHALL BE REINFORCED EVERY 3RD COURSE ABOVE AND BELOW ALL OPENINGS FOR THREE CONSECUTIVE COURSES.

GENERAL LEGEND

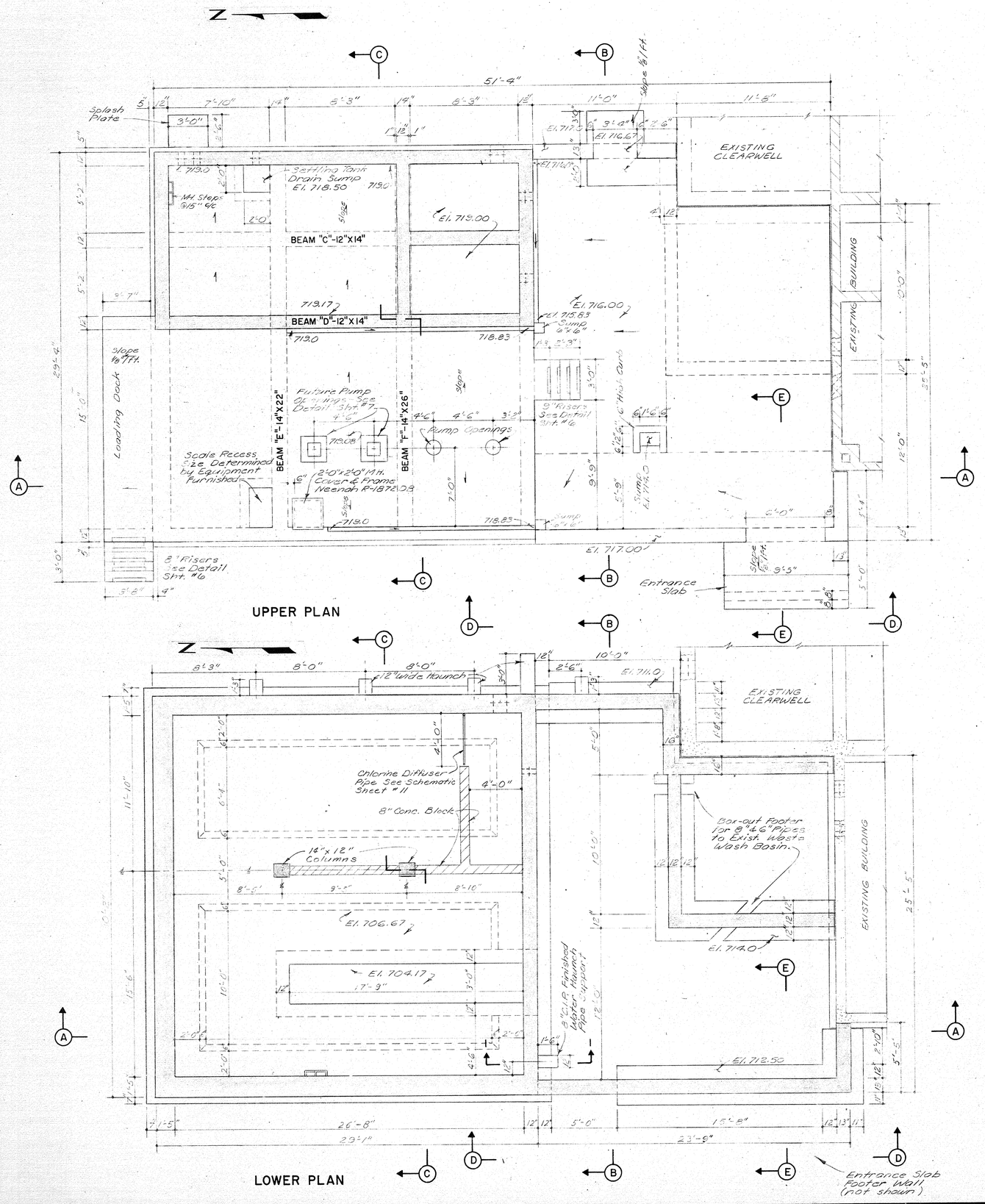
- Existing Structures
- Proposed Structures
- Cut Concrete
- Fill Concrete
- Concrete Block
- Face Brick
- Bell & Spigot Joint
- Flange Joint
- Mechanical Joint
- Sleeve Coupling
- Check Valve
- Butterfly Valve
- Gate Valve
- Wall Pipe
- Wall Sleeve
- C.I.P. Cast Iron Pipe
- G.W.I. Genuine Wrought Iron

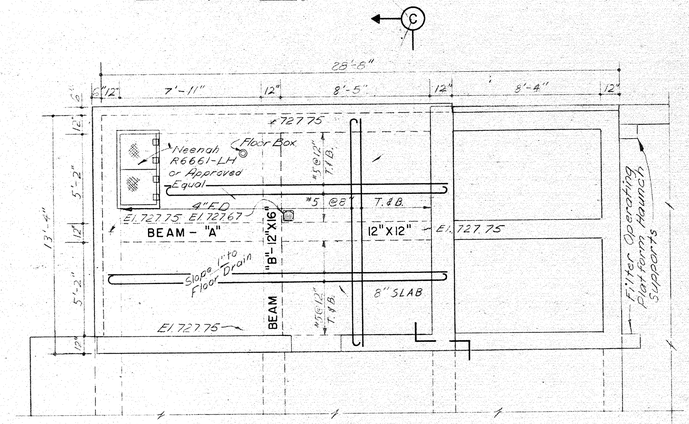
WTP434_003D

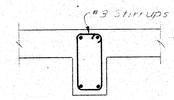
BURGESS & NIPLE, LIMITED CONSULTING ENGINEERS
COLUMBUS, OHIO

ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS
ARCHITECTURAL ELEVATIONS & DETAILS

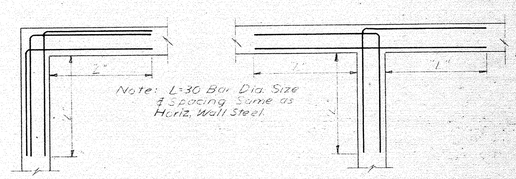
REVISIONS	DRAWN BY H.J.S.	CHECKED BY
	TRACED BY R.P.R.	APPROVED BY
MARCH 1969	SCALE: 3/16"=1'-0"	SHEET 3 OF 17



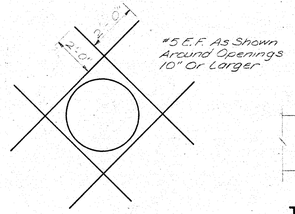




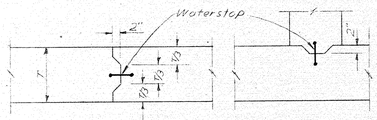
TYPICAL STIRRUP DETAIL
NO SCALE



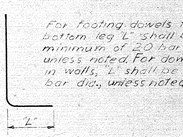
TYPICAL CORNER BAR DETAIL
NO SCALE



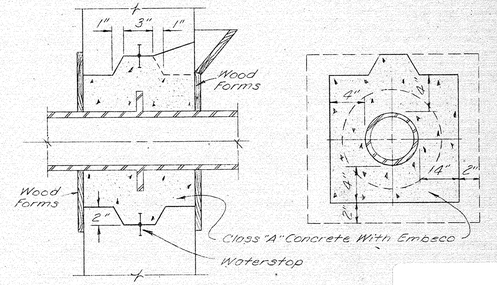
TYPICAL OPENING DETAIL
NO SCALE



TYPICAL CONSTRUCTION JOINT DETAIL
NO SCALE

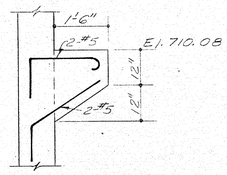


DOWEL DETAIL
NO SCALE



STANDARD BOX OUT DETAIL

WTP434_004D



SECTION 1-1

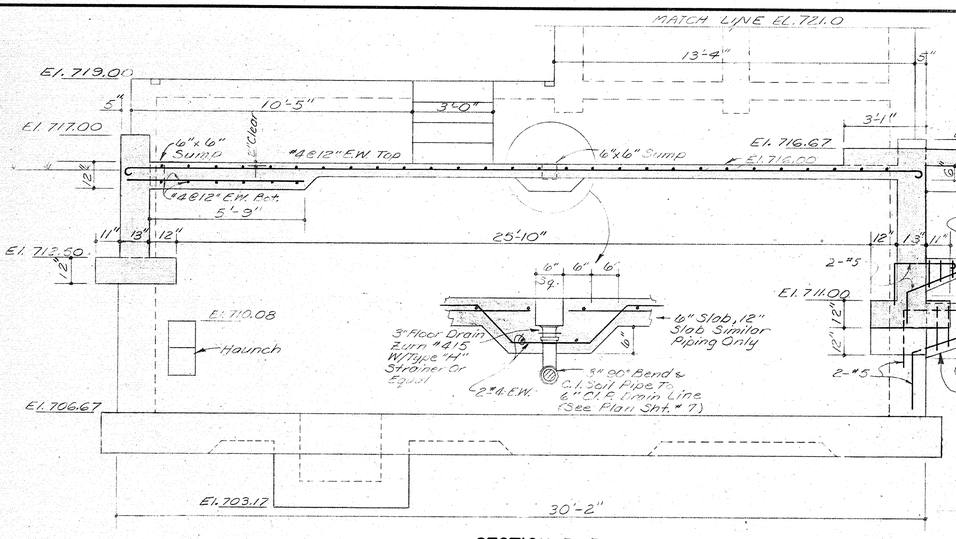
LEGEND

O.F. = Outside Face
I.F. = Inside Face
T.F. = Top
B. = Bottom
E.W. = Each Way
E.F. = Each Face
Alt. = Alternate
Typ. = Typical
Reinf. = Reinforcing
Horiz. = Horizontal
Vert. = Vertical

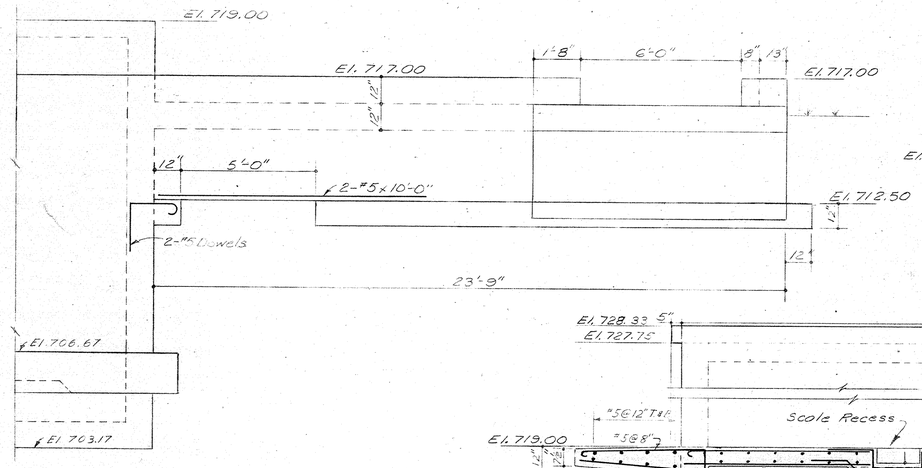
BURGESS & NIPLE, LIMITED CONSULTING ENGINEERS
COLUMBUS, OHIO

ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS
CONCRETE & REINFORCING STEEL PLANS & STANDARD DETAILS

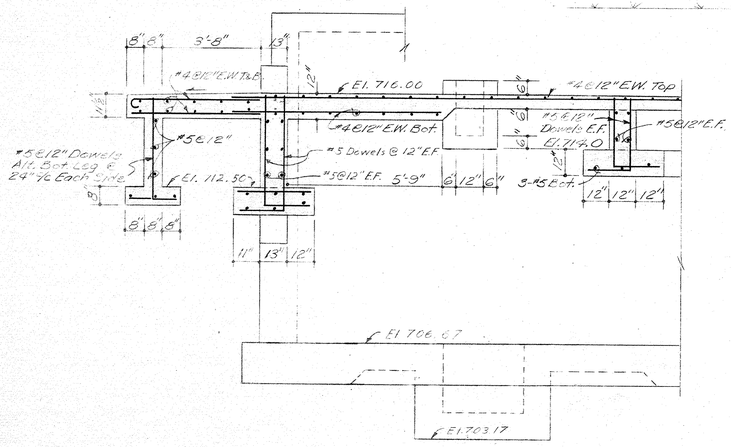
REVISIONS	DRAWN BY R.P.	CHECKED BY [illegible]
	TRACED BY R.P.	APPROVED BY [illegible]
MARCH 1969	SCALE: 1/4"=1'-0"	SHEET 4 OF 17



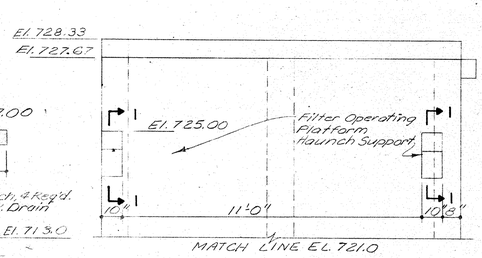
SECTION B-B

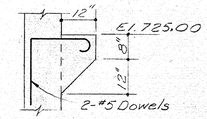


SECTION D-D



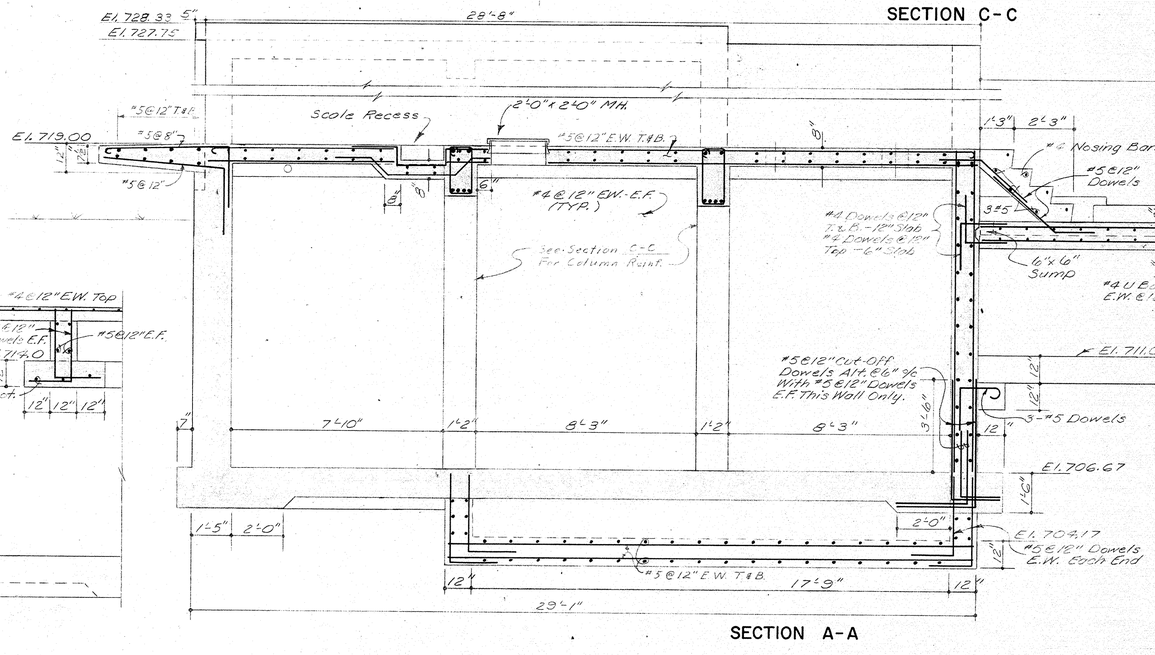
SECTION E-E





SECTION 1-1

SECTION C-C



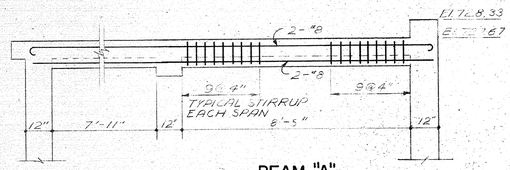
SECTION A-A

BURGESS & NIPLE, LIMITED CONSULTING ENGINEERS
COLUMBUS, OHIO

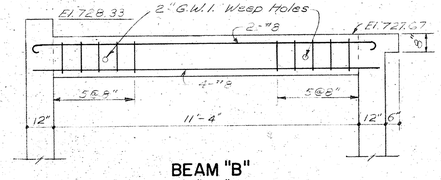
ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS
CONCRETE & REINFORCING STEEL SECTIONS

REVISIONS	DRAWN BY RR	CHECKED BY CBM
	TRACED BY RR	APPROVED BY CBM
MARCH 1969	SCALE: 3/8"=1'-0"	SHEET 5 OF 17

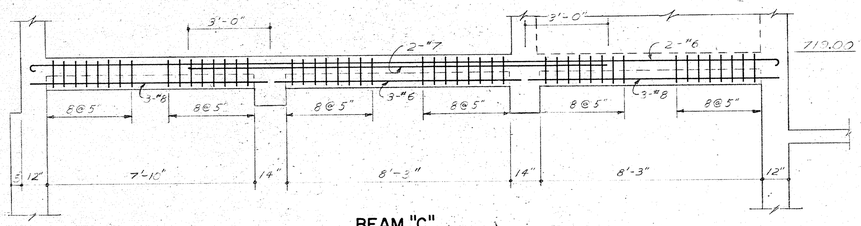
WTP434_005D



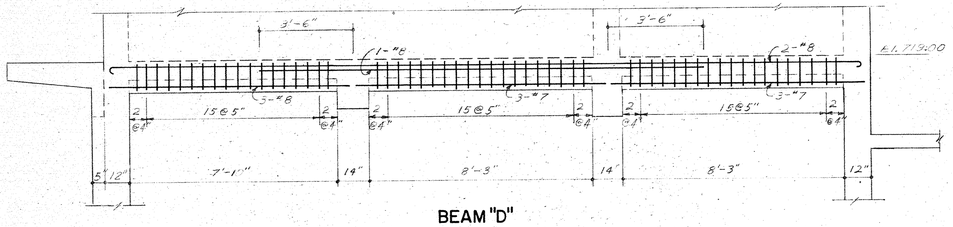
BEAM "A"
12" X 12"



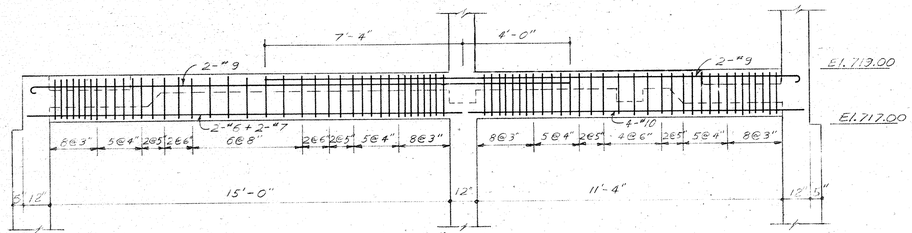
BEAM "B"
12"X18"



BEAM "C"
12"X14"



BEAM "D"
12"X14"



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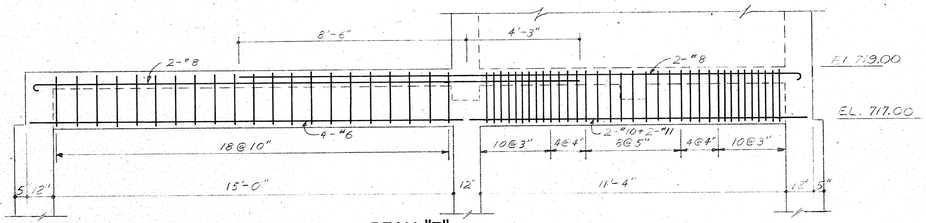
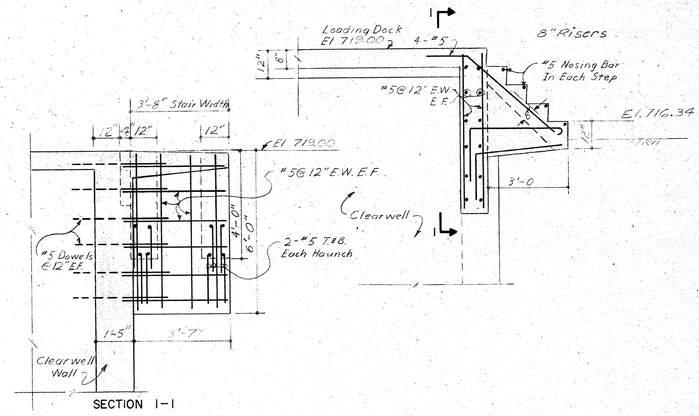
14"X22"

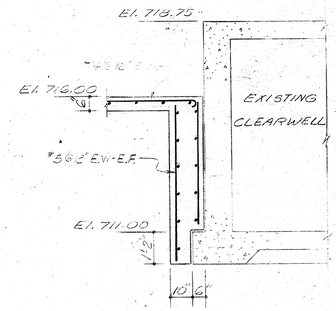


BEAM "F"
14"X26"

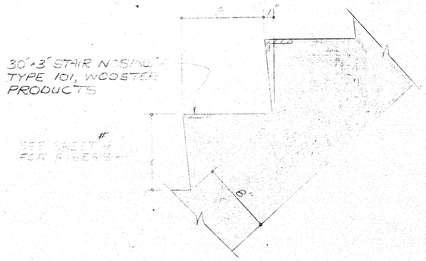


SECTION 1-1

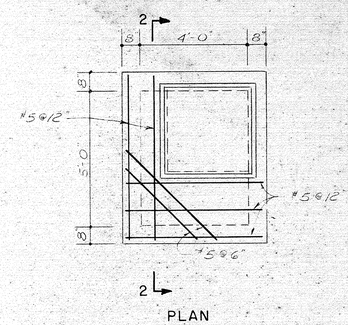
LOADING DOCK STAIRS DETAIL



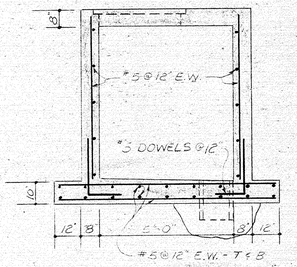
WALL FOOTING AT CLEARWELL



TYPICAL STAIR DETAIL
SCALE: 1 1/2"= 1'-0"



PLAN



SECTION 2-2

METER VAULT

WTP434_006D

BURGESS & NIPLE, LIMITED CONSULTING ENGINEERS
COLUMBUS, OHIO

ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS
CONCRETE & REINFORCING STEEL BEAMS & DETAILS

REVISIONS	DRAWN BY RR	CHECKED BY
	TRACED BY RR	APPROVED BY
MARCH 1969	SCALE: 3/8"=1'-0"	SHEET 6 OF 17

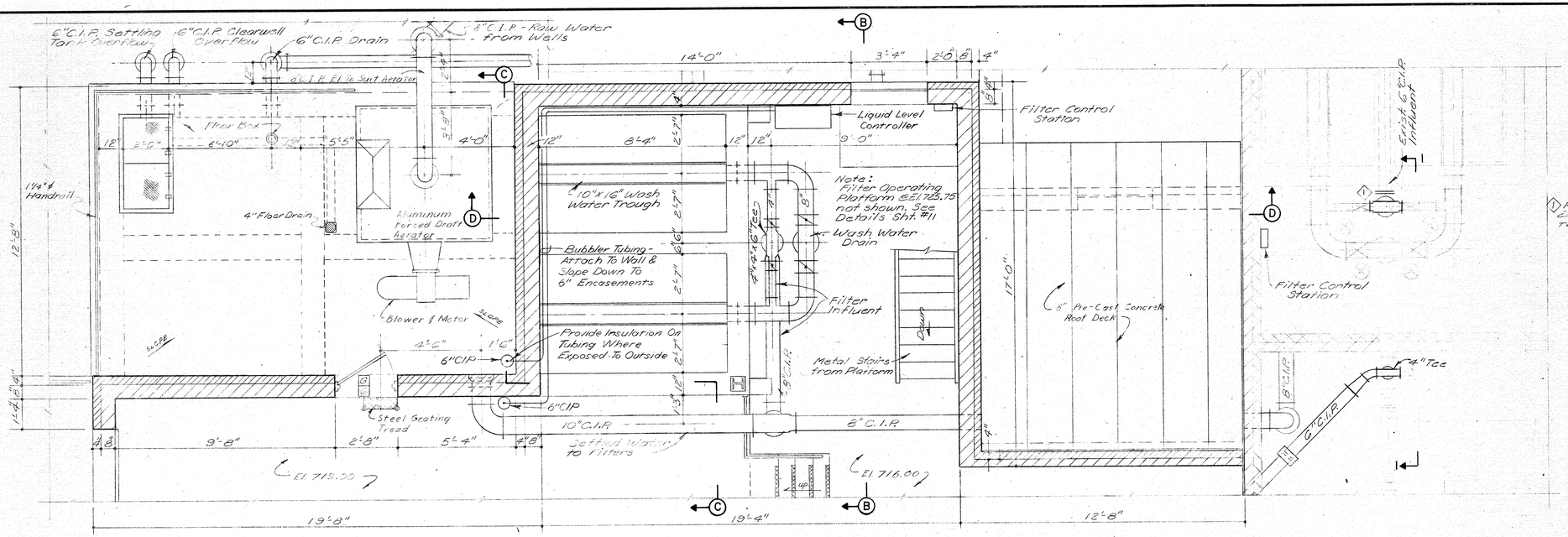
BURGESS & NIPLE, LIMITED — CONSULTING ENGINEERS
COLUMBUS, OHIO

ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS

FLOOR PLAN

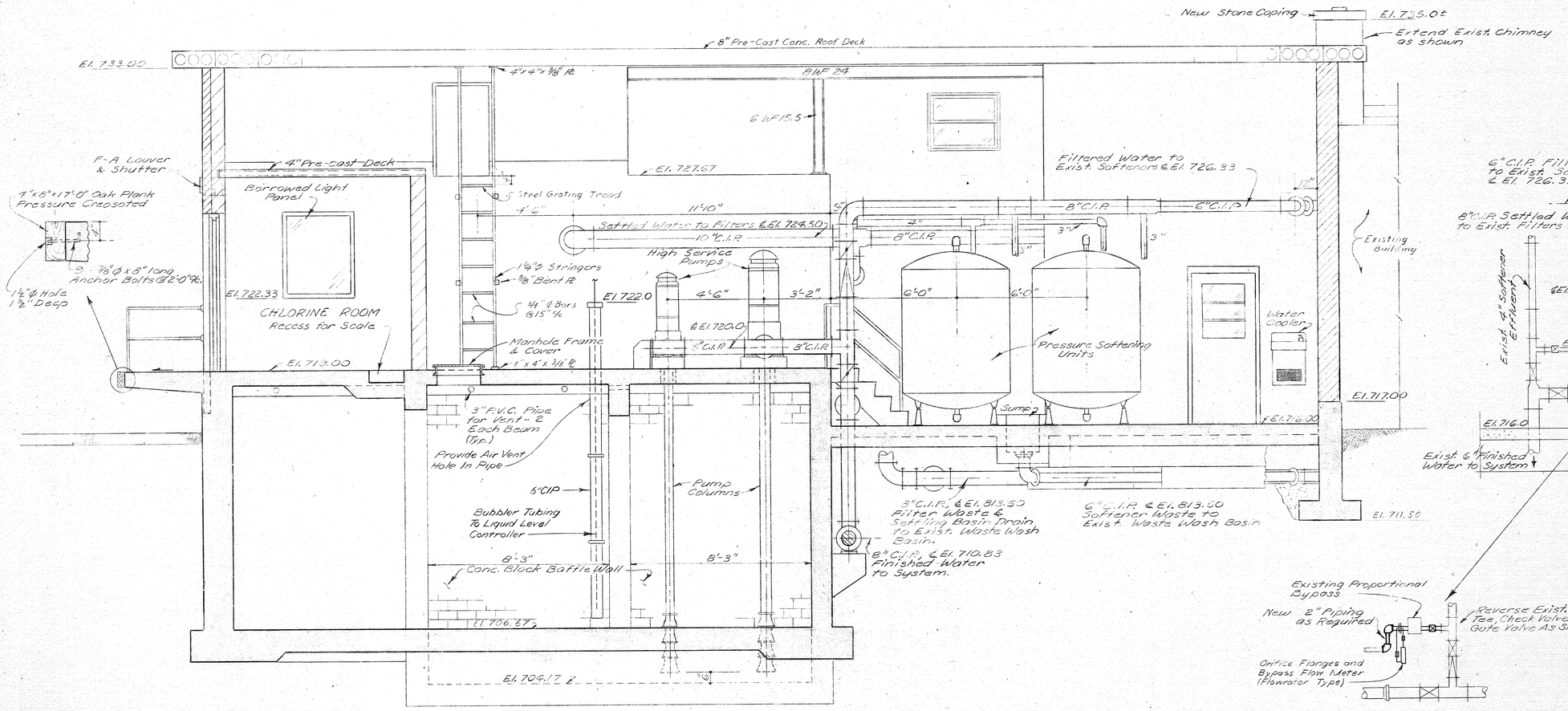
REVISIONS	DRAWN BY H. S.	CHECKED BY
	TRACED BY RPR	APPROVED BY
MARCH 1969	SCALE: 3/8" = 1'-0"	SHEET 7 OF 17

HILLS CO.



1 Rotate Exist. 4"x4"x6" Tee 30° Down & Provide & attach 6" Blind Flange to abandoned Influent Pipe.

PLAN EL. 730.00



SECTION A - A

SECTION 1-1

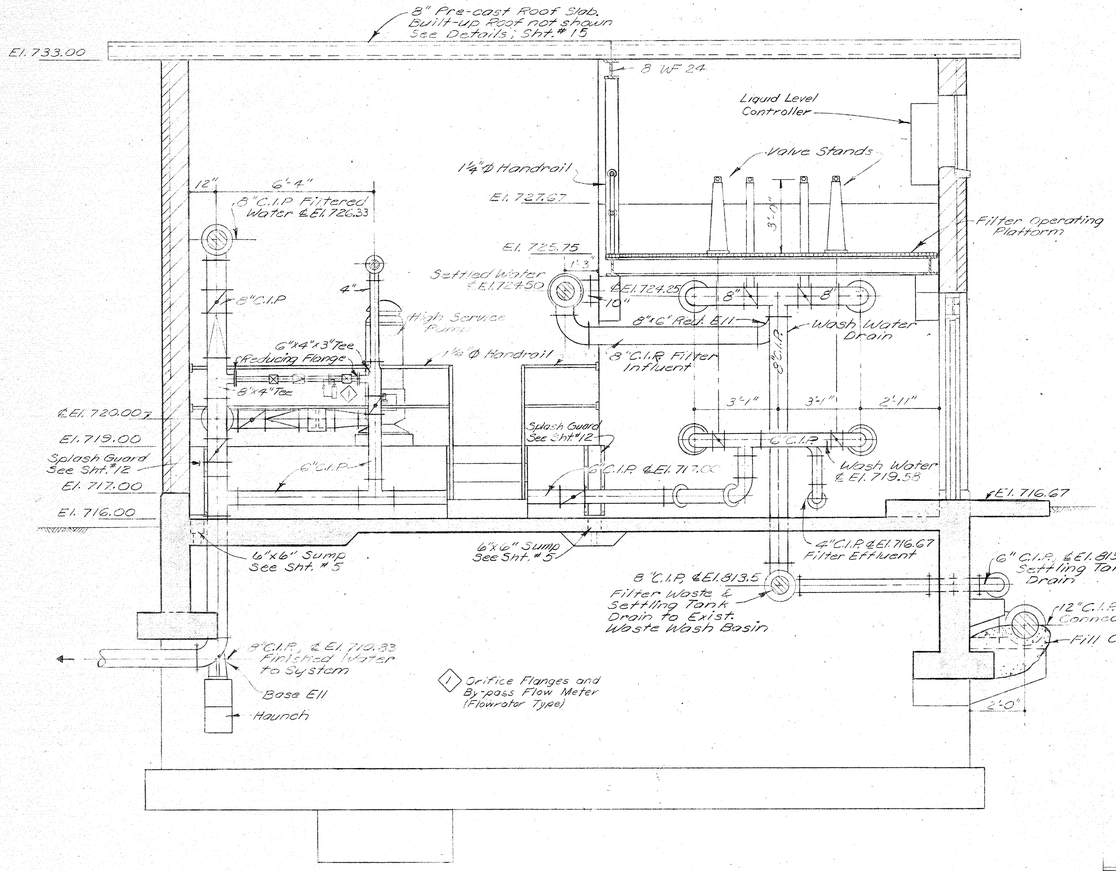
WTP434_008D

BURGESS & NIPLE, LIMITED — CONSULTING ENGINEERS
COLUMBUS, OHIO

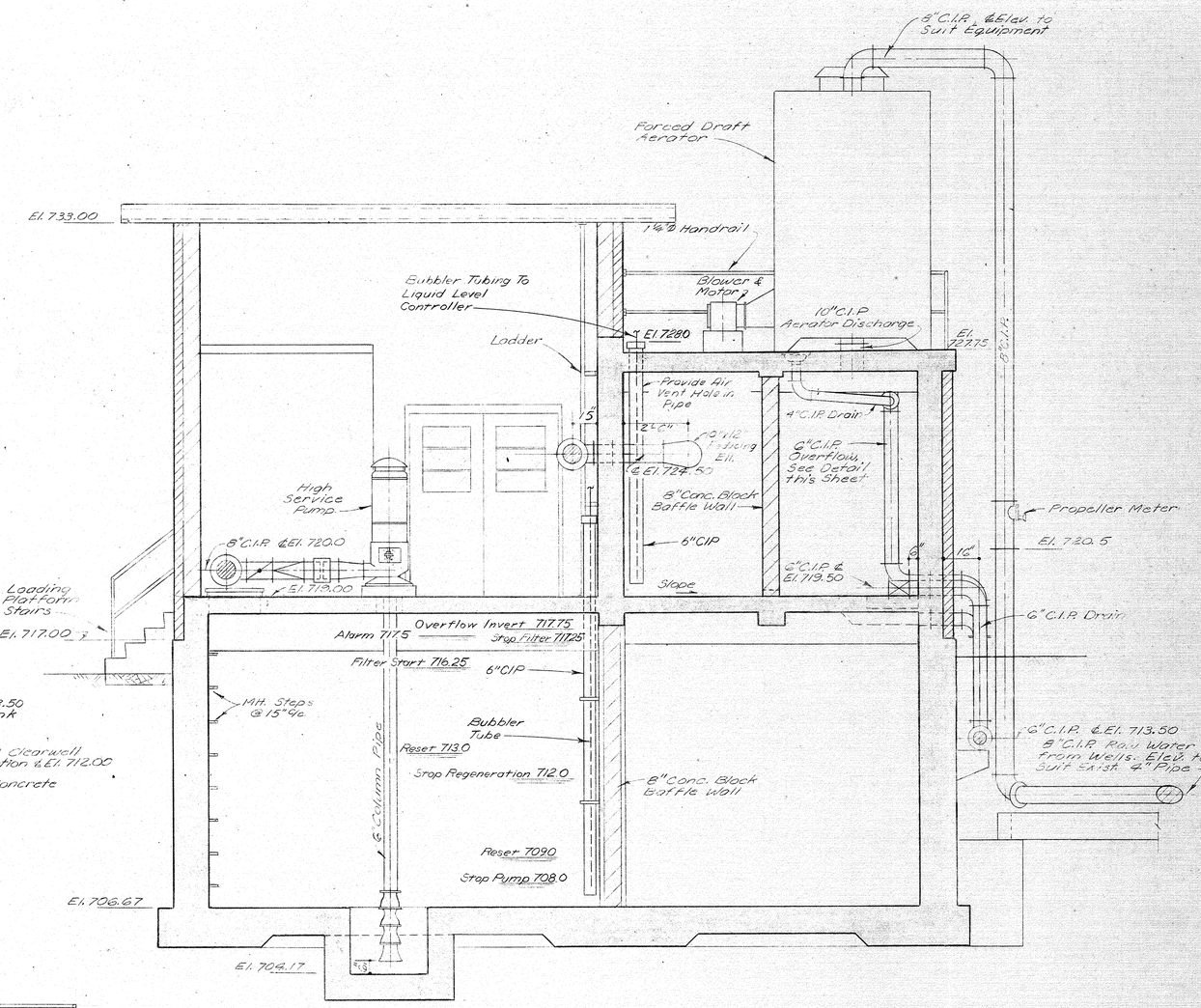
ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS

PLAN & SECTIONS

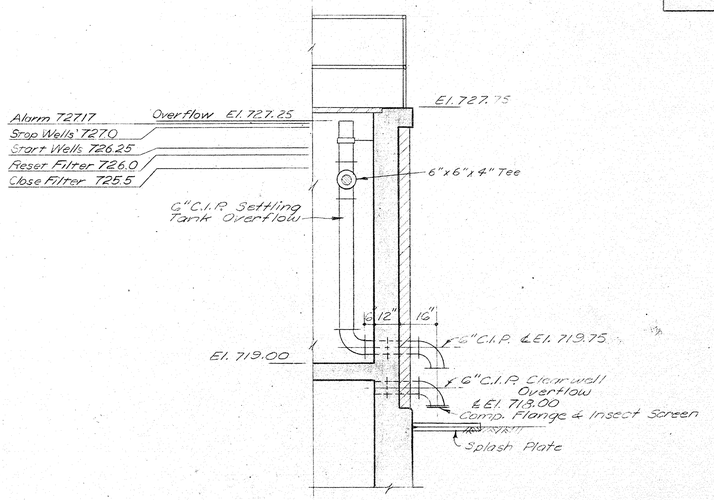
REVISIONS	DRAWN BY H.S.	CHECKED BY CBM
	TRACED BY R.P.R.	APPROVED BY CBM
MARCH 1969	SCALE: 3/8"=1'-0"	SHEET 8 OF 17



SECTION B – B



SECTION C – C



OVERFLOW PIPING DETAILS

WTP434_009D

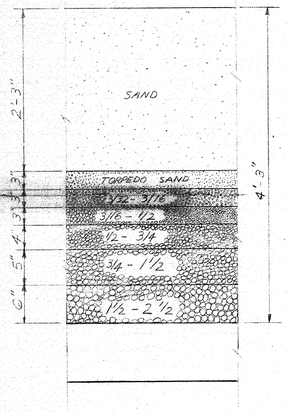
BURGESS & NIPLE, LIMITED CONSULTING ENGINEERS
COLUMBUS, OHIO

ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS

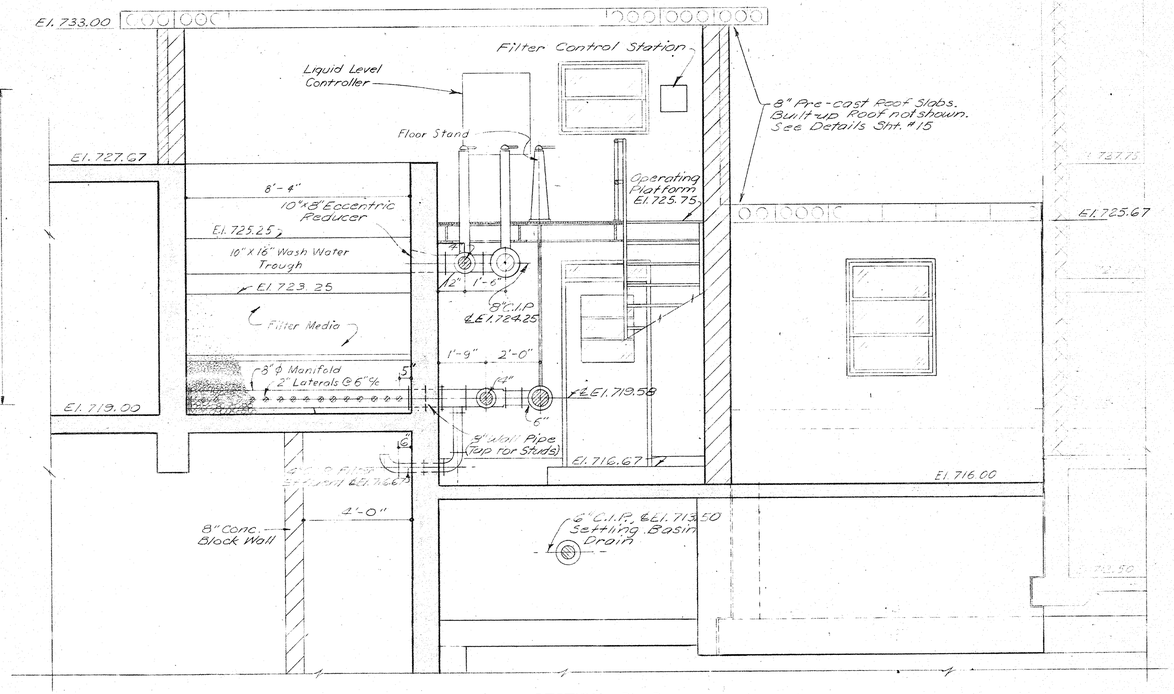
SECTIONS & DETAILS

REVISIONS	DRAWN BY H.S.	CHECKED BY OSM
	TRACED BY R.P.R.	APPROVED BY OSM
MARCH 1969	SCALE: 3/8"=1'-0"	SHEET 9 OF 17

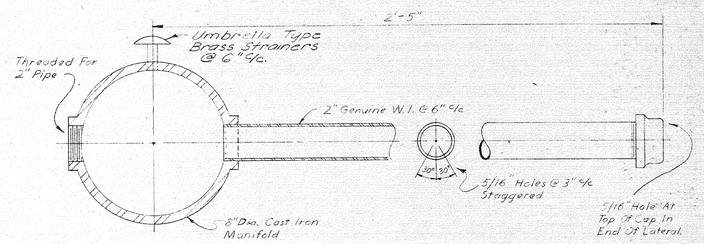
HILLS CO.—17-0153—200—4-68



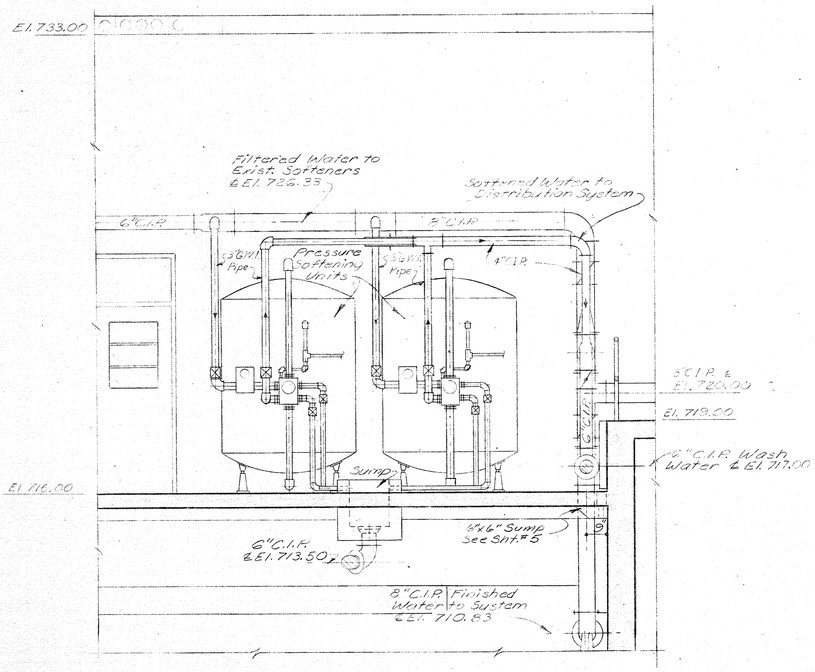
FILTER MEDIA DETAIL



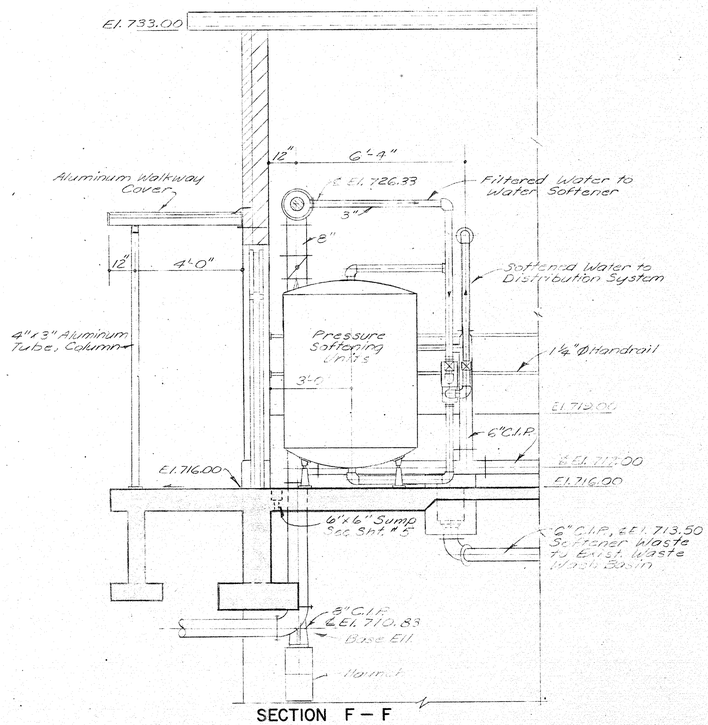
SECTION D – D



MANIFOLD & LATERAL DETAIL
SCALE: 3"=1'-0"



SECTION E – E



SECTION F – F

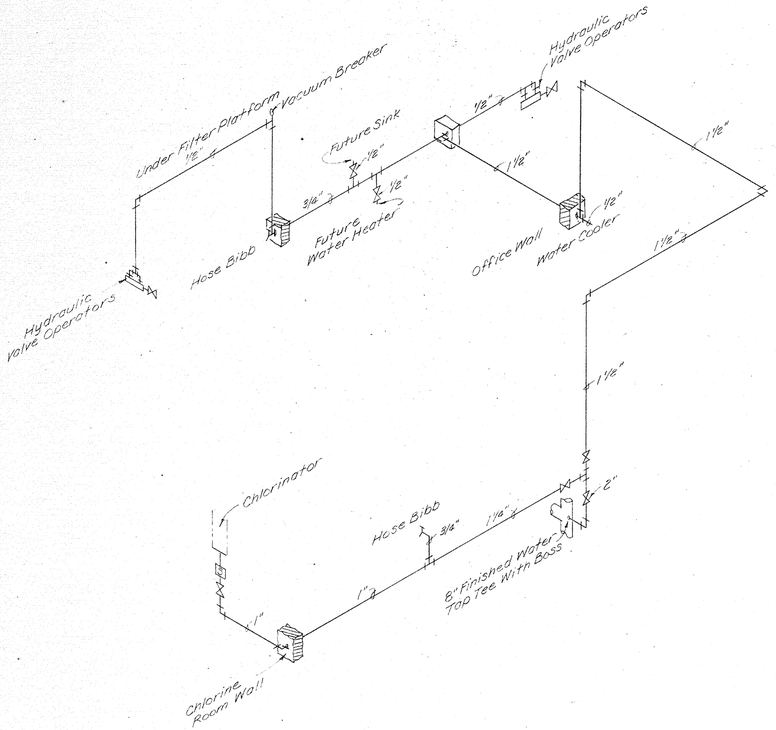
WTP434_010D

BURGESS & NIPLE, LIMITED CONSULTING ENGINEERS
COLUMBUS, OHIO

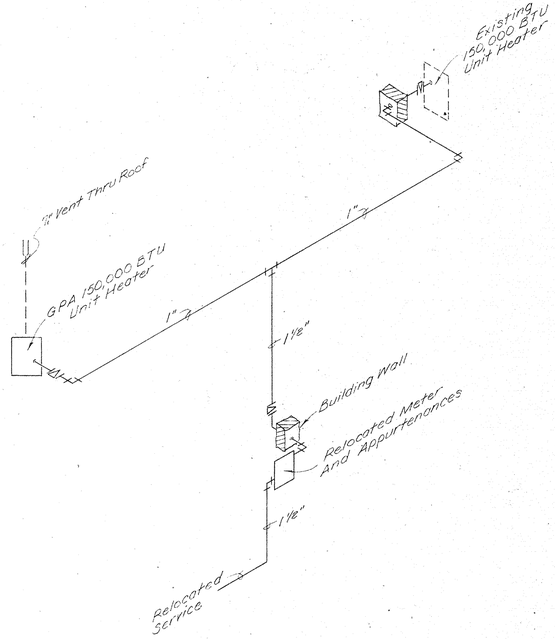
ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS

SECTIONS & DETAILS

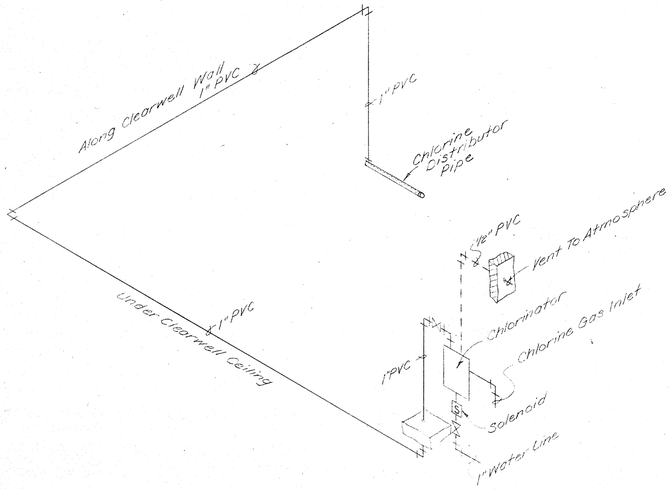
REVISIONS	DRAWN BY H.S.	CHECKED BY D.B.M.
	TRACED BY R.F.R.	APPROVED BY D.B.M.
MARCH 1969	SCALE: 3/8"= 1'-0" & NOTED	SHEET 10 OF 17



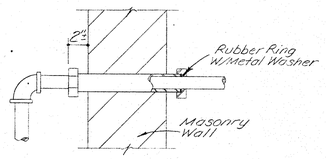
POTABLE WATER PIPING



GAS PIPING



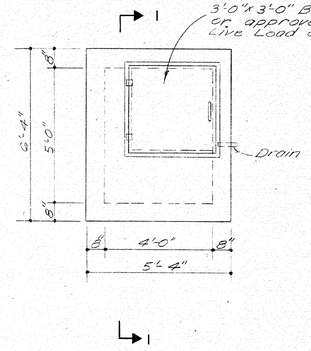
CHLORINE SOLUTION PIPING



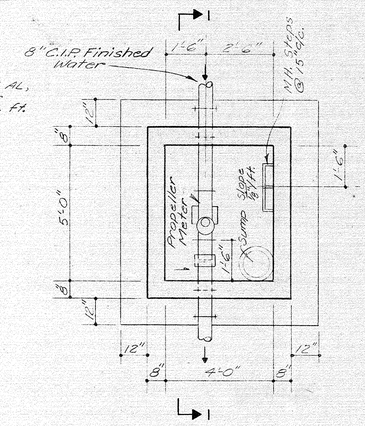
TYPICAL GAS PIPE WALL SLEEVE
NO SCALE

Note:
All Hose Bibbs And Wall Hydrants Shall Come Complete With Vacuum Breaker.
Provide Valves And Unions Adjacent To All Fixtures And Equipment.
Provide Dielectric Fittings Where Pipe Of Dissimilar Material Meet.
All Pipe Shall Be Properly Supported By Hangers And/Or Wall Straps. Isolate Copper Pipe From Same.
All Floor Drains Shall Be Zurn Z-215 Or Approved Equal.

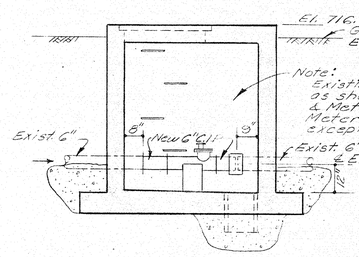
N



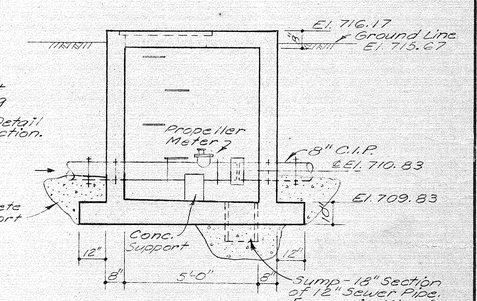
PLAN AT EL. 716.17



PLAN AT EL. 714.00

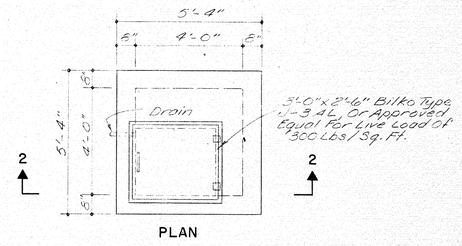


SECTION 1-1
(FOR EXISTING 6" C.I.P.)

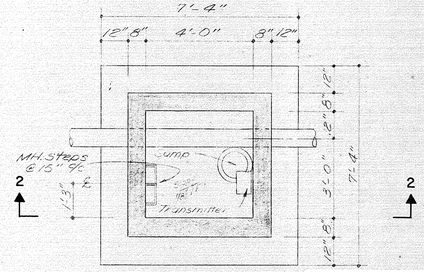


SECTION 1-1

METER VAULT DETAILS
(2 REQ'D.)
SCALE: 3/8"=1'-0"

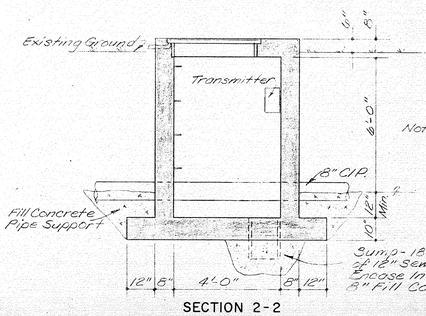


PLAN



LOWER PLAN

TELEMETER MANHOLE
(AT EXISTING ELEVATED TANK)
SCALE: 3/8"=1'-0"



SECTION 2-2

Note: Reinforcing Steel Similar To Meter Vault. See Detail Sht. # 6.

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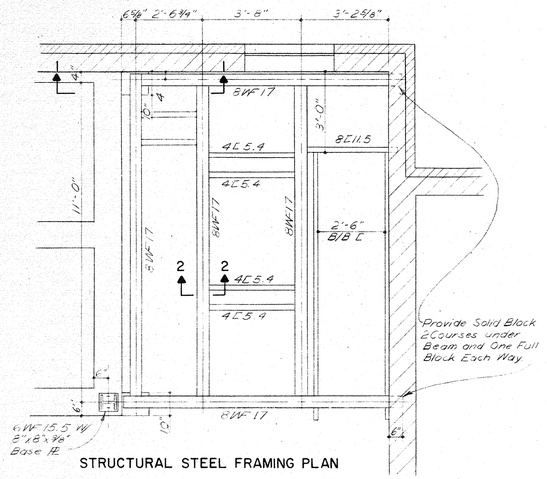
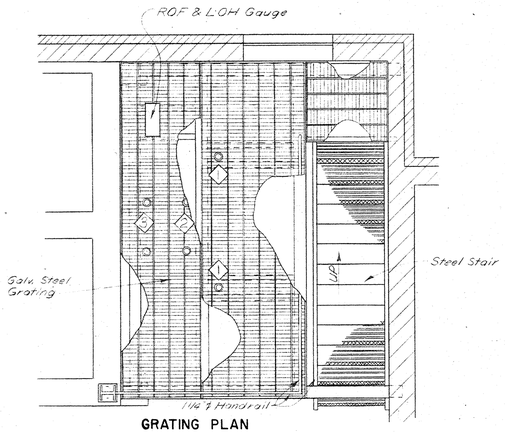
BURGESS & NIPLE, LIMITED CONSULTING ENGINEERS
COLUMBUS, OHIO

ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS
METER VAULT, TELEMETER MANHOLE & PIPING SCHEMATICS

REVISIONS	DRAWN BY H.S.	CHECKED BY
	TRACED BY D.E.H.	APPROVED BY
MARCH 1969	SCALE: NOTED	SHEET 11 OF 17

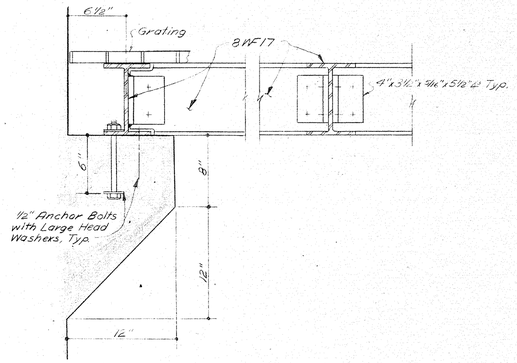


STRUCTURAL STEEL FRAMING PLAN

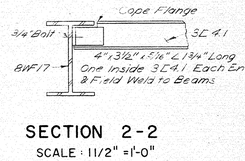


GRATING PLAN

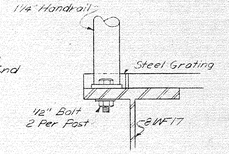
◇ 6" Butterfly Valve Floor Stands
◇ 3" Butterfly Valve Floor Stands
◇ 4" Butterfly Valve Floor Stands



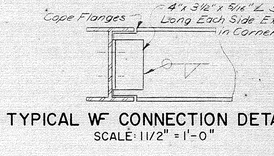
SECTION 1-1
SCALE: 1 1/2" = 1'-0"



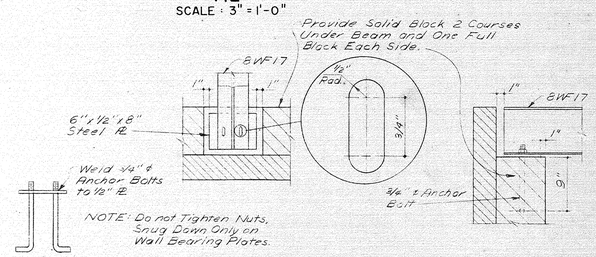
SECTION 2-2
SCALE: 1 1/2" = 1'-0"



TYPICAL HANDRAIL TIE
SCALE: 3" = 1'-0"



TYPICAL WF CONNECTION DETAILS
SCALE: 1 1/2" = 1'-0"



MASONRY BEARING PLATE
SCALE: 1" = 1'-0"

FILTER OPERATING PLATFORM DETAILS
SCALE: 3/8" = 1'-0"

ELEVATION
SCALE: 3/8" = 1'-0"

STEEL STAIR DETAILS
SCALE: 1" = 1'-0"

TYPICAL HANDRAIL DETAIL
NO SCALE

SUMP SPLASH GUARDS
SCALE: 3" = 1'-0"

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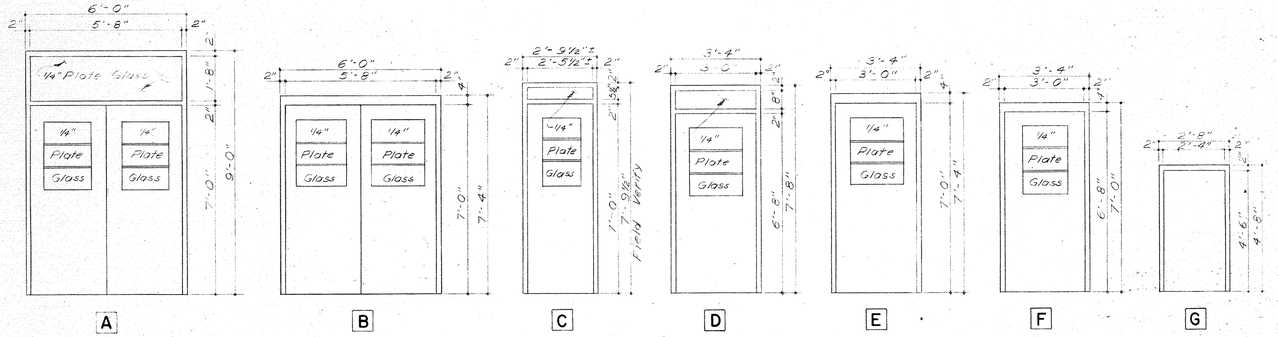
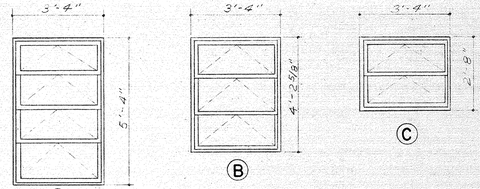
BURGESS & NIPLE, LIMITED CONSULTING ENGINEERS
COLUMBUS, OHIO

ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS
FILTER OPERATING PLATFORM & MISCELLANEOUS DETAILS

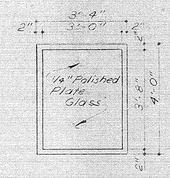
REVISIONS	DRAWN BY H.J.S.	CHECKED BY
	TRACED BY R.P.R.	APPROVED BY
MARCH 1969	SCALE: NOTED	SHEET 12 OF 17



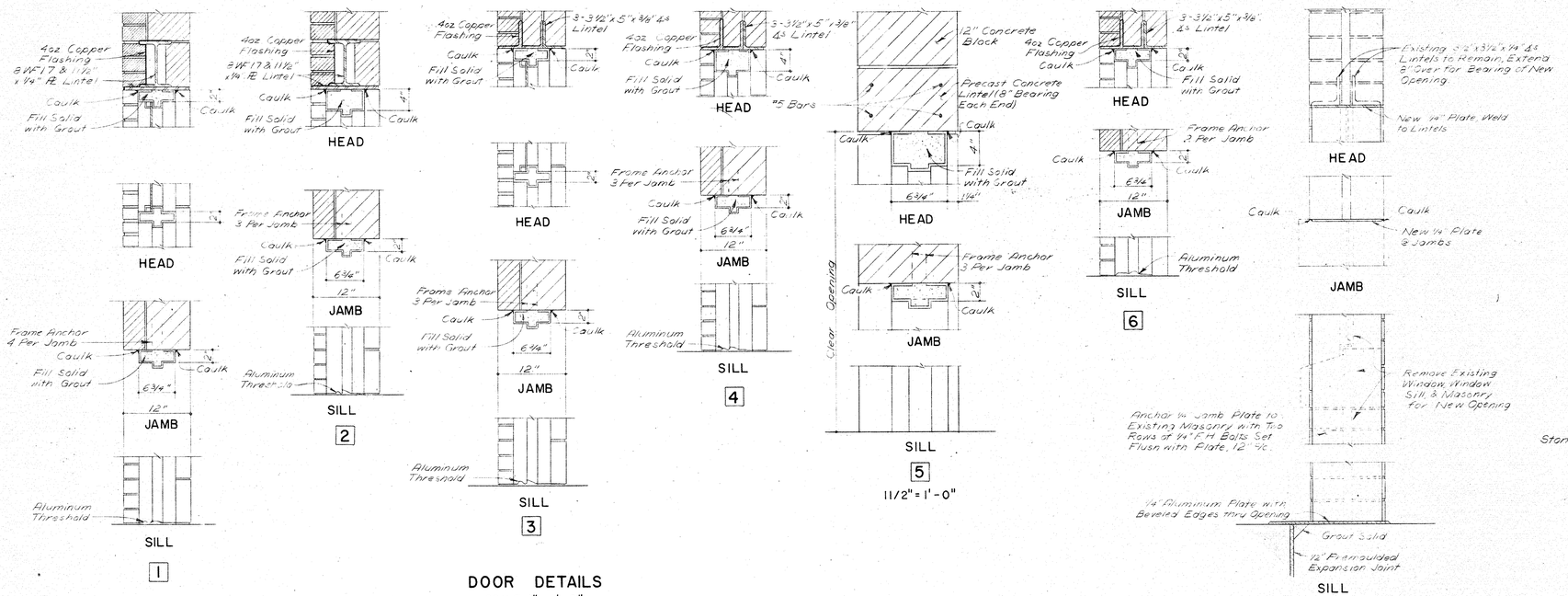
DOOR ELEVATIONS
SCALE: 3/8" = 1'-0"



WINDOW ELEVATIONS
SCALE: 3/8" = 1'-0"

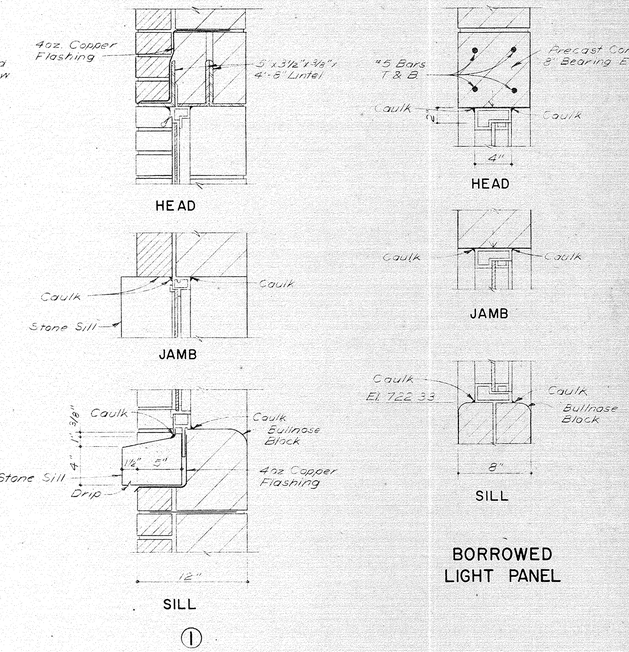


BORROWED LIGHT PANEL



DOOR DETAILS
SCALE: 1" = 1'-0"

OPENING THRU EXISTING WALL
SCALE: 11/2" = 1'-0"



WINDOW DETAILS
SCALE: 11/2" = 1'-0"

BORROWED LIGHT PANEL

DOOR SCHEDULE

STILE	QUAN	TYPE	MATERIAL	FRAME	SECTION	LINTEL	REMARKS
A	1	Full Flush	H.M.	H.M.	1	8WF17 x 7'-4" W¼" PL Plate	Top Light
B	1	Full Flush	H.M.	H.M.	2	8WF17 x 7'-4" W¼" Plate	
C	1	Full Flush	H.M.	H.M.		Existing	Remove Key, Etch for Frame Anchors & Fitting, Grind Smooth with Grout
D	1	Full Flush	H.M.	HM.	3	3-5"x3½"x⅜"x4'-5"	Top Light
E	1	Full Flush	H.M.	H.M.	4	3-5"x3½"x⅜"x4'-8"	
F	1	Full Flush	H.M.	H.M.	5	Precast Conc.	
G	1	Full Flush	H.M.	H.M.	6	3-5"x3½"x⅜"x4'-0"	

WINDOW SCHEDULE

STYLE	QUAN	TYPE	MATERIAL	FRAME	SECTION	LINTEL	REMARKS
A	2	Awning	Aluminum	Aluminum	1	3-5"x3½"x⅜"x4'-8"	
B	1	Awning	Aluminum	Aluminum	1	3-5"x3½"x⅜"x4'-8"	
C	1	Awning	Aluminum	Aluminum	1	3-5"x3½"x⅜"x4'-8"	

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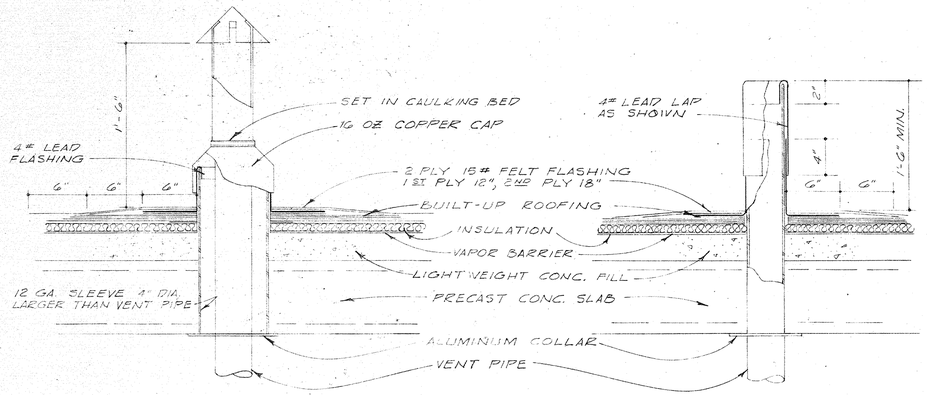
BURGESS & NIPLE, LIMITED — CONSULTING ENGINEERS
COLUMBUS, OHIO

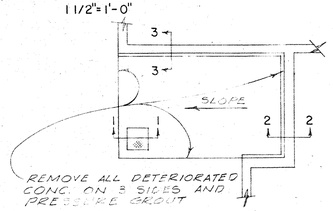
ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS

ARCHITECTURAL DETAILS

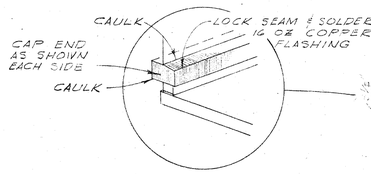
REVISIONS	DRAWN BY H. J. S.	CHECKED BY
	TRACED BY D. R. H.	APPROVED BY
MARCH 1969	SCALE: NOTED	SHEET 13 OF 17



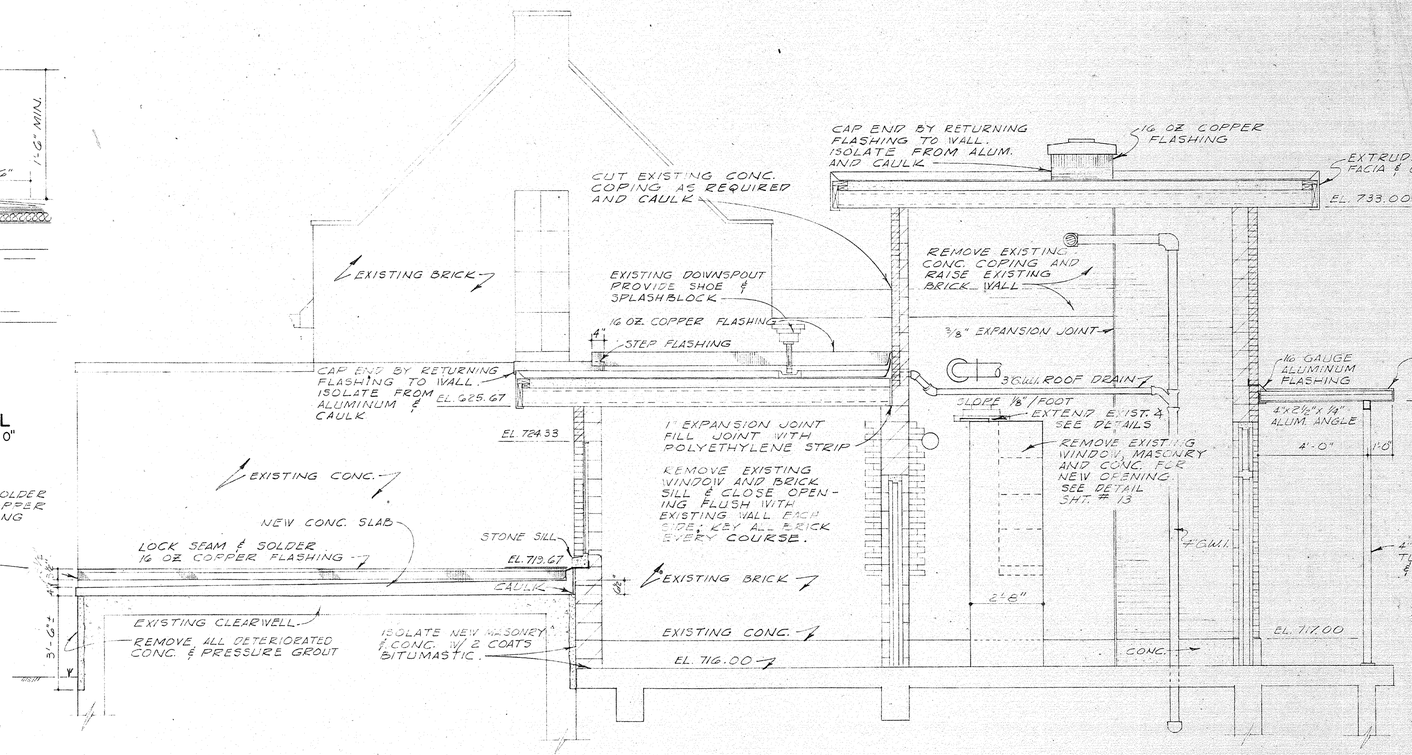
HEATER VENT DETAIL
SCALE 1 1/2"=1'-0"



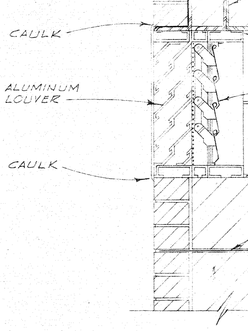
EXISTING CLEARWELL PLAN
SCALE NONE



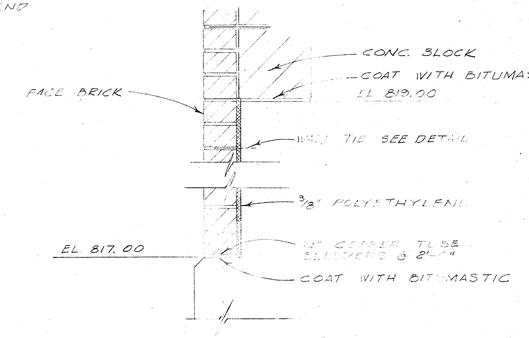
SANITARY VENT DETAIL
SCALE 1 1/2"=1'-0"



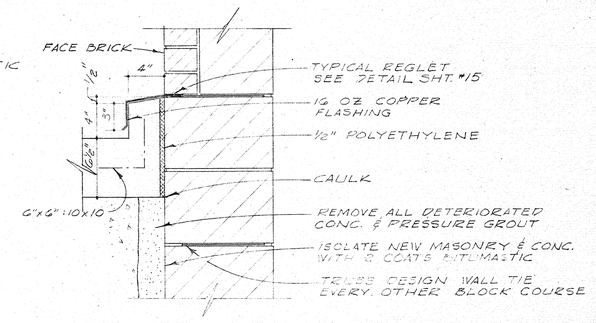
SECTION Z-Z
SCALE 3/8"=1'-0"



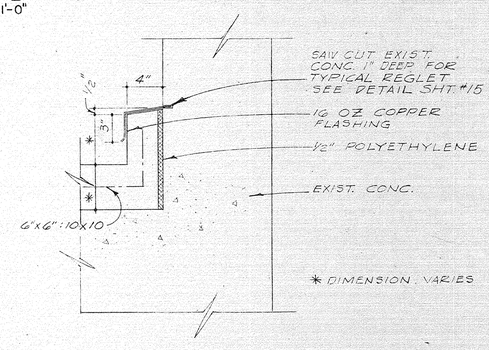
FRESH AIR INTAKE
SCALE 1 1/2"=1'-0"



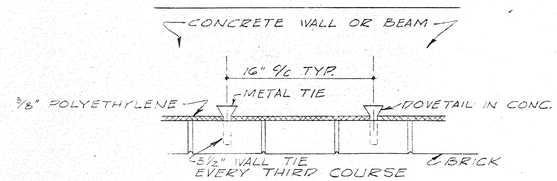
TYPICAL MASONRY DETAIL
SCALE 1 1/2"=1'-0"



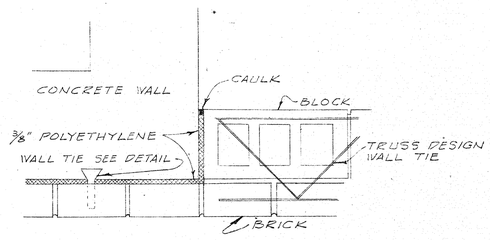
SECTION 2-2
SCALE 1 1/2"=1'-0"

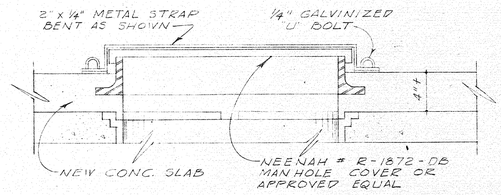


SECTION 3-3
SCALE 1 1/2"=1'-0"



TYPICAL MASONRY, WALL TIE
SCALE 1 1/2"=1'-0"





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

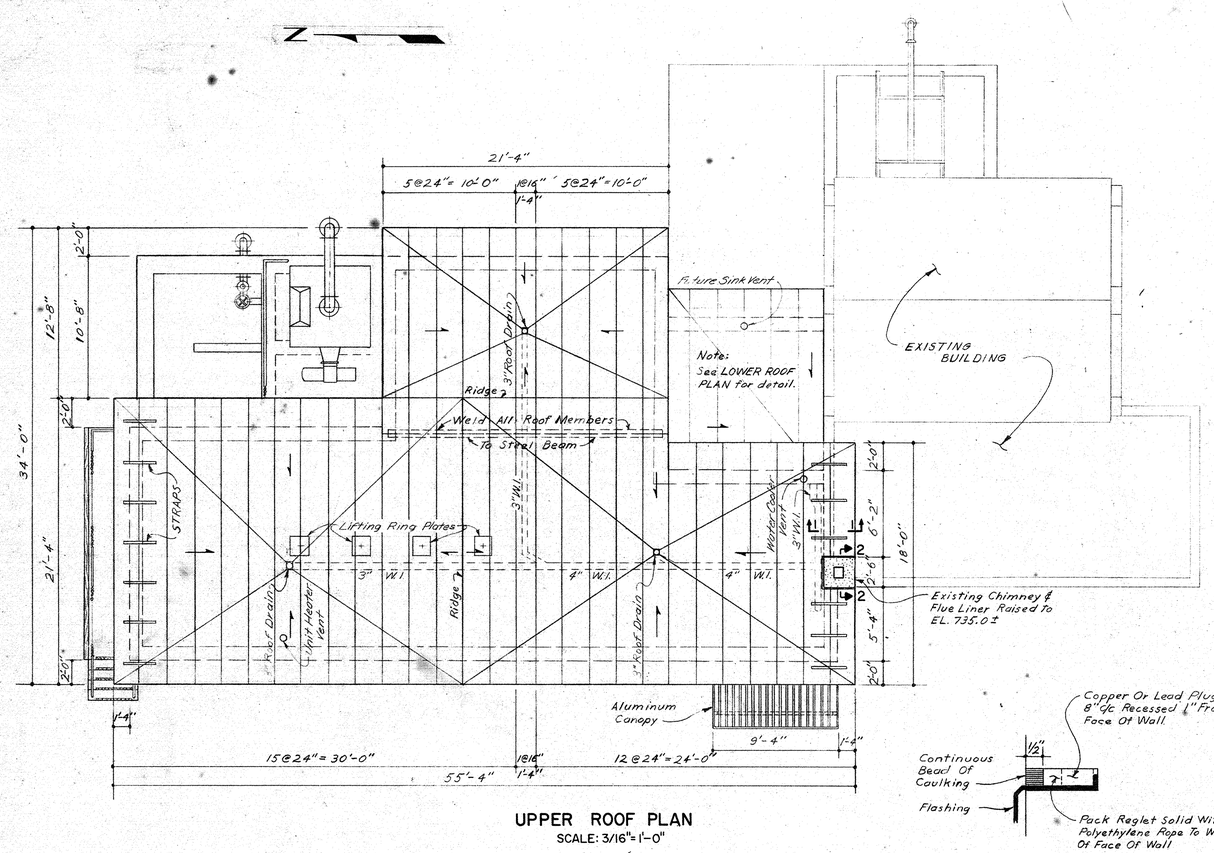
WTP434_014D

BURGESS & NIPLE, LIMITED CONSULTING ENGINEERS
COLUMBUS, OHIO

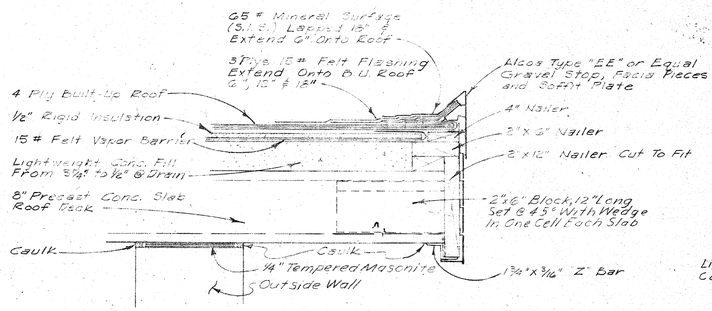
ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS

ARCHITECTURAL DETAILS

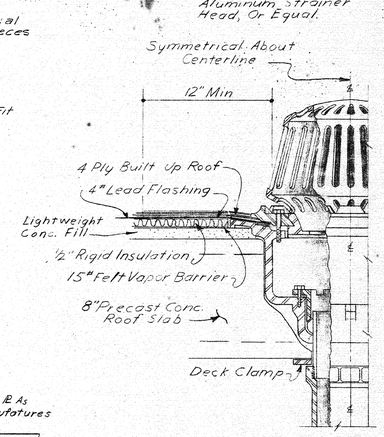
REVISIONS	DRAWN BY H.J.S.	CHECKED BY
	TRACED BY D.R.W.	APPROVED BY
MARCH 1969	SCALE: AS SHOWN	SHEET 14 OF 17



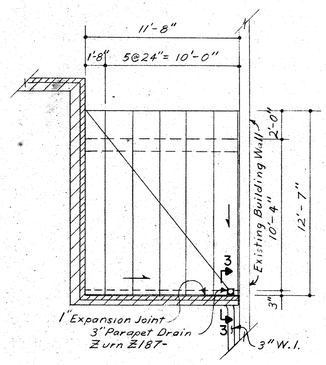
UPPER ROOF PLAN
SCALE: 3/16"=1'-0"



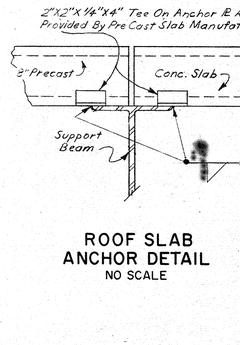
TYPICAL GRAVEL STOP & FACIA DETAIL
SCALE: 11/2"=1'-0"



ROOF DRAIN DETAIL
NO SCALE

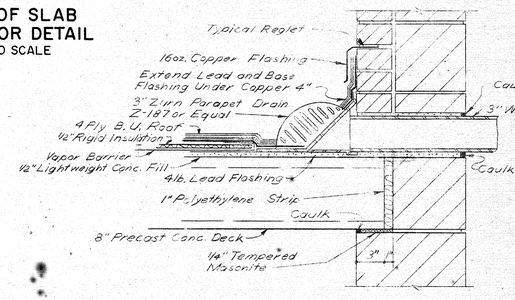


LOWER ROOF PLAN
SCALE: 3/16"=1'-0"

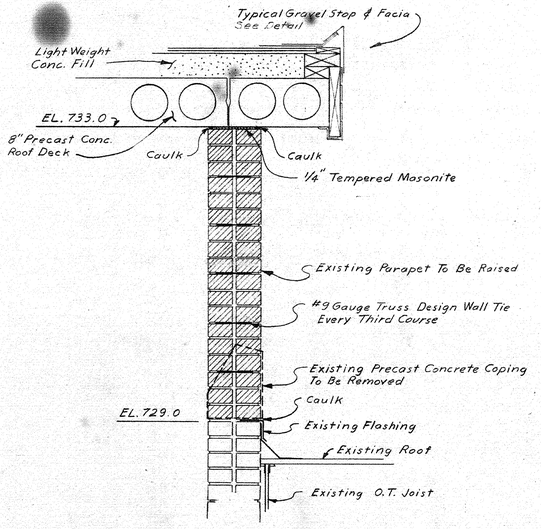


ROOF SLAB ANCHOR DETAIL
NO SCALE

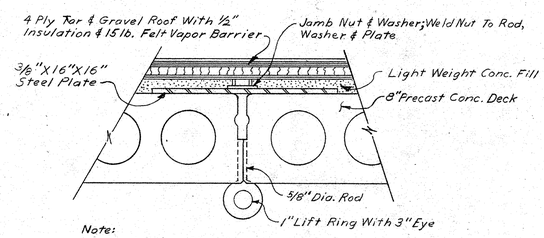
TYPICAL REGLET
NO SCALE



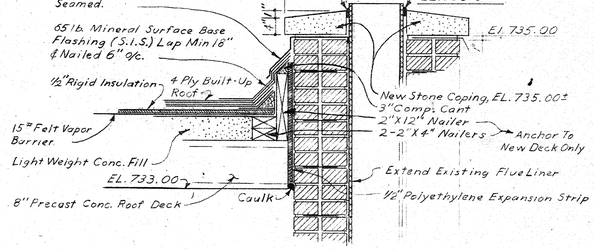
SECTION 3-3
SCALE: 11/2"=1'-0"



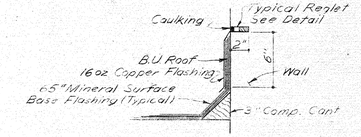
SECTION 1-1
SCALE: 1"=1'-0"



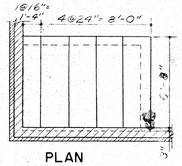
TYPICAL LIFTING RING
NO SCALE



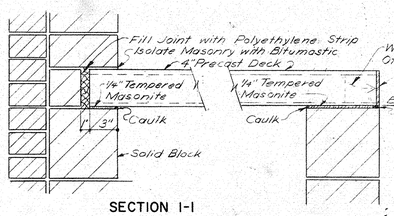
SECTION 2-2
SCALE: 1"=1'-0"



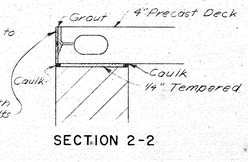
CAP FLASHING
NO SCALE



PLAN



SECTION 1-1



SECTION 2-2

CHLORINE ROOM CEILING DETAILS
NO SCALE

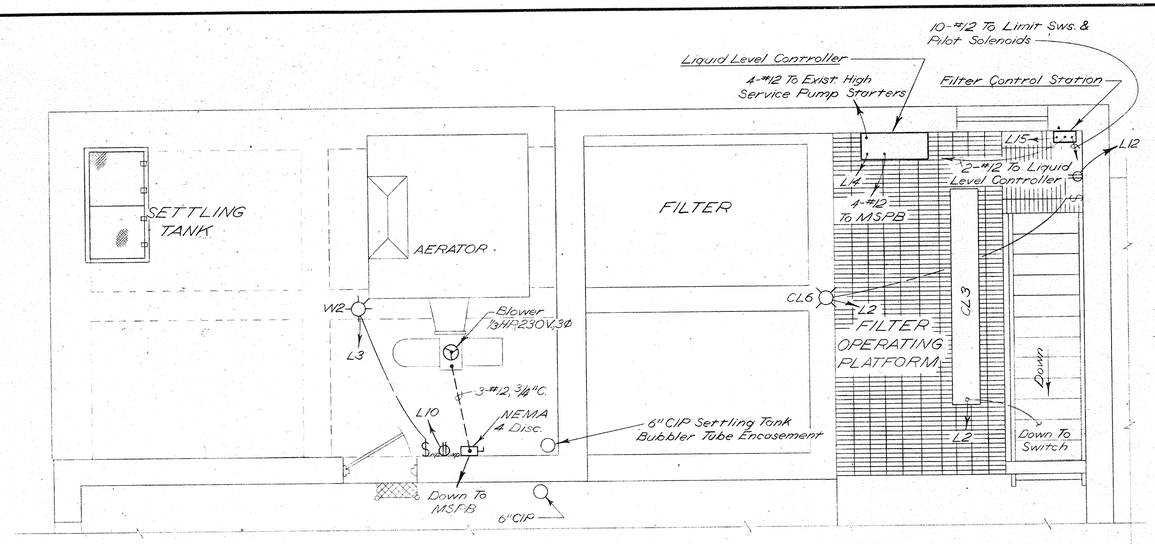
WTP434_015D

BURGESS & NIPLE, LIMITED CONSULTING ENGINEERS
COLUMBUS, OHIO

ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS

ROOF PLAN & DETAILS

REVISIONS	DRAWN BY H.J.S.	CHECKED BY C.P.W.
	TRACED BY R.P.P.	APPROVED BY
MARCH 1969	SCALE: AS SHOWN	SHEET 15 OF 17

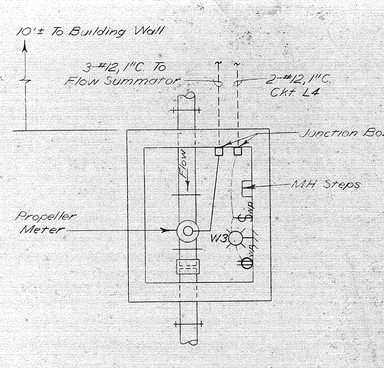


PLAN AT EL. 730.00

FIXTURE SCHEDULE				
Fix. No.	Manufacturer	Catalog No.	Lamp Size	Remarks
CL1	Crouse-Hinds	VMVC2A175G	175 W. Merc. Vap.	Mount On 24" Stems
CL2	Crouse-Hinds	VMVC2A175G	175 W. Merc. Vap.	Mount On 5'-0" Stems
CL3	Lithonia	8TAF240RO	4-F40W	
CL4	Stonco	V61404-MM	100W. Merc. Vap.	
CL5	McPhilben	43-89	2-100W I.F.	With P-1679 Finish. Collar
CL6	Stonco	150-L (2 Req'd)	2-75 W/PAR38/FL	Mount On Stonco 2-B Cover
W1	McPhilben	43-44 VT	100W I.F.	
W2	Stonco	150-L (3 Req'd.)	3-75 W/PAR38/FL	Mount On Stonco #51 Corner Br.
W3	Stonco	VWXL-11K	100W I.F.	

LEGEND

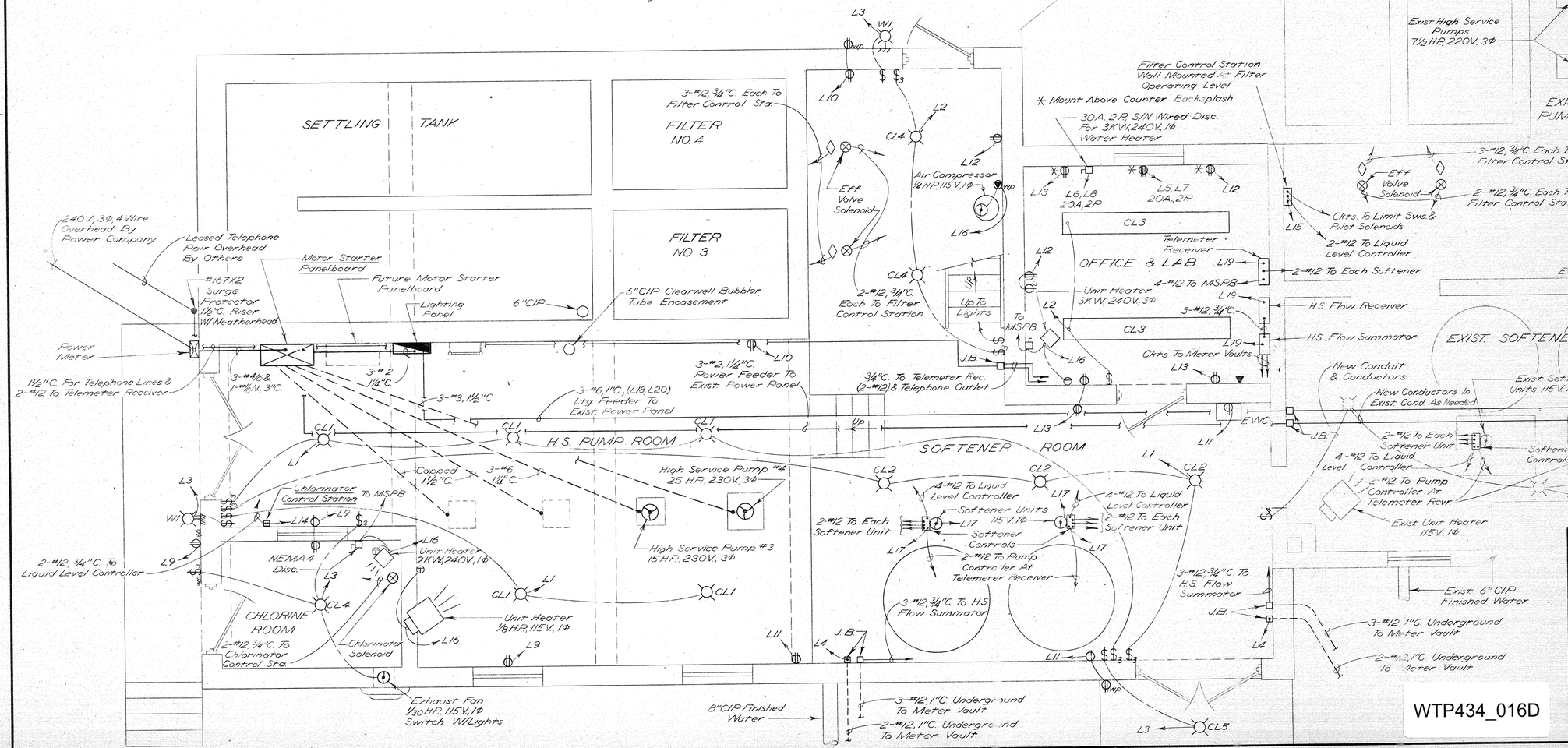
- Wall Switch
- 3-Way Wall Switch
- 4-Way Wall Switch
- Thermostat
- W.P. Weatherproof
- Telephone Outlet
- Disconnect Switch
- Motor
- Duplex Receptacle
- EWC Electric Water Cooler
- Valve Limit Switches To Filter Control Station Pilot Lights.
- Twistlock Receptacle



TYPICAL METER VAULT
TWO (2) REQUIRED

Note: Conceal All Conduit In Office Area And In Floor Slabs Where Shown On The Plans. All Other Conduit May Be Run Exposed. Provide Cast Type F.D. Boxes For Surface Receptacles & Switches.

Note: The Horsepowers Shown Are Estimated Only. The Contractor Shall Verify The Electrical Ratings Of Equipment To Be Furnished And Provide Proper Controls, Wire, Conduit, And Connection At No Change In Contract Price.



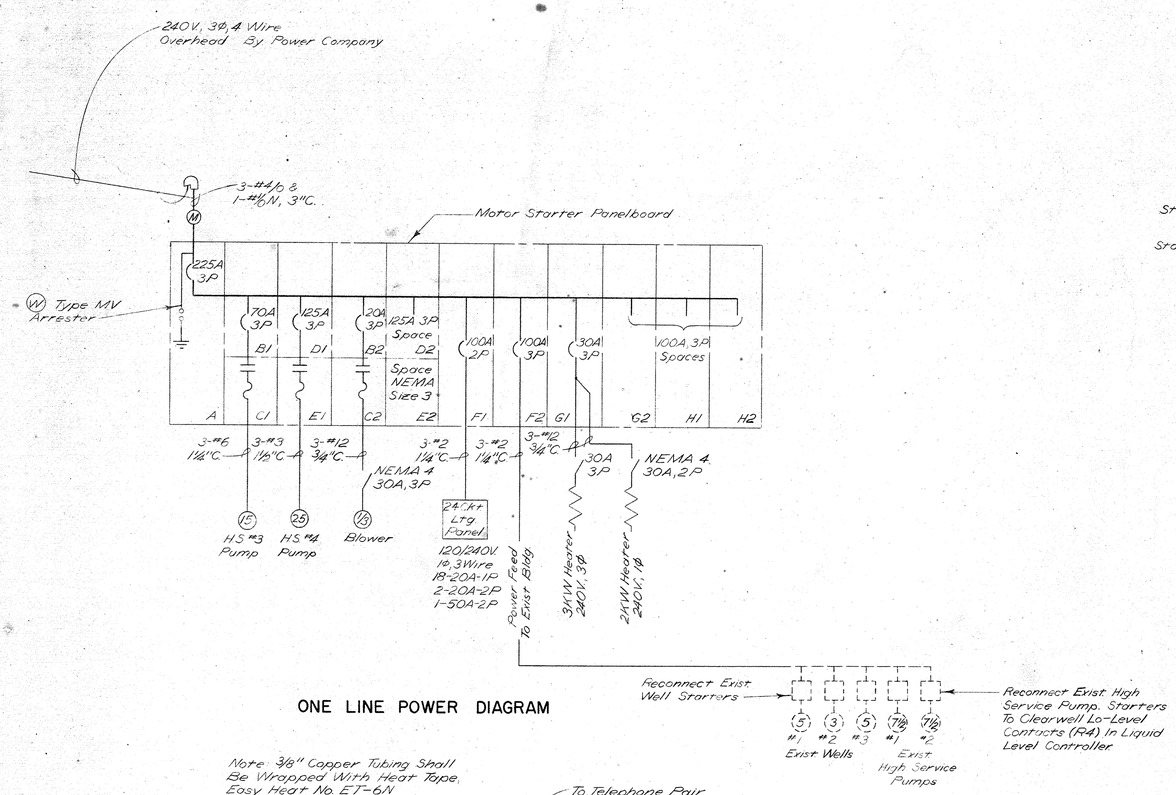
WTP434_016D

BURGESS & NIPLE, LIMITED CONSULTING ENGINEERS
COLUMBUS, OHIO

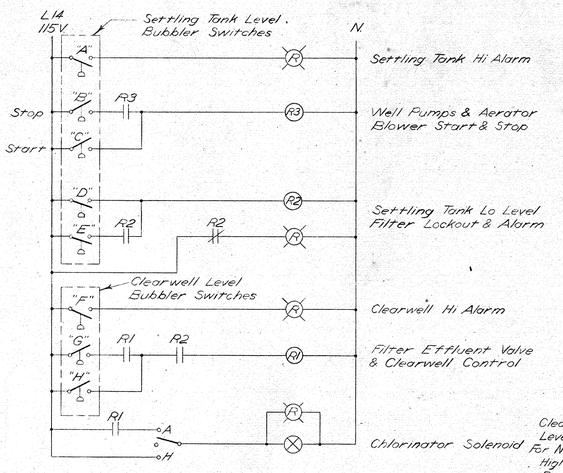
ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS

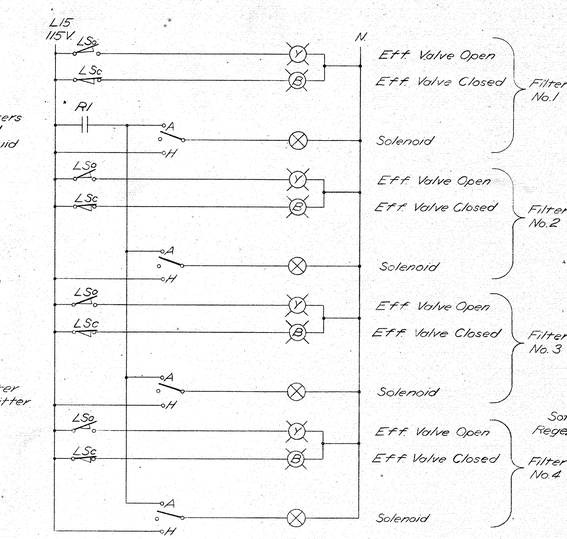
ELECTRICAL PLANS

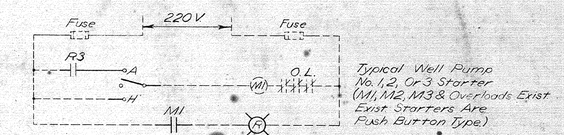
REVISIONS	DRAWN BY WCM	CHECKED BY JMH
	TRACED BY PG	APPROVED BY
MARCH 1969	SCALE: 3/8"=1'-0"	SHEET 16 OF 17

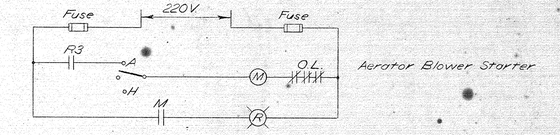


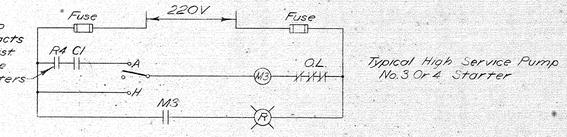
ONE LINE POWER DIAGRAM

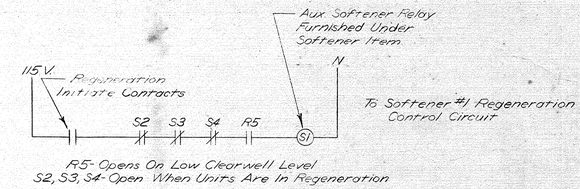






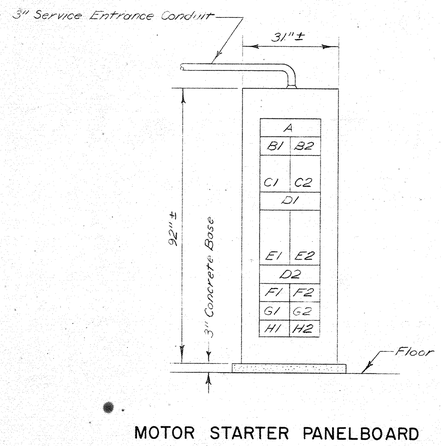




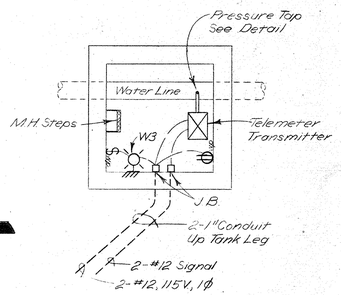


TYPICAL SOFTENER REGENERATION LOCKOUT CIRCUIT - SHOWN FOR UNIT #1

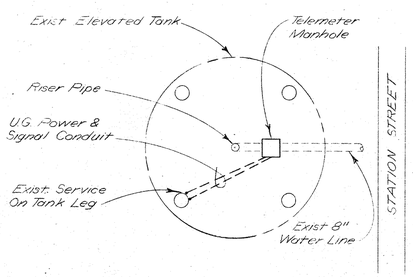
TELEMETERING DETAILS



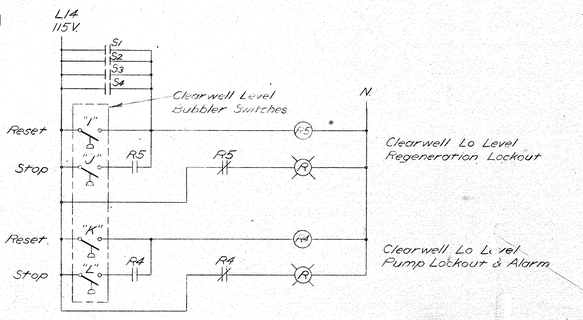
MOTOR STARTER PANELBOARD



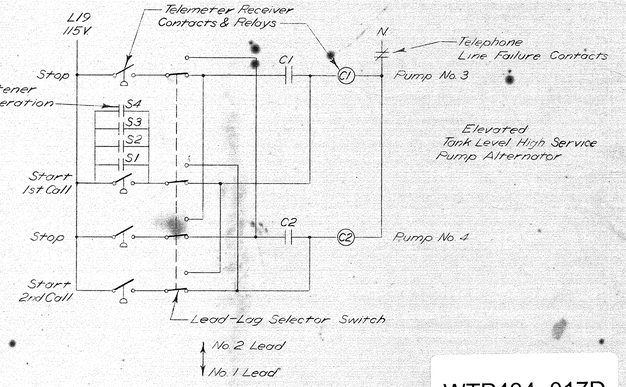
TELEMETER MANHOLE PLAN



TELEMETER MANHOLE SITE PLAN



CONTROL DIAGRAMS



WTP434_017D

BURGESS & NIPLE, LIMITED CONSULTING ENGINEERS
COLUMBUS, OHIO

ASHVILLE, OHIO
WATER TREATMENT PLANT IMPROVEMENTS

ELECTRICAL DIAGRAMS & DETAILS

REVISIONS	DRAWN BY WCM	CHECKED BY
	TRACED BY PG	APPROVED BY
MARCH 1969	SCALE: NONE	SHEET 17 OF 17