

PIPE HANGER DETAIL (BELOW ROOF)

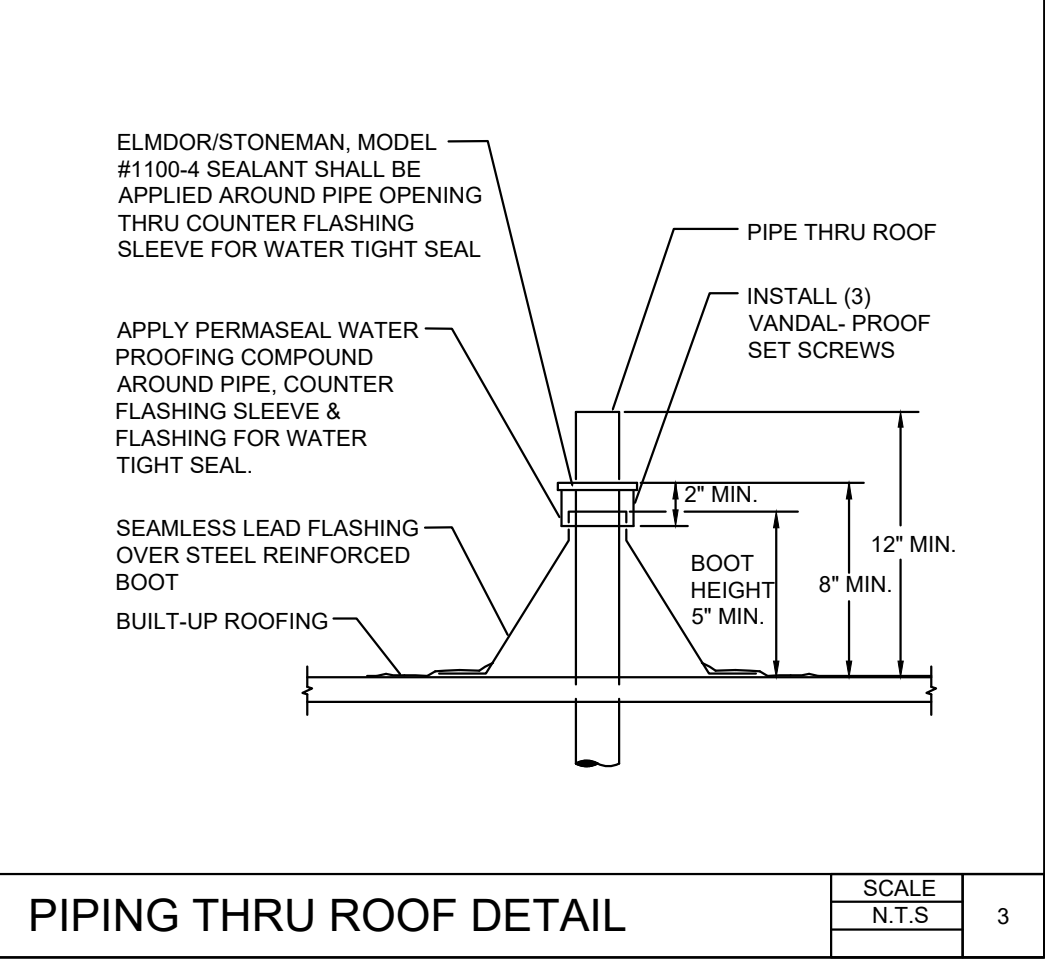
SCALE
N.T.S.

1

WALL CLEANOUT DETAIL

SCALE
N.T.S.

2



PIPING THRU ROOF DETAIL

SCALE
N.T.S.

