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Appeal 34817

Appeal Summary

Status: Decision Rendered

Appeal ID: 34817

Submission Date: 5/22/25 1:36 PM

Hearing Date: 6/4/25

Case #: B-1

Appeal Type: Building

Project Type: commercial

Building/Business Name: City of Portland Columbia Boulevard Wastewater Treatment Plant Reuse Facilities

Appeal Involves: Addition to an existing structure

Proposed use: Rain and sun canopy for process equipment.

Project Address: 5001 N Columbia Blvd

Appellant Name: Matt Hewitt

Appellant Phone: 503-823-2902

LUR or Permit Application #: Other Permit application not yet submitted.

Stories: 1 **Occupancy:** F-1 **Construction Type:** II-B

Fire Sprinklers: No

Plans Examiner/Inspector: None, permit application not yet submitted.

Plan Submitted Option: pdf [\[File 1\]](#)
Payment Option: electronic

Appeal Information Sheet

Appeal item 1

Code Section

ASCE 7-16 Section 12.13.9

Requires

OSSC 3405.2.1 requires that an addition meet the code provisions for new construction, which includes OSSC 1613. OSSC 1613 references ASCE 7-16, Chapter 12. ASCE 7-16 Section 12.13.9 requires that buildings on liquefiable sites meet shallow and/or deep foundation requirements, and in some cases prohibits the use of shallow foundations.

Code Modification or Alternate Requested

Due to the low risk to life safety, the intent of the appeal is to waive the requirements of ASCE 7-16 Section 12.13.9 on the existing concrete structure.

Proposed Design

The existing structure, built in approximately 1996 under permit 95-01987-BLD (see relevant drawings and photograph, attached) consists of a concrete structure that is mostly below grade but that extends above grade by approximately 5 feet. A steel pre-engineered metal building canopy structure currently covers the eastern-half of the existing concrete structure. The original permit drawings reference a future cover over the western-half of the concrete structure, and an upcoming project intends to

construct a steel-framed canopy structure in order to provide shade and rain protection for maintenance workers. The facility houses the water reuse system at the Columbia Boulevard Wastewater Treatment Plant, which is a recycling process that takes already-treated wastewater that would otherwise be discharged to the Columbia River and applies a chemical and filtering process to the water such that the water can be reused for plant operations rather than purchasing the needed water from the City water supply. The system is existing but will be replaced in an upcoming capital improvement project, and BES wants to take this opportunity to add the canopy structure for shade and rain protection for its operations and maintenance staff.

The proposed new open-sided steel-framed column and roof canopy structure will attach to the top and sides of the existing concrete structure, and the columns will cantilever upward to support the roof. No new foundations will be constructed, and there will not be any ground disturbance with the proposed design.

The site is located within approximately 50 feet of the Columbia Slough. Geotechnical investigation conducted as a part of recent construction at the Plant indicates that lateral spreading at that distance from the Slough could be between 2.5 and 9 feet, depending on the calculation method used. Similarly, liquefaction-induced total settlement could be between 10 and 22 inches, with differential settlement across the structure expected to be less. The ability of the existing concrete and steel framed canopy structure to withstand the anticipated liquefaction-induced settlement and lateral spreading without potential failure is questionable at best. Upgrading the existing concrete structure to withstand the anticipated movements is not practical without probable demolition and reconstruction, support on piles and ground improvement.

Reason for alternative

The area of the existing concrete structure that houses the recycling process equipment will not be occupied full-time. The only time occupancy will occur is during normal maintenance operations by a team of two workers. The anticipated maintenance frequency and duration is as follows: weekly inspections taking less than 30 minutes; monthly lubrication of pumps, drives and gear boxes taking approximately 1 hour; and every 7 to 10 years, filter cloth replacement taking approximately 2 days.

Based on the infrequent occupancy, the change in the risk to life safety is minimal. Further, if the new equipment were installed during the upcoming project without the sun and rain canopy structure added, the change in the risk to life safety would be zero since the maintenance would occur whether or not a canopy is present.

Since the change in the risk to life safety due to the infrequent occupancy is minimal, and the impracticality of rehabilitating the existing structure to address liquefaction issues, we propose that the steel framed canopy structure be allowed to be constructed as an addition to the western-half of

the existing concrete structure without provisions made to address ASCE 7-16 Section 12.13.9.

Appeal Decision

Waive the requirements for foundations on liquefiable sites for the construction of a new steel-framed canopy: Granted provided the post to roof framing connections of the canopy structure are ductile to accommodate rotations that the structure may experience due to differential settlement.

"The Administrative Appeal Board finds with the conditions noted, that the information submitted by the appellant demonstrates that the approved modifications or alternate methods are consistent with the intent of the code; do not lessen the health, safety, accessibility, life, fire safety or structural requirements; and that special conditions unique to this project make strict application of those code sections impractical.

Under City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 90 calendar days of the date this decision is published. For information on the appeals process, how to file a reconsideration, and how to appeal to the Building Code Board of Appeal, go to <https://www.portland.gov/ppd/file-appeal/appeal-process> or email PPDAppeals@portlandoregon.gov."



FRP GRATING SHALL:

1. BE FIBERGRATE SAFE-T-SPAN I6015 OR APPROVED EQUAL.
2. HAVE A NON-SLIP WALKING SURFACE.
3. BE APPROVED FOR A 100 PSF LOAD AT A MAXIMUM SPAN OF 5'-0".

SEE PROJECT SPECIFICATIONS FOR MORE INFORMATION

1. ALL DIMENSIONS SHALL BE FIELD VERIFIED.
2. EXISTING GRADE ELEVATIONS ARE APPROXIMATE. SEE CIVIL PLANS FOR PRECISE GRADING.

1. NEW 1-1/2" FRP GRATING.
2. NEW WT3X9 BEAM.
3. NEW WT 3X9 BRACE.
4. RE-USE EXISTING C-CHANNEL SUPPORT BEAM.



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				CONSTRUCTED BY _____	CHECKED BY	EV	CONST. MGR.	
				PROJECT COMPLETED _____				
				MAP CORRECTED BY _____ CHECKED BY _____				
				FINAL MAP DATA	DESIGN MGR.			
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REVISION								



STRUCTURAL GRATING PLAN
GROUND LEVEL

4 SECTION

OB NO.
E10483

HEET NO.
S20

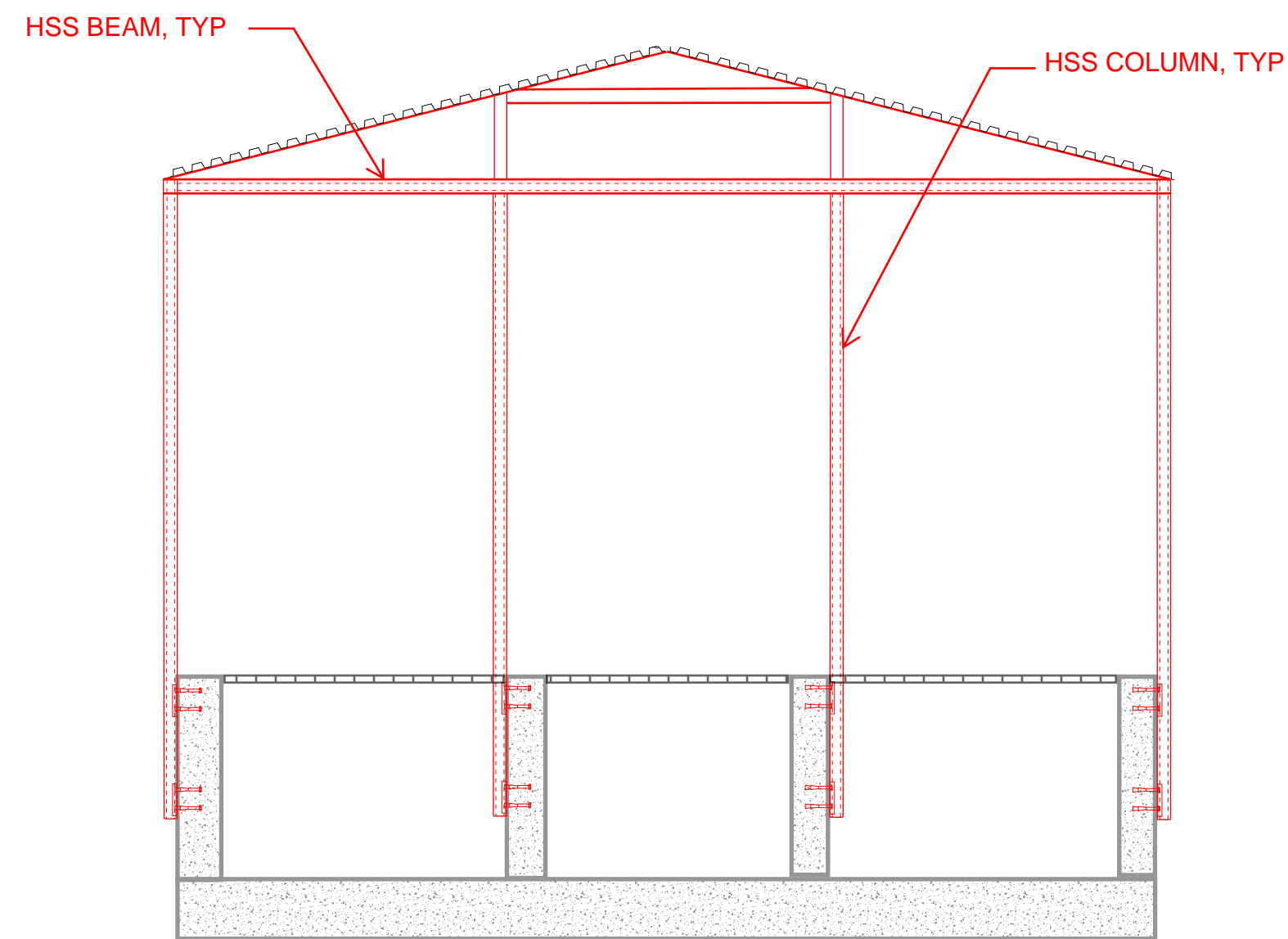
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GENERAL SHEET NOTES

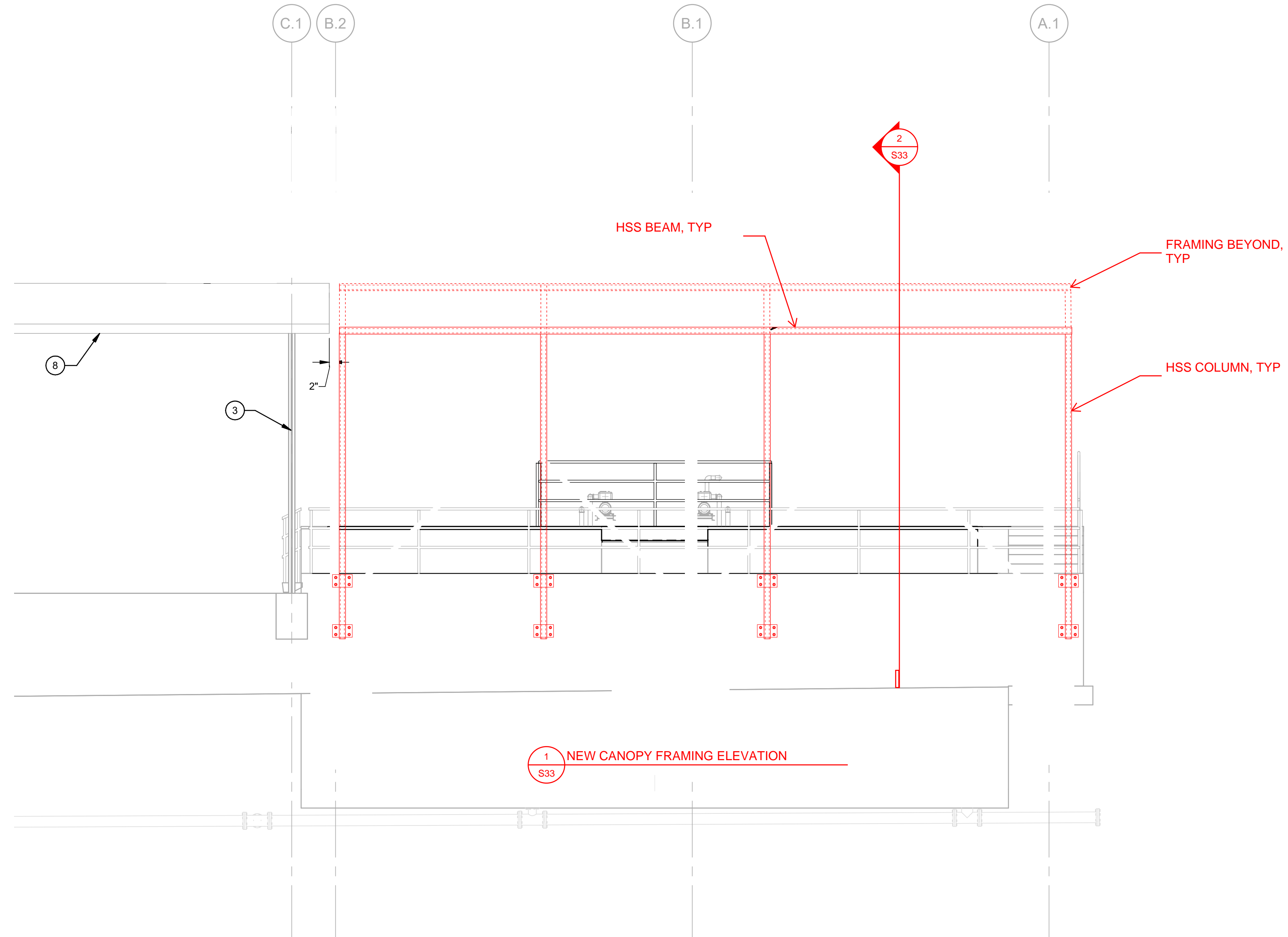
2. EXISTING CANOPY ROOF FRAMING AND BRACING NOT SHOWN FOR CLARITY.
3. REMOVE PEELING STRUCTURAL COATINGS FROM EXISTING CANOPY STEEL MEMBERS, WIRE-BRUSH AREAS OF RUST AND CORROSION, SURFACE PREP, AND PAINT MEMBERS WITH NEW COATING.

GENERAL NOTES

1. ALL DIMENSIONS SHALL BE FIELD VERIFIED
2. EXISTING GRADE ELEVATIONS ARE APPROXIMATE. SEE CIVIL PLANS FOR PRECISE GRADING



2 NEW CANOPY SECTION



1 NEW CANOPY FRAMING ELEVATION

				XREF(S) USED:	DESIGNED BY	DATE APPD.
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NO.	DATE	DESCRIPTION	APPD.	DRAWING NAME		
REVISION						

—CITY OF PORTLAND—
ENVIRONMENTAL SERVICES



30%



CBWTP REUSE SYSTEM REPLACEMENT

REUSE CANOPY
SECTIONS

4 SECTION

OB NO.

E10483

SHEET NO.
S33

DF

COLUMBIA BOULEVARD WASTEWATER TREATMENT PLANT WATER REUSE SYSTEM

A map of the Portland, Oregon area. The Columbia River flows from the north, with the Oregon-Washington border indicated. The Willamette River flows from the southwest. Major highways shown include I-5, I-205, I-28, I-8, I-17, I-99W, I-99E, I-213, I-84, I-30, I-26, and I-14. Cities and towns labeled include Vancouver, Portland, Hillsboro, Beaverton, Milwaukie, Lake Oswego, West Linn, Gladstone, Oregon City, Gresham, and Newberg. The Columbia Blvd Wastewater Treatment Plant is marked with a black dot and an arrow. A scale bar (0 to 6 miles) and a north arrow are located in the bottom right corner.

