

CHARLESTON HEIGHTS COMMUNITY CENTER RENOVATION

800 BRUSH STREET
LAS VEGAS, NV 89107

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Vicinity Map



Project Team

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April 12, 2016

Mr. Patrick Batte
City of Las Vegas
Department of Public Works
333 North Rancho Drive
Las Vegas, Nevada 89106

RE: SDR-63790 [PRJ-63146] - ADMINISTRATIVE SITE DEVELOPMENT PLAN
REVIEW
ADMINISTRATIVE CYCLE - APRIL 2016

Dear Mr. Shaffer:

Your request for a Minor Site Development Plan Review FOR A 1,000 SQUARE-FOOT RESTROOM ADDITION AND NEW TRASH ENCLOSURE FOR AN EXISTING CIVIC BUILDING on 2.29 acres on the east side of Brush Street, approximately 150 feet south of Evergreen Avenue (APN 138-36-801-002), C-V (Civic) Zone, Ward 1 (Tarkanian) [PRJ-63146], has been considered administratively by the Department of Planning staff.

The Department of Planning has administratively **APPROVED** your request subject to the following:

Planning

- Conformance to the Conditions of Approval for Rezoning (Z-53-63) shall be required, if approved.
- This approval shall be void two years from the date of final approval, unless exercised pursuant to the provisions of LVMC Title 19.16. An Extension of Time may be filed for consideration by the City of Las Vegas.
- All necessary building permits shall be obtained and final inspections shall be completed in compliance with Title 19 and all codes as required by the Department of Building and Safety.
- These Conditions of Approval shall be affixed to the cover sheet of any plan set submitted for building permit.
- A fully operational fire protection system, including fire apparatus roads, fire hydrants and water supply, shall be installed and shall be functioning prior to construction of any combustible structures.
- All City Code requirements and design standards of all City Departments must be satisfied, except as modified herein.

2014 WINNER OF THE U.S. CONFERENCE OF MAYORS CLIMATE PROTECTION AWARD

SDR-63790 [PRJ-63146] - Page Two
April 12, 2016

Public Works

- Unless otherwise allowed by the City Engineer, record a "Declaration of Intent" for public sewer purposes such that when it is combined with the existing Public Sewer Easement (recorded document #910814:00928) the total width for sewer purposes is 20 feet wide over the existing public sewer which traverses this property.

- No trees or vegetation taller than three feet shall be allowed along the north 20-feet of this site.

This action by the Department of Planning staff on April 12, 2016 is final unless a written appeal is filed with the Director of the Department of Planning within ten days of the date of this letter.

Sincerely,

Sieve Gebeke, AICP
Planning Supervisor

SG:nl

cc:

Christel Jefferson
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RECORD DRAWING

BASED ON CONTRACTOR SUPPLIED
INFORMATION, WHICH HAS NOT BEEN VERIFIED
BY SH ARCHITECTURE

DATE: 02/15/2018



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Charleston Heights Community Center
- Renovation -

COVERSHEET

THIS DRAWING
WAS ORIGINALLY
STAMPED BY
JOHN A. SAWDON
ARCHITECT NO. 4058
ON 09/06/2016

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

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DRAWN CJT

FILE

DATE 05/02/2016

SCALE

BID NO 15.59806.JH

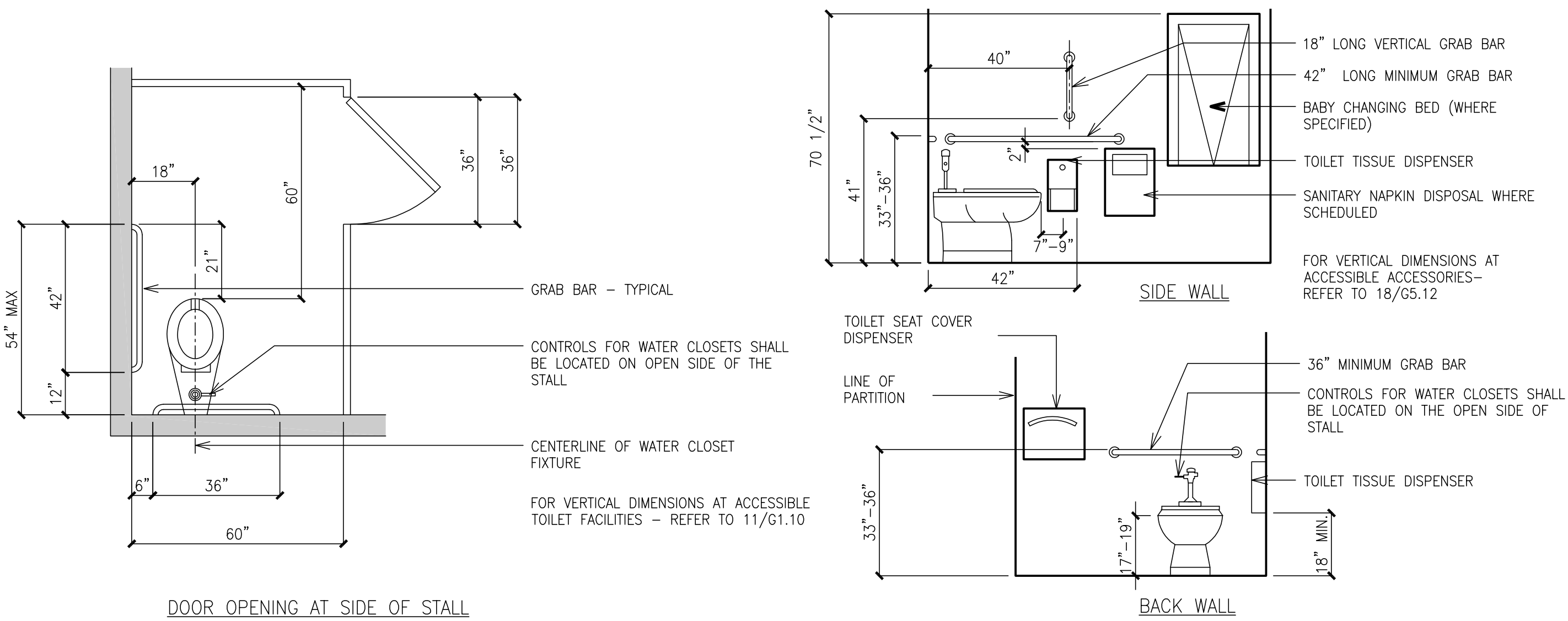
CLV DWG NO 620-10B

HANSEN NO 59806

SHT NO

AG0.00

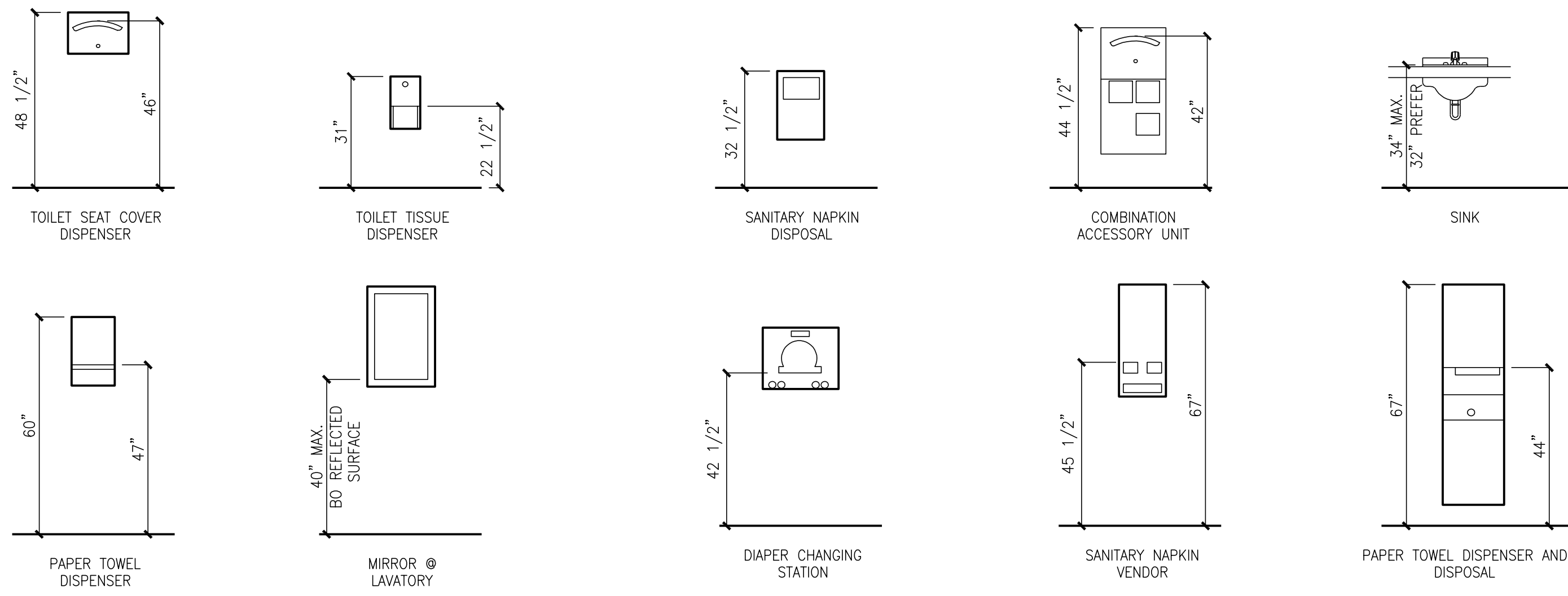
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H.C. TOILET STALL CLEARANCES

3/8" = 1'-0"

1. VERIFY ALL ACCESSORY SIZE AND MOUNTING WITH MANUFACTURERS APPROVED CUT SHEETS
2. TRAPS AND HOT WATER PIPES AT LAVS OR SINKS SET IN OPEN COUNTERS TO BE INSULATED

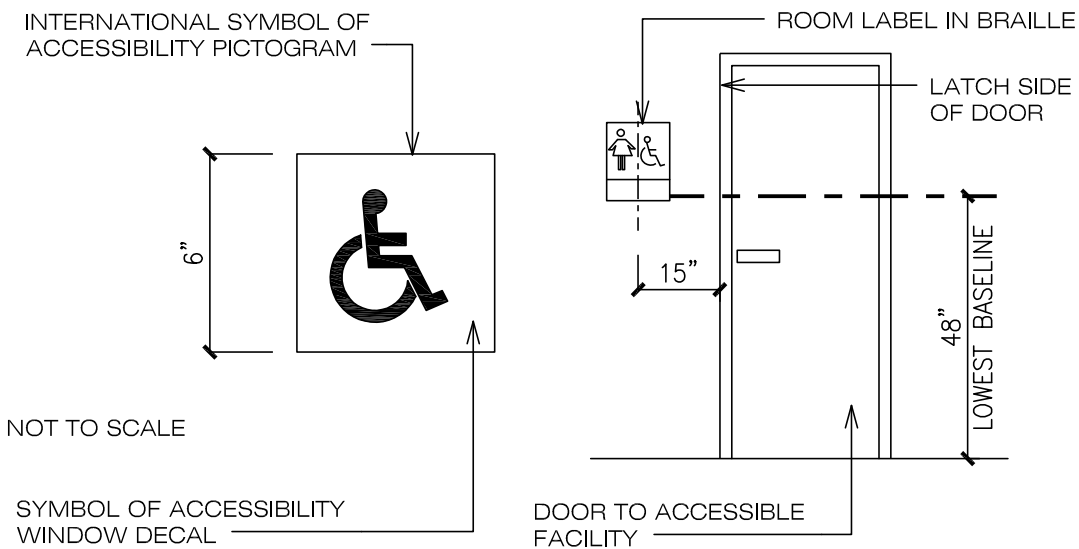


ACCESSIBLE FIXTURE AND ACCESSORY MOUNTING SCHEDULE

3/8" = 1'-0"

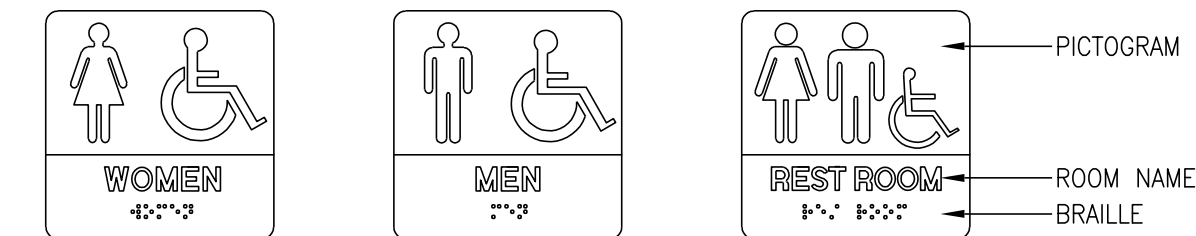
INTERNATIONAL SYMBOL OF ACCESSIBILITY

NOTE: WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE, INCLUDING AT THE DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL, PREFERABLY ON THE RIGHT



WALL MOUNTED SIGNAGE AT RESTROOMS

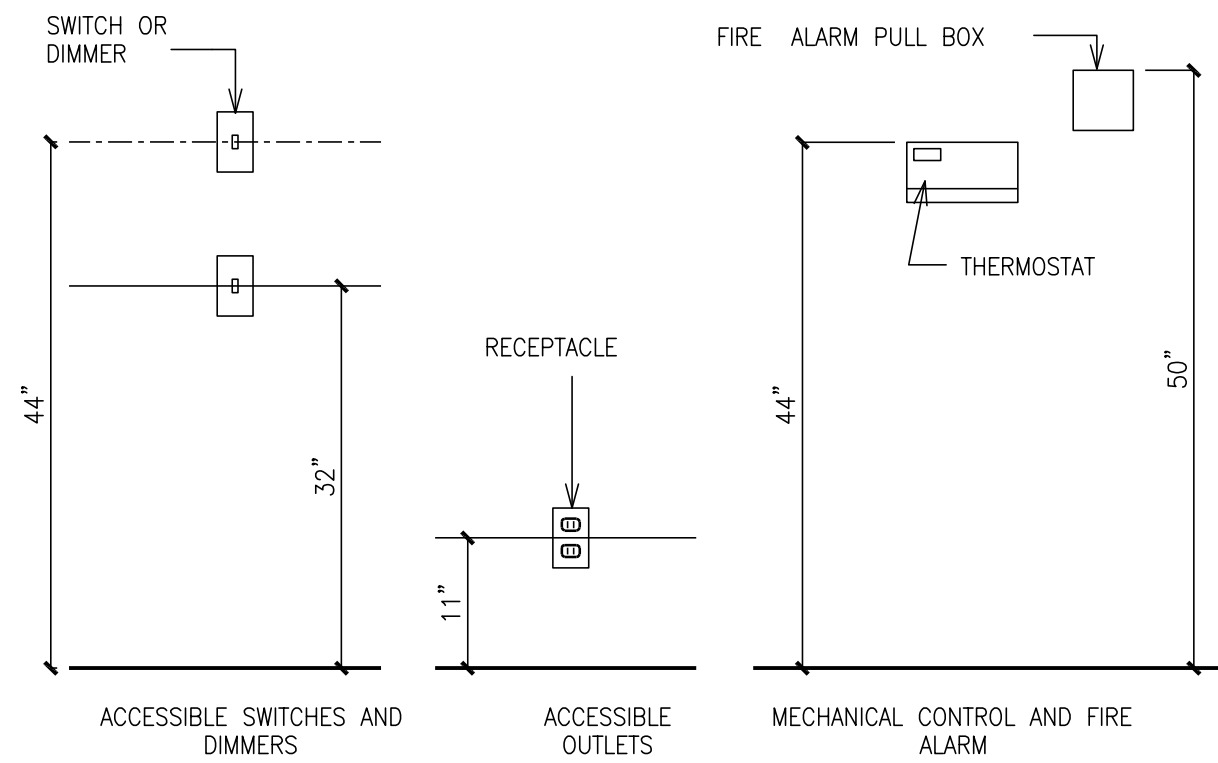
SIGNAGE IDENTIFICATION TO BE UPPERCASE LETTERS 5/8 INCH MINIMUM AND 2 INCH MAXIMUM HEIGHT. LETTERS ARE TO BE RAISED FROM BACKGROUND 1/32 INCH. BRAILLE SHALL BE CONTRACTED - GRADE II



ACCESSIBILITY SIGNS AT DOORS

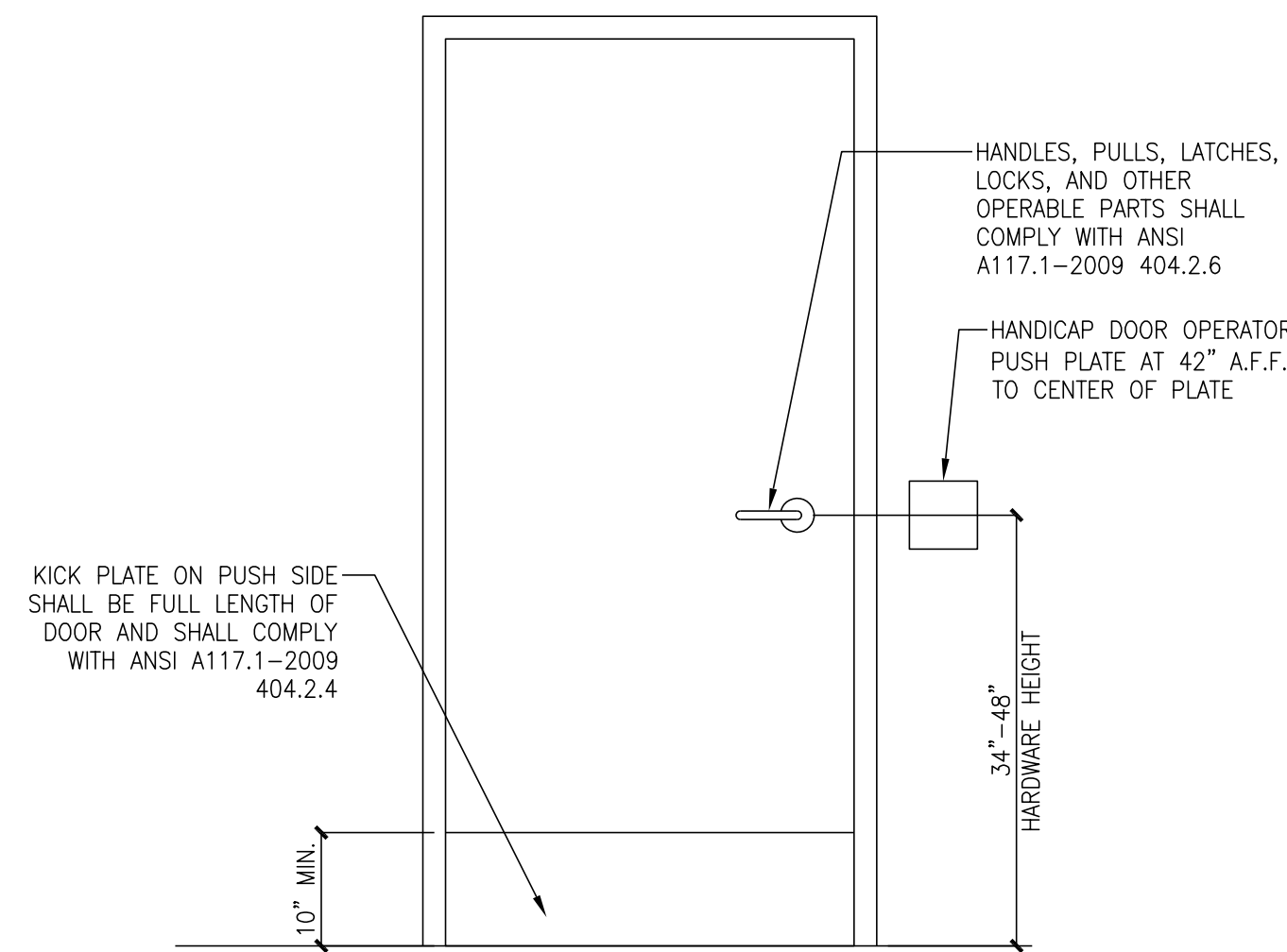
NTS

CENTER OF ELECTRICAL AND COMMUNICATION RECEPTACLE OUTLETS SHALL BE NOT LESS THAN 15" ABOVE FLOOR OR WORKING PLATFORM - EXCEPTION: REQUIREMENTS DO NOT APPLY WHERE USE OF SPECIAL EQUIPMENT DICTATES OTHERWISE OR WHERE ELECTRICAL AND COMMUNICATIONS SYSTEMS RECEPTACLES ARE NOT NORMALLY INTENDED FOR USE BY BUILDING OCCUPANTS.



RECEPTACLES AND SWITCHES

3/4" = 1'-0"

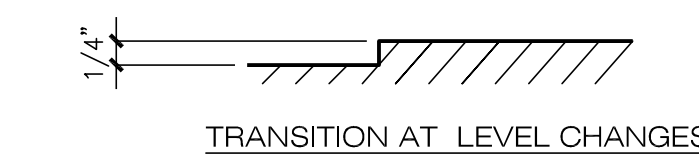
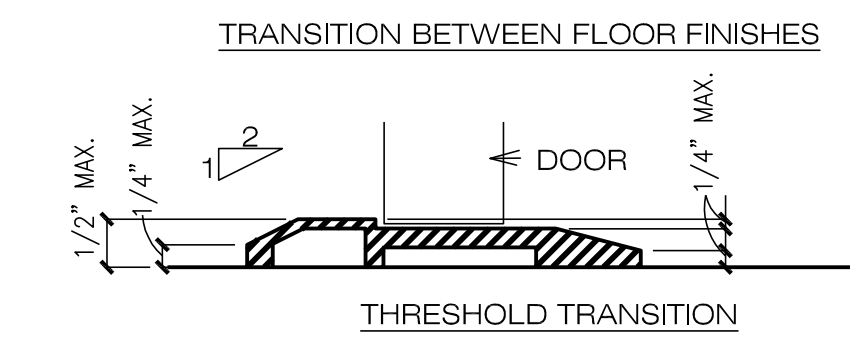
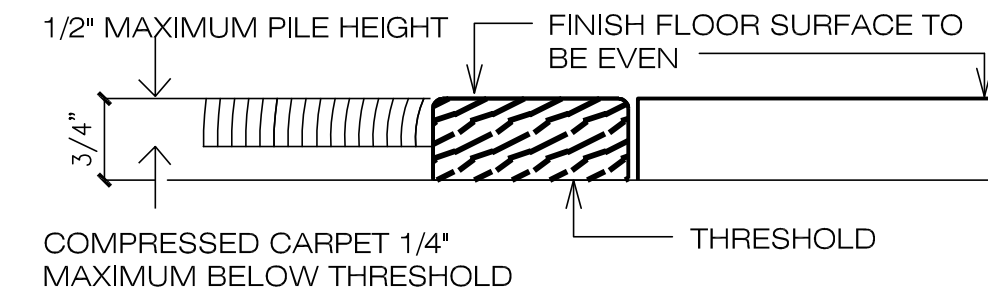


HARDWARE MOUNTING HT.

1/4" = 1'-0"

1. FLOOR OR LANDING SHALL NOT BE MORE THAN 1/2" LOWER THAN THRESHOLD OF DOORWAY. CHANGES IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE LEVELED WITH SLOPE NO GREATER THAN 1 VERTICAL TO 2 HORIZONTAL - EXTERIOR LANDING MAY SLOPE 2% MAX FOR SURFACE DRAINAGE

2. WHEN CARPET IS USED, IT SHALL BE SECURELY ATTACHED, HAVE FIRM CUSHION, PAD OR BACKING OR NO CUSHION OR PAD, AND HAVE LEVEL LOOP, TEXTURED LOOP, LEVEL CUT PILE, OR LEVEL CUT / UNCUT PILE TEXTURE. MAXIMUM PILE HEIGHT SHALL BE 1/2 INCH. EXPOSED EDGES OF CARPET SHALL BE FASTENED TO FLOOR SURFACES AND HAVE TRIM ALONG ENTIRE LENGTH OF EXPOSED EDGE.



LEVEL CHANGES AT THRESHOLD

1/4" = 1'-0"

RECORD DRAWING

BASED ON CONTRACTOR SUPPLIED INFORMATION, WHICH HAS NOT BEEN VERIFIED BY SH ARCHITECTURE

DATE: 02/15/2018



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Charleston Heights Community Center

- Renovation -

ACCESSIBILITY CLEARANCE STANDARDS

THIS DRAWING WAS ORIGINALLY STAMPED BY JOHN A. SAWDON ARCHITECT NO. 4058 ON 05/02/2016

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

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DRAWN

CJT

FILE

DATE

05/02/2016

SCALE

BID NO

15.59806.JH

CLV DWG NO

620-10B

HANSEN NO

59806

SHT NO

AG1.20

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EXISTING CODE STUDY (U.B.C. 1997)

Code Analysis:
Submitted under 1997 U.B.C. as adopted by the City of Las Vegas.

The city of Las Vegas has installed a fire sprinkler system throughout the building above and below the suspended ceiling in lieu of one hour construction.
The plumbing fixtures have been provided for 6 women and 6 men.
The two existing restrooms have been upgraded for full ADA compliance.

Scope of Work:
Provide a new 1,573 s.f. type V–1HR addition to the existing 23,666 s.f. Charleston Heights Arts Center facility. In addition, to reconfigure the existing parking spaces to provide additional handicapped parking spaces & an accessible route to comply with the 1994 U.B.C. & 1992 A.N.S.I. requirements.

(BUILDING A)	
Code Analysis – Existing Facility:	
Zone:	C–V
Type of Construction:	V–1HR.
Fire Sprinklers:	Existing
Mixed Occupancy:	
Multi–Purpose Rm.	A–2.1
Auditorium/Stage	A–2.1
Office	B
Storage	S–1
Height (Allowed):	50’–0”
Height (Actual):	28’–8”
Number of Stories (allowed):	2
Number of Stories (actual):	1
Allowable Area:	
A–2.1	10,500 SF
B	14,000 SF
S–1	14,000 SF

Allowable Area Increases:	
Separation on 3 side over 60 Feet = 100 Percent Increase.	
Increase for fully fire sprinkled building.	
A–2.1 (10,500 X 2 X 2)	42,000 SF
A–2.1 (10,500 X 2 X 2)	42,000 SF
B (14,000 X 2 X 2)	56,000 SF
S–1 (14,000 X 2 X 2)	56,000 SF

Occupant Loads:
Existing First Floor Occupancy: 2,340 persons
Total oreo (existing first floor): 22,616 SF

Existing Second Floor Occupancy: 7.3 persons
Total oreo (existing second floor): 1,050 SF

Total Existing Building Area: (first + second floors):	23,666 SF
Total Existing Parking	123 Spoces

(BUILDING B)
Code Analysis – New 1,573 SF Addition:

Zone:	C–V
Type of Construction:	V–N
Fire Sprinklers:	Provided
Occupancy:	B
Height (Allowed):	40’–0”
Height (Actual):	16’–8”
Number of Stories (allowed):	2 (See U.B.C. Table 5–B)
Number of Stories (actual):	1

Allowable Areas:	
B (New Addition):	8,000 SF (See U.B.C. Table 5–B)
Existing Facility (Mixed Occupancy):	42,000 SF (see code analysis for (e) facility)

Actual Areas:	
B (New Addition):	1,573 SF
Existing Facility (Mixed Occupancy):	23,666 SF

Occupant Loads:			
Use	Occupancy Group	Calculation	Occupancy Load:
Work Room	B	847. 5 @ 100	8.48 Persons
Receiving	B	240.4 @ 100	2.4 Persons
Storage	S–1	409.9 @ 300	1.37 Persons

Total Occupancy Load (Existing Addition):	12.25 Persons
---	---------------

Exiting Required:
Occupant Load = 12.3 Persons = 1 Exit required, 2 exits provided.
Required Exit width = 12.3 x 0.2 = 2.5 inches.
Exit width (Provided) = 36” @ 2 exits = 72” (total exit width provided).

Area Separation of Existing Facility and New Addition: (per section 504.6.2)
1 1/2 Hr. Rated Openings in 2 Hr. rated walls.
2 Hr. Required between Existing A2.1 occupancy & (New Addition), B occupancy (Refer to Table 3–B).
2 Hr. Required between Existing A2.1 occupancy & (New Addition), S–1 occupancy (Refer to Table 3–B).

Exterior Wall and Opening Protection (See Table 5–A):

Exterior Bearing Walls	Exterior Non–Bearing Walls	Exterior Openings:
One–Hour	Same as Bearing	Not permitted less than 5’ Protected less than 10’

Total Existing Building Area + New Addition:	25,239 SF
Handicap Parking	
Required: / Provided (101–150 Spoces per Chapter 19A.10 g)	
5 Total 1–Van Accessible w/4 Standard Handicap Parking.	

CODE ANALYSIS (BUILDING A WITH RESTROOM EXPANSION)

1) CODE YEAR / TYPE

2012 IFC WITH MODIFYING ORDINANCE 6325
2012 ADMINISTRATIVE CODE ORDINANCE 6349
2012 IBC WITH ORDINANCE 6350
2012 UMC WITH ORDINANCE 6354
2012 UPC WITH ORDINANCE 6355
2011 NEC WITH ORDINANCE 6356
2009 IECC WITH ORDINANCE 6144
2009 ICC/ANSI A117.1–2009

2) OCCUPANCY CLASSIFICATION

GROUP	DESCRIPTION
A–1	ASSEMBLY (AUDITORIUM, STAGE)
A–3	ASSEMBLY (SMALL MULTI–PURPOSE)
B	BUSINESS (OFFICES, CONFERENCE, CONTROL RM, BIG MULTI–PURPOSE ROOM)
S–1	STORAGE

3) TYPE OF CONSTRUCTION:

TYPE V–B

4) FIRE SPRINKLERS

REQUIRED: YES OR NO YES
IF YES: NEW___OR EXISTING_X_ TYPE: NEPA 13

5) FIRE ALARM

REQUIRED: YES OR NO YES IF YES: NEW_X_ OR EXISTING___
TYPE: AUTOMATIC___MANUAL_NEPA 72_

6) HEIGHT (W/ HEIGHT INCREASE PER IBC 504.2)

OCC. GROUP	ALLOWED HT.	ACTUAL HT.
A–1	60’	28’–8’
A–3	60’	28’–8’
B	60’	28’–8’
S–1	60’	28’–8’

7) STORIES

OCC. GROUP	ALLOWED STORIES	ACTUAL STORIES
A–1	2	1
A–3	2	1
B	3	1 WITH MEZZANINE
S–1	2	1

8) AREA: CALCULATIONS BASED ON MOST RESTRICTIVE OCCUPANCY A–1

If = [F/P–0.25]W/30		
If = [825/825–0.25]30/30 (30’ OF OPEN SPACE PROVIDED ON ALL FOUR SIDES OF BUILDING SEE SITE PLAN A1.10)		
If = [1–0.25]1		
If = [0.75]1		
If = 0.75		
Aa = {At + [At x If] = At x Is}		
BASIC ALLOWABLE AREA PER FLOOR (At)		5,500 SF
SPRINKLER INCREASE (Is) (506.3)	300%	16,500 SF
FRONTAGE INCREASE (If)	0%	0.75
Aa =5,500 + [5,500 x 0.75] + [5,500 x 3]}		
Aa = 5,500 + 4,125 + 16,500		
TOTAL ADJUSTABLE ALLOWABLE AREA (Aa)		26,125 SF
TOTAL TENANT IMPROVEMENT AREA (EXISTING FIRST FLOOR + 486 SF ADDITION)		24,925 SF
TOTAL TENANT IMPROVEMENT AREA (EXISTING MEZZANINE)		1,050 SF
TOTAL ACTUAL BUILDING AREA		25,728 SF

9 & 10) OCCUPANT LOAD & NUMBER OF EXITS

AREA	FUNCTION	AREA (SF)	FACTOR (TABLE 1004.1.2)	OCC. LOAD	EXITS REQ'D	EXITS PROV'D
ASSEMBLY (A–1)	AUDITORIUM	2,865	# OF SEATS	377	2	2
	STAGE	2,172	15	145	2	2
ASSEMBLY (A–3)	MULTIPURPOSE	10,777	15	719	4	4
BUSINESS (B)		7,005	100	71	2	3
STORAGE (S–1)	STORAGE	1,084	300	4	1	1
			TOTAL	1,316		

11) FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS

STRUCTURAL FRAME 0 HR.
BEARING WALLS – EXTERIOR 0 HR.
BEARING WALLS – INTERIOR 0 HR.
NON–BEARING WALLS 0 HR.
FLOOR CONSTRUCTION 0 HR.
ROOF CONSTRUCTION 0 HR.

12) REQ'D FIRE RESISTANCE OF EXTERIOR WALLS DUE TO LOCATION ON PROPERTY

WALL	SEPERATION DIST.	RATING
NORTH WALL	OVER 30 FEET	0 HR.
EAST WALL	OVER 30 FEET	0 HR.
SOUTH WALL	OVER 30 FEET	0 HR.
WEST WALL	OVER 30 FEET	0 HR.

13) PROTECTION OF OPENINGS DUE TO LOCATION ON PROPERTY AND MAXIMUM AREA OF EXT WALL OPENINGS

MAXIMUM AREA OF EXTERIOR WALL OPENINGS PER TABLE 705.8

WALL	FIRE SEPARATION DISTANCE	ALLOWABLE AREA
NORTH WALL	OVER 30 FEET	NOT REQUIRED
EAST WALL	OVER 30 FEET	NOT REQUIRED
SOUTH WALL	OVER 30 FEET	NOT REQUIRED
WEST WALL	OVER 30 FEET	NOT REQUIRED

14) SPACES REQUIRING FIRE-RESISTANCE RATED SEPARATION

EXISTING 1 HOUR RATED SEPARATION FOR FIRE RISER ROOM

15) NON-SEPARATED OR SEPARATED OCCUPANCIES

NON–SEPARATED OCCUPANCIES A–1, A–3, B, AND S–1

16) ROOF COVERING MATERIAL CLASS

TYPE OF CONSTRUCTION	ALLOWED	ACTUAL
V–B	C	C

17) REQUIRED PLUMBING FIXTURES

OCCUPANCY	OCCUPANT LOAD	WATER CLOSETS		LAVATORIES		BATHTUBS OR SHOWERS	DRINKING FOUNTAINS	SERVICE SINKS
		MALE	FEMALE	MALE	FEMALE			
ASSEMBLY A–1	522	1/125	1/65	1/200		–	1/500	1
		2	4	3	3	–	2	
ASSEMBLY A–3	719	1/125	1/65	1/200		–	1/500	1
		3	6	1	1	–	2	
BUSINESS	71	1/25	1/25	1/40		–	1/100	1
		2	2	1	1	–	0	
STORAGE	4	1/100	1/100	1/200		–	1/1000	1
		0.0	0.0	0.0	0.0	–	0.0	
TOTAL REQUIRED		7	12	5	5	–	4	4
TOTAL PROVIDED		7	12	5	5	–	3, AND 1 BOTTLE FILLING STATION	1

18) SPECIAL INSPECTION(S) REQUIRED

SEE GENERAL STRUCTURAL NOTES SHEET S1.01

19) I.E.C.C. COMPLIANCE REPORTS

COMcheck Software Version 4.0.2.8
Envelope Compliance Certificate

Project Information

Energy Code: 2012 IECC
Project Title: Charleston Heights Arts Center
Location: Las Vegas, Nevada
Climate Zone: 3b
Project Type: Addition
Vertical Glazing / Wall Area: 1%

Owner/Agent:
City Of Las Vegas

Designer/Contractor:
SH Architecture
7250 Peak Drive
Suite 216
Las Vegas, NV 89128
702-363-2222
jsawdon@sh-architecture.com

Building Area	Floor Area
1-Performing arts theater : Nonresidential	26355

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor _(a)
Floor 1: Slab-On-Grade-Unheated, [Bldg. Use 1 - Performing arts theater] (b)	807	---	---	0.730	0.730
Roof 1: Insulation Entirely Above Deck: High Albedo Roof Required, Initial Year Solar Reflectance = 0.70, Thermal Emittance = 0.75 (c). [Bldg. Use 1 - Performing arts theater]	26355	---	38.0	0.026	0.048
Exterior Wall 1: Concrete Block-8", Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - Performing arts theater]	4260	2.0	10.0	0.074	0.110
Door 1: Insulated Metal, Swinging, [Bldg. Use 1 - Performing arts theater]	70	---	---	0.350	0.610
Door 2: Glass (> 50% glazing)/Metal Frame, Entrance Door, Perf. Type: Energy code default, Double Pane with Low-E, Clear, SHGC 0.70, [Bldg. Use 1 - Performing arts theater]	140	---	---	0.800	0.770
Exterior Wall 2: Concrete Block-8", Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - Performing arts theater]	4260	2.0	10.0	0.074	0.110
Door 3: Insulated Metal, Swinging, [Bldg. Use 1 - Performing arts theater]	140	---	---	0.350	0.610
Exterior Wall 3: Concrete Block-8", Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - Performing arts theater]	3040	2.0	10.0	0.074	0.110
Door 4: Insulated Metal, Swinging, [Bldg. Use 1 - Performing arts theater]	90	---	---	0.350	0.610
Exterior Wall 4: Concrete Block-8", Solid Grouted, Normal Density, Furring: Metal, [Bldg. Use 1 - Performing arts theater]	3040	2.0	10.0	0.074	0.110

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor _(a)
Door 5: Insulated Metal, Swinging, [Bldg. Use 1 - Performing arts theater]	90	---	---	0.350	0.610
(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements. (b) Slab-On-Grade proposed and budget U-factors shown in table are F-factors. (c) High albedo roof requirement options: 1) 3-year aged solar reflectance >= 0.55 thermal emittance >= 0.75, 2) 3-year aged solar reflectance index >= 64.0, 3) Initial year aged solar reflectance >= 0.70 thermal emittance >= 0.75, 4) Initial year aged solar reflectance index >= 82.0.					
Envelope PASSES: Design 10% better than code					
Envelope Compliance Statement Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2012 IECC requirements in COMcheck Version 4.0.2.8 and to comply with the mandatory requirements listed in the Inspection Checklist.					
Name - Title	Signature		Date		



REVISIONS

ARCHITECT

SH ARCHITECTURE
7250 Peak Drive Suite 216 Las Vegas Nevada 89128
Office 702.363.2222
www.sh-architecture.com

Charleston Heights Community Center

– Renovation –

CODE ANALYSIS AND IECC COMPLIANCE

THIS DRAWING
WAS ORIGINALLY
STAMPED BY
JOHN A. SAWDON
ARCHITECT NO. 4058
ON 09/06/2016

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

333 NORTH RANCHO DRIVE
LAS VEGAS, NEVADA 89106
PHONE: (702) 239-6535
FAX: (702) 384-4846
TDD: (702) 386-9108

DRAWN	CJT
FILE	
DATE	05/02/2016
SCALE	
BID NO	15.59806.JH
CLV DWG NO	620–10B
HANSEN NO	59806
SHT NO	

AG2.10

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REVISIONS

ARCHITECT

SH
ARCHITECTURE
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office 702.260.2222
www.sh-architecture.com

Charleston Heights Community Center
– Renovation –
TYPICAL PARTITION FRAMING AND DETAILS

THIS DRAWING
WAS ORIGINALLY
STAMPED BY
JOHN A. SAWDON
ARCHITECT NO. 4058
ON 07/18/2016

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

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LAS VEGAS, NEVADA 89106
PHONE: (702) 239-6535
FAX: (702) 384-4846
TDD: (702) 386-9108

DRAWN CJT

FILE

DATE 05/02/2016

SCALE

BID NO 15.59806.JH

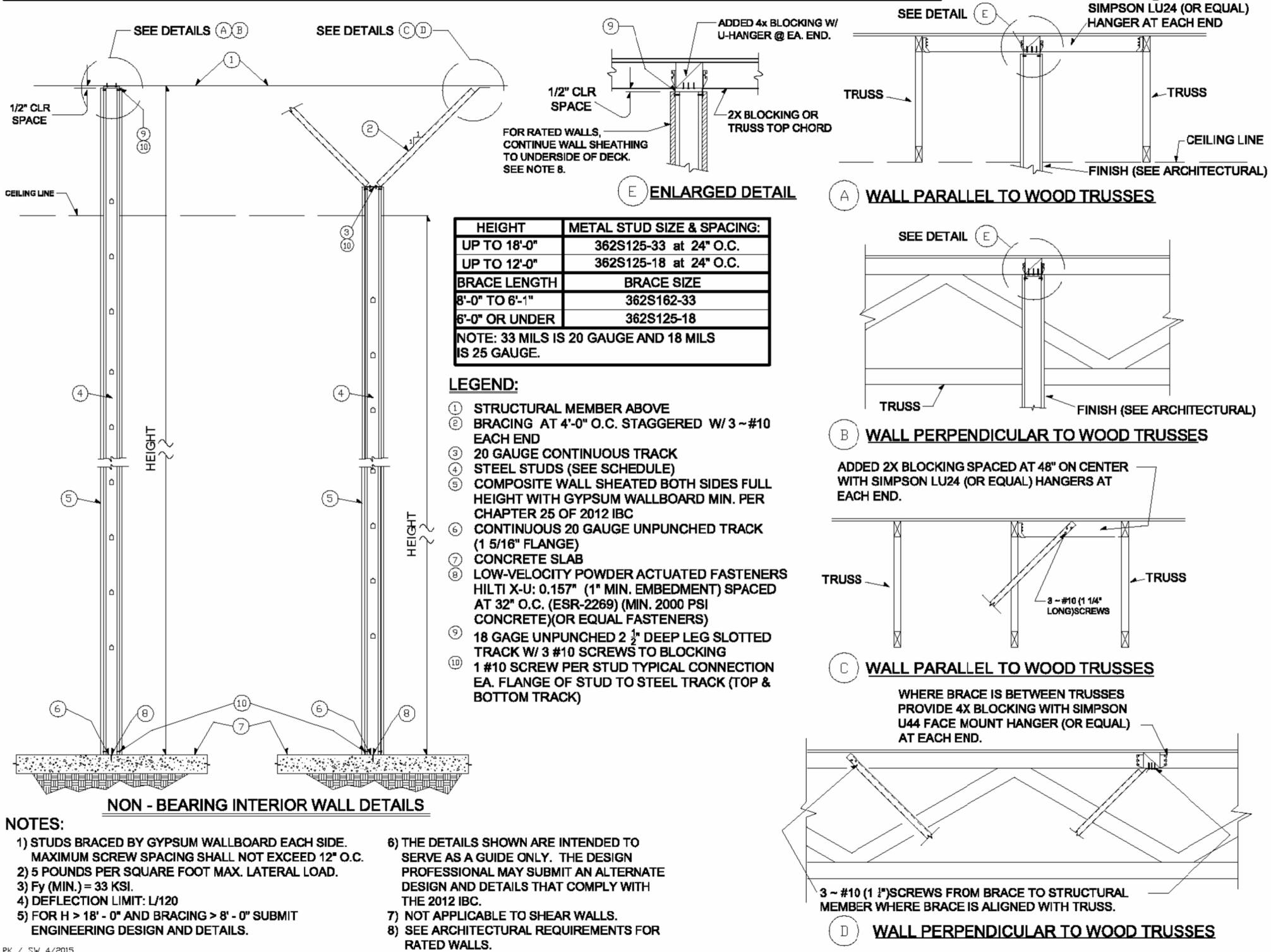
CLV DWG NO 620-10B

HANSEN NO 59806

SHT NO

AG3.10

NON - BEARING STEEL STUD WALL PARTITION DETAIL - TO WOOD (2012 IBC):



REV. / DW. 4/2015

RECORD DRAWING

BASED ON CONTRACTOR SUPPLIED
INFORMATION, WHICH HAS NOT BEEN VERIFIED
BY SH ARCHITECTURE

DATE: 02/15/2018

NON-BEARING METAL STUD WALL PARTITION DETAIL

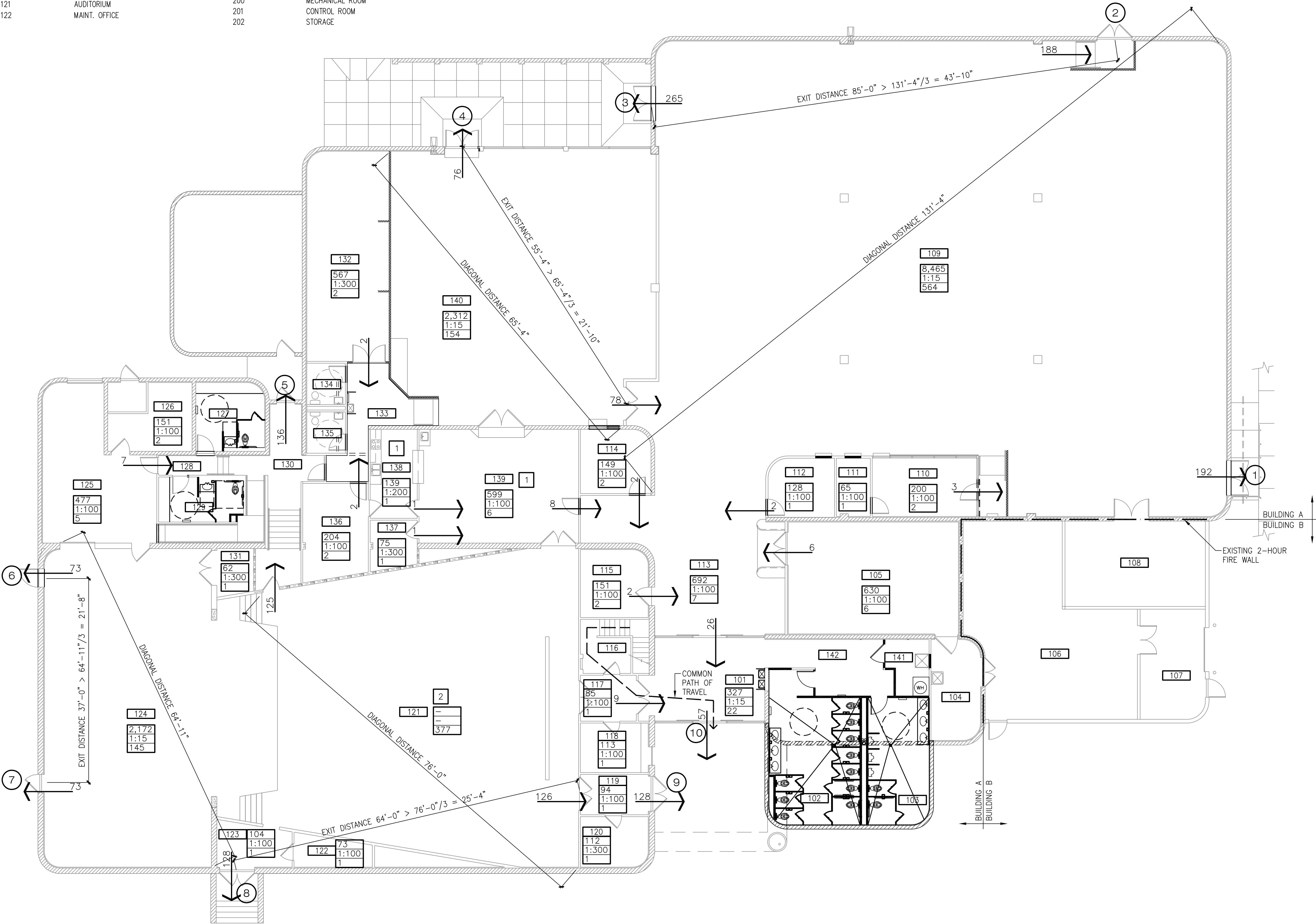
NTS

1

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ROOM LEGEND

ROOM NO.	DESCRIPTION	ROOM NO.	DESCRIPTION
101	ENTRANCE	123	ALCOVE
102	WOMENS	124	STAGE
103	MENS	125	BACKSTAGE WORK AREA
104	FIRE SPRINKLER/RISER	126	ELECTRICAL ROOM
105	EXHIBIT AREA	127	DRESSING ROOM
106	RECEIVING AREA	128	CORRIDOR
107	LOADING/UNLOADING	129	DRESSING ROOM
108	CHAIR STORAGE	130	CORRIDOR
109	MULTI-PURPOSE ROOM	131	STORAGE
110	OFFICE	132	STORAGE
111	OFFICE	133	CORRIDOR
112	OFFICE	134	TOILET ROOM
113	LOBBY	135	TOILET ROOM
114	OFFICE	136	STAFF ROOM
115	OFFICE	137	STORAGE
116	STAIR	138	SERVING
117	FOYER	139	CONFERENCE
118	BOX OFFICE	140	MULTI-PURPOSE ROOM
119	FOYER	141	JANITOR
120	STORAGE	142	CORRIDOR
121	AUDITORIUM	200	MECHANICAL ROOM
122	MAINT. OFFICE	201	CONTROL ROOM
		202	STORAGE



OVERALL EXITING PLAN

3/32" = 1'-0"

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	OCCUPANCY ROOM TAG: - SQUARE FOOTAGE OF SPACE - OCCUPANT LOAD FACTOR - NUMBER OF OCCUPANTS (N/C = NON-CONTRIBUTING LOAD)
	NUMBER OF OCCUPANTS EXITING TAG
	EXIT DOOR NUMBER
	EXIT ROOM NUMBER

EXIT DOOR KEY

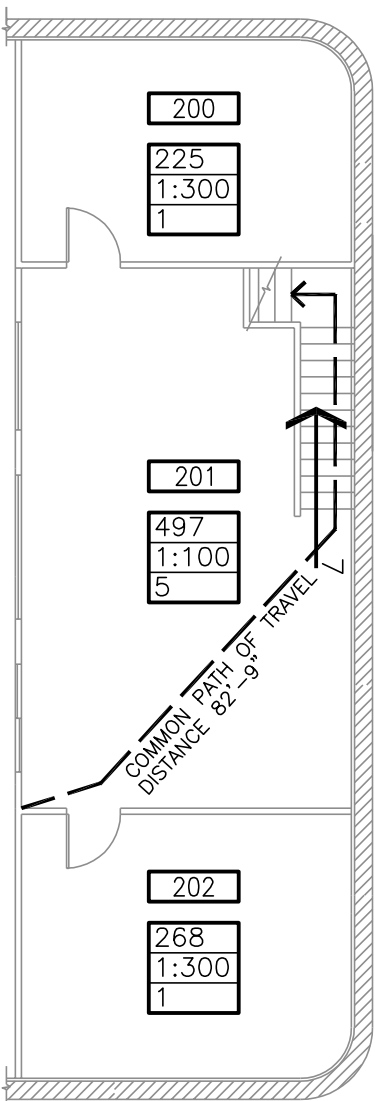
EXIT NUMBER	OCCUPANCY SERVED	EGRESS WIDTH FACTOR	WIDTH REQ'D (IN.)	WIDTH PROV. (IN.)	EXIT CAPACITY
1	192	.2	38.4	68	340
2	188	.2	37.6	68	340
3	265	.2	53	68	340
4	76	.2	15.2	68	340
5	136	.2	27.2	34	170
6	73	.2	14.6	34	170
7	73	.2	14.6	34	170
8	128	.2	25.6	68	340
9	128	.2	25.6	68	340
10	57	.2	11.4	68	340
TOTAL	1,316				

EXIT STAIR KEY

EXIT NUMBER	OCCUPANCY SERVED	EGRESS WIDTH FACTOR	WIDTH REQ'D (IN.)	WIDTH PROV. (IN.)	EXIT CAPACITY
1	7	.3	2.1	36	120

KEYNOTES

- 1 AREA CLASSIFIES AS OCCUPANCY TYPE "B" UNDER IBC 303.1.2
- 2 OCCUPANT LOAD IS BASED ON NUMBER OF FIXED SEATING PER IBC 1004.4.



MEZZANINE EXITING PLAN

3/32" = 1'-0"

RECORD DRAWING

BASED ON CONTRACTOR SUPPLIED INFORMATION, WHICH HAS NOT BEEN VERIFIED BY SH ARCHITECTURE
DATE: 02/15/2018



REVISIONS

ARCHITECT

Charleston Heights Community Center
- Renovation -
EXITING PLANS

THIS DRAWING
WAS ORIGINALLY
STAMPED BY
JOHN A. SAWDON
ARCHITECT NO. 4058
ON 08/02/2016

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

333 NORTH RANCHO DRIVE
LAS VEGAS, NEVADA 89106
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TDD: (702) 386-9108

DRAWN

CJT

FILE

DATE

05/02/2016

SCALE

BID NO

15.59806.JH

CLV DWG NO

620-10B

HANSEN NO

59806

SHT NO

AG4.10

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Call before you Dig

Avoid cutting underground utility lines. It's costly.

Call

811

OR

1-800-227-2600

Avoid hitting underground traffic signal systems and street light system conduits. It's costly.

Call before you do UnderGround

1-702-432-5300

LAS VEGAS AREA

COMPUTERIZED TRAFFIC SYSTEM

Avoid hitting overhead power lines. It's costly.

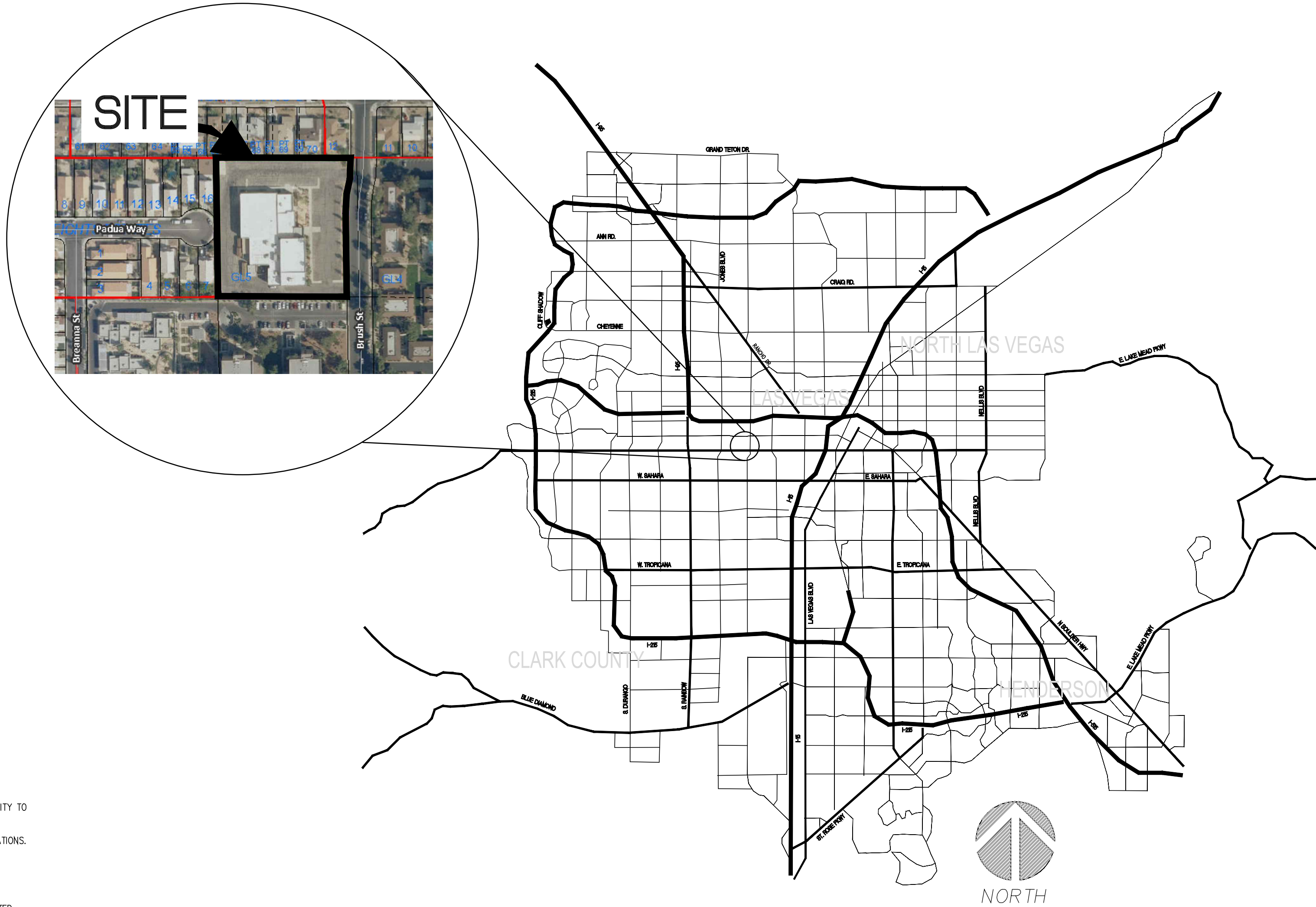
CALL BEFORE YOU DO OVERHEAD

1-702-227-2929

IMPROVEMENT PLANS FOR CHARLESTON HEIGHTS COMMUNITY CENTER RENOVATION CITY OF LAS VEGAS

APN #138-36-801-002

GOVERNMENT LOT 5 LOCATED IN THE SOUTH HALF (S 1/2) OF THE SOUTHEAST QUARTER (SE 1/4) SECTION 36
TOWNSHIP 20 SOUTH, RANGE 60 EAST, M.D.M.,
CITY OF LAS VEGAS, CLARK COUNTY, NEVADA.



NOTE:
EXISTING UTILITY LOCATIONS SHOWN HEREIN ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATIONS. CALL BEFORE YOU DIG. (800) 227-2600.

NOTE:
APPROVAL OF THESE PLANS BY CLARK COUNTY IS LIMITED TO THOSE IMPROVEMENTS CONSTRUCTED IN THE DEDICATED RIGHTS-OF-WAY AND/OR DEDICATED EASEMENTS. THIS APPROVAL DOES NOT AUTHORIZE THE CONSTRUCTION OF ANY IMPROVEMENTS THAT DEVIATE FROM ADOPTED STANDARDS AND/OR SPECIFICATIONS EXCEPT THOSE SPECIFICALLY IDENTIFIED AS "DEVIATIONS FROM STANDARDS". THE ENGINEER SHALL RESOLVE ANY DEVIATIONS OTHER THAN THOSE LISTED IN "DEVIATIONS FROM STANDARDS" IN FAVOR OF THE UNIFORM STANDARDS DRAWINGS AND SPECIFICATIONS CLARK COUNTY AREA NEVADA.", (CURRENT EDITIONS).

NOTE:
THE ENGINEER SHOULD CONTACT THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP) TO OBTAIN A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT PRIOR TO CONSTRUCTION. ALL CONSTRUCTION PROJECTS ONE ACRE OR LARGER MUST APPLY FOR THE PERMIT THROUGH THE NDEP. ALL QUESTIONS REGARDING THE NPDES PERMIT REQUIREMENTS SHOULD BE DIRECTED TO THE NDEP (775) 687-9429.

FLOOD ZONE INFORMATION:
THIS SITE IS LOCATED IN ZONE "X". AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN, PER THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL 32003C2170 F. CLARK COUNTY, NEVADA DATED NOVEMBER 16, 2011.
FLOOD DESIGNATION PROVIDED BY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) .

UTILITY DATA
POWER: NV ENERGY
WATER: LAS VEGAS VALLEY WATER DISTRICT
SEWER: CITY OF LAS VEGAS
GAS: SOUTHWEST GAS CO
TELEPHONE: CENTRAL TELEPHONE COMPANY DBA CENTURYLINK
DISPOSAL: REPUBLIC SERVICES

OWNER / DEVELOPER
CITY OF LAS VEGAS
333 N. RANCHO DR., 8TH FLOOR
LAS VEGAS, NV 89106
PH (702) 363-2222

ENGINEER
PER4MANCE ENGINEERING, LLC.
197 CARLSBAD CAVERNS ST
HENDERSON, NV 89012
PH (702) 569-9770

SHEET INDEX		
SHEET NUMBER	SHEET DESCRIPTION	SHEET TITLE
1	C-1	COVER SHEET
2	N-1	GENERAL NOTES AND QUANTITIES
3	UT-1	UTILITY PLAN
4	DT-1	DETAIL SHEET 1

RECORD DRAWING
BASED ON CONTRACTOR SUPPLIED INFORMATION, WHICH WAS NOT FIELD VERIFIED BY PER4MANCE ENGINEERING, LLC.
DATE: 02/15/18

APPROVALS

CITY OF LAS VEGAS

CITY ENGINEER, ALLEN PAVELKA P.E., #9029
CITY OF LAS VEGAS, NEVADA

"APPROVAL OF THESE PLANS BY THE CITY ENGINEER IS LIMITED TO THOSE IMPROVEMENTS CONSTRUCTED IN THE DEDICATED RIGHTS-OF-WAY AND/OR DEDICATED EASEMENTS. THIS APPROVAL DOES NOT AUTHORIZE THE CONSTRUCTION OF ANY IMPROVEMENTS THAT DEVIATE FROM ADOPTED STANDARDS AND/OR SPECIFICATIONS EXCEPT THOSE SPECIFICALLY LISTED UNDER "DEVIATIONS FROM STANDARDS" THE ENGINEER SHALL RESOLVE ANY DEVIATION OTHER THAN THOSE LISTED IN "DEVIATION FROM STANDARDS" IN FAVOR OF THE UNIFORM STANDARD DRAWINGS AND SPECIFICATIONS, CLARK COUNTY AREA, NEVADA."

CHRIS KNIGHT, DIRECTOR
BUILDING AND SAFETY DEPARTMENT
CITY OF LAS VEGAS, NEVADA

THIS PLAN MEETS THE APPLICABLE STANDARDS OF THE PLANNING AND DEVELOPMENT DEPARTMENT.

N/A
LAS VEGAS FIRE AND RESCUE

NV ENERGY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NV ENERGY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.
N/A
NV ENERGY

"THE AFFIXED CENTRAL TELEPHONE COMPANY DBA CENTURYLINK APPROVAL DOES NOT ASSUME OR GUARANTEE LIABILITY FOR KNOWN OR UNKNOWN CONFLICTS WITH EXISTING OR PROPOSED IMPROVEMENTS. RESOLUTION OF ANY CONFLICT WILL BE ACCOMPLISHED PURSUANT TO LOCAL ORDINANCES, NEVADA REVISED STATUTES AND/OR PUBLIC UTILITY COMMISSION RULES AND REGULATIONS."

N/A
CENTRAL TELEPHONE COMPANY DBA CENTURYLINK

SOUTHWEST GAS CORPORATION

N/A
COX COMMUNICATIONS LAS VEGAS, INC.



REVISIONS
ARCHITECT

ARCHITECTURE

Charleston Heights Community Center
- Renovation -

100% PERMIT SET
COVER SHEET

THIS DRAWING WAS
ORIGINALLY STAMPED
BY
RAY FREDERICKSEN,
P.E. NO. 17471
ON
05/02/2016

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

333 NORTH RANCHO DRIVE
LAS VEGAS, NEVADA 89106
PHONE: (702) 229-6535
FAX: (702) 384-4846
TDD: (702) 386-9108

DRAWN CJT
FILE
DATE 02/15/2018
SCALE 1" = 30'
BID NO 15.59806.JH
CLV DWG NO 620-10B
HATCHEN NO 59806
SHEET NO

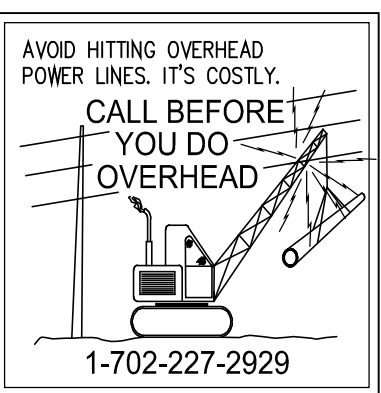
1 OF 4

ALIC CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA", LATEST REVISED EDITION: THE "UNIFORM IMPROVEMENTS STANDARD SPECIFICATIONS FOR THE SUMMERLIN AREA, AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY, THE "UNIFORM BUILDING CODE, AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".

THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE USER. THE EXISTING UTILITY DEPT. MAPS MAY NOT BE SHOWN TO SCALE. THE USER SHALL BE RESPONSIBLE AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCE WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.

- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REQUIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
- ALL CONSTRUCTION SHALL BE SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
- TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM 6028 DAYS. MIX DESIGN TO BE APPROVED BY THE CITY ENGINEER, PRIOR TO THE USE ON THE PROJECT.
- PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
- EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 150' IN EXTRUDED-TYPE CURB, PER SUMMERLIN IMPROVEMENT STANDARDS.
- AC PAVEMENT TO BE ONE-HALF INCH (1/2") ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
- CURB AND GUTTER FLOW TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER SUMMERLIN STANDARD DRAWING 216.
- SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD SUMMERLIN DRAWINGS. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF TRANSITIONS TO BE AS SHOWN ON PLANS.
- ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY TERRACON, PROJECT NO. 64965481, AND AS SHOWN ON THESE PLANS.
- EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES LOCATIONS.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. NO. 625.550.
- UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC., SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.
- WALL NOTES:
ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
- ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT-OF-WAY.
- CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC. TO FINISH GRADE AS APPLICABLE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.
- MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF NDOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.
- WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC. THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO OFFSITE INSPECTION AND TESTING CERTIFYING THAT ALL DEVICES HAVE BEEN PLACED AND VERIFIED TO BE IN GOOD WORKING CONDITION PRIOR TO CONSTRUCTION OF ANY ROAD.
- SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE OFFSITE INSPECTION AND TESTING SCHEMA PRIOR TO PROJECT ACCEPTANCE. THE MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO THE INLET, AND THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERAL EXITS THE PUBLIC RIGHT OF WAY. THE LOCATION SHALL BE DESCRIBED BY STATE PLANE COORDINATES WHICH SHALL BE BASED ON "NEVADA COORDINATE SYSTEM OF 1983, EAST ZONE" AS DEFINED BY THE NEVADA REVISED STATUTES CHAPTER 327, AND TIED TO CITY OF LAS VEGAS VERTICAL CONTROL BENCHMARK NETWORK. COORDINATES MUST BE CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTANTIES OF +/- 0.1 METER (+/- 0.3 FEET) A SEPARATE ELECTRONIC COMMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN CONNECTIONS SHALL ALSO ACCOMPANY THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).
- SANITARY SEWER SERVICE LATERALS REQUIRE THE INSTALLATION OF A MARKER BALL AT THE CONNECTION OF THE SEWER SERVICE LATERAL TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERAL EXITS THE PUBLIC RIGHT OF WAY. STORM DRAIN LATERALS REQUIRE THE INSTALLATION OF A MARKER BALL AT THE CONNECTION OF THE STORM DRAIN LATERAL TO THE STORM DRAIN MAIN AND WHERE THE STORM DRAIN LATERAL EXITS THE PUBLIC RIGHT OF WAY OR WHERE THE STORM DRAIN LATERAL CONNECTS TO A DROP INLET. THE MARKER BALL SHALL BE 3M 4" MARKER BALL 1404-XR OR APPROVED EQUIVA.
- CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST ADDITION.
- A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

3. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD SPECIFICATIONS FOR SEWER WORKS' CONSTRUCTION IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER PLANS. ANY ADDITIONS, DELETIONS, OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CITY ENGINEER.
5. CHISEL "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
6. POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II AGGREGATE BASE.
7. ALL MANHOLES PAVED IN STREETS EIGHTY (80') FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREETS LESS THAN EIGHTY (80') FOOT R/W WILL REQUIRE RETROFIT IF PAVING DOES NOT CONFORM TO CITY STANDARDS AT THE MANHOLE.
8. TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO TWELVE INCH (12") DIAMETER. CONNECTIONS TO FIFTEEN INCH (15") OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "Y" S SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.
9. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER A WATER MAIN.
10. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONTRACTORS.
11. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE SHALL BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.
12. INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PVC PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.



1. IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE OWNER/ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES.
3. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION. ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION.
4. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT.
6. CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICATED:

	HORIZONTAL	VERTICAL	COMPACTION
A. PAVEMENT AREA SUBGRADE	0.1"+	+0.0' TO -0.1'	SEE SOILS REPORT
B. ENGINEERED FILL	0.5"+	+0.1' TO -0.1'	SEE SOILS REPORT
7. COMPACTION TESTING WILL BE PERFORMED BY THE OWNER OR HIS REPRESENTATIVE AND COPIES OF TEST RESULTS WILL BE PROVIDED TO THE CITY.
8. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
9. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER.
10. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC, SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.

1. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.
2. THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.
3. BEFORE ANY WORK IS STARTED IN THE RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING CITY STREETS. MAINTENANCE IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
4. WHEN A DESIGNATED "SAFE ROUTE TO SCHOOL" IS ENCLOSED UPON BY A CONSTRUCTION WORK ZONE AND PUBLIC WORKS STAFF IDENTIFIES A NEED FOR STUDENTS TO BE ASSISTED IN THE SAFE CROSSING THROUGH THAT WORK ZONE, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A QUALIFIED "CROSSING GUARD". THE GUARD SHALL BE PRESENT FOR THE FULL DURATION OF TIME THAT CHILDREN ARE LIKELY TO BE PRESENT.
5. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CURRENT CITY STANDARDS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CITY STANDARDS.
7. WHEN A PROPOSED STREET LIGHT STANDARD IS LOCATED WITHIN FIVE FEET (5') OF ANY PROPOSED SIGN SHOWN ON THE PLANS TO BE MOUNTED ON A SIGNPOST, THE SIGN SHALL BE MOUNTED ON THE STREET LIGHT STANDARD AND THE SIGNPOST SHALL BE ELIMINATED.
8. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC TO ENTER THE ROADWAY BEING IMPROVED HEREUNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
9. STREET SIGNS AND STOP SIGNS SHALL BE INSTALLED PER CITY STANDARD SPECIFICATIONS FOR PLACEMENT OF STREET NAME SIGNS.
10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND FLAGGERS TO ENSURE THE SAFETY OF THE PUBLIC IN OR AROUND THE WORK AREA. THE CONTRACTOR SHALL HAVE A CERTIFIED ATSSA TRAFFIC CONTROL TECHNICIAN OR WORK ZONE SAFETY COUNCIL SET-UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS PRIORS OF WAY.
11. WORK IN PUBLIC STREETS, OTHER BEGUN, SHALL BE EXPEDITED TO COMPLETION SO AS TO PROVIDE A MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING CITIZENS AREA TRANSIT (C.A.T.) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET AND TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.
13. GUARDS SHALL BE OBTAINED BY CONTACTING THE METROPOLITAN POLICE DEPARTMENT SPECIAL EVENTS UNIT (PHONE NO. 752-4529). INSPECTOR WILL BE REQUIRED TO OBTAIN PERMIT, TRAINED IN TRAFFIC CONTROL, FEES FOR THE USE OF THESE OFFICERS SHALL BE SET BY METRO AND SHALL BE PAID BY CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL ARRANGEMENTS WITH METRO.
14. ANY WORK WITHIN 300' OF A SIGNALIZED INTERSECTION SHALL BE NIGHT WORK, UNLESS DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.
15. THE CONTRACTOR SHALL PRIOR TO THE TRAFFIC ENGINEERING DIVISION (TRANSPORTATION SECTION) THROUGH THE PROJECTS OFFICE INSPECTOR PRIOR TO WAITING PAVING TO RECEIVE DIRECTION FOR ANY PERMANENT OR TEMPORARY MODIFICATIONS TO THE APPROVED DRAWINGS REGARDING FINAL PAVEMENT TRANSITIONS MARKINGS AND SIGNING THAT ARE REQUIRED TO MATCH ADJACENT ROADWAY SEGMENTS THE CONTRACTOR SHALL PROVIDE A DRAWING FOR APPROVAL BY THE TRAFFIC ENGINEERING DIVISION ADJUNCT ANY ADJUSTMENTS TO THE FINAL PAVEMENT MARKINGS AND SIGNAGE, WHICH MAY INCLUDE MODIFYING, ADDING OR MODIFYING PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS SUCH THAT ADEQUATE TRANSITIONS AND LANE TERMINATIONS BETWEEN ADJACENT ROADWAY SEGMENTS ARE CONSTRUCTED.

1. ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST EDITION, AND THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST EDITION, AND "SUMMERLIN IMPROVEMENT STANDARDS", LATEST EDITION.
2. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS (ETC.) LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE TRAFFIC/ELECTRICAL FIELD OPERATIONS DIVISION AND THE CITY ENGINEER. ANY DEVIATION FROM THE PLAN LOCATION WILL REQUIRE COMPLIANCE WITH SECTION 623.10.0.3 (E) OF THE SPECIFICATIONS.
3. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
4. ALL STREET LIGHTING CONDUITS STUB SHALL HAVE AT LEAST ONE GREEN #8 THW WIRE INSTALLED, AS TRACER WIRE. WHEN "EMPTY" CONDUIT IS COMPLETELY INSTALLED FROM PB TO PB, IT SHALL HAVE A MINIMUM OF 2 #4 AND 1 #8 THW WIRE WITH THE ENDS TAPED OR "SAFE OFF" PRIOR TO FINAL INSPECTION.
5. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN ACCORDANCE WITH THE UDC 320A.
6. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TEF0 PRIOR TO ANY PREFINAL INSPECTION. THE AS-BUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.
7. SERVICE POINT SHALL BE COORDINATED WITH NV ENERGY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICE POINTS SHALL BE SHOWN ON THE PLANS.
8. IT SHALL BE ASSUMED THAT IN THE ABSENCE OF AN EXISTING, WORKABLE CIRCUIT TO ATTACH TO, ALL INSTALLATIONS SHALL REQUIRE A NEW SERVICE FOR OPERATION OF THE CIRCUIT.
9. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREET LIGHTING CIRCUITS AND/OR POLES, THESE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES INVOLVED BEFORE STREETLIGHT BASES ARE INSTALLED AT NO EXPENSE TO THE CITY OF LAS VEGAS.
10. THE CONTRACTOR SHALL FURNISH COMPLETE SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON PLANS.
11. THE DEVELOPER/OWNER WILL BE REQUIRED TO SUPPLY POWER TO ALL NEW PUBLIC STREET LIGHTS INSTALLED UNDER THIS DESIGN PRIOR TO BOND RELEASE AND PROJECT COMPLETION. THE DEVELOPER/OWNER WILL BE RESPONSIBLE FOR ALL ITEMS ASSOCIATED WITH THE INSTALLATION, CONSTRUCTION, ENERGIZING, MAINTENANCE, AND OPERATIONAL COSTS OF SAID STREET LIGHTS PRIOR TO PROJECT COMPLETION. REFER TO THE PLAN FOR ANY NEW SERVICE REQUIREMENT. THE TRANSFER OF OWNERSHIP FROM THE DEVELOPER/OWNER TO THE CITY OF LAS VEGAS FOR ALL NEW PUBLIC STREET LIGHTS AND/OR SERVICES INSTALLED UNDER THIS PLAN DESIGN WILL BE IN CONJUNCTION WITH THIS PROJECT COMPLETION. COORDINATE ALL MAINTENANCE AND OPERATIONAL TRANSFERS WITH THE CITY OF LAS VEGAS TRAFFIC ENGINEERING DEPARTMENT (TEF0) (702) 229-6331.

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT'S ORDINANCE # 6124, FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATION.
2. AUTHORIZED FIRE HYDRANTS FOR THIS PROJECT ARE:
 - A. KENNEDY - GUARDIAN MODELS K81A AND K81D
 - B. MUELLER - SUPER CENTURION 250 MODEL A-423
 - C. CLOW - MEDALLION MODEL F-2546LSD
 - D. U.S. PIPE - METROFLOW/M-03
3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR THE INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK.
4. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. SNFC#6124, SECTION 1412.
5. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF STREET ADJACENT TO SNFC #6124 SECTION 507.5.3.
6. ALL UNDERGROUND INSPECTIONS, PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE CONSTRUCTION MATERIAL TESTS ARE ACCEPTABLE FOR THE HYDRO TEST WITH PRIOR FIRE PREVENTION APPROVAL.
7. ALL ON-SITE UNDERGROUND WATER MAINS AND MATERIALS SHALL BE UL LISTED A.N.W.A. APPROVED AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE. SNFC 507.2.1, NPA 24.
8. PAINTING OF THE CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, AND ALL OTHER WORK NECESSARY PER PLANS, SHALL BE COMPLETED BEFORE APPROVAL BY THE CITY OF LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. FC 507; NPA24.
9. PRIVATE FIRE HYDRANTS SHALL BE PAINTED RED. SNFC 507.5.1
10. PRIOR TO THE FINAL OCCUPANCY, A FLOW TEST MUST BE WITNESSED BY THE CITY OF LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. FC 507.5.1
11. FIRE HYDRANTS SPACING SHALL BE:
 - RESIDENTIAL - 500 FEET UNSPRINKLERED; 600 FEET SPRINKLERED.
 - COMMERCIAL - 300 FEET UNSPRINKLERED; 400 FEET SPRINKLERED.
12. WHERE NEW WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF THE STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT MAXIMUM 1,000 FOOT SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDOUS MATERIALS. FIRE HYDRANTS ARE REQUIRED ON EITHER FOUR OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT MAXIMUM 1000 FT ON AN ALTERNATING BASIS.
13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE REQUIRED RADIUS OF A CUL-DE-SAC OR WITHIN 20 FEET OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.
14. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. FC# C102.12

BASED ON CONTRACTOR SUPPLIED INFORMATION,
WHICH WAS NOT FIELD VERIFIED BY PER4MANCE
ENGINEERING, LLC.

DATE: 02/15/18

NON

IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED WHICH IS NOT SHOWN ON THESE DRAWINGS, THE OWNER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AND AT THE DIRECTION OF THE CITY OF LAS VEGAS DEPT. OF PUBLIC WORKS. TEMPORARY CONSTRUCTION ITEMS INCLUDE: PAVEMENT TRANSITIONS, PROTECTIVE DITCHES AND BERMS, ROAD SIGNS AND BARRICADES, ETC.

-QUANTITIES SHOWN ARE ESTIMATES ONLY AND ARE INTENDED TO ILLUSTRATE SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT QUANTITIES INVOLVED.

-EXISTING UTILITY LOCATIONS SHOWN HEREIN ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN/HEREIN. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATIONS. CALL BEFORE YOU DIG: (800) 227-2600

AC	ASPHALTIC CONCRETE	PC	POLYETHYLENE
ACP	ASBESTOS CEMENT PIPE	PCP	POINT OF CURVATURE
BC	BEGIN CURB/BACK OF CURB	PL	PROPERTY LINE
BCR	BEGIN CURB RETURN/CURB RADIUS	PP	POWER POLE
BSW	BACK OF SIDEWALK	PROP	PROPOSED
CL	CENTERLINE	PT	POINT OF TANGENCY
CO	CLEANOUT	PVC	POLYVINYL CHLORIDE PIPE
DI	DROP INLET	RCP	REINFORCED CONCRETE PIPE
D.I.P.	DUCTILE IRON PIPE	R/W	RIGHT-OF-WAY
DWG	DRAWING	S	SANITARY SEWER
EL	ELEVATION	SD	STORM DRAIN
EX	EXISTING	SH	STEEL HIGH PRESSURE
FF	FINISHED FLOOR	STA	STATION
FG	FINISHED GRADE	STD	STANDARD
FH	FIRE HYDRANT	SW	SIDEWALK
FL	FLOW LINE	TC	TOP OF CURB
GB	GRADE BREAK	TMA	TOP OF MAINLINE
GP	HIGH POINT	TSW	TOP OF SIDEWALK
HP	HIGH POINT	VC	VERTICAL CURVE
INV	INVERT	VCP	VITRIFIED CLAY PIPE
LAT	LATERAL	VERT	VERTICAL
LF	LINEAL FEET	VG	VALLEY GUTTER
LT	LEFT	W	WATER

ARCHITECT

STRUCTURE

Charleston Heights Community Center
- Renovation -

- Renovation -

100% PERMIT SET
GENERAL NOTES SHEET

THIS DRAWING WAS
ORIGINALLY STAMPED
BY
RAY FREDERICKSEN,
P.E. NO. 17471
ON
05/02/2016

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

333 NORTH RANCHO DRIVE
LAS VEGAS, NEVADA 89106
PHONE: (702) 229-6535
FAX: (702) 384-4846
TDD: (702) 386-9108

DRAWN

DATE 02/15/2018

SCALE 1" = 30'

BID NO	15 5980
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CLV DWG NO 620-10

HANSEN NO

1

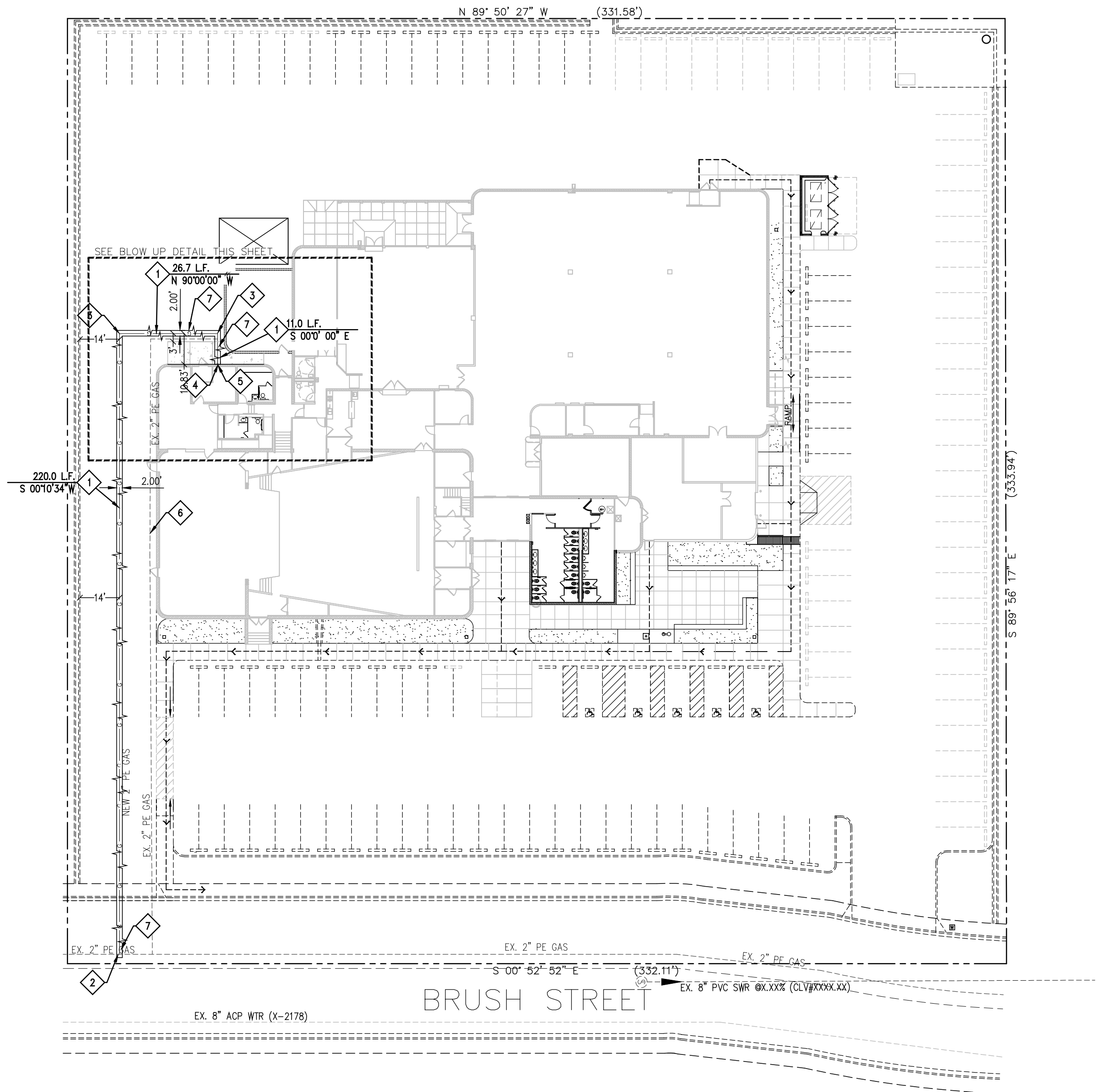
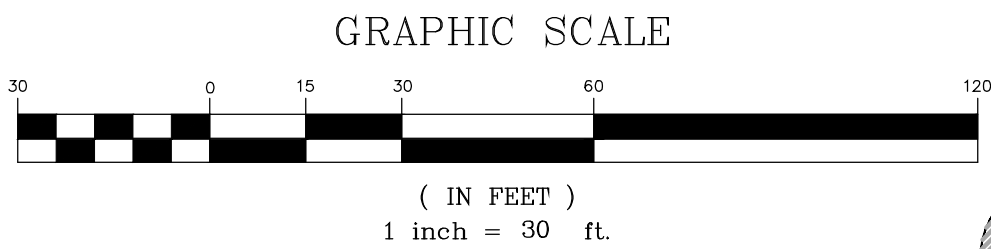
2 OF 4

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call
811
OR
1-800-227-2600

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEM CONDUITS. IT'S COSTLY.
Call before you do UnderGround
1-702-432-5300
LAS VEGAS AREA
COMPUTERIZED TRAFFIC SYSTEM

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DO OVERHEAD
1-702-227-2929

WATER NOTE:
ALL WATER LINES TO HAVE A MINIMUM DEPTH OF COVER OF FORTY EIGHT INCHES (42").

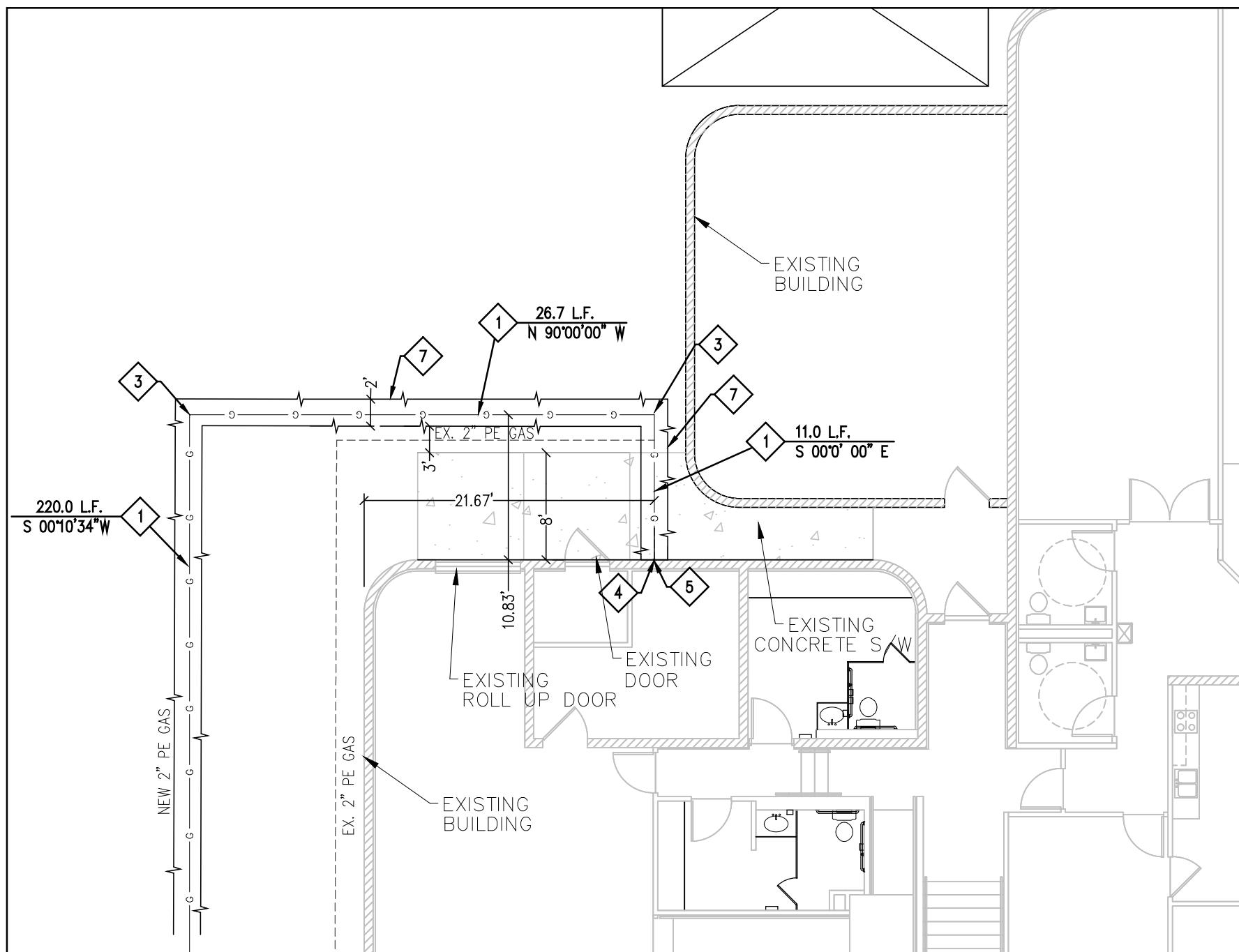


CONSTRUCTION NOTES

- SUGGESTED GAS LINE LOCATIONS ARE TO CLEAR ALL SUBSTRUCTURE LOCATE DIN THE FIELD.
- ALL PIPELINE CONSTRUCTION SHALL CONFORM TO APPLICABLE JURISDICTION SPECIFICATIONS.
- DO NOT SCALE THIS DRAWING.
- CHANGE IN PROPOSED MAIN LOCATION MUST BE AUTHORIZED BY SWG ENGINEER PRIOR TO INSTALLATION.
- GAS MAINS SHALL BE PURGED PER OPERATIONS MANUAL.
- ALL MAIN TIE-INS REQUIRING TEES ARE TO BE FULL FLOW TEES UNLESS OTHERWISE STATED.
- TRENCHING AND PAVEMENT REPLACEMENT PER CCAUSD 503 AND 500.5.

GAS CONSTRUCTION NOTES

NUMBER	ITEM
1	PROPOSED 2" PE MAIN
2	PROPOSED 2" X 2" PE TAPPING TEE
3	PROPOSED 2" PE 90° BEND
4	PROPOSED GAS METER
5	EXISTING GAS METER
6	EXISTING GAS LINE (ABANDON)
7	SAWCUT, TRENCH, BACKFILL, AND PAVEMENT REPLACEMENT PER CCAUSD 503 AND 500.5. ASPHALT PATCH TO MATCH EXISTING ASPHALT



BLOW UP DETAIL OF GAS METER AREA
1"=10'

NOTE:
INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE No. 15.

FIRE HYDRANT INSTALLATION:
FIRE HYDRANT(S) TO BE INSTALLED IN ACCORDANCE WITH THE UDACS STANDARD PLATE No. 40.

NOTE:
ALL ABOVE GROUND UTILITY APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF TITLE 19.12.040.

FIRE DEPARTMENT APPROVAL:
APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM THE LVWDO.

- NOTES:
- REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS OR PAVEMENT MARKINGS) UNDER CLARK COUNTY JURISDICTION THAT ARE DISTURBED, DESTROYED, MOVED OR MODIFIED BY TRENCHING ACTIVITY TO CLARK COUNTY SATISFACTION. ALL MATERIALS USED SHALL MEET CLARK COUNTY'S SPECIFICATIONS, OR WILL BE AN APPROVED EQUIVALENT.
 - IN THE EVENT THAT THE TRAFFIC SIGNAL CONDUITS, LOOP DETECTORS OR ASSOCIATED EQUIPMENT ARE DAMAGED BY THE CONTRACTOR, THE CONTRACTOR WILL HIRE AN MSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATIONS No. 623 G.01.02.
 - CONTRACTOR SHALL CONTACT CLARK COUNTY TRAFFIC OPERATIONS @ 465-7511 TO SCHEDULE COUNTY TRAFFIC STAFF TO LOCATE UNDERGROUND STREETLIGHTING AND SIGNAL FACILITIES IN THE PROJECT AREA. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED PRIOR TO THIS OPERATION. HOURS OF OPERATION ARE: 6:30AM - 3:00PM, MONDAY THROUGH FRIDAY, EXCLUDING HOLIDAYS.
 - TRENCH BACKFILL PER CCAUSD STD. DWG. NO. 503 AND 504.1.

ASBESTOS CEMENT PIPE (ACP):
DISPOSAL OF ASBESTOS CEMENT PIPE SHALL BE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

DISCLAIMER NOTE:

EXISTING UTILITIES AS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY BOTH VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. ENGINEER ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITIES SHOWN INCORRECTLY OR OTHERWISE NOT SHOWN.

THE DISTRICT CAN NOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHOULD ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPEDE CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN. CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCE IS AVAILABLE.

AS-BUILT

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100% PERMIT SET
UTILITY PLAN

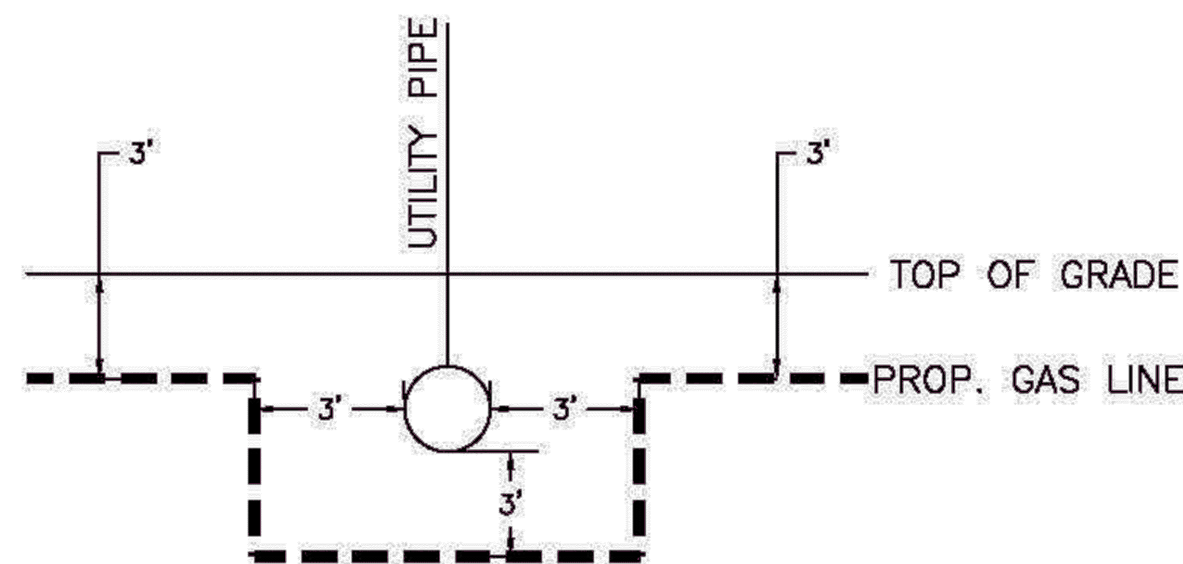
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DRAWN	CJT
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DATE	02/15/2018
SCALE	1" = 30'
BID NO	15.59806.JH
CLV DWG NO	620-10B
DANSEN NO	59806
SHT NO	

3 OF 4



1. NO STONES OR LUMPS GREATER THAN 3" PERMITTED IN TRENCH 2' OR LESS IN WIDTH.
2. TRENCH WIDTH, BEDDING, SUBGRADE AND PIPE ZONE REQUIREMENTS FOR UTILITY INSTALLATIONS SHALL CONFORM TO THE RESPECTIVE ENTITY REQUIREMENTS.
3. CRUSHED ROCK MAY BE USED FOR PIPE BEDDING ONLY IF MATERIAL USE HAS BEEN SPECIFICALLY APPROVED BY THE GOVERNING AGENCY. SEE STANDARD DRAWING NO. 505 FOR PIPE BEDDING METHODS.
4. LAS VEGAS VALLEY WATER DISTRICT REQUIRES PIPE BEDDING AND BACKFILL WITHIN THE PIPE ZONE TO BE OF THE SAME MATERIAL.

RECORD DRAWING

BASED ON CONTRACTOR SUPPLIED INFORMATION,
WHICH WAS NOT FIELD VERIFIED BY PER4MANCE
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DATE: 02/15/18

AS-BUILT

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DRAWN CJT

FILE	
DATE	02/15/2018

SCALE $1'' = 30'$

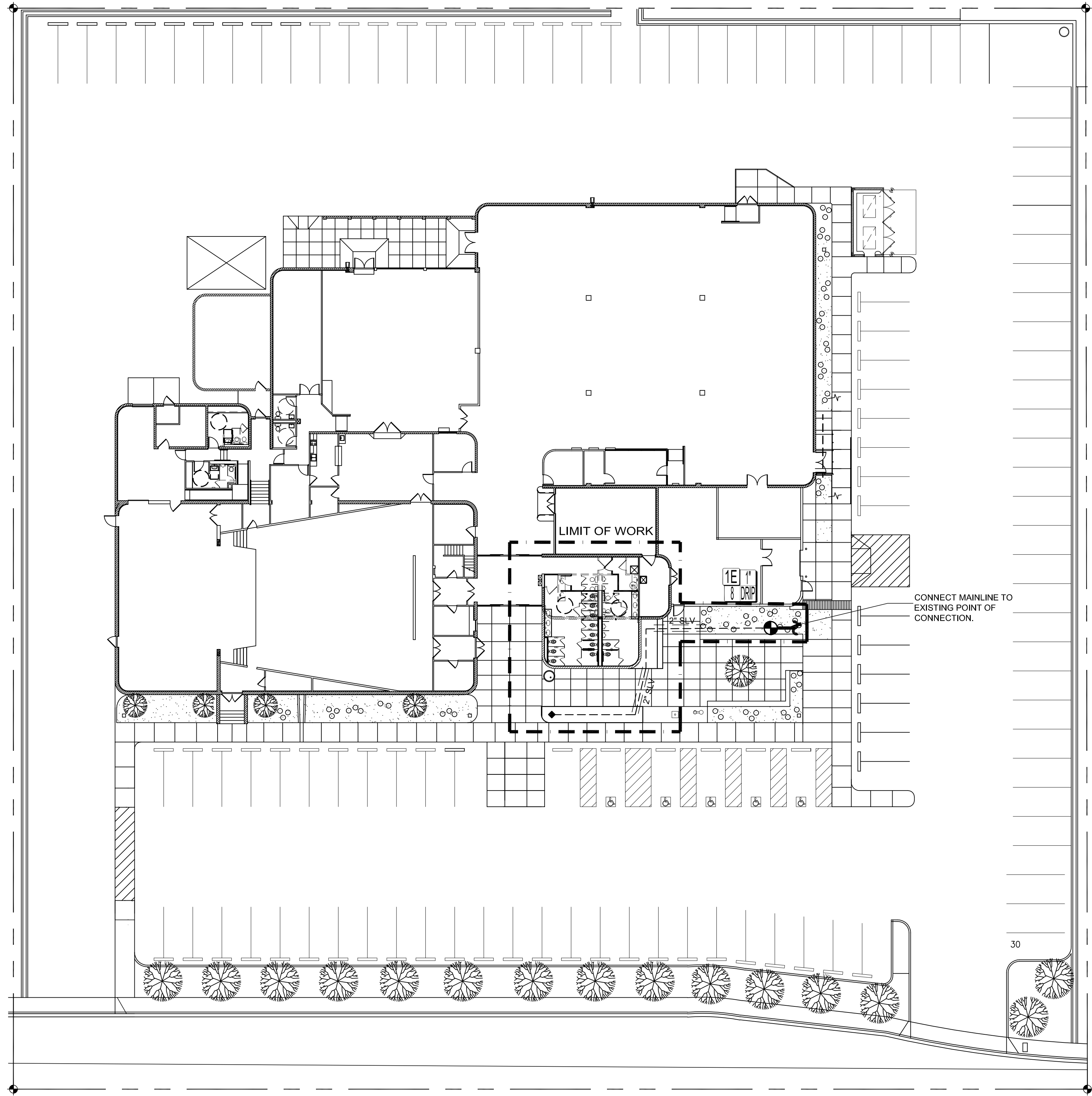
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4 OF 4



EVERGREEN AVENUE

BRUSH STREET

A IRRIGATION PLAN

1" = 20'-0"

IRRIGATION SCHEDULE

IRRIGATION COMPONENTS			
SYMBOL	ITEM	DESCRIPTION	DETAIL(S)
	EXISTING POINT OF CONNECTION	EXISTING POC TO REMAIN & PROTECT	
	EXISTING REMOTE CONTROL VALVE	CONTRACTOR SHALL VERIFY WHICH EXISTING VALVES ARE TO REMAIN IN USE PRIOR TO START OF CONSTRUCTION. IF VALVE IS NOT LONGER IN USE FOR EXISTING PLANT AND TURF AREAS, CONTRACTOR SHALL REMOVE VALVE AND REPAIR MAINLINE.	
	FLUSH VALVE	3/4" SCHEDULE 80 PVC BALL VALVE 150 PSI RATED.	D SHEET L3.01
	EXISTING MAINLINE	SCHEDULE 40 PVC. CONTRACTOR TO FIELD VERIFY LOCATION AND ADJUST IRRIGATION AS REQUIRED FOR NEW PLANTERS.	
	DRIP LINE HEADER FOR SHRUBS	3/4" FLEXIBLE PVC DRIP TUBING TO NO MORE THAN 8' OF 1/2" EXCALIBUR DRIP PIPE TO EMITTER. SEE DETAIL FOR EMITTER LATERAL PIPE INSTALLATION.	A SHEET L3.01
	SLEEVE	SCHEDULE 40 PVC. SIZE PER PLAN.	E SHEET L3.01

EMITTERS, SPRAY HEADS AND ROTOR HEADS												
SYM.	MANUFACTURER/MODEL	PAT.	RD	PSI	GPM						DRIP GPH	DETAIL(S) SHEET L3.01
					Q	T	H	TT	TQ	F		
NOT SHOWN	SALCO SLV-PST-1 EMITTERS WITH BLACK SCHEDULE 40 MALE ADAPTERS FOR SHRUBS	—	—	30	—	—	—	—	—	—	1.0	A,B,C
NOT SHOWN	SALCO SLV-PST-2 EMITTERS WITH BLACK SCHEDULE 40 MALE ADAPTERS FOR TREES.	—	—	30	—	—	—	—	—	—	2.0	A,B,C

IRRIGATION NOTES

- SEE SHEETS L3.01 OR IRRIGATION DETAILS.
- THE DRIP IRRIGATION SYSTEM IS DESIGNED TO ACCOMMODATE A MAXIMUM OF 8 GPM PER DRIP VALVE ASSEMBLY.
- CONTRACTOR TO COORDINATE EXACT LOCATION OF EXISTING IRRIGATION CONTROLLER WITH OWNER. CONTRACTOR TO COORDINATE WITH GENERAL CONTRACTOR AND ALL TRADES.
- BRING ANY DISCREPANCIES IMMEDIATELY TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE FOR IMMEDIATE RESOLUTION.
- CONTRACTOR TO LOCATE AND VERIFY LOCATIONS OF ALL IRRIGATION EQUIPMENT AND UTILITIES PRIOR TO DEMOLITION AND CONSTRUCTION.
- USE EXISTING MAINLINE. PROVIDE NEW MAINLINE AS NECESSARY. REMOVE EXISTING VALVES IF THEY ARE NO LONGER NEEDED AND CAP THE ASSOCIATED IRRIGATION LINES. CONTRACTOR TO FIELD VERIFY SIZES, LOCATIONS AND TYPE OF EXISTING MAINLINES PRIOR TO DEMOLITION OR INSTALLATION OF NEW LANDSCAPE AND IRRIGATION ALL LOCATIONS MUST BE VERIFIED.
- THE VALVE IDENTIFICATION ON THIS PLAN ARE GENERIC. THE "E" DESIGNATION REFERS TO THE EXISTING CONTROLLER. ALL STATION IDENTIFICATIONS (ON LID AND TAGS) NEED TO CORRESPOND TO THE EXISTING CONTROLLER'S DESIGNATIONS.
- CONTRACTOR TO PROTECT AND PRESERVE EXISTING IRRIGATION COMPONENTS NECESSARY FOR THE CONTINUED IRRIGATION OF THE ENTIRE IRRIGATION SYSTEM. CONTRACTOR TO REPLACE ANY EXISTING COMPONENTS DAMAGED DURING DEMOLITION OR CONSTRUCTION WITH COMPONENTS OF THE SAME MANUFACTURER, MODEL, SIZE, ETC. AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR TO MAINTAIN IRRIGATION TO EXISTING PLANT MATERIAL THAT IS TO REMAIN DURING DEMOLITION AND CONSTRUCTION. A TEMPORARY IRRIGATION SYSTEM AND/OR HAND WATERING MAY BE NECESSARY DURING CONSTRUCTION TO PROTECT AND PRESERVE EXISTING LANDSCAPE. CONTRACTOR RESPONSIBLE FOR ANY PLANT MATERIAL DAMAGED BY LACK OF IRRIGATION.
- SOME MODIFICATIONS TO IRRIGATION LINES AND IRRIGATION SYSTEM COMPONENTS MAY BE NECESSARY THAT ARE NOT SHOWN ON THE PLANS. THE PLANS WERE DERIVED FROM LIMITED INFORMATION ON THE EXISTING IRRIGATION SYSTEM. REROUTE IRRIGATION MAINLINES, LATERAL LINES AND WIRES; AND STUB AND CAP MAINLINES AND LATERAL LINES AS NECESSARY TO PROVIDE A COMPLETE FUNCTIONING IRRIGATION SYSTEM FOR THE ENTIRE SITE. PROVIDE SLEEVES FOR ALL PIPES AND WIRES UNDER HARDSCAPE.

RECORD DRAWING
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0 20' 40' 60'
SCALE: 1" = 20'

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IRRIGATION PLAN

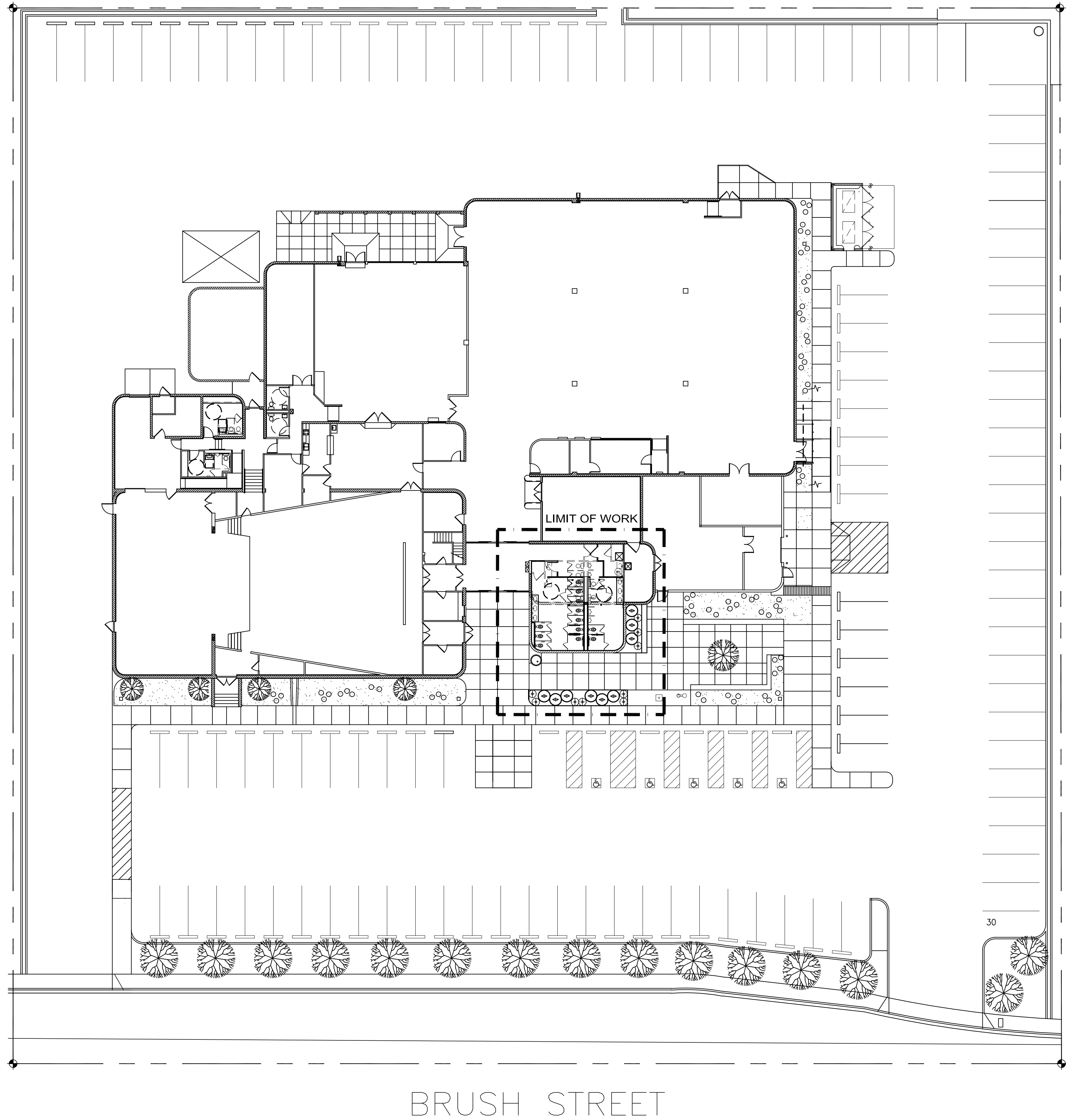
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A PLANTING PLAN

PLANTING LEGEND

TREES			
SYMBOL	BOTANICAL NAME COMMON NAME	QTY.	CALIPER MINIMUM SIZE
	EXISTING TREE TO REMAIN PROTECT IN PLACE		

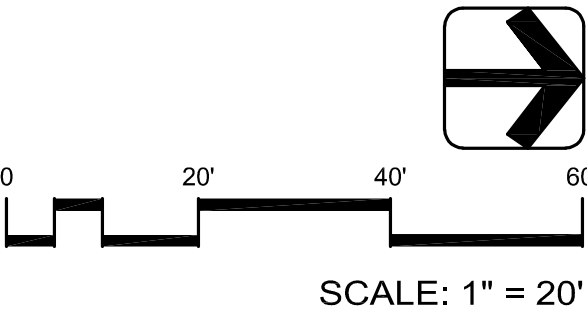
SHRUBS			
SYMBOL	BOTANICAL NAME COMMON NAME	QTY.	MINIMUM SIZE
	EXISTING SHRUB TO REMAIN PROTECT IN PLACE		
	LANTANA SP. 'NEW GOLD' GOLDEN LANTANA	8	5 GALLON
	XYLOSMA CONGESTUM 'COMPACTA' COMPACT SHINY XYLOSMA	8	5 GALLON

LANDSCAPE ELEMENTS			
SYMBOL	DESCRIPTION	QTY.	DETAIL
	DECORATIVE ROCK. SIZE: MATCH EXISTING COLOR: MATCH EXISTING ALL PLANTER AREAS TO RECEIVE 2" MINIMUM DEPTH LAYER UNLESS OTHERWISE NOTED, SEE NOTE 1.	250 S.F.	'G', L3.01

PLANTING NOTES

- DECORATIVE ROCK (DR) - INSTALL THE MINIMUM LAYER OF DECORATIVE ROCK IN ALL LANDSCAPE AREAS WITHIN LANDSCAPE LIMIT OF WORK EXCEPT WHERE OTHERWISE NOTED. CONTRACTOR TO PROVIDE SAMPLES OF DECORATIVE ROCK FOR APPROVAL PRIOR TO INSTALLATION. COMPACT SUB-GRADE TO 85% AND APPLY A PRE-EMERGENT HERBICIDE TO SOIL. AFTER PLACING ROCK, RAKE SMOOTH, WET TO ENTIRE DEPTH, ALLOW TO DRY, THEN LIGHTLY SCARIFY SURFACE WITH A LEAF RAKE. APPLY A SECONDARY APPLICATION OF PRE-EMERGENT HERBICIDE TO TOP OF ROCK. KEEP TOP OF ROCK 2" BELOW TREE GRATE. DO NOT ALLOW ROCK TO TOUCH THE TRUNK OF ANY TREE. TO BE INSTALLED AFTER INSTALLATION OF PLANT MATERIAL.
- CONTRACTOR TO PRESERVE AND PROTECT EXISTING TREES IDENTIFIED ON PLAN BY AN EXISTING TREE SYMBOL. CONTRACTOR TO PRESERVE AND PROTECT LANDSCAPE OUTSIDE LIMIT OF LANDSCAPE WORK.
- PRIOR TO BEGINNING WORK, CONTRACTOR TO INVENTORY EXISTING PLANTS AND MARK THOSE TO REMAIN FOR APPROVAL BY OWNER. CONTRACTOR TO VERIFY THAT EXISTING TREES TO REMAIN WILL NOT BE DAMAGED BY DEMOLITION OR CONSTRUCTION. IF EXISTING TREES AND/OR LANDSCAPE TO REMAIN IS DAMAGED DURING DEMOLITION OR CONSTRUCTION, TREE(S)/SHRUB(S) TO BE REPLACED AT CONTRACTOR'S EXPENSE WITH PLANT(S) OF SAME GENUS, SPECIES, VARIETY, FORM AND SIZE.
- CONTRACTOR TO PROTECT IN PLACE EXISTING UTILITIES. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION. CONTRACTOR TO USE CAUTION. CALL BEFORE YOU DIG AND CALL BEFORE YOU OVER HEAD.