3



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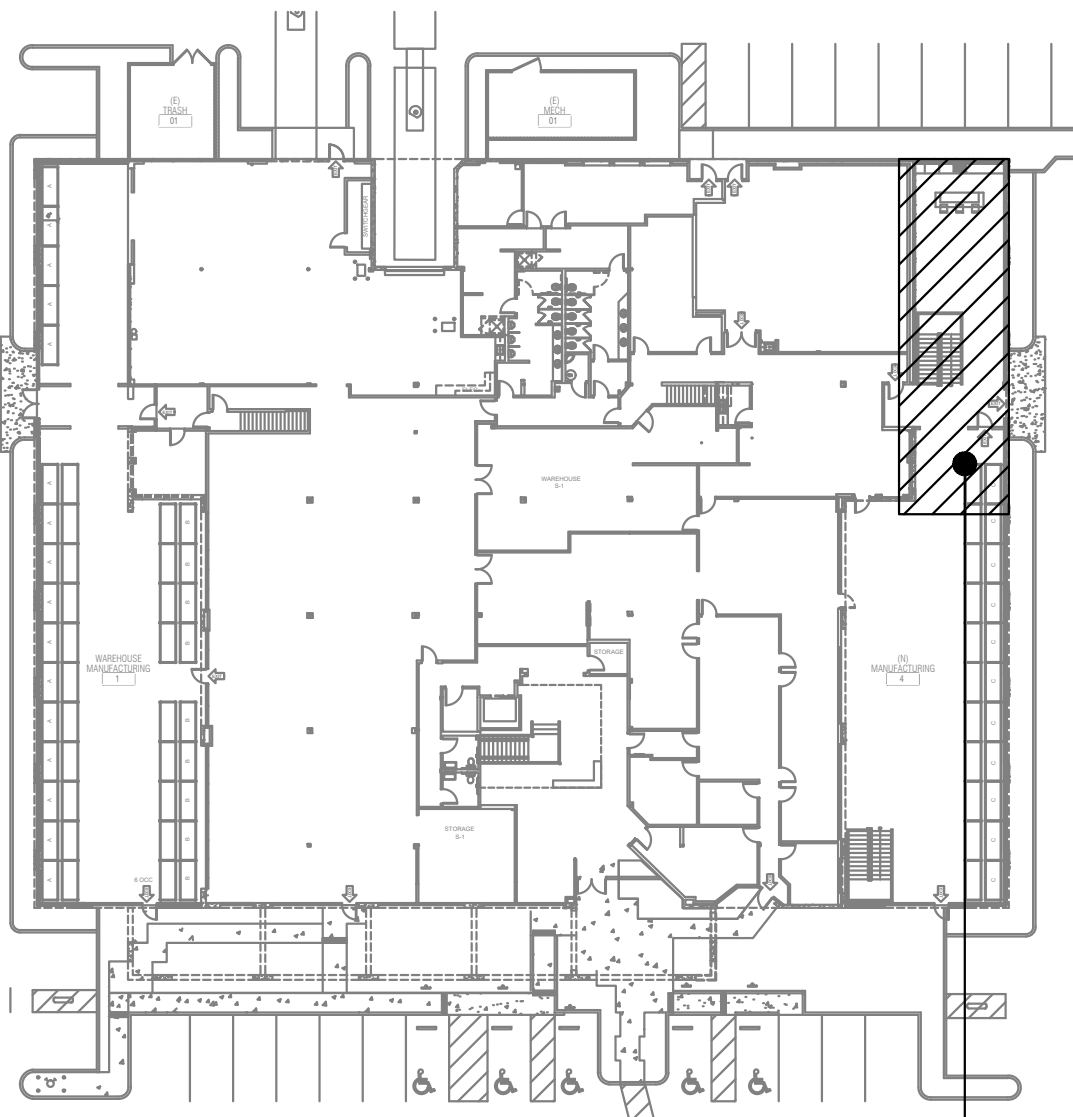
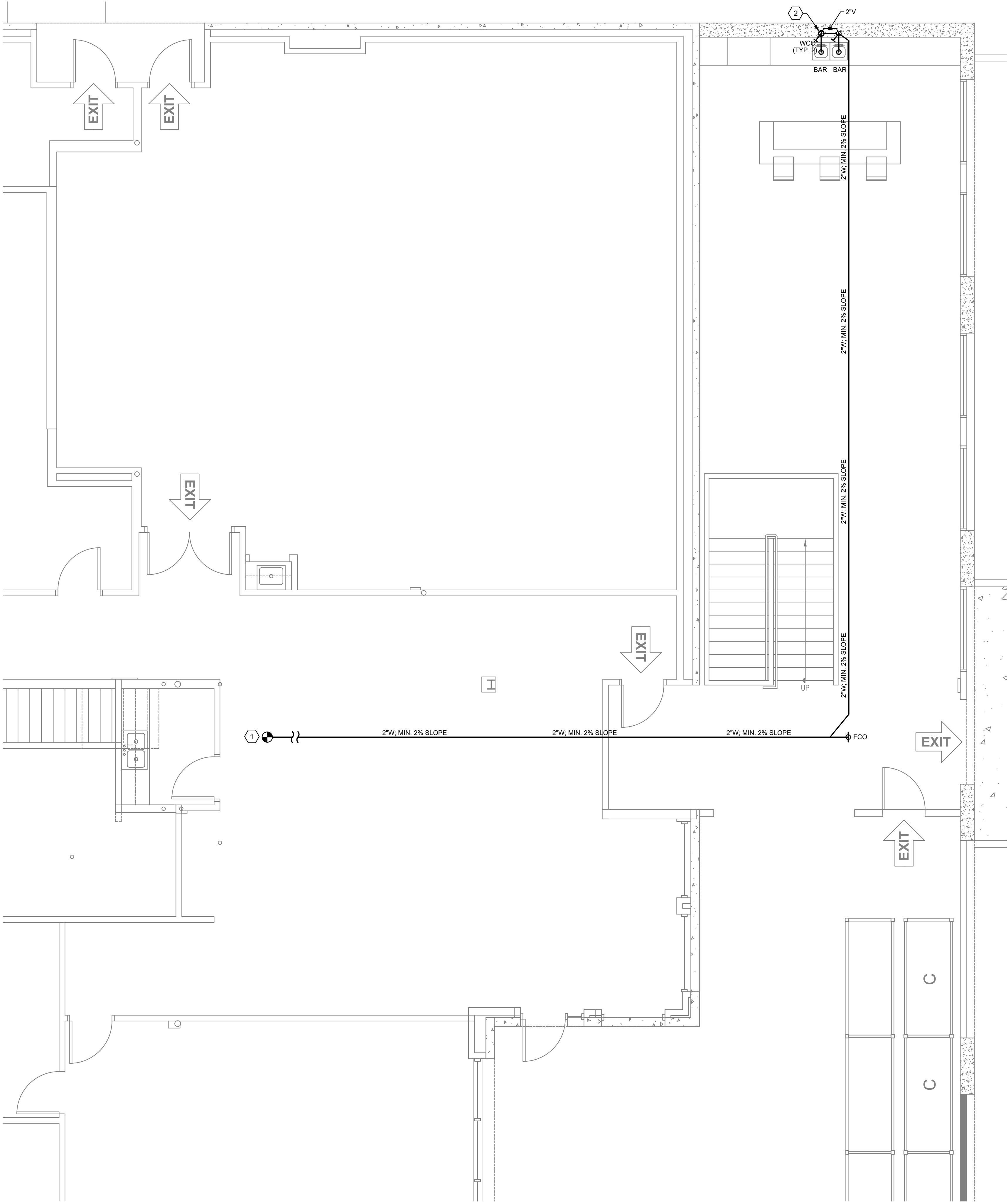


GST OFFICE

12881 166TH STREET,
CERRITOS, CA 90703

REVISION						
DATE:	03/16/2022	SCALE:				
SHEET TITLE:	PLUMBING DETAILS	SHEET NO.:	P001			

WASTE & VENT PLAN



KEYED PLAN

SCOPE OF WORK

- # KEYED PLAN NOTES:
1. P.O.C. TO EXISTING SANITARY WASTE WITH NEW PIPING. FIELD VERIFY ALL EXISTING CONDITIONS, SIZE, AND LOCATION PRIOR TO START OF THIS WORK.

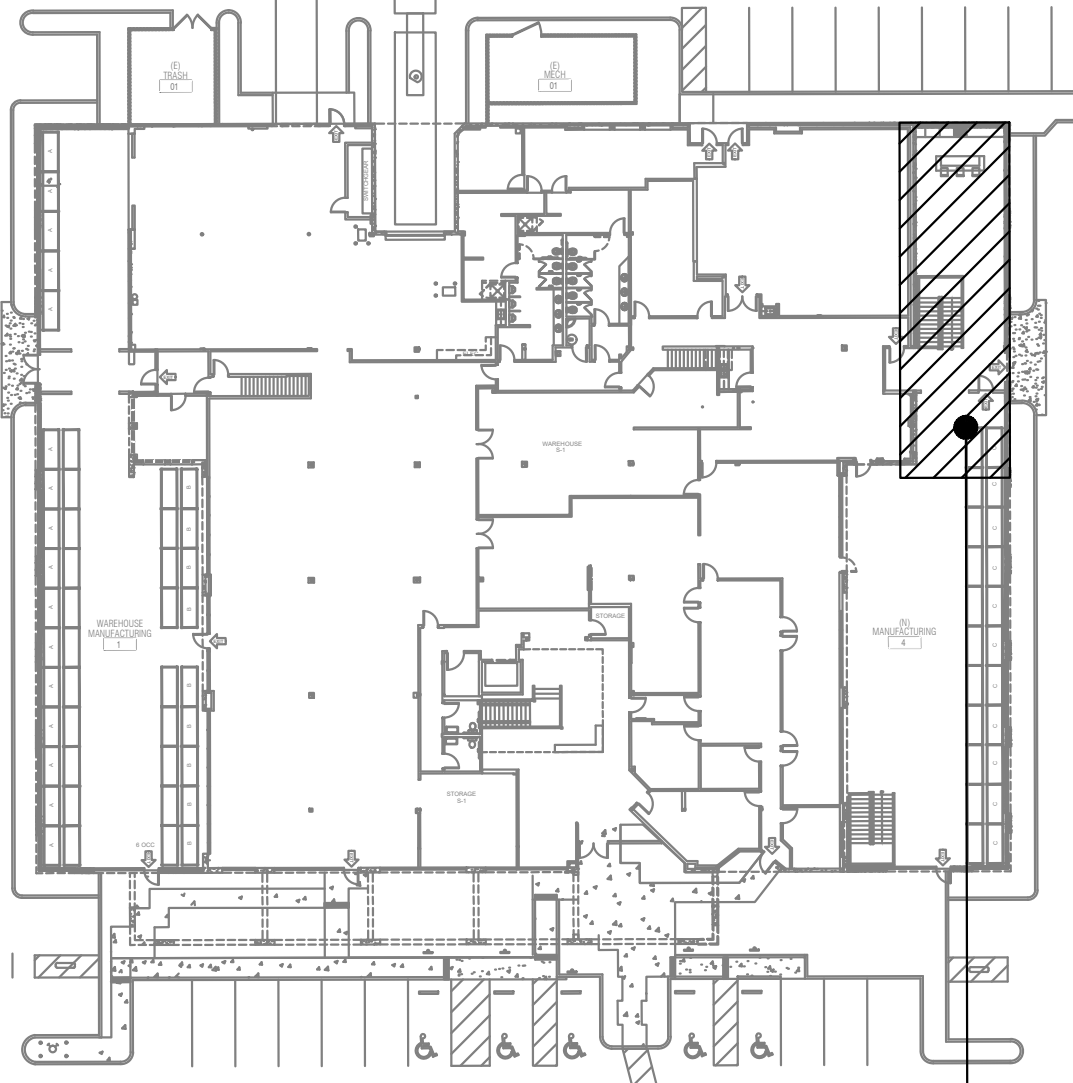
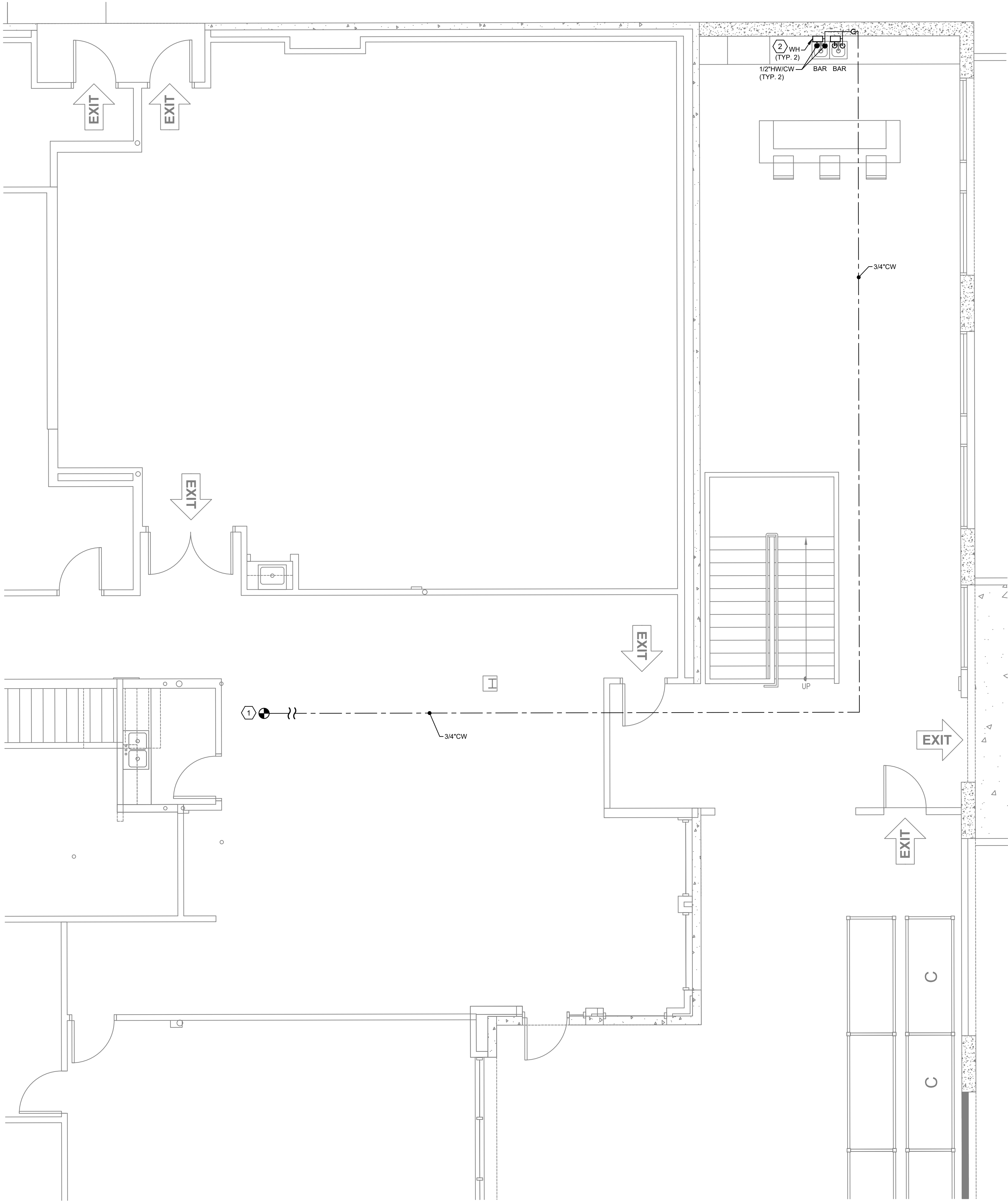
2. INSTALL NEW 2" VENT THRU ROOF. FIELD VERIFY LOCATION PRIOR TO START OF THIS WORK.
- GENERAL NOTES:
1. IF DRAWINGS ARE INCORRECT FROM THE ACTUAL SITE CONDITION, CONTRACTOR SHALL NOTIFY ENGINEER(S) AND PROVIDE INFORMATION REFLECTING ACTUAL CONDITIONS.

2. ALL PLUMBING FIXTURES AND CONNECTIONS ARE NEW UNLESS NOTED AS EXISTING.

REVISION				
DATE: 03/16/2022		SCALE: 1/4" = 1'-0"		
SHEET TITLE:				
WASTE & VENT PLAN				

P100

WATER & GAS PLAN



KEYED PLAN

SCOPE OF WORK

KEYED PLAN NOTES:

1. P.O.C. TO EXISTING CW LINE WITH NEW PIPING. FIELD VERIFY ALL EXISTING CONDITIONS SIZE AND LOCATIONS PRIOR TO START OF THIS WORK.
2. INSTALL NEW INSTAHOT WATER HEATER UNDER SINK.

GENERAL NOTES:

1. IF DRAWINGS ARE INCORRECT FROM THE ACTUAL SITE CONDITION, CONTRACTOR SHALL NOTIFY ENGINEER(S) AND PROVIDE INFORMATION REFLECTING ACTUAL CONDITIONS.
2. ALL PLUMBING FIXTURES AND CONNECTIONS ARE NEW UNLESS NOTED AS EXISTING.

GST OFFICE

12881 166TH STREET,
CERRITOS, CA 90703

REVISION

DATE: 03/16/2022 SCALE: 1/4" = 1'-0"

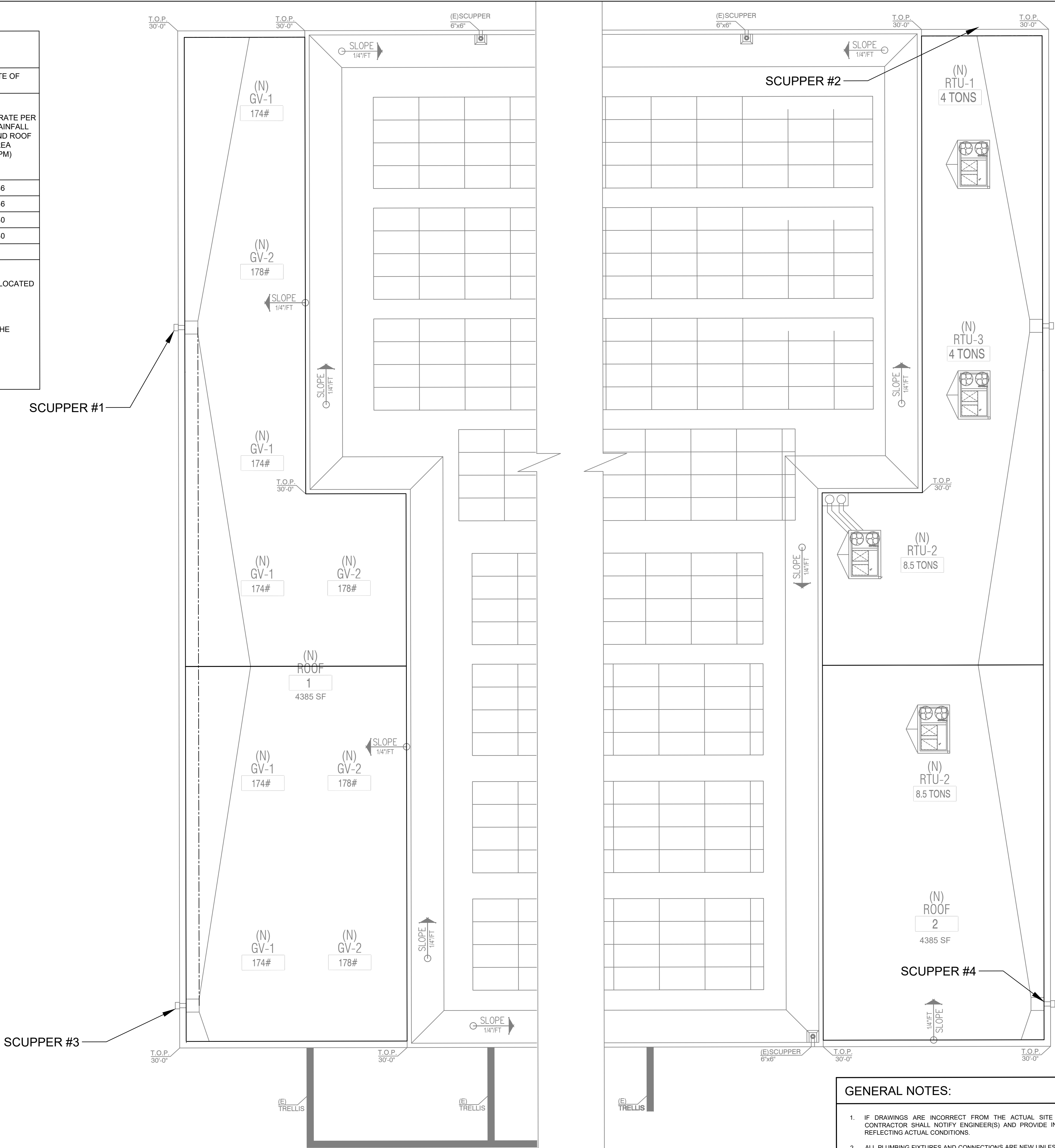
SHEET TITLE:

WATER & GAS
PLAN

SHEET NO.:

P200

ROOF DRAIN SIZING BY ROOF AREA						
REFERENCES: CPC 2019, CH-11, 1101.12; TABLES 1103.2, 1103.2, 1103.2, 1105.1 (1, 2), APPENDIX D (TABLE D101.1 & D104.1); MAX. RATE OF RAINFALL: 2 IN/HR						
SCUPPER #	ROOF SECTION AREA (SQ. FT.)	SIZING OF HORIZONTAL PIPING @ 2% SLOPE	MIN. ROOF DRAINS, LEADERS AND VERTICAL PIPE SIZE	MIN. SCUPPER WIDTH (INCH)	INSTALLED SCUPPER WIDTH (INCH)	RUNOFF RATE PER MAX. RAINFALL RATE AND ROOF AREA (GPM)
1	2191	3"Ø	3"Ø	10"	10"	46
2	2191	3"Ø	3"Ø	10"	10"	46
3	1950	3"Ø	3"Ø	10"	10"	40
4	1950	3"Ø	3"Ø	10"	10"	40
NOTE	1. OVERFLOW DRAINS HAVING THE SAME SIZE AS THE ROOF DRAINS SHALL BE INSTALLED WITH THE INLET FLOW LINE LOCATED 2" ABOVE THE LOW POINT OF THE ROOF. 2. ALL STORM DRAINAGE FIXTURES WILL BE SUPPLIED AND INSTALLED BY THE PLUMBER. 3. PROVIDE CLEANOUTS AT THE BASE OF THE OUTSIDE LEADER OR OUTSIDE CONDUCTOR BEFORE IT CONNECTS TO THE HORIZONTAL DRAIN. 4. RAIN WATER DRAINS SHALL NOT BE CONNECTED TO THE SANITARY SYSTEM.					



ROOF DRAINAGE PLAN

- GENERAL NOTES:
- IF DRAWINGS ARE INCORRECT FROM THE ACTUAL SITE CONDITION, CONTRACTOR SHALL NOTIFY ENGINEER(S) AND PROVIDE INFORMATION REFLECTING ACTUAL CONDITIONS.
 - ALL PLUMBING FIXTURES AND CONNECTIONS ARE NEW UNLESS NOTED AS EXISTING.

REVISION

DATE: 03/16/2022 SCALE: 1/8" = 1'-0"

SHEET TITLE:

ROOF DRAINAGE PLAN

SHEET NO.:

P300

STATE OF CALIFORNIA

Domestic Water Heating System

NRCC-PLB-E (Created 10/20)

CALIFORNIA ENERGY COMMISSION

NRCC-PLB-E

CERTIFICATE OF COMPLIANCE

This document is used to demonstrate compliance for nonresidential occupancies with requirements in §110.1, §110.3, §120.3, and §140.5, and with requirements in §141.0(a), for additions and alterations, for domestic water heating systems using the prescriptive path. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements in §110.1, §110.3, §120.3, §150.0 and §150.1(c)(8), and with requirements in §150.2 for additions and alterations.

Project Name: GST Office

Report Page: Page 1 of 5

Project Address: 12881 166th St.

Date Prepared: 2022-03-16

A. GENERAL INFORMATION

01 Project Location (city): Cerritos

02 Climate Zone: 02

03 Occupancy Types Within Project (select all that apply):
☒ Nonresidential
☐ State Building
☐ High-Rise Residential
☐ Healthcare Facility
☐ Hotel/ Motel
☐ Other (Write In):

B. PROJECT SCOPE

Table Instructions: Include any domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in §140.5, §150.1(c)(8), and §141.0(a), or §141.0(b)(2) for additions or alterations. Solar water heating systems should be documented on the NRCC-SRA compliance document. Combined hydronic water heating systems should be documented on the NRCC-MCH compliance document.

01 My project consists of (check all that apply):
☒ New System (DHW system being installed for the first time in newly constructed building)

02 System Type(s)¹: Individual System (serving nonresidential spaces)¹

03 System Components:
☒ Equipment
☒ Distribution
☒ Controls
☐ System Alteration (equipment, distribution or controls)
☐ Equipment
☐ Distribution
☐ Controls

1 FOOTNOTE: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.

2 Dwelling units refers to hotel/ motel guest rooms and units in a high-rise residential occupancy.

C. COMPLIANCE RESULTS

Table Instructions: Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, or the table indicated as not compliant for guidance.

01 Domestic Hot Water Equipment

02 Distribution Systems

03 Controls

04 Compliance Results

(See Table F)

(See Table G)

(See Table H)

COMPLIES

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards>

October 2020

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Project Address: 12881 166th St.

Date Prepared: 2022-03-16

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. DOMESTIC HOT WATER EQUIPMENT

Table Instructions: Complete the following table to demonstrate compliance with mandatory equipment requirements in §110.1 and §110.3. For high-rise residential and hotel/ motel occupancies, compliance with prescriptive requirements in §150.1(c)(8) must also be demonstrated and with §150.2 for addition and alteration scopes.

Equipment Schedule: Individual Systems

01 02 03 04 05 06

Name or Item Tag Equipment Type Volume (gal) Max GPM/ First Hour Rating (FHR) Rated Uniform Energy Factor (UEF) Minimum Required Uniform Energy Factor (UEF)¹

WH Electric Instantaneous (≤ 12kW) ≤2 0 ≤ GPM < 1.7 0.91 0.91

Reset Add Row Remove Last

1 FOOTNOTE: Compliant equipment may be found in the Modernized Appliance Efficiency Database System (MAEDBS) on the Energy Commission website: <https://acerappliance.energy.ca.gov/Pages/Search/AdvancedSearch.aspx>

Water Heating Equipment All Occupancies

Yes No Not Applicable Requirement

18 Unfired storage tank insulation shall have Internal + External ≥ R-16 OR External ≥ R-12. Label required per §110.3(c)(3)

19 New state buildings 60% of energy for service water heating from site solar energy or recovered energy per §110.3(c)(5)

20 Isolation valves for instantaneous water heater with input rating > 6.8 kBtUH or 2 kW has been specified per §110.3(c)(6)

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

Table Instructions: Complete the following table to demonstrate compliance for nonresidential occupancies with distribution requirements in §120.3 and §140.5. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements in §110.3(c), §120.3, §150.0, §150.1.

Table Continued

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards>

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Project Name: GST Office

Report Page: Page 3 of 5

Project Address: 12881 166th St.

Date Prepared: 2022-03-16

Table Continued

Mandatory Pipe Insulation All Occupancies

12 For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per §120.3:
- Rediculating system piping, including supply and return piping of the water heater
- The first 3 ft of hot and cold outlet piping for a nonrecirculating storage system
- Pipes that are externally heated

13 Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per §120.3(b) and §150.0(b)(3)

TABLE 120.3-A PIPE INSULATION THICKNESS

Fluid Temperature Range (°F) Conductivity Range (Btu-in per hour per ft² per °F) Insulation Mean Rating Temp (°F) Nominal Pipe Diameter (in)

<1 1 to < 1.5 1.5 to < 4

Minimum Insulation Required

105-140 0.22-0.28 100 1.0 in or R-7.7 1.5 in or R-12.5 1.5 in or R-11

H. DOMESTIC HOT WATER SYSTEM CONTROLS

Table Instructions: Complete the following table to demonstrate compliance with controls requirements in §110.3 for all occupancies. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements in §150.1(c)(8).

Yes No Not Applicable Requirement

01 Construction documents require manufacturer certification that service water-heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per §110.3(a)

02 Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per §110.3(c)(1) unless covered by California Plumbing Code Section 613.0.

03 Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)(2) unless system serves healthcare facility.

04 For recirculation systems serving multiple dwelling units, design includes automatic pump controls per §150.1(c)(8)(ii), or §150.2 for additions or alterations

05 For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA 4.4.9 per §150.1(c)(8).

06 For replacement single heat pump water heaters serving individual dwelling units in climate zones 1-15, design includes communication interface that meets demand responsive control requirements of §110.12(a) per §150.2(b)(1)(iii).

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards>

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Project Name: GST Office

Report Page: Page 4 of 5

Project Address: 12881 166th St.

Date Prepared: 2022-03-16

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/.

YES NO Form/Title Field Inspector Pass Fail

NRCI-PLB-01-E - Must be submitted for all buildings

NRCI-PLB-02-E - Must be submitted for high-rise residential and hotel/ motel central hot water distribution systems to be recognized for compliance.

NRCI-PLB-03-E - Must be submitted for high-rise residential and hotel/ motel single dwelling unit hot water distribution systems to be recognized for compliance.

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to service water heating requirements.

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/.

YES NO Form/Title Field Inspector Pass Fail

NRCV-PLB-21-H High-rise Residential Central Hot Water Distribution HERS Verification

NRCV-PLB-22-H High-rise Residential Individual Dwelling Unit Hot Water Distribution HERS Verification

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards>

October 2020

STATE OF CALIFORNIA

Domestic Water Heating System

NRCC-PLB-E (Created 10/20)

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NRCC-PLB-E

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Project Name: GST Office

Report Page: Page 5 of 5

Project Address: 12881 166th St.

Date Prepared: 2022-03-16

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete

Documentation Author Name: David Kang

Documentation Author Signature: [Signature]

Company: CDI

Signature Date: 2022-03-16

Address: 16520 Bake Pkwy, #100

CEA/ HERS Certification Identification (if applicable):

City/State/Zip: Irvine/CA/92618

Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.

2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)

3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.

4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: David Kang

Responsible Designer Signature: [Signature]

Company: CDI

Date Signed: 2022-03-16

Address: 16520 Bake Pkwy, #100

License: M37036

City/State/Zip: Irvine/CA/92618

Phone:

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards>

October 2020

CDI Circa Domini International, Inc.

Engineering - Consulting

16520 Bake Pkwy, Suite 100, Irvine, CA

Phone (949) 336-6636 | dkang@cdieng.com

REGISTERED PROFESSIONAL ENGINEER

CHUNG SUN KANG

M 37036

Exp. 9-30-22

MECHANICAL

STATE OF CALIFORNIA

GST OFFICE

12881 166TH STREET,

CERRITOS, CA 90703

REVISION

DATE: 03/16/2022

SCALE:

SHEET TITLE:

PLUMBING

TITLE 24

SHEET NO.:

TP00

PLOT DATE: 7/14/2022 5:49:17 PM