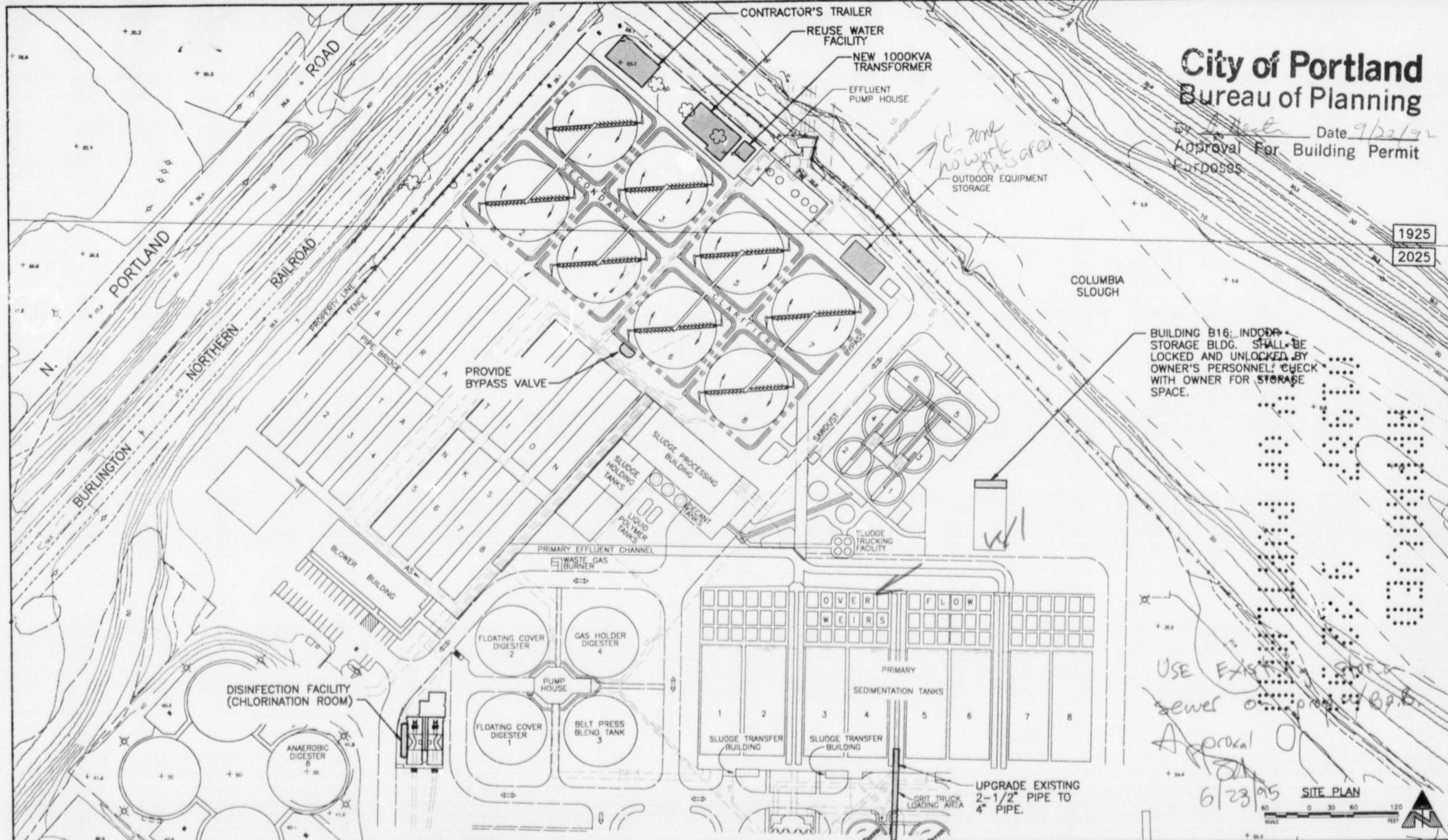
5-25-95
JZ

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CONSTRUCTED BY _____				DRAWN BY	5/25/95	<div style="text-align: center;"> ENVIRONMENTAL SERVICES APPROVALS </div>					1925, 2025
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City of Portland
Bureau of Planning

By [Signature] Date 9/22/92
Approval For Building Permit
PerD9585

1925
2025



				CONSTRUCTED BY _____		DESIGNED BY _____		DATE APPROVED _____	
				PROJECT COMPLETED _____		DRAWN BY _____		PROGRAM MGR _____	
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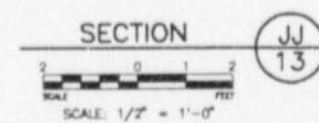
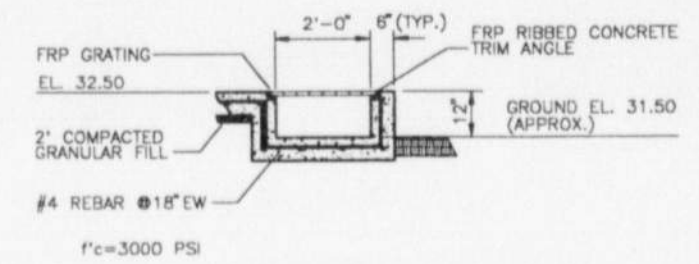
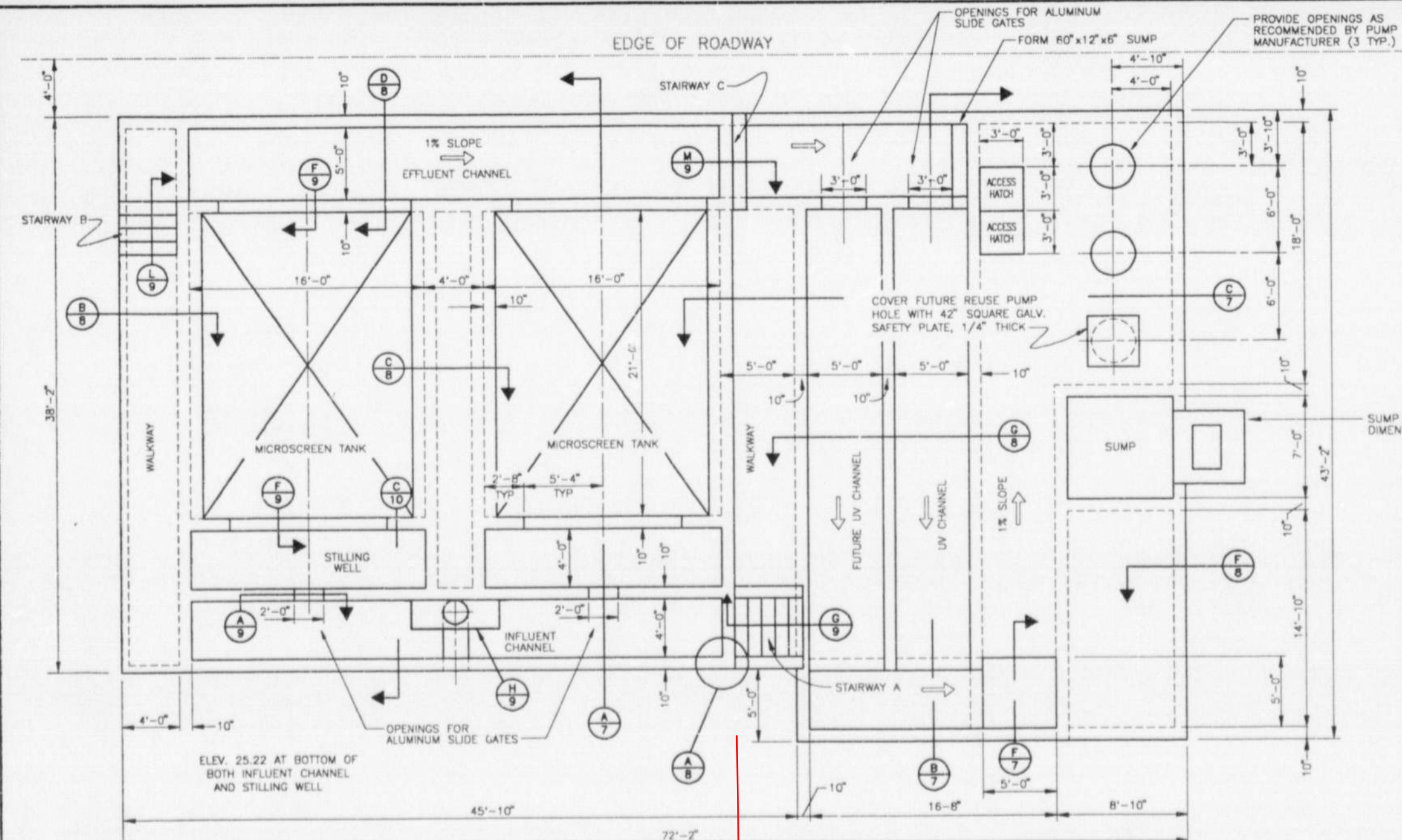
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

DRAWINGS OF EXISTING FACILITY
(FOR REFERENCE)



CBWTP WATER REUSE SYSTEM
SITE PLAN
WORK AREAS

1/4 SECTION
1925, 2025
JOB NO.
5210
C-02
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GENERAL NOTES

ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE CITY OF PORTLAND "STANDARD CONSTRUCTION SPECIFICATIONS" DATED JULY 1, 1987 AND ALL APPLICABLE REVISIONS.

ALL REINFORCING STEEL SHALL CONFORM TO ASTM SPECIFICATION A706, A615 (S1) GRADE 60. THE FOLLOWING SPLICE LENGTHS SHALL BE USED UNLESS NOTED OR SHOWN OTHERWISE:

BAR SIZE	PLAIN BAR SPLICE LENGTH	EPOXY COATED SPLICE LENGTH
3	1'-0"	1'-5"
4	1'-4"	1'-11"
5	1'-8"	2'-0"
6	2'-0"	2'-11"
7	2'-9"	3'-0"
8	3'-7"	3'-2"
9	4'-7"	6'-7"
10	5'-9"	8'-2"
11	7'-1"	10'-3"
14 & 18	NOT PERMITTED	NOT PERMITTED

ALL BARS SHALL BE PLACED 2" CLEAR OF THE NEAREST FACE OF CONCRETE UNLESS SHOWN OTHERWISE.

ALL CONCRETE SHALL BE CLASS 3300-3/4"

STRUCTURAL STEEL SHALL CONFORM TO ASTM SPECIFICATION A36. HOT DIP GALVANIZE PER ASTM A123.

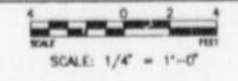
THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION OF ALL EXISTING UTILITIES WITHIN THE WORK AREA OF THE STRUCTURE BEFORE PROCEEDING WITH THE WORK AND PROVIDING PROTECTION FOR THE VARIOUS UTILITIES AFFECTED.

ALL GRATING AND COVERS ARE NOT SHOWN FOR CLARITY.

AREA OF PROPOSED FUTURE CANOPY

AREA OF EXISTING CANOPY

OVERALL PLAN OF REUSE WATER SYSTEM



NO.	DATE	DESCRIPTION	REVISION

CONSTRUCTED BY	DESIGNED BY	DATE APPD.
PROJECT COMPLETED	DRAWN BY	PROGRAM MGR.
MAP CORRECTED BY	CHECKED BY	CONST. MGR.
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CITY OF PORTLAND

ENVIRONMENTAL SERVICES

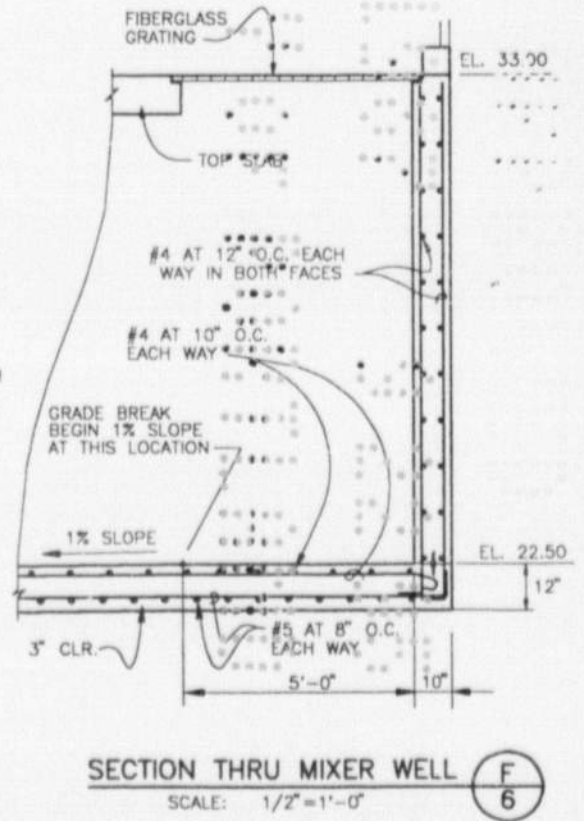
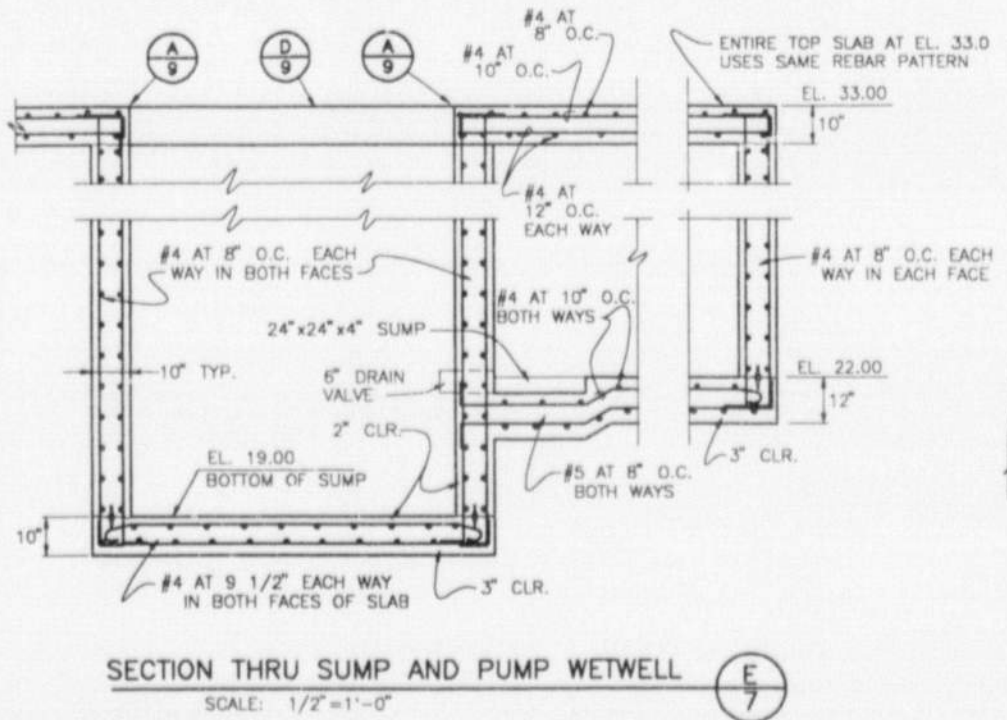
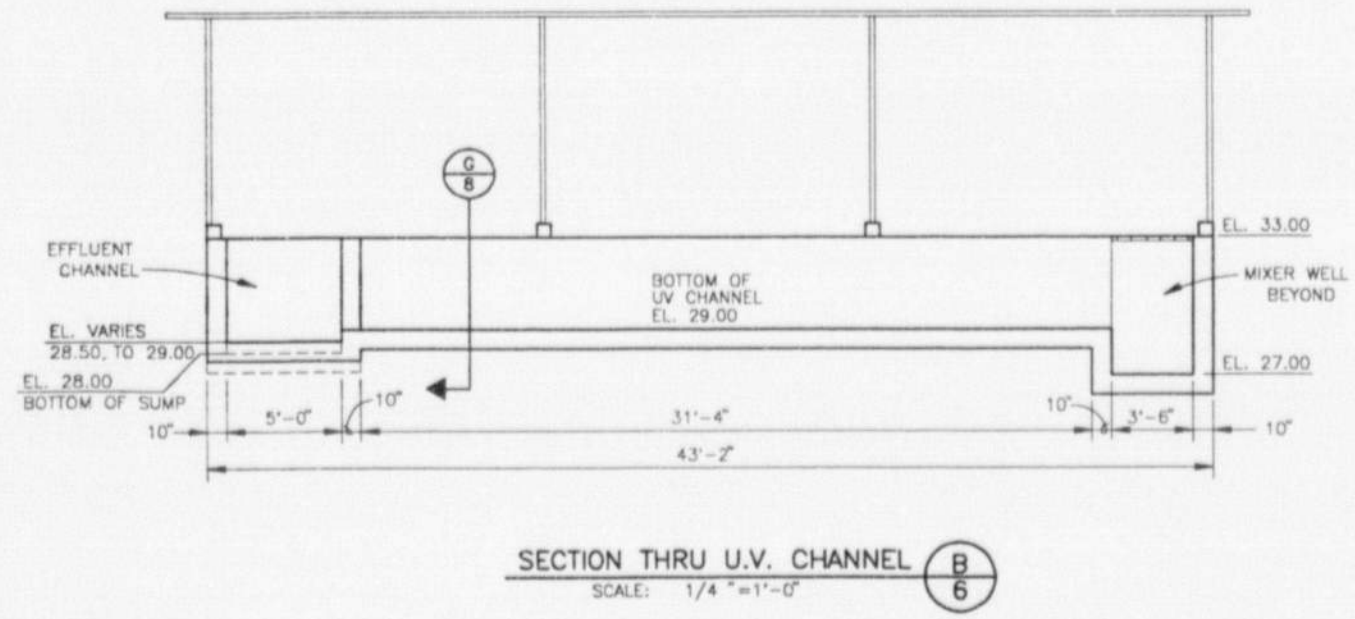
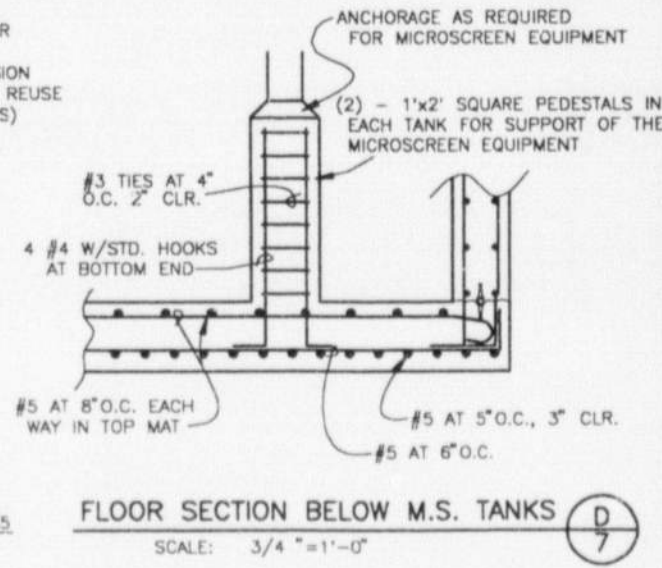
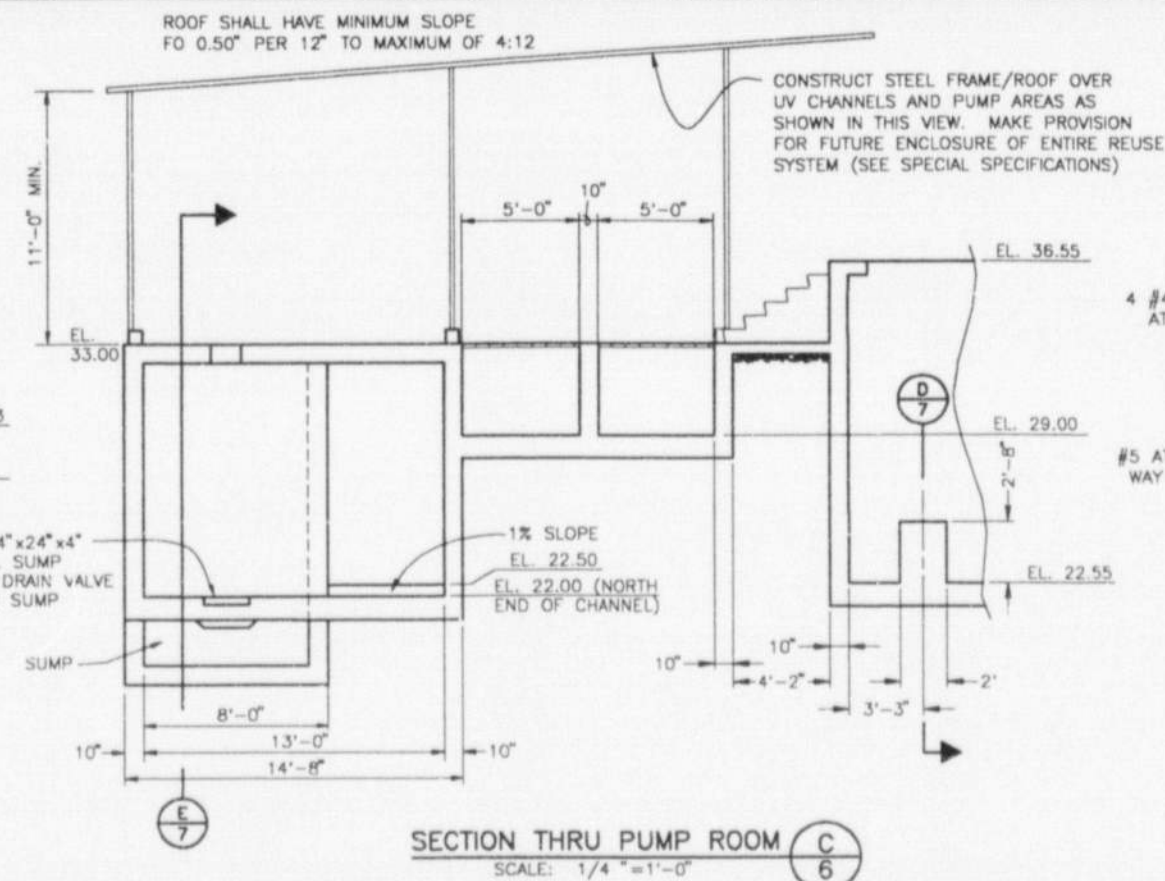
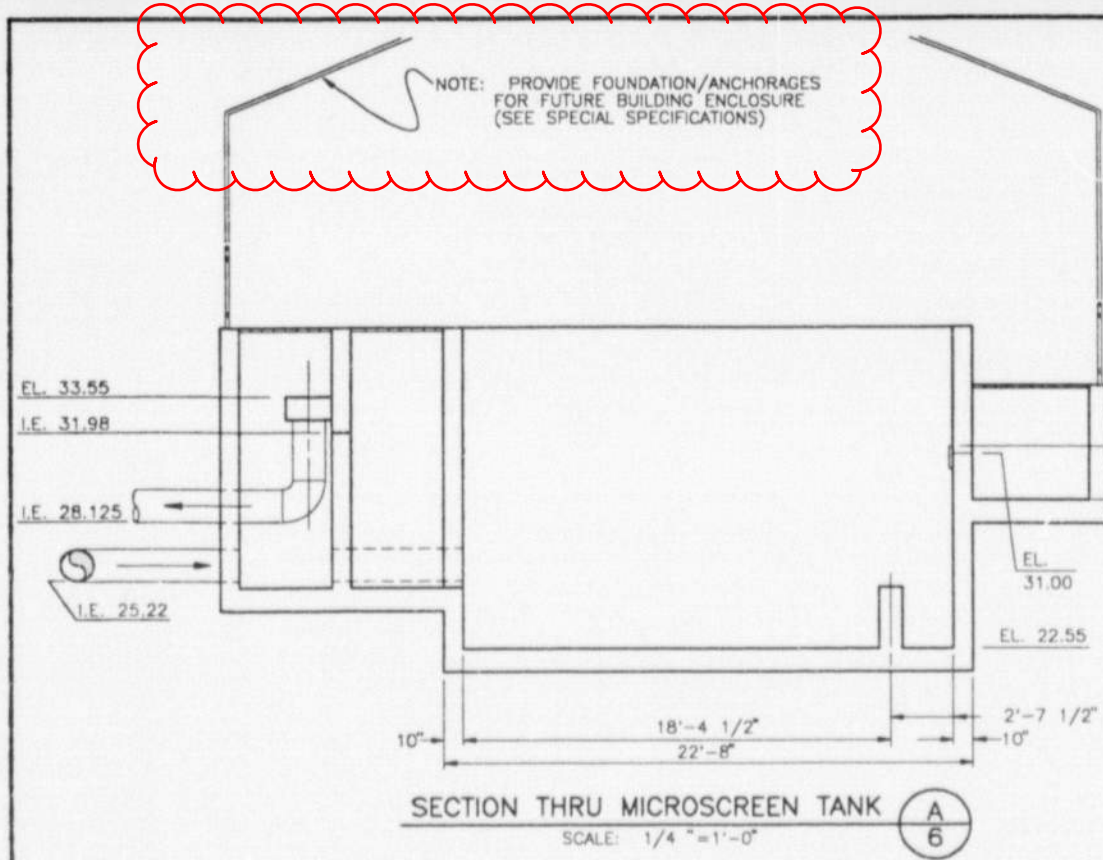
DRAWINGS OF EXISTING FACILITY (FOR REFERENCE)

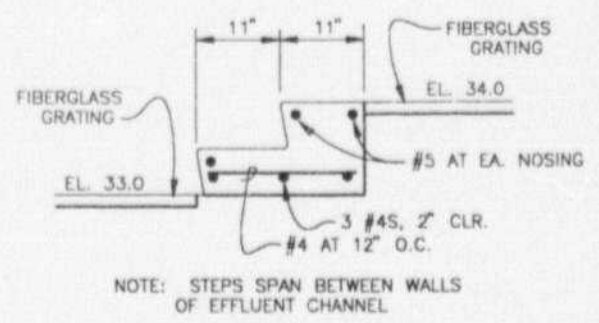
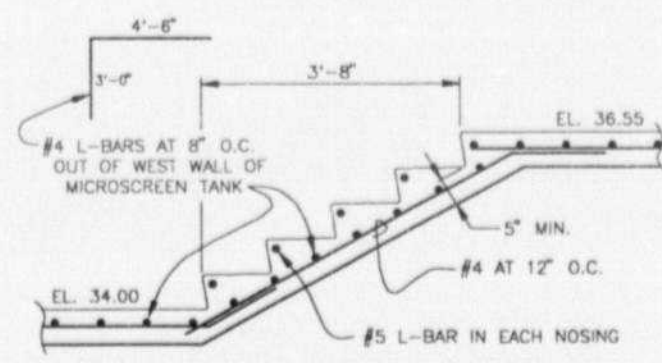
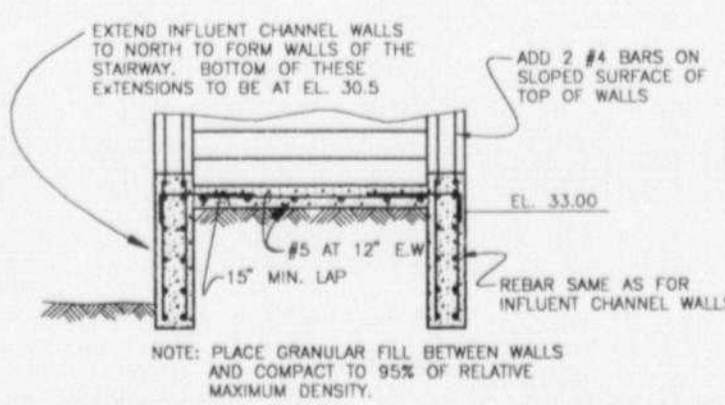
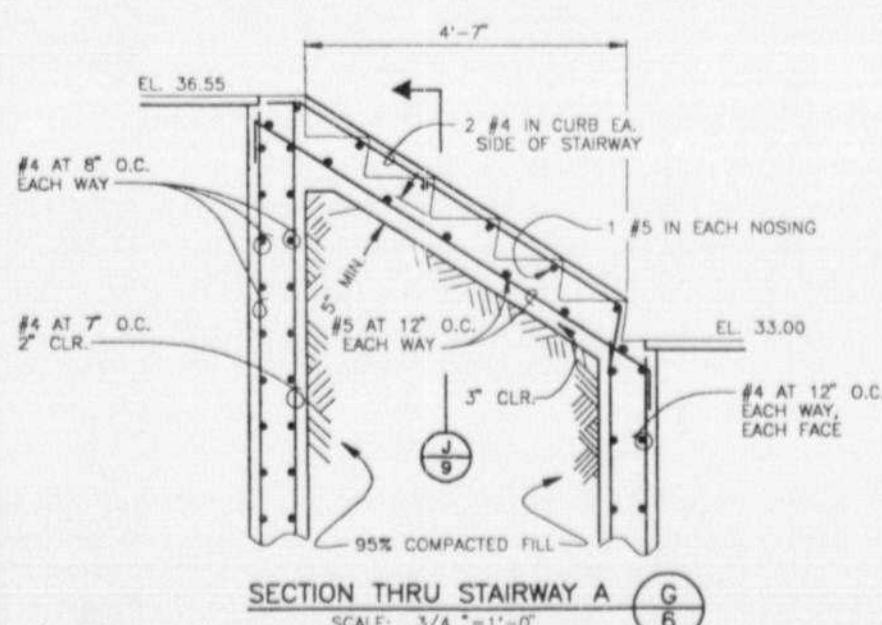
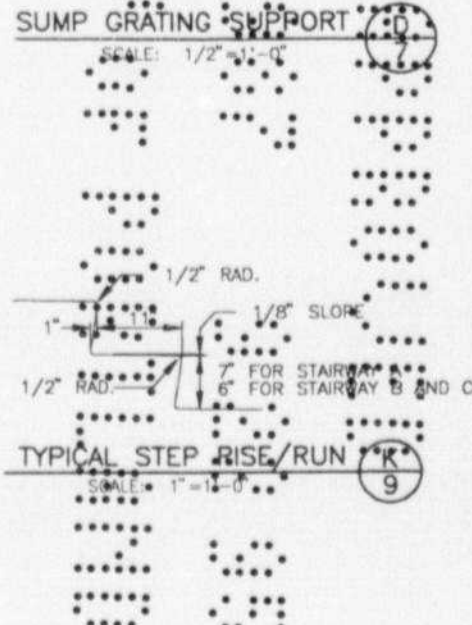
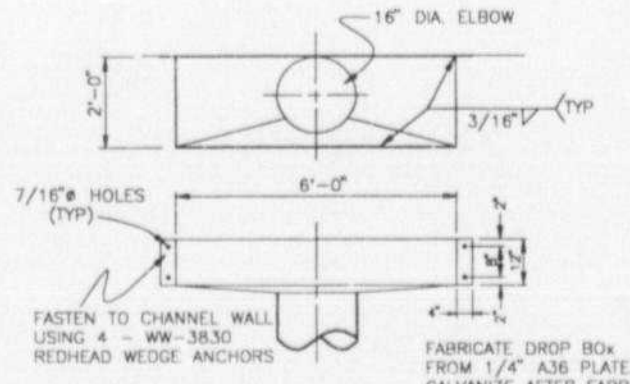
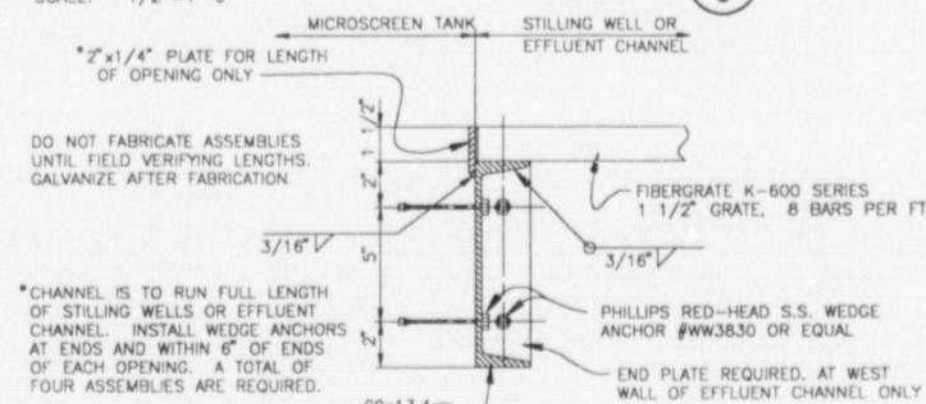
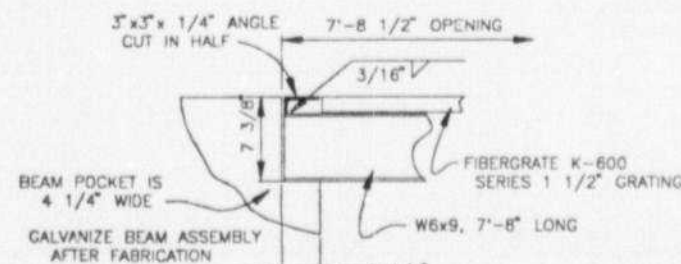
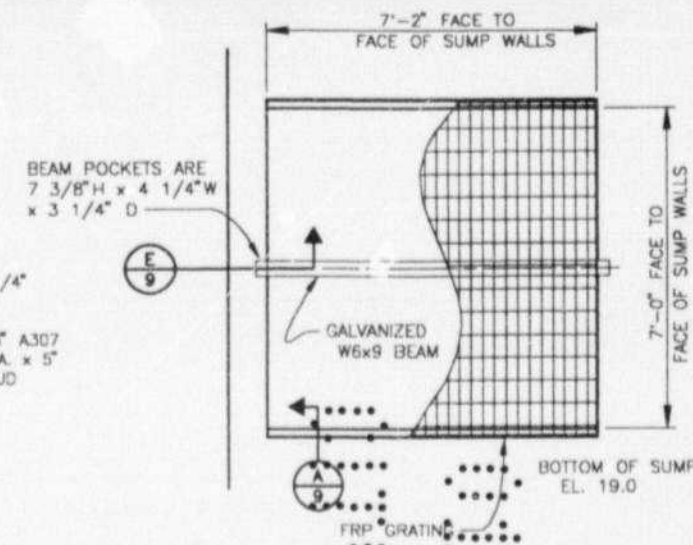
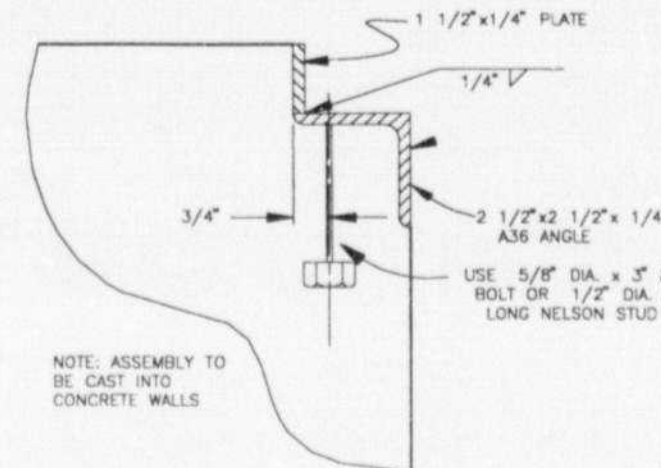
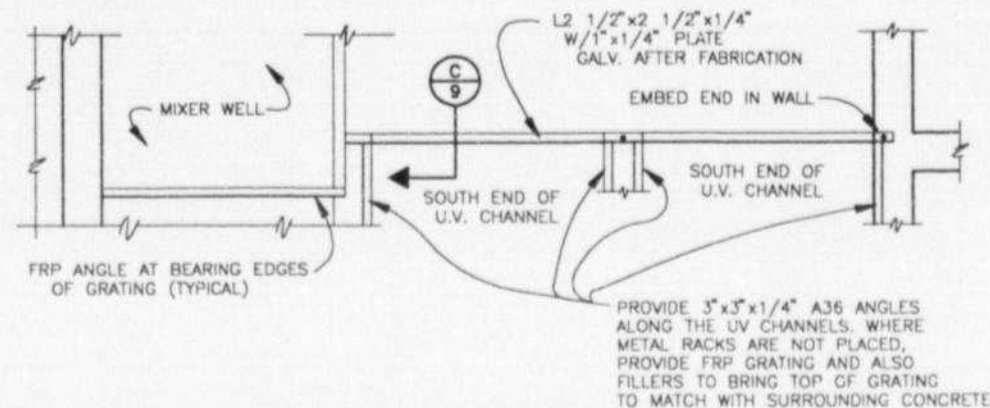
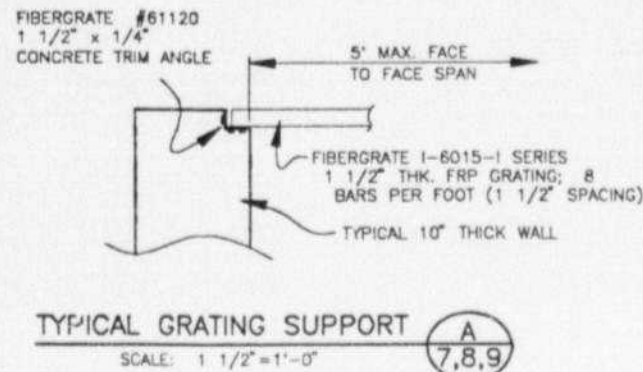


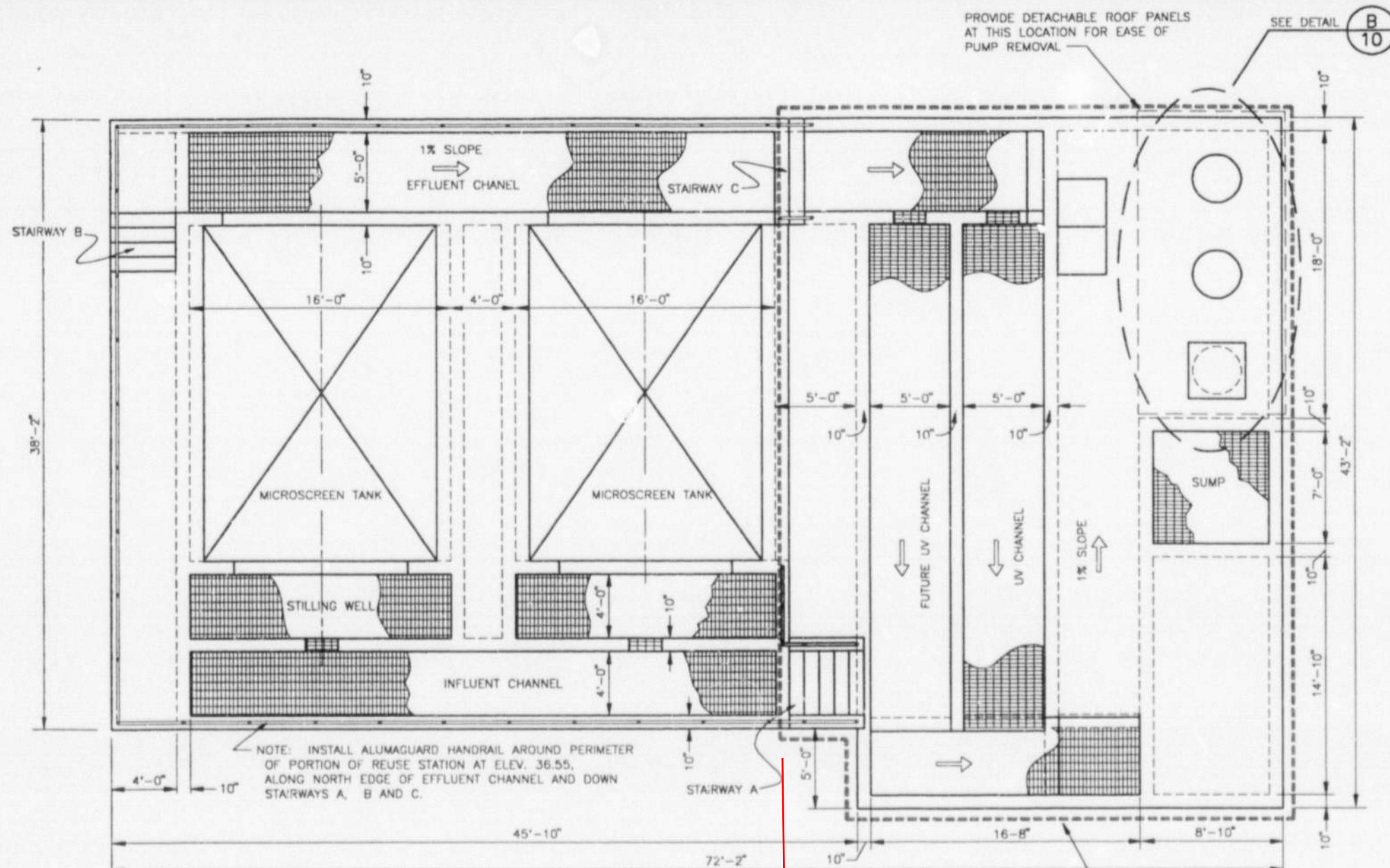
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ON A FULL SIZE DRAWING

CBWTP WATER REUSE SYSTEM
PLAN

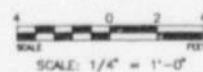
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1925, 2025
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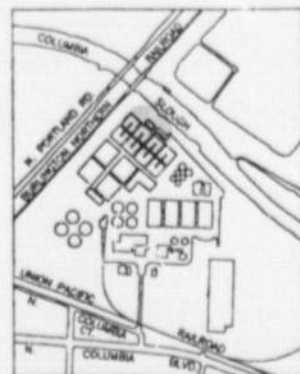


HANDRAIL AND GRATING PLAN

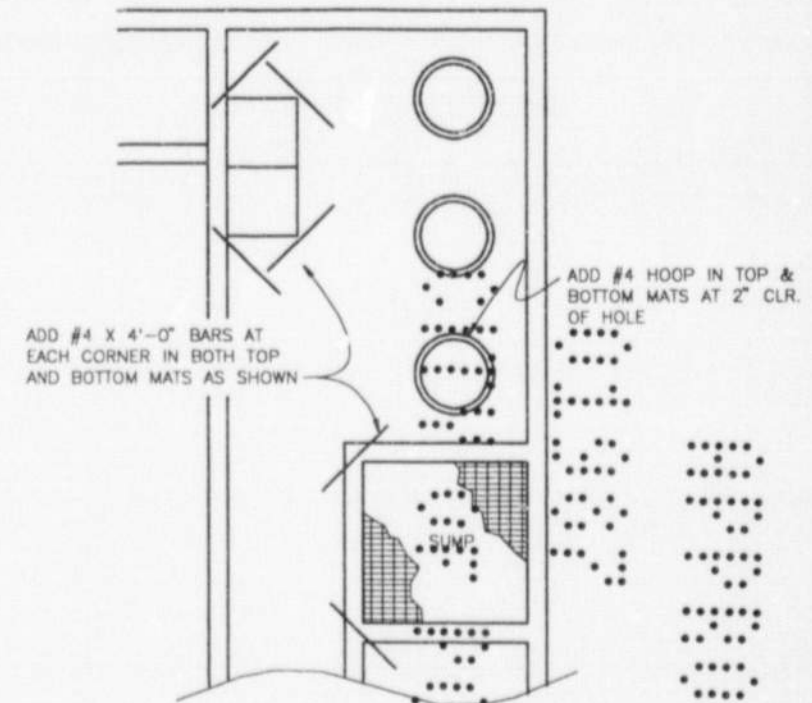


NOTES:

1. PROVIDE FRP GRATING FOR ALL WALKING SURFACES UNLESS STATED OTHERWISE

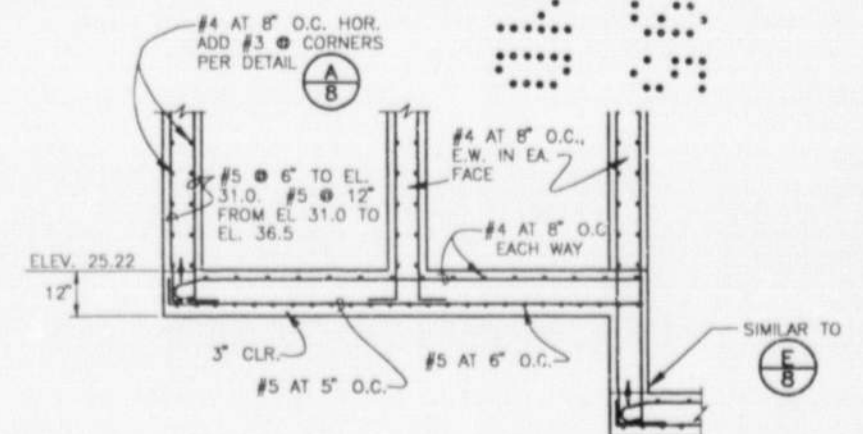


KEY PLAN



ADDED REBAR IN PUMP FLOOR SLAB

SCALE: 1/4" = 1'-0"



SECTION THRU INFLUENT/STILLING CHANNELS

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

CITY OF PORTLAND
ENVIRONMENTAL SERVICES



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ON A FULL SIZE DRAWING

CBWTP WATER REUSE SYSTEM
HANDRAIL PLAN

DRAWINGS OF EXISTING FACILITY
(FOR REFERENCE)

NO.	DATE	DESCRIPTION	APPROVED

CONSTRUCTED BY	DESIGNED BY
PROJECT COMPLETED	DATE APP'D
MAP CORRECTED BY	PROGRAM MGR
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