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DATE: 02/15/2018



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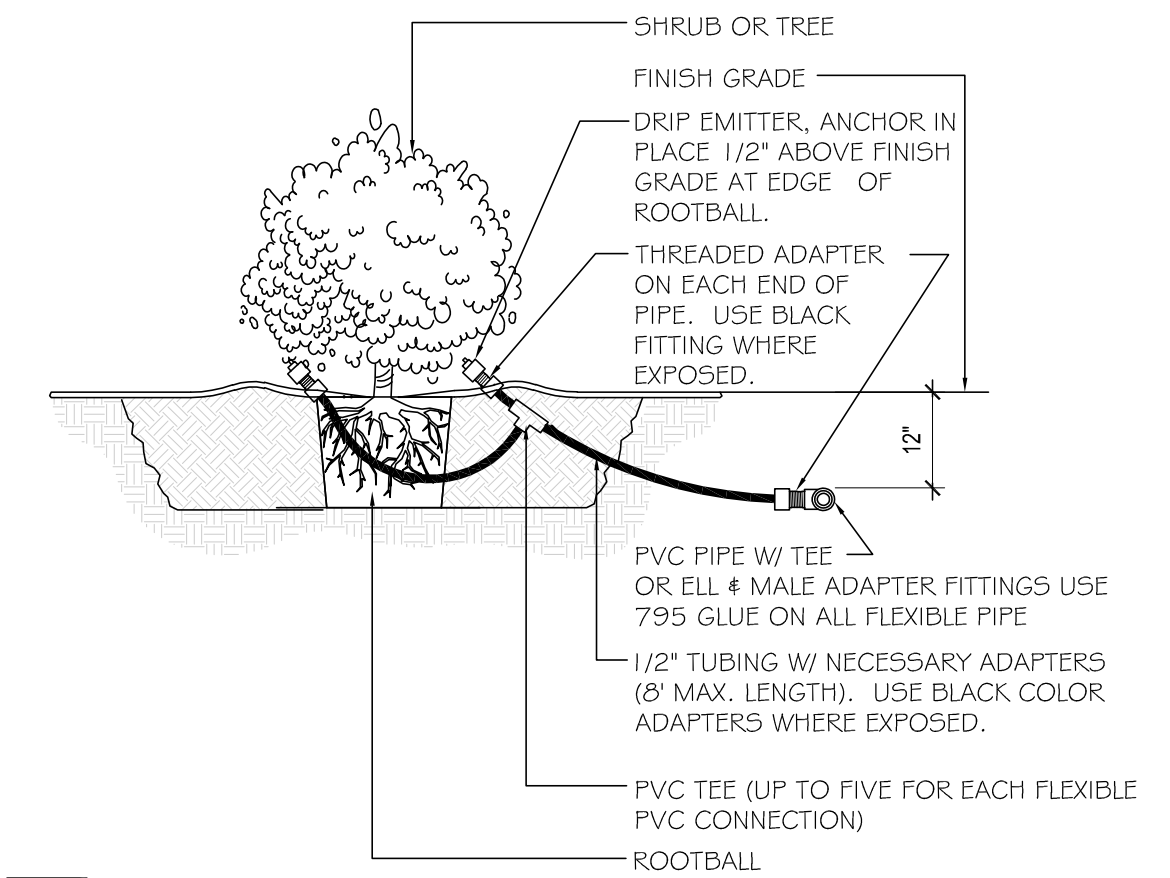
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PLANTING PLAN

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CLY DWG NO	620-108
HANSEN NO	59806
SHT NO	L2.01



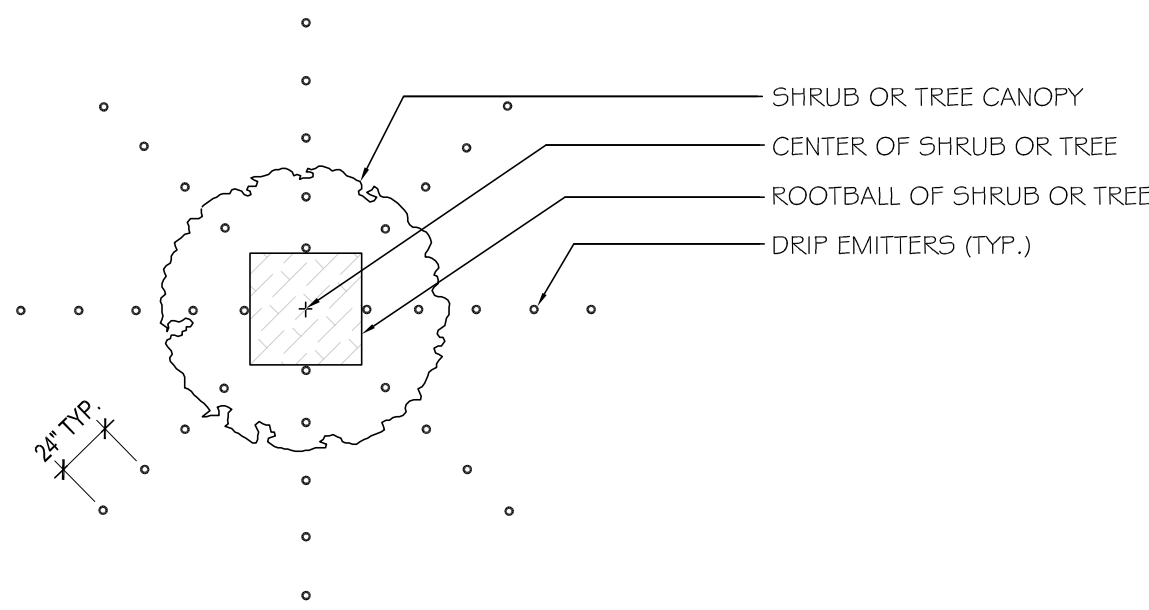
A DRIP EMITTER

EMITTER SCHEDULE		
PLANT SIZE	QTY.	GPH
1 Gallon Shrub	1	1
5 Gallon Shrub	2	1
15 Gallon Shrub	4	1
15 Gallon Tree	8	2
24\" Box Tree	12	2
36\" Box Tree	20	2
Palm Tree	20	2
Agave	2	0.5
Cacti	1	0.5
Existing Tree	20	2

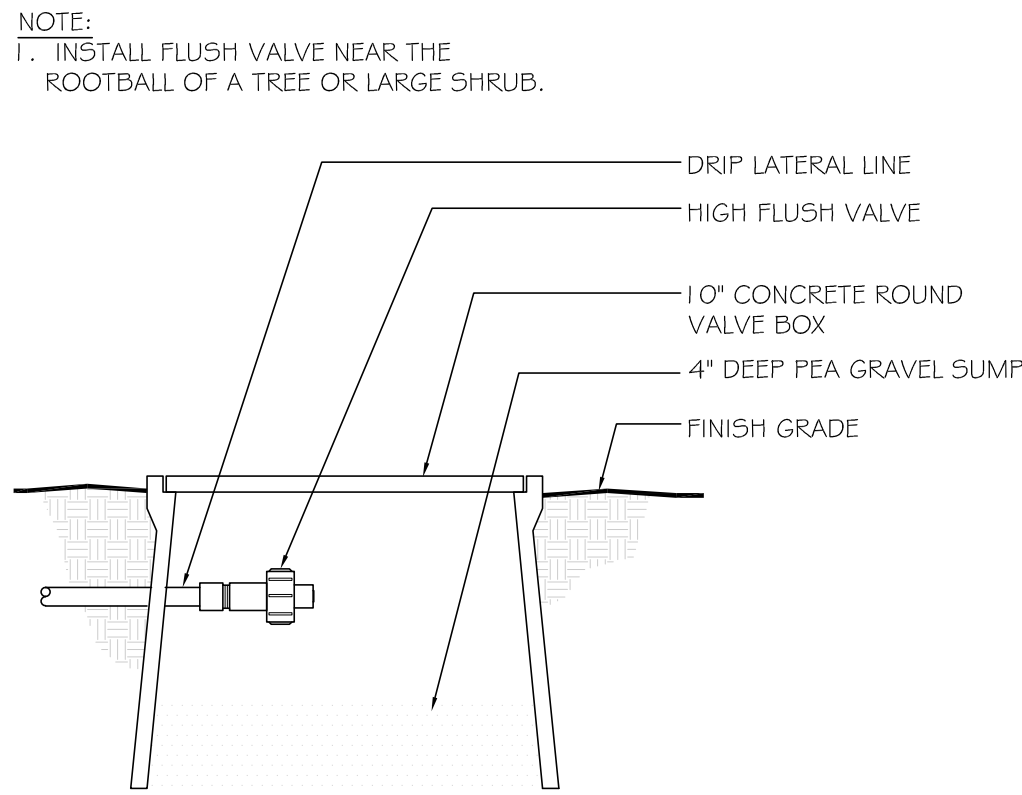
- NOTES:
1. THE IRRIGATION TO CACTI IS TO BE CAPPED ONCE THE PLANTS ARE ESTABLISHED.
 2. EMITTER QUANTITIES FOR TREES CAN BE REDUCED IF PLANTER AREAS ARE TOO SMALL TO PROVIDE ADEQUATE ROOM FOR SPECIFIED EMITTERS.
 3. PROVIDE A MINIMUM OF (4) EMITTERS TO TREES IN PLANTERS 36\" SQUARE FEET OR LESS.

B EMITTER SCHEDULE

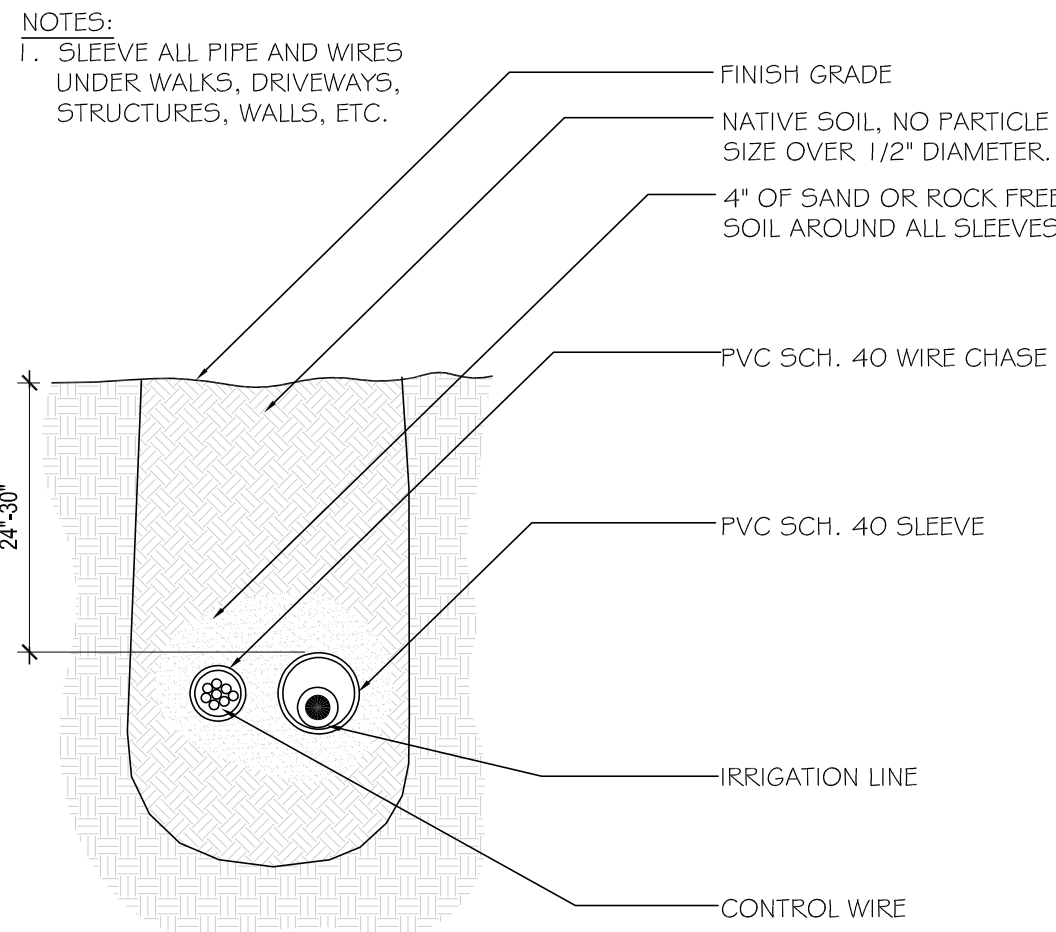
- NOTES:
1. THIS IS A SUGGESTED EMITTER LAYOUT PLAN. ACTUAL LAYOUT MAY VARY DEPENDING ON SURROUNDING FEATURES. THE INTENT IS TO PROVIDE WATER FOR FUTURE ROOT GROWTH.
 2. ADJACENT TREES AND SHRUBS MAY SHARE THE SAME EMITTER WHERE PATTERNS OVERLAP.
 3. BEGIN PLACEMENT OF EMITTERS ADJACENT TO ROOTBALL OF PLANT AND WORK OUTWARD IN ALL DIRECTIONS UNTIL THE REQUIRED NUMBER OF EMITTERS PER PLANT IS OBTAINED. WHERE LARGE PLANTS ARE INSTALLED IN NARROW PLANTERS REDUCE THE QUANTITY OF EMITTERS TO FIT THE SPACE. 5'-0\" SQUARE PARKING LOT PLANTERS ONLY NEED FOUR TREE EMITTERS. KEEP ALL EMITTERS 18\" FROM ANY CURB, WALK, OR OTHER PLANTER EDGE AND 36\" FROM ANY BUILDING OR STRUCTURE.



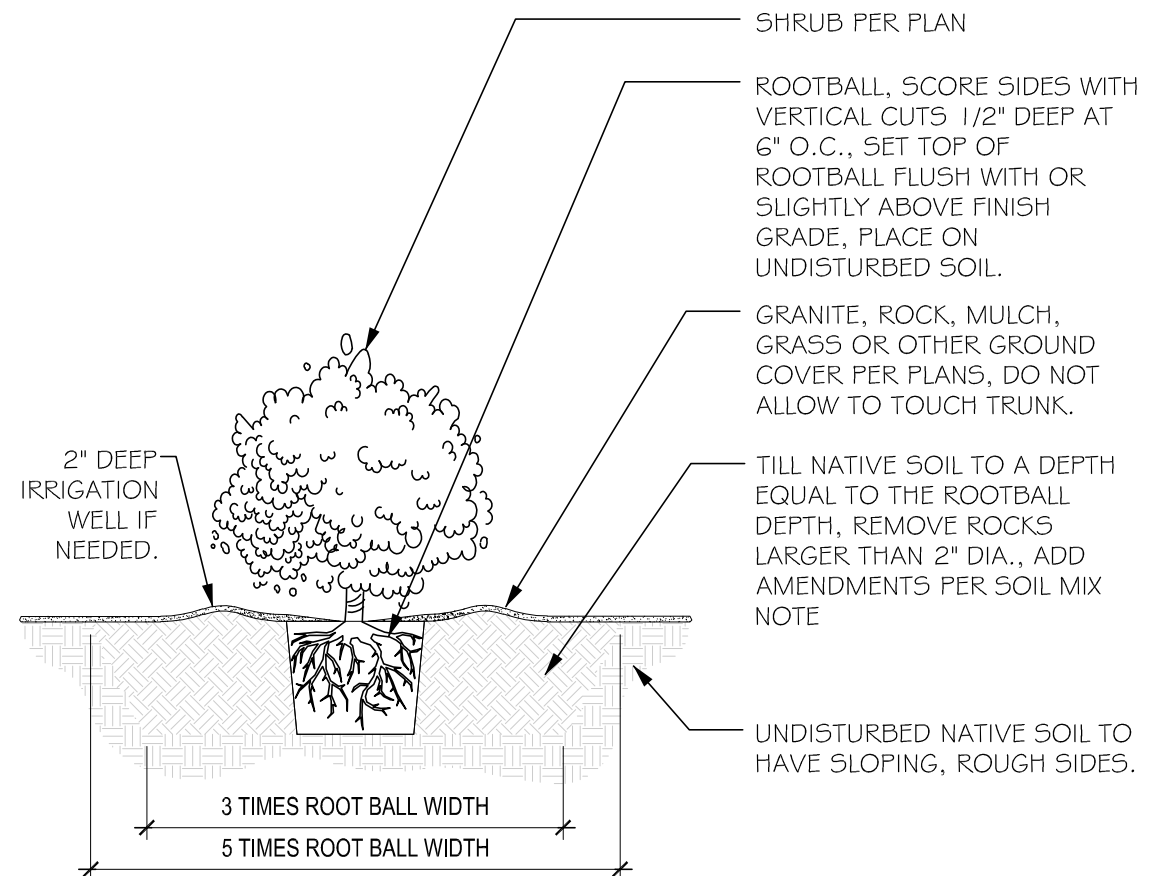
C EMITTER LAYOUT



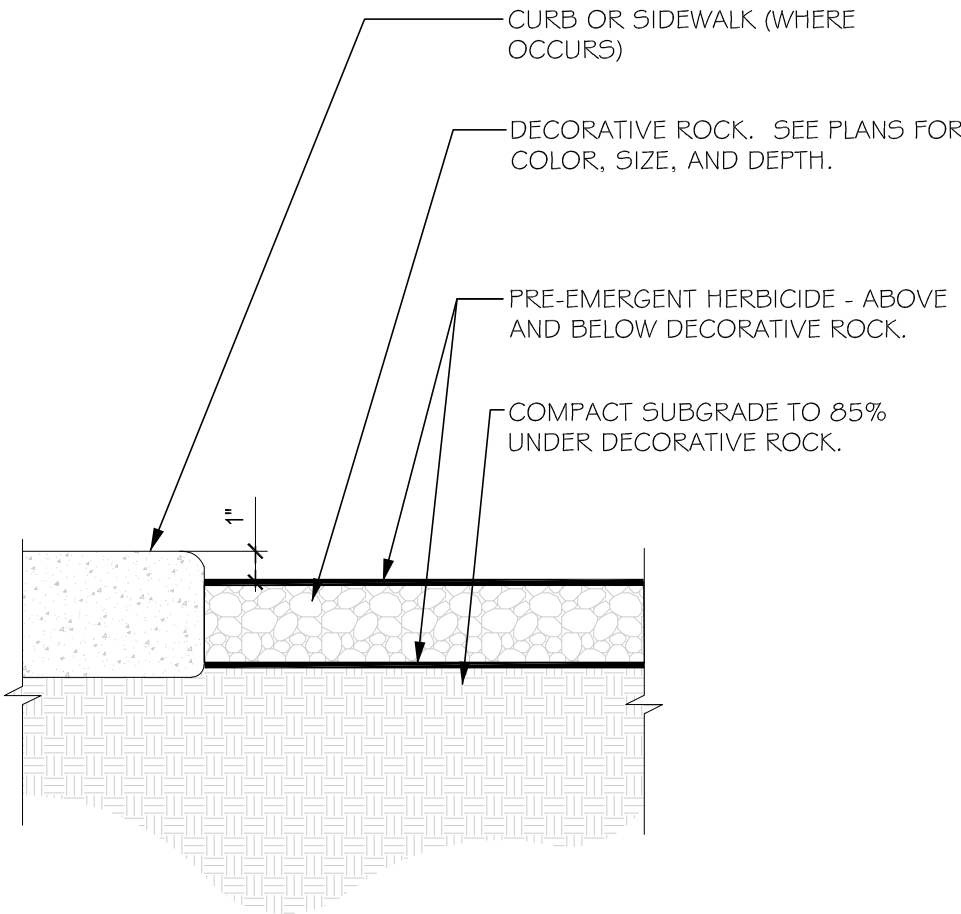
D DRIP FLUSH VALVE



E SLEEVE SECTION



F SHRUB PLANTING



G DECORATIVE ROCK

BACKFILL MIX FOR ALL TREES, SHRUBS, VINES AND OTHER CONTAINER PLANT MATERIAL OTHER THAN BARE ROOT PALM TREES TO BE THOROUGHLY MIXED IN THE TILLED NATIVE SOIL AREA OF THE PLANTING HOLE AND CONSIST OF THE FOLLOWING:

- 4 PARTS BY VOLUME ON SITE SOIL (NO PARTICLE OVER 2\" DIA.)
- 1 PARTS BY VOLUME ORGANIC SOIL CONDITIONER

AFTER PLANT INSTALLATION, EVENLY BROADCAST THE FOLLOWING AMENDMENTS OVER THE TILLED NATIVE SOIL AREA AROUND THE ROOTBALL OF THE PLANT AND WORK INTO THE TOP 2\" OF SOIL:

- 1 LB. 15-15-15 FERTILIZER PER 25 SQ. FT. OF TILLED SURFACE AREA
- 2 LB. IRON SULFATE PER 25 SQ. FT. OF TILLED SURFACE AREA

H SOIL MIX NOTE

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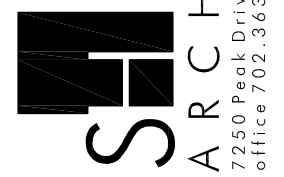
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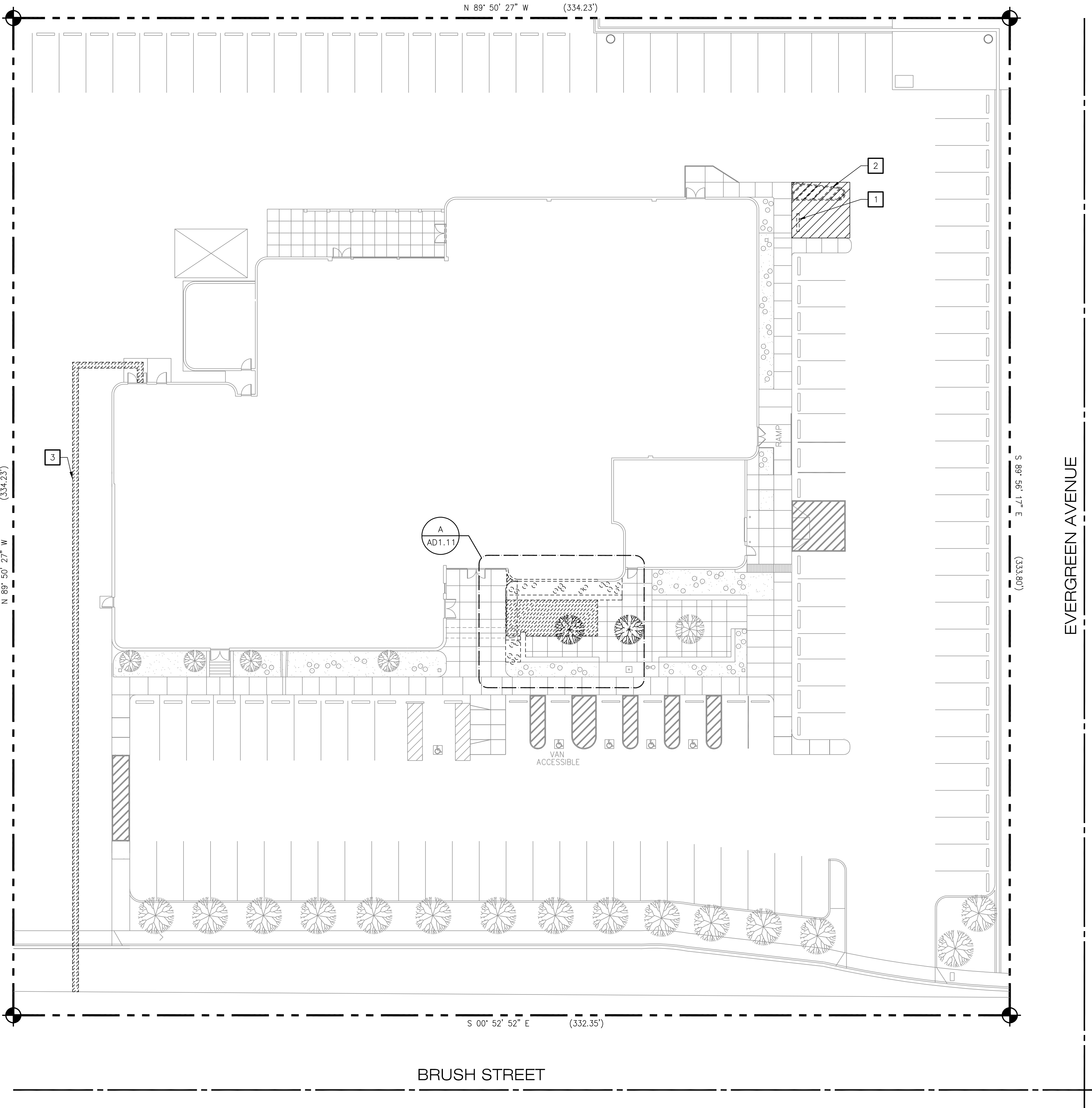
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BID NO	15.59806.JH
CLY DWG NO	620-108
HANSEN NO	59806
SHT NO	L3.01



OVERALL DEMO SITE PLAN

1" = 20'-0"

KEY NOTES

- 1 EXISTING PARKING BUMPER TO BE REMOVED AND DISPOSED.
- 2 SAWCUT AND REMOVE EXISTING ASPHALT FOR NEW TRASH ENCLOSURE.
- 3 CUT PAVEMENT FOR NEW GAS LINE. SEE CIVIL DRAWINGS.

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OVERALL DEMO SITE PLAN

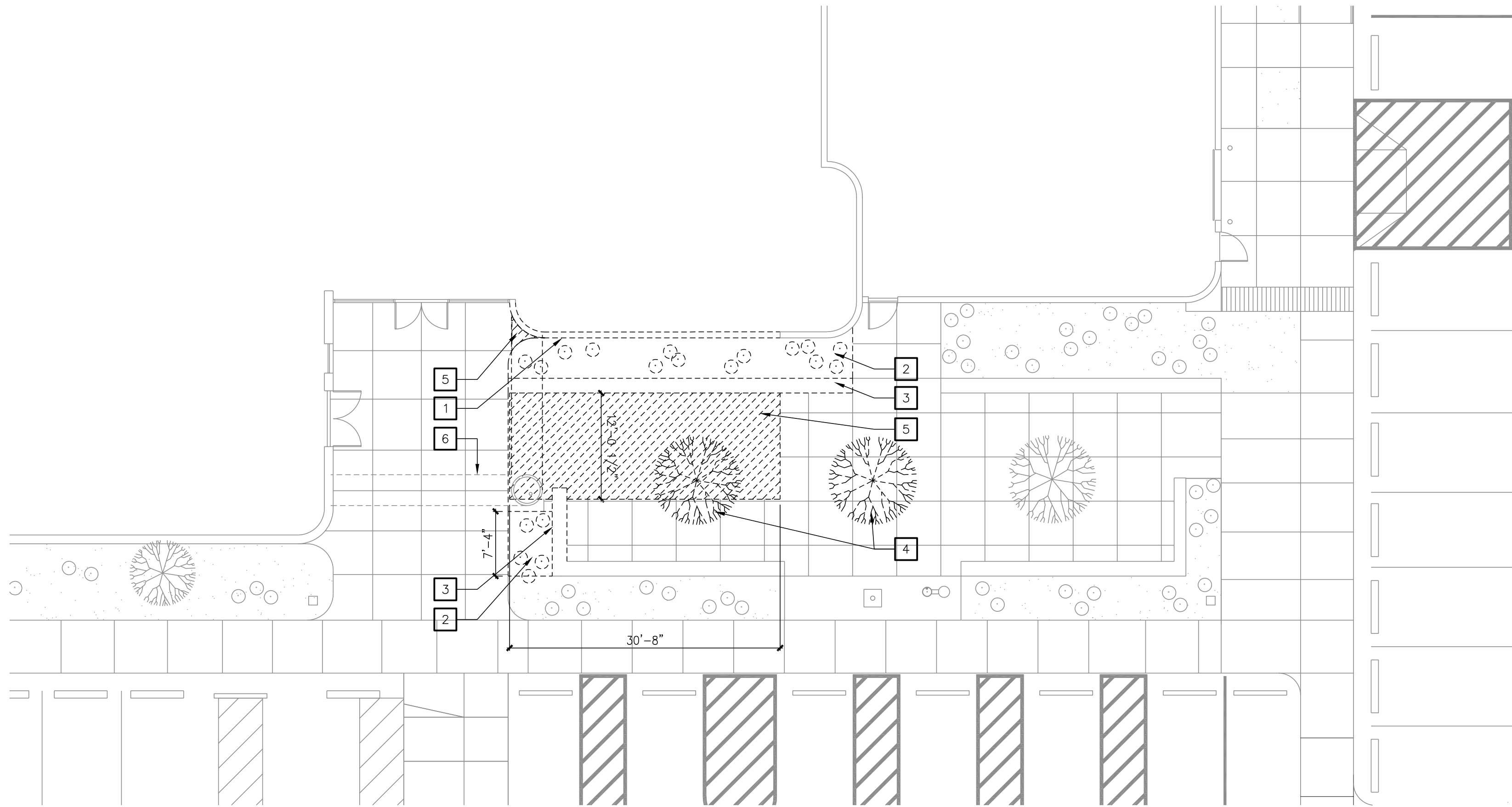
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ENLARED DEMO SITE PLAN A

1"=10'-0"

KEY NOTES

- 1

EXISTING CMU WALL TO BE DEMOLISHED.
- 2

EXISTING LANDSCAPE AND DRIP IRRIGATION TO BE DEMOLISHED.
- 3

EXISTING CONCRETE BENCH TO BE DEMOLISHED. CONCRETE BENCH LIGHTING TO BE REMOVED, STORED, AND REUSED FOR FUTURE USE BY OWNER.
- 4

EXISTING TREES TO BE REMOVED.
- 5

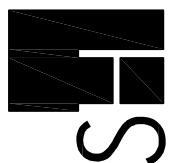
EXISTING CONCRETE SLAB TO BE DEMOLISHED.
- 6

EXISTING CANOPY ABOVE.



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ENLARGED DEMO SITE PLAN

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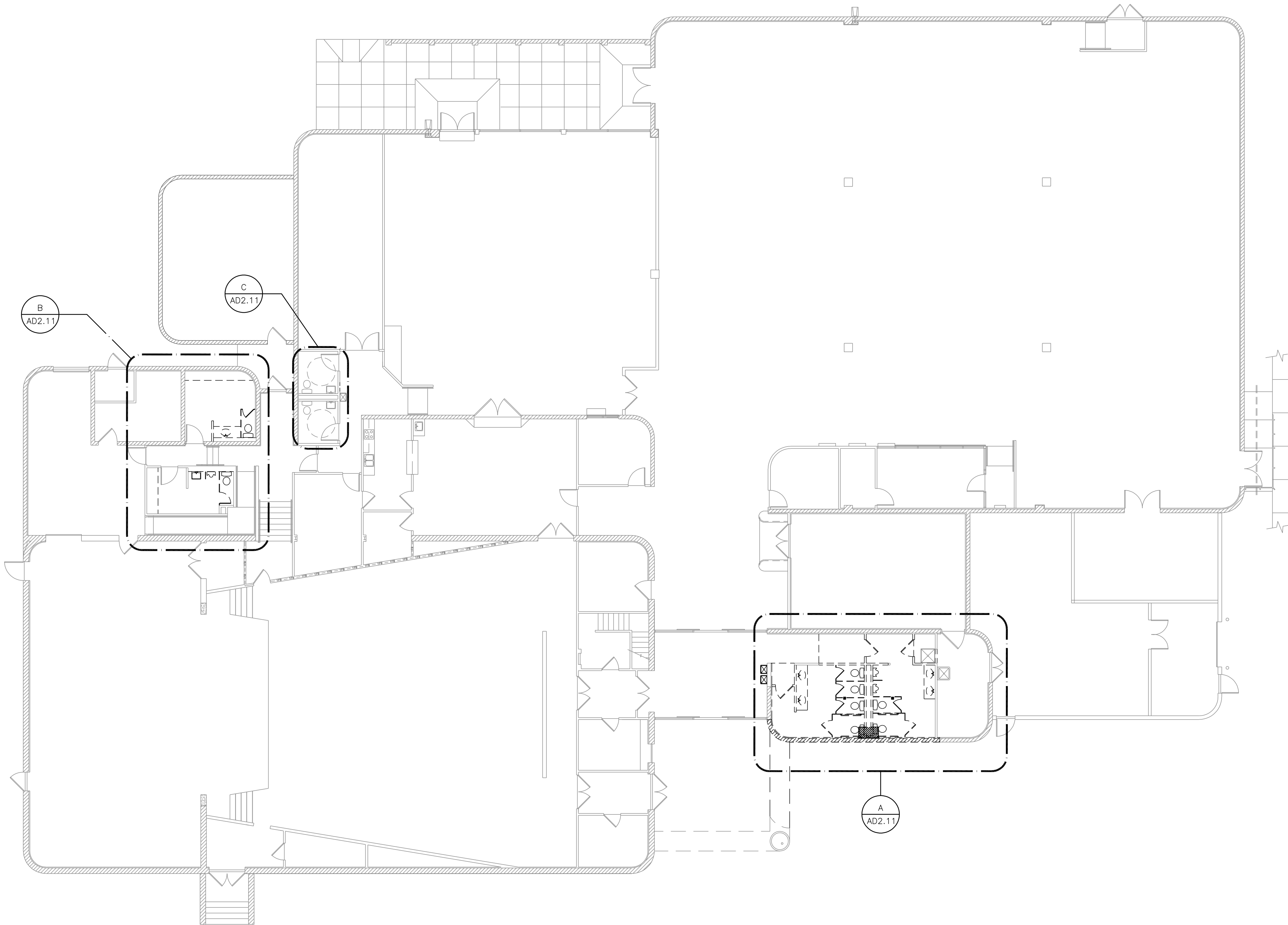
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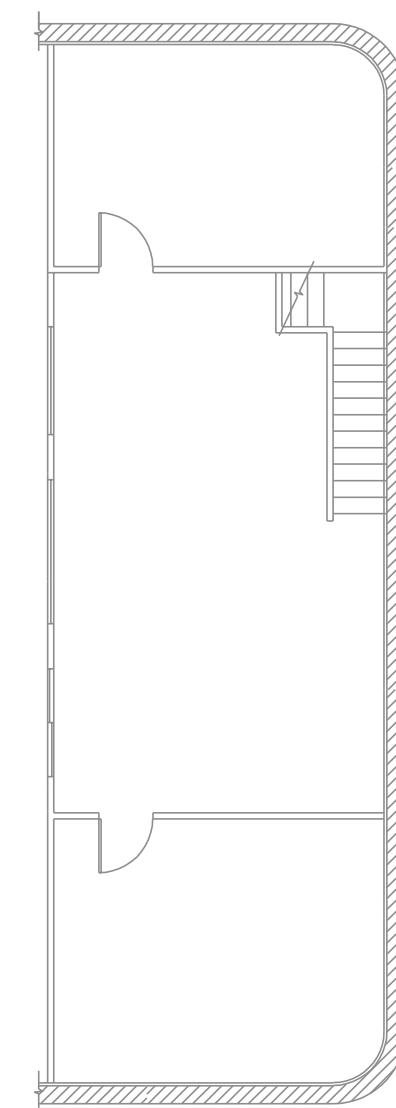
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OVERALL DEMOLITION PLAN

3/32" = 1'-0"



MEZZANINE PLAN

3/32" = 1'-0"

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OVERALL DEMOLITION PLAN

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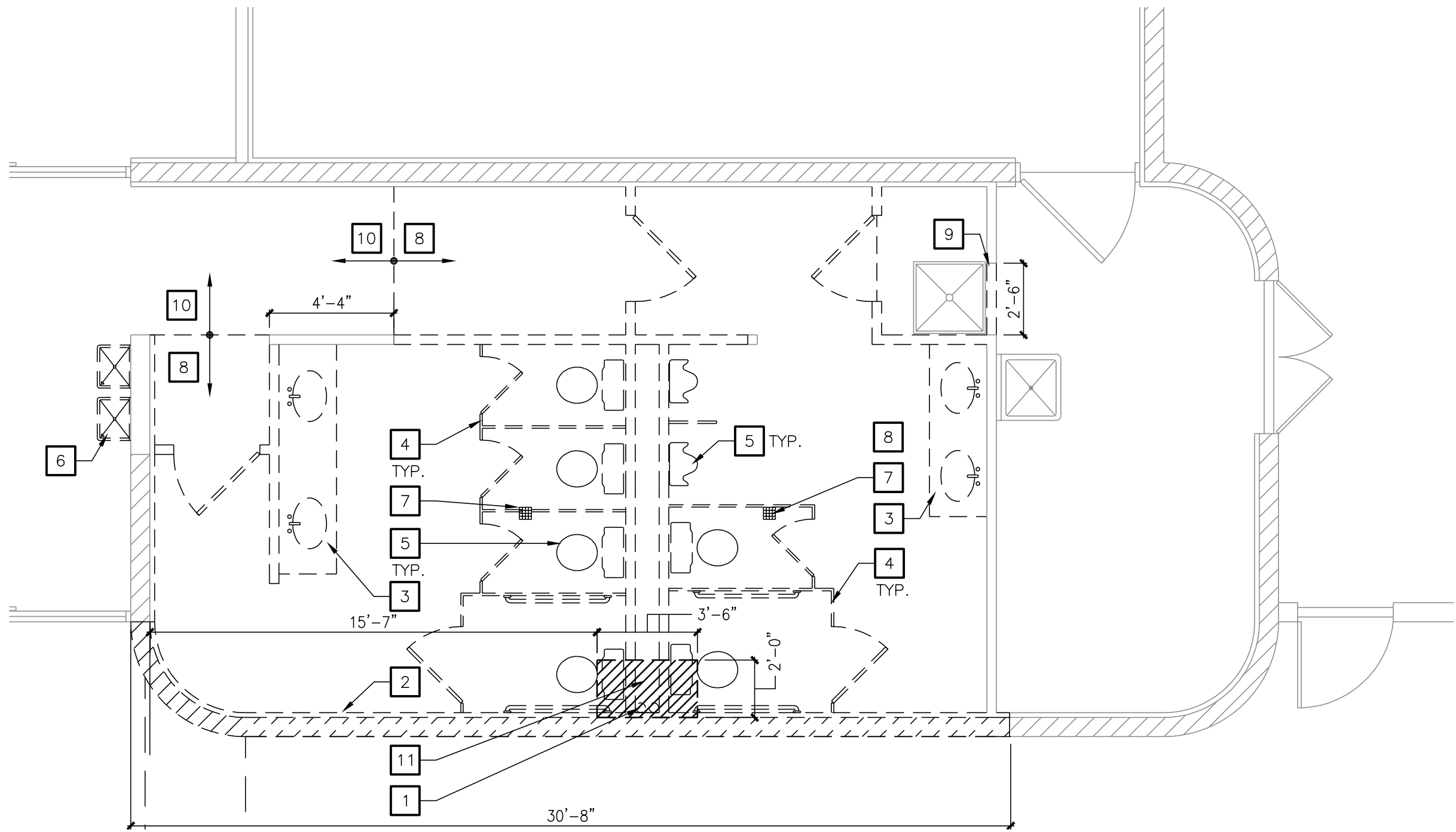
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HANSEN NO
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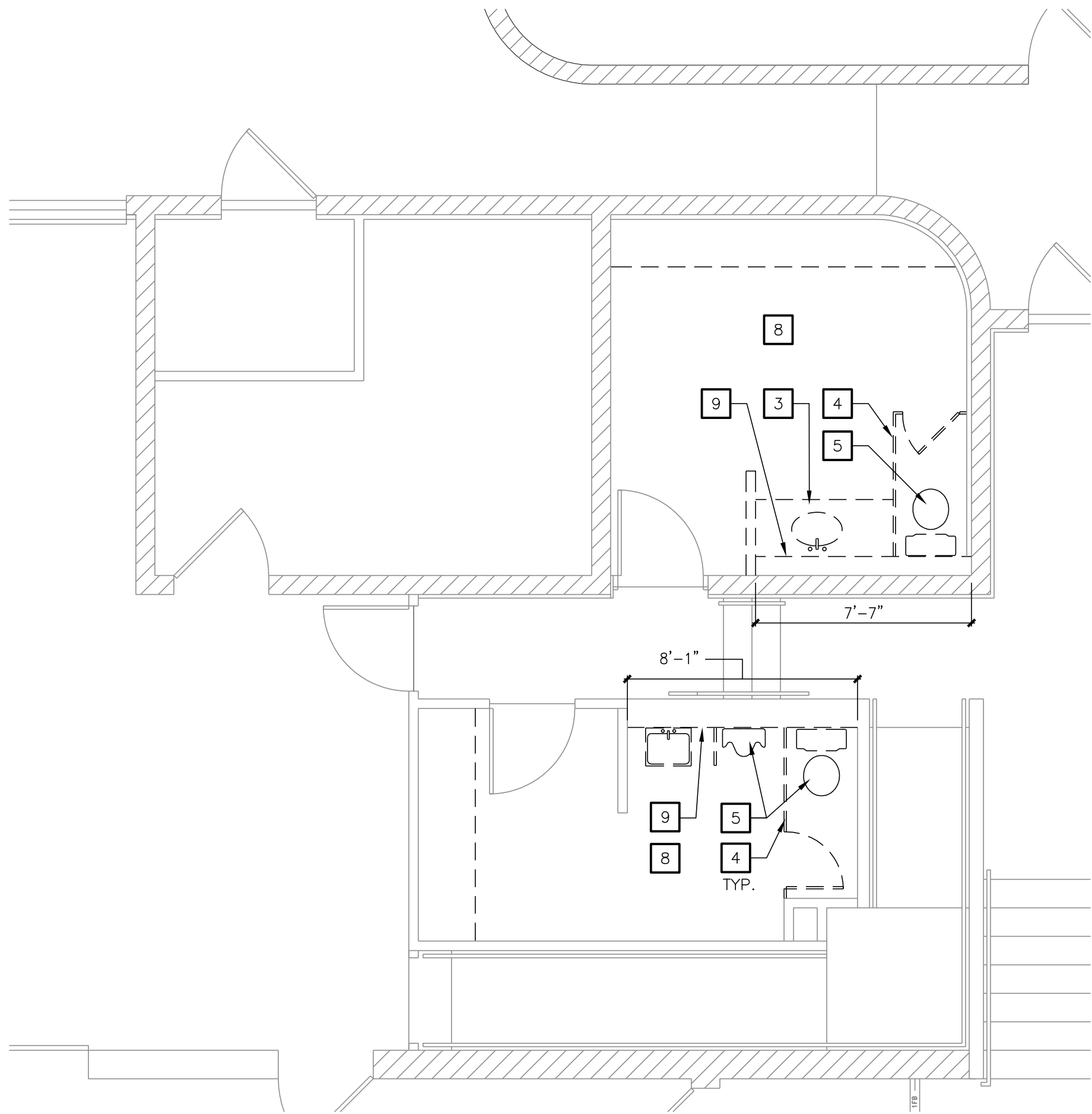
SHT NO

AD2.10

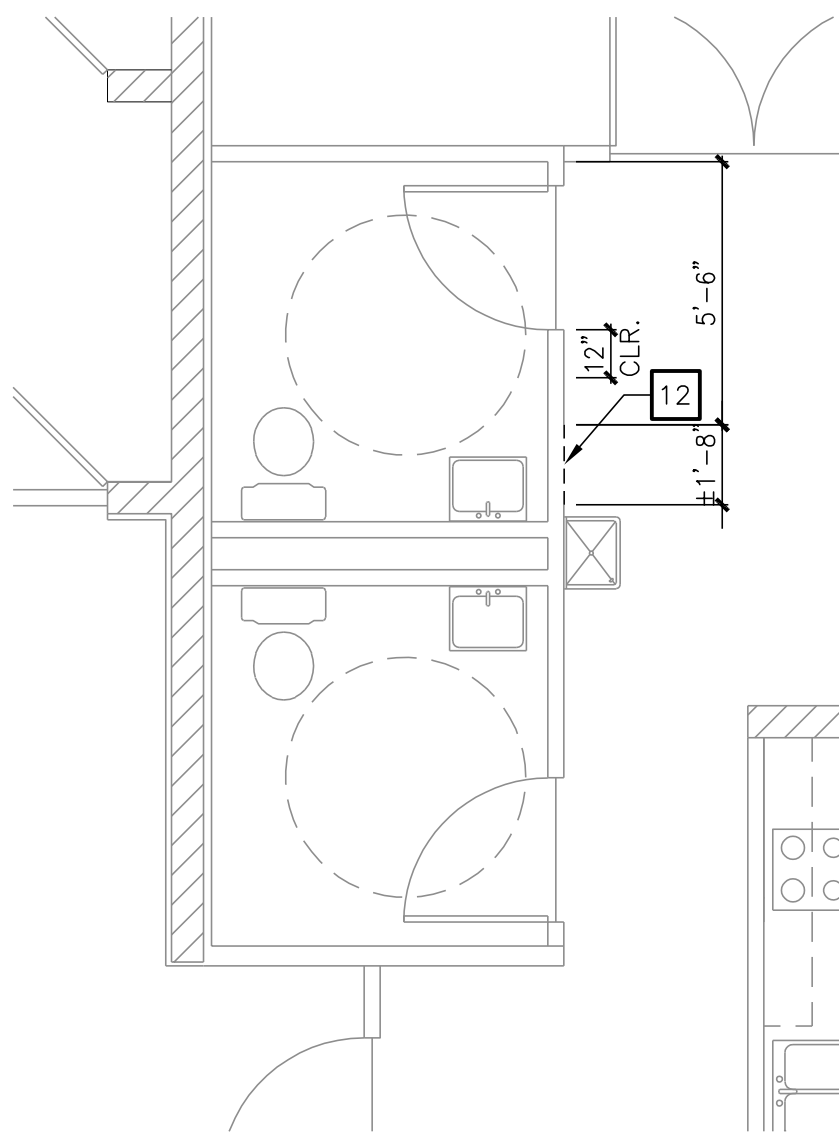
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ENLARGED DEMO PLAN A
1/4" = 1'-0"



ENLARGED DEMO PLAN B
1/4" = 1'-0"



ENLARGED DEMO PLAN C
1/4" = 1'-0"

KEYNOTES

- 1 REMOVE EXISTING ROOF DRAINS & OUTLETS
- 2 DEMOLISH INDICATED PORTIONS OF EXISTING CMU WALL. PROTECT REMAINING STRUCTURAL WALLS IN-PLACE
- 3 REMOVE EXISTING LAVATORY COUNTERS & MIRRORS
- 4 REMOVE EXISTING RESTROOM PARTITION SYSTEMS, ACCESSORIES AND GRAB BARS.
- 5 REMOVE EXISTING PLUMBING FIXTURES. COORDINATE WITH PLUMBING FOR FLOOR CONDITION.
- 6 REMOVE EXISTING DRINKING FOUNTAIN
- 7 EXISTING FLOOR DRAIN TO BE REMOVED AND EXTENDED.
- 8 DEMOLISH EXISTING FLOOR AND WALL TILE.
- 9 REMOVE EXISTING GYP. BD. FINISH TO ACCESS EXISTING PLUMBING
- 10 EXISTING FLOORING TO REMAIN. PROTECT IN PLACE DURING CONSTRUCTION.
- 11 REMOVE EXISTING CONCRETE SLAB FOR NEW STRUCTURAL FOOTING.
- 12 REMOVE EXISTING GYP. BD. TO SUD TO ALLOW FOR INSTALLATION FOR WATER LINE AND POWER FOR NEW BOTTLE FILLING STATION.

DEMOLITION LEGEND

- EXISTING FRAMED WALL TO REMAIN, PROTECT EXISTING WORK TO REMAIN
- EXISTING FRAMED WALL TO BE DEMOLISHED, SERVICES INCLUDING, BUT NOT LIMITED TO HVAC, PLUMBING, FIRE PROTECTION, ELECTRICAL AND TELECOMMUNICATIONS SHALL BE REMOVED, MAINTAINED AND ABANDONED
- EXISTING DOOR & FRAME TO REMAIN AND BE PROTECTED
- EXISTING DOOR & FRAME TO BE DEMOLISHED; VERIFY SALVAGE, RELOCATION, RECYCLING OR REUSE WITH OWNER
- EXISTING CMU WALL TO REMAIN. PROTECT EXISTING WORK TO REMAIN

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ENLARGED DEMO PLANS

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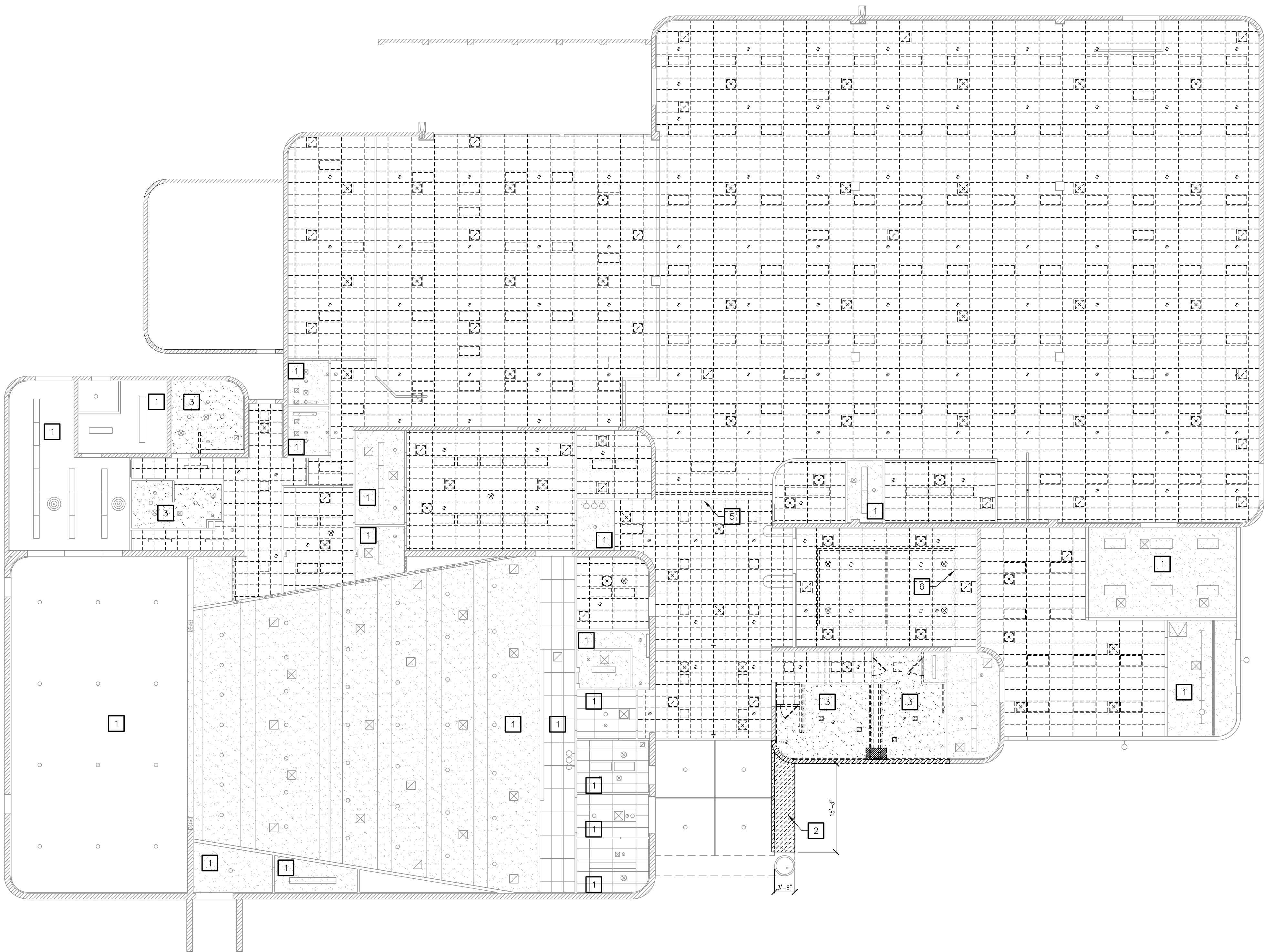
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MODIFY SECTION OF
EXISTING CEMENT
CANOPY. PATCH AND
REPAIR WHERE REQUIRED
AFTER RESTROOM
EXPANSION.

DETAIL 1

NTS



DEMO CEILING PLAN

3/32" = 1'-0"

CEILING LEGEND

- ☒ ☐ EXISTING DIFFUSERS TO REMAIN. VERIFY WITH EXISTING CONDITIONS AND MECHANICAL DRAWINGS.
- ☒ ☐ EXISTING DIFFUSERS TO BE REMOVED, STORED AND REUSED WHEN POSSIBLE. SEE MECHANICAL DRAWINGS. DAMAGED DIFFUSERS TO BE DISCARDED. REUSED DIFFUSERS TO BE CLEANED AND PREPPED BEFORE REUSE.
- ☐ ☐ EXISTING LIGHT FIXTURE TO BE REMOVED
- ☐ ☐ EXISTING LIGHT FIXTURE TO REMAIN
- ☐ EXISTING RECESSED LIGHT FIXTURE TO REMAIN
- ☐ EXISTING RECESSED LIGHT FIXTURE TO BE REMOVED
- ☐ EXISTING WALL MOUNTED LIGHT FIXTURE TO REMAIN
- ☐ EXISTING WALL MOUNTED RESTROOM LIGHT FIXTURE TO BE REMOVED
- ☐ EXISTING SPEAKER TO BE REMOVED, STORED AND REUSED
- ☐ EXISTING SPEAKER TO BE REMAIN
- ☐ EXISTING SMOKE DETECTOR TO BE REMOVED, STORED AND REUSED
- ☐ EXISTING SMOKE DETECTOR TO BE REMAIN
- ☐ EXISTING EXIT LIGHT SIGN TO BE REMOVED
- ☐ EXISTING EXIT LIGHT SIGN TO BE REMAIN

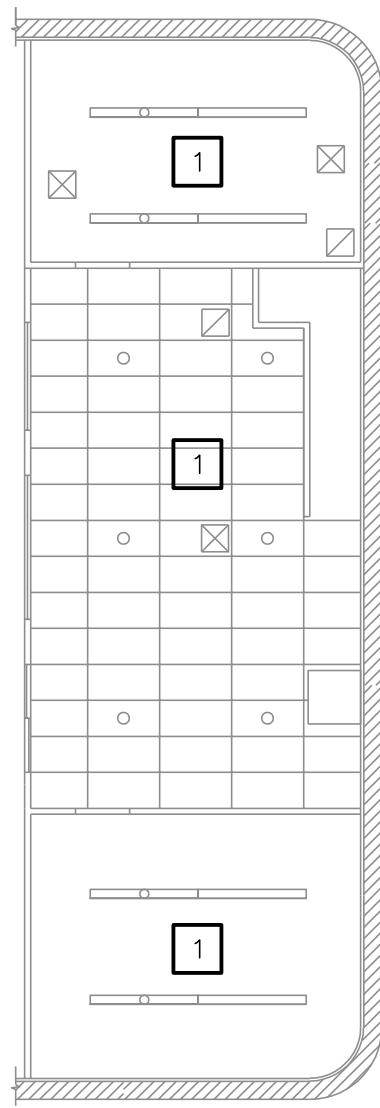
KEYNOTES

- NO DEMOLITION WORK TO BE DONE IN THIS AREA
- MODIFY EXISTING CEMENT CANOPY FOR RESTROOM EXPANSION. SEE DETAIL 1 ON SHEET AD3.10 FOR ADDITIONAL INFORMATION.
- DEMOLISH EXISTING GYP. BD. CEILING.
- EXISTING GYP. BD. CEILING TO REMAIN. PATCH AND REPAIR AT REMOVAL OF WALL.
- REMOVE EXISTING ROOM DIVIDER.
- REMOVE EXISTING TRACK LIGHTING SYSTEM.

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MEZZANINE DEMO RCP

3/32" = 1'-0"



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DEMO CEILING PLAN

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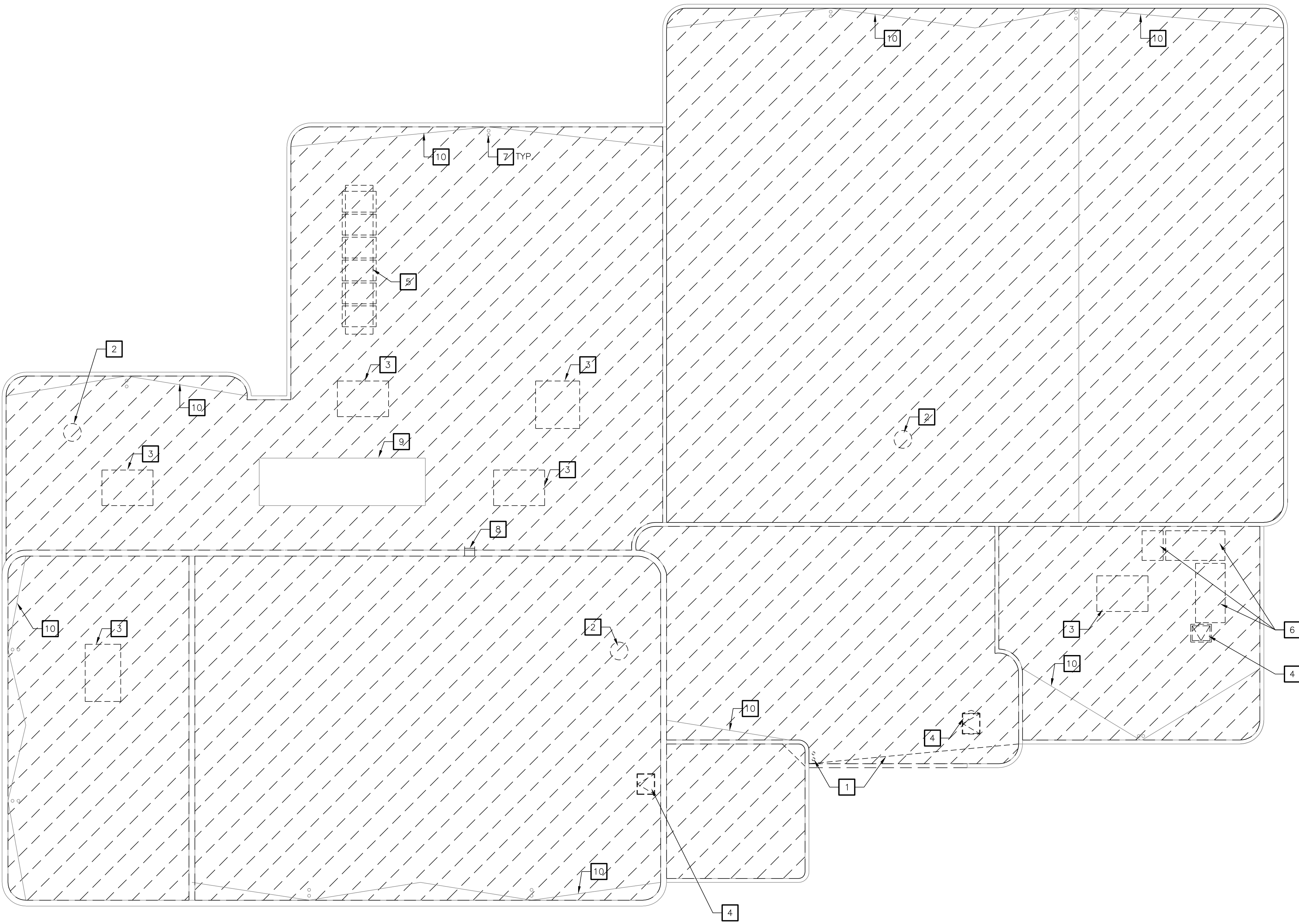
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SHT NO

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DEMO ROOF PLAN

3/32" = 1'-0"

SHEET NOTES

- A. REMOVE ALL MATERIALS NOT ASSOCIATED WITH ROOF FROM ROOFTOP AND STORE ELSEWHERE.
- B. CONTRACTOR TO REMOVE ALL EXTERIOR LIGHTING ON ROOF DURING CONSTRUCTION AND RE-INSTALL AFTER IMPROVEMENTS ARE MADE. ALL WIRING AND CONDUITS MUST BE CONCEALED WITHIN BUILDING.
- C. ALL EXISTING CONDUIT, PIPING, AND UTILITIES CURRENTLY ON ROOF TOP SHALL BE RE-LOCATED INSIDE BUILDING
- D. ALL EXISTING MECHANICAL CURBS TO BE REMOVED
- E. DEMOLISH ROOFING DOWN TO SHEATHING FOR FURTHER EXAMINATION OF CONDITION OF EXISTING ROOF. REMOVE EXISTING ROOFING INSULATION DOWN TO METAL DECK. CONTRACTOR IS TO ORGANIZE A MEETING WITH CONTRACTOR, ROOFING MANUFACTURER, OWNER, ARCHITECT, AND ENGINEER.

KEYNOTES

- 1 EXISTING ROOF DRAWIN AND CRICKETS TO BE REMOVED COMPLETELY.
- 2 REMOVE EXISTING EXHAUST FAN
- 3 REMOVE EXISTING MECHANICAL UNIT
- 4 REMOVE EXISTING ROOF ACCESS. MAINTAIN IN WORKING CONDITION FOR REUSE.
- 5 REMOVE EXISTING SOLAR COLLECTORS AND ASSOCIATED WIRING BACK TO SOURCE.
- 6 DEMO EXISTING WALK PADS
- 7 EXISTING ROOF DRAIN AND OVERFLOW DRAIN TO REMAIN
- 8 REMOVE EXISTING VERTICAL LADDER.
- 9 EXISTING MECHANICAL UNIT TO REMAIN.
- 10 EXISTING CRICKET FRAMING TO REMAIN - SINGLE PLY ROOFING TO BE REMOVED BACK TO SHEATHING.

LEGEND

- EXISTING ROOFTING TO BE REMOVED DOWN TO SHEATHING.



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DEMO ROOF PLAN

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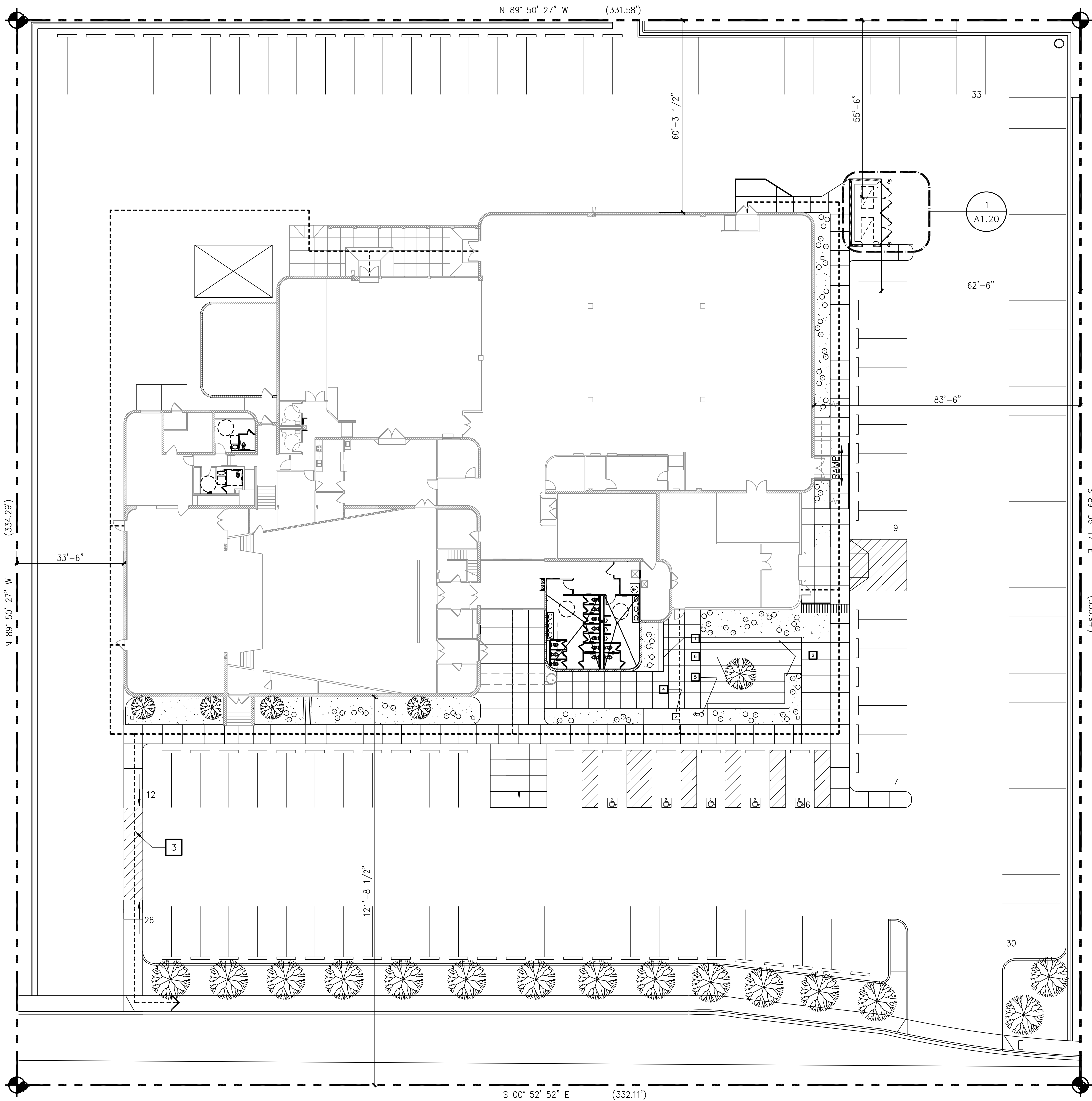
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BRUSH STREET

SITE PLAN

1" = 20'-0"

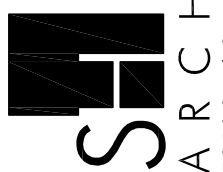
KEY NOTES

- 1 NEW PLANTER WITH BENCH SEATING. FINISH TO MATCH EXISTING.
- 2 EXISTING CONCRETE BENCH
- 3 EXISTING ACCESSIBLE ROUTE
- 4 EXISTING FLAGPOLE.
- 5 EXISTING DRINKING FOUNTAIN
- 6 EXISTING TREE TO REMAIN.



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SITE PLAN

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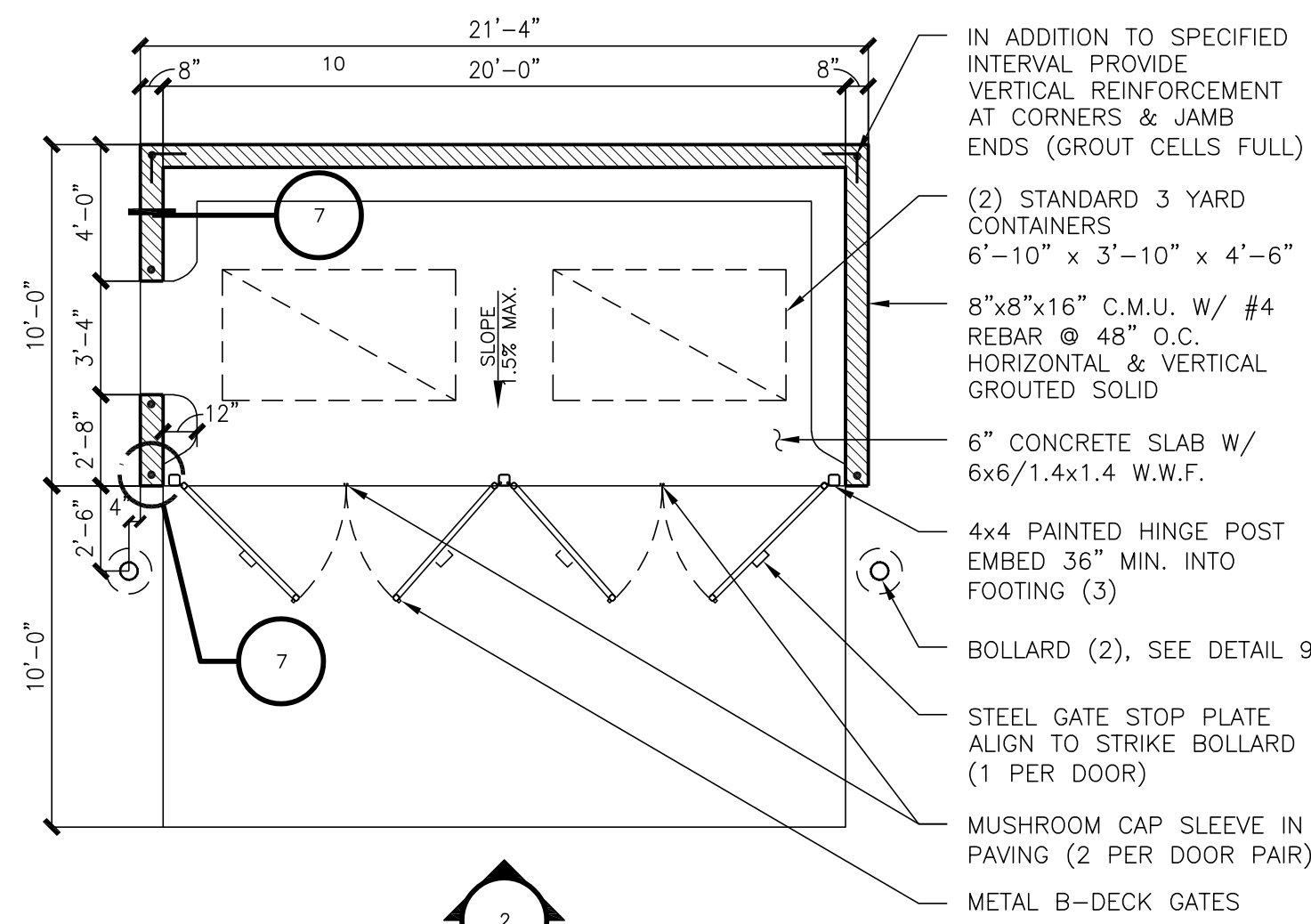
A1.10

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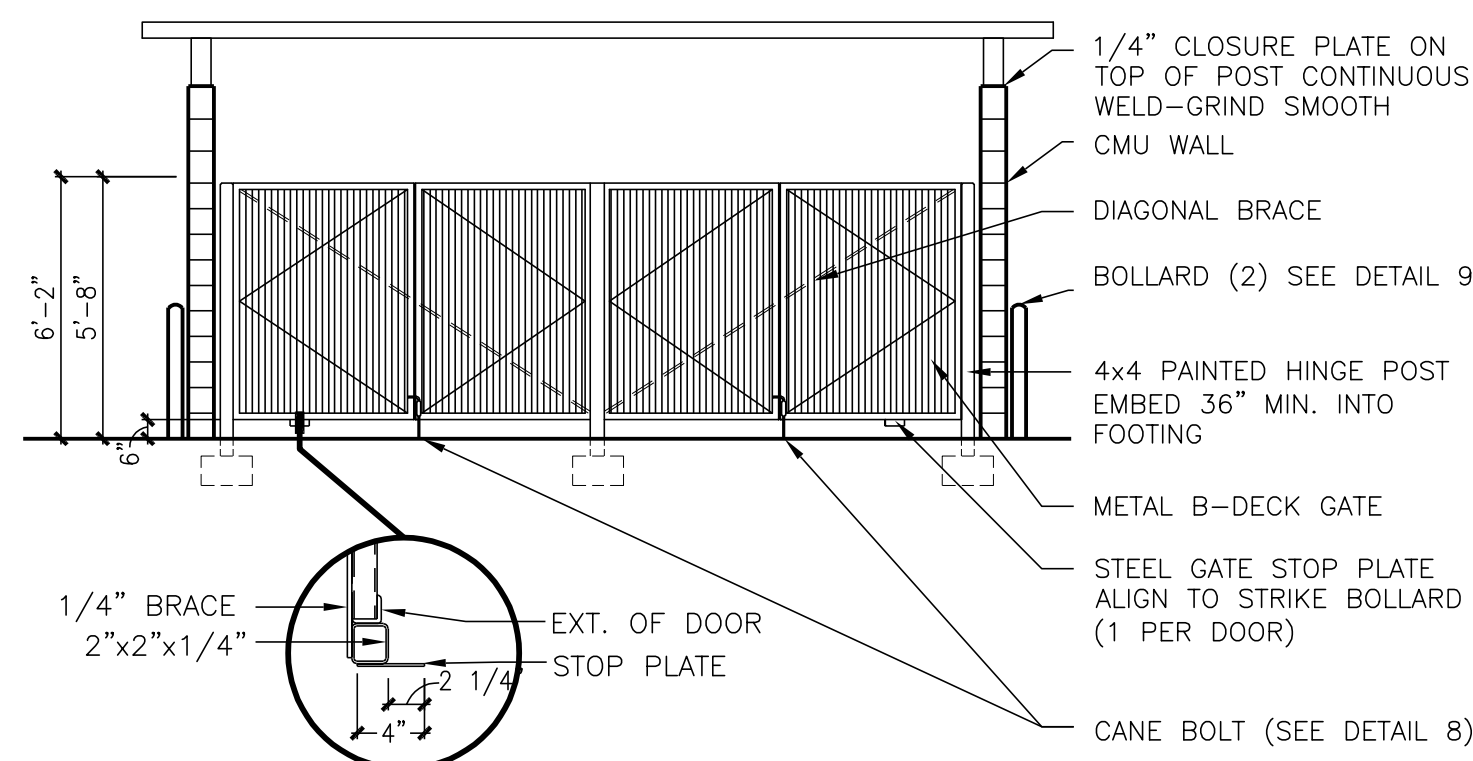
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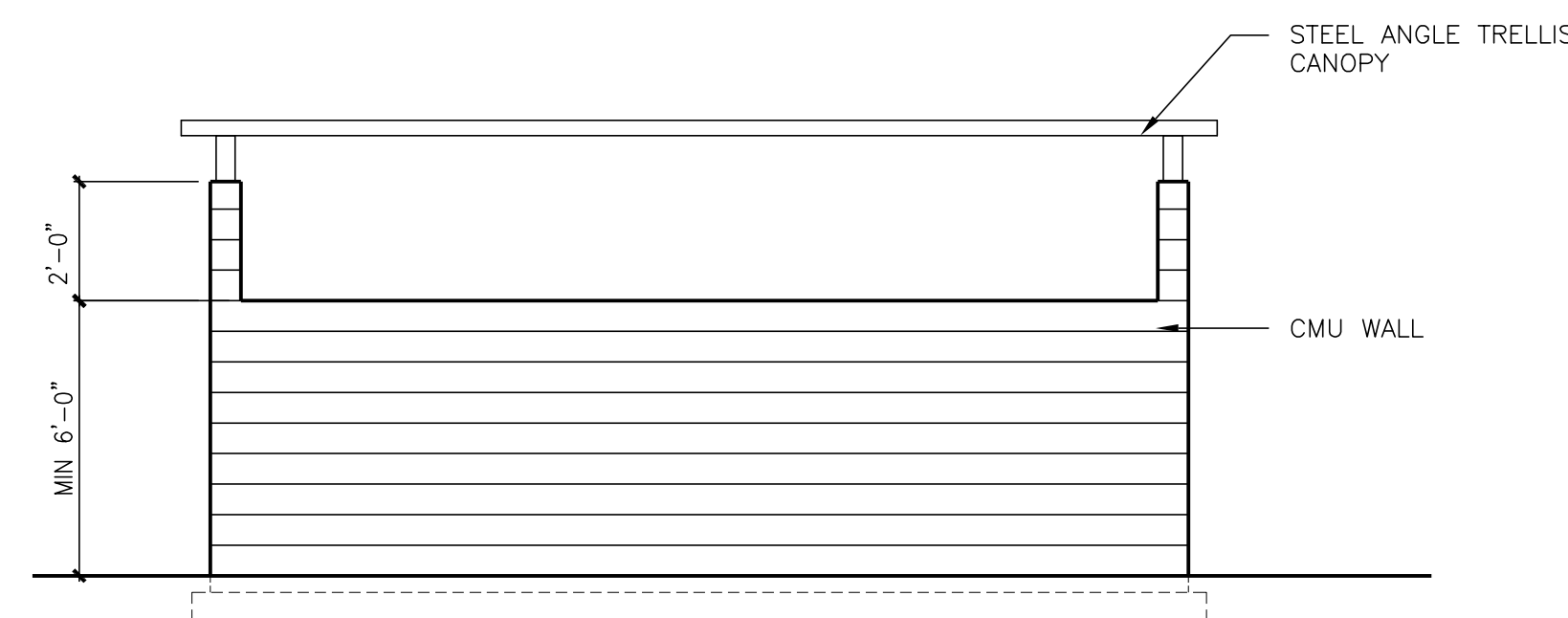
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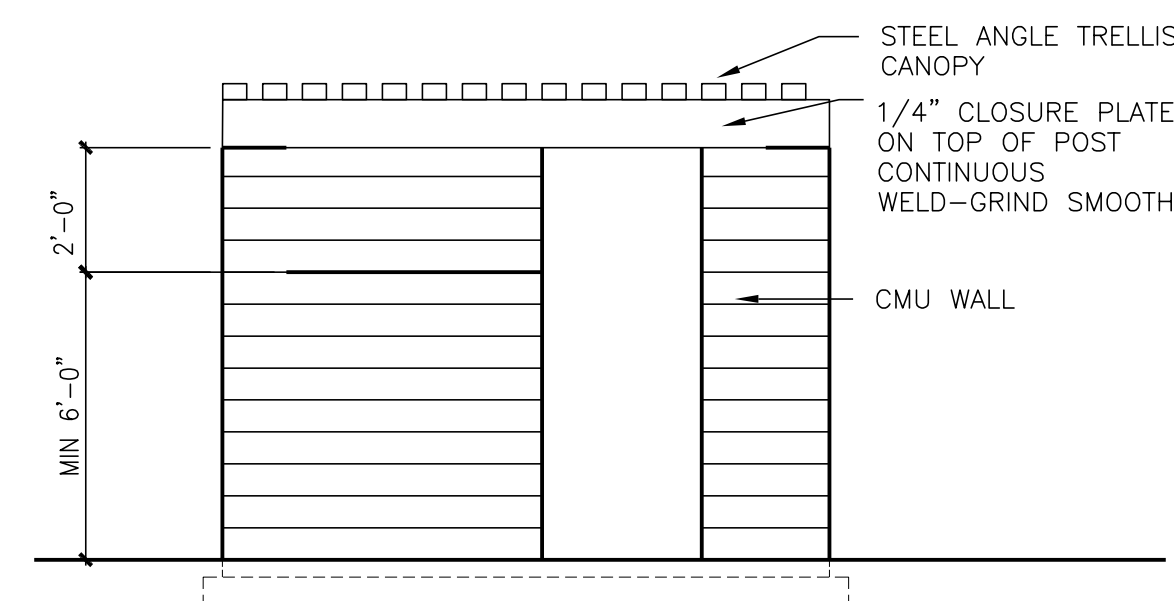
PLAN
NTS
1



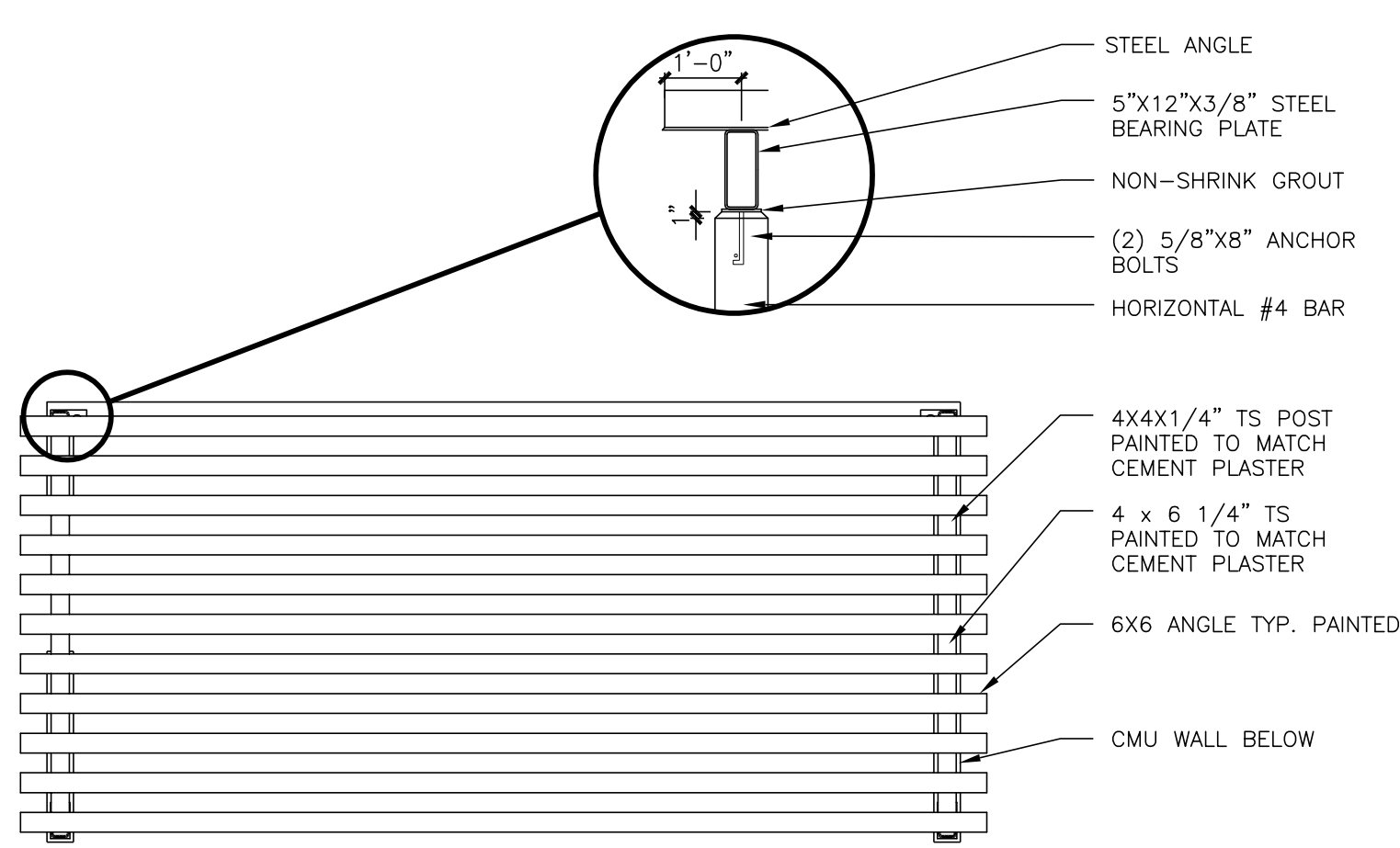
FRONT ELEVATION
NTS
2



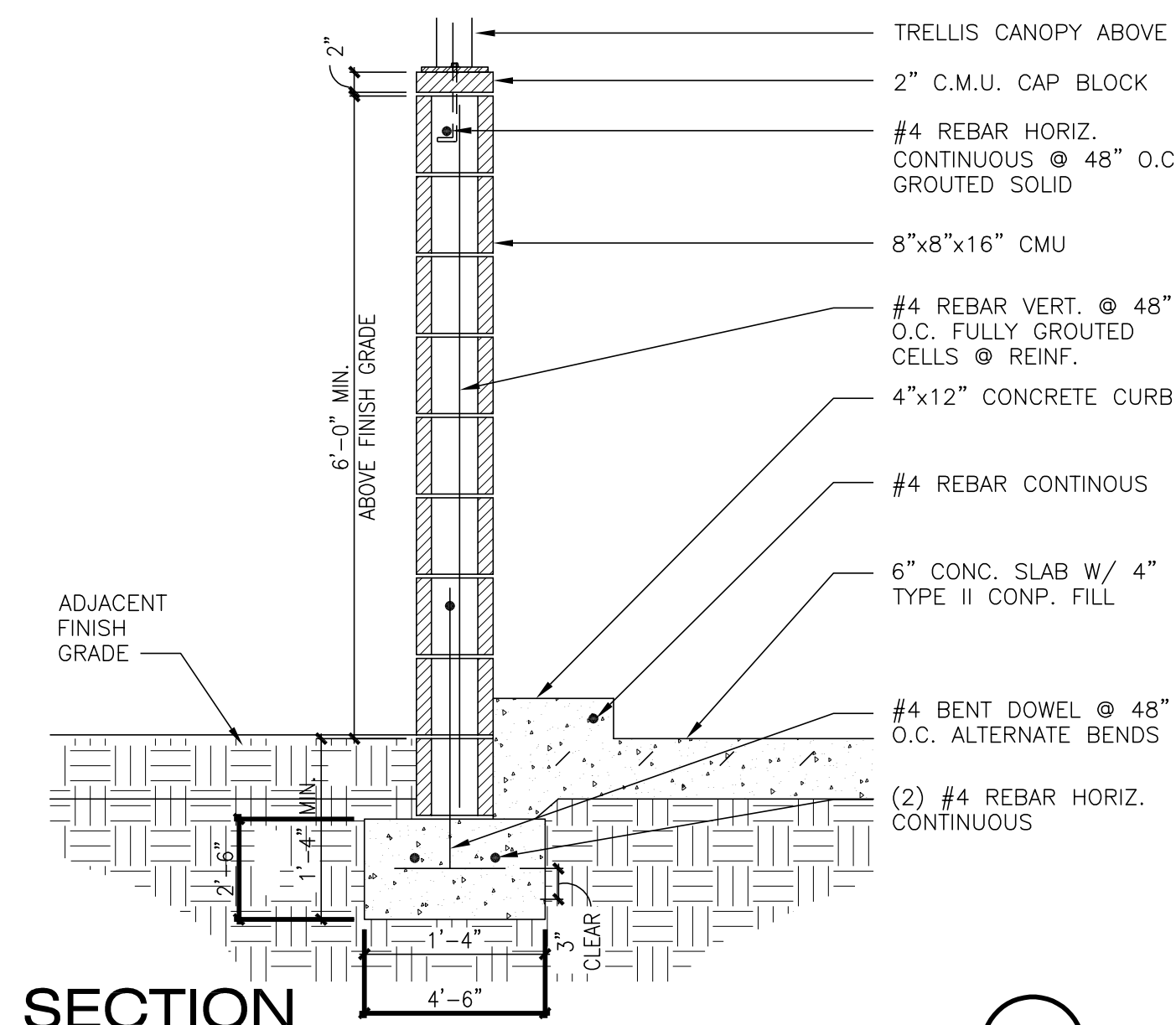
REAR ELEVATION
NTS
3



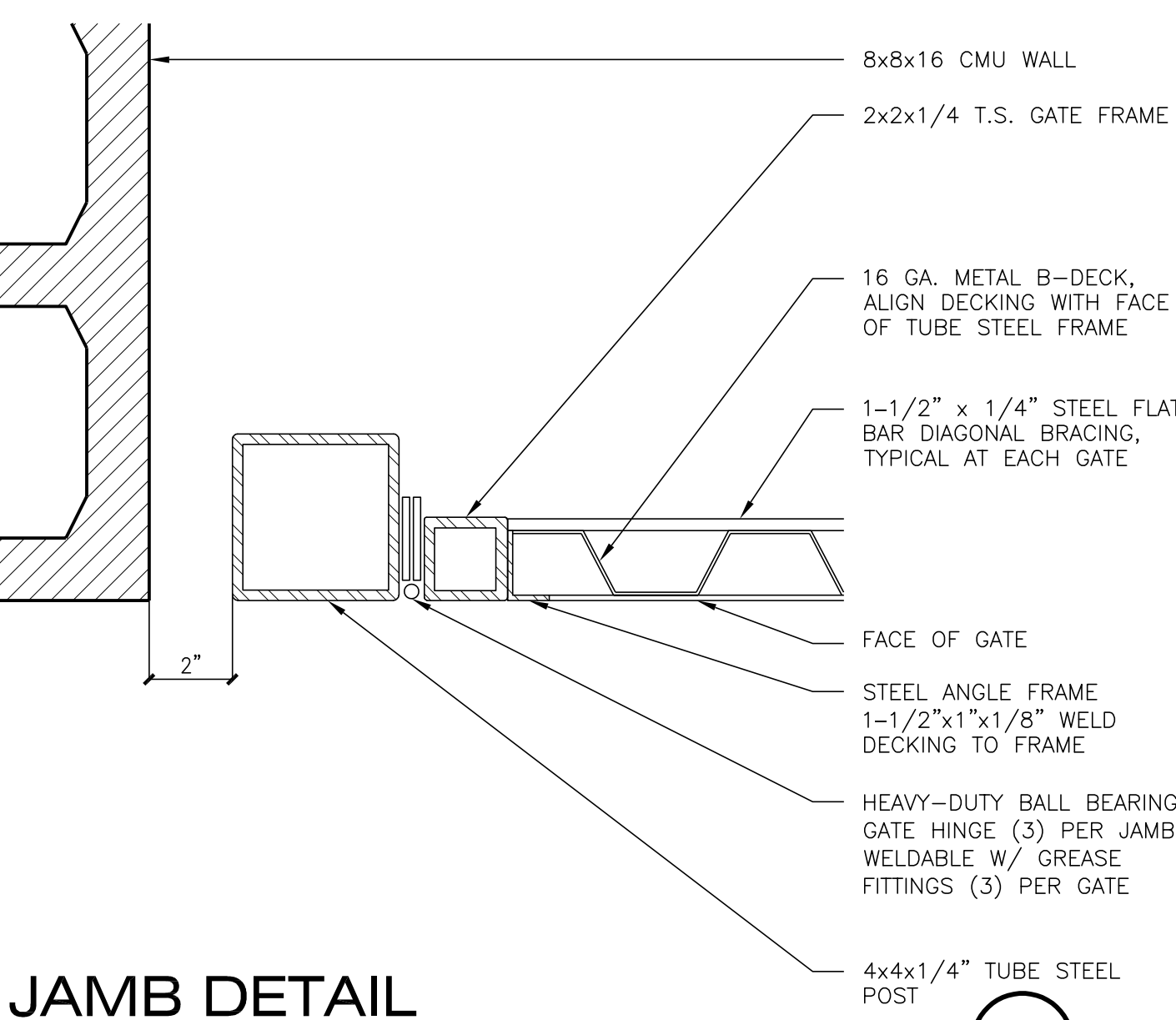
SIDE ELEVATION
1/4" = 1'-0"
4



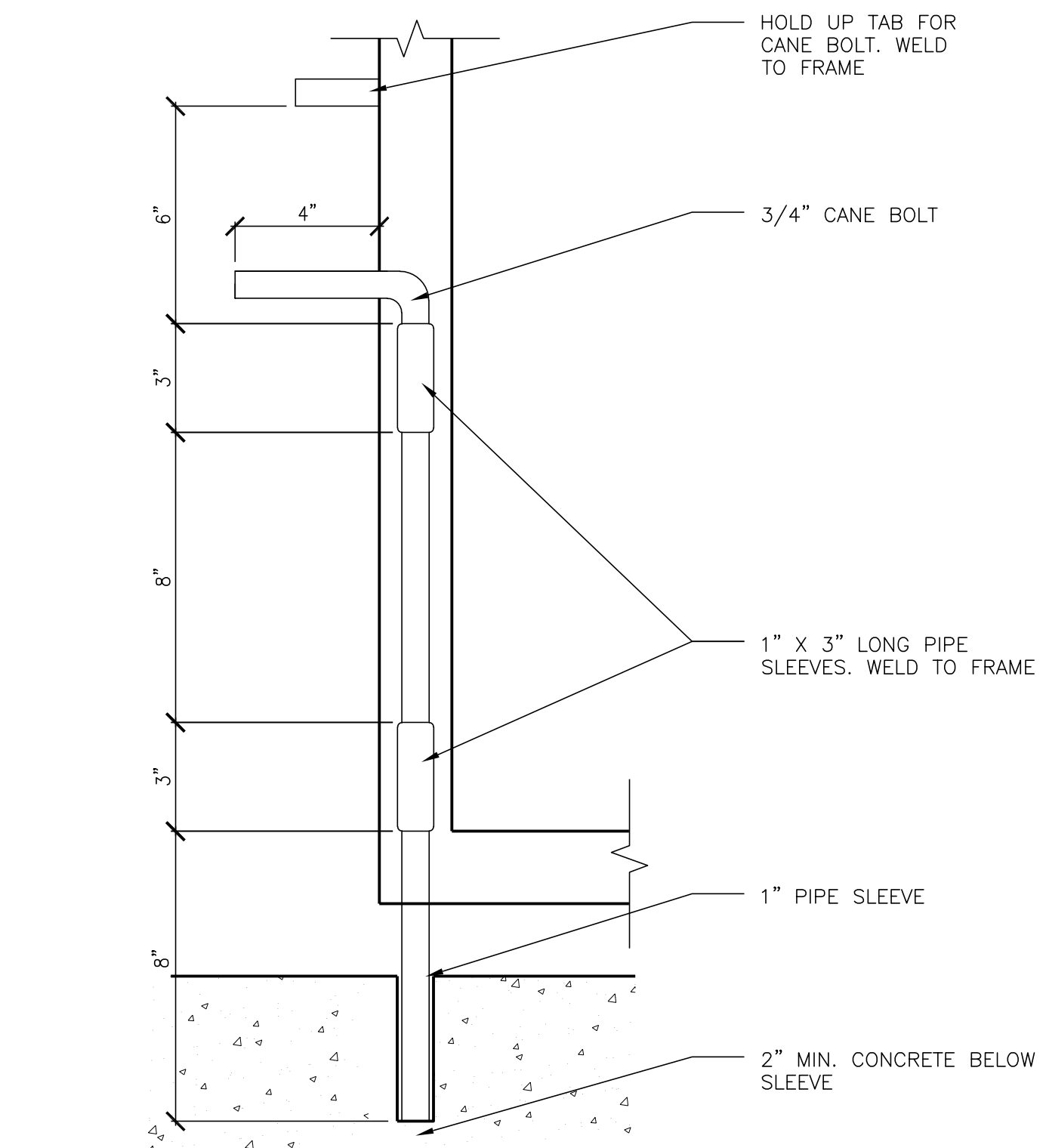
ROOF PLAN
NTS
5



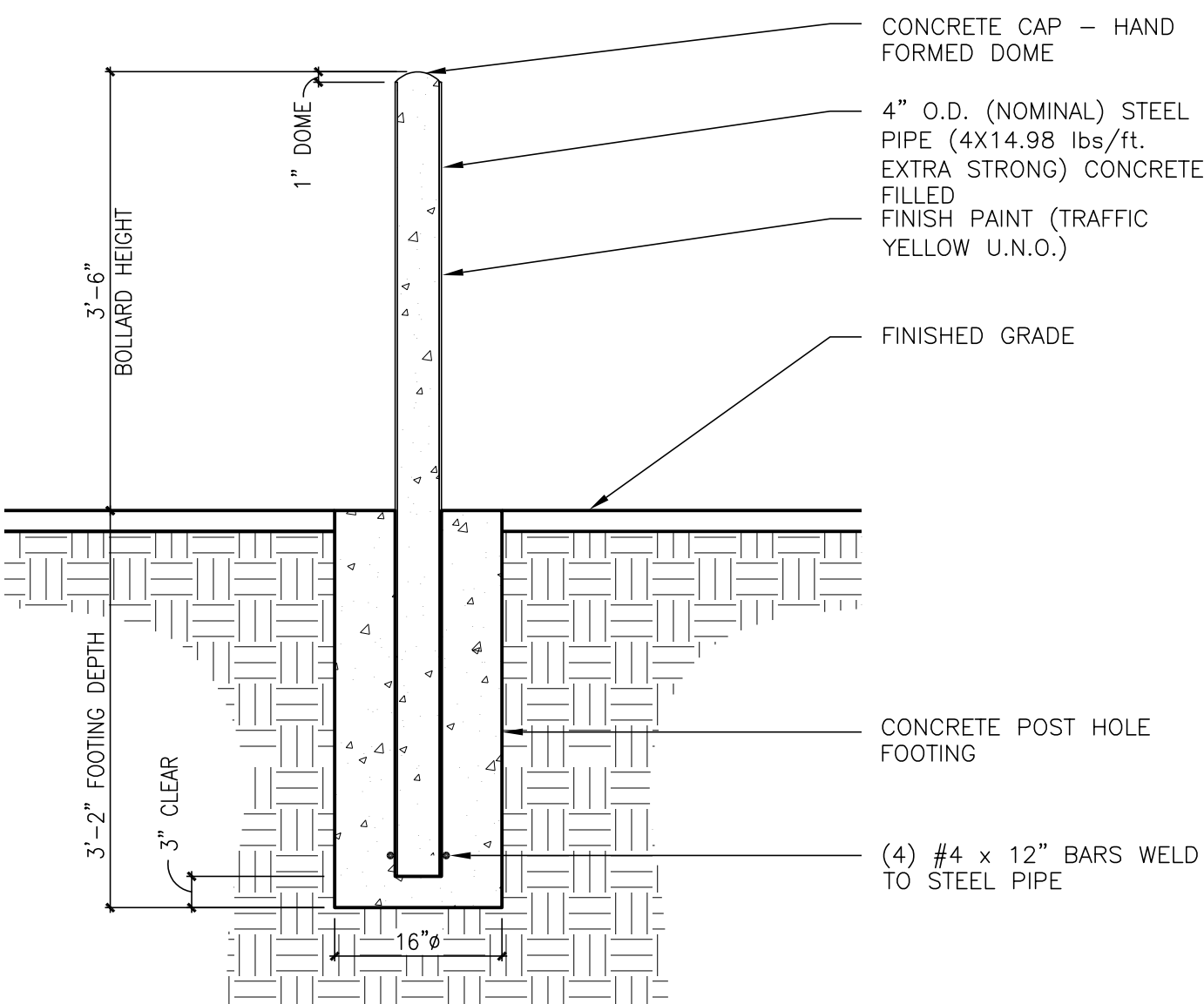
SECTION
NTS
6



JAMB DETAIL
NTS
7



CANE BOLT DETAIL
3"=1'-0"
8



BOLLARD DETAIL
3/4" = 1'-0"
9

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TRASH ENCLOSURE PLAN, ELEVATIONS AND DETAILS

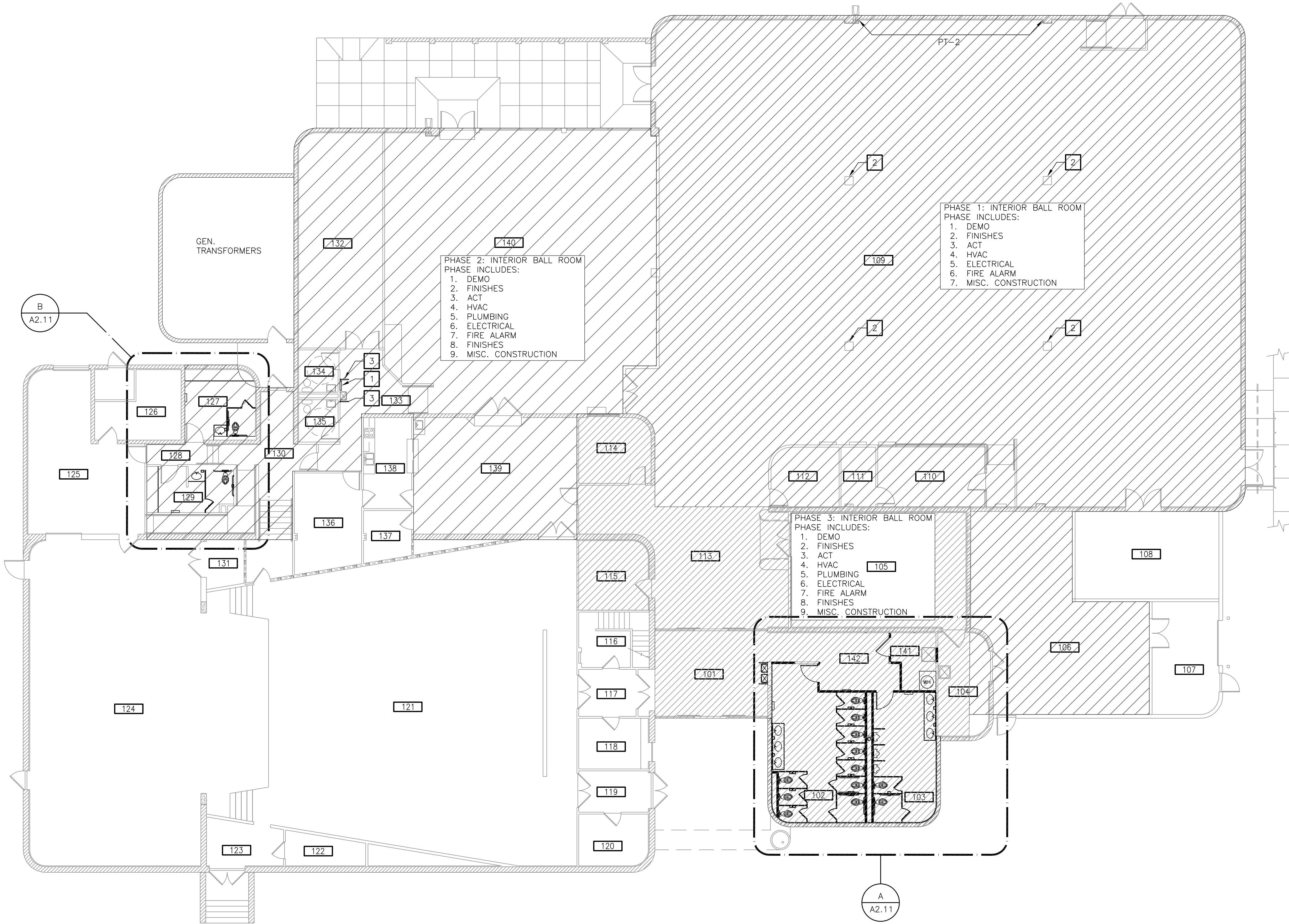
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SHT NO:

A1.20



OVERALL FLOOR PLAN

3/32" = 1'-0"



MEZZANINE PLAN

3/32" = 1'-0"

RECORD DRAWING

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KEYNOTES

1. INSTALL NEW SURFACE MOUNTED BOTTLE FILLING STATION PER FOOTNOTE "G" OF TABLE 2902.1. PATCH AND REPAIR WALL TO MATCH EXISTING AS REQUIRED.
2. COLUMNS TO BE PAINTED PT-2.
3. PROVIDE STAINLESS STEEL WALL TO FLOOR DRINKING FOUNTAIN SAFETY RAIL. SEE DETAIL 6/A12.10

ROOM LEGEND

ROOM NO.	DESCRIPTION
101	ENTRANCE
102	WOMENS
103	MENS
104	FIRE SPRINKLER/RISER
105	EXHIBIT AREA
106	RECEIVING AREA
107	LOADING/UNLOADING
108	CHAIR STORAGE
109	MULTI-PURPOSE ROOM
110	OFFICE
111	OFFICE
112	OFFICE
113	LOBBY
114	OFFICE
115	OFFICE
116	STAIR
117	FOYER
118	BOX OFFICE
119	FOYER
120	STORAGE
121	AUDITORIUM
122	MAINT. OFFICE
123	ALCOVE
124	STAGE
125	BACKSTAGE WORK AREA
126	ELECTRICAL ROOM
127	DRESSING ROOM
128	CORRIDOR
129	DRESSING ROOM
130	CORRIDOR
131	STORAGE
132	STORAGE
133	CORRIDOR
134	TOILET ROOM
135	TOILET ROOM
136	STAFF ROOM
137	STORAGE
138	SERVING
139	CONFERENCE
140	MULTI-PURPOSE ROOM
141	JANITOR
142	CORRIDOR
200	MECHANICAL ROOM
201	CONTROL ROOM
202	STORAGE



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OVERALL FLOOR PLAN

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A2.10



FINISH LEGEND

NEW CERAMIC TILE, (CT-5). IN AREAS WITH (CT-5) USE BASE (CB-1).

EPOXY FLOORING (EP-1). IN AREAS WITH (EP-1) USE BASE (RB-1).

LUXURY VINYL TILE (LVT-1). IN AREAS WITH LVT-1) USE BASE (RB-1).

PAINT

BASE

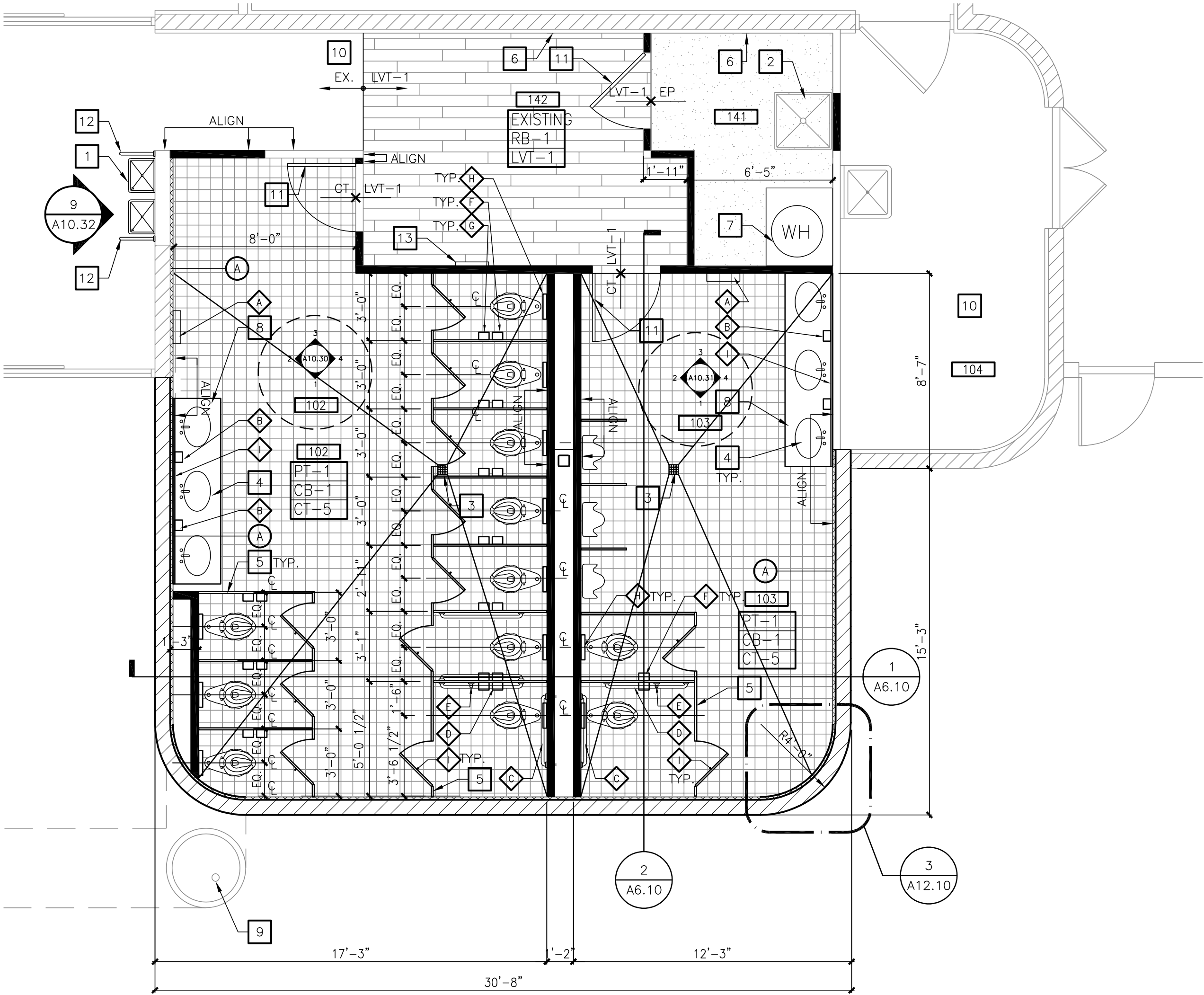
FLOOR

ROOM FINISH SYMBOL

ACCESSORY SCHEDULE

#	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING TYPE	MOUNTING HT.	REMARKS
A	PAPER TOWEL DISPENSER/WASTE RECEPTACLE	BOBRICK	B-3949	SURFACE	58"	
B	SOAP DISPENSER	BOBRICK	B-4112	SURFACE	48"	
C	GRAB - BAR36	BOBRICK	B-6806	SURFACE	33"	
D	GRAB - BAR42	BOBRICK	B-6806	SURFACE	33"	
E	GRAB - BAR18	BOBRICK	B-6806	SURFACE	59"	
F	MULTI-ROLL TOILET TISSUE DISPENSER	BOBRICK	B-4288	SURFACE	26"	
G	SANITARY NARKINS DISPOSAL	BOBRICK	B-270	SURFACE	25"	
H	SEAT-COVER DISPENSER	BOBRICK	B-4221	SURFACE	48"	
I	MIRROR	TBD	TBD	SURFACE	76"	
J	HAT AND COAT HOOK	BOBRICK	B-211	SURFACE	42"	

- A. ALL FINISHES SHALL BE SATIN U.N.O.
B. ALL MOUNTING HEIGHTS ARE FROM FINISH FLOOR TO TOP OF UNIT U.N.O.



ENLARGED FLOOR PLAN

1/4" = 1'-0"

A

SHEET NOTES

- A. SEE SHEET G1.00 FOR ALL ACCESSORY DIMENSIONS AND ADA COMPLIANCE
B. PROVIDE BLOCKING FOR ALL TOILET ACCESSORIES - TYPICAL FOR MOUNTING AND WITH ADEQUATE SUPPORT TO MEET CODE REQUIREMENTS
C. INSULATE ALL LAVATORY AND HAND SINK EXPOSED DRAIN AND/OR HOT WATER PIPING BELOW FIXTURES PER ADAAG
D. PROTECT ALL EXISTING FINISHES, FURNITURE, EQUIPMENT, ETC. TO REMAIN DURING CONSTRUCTION. REPAIR ANY DAMAGES CAUSED TO EXISTING FINISHES DURING CONSTRUCTION.

KEY NOTES

- 1 NEW DRINKING FOUNTAINS.
2 EXISTING MOP SINK TO REMAIN. PROTECT DURING CONSTRUCTION.
3 FLOOR DRAIN.
4 NEW SINK AND MANUAL FAUCETS. SEE PLUMBING DRAWINGS.
5 NEW TOILET PARTITIONS.
6 PATCH AND REPAIR WALL WHERE DEMOLITION OCCURS.
7 INSTALL NEW WATER HEATER WITH 4" CONCRETE HOUSEKEEPING PAD.
8 SOLID SURFACE COUNTERTOP AND BACKSPLASH.
9 EXISTING PIPE COLUMN.
10 NO WORK TO BE DONE THIS AREA.PROTECT IN PLACE
11 REUSE EXISTING DOOR AND FRAME.
12 PROVIDE STAINLESS STEEL WALL TO FLOOR DRINKING FOUNTAIN SAFETY RAIL.
SEE DETAIL 6/A12.10
13 PROVIDE DIRECTIONAL SIGNAGE TO READ "SINGLE USER/FAMILY RESTROOMS LOCATED BEHIND MULTI-PURPOSE ROOM."

FINISH LEGEND

CEILING
ACT-1 ARMSTRONG #1903 ULTIMA SQUARE LAY-IN, 2X4

PAINT
PT-1 SHERWIN WILLIAMS, SW 7570 EGRET WHITE SEMI-GLOSS
PT-2 SHERWIN WILLIAMS, SW 2839 ROYOCROFT COPPER RED
PT-3 SHERWIN WILLIAMS, SW 7007 CEILING BRIGHT WHITE (GYP. CEILING ONLY)

CERAMIC TILE
CT-1 DALTILE, SEMI-GLOSS, K101 WHITE, 4-1/4" X 4-1/4"
CT-2 DALTILE, SEMI-GLOSS, 0161 URBAN PUTTY,4-1/4" X 4-1/4"
CT-3 DALTILE, SEMI-GLOSS, 0182 SUEDE GRAY, 4-1/4" X 4-1/4"
CT-4 DALTILE, SEMI-GLOSS, 0093 FIRE BRICK, 4-1/4" X 4-1/4"
CT-5 DALTILE, KEYSTONES, D201 URBAN PUTTY SPECKLE, 2'X 2'

CERAMIC BASE
CB-1 DALTILE, SEMI-GLOSS, K101 WHITE, 4-1/4" X 4-1/4"

SOLID SURFACE
SS-1 FORMICA SIGNATURES, 742 BIANCO TERRAZZO

TOILET PARTITIONS
TP-1 BRADLEY POWDER COATED PARTITIONS, 0412 WARM GRAY

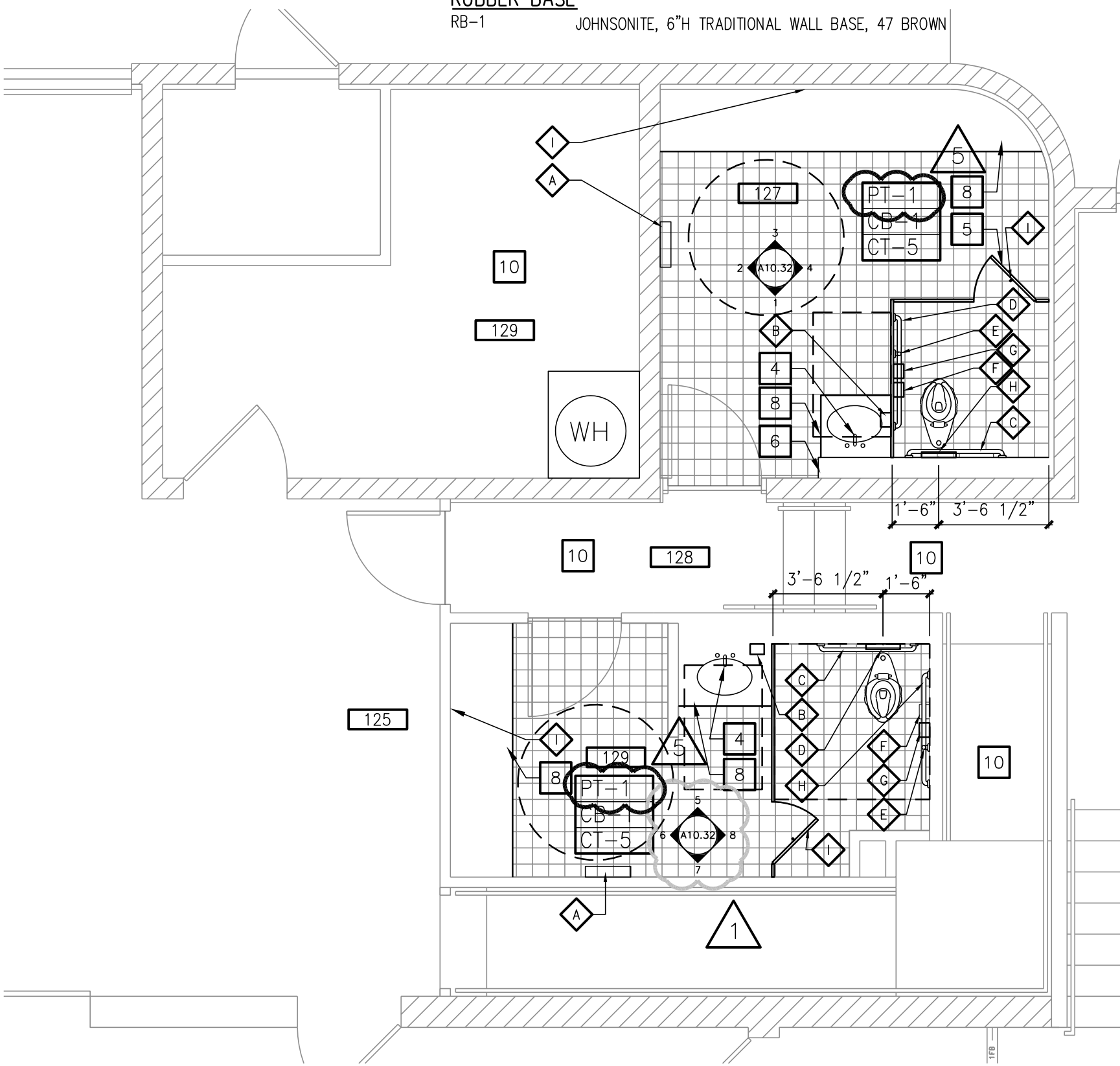
GROUT
GT-1 LATICRETE, 61 PARCHMENT

EPOXY FLOORING
EP-1 STONHARD, STONCLAD GS, COLOR: BEECHWOOD

RUBBER BASE
RB-1 JOHNSONITE, 6"H TRADITIONAL WALL BASE, 47 BROWN

LUXURY VINYL TILE
LVT-1 PATCRAFT, 1200V HIGHLAND FOREST
COLOR: 20200 NATURAL MAPLE
STAGGERED INSTALLATION
SIZE 4" X 36"

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ENLARGED FLOOR PLAN

1/4" = 1'-0"

B



REVISIONS
7/18/16 PLAN COMMENTS
4/20/17 PLAN REVISIONS
5/8/17 PLAN REVISIONS

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ENLARGED FLOOR PLANS

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BID NO	15.59806.JH
CLV DWG NO	620-10B
HANSEN NO	59806

SHT NO

A2.11



NORTH



NORTH

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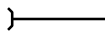
ROOM NO.

101	ENTRANCE
102	WOMENS
103	MENS
104	FIRE SPRINKLER/RISER
105	EXHIBIT AREA
106	RECEIVING AREA
107	LOADING/UNLOADING
108	CHAIR STORAGE
109	MULTI-PURPOSE ROOM
110	OFFICE
111	OFFICE
112	OFFICE
113	LOBBY
114	OFFICE
115	OFFICE
116	STAIR
117	FOYER
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119	FOYER
120	STORAGE
121	AUDITORIUM
122	MAINT. OFFICE
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125	BACKSTAGE WORK AREA
126	ELECTRICAL ROOM
127	DRESSING ROOM
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130	CORRIDOR
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132	STORAGE
133	CORRIDOR
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135	TOILET ROOM
136	STAFF ROOM
137	STORAGE
138	SERVING
139	CONFERENCE
140	MULTI-PURPOSE ROOM
141	JANITOR
142	CORRIDOR
200	MECHANICAL ROOM
201	CONTROL ROOM
202	STORAGE

A. REFER TO SHEET A2.11 FOR FINISH LEGEND.

A. REFER TO SHEET A2.11 FOR FINISH LEGEND.

SYMBOL

SYMBOL	DESCRIPTION
	RECESSED DOWN LIGHT FIXTURE
	SURFACE MOUNTED LIGHT FIXTURE
	WALL MOUNTED VANITY MIRROR LIGHT FIXTURE
	RECESSED 2X4 OR 2X2 LAY-IN LIGHT FIXTURE
	PENDANT MOUNTED LIGHT FIXTURE
	SURFACE MOUNTED STRIP FLUORESCENT LIGHT FIXTURE
	CHAIN-MOUNTED STRIP FLUORESCENT LIGHT FIXTURE
	CEILING MOUNTED ILLUMINATED EXIT SIGN
	WALL MOUNTED ILLUMINATED EXIT SIGN
	BATTERY PACK
	CEILING SPEAKER
	WALL MOUNTED SPEAKER
	JUNCTION BOX
	WALL MOUNTED JUNCTION BOX
	SECURITY CAMERA
	ACCESS PANEL
	SUPPLY AIR DIFFUSER
	RETURN AIR DIFFUSER / EXHAUST
	EXHAUST FAN

SYMBOL

<u>SYMBOL</u>	<u>DESCRIPTION</u>
 FINISH HEIGHT	ACOUSTICAL TILE CEILING, SEE DETAIL 1/A3.20
 FINISH	EXISTING CEILING TO REMAIN
 FINISH HEIGHT	GYPSUM BOARD CEILING, SEE DETAIL 2/A3.20
 FINISH HEIGHT	GYPSUM BOARD HEADER, SEE DETAIL 3/A3.20

BASED ON CONTRACTOR SUPPLIED
INFORMATION, WHICH HAS NOT BEEN VERIFIED
BY SH ARCHITECTURE

DATE: 02/15/2018

$$3/32'' = 1'-0''$$
$$3/32'' = 1'-0''$$


ARCHITECT

SH ARCHITECTURE
7250 Peak Drive Suite 216 Las Vegas Nevada 89131
Office 702.363.2222 www.sh-architecture.com

Charleston Heights Community Center

OVERALL REFLECTED CEILING PLAN

THIS DRAWING
WAS ORIGINALLY
STAMPED BY
JOHN A. SAWDON
ARCHITECT NO. 4058
ON 07/18/2016

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

333 NORTH RANCHO DRIVE
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FAX: (702) 384-4846
TDD: (702) 386-9108

RAWN CJT

05/02/2016

15.59806.JH

620-10B

59806

HT NO

A3.10



SHEET NOTES

A. REFER TO SHEET A2.11 FOR FINISH SCHEDULE.

FIXTURE LEGEND

SYMBOL	DESCRIPTION
	RECESSED DOWN LIGHT FIXTURE
	SURFACE MOUNTED LIGHT FIXTURE
	WALL MOUNTED VANITY MIRROR/LIGHT FIXTURE
	RECESSED 2X4 OR 2X2 LAY-IN LIGHT FIXTURE
	PENDANT MOUNTED LIGHT FIXTURE
	SURFACE MOUNTED STRIP FLUORESCENT LIGHT FIXTURE
	CHAIN-MOUNTED STRIP FLUORESCENT LIGHT FIXTURE
	CEILING MOUNTED ILLUMINATED EXIT SIGN
	WALL MOUNTED ILLUMINATED EXIT SIGN
	BATTERY PACK
	CEILING SPEAKER
	WALL MOUNTED SPEAKER
	JUNCTION BOX
	WALL MOUNTED JUNCTION BOX
	SECURITY CAMERA
	ACCESS PANEL
	SUPPLY AIR DIFFUSER
	RETURN AIR DIFFUSER / EXHAUST
	EXHAUST FAN

CEILING TYPE LEGEND

SYMBOL	DESCRIPTION
	ACOUSTICAL TILE CEILING, SEE DETAIL 1/A3.20
	EXISTING CEILING TO REMAIN
	GYP SUM BOARD CEILING, SEE DETAIL 2/A3.20
	GYP SUM BOARD HEADER, SEE DETAIL 3/A3.20

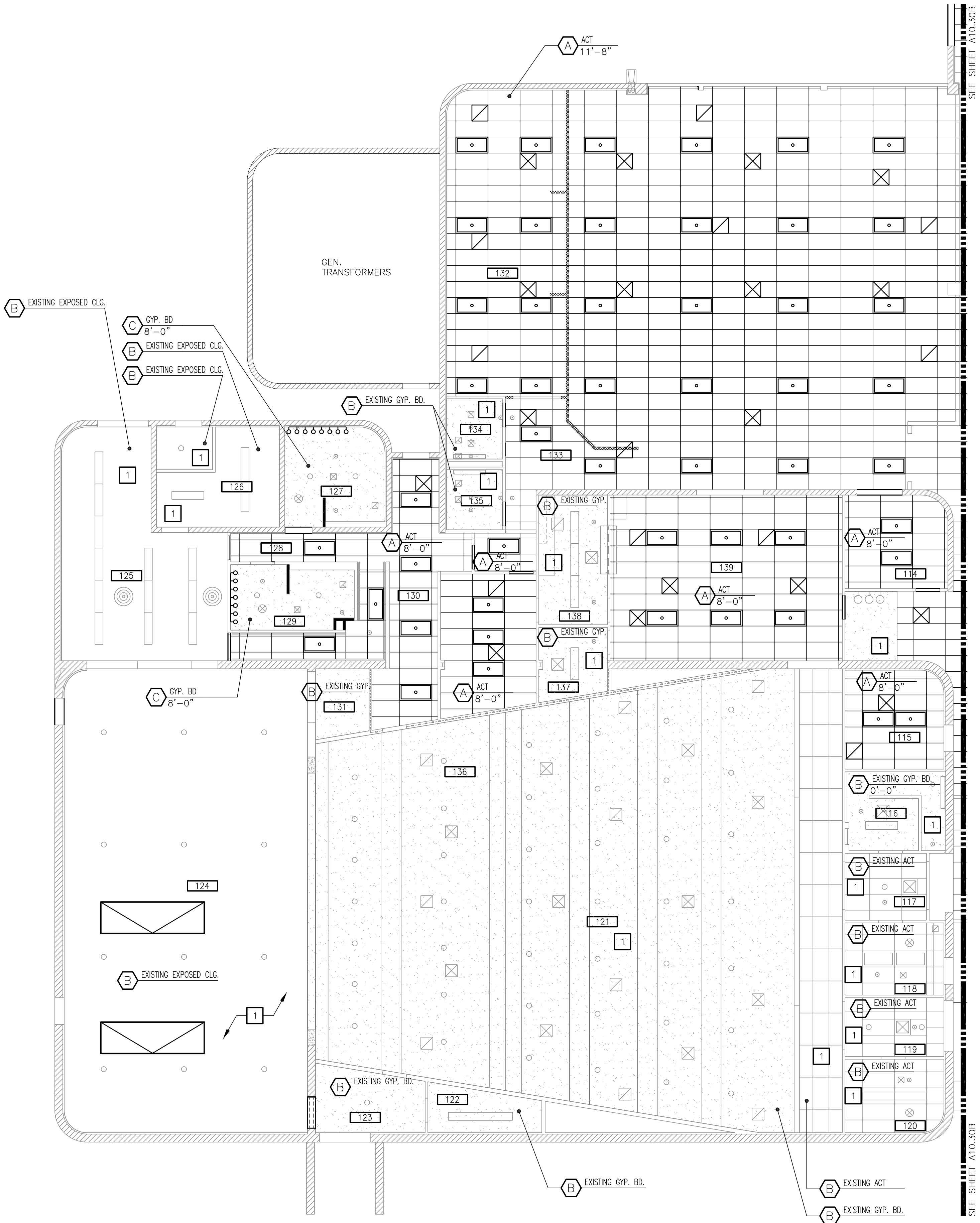
KEYNOTES

- 1
- NO WORK TO BE DONE IN THIS AREA
- 2
- PATCH AND REPAIR CEMENT PLASTER CANOPY AFTER INSTALLING RESTROOM EXPANSION. HEIGHT AND FINISH TO MATCH EXISTING.

ROOM LEGEND

ROOM NO.	DESCRIPTION
101	ENTRANCE
102	WOMENS
103	MENS
104	FIRE SPRINKLER/RISER
105	EXHIBIT AREA
106	RECEIVING AREA
107	LOADING/UNLOADING
108	CHAIR STORAGE
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135	TOILET ROOM
136	STAFF ROOM
137	STORAGE
138	SERVING
139	CONFERENCE
140	MULTI-PURPOSE ROOM
141	JANITOR
142	CORRIDOR
200	MECHANICAL ROOM
201	CONTROL ROOM
202	STORAGE

RECORD DRAWING
BASED ON CONTRACTOR SUPPLIED
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DATE: 02/15/2018



REFLECTED CEILING PLAN "A"

1/8" = 1'-0"



REVISIONS

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REFLECTED CEILING PLAN "A"

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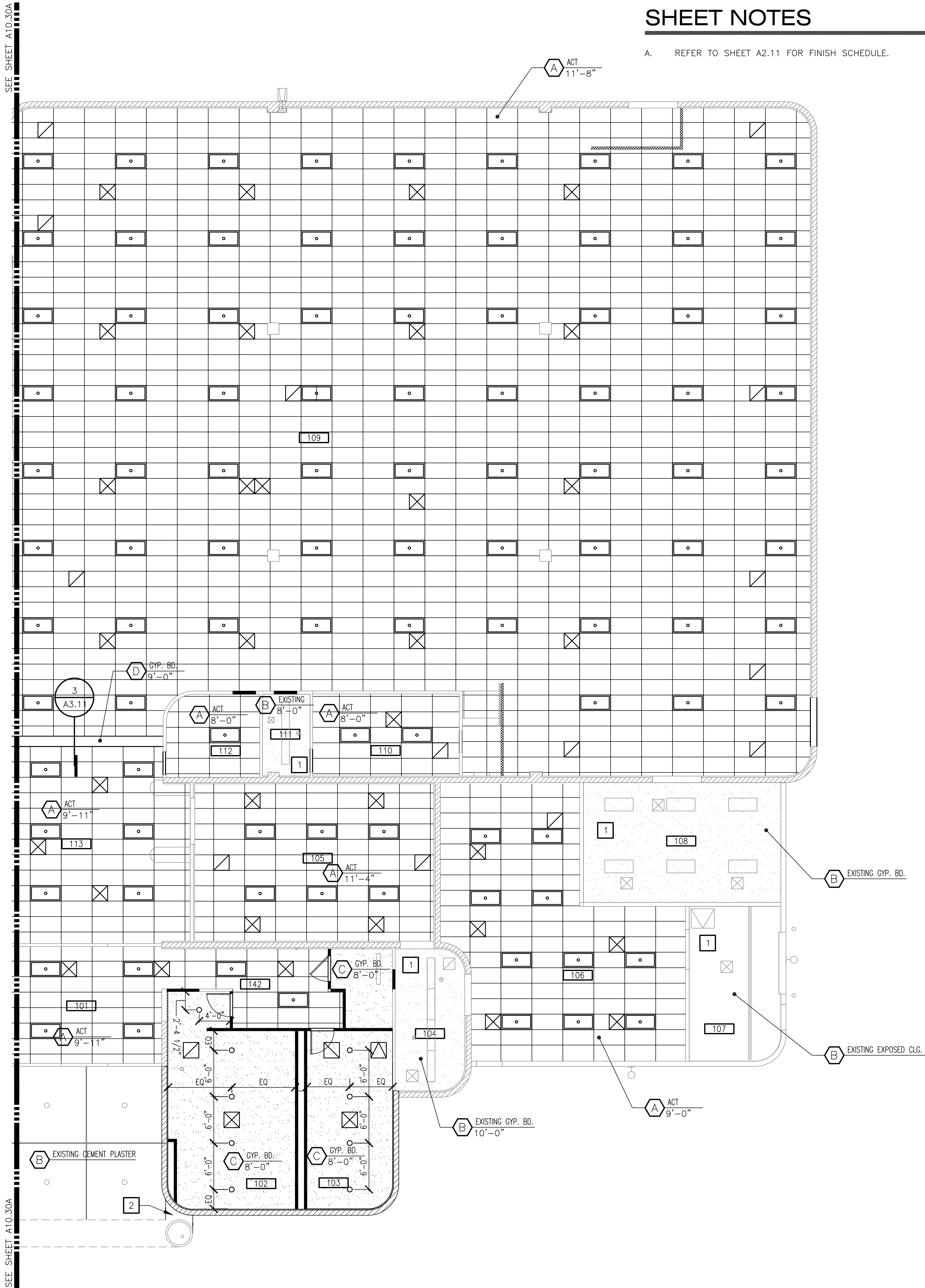
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DEPARTMENT OF PUBLIC WORKS

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TDD: (702) 386-9108

DRAWN	CJT
FILE	
DATE	05/02/2016
SCALE	
BID NO	15.59806.JH
CLV DWG NO	620-10B
HANSEN NO	59806
SHT NO	

A3.10A





SHEET NOTES

A. REFER TO SHEET A2.11 FOR FINISH SCHEDULE.

FIXTURE LEGEND

SYMBOL	DESCRIPTION
	RECESSED DOWN LIGHT FIXTURE
	SURFACE MOUNTED LIGHT FIXTURE
	WALL MOUNTED VANITY MIRROR LIGHT FIXTURE
	RECESSED 2X4 OR 2X2 LAY-IN LIGHT FIXTURE
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	SURFACE MOUNTED STRIP FLUORESCENT LIGHT FIXTURE
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	CEILING MOUNTED ILLUMINATED EXIT SIGN
	WALL MOUNTED ILLUMINATED EXIT SIGN
	BATTERY PACK
	CEILING SPEAKER
	WALL MOUNTED SPEAKER
	JUNCTION BOX
	WALL MOUNTED JUNCTION BOX
	SECURITY CAMERA
	ACCESS PANEL
	SUPPLY AIR DIFFUSER
	RETURN AIR DIFFUSER / EXHAUST
	EXHAUST FAN

CEILING TYPE LEGEND

SYMBOL	DESCRIPTION
	ACOUSTICAL TILE CEILING, SEE DETAIL 1/A3.20
	EXISTING CEILING TO REMAIN
	GYP. BOARD CEILING, SEE DETAIL 2/A3.20
	GYP. BOARD HEADER, SEE DETAIL 3/A3.20

KEYNOTES

- NO WORK TO BE DONE IN THIS AREA
- PATCH AND REPAIR CEMENT PLASTER CANOPY AFTER INSTALLING RESTROOM EXPANSION. HEIGHT AND FINISH TO MATCH EXISTING.

ROOM LEGEND

ROOM NO.	DESCRIPTION
101	ENTRANCE
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137	STORAGE
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139	CONFERENCE
140	MULTI-PURPOSE ROOM
141	JANITOR
142	CORRIDOR
200	MECHANICAL ROOM
201	CONTROL ROOM
202	STORAGE

RECORD DRAWING

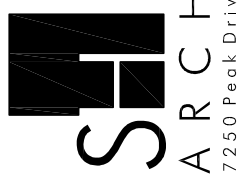
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DATE: 02/15/2018



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REFLECTED CEILING PLAN "B"

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DRAWN CJT

DATE 05/02/2016

SCALE

BID NO 15.59806.JH

CLV DWG NO 620-10B

HANSEN NO 59806

SHT NO

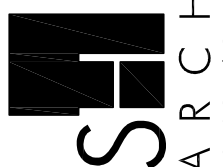
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CEILING DETAILS

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FAX: (702) 384-4846
TDD: (702) 386-9108

DRAWN CJT

DATE 05/02/2016

SCALE

BID NO 15.59806.JH

CLV DWG NO 620-10B

HANSEN NO 59806

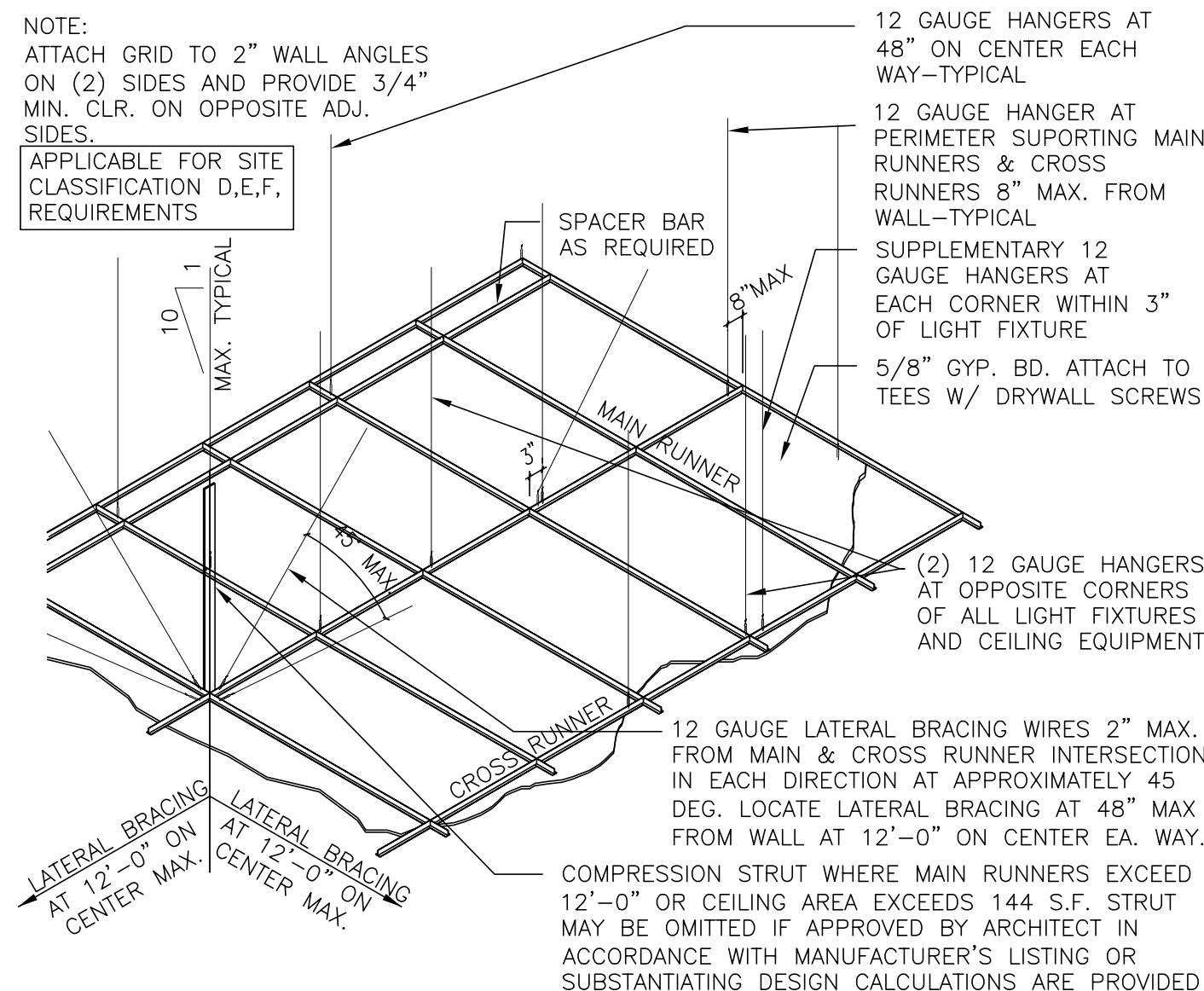
SHT NO

A3.20

RECORD DRAWING

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BY SH ARCHITECTURE

DATE: 02/15/2018



DETAIL 1

M102-03

1/2" = 1'-0"

NOTE: PLEASE REFER TO ESR-3336 FOR ADDITIONAL INFORMATION.

RUNNER TRACK ATTACH TO
WALL WITH #8 SCREW 16"
O.C.

20 GAUGE METAL STUDS @
16" O.C. MAXIMUM AS
FOLLOWS: UP TO 8'-6"=1
1/2" STUDS
8'-7" - 11'-3"= 3 5/8"
STUDS
11'-4" - 16'-9" = 6"
STUDS

ATTACH TO METAL TRACK
WITH # 8 SCREW EA. SIDE

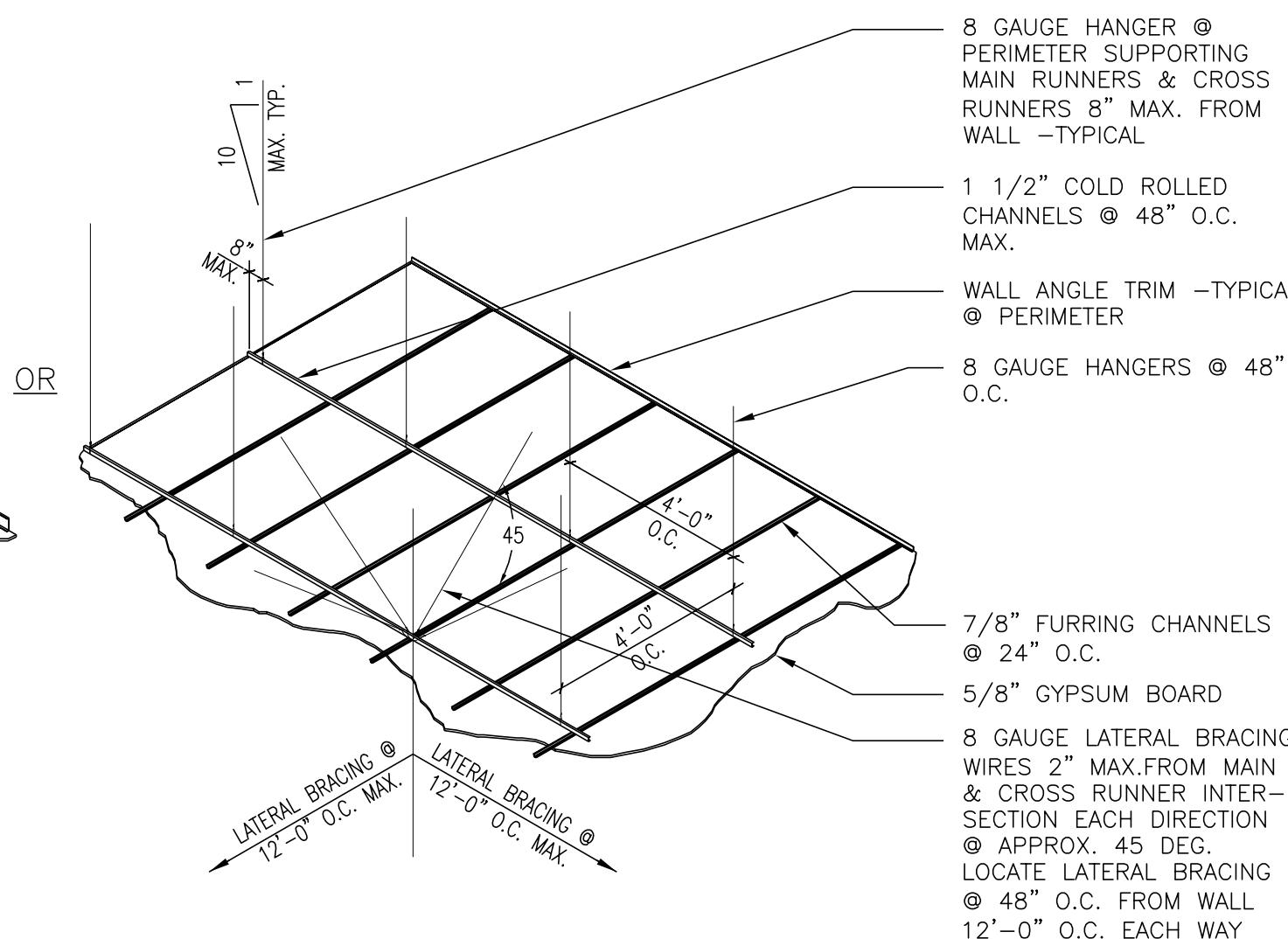
CROSS BRACING @ 48"
O.C. MAXIMUM

5/8" GYPSUM BD.

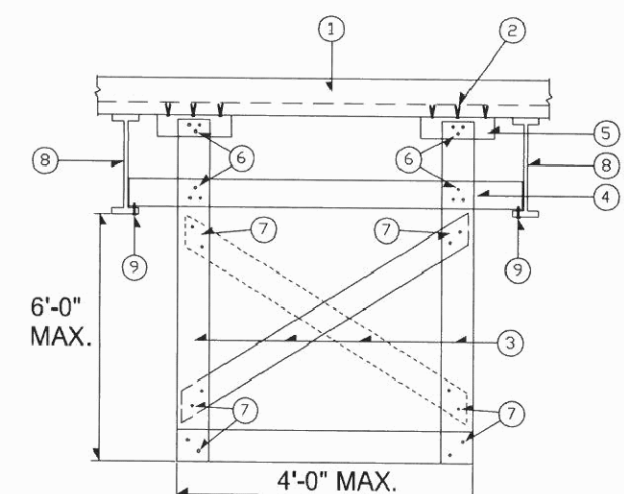
M102-01

GYPSUM BOARD CEILING - METAL FRAME OR SUSPENDED

3" = 1'-0"



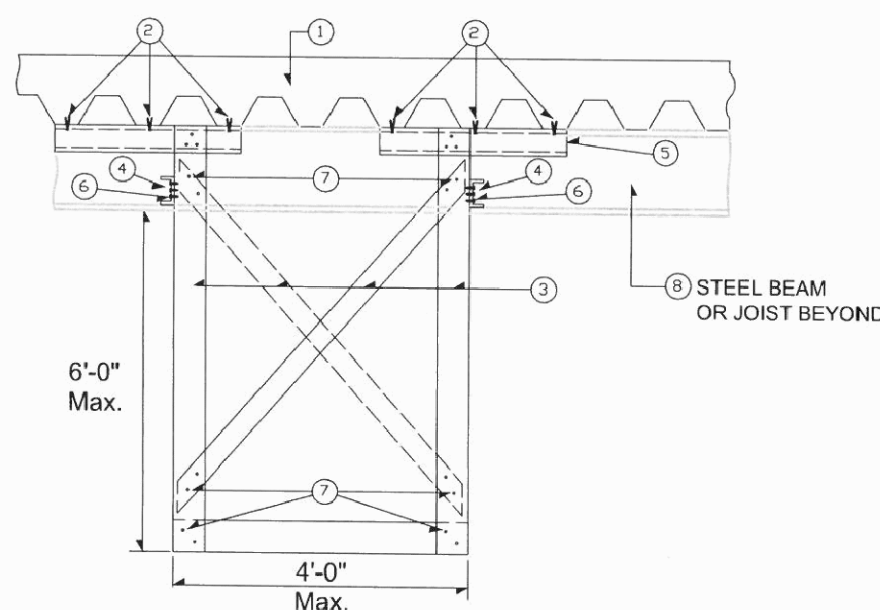
STEEL STUD SOFFIT FRAMING PARALLEL TO STEEL BEAM OR STEEL JOISTS



LEGEND:

- ① CONCRETE ON METAL DECK
- ② (3) .1770 X 1" HILTI SHOT PINS IN CONCRETE, SPACED @ 6" O.C.
- ③ 362S137-33 STEEL STUDS @ 24" O.C.
(WITH DIAGONALS ALTERNATE OR STAGGERED)
- ④ 600S162-33 @ EACH STUD WITH 2 # 12 SCREWS AT
EACH END
- ⑤ 600S125-33 @ EACH STUD, 18" MIN. LENGTH
- ⑥ 3 # 10 SCREWS
- ⑦ 2 # 10 SCREWS
- ⑧ STEEL BEAMS OR STEEL JOISTS
- ⑨ 2 # 12 SCREWS AT EACH END

STEEL STUD SOFFIT FRAMING PERPENDICULAR TO STEEL BEAM OR STEEL JOISTS



NOTES:

- 1. 5 PSF LATERAL LOAD
- 2. F_y (MIN.) = 33 ksi
- 3. MATERIALS, LOADS AND INSTALLATION SHALL
COMPLY WITH THE 2012 IBC.
- 4. GYPSUM BOARD MATERIALS, ACCESSORIES AND
ATTACHMENT SHALL COMPLY WITH 2012 IBC.
- 5. THESE DETAILS ARE GUIDELINES ONLY. THE
REGISTERED DESIGN PROFESSIONAL
(PROFESSIONAL ENGINEER) MAY PROVIDE
ALTERNATE DESIGN AND CALCULATIONS THAT
COMPLY WITH 2012 IBC.
- 6. SEE ARCHITECTURAL FOR SOFFIT DIMENSIONS.
- 7. DOES NOT APPLY TO SOFFIT FRAMING WITH
DIFFERENT CONFIGURATIONS.

SOFFIT FRAMING DETAIL

NTS

3

SIGNS

ARCHITECT

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Charleston Heights Community Center

Renovation -

ROOF PLAN

THIS DRAWING
WAS ORIGINALLY
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JOHN A. SAWDON
ARCHITECT NO. 4058
ON 07/18/2016

OWNER: CITY OF LAS VEGAS
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33 NORTH RANCHO DRIVE
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HOME: (702) 229-6535
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CELL: (702) 386-9108

AWN CJT

E

05/02/2016

SALE

15.59806.JH

DWG NO 620-10B

59806

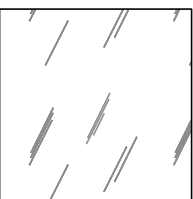
T N

A4.10

KEYNOTES

- 1 NEW ROOFING MEMBRANE o/ EXISTING SHEATHING AND STRUCTURE
- 2 NEW EXHAUST FAN
- 3 EXISTING MECHANICAL UNIT TO REMAIN
- 4 REUSE EXISTING ROOF ACCESS HATCH. PROVIDE ADDITIONAL TELESOPING LADDER SAFETY POST
- 5 CRICKET
- 6 EXISTING ROOF DRAIN AND OVERFLOW DRAIN
- 7 NEW PARAPET LADDER, SEE DETAIL 6 ON SHEET A4.11
- 8 4" VENT PIPE
- 9 NEW MECHANICAL UNIT - REFER TO MECHANICAL DRAWINGS
- 10 NEW ROOF AND OVERFLOW DRAIN
- 11 PROVIDE GUARDRAIL FOR FALL PROTECTION.
- 12 EXISTING ROOF HATCHES REPLACED WITH NEW HATCHES THAT RUN TO PULL STATIONS IN THE THEATER

LEGEND

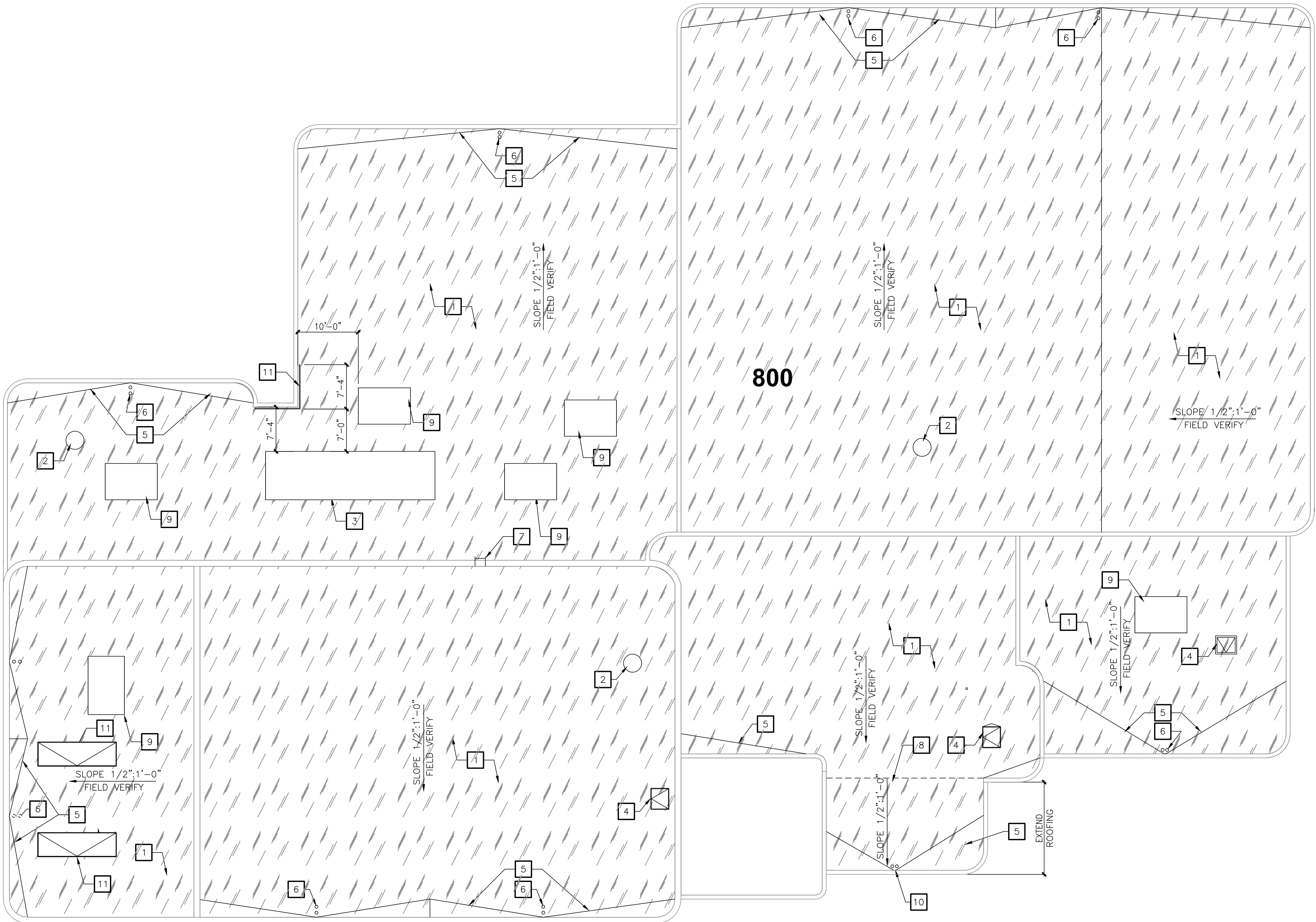
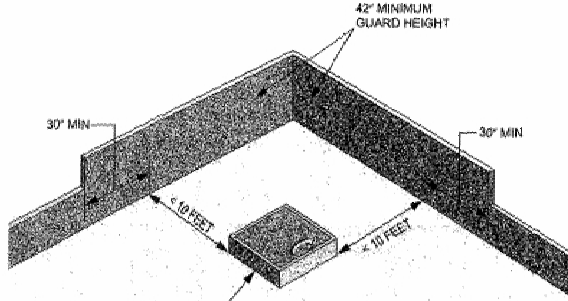


NEW SINGLE PLY ROOFING o/ NEW R-38 RIGID INSULATION o/ EXISTING ROOF
SHEATHING o/ EXISTING JOISTS

2012 IBC Section 1013.3: Guard height.
Required Guards shall not be less than 42 inches high, measured vertically as follows: 1. From the adjacent walking surfaces; 2. On stairs, from the line connecting the leading edges of the tread nosings; and 3. On ramps, from the ramp surface at the guard.

2012 IBC Section 1013.6: Mechanical equipment.
Guards shall be provided where appliances, equipment, fans, roof hatch openings or other components that require service are located within 10 feet of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches above the floor, roof or grade below. The guard shall be constructed so as to prevent the passage of a sphere 21 inches in diameter. The guard shall extend not less than 30 inches beyond each side of such appliance, equipment, fan or component.

2012 IBC Section 1013.7: Roof access.
Guards shall be provided where a roof hatch opening is located within 10 feet of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches above the floor, roof or grade below. The guard shall be constructed so as to prevent the passage of a sphere 21 inches in diameter.



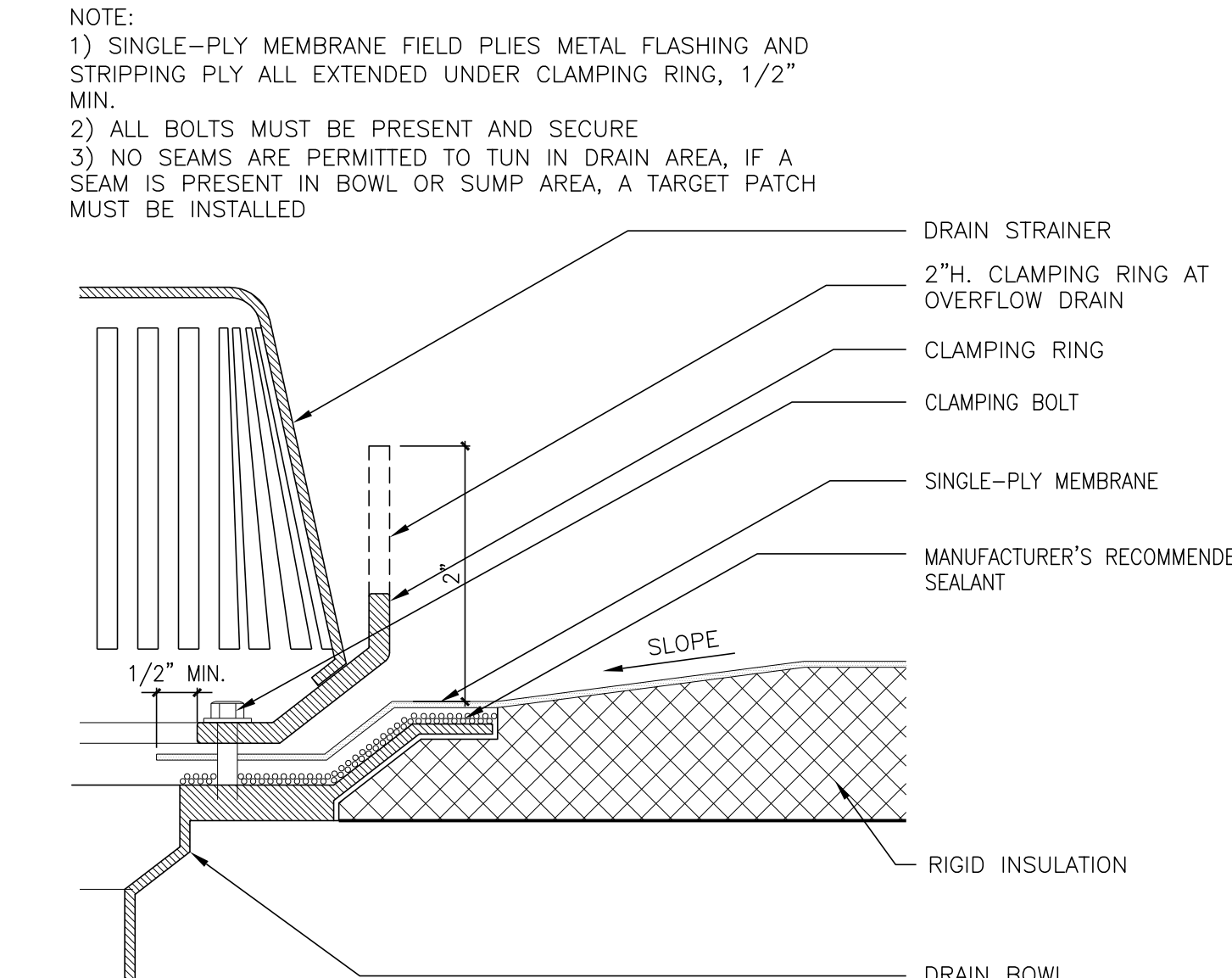
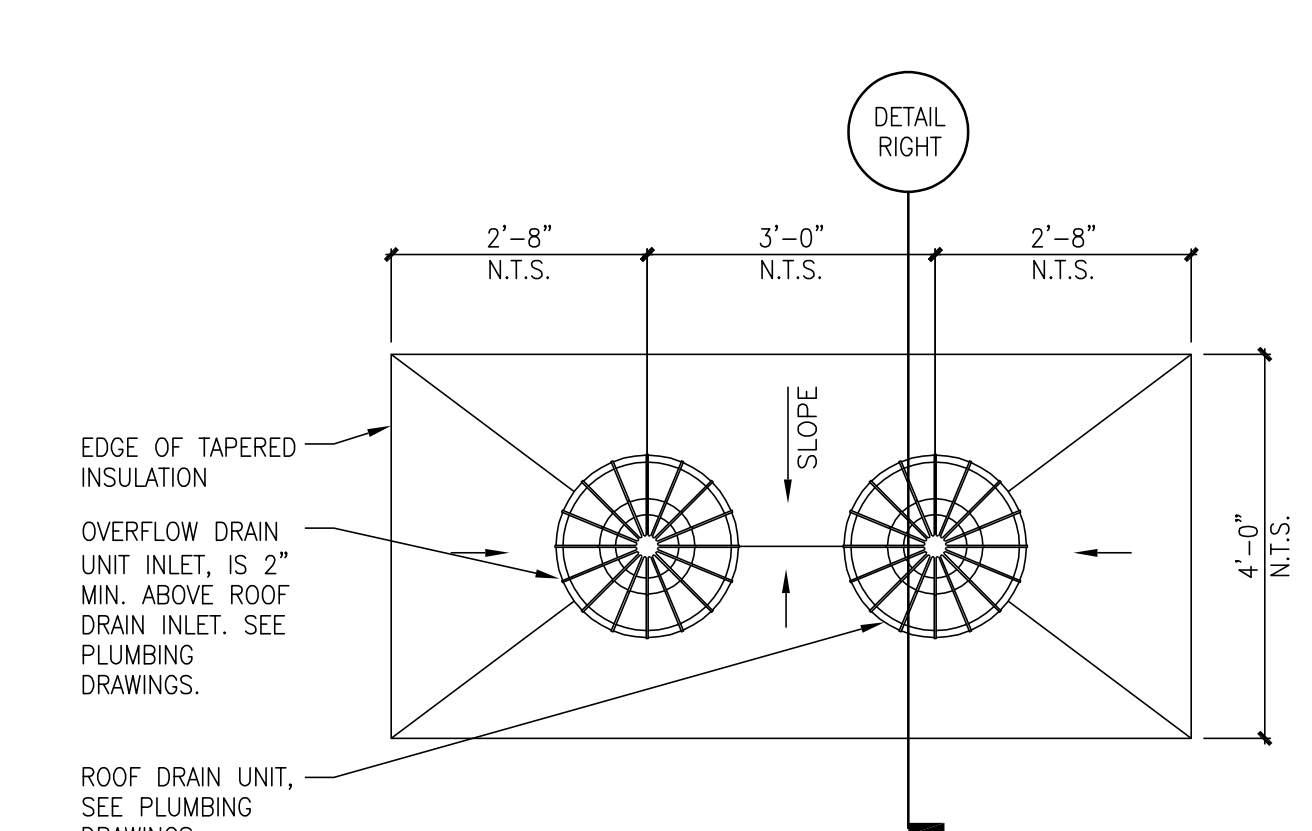
ROOF PLAN

$$3/32'' = 1'-0''$$

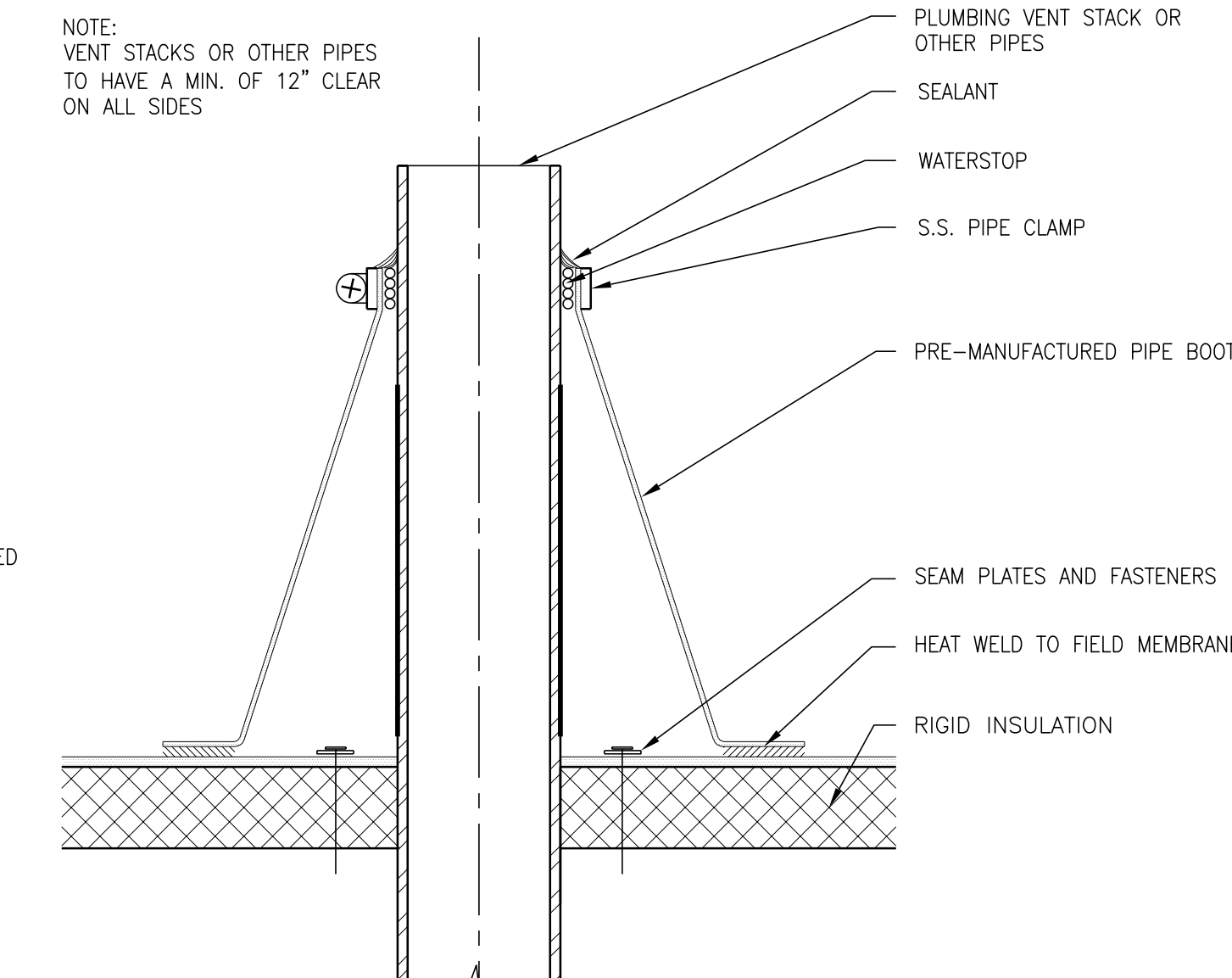
RECORD DRAWING

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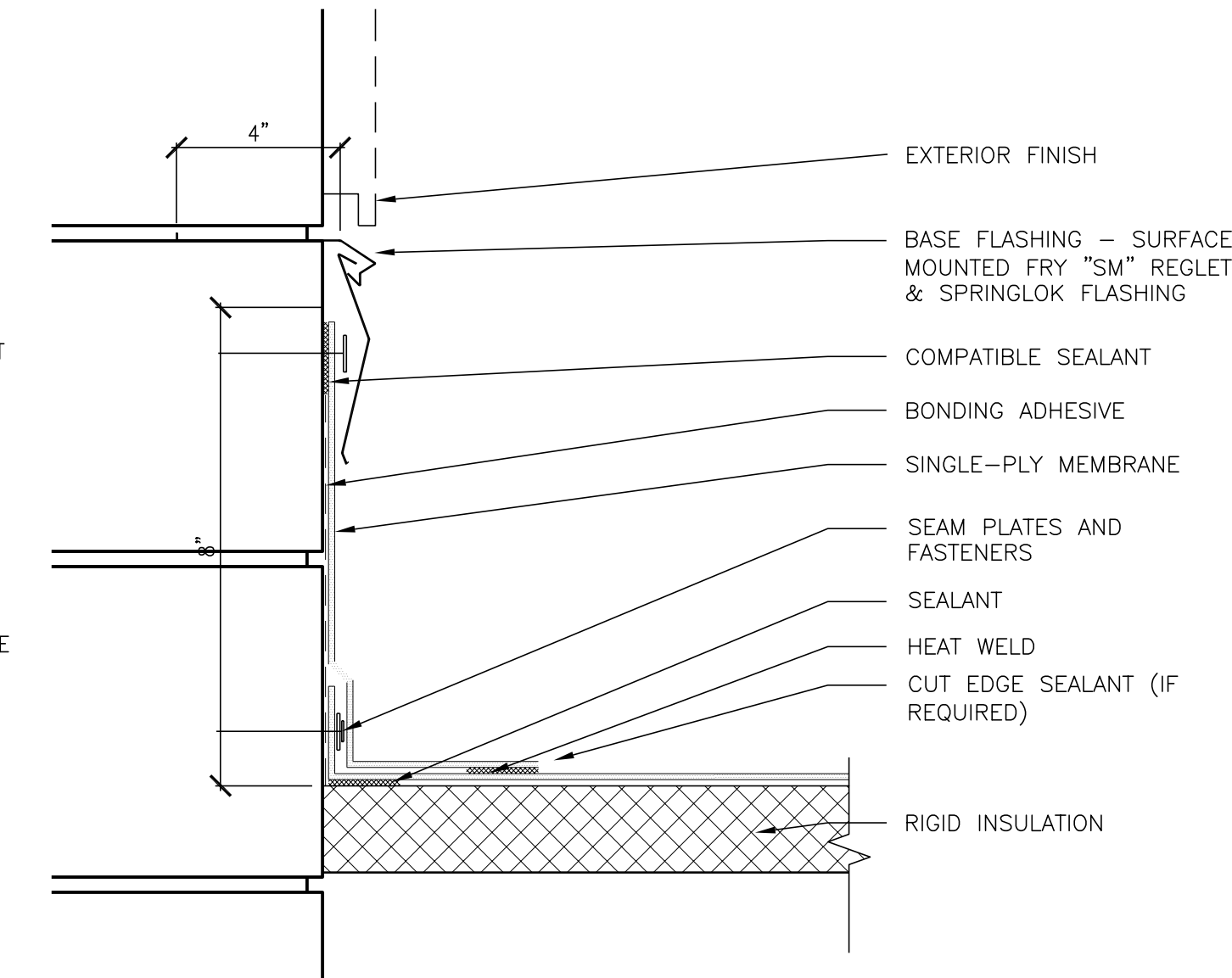
DATE: 02/15/2018



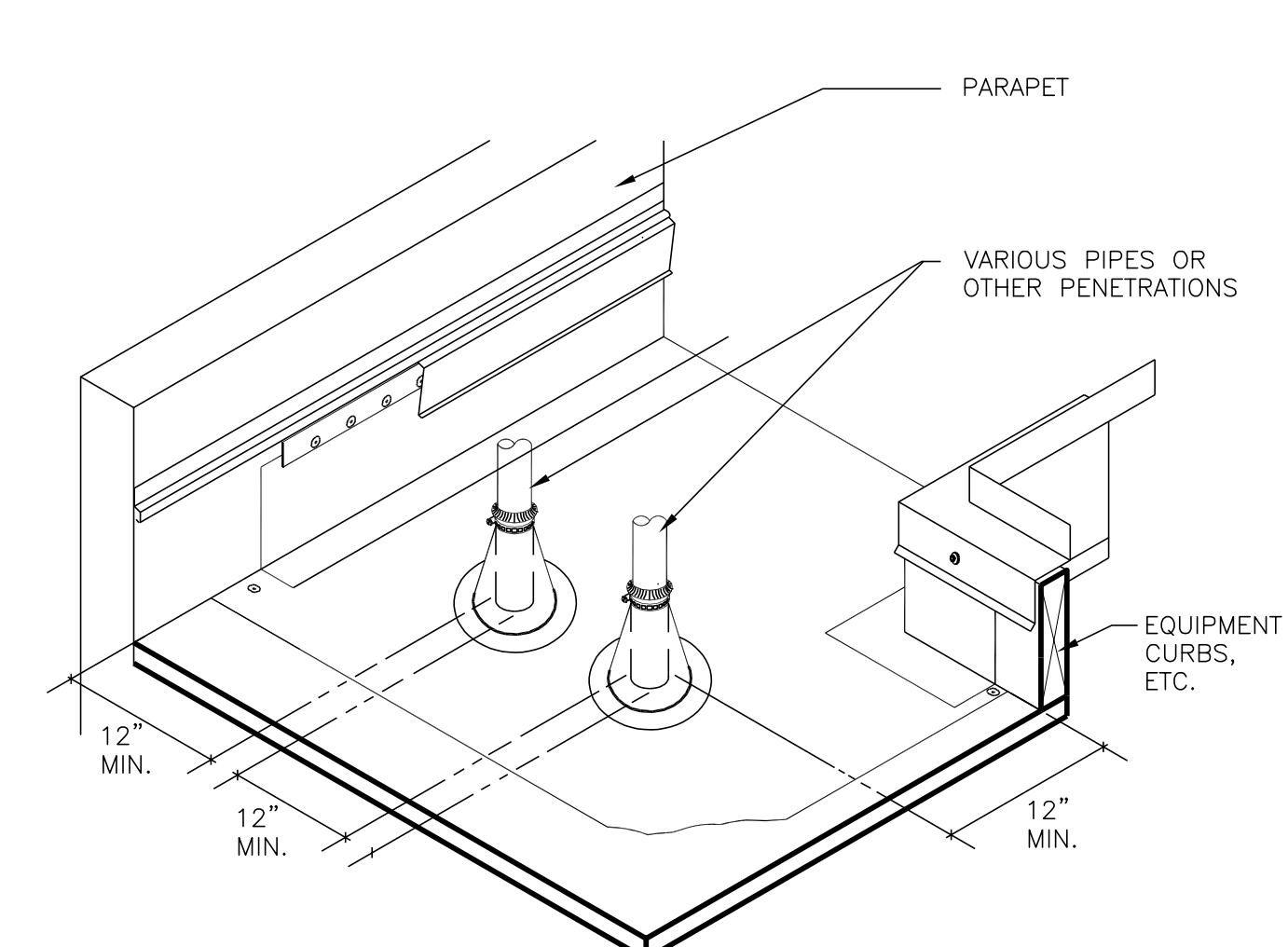
DETAIL 1
3" = 1'-0"



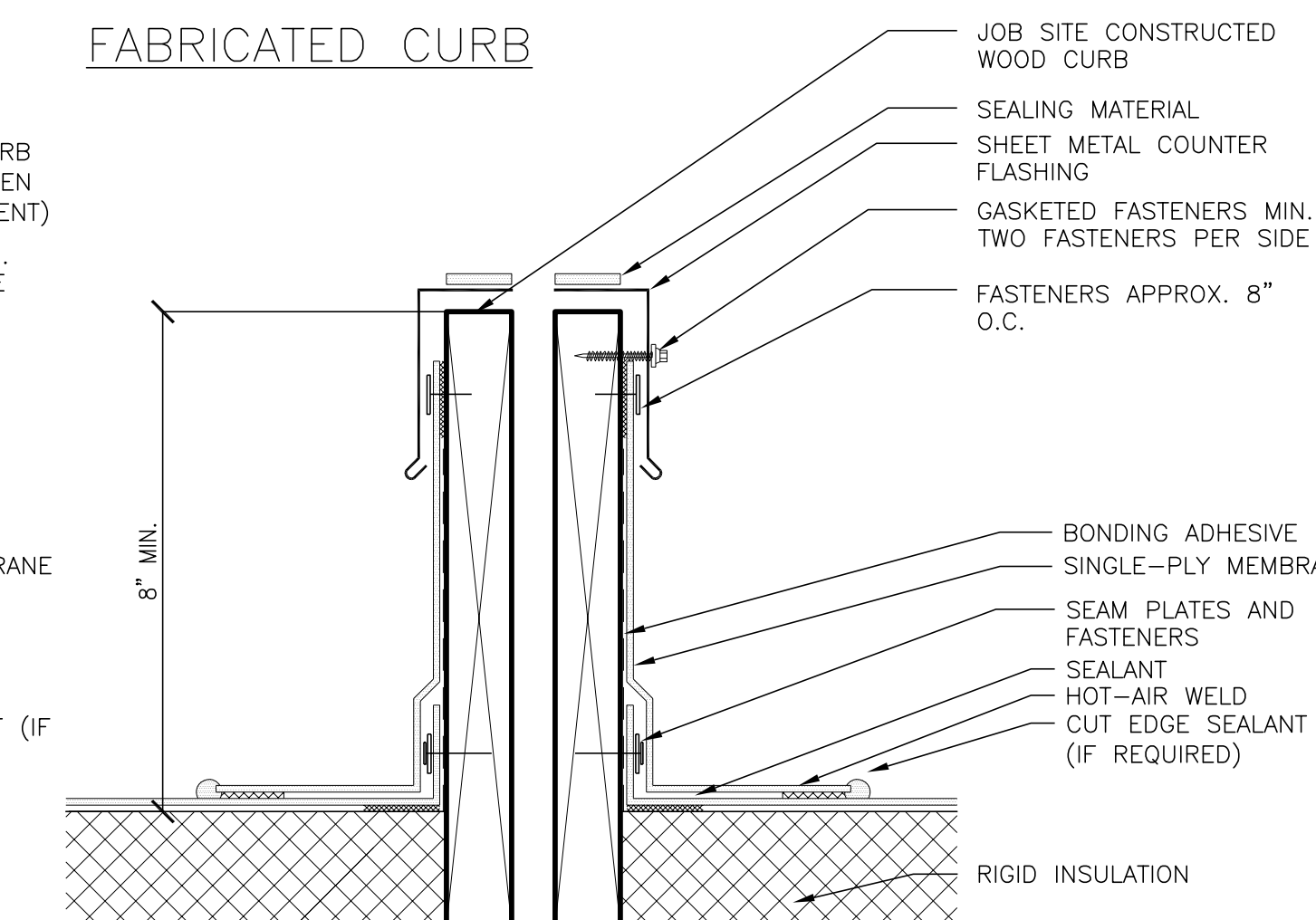
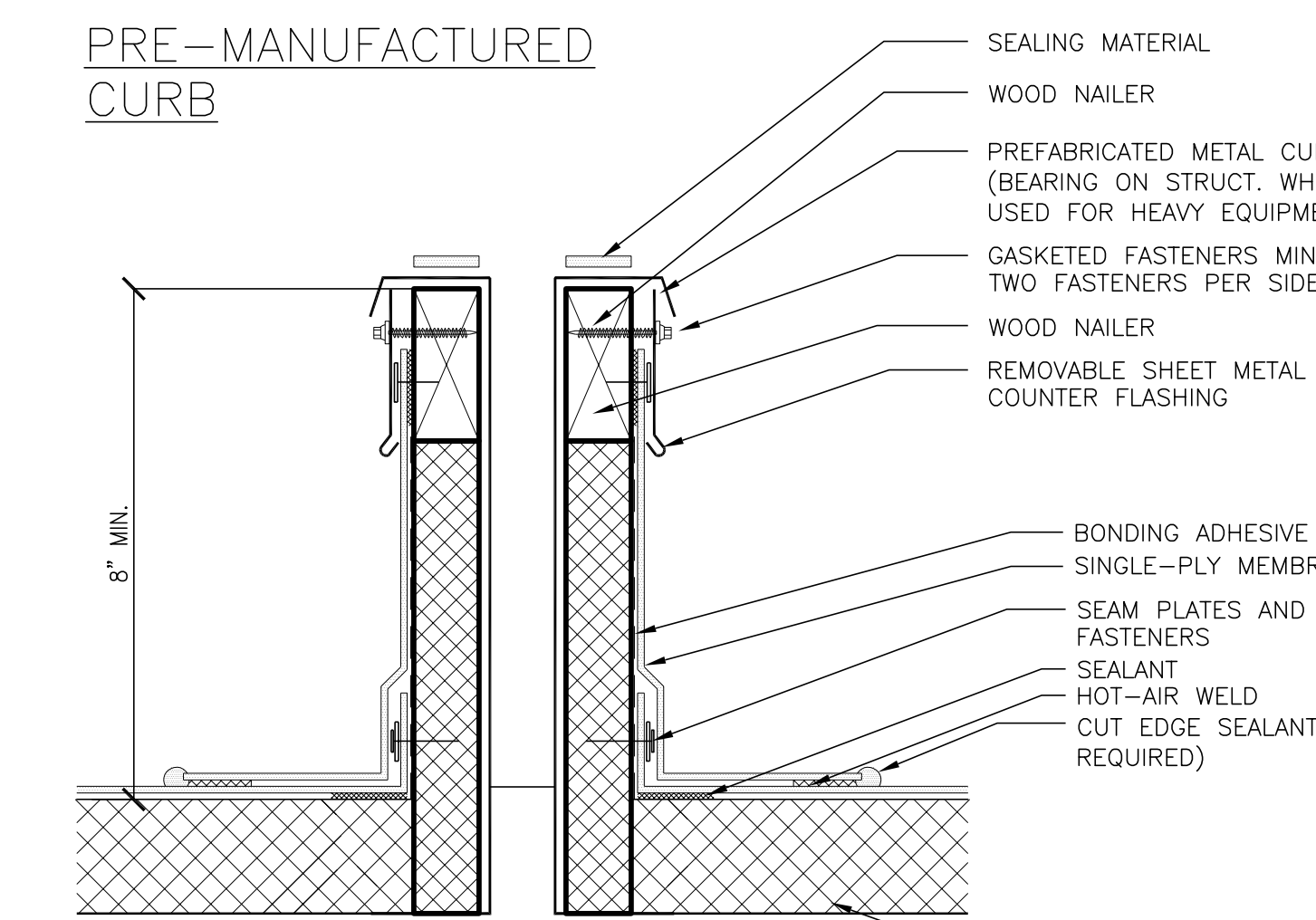
DETAIL 2
3" = 1'-0"



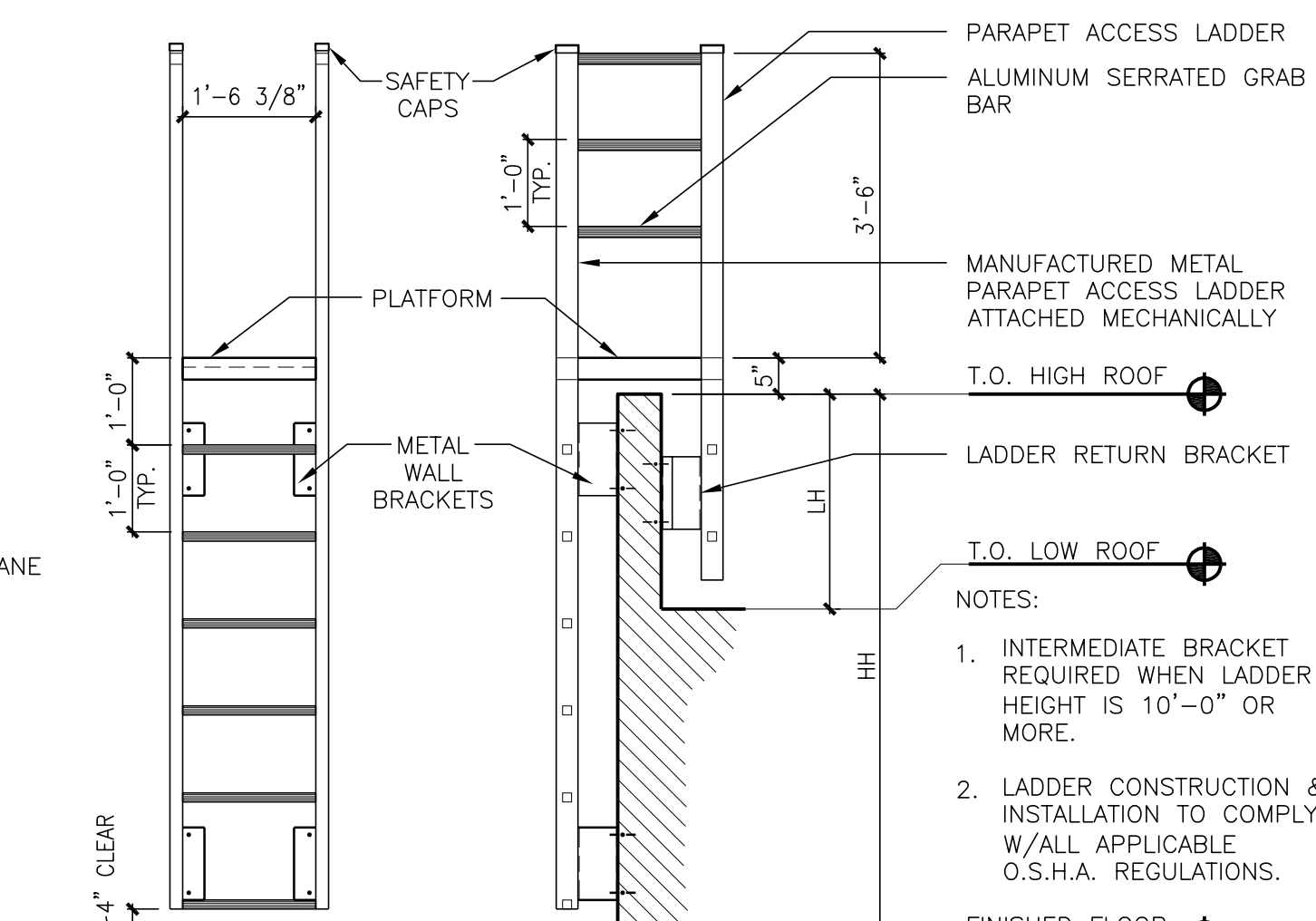
DETAIL 3
3" = 1'-0"



DETAIL 4
N.T.S.



DETAIL 5
3" = 1'-0"



DETAIL 6
1/2" = 1'-0"



REVISIONS

NO.	DESCRIPTION

ARCHITECT

SH ARCHITECTURE

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ROOF DETAILS

THIS DRAWING
WAS ORIGINALLY
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JOHN A. SAWDON
ARCHITECT NO. 4058
ON 05/02/2016

OWNER: CITY OF LAS VEGAS
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DRAWN	CJT
FILE	
DATE	05/02/2016
SCALE	
BID NO.	15.59806.JH
CLV DWG NO.	620-10B
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SHT NO.	

A4.11

RECORD DRAWING

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DATE: 02/15/2018



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EXTERIOR ELEVATIONS

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DATE 05/02/2016

SCALE

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CLV DWG NO 620-10B

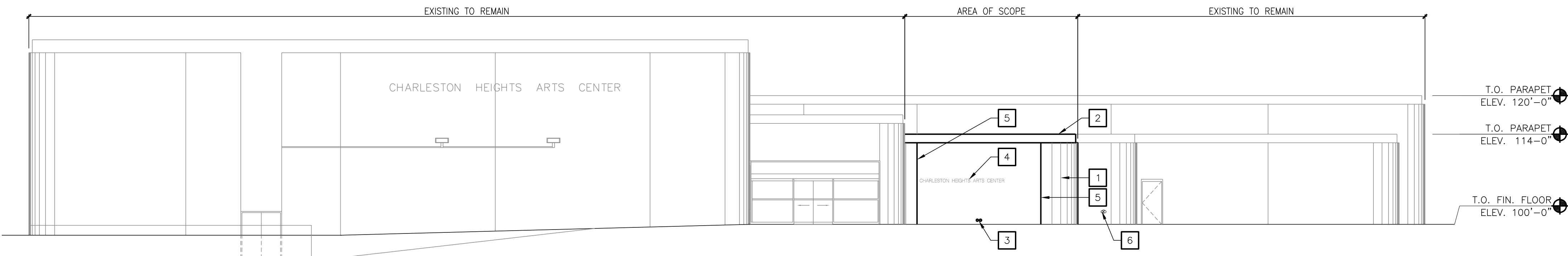
HANSEN NO 59806

SHT NO

A5.10

KEYNOTES

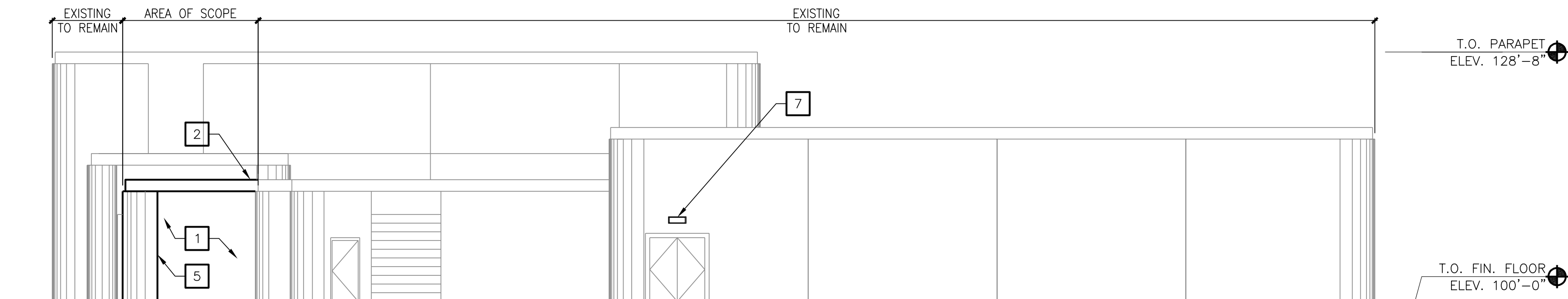
- 1 CEMENT PLASTER EXTERIOR FINISH o/ 8X8X16 CMU BLOCK WALL
- 2 CEMENT PLASTER EXTERIOR FINISH o/ 4X8X16 CMU BLOCK WALL
- 3 NEW ROOF AND OVERFLOW DRAIN OUTLETS
- 4 EXISTING BUILDING SIGNAGE TO BE REMOVED.
- 5 CEMENT PLASTER CONTROL JOINT
- 6 EXISTING FIRE DEPARTMENT CONNECTION TO REMAIN
- 7 NEW EXTERIOR LIGHT FIXTURE



EXTERIOR ELEVATION

A

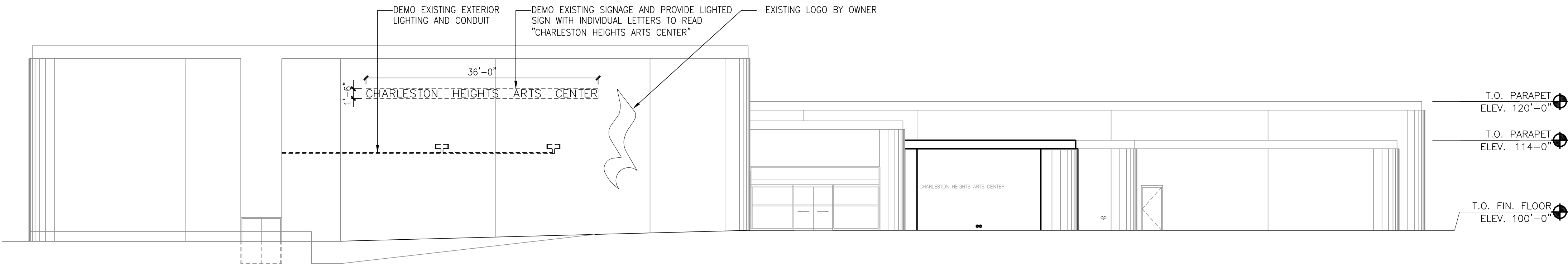
3/32" = 1'-0"



EXTERIOR ELEVATION

B

3/32" = 1'-0"



EXTERIOR ELEVATION - AD ALT #1

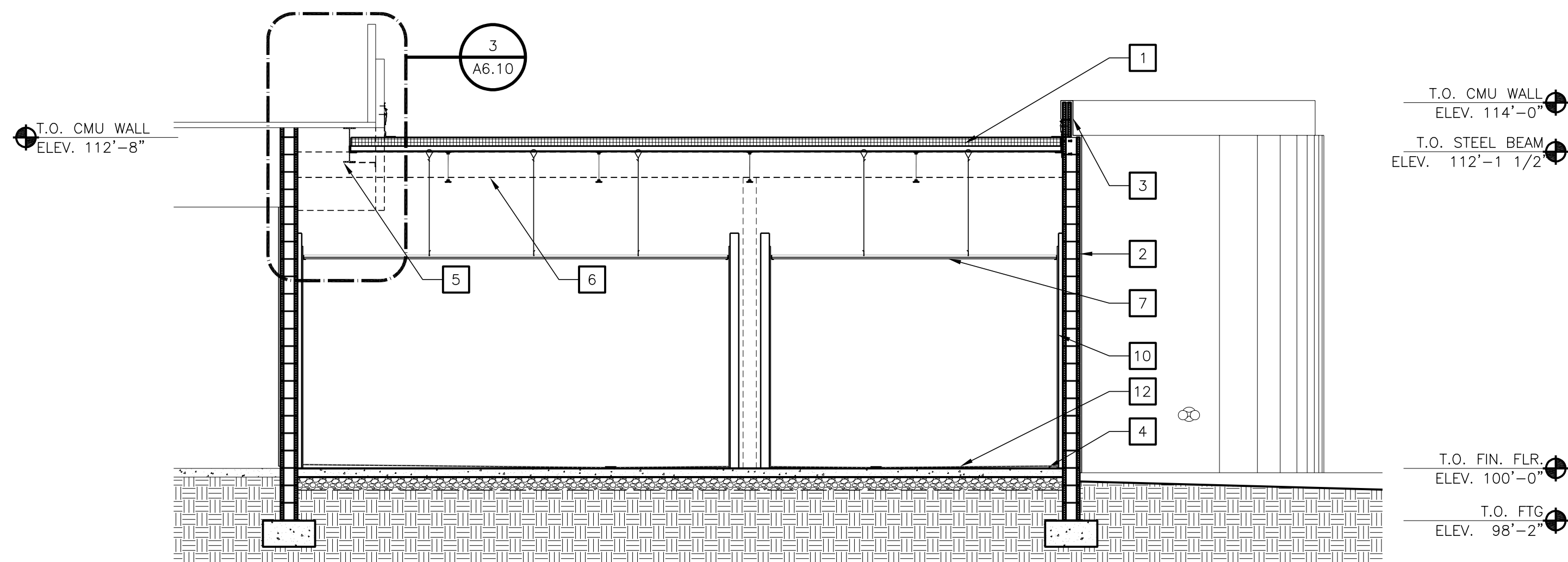
C

3/32" = 1'-0"

RECORD DRAWING

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BY SH ARCHITECTURE

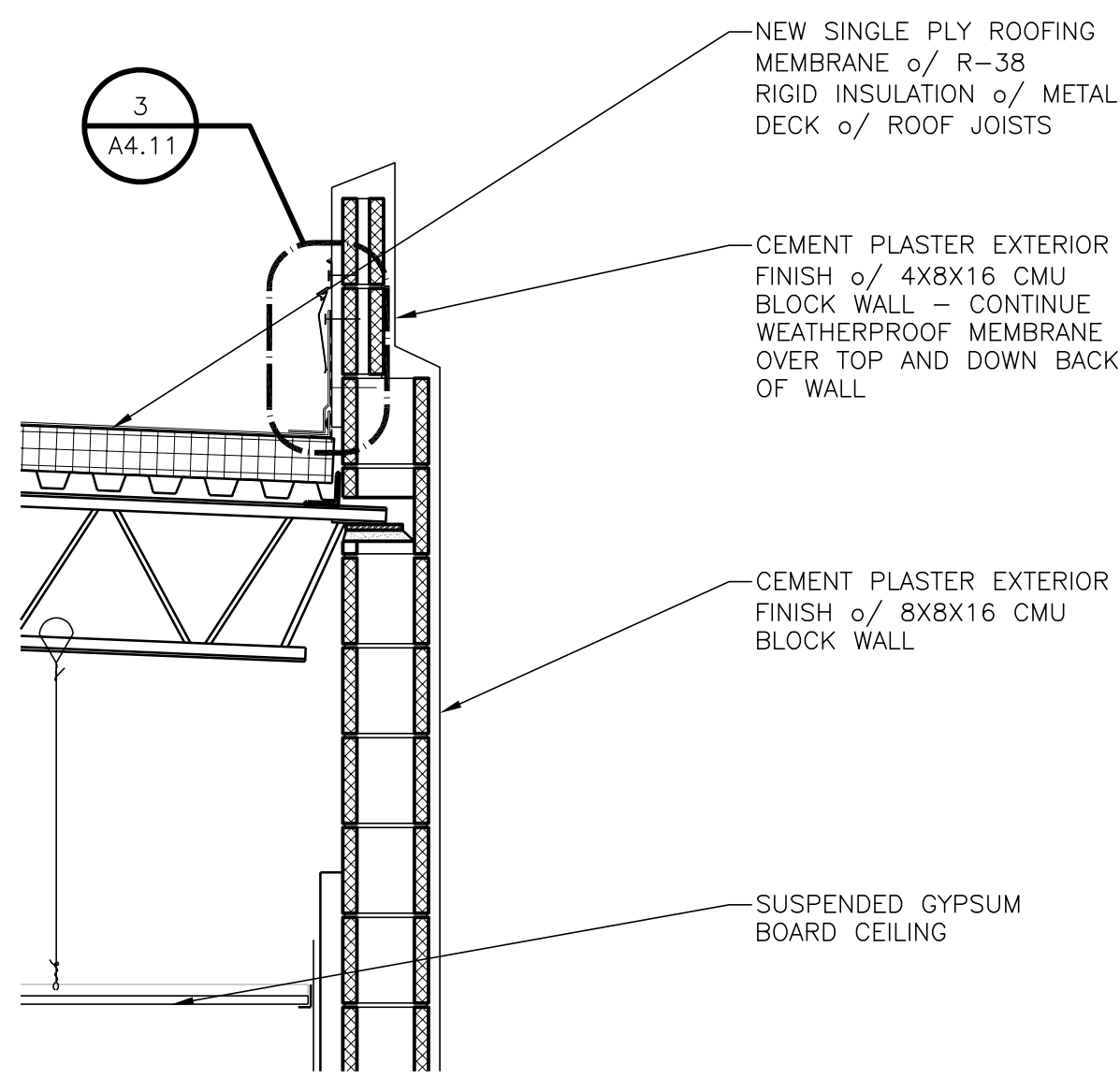
DATE: 02/15/2018



BUILDING SECTION 1

1/4" = 1'-0"

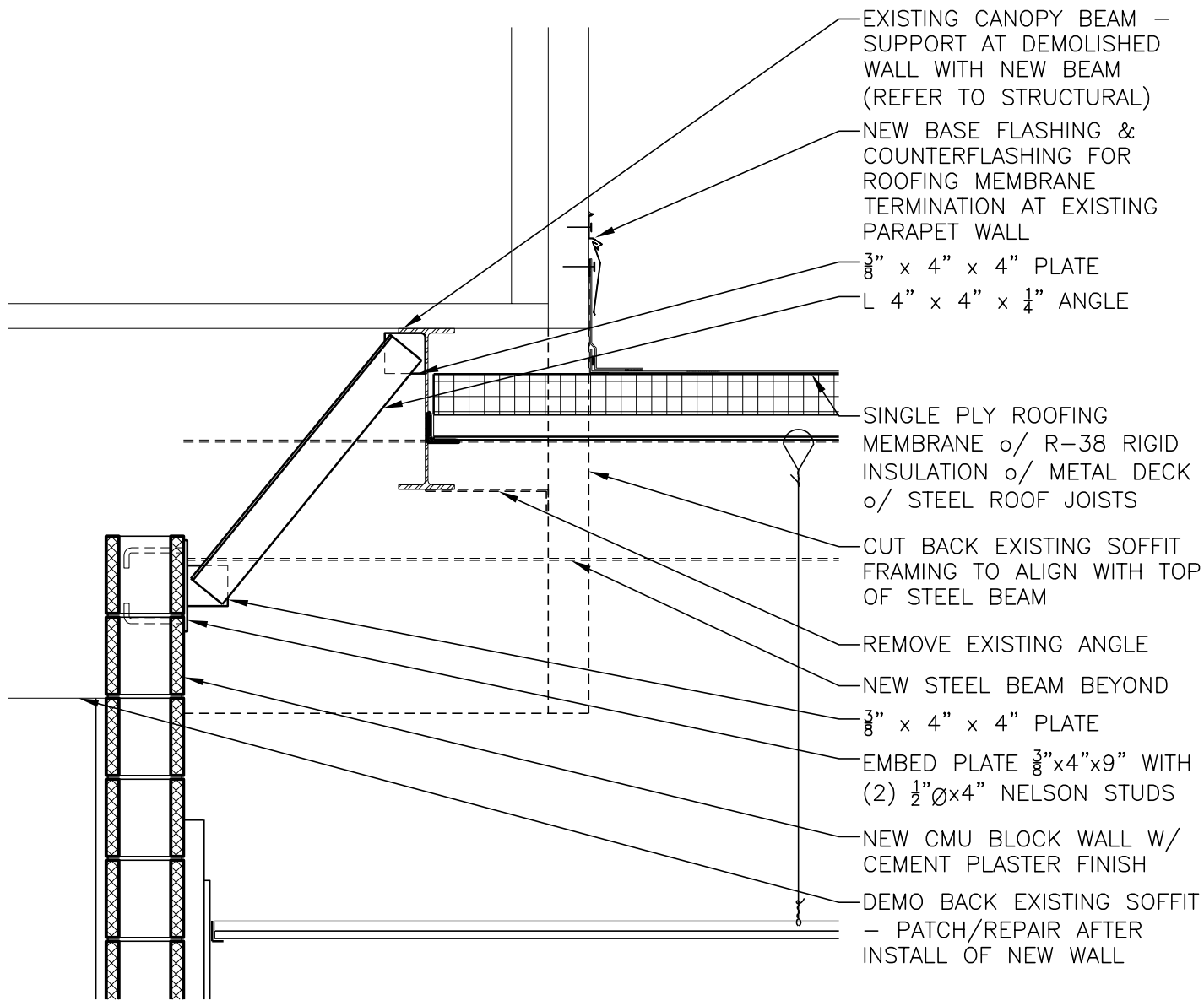
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PARAPET DETAIL 4

3/4" = 1'-0"

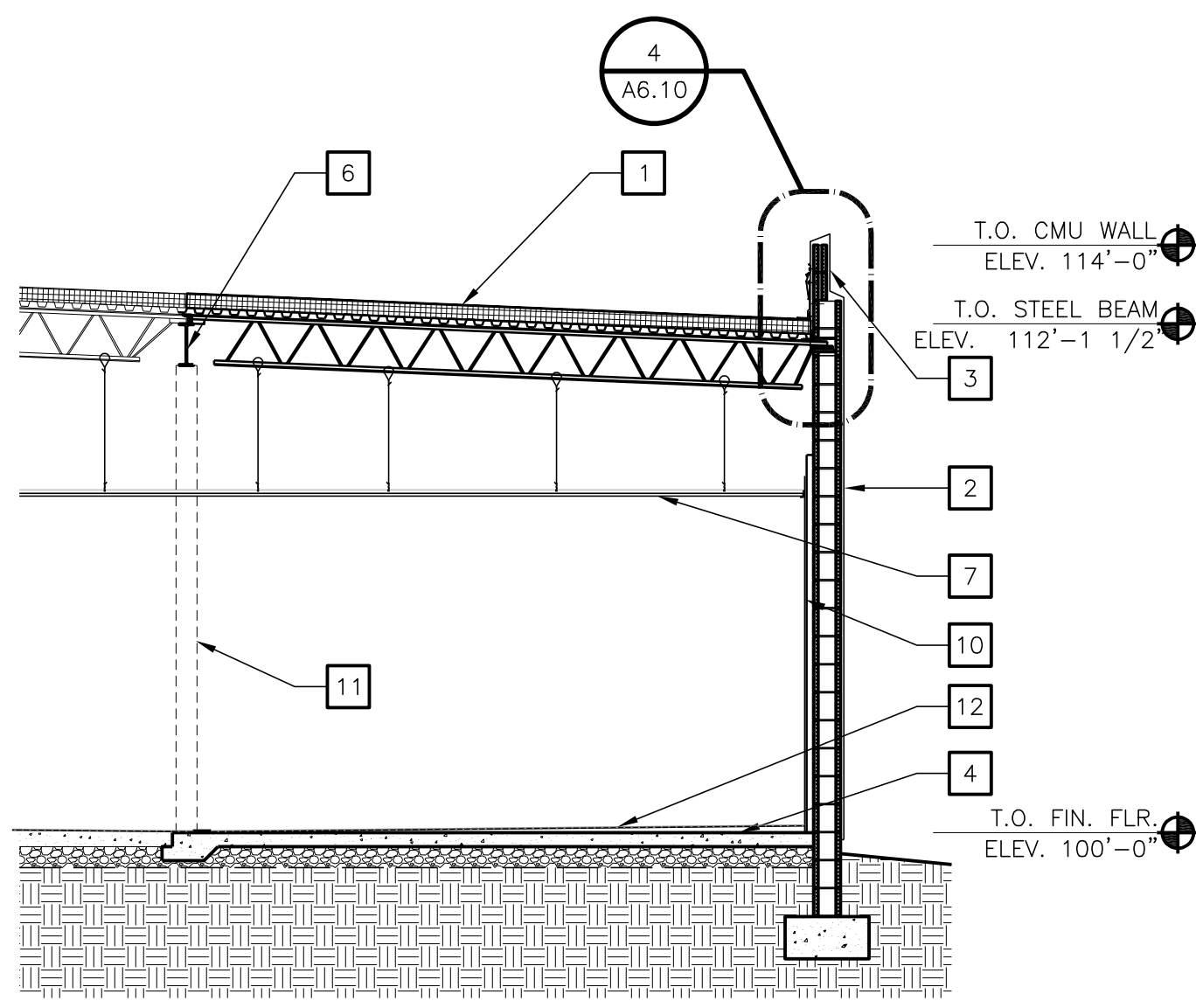
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PARAPET DETAIL 3

3/4" = 1'-0"

3



BUILDING SECTION 2

1/4" = 1'-0"

2

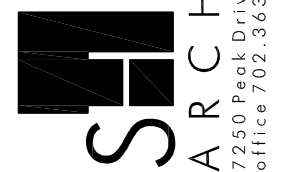
KEYNOTES

- 1 NEW SINGLE PLY ROOFING MEMBRANE o/ R-38 RIGID INSULATION o/ METAL DECK o/ ROOF JOISTS
- 2 CEMENT PLASTER EXTERIOR FINISH o/ 8X8X16 CMU BLOCK WALL
- 3 CEMENT PLASTER EXTERIOR FINISH o/ 4X8X16 CMU BLOCK WALL
- 4 CONCRETE SLAB ON GRADE o/ 6" GRANULAR FILL o/ VAPOR BARRIER
- 5 EXISTING STEEL BEAM
- 6 NEW STEEL BEAM
- 7 SUSPENDED GYPSUM BOARD CEILING - REFER TO TYPICAL DETAIL SHEET A3.20
- 8 EXISTING ENTRY HARDSCAPE TO REMAIN - PATCH AS NECESSARY AFTER INSTALL OF NEW WALL
- 9 EXISTING ENTRY CEILING TO REMAIN - PATCH AS NECESSARY AFTER INSTALL OF NEW WALL
- 10 5/8" GYPSUM GLASS BOARD o/ 1-1/2" Z FURRING WITH R-10 RIGID INSULATION
- 11 STRUCTURAL STEEL POST BEYOND
- 12 TILE FLOORING o/ MORTAR BED



REVISIONS

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Charleston Heights Community Center

- Renovation -

BUILDING SECTIONS

THIS DRAWING
WAS ORIGINALLY
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JOHN A. SAWDON
ARCHITECT NO. 4058
ON 05/02/2016

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

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DRAWN CJT

FILE

DATE 05/02/2016

SCALE

BID NO 15.59806.JH

CLV DWG NO 620-108

HANSEN NO 59806

SHT NO

A6.10

RECORD DRAWING

BASED ON CONTRACTOR SUPPLIED
INFORMATION, WHICH HAS NOT BEEN VERIFIED
BY SH ARCHITECTURE

DATE: 02/15/2018



REVISIONS

ARCHITECT

SH
ARCHITECTURE
7250 Peas Drive, Suite 214 Las Vegas, Nevada 89128
office 702.363.2222 www.sharchitecture.com

Charleston Heights Community Center
— Renovation —
RESTROOM ELEVATIONS

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

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DRAWN CJT

FILE

DATE 05/02/2016

SCALE

BID NO 15.59806.JH

CLV DWG NO 620-108

HANSEN NO 59806

SHT NO

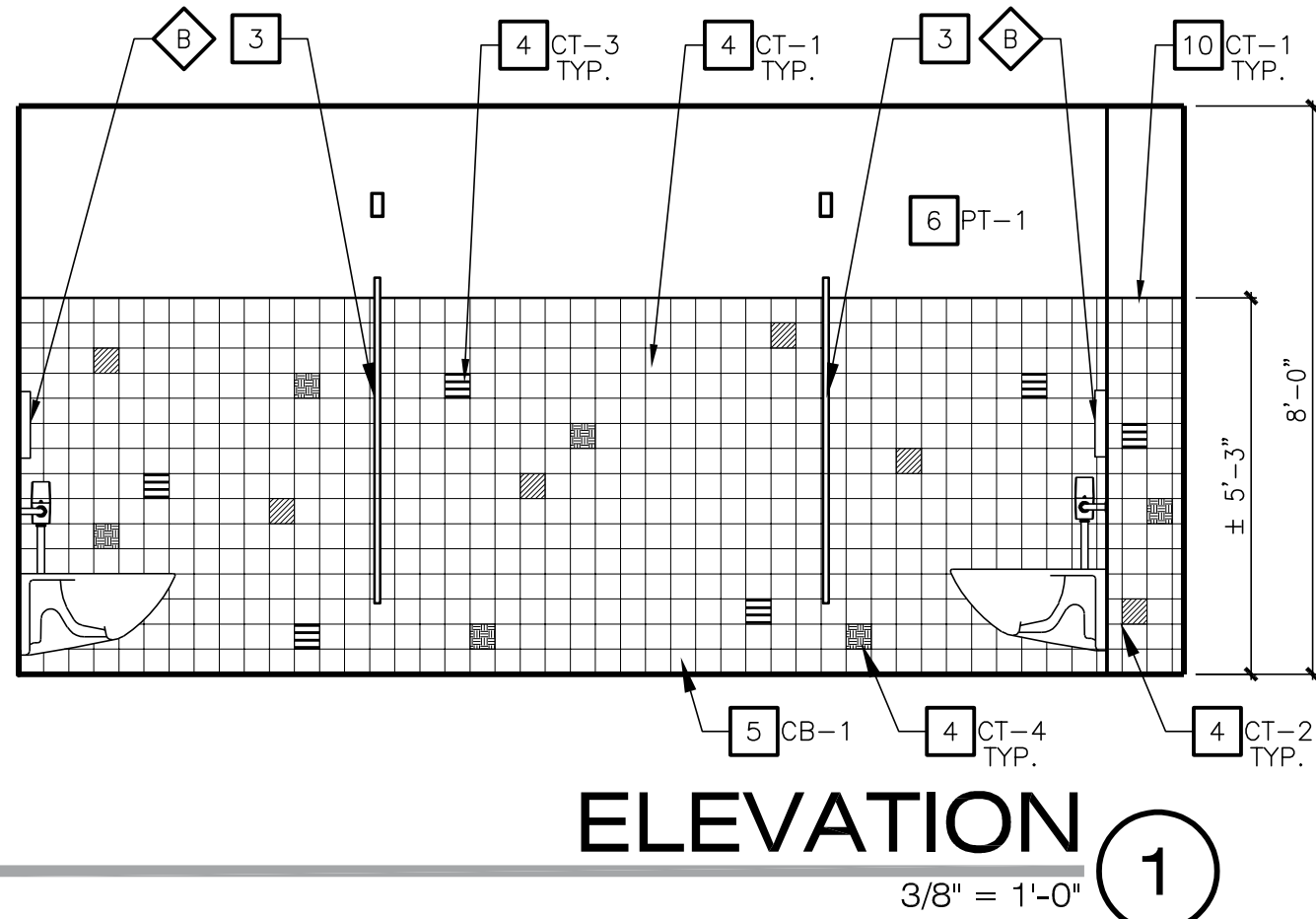
A10.30

SHEET NOTES

- A. SEE SHEET G1.20 FOR ACCESSORY DIMENSIONS AND ADA COMPLIANCE.
- B. PROVIDE BLOCKING FOR ALL TOILET ACCESSORIES – TYPICAL FOR MOUNTING AND WITH ADEQUATE SUPPORT TO MEET CODE REQUIREMENTS.
- C. INSULATE ALL LAVATORY AND HAND SINK EXPOSED DRAIN AND/OR HOT WATER PIPING BELOW FIXTURES PER ADAAG.
- D. REFER TO SHEET A2.11 FOR FINISHES AND ACCESSORY SCHEDULE.

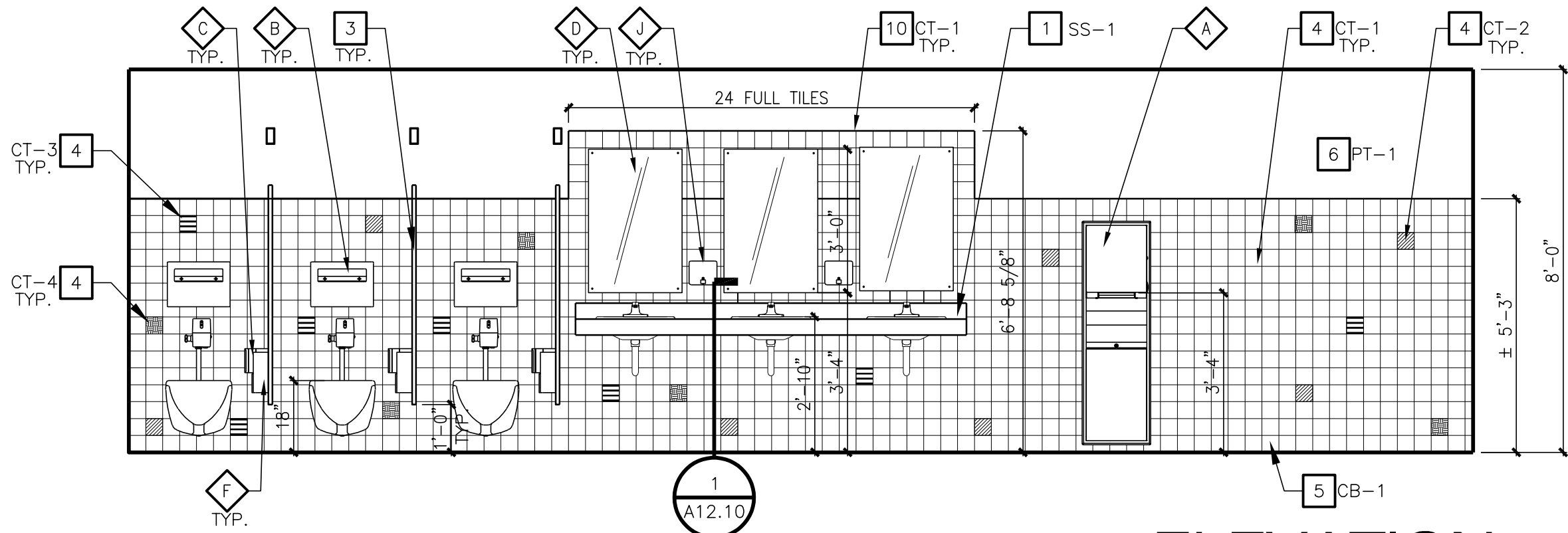
KEY NOTES

- 1 SOLID SURFACE COUNTERTOP WITH 4"H BACKSPLASH, SS-1.
- 2 INSTALL NEW MIRROR WITH LIGHT/POWER SUPPORT FRAME.
- 3 TOILET PARTITION, TP-1. PROVIDE BACKING FOR ATTACHMENT PER MANUFACTURER'S REQUIREMENTS.
- 4 WALL TILE
- 5 TILE COVE BASE, SEE DETAIL 4/A12.10.
- 6 GYP. BD, PAINTED
- 7 INSTALL NEW HI-LO DRINKING FOUNTAIN.
- 8 EXISTING BASE TO REMAIN.
- 9 EXISTING GYP. BD. TO REMAIN.
- 10 BULLNOSE TILE, SEE DETAIL 5/A12.10
- 11 STAINLESS STEEL WALL TO FLOOR DRINKING FOUNTAIN RAIL, SEE DETAIL 6/A12.10



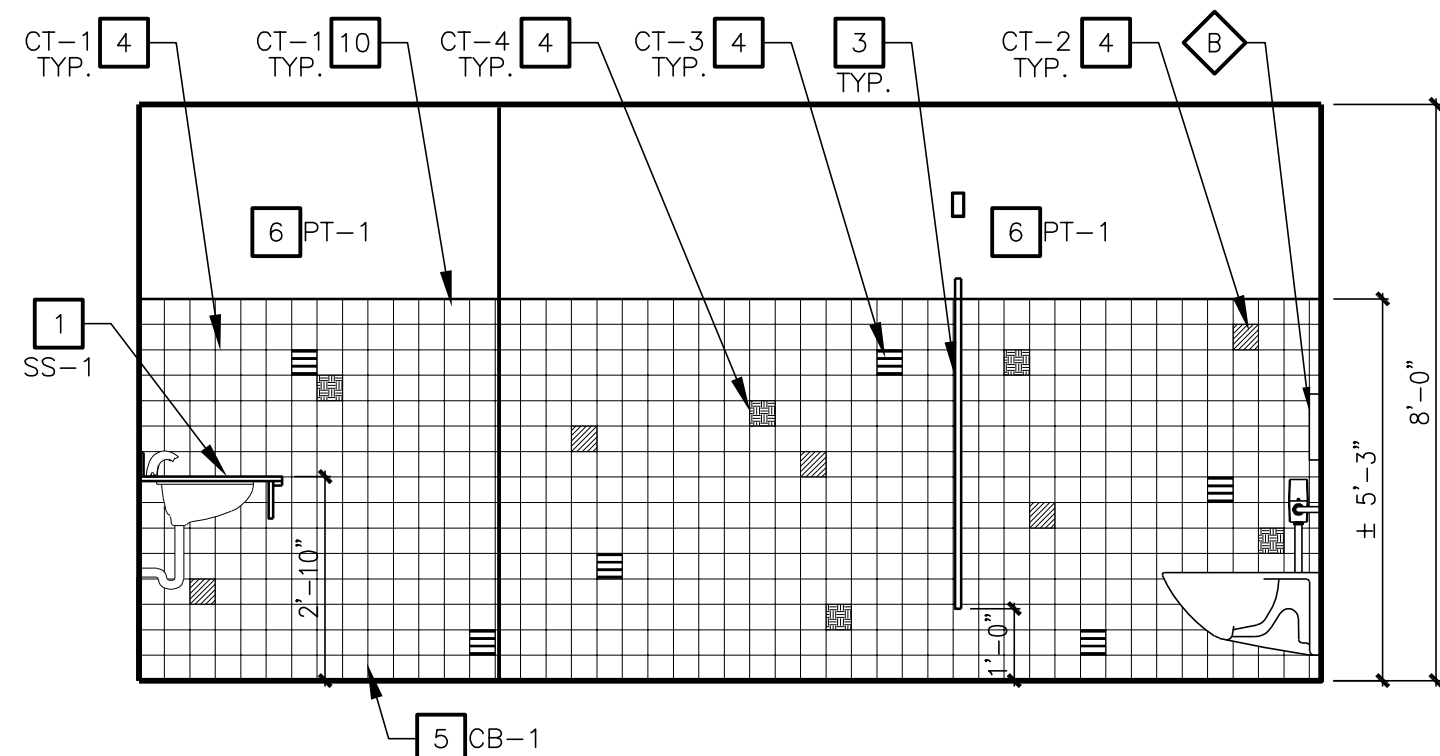
ELEVATION 1

3/8" = 1'-0"



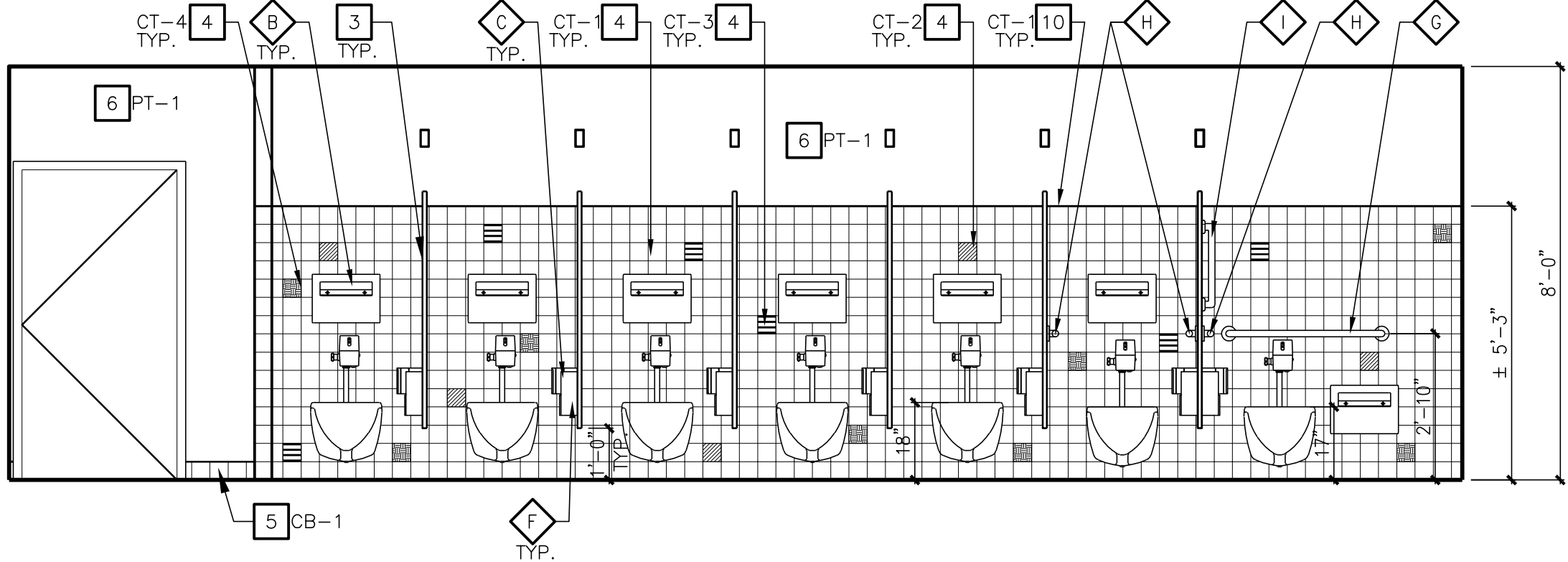
ELEVATION 2

3/8" = 1'-0"



ELEVATION 3

3/8" = 1'-0"



ELEVATION 4

3/8" = 1'-0"



REVISIONS

ARCHITECT

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**Charleston Heights Community Center
– Renovation –
RESTROOM ELEVATIONS**

**THIS DRAWING
WAS ORIGINALLY
STAMPED BY
JOHN A. SAWDON
ARCHITECT NO. 4058
ON 05/02/2016**

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

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DRAWN
CJT

DATE
05/02/2016

SCALE

BID NO
15.59806.JH

CLV DWG NO
620-10B

HANSEN NO
59806

SHT NO

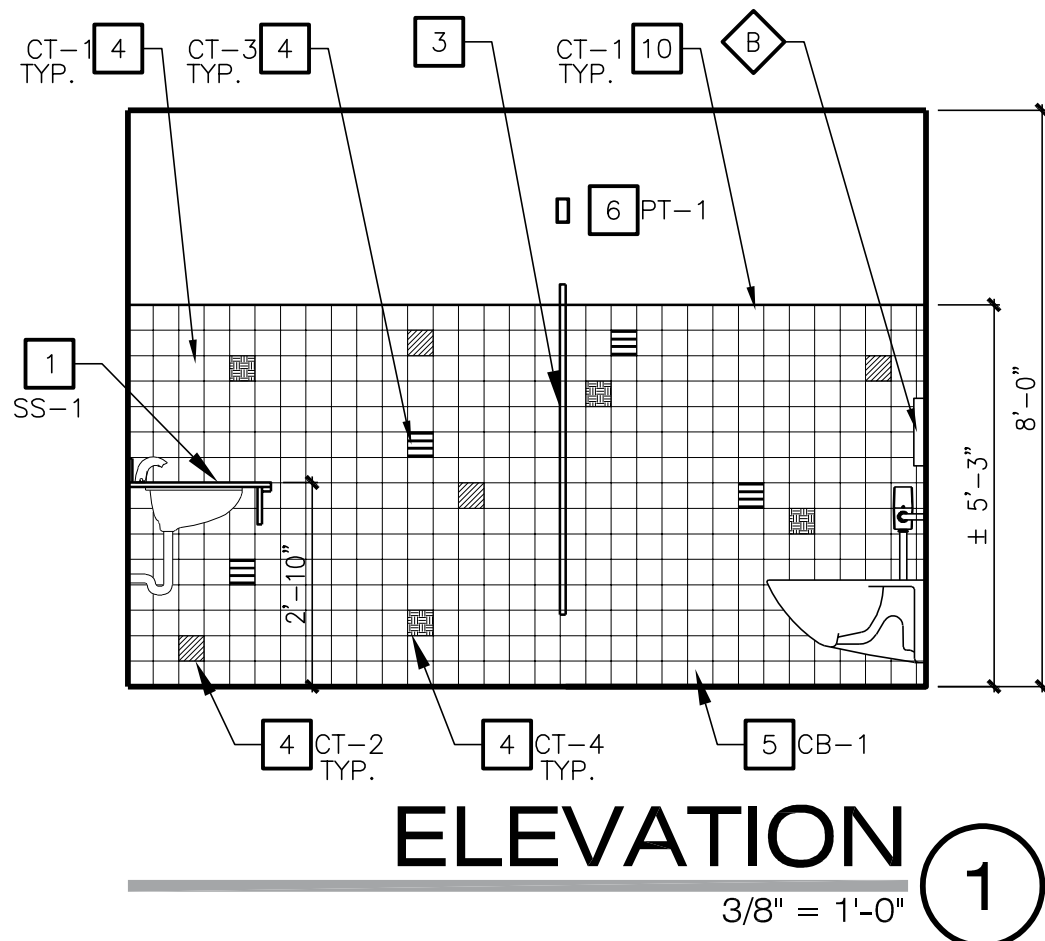
A10.31

SHEET NOTES

- SEE SHEET G1.20 FOR ACCESSORY DIMENSIONS AND ADA COMPLIANCE.
- PROVIDE BLOCKING FOR ALL TOILET ACCESSORIES – TYPICAL FOR MOUNTING AND WITH ADEQUATE SUPPORT TO MEET CODE REQUIREMENTS.
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- REFER TO SHEET A2.11 FOR FINISHES AND ACCESSORY SCHEDULE.

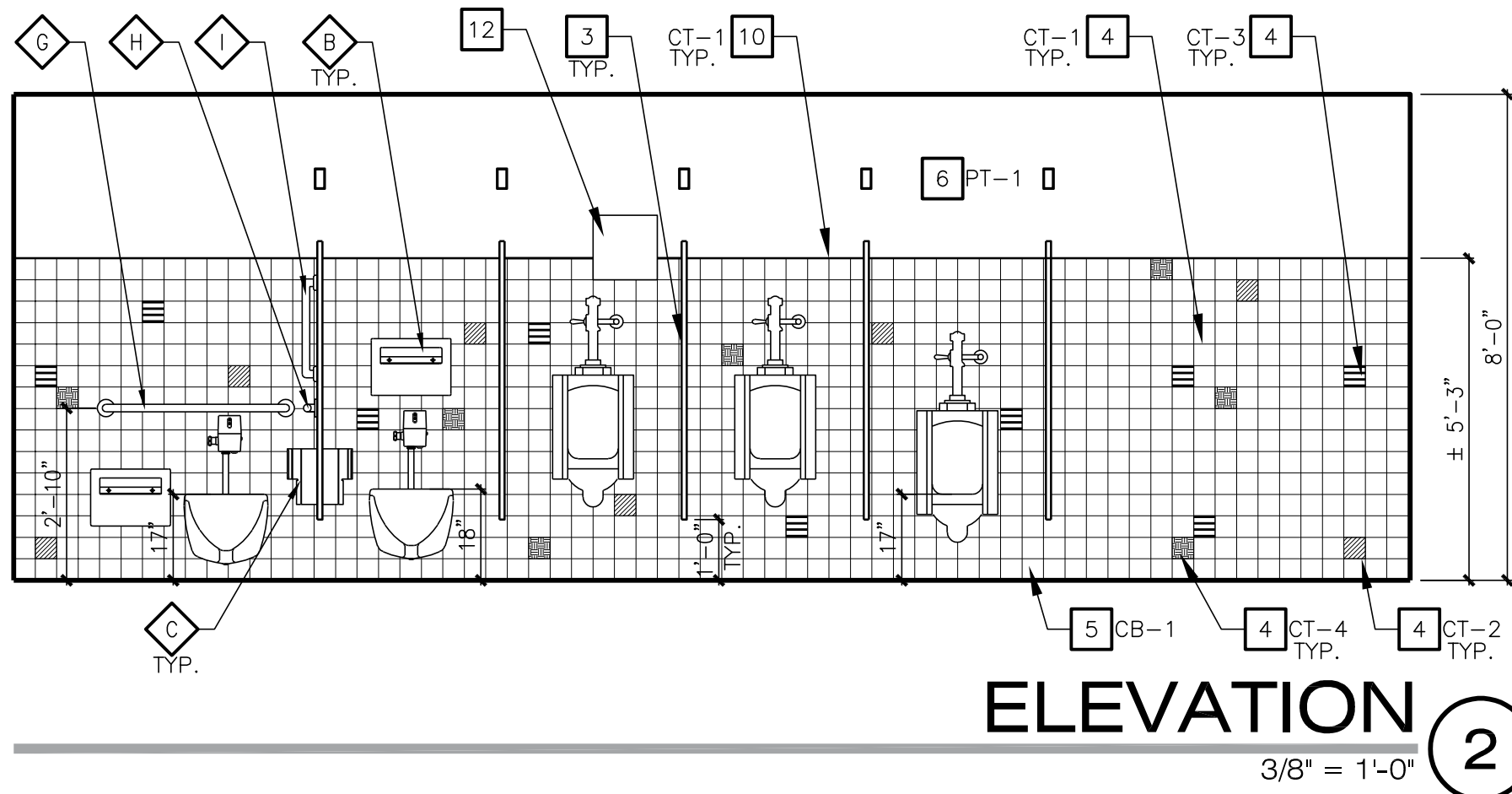
KEY NOTES

- SOLID SURFACE COUNTERTOP WITH 4"H BACKSPLASH, SS-1.
- INSTALL NEW MIRROR WITH LIGHT/POWER SUPPORT FRAME.
- TOILET PARTITION, TP-1. PROVIDE BACKING FOR ATTACHMENT PER MANUFACTURER'S REQUIREMENTS.
- WALL TILE
- TILE COVE BASE, SEE DETAIL 4/A12.10.
- GYP. BD, PAINTED
- INSTALL NEW HI-LO DRINKING FOUNTAIN.
- EXISTING BASE TO REMAIN.
- EXISTING GYP. BD. TO REMAIN.
- BULLNOSE TILE, SEE DETAIL 5/A12.10
- STAINLESS STEEL WALL TO FLOOR DRINKING FOUNTAIN RAIL, SEE DETAIL 6/A12.10
- PROVIDE ACCESS PANEL FOR THERMOPLASTIC MIXING VALVE. PAINT TO MATCH WALL.



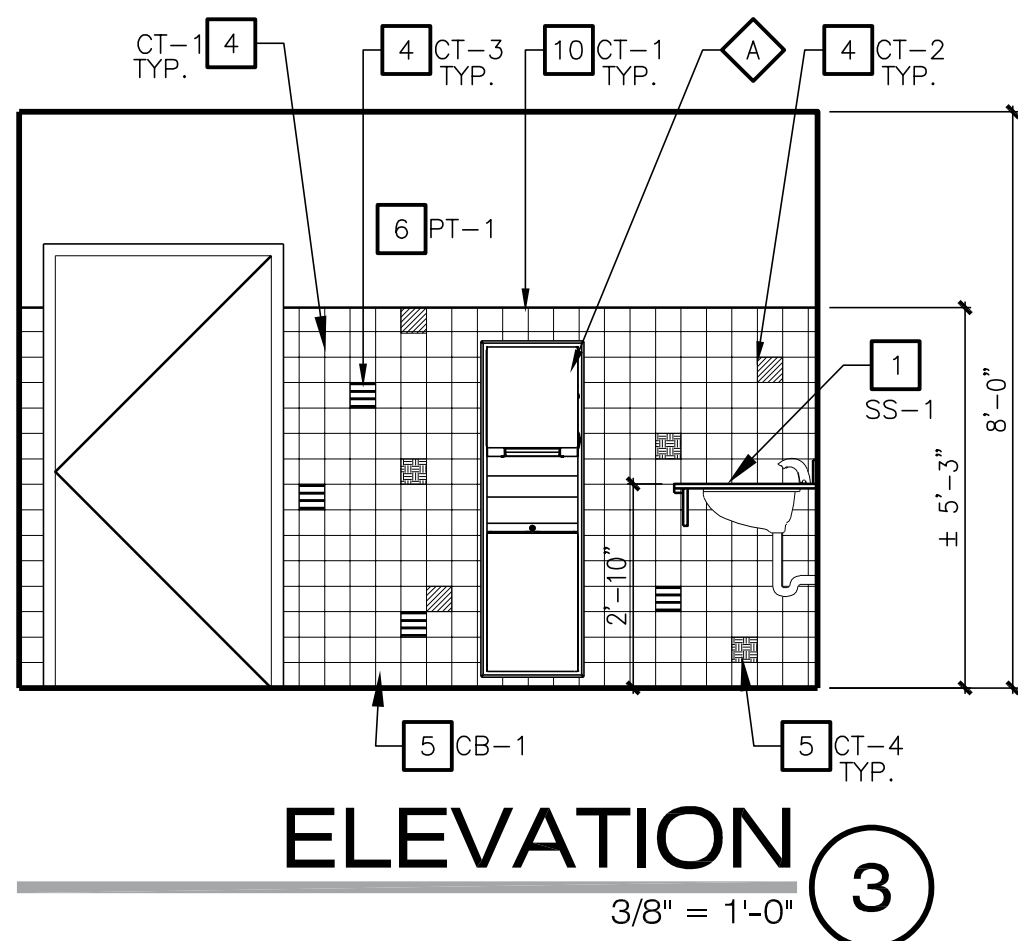
ELEVATION 1

3/8" = 1'-0"



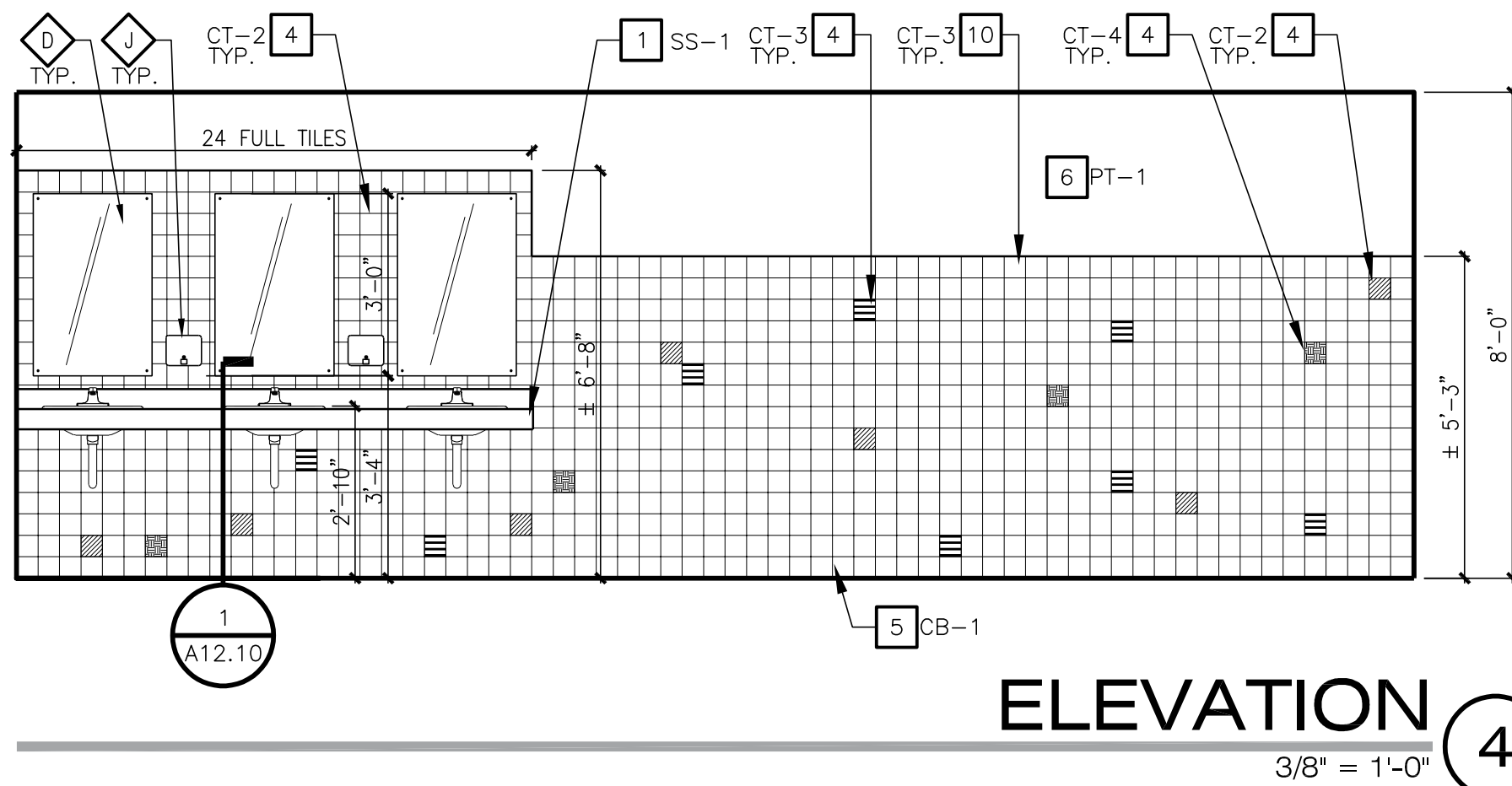
ELEVATION 2

3/8" = 1'-0"



ELEVATION 3

3/8" = 1'-0"



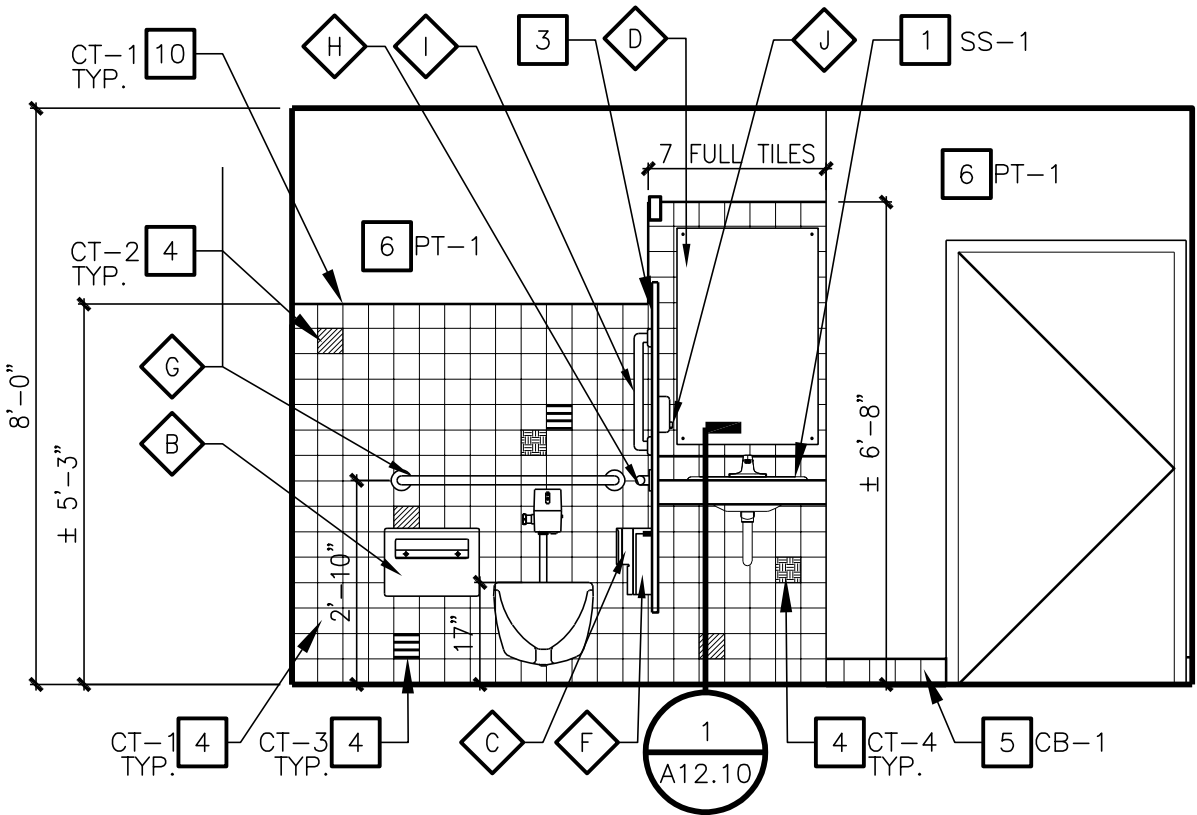
ELEVATION 4

3/8" = 1'-0"

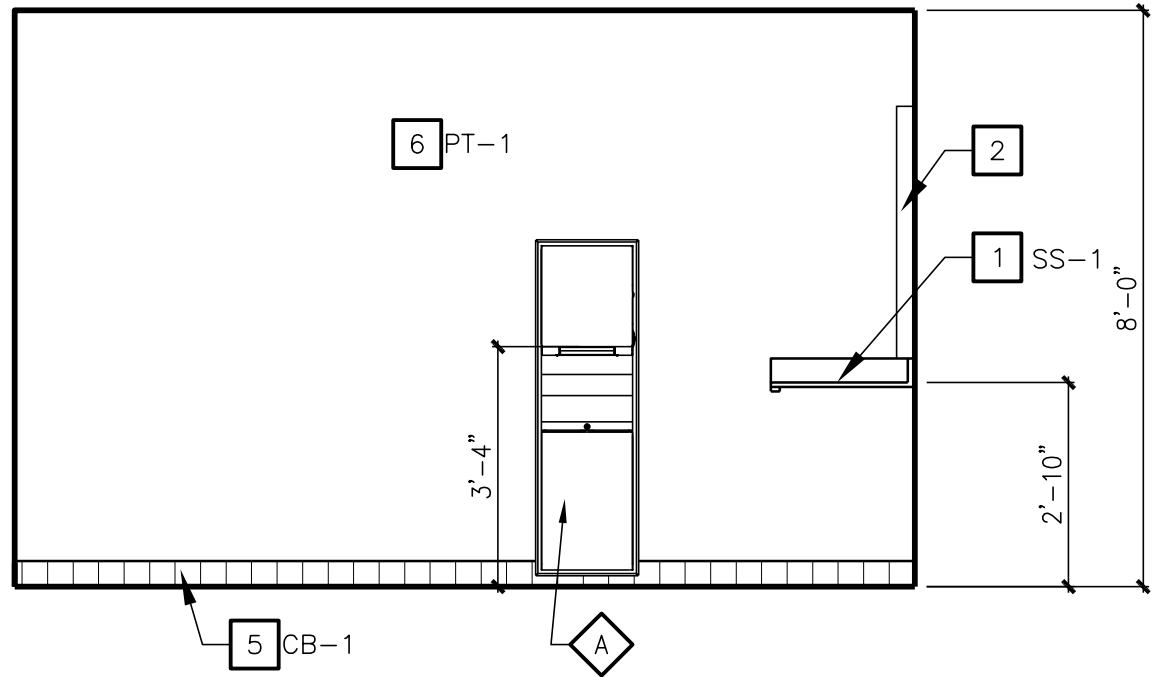
RECORD DRAWING

BASED ON CONTRACTOR SUPPLIED
INFORMATION, WHICH HAS NOT BEEN VERIFIED
BY SH ARCHITECTURE

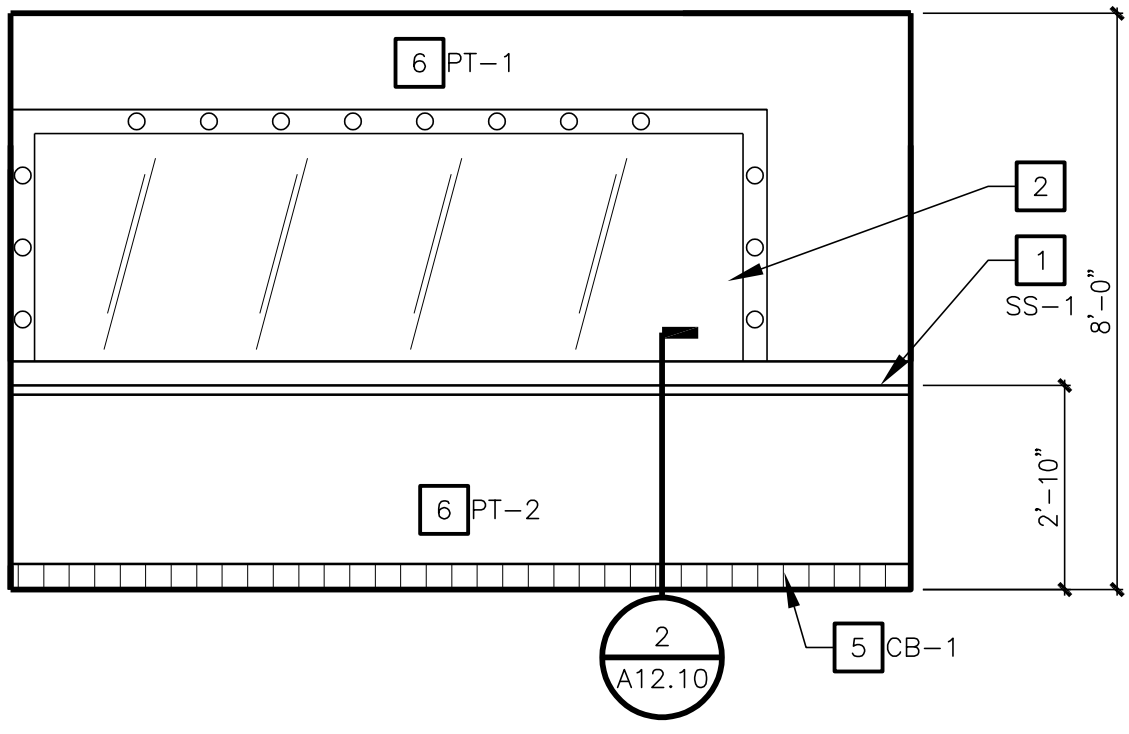
DATE: 02/15/2018



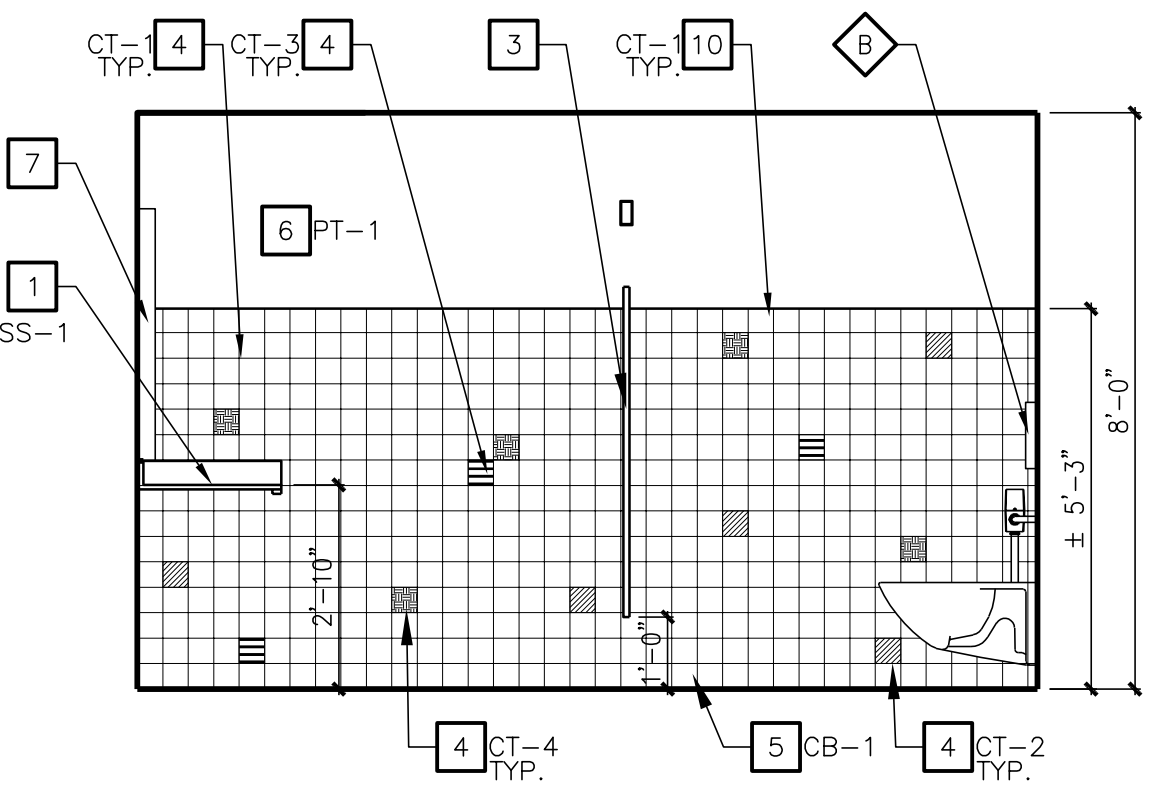
ELEVATION - ROOM 127 ①
3/8" = 1'-0"



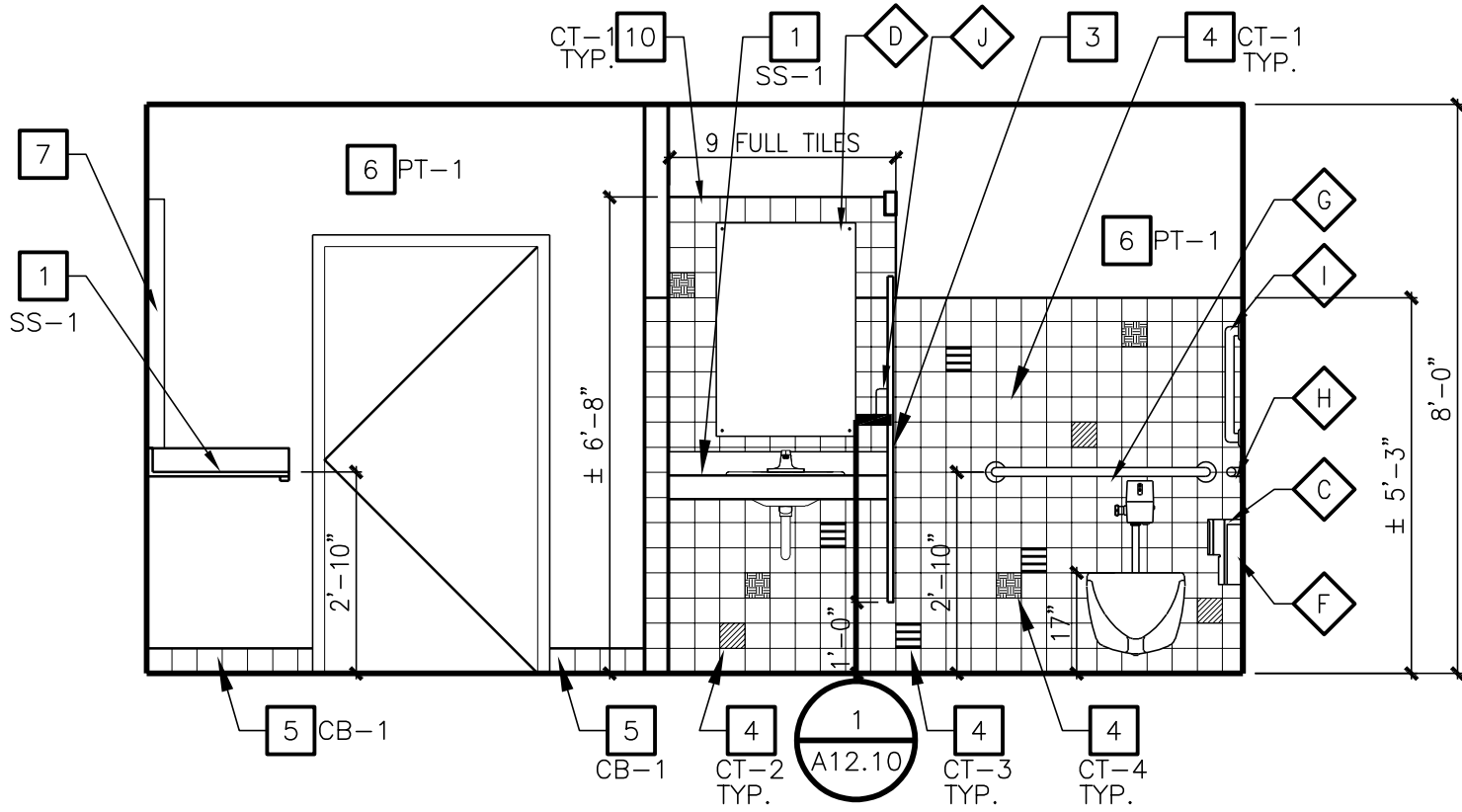
ELEVATION - ROOM 127 ②
3/8" = 1'-0"



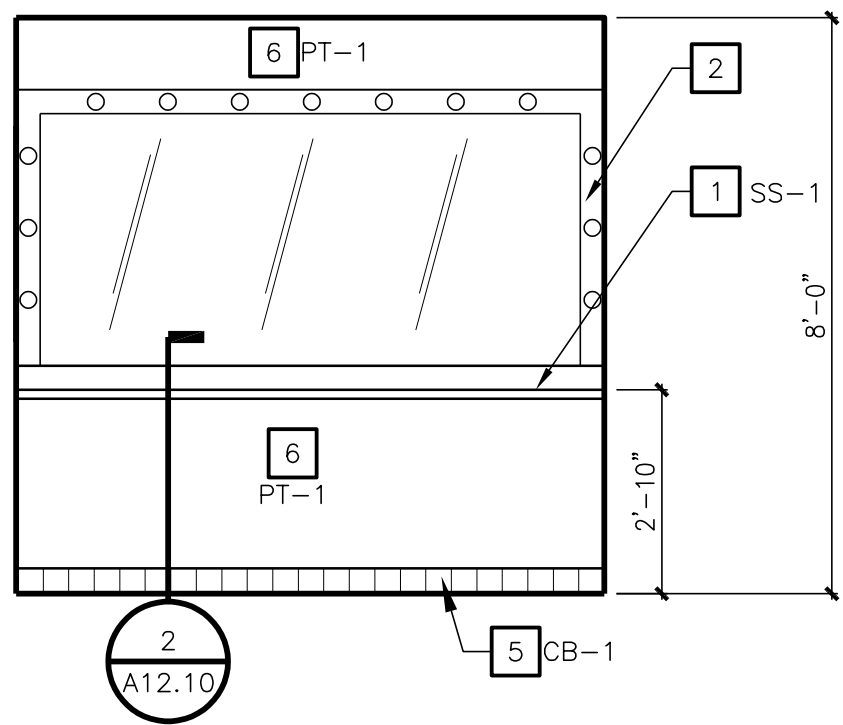
ELEVATION - ROOM 127 ③
3/8" = 1'-0"



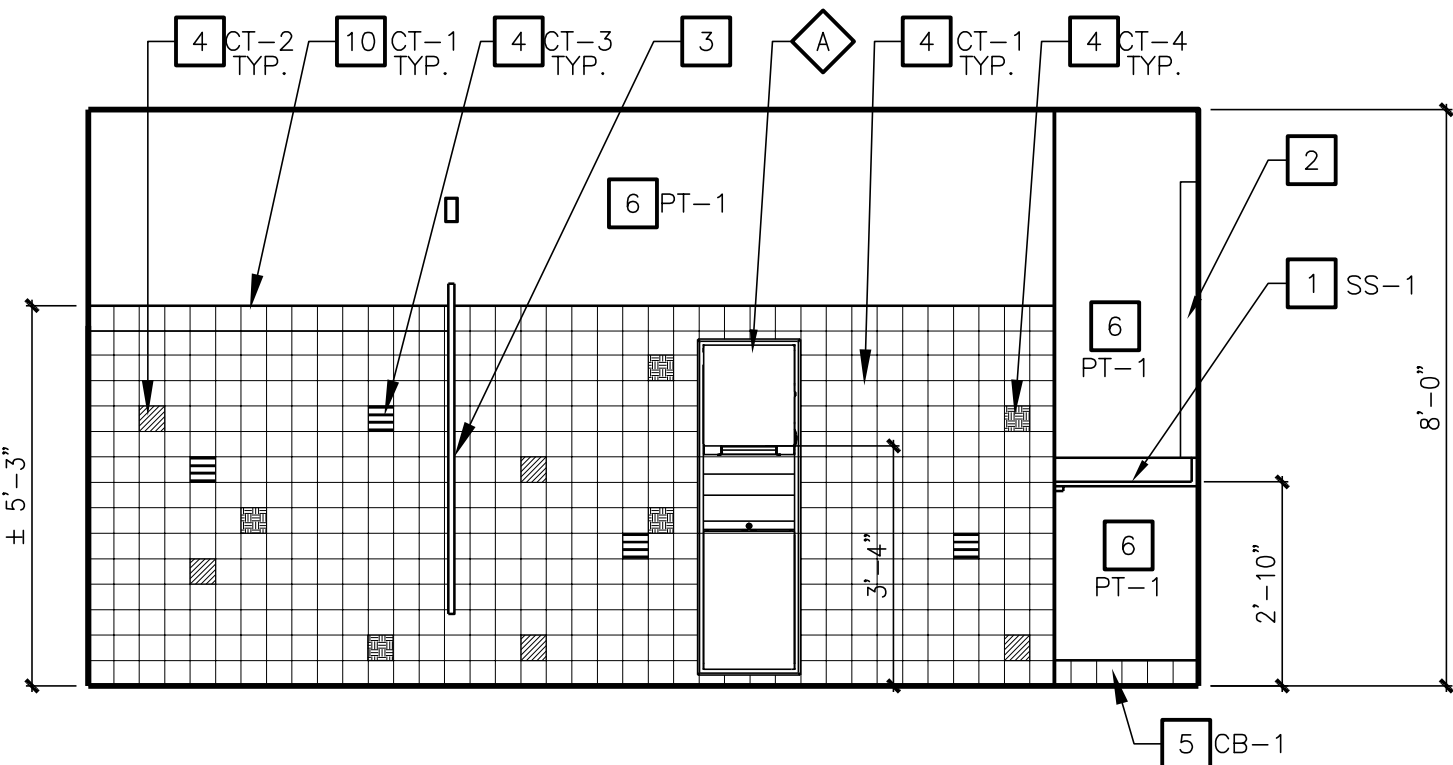
ELEVATION - ROOM 127 ④
3/8" = 1'-0"



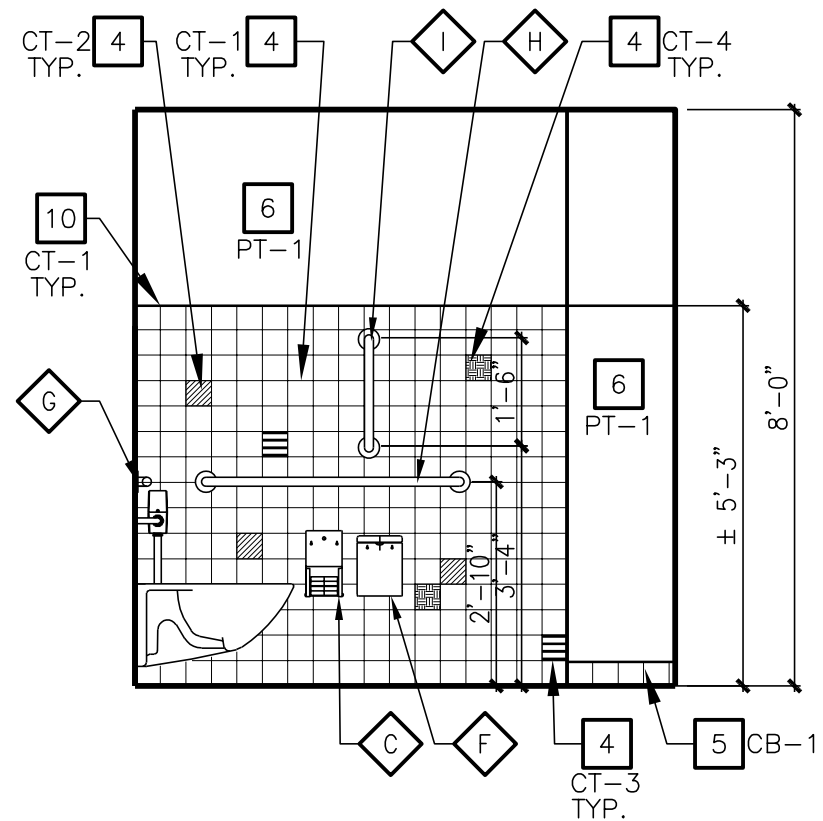
ELEVATION - ROOM 129 ⑤
3/8" = 1'-0"



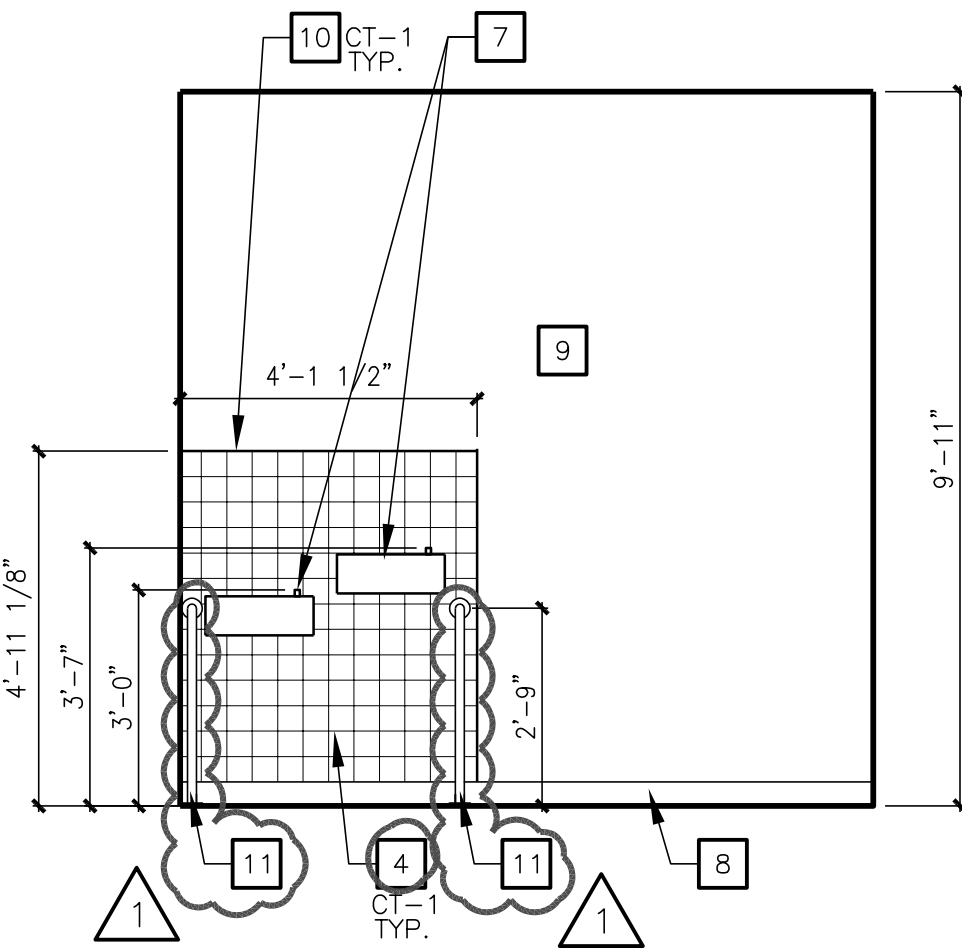
ELEVATION - ROOM 129 ⑥
3/8" = 1'-0"



ELEVATION - ROOM 129 ⑦
3/8" = 1'-0"



ELEVATION - ROOM 129 ⑧
3/8" = 1'-0"



ELEVATION - ROOM 101 ⑨
3/8" = 1'-0"

SHEET NOTES

- SEE SHEET G1.20 FOR ACCESSORY DIMENSIONS AND ADA COMPLIANCE.
- PROVIDE BLOCKING FOR ALL TOILET ACCESSORIES - TYPICAL FOR MOUNTING AND WITH ADEQUATE SUPPORT TO MEET CODE REQUIREMENTS.
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KEY NOTES

- SOLID SURFACE COUNTERTOP WITH 4"H BACKSPLASH, SS-1.
- INSTALL NEW MIRROR WITH LIGHT/POWER SUPPORT FRAME.
- TOILET PARTITION, TP-1. PROVIDE BACKING FOR ATTACHMENT PER MANUFACTURER'S REQUIREMENTS.
- WALL TILE
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RECORD DRAWING

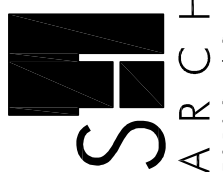
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DATE: 02/15/2018



REVISIONS
7/18/16 PLAN COMMENTS

ARCHITECT



Charleston Heights Community Center
- Renovation -
RESTROOM ELEVATIONS

THIS DRAWING
WAS ORIGINALLY
STAMPED BY
JOHN A. SAWDON
ARCHITECT NO. 4058
ON 07/18/2016

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

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TDD: (702) 386-9108

DRAWN CJT

DATE 05/02/2016

SCALE

BID NO 15.59806.JH

CLV DWG NO 620-10B

HANSEN NO 59806

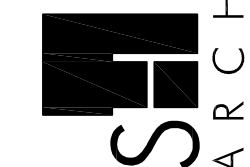
SHT NO

A10.32

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ARCHITECT



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- Renovation -

DETAILS

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ON 07/18/2016

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DRAWN CJT

DATE 05/02/2016

BID NO	15.59806.JH
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CLV DWG NO 620-10B

HANSEN NO 59806

SHT NO

A12.1C

RECORD DRAWING

BASED ON CONTRACTOR SUPPLIED
INFORMATION, WHICH HAS NOT BEEN VERIFIED
BY SH ARCHITECTURE

DATE: 02/15/2018

SPECIAL CONDITIONS, REQUIREMENTS AND NOTES TO OWNER, DEVELOPER AND CONTRACTORS

CONTRACTOR, BUILDER AND SUBCONTRACTORS INVOLVED IN ANY FORM OF CONSTRUCTION USING THESE DOCUMENTS SHALL INFORM THE OWNER AND DEVELOPER IN WRITING PRIOR TO CONSTRUCTION OF THE FOLLOWING RESPONSIBILITIES, PERFORMANCE CRITERIA AND LIMITATIONS AND RISKS ASSOCIATED WITH CONSTRUCTION. IF THE OWNER, DEVELOPER OR CONTRACTOR IS NOT ABLE TO ACCEPT RESPONSIBILITIES OR PERFORMANCE CRITERIA AND LIMITATIONS, NOTIFY OUR OFFICE PRIOR TO START OF CONSTRUCTION. IT SHALL BE EXPRESSLY UNDERSTOOD THAT THE ENGINEER IS NOT RESPONSIBLE OR LIABLE FOR THE LACK OF PERFORMANCE OF MATERIALS, SYSTEMS OR DESIGNS NOT BEING LIMITED TO ITEMS OUTLINED BELOW. CONTRACTORS AND SUBCONTRACTORS SHALL THOROUGHLY REVIEW ALL CONDITIONS AND RESPONSIBILITIES STATED IN THESE NOTES, GENERAL STRUCTURAL NOTES, PLANS, SECTIONS AND DETAILS AND SHALL NOTIFY THE ENGINEER AND OWNER IN WRITING PRIOR TO CONSTRUCTION OF ANY CONDITIONS OR RESPONSIBILITIES WHICH ARE NOT ACCEPTABLE OR NOT UNDERSTOOD.

1. PLAIN CONCRETE, REINFORCED CONCRETE, POST-TENSIONED CONCRETE, OR CONCRETE MASONRY DEVELOPE CRACKS. THE CRACKS ARE DUE TO INHERENT SHRINKAGE, CREEP AND RESTRAINING EFFECTS. CRACKS ARE NORMALLY COSMETIC AND THE SYSTEM MAINTAINS SERVICEABILITY AND STRENGTH REQUIREMENTS. JOINTS MAY BE INDICATED TO CONTROL CRACKING, BUT ARE NOT MEANT TO ELIMINATE ALL CRACKING, AS THIS IS NOT PRACTICAL. THE CONTRACTOR SHALL USE ALL STANDARD MEANS TO INSURE PROPER PROTECTION AND CURING OF CEMENTIOUS MATERIALS TO REDUCE CRACKING, SURFACE SPALLING OR EXTREME CRACKING MAY BE CAUSED BY POOR MATERIAL OR PLACEMENT. CONTACT OUR OFFICE FOR POSSIBLE REPAIR REQUIREMENTS.

3. FOUNDATIONS HAVE BEEN DESIGNED WITH A SOIL INVESTIGATION OR RECOMMENDATIONS FROM A GEOTECHNICAL CONSULTANT (SEE BELOW). FOUNDATION SETTLEMENT MAY CAUSE DISTORTION AND DISTRESS TO THE SUPPORTED STRUCTURE AS WELL AS ADJACENT UTILITIES, SLABS OR FOUNDATIONS. THE SOIL REPORT MAY INDICATE A LEVEL OF DISPLACEMENT. ATTENTION TO PROPER SOIL PREPARATION AND GRADING, AS WELL AS PROPER DRAINAGE AWAY FROM STRUCTURE IS ESSENTIAL IN REDUCING EXPECTED SETTLEMENT.

4. PLYWOOD OR APA RATED SHEATHING (OSB) AS NOTED ON DRAWINGS OR NOTES MAY BE A MINIMUM AS REQUIRED FOR STRUCTURAL LOADS. CONTRACTOR, DEVELOPER AND/OR OWNER SHALL BE RESPONSIBLE FOR SPECIFYING ALTERNATE THICKNESS OR SPAN RATING REQUIREMENTS TO SATISFY ROOFING WARRANTIES, NOISE RESTRICTIONS OR SUPPLEMENTAL DEFLECTION CRITERIA. CONTACT ENGINEER FOR INCREASED NAILING REQUIREMENTS FOR ALTERNATE SHEATHING.

5. VARIATION IN DIMENSIONS MAY OCCUR AS A RESULT OF THERMAL INFLUENCES, NATURAL DEFLECTIONS AND/OR CAMBERS OF MEMBERS. AS A RESULT, QUANTITIES MAY VARY AND ARCHITECTURAL FINISHES MAY BE AT RISK OF COSMETIC VARIATION OR DAMAGE.

6. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR VARIATIONS TO PLANS BETWEEN BID PROCESS AND FINALIZED APPROVED DOCUMENTS RELEASED FOR CONSTRUCTION. ADDITIONS AND ALTERATIONS MAY BE MADE BETWEEN RELEASE OF BID DOCUMENTS AND FINALIZED CONSTRUCTION DOCUMENTS.

7. DESIGNS HAVE BEEN COMPLETED USING THE CODE STATED IN THE BASIS FOR DESIGN. WHERE MORE THAN ONE REFERENCE IS LISTED BELOW, THE REFERENCE THAT CORRESPONDS TO THE CODE STATED IN THE BASIS OF DESIGN SHALL BE USED. OTHER SPECIALIZED CODES OR DIRECTIVES (HUD, OSHA, AISHO, ETC.) ARE NOT USED IN THE PREPARATION OF THESE DOCUMENTS AND ARE NOT REFERENCED.

8. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE STRUCTURAL ENGINEERS IN THIS OR SIMILAR LOCALITIES. THEY NECESSARILY ASSUME THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR, SUBCONTRACTOR AND/OR WORKPERSONS WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, IT IS UNDERSTOOD THAT THE CONTRACTOR WILL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR ALL WORK NOT EXPLICITLY SHOWN.

9. CALCULATION AND DESIGN OF MISCELLANEOUS NON-STRUCTURAL ITEMS, SUCH AS STAIRS, RAILINGS, NON-STRUCTURAL WALLS AND PREFABRICATED STRUCTURAL ITEMS, SUCH AS FLOOR AND ROOF TRUSSES, ARE NOT INCLUDED AND IS TO BE PROVIDED BY OTHERS UNLESS SPECIFICALLY NOTED ON THESE DRAWINGS.

10. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING, FORMWORK, ETC. AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. CONSTRUCTION MATERIALS SHALL BE UNIFORMLY SPREAD OUT SUCH THAT DESIGN LIVE LOAD PER SQUARE FOOT AS STATED HEREIN IS NOT EXCEEDED. VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREET, AND UTILITIES IN ACCORDANCE WITH THE LOCAL BUILDING DEPARTMENT. ALL WORK OR CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES, REGULATIONS AND SAFETY REQUIREMENTS.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS, CONDITIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL INFORM THE ARCHITECT IN WRITING OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS. ANY SUCH DISCREPANCY, OMISSION, OR VARIATION NOT REPORTED BEFORE START OF CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

13. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDA.

14. OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. IF AN OPTION IS USED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES AND SHALL COORDINATE ALL DETAILS.

15. TYPICAL DETAILS AND NOTES SHALL APPLY, THOUGH NOT NECESSARILY INDICATED AT A SPECIFIC LOCATION ON PLANS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT. DETAILS MAY SHOW ONLY ONE SIDE OF CONNECTION OR MAY OMIT INFORMATION FOR CLARITY. WHERE DISCREPANCIES OCCUR IN THESE DRAWINGS, NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.

16. ALL OPENINGS ARE NOT SHOWN ON THESE DRAWINGS. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION. OPENINGS MAY REQUIRE ADDITIONAL REINFORCING OR SUPPORTS AS SHOWN ON TYPICAL DETAILS. IF TYPICAL DETAILS FOR ALL CONDITIONS ARE NOT INCLUDED HEREIN, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REQUEST IN WRITING ADDITIONAL INFORMATION.

17. ALL INSPECTIONS REQUIRED BY THE BUILDING CODES, LOCAL BUILDING OFFICIALS, OR BY THESE PLANS SHALL BE PROVIDED BY AN INDEPENDENT INSPECTION COMPANY OR, THE BUILDING DEPARTMENT. INSPECTION REQUIREMENTS STATED HEREIN ARE PARTIAL. COMPLETE INSPECTION REQUIREMENTS SHALL BE AS DIRECTED BY THE LOCAL BUILDING DEPARTMENT. SITE VISITS BY THE ENGINEER DO NOT CONSTITUTE AN INSPECTION, UNLESS SPECIFICALLY CONTRACTED FOR.

18. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS. SHOP DRAWINGS ARE REVIEWED ONLY FOR GENERAL COMPLIANCE WITH THE STRUCTURAL DRAWINGS. REVIEW DOES NOT INDICATE THAT THE SHOP DRAWINGS ARE CORRECT OR COMPLETE. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR. ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DRAWINGS SHALL BE CLOUDED. ANY OF THE AFOREMENTIONED SHALL NOT BE CONSIDERED APPROVED AFTER ENGINEER'S REVIEW UNLESS SPECIFICALLY NOTED ACCORDINGLY. THE SHOP DRAWINGS DO NOT SUPERSEDE OR REPLACE THE ORIGINAL CONTRACT DRAWINGS. ANY ENGINEERING PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF AN APPROPRIATELY REGISTERED ENGINEER. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ADEQUACY OF ENGINEERING DESIGNS PERFORMED BY OTHERS. ALLOW FIVE WORKING DAYS FOR THE ENGINEER'S REVIEW. ONE COPY OF EACH SUBMITTAL WILL BE RETAINED FOR THE ENGINEER'S RECORDS.

BASIS FOR DESIGN

- BUILDING CODE: 2012 INTERNATIONAL BUILDING CODE (IBC)
- RISK CATEGORY: III
- ROOF LOADS: LIVE LOAD (PSF) = 20 at 4:12 SLOPE OR LESS
DEAD LOAD (PSF)= 21 TOTAL; 18 SUPERIMPOSED ON PREFAB TRUSS
SNOW LOAD = N/A
- WIND LOAD: 115 MPH, 3-SECOND GUST ULTIMATE DESIGN WIND SPEED
EXPOSURE: 3
INTERNAL PRESSURE COEFFICIENT, GCp1=+/-0.18
COMPONENT & CLADDING DESIGN PRESSURE = 30 PSF
- SEISMIC DESIGN DATA: MAPED SPECTRAL RESPONSE ACCELERATIONS: Ss=0.541, S1=0.170
SPECTRAL RESPONSE COEFFICIENTS: Sds=0.493, Sd1=0.240
SITE CLASS= D
SEISMIC DESIGN CATEGORY = D
BASIC SEISMIC=FORCE-RESISTING SYSTEM
SPECIAL REINFORCED MASONRY SHEAR WALLS, R=5.0
DESIGN BASE SHEAR = 0.123 x W
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
SEISMIC RESPONSE COEFFICIENT: Cs=0.123
- SNOW LOAD: N/A
- FLOOD LOAD: N/A
- SPECIAL LOADS: N/A

FOUNDATION NOTES

- GEOTECHNICAL REPORT: CITY OF LAS VEGAS
PROJECT No. 20153797E1
DATED DECEMBER 2, 2015
- FOOTING DEPTH: 18 INCHES BELOW GRADE (SEE BELOW FOR DEFINITION OF GRADE)
- ALLOWABLE FOOTING BEARING: 2000 PSF. ONE-THIRD INCREASE FOR SEISMIC OR JOINT LOAD COMBINATIONS
- SLAB-ON-GRADE SUPPORT: 6 INCH LAYER OF SELECT GRANULAR FILL MATERIAL (PER SOIL REPORT) PLACED OVER 8 MIL MINIMUM VISQUEEN MEMBRANE.
- SOIL SULFATE EXPOSURE: MAPED SPECTRAL RESPONSE ACCELERATIONS: Ss=0.541, S1=0.170
SPECTRAL RESPONSE COEFFICIENTS: Sds=0.493, Sd1=0.240
SITE CLASS= D
SEISMIC DESIGN CATEGORY = D
BASIC SEISMIC=FORCE-RESISTING SYSTEM
SPECIAL REINFORCED MASONRY SHEAR WALLS, R=5.0
DESIGN BASE SHEAR = 0.123 x W
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
SEISMIC RESPONSE COEFFICIENT: Cs=0.123
- ALL FOOTINGS SHALL EXTEND TO DEPTH NOTED ABOVE UNO ON PLANS OR DETAIL. GRADE IS DEFINED AS TOP OF SLAB FOR INTERIOR FOOTINGS, AND LOWEST ADJACENT COMPACTED SUBGRADE (PAD GRADE BEFORE LANDSCAPING) OR NATURAL GRADE WITHIN 5 FEET OF BUILDING FOR PERIMETER FOOTINGS. GRADE IS DEFINED AS TOP OF EXTERIOR PAVING OR CONCRETE WHERE EXTERIOR PAVING OR CONCRETE IS PERMANENTLY LOCATED DIRECTLY ADJACENT TO BUILDING AND EXTENDS AT LEAST 5 FEET FROM BUILDING. LOCATION OF FOUNDATIONS NEAR SLOPES SHALL COMPLY WITH IBC 1808.7. FOOTING EXCAVATIONS SHALL BE CLEAN AND FREE FROM LOOSE DEBRIS, STANDING WATER, OR UNCOMPACTED MATERIAL AT TIME OF CONCRETE PLACEMENT.
- CONCRETE SLABS ON GRADE SHALL BE SUPPORTED ON SELECT FILL MATERIAL AS NOTED ABOVE. FILL MATERIAL SHOULD BE MOISTENED, BUT NOT SATURATED JUST PRIOR TO PLACING CONCRETE. CARE SHALL BE TAKEN IN PLACING SLABS ON GRADE SO AS NOT TO DISTURB FILL MATERIAL OR REINFORCING.
- SITE PREPARATION AND GRADING REQUIREMENTS OF THE 2012 INTERNATIONAL BUILDING CODE AND ANY ADDENDA SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF FOUNDATIONS. ANY TESTS, INSPECTIONS, FIELD OBSERVATIONS, OR APPROVAL FROM THE ENGINEER OF RECORD SHALL BE PERFORMED PRIOR TO PLACEMENT OF FOUNDATION REINFORCING STEEL OR CONCRETE. ALTERATIONS TO SITE PREPARATION OR GRADING SHALL BE REPORTED TO THE ENGINEER PRIOR TO FOUNDATION CONSTRUCTION.
- BACKFILL AGAINST FOUNDATION WALLS OR EXTERIOR WALLS BELOW GRADE SHALL NOT BE PLACED UNTIL AFTER THE TOP OF THE WALLS ARE RESTRAINED BY THE COMPLETED INTERIOR FLOOR SYSTEMS.

CONCRETE

- MINIMUM 28 DAY STRENGTH (f'c) SHALL BE 4500 PSI, W/C = .45 *
- CONCRETE MIXES SHALL BE DESIGNED BY A CERTIFIED LABORATORY AND APPROVED BY THE ENGINEER.
- ALL CONCRETE SHALL BE REGULAR WEIGHT OF 145 POUNDS PER CUBIC FOOT USING HARDROCK AGGREGATES. AGGREGATE USED IN CONCRETE SHALL CONFORM TO ASTM C33, CONCRETE AGGREGATES.
- MAXIMUM SLUMP FOR EXTERIOR SLABS SHALL BE 5 INCHES. MAXIMUM SLUMP FOR ALL OTHER CONCRETE SHALL BE 4 INCHES. WATER SHALL BE CLEAN AND POTABLE.
- PORTLAND CEMENT SHALL CONFORM TO ASTM C150. TYPE V CEMENT SHALL BE USED FOR CONCRETE IN CONTACT WITH EARTH. TYPE II CEMENT MAY BE USED ELSEWHERE. MAXIMUM CHLORIDE ION, PERCENT BY WEIGHT OF CEMENT, SHALL NOT EXCEED 0.06.
- NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT, UNLESS APPROVED BY THE ENGINEER OR AUTHORIZED TESTING AGENCY.
- CONCRETE MIXING, PLACEMENT AND QUALITY SHALL BE PER IBC CHAPTER 19, ASTM C94, ASTM C685, AND ACI 302. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT SLABS ON GRADE. NEED ONLY BE VIBRATED OR THOROUGHLY RODDED AROUND EMBEDDED STRAPS OR HARDWARE. BOLTS FOR HOLDOWNS, PT ANCHORAGES (AS OCCUR), CURBS AND EDGES OF SLAB STEPS AND UNDER FLOOR DUCTS OR SIMILAR ELEMENTS. REMOVE ALL DEBRIS FROM FORMS BEFORE PLACING CONCRETE. CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL (AS IN WALLS AND COLUMNS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED 5 FEET. CARE SHALL BE TAKEN IN PLACING SLABS ON GRADE SO AS NOT TO DISTURB FILL MATERIAL.
- ALL ITEMS TO BE CAST IN CONCRETE SUCH AS REINFORCING, DOWELS, BOLTS, ANCHORS, PIPES, SLEEVES, ETC. SHALL BE SECURELY POSITIONED IN THE FORMS BEFORE PLACING THE CONCRETE.
- CONCRETE SLAB ON GRADE CONTROL JOINTS SHALL BE AS SHOWN ON THE FOUNDATION PLAN OR TYPICAL DETAILS. WHERE CONTROL JOINTS ARE NOT SHOWN ON PLANS, ALL CONCRETE SLABS ON GRADE SHALL BE BOUNDED BY KEYS, DOWELED OR SAW-CUT CONTROL JOINTS SUCH THAT THE ENCLOSED AREA DOES NOT EXCEED 260 SQUARE FEET. RATIO OF BOUNDARY DIMENSIONS SHALL NOT EXCEED 1.5:1. KEYED OR DOWELED CONTROL JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING POURING. ALL OTHER JOINTS MAY BE SAW CUT. POST-TENSIONED CONCRETE SLABS ON GRADE SHALL NOT HAVE CONTROL JOINTS UNLESS SPECIFICALLY NOTED ON THE PLANS.
- NO PIPES OR ELECTRICAL CONDUITS SHALL BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY THE ENGINEER. MAXIMUM PIPE SIZE SHALL BE 1/3 OF THE SLAB THICKNESS AND LOCATED AT THE MID-DEPTH. MINIMUM SPACING SHALL BE 3 TIMES THE PIPE DIAMETER. PIPES SHALL NOT IMPAIR THE STRENGTH OF THE MEMBER.
- PROTECT CONCRETE FROM DAMAGE OR REDUCED STRENGTH DUE TO COLD OR HOT WEATHER IN ACCORDANCE WITH ACI 305 AND 306 AND ACI 318 SECTIONS 5.12 AND 5.13.

GENERAL STRUCTURAL NOTES

MASONRY (CONCRETE BLOCK)

- COMPRESSIVE STRENGTH OF CONCRETE MASONRY CONSTRUCTION (CMU) SHALL BE AS FOLLOWS (PSI). MASONRY STRENGTH NOT SPECIFICALLY NOTED ON PLAN SHALL BE (F'm) 1500 PSI.
MASONRY STRENGTH(F'm DESIGN) BLOCK STRENGTH MORTAR STRENGTH GROUT STRENGTH
1500 1900 1800 2000
- CONCRETE BLOCK SHALL BE HOLLOW LOAD-BEARING MEDIUM WEIGHT CONCRETE MASONRY UNITS CONFORMING TO IBC SECTION 2103.1, ASTM C90. ALL BLOCKS SHALL BE PLACED IN RUNNING BOND CONSTRUCTION (UNLESS OTHERWISE NOTED) WITH ALL VERTICAL CELLS IN ALIGNMENT.
- MORTAR MIX SHALL CONFORM TO REQUIREMENTS OF IBC SECTION 2103.9, ASTM C270, TYPE M OR S. TYPE M MORTAR SHALL BE USED WHERE MASONRY IS IN CONTACT WITH SOIL.
- GROUT SHALL CONFORM TO REQUIREMENTS OF IBC SECTION 2103.13, ASTM C478. USE SUFFICIENT WATER FOR GROUT TO FLOW INTO ALL JOINTS OF THE MASONRY WITHOUT SEGREGATION. ALL CELLS IN CONCRETE BLOCKS CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT. ALL MASONRY BELOW FINISHED FLOOR OR GRADE SHALL BE GROUTED SOLID. HOLD GROUT DOWN 1-1/2" BELOW TOP OF BLOCK AT GROUT LIFT JOINTS AND AT CONCRETE PLACED OVER MASONRY.
- MINIMUM WALL VERTICAL REINFORCING, UNLESS NOTED OTHERWISE ON PLANS OR DETAILS, SHALL BE #5 BAR VERTICAL FULL HEIGHT IN CENTER OF GROUTED CELL AT ALL WALL INTERSECTIONS, CORNERS, WALL ENDS, JAMBS AT WALL OPENINGS, EACH SIDE OF CONTROL JOINTS, AND AT INTERVALS NOT TO EXCEED 48 INCHES ON CENTER. Tie at 8"-0" VERTICALLY, WITH SINGLE WIRE LOOP TIE OR EQUIVALENT. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION WITH DOWELS TO MATCH AND LAP VERTICAL REINFORCING.
- MINIMUM WALL HORIZONTAL REINFORCING, UNLESS NOTED OTHERWISE ON PLANS OR DETAILS, SHALL BE (2) #5 BARS IN CENTER OF 16 INCH DEEP (MINIMUM) CONTINUOUS GROUTED BOND BEAM AT ELEVATED FLOOR AND ROOF LINES AND SINGLE #5 BAR IN CENTER OF 8 INCH DEEP CONTINUOUS GROUTED BOND BEAM AT TOP OF PARAPET OR FREE STANDING WALL AND AT INTERVALS NOT TO EXCEED 4'-0" OC. PLACE BARS AT ELEVATED FLOOR AND ROOFLINES CONTINUOUS THROUGH CONTROL JOINTS. PROVIDE BENT BARS PER TYPICAL DETAILS TO MATCH AND LAP HORIZONTAL BOND BEAM REINFORCING AT CORNERS AND WALL INTERSECTIONS TO MAINTAIN BOND BEAM CONTINUITY. USE BOND BEAM UNITS AT HORIZONTAL REINFORCING.
- MINIMUM LINTEL, WHERE NOT NOTED ON PLANS, SHALL HAVE A MINIMUM OF (2) #5 CONTINUOUS HORIZONTAL BARS IN BOTTOM OF BOND BEAM OR LINTEL BLOCK AND SHALL BE GROUTED SOLID TO A MINIMUM DEPTH OF 24 INCHES. ALL LINTEL REINFORCING AND GROUT SHALL EXTEND 2 FEET MINIMUM PAST JAMBS UNLESS NOTED OTHERWISE ON PLANS OR DETAILS.
- LAP SPICES OF REINFORCING STEEL SHALL CONFORM TO TYPICAL REBAR LAP SCHEDULE IN MASONRY, WHERE PRESENT, UNLESS NOTED OTHERWISE, OR TO IBC 2107 OR 2108. STAGGER LAP SPICES A MINIMUM OF ONE LENGTH.

REINFORCING STEEL (FOR CONCRETE AND MASONRY)

- REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615. REINFORCING SHALL BE GRADE 60 (FY = 60 KSI) DEFORMED BARS FOR ALL BARS #5 AND LARGER AND ALL BARS USED FOR CONCRETE WALLS, BEAMS, ELEVATED SLABS AND COLUMN PRIMARY REINFORCING. REINFORCING MAY BE GRADE 40 (FY = 40 KSI) DEFORMED BARS FOR ALL BARS #4 AND SMALLER UNLESS NOTED OTHERWISE ON PLANS OR DETAILS. ALL REINFORCING TO BE WELDED SHALL BE ASTM A706, GRADE 60 LOW ALLOY WELDABLE STEEL.
- ALL DIMENSIONS SHOWING THE LOCATION OF REINFORCING STEEL NOT NOTED AS "CLEAR" OR "CLR" ARE TO CENTER OF STEEL. MINIMUM COVER FOR NON-PRESTRESSED CONCRETE REINFORCING SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE ON PLANS OR DETAILS:
EXPOSURE CONDITION: MINIMUM COVER: TOLERANCES (+ / -):
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3" 3/8"
EXPOSED TO EARTH OR WEATHER: #5 AND SMALLER: 1-1/2" 3/8"
#6 AND LARGER: 2" 3/8"
SLABS ON GRADE: 1-1/2" 1/4"
- LAP SPICES OF REINFORCING STEEL IN CONCRETE BEAMS, SLABS AND FOOTINGS SHALL BE ACCORDING TO ACI SECTION 12 OR LAP SCHEDULE, WHERE PRESENT, UNLESS NOTED OTHERWISE. STAGGER SPICES A MINIMUM OF ONE LAP LENGTH. NO TACK WELDING OF REINFORCING BARS ALLOWED. LATEST ACI CODE AND DETAILING MANUAL APPLY. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS. VERTICAL WALL BARS SHALL BE SPICED AT OR NEAR FLOOR LINES. SPICE BARS TOP BARS AT CENTER LINE OF SPAN AND BOTTOM BARS AT THE SUPPORT IN SPANDRELS, BEAMS, GRADE BEAMS, ETC. UNLESS NOTED OTHERWISE.
- METCHANICAL SPICE COUPLERS, FLANGE COUPLERS, THREADED COUPLERS, ETC. SHALL HAVE CURRENT ICC APPROVAL AND SHALL BE CAPABLE OF DEVELOPING 125% OF THE STRENGTH OF THE BAR.
- ALL REINFORCING SHALL BE BENT COLD. BARS SHALL NOT BE STRAIGHTENED AND RE-BENT. FIELD BENDING OF REBAR SHALL NOT BE ALLOWED UNLESS SPECIFICALLY NOTED.
- WELDING OF REINFORCING BARS, METAL INSERTS, AND CONNECTIONS SHALL CONFORM WITH AWS D1.4 AND SHALL BE MADE ONLY AT LOCATIONS SHOWN ON PLANS OR DETAILS.
- REINFORCING BAR SPACING SHOWN ON PLANS ARE AT MAXIMUM ON CENTERS. ALL BARS SHALL BE DETAILIED AND PLACED PER CONCRETE REINFORCING STEEL INSTITUTE (CRSI) SPECIFICATIONS AND HANDBOOK. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE.

STEEL JOISTS AND JOIST GIRDERS

- ALL JOISTS SHALL BE DESIGNED, FABRICATED, WELDED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE "STANDARD SPECIFICATIONS" OF THE STEEL JOIST INSTITUTE.
- JOIST MANUFACTURER SHALL DESIGN AND SUBMIT CALCULATIONS BY AN APPROPRIATELY REGISTERED ENGINEER FOR ALL JOISTS AND JOIST GIRDERS, EXCEPT PARALLEL CHORD JOISTS WITH UNIFORM LOADS AND CONTINUOUSLY SUPPORTED COMPRESSION CHORDS PER SJI STANDARD LOAD TABLES. CALCULATIONS SHALL INCLUDE DEFLECTION AND CAMBER REQUIREMENTS. LIVE LOAD DEFLECTIONS SHALL BE LIMITED TO SPAN/360. ALL JOISTS AND JOIST GIRDERS SHALL BE CAMBERED FOR THE DESIGN DEAD LOAD. MANUFACTURER SHALL ADD ADDITIONAL WEB MEMBERS AS REQUIRED AND ADJUST CHORD AND WEB SIZES ACCORDINGLY, BUT SHALL NOT ALTER DEPTH OF JOISTS WITHOUT APPROVAL OF THE ARCHITECT. DESIGN CALCULATIONS SHALL INCLUDE SUPERIMPOSED LOADS FROM MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER ROOF-SUPPORTED EQUIPMENT. VERIFY SIZE, WEIGHT AND LOCATION OF EQUIPMENT WITH ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ALONG WITH DESIGN CALCULATIONS SEALED BY A REGISTERED ENGINEER FOR REVIEW PRIOR TO MANUFACTURE. SHOP DRAWINGS AND CALCULATIONS SHALL INCLUDE DETAILS OF ANY OPTIONAL FIELD SPICES.
- ALL STEEL JOISTS, GIRDERS OR BEAMS SHALL BEAR AT A PANEL POINT. JOISTS OR BEAMS SHALL BE EQUALLY SPACED BETWEEN COLUMN LINES UNLESS NOTED OTHERWISE ON PLANS. MANUFACTURER SHALL DESIGN JOIST SHOES WHERE BEARING LENGTH IS LESS THAN 4" AT LH SERIES JOIST AND LESS THAN 3" AT K SERIES JOIST.
- MANUFACTURER SHALL PROVIDE BRIDGING AS REQUIRED PER SJI SPECIFICATIONS. WHERE BOTTOM CHORD WELD IS INDICATED ON DRAWINGS, DO NOT WELD BOTTOM CHORDS TO JOIST SUPPORT UNTIL FULL DEAD LOAD IS IN PLACE. WHERE CROSS BRIDGING INTERFERES WITH MECHANICAL INSTALLATIONS, REMOVE THE INTERFERING CROSS BRIDGING ELEMENTS AFTER TOTAL DEAD LOAD IS APPLIED AND REPLACE WITH EQUIVALENT HORIZONTAL ANGLES (L2x2x3/16 MINIMUM) AT TOP AND BOTTOM CHORDS.
- MANUFACTURER SHALL DESIGN JOIST AND JOIST GIRDERS IN ACCORDANCE WITH THE UNDERWRITER LABORATORY (U.L.) DESIGN REQUIREMENTS IN ORDER TO ACHIEVE THE FIRE RATING SPECIFIED IN ARCHITECTURAL DRAWINGS.

STRUCTURAL STEEL

- STRUCTURAL STEEL MEMBERS SHALL CONFORM WITH THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES UNLESS NOTED OTHERWISE:
SHAPE STANDARD Fy
ROLLED WIDE FLANGE SECTIONS: ASTM A992 50 KSI
OTHER STANDARD STEEL SHAPES AND ROLLED SECTIONS: ASTM A36 36 KSI
BARS AND PLATES: ASTM A36 36 KSI
PIPES: ASTM A53 TYPE E OR S, GRADE B 35 KSI
TUBES: ASTM A500 GRADE B 46 KSI
BOLTS AT STEEL CONNECTIONS: ASTM A325 OR A490 ---
FOUNDATION ANCHOR BOLTS ASTM F1554 36 KSI
HEADED STEEL STUDS ASTM A108
2. ALL BOLTS SHALL BE INSTALLED AS BEARING-TYPE CONNECTIONS WITH THREADS EXCLUDED FROM SHEAR PLANE (TYPE "X" CONNECTION), UNLESS NOTED OTHERWISE. HIGH-STRENGTH BOLTS SHALL BE TIGHTENED USING ANY AISC APPROVED METHOD. BOLTS IN SHEAR/BEARING CONNECTIONS ARE TO BE TIGHTENED ACCORDING TO THE FOLLOWING:
BOLT TYPE TIGHTENING
A307 SNUG TIGHT
A325N/A490N SNUG TIGHT
A325X/A490X SNUG TIGHT
A325SC/A490SC FULL PRETENSIONING
3. ALL THREADED ROD AND THREADED STUDS SHALL BE ASTM A307 UNLESS NOTED OTHERWISE. ALL EXPANSION OR EPOXY BOLTS SHALL HAVE CURRENT ICC RATING FOR MATERIAL INTO WHICH INSTALLATION OCCURS. HEADED STUDS SHALL CONFORM TO ALL REQUIREMENTS OF THE LATEST EDITION OF THE "RECOMMENDED PRACTICES FOR STUD WELDING" AND THE "STRUCTURAL WELDING CODE" PUBLISHED BY AMERICAN WELDING SOCIETY (AWS). HEADED STUDS SHALL BE AUTOMATICALLY WELDED.
4. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST EDITION.
5. WELDING SHALL BE PERFORMED BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN THE TYPE OF WELD SHOWN ON THE DRAWINGS. ALL WELDING SHALL USE E70 SERIES LOW HYDROGEN ELECTRODES UNLESS NOTED OTHERWISE. ALL WELDS INVOLVING REINFORCING BARS SHALL USE E70 OR E90 SERIES ELECTRODES. ALL WELDING SHALL CONFORM TO THE LATEST AMERICAN WELDING SOCIETY (AWS) STANDARDS. WELDS ON DRAWINGS ARE SHOWN AS SHOP WELDS. CONTRACTOR MAY SHOP WELD OR FIELD WELD AT HIS DISCRETION. ALL FULL PENETRATION WELDS SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING LABORATORY.

6. GROUT BENEATH COLUMN BASES OR BEARING PLATES SHALL BE 5,000 PSI (MIN) NON-SHRINK FLOWABLE GROUT OR DRYPACK. INSTALL GROUT UNDER BEARING PLATES BEFORE FRAMING MEMBER IS INSTALLED. AT COLUMNS, INSTALL GROUT UNDER BASE PLATES AFTER COLUMN HAS BEEN PLUMBED BUT PRIOR TO FLOOR OR ROOF INSTALLATION. GROUT DEPTH SHALL BE SUFFICIENT TO ALLOW GROUT OR DRYPACK TO BE PLACED BENEATH PLATE WITHOUT VOIDS.

STEEL DECK

- ROOF DECK SHALL BE AS NOTED ON PLAN. DECK SHALL BE ERECTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AS 3 SPAN MINIMUM. WELD DECK TO SUPPORTING MEMBERS WITH (5) 1/2" EFFECTIVE DIAMETER OR 3/8" x 1" EFFECTIVE PUDDLE WELDS PER SHEET AT ENDS, END LAPS AND INTERMEDIATE SUPPORTS, AND AT 12" OC AT PERIMETER BEAMS, EDGES OF OPENINGS PARALLEL TO THE DECK, AND AT DRAG OR COLLECTOR ELEMENTS NOTED ON PLANS. SIDE SEAM ATTACHMENT SHALL BE BUTTON PUNCHES AT 12" OC DECK STEEL MAY BE EITHER GALVANIZED OR PRIME PAINTED.
- STEEL DECK SUPPLIER SHALL PROVIDE ALL NECESSARY ACCESSORIES SUCH AS RIDGE AND VALLEY PLATES, SADDLES, COVER PLATES, ETC., TO MAKE THE JOB COMPLETE.
- STEEL DECK SHALL HAVE AN EVALUATION SERVICE REPORT FOR THE BUILDING CODE LISTED IN THE BASIS OF DESIGN.

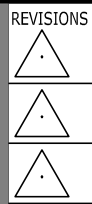
DEFERRED SUBMITTALS

- IN ACCORDANCE WITH THE IBC SECTION 107.3.4.1, SPECIALTY ITEMS, PRE-ENGINEERED COMPONENTS, AND BUILDING/BUILD ELEMENTS MAY BE SUBMITTED FOR APPROVAL BY THE ENGINEER OF RECORD AND THE DESIGN OFFICIAL BY DEFERRED SUBMITTAL. SUCH ITEMS ARE DEFINED AS THOSE SPECIFIED IN CONSTRUCTION DOCUMENTS BUT WHICH REQUIRE DESIGN BY THE MANUFACTURER, SUPPLIER OR INSTALLER.
- DEFERRED SUBMITTALS ARE REQUIRED FOR THE FOLLOWING:
STEEL JOISTS AND/OR JOIST GIRDERS
3. SUBMITTALS SHALL INCLUDE:
a) CALCULATIONS, PREPARED AND SEALED BY AN APPROPRIATELY REGISTERED ENGINEER (THE "SPECIALTY ENGINEER").
b) DIAGRAM PREPARED AND SEALED BY THE SPECIALTY ENGINEER, SHOWING LOAD MAGNITUDES AND LOCATIONS - SEPARATED INTO DEAD, LIVE, WIND AND/OR SEISMIC COMPONENTS - THAT ARE APPLIED TO THE PRIMARY STRUCTURE.
c) ERECTION OR DESIGN DRAWINGS BEARING THE SPECIALTY ENGINEER'S SEAL AND THE ARCHITECT'S STAMP INDICATING HIS REVIEW.
4. SUBMIT ONE (1) REPRODUCIBLE COPY, ONE (1) WET SEALED COPY FOR THE STRUCTURAL ENGINEER OF RECORD'S FILE, AND ADDITIONAL COPIES AS ARE NECESSARY FOR THE BUILDING DEPARTMENT. SUBMITTALS CONTAINING EXCEPTIONS, CORRECTIONS, OR OTHER REVIEW COMMENTS ARE NOT ACCEPTABLE FOR SUBMITTAL TO THE BUILDING DEPARTMENT.
5. THE STRUCTURAL ENGINEER OF RECORD'S REVIEW IS STRICTLY LIMITED TO THE FOLLOWING:
a) THE DRAWINGS AND CALCULATIONS ARE PROPERLY SEALED.
b) THE LOAD CRITERIA IS CONSISTENT WITH THE CONTRACT DOCUMENTS AND INTERNATIONAL BUILDING CODE REQUIREMENTS.
c) THE CONNECTIONS TO THE PRIMARY STRUCTURE ARE CONSISTENT WITH THE PRIMARY DESIGN.
d) THE BASE STRUCTURE IS CAPABLE OF SUPPORTING THE IMPOSED LOADS.
6. IF THE LOADS IMPOSED ON THE STRUCTURE EXCEED THE LOAD ALLOWANCE PROVIDED, THE STRUCTURAL ENGINEER OF RECORD WILL REJECT THE SUBMITTAL. ONLY AT THE OWNER'S WRITTEN DIRECTION WILL MODIFICATIONS TO THE BASE STRUCTURE TO ACCOMMODATE THE SPECIALTY ITEM(S) BE MADE BY THE ENGINEER OF RECORD. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND THE ENGINEER OF RECORD AND THE BUILDING OFFICIAL HAVE APPROVED SUBMITTAL DOCUMENTS.

INSPECTION NOTES

- IN ADDITION TO THE STANDARD INSPECTIONS BY THE BUILDING OFFICIAL REQUIRED PER IBC CHAPTER 17, THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS WHO SHALL PROVIDE INSPECTIONS DURING CONSTRUCTION FOR THE TYPES OF WORK LISTED IN THIS SECTION.
- THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
- THE SPECIAL INSPECTOR SHALL INSPECT THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED CONTRACT DRAWINGS AND SPECIFICATIONS. SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE ENGINEER AND THE BUILDING OFFICIAL. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE CODE PROVISIONS.
- INSPECTORS SHALL INSPECT FROM AN APPROVED SET OF CONTRACT DRAWINGS. SHOP DRAWINGS SHALL NOT BE USED IN LIEU OF THE APPROVED CONTRACT DRAWINGS FOR INSPECTION PURPOSES.
- TYPES OF WORK TO BE INSPECTED BY THE SPECIAL INSPECTOR ARE AS FOLLOWS:
a) DURING THE TAKING OF TEST SPECIMENS AND PLACING OF REINFORCED CONCRETE AND SHOTCRETE. EXCEPTION: FOUNDATION CONCRETE, OTHER THAN CAST-IN-PLACE DRILLED PILES OR CAISSONS, WHERE THE STRUCTURAL DESIGN IS BASED ON AN Fc NO GREATER THAN 2,500 PSI DOES NOT REQUIRE SPECIAL INSPECTION. FREQUENCY AND TYPE OF TEST SPECIMENS SHALL BE PER IBC SECTION 1903.1.
b) PRIOR TO, AND DURING THE INSTALLATION OF CONCRETE AROUND BOLTS.
c) DURING THE PLACING OF REINFORCING FOR ALL CONCRETE REQUIRED TO HAVE SPECIAL INSPECTION NOTED ABOVE.
d) DURING THE WELDING OF ANY STRUCTURAL MEMBER OR CONNECTION, EXCEPT WELDING DONE IN AN APPROVED FABRICATOR'S SHOP PER IBC SECTION 1704.2.5.2 AND 1705.2. EXCEPTION: SPECIAL INSPECTOR NEED NOT BE CONTINUOUSLY PRESENT DURING WELDING OF SINGLE PASS FILLET WELDS NOT LARGER THAN 5/16 INCH OR FLOOR AND ROOF DECK WELDING, PROVIDED THE MATERIALS AND QUALIFICATIONS OF WELDING PROCEDURES AND WELDERS ARE VERIFIED PRIOR TO THE START OF WORK, AND PERIODIC INSPECTIONS ARE MADE OF WORK IN PROGRESS.
e) DURING THE PREPARATION AND TAKING OF ANY REQUIRED PRISMS OR TEST SPECIMENS, PLACING OF ALL MASONRY UNITS, PLACEMENT OF REINFORCEMENT, INSPECTION OF GROUT SPACE IMMEDIATELY PRIOR TO CLOSING OF CLEANOUTS, AND DURING ALL GROUTING OPERATIONS.
f) DURING ALL EPOXY ANCHORING OPERATIONS FOR BOLTS, REBAR, THREADED ROD, ETC., INCLUDING VERIFICATION OF BOLT OR BAR MATERIALS, HOLE DEPTH AND DIAMETER, HOLE CLEANOUT, EPOXY MIXING AND PLACEMENT PROCEDURES, AND EMBEDMENT DEPTH IN ACCORDANCE THE CONTRACT DRAWINGS AND THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
g) DURING THE APPLICATION OF SPRAY APPLIED FIREPROOFING ON ALL STRUCTURAL STEEL.

6. CERTIFICATE OF APPROVAL REGARDING MATERIALS AND INSPECTION OF PREFABRICATED ITEMS SHALL BE PROVIDED IN ACCORDANCE WITH IBC SECTION 1703 THE QUALITY ASSURANCE PROGRAM.



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Charleston Heights Arts Center
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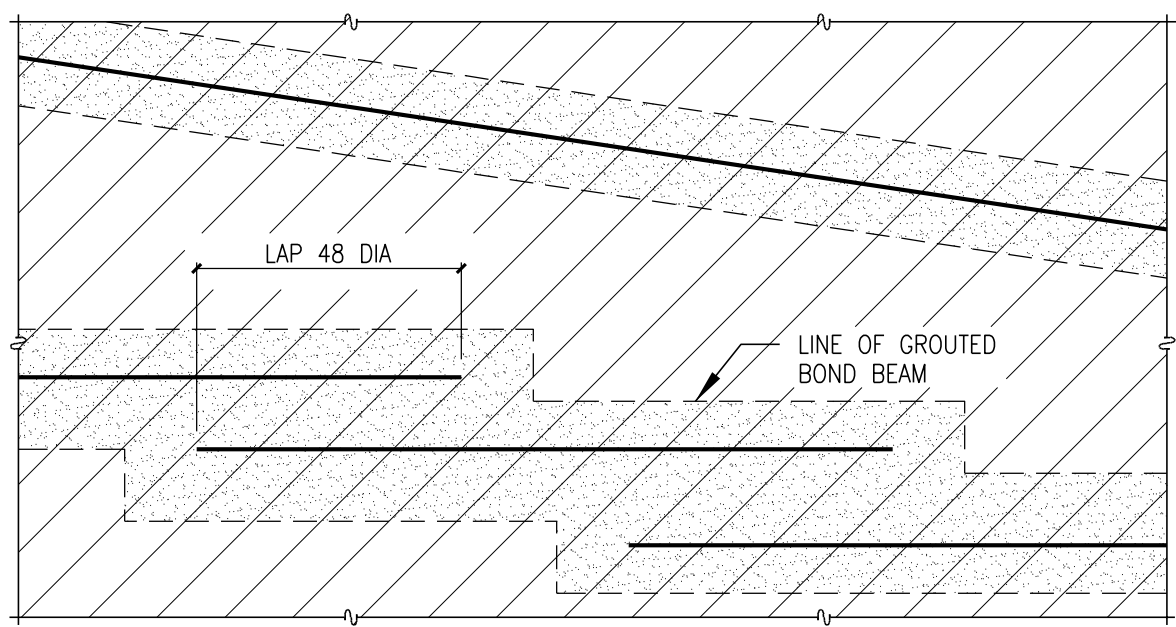
GENERAL STRUCTURAL NOTES

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

333 NORTH RANCHO DRIVE
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PHONE: (702) 225-6100
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DRAWN ACD
FILE
DATE 03/27/2018
SCALE G011015230
BID NO 15.59806.JH
CLV DWG NO 620-10B
HAISEN NO 59806
SHT NO

S1.01

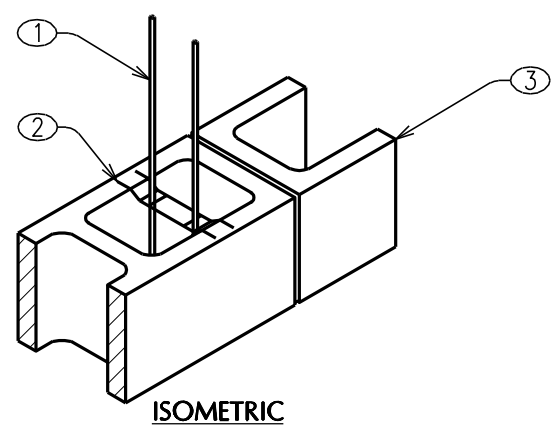


- NOTE:**
- BOND BEAM REINF MAY BE HORIZONTAL (WITH STEPS) OR MAY SLOPE AS SHOWN
 - AT STEP BOND BEAM, LAP BAR 48 BAR DIAMETERS WITH A MAX SPACE OF 8" BETWEEN BARS. GROUT SHALL EXTEND 8" MIN PAST END OF BAR.
 - MIN DEPTH OF GROUT AROUND REINF PER TYPICAL HORIZ BOND BEAM DETAIL AND GSN
 - VERTICAL REINF NOT SHOWN

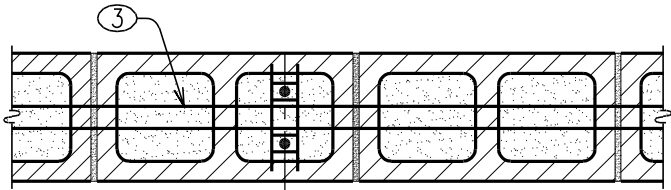
12 TYPICAL STEPPED/SLOPED BOND BEAM

012-07262XR

NO SCALE



- VERTICAL REINFORCING EACH FACE OF WALL UNO ON PLAN. HOLD BAR AT 2" CLR TO OUTSIDE FACE OF BLOCK
- WIRE POSITIONER (SPIDER CLIP) OR TIE AT 8"-0" VERTICALLY
- HORIZONTAL REINFORCING TO INSIDE OF VERTICAL BARS



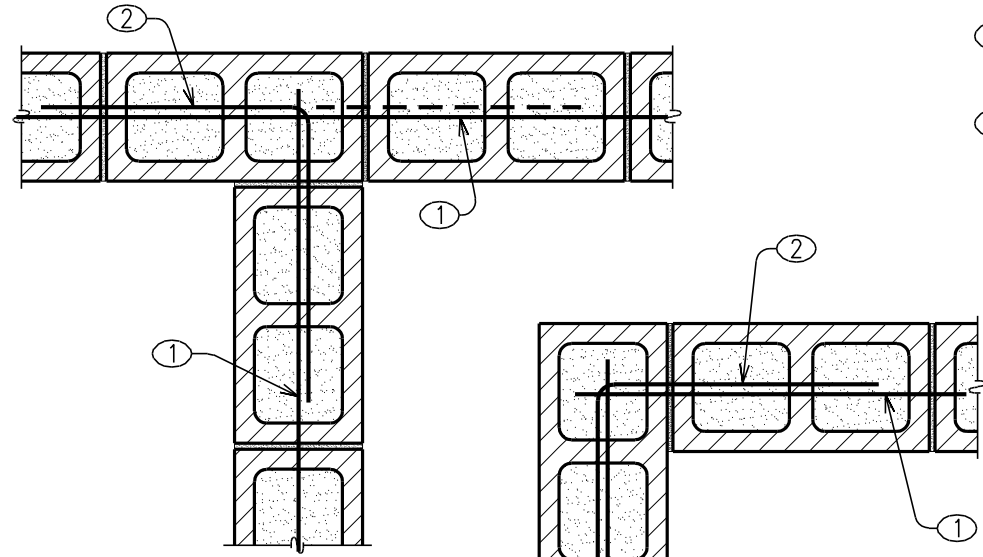
NOTE: WIRE POSITIONERS AS SHOWN SHALL BE USED IN ALL WALLS REQUIRING 2 BARS IN A CELL (DOUBLE VERT REINFORCING)

PLAN

13 TYPICAL DOUBLE VERTICAL REINFORCING IN MASONRY WALL

013-07262XR

NO SCALE



- HORIZ REINFORCING PER GSN OR PLAN OR DETAIL
- CORNER BARS SAME SIZE AND SPACING AS HORIZ REINFORCING. LAP PER GSN OR SCHEDULE. PROVIDE STANDARD HOOK AND ALTERNATE BEND DIRECTION AT INTERSECTION

PLAN - INTERSECTION

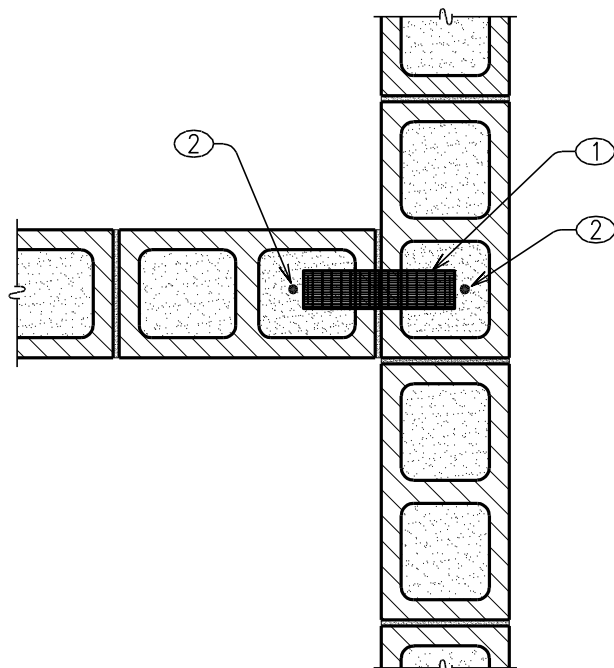
PLAN - CORNER

- NOTE:**
- VERT REINFORCING AND GROUT NOT SHOWN FOR CLARITY
 - AT DOUBLE HORIZ REINFORCING PROVIDE CORNER BAR FOR EACH HORIZ BAR

14 TYPICAL CORNER REINFORCING IN MASONRY WALL

014-07262XR

NO SCALE



- BENT STEEL "2" BAR 1/8x1 1/4" WIDE x2"x8"x2" AT 48" OC
- VERT BAR IN GROUTED CELLS AT END OR AT INTERSECTION OF WALLS

NOTE: DETAIL APPLIES TO ABUTTING WALLS WHERE INTERSECTION IS NOT BUILT IN OVERLAPPING COURSES. OVERLAP COURSES IN RUNNING BOND AT ALL CORNER (NON-INTER SECTION)

15 PLAN - ABUTTING MASONRY WALLS

015-07262XR

NO SCALE

BAR SIZE	MIN BAR SPACING (IN)	CONCRETE ①③							
		2500 PSI		3000 PSI		4000 PSI		4500 PSI	
		TOP BARS ④	OTHER BARS	TOP BARS ④	OTHER BARS	TOP BARS ④	OTHER BARS	TOP BARS ④	OTHER BARS
2	1	20	16	19	14	16	12	15	12
3	1	30	23	28	22	24	19	23	18
4	1	41	31	37	29	32	25	31	24
5	1 1/4	51	39	47	36	40	31	38	29
6	1 1/2	61	47	56	43	48	37	46	35
7	1 3/4	89	68	81	63	70	54	67	51
8	2	101	78	93	72	80	62	76	58
9	2 1/4	114	88	105	81	91	70	86	66
10	2 1/2	129	99	118	91	102	79	96	74
11	2 3/4	143	110	131	101	113	87	107	82

- LAP LENGTHS BASED ON CLASS B LAP SPlice PER ACI 318-05 AND IBC 2107 FOR NORMAL WEIGHT CONCRETE AND UNCOATED BARS. ALL LAP LENGTHS ARE IN INCHES
- BAR SPACING IS MEASURED AS CLEAR DISTANCE BETWEEN BARS. NOTIFY ENGINEER WHERE BAR SPACING IS LESS THAN MIN SPACING NOTED IN SCHEDULE
- SEE PLAN OR GSN FOR DESIGN CONCRETE STRENGTH
- TOP BARS ARE BARS SO PLACED THAT 12 INCHES OR MORE OF FRESH CONCRETE IS CAST IN MEMBER BELOW SPlice

08 TYPICAL REBAR LAP SCHEDULE - CONCRETE

008-07262XR

NO SCALE

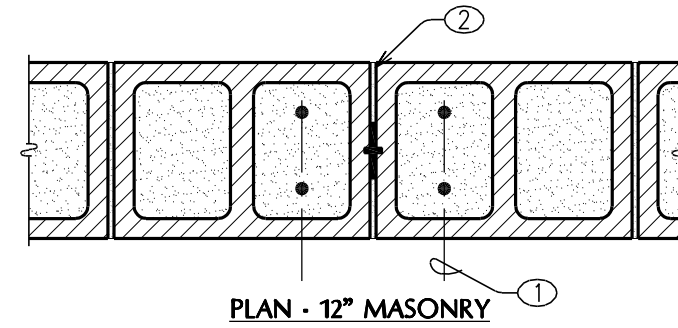
BAR SIZE	MIN BAR SPACING (IN)	MASONRY ①	
		SEE BELOW ③	ALL OTHER BARS
3	1 7/8	27	18
4	2	36	24
5	2	45	30
6	2	54	36
7	2	63	42
8	2	72	48
9	2	81	54

- LAP LENGTHS BASED ON LAP SPlice PER IBC 2006 SECTION 2107 FOR UNCOATED BARS IN MASONRY. F'm=1500 PSI. ALL LAP LENGTHS ARE IN INCHES.
- MINIMUM BAR SPACING IS MEASURED AS CLEAR DISTANCE BETWEEN BARS OR CLEAR DISTANCE TO EDGE OF CONCRETE.
- HORIZONTAL REINFORCING IN LINTELS, BOND BEAMS AT FLOORS AND ROOFS, ALL WALL VERT REINFORCING, ALL BARS DESIGNATED AS "COLLECTOR", "CHORD", OR "DRAG".

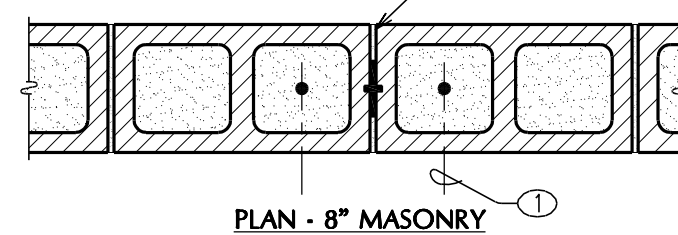
09 TYPICAL REBAR LAP SCHEDULE - MASONRY (ALLOWABLE STRESS DESIGN)

009-07262XR

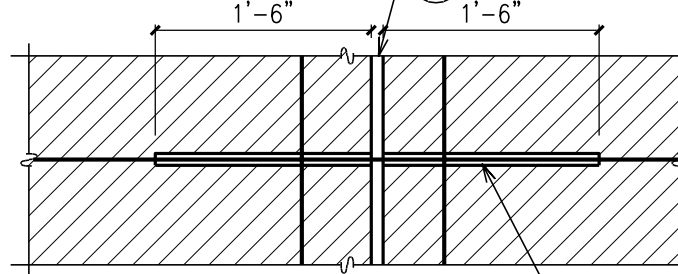
NO SCALE



PLAN - 12" MASONRY



PLAN - 8" MASONRY



ELEVATION

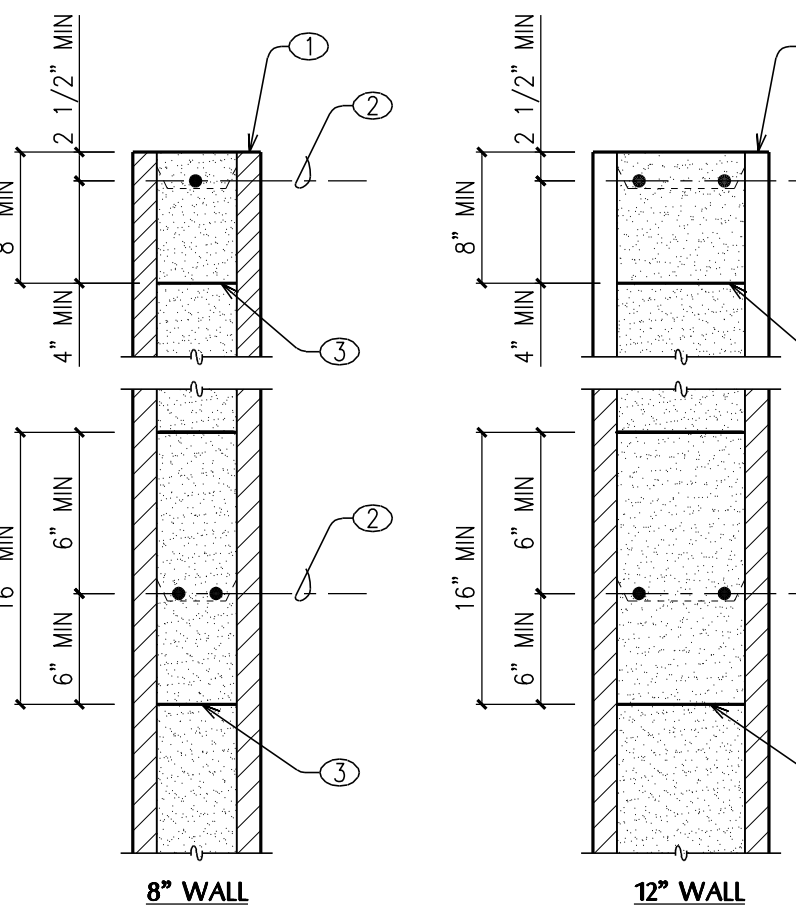
- VERTICAL WALL REINFORCING IN SOLID GROUTED CELL EACH SIDE OF JOINT
- CONTINUOUS VERTICAL CONTROL JOINT MATERIAL PER ARCHITECTURAL. AT FIREWALL OR AREA SEPARATIONS, CERE BLANKET IS REQUIRED. REQUEST INFORMATION FROM ARCHITECT
- CONTINUE HORIZONTAL BOND BEAM REINFORCING THRU JOINT. WRAP BARS WITH MASTIC FOR BOND BREAK WITHIN 1'-6" OF JOINT. DO NOT LAP HORIZONTAL REINFORCING WITHIN 4'-0" OF CONTROL JOINT

- NOTE:**
- CONTROL JOINTS TO BE LOCATED AS SHOWN ON PLAN OR AS SPECIFIED IN THE GENERAL STRUCTURAL NOTES WITH MAX SPACING OF 30'-0". COORDINATE WITH ARCHITECTURAL ELEVATIONS, PLANS AND SPECIFICATIONS.
 - HORIZONTAL REINFORCING NOT REQUIRED BY PLANS TO BE CONTINUOUS THRU JOINT SHALL TERMINATE IN CELL ADJACENT TO JOINT, UNO

10 CONTROL JOINT IN MASONRY WALL

010-07262XR

NO SCALE

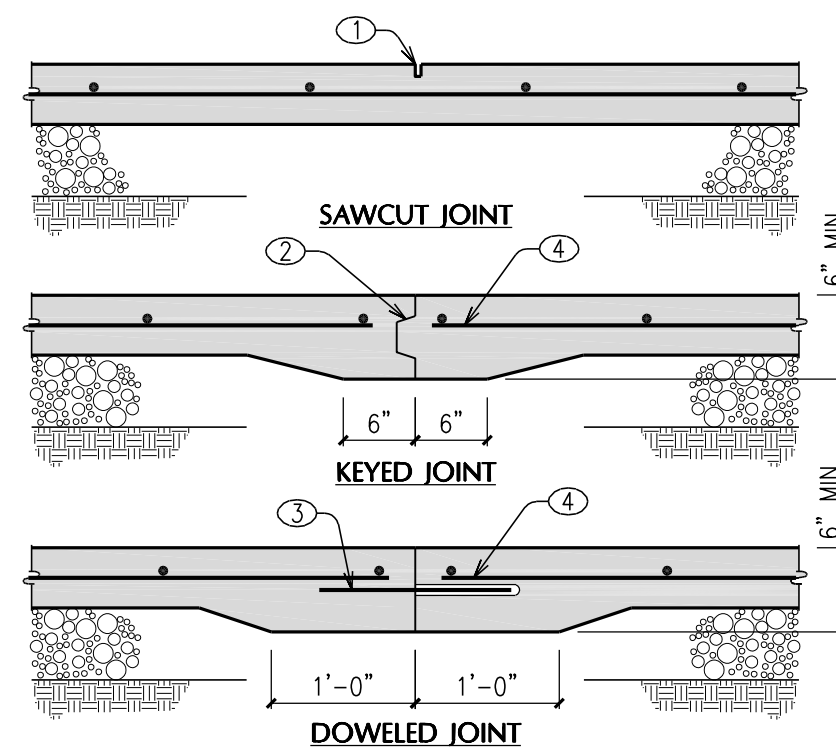


- TOP OF WALL OR BOT OF OPENING
 - HORIZ BOND BEAM REINFORCING PER GSN UNO ON PLAN OR DETAIL
 - CONT GROUT STOP FOR HORIZ GROUT
- NOTE:**
- VERT REINFORCING NOT SHOWN FOR CLARITY. SEE TYP DETAIL WHERE DOUBLE VERT BARS REQUIRED
 - SEE DETAILS FOR ADDITIONAL GROUT DEPTH REQUIRED AROUND EMBEDDED ITEMS
 - BOLTS, DOWELS OR EMBEDDED STRAP SHALL HAVE 4" MIN GROUT COVER

11 TYPICAL HORIZONTAL BOND BEAM

011-07262XR

NO SCALE

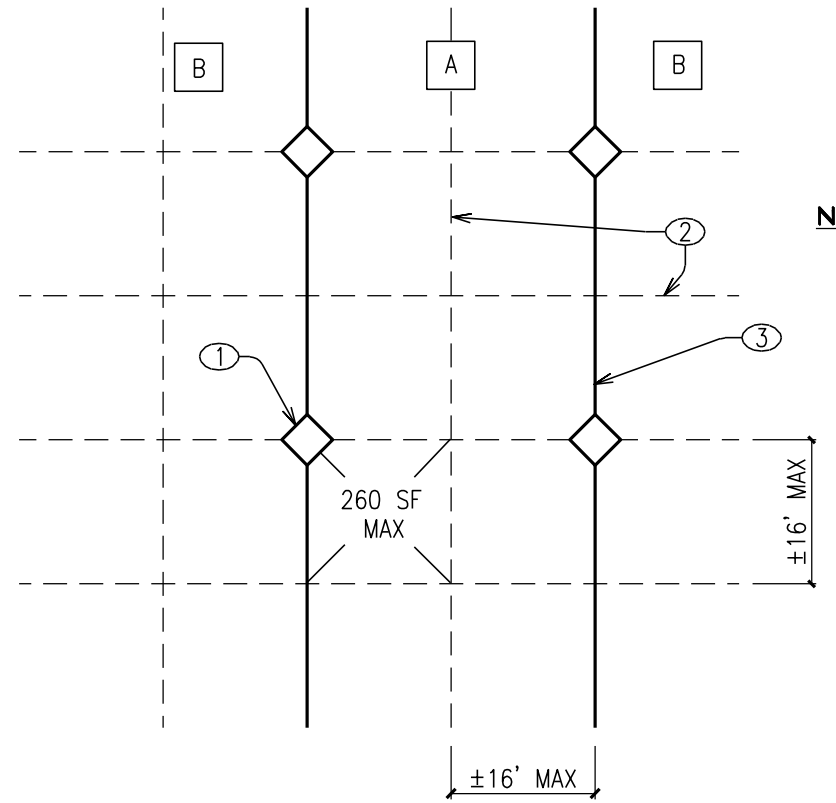


- NOTES:**
- USE DOWELED OR KEYED JOINT AT SLOPE TRANSITIONS IN RAMPS AT SLAB ON GRADE
 - KEYED OR DOWELED JOINT NEED ONLY OCCUR AT EXPOSED EDGES DURING PLACEMENT
 - DETAIL DOES NOT APPLY TO POST-TENSIONED SLABS ON GRADE
 - CONCRETE CONTROL JOINTS SHALL BE LOCATED ACCORDING TO GEN STRUCTURAL NOTES OR AS SHOWN ON PLANS. ADD CONTROL JOINTS SUCH THAT AREA ENCLOSED BY JOINTS DOES NOT EXCEED 260 SQ FEET WITH ASPECT RATIO LESS THAN 1.5 TO 1.0

04 TYPICAL CONTROL JOINT IN SLAB ON GRADE

004-07262XR

NO SCALE



- CLOSURE POUR AROUND COLUMN
- SAW CUT CONTROL JOINT SEE TYP DETAIL
- DOWELED OR KEYED JOINT BETWEEN POURS.

NOTE:

- FIRST SLAB POUR STRIP
- SECOND SLAB POUR STRIP

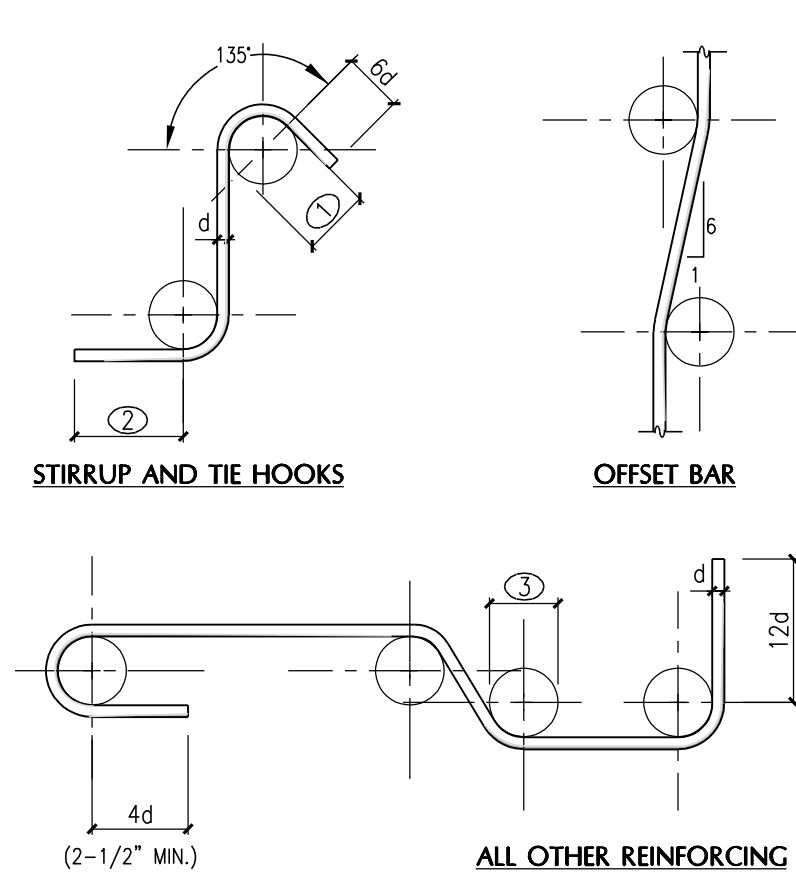
SPACE JOINTS AT 16' MAX EW WITH RATIO NOT TO EXCEED 1.5:1 FOR ANY PANEL. ADD (2) #4x48" DIAGONAL AT INSET CORNER OR PERPENDICULAR TO DISCONTINUOUS JOINT.

PLACE POUR STRIP AT COLUMNS OR SUBDIVIDE BETWEEN COLUMNS OR WALLS. LOCATE JOINT FROM INSET CORNERS WHERE APPROPRIATE

05 PLAN - CONCRETE SLAB ON GRADE PLACEMENT

005-07262XR

NO SCALE



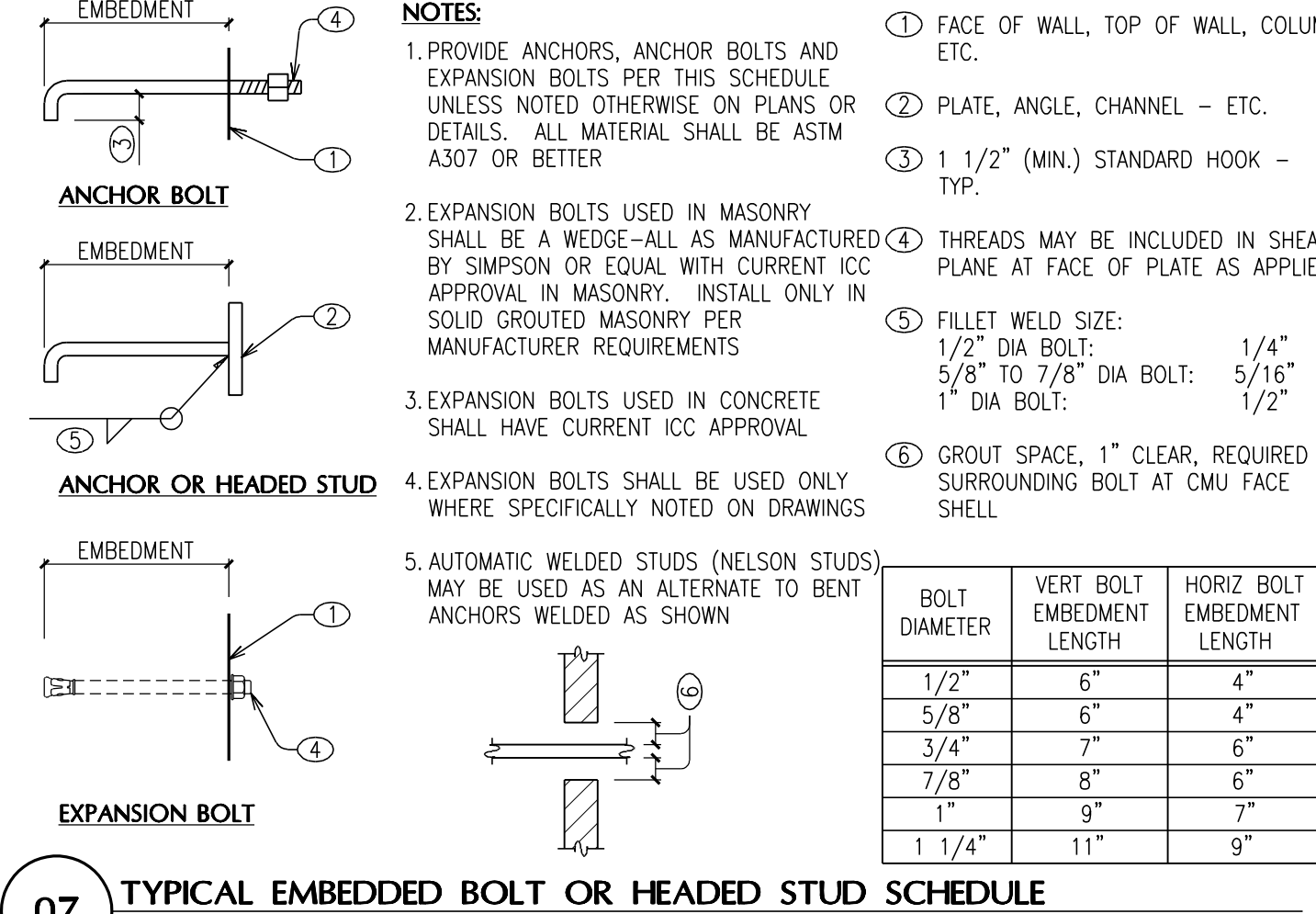
- MINIMUM FINISHED BEND DIAMETER 4d FOR #5 BAR AND SMALLER, 6d FOR #6 THRU #8. TYPICAL FOR STIRRUPS AND TIES ONLY
- 6d FOR #5 AND SMALLER 12d FOR #6 THRU #8
- MINIMUM FINISHED BEND DIAMETER 6d UP TO #8 BAR, 8d FOR #9 THRU #11, 12d FOR #14 AND #18. TYPICAL FOR ALL REINFORCING EXCEPT STIRRUPS AND TIES

- NOTE:**
- d = BAR DIAMETER
 - ALL REINFORCEMENT SHALL BE BENT COLD UNLESS NOTED OTHERWISE ON PLANS OR DETAILS
 - REINFORCING PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT UNLESS SPECIFICALLY NOTED ON PLANS OR DETAILS

06 STANDARD REBAR BENDING DETAILS

006-07262XR

NO SCALE



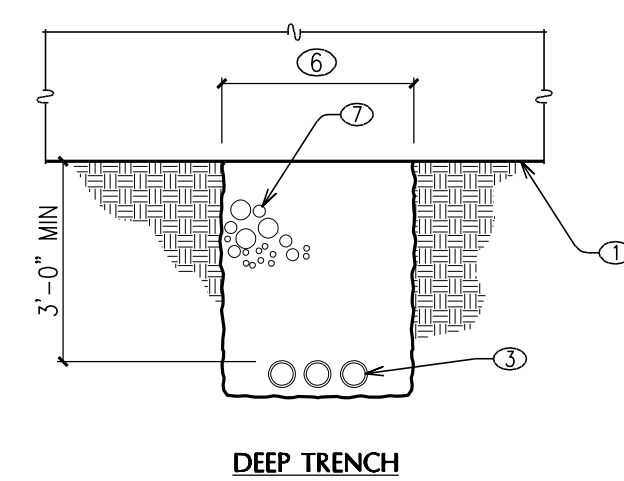
- NOTES:**
- PROVIDE ANCHORS, ANCHOR BOLTS AND EXPANSION BOLTS PER THIS SCHEDULE UNLESS NOTED OTHERWISE ON PLANS OR DETAILS. ALL MATERIAL SHALL BE ASTM A307 OR BETTER
 - EXPANSION BOLTS USED IN MASONRY SHALL BE A WEDGE-ALL AS MANUFACTURED BY SIMPSON OR EQUAL WITH CURRENT ICC APPROVAL IN MASONRY. INSTALL ONLY IN SOLID GROUTED MASONRY PER MANUFACTURER REQUIREMENTS
 - EXPANSION BOLTS USED IN CONCRETE SHALL HAVE CURRENT ICC APPROVAL
 - EXPANSION BOLTS SHALL BE USED ONLY WHERE SPECIFICALLY NOTED ON DRAWINGS
 - AUTOMATIC WELDED STUDS (NELSON STUDS) MAY BE USED AS AN ALTERNATE TO BENT ANCHORS WELDED AS SHOWN
 - FACE OF WALL, TOP OF WALL, COLUMN ETC.
 - PLATE, ANGLE, CHANNEL - ETC.
 - 1 1/2" (MIN.) STANDARD HOOK - TYP.
 - THREADS MAY BE INCLUDED IN SHEAR PLANE AT FACE OF PLATE AS APPLIES.
 - FILLET WELD SIZE: 1/4" 1/2" DIA BOLT: 5/8" TO 7/8" DIA BOLT: 1" DIA BOLT: 1 1/4"
 - GROUT SPACE, 1" CLEAR, REQUIRED SURROUNDING BOLT AT CMU FACE SHELL

BOLT DIAMETER	VERT BOLT EMBEDMENT LENGTH	HORIZ BOLT EMBEDMENT LENGTH
1/2"	6"	4"
5/8"	6"	4"
3/4"	7"	6"
7/8"	8"	6"
1"	9"	7"
1 1/4"	11"	9"

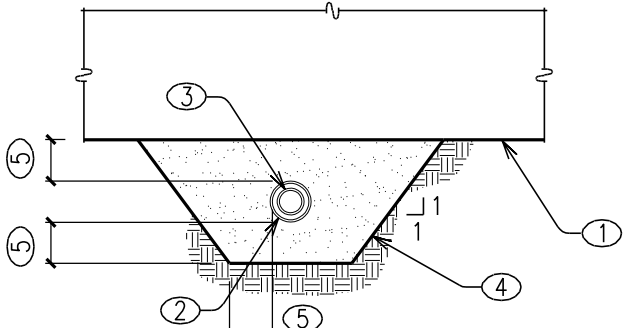
07 TYPICAL EMBEDDED BOLT OR HEADED STUD SCHEDULE

007-07262XR

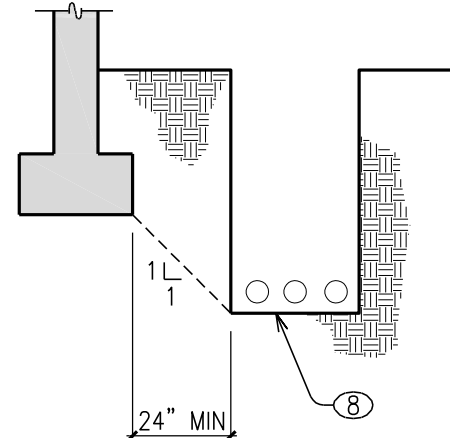
NO SCALE



DEEP TRENCH



SHALLOW TRENCH



TRENCH PARALLEL TO FOOTING

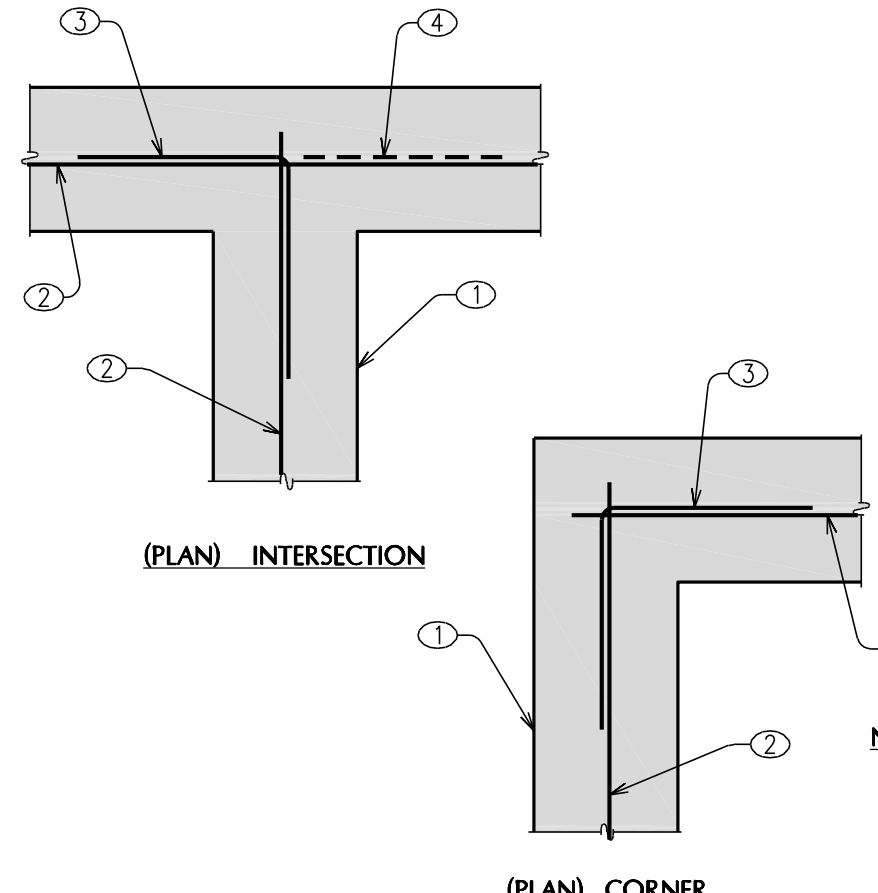
- BOTTOM OF CONCRETE FOOTING OR FOUNDATION
- SLEEVE. SIZE TO PROVIDE 1 1/2" MIN. CLEARANCE AROUND UTILITY PIPE
- UTILITY PIPE
- LEAN CONCRETE FILL. PLACE PRIOR TO FOOTING PLACEMENT. EXTEND CONCRETE AND SLEEVE 3'-0" PAST EACH SIDE FOOTING
- CLEARANCE EQUAL TO SLEEVE DIA (6" MIN)
- 4'-0" MAX. WIDTH. WHERE TRENCH WIDTH EXCEEDS 3'-0", NOTIFY STRUCTURAL ENGINEER PRIOR TO PLACEMENT OF FOOTING
- BACKFILL AND RECOMPACT TRENCH PER SOIL REPORT AND SPECIFICATIONS
- BOTTOM OF TRENCH PARALLEL TO FOUNDATION SHALL NOT BE CLOSER THAN 1 TO 1 SLOPE FROM BOTTOM EDGE OF FOOTING

- NOTE:**
- PIPES SHALL NOT PASS THRU FOOTING OR WALL WITHOUT SPECIFIC APPROVAL AND INSTRUCTIONS FROM THE ENGINEER.
 - FOOTING SETTLEMENT OR DIFFERENTIAL MOVEMENT MAY DAMAGE UTILITY PIPES. DETAILS ARE SUGGESTED MEANS OF PROTECTING PIPES. ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO PIPES OR FOUNDATIONS

01 TYPICAL UTILITY TRENCH AT CONTINUOUS FOOTING

001-07262XR

NO SCALE



(PLAN) INTERSECTION

(PLAN) CORNER

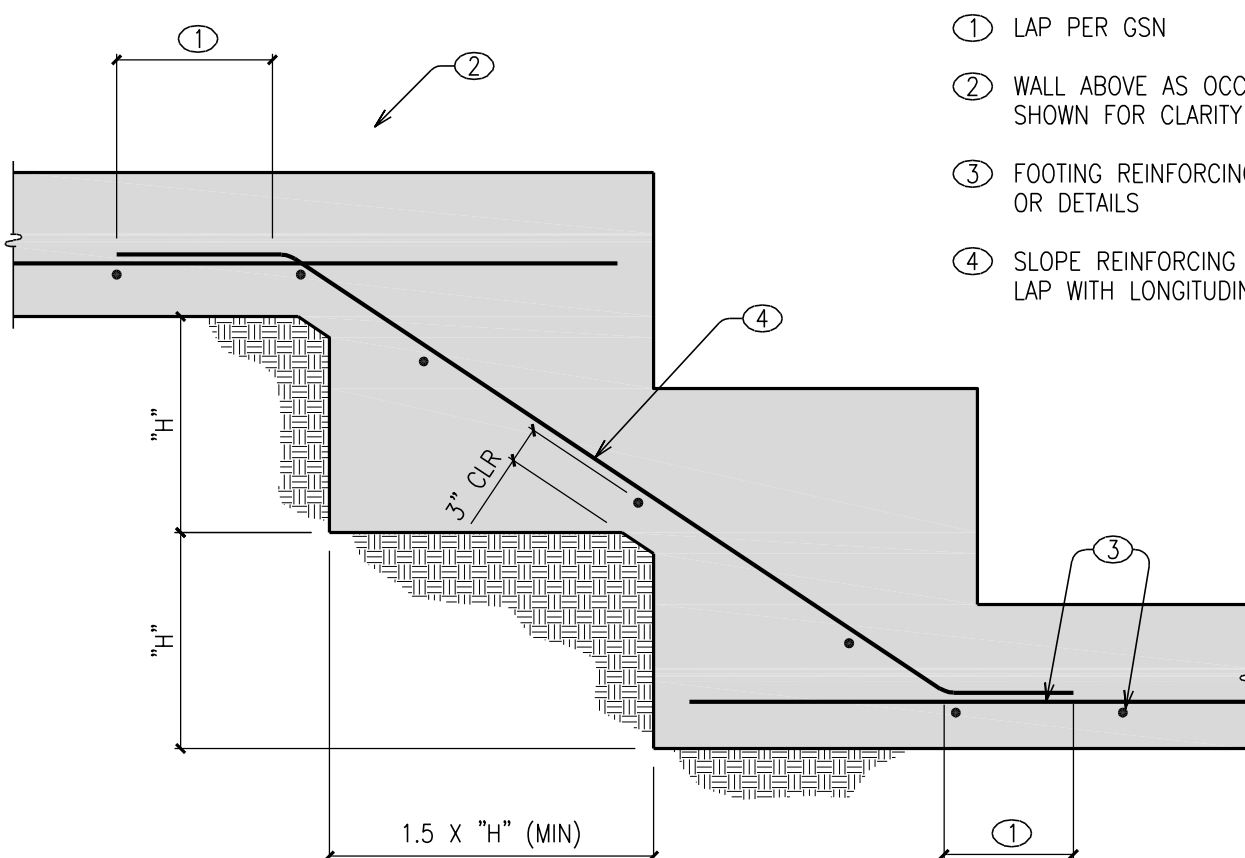
- STEM WALL OR FOOTING
- HORIZ REINFORCING PER PLAN OR DETAILS
- BENT CORNER BARS TO MATCH AND LAP WITH EACH HORIZ BAR PER REBAR LAP SCHEDULE
- ALTERNATE BEND

- NOTE:**
- VERT OR TRANSVERSE REINFORCING AS OCCURS NOT SHOWN FOR CLARITY
 - BEND DETAILS SIMILAR FOR DOUBLE MAT OF WALL REINFORCING

02 TYPICAL CORNER REIN IN FOOTING, GRADE BEAM OR STEM WALL

002-07262XR

NO SCALE



- LAP PER GSN
- WALL ABOVE AS OCCURS NOT SHOWN FOR CLARITY
- FOOTING REINFORCING PER PLANS OR DETAILS
- SLOPE REINFORCING AT STEP AND LAP WITH LONGITUDINAL BARS

NOTE: "H" = 1'-6" (MAX)

03 TYPICAL STEPPED FOOTING

003-07262XR

NO SCALE



REVISIONS

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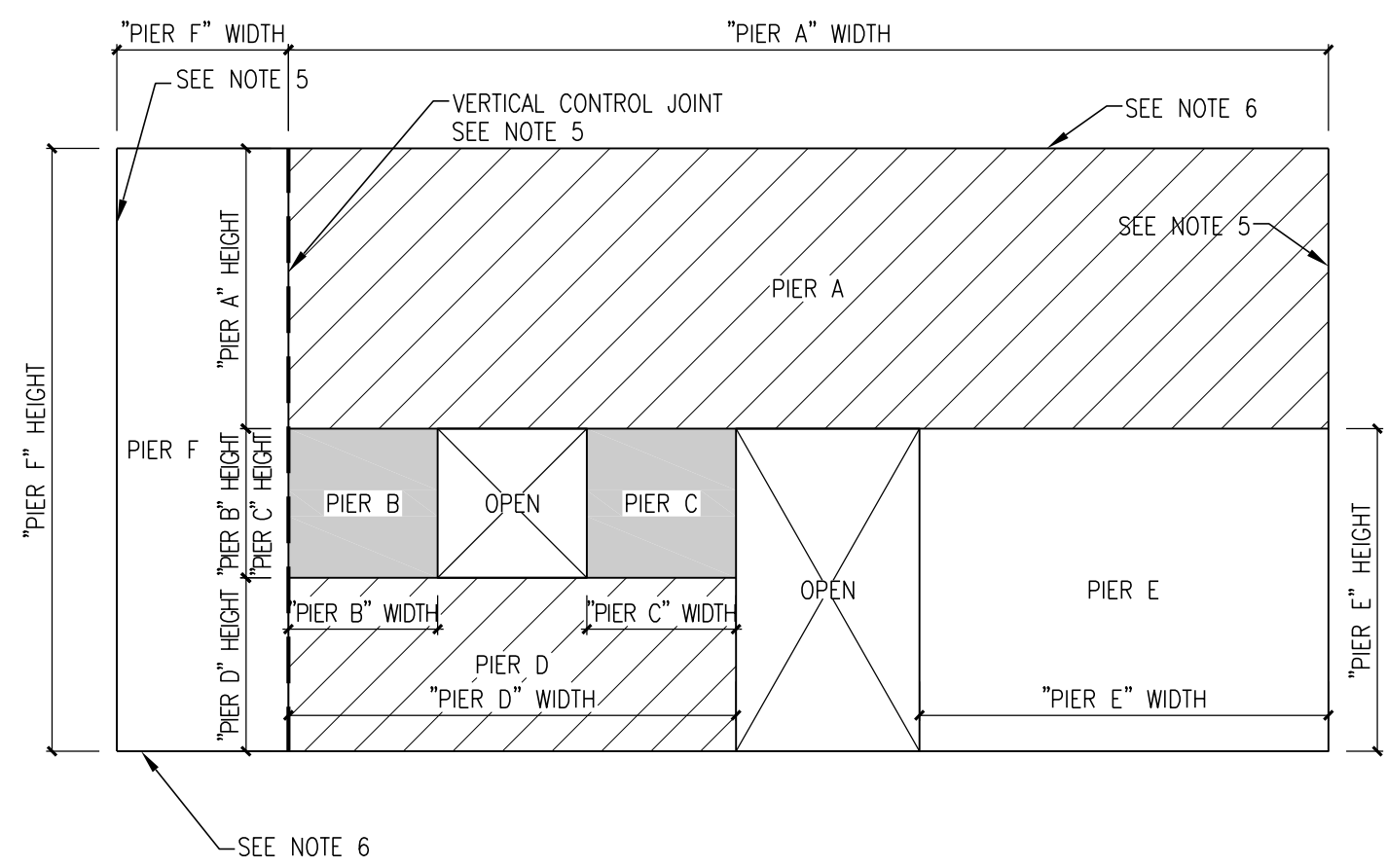
Charleston Heights Arts Center
- Interior Remodel -
TYPICAL DETAILS

OWNER: CITY OF LAS VEGAS
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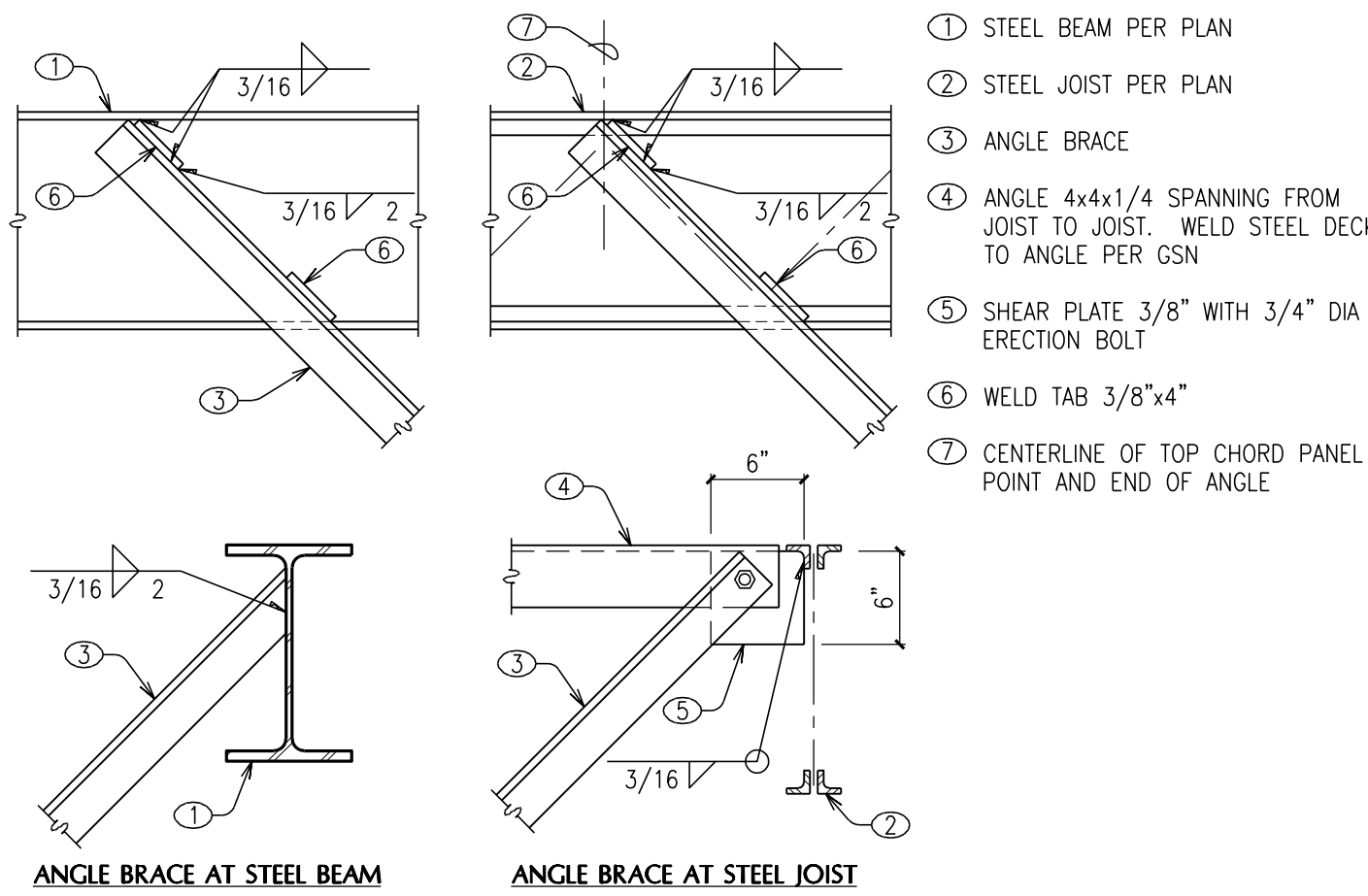
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15-230

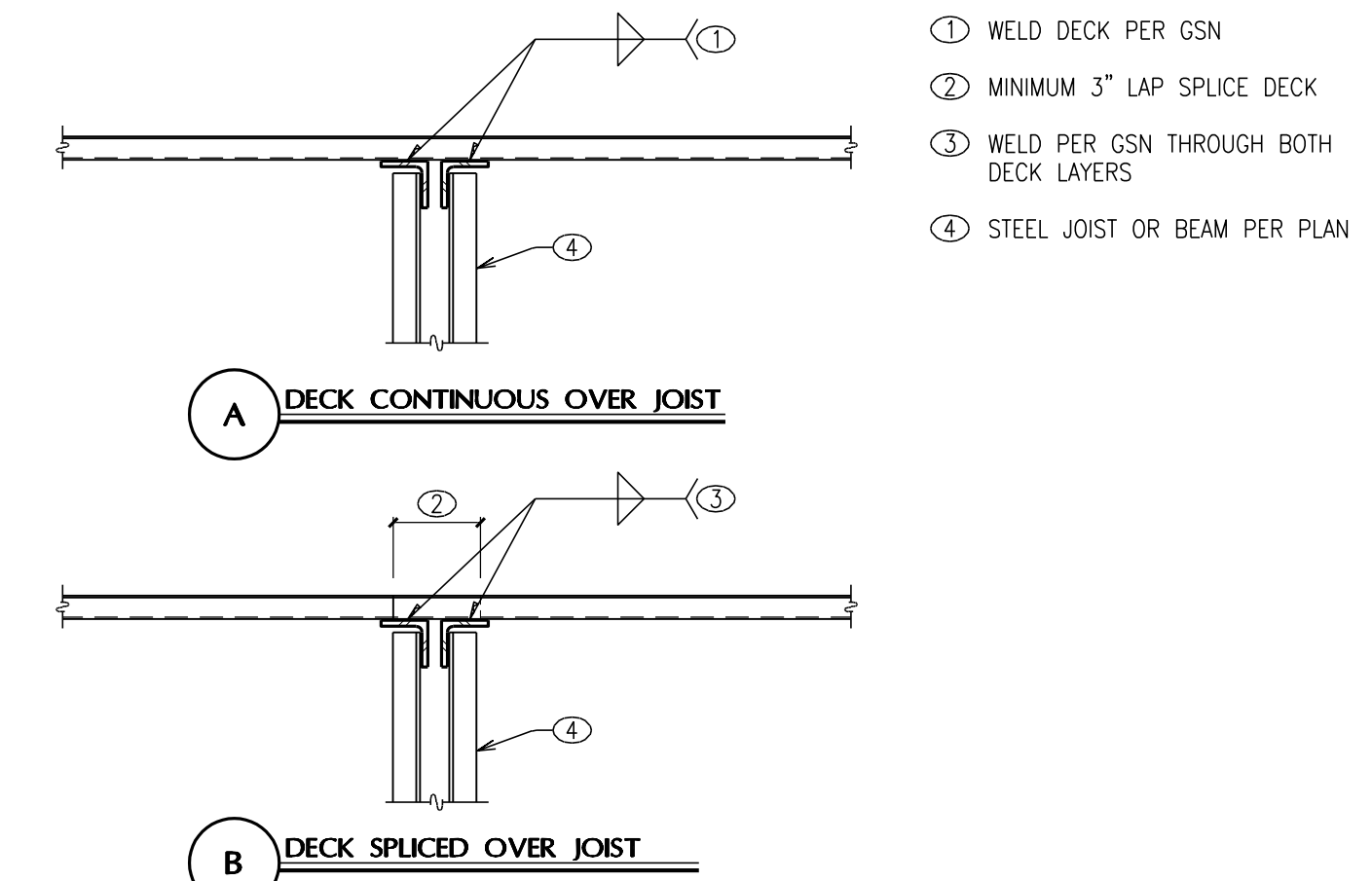


- NOTE**
1. TYPICAL PIER TYPES ARE DEFINED ABOVE. PIER HEIGHTS AND WIDTHS AS SHOWN
 2. SPACING OF HORIZONTAL REINFORCING IN A PIER SHALL NOT EXCEED:
 - a) SPACING OF REINFORCING AS INDICATED ON PLAN /DETAILS/NOTES.
 - b) ONE-THIRD THE PIER LENGTH.
 - c) ONE-THIRD THE PIER HEIGHT.
 3. SPACING OF VERTICAL REINFORCING IN A PIER NOT TO EXCEED:
 - a) SPACING INDICATED ON PLAN/DETAILS/NOTES
 - b) THREE TIMES THE SPACING OF HORIZONTAL PIER REINFORCING
 4. ALL ENDS OF HORIZONTAL BARS SHOULD BE ANCHORED AROUND A VERTICAL BAR WITH A STANDARD 180 DEGREE HOOK.
 5. PIER OR WALL LENGTH TO BE LIMITED BY END OF WALL OR VERTICAL MASONRY CONTROL JOINT(S).
 6. PIER OR WALL HEIGHT TO BE LIMITED BY LOCATION OF FLOOR OR ROOF ABOVE OR BELOW.

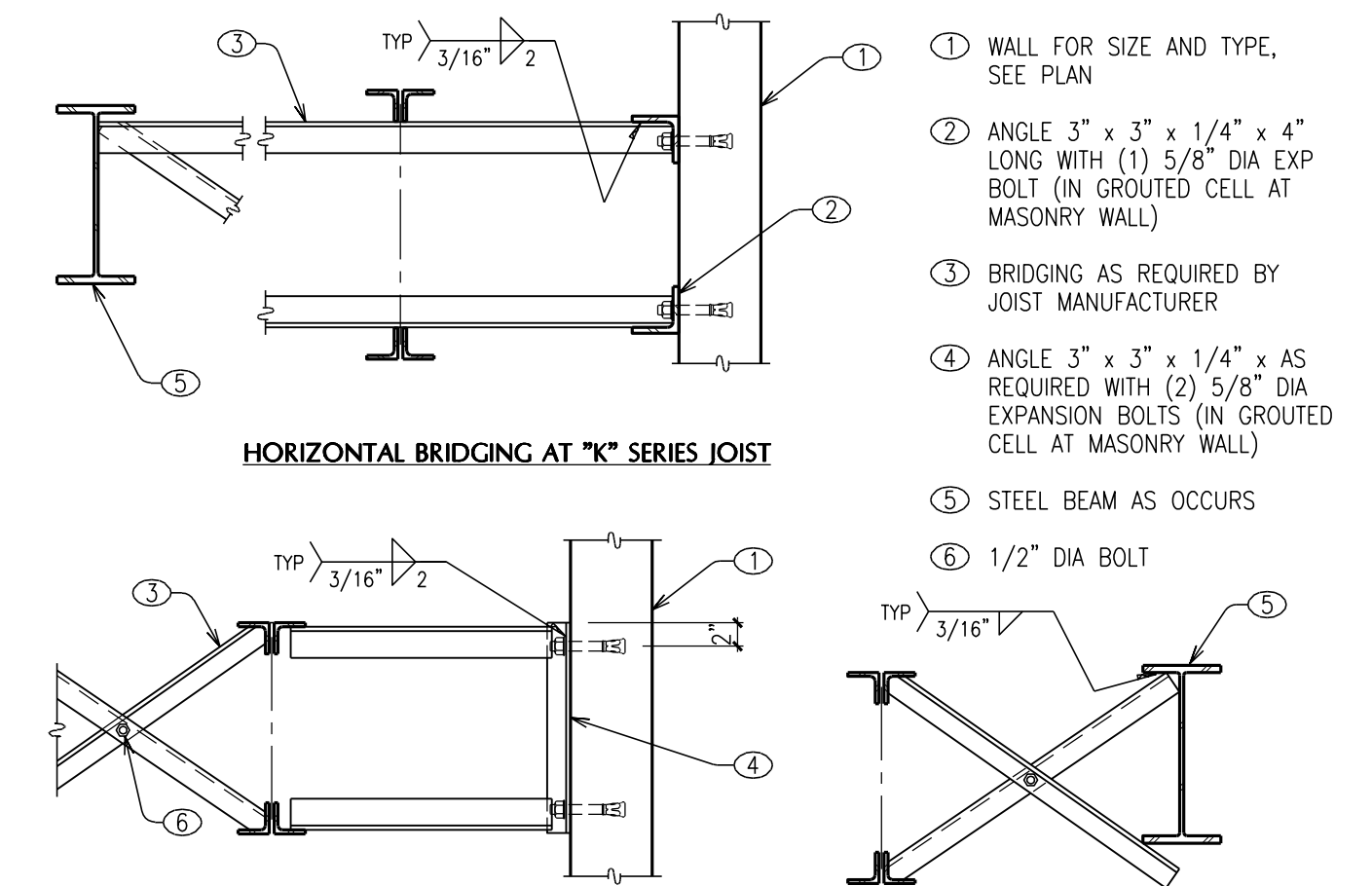
27 TYPICAL ELEVATION-SPECIAL REINFORCED MASONRY SHEARWALL
027-15230 NO SCALE



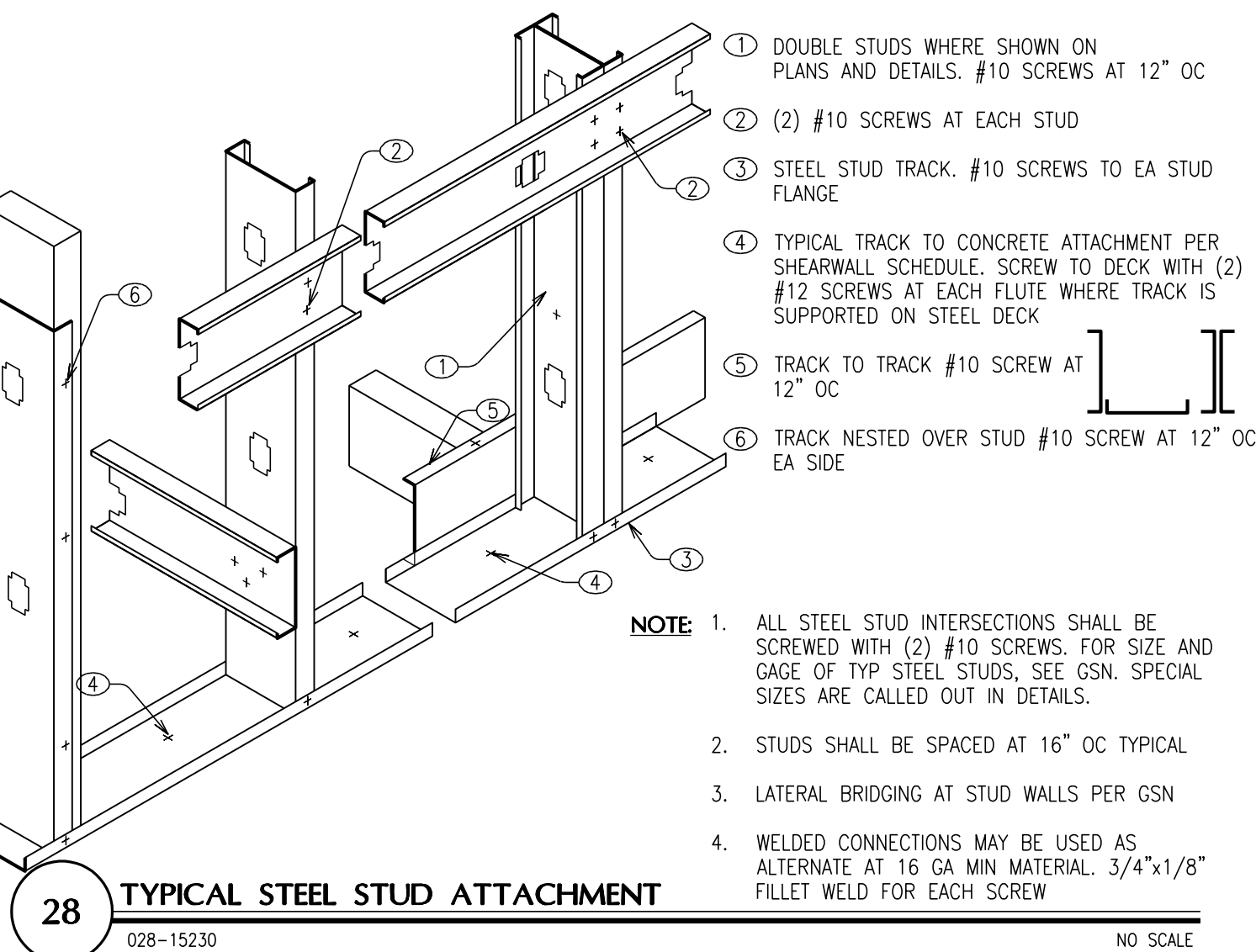
23 ANGLE BRACE CONNECTIONS
023-15230 NO SCALE



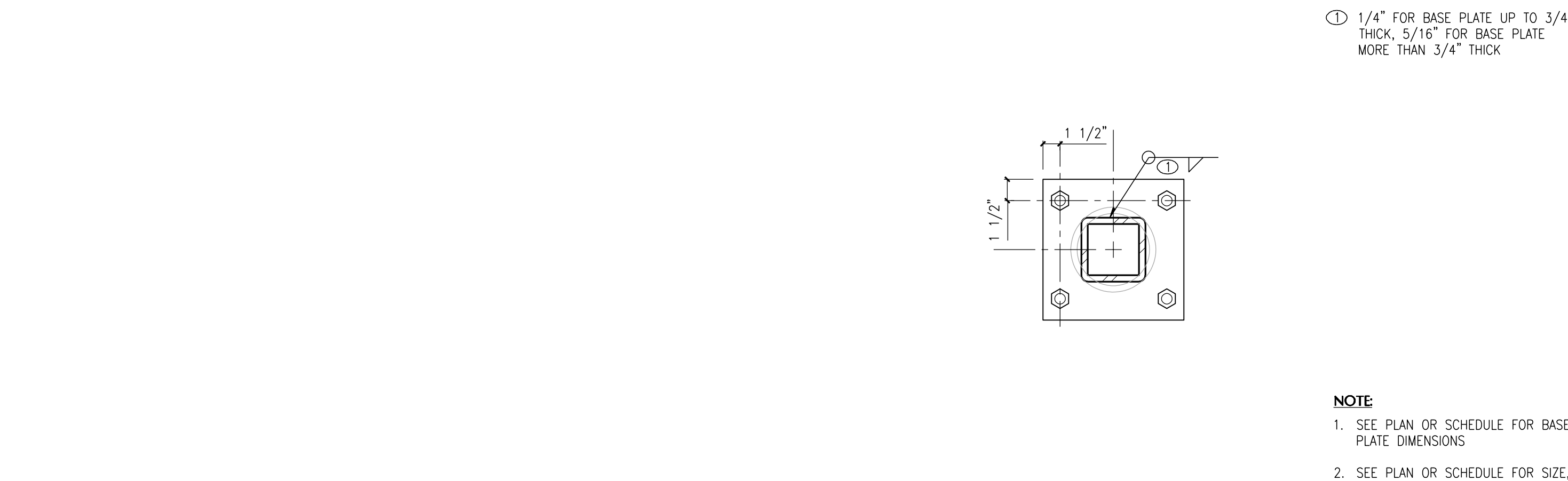
24 STEEL DECK AT SUPPORT
024-15230 NO SCALE



25 TYPICAL STEEL JOIST BRIDGING TO WALL
025-15230 NO SCALE

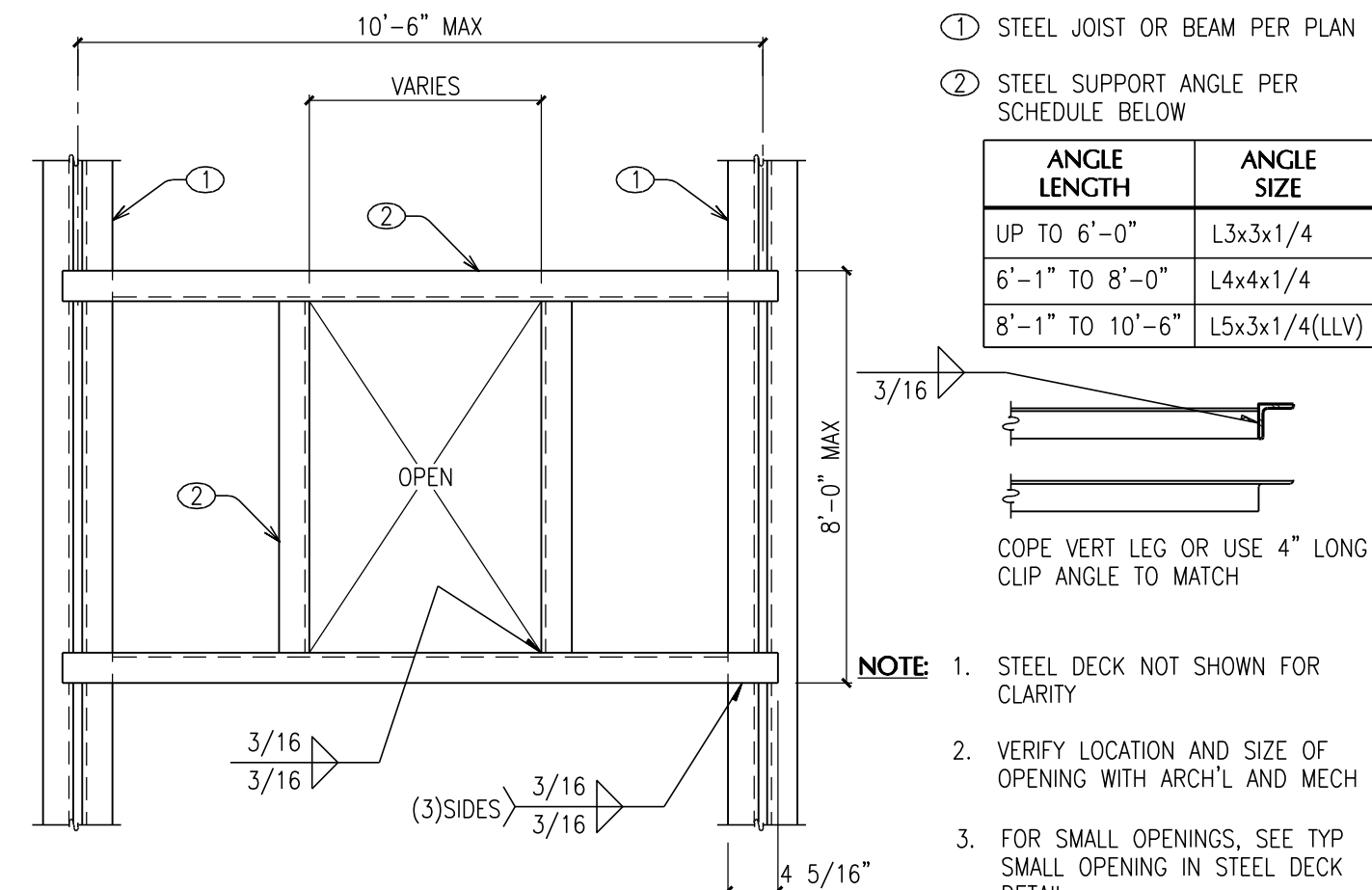


28 TYPICAL STEEL STUD ATTACHMENT
028-15230 NO SCALE

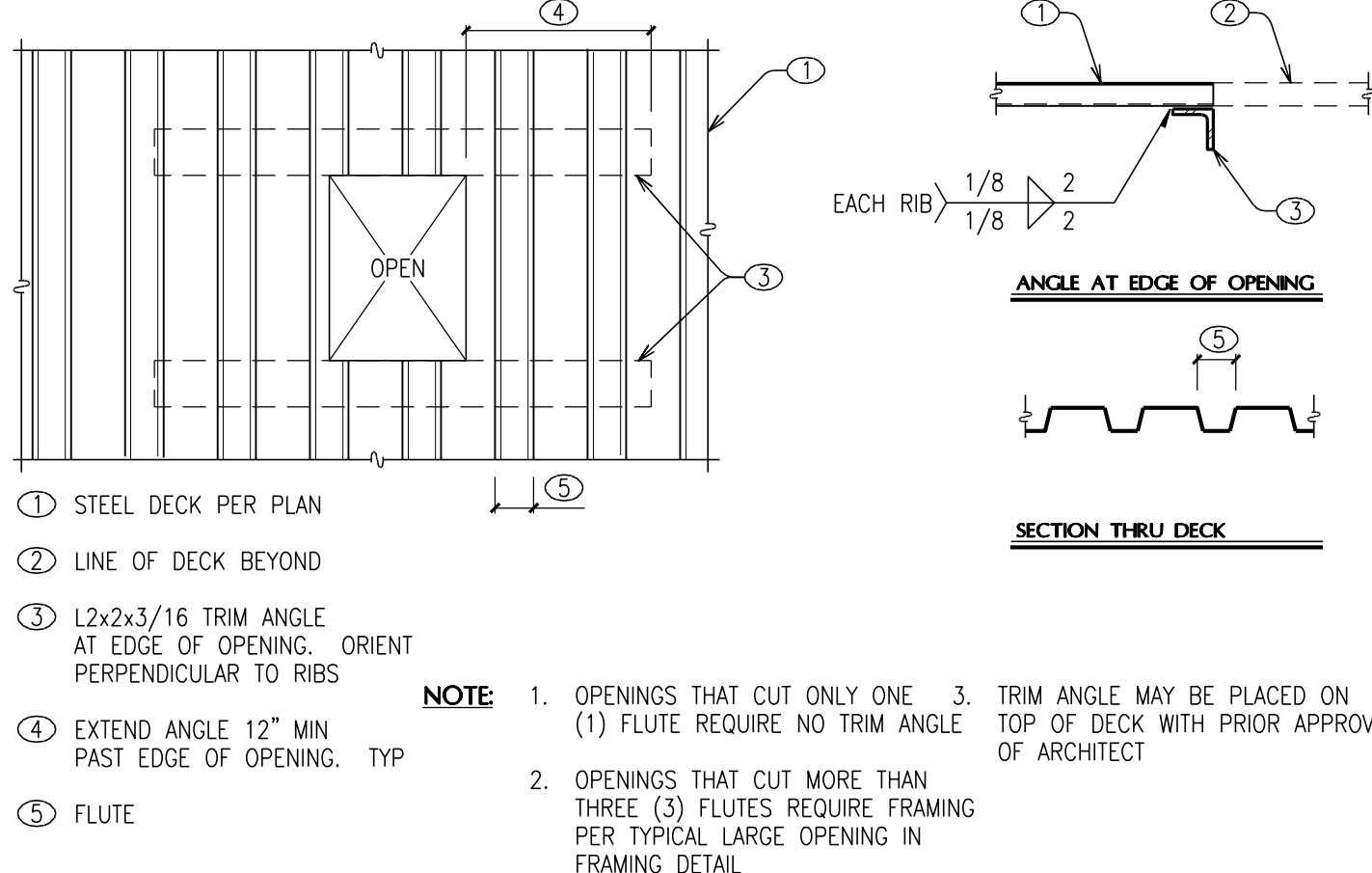


- NOTE**
1. SEE PLAN OR SCHEDULE FOR BASE PLATE DIMENSIONS
 2. SEE PLAN OR SCHEDULE FOR SIZE, BOLTS

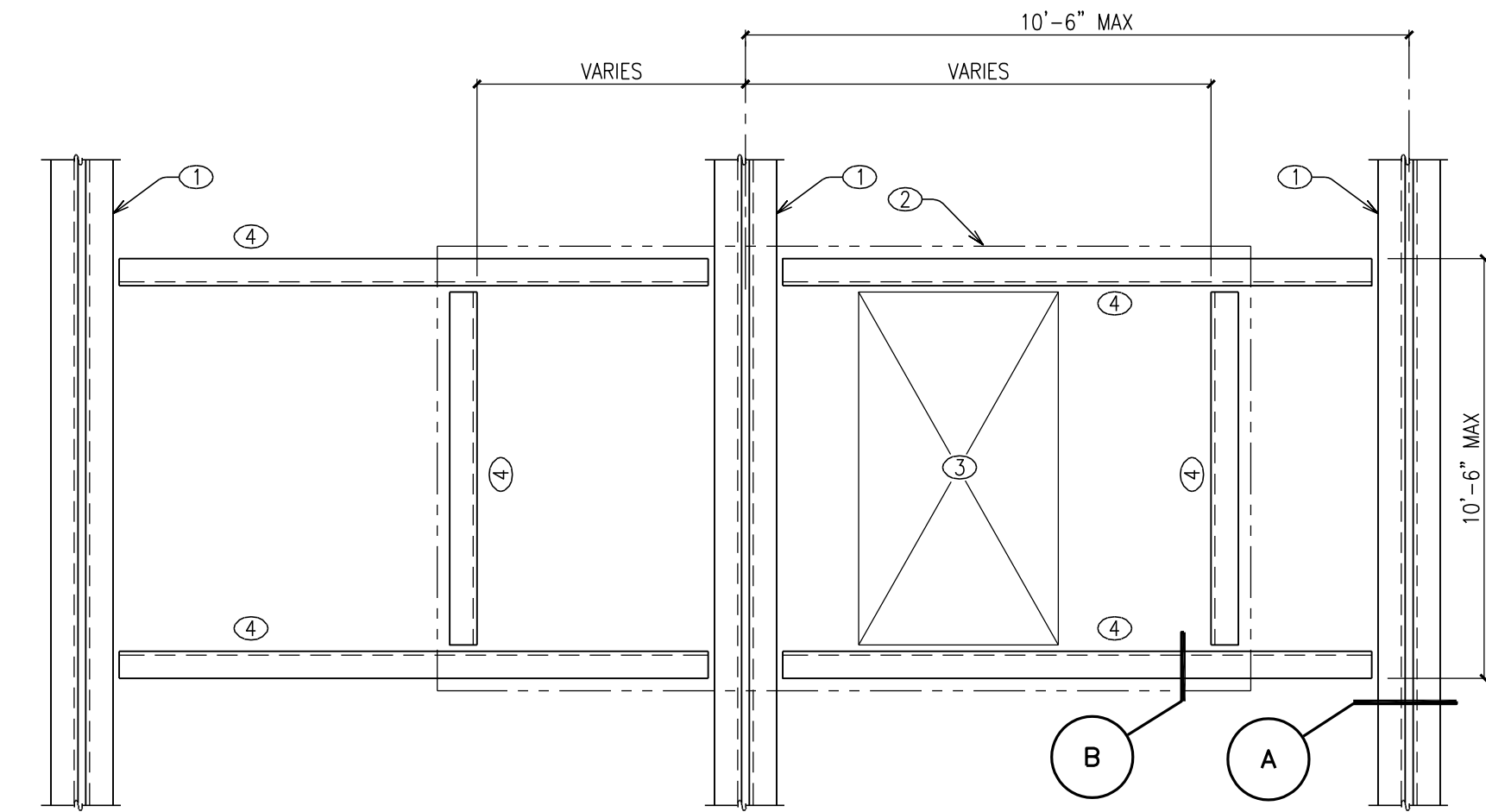
26 PLAN - TYPICAL STEEL COLUMN BASE PLATE
026-15230 NO SCALE



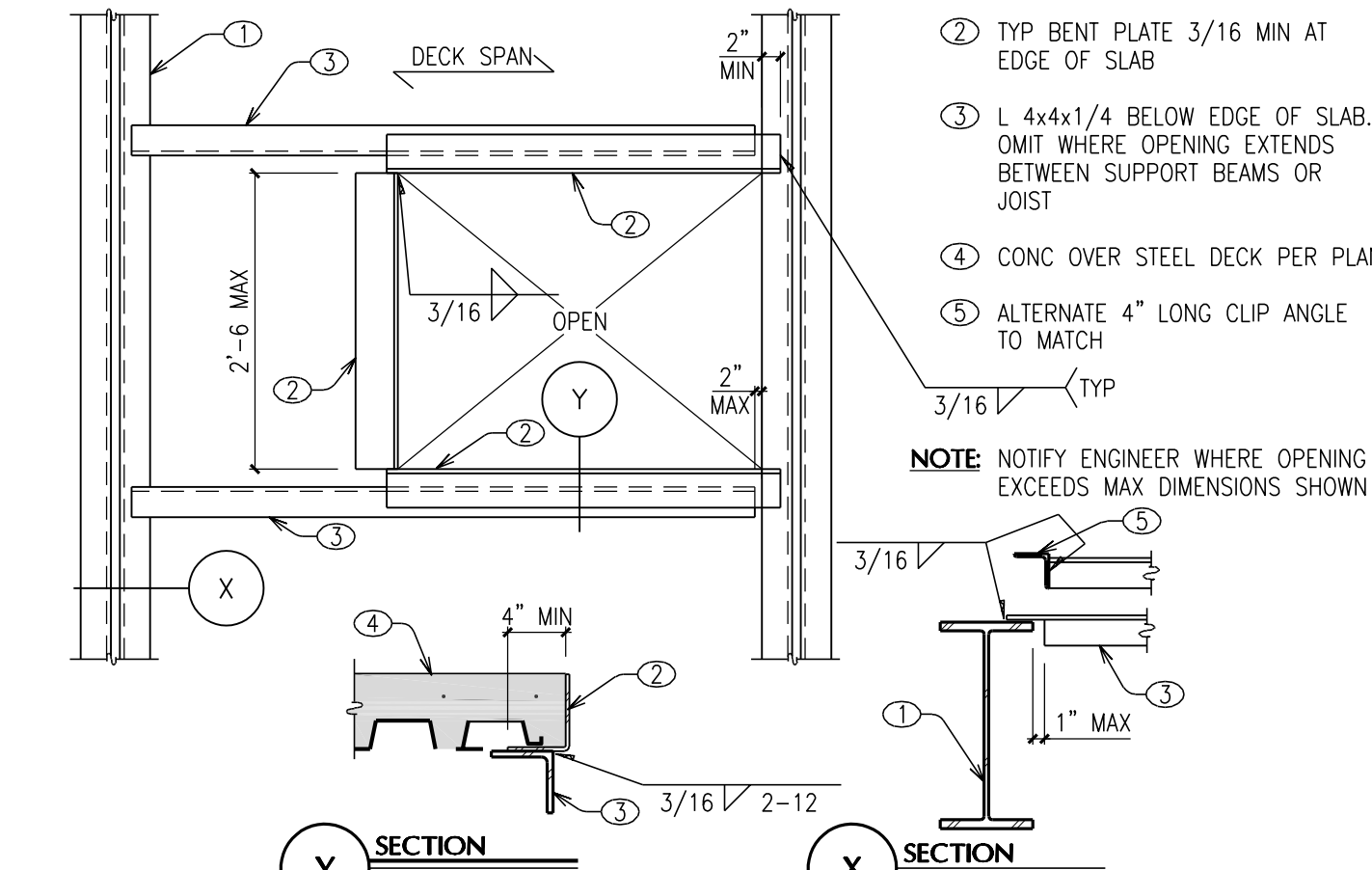
19 PLAN - TYPICAL LARGE OPENING IN ROOF FRAMING
019-15230 NO SCALE



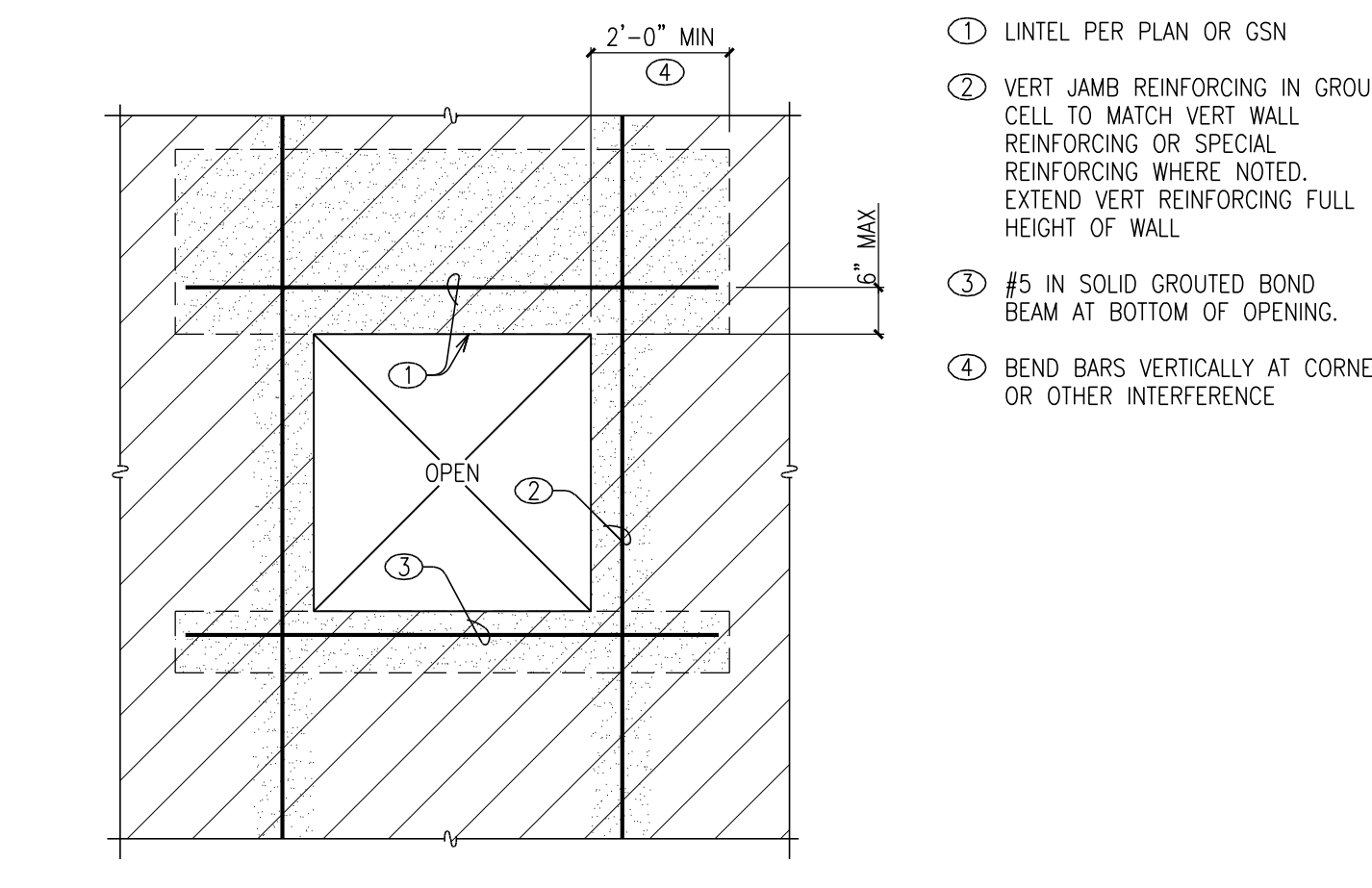
20 TYPICAL SMALL OPENING IN STEEL DECK
020-15230 NO SCALE



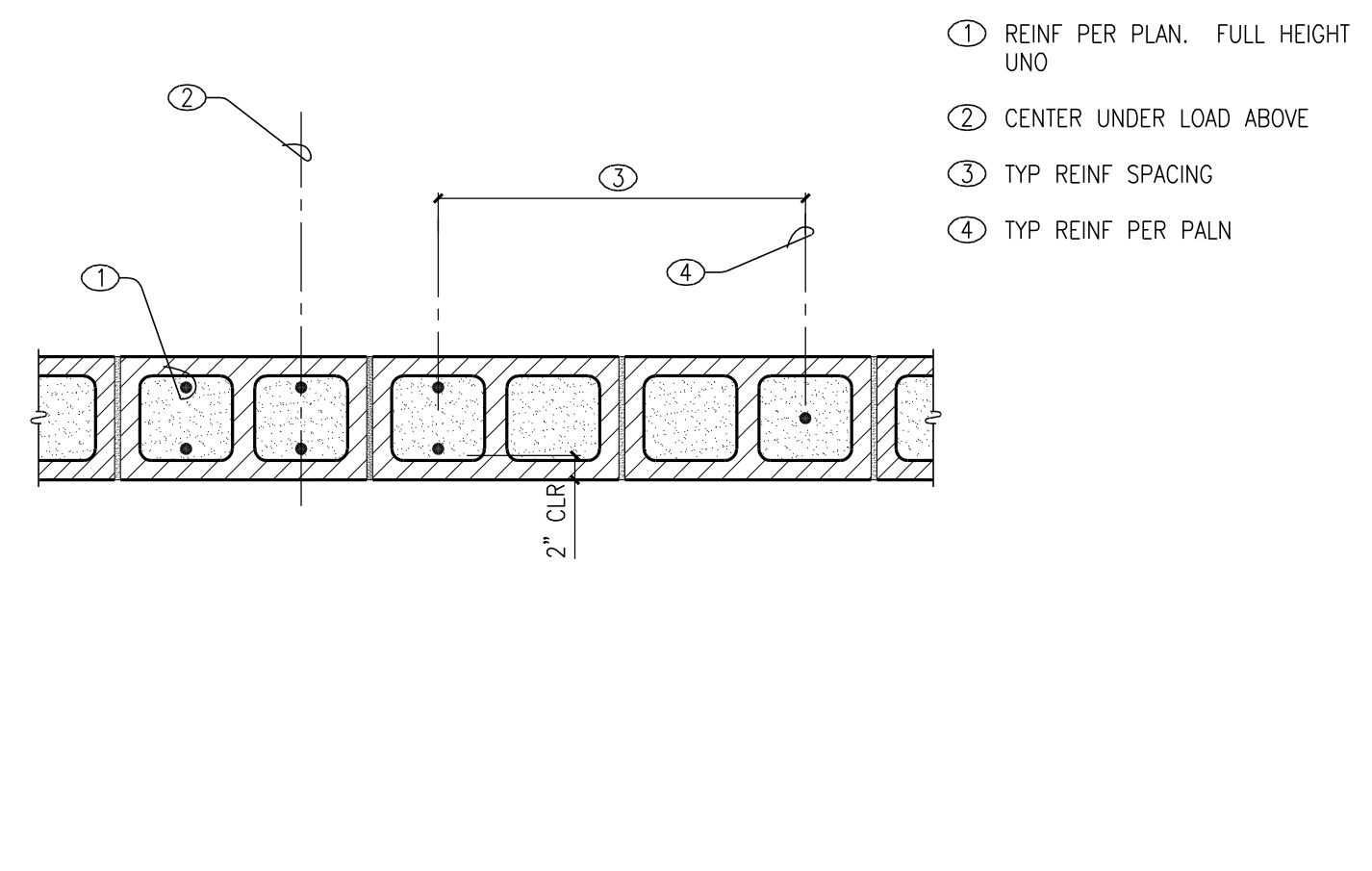
21 (PLAN) TYPICAL FRAMING AT MECHANICAL UNIT AT STEEL JOISTS
021-15230 NO SCALE



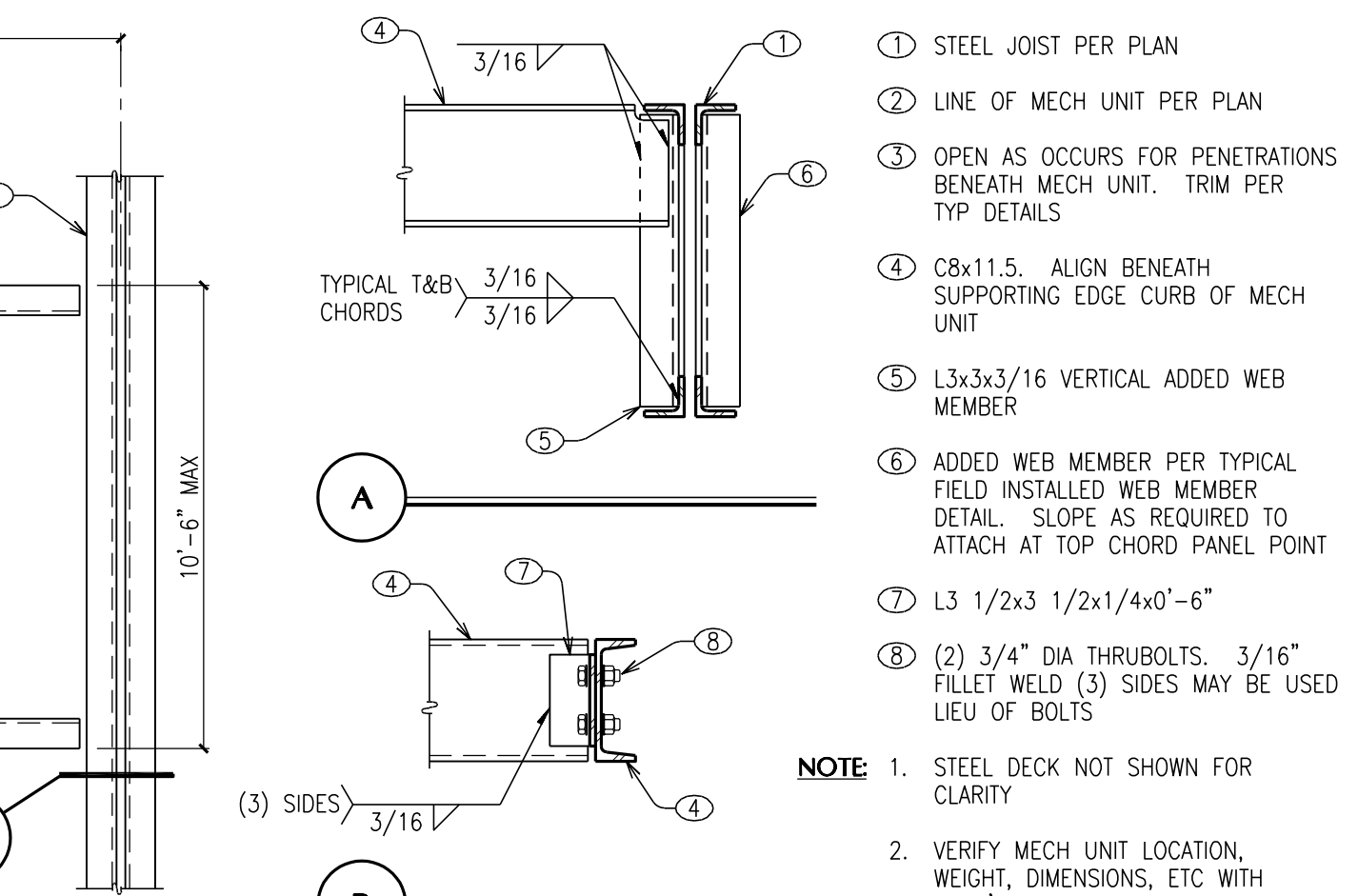
22 PLAN - TYPICAL LARGE OPENING IN FLOOR FRAMING
022-15230 NO SCALE



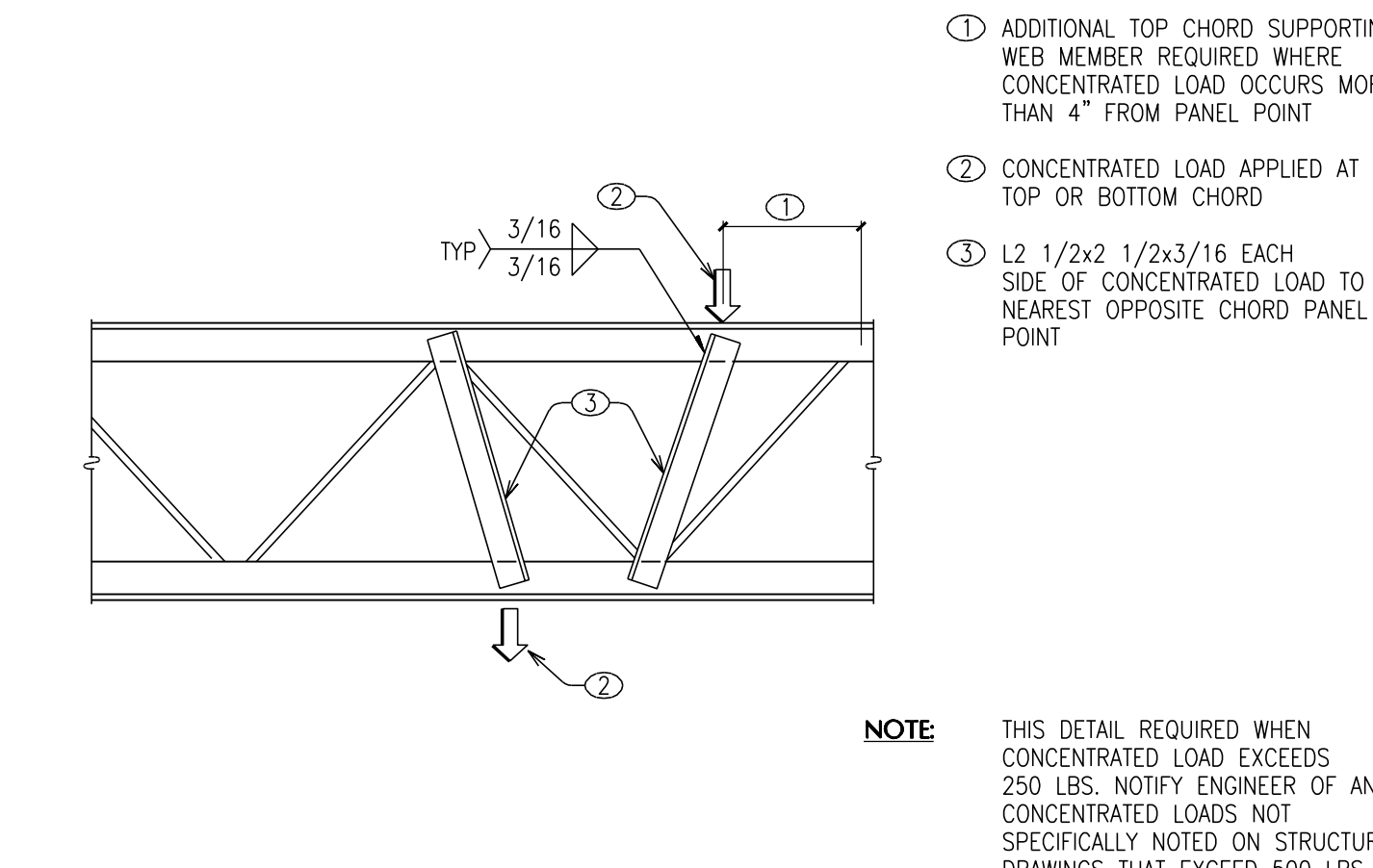
16 ELEVATION - TYPICAL OPENING AT MASONRY WALL
016-07262XR NO SCALE



17 PLAN - SPECIAL REINF AT MASONRY WALL
017-07262XR NO SCALE



18 TYPICAL FIELD INSTALLED WEB MEMBER AT STEEL JOIST
018-15230 NO SCALE



- NOTE**
1. THIS DETAIL REQUIRED WHEN CONCENTRATED LOAD EXCEEDS 250 LBS. NOTIFY ENGINEER OF ANY CONCENTRATED LOADS NOT SPECIFICALLY NOTED ON STRUCTURAL DRAWINGS THAT EXCEED 500 LBS.

19 TYPICAL FIELD INSTALLED WEB MEMBER AT STEEL JOIST
019-15230 NO SCALE



REVISIONS

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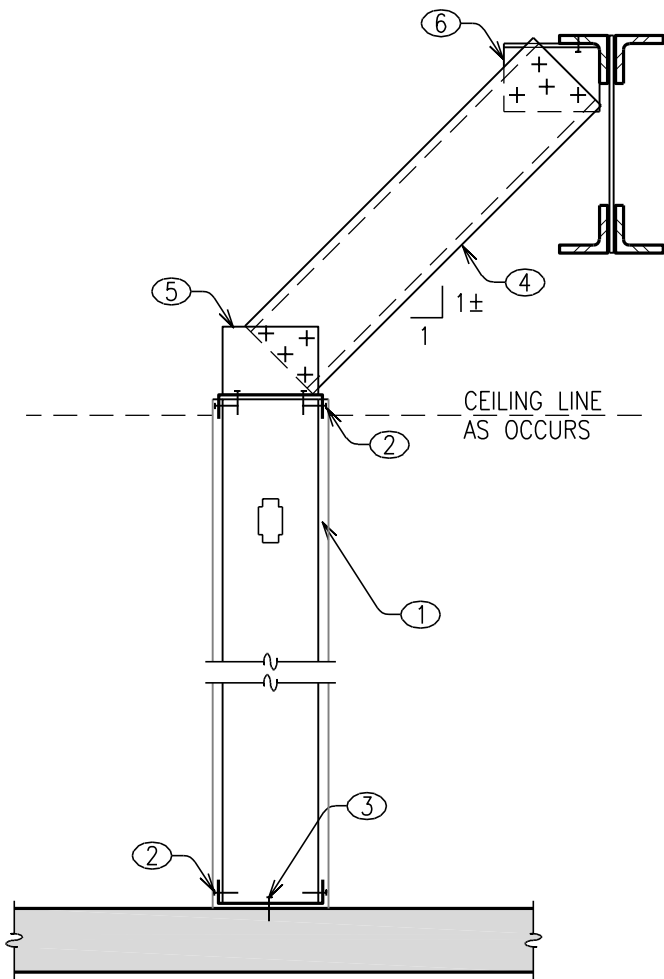
Charleston Heights Arts Center
- Interior Remodel -
TYPICAL DETAILS

OWNER: CITY OF LAS VEGAS
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DRAWN	ACD
FILE	S021015230
DATE	03/27/2018
SCALE	
BID NO	15.59806-JH
CLV DWG NO	620-10B
HAISEN NO	59806
SHT NO	

S1.03



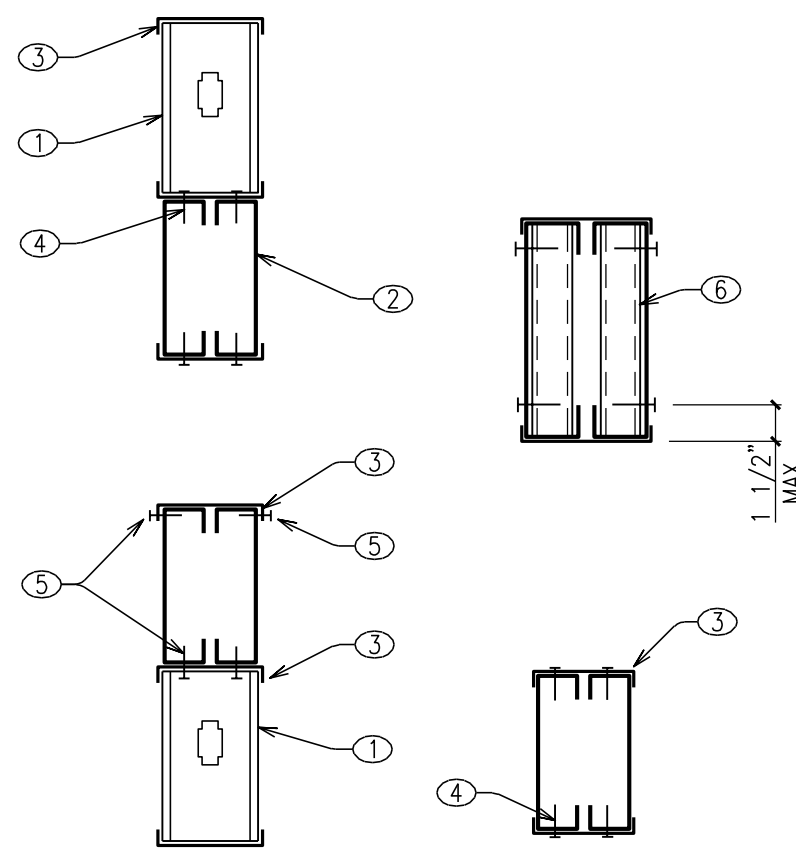
- 362S137-33 STUDS AT 24" OC MAX
- 362T125-33 WITH #8 SCREWS EACH FLANGE AT EACH STUD
- 0.157" DIAMETER x 1 1/2" EMBED HILT X-U PIN AT 24" OC (ICC ESR-2269)
- 362S137-33 BRACE AT 6'-0" OC MAX
- L4x2x14 GA LLV WITH (4) #8 SCREWS TO BRACE AND (2) #8 SCREWS TO TRACK
- L4x2x14 GA LLV WITH (4) #8 SCREWS TO BRACE AND (1) 0.157" DIAMETER HILT X-U PIN TO JOIST CHORD (ICC ESR-2269)

NOTE:
1. APPLY GYPSUM BOARD BOTH SIDES OF WALL TO TOP TRACK

35 TYPICAL INTERIOR PARTITION FRAMING

035-15230

NO SCALE



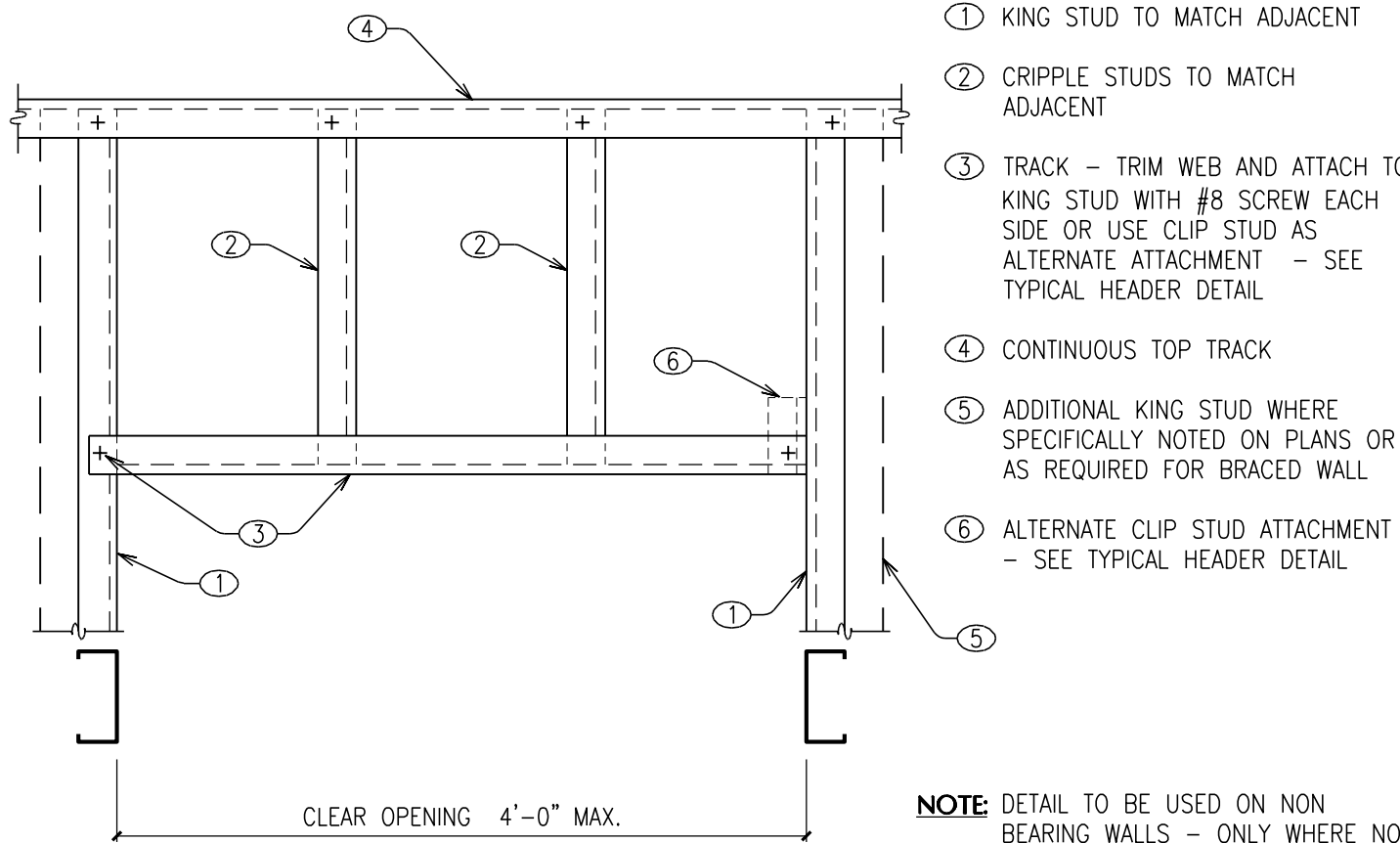
- CRIPPLE WALL CONSTRUCTION TO MATCH ADJACENT WALLS
- STEEL HEADER PER PLAN
- CONTINUOUS TRACK
- (2) #8 SCREWS AT 24" OC
- (1) #8 SCREW AT 12" OC
- STIFFENER AT BEARING STIFFENER OF STUD OR TRACK, SAME SIZE AND GAUGE AS HEADER, 6"x18 GAGE MAX TRIM STIFFENER FLUSH WITH HEADER FLANGE (2) #8 SCREW TOP AND BOTTOM AND 6" MAX OC HEADER WEB TO STIFFENER.

NOTE: USE SIMILAR CONSTRUCTION WHERE 3 OR MORE STEEL SECTIONS ARE REQUIRED FOR HEADERS OR BEAM

32 TYPICAL HEADER AND BEAM CONSTRUCTION

032-15230

NO SCALE



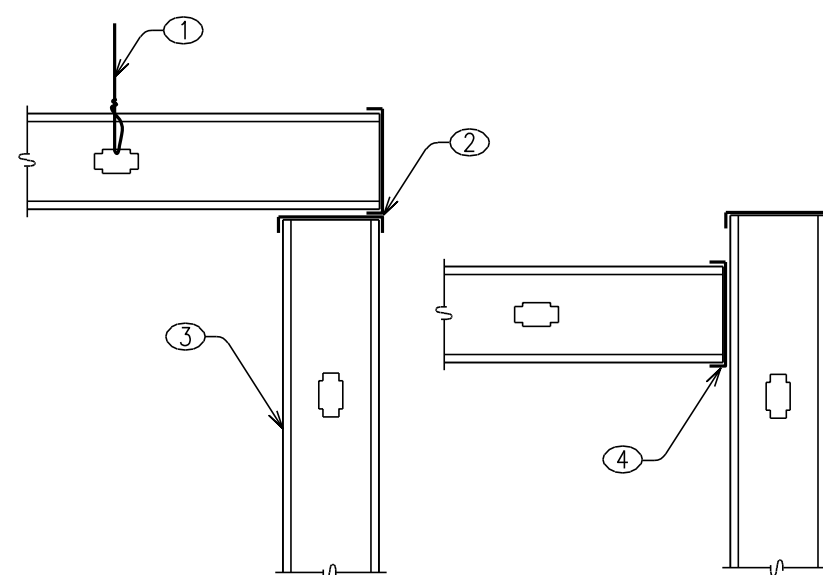
- KING STUD TO MATCH ADJACENT
- CRIPPLE STUDS TO MATCH ADJACENT
- TRACK - TRIM WEB AND ATTACH TO KING STUD WITH #8 SCREW EACH SIDE OR USE CLIP STUD AS ALTERNATE ATTACHMENT - SEE TYPICAL HEADER DETAIL
- CONTINUOUS TOP TRACK
- ADDITIONAL KING STUD WHERE SPECIFICALLY NOTED ON PLANS OR AS REQUIRED FOR BRACED WALL
- ALTERNATE CLIP STUD ATTACHMENT - SEE TYPICAL HEADER DETAIL

NOTE: DETAIL TO BE USED ON NON BEARING WALLS - ONLY WHERE NO HEADER IS SPECIFICALLY NOTED ON PLANS

33 TYPICAL SMALL OPENING IN NON BEARING WALL

033-15230

NO SCALE



- 10 GAGE MIN WIRE HANGER
- SCREW TRACK TO TRACK WITH #8 SCREW AT 16" OC
- TYPICAL WALL CONSTRUCTION DETAIL
- TRACK AT WALL STUD WITH (2) #8 SCREW TYPICAL

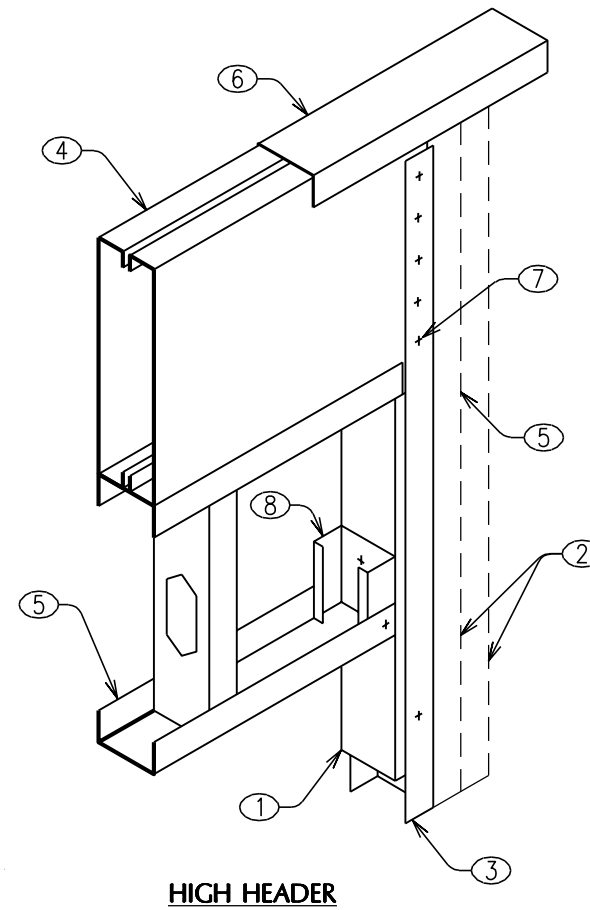
- NOTE:**
- TYPICAL JOIST SUPPORTING DRYWALL SHALL BE PER TABLE. TRACK TO MATCH JOIST AT ENDS WITH (2) #8 SCREW TO EACH JOIST.
 - SUPPORT JOIST ON WALL AND WIRE HANGERS AS SHOWN SECURE HANGER TO STRUCTURE WITH #12x1 1/2 SCREW AT WOOD
 - CEILING AREAS TO BE NON-ACCESSIBLE WITHOUT LOADS FROM MECHANICAL EQUIPMENT OR OTHER HEAVY MATERIALS

UNSUPPORTED LENGTH	MIN STUD
4'-0"	1 5/8x1 1/4x25GA @ 24
6'-0"	2 1/2x1 1/4x25GA @ 24
8'-0"	2 1/2x1 1/4x25GA @ 16
10'-0"	3 1/2x1 1/4x25GA @ 24
	3 1/2x1 1/4x20GA @ 16
	3 1/2x1 5/8x20GA @ 24

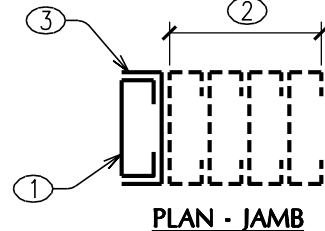
34 TYPICAL HARD CEILING FRAMING

034-15230

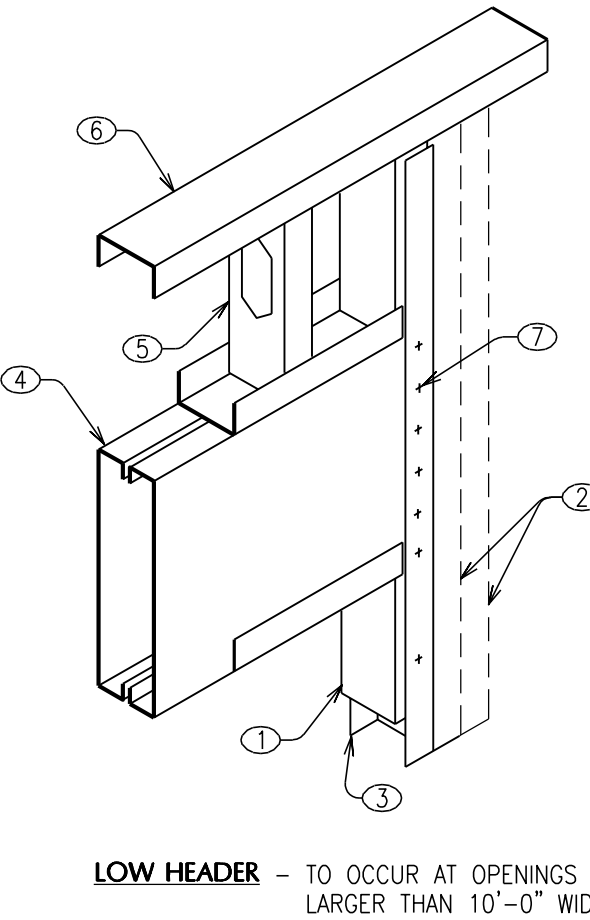
NO SCALE



- TRIMMER STUD TO FIT WITHIN VERTICAL TRACK WITH #10 SCREWS AT 32" OC MAX EACH SIDE
- ADDITIONAL FULL HEIGHT STUDS AS REQUIRED FOR BRACED WALL OR PER PLAN. ATTACH BUILT-UP STUDS PER TYPICAL DETAIL
- VERTICAL TRACK (KING STUD) FULL HEIGHT
- STEEL HEADER PER PLAN TO FIT WITHIN VERTICAL TRACK AS SHOWN (2) #10 SCREWS AT 24" OC TOP AND BOT.
- CRIPPLE WALL CONSTRUCTION TO MATCH ADJACENT WALLS
- CONTINUOUS TOP TRACK
- #10 SCREWS AT 2" OC. TRACK TO HEADER EACH SIDE
- CLIP STUD ATTACHMENT USING 3" LONG STUD OR 2x2x20 GA x 3" LONG ANGLE. (2) #10 SCREWS TO STUD AND TRACK



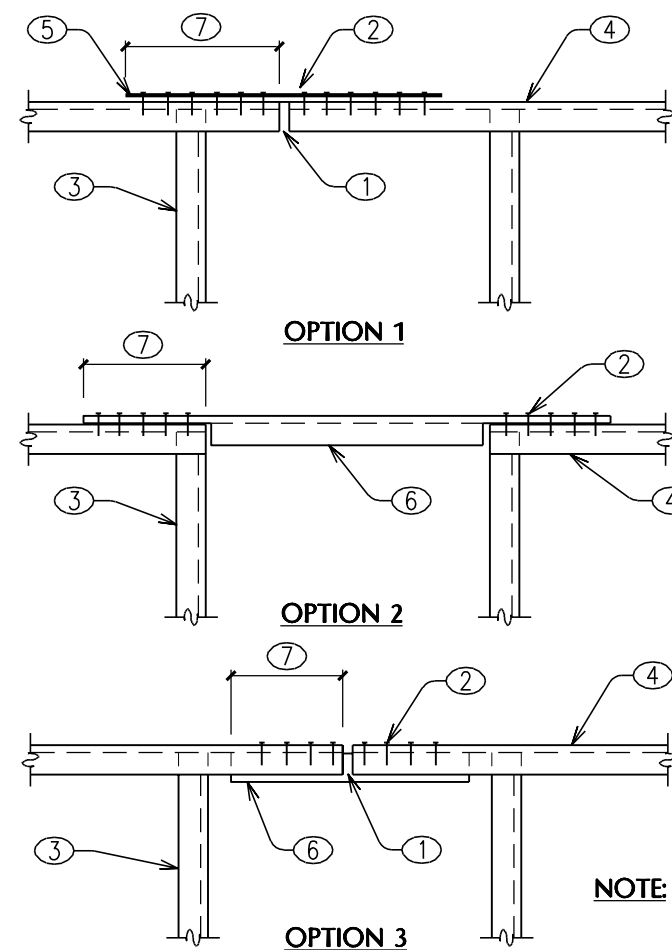
- NOTE:**
- HEADER MAY BE CONSTRUCTED HIGH OR LOW. LOW HEADER REQUIRED AT OPENING 10' OR LARGER
 - ALTERNATE: WELDED CONNECTION ACCEPTABLE USING 3/6" LONG FILLET WELD FOR EACH SCREW NOTED



29 TYPICAL HEADER CONSTRUCTION

029-15230

NO SCALE



- SPLICE TRACK BETWEEN STUDS ONLY IF NO LOAD IS STACKED BETWEEN STUDS
- TOTAL NUMBER OF SCREWS AT EACH SIDE OF SPLICE - SEE TABLE BELOW
- STEEL STUD
- CONTINUOUS TOP TRACK - 20 GA MIN UNLESS NOTED OTHERWISE
- SINGLE 2"x16 GAUGE STRAP AT TOP OR STRAP TO EACH FLANGE
- STEEL STUD BLOCK - TRIM FLANGE AT OPTION 2
- MINIMUM LENGTH OF SPLICE SUCH THAT SCREWS ARE 3/4" MIN SPACING AND EDGE DISTANCE IN 2 ROWS OF SCREWS

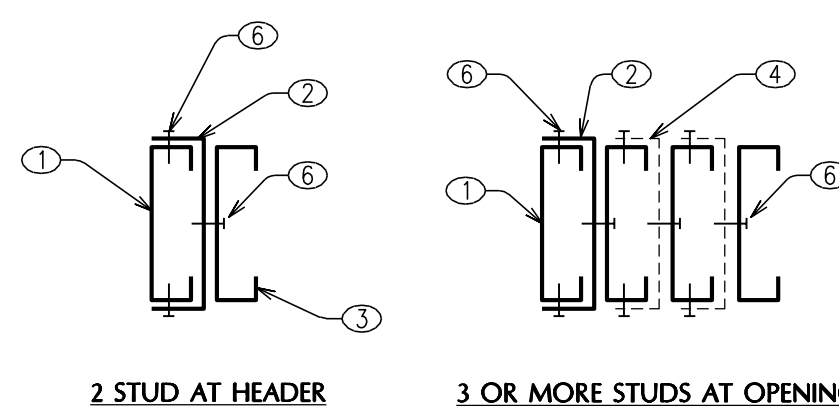
LENGTH OF WALL (BETWEEN CORNERS)	SCREWS EACH SIDE OF SPLICE
OVER 30'	12 #8
OVER 20'	8 #8
OVER 10'	6 #8
LESS THAN 10'	2 #8

NOTE: TOP TRACK MAY ALTERNATELY BE SPLICED OVER HIGH HEADER (HEADER UNDER TRACK) WITHOUT STRAP - SCREW EACH SIDE OF SPLICE PER TABLE

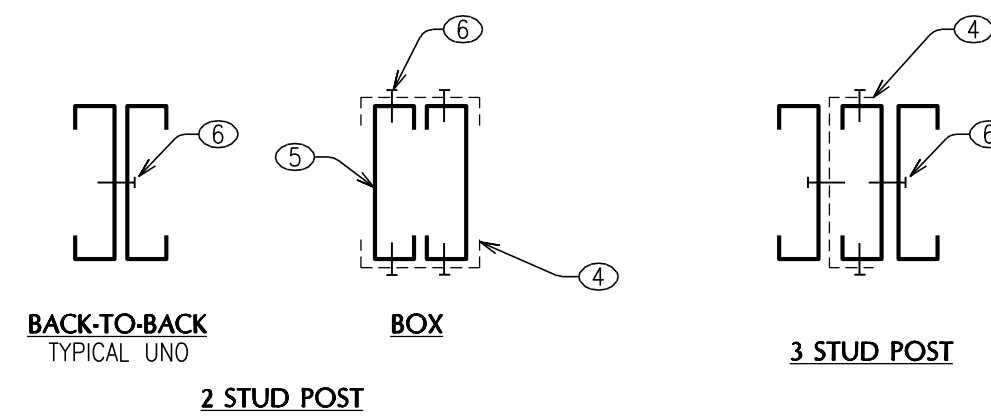
30 TYPICAL TOP TRACK SPLICE AT EXTERIOR OR BRACED WALL

030-15230

NO SCALE



- TRIMMER STUD UNDER HEADER - MATCH ADJACENT WALLS
- VERTICAL TRACK FULL HEIGHT
- ADDITIONAL KING STUD
- 6" LONG TRACK TIE, 20 GAGE, AT STUD MIDHEIGHT WITH (2) #8 SCREWS AT EACH SIDE
- VERTICAL STUD FULL HEIGHT
- #8 SCREW AT 24" O.C.



2 STUD AT HEADER
3 OR MORE STUDS AT OPENING
2 STUD POST
3 STUD POST

31 PLAN - TYPICAL BUILT-UP STUD AT POST OR JAMB

031-15230

NO SCALE



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TYPICAL DETAILS

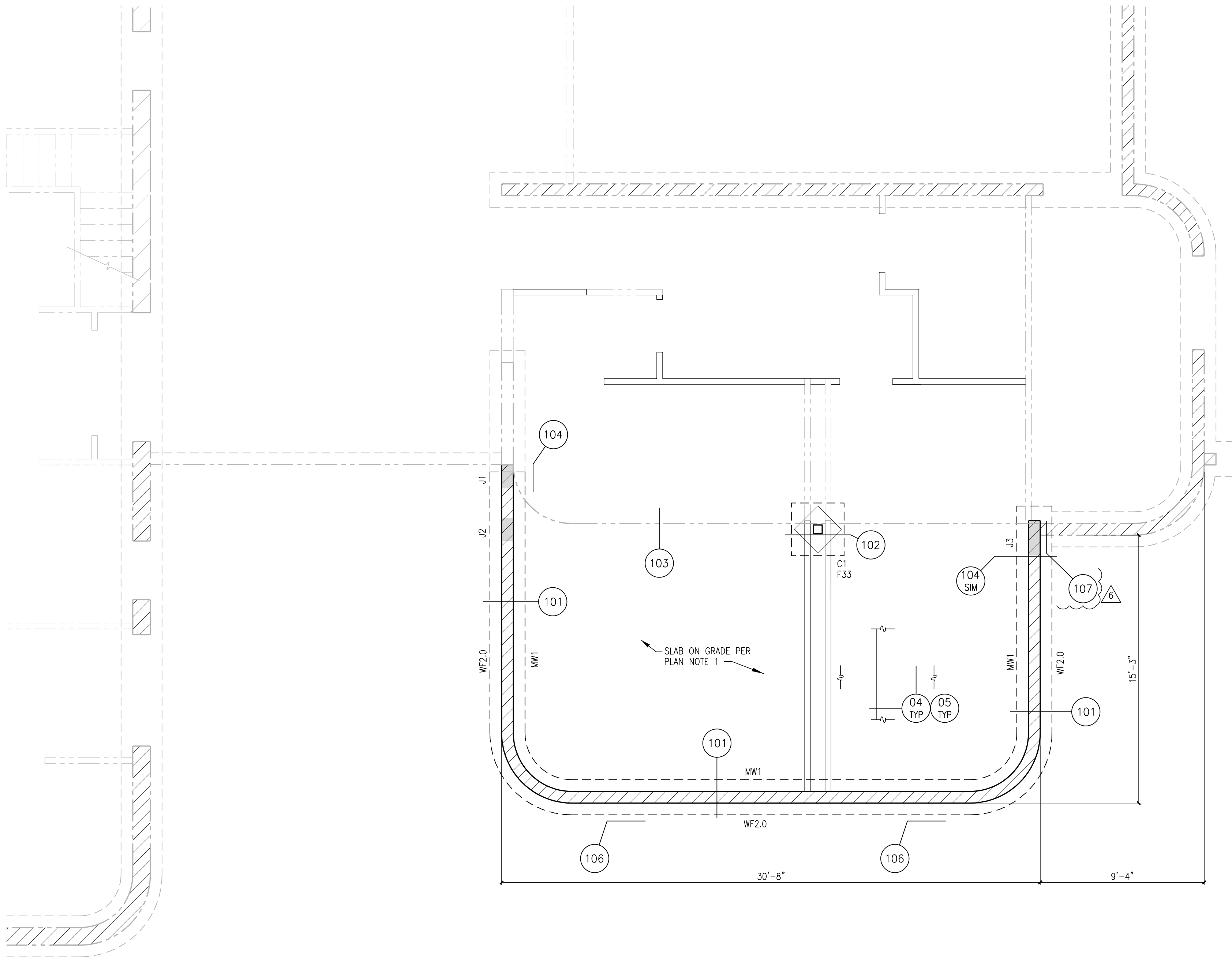
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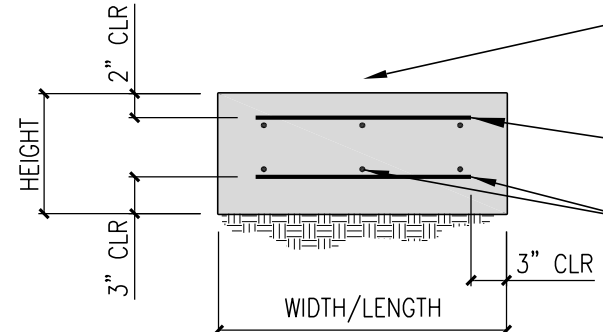
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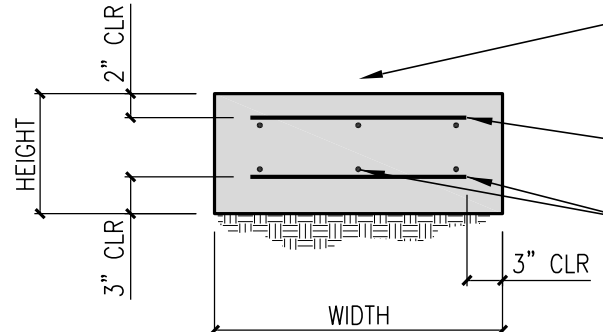


FOUNDATION PLAN

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

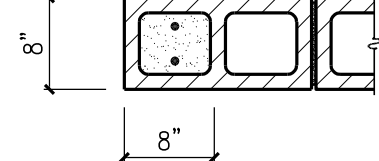
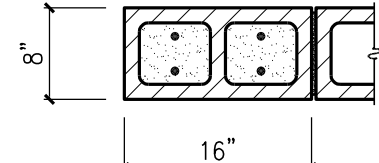
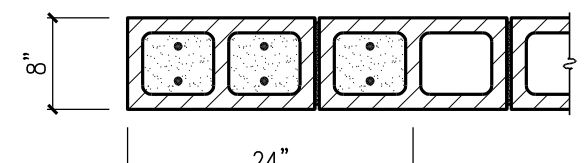
COLUMN (C) SCHEDULE				
NOTES: 1. FOR BASE PLATE CONFIGURATION, ANCHOR BOLT PATTERN, AND COLUMN TO BASE PLATE CONNECTION, SEE TYPICAL STEEL COLUMN BASE PLATE DETAIL. 2. STANDARD AB EMBEDMENT = 9" U.N.O.				
MARK	SIZE	BASE PLATE	BASE PLATE TYPE	REMARKS
C1	HSS 6x6x1/4	PLATE 3/4x12x12 WITH (4) 3/4" DIA ANCHOR BOLTS	A	---

ISOLATED FOOTING (F) SCHEDULE						
						
NOTES: 1. SEE PLAN OR GSN FOR TOF OR EMBEDMENT						
MARK	DIMENSIONS			BOTTOM REINFORCING	TOP REINFORCING	REMARKS
	HEIGHT	WIDTH	LENGTH			
F33	12"	3'-0"	3'-0"	(4) #5 EW	-	

WALL FOOTING (WF) SCHEDULE					
					
NOTES: 1. SEE PLAN OR GSN FOR TOF OR EMBEDMENT					
MARK	DIMENSIONS		BOTTOM REINFORCING	TOP REINFORCING	REMARKS
	HEIGHT	WIDTH			
WF2.0	12"	2'-0"	(3) #5 CONT	-	

FOUNDATION PLAN NOTES

- CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. CONTRACTOR TO RESOLVE ANY DISCREPANCIES WITH THE ENGINEER.
- CONTRACTOR TO VERIFY LOCATION OF ALL DEPRESSED SLABS, INSERTS IN SLAB ON GRADE, ETC. WITH APPROVED ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
- WF1, WF2, Etc. INDICATES CONTINUOUS WALL FOOTING. SEE CONTINUOUS WALL FOOTING SCHEDULE ON SHEET S2.01.
- F22, F33, Etc. INDICATES ISOLATED FOOTING. SEE ISOLATED FOOTING SCHEDULE ON SHEET S2.01.
- C1, C2, Etc. INDICATES STEEL COLUMN. SEE COLUMN SCHEDULE ON SHEET S2.01.
- WHERE SLAB SLOPES TO DRAIN, PROVIDE MINIMUM SLOPE OF 1/8" PER FOOT FROM DRAIN TO NEAREST SLAB EDGE.
- TOF ELEVATION SHALL BE 1'-4" BELOW FINISHED FLOOR AT ALL PANELS UNLESS NOTED OTHERWISE. SEE PANEL ELEVATIONS FOR ADDITIONAL INFORMATION. TOF AT COLUMNS SHALL BE 1'-0" BELOW FINISHED FLOOR.
- 5" CONCRETE SLAB ON GRADE WITH #4 BARS AT 16" OC EACH WAY CENTERED IN SLAB THICKNESS. FOR SLAB SUPPORT SEE GENERAL STRUCTURAL NOTES AND SOILS REPORT
- J1, J2, Etc. INDICATES MASONRY JAMB PER SCHEDULE. JAMB ARE TO EXTEND FULL HEIGHT OF WALL
- MW1, MW2, Etc. INDICATES MASONRY WALL PER SCHEDULE. WALL TYPE SHOWN IS TO EXTEND FULL HEIGHT OF WALL
- "MCJ" INDICATES MASONRY WALL CONSTRUCTION JOINT. SEE TYPICAL DETAILS AND GSN. JOINTS SHOWN ARE TO EXTEND FULL HEIGHT OF WALL.

MASONRY JAMB (J) SCHEDULE				
MARK	MIN WIDTH	REINFORCING	REMARKS	SCHEMATIC
J1	8"	(1) #5 VERTICAL EACH FACE TOTAL - (2) #5 VERTICAL	REINFORCING CLEARANCE PER DETAIL	
J2	16"	(1) #5 VERTICAL EACH FACE - EACH CELL TOTAL - (4) #5 VERTICAL	REINFORCING CLEARANCE PER DETAIL	
J3	24"	(1) #5 VERTICAL EACH FACE - EACH CELL TOTAL - (6) #5 VERTICAL	REINFORCING CLEARANCE PER DETAIL	
GENERAL NOTES				
ALL JAMB REINFORCING EXTENDS FROM FOUNDATION TO TOP OF PARAPET USE 1 - #5 BAR EACH FACE IN CELLS ADJACENT TO WALL OPENINGS UNLESS NOTED OTHERWISE.				

MASONRY WALL (MW) SCHEDULE			
NOTE 1. SPECIAL INSPECTION REQUIRED. 2. SEE TYPICAL DETAILS AND GSN FOR ADDITIONAL REQUIREMENTS. 3. ALL MASONRY WALLS TO BE DETAILED AS FULLY GROUTED REINFORCED MASONRY SHEAR WALLS. SEE DETAIL 27. REVISE SPACING OF HORIZONTAL AND VERTICAL BARS AS REQUIRED BY DETAIL 27. PROVIDE HOOKS ON HORIZONTAL BARS PER DETAIL 27.			
MARK	SIZE	REINFORCING	REMARKS
MW1	8"	#5 VERTICAL AT 32" OC MAX	TYPICAL UNLESS NOTED OTHERWISE ON PLAN



REVISIONS

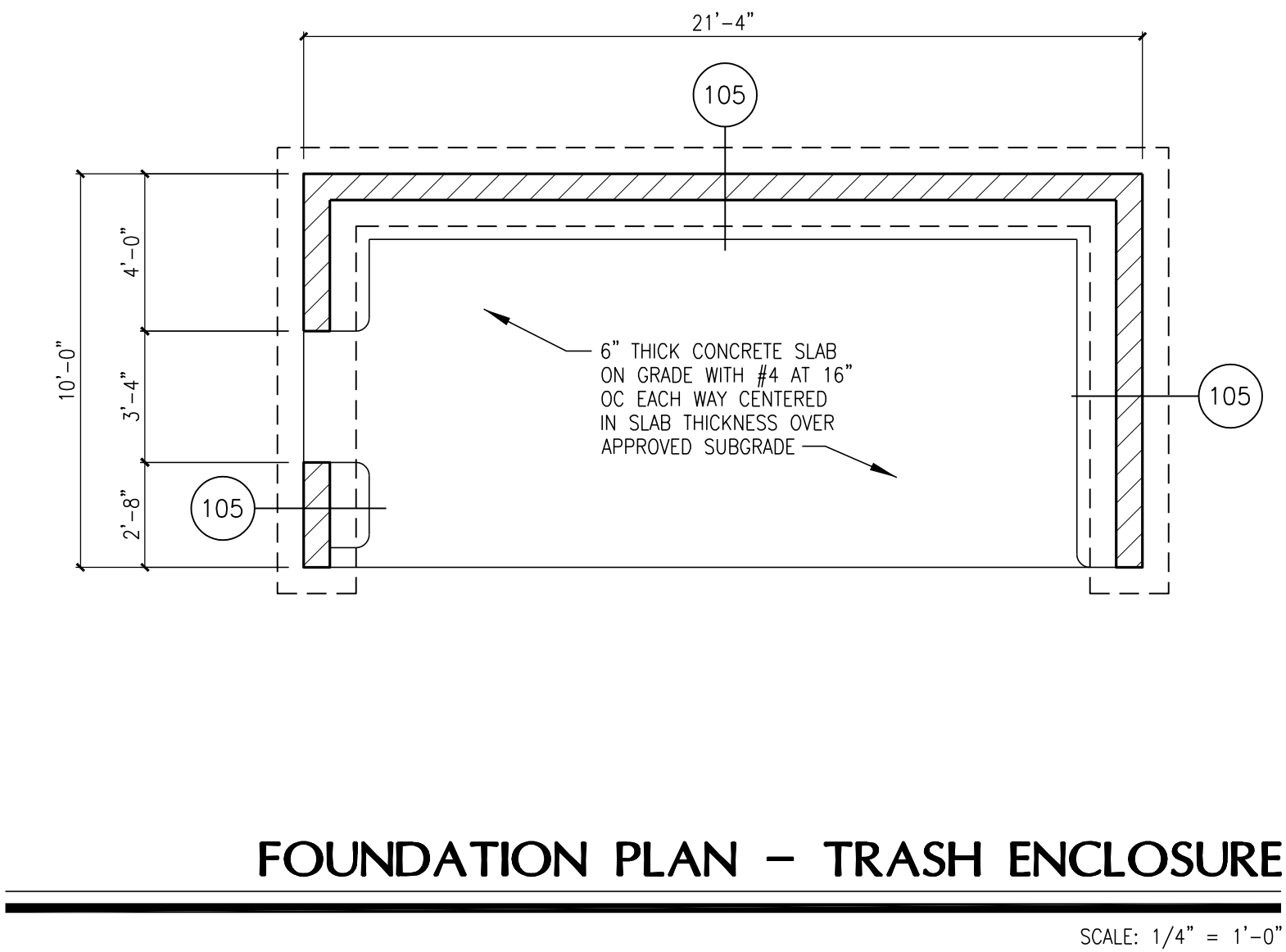
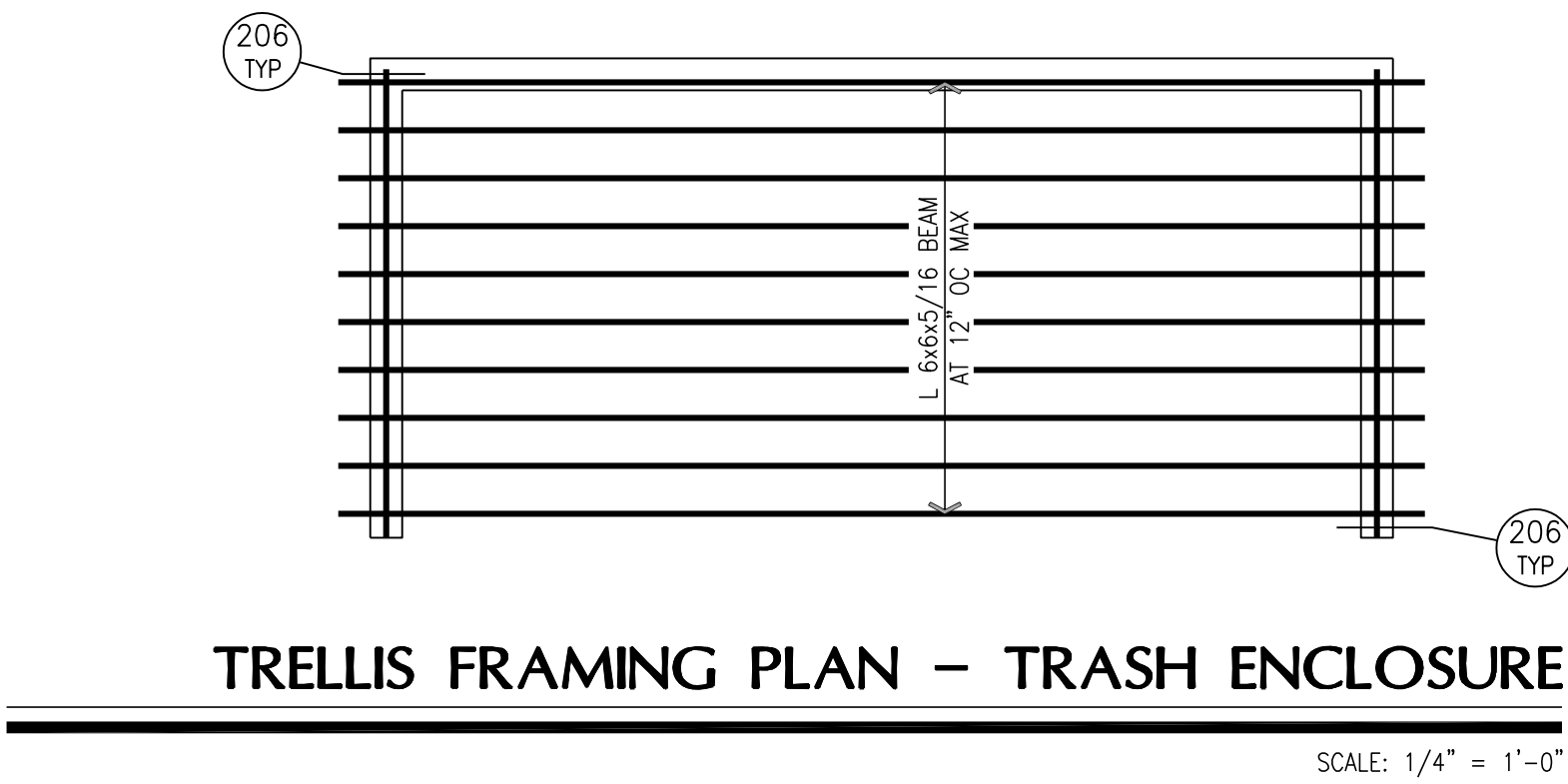
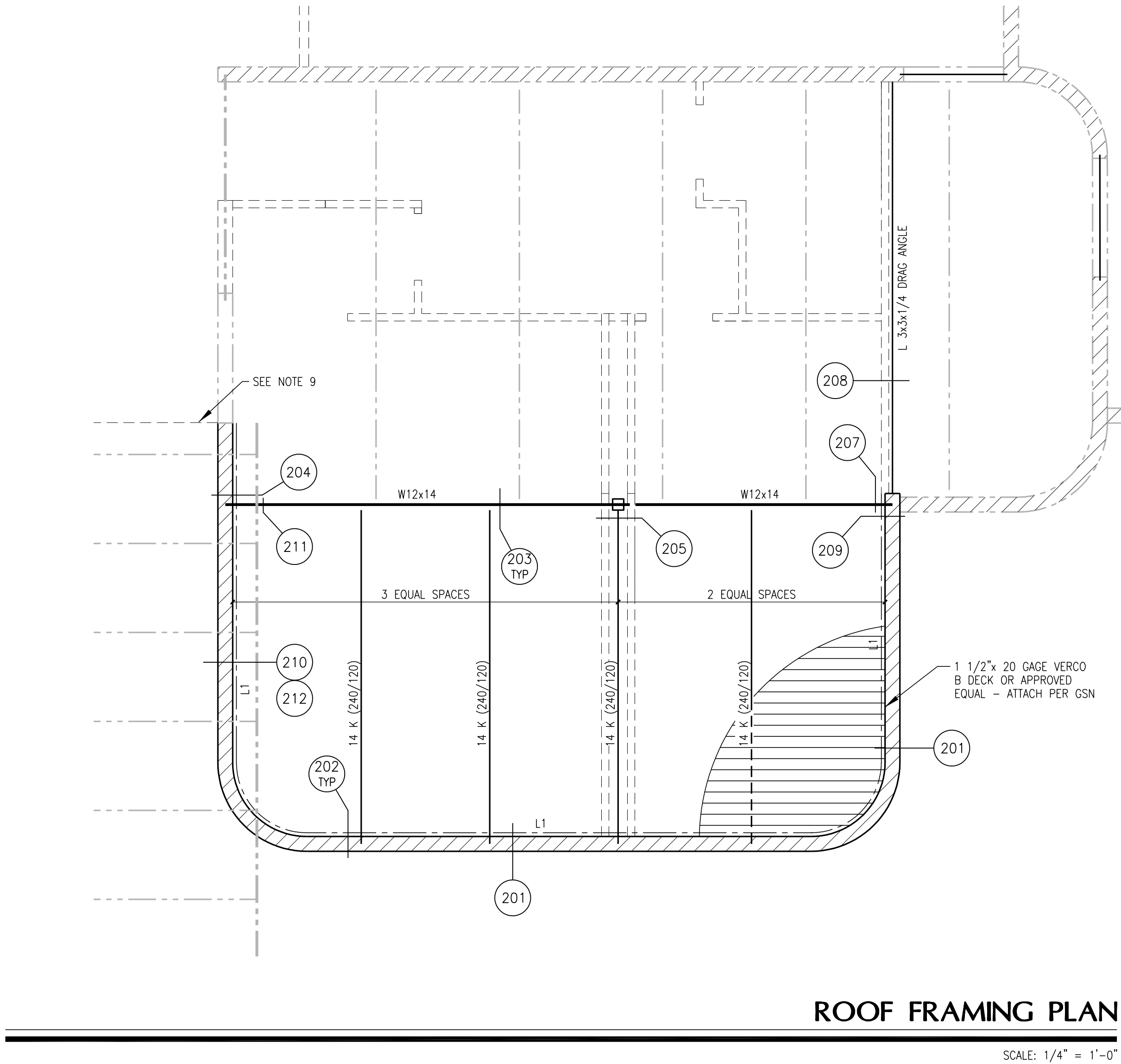
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LEDGER (L) SCHEDULE		
MARK	LEDGER SIZE	LEDGER ATTACHMENT
L1	ANGLE 3x3x1/4 CONTINUOUS	USE 3/4" DIA ANCHOR BOLTS AT 48" O.C. (ALT: USE WELD PLATE 3x8x1/2 AT 48" O.C. WITH (2) 1/2" DIA HOOKED ANCHORS)

- FRAMING PLAN NOTES:**
- VERIFY ALL ELEVATIONS SHOWN ON THIS PLAN WITH LATEST ARCHITECTURAL.
 - ROOF SLOPE AND CRICKET AREAS PER ARCHITECTURAL. MINIMUM ROOF SLOPE 1/2" PER FT.
 - PREMANUFACTURED STEEL TRUSSES:
 - DESIGN CRITERIA:
TOTAL LOAD DEFLECTION SHALL BE LESS THAN SPAN/240
LIVE LOAD DEFLECTION SHALL BE LESS THAN SPAN/360
 - TRUSS MANUFACTURER TO VERIFY LOCATION AND WEIGHT OF ALL ROOF TOP MECHANICAL UNITS, SKYLIGHTS, ETC. TRUSS ANUFACTURER TO DESIGN TRUSSES FOR A MINIMUM POINT LOAD LOCATED ANYWHERE ON THE JOIST OF 1.0k.
 - "D-" INDICATES DRAG LOAD (TENSION OR COMPRESSION) DUE TO WIND OR SEISMIC. TRUSS MANUFACTURER SHALL DESIGN FOR INDICATED LOADING APPROPRIATE LOAD COMBINATION. WHERE LOAD IS MARKED AS "(Em)", THIS INDICATES INCLUDES SEISMIC OVERSTRENGTH FOR LOAD COMBINATIONS PER ASCE 7-05 12.4.3.2 AND ALLOWABLE STRESS INCREASE PER 12.4.3
 - SPACE JOISTS EQUALLY BETWEEN COLUMNS, BEAMS OR WALLS AS SHOWN, UNO.
 - PROVIDE BRIDGING BETWEEN JOISTS AS REQUIRED BY TRUSS MANUFACTURER.
 - "U/D-" INDICATES UPLIFT OR COMPRESSION LOAD DUE TO WIND OR SEISMIC LOADS. TRUSS MANUFACTURER SHALL DESIGN FOR INDICATED LOAD IN APPROPRIATE LOAD COMBINATION.
 - STEEL ROOF TRUSSES SHALL BE DESIGNED FOR A MAIN WIND FORCE UPLIFT OF 18.0 PSF (GROSS).
 - TRUSS MANUFACTURER SHALL DESIGN TOP CHORD OF ALL JOISTS PER AXIAL LOAD (TENSION OR COMPRESSION) IN DL+LL+WIND OR SEISMIC LOAD COMBINATION AS FOLLOWS (UNO): STEEL JOISTS= 4.0 KIPS
 - TRUSS MANUFACTURER TO DESIGN JOISTS FOR LOAD DUE TO SPRINKLER, HYDRONIC OR SIMILAR PIPING PER MECHANICAL PLANS. SUPPORT PIPING PER MECHANICAL DETAILS. SUPPORT DETAILS TO BE APPROVED BY STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
 - ALL OVERHANGS SHALL BE DESIGNED FOR COMPONENT WIND LOADS (ASCE 7-05) OF + 6.8 PSF (DOWN) AND -43.0 PSF (UPLIFT)
 - ALL TRUSSES MAIN SPAN SHALL BE DESIGNED FOR COMPONENT WIND LOADS (ASCE 7-05) OF + 6.8 PSF (DOWN) AND -29.0 PSF (UPLIFT)
 - L1, L2 . . . INDICATES STEEL LEDGER PER SCHEDULE SHEET ON S2.01.
 - ML1, ML2 . . . INDICATES MASONRY UNTEL PER SCHEDULE ON SHEET S2.01.
 - LOCATION OF MECHANICAL CHASES AND OTHER OPENINGS MAY NOT NECESSARILY BE SHOWN ON STRUCTURAL DRAWINGS. TRIM OPENINGS PER APPROPRIATE TYPICAL DETAIL.
 - DIMENSIONS AS INDICATED ARE TO CENTERLINE OF BEAMS.
 - NEW ROOF TOP MECHANICAL UNITS TO BE ANCHORED TO EXISTING CURBS. ATTACH WITH (4) #10 SCREWS (MIN) EACH END OF THE UNIT (8 TOTAL). FIELD VERIFY EXISTING CURBS ARE SECURED TO ROOF STRUCTURE WITH A MINIMUM ATTACHMENT AS SPECIFIED FOR THE UNITS
 - ADJACENT PARTITION TO BE DEMOLISHED IS NEITHER A LOAD BEARING NOR SHEAR WALL, FIELD VERIFY



REVISIONS

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ROOF FRAMING PLAN

OWNER: CITY OF LAS VEGAS

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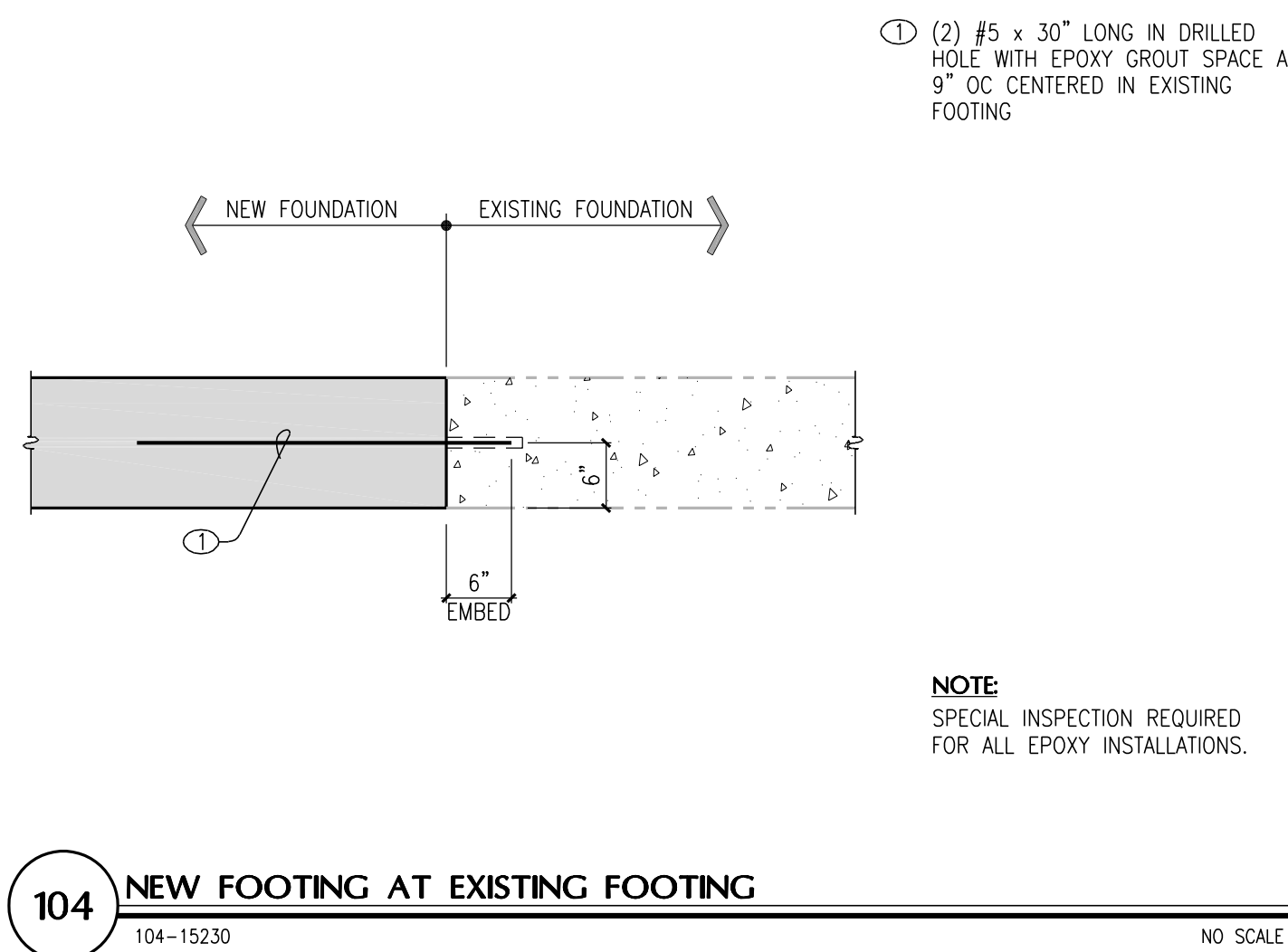
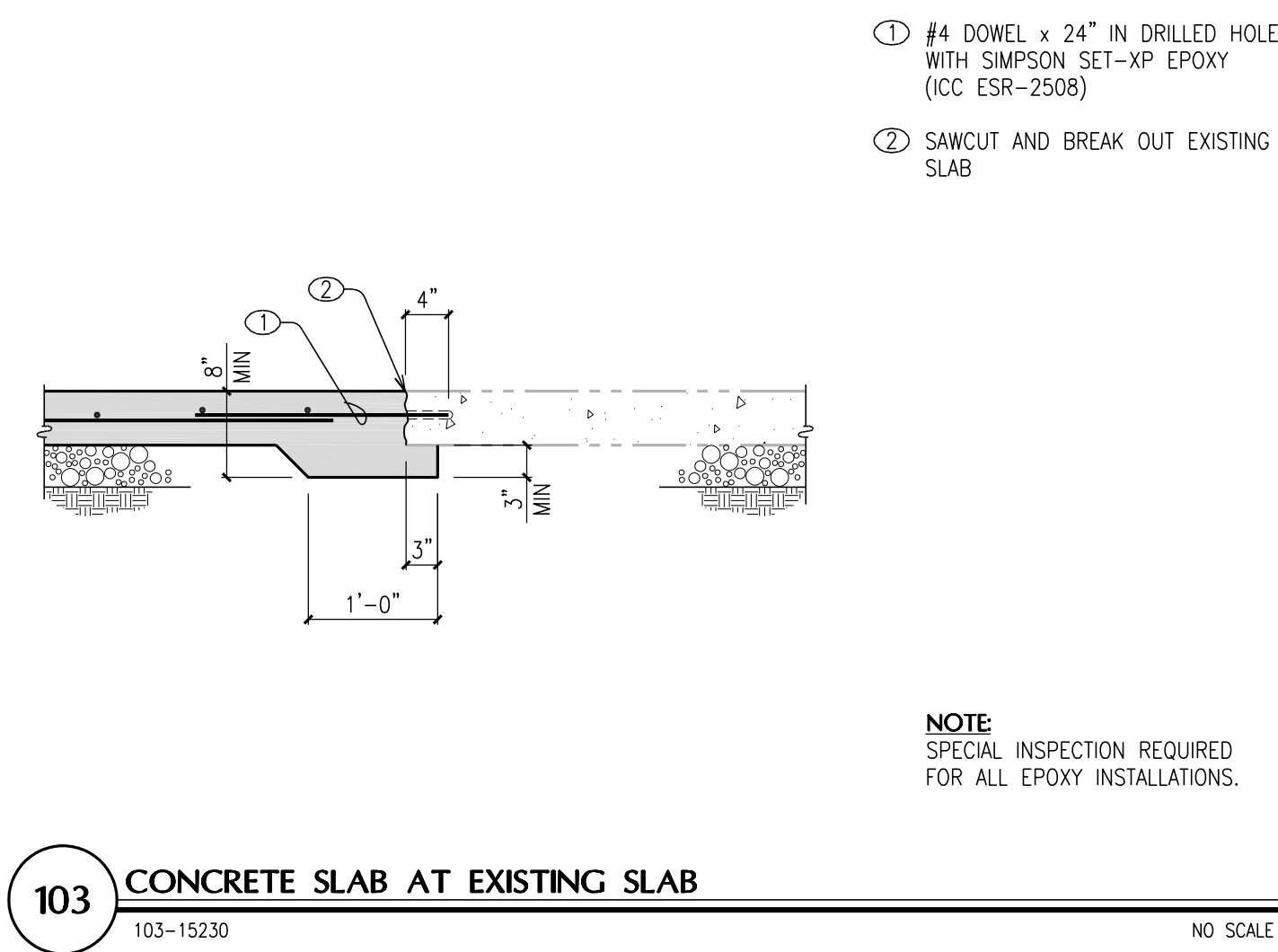
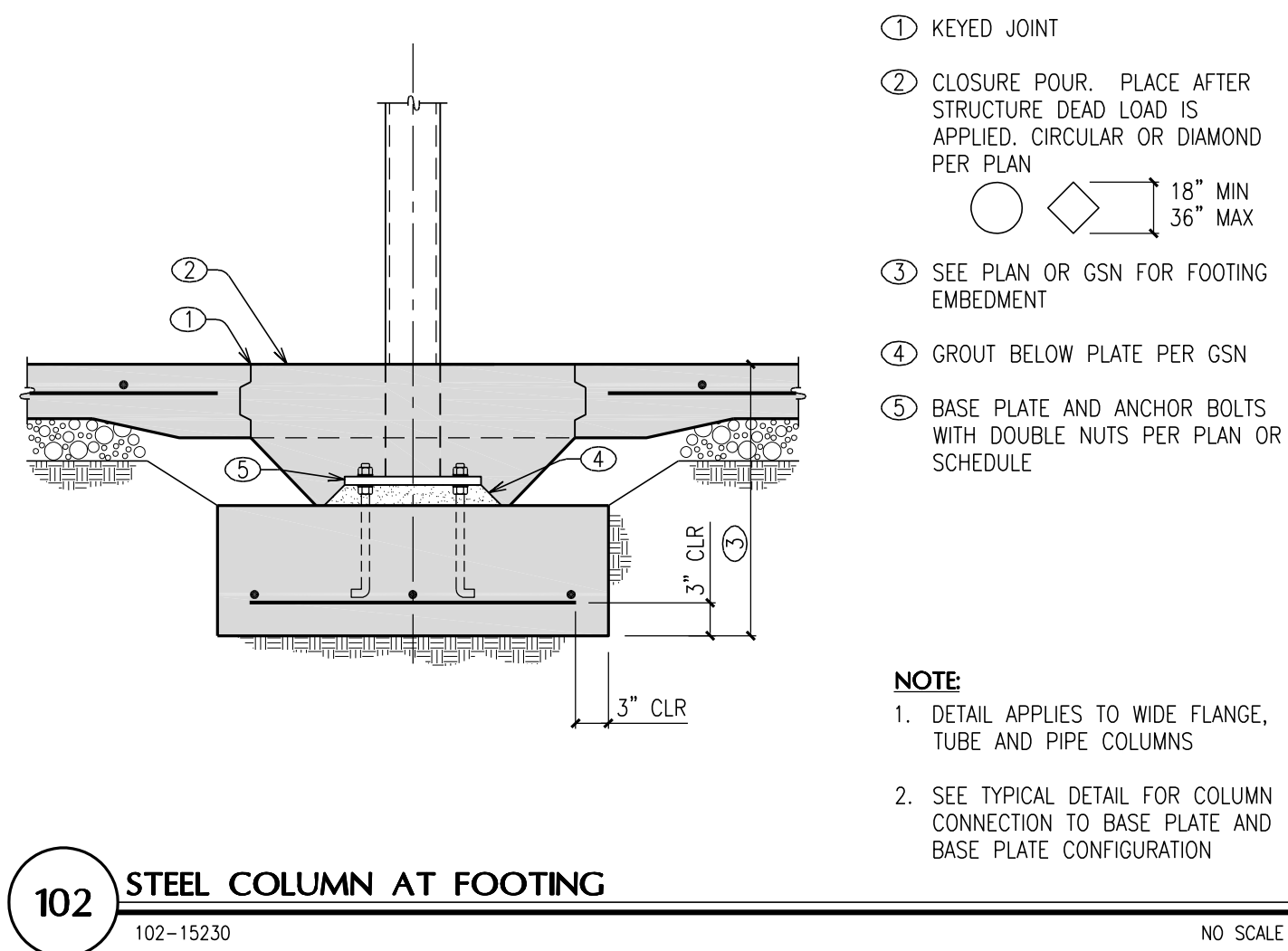
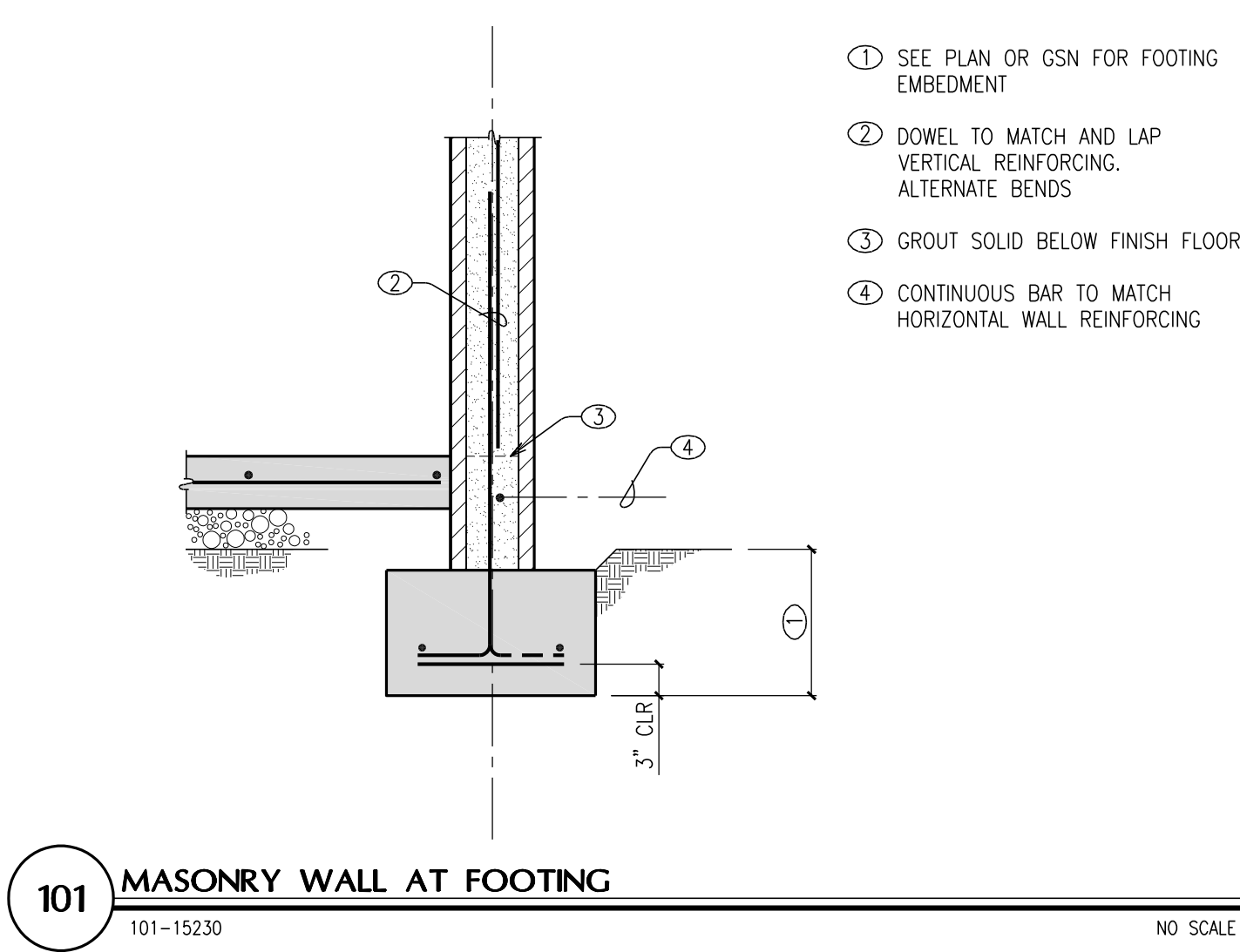
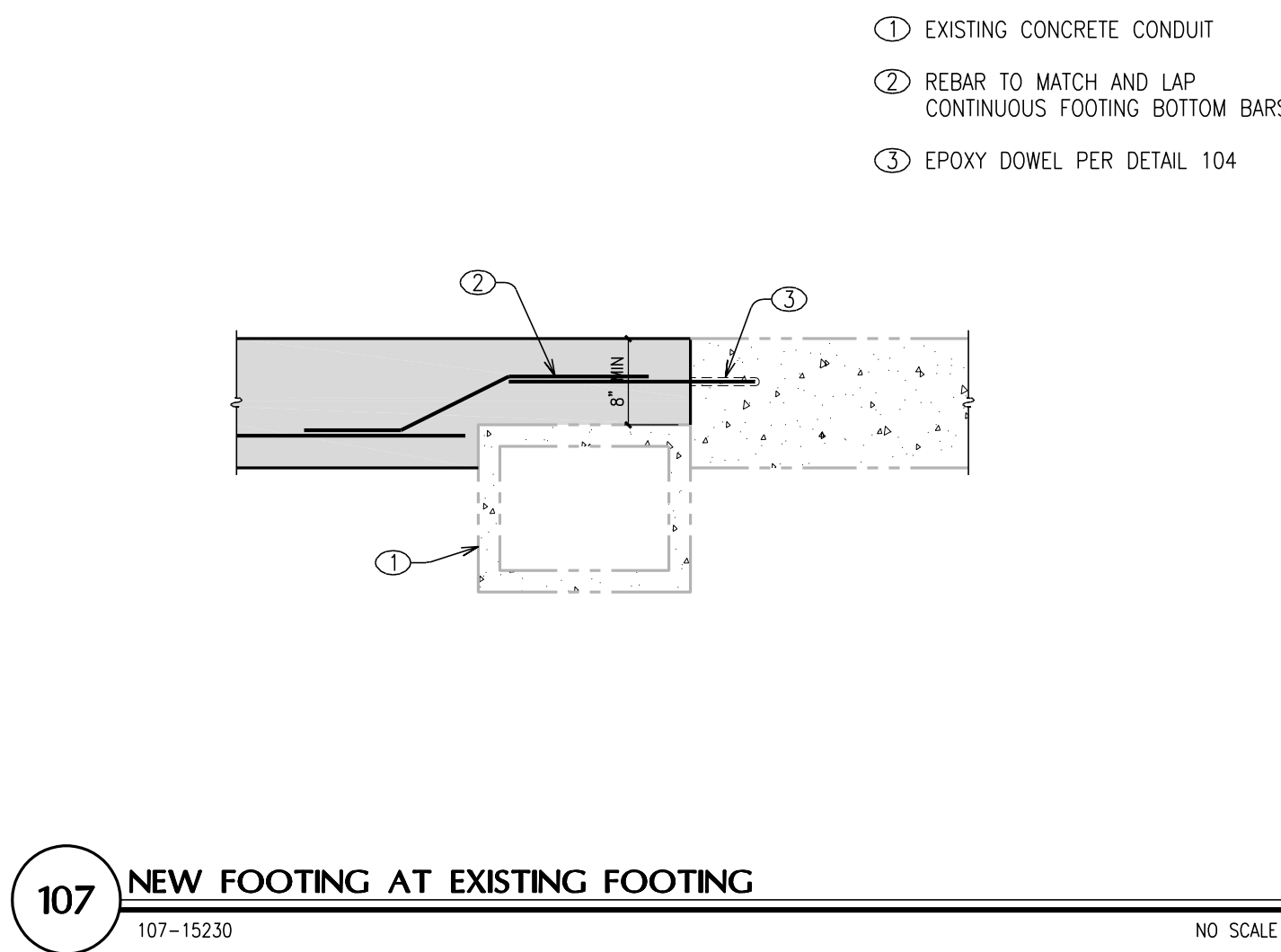
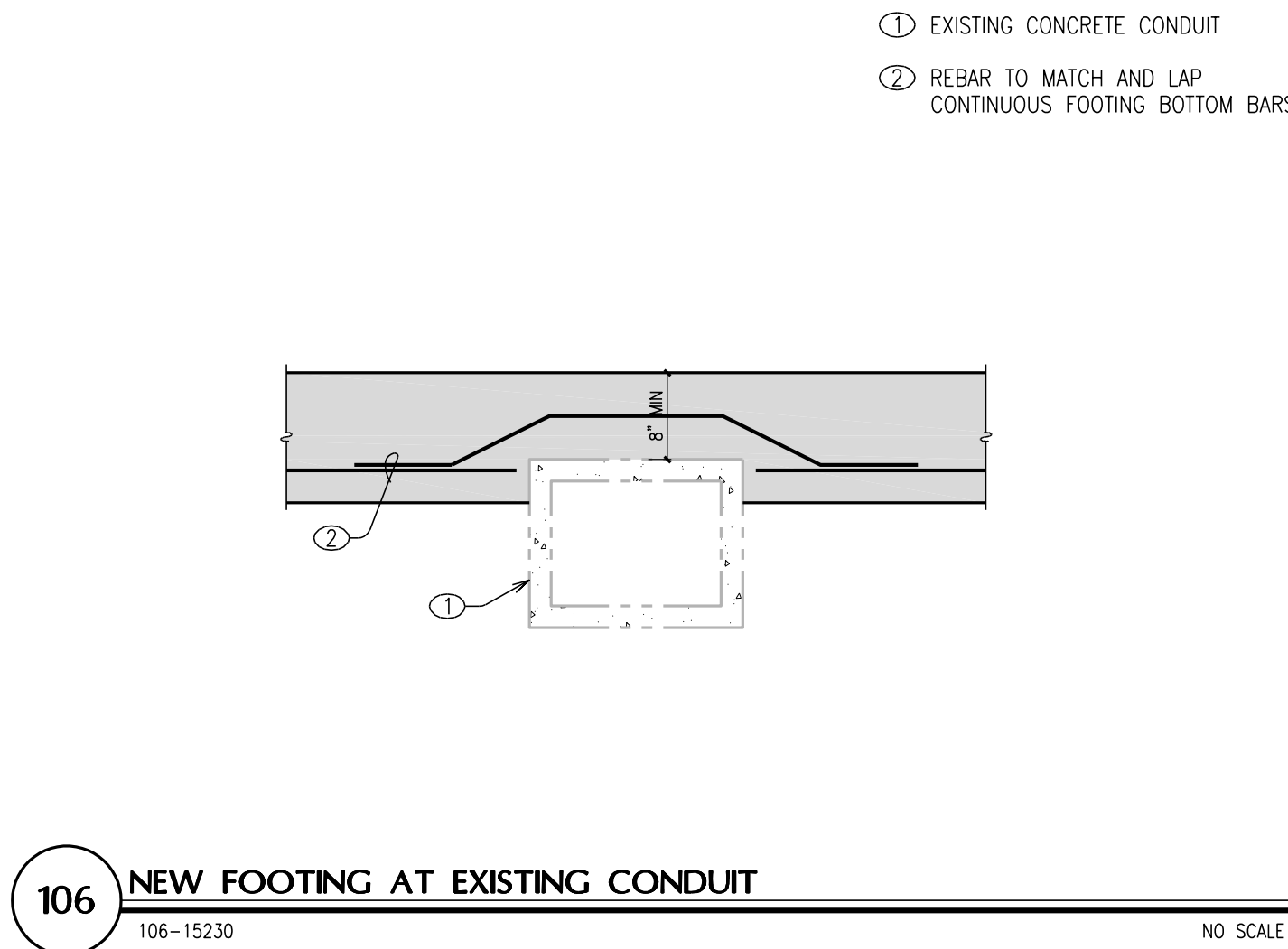
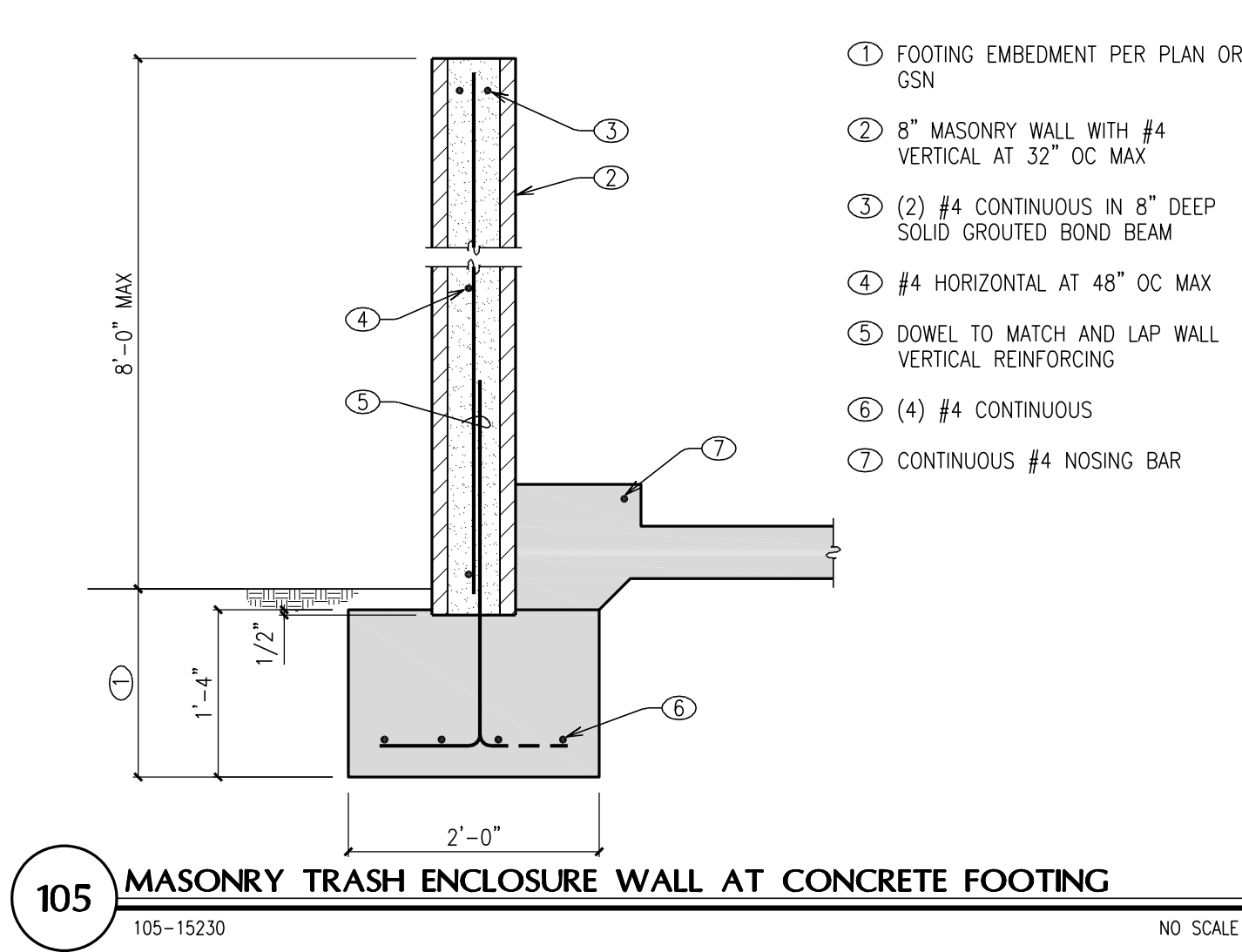
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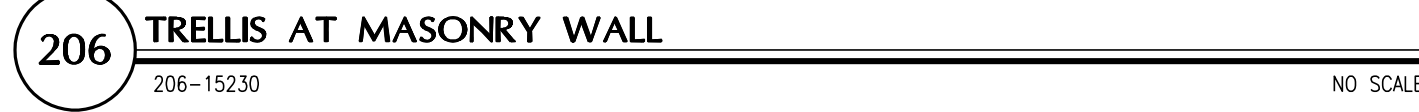
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ELECTRICAL SYMBOL LEGEND	
(THIS IS A MASTER LEGEND, NOT ALL SYMBOLS MAY APPEAR ON DRAWINGS.)	
SYMBOL	DESCRIPTION
	SHEET NOTE
	REVISION NUMBER
	FLUORESCENT FIXTURE
	FLUORESCENT FIXTURE WITH (1) LAMP ON EMERGENCY
	FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT OR INTEGRAL BATTERY BACK-UP
	LETTER INDICATES LIGHT FIXTURE TYPE AS INDICATED ON FIXTURE SCHEDULE
	FLUORESCENT FIXTURE
	FLUORESCENT FIXTURE
	FLUORESCENT FIXTURE
	FLUORESCENT FIXTURE
	EMERGENCY BATTERY LIGHTING UNIT WITH TWIN HEADS
	WALL MOUNTED FIXTURE
	EXIT LIGHT WITH DIRECTIONAL ARROWS AS INDICATED CEILING MOUNTED
	EXIT LIGHT WITH DIRECTIONAL ARROWS AS INDICATED WALL MOUNTED
	DOUBLE FACE EXIT LIGHT WITH DIRECTIONAL ARROWS AS INDICATED CEILING MOUNTED
	SINGLE POLE SWITCH AT +48" UNLESS NOTED
	DUAL SWITCH AT +48" UNLESS NOTED
	3-WAY POLE SWITCH AT +48" UNLESS NOTED
	4-WAY POLE SWITCH AT +48" UNLESS NOTED
	DIMMER SWITCH - SOLID STATE TYPE AT +48" UNLESS NOTED
	SWITCH WITH MOTION SENSOR
	DUAL SWITCH WITH MOTION SENSOR
	CEILING MOUNTED MOTION SENSOR
	DAYLIGHT OR MOTION SENSOR (INDOORS)
	DIMMING MODULE
	SWITCHING MODULE
	DUPLEX RECEPTACLE AT +18" UNLESS NOTED
	GFCI RECEPTACLE AT +48" UNLESS NOTED
	CEILING MOUNTED DUPLEX RECEPTACLE
	JUNCTION BOX
	NON-FUSED DISCONNECT SWITCH - 30A, 3P UNLESS NOTED OTHERWISE
	FUSED DISCONNECT SWITCH - 30A, 3P WITH 30A FUSES UNLESS NOTED OTHERWISE
	MAGNETIC MOTOR STARTER - FVNR, NEMA SIZE #1 (UNLESS NOTED OTHERWISE) WITH HOA, RED RUN PILOT LIGHT, CONTROL XFMR, SOLID STATE OVERLOADS, (2) NO AND (2) NC CONTACTS
	COMBINATION FUSED SWITCH AND STARTER AS NOTED ABOVE
	COMBINATION NON-FUSED SWITCH AND STARTER AS NOTED ABOVE
	POWER SUPPLY
	THERMOSTAT OUTLET AT +44" UNLESS NOTED
	SURFACE MOUNTED PANELBOARD
	FLUSH MOUNTED PANELBOARD
	MAIN SWITCHBOARD, MOTOR CONTROL CENTER OR DISTRIBUTION BOARD
	TRANSFORMER
	HOMERUN CONDUIT - STROKES INDICATE QUANTITY OF CONDUCTORS
	CONDUIT AND/OR WIRE CONCEALED IN WALL OR ABOVE CEILING EXCEPT IN EXPOSED STRUCTURE AREAS
	CONDUIT AND/OR WIRE BELOW FLOOR OR GRADE
	EXISTING CONDUIT AND/OR WIRE TO BE REMOVED
	EXISTING CONDUIT AND/OR WIRE TO REMAIN (SHOWN LIGHT LINEWEIGHT)
	CONDUIT STUB-OUT
	CONDUIT AND/OR WIRE RISER UP/RISER DOWN
	1/2"-2 #12 & 1 #12 GRND THWN UNLESS NOTED
	1/2"-3 #12 & 1 #12 GRND THWN UNLESS NOTED
	1/2"-4 #12 & 1 #12 GRND THWN UNLESS NOTED
	1/2"-5 #12 & 1 #12 GRND THWN UNLESS NOTED
	3/4"-6 #10 & 1 #10 GRND THWN UNLESS NOTED
	CIRCUIT BREAKER
	FUSIBLE SWITCH
	MECHANICAL EQUIPMENT - SEE HVAC AND PLUMBING DRAWINGS
	PLAN/RISER
	SHEET
	PLAN
	SHEET
	MECHANICAL EQUIPMENT TYPE
	MECHANICAL EQUIPMENT NUMBER
	E = EXISTING

ELECTRICAL GENERAL NOTES

1. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK.
2. REFER TO ARCHITECTURAL DEMOLITION DRAWINGS FOR LOCATION AND EXTENT OF DEMOLITION REQUIRED. CONTRACTOR SHALL VISIT SITE PRIOR TO BID TO DETERMINE EXTENT OF WORK INVOLVED. PROVIDE LABOR AND MATERIALS AS REQUIRED TO MAINTAIN AND/OR RESTORE CONTINUITY OF SERVICE TO EXISTING CIRCUITS.
3. CONTRACTOR SHALL PROVIDE ALL NECESSARY DEMOLITION TO REMOVE EXISTING UNUSED CONDUIT, WIRE, CABLE, JUNCTION BOXES, RECEPTACLES, SWITCHES, LIGHTS, ETC COMPLETE WITH ASSOCIATED CIRCUITING TO SOURCE.
4. SYSTEM OUTAGES SHALL BE PERMITTED ONLY AT TIMES APPROVED BY OWNER, IN WRITING. WORK WHICH COULD RESULT IN AN ACCIDENTAL OUTAGE (BEYOND BRANCH CIRCUITS) SHALL BE PERFORMED WITH THE OWNER'S MAINTENANCE PERSONNEL ADVISED OF SUCH WORK.
5. PRIOR TO COMMENCEMENT OF ROUGH-IN WORK, COORDINATE WITH ARCHITECT, DRAWING NOTES, ELEVATIONS, SECTIONS, SPECIFICATIONS, FURNITURE, FIXTURES, AND EQUIPMENT FOR ALL RECEPTACLE AND COMMUNICATION DEVICE MOUNTING HEIGHT AND MOUNTING LOCATION.
6. ALL 125V, SINGLE PHASE, 15 AND 20 AMP RECEPTACLE OUTLETS THAT ARE USED AS TEMPORARY POWER DURING CONSTRUCTION SHALL HAVE GFCI PROTECTION.
7. PROVIDE EQUIPMENT BONDING JUMPER GROUND CONNECTION IN ALL BOXES, ENCLOSURES, ETC, FROM THE EQUIPMENT GROUNDING CONDUCTOR.
8. ALL EMPTY RACEWAY SYSTEMS SHALL HAVE A #12 PULLWIRE OR EQUAL AND SHALL BE IDENTIFIED AT ALL JUNCTIONS, PULL AND TERMINATION POINTS, USING PERMANENT METALLIC TAGS. TAG SHALL INDICATE INTENDED USE OF CONDUIT, ORIGINATION AND TERMINATION POINTS OF EACH INDIVIDUAL CONDUIT.
9. CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL LIGHT FIXTURES TO ENSURE THAT THE LIGHT FIXTURES DO NOT INTERFERE WITH ANY STRUCTURAL, MECHANICAL, OR PLUMBING COMPONENTS AND EQUIPMENT. COORDINATE RELOCATION OF ANY LIGHT FIXTURE DUE TO INTERFERENCES WITH STRUCTURAL, MECHANICAL, OR PLUMBING COMPONENTS AND EQUIPMENT.
10. FIXTURES RECESSED IN "T-BAR" CEILING SHALL BE SUPPORTED INDEPENDENTLY OF CEILING SYSTEM, WITH TWO #12 HANGER WIRES UP TO STRUCTURE. SECURE HANGER WIRES TO OPPOSITE CORNERS OF FIXTURE. CLIP FIXTURE TO GRID ON TWO SIDES WITH FACTORY-FURNISHED CLIPS. FINAL CONNECTION TO FIXTURE SHALL BE MADE WITH A FLEXIBLE UL APPROVED ASSEMBLY.
11. CONDUITS PENETRATING THROUGH ROOF SHALL HAVE ROOF FLASHING WITH CAULK TYPE COUNTER FLASHING SLEEVE. INSTALLATION SHALL BE WATERTIGHT. CONDUITS SHALL NOT BE RUN HORIZONTALLY ON THE ROOF. PENETRATIONS SHALL BE AT EQUIPMENT LOCATIONS ONLY AND SHALL BE COORDINATED WITH MECHANICAL EQUIPMENT.
12. FINAL CONNECTIONS TO MOTORS, TRANSFORMERS AND OTHER VIBRATING EQUIPMENT SHALL BE WITH FLEXIBLE METAL CONDUIT (INDOORS) OR LIQUIDTIGHT FLEXIBLE METAL CONDUIT (OUTDOORS) AND APPROVED FITTINGS. DO NOT SECURE CONDUITS, DISCONNECTS OR DEVICES TO DUCTWORK OR MECHANICAL EQUIPMENT.
13. WIRE TERMINATION PROVISIONS FOR PANELBOARDS, CIRCUIT BREAKERS, SAFETY SWITCHES, AND ALL OTHER ELECTRICAL APPARATUS SHALL BE LISTED AS SUITABLE FOR 75°C.
14. CONTRACTOR SHALL PROVIDE A VOLTAGE BARRIER IN BOXES CONTAINING MULTIPLE SWITCHES WITH A VOLTAGE POTENTIAL OF 300V OR GREATER.
15. REFER TO MECHANICAL CONTROL DIAGRAMS FOR ADDITIONAL WIRING REQUIREMENTS. PROVIDE ALL RACEWAYS, WIRING, CONTROL SWITCHES, ETC AS REQUIRED.

SHEET INDEX										
ISSUE										
				2018-02-15 RECORD DRAWINGS						
					SHEET NUMBER	SHEET DESCRIPTION				
					• E0.00	COVER SHEET				
					• E0.01	IECC AND FIXTURE SCHEDULES				
					• ES1.10	SITE PLAN				
					• ED1.10	DEMOLITION ELECTRICAL ROOF PLAN				
					• ED2.10	DEMOLITION LIGHTING PLAN				
					• ED3.10	DEMOLITION POWER PLAN				
					• E1.10	ELECTRICAL ROOF PLAN				
					• E2.10	LIGHTING PLAN				
					• E2.11	LIGHTING PHOTOMETRIC PLAN				
					• E3.10	POWER PLAN				
					• E4.00	ENLARGED ELECTRICAL PLANS				
					• E5.00	SINGLE LINE DIAGRAM				
					• E7.00	PANEL SCHEDULES				

ELECTRICAL ABBREVIATION LIST	
(THIS IS A MASTER LIST, NOT ALL ABBREVIATIONS MAY APPEAR ON DRAWINGS.)	
+18"	MOUNTING HEIGHTS ARE TO CENTERLINE OF DEVICE ABOVE FINISH FLOOR OR FINISH GRADE
A	AMPERE
AFF	ABOVE FINISH FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
ATS	AUTOMATIC TRANSFER SWITCH
DB	DISTRIBUTION BOARD
E	EXISTING
FLA	FULL LOAD AMPS
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GRND	GROUND
IBC	INTERNATIONAL BUILDING CODE
KW	KILOWATT
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPS
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
NA	NOT APPLICABLE
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NIC	NOT IN CONTRACT
PH(Ø)	PHASE
PNL	PANEL
SNEC	SOUTHERN NEVADA ELECTRICAL CODE AMENDMENTS
SWBD	SWITCHBOARD
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
V	VOLT
VA	VOLT-AMP
VAV	VARIABLE AIR VOLUME
W	WATT
WP	WEATHER-PROOF (NEMA 3R)
XFMR	TRANSFORMER

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COVER SHEET



EO.00

COMcheck Software Version 4.0.2.5

Interior Lighting Compliance Certificate

Project Information

Energy Code:2012 IECC

Project Title:Charleston heights Community Center

Project Type:New Construction

Construction Site:Owner/Agent:Designer/Contractor:

Additional Efficiency Package

Unspecified

A	B	C	D
Area Category	Floor Area (ft2)	Allowed Watts / ft2	Allowed Watts (B X C)
1-Conference area (Common Space Types:Conference / Meeting / Multipurpose)	14114	1.19	16937
Total Allowed Watts =			16937

A	B	C	D	E
Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	Lamps/ Fixture	# of Fixtures	Fixture Watt.	(C X D)
1-Conference area (Common Space Types:Conference / Meeting / Multipurpose)				
LED 1: A: LED 2X4: LED Linear 33W:	1	128	45	5760
LED 2: B: LED 2X4: LED Linear 33W:	1	21	44	924
LED 3: C: LED 1X4: LED Linear 33W:	1	14	29	406
LED 4: D: LED DOWNLIGHT: LED PAR 20W:	1	9	24	216
Track lighting 1: H: LED TRACK HEAD: Wattage based on current limiting device capacity	0	0	800	800
Total Proposed Watts =			8106	

Interior Lighting PASSES: Design 52% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2012 IECC requirements in COMcheck Version 4.0.2.5 and to comply with the mandatory requirements listed in the Inspection Checklist.

Name - TitleSignatureDate

Project Title:Charleston heights Community CenterReport date: 04/29/16

Data filename: J:\15.0821\Docs\Design\E\Calcs\2016-04-29-IECC CALC.cckPage1of6

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.5.1 [F116]†	Furnished as-built drawings for electric power systems within 30 days of system acceptance.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C303.3, C408.2.5.2 [F117]†	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C405.5.2 [F118]†	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	See the Interior Lighting fixture schedule for values.
C408.3 [F133]†	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C406 [F134]†	Efficient HVAC performance, efficient lighting system, or on-site supply of renewable energy consistent with what is shown the approved plans.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	

Additional Comments/Assumptions:

1High Impact (Tier 1)2Medium Impact (Tier 2)3Low Impact (Tier 3)

Project Title:Charleston heights Community CenterReport date: 04/29/16

Data filename: J:\15.0821\Docs\Design\E\Calcs\2016-04-29-IECC CALC.cckPage5of6

COMcheck Software Version 4.0.2.5

Inspection Checklist

Energy Code: 2012 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4]†	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	
C406 [PR9]†	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐ Complies ☐ Does Not ☐ Not Observable ☐ Not Applicable	

Additional Comments/Assumptions:

1High Impact (Tier 1)2Medium Impact (Tier 2)3Low Impact (Tier 3)

Project Title:Charleston heights Community CenterReport date: 04/29/16

Data filename: J:\15.0821\Docs\Design\E\Calcs\2016-04-29-IECC CALC.cckPage2of6

FIXTURE SCHEDULE							
FIXT. TYPE	MANUFACTURER		VOLT AMPS	MOUNTING	LAMP TYPE	REMARKS	VOLT
	NAME	CATALOG NUMBER					
A	METALUX	24CZ-LD4-50-UNV-L835-CD1	45	RECESSED	LED 5000 LUMENS 3500K	LED 2'X4' TROFFER SPECIFICATION GRADE TROFFER	120/277
B	METALUX	24GR-LD4-48-UNV-L835-CD1	44	RECESSED	LED 4800 LUMENS 3500K	LED 2'X4' TROFFER LENSED GRID	120/277
C	METALUX	48CLED-LD4-28SL-F-UNV-L835-CD1-U	29	SURFACE	LED 2800 LUMENS 3500K	LED 1X4 WALL MOUNTED	120/277
D	PORTFOLIO	LD6A-D010TE-ERM6A10-8-35-6LM-1-L1	24	RECESSED	LED 1500 LUMENS 3500K	6" LED DOWNLIGHT	120/277
E	SURE-LITES	CX6-1	5	SURFACE	FURNISHED WITH FIXTURE	DIE CAST SINGLE FACE LED EXIT SIGN ARROWS AND MOUNTING PER DRAWINGS	120/277
F	HALO	PD6-30-ED010-PDM6A-835	35	RECESSED	LED 3000 LUMENS 3500K	6" LED EXTERIOR DOWNLIGHT	120/277
G	CONTECH LIGHTING	LT-28-B	-	SURFACE	-	2 CIRCUIT TRACK 8' LENGTH	120
H	CONTECH LIGHTING	CTL-830-B-LF20	18	TO TRACK	①	LED TRACK HEAD WITH LED LAMP	120
H1	CONTECH LIGHTING	CTL-830-B-LF20	18	TO TRACK	②	LED TRACK HEAD WITH LED LAMP	120

NOTES

① PROVIDE AND INSTALL SORAA LED CAT. NO. SP30L-18-36D-827-03.

② PROVIDE AND INSTALL SORAA LED CAT. NO. SP30L-18-60D-827-03.

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REVISIONS

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- Renovation -

IECC AND FIXTURE SCHEDULES



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DRAWN NLB

FILE

DATE 02/15/2018

SCALE

BID NO 15.59806.JH

CLV DWG NO 620-10B

HANSEN NO 59806

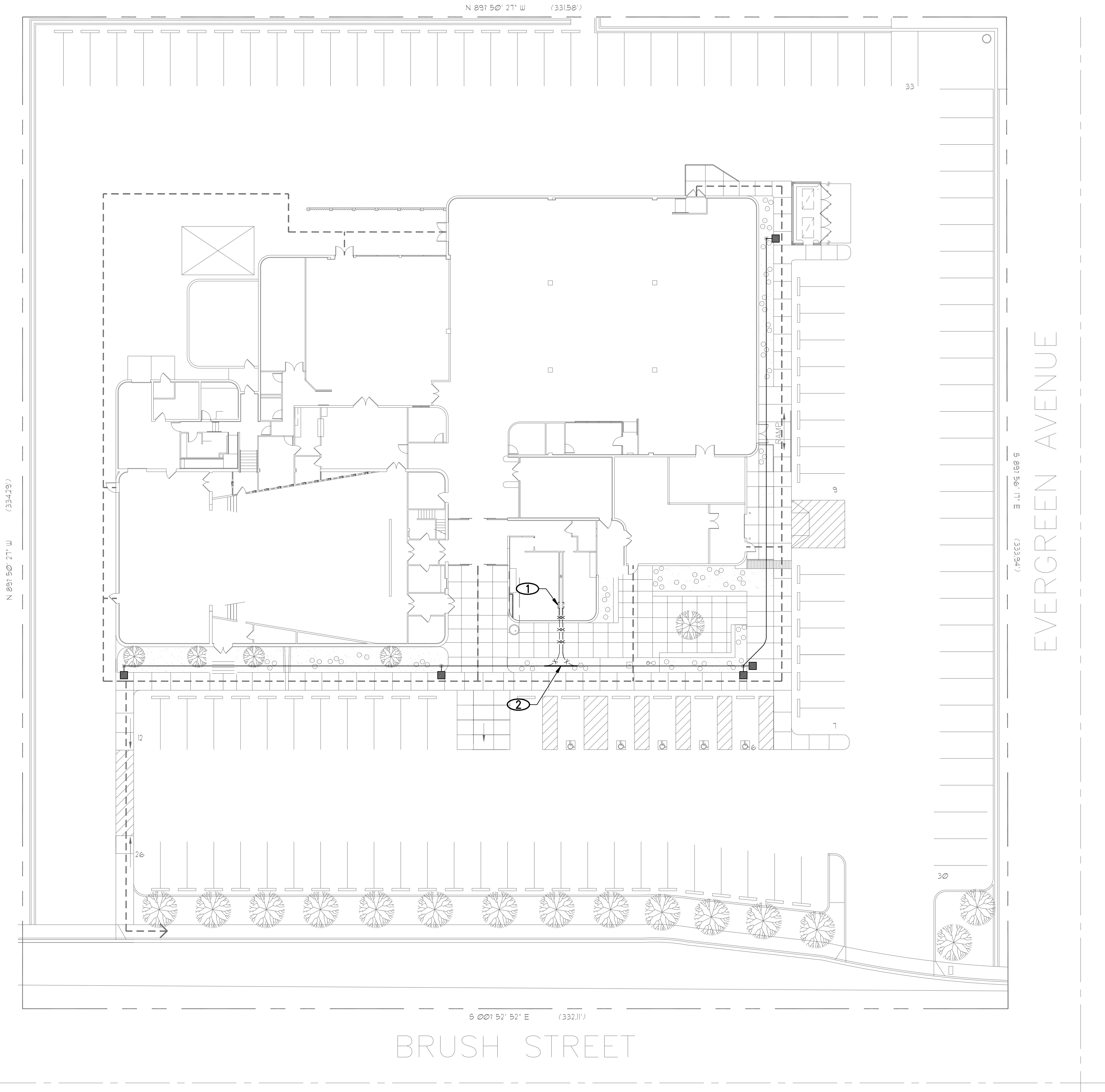
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SITE PLAN

1" = 20' 0"

A

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NOTICE

- EXISTING TO REMAIN SHOWN LIGHT, NEW SHOWN BOLD.

NOTES

- ① FIXTURE AND ASSOCIATED WIRING TO BE REMOVED.
- ② RECONNECT TO MAKE A COMPLETE AND OPERABLE CIRCUIT.



REVISIONS

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- Renovation -

SITE PLAN



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HANSEN NO 59806

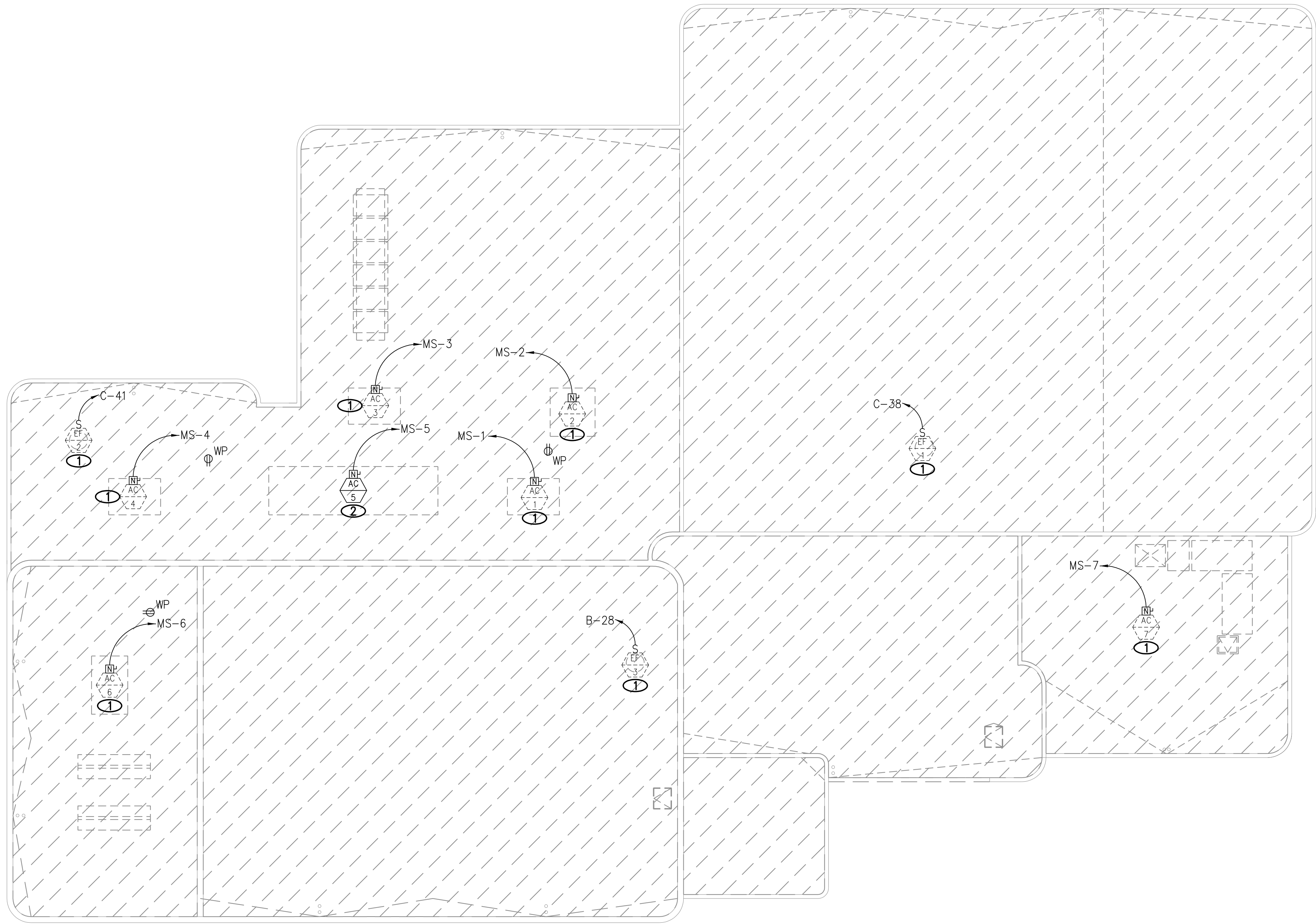
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DEMOLITION ELECTRICAL ROOF PLAN

3/32" = 1'-0"

A

NOTICE

1. EXISTING TO REMAIN SHOWN LIGHT, EXISTING TO BE REMOVED SHOWN LIGHT AND DASHED.

NOTES

- ① DISCONNECT EXISTING HVAC EQUIPMENT FOR REMOVAL.
② EXISTING HVAC UNIT TO REMAIN.

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DEMOLITION ELECTRICAL ROOF PLAN



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DRAWN	NLB
FILE	
DATE	02/15/2018
SCALE	
BID NO	15.59806.JH
CLV DWG NO	620-10B
HANSEN NO	59806

SHT NO

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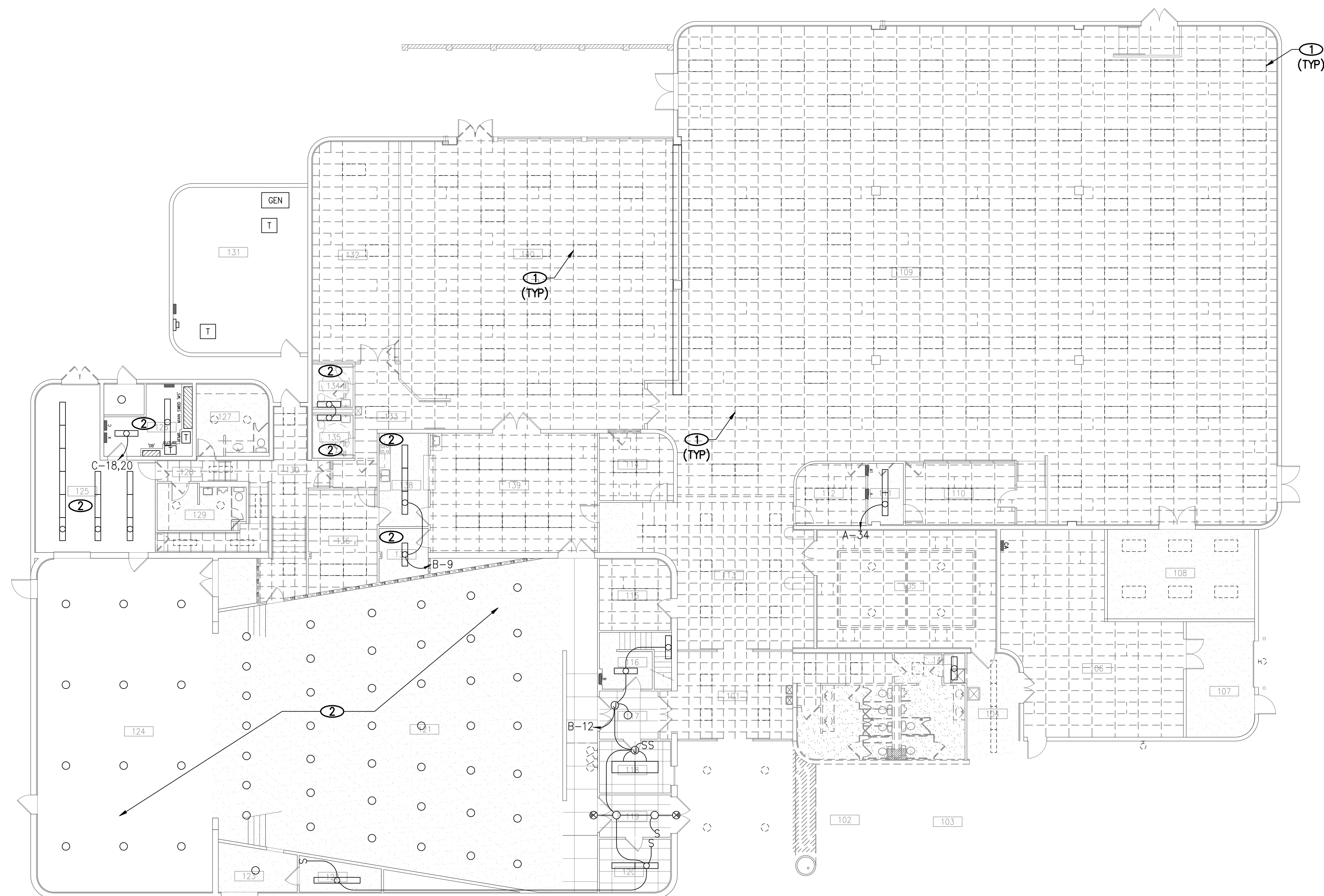
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1. EXISTING TO REMAIN SHOWN LIGHT, EXISTING
TO BE REMOVED SHOWN LIGHT AND DASHED.

- ① DISCONNECT EXISTING LIGHT FIXTURE AND PROPERLY DISPOSE. REMOVE EXISTING CONDUIT, WIRE, BOXES, CONTROL WIRING, BACK TO SOURCES FOR ROOMS 109 AND 140 ONLY.
- ② NO DEMO WORK IN THIS AREA.


$$3/32'' = 1'-0''$$

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OF PUBLIC
Charleston Heights Community Center

DEMOLITION LIGHTING PLAN



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DRAWN	NLB
FILE	
DATE	02/15/2018
SCALE	
BID NO	15.59806.JH
CLV DWG NO	620-10B
HANSEN NO	59806

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#15.0821



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$$3/32'' = 1'-0''$$

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1. EXISTING TO REMAIN SHOWN LIGHT, EXISTING TO BE REMOVED SHOWN LIGHT AND DASHED.

- ① REMOVE EXISTING RELAY PANEL, CONDUIT, WIRE ETC., BACK TO SOURCE.

RECORD DRAWINGS

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DEMOLITION POWER PLAN



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DRAWN NLB

DATE 03/15/2018

010-10

CLV DWG NO 620-10B

59806

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ELECTRICAL ROOF PLAN

3/32" = 1'-0"

A

RECORD DRAWINGS

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NOTES

- EXISTING TO REMAIN SHOWN LIGHT, NEW SHOWN BOLD.

NOTICE



JBA Las Vegas
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P: 702.352.2020

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

333 NORTH RANCHO DRIVE
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PHONE: (702) 239-6535
FAX: (702) 384-4846
TDD: (702) 386-9108

DRAWN	NLB
FILE	
DATE	02/15/2018
SCALE	
BID NO	15.59806.JH
CLV DWG NO	620-10B
HANSEN NO	59806
SHT NO	

E1.10

Charleson Heights Community Center

- Renovation -

ELECTRICAL ROOF PLAN



REVISIONS

ARCHITECT

#15-0621

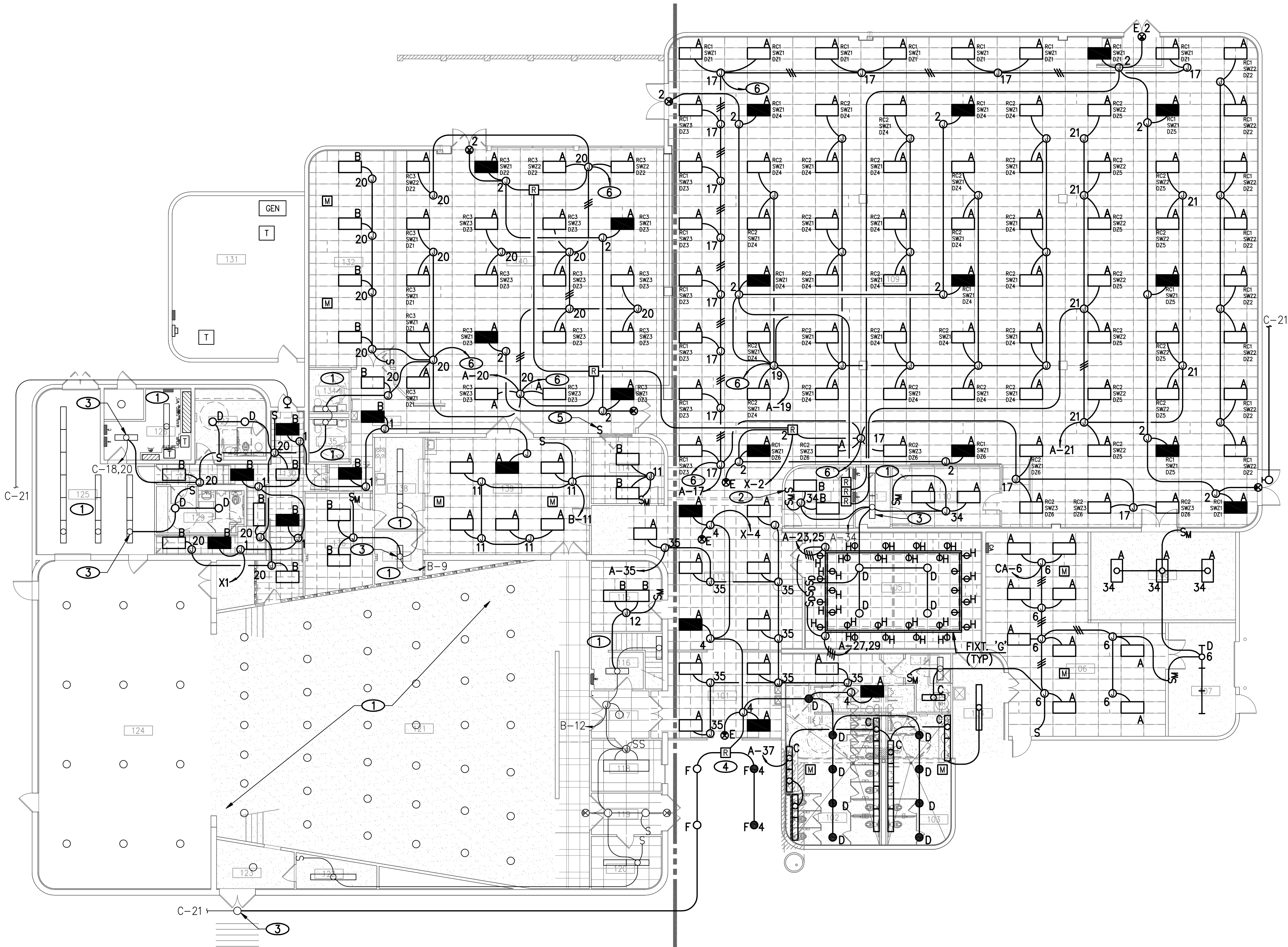
DRAWINGS ARE INSTRUMENTS OF SERVICE AND THE PROPERTY OF THE DESIGN PROFESSIONAL. WHOSE STAMP OF CERTIFICATION APPEARS ON THE DRAWING AND SPECIFICATIONS ANY USE OR REPRODUCTION IN WHOLE OR IN PART WITHOUT WRITTEN CONSENT BY THE CLIENT MAY BE UTILIZED ONLY FOR OCCUPYING THE PROJECT FOR WHICH THEY WERE PREPARED AND NOT FOR THE CONSTRUCTION OF ANY OTHER PROJECT. N.A.C. 632.390

NOTICE

1. EXISTING TO REMAIN SHOWN LIGHT, NEW SHOWN BOLD.

NOTES

- ① EXISTING LIGHT FIXTURE THIS AREA TO BE UNCHANGED.
- ② SWITCHING GROUP CONSISTS OF (6) 0-10V SLIDE TYPE DIMMERS.
- ③ INTERCEPT EXISTING CONDUIT AND CIRCUITING. PROVIDE JUNCTION BOX, CONDUCTORS, SPLICE, ETC. AS REQUIRED.
- ④ PROVIDE 20 AMP UL LISTED EMERGENCY TRANSFER RELAY WITH (2) N.O. AND (2) N.C. CONTACTS.
- ⑤ SWITCHING GROUP CONSISTS OF (3) 0-10V SLIDE TYPE DIMMERS.
- ⑥ ROUTE VIA SWITCHING GROUP.
- ⑦ PROVIDE UL 924 EMERGENCY LIGHTING TRANSFER DEVICE. REFER TO DIAGRAM 1/E7.00.



LIGHTING PLAN

3/32" = 1'-0"

A

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REVISIONS

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Charleson Heights Community Center

- Renovation -

LIGHTING PLAN



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DRAWN	NLB
FILE	
DATE	02/15/2018
SCALE	
BID NO	15.59806.JH
CLV DWG NO	620-10B
HANSEN NO	59806
SHT NO	

E2.10

#15.0521



ARCHITECT

Charleston Heights Community Center
- Renovation -



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DRAWN NLB

DATE 02/15/2018

BID NO	15 59806 JH
--------	-------------

CLV DWG NO	620-10B
MANSEN NO	

SHT NO _____

E2.11

1. EXISTING TO REMAIN SHOWN LIGHT, NEW SHOWN BOLD.

① NOT USED.


$$3/32'' = 1'-0''$$

(A)

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ARCHITECT

POWER PLAN



OWNER: CITY OF LAS VEGA
DEPARTMENT OF PUBLIC WORKS

DRAW

DATE 02/15/201

SCALE

CLV DWG NO 620-10B

59806

SHT NO

E3.1C

#15 0821

1. EXISTING TO REMAIN SHOWN LIGHT, NEW SHOWN BOLD.

- ① RECEPTACLE FOR ELECTRIC WATER COOLER. COORDINATE ROUGH-IN REQUIREMENTS WITH THE PLUMBING DRAWINGS.
- ② REMOVE EXISTING CIRCULATION PUMPS, CONDUIT, WIRE BOXES, BACK TO SOURCE.
- ③ INTERCEPT EXISTING CONDUIT AND CIRCUITING, PROVIDE JUNCTION BOX, CONDUCTORS, SPLICE, ETC. AS REQUIRED.

THE PREPARATION OF THIS RECORD DRAWING HAVE BEEN BASED UPON INFORMATION FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, IBA CONSULTING ENGINEERS ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS RECORD DRAWING OR FOR ANY ERRORS OR OMISSIONS THAT MAY HAVE BEEN INCORPORATED INTO IT AS A RESULT OF INCORRECT INFORMATION PROVIDED. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY.


$$3/32'' = 1'-0''$$

(A)



NOTICE

1. EXISTING TO REMAIN SHOWN LIGHT, NEW SHOWN BOLD.

NOTES

- 1 PROVIDE 120V CONNECTION TO RESTROOM FIXTURES. COORDINATE ROUGH-IN AND CONNECTION REQUIREMENTS WITH PLUMBING DRAWINGS.
- 2 CONNECT TO INSTA-HOT WATER HEATER. COORDINATE ROUGH-IN AND CONNECTION REQUIREMENTS WITH PLUMBING DRAWINGS

ENLARGED ELECTRICAL PLAN

1/4" = 1'-0"

A
E4.00

ENLARGED ELECTRICAL PLAN

1/4" = 1'-0"

B
E4.00



REVISIONS

ARCHITECT

Charleson Heights Community Center
- Renovation -

ENLARGED ELECTRICAL PLANS



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DRAWN	NLB
FILE	
DATE	02/15/2018
SCALE	
BID NO	15.59806.JH
CLV DWG NO	620-10B
HANSEN NO	59806

SHT NO

E4.00

RECORD DRAWINGS

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#15.0521

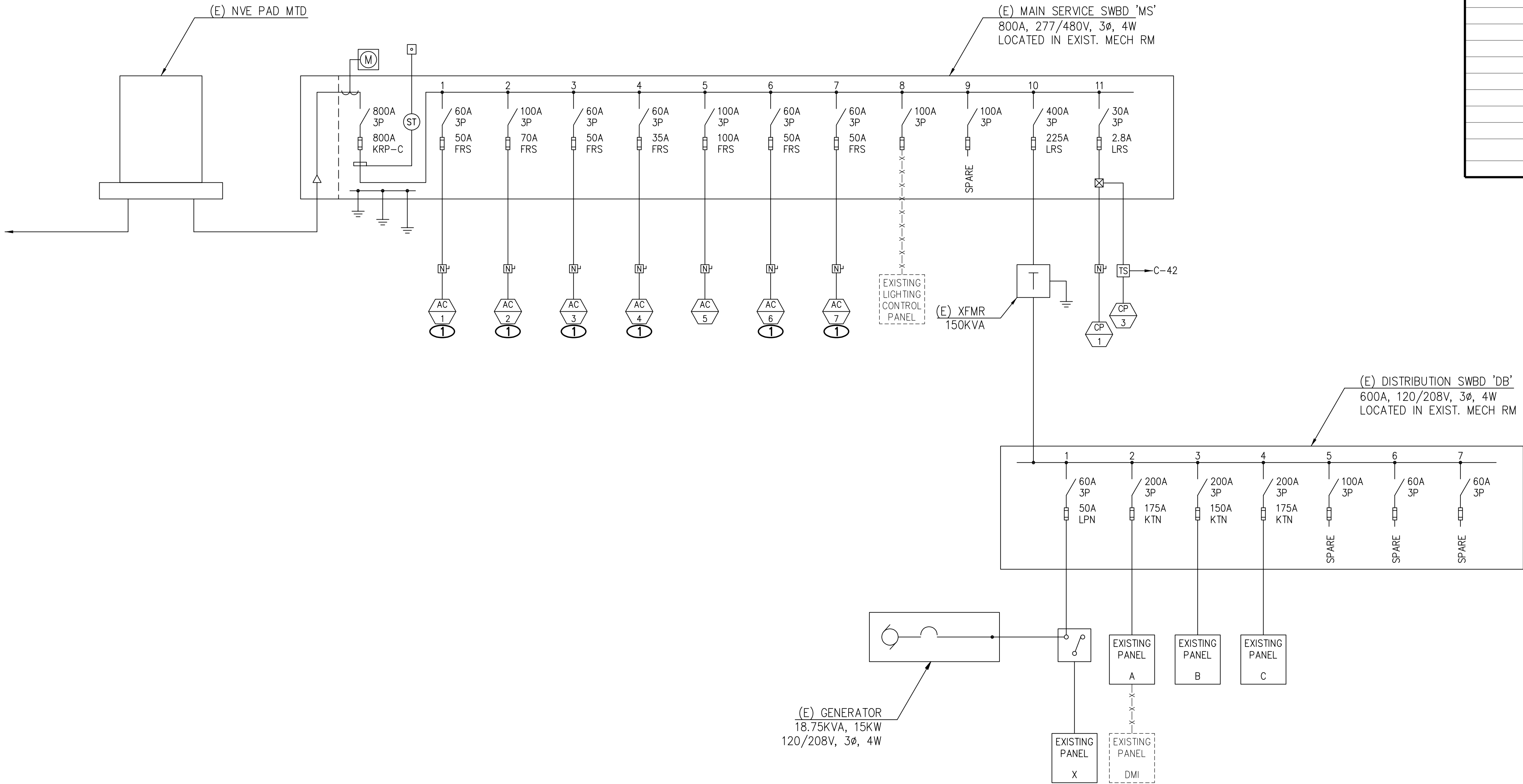
NOTICE

1. EXISTING TO REMAIN SHOWN LIGHT, EXISTING TO BE REMOVED SHOWN LIGHT AND DASHED.

NOTES

① PROVIDE CONNECTION TO NEW HVAC UNIT, UTILIZE EXISTING CIRCUIT PREVIOUSLY UTILIZED. NO NEW LOAD ADDED.

LOAD CALCULATIONS			
SWITCHBOARD 'MS'			
DIST 'DB'	=	129	KVA
TOTAL	=	129	KVA
/480V ,3Ø	=	155	A
DISTRIBUTION BOARD 'DB'			
PANEL 'A'	=	45	KVA
PANEL 'B'	=	33	KVA
PANEL 'C'	=	43	KVA
PANEL 'X'	=	8	KVA
TOTAL	=	129	KVA
/208V ,3Ø	=	358	A



SINGLE LINE DIAGRAM
NO SCALE

1
E5.00

RECORD DRAWINGS

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REVISIONS

ARCHITECT

Charleston Heights Community Center
- Renovation -

SINGLE LINE DIAGRAM



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DRAWN: NLB
FILE:
DATE: 02/15/2018
SCALE:
BID NO: 15.59806.JH
CLV DWG NO: 620-10B
HENSEN NO: 59806
SHT NO:

E5.00

#15-0821

[illegible][illegible]

PANEL: B		VOLTAGE: 208 BUS: 225A	/ 120 3Ø 4W	CIRCUIT CODE: blank or L	N: NON-CONTINUOUS L: LONG-CONTINUOUS																																				
DATE: 4/29/16 11:53 AM		MARKS: L.O.	LOCATION: (E) ROOM 17	K: KITCHEN	R: DEMANDABLE RECEPTACLES																																				
JOB: 15.0821		AIC RATING: 10,000	MOUNTING: FLUSH	NO. OF EQUIPMENT:																																					
LOAD DESIGNATION		C O N N E C T I V A												LOAD DESIGNATION																											
CR	TRIP	(NOTE)	M	R	L	ØA	ØB	ØC	A	B	C	ØA	ØB	ØC	L	R	M	(NOTE)	DESCRIPTION	TRIP	CR	ØA	ØB	ØC	L	R	M	(NOTE)	DESCRIPTION	TRIP	CR	ØA	ØB	ØC	L	R	M	(NOTE)	DESCRIPTION	TRIP	CR
1	20 1	(E) WENDING				1000			*			720							(E) RECEPT	20	1								(E) RECEPT	20	1							(E) RECEPT	20	1	
5	20 1	(E) WENDING					1000							900					(E) RECEPT	20	1								(E) RECEPT	20	1							(E) RECEPT	20	1	
1	20 1	(E) WENDING						1000	*						500				(E) RECEPT	20	1								(E) RECEPT	20	1							(E) RECEPT	20	1	
7	20 1	(E) LIGHTING				1400			*			360							(E) RECEPT	20	1								(E) RECEPT	20	1							(E) RECEPT	20	1	
9	20 1	(E) LIGHTING					1120						540						(E) RECEPT	20	1								(E) OFFICE LTG	20	1							(E) RECEPT	20	1	
11	20 1	(E) LIGHTING						1800	*				1650						(E) RECEPT	20	1								(E) RECEPT	20	1							(E) RECEPT	20	1	
13	20 1	(E) LIGHTING				1200						500							(E) RECEPT	20	1								(E) RECEPT	20	1							(E) RECEPT	20	1	
15	20 1	(E) LIGHTING					1500						360						(E) RECEPT	20	1								(E) SPARE	20	1							(E) RECEPT	20	1	
17	20 1	(E) LIGHTING						1200	*				--						(E) SPARE	20	1								(E) SPARE	20	1							(E) SPARE	20	1	
19	20 1	(E) LIGHTING				1200						500							1 RESTROOM SENSORS	20	1								1 RESTROOM SENSORS	20	1							1 RESTROOM SENSORS	20	1	
21	20 1	(E) LIGHTING					1500		*				500						1 RESTROOM SENSORS	20	1								1 RESTROOM SENSORS	20	1							1 RESTROOM SENSORS	20	1	
23	20 1	(E) LIGHTING						1200	*				500						1 RESTROOM SENSORS	20	1								(F) SPRINKLER CONT.	20	1							(F) SPRINKLER CONT.	20	1	
25	20 1	(E) LIGHTING				1200						500							(F) SP-5	20	1								(F) SP-5	20	1							(F) SP-5	20	1	
27	20 1	(E) LIGHTING					1080		*				670						(E) WIR CHILLER	20	1								(E) WIR CHILLER	20	1							(E) WIR CHILLER	20	1	
29	20 1	(E) SP-1						870	*				600						(E) BLOWER	20	1								(E) BLOWER	20	1							(E) BLOWER	20		

[illegible]

—	X	A
—	—	B
—	—	C

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REVISIONS

ARCHITECT

Charleston Heights Community Center
- Renovation -

- Renovation -

PANEL SCHEDULES



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DRAW NL

DATE 02/15/2018

SCALE

15.59806.

620-1

59806

SHT NO

E7.00

(THIS IS A MASTER LIST, NOT ALL ABBREVIATIONS MAY APPEAR ON DRAWINGS.)

AABC	AMERICAN AIR BALANCE COUNCIL	LAT	LEAVING AIR TEMPERATURE
AD	ACCESS DOOR	LBS	POUNDS
ADA	AMERICANS WITH DISABILITIES ACT	LWT	LEAVING WATER TEMPERATURE
AF	AIR FOIL		
AFF	ABOVE FINISH FLOOR	MAT	MIXED AIR TEMPERATURE
AFMS	AIR FLOW MEASURING STATION	MAX	MAXIMUM
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MBH	1000 BRITISH THERMAL UNITS PER HOUR
AHU (AH)	AIR HANDLING UNIT	MCA	MINIMUM CIRCUIT AMPS
AP	ACCESS PANEL	MCC	MOTOR CONTROL CENTER
APD	AIR PRESSURE DROP	MERV	MINIMUM EFFICIENCY REPORTING VALUE
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	MIN	MINIMUM
		MOCP	MAXIMUM OVER CURRENT PROTECTION
AUTO	AUTOMATIC		
		NA	NOT APPLICABLE
B	BOILER	NC	NORMALLY CLOSED
BAS	BUILDING AUTOMATION SYSTEM	NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU
BHP	BRAKE HORSE POWER		
BI	BACKWARD INCLINED	NEC	NATIONAL ELECTRICAL CODE
BMS	BUILDING MANAGEMENT SYSTEM	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
BTU	BRITISH THERMAL UNIT	NIC	NOT IN CONTRACT
		NO	NORMALLY OPEN
°C	DEGREES CELSIUS	NPSHA	NET POSITIVE SUCTION HEAD AVAILABLE
CBC	CALIFORNIA BUILDING CODE	NPSHR	NET POSITIVE SUCTION HEAD REQUIRED
CFH	CUBIC FEET PER HOUR		
CFM	CUBIC FEET PER MINUTE	OED	OPEN END DUCT
CH	CHILLER	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CHWP	CHILLED WATER PUMP		
CMC	CALIFORNIA MECHANICAL CODE	OPA	OSHPD PRE-APPROVAL OF ANCHORAGE
CO	CARBON MONOXIDE	OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
CO2	CARBON DIOXIDE		
COP	COEFFICIENT OF PERFORMANCE	OSP	OSHPD SPECIAL SEISMIC CERTIFICATION
CPC	CALIFORNIA PLUMBING CODE		PRE-APPROVAL
CT	COOLING TOWER		
CU	CONDENSING UNIT	P	PUMP
CV	CONSTANT VOLUME	PCF	POUND PER CUBIC FOOT
CWP	CONDENSER WATER PUMP	PCU	POLLUTION CONTROL UNIT
		PD	PRESSURE DROP
DB	DRY BULB TEMPERATURE	PH	PHASE
dB	DECIBEL	PPM	PARTS PER MILLION
DC	DIRECT CURRENT	PRV	PRESSURE REDUCING VALVE
DDC	DIRECT DIGITAL CONTROL	PSI	POUND PER SQUARE INCH
DDCFP	DIRECT DIGITAL CONTROL FIELD PANEL	PSIA	POUND PER SQUARE INCH ABSOLUTE
DIA (ϕ)	DIAMETER	PSIG	POUND PER SQUARE INCH GAUGE
DN	DOWN	PTAC	PACKAGED THROUGH THE WALL AIR CONDITIONER UNIT
DP	DIFFERENTIAL PRESSURE		
DS	DUCT SUMP	PTHP	PACKAGED THROUGH THE WALL HEAT PUMP UNIT
DX	DIRECT EXPANSION		
E	EXISTING	REFR	REFRIGERANT
EAT	ENTERING AIR TEMPERATURE	RH	RELATIVE HUMIDITY
EC	EVAPORATIVE COOLER	RPM	REVOLUTIONS PER MINUTE
EER	ENERGY EFFICIENCY RATIO	RTU	ROOFTOP UNIT
EF	EXHAUST FAN		
EFF	EFFICIENCY	SD	SMOKE DAMPER
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM	SEER	SEASONAL ENERGY EFFICIENCY RATIO
ESP	EXTERNAL STATIC PRESSURE	SEF	SMOKE EXHAUST FAN
ET	EXPANSION TANK	SF	SUPPLY FAN
EWT	ENTERING WATER TEMPERATURE	SH	STATIC HEAD
		SP	STATIC PRESSURE
°F	DEGREES FAHRENHEIT	SQ FT (ϕ)	SQUARE FEET
FCU (FC)	FAN COIL UNIT		
FLA	FULL LOAD AMPS	TAB	TESTING AND BALANCING
FM	FLOW METER	TCP	TEMPERATURE CONTROL PANEL
FPM	FEET PER MINUTE	TD	TEMPERATURE DIFFERENCE
FPS	FEET PER SECOND	TDH	TOTAL DEVELOPED HEAD
FT	FEET	TEL	TOTAL EQUIVALENT LENGTH
		TEMP (T)	TEMPERATURE
GA	GAUGE	TF	TRANSFER FAN
GAL	GALLONS	TSP	TOTAL STATIC PRESSURE
GBS	GALVANIZED BIRD SCREEN	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UH	UNIT HEATER
		UMC	UNIFORM MECHANICAL CODE
H	HEIGHT	UNO	UNLESS NOTED OTHERWISE
HD	HEAD	UPC	UNIFORM PLUMBING CODE
HOA	HAND OFF AUTO	UV	ULTRA VIOLET
HP	HORSE POWER		
HR	HOUR	V	VOLT
HWP	HOT WATER PUMP	VAV	VARIABLE AIR VOLUME
HX	HEAT EXCHANGER	VD	VOLUME DAMPER (MANUAL)
HZ	HERTZ	VEL	VELOCITY
		VFD	VARIABLE FREQUENCY DRIVE
IBC	INTERNATIONAL BUILDING CODE	W	WATT, WIDTH
IFC	INTERNATIONAL FIRE CODE	WB	WET BULB TEMPERATURE
IH	INTAKE HOOD	WC	WATER COLUMN
IMC	INTERNATIONAL MECHANICAL CODE	WG	WATER GAUGE
IN	INCH	WMS	WIRE MESH SCREEN
IPC	INTERNATIONAL PLUMBING CODE	WP	WATER PRESSURE
		WPD	WATER PRESSURE DROP
KW	KILOWATT	WSHP (WHP)	WATER SOURCE HEAT PUMP
		WT	WEIGHT
L	LENGTH		

(THIS IS A MASTER LEGEND, NOT ALL SYMBOLS MAY APPEAR ON DRAWINGS.)

ABBR	SYMBOL	SHEET NOTE
		REVISION NUMBER
	--/-- --ø	RECTANGULAR DUCTWORK (IN) – ROUND DUCTWORK (IN)
SA		SUPPLY AIR DUCT UP/DOWN
RA		RETURN AIR DUCT UP/DOWN
EA		EXHAUST AIR DUCT UP/DOWN
OA		OUTSIDE AIR DUCT UP/DOWN
		SUPPLY, RETURN, EXHAUST – DIFFUSER, GRILLE, OR REGISTER
		LINEAR SLOT DIFFUSER, GRILLE OR REGISTER
		SIDEWALL SLOT DIFFUSER, GRILLE OR REGISTER
		AIR FLOW DIRECTION ARROW
		SINGLE LINE RIGID DUCT/WITH ACOUSTICAL LINER
		DOUBLE LINE RIGID DUCT/WITH ACOUSTICAL LINER
		SINGLE/DOUBLE LINE RADIUS DUCT ELBOW
		SINGLE/DOUBLE LINE MITERED DUCT ELBOW
		DOUBLE LINE DUCT TRANSITION
FSD		DAMPERS – FIRE, SMOKE, AND COMBINATION FIRE/SMOKE
MD, BDD		DAMPERS – MOTORIZED AND BACKDRAFT
MVD		DAMPERS – MANUAL AND MANUAL WITH REMOTE OPERATION
DD		DUCT MOUNTED SMOKE DETECTOR
CHS/R		CHILLED WATER – SUPPLY AND RETURN
HS/R		HOT WATER – SUPPLY AND RETURN
D		DRAIN
ICW		INDUSTRIAL COLD WATER
CS/R		CONDENSER WATER – SUPPLY AND RETURN
LPS/R		LOW PRESSURE STEAM – SUPPLY AND RETURN
HPS/R		HIGH PRESSURE STEAM – SUPPLY AND RETURN
RL/S		REFRIGERANT – LIQUID AND SUCTION
PD		PUMPED DRAIN
S/R		HYDRONIC LOOP – SUPPLY AND RETURN
CV		CONTROL VALVE (2-WAY, 3-WAY)
PCV		PNEUMATIC CONTROL VALVE (2-WAY, 3-WAY)
GV, SOV		GATE VALVE/SHUT-OFF VALVE
BV		THROTTLING VALVE
TV		BALANCING VALVE
CV		CHECK VALVE
PRV		PRESSURE REDUCING VALVE
RV		RELIEF VALVE
		STRAINER WITH BLOW-DOWN VALVE
FPC		FLEXIBLE PIPE CONNECTION
		UNION
AV		AIR VENT
		DUCT OR PIPE SINGLE LINE TRANSITION
PG		PRESSURE GAUGE
TH		THERMOMETER
TW		TEST WELL (PETE'S PLUG)
		FLOW SWITCH
		PIPE DOWN AND PIPE TEE DOWN
		PIPE UP AND PIPE TEE UP
		PIPE CAP
		ANCHOR
		GUIDE
		FLOW ARROW
		THERMOSTAT
		HUMIDISTAT
		SPACE TEMPERATURE SENSOR WITH PLUG-IN PORT
		OCCUPANCY SENSOR
		CARBON DIOXIDE SENSOR
		CARBON MONOXIDE SENSOR
POC		POINT OF CONNECTION TO EXISTING
POD		POINT OF DISCONNECTION FROM EXISTING
		ITEM TO BE REMOVED

← EQUIPMENT TYPE
 ← EQUIPMENT NUMBER
 ← CFM/GPM, E = EXISTING

← PLAN/RISER TYPE
 ← SHEET/RISER NUMBER

← SUPPLY DIFFUSER TAG, E = EXISTING
 ← CFM/DIRECTION
 ← RETURN/EXHAUST GRILLE TAG, E = EXISTING
 ← CFM/DIRECTION

← AHU EQUIPMENT NUMBER
 ← TERMINAL BOX TAG
 ← CFM/GPM

ISSUE

[illegible]

THIS PROJECT INVOLVES CONSTRUCTION INSIDE AN EXISTING STRUCTURE. CONTRACTORS, BY SUBMITTING A BID ARE DEEMED TO BE COMPLETELY FAMILIAR WITH THE EXISTING CONDITIONS OF THE BUILDING AS IT INFLUENCES THE WORK DESCRIBED. NO CLAIMS FOR EXTRA COMPENSATION WILL BE CONSIDERED FOR EXISTING CONDITIONS VISIBLE OR REASONABLY INFERRABLE FROM A CAREFUL EXAMINATION OF THE EXISTING BUILDING CONDITIONS.

CONTRACTOR SHALL INSPECT THE EXISTING FIELD CONDITIONS AT THE SITE (INCLUDING BUT NOT LIMITED TO SIZES, INVERTS AND POINTS OF CONNECTION) AND THE CONTRACT DOCUMENTS PRIOR TO THE START OF ANY WORK TO DETERMINE WHAT EFFECT THE EXISTING CONDITIONS WILL HAVE ON THE WORK POTENTIAL. CONTRACTOR SHALL REPORT DISCREPANCIES TO THE ARCHITECT AND INCLUDE IN HIS BID ALL COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.



REVISIONS

ARCHITECT

Charleston Heights Community Center
- Renovation -

COVER SHEET



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TDD: (702) 386-9108

DRAWN DATE 02/12/2002

SCALE

CLV DWG NO 620 10B

Hansen NO

SHT NO. _____

140000

RECORD DRAWINGS

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MECHANICAL GENERAL NOTES			
1.	DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK.	19.	EQUIPMENT START-UP SHALL BE BY MANUFACTURER'S AUTHORIZED REPRESENTATIVE.
2.	EXISTING DUCTWORK, PIPING AND EQUIPMENT TO REMAIN IS SHOWN LIGHT. NEW DUCTWORK, PIPING AND EQUIPMENT IS SHOWN HEAVY. EXISTING DUCTWORK, PIPING AND EQUIPMENT TO BE REMOVED IS SHOWN CROSSHATCHED.	20.	SEISMIC RESTRAINTS SHALL BE PROVIDED PER THE LATEST ADOPTED EDITION OF THE APPLICABLE STATE BUILDING CODE AND THE SMACNA SEISMIC RESTRAINT MANUAL, GUIDELINES FOR MECHANICAL SYSTEMS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE PROPOSED RESTRAINTS, STRUCTURAL ATTACHMENT METHODS AND RESTRAINT LOCATIONS TO THE ARCHITECT FOR REVIEW AND APPROVAL. THE SUBMITTED DOCUMENTS SHALL BE PREPARED AND STAMPED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF NEVADA.
3.	ARCHITECTURAL DRAWINGS SHALL BE REVIEWED FOR PROJECT SCOPE AND AREA OF WORK. WORK SHALL INCLUDE DEMOLITION AND REMOVAL OF EXISTING MECHANICAL SYSTEMS AS REQUIRED. MECHANICAL SYSTEMS IN EXISTING WALLS AND UNDER GROUND SHALL BE REMOVED AND CAPPED AS REQUIRED. RECONNECT EXISTING PIPING AND DUCTWORK NOT IN DEMOLITION AREA AS REQUIRED TO MAINTAIN A COMPLETE AND OPERABLE SYSTEM.	21.	INSTALL THERMOSTATS AT MOUNTING HEIGHT 4'-0" AFF IN ACCORDANCE WITH ADA REQUIREMENTS. COORDINATE EXACT LOCATION IN FIELD WITH CONTRACTOR AND ARCHITECT.
4.	THE OWNER RESERVES FIRST CHOICE TO KEEP EXISTING EQUIPMENT AND MATERIALS. COORDINATE WITH OWNER AND DELIVER DESIGNATED EQUIPMENT AND MATERIALS REMOVED UNDER THIS CONTRACT TO OWNERS DESIGNATED STORAGE AREA. REMAINING EQUIPMENT AND MATERIAL REMOVED SHALL BECOME PROPERTY OF THE CONTRACTOR.	22.	WHERE PIPING AND/OR DUCTWORK IS TO BE REMOVED TO A POINT, IT SHALL BE CAPPED OFF AND PROTECTED (WHERE APPLICABLE) FOR CONNECTION TO NEW WORK. INSULATION ON EXISTING PIPING AND DUCTWORK SHALL BE REPAIRED OR REPLACED EQUAL TO NEW CONDITION.
5.	UNLESS NOTED OTHERWISE, FLEXIBLE DUCTS TO TERMINAL UNITS, DIFFUSERS, REGISTERS, AND GRILLES SHALL BE SAME SIZE AS NECK.	23.	PIPING AND/OR DUCTWORK CONNECTING TO REMOVED EQUIPMENT SHALL BE REMOVED TO A POINT SO AS NOT TO INTERFERE WITH NEW CONSTRUCTION.
6.	FLEXIBLE DUCTWORK MAXIMUM HORIZONTAL RUNS WITH ONE 90° BEND SHALL BE SECURED WITH SCREWS AND DRAWBANDS.	24.	THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND PATCHING OF DAMAGED ARCHITECTURAL COMPONENTS TO REMAIN DURING THE REMOVAL OF DESIGNATED SYSTEMS. COORDINATE REPAIR REQUIREMENTS WITH ARCHITECT.
7.	DUCT SIZES INDICATED ARE NET INSIDE CLEAR DIMENSIONS.		
8.	PROVIDE GEAR OPERATED CEILING OPERATORS FOR INACCESSIBLE MANUAL VOLUME DAMPERS. OPERATOR SHALL BE EQUAL TO YOUNG REGULATOR WITH CEILING ESCUTCHEON AND COVER PLATE. COORDINATE EXACT LOCATION OF COVER PLATE WITH ARCHITECT.		
9.	ITEM DESIGNATIONS INDICATED ARE FOR PURPOSES OF THESE DOCUMENTS ONLY. CONTRACTOR SHALL VERIFY WITH OWNER ACTUAL "TAGGING" INFORMATION TO BE PROVIDED FOR EACH ITEM OF MECHANICAL EQUIPMENT PRIOR TO NAMEPLATE ORDER RELEASE.		
10.	THE MECHANICAL DETAILS SHALL BE INCORPORATED INTO THE ASSOCIATED WORK AND PROVIDE GENERAL GUIDANCE AS TO THE INSTALLATION INTENT WHETHER REFERENCED TO OR NOT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY COMPONENTS FOR A COMPLETE INSTALLATION AND ENSURE THAT ALL INSTALLATIONS ARE IN ACCORDANCE WITH THE EQUIPMENT'S LISTING AND MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTION.		
11.	REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ACTUAL LOCATION OF GRILLES, REGISTERS, DIFFUSERS AND ACCESS PANELS IN CEILING AND FOR DIMENSIONED LENGTHS OF LINEAR DIFFUSERS. COORDINATE DIFFUSER BORDER TYPES WITH CEILING TYPE SCHEDULED IN ARCHITECTURAL REFLECTED CEILING PLANS.		
12.	TURNING VANE RUNNERS SHALL HAVE A VANE IN EVERY SLOT IN STRICT CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS AND SMACNA DUCT CONSTRUCTION STANDARDS. TURNING VANE SHALL BE SINGLE THICKNESS TYPE.		
13.	FIELD VERIFY FIT OF DUCTWORK AND PIPING PRIOR TO FABRICATION.		
14.	COORDINATE AND VERIFY ACTUAL APPROVED EQUIPMENT DIMENSIONS PRIOR TO POURING CONCRETE EQUIPMENT PADS. COORDINATE EQUIPMENT PAD DIMENSIONS WITH VIBRATION/SEISMIC ISOLATION REQUIREMENT.		
15.	PROVIDE ACCESS DOOR IN DUCTWORK UPSTREAM OF EACH DUCT-MOUNTED COIL, HUMIDIFIER, SMOKE DETECTOR, FIRE DAMPER, SMOKE DAMPER, AND COMBINATION FIRE/SMOKE DAMPER.		
16.	REFER TO EQUIPMENT DRAWINGS, SPECIFICATIONS AND SHOP DRAWINGS FOR CONNECTION REQUIREMENTS TO EQUIPMENT.		
17.	MANUAL VOLUME DAMPERS AND VALVES ON INSULATED DUCTWORK AND PIPING SHALL HAVE EXTENDED STEMS TO ALLOW FOR THE INSULATION THICKNESS. PROVIDE MINIMUM 12" LONG RED RIBBON LOCATOR ON VOLUME DAMPER AND VALVE HANDLES.		
18.	PROVIDE HEAT TRAPS FOR ALL WATER HEATING EQUIPMENT.		

ITEM	LOCATION	SERVICE	MANUFACTURER MODEL NUMBER BASIS OF DESIGN CARRIER OR TRANE	SUPPLY FAN				EXHAUST FAN		COOLING COIL						HEATING						UNIT								NOTES	
				AIRFLOW (CFM)	ESP (IN WC)	FAN (RPM)	MOTOR (BHP)	AIRFLOW (CFM)	ESP (IN WC)	TOTAL CAPACITY (KBTU/H)	SENSIBLE CAPACITY (KBTU/H)	EAT		LAT		EER	EAT (°F)	LAT (°F)	INPUT (KBTU/H)	OUTPUT (KBTU/H)	AFUE (%)	AMBIENT TEMP. (°F)	EER	SEER	OA AIRFLOW (CFM)	ELECTRICAL			BASE OPERATING WEIGHT (LBS)		
												DB (°F)	WB (°F)	DB (°F)	WB (°F)											V/PH	MCA (A)	MOCP (A)			
AC-1	ROOF	EXHIBIT AREA	CARRIER 48LCD-017	5,000	0.9	-	2.3	-	-	143	143	83.8	63.6	55.3	53.5	12.5	-	-	194	157	-	115	12.5		900	460/3	40.7	50	2,600	1, 2, 3, 4, 5, 6, 7, 8, 9	
AC-2	ROOF	MULTI-PURPOSE ROOM	CARRIER 48A2D-035	12,500	1.0	-	9.07	-	-	375	375	85.4	63.8	55.3	53.2	10	-	-	350	249	-	115	10		3,000	460/3	84	100	4,947	1, 2, 3, 4, 5, 6, 7, 8, 9	
AC-3	ROOF	MEETING/ FUNCTION ROOM	CARRIER 48LCD-024	6,000	0.8	-	3.0	-	-	200	190	81.1	62.9	57.1	54.4	11.1	-	-	194	157	-	115	11.1		800	460/3	61	70	2,860	1, 2, 3, 4, 5, 6, 7, 9, 10	
AC-4	ROOF	WORK ROOM	CARRIER 48LCD-014	4,000	0.8	-	1.22	-	-	114	109	82.7	63.3	55.4	53.3	12.3	-	-	155	126	-	115	12.3		300	460/3	33.9	45	1,853	1, 2, 3, 4, 5, 6, 7, 8, 9	
AC-5	ROOF	THEATER	(EXISTING)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360	284	-	-	-		-	460/3	84	110	-	YCD-420B4LKG	
AC-6	ROOF	STAGE	CARRIER 48LCD-024	5,800	0.9	-	2.93	-	-	197	181	83.6	63.5	52.1	51.3	12	-	-	194	157	-	115	12		500	460/3	60.6	70	2,858	1, 2, 3, 4, 5, 6, 7, 8, 9	
AC-7	ROOF	NE CORNER	CARRIER 48LCD-005	1,600	0.5	-	0.72	-	-	41	41	84.6	63.7	55	54	16.4	-	-	64	52	-	115	10		200	208/3	27	40	670	1, 2, 3, 4, 5, 6, 7, 8, 9	
1. ACTUAL OPERATION AT 2200 FEET ABOVE SEA LEVEL.				5. THE UNIT SHALL BE SHIPPED WITH INTERNAL CONTROLS.				9. PROVIDE WITH PROGRAMMABLE ROOM THERMOSTAT CAPABLE OF BEING INTERFACED WITH WEB ACCESSIBLE SYSTEM SIMILAR TO ECOBEE, MODEL EB-EMS-01.																							
2. PROVIDE DUCT SMOKE DETECTOR IN S/A DUCT, INTERLOCK DETECTOR AS REQUIRED TO SHUT DOWN UNIT UPON DETECTION OF SMOKE. ELECTRICAL CONTRACTOR TO PROVIDE 120V POWER TO DETECTOR ONLY.				6. PROVIDE MECHANICAL EQUIPMENT RESTRAINT AS REQUIRED BY IBC.				10. PROVIDE NEW ROOF CURB BY UNIT MANUFACTURER. AC UNIT HAS BEEN RELOCATED FROM ORIGINAL LOCATION. PROVIDE MINIMUM 11 FT CLEARANCE FROM ROOF EDGE IN ORDER TO COMPLY WITH 2012 IBC, SECTION 1013.6.																							
3. PROVIDE UNIT WITH OA INTAKE HOOD AND MODULATING OA DAMPER.				8. FIELD VERIFY EXISTING ROOF CURB DIMENSIONS AND ORIGINAL EQUIPMENT MANUFACTURER MODEL NUMBER. COORDINATE WITH NEW EQUIPMENT MANUFACTURER AND DETERMINE ROOF CURB ADAPTOR REQUIREMENTS.																											
4. PROVIDE UNIT WITH 2" THROWAWAY FILTERS, MERV-8. (MIN 30% EFFICIENCY)																															

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DIFFUSER & REGISTER SCHEDULE							
SUPPLY AIR				RETURN or EXHAUST AIR			
ITEM	NECK SIZE	CFM RANGE	TYPE	ITEM	NECK SIZE	CFM RANGE	TYPE
1	6ø – 6 X 6	0 – 90	S1	1	6ø – 6 X 6	0 – 80	R1
2	8ø – 8 X 8	91 – 160	S1	2	8ø – 8 X 8	81 – 140	R1
3	10ø – 10 X 10	161 – 250	S1	3	10ø – 10 X 10	141 – 215	R1
4	12ø – 12 X 12	251 – 360	S1	4	12ø – 12 X 12	216 – 315	R1
5	14ø – 14 X 14	361 – 460	S1	5	14ø	316 – 430	R1
6	16ø – 16 X 16	461 – 600	S1	6	16ø	431 – 560	R1
7	6 X 6	0 – 190	S2	7	18 X 18	561 – 900	R1
8	8 X 8	191 – 310	S2	8	22 X 22	901 – 1345	R1
9	10 X 10	311 – 430	S2	9	6 X 6	0 – 100	R2
10	12 X 12	431 – 560	S2	10	8 X 8	101 – 200	R2
11	14 X 14	561 – 695	S2	11	10 X 10	201 – 300	R2
12	16 X 16	696 – 820	S2	12	12 X 12	301 – 450	R2
13	18 X 18	821 – 950	S2	13	14 X 14	451 – 625	R2
14	20 X 20	951 – 1085	S2	14	16 X 16	626 – 810	R2
15	22 X 22	1086 – 1200	S2	15	18 X 18	811 – 965	R2
16	24 X 24	1201 – 1330	S2	16	20 X 20	966 – 1110	R2
17	6 X 6	0 – 125	S3	17	22 X 22	1111 – 1255	R2
18	8 X 8	126 – 250	S3	18	24 X 24	1256 – 1375	R2
19	12 X 8	251 – 350	S3				
20	18 X 8	351 – 550	S3				
21	24 X 12	551 – 1000	S3				
22	–	200 – 550	S4				
23	–	160 – 400	S5				
24	20 X 20	800 – 900	S6				
DIFFUSER & REGISTER SPECIFICATIONS							
SUPPLY AIR:							
TYPE S1: TITUS MODEL TMS-AA DIFFUSER WITH ADJUSTABLE VANES, BORDER TYPE 3 WITH 24" X 24" MODULE SIZE FOR LAY-IN CEILINGS. THROW PATTERN SHALL BE 4 WAY UNLESS NOTED OTHERWISE.							
TYPE S2: TITUS MODEL MCD MODULAR CORE DIFFUSER WITH BORDER TYPE 3 FOR LAY-IN CEILINGS OR BORDER TYPE 6 FOR SURFACE MOUNT. THROW PATTERN SHALL BE 4 WAY UNLESS NOTED OTHERWISE.							
TYPE S3: TITUS MODEL 300RS DOUBLE DEFLECTION SIDE WALL SUPPLY AIR GRILLE.							
TYPE S4: TITUS MODEL FL-20, 4' LONG FLOW BAR, SLOT DIFFUSER WITH 2" SLOTS AND BORDER TYPE 22 INCLUDING MODEL FBPI-20 INSULATED PLENUM.							
TYPE S5: PRICE, MODEL DF1R 48 X 24 DISPLACEMENT DIFFUSER. FOR RECESSED APPLICATION PROVIDE STANDARD RECESSED FRAME. FINAL FINISH TO BE SELECTED BY ARCHITECT.							
TYPE S6: TITUS MODEL PAR PERFORATED FLUSH FACE GRILLE WITH BORDER TYPE 3 WITH 24" X 24" MODULE SIZE FOR LAY-IN CEILINGS.							
RETURN/EXHAUST AIR:							
TYPE R1: TITUS MODEL PAR PERFORATED FLUSH FACE GRILLE WITH BORDER TYPE 3 WITH 24" X 24" MODULE SIZE FOR LAY-IN CEILINGS.							
TYPE R2: TITUS MODEL 350RL BLADE TYPE GRILLE WITH 3/4" SPACED BLADES AND 35' DEFLECTION, BORDER TYPE 1 FOR SURFACE MOUNT OR BORDER TYPE 3 FOR LAY-IN CEILINGS. INSTALL WITH BLADES OPPOSED TO LINE OF SIGHT.							

EXHAUST FAN SCHEDULE														
ITEM	LOCATION	SERVICE	MANUFACTURER MODEL NUMBER	TYPE	AIRFLOW (CFM)	SP (IN WG)	FAN RPM	ELECTIRCAL					MAX OPERATING WEIGHT (LBS)	NOTES
								BHP	HP	RPM	FLA (A)	V/PH		
EF-1	ROOF	RESTROOMS 102,103	GREENCHECK CUE-121-VG	–	1,200	0.6	–	–	1/2	1,725	6.2	120/1	75	1, 2, 3, 4
1. PROVIDE SOUND ATTENUATING ROOF CURB. 2. OPERATION AT 2,200 FEET ABOVE SEA LEVEL. 3. PROVIDE BACKDRAFT DAMPER AND UNIT MOUNTED DISCONNECT SWITCH. 4. PROVIDE HINGED CURB CAP KIT WITH CABLES.														

RECORD DRAWINGS
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#15.0821



REVISIONS

ARCHITECT

Charleston Heights Community Center
- Renovation -

SCHEDULES



JBA Las Vegas
5105 W. Pecos Ln
Las Vegas, NV 89115
p 702.882.2000

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

333 NORTH RANCHO DRIVE
LAS VEGAS, NEVADA 89106
PHONE: (702) 259-6535
FAX: (702) 384-4846
TDD: (702) 386-9108

DRAWN JU

DATE 02/15/2018

SCALE

BID NO 15.59806.JH

CLV DWG NO 620-10B

HANSEN NO 59806

SHT NO

M0.02

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VENTILATION COMPLIANCE (PER ASHRAE 62.1)										
ROOM NUMBER	ROOM NAME	AREA CALCULATION			OCCUPANT CALCULATION			TOTAL OA REQUIRED (CFM)	TOTAL OA PROVIDED (CFM)	NOTES
		AREA (SQ FT)	AREA OA RATE (CFM/SQ FT)	AREA OA REQUIRED (CFM)	OCCUPANT QTY	OCCUPANT OA RATE (CFM/PERSON)	OCCUPANT OA REQUIRED (CFM)			
101	ENTRANCE	500	0.06	30	4	5	20	5		
105	EXHIBIT AREA	629	0.06	37.7	20	7.5	150	188		
113	LOBBY	649	0.06	38.9	20	5	100	139		
114	OFFICE	147	0.06	3.8	2	5	10	14		
							AC-1	346	900	
109	MULTI-PURPOSE ROOM	8,438	0.06	506.3	450	5	2,250	2,756		
110	OFFICE	201	0.06	12.1	2	5	10	22		
111	OFFICE	65	0.06	3.9	2	5	10	14		
112	OFFICE	127	0.06	7.6	2	5	10	18		
							AC-2	2,810	3,000	
127	DRESSING ROOM	146	0.06	8.8	2	5	10	19		
130	CORRIDOR	204	0.06	12.2	-	-	-	12		
132	STORAGE	567	0.06	34	-	-	-	34		
133	CORRIDOR	194	0.06	11.6	-	-	-	12		
140	MULTI-PURPOSE ROOM	2,311	0.06	138.7	120	5	600	739		
							AC-3	816	800	
115	OFFICE	150	0.06	9	2	5	10	19		
116	STAIR	121	0.06	7.3	-	-	-	7		
117	FOYER	85	0.06	5.1	-	-	-	5		
129	DRESSING ROOM	117	0.06	7	2	5	10	17		
138	SERVING	138	0.06	8.3	4	5	20	28		
139	CONFERENCE	598	0.06	35.9	20	5	100	136		
136	STAFF ROOM	204	0.06	12.2	5	5	25	37		
137	STORAGE	74	0.06	4.4	-	-	-	4		
							AC-4	253	300	
124	STAGE	4,750	0.06	285	30	5	150	435		
125	BACKSTAGE WORK AREA	477	0.06	28.6	6	5	30	59		
							AC-6	494	500	
106	RECEIVING AREA	863	0.06	51.2	4	5	20	71		

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REVISIONS

ARCHITECT

Charleson Heights Community Center

- Renovation -

VENTILATION COMPLIANCE



JBA Las Vegas
5155 W. Patrick Ln
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OWNER: CITY OF LAS VEGAS
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LAS VEGAS, NEVADA 89106
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FAX: (702) 384-4846
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DRAWN JU

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HANSEN NO 59806

SHEET NO

M0.03

#15.0821

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COMcheck Software Version 4.0.2.5
Mechanical Compliance Certificate

Section 1: Project Information

Energy Code: 2009 IECC
Project Title: Charleston Heights Art Center
Project Type: Alteration
Construction Site: 800 Brush Street
Las Vegas, NV 89197
Owner/Agent: City of Las Vegas
Department of Public Works
Designer/Contractor: JBA Consulting Engineers
5155 W. Patrick Ln
Las Vegas, NV 89118

Section 2: General Information

Building Location (for weather data): Las Vegas, Nevada
Climate Zone: 3b

Section 3: Mechanical Systems List

Quantity	System Type & Description
1	AC-1 Exhibit Area (Single Zone) : Heating: 1 each - Central Furnace, Gas, Capacity = 194 kBtu/h Proposed Efficiency = 80.00% Et, Required Efficiency = 80.00% Et Cooling: 1 each - Single Package DX Unit, Capacity = 143 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 12.00 EER, Required Efficiency = 10.80 EER Fan System: FAN SYSTEM 1 AC-1 -- Compliance (Motor nameplate HP method) : Passes Fans: FAN 1 Supply, Constant Volume, 5000 CFM, 5.0 motor nameplate hp
1	AC-2 Multi-purpose room (Single Zone) : Heating: 1 each - Central Furnace, Gas, Capacity = 350 kBtu/h Proposed Efficiency = 80.00% Ec, Required Efficiency = 80.00% Ec Cooling: 1 each - Single Package DX Unit, Capacity = 375 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 12.00 EER, Required Efficiency = 9.80 EER Fan System: FAN SYSTEM 2 AC-2 -- Compliance (Motor nameplate HP method) : Passes Fans: FAN 2 Supply, Constant Volume, 12500 CFM, 10.0 motor nameplate hp
1	AC-3 Meeting/Function (Single Zone) : Heating: 1 each - Central Furnace, Gas, Capacity = 194 kBtu/h Proposed Efficiency = 80.00% Et, Required Efficiency = 80.00% Et Cooling: 1 each - Single Package DX Unit, Capacity = 200 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 11.00 EER, Required Efficiency = 10.80 EER Fan System: FAN SYSTEM 3 AC-3 -- Compliance (Motor nameplate HP method) : Passes Fans: FAN 3 Supply, Constant Volume, 6000 CFM, 5.0 motor nameplate hp
1	AC-4 Work room (Single Zone) : Heating: 1 each - Central Furnace, Gas, Capacity = 155 kBtu/h Proposed Efficiency = 80.00% Et, Required Efficiency = 80.00% Et Cooling: 1 each - Single Package DX Unit, Capacity = 114 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 12.00 EER, Required Efficiency = 11.00 EER Fan System: FAN SYSTEM 4 AC-4 -- Compliance (Motor nameplate HP method) : Passes Fans: FAN 4 Supply, Constant Volume, 4000 CFM, 3.0 motor nameplate hp
1	AC-6 Stage (Single Zone) :

Project Title: Charleston Heights Art Center
Data filename: J:\15.0821\Docs\Design\M2012 IECC\Charleston Heights Art Ctr Energy Compliance.ck
Report date: 05/23/16
Page 1 of 4

- ☐ Gravity dampers acceptable in buildings -3 stories
- ☐ 16. Automatic controls for freeze protection systems present
- ☐ 17. Exhaust air heat recovery included for systems 5,000 cfm or greater with more than 70% outside air fraction or specifically exempted
- Exception(s):
- ☐ Hazardous exhaust systems, commercial kitchen and clothes dryer exhaust systems that the International Mechanical Code prohibits the use of energy recovery systems.
 - ☐ Systems serving spaces that are heated and not cooled to less than 60°F.
 - ☐ Where more than 60 percent of the outdoor heating energy is provided from site-recovered or site solar energy.
 - ☐ Heating systems in climates with less than 3600 HDD.
 - ☐ Cooling systems in climates with a 1 percent cooling design wet-bulb temperature less than 64°F.
 - ☐ Systems requiring dehumidification that employ energy recovery in series with the cooling coil.
 - ☐ Laboratory fume hood exhaust systems that have either a variable air volume system capable of reducing exhaust and makeup air volume to 50 percent or less of design values or, a separate make up air supply meeting the following makeup air requirements:
a) at least 75 percent of exhaust flow rate, b) heated to no more than 2°F below room setpoint temperature, c) cooled to no lower than 3°F above room setpoint temperature, d) no humidification added, e) no simultaneous heating and cooling.

Section 5: Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical alteration project has been designed to meet the 2009 IECC, Chapter 8, requirements in COMcheck Version 4.0.2.5 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title Signature Date

Section 6: Post Construction Compliance Statement

- ☐ HVAC record drawings of the actual installation, system capacities, calibration information, and performance data for each equipment provided to the owner.
- ☐ HVAC O&M documents for all mechanical equipment and system provided to the owner by the mechanical contractor.
- ☐ Written HVAC balancing and operations report provided to the owner.

The above post construction requirements have been completed.

Principal Mechanical Designer-Name Signature Date

Project Title: Charleston Heights Art Center
Data filename: J:\15.0821\Docs\Design\M2012 IECC\Charleston Heights Art Ctr Energy Compliance.ck
Report date: 05/23/16
Page 4 of 4

Heating: 1 each - Central Furnace, Gas, Capacity = 194 kBtu/h
Proposed Efficiency = 90.00% Et, Required Efficiency = 80.00% Et
Cooling: 1 each - Single Package DX Unit, Capacity = 197 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 12.00 EER, Required Efficiency = 10.80 EER
Fan System: FAN SYSTEM 5 | AC-6 -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 5 Supply, Constant Volume, 5800 CFM, 5.0 motor nameplate hp

- 1 AC-7 NE corner area (Single Zone) :
Heating: 1 each - Central Furnace, Gas, Capacity = 64 kBtu/h
Proposed Efficiency = 80.00% Et, Required Efficiency = 80.00% Et
Cooling: 1 each - Single Package DX Unit, Capacity = 41 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 16.40 SEER, Required Efficiency = 13.00 SEER
Fan System: FAN SYSTEM 6 | AC-7 -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 6 Supply, Constant Volume, 1600 CFM, 1.5 motor nameplate hp

- 1 Water Heater WH-1:
Gas Storage Water Heater, Capacity: 100 gallons, Input Rating: 199 Btu/h w/ Circulation Pump
Proposed Efficiency: 94.00 % Et, Required Efficiency: 80.00 % Et

Section 4: Requirements Checklist

Requirements Specific To: AC-1 Exhibit Area :

- ☐ 1. Equipment minimum efficiency: Central Furnace (Gas): 80.00 % Et (or 78% AFUE)
- ☐ 2. Equipment minimum efficiency: Single Package Unit: 10.80 EER
- ☐ 3. Integrated economizer is required for this location and system.
- ☐ 4. Cooling system provides a means to relieve excess outdoor air during economizer operation.
- ☐ 5. Hot gas bypass prohibited unless system has multiple steps of unloading or continuous capacity modulation
- ☐ 6. Hot gas bypass limited to 50% of total cooling capacity

Requirements Specific To: AC-2 Multi-purpose room :

- ☐ 1. Equipment minimum efficiency: Central Furnace (Gas): 80.00 % Ec
- ☐ 2. Equipment minimum efficiency: Single Package Unit: 9.80 EER (9.5 IPLV)
- ☐ 3. Integrated economizer is required for this location and system.
- ☐ 4. Cooling system provides a means to relieve excess outdoor air during economizer operation.
- ☐ 5. Hot gas bypass prohibited unless system has multiple steps of unloading or continuous capacity modulation
- ☐ 6. Hot gas bypass limited to 25% of total cooling capacity

Requirements Specific To: AC-3 Meeting/Function :

- ☐ 1. Equipment minimum efficiency: Central Furnace (Gas): 80.00 % Et (or 78% AFUE)
- ☐ 2. Equipment minimum efficiency: Single Package Unit: 10.80 EER
- ☐ 3. Integrated economizer is required for this location and system.
- ☐ 4. Cooling system provides a means to relieve excess outdoor air during economizer operation.
- ☐ 5. Hot gas bypass prohibited unless system has multiple steps of unloading or continuous capacity modulation
- ☐ 6. Hot gas bypass limited to 50% of total cooling capacity

Requirements Specific To: AC-4 Work room :

- ☐ 1. Equipment minimum efficiency: Central Furnace (Gas): 80.00 % Et (or 78% AFUE)
- ☐ 2. Equipment minimum efficiency: Single Package Unit: 11.00 EER
- ☐ 3. Integrated economizer is required for this location and system.
- ☐ 4. Cooling system provides a means to relieve excess outdoor air during economizer operation.
- ☐ 5. Hot gas bypass prohibited unless system has multiple steps of unloading or continuous capacity modulation
- ☐ 6. Hot gas bypass limited to 50% of total cooling capacity

Requirements Specific To: AC-6 Stage :

- ☐ 1. Equipment minimum efficiency: Central Furnace (Gas): 80.00 % Et (or 78% AFUE)
- ☐ 2. Equipment minimum efficiency: Single Package Unit: 10.80 EER
- ☐ 3. Integrated economizer is required for this location and system.
- ☐ 4. Cooling system provides a means to relieve excess outdoor air during economizer operation.
- ☐ 5. Hot gas bypass prohibited unless system has multiple steps of unloading or continuous capacity modulation
- ☐ 6. Hot gas bypass limited to 50% of total cooling capacity

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Data filename: J:\15.0821\Docs\Design\M2012 IECC\Charleston Heights Art Ctr Energy Compliance.ck
Report date: 05/23/16
Page 2 of 4

Requirements Specific To: AC-7 NE corner area :

- ☐ 1. Equipment minimum efficiency: Central Furnace (Gas): 80.00 % Et (or 78% AFUE)
- ☐ 2. Equipment minimum efficiency: Single Package Unit: 13.00 SEER

Requirements Specific To: Water Heater WH-1 :

- ☐ 1. Water heating equipment meets minimum efficiency requirements: Gas Storage Water Heater efficiency: 80.00 % Et (259 SL, kBtu/h)
- ☐ 2. All piping in circulating system insulated
- ☐ 3. Hot water storage temperature controls that allow setpoint of 90°F for non-dwelling units and 110°F for dwelling units.
- ☐ 4. Automatic time control of heat tapes and recirculating systems present
- ☐ 5. Controls will shut off operation of circulating pump between water heater/boiler and storage tanks within 5 minutes after end of heating cycle

Generic Requirements: Must be met by all systems to which the requirement is applicable:

- ☐ 1. Plant equipment and system capacity no greater than needed to meet loads
Exception(s):
 - ☐ Standby equipment automatically off when primary system is operating
 - ☐ Multiple units controlled to sequence operation as a function of load
- ☐ 2. Minimum one temperature control device per system
- ☐ 3. Minimum one humidity control device per installed humidification/dehumidification system
- ☐ 4. Load calculations per ASHRAE/ACCA Standard 183.
- ☐ 5. Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup
Exception(s):
 - ☐ Continuously operating zones
- ☐ 6. Outside-air source for ventilation; system capable of reducing OSA to required minimum
- ☐ 7. R-5 supply and return air duct insulation in unconditioned spaces
R-8 supply and return air duct insulation outside the building
R-8 insulation between ducts and the building exterior when ducts are part of a building assembly
Exception(s):
 - ☐ Ducts located within equipment
 - ☐ Ducts with interior and exterior temperature difference not exceeding 15°F.
- ☐ 8. Mechanical fasteners and sealants used to connect ducts and air distribution equipment
- ☐ 9. Ducts sealed - longitudinal seams on rigid ducts; transverse seams on all ducts; UL 181A or 181B tapes and mastics
- ☐ 10. Hot water pipe insulation: 1.5 in. for pipes <=1.5 in. and 2 in. for pipes >1.5 in.
Chilled water/refrigerant/brine pipe insulation: 1.5 in. for pipes <=1.5 in. and 1.5 in. for pipes >1.5 in.
Steam pipe insulation: 1.5 in. for pipes <=1.5 in. and 3 in. for pipes >1.5 in.
Exception(s):
 - ☐ Piping within HVAC equipment.
 - ☐ Fluid temperatures between 55 and 105°F.
 - ☐ Fluid not heated or cooled with renewable energy.
 - ☐ Piping within room fan-coil (with AHRI440 rating) and unit ventilators (with AHRI840 rating).
 - ☐ Runouts <4 ft in length.
- ☐ 11. Operation and maintenance manual provided to building owner
- ☐ 12. Thermostatic controls have 5°F deadband
Exception(s):
 - ☐ Thermostats requiring manual changeover between heating and cooling
 - ☐ Special occupancy or special applications where wide temperature ranges are not acceptable and are approved by the authority having jurisdiction.
- ☐ 13. Balancing devices provided in accordance with IMC 603.17
- ☐ 14. Demand control ventilation (DCV) present for high design occupancy areas (>40 person/1000 ft2 in spaces >500 ft2) and served by systems with any one of 1) an air-side economizer, 2) automatic modulating control of the outdoor air damper, or 3) a design outdoor airflow greater than 3000 cfm.
Exception(s):
 - ☐ Systems with heat recovery.
 - ☐ Multiple-zone systems without DDC of individual zones communicating with a central control panel.
 - ☐ Systems with a design outdoor airflow less than 1200 cfm.
 - ☐ Spaces where the supply airflow rate minus any makeup or outgoing transfer air requirement is less than 1200 cfm.
- ☐ 15. Motorized, automatic shutoff dampers required on exhaust and outdoor air supply openings
Exception(s):

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Report date: 05/23/16
Page 3 of 4



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Charleston Heights Community Center

- Renovation -

ENERGY COMPLIANCE



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DRAWN JU

FILE

DATE 02/15/2018

SCALE

BID NO 15.59806.JH

CLV DWG NO 620-10B

HANSEN NO 59806

SHT NO

MO.04

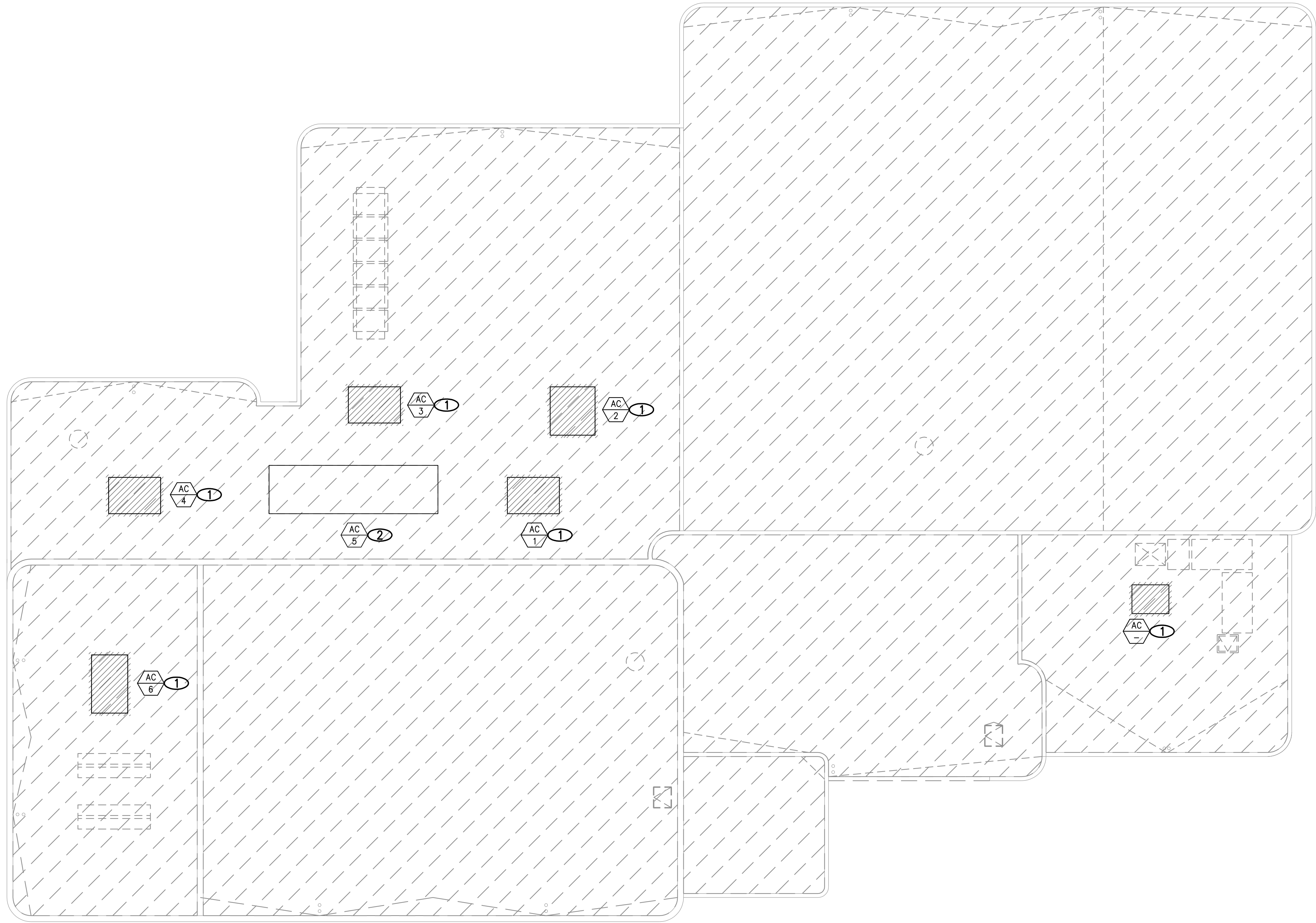
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DEMOLITION MECHANICAL ROOF PLAN

3/32" = 1'-0"

A

NOTICE

1. NOT USED.

NOTES

- ① EXISTING ROOFTOP UNIT TO BE REMOVED. CAP EXISTING SA, RA DUCTS AND PREPARE TO CONNECT TO NEW EQUIPMENT.
- ② EXISTING AC UNIT SERVICING THE THEATER TO REMAIN AND TO BE REUSED.

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DEMOLITION MECHANICAL ROOF PLAN



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DATE 02/15/2018

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CLV DWG NO 620-10B

HANSEN NO 59806

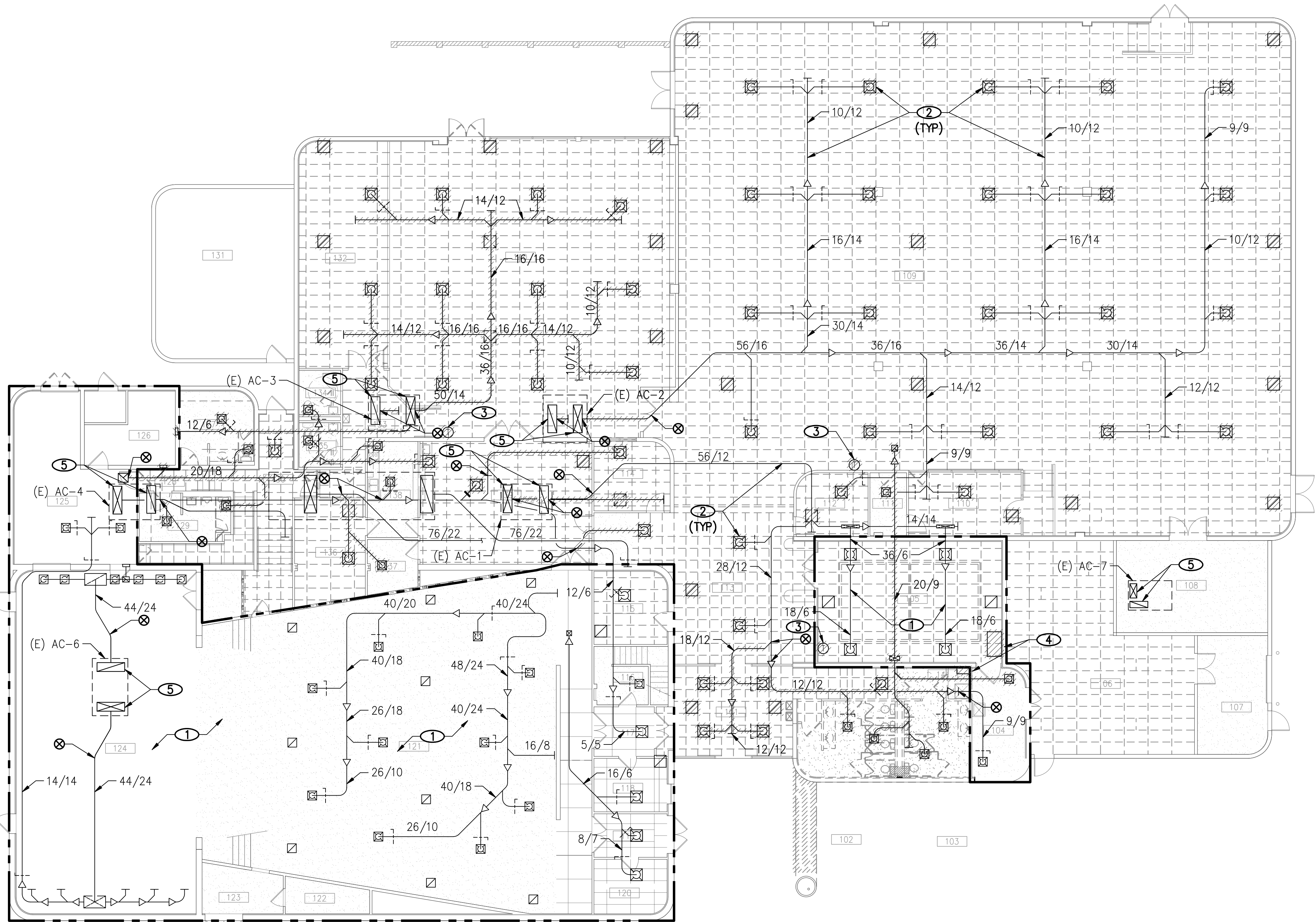
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DEMOLITION MECHANICAL PLAN A
3/32" = 1'-0"

NOTICE

1. NOT USED.

NOTES

1. EXISTING DUCTWORK AND ASSOCIATED DIFFUSERS TO REMAIN.
2. EXISTING DUCTWORK TO REMAIN AND TO BE REUSED. REMOVE EXISTING DIFFUSERS ONLY.
3. EXISTING THERMOSTAT TO BE REMOVED AND RETURNED TO OWNER.
4. EXISTING HUMIDIFIER, CONTROLS, AND ASSOCIATED PIPING AND WIRING TO BE REMOVED.
5. EXISTING SA, RA SHEET METAL PLENUMS TO REMAIN AND TO BE REUSED.



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DEMOLITION MECHANICAL PLAN



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CLV DWG NO	620-10B
HANSEN NO	59806
SHT NO	

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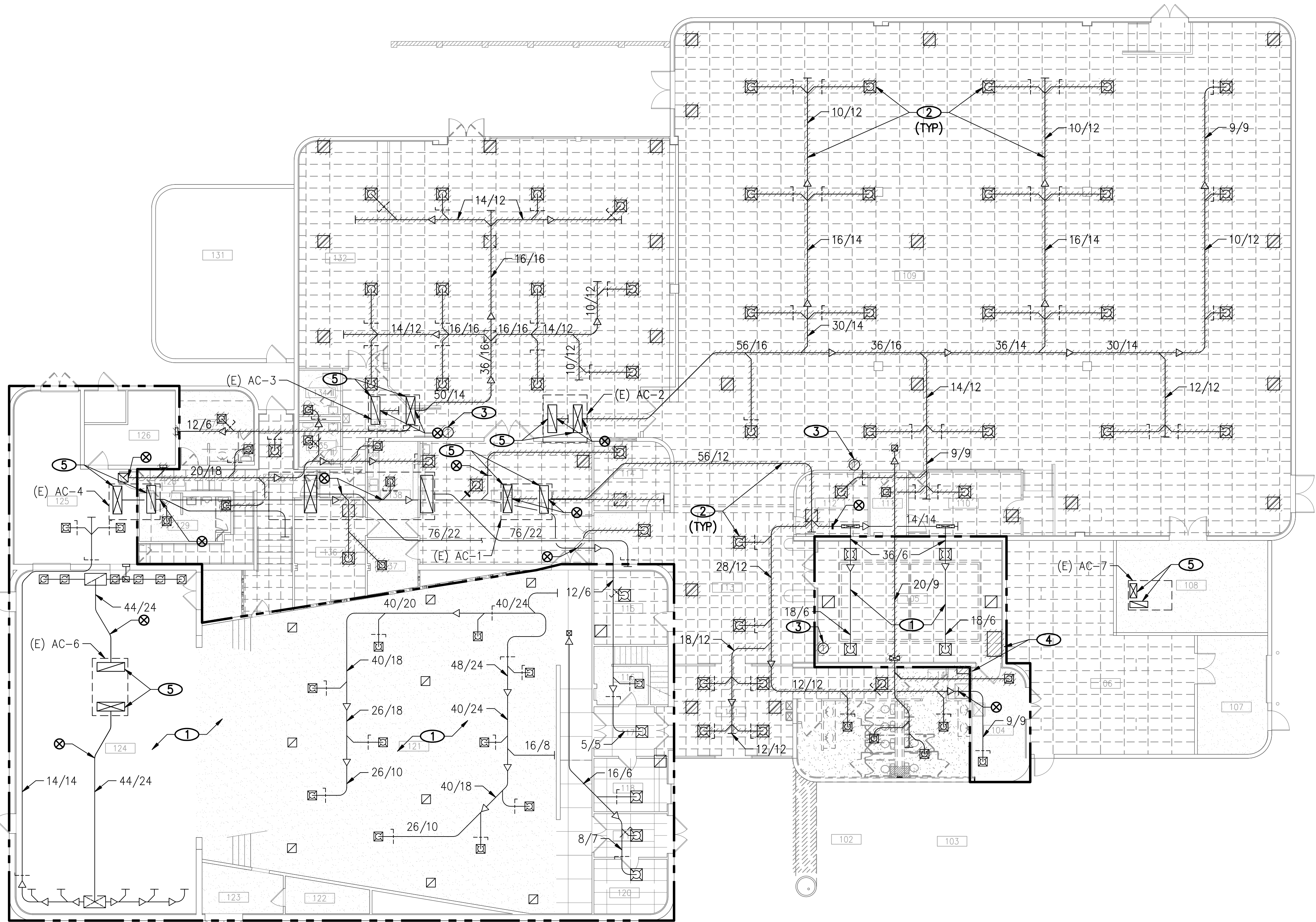
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DEMOLITION MECHANICAL PLAN

3/32" = 1'-0"

A

NOTICE

1. NOT USED.

NOTES

- ① EXISTING DUCTWORK AND ASSOCIATED DIFFUSERS TO REMAIN.
- ② EXISTING DUCTBOARD DUCTWORK AND ASSOCIATED DIFFUSERS TO BE REMOVED
- ③ EXISTING THERMOSTAT TO BE REMOVED AND RETURNED TO OWNER.
- ④ EXISTING HUMIDIFIER, CONTROLS, AND ASSOCIATED PIPING AND WIRING TO BE REMOVED.
- ⑤ EXISTING SA, RA SHEET METAL PLENUMS TO REMAIN AND TO BE REUSED.



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DEMOLITION MECHANICAL PLAN



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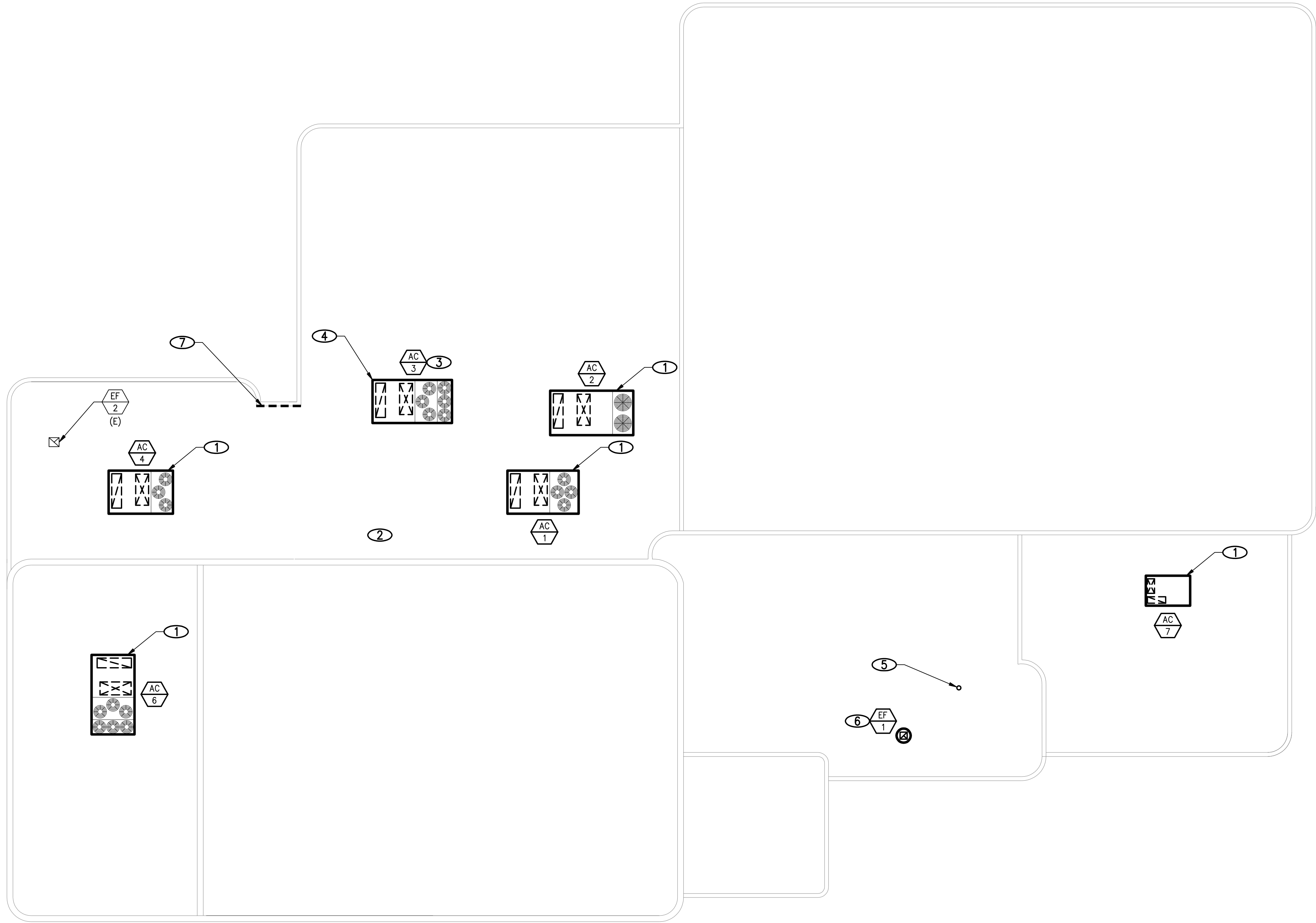
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MECHANICAL ROOF PLAN

3/32" = 1'-0"

A

NOTICE

1. FIELD VERIFY EXISTING EQUIPMENT LOCATIONS.

NOTES

- ① INSTALL NEW ROOFTOP UNIT ON EXISTING ROOF CURB. PROVIDE ROOF CURB ADAPTOR.
- ② EXISTING UNIT TO REMAIN AND TO BE REUSED.
- ③ AC-3 HAS BEEN RELOCATED FROM THE ORIGINAL LOCATION. PROVIDE NEW ROOF CURB BY UNIT MANUFACTURER.
- ④ AC-3 UNIT SHALL BE LOCATED MIN 11 FT AWAY FROM THE ROOF EDGE.
- ⑤ 4" CONCENTRIC VENT UP THRU ROOF. REFER TO 3/M6.01 FOR SPECIFICATIONS.
- ⑥ ROOF EXHAUST FAN. REFER TO 1/M6.01 FOR MOUNTING DETAIL.
- ⑦ GUARDS SHALL BE PROVIDED PER 2012 IBC, 1013.6 FOR MECHANICAL EQUIPMENT LOCATED WITHIN 10 FT OF ROOF EDGE. THE GUARD SHALL BE CONSTRUCTED SO AS TO PREVENT THE PASSAGE OF A SPHERE 21 INCHES IN DIAMETER. THE GUARD SHALL EXTEND NO LESS THAN 30 INCHES BEYOND EACH END OF AC UNIT.

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MECHANICAL ROOF PLAN



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BID NO 15.59806.JH

CLV DWG NO 620-10B

HANSEN NO 59806

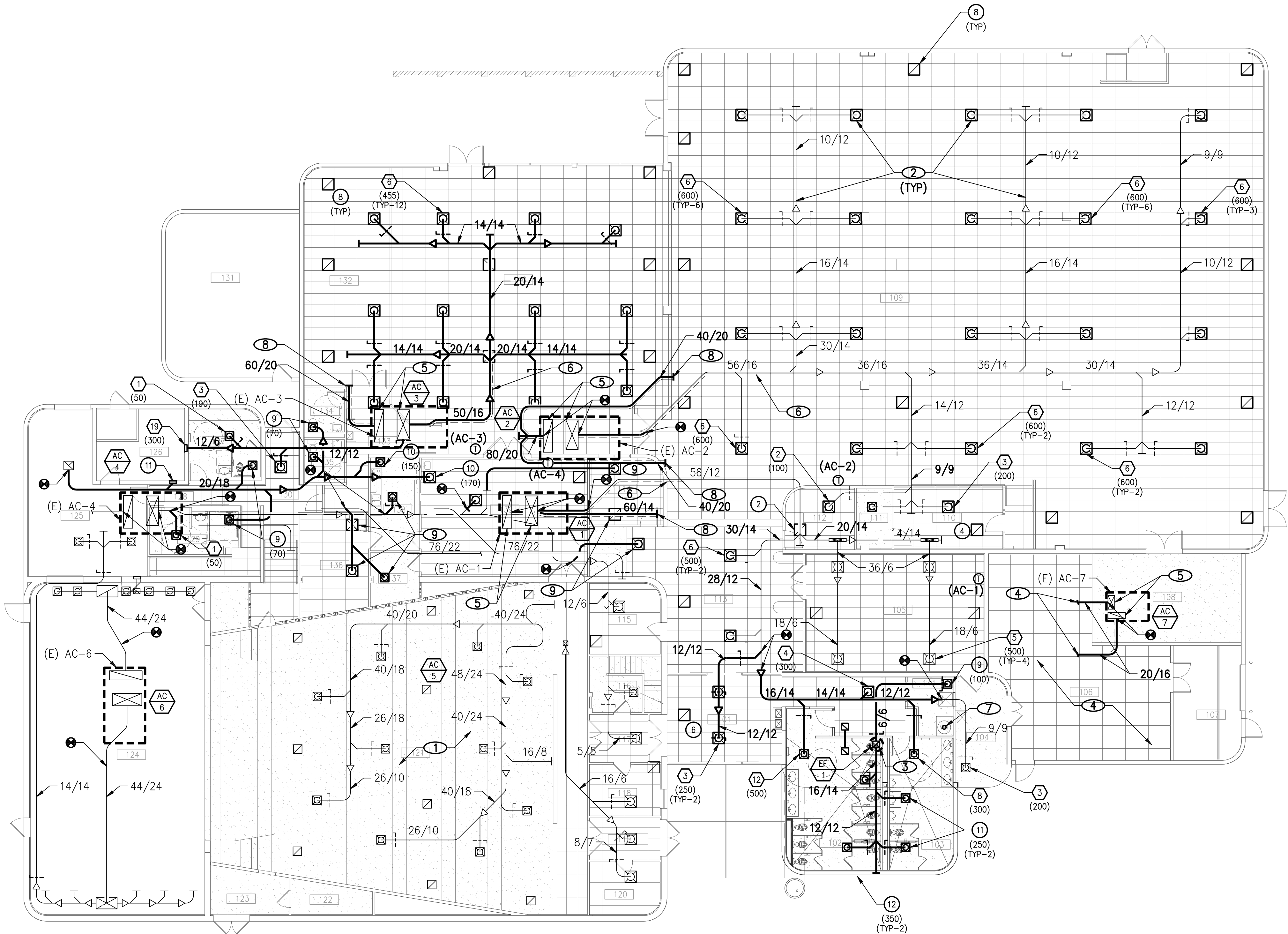
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MECHANICAL PLAN

3/32" = 1'-0"

A

NOTICE

1. PROVIDE VOLUME CONTROL DAMPER TO ALL BRANCH DUCTWORK UPSTREAM OF DIFFUSER AND RETURN GRILLE. PROVIDE REMOTE DAMPER OPERATOR BY YOUNG REGULATOR MANUFACTURER, TO ALL VOLUME DAMPERS WHICH ARE NOT ACCESSIBLE. INSTALL DAMPER CONTROLLER INSIDE THE SLOT DIFFUSER OR INSIDE THE DIFFUSER.
2. TRANSITION AS REQUIRED FROM AIR HANDLING UNIT TO DUCTWORK SIZES SHOWN.
3. VERIFY DUCTWORK ROUTING AND CLEARANCES WITH THE ARCHITECTURAL AND STRUCTURAL PLANS TO AVOID ANY CONFLICTS WITH THREADED ROD HANGERS.
4. HVAC DUCTWORK SHALL BE SEISMICALLY BRACED PER IBC.
5. PROVIDE SEISMIC RESTRAINTS FOR MECHANICAL EQUIPMENT PER IBC.

NOTES

- ① EXISTING DUCTWORK AND ASSOCIATED SA, RA DIFFUSERS TO REMAIN.
- ② EXISTING DUCTWORK TO BE REUSED. PROVIDE NEW SA, RA DIFFUSERS.
- ③ 14/14 EA DUCT UP THROUGH ROOF AND CONNECT TO EF-1.
- ④ EXISTING SA, RA DUCTWORK AND DIFFUSERS TO REMAIN AND TO BE REUSED.
- ⑤ FULL SIZE UNIT OPENING DOWN TO ACOUSTICALLY LINED SA, RA PLENUM.
- ⑥ PROVIDE 1" THICK ACOUSTIC LINING AS INDICATED.
- ⑦ 4" CONCENTRIC VENT UP THRU ROOF.
- ⑧ PROVIDE WIREMESH SCREEN AT RA DUCT TERMINATION. UPSIZE THE INTAKE OPENING BY 30%.
- ⑨ REPLACE EXISTING DIFFUSER WITH NEW SAME SIZE DIFFUSER.

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MECHANICAL PLAN



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DATE	02/15/2018
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ARCHITECT

Charleston Heights Community Center
- Renovation -



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DRAWN

DATE 02/15/201

SCALE

15.59806.JH
CLV DWG NO

Hansen NO

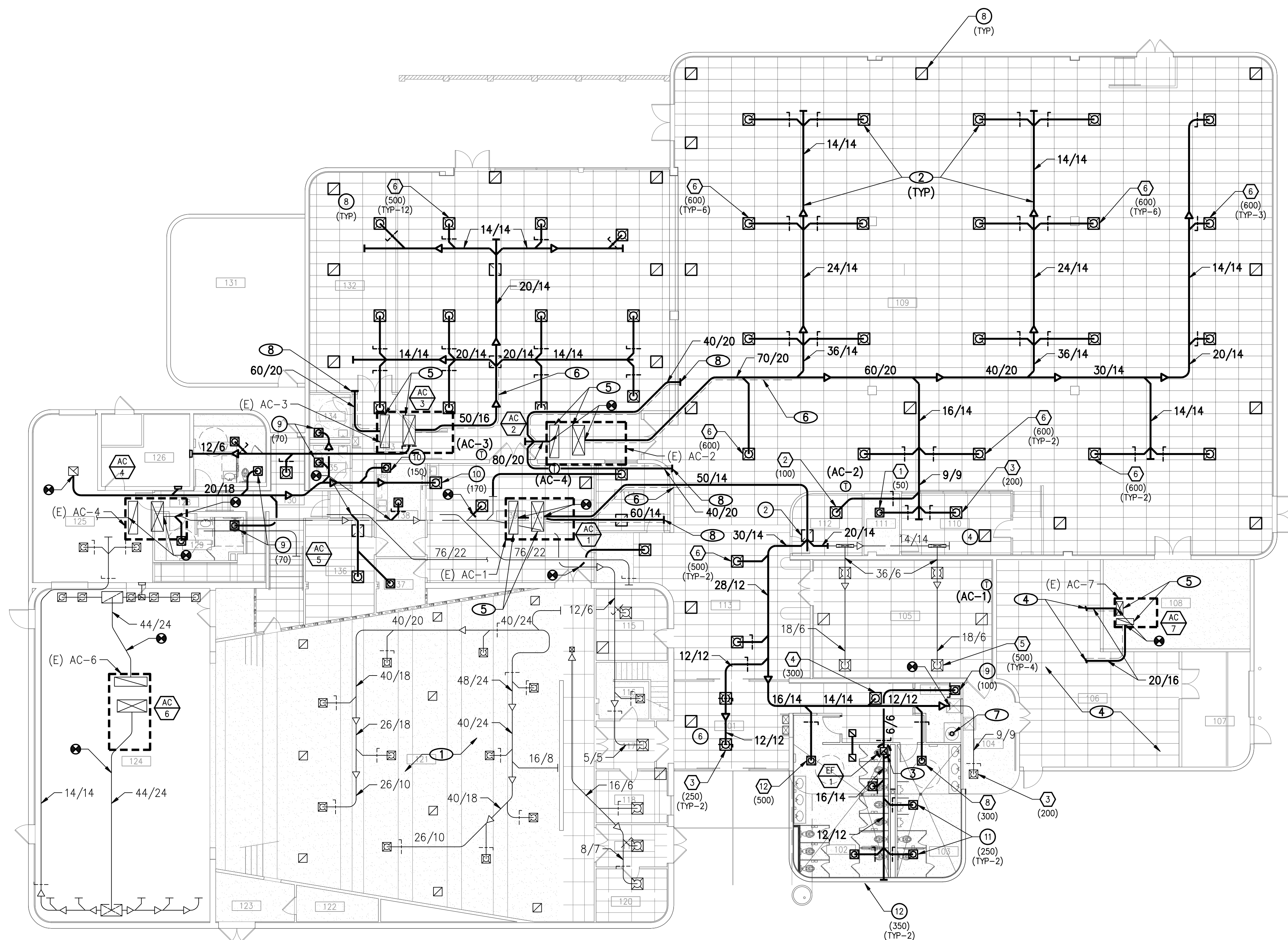
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1. PROVIDE VOLUME CONTROL DAMPER TO ALL BRANCH DUCTWORK UPSTREAM OF DIFFUSER AND RETURN GRILLE. PROVIDE REMOTE DAMPER OPERATOR BY YOUNG REGULATOR MANUFACTURER, TO ALL VOLUME DAMPERS WHICH ARE NOT ACCESSIBLE. INSTALL DAMPER CONTROLLER INSIDE THE SLOT DIFFUSER OR INSIDE THE DIFFUSER.
2. TRANSITION AS REQUIRED FROM AIR HANDLING UNIT TO DUCTWORK SIZES SHOWN.
3. VERIFY DUCTWORK ROUTING AND CLEARANCES WITH THE ARCHITECTURAL AND STRUCTURAL PLANS TO AVOID ANY CONFLICTS WITH THREADED ROD HANGERS.
4. HVAC DUCTWORK SHALL BE SEISMICALLY BRACED PER IBC.
5. PROVIDE SEISMIC RESTRAINTS FOR MECHANICAL EQUIPMENT PER IBC.

- ① EXISTING DUCTWORK AND ASSOCIATED SA, RA DIFFUSERS TO REMAIN.
- ② NEW SHEET-METAL DUCTWORK AND NEW SA, RA DIFFUSERS.
- ③ 14/14 EA DUCT UP THROUGH ROOF AND CONNECT TO EF-1.
- ④ EXISTING SA, RA DUCTWORK AND DIFFUSERS TO REMAIN AND TO BE REUSED.
- ⑤ FULL SIZE UNIT OPENING DOWN TO ACOUSTICALLY LINED SA, RA PLENUM.
- ⑥ PROVIDE 1" THICK ACUSTICAL LINING AS INDICATED.
- ⑦ 4" CONCENTRIC VENT UP THRU ROOF.
- ⑧ PROVIDE WIREMESH SCREEN AT RA DUCT TERMINATION. UPSIZE THE INTAKE OPENING BY 30%.

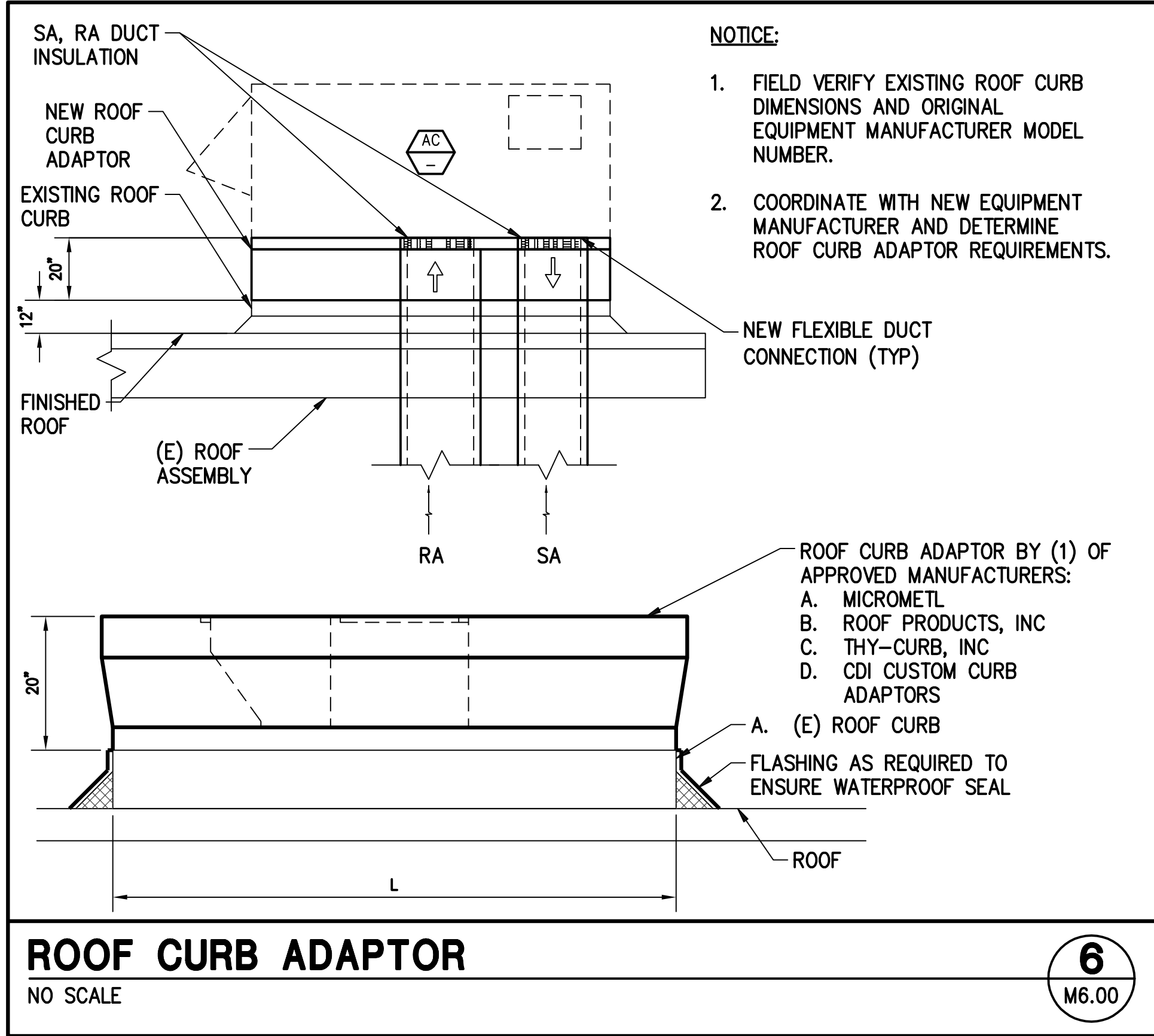
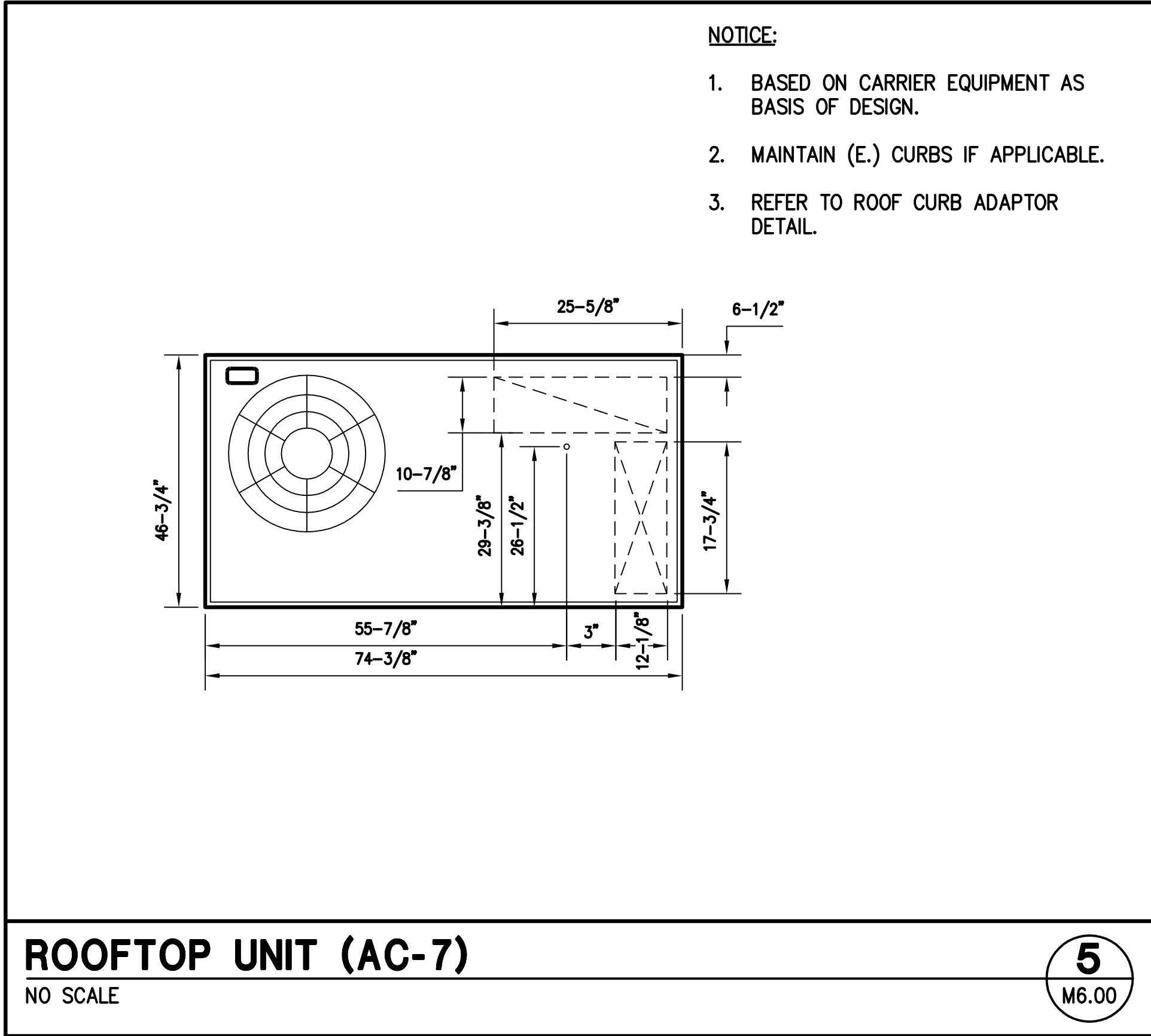
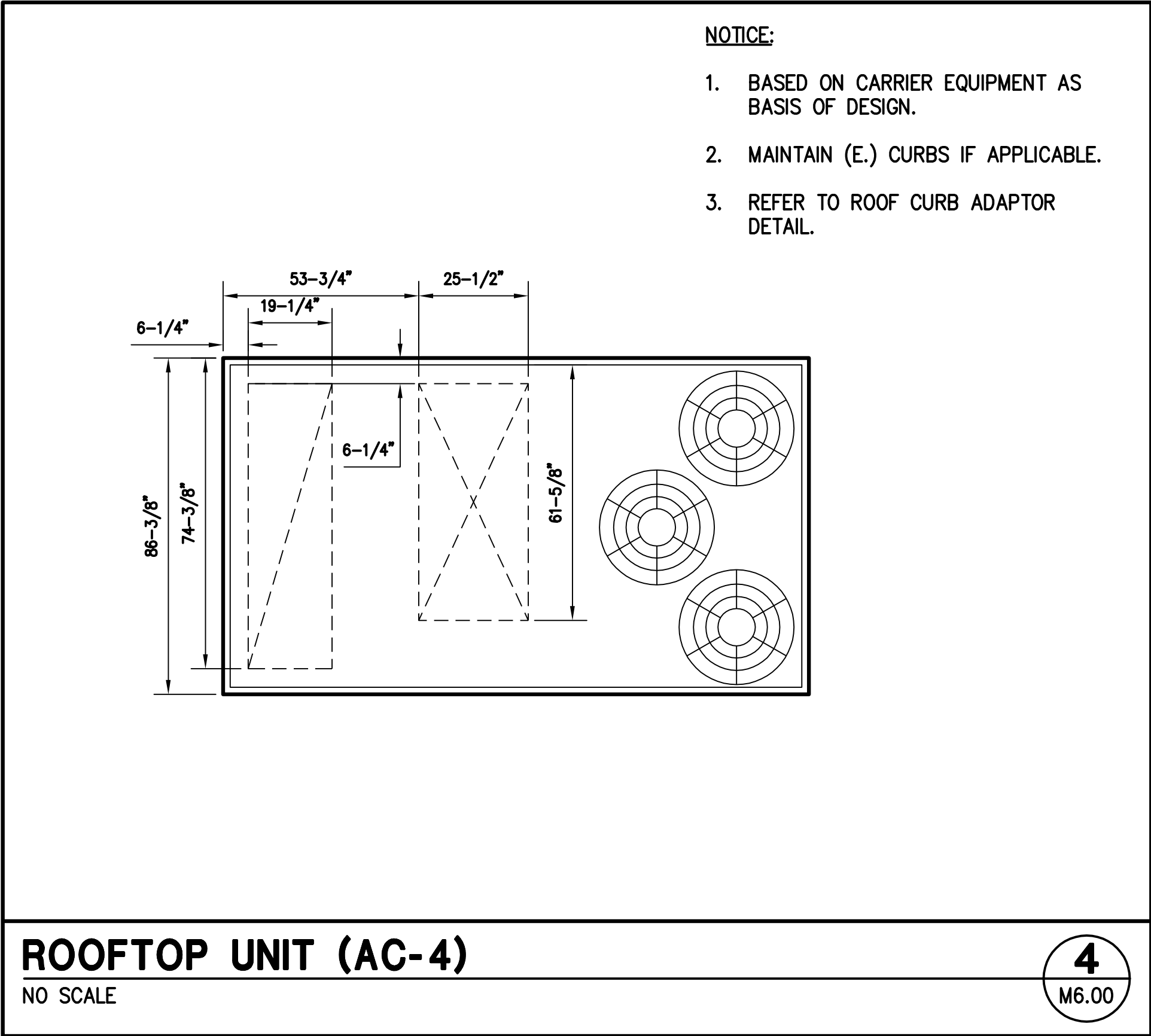
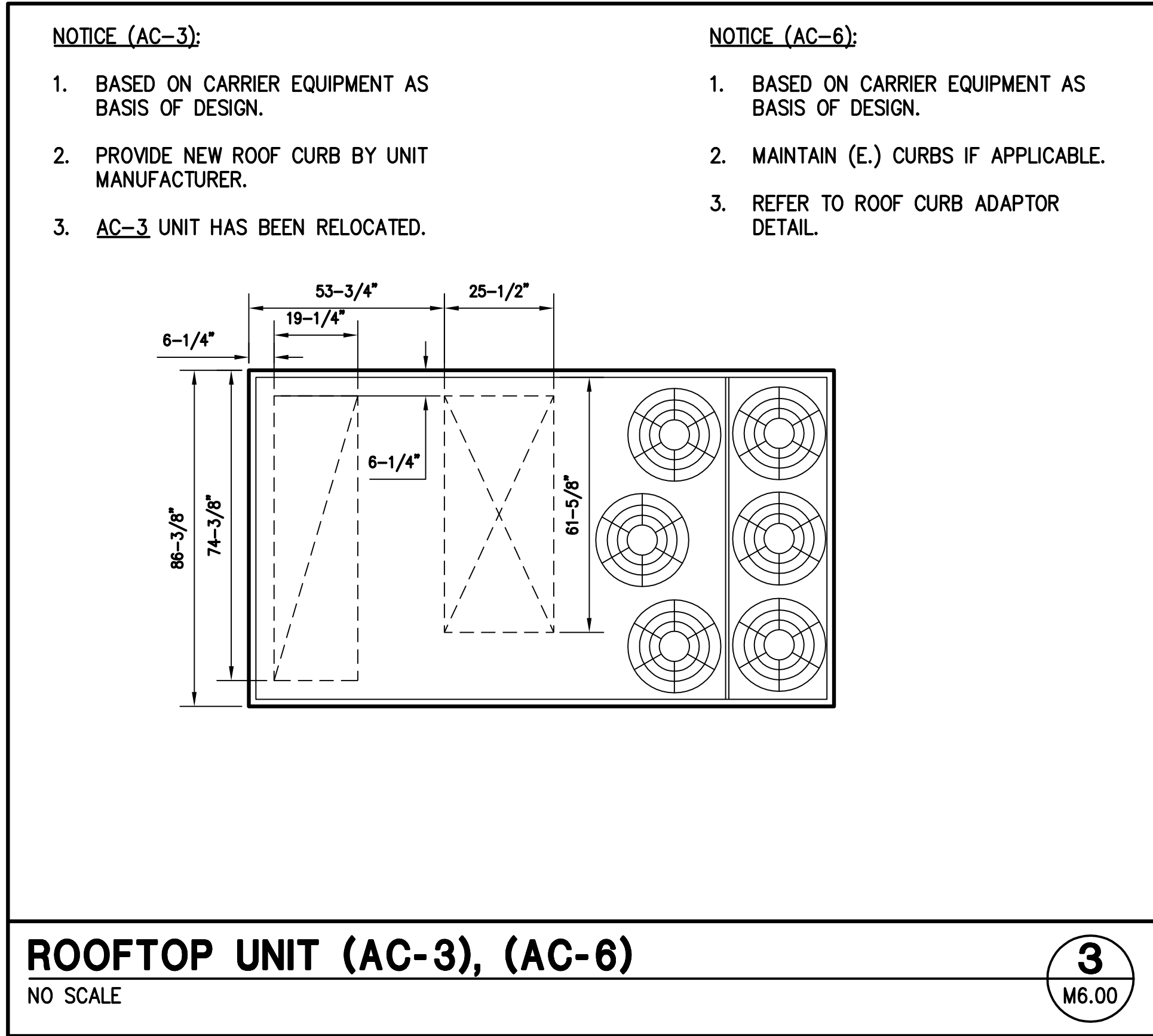
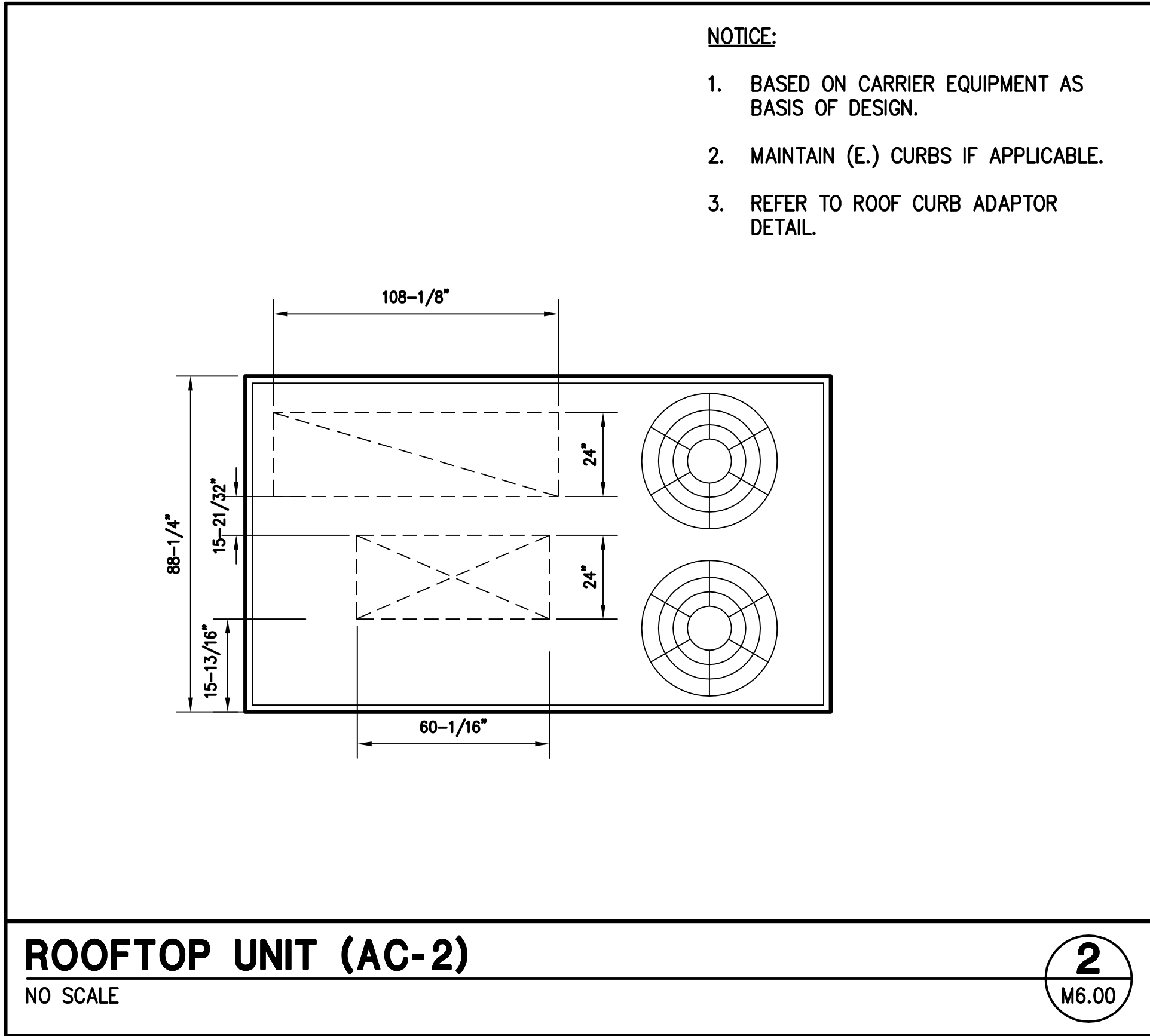
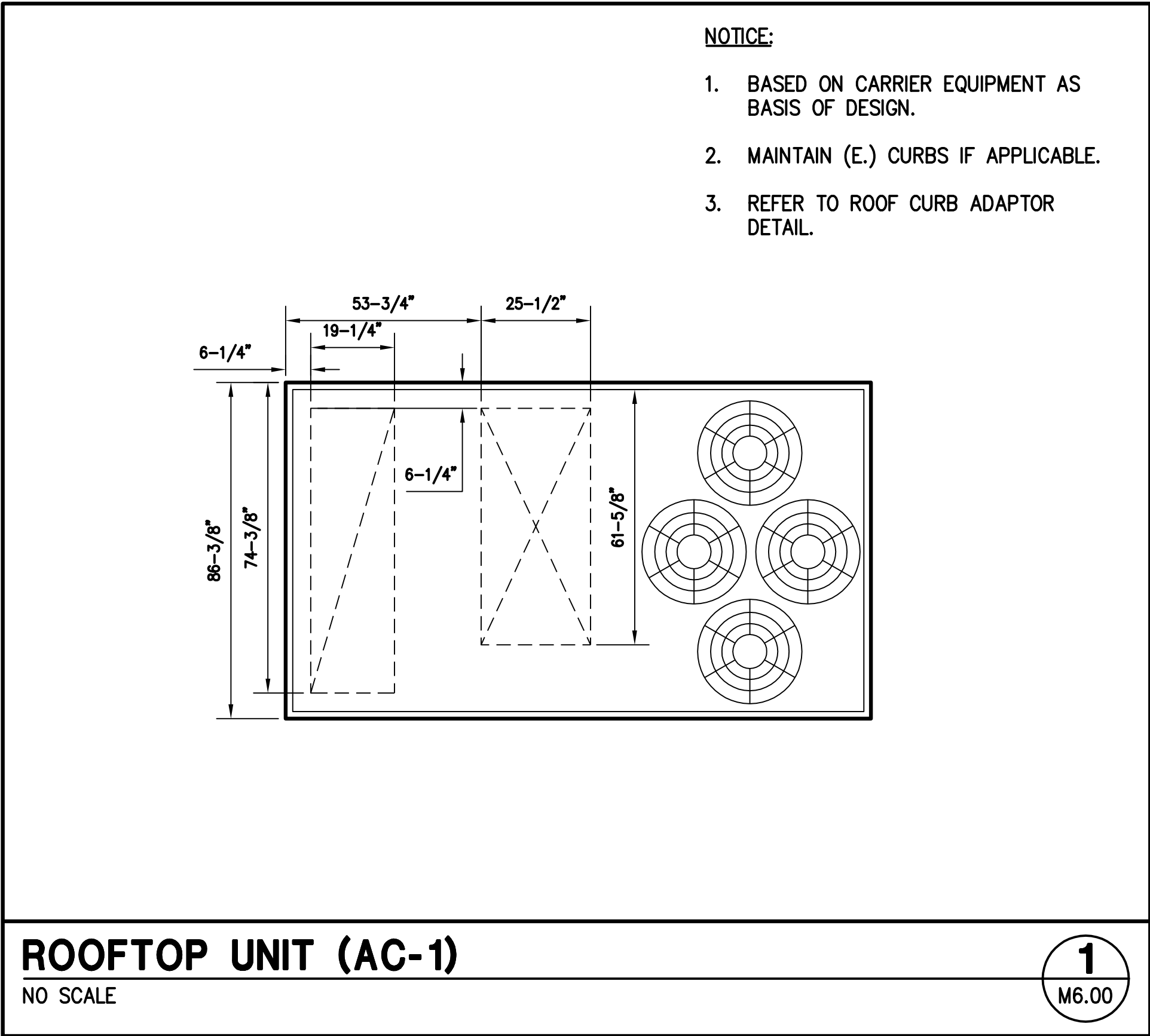
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$$3/32'' = 1'-0''$$

(A)



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REVISIONS

ARCHITECT

Charleston Heights Community Center
- Renovation -

DESIGN DETAILS



JBA Las Vegas
5155 W Pecos Ln
Las Vegas, NV 89115
p 702.352.2000

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

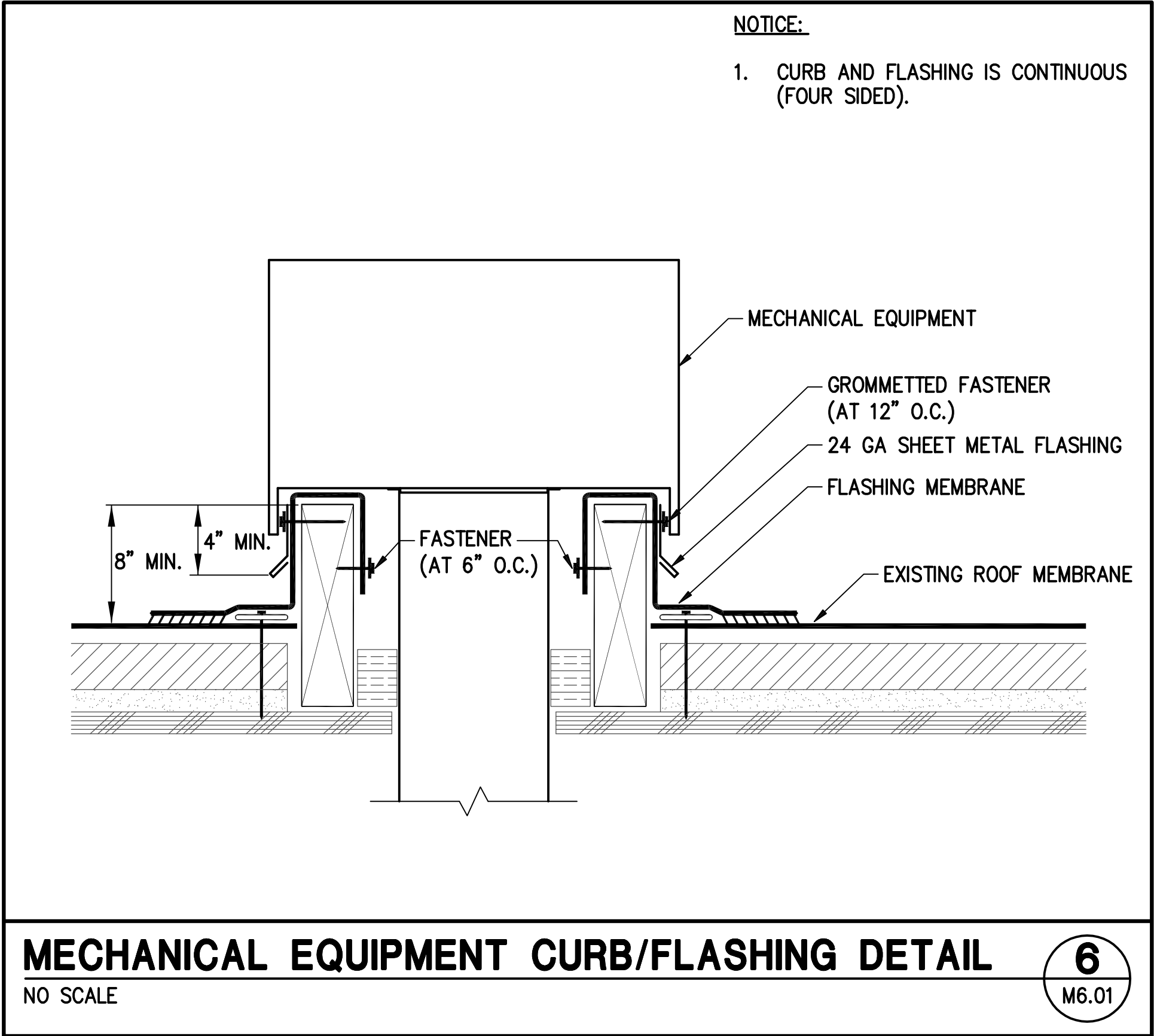
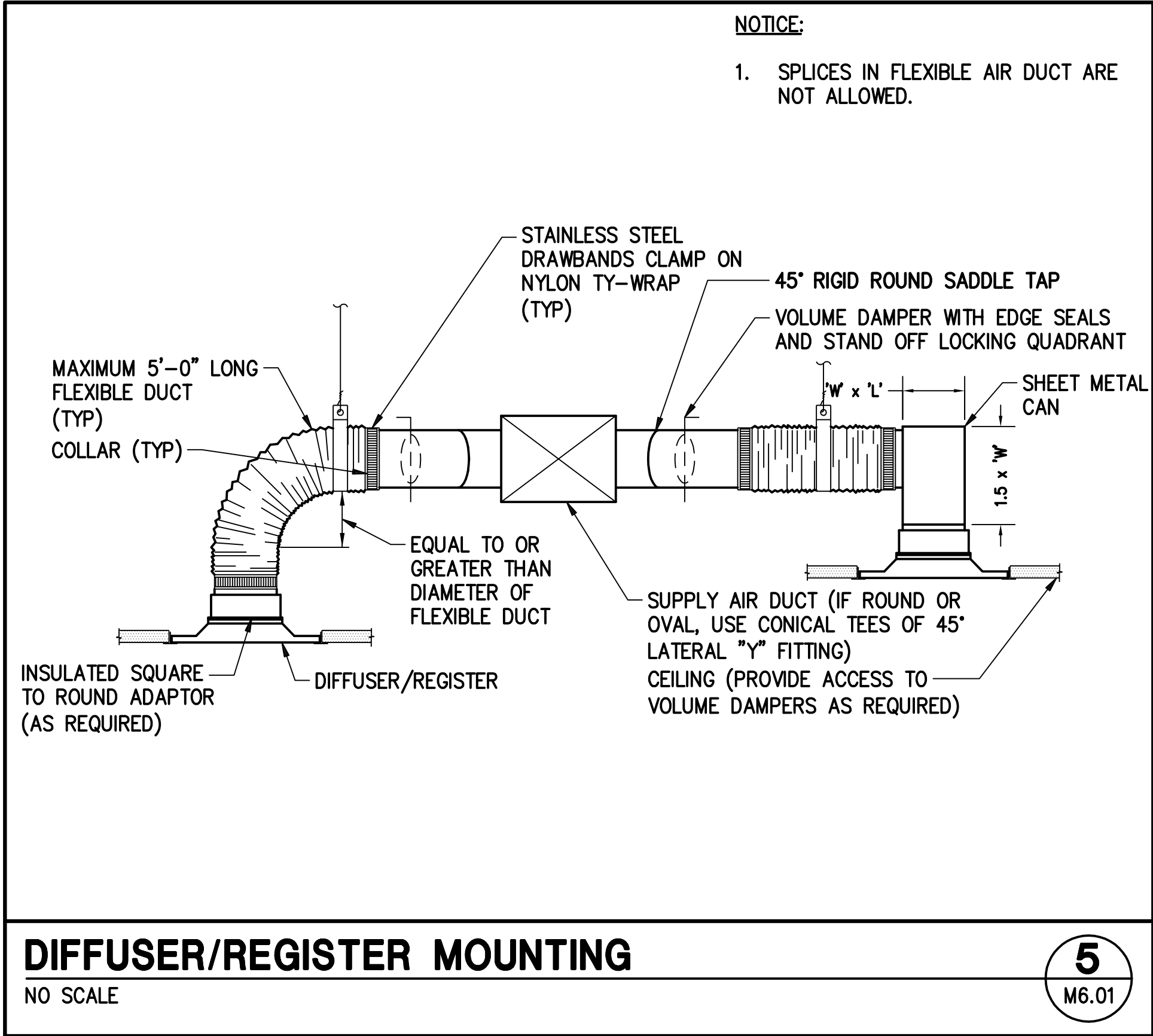
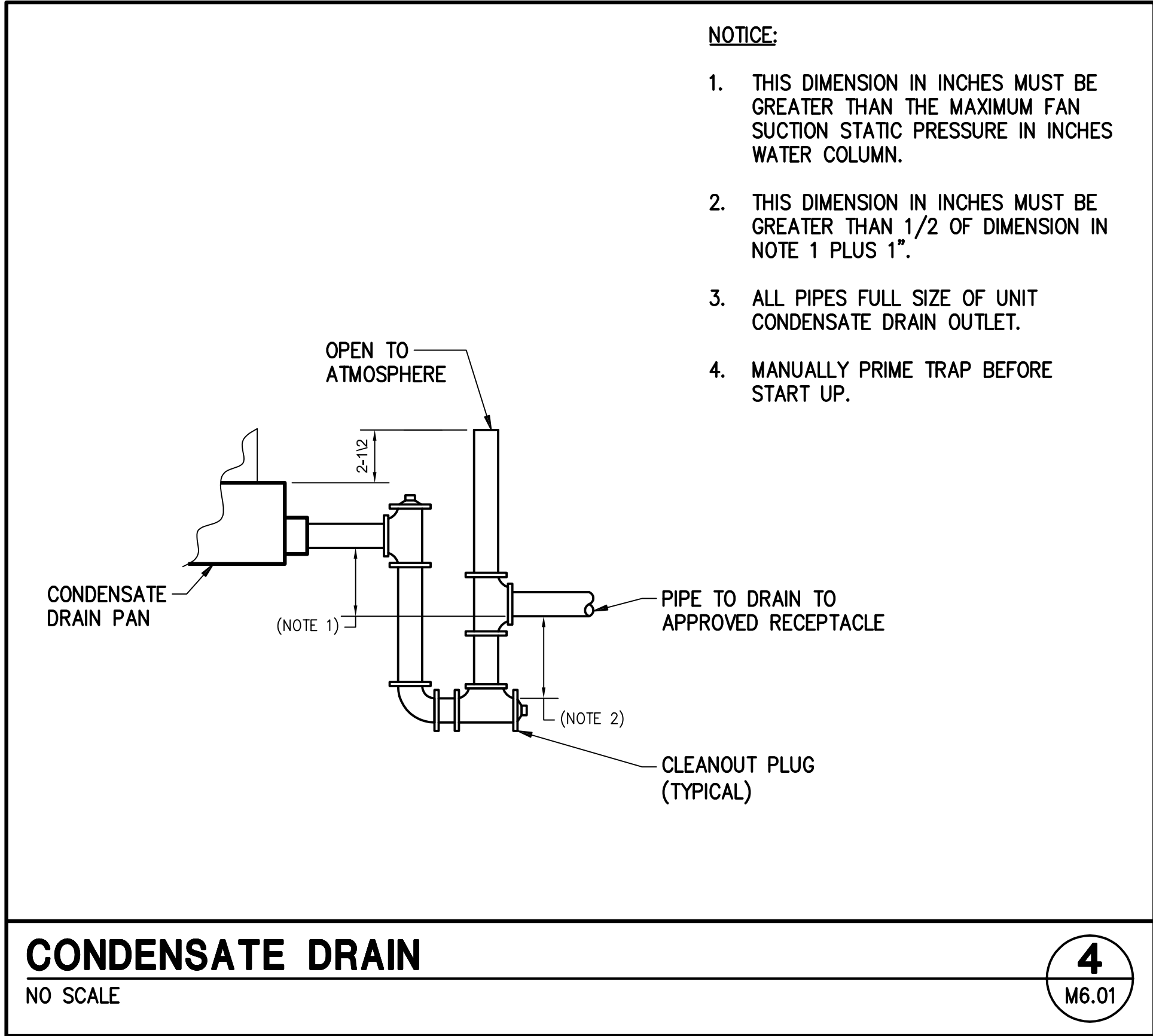
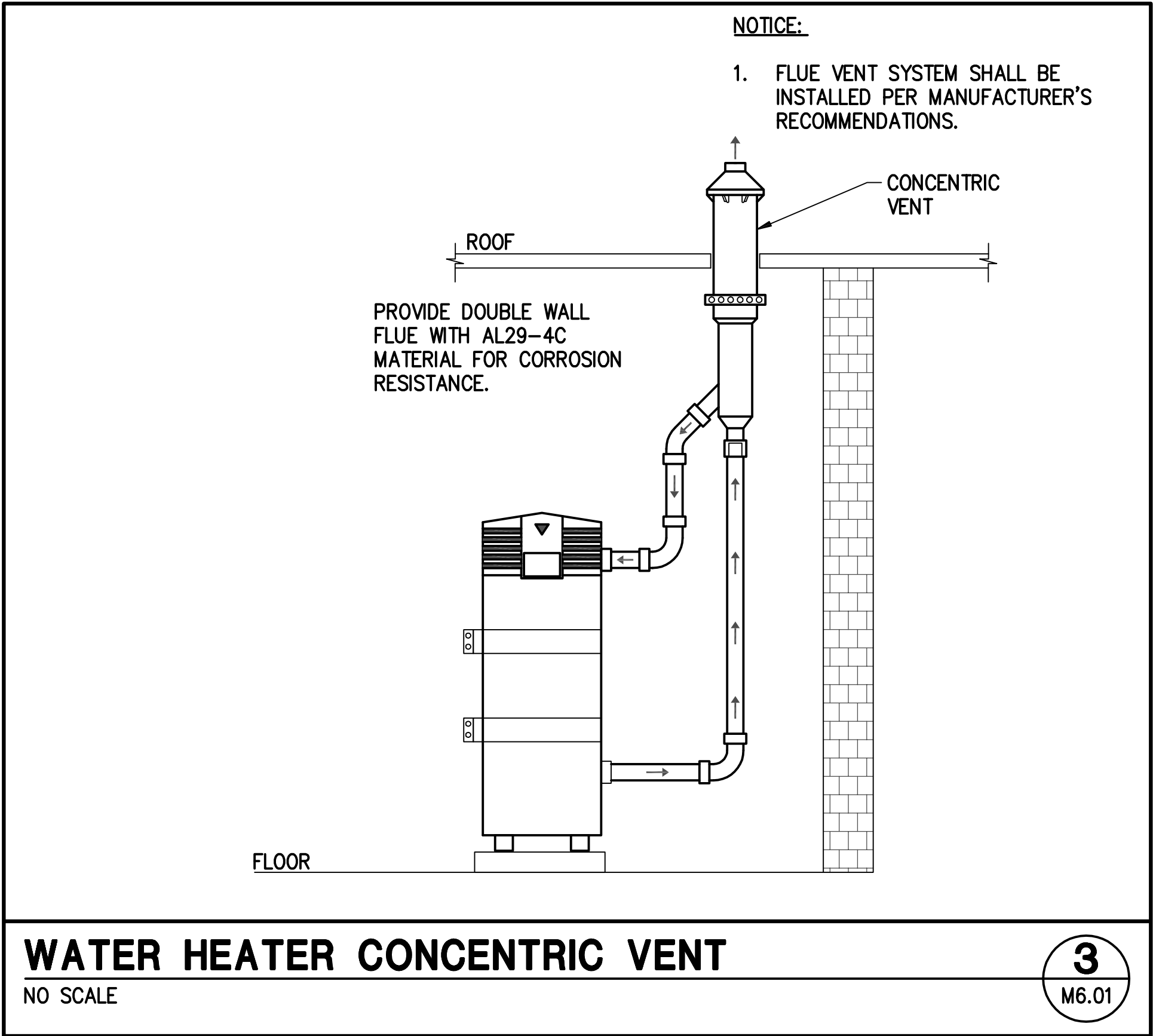
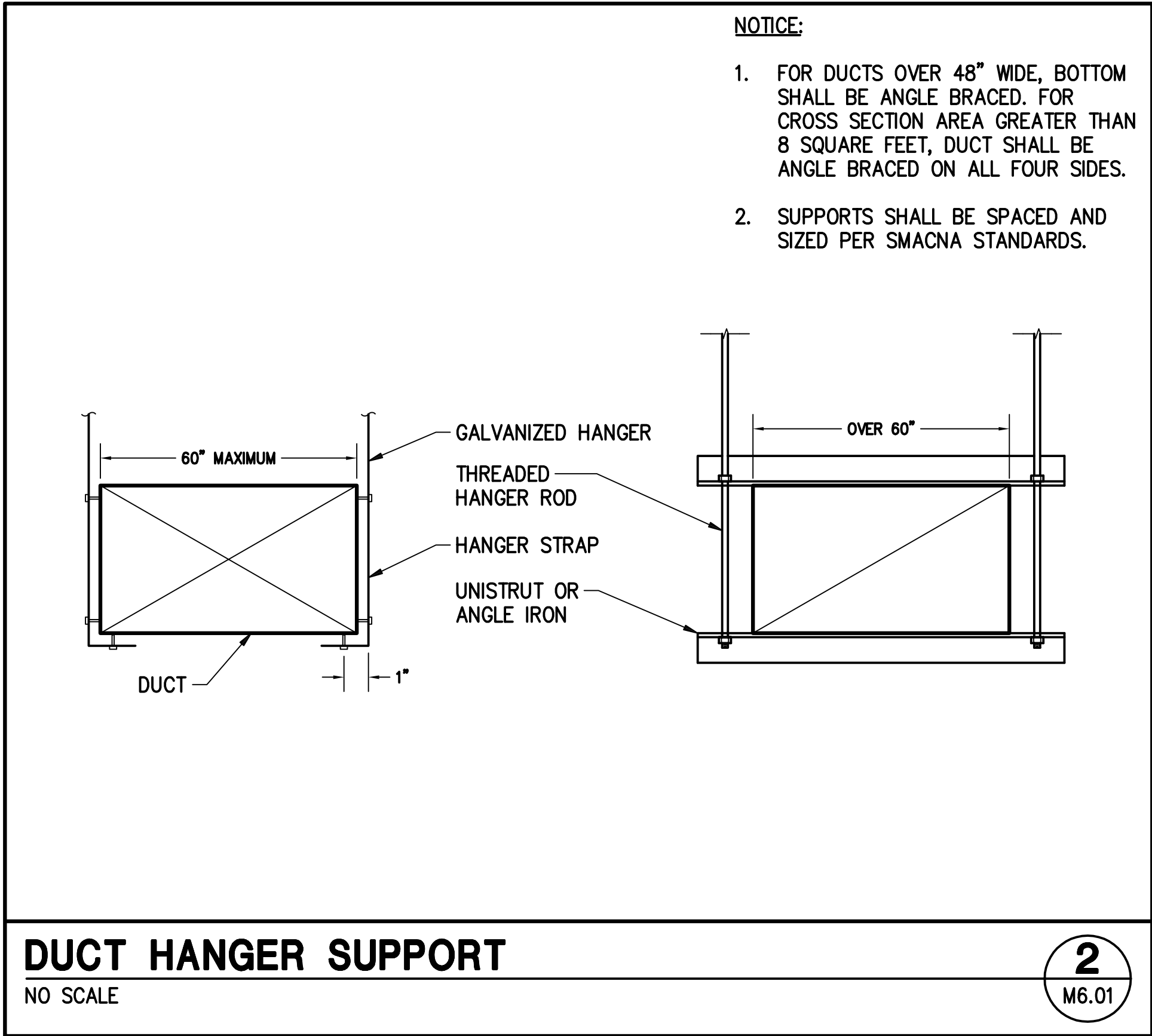
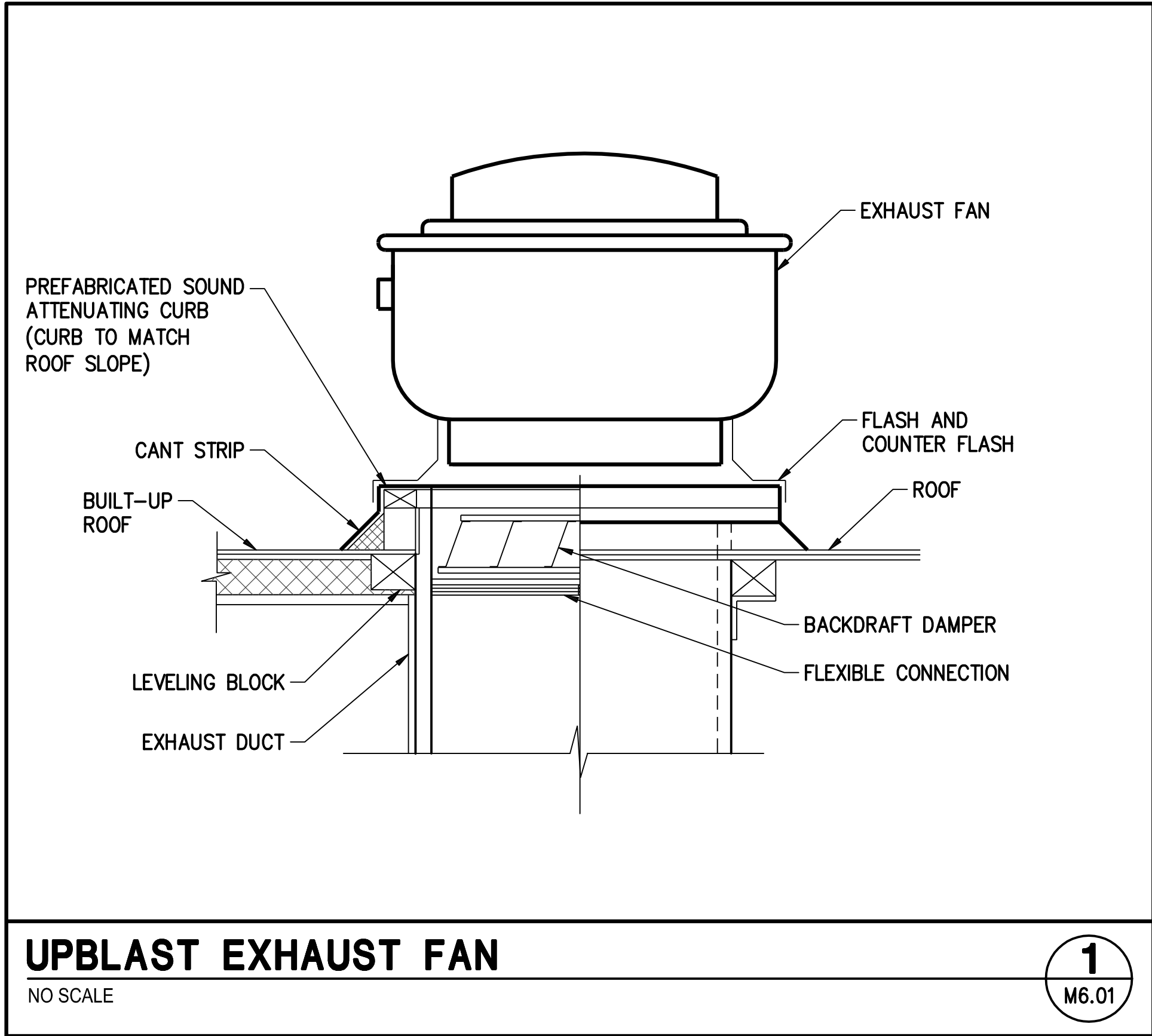
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DRAWN JU
FILE
DATE 02/15/2018
SCALE
BID NO 15.59806.JH
CLV DWG NO 620-10B
HANSEN NO 59806
SHT NO

M6.00

#15.0821

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REVISIONS

NO.	DESCRIPTION

ARCHITECT

Charleston Heights Community Center
- Renovation -

DESIGN DETAILS



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(THIS IS A MASTER LIST, NOT ALL ABBREVIATIONS MAY APPEAR ON DRAWINGS.)

AD	ACCESS DOOR / AREA DRAIN	MAX	MAXIMUM
ADA	AMERICANS WITH DISABILITIES ACT	MBH	1000 BRITISH THERMAL UNITS PER HOUR
AFF	ABOVE FINISH FLOOR	MCA	MINIMUM CIRCUIT AMPS
AP	ACCESS PANEL	MCC	MOTOR CONTROL CENTER
AUTO	AUTOMATIC	MH	MANHOLE
		MIN	MINIMUM
BHP	BRAKE HORSEPOWER	MOC	MAXIMUM OVER CURRENT PROTECTION
BMS	BUILDING MANAGEMENT SYSTEM		
BOH	BACK OF HOUSE	NA	NOT APPLICABLE
BTU	BRITISH THERMAL UNIT	NEC	NATIONAL ELECTRICAL CODE
		NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
°C	DEGREES CELSIUS	NIC	NOT IN CONTRACT
CFH	CUBIC FEET PER HOUR	NPSHA	NET POSITIVE SUCTION HEAD AVAILABLE
CFM	CUBIC FEET PER MINUTE	NPSHR	NET POSITIVE SUCTION HEAD REQUIRED
DC	DIRECT CURRENT	OFCI	OWNER FURNISHED/CONTRACTOR INSTALLED
DDC	DIRECT DIGITAL CONTROL		
DDCFP	DIRECT DIGITAL CONTROL FIELD PANEL		
DF	DRINKING FOUNTAIN	P	PUMP
DFU	DRAINAGE FIXTURE UNITS	PA	PRESSURE AVAILABLE
DIA (Ø)	DIAMETER	PD	PRESSURE DROP
DN	DOWN	PDI	PLUMBING DRAINAGE INSTITUTE
		PH	PHASE
E	EXISTING	PRV	PRESSURE REDUCING VALVE
EFF	EFFICIENCY	PSI	POUND PER SQUARE INCH
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM	PSIA	POUND PER SQUARE INCH ABSOLUTE
ET	EXPANSION TANK	PSIG	POUND PER SQUARE INCH GAUGE
EWC	ELECTRIC WATER COOLER		
		RPM	REVOLUTIONS PER MINUTE
°F	DEGREES FAHRENHEIT		
FLA	FULL LOAD AMPS	S	SINK, SOIL
FPM	FEET PER MINUTE	SH	SHOWER / STATIC HEAD
FPS	FEET PER SECOND	SP	STATIC PRESSURE
FT	FEET	SQ FT (Ⓔ)	SQUARE FEET
FU	FIXTURE UNITS	SS	SERVICE SINK
GAL	GALLONS	T	TEMPERATURE
GPH	GALLONS PER HOUR	TAB	TESTING AND BALANCING
GPM	GALLONS PER MINUTE	TDH	TOTAL DEVELOPED HEAD
		TEL	TOTAL EQUIVALENT LENGTH
H	HEIGHT	TP	TRAP PRIMER
HD	HEAD	TS	TEMPERING STATION
HOA	HAND OFF AUTO	TYP	TYPICAL
HP	HORSEPOWER		
HR	HOUR	U	URINAL
HS	HAND SINK	UMC	UNIFORM MECHANICAL CODE
HZ	HERTZ	UNO	UNLESS NOTED OTHERWISE
		UPC	UNIFORM PLUMBING CODE
IBC	INTERNATIONAL BUILDING CODE		
IE	INVERT ELEVATION	V	VENT, VOLTS
IFC	INTERNATIONAL FIRE CODE		
IFGC	INTERNATIONAL FUEL GAS CODE	W	WIDTH, WASTE, WATT
IMC	INTERNATIONAL MECHANICAL CODE	WC	WATER CLOSET
IN	INCH	WFU	WATER FIXTURE UNITS
IPC	INTERNATIONAL PLUMBING CODE	WG	WATER GAUGE
		WH	WATER HEATER
KW	KILOWATT	WP	WATER PRESSURE
		WPD	WATER PRESSURE DROP
L	LENGTH, LAVATORY		
LBS	POUNDS		

(THIS IS A MASTER LEGEND, NOT ALL SYMBOLS MAY APPEAR ON DRAWINGS.)

ABBR	SYMBOL	DESCRIPTION
		SHEET NOTE
		REVISION NUMBER
S OR W		SOIL, WASTE OR SEWER - ABOVE AND BELOW GRADE/FLOOR
CWV		COMBINATION WASTE AND VENT
GR		GREASE WASTE - ABOVE AND BELOW GRADE/FLOOR
SD		STORM DRAIN - ABOVE AND BELOW GRADE/FLOOR
OSD		OVERFLOW STORM DRAIN - ABOVE AND BELOW GRADE/FLOOR
		OVERFLOW STORM DRAIN ABOVE GRADE OR FLOOR
PDP		PLANTER DRAIN PIPING BELOW GRADE OR FLOOR
		PLANTER DRAIN PIPING ABOVE GRADE OR FLOOR
AW		ACID WASTE BELOW GRADE OR FLOOR
		ACID WASTE ABOVE GRADE OR FLOOR
OD		POOL OVERFLOW DRAIN PIPING
SLD		SLAB DRAIN PIPING
V		VENT
AV		ACID VENT
FOV		FUEL OIL VENT
ERV		EMERGENCY RELIEF VENT
		FUEL OIL - SUPPLY AND RETURN
		COLD WATER
HW		HOT WATER
HWR		HOT WATER RETURN
TW		TEMPERED WATER
TWR		TEMPERED WATER RETURN
SCW		SOFT COLD WATER
PD		PUMPED DRAIN
D		DRAIN
PW		PUMPED WASTE
ICW		INDUSTRIAL COLD WATER
NPW		NON-POTABLE WATER
		PRESSURE GAS - LOW, MEDIUM, AND HIGH
GV		GAS PRESSURE REGULATOR VENT
F		FIRE LINE
CSP		COMBINATION STAND PIPE
		PIPING BELOW GRADE WITH HEAT TRACE
		PIPING ABOVE GRADE WITH HEAT TRACE
		GAS - COCK, PRESSURE REGULATOR, METER, AND SOLENOID
		HOSE BIBB - NORMAL AND RECESSED
		REDUCED PRESSURE BACKFLOW PREVENTER
CO, WCO		CLEANOUT AND WALL CLEANOUT
AD, OAD		AREA DRAIN, OVERFLOW AREA DRAIN
FD		FLOOR DRAIN/ABOVE
FS		FLOOR SINK/ABOVE
PD		PLANTER DRAIN
DD		DECK DRAIN/ABOVE
RD, ORD		ROOF DRAIN, OVERFLOW ROOF DRAIN/ABOVE
VTR		VENT THROUGH ROOF
FSR		FIRE SPRINKLER RISER
SOV		SHUT-OFF VALVE
BVA		BALANCING VALVE ASSEMBLY - SOV, CV AND BV
BV		BALANCING VALVE
CV		CHECK VALVE
PRV		PRESSURE REDUCING VALVE
MX		MIXING VALVE
		RELIEF VALVE
		STRAINER WITH BLOW-DOWN VALVE
		FLEXIBLE PIPE CONNECTION
		UNION
		PIPE TRANSITION
PG		PRESSURE GAUGE
TH		THERMOMETER
WHA		WATER HAMMER ARRESTOR
		PIPE DOWN AND PIPE TEE DOWN
		PIPE UP AND PIPE TEE UP
		PIPE CAP
		ANCHOR
		GUIDE
		FLOW ARROW
POC		POINT OF CONNECTION TO EXISTING
POD		POINT OF DISCONNECTION FROM EXISTING
		ITEM TO BE REMOVED
		EQUIPMENT TYPE
		EQUIPMENT NUMBER
		E = EXISTING
		PLAN/RISER TYPE
		SHEET/RISER NUMBER

ISSUE

[illegible]

THIS PROJECT INVOLVES CONSTRUCTION INSIDE AN EXISTING STRUCTURE. CONTRACTORS, BY SUBMITTING A BID ARE DEEMED TO BE COMPLETELY FAMILIAR WITH THE EXISTING CONDITIONS OF THE BUILDING AS IT INFLUENCES THE WORK DESCRIBED. NO CLAIMS FOR EXTRA COMPENSATION WILL BE CONSIDERED FOR EXISTING CONDITIONS VISIBLE OR REASONABLY INFERABLE FROM A CAREFUL EXAMINATION OF THE EXISTING BUILDING CONDITIONS.

CONTRACTOR SHALL INSPECT THE EXISTING FIELD CONDITIONS AT THE SITE (INCLUDING BUT NOT LIMITED TO SIZES, INVERTS AND POINTS OF CONNECTION) AND THE CONTRACT DOCUMENTS PRIOR TO THE START OF ANY WORK TO DETERMINE WHAT EFFECT THE EXISTING CONDITIONS WILL HAVE ON THE WORK POTENTIAL. CONTRACTOR SHALL REPORT DISCREPANCIES TO THE ARCHITECT AND INCLUDE IN HIS BID ALL COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.



REVISIONS

ARCHITECT

Charleston Heights Community Center

Renovation -

COVER SHEET



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DRAWN

DATE 02/15/201

SCALE

BID NO	15.59806.JH
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CLV DWG NO 620-10B

HANSEN NO 60806

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RECORD DRAWINGS

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PLUMBING GENERAL NOTES	
1. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK.	
2. EXISTING PIPING AND EQUIPMENT TO REMAIN IS SHOWN LIGHT. NEW PIPING AND EQUIPMENT IS SHOWN HEAVY. EXISTING PIPING AND EQUIPMENT TO BE REMOVED IS SHOWN CROSSHATCHED.	
3. ARCHITECTURAL DRAWINGS SHALL BE REVIEWED FOR PROJECT SCOPE AND AREA OF WORK. WORK SHALL INCLUDE DEMOLITION AND REMOVAL OF EXISTING PLUMBING FIXTURES AS REQUIRED. PLUMBING IN EXISTING WALLS AND UNDER GROUND SHALL BE REMOVED AND CAPPED AS REQUIRED. RECONNECT EXISTING PIPING TO FIXTURES AND EQUIPMENT NOT IN DEMOLITION AREA AS REQUIRED TO MAINTAIN A COMPLETE AND OPERABLE SYSTEM.	
4. THE OWNER RESERVES FIRST CHOICE TO KEEP EXISTING EQUIPMENT AND MATERIALS. COORDINATE WITH OWNER AND DELIVER DESIGNATED EQUIPMENT AND MATERIALS REMOVED UNDER THIS CONTRACT TO OWNERS DESIGNATED STORAGE AREA. REMAINING EQUIPMENT AND MATERIAL REMOVED SHALL BECOME PROPERTY OF THE CONTRACTOR.	
5. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT PLUMBING FIXTURE LOCATIONS, MOUNTING HEIGHTS, AND PLUMBING ROUGH-IN LOCATIONS. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL HANDICAPPED FIXTURES. OBTAIN EXACT FLOOR DRAIN AND FLOOR SINK LOCATIONS FROM FOOD SERVICE DRAWINGS. ROUGH-IN LOCATIONS FOR KITCHENS, BARS, ETC TO BE TAKEN FROM APPROVED FOOD SERVICE SHOP DRAWINGS.	
6. ITEM DESIGNATIONS INDICATED ARE FOR PURPOSES OF THESE DOCUMENTS ONLY. CONTRACTOR SHALL VERIFY WITH OWNER ACTUAL DESIGNATION INFORMATION TO BE PROVIDED FOR EACH ITEM OF PLUMBING EQUIPMENT PRIOR TO NAMEPLATE ORDER RELEASE.	
7. THE PLUMBING DETAILS SHALL BE INCORPORATED INTO THE ASSOCIATED WORK AND PROVIDE GENERAL GUIDANCE AS TO THE INSTALLATION INTENT WHETHER REFERENCED TO OR NOT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY COMPONENTS FOR A COMPLETE INSTALLATION AND ENSURE THAT ALL INSTALLATIONS ARE IN ACCORDANCE WITH THE EQUIPMENT'S LISTING AND MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTION.	
8. SEISMIC RESTRAINTS SHALL BE PROVIDED PER THE LATEST ADOPTED STANDARD BUILDING CODE AND THE SMACNA SEISMIC RESTRAINT MANUAL GUIDELINES FOR MECHANICAL SYSTEMS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE PROPOSED RESTRAINTS, STRUCTURAL ATTACHMENT METHODS, AND RESTRAINT LOCATIONS TO THE ARCHITECT FOR REVIEW. THE SUBMITTED DOCUMENTS SHALL BE PREPARED AND STAMPED BY A STRUCTURAL ENGINEER LICENSED IN THE PROJECT STATE.	
9. COORDINATE SPRINKLER/STANDPIPE DRAIN REQUIREMENTS AND LOCATIONS WITH FIRE PROTECTION DIVISION OF WORK.	
10. REFER TO CIVIL DRAWINGS FOR INVERT AT SITE UTILITY POINTS OF CONNECTION. PROVIDE OFFSET AND INCREASER FOR STORM DRAIN OR SEWER AS REQUIRED FOR CONNECTION TO CIVIL.	
11. HOT WATER RETURN PIPING BRANCH LINES TO DROP DOWN IN WALL AND CONNECT TO HOT WATER SUPPLY AT STOPS, OR AT TEMPERING STATIONS. REFER TO DETAIL SHEET FOR DIAGRAMS SHOWING CONNECTIONS.	
12. ARRANGE WATER HEATERS AND PIPING TO PROVIDE EASE OF DISASSEMBLY AND MAINTENANCE.	
13. HOT AND COLD WATER SHUT-OFF VALVES AND HOT WATER RETURN THROTTLING VALVES SHALL BE LOCATED TO BE EASILY ACCESSED.	
14. PROVIDE WALL CLEANOUTS AT SINKS AND URINALS IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE ADOPTED STANDARD PLUMBING CODE.	
15. VENTS THROUGH ROOF SHALL BE MINIMUM 10'-0" FROM ANY OUTSIDE AIR INTAKES AND BUILDING OPENINGS.	
16. EQUIPMENT AND PIPING LOCATIONS SHOWN FROM BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD VERIFY SIZE AND LOCATIONS PRIOR TO START OF WORK. IF SYSTEMS ARE NOT AS SHOWN IN DRAWINGS, REPORT DEVIATIONS TO ARCHITECT/ENGINEER WITHIN 48 HOURS OF DISCOVERY.	
17. WHERE PIPING IS TO BE REMOVED TO A POINT, IT SHALL BE CAPPED OFF AND PROTECTED (WHERE APPLICABLE) FOR CONNECTION TO NEW WORK. INSULATION ON EXISTING PIPING SHALL BE REPAIRED OR REPLACED EQUAL TO NEW CONDITION.	
18. PIPING CONNECTING TO REMOVED EQUIPMENT SHALL BE REMOVED TO A POINT SO AS NOT TO INTERFERE WITH NEW CONSTRUCTION.	

FIRE SPRINKLER NOTES	
1. SPRINKLER CONTRACTOR SHALL PROVIDE SYSTEM DESIGN, LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY FOR THE COMPLETE DESIGN AND INSTALLATION OF THE FIRE SPRINKLER SYSTEM SERVING THE SPACE.	
2. THE DESIGN AND INSTALLATION SHALL CONFORM TO ALL REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION NFPA 13, CLARK COUNTY FIRE CODE FIRE CODE AND THE GENERAL REQUIREMENTS OF APPLICABLE SECTIONS OF THE 2012 IBC, THE SPECIFIC REQUIREMENTS OF THE LOCAL FIRE PREVENTION BUREAU AND THE OWNER'S INSURANCE UNDERWRITER.	
3. THE SYSTEM SHALL INCLUDE, BUT IS NOT LIMITED TO, SPRINKLERS, ESCUTCHEONS, PIPING, VALVES, FITTINGS, DRAINS, HANGERS, BRACING, SIGNS, TEST CONNECTIONS AND OTHER IDENTIFICATION MARKINGS AS REQUIRED.	
4. ALL PIPING, EQUIPMENT AND MATERIALS USED IN THE INSTALLATION OF THE FIRE PROTECTION SYSTEMS SHALL BE LISTED AS APPROVED BY UNDERWRITERS, LABORATORIES INC., "LIST OF INSPECTED FIRE PROTECTION EQUIPMENT AND MATERIALS", OR APPROVED BY OTHER APPROPRIATE, NATIONALLY RECOGNIZED TESTING LABORATORIES FOR USE IN SPRINKLER SYSTEMS, AND SHALL BE THE LATEST DESIGN OF THE MANUFACTURER.	
5. ALL EQUIPMENT OF THE SAME TYPE SHALL BE PROVIDED BY THE SAME MANUFACTURER. PRODUCTS FROM MULTIPLE MANUFACTURERS FOR THE SAME TYPE SHALL NOT BE ALLOWED.	
6. PROVIDE SEISMIC BRACING AS REQUIRED BY 2012 INTERNATIONAL BUILDING AND FIRE CODES AND NFPA 13.	
7. PIPING, PIPE HANGERS, SWAY BRACING AND SUPPORTS SHALL CONFORM TO THE LATEST EDITION OF NFPA 13.	
8. ALL SPRINKLERS WITHIN THE SPACE SHALL BE PROVIDED WITH EQUIVALENT CHARACTERISTICS, INCLUDING TEMPERATURE RATING, RESPONSE TIME INDEX AND RESPONSE TYPE.	
9. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND COORDINATE WITH OTHER TRADES PRIOR TO INSTALLATION. COORDINATE WITH OTHER WORK, INCLUDING DUCTWORK, DIFFUSERS, GRILLES, ELECTRICAL AND PLUMBING PIPING AS NECESSARY TO INTERFACE COMPONENTS OF FIRE SPRINKLER PIPING PROPERLY WITH OTHER WORK.	
10. AFTER SYSTEM IS INSTALLED IT SHALL BE FILLED AND TESTED IN ACCORDANCE WITH LOCAL REQUIREMENTS AND THE REQUIREMENTS OF THE APPLICABLE NFPA STANDARDS.	
11. SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE PROVIDED TO THE ARCHITECT PRIOR TO SUBMISSION TO THE LOCAL AUTHORITIES. ONCE APPROVED BY THE ARCHITECT OR THEIR ENGINEER, SHOP DRAWINGS SHALL BE SUBMITTED TO THE LOCAL JURISDICTION FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL CONFORM TO THE REQUIREMENTS OF NFPA 13.	
12. THE CONTRACTOR GUARANTEES THAT ALL WORK INSTALLED SHALL BE FREE OF DEFECTS IN WORKMANSHIP AND MATERIAL FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE CERTIFICATION OF COMPLETION AND ACCEPTANCE OF THE WORK.	
13. THE CONTRACTOR SHALL PROVIDE A STOCK OF SPARE SPRINKLERS, INCLUDING CABINET, AS REQUIRED BY NFPA 13.	
14. ALL SPRINKLERS SHALL BE CONCEALED. FINISH AND COLOR SHALL BE SELECTED BY THE ARCHITECT.	
15. ALL SPRINKLERS SHALL BE CENTERED WITHIN THE CEILING TILE, COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO SUBMITTAL OF SHOP DRAWINGS.	
16. ALL PIPING IN FINISHED OR PUBLIC SPACES SHALL BE CONCEALED ABOVE FINISHED CEILINGS. PIPING IN UNFINISHED SPACES MAY BE EXPOSED.	
17. CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING, SEALING, PATCHING AND PAINTING AS REQUIRED FOR INSTALLATION OF SPRINKLER SYSTEM. ALL PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRESTOPPED WITH AN APPROVED MATERIAL AS PRESCRIBED BY THE BUILDING CODE. ALL FIRESTOPPING SHALL USE LISTED ASSEMBLIES BASED ON THE RATED PENETRATION.	
18. CONTRACTOR SHALL TEST ENTIRE SYSTEM IN ACCORDANCE WITH NFPA 13. PROVIDE ARCHITECT WITH COPIES OF ALL TEST CERTIFICATES, OPERATION AND MAINTENANCE MANUALS, RECORD DRAWINGS AND OTHER REQUIRED CERTIFICATES AS REQUIRED BY NFPA 13.	
19. CONTRACTOR SHALL BE LICENSED AND FULLY QUALIFIED TO PERFORM THE WORK AS REQUIRED BY THE LOCAL JURISDICTION.	

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REVISIONS

ARCHITECT

Charleson Heights Community Center

- Renovation -

GENERAL NOTES



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P0.01

#15.0621

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NOTICE

NOTICE:

1. FINAL COLOR, FIXTURE, TRIM AND ACCESSORIES SHALL BE APPROVED BY ARCHITECT PRIOR TO FIXTURE RELEASE.
2. PLUMBING FIXTURES SHALL COMPLY WITH STATE AND COUNTY WATER CONSERVATION REQUIREMENTS.
3. BALL VALVES SERVING WATER FOR HUMAN CONSUMPTION SHALL BE LEAD FREE IN ACCORDANCE WITH NSF-61-G.



REVISIONS

ARCHITECT

Charleson Heights Community Center

- Renovation -

SCHEDULES



jba Las Vegas
5105 W. Patoka Ln
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p 702.352.2000

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

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DRAWN JU

DATE 02/15/2018

BID NO 15.59806.JH

CLV DWG NO 620-10B

HANSEN NO 59806

SHT NO

P0.02

RECORD DRAWINGS

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PLUMBING FIXTURE SPECIFICATIONS

PLUMBING FIXTURES

WATER CLOSET WC-1: ZURN ECOVANTAGE, MODEL NUMBER Z-5615 WALL MOUNTED, ELONGATED BOWL, EVERCLEAN SURFACE. LOW CONSUMPTION, TOP SPUD, 1.6 GPF, EXPOSED HARDWIRED MULTI-AC-POWERED, SENSOR OPERATED FLUSH VALVE AQUASENSE, ZEMS-6000AV-IS, HEAVY DUTY, ELONGATED, OPEN FRONT, WHITE SEAT Z-5950 WITH CHECK HINGES, EVERCLEAN SURFACE, LESS COVER. ZURN CARRIER 1203-N.

WATER CLOSET WC-2: ZURN ECOVANTAGE, MODEL NUMBER Z-5615 WALL MOUNTED, ELONGATED BOWL, EVERCLEAN SURFACE. LOW CONSUMPTION, TOP SPUD, 1.6 GPF, EXPOSED HARDWIRED MULTI-AC-POWERED, SENSOR OPERATED FLUSH VALVE AQUASENSE, ZEMS-6000AV-IS, HEAVY DUTY, ELONGATED, OPEN FRONT, WHITE SEAT Z-5950 WITH CHECK HINGES, EVERCLEAN SURFACE, LESS COVER. ZURN CARRIER 1203-N. (ADA COMPLIANT)

WATER CLOSET (WC-3): ZURN ECOVANTAGE, MODEL NUMBER Z-5665 FLOOR MOUNTED, ELONGATED BOWL, EVERCLEAN SURFACE. LOW CONSUMPTION, TOP SPUD, 1.25 GPF, EXPOSED HARDWIRED MULTI-AC-POWERED, SENSOR OPERATED FLUSH VALVE AQUASENSE, ZEMS-6000AV-HET-IS, HEAVY DUTY, ELONGATED, OPEN FRONT, WHITE SEAT Z-5950 WITH CHECK HINGES, EVERCLEAN SURFACE, LESS COVER. (ADA COMPLIANT)

URINAL U-1: ZURN ECOVANTAGE, MODEL NUMBER Z-5755-U, WALL MOUNTED, ZURN FLUSH VALVE ZEMS-6003AV-ULF-IS 0.125 GPF, WHITE VITREOUS CHINA, TOP SPUD, BLOW-OUT. LOW CONSUMPTION, EXPOSED, HARDWIRED MULTI-AC POWERED, SENSOR OPERATED FLUSH VALVE. (ADA COMPLIANT)

LAVATORY (L-1): ZURN ECOVANTAGE, MODEL NUMBER Z-5220, 19" X 16" LAVATORY UNDERCOUNTER FRONT OVERFLOW, WHITE VITREOUS CHINA, 4" CENTERS, OVAL LAVATORY WITH OVERFLOW AND CLAMPS. ZURN Z-6915-XL ELECTRONIC METERING, HARD WIRED FAUCET, 0.35 GPM, VANDAL RESISTANT LAVATORY FAUCET WITH CHROME PLATED GRID DRAIN. FURNISH WITH P6000-HWG POWER CONVERTER. PROVIDE TRUEBRO LAV GUARD UNDERSINK PIPING PROTECTION. (ADA COMPLIANT).

LAVATORY (L-2): ZURN, MODEL NUMBER Z-5310, 20" X 18" WALL MOUNTED, WHITE VITREOUS CHINA, 4" CENTERS, LAVATORY WITH OVERFLOW AND HANGER. ZURN Z-6915-XL ELECTRONIC METERING, HARD WIRED FAUCET, 0.35 GPM. VANDAL RESISTANT LAVATORY FAUCET WITH CHROME PLATED GRID DRAIN. FURNISH WITH P6000-HWG POWER CONVERTER. PROVIDE TRUEBRO LAV GUARD UNDERSINK PIPING PROTECTION. (ADA COMPLIANT).

ELECTRIC WATER COOLER (EWC-1): ELKAY LZSTL8WSLK, WALL MOUNTED WATER COOLER WITH BOTTLE FILLING STATION, STAINLESS STEEL, BI-LEVEL, PUSH-BUTTON OPERATED, VANDAL-RESISTANT, BARRIER-FREE, 8 GPH, ELECTRIC WATER COOLER WITH IN WALL MOUNTING FRAME. ELECTRICAL SERVICE SHALL BE 115 VOLTS, 60 HZ, 370 WATTS, 5 FLA. PROVIDE WITH CANE DETECTION SHIELD.

DRINKING FOUNTAIN (DF-1): ELKAY MODEL LZWSM, FILTERED, SURFACE MOUNT, STAINLESS STEEL, EZH2O BOTTLE FILLING STATION, ELECTRONIC SENSOR FOR TOUCHLESS ACTIVATION. PROVIDE WATER SENTRY PLUS FILTRATION SYSTEM. QUICK FILL RATE: 1.5 GPM. ELECTRICAL: 115 V/ 1 PH, FLA = 1.0.

SUPPLIES, TRAPS AND MISCELLANEOUS

SUPPLIES: FOR CONCEALED APPLICATIONS, CONNECT WATER CLOSETS, LAVATORIES AND SINKS WITH McGUIRE BV 2165 CC BALL VALVE ANGLE STOP WITH SS-16 16" STAINLESS STEEL CONNECTOR FOR LAVATORIES, SINKS; McGUIRE BV 2165 CC BALL VALVE ANGLE STOP WITH SS-12 12" STAINLESS STEEL CONNECTOR FOR WATER CLOSET. WHERE EXPOSED, PROVIDE CROME PLATED FLEXIBLE TUBE-RISERS (PROVIDE OFFSET TAILPIECE AND INSULATE WASTE AND SUPPLIES AT ALL HANDICAPPED LAVATORIES WITH McGUIRE PW 2150 PRE-WRAP INSULATION KIT). CONCINNITY MODEL NUMBER 19-L3 "IN WALL STOPS" SATIN CHROME WITH BRUSHED BRASS ACCENT AT WALL MOUNTED LAVATORY. WHERE EXPOSED, PIPING TRIM FINISH SHALL MATCH FIXTURE FINISH.

TRAPS: McGUIRE B8902, CHROME PLATED CAST BRASS WITH CLEANOUT PLUG AND TUBING OUTLET WITH TRAP ADAPTER AND ESCUTCHEON. (B-155WC FOR OFFSET TAILPIECE).

CLEANOUT (CO): ZURN MODEL Z1468 (WALL), ZURN MODEL Z1400 (FLOOR).

FLOOR DRAIN (FD): ZURN MODEL Z415B, CAST IRON DRAIN BODY WITH FLASHING COLLAR AND ADJUSTABLE STRAINER HEAD. STRAINER FINISH SHALL BE NICKEL BRONZE UNLESS LOCATION REQUIRES GRATE TO MATCH APPLICABLE FIXTURE FINISHES AS IN TOILET ROOMS OR OUTDOOR SHOWERS. JR SMITH FIGURE 2233-Y, 11-1/2" CAST IRON GRATE (MECHANICAL ROOM, TRASH DOCK AND HEAVY TRAFFIC AREAS).

FLOOR DRAIN (FD-1): ZURN MODEL Z532 HEAVY-DUTY FLOOR DRAIN WITH CAST IRON BODY, FLASHING CLAMP, HEAVY DUTY SLOTTED GRATE AND SEDIMENT BUCKET.

FLOOR SINK (FS): ZURN MODEL FD2377 CAST IRON DRAIN, 10" DEEP WITH ENAMELED CAST IRON HALF GRATE EXCEPT WHERE INDICATED OTHERWISE ON PLUMBING DRAWINGS.

RECESSED HOSE BIBB (HB-1): ZURN MODEL Z-1320, FREEZELESS WALL HYDRANT WITH ANTI-SIPHON VACUUM BREAKER, 3/4" THREADED HOSE CONNECTION, REMOVABLE WHEEL HANDLE.

PLUMBING FIXTURE SCHEDULE

ITEM	FIXTURE	ROUGH-IN SIZE (IN)					NOTES
		TW/HW	CW	V	TRAP	S/W	
<u>WC-1, WC-2</u>	WATER CLOSET	-	1	2	-	4	WALL MOUNTED, ELECTRONIC FLUSH VALVE
<u>WC-3</u>	WATER CLOSET	-	1	2	-	4	WALL MOUNTED, ELECTRONIC FLUSH VALVE
<u>U-1</u>	URINAL	-	1/2	2	2	2	WALL MOUNTED, ELECTRONIC FLUSH VALVE
<u>L-1</u>	LAVATORY	1/2	1/2	1-1/4 1-1/2	1-1/4 1-1/2	1-1/2	COUNTERTOP, ELECTRONIC FAUCET
<u>L-2</u>	LAVATORY	1/2	1/2	1-1/4 1-1/2	1-1/4 1-1/2	1-1/2	WALL MOUNTED, ELECTRONIC FAUCET
<u>EWC-1</u>	ELECTRIC WATER COOLER	-	1/2	1-1/2	1-1/2	1-1/2	WALL MOUNTED

#15-0821

ELECTRONIC TRAP PRIMER SCHEDULE											
ITEM	LOCATION	MANUFACTURER MODEL NUMBER	TYPE	MOUNTING	MINIMUM MOUNTING HEIGHT (IN)	NUMBER OF DRAINS	INLET SIZE (IN)	MINIMUM HEADER CONNECTIONS	ELECTRICAL		NOTES
									V	FUSE (A)	
ETP-1	RESTROOMS	PPP, INC MPB-500	MANIFOLD	RECESSED	48	3	3/4	4	115/1	2	1, 2, 3, 4, 5
1. PROVIDE WITH ANTI-SIPHON VACUUM BREAKER, 24 HOUR CLOCK, MANUAL OVER RIDE, SOLENOID VALVE, CALIBRATED MANIFOLD WITH 1/2" OUTLET COMPRESSION FITTINGS. 5. VERIFY MOUNTING HEIGHT WITH FIELD CONDITIONS AND MANUFACTURER'S RECOMMENDATIONS. 2. PROVIDE SHUT-OFF VALVE ON INLET. 3. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. 4. PAINT ACCESS PANEL TO MATCH WALL. COORDINATE WITH ARCHITECT.											

THERMOSTATIC MIXING VALVE SCHEDULE										
ITEM	LOCATION	MANUFACTURER MODEL NUMBER	TYPE	MINIMUM FLOW RATE (GPM)	MAXIMUM FLOW RATE (GPM)	DESIGN FLOW RATE (GPM)	PRESSURE DROP (PSIG)	TEMPERATURE LIMIT STOP SET (°F)	INLET/OUTLET SIZE (IN)	NOTES
TMV-1	–	SYMMONS 5-200-1B	THERMOSTATIC	0.5	4	1.5	5.0	105	3/4 / 3/4	1, 2
TMV-2	–	SYMMONS 5-200-1B	THERMOSTATIC	0.5	4	1.5	5.0	105	3/4 / 3/4	1, 2
										1, 2

1. PROVIDE WITH ROUGH BRONZE FINISH, COLOR-CODED DIAL THERMOMETER, INLET THERMOMETERS, TEST CONNECTION, INLET CHECK STOPS, OUTLET BALL VALVE, LOCKING TEMPERATURE REGULATORS AND WALL SUPPORT.

2. PROVIDE ACCESS PANEL PER UPC.

GAS FIRED TANK WATER HEATER SCHEDULE												
ITEM	LOCATION	MANUFACTURER MODEL NUMBER	STORAGE CAPACITY (GAL)	RECOVERY RATE (GPH)	EFFICIENCY %	WORKING PRESSURE (PSIG)	TEMPERATURE RISE (°F)	NATURAL GAS INPUT (MBH)	FLUE SIZE (IN)	V/PH	MAXIMUM OPERATING WEIGHT (LBS)	NOTES
WH-1	JANITOR RM	A.O. SMITH BTH-199	100	288	94	160	80	199	4"	115/1	1400	1, 2, 3, 4, 5
1. PROVIDE WITH MULTI-FLUE DEIGN, FUSED GLASS LINING, POLYURETHANE FOAM INSULATION, TANK SAVER ANODES, HEAVY STEEL JACKET WITH BAKED ENAMEL FINISH.												
2. PROVIDE WITH AUTOMATIC RESET HIGH-LIMIT, SPARK IGNITION, SLIDE OUT BURNER TRAP, AUTOMATIC FIRE DAMPER, LOW WATER CUT-OFF, TEMPERATURE GAUGE AND PRESSURE GAUGE.												
3. MOUNT ON 4" HOUSE KEEPING PAD.												
4. SHALL MEET LATEST EDITION OF ASHRAE 90.1 STANDARDS.												
5. PROVIDE WITH ASME PRESSURE AND TEMPERATURE RELIEF VALVE, STAMPED "HLW".												
6. PROVIDE EXPANSION TANK, WATTS MODEL DET-12.												

CIRCULATING PUMP SCHEDULE											
ITEM	LOCATION	MANUFACTURER MODEL NUMBER	TYPE	FLOW (GPM)	TDH (FT)	ELECTRICAL			MAXIMUM OPERATING WEIGHT (LBS)	NOTES	
						V/PH	HP	RPM			
HCP-1	JANITOR RM	TACO 0014	140" INLINE HOT WATER CIRCULATING PUMP	5	30	115/1	1/8	3250	15	1, 2, 3, 4, 5, 6, 7	
1. PROVIDE WITH STAINLESS STEEL OR BRONZE CONSTRUCTION, SUITABLE FOR USE IN DOMESTIC WATER SYSTEMS.						5. WIRING SHALL BE IDENTIFIED FOR USE IN WET LOCATIONS IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.					
2. FLANGED BRONZE HOUSING.						6. PROVIDE SUPPLEMENTAL SUPPORT STEEL AND VIBRATION ISOLATION.					
3. PROVIDE WITH BUILT-IN THERMAL OVERLOAD SWITCH.						7. RECIRCULATING PUMP SHALL BE ENABLED PER OCCUPANCY SCHEDULE AND WHEN HWR TEMPERATURE FALLS BELOW SET POINT. PUMP SHALL BE PROGRAMMED FOR A MAXIMUM ON-TIME OF 30 MINUTES AND FOR A MINIMUM OFF-TIME OF 10 MINUTES.					
4. PROVIDE WITH CONTROL PANEL COMPLETE WITH HIGH LEVEL ALARM LIGHT AND NEMA 4X ENCLOSURE.											

PIPE SIZE (IN)	MAXIMUM FLOW (GPM)		FLUSH TANK (FU)		FLUSH VALVE (FU)		VELOCITY (FPS)	
	CW	HW	CW	HW	CW	HW	CW	HW
1/2	1	1	1	1	—	—	1.0	1.0
3/4	3	3	3	3	—	—	1.5	1.5
1	6	6	7	7	—	—	2.0	2.0
1-1/4	11	10	15	13	—	—	2.5	2.5
1-1/2	18	15	26	21	—	—	2.75	2.75
2	40	30	86	54	28	12	3.0	3.0
2-1/2	65	50	200	127	90	48	3.5	3.5
3	100	80	380	275	245	148	4.0	4.0

STATIC HEAD (SH) = 20 FEET x 0.43 = 8.6 PSI
 SERVICE PRESSURE = (SP)
 PRESSURE AVAILABLE (PA) = 70 (SP) - (8.6 (SH) + 25 REQ. PRESSURE + 15 METER)
 (PA) = 22.4 PSI (PA)
 DEVELOPED LENGTH LONGEST RUN = 350 FEET
50 % FITTINGS LENGTH = 175 FEET
 TOTAL EQUIVALENT LENGTH (TEL) = 525 FEET
 ALLOWABLE FRICTION LOSS/100FT = 22 X 100 PSI (PA) = 4.19 PSI/100FT
 525 FT (TEL)

WATER HAMMER ARRESTOR SCHEDULE		
PIPE SIZE (IN)	PDI SYMBOL (1)	NOTES
1/2	A	2
3/4	A	2
1	B	2
1-1/4	B	2
1-1/2	C	2
2	D	2
2-1/2	F	2

1. PDI = PLUMBING DRAINAGE INSTITUTE STANDARDS.
2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

MATERIALS SCHEDULE	
SERVICE	MATERIALS
DOMESTIC WATER	TYPE L COPPER ABOVE GRADE, TYPE K COPPER BELOW GRADE.
SOIL, WASTE AND VENT	CAST IRON SOIL PIPE WITH NO-HUB FITTINGS ABOVE GRADE, SCHEDULE 40 PVC WITH SOLVENT WELD FITTINGS BELOW GRADE.
NATURAL GAS	SCHEDULE 40 BLACK STEEL.

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SCHEDULES



#15.0821

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P0.04

DRAWN JU

FILE

DATE 02/15/2018

SCALE

BID NO 15.59806.JH

CLV DWG NO 620-10B

HANSEN NO 59806

SHT NO

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

333 NORTH RANCHO DRIVE
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FAX: (702) 384-4846
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Charleson Heights Community Center

- Renovation -

SCHEDULES

ARCHITECT

REVISIONS



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INSTANTANEOUS WATER HEATER SCHEDULE

ITEM	LOCATION	MANUFACTURER MODEL NUMBER	FLOW RATE (GPM)	MINIMUM OPERATING PRESSURE (PSIG)	MAXIMUM OPERATING PRESSURE (PSIG)	TEMPERATURE RISE (°F)	ELECTRICAL		MAXIMUM OPERATING WEIGHT (LBS)	NOTES
							V/PH	W		
IWH-1	RR-127	CHRONOMITE SR-20L	0.5	25	150	57	208/1	4,160	1, 2, 3	1, 2, 3
IWH-2	RR-129	CHRONOMITE SR-20L	0.5	25	150	57	208/1	4,160	1, 2, 3	1, 2, 3

1. PROVIDE WITH CAST ALUMINUM ALLOY CASING, CELCON PLASTIC ELEMENT ASSEMBLY WITH NICHROME COILS OR APPROVED EQUAL.
2. HOT WATER STORAGE VESSELS ARE PROHIBITED.
3. PROVIDE WITH ADAPTORS AND COMPRESSION FITTINGS.

NOTICE

1. NOT USED.

NOTES

1

EXISTING BOILER/WATER HEATER TO BE SALVAGED AND DELIVERED TO THE CITY OF LAS VEGAS – EAST YARD.

REVISIONS

ARCHITECT

Charleson Heights Community Center
- Renovation -

DEMOLITION WASTE AND VENT PLAN

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consulting engineers

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FILE:

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SCALE:

BID NO: 15.59806.JH

CLV DWG NO: 620-10B

HANSEN NO: 59806

SHT NO: PD2.10

DEMOLITION WASTE AND VENT PLAN

3/32" = 1'-0"

A

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DEMOLITION WASTE AND VENT PLAN

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OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

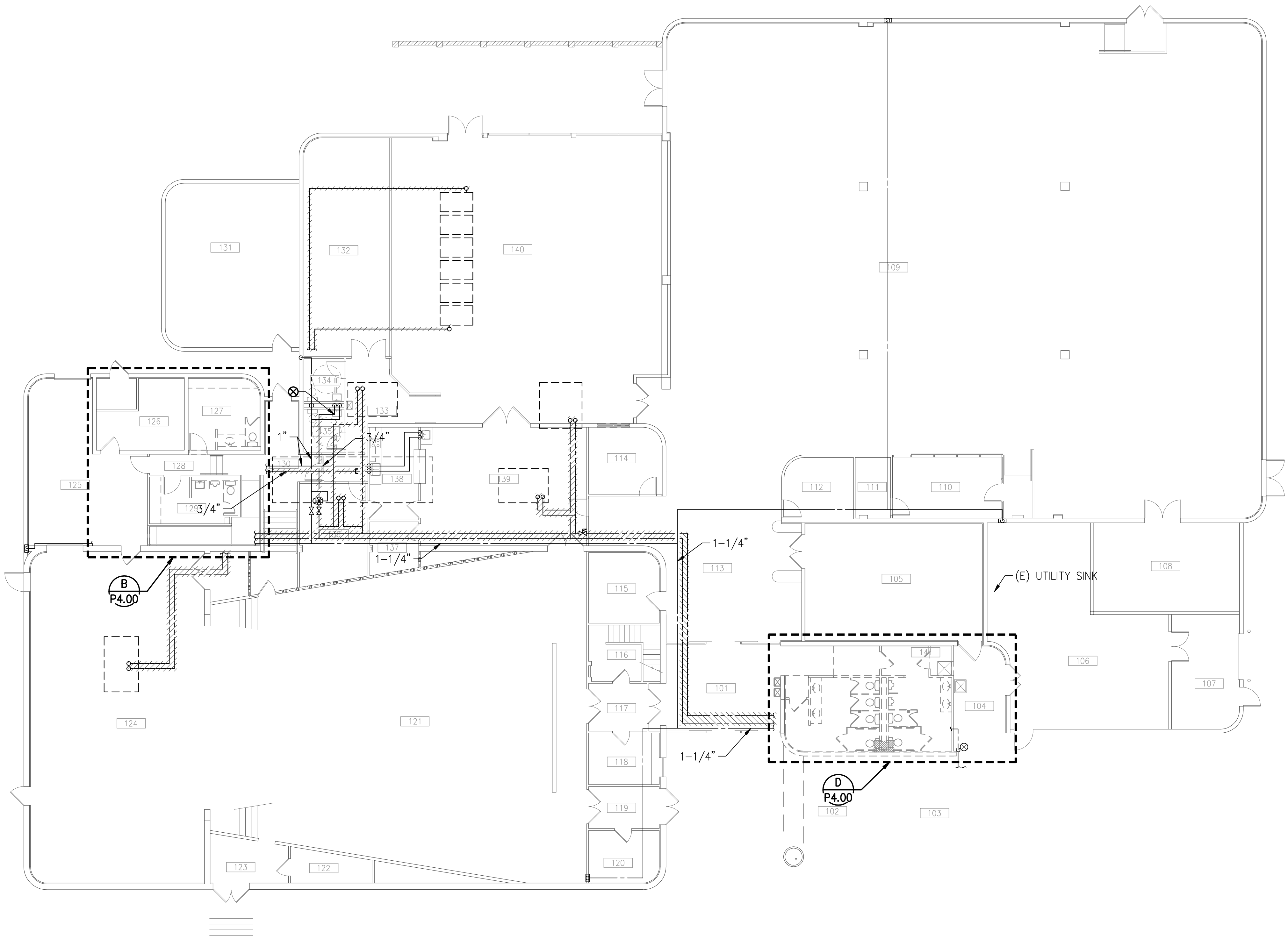
DRAWN: JU
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DEMOLITION DOMESTIC WATER PLAN

3/32" = 1'-0" A

NOTICE

1. NOT USED.

NOTES

1. NOT USED.

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REVISIONS

ARCHITECT

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- Renovation -

DEMOLITION DOMESTIC WATER PLAN

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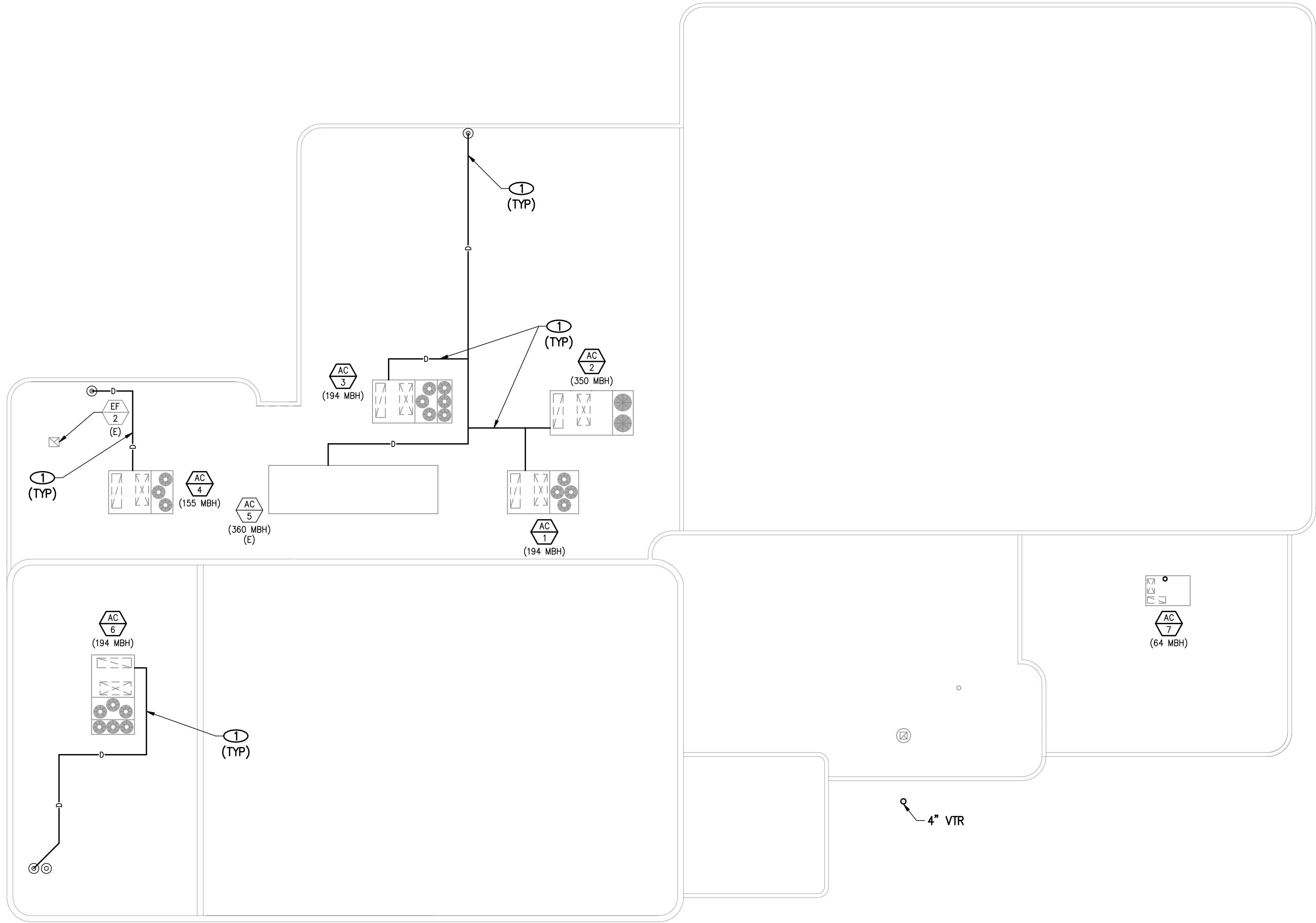
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FILE	
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HANSEN NO	59806
SHT/NO	

PD3.10

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PLUMBING ROOF PLAN

3/32" = 1'-0"

A

NOTICE

1. NOT USED.

NOTES

1. ADD NEW 3/4" PVC CONDENSATE LINES DRAINED ACROSS THE ROOF TO THE NEAREST ROOF DRAIN. PAINT PVC FOR PROTECTION AGAINST THE SUN.

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PLUMBING ROOF PLAN



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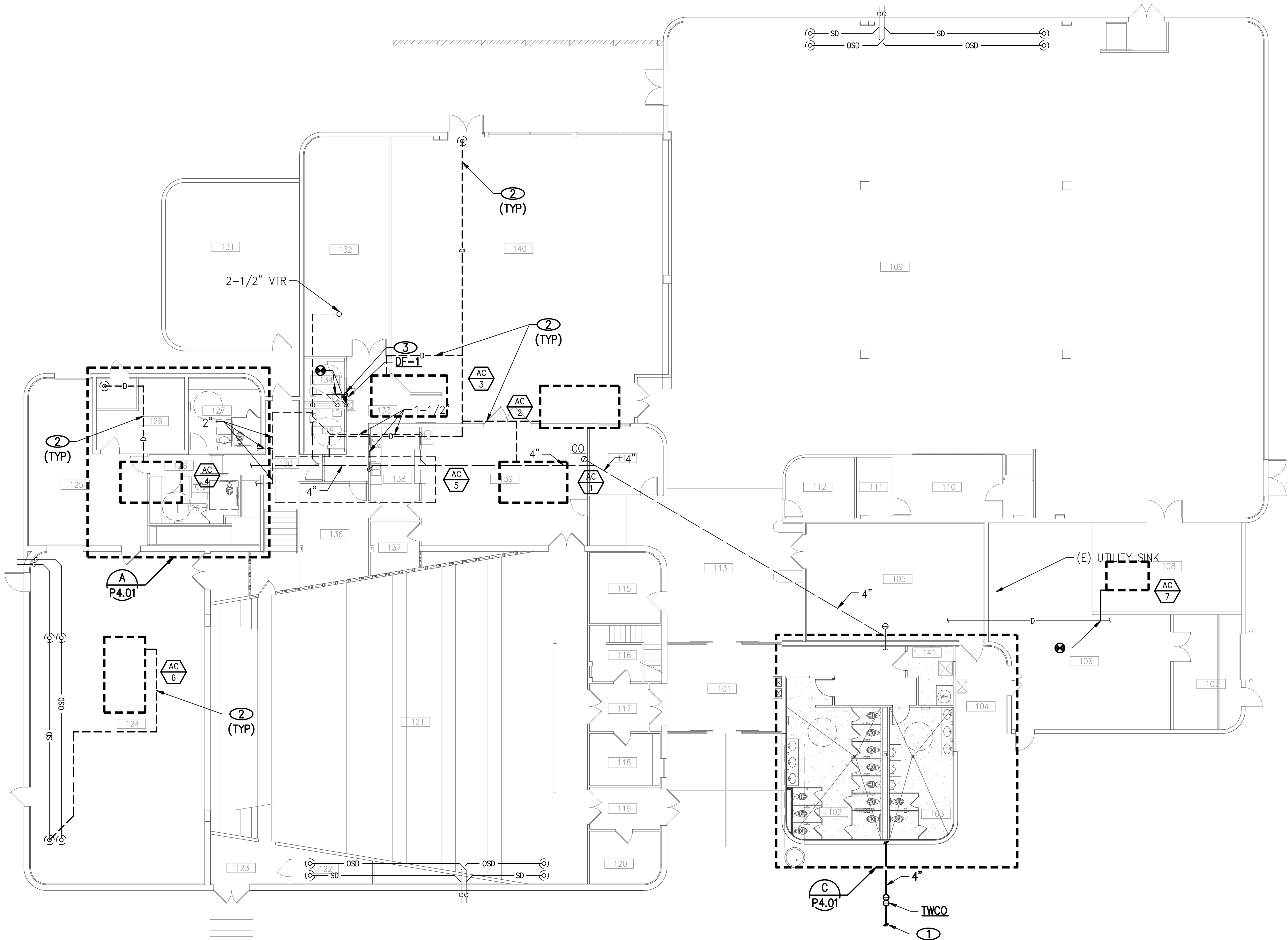
SHT NO

P1.10

#15.0821

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WASTE AND VENT PLAN

3/32" = 1'-0"

A

NOTICE

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING WASTE, VENT, DOMESTIC WATER, AND MEDICAL GAS SERVICES PRIOR TO THE START OF WORK.
2. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE, TYPE, AND LOCATION OF ALL POINTS OF CONNECTION PRIOR TO THE START OF WORK.

NOTES

- ① SEE CIVIL PLANS FOR CONTINUATION.
- ② ADD NEW 3/4" PVC CONDENSATE LINES DRAINED ACROSS THE ROOF TO THE NEAREST ROOF DRAIN. PAINT PVC FOR PROTECTION AGAINST THE SUN.
- ③ 2" W DOWN IN WALL AND CONNECT TO EXISTING WASTE LINE. 2" V UP IN WALL AND CONNECT TO VENT PIPING IN CEILING SPACE.

RECORD DRAWINGS

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REVISIONS

ARCHITECT

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- Renovation -

WASTE AND VENT PLAN



JBA Las Vegas
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Las Vegas, NV 89115
p 702.382.2000

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

333 NORTH RANCHO DRIVE
LAS VEGAS, NEVADA 89106
PHONE: (702) 239-6535
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TDD: (702) 386-9108

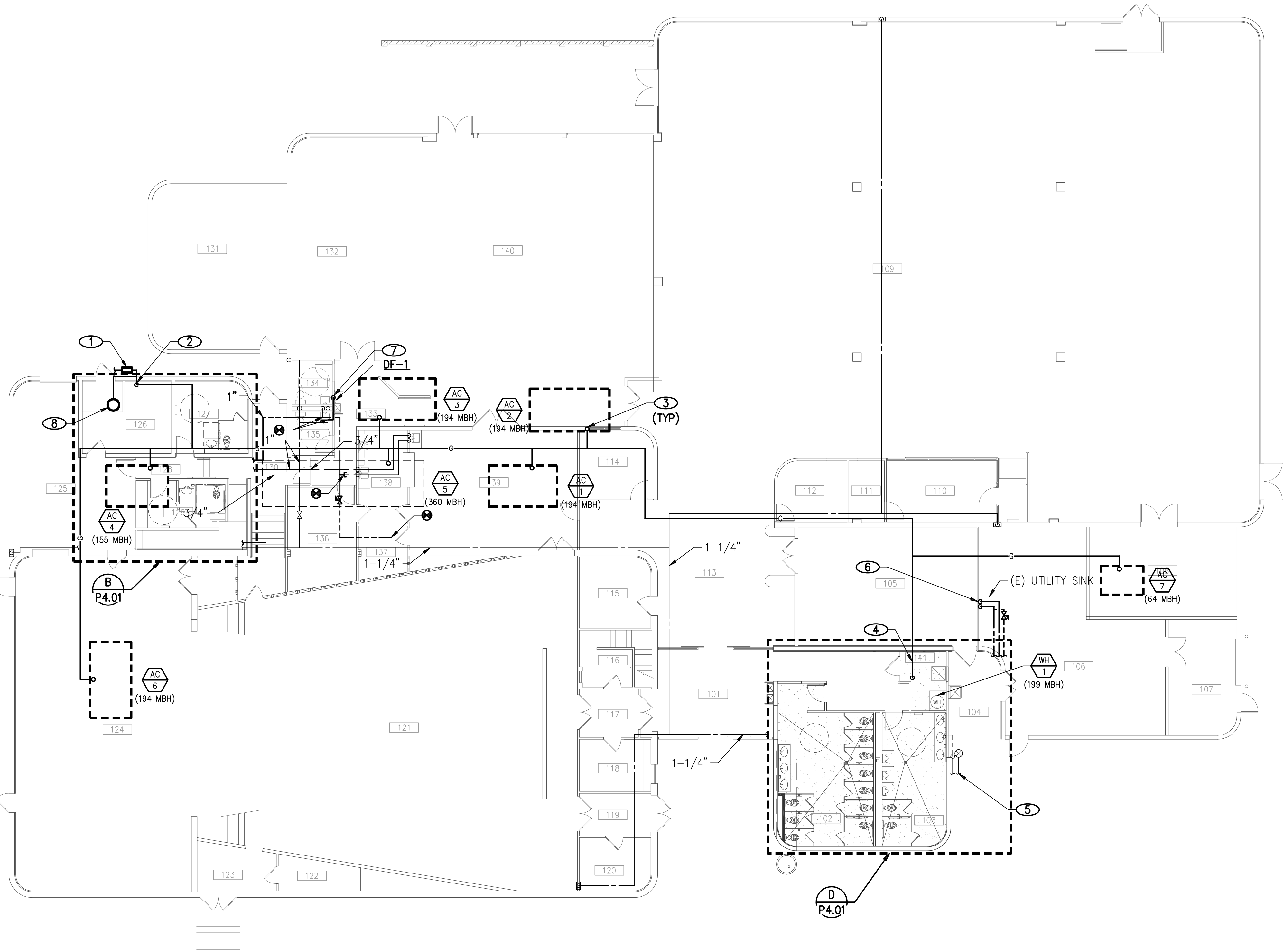
DRAWN	JU
FILE	
DATE	02/15/2018
SCALE	
BID NO	15.59806.JH
CLV DWG NO	620-10B
HANSEN NO	59806
SHT NO	

P2.10

#15.0821

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DOMESTIC WATER PLAN

3/32" = 1'-0"

A

NOTICE

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING WASTE, VENT, DOMESTIC WATER, AND MEDICAL GAS SERVICES PRIOR TO THE START OF WORK.
2. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE, TYPE, AND LOCATION OF ALL POINTS OF CONNECTION PRIOR TO THE START OF WORK.

NOTES

- ① GAS METER BY SW GAS CORP. GAS METER SHALL DELIVER 1,710 MBH AT 300 FT TDL.
- ② GAS PIPING RUN UP THE BUILDING EXTERIOR AND ALONG THE ROOF. NEW STUB FOR THIS.
- ③ GAS PIPE CONNECTED FROM PIPE ON THE ROOF.
- ④ GAS PIPING DOWN TO WH-1.
- ⑤ EXISTING 2" CW SERVICE TO REMAIN AND TO BE REUSED.
- ⑥ 3/4" CW, 3/4" HW DOWN IN WALL AND CONNECT TO EXISTING UTILITY SINK.
- ⑦ 1/2" CW DOWN IN WALL AND CONNECT TO DF-1.
- ⑧ NEW WATER HEATER TO BE PROVIDED BY OWNER.

RECORD DRAWINGS

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REVISIONS

ARCHITECT

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- Renovation -

DOMESTIC WATER PLAN



JBA Las Vegas
5105 W. Patrick Ln
Las Vegas, NV 89118
p 702.362.2000

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS

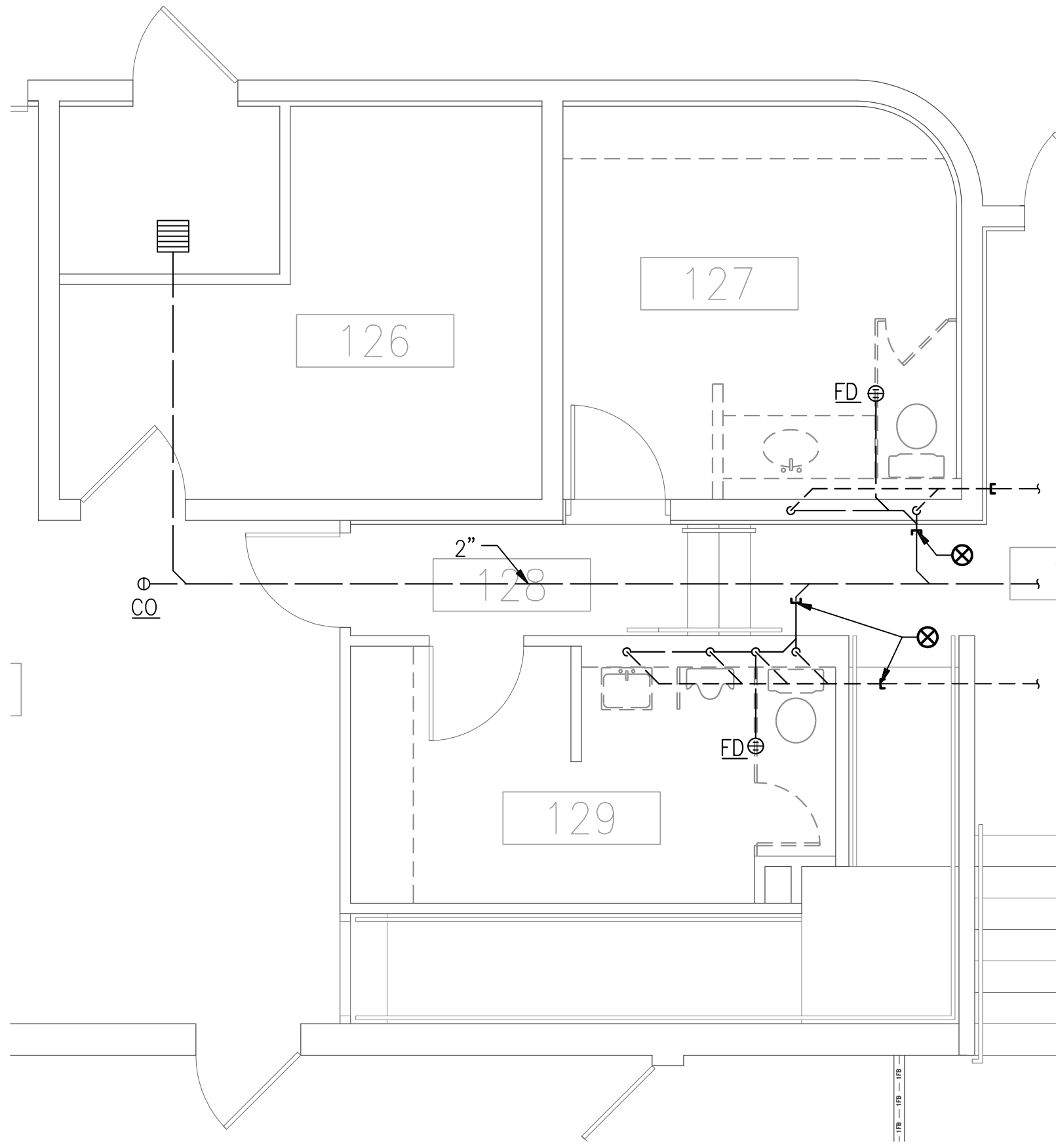
333 NORTH RANCHO DRIVE
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DRAWN	JU
FILE	
DATE	02/15/2018
SCALE	
BID NO	15.59806.JH
CLV DWG NO	620-10B
HANSEN NO	59806
SHT NO	

P3.10

#15.0821

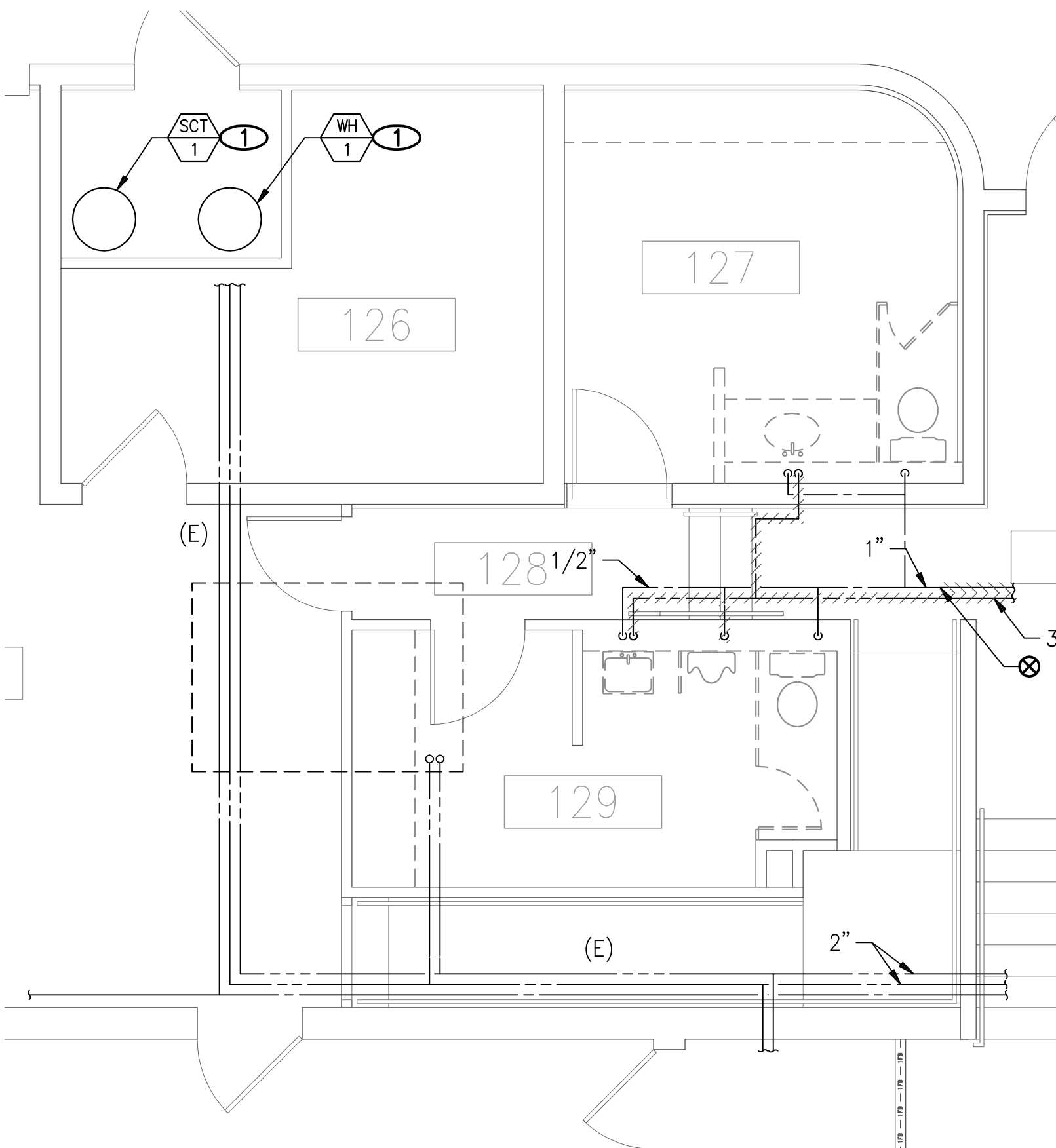
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ENLARGED DEMOLITION WASTE AND VENT PAN

1/4" = 1'-0"

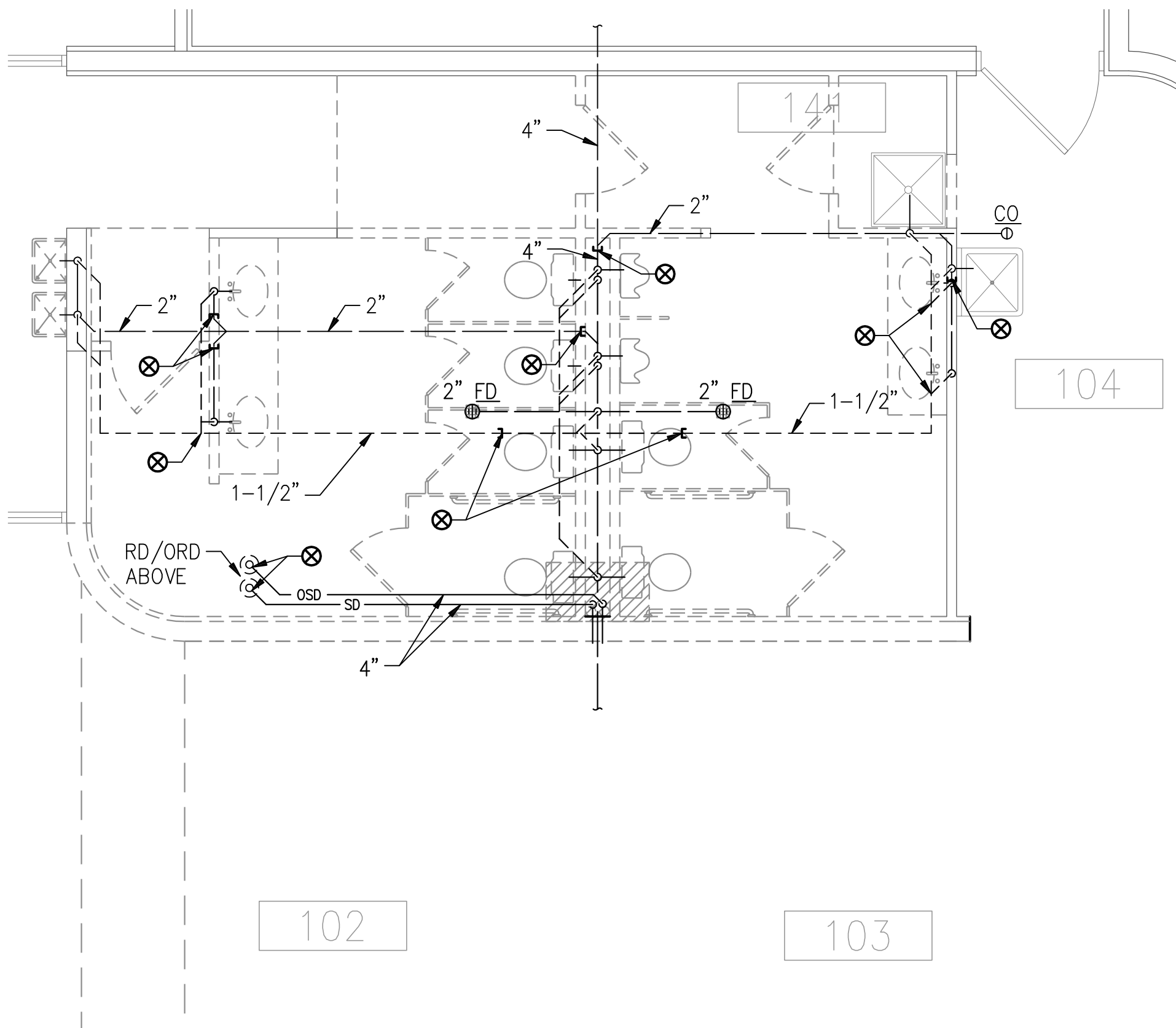
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P4.00



ENLARGED DEMOLITION DOMESTIC WATER PAN

1/4" = 1'-0"

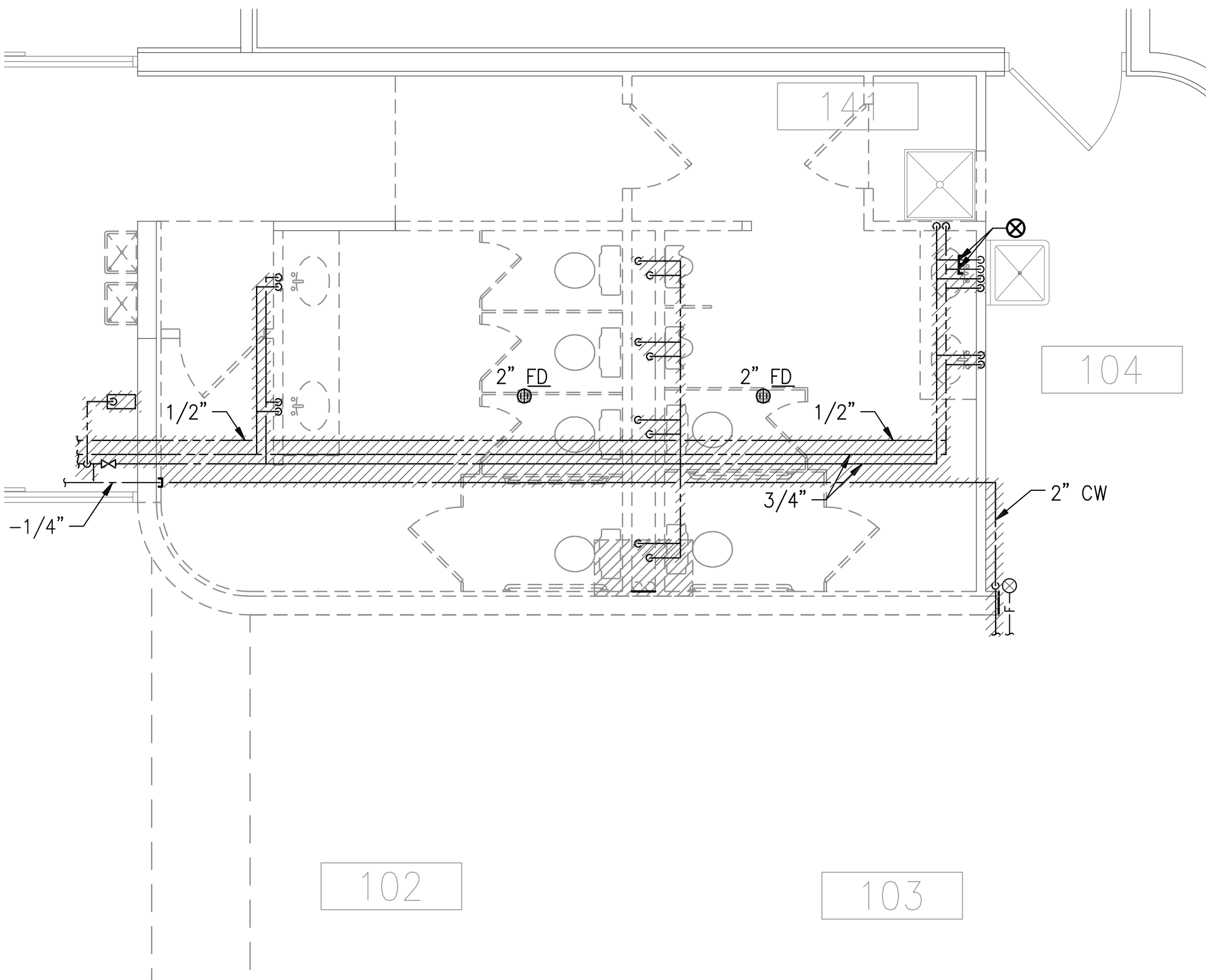
B
P4.00



ENLARGED DEMOLITION WASTE AND VENT PLAN

1/4" = 1'-0"

C
P4.00



ENLARGED DEMOLITION DOMESTIC WATER PLAN

1/4" = 1'-0"

D
P4.00

NOTES

- 1 EXISTING BOILER/WATER HEATER TO BE REMOVED AND SALVAGED AND DELIVERED TO CITY OF LAS VEGAS - EAST YARD.



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ENLARGED PLUMBING DEMOLITION PLANS



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BID NO 15.59806.JH

CLV DWG NO 620-10B

HANSEN NO 59806

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WASTE AND VENT PLAN



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DRAWN JU

DATE 02/15/2018

SCALE

FIG NO 15.59806.JH

CLV DWG NO 620-10B

HANSEN NO 59806

SHT NO

P4.01

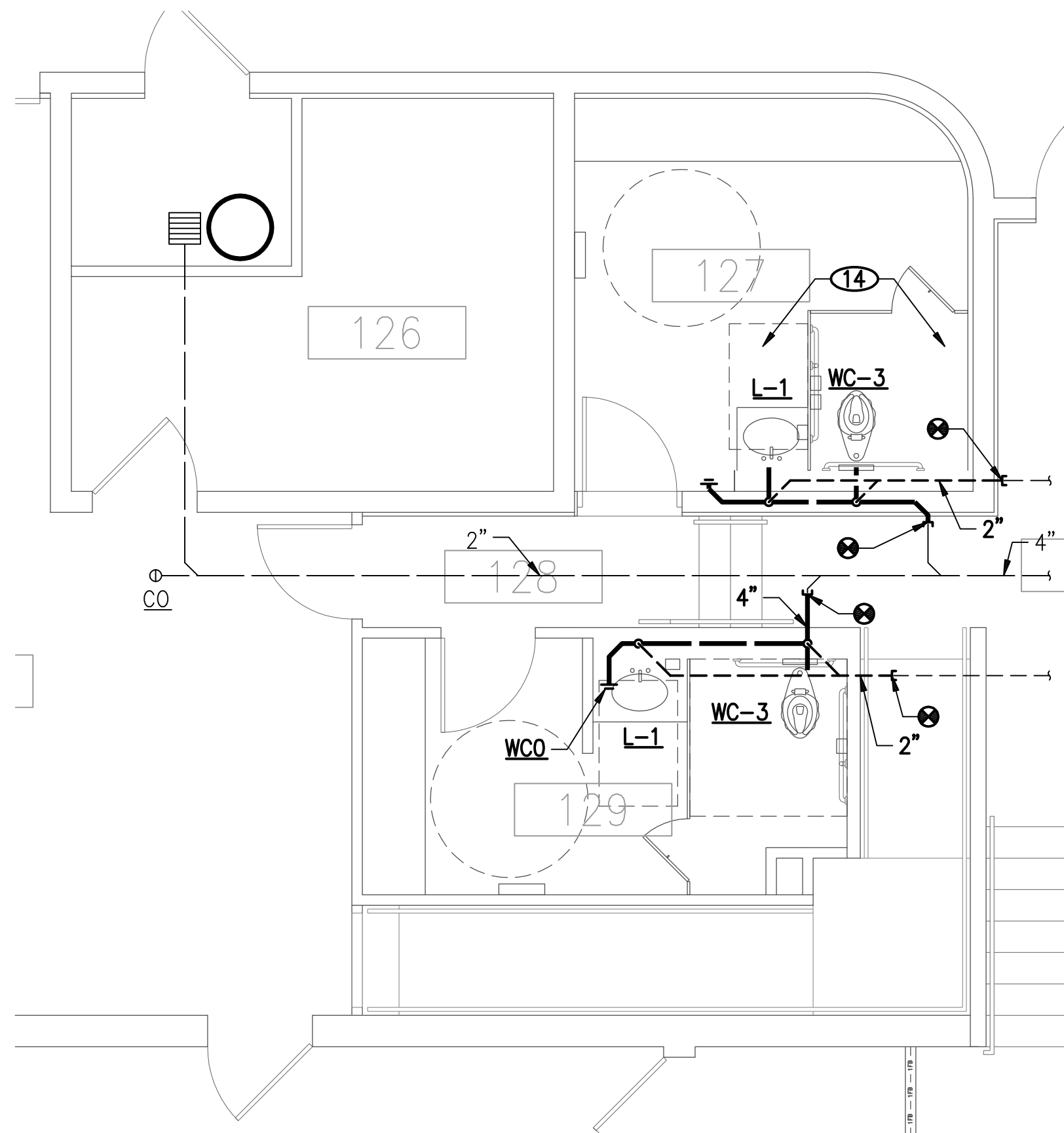
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NOTES

- 4" W DOWN FROM HEADER TO UNDERGROUND.
- 4" W DOWN, 2" V UP AND CONNECT TO EACH WC.
- 2" W DOWN, 1-1/2" V UP AND CONNECT TO EACH LAVATORY/SINK.
- 2" CW DOWN TO 2" MANIFOLD WITHIN PLUMBING CHASE.
- CONNECT 1-1/4" CW TO EACH WC.
- CONNECT 3/4" CW, 3/4" TW TO EACH LAVATORY.
- 3/4" CW, 3/4" HW DOWN IN WALL AND CONNECT TO SS-1.
- 1/2" CW DOWN IN WALL AND CONNECT TO EWC-1.
- THERMOSTATIC MIXING VALVE. PROVIDE ACCESS PANEL PER UMC. REFER TO 2/P6.00 FOR DESIGN DETAIL.
- 1" CW, 1" HW DOWN AND CONNECT TO WH-1. REFER TO 1/P6.00 FOR DESIGN DETAIL.
- 1/2"CW DOWN IN WALL AND CONNECT TO ETP-1. ROUTE 1/2" CW LINE TO EACH ED.
- CIRCUIT SETTER OR BALANCING VALVE IN HWR.
- 4" VENT THROUGH ROOF. REFER TO 6/P6.01 FOR DESIGN DETAIL.
- EXISTING PLUMBING FIXTURES TO BE REPLACED WITH NEW.
- INSTANTANEOUS WATER HEATER. REFER TO 1/P6.02 FOR DESIGN DETAIL.
- 3/4" CW, 3/4" HW DOWN IN WALL AND CONNECT TO EXISTING UTILITY SINK.
- SEE CIVIL PLANS FOR CONTINUATION.
- 2" CW SHUT-OFF VALVE IN CONCRETE VALVE BOX.
- NEW WATER HEATER TO BE PROVIDED BY OWNER.

RECORD DRAWINGS

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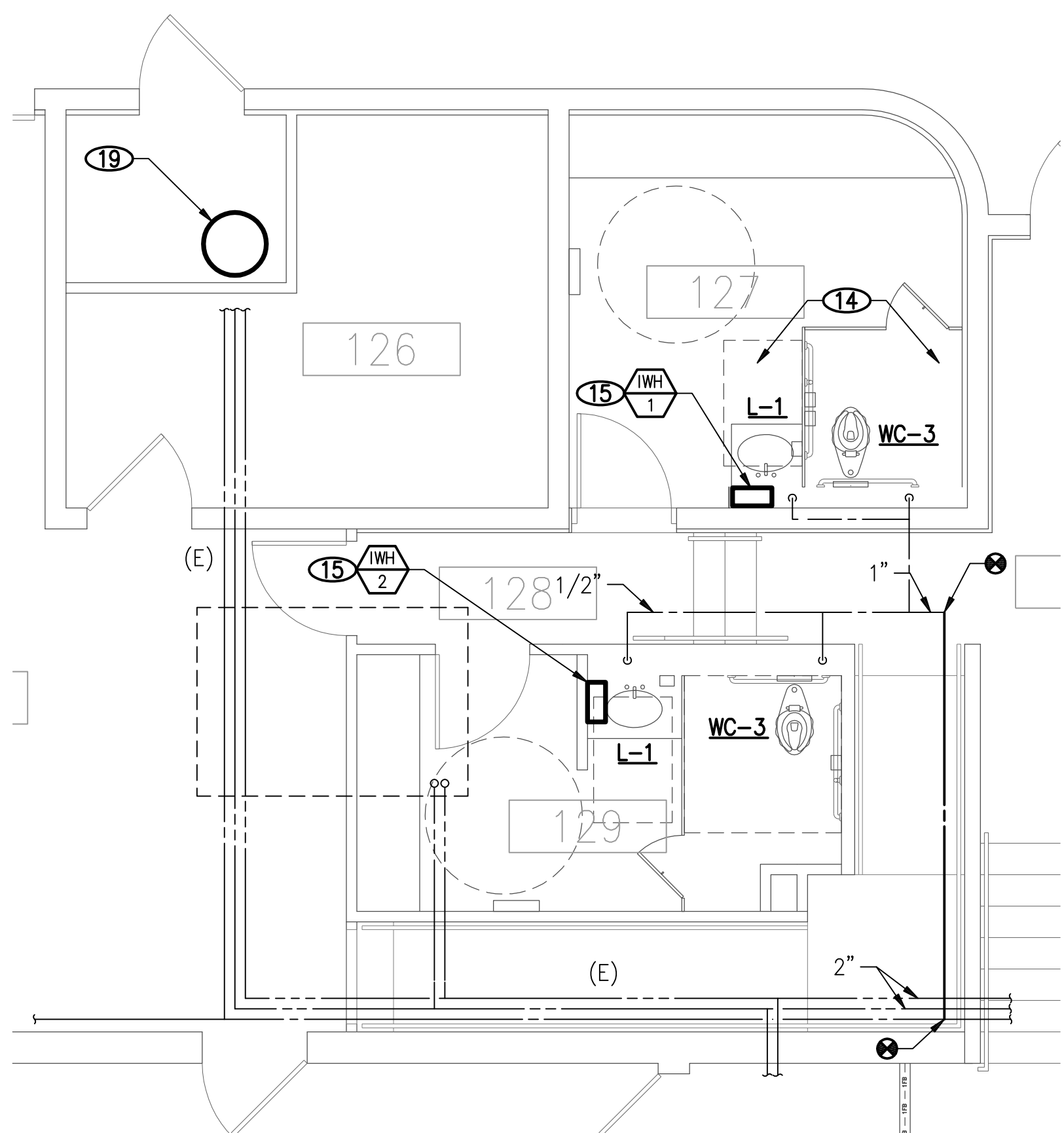


ENLARGED WASTE AND VENT PAN

1/4" = 1'-0"

A

P4.01

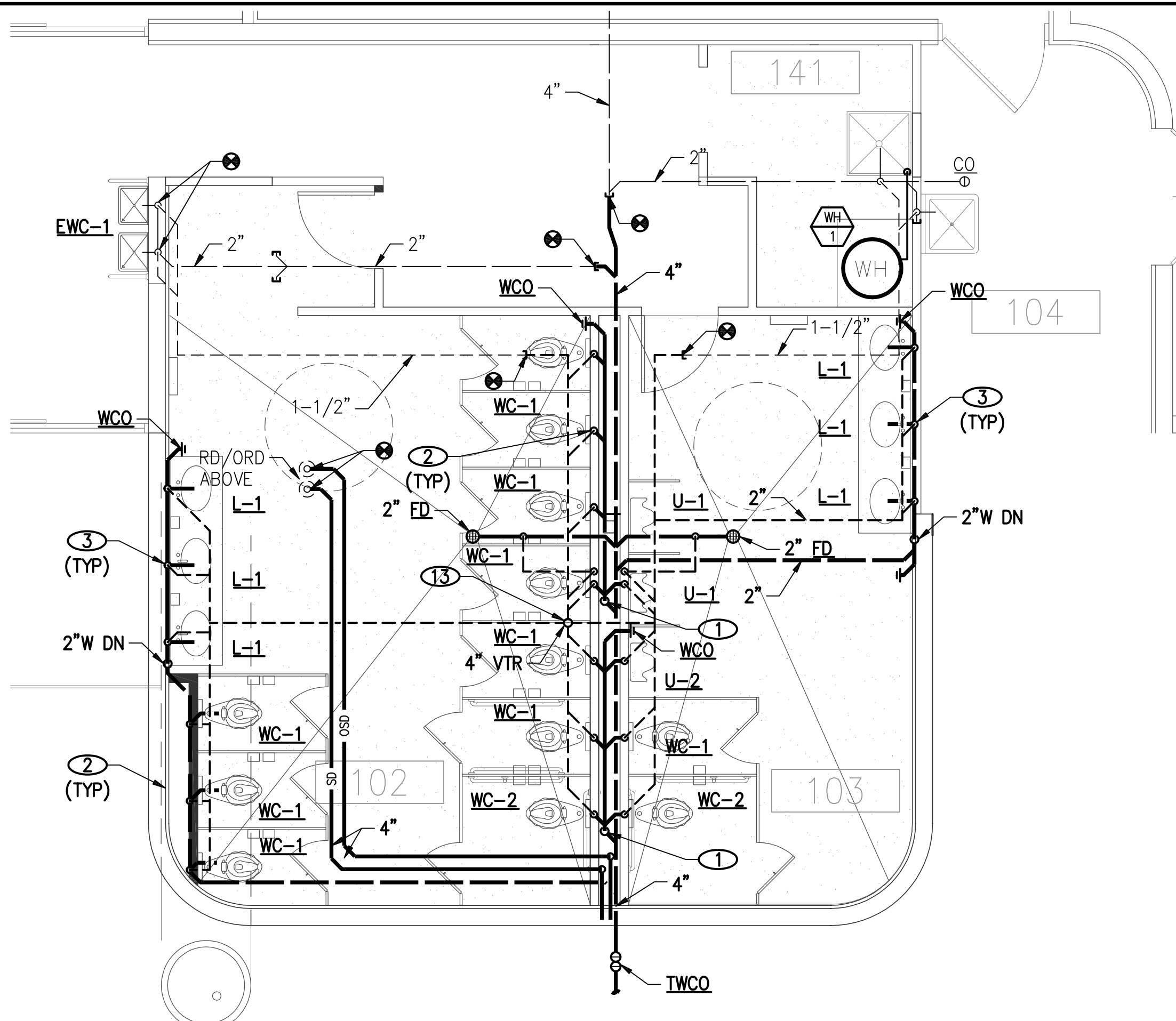


ENLARGED DOMESTIC WATER PAN

1/4" = 1'-0"

B

P4.01

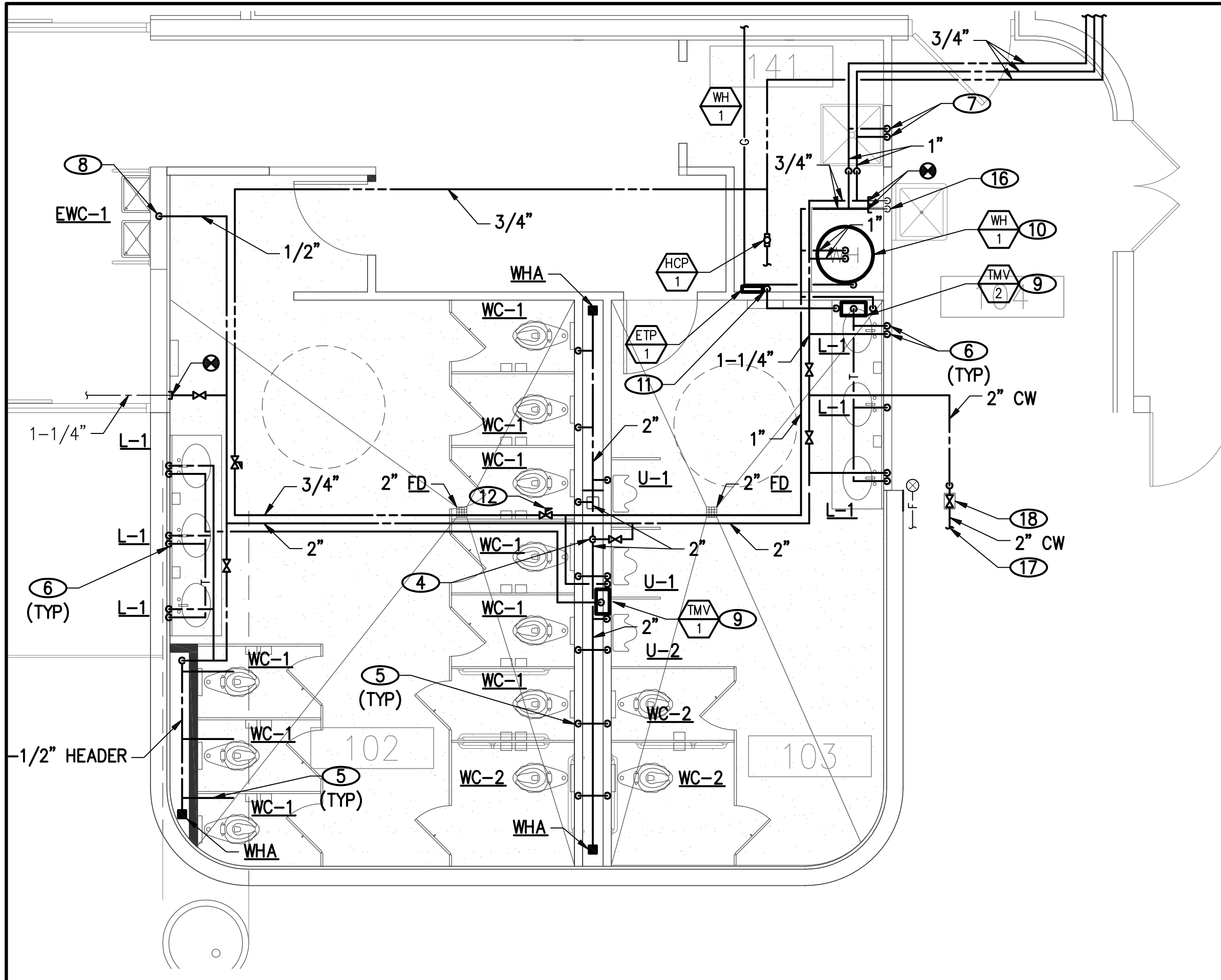


ENLARGED WASTE AND VENT PLAN

1/4" = 1'-0"

C

P4.01



ENLARGED DOMESTIC WATER PLAN

1/4" = 1'-0"

D

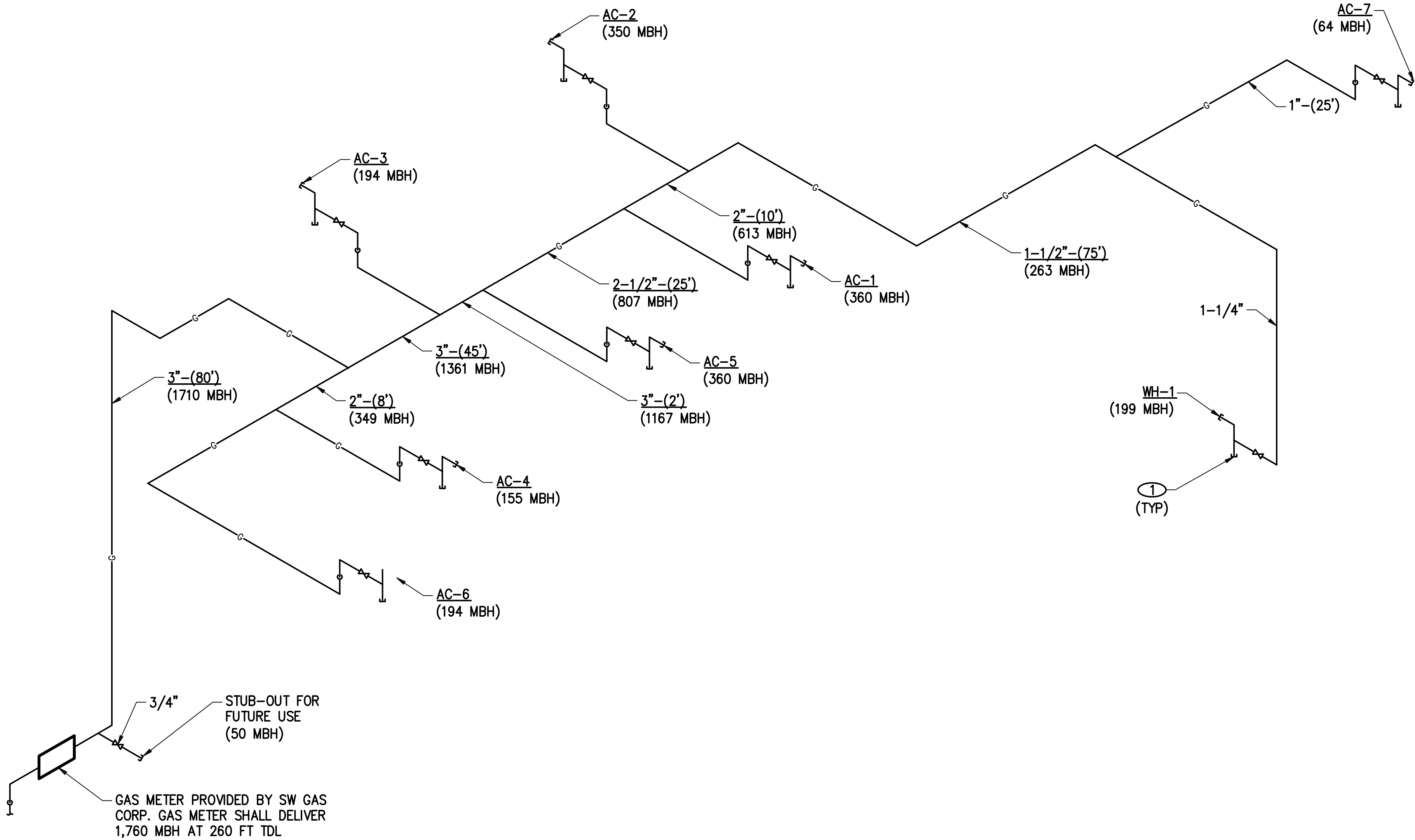
P4.01

NOTICE

1. GAS PIPE SIZING BASED ON LOW PRESSURE GAS SERVICE PER 2012 UPC TABLE 1216.2 (1).

NOTES

- ① PROVIDE SEDIMENT TRAP DOWNSTREAM OF THE EQUIPMENT SHUT-OFF VALVE AS CLOSE TO THE INLET OF THE EQUIPMENT AS PRACTICAL PER UPC, 1211.8.



GAS ISOMETRIC DIAGRAM

NO SCALE

1
P5.00

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GAS ISOMETRIC DIAGRAM



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DRAWN JU

DATE 02/15/2018

SCALE

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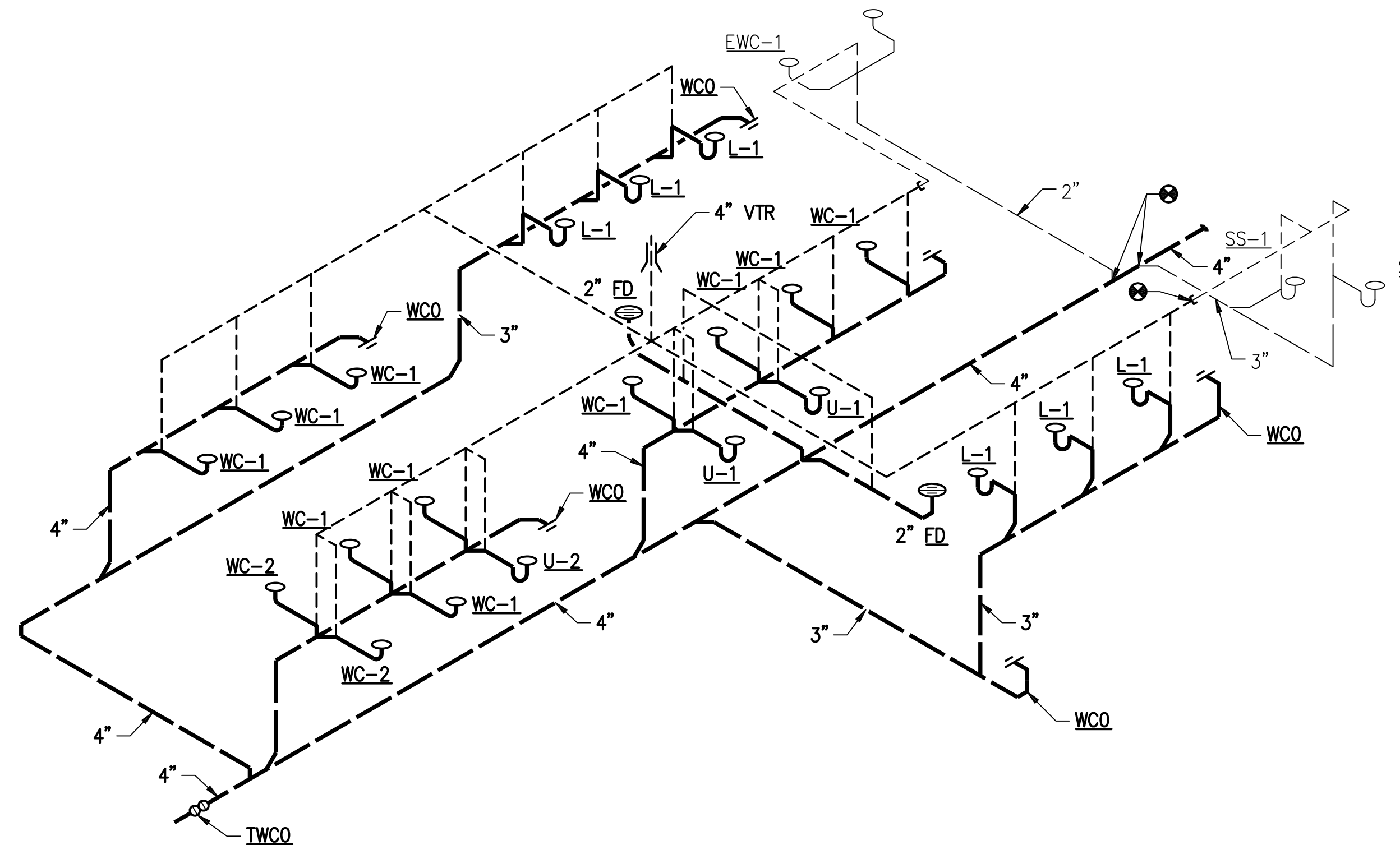
CLV DWG NO 620-10B

HANSEN NO 59806

SHT NO

P5.00

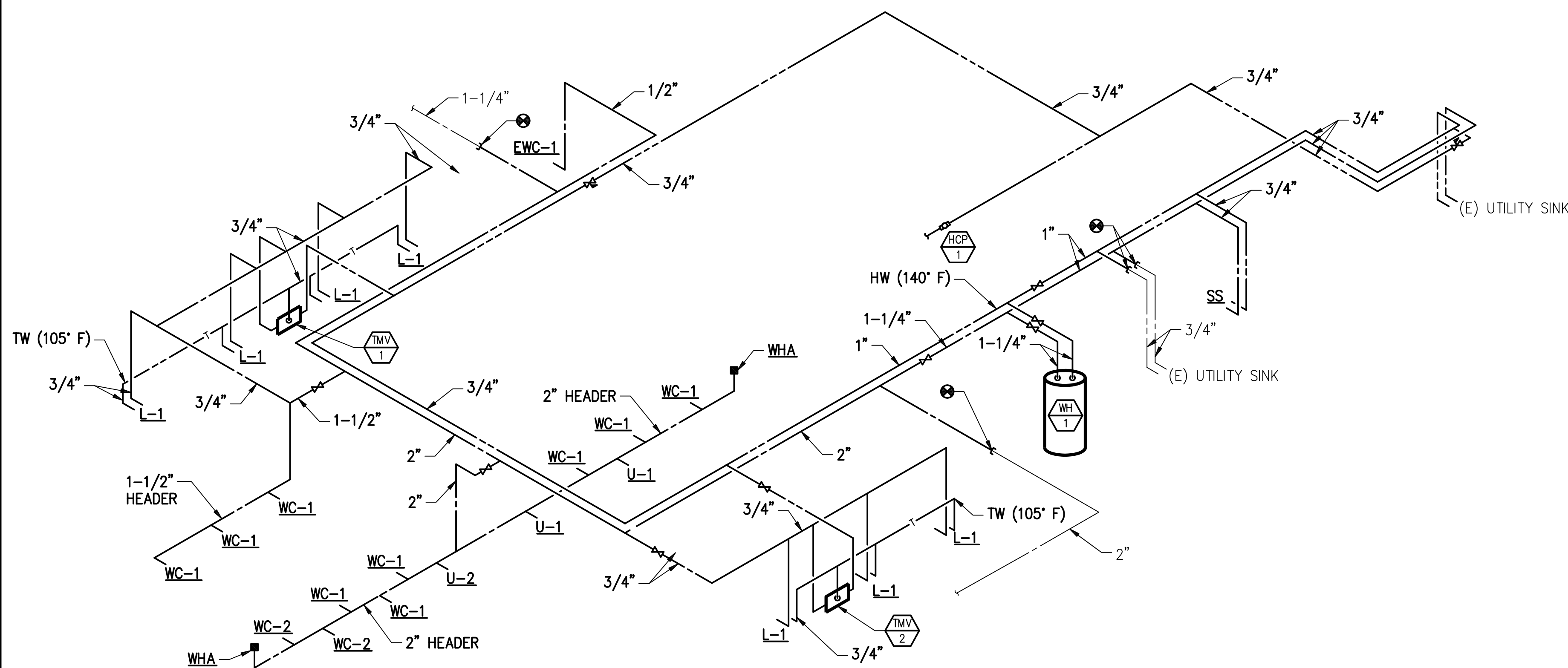
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WASTE AND VENT ISOMETRIC DIAGRAM

NO SCALE

1
P5.01



DOMESTIC WATER ISOMETRIC DIAGRAM

NO SCALE

2
P5.01

NOTICE

1. PROVIDE DOMESTIC HOT WATER RE-CIRCULATION AT EACH POINT IMMEDIATELY BEHIND EACH BANK OF LAVATORY FAUCETS.
2. PROVIDE A BALANCING VALVE AT EACH DOMESTIC HOT WATER RE-CIRCULATING BRANCH.



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KVA-VIDJALFAR EN BARN



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TDD: (702) 386-9100

DRAWN J

DATE 0

SCALE

BID NO 15.59806.JH

620-10B

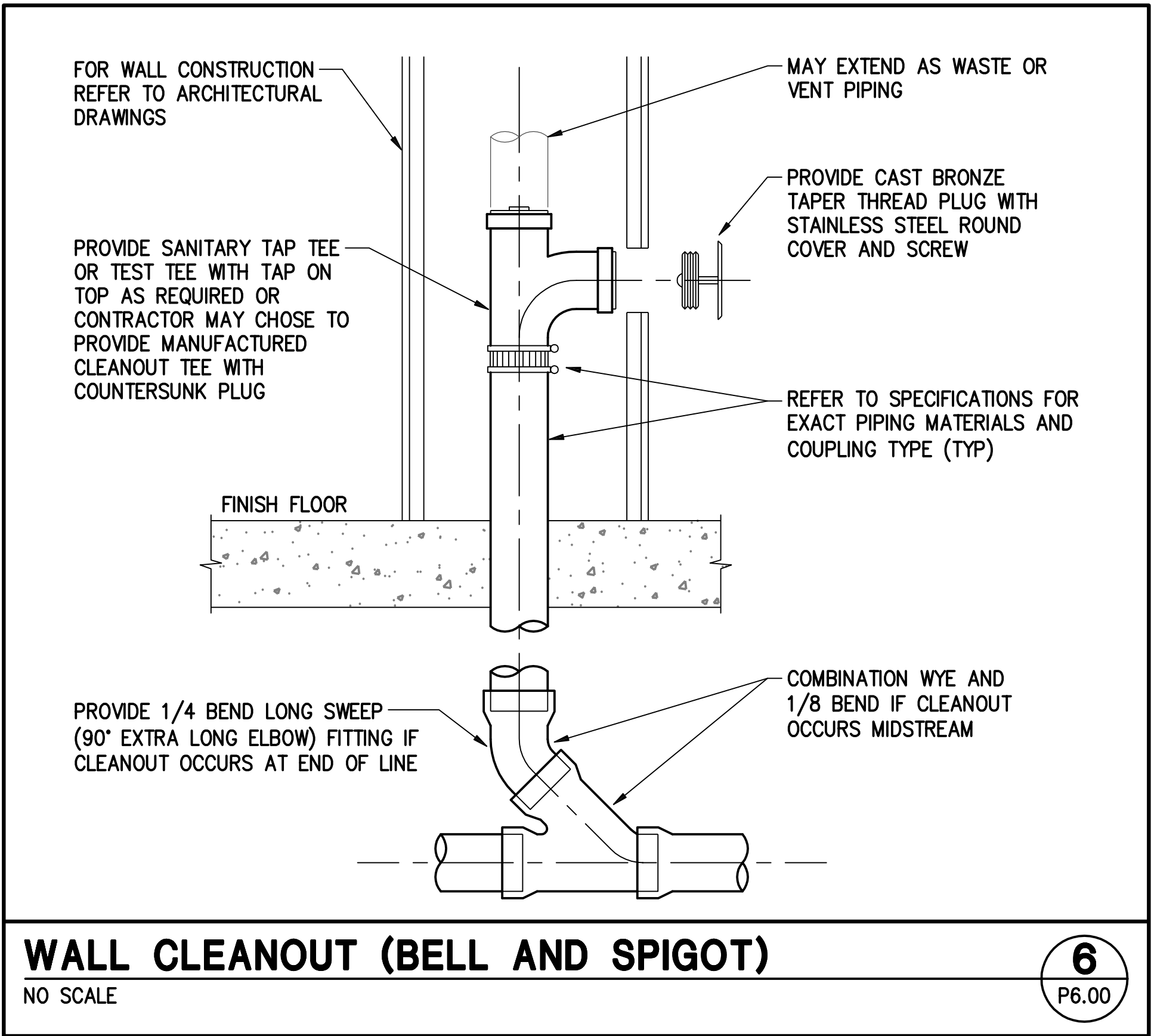
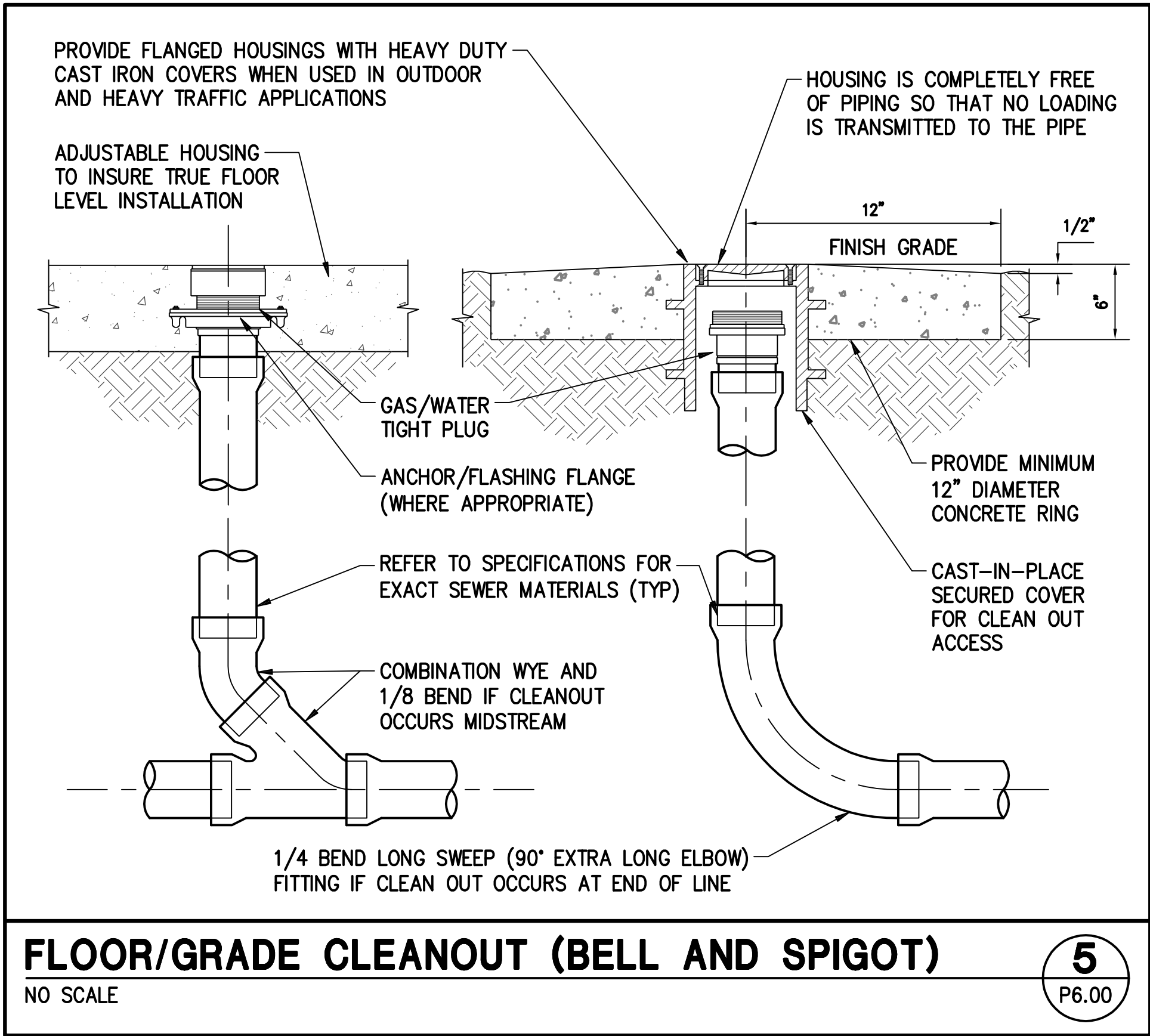
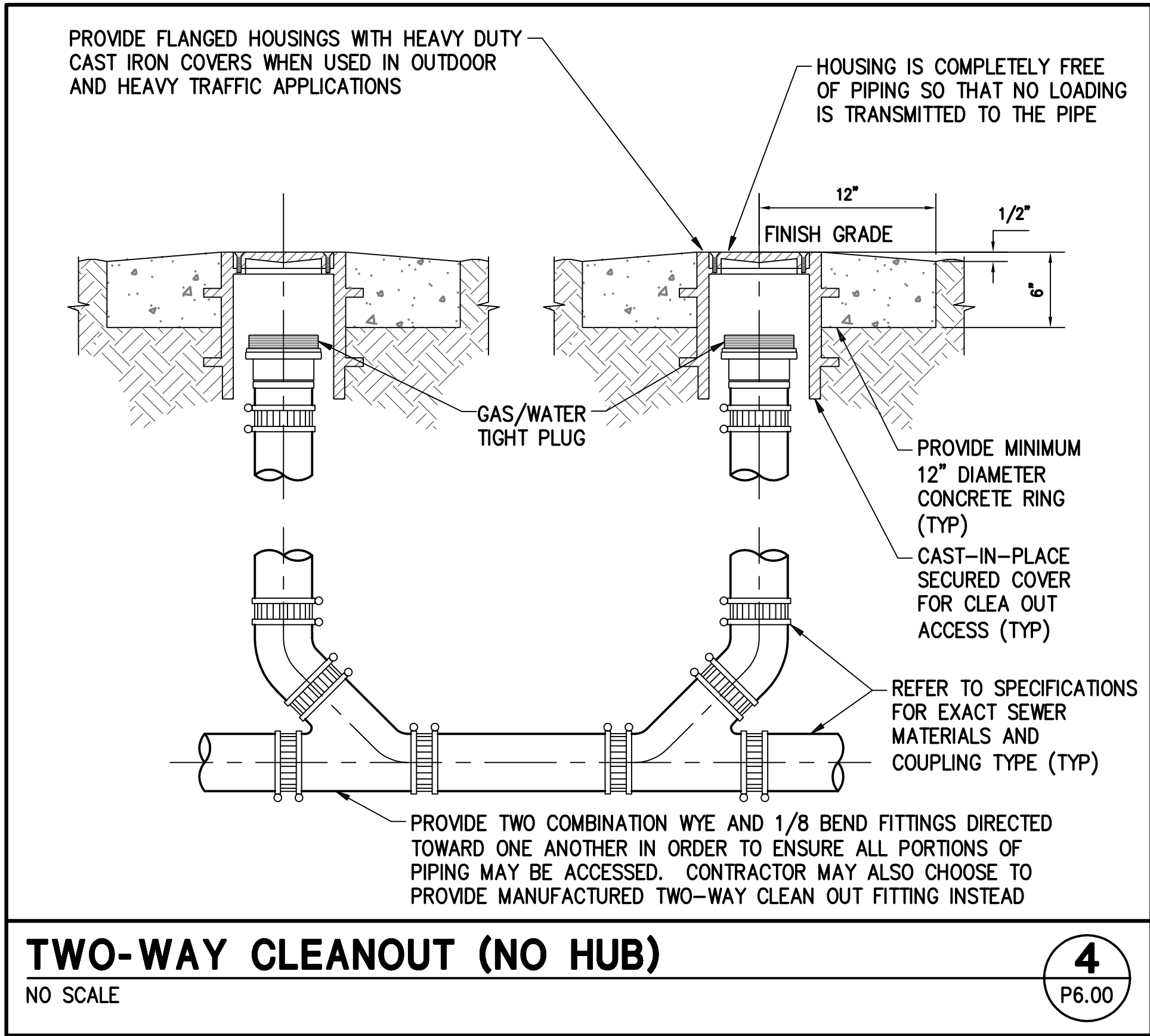
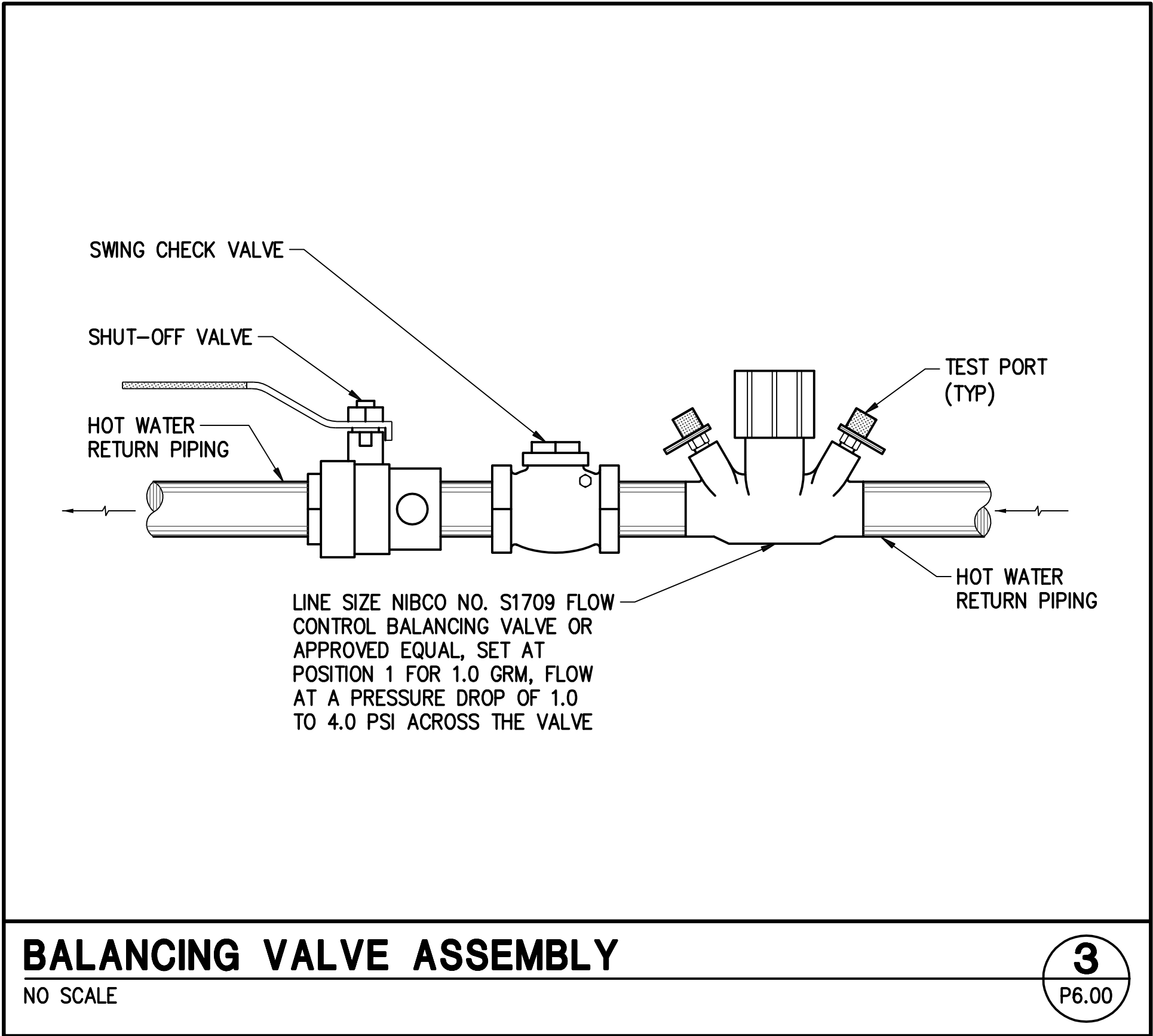
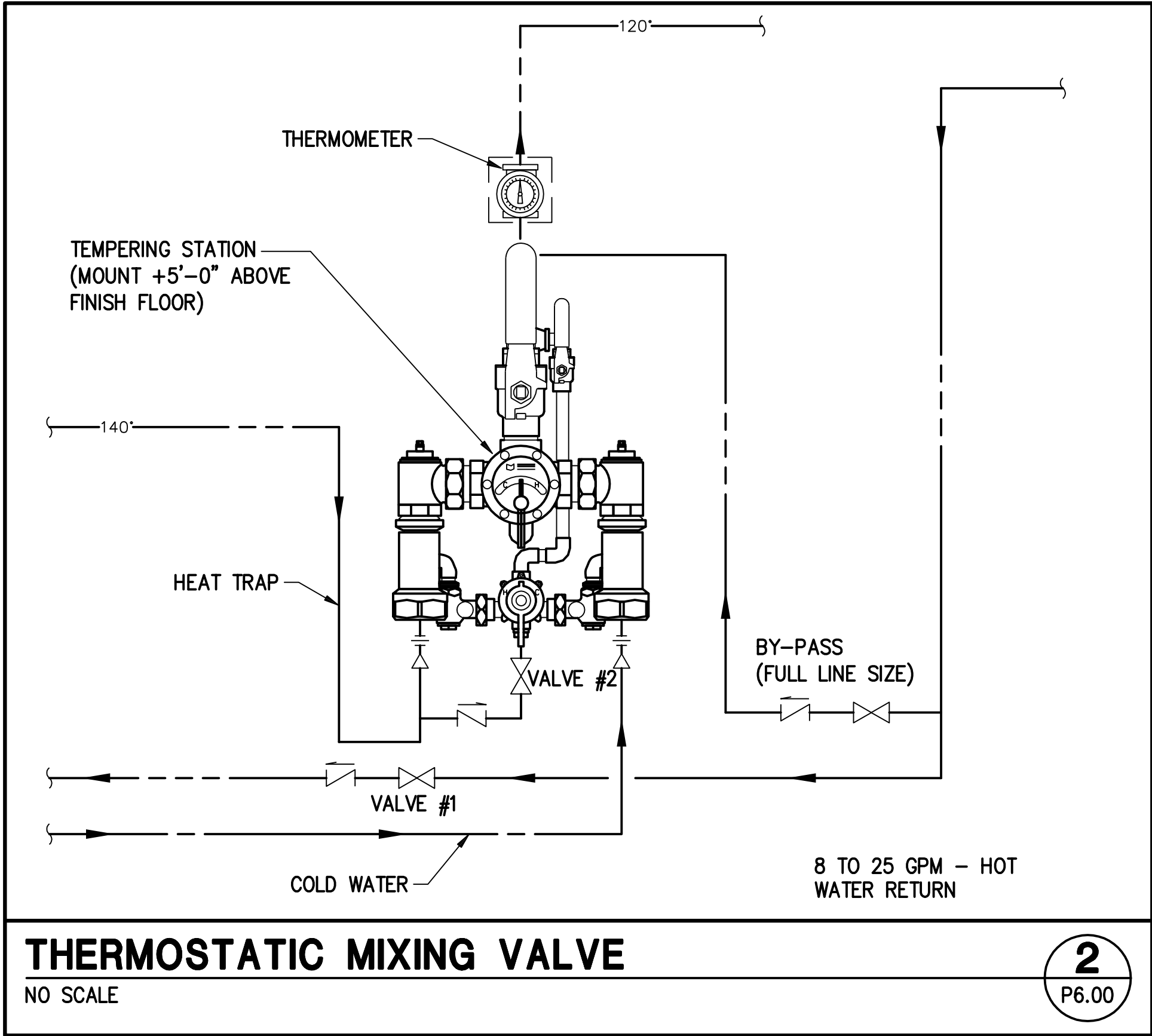
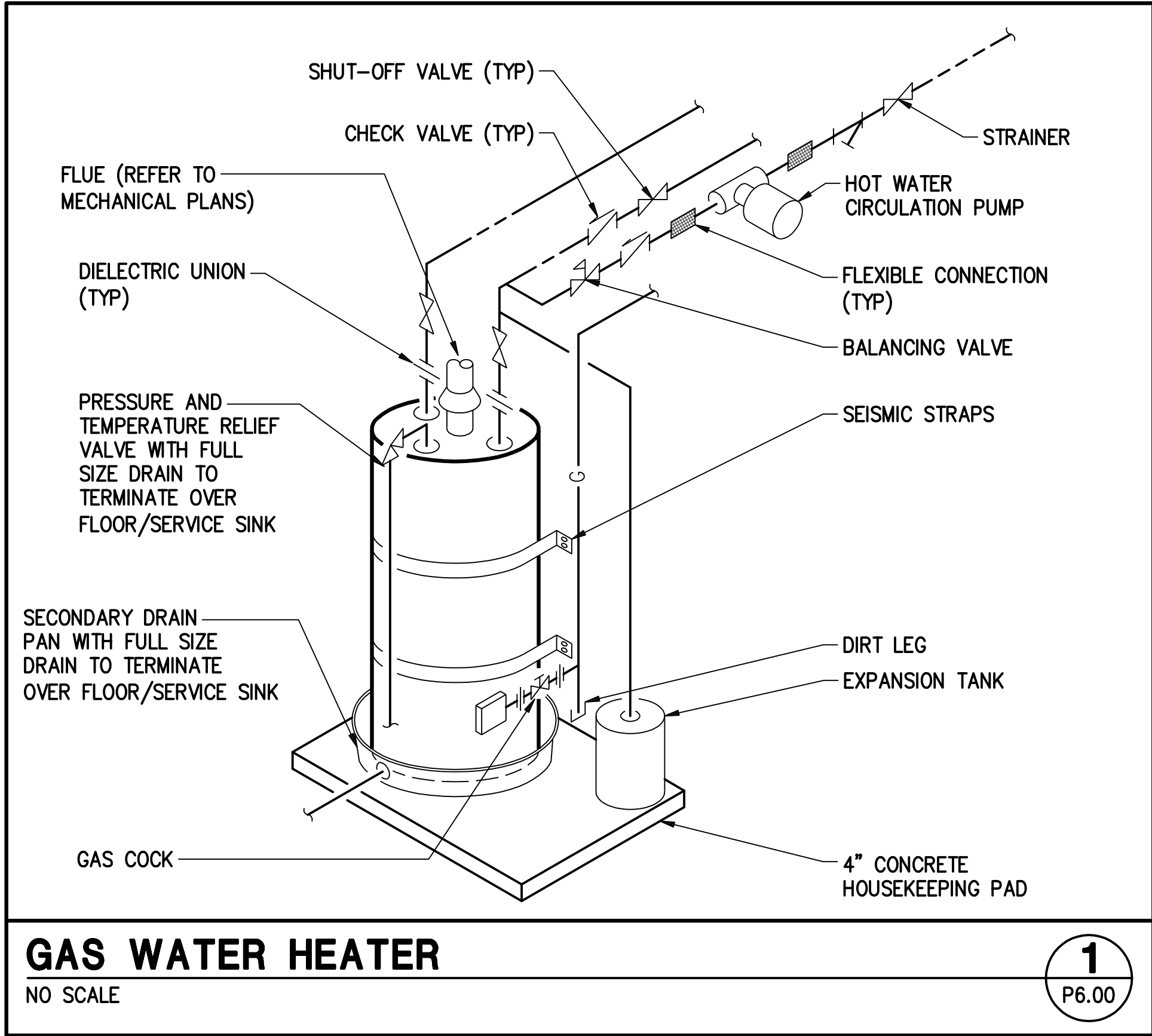
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REVISIONS
ARCHITECT

Charleston Heights Community Center
- Renovation -

DESIGN DETAILS



333 NORTH RANCHO DRIVE
LAS VEGAS, NEVADA 89106

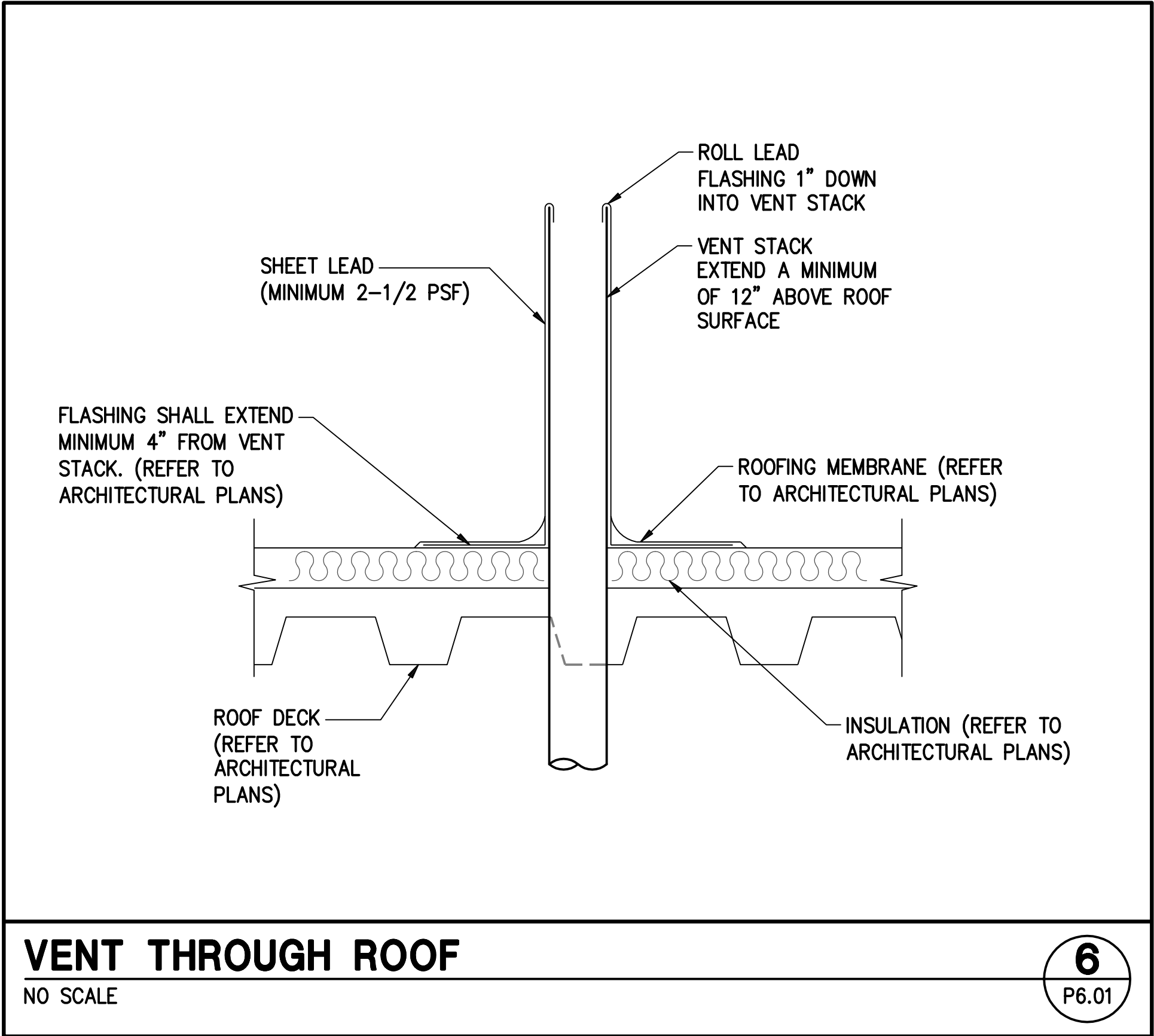
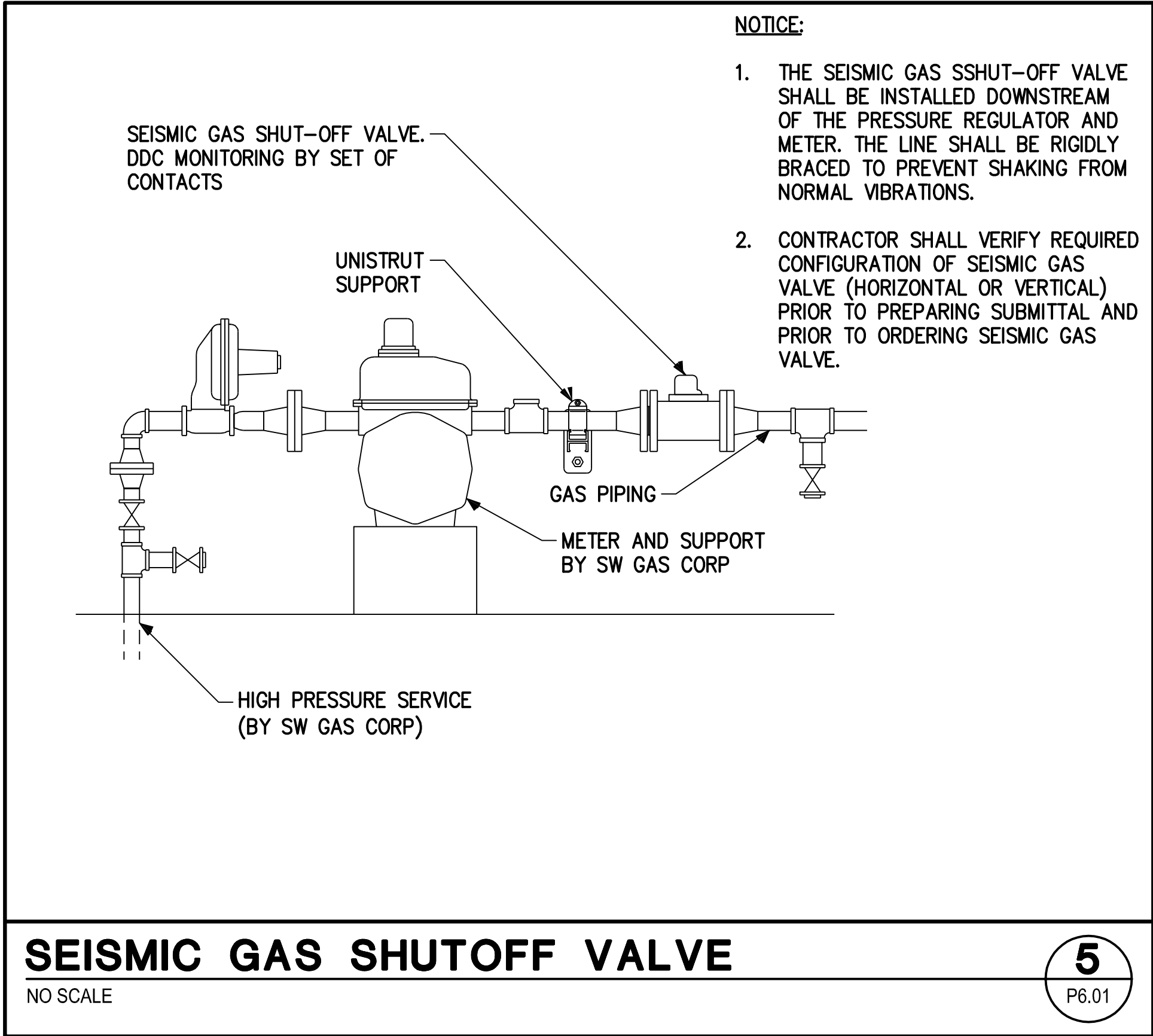
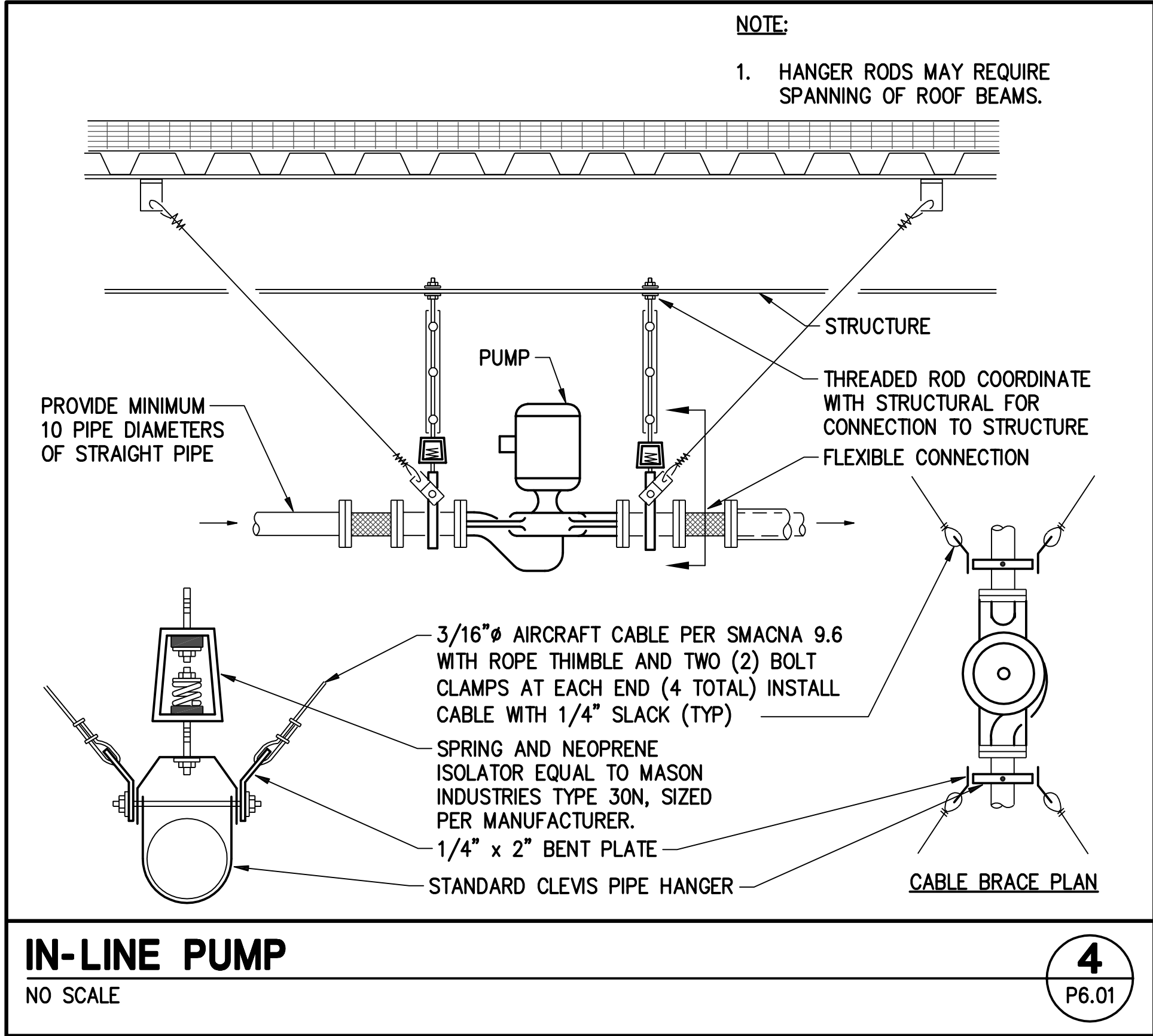
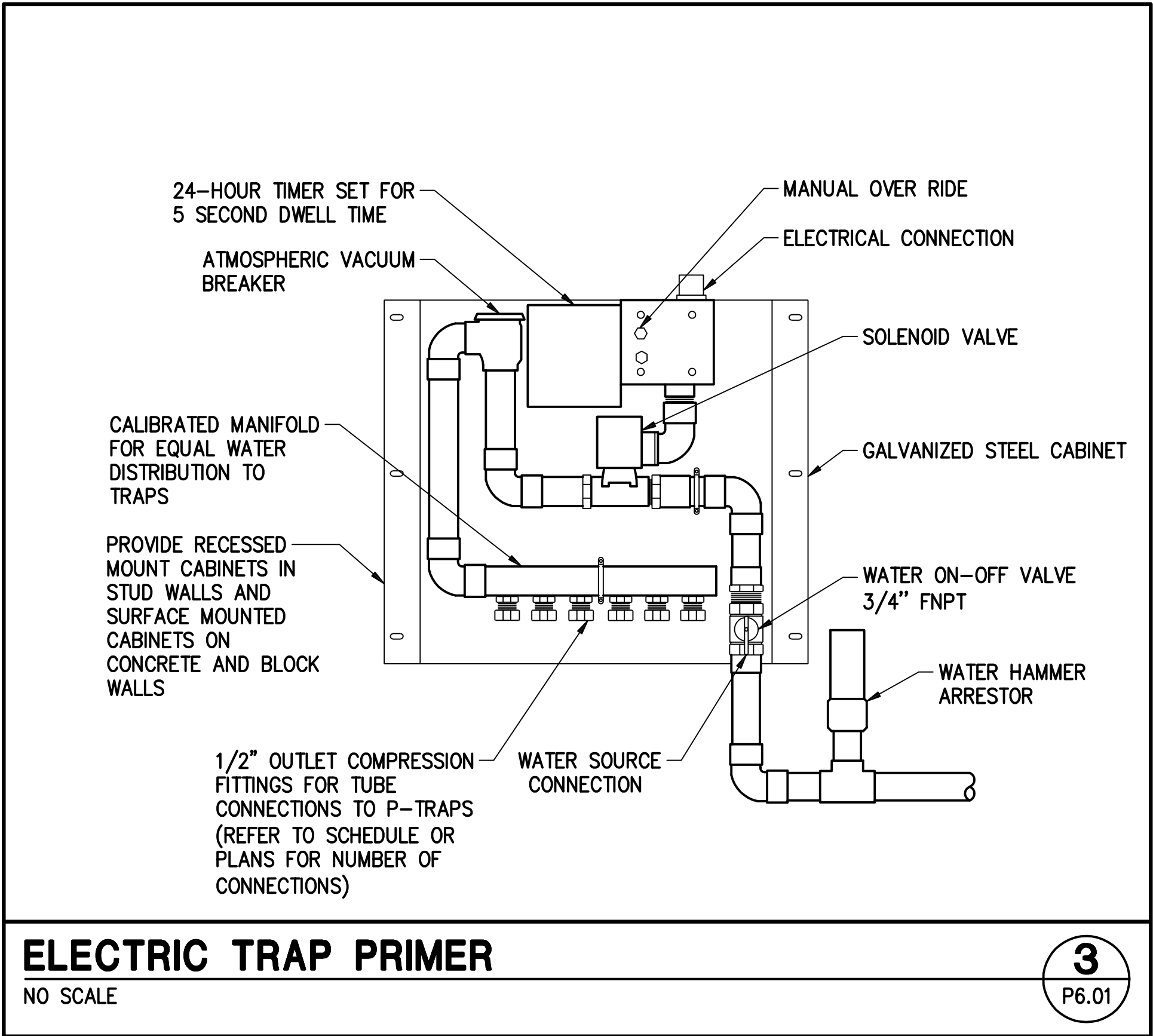
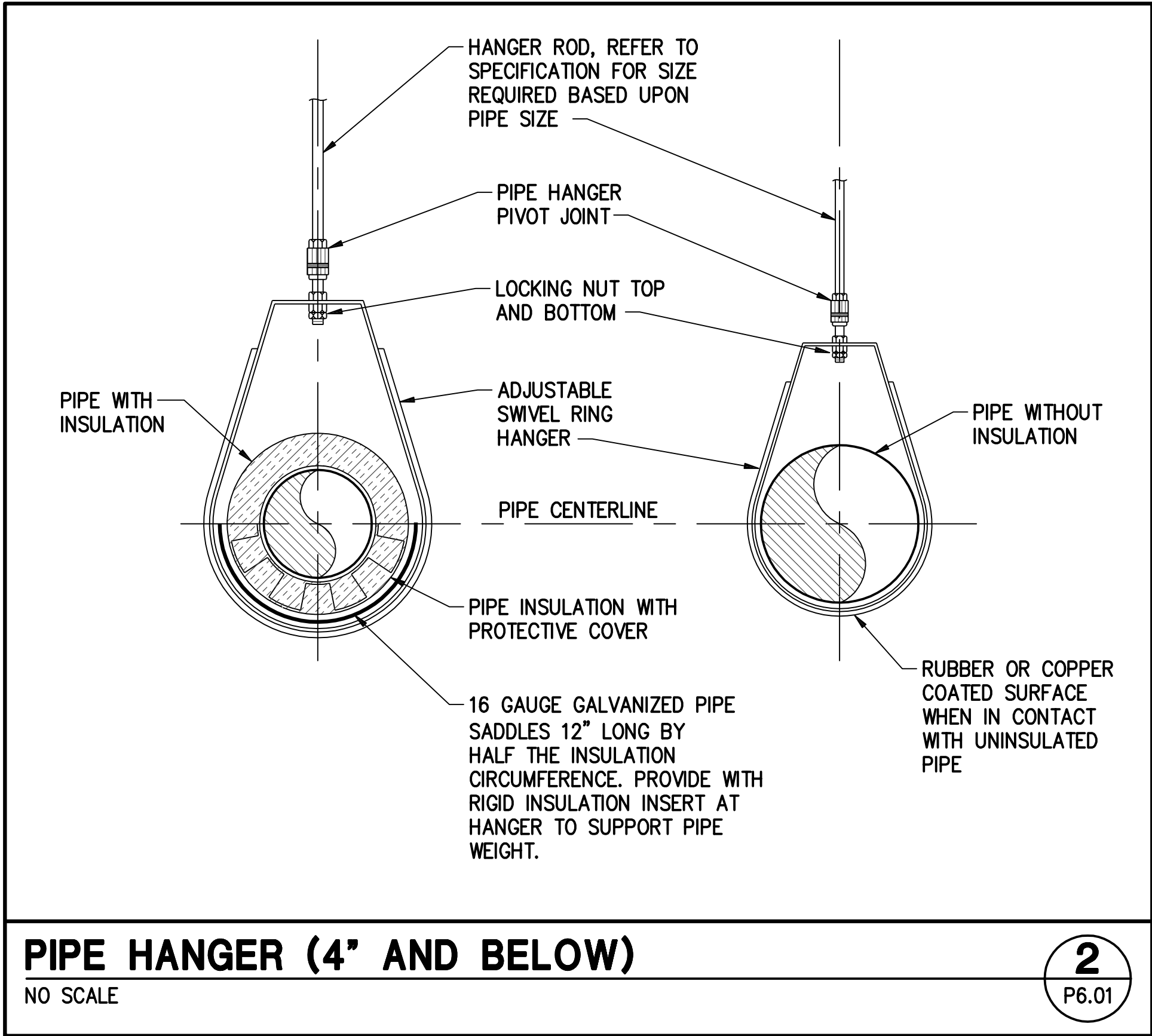
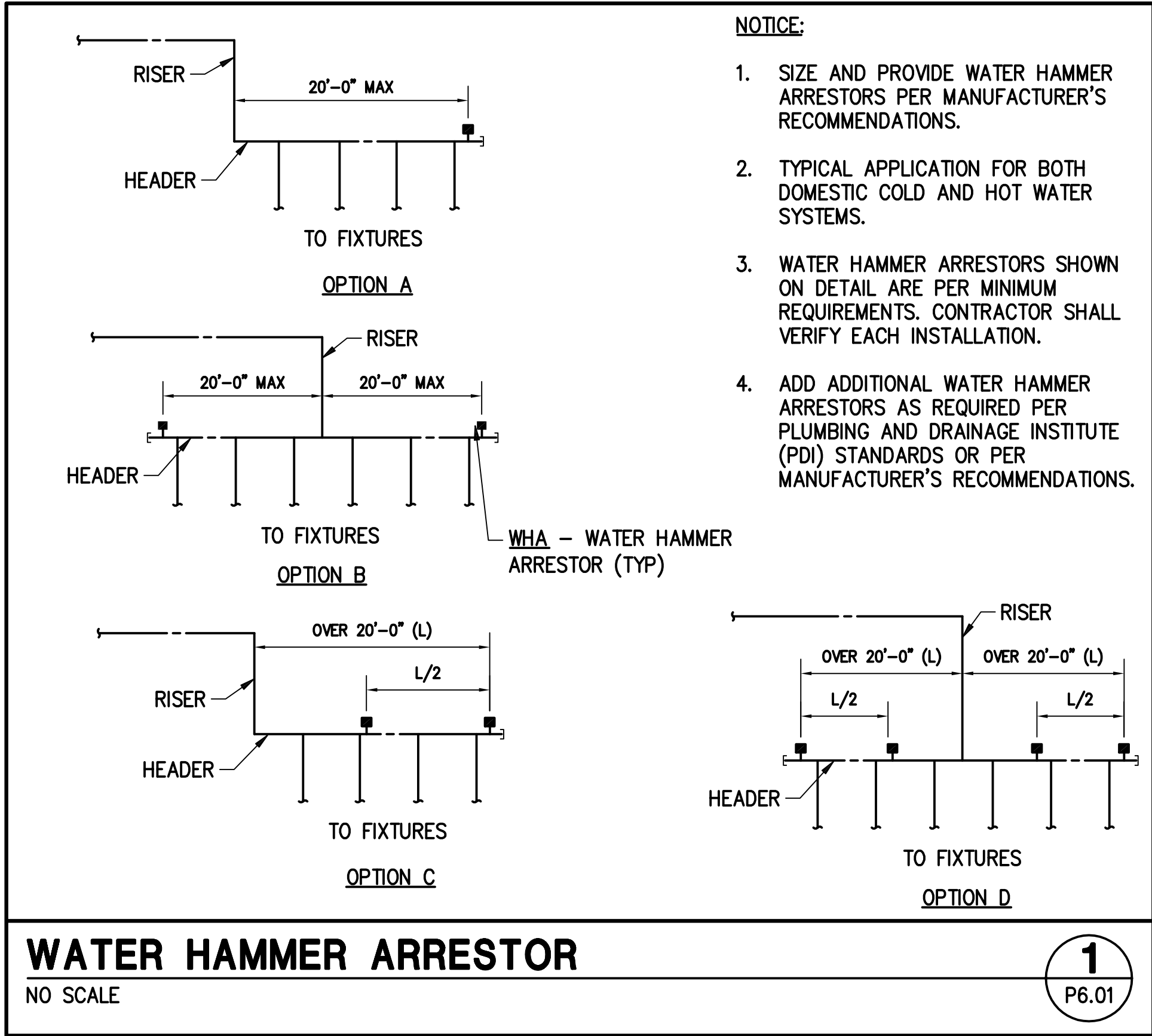
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DEPARTMENT OF PUBLIC WORKS

PHONE: (702) 228-6535
FAX: (702) 384-4846
TDD: (702) 386-9108

DRAWN: JU
FILE:
DATE: 02/15/2018
SCALE:
RID NO: 15.59806.JH
CLV DWG NO: 620-10B
HANSEN NO: 59806
SHT NO:

P6.00

#15.0821



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DESIGN DETAILS



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JU

FILE

DATE

02/15/2018

SCALE

FIG NO

15.59806.JH

CLV DWG NO

620-10B

HANSEN NO

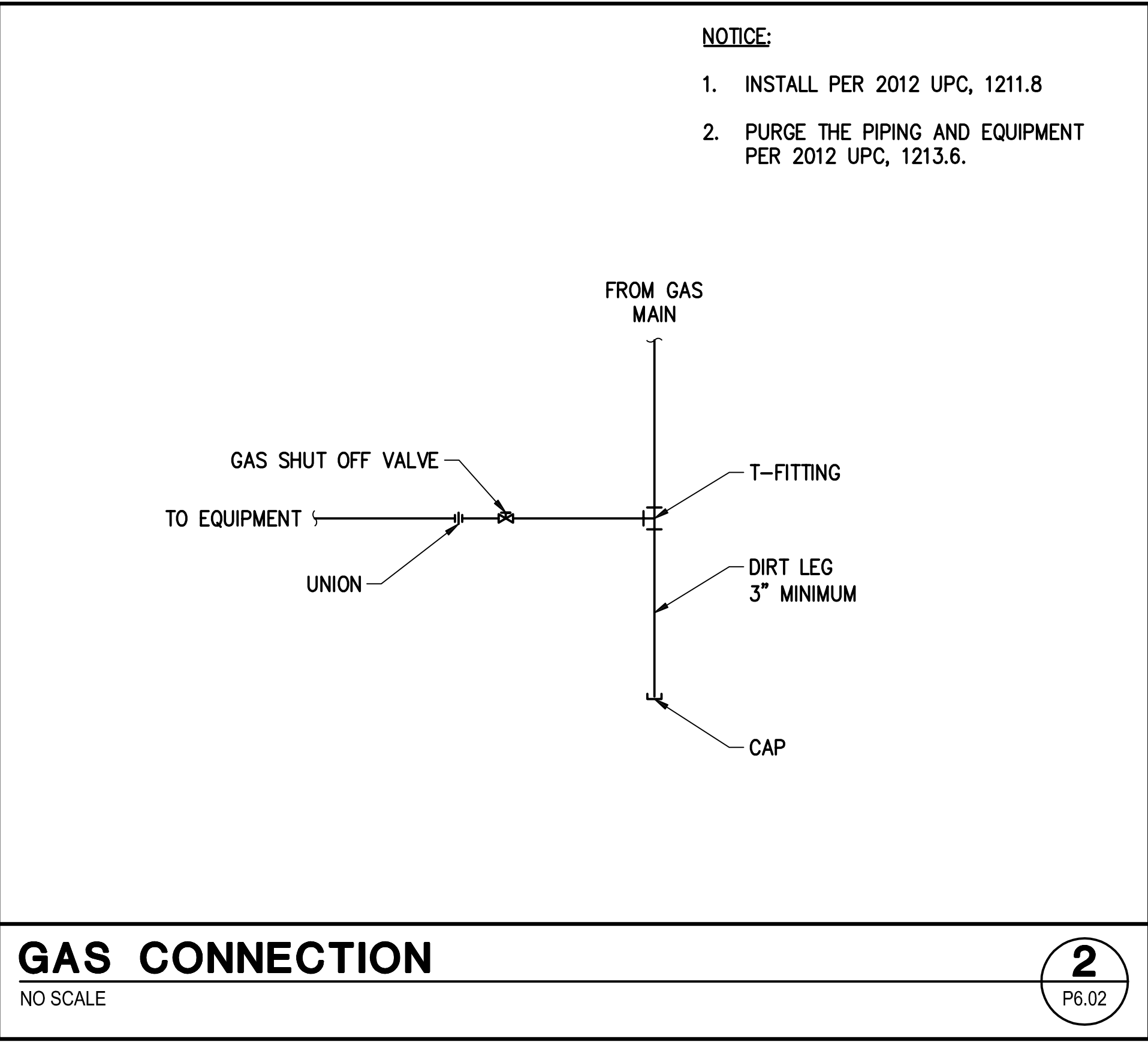
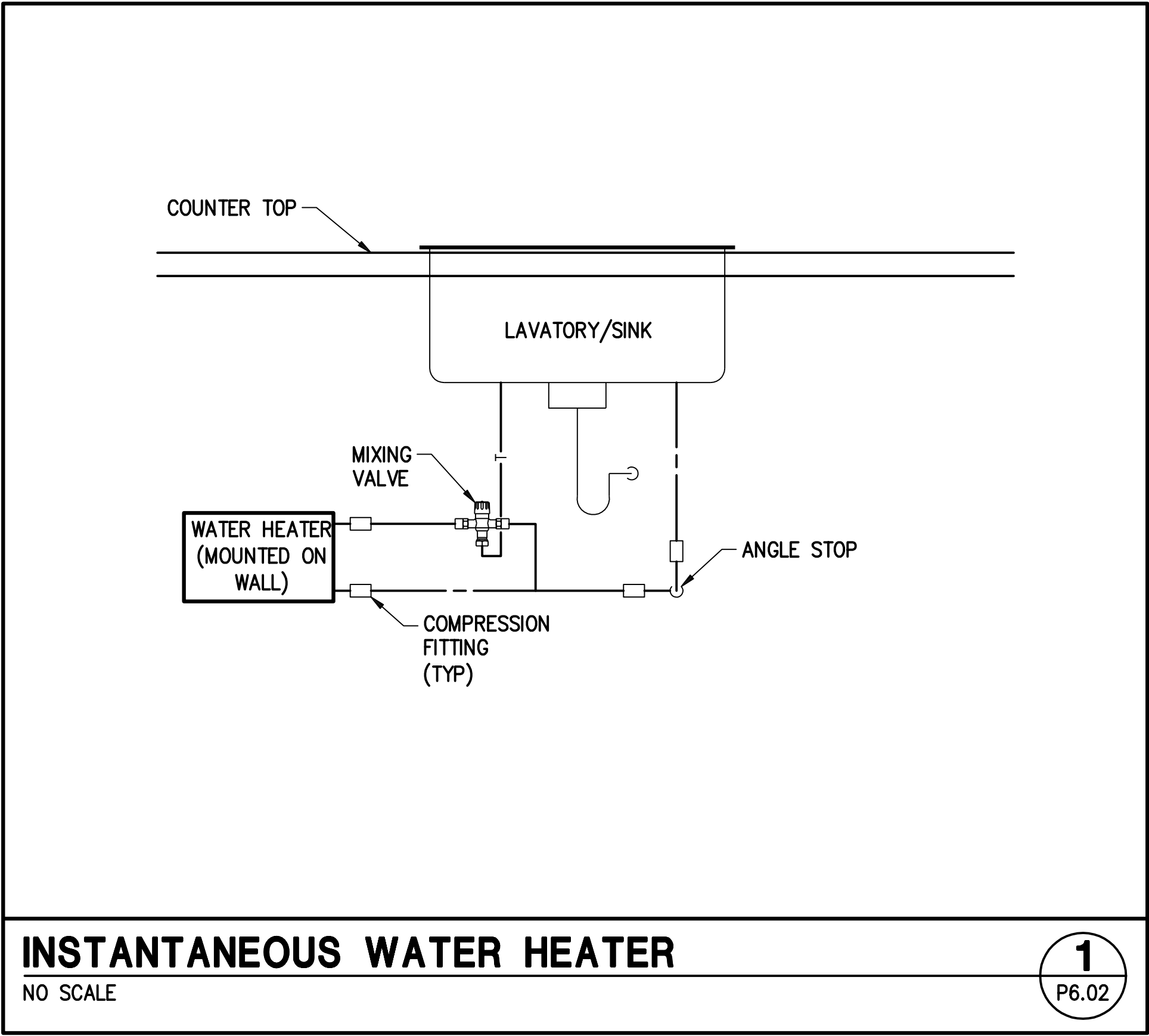
59806

SHT NO

P6.01

#15.0821

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- Renovation -

DESIGN DETAILS



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DRAWN JU

FILE

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CLV DWG NO 620-10B

HANSEN NO 59806

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CHARLESTON HEIGHTS COMMUNITY CENTER

800 BRUSH STREET

LAS VEGAS, NV 89107

GENERAL NOTES:

A: ALL WIRING TO BE IN ACCORDANCE WITH NFPA 70 ARTICLE 760.
B: FIRE ALARM SYSTEM TO BE DESIGNED AND INSTALLED PER 2013 NFPA 72 APPLICABLE CODES AND 2012 IFC STANDARDS.
C: AREAS PROTECTED BY AN AUDIBLE ALARM WILL ACHIEVE A MINIMUM OF 80DB SOUND AT ANY PLACE WITHIN THE PROTECTED PROPERTY.

CODES:

2012 - INTERNATIONAL BUILDING CODE
2012 - INTERNATIONAL FIRE CODE
2011 - NEC
2013 - NFPA72

PROJECT INFORMATION:

OCCUPANCY TYPE = GROUP A-1, A-3, B & S-1
OCCUPANCY LOAD = 1,316
SQUARE FOOTAGE = 25,239

INSTALLATION/OPERATION NOTES:

THIS IS AN EXISTING SPRINKLED BUILDING THAT WILL HAVE AN ADDRESSABLE VOICE NOTIFICATION FIRE ALARM SYSTEM INSTALLED. EDS ELECTRONICS WILL BE INSTALLING NEW VOICE AND STROBE NOTIFICATION APPLIANCES WITHIN THE BUILDING THAT WILL CONNECT TO A NEW POWER SUPPLY (FCPS-2458) AND HIGH LEVEL AUDIO AMPLIFIERS, LOCATED IN FIRE SPRINKLER RISER ROOM ON THE FIRST FLOOR. EDS ELECTRONICS WILL ALSO BE INSTALLING NEW ADDRESSABLE INITIATION DEVICES THAT WILL CONNECT TO THE NEW FIRE ALARM CONTROL PANEL, LOCATED IN THE FIRE SPRINKLER RISER ROOM ON THE FIRST FLOOR. EACH INITIATION DEVICE WILL HAVE A DISTINCT ADDRESS IDENTIFICATION AND LOCATION TO BE DISPLAYED BY ALPHANUMERIC DISPLAY AT THE FIRE ALARM CONTROL PANEL.

ALL WIRING TO BE CLASS 'B' WIRED IN A POWER LIMITED FASHION. THIS SYSTEM WILL OPERATE SO THAT SHOULD A FIRE ALARM CONDITION OCCUR, AN EMERGENCY VOICE NOTIFICATION ANNOUNCEMENT WILL SOUND AND ALL STROBES WILL FLASH IN SYNCHRONIZATION AND HVAC UNITS SHALL SHUT DOWN GLOBALLY PER THE ENCLOSED FIRE ALARM MATRIX. THIS SYSTEM WILL BE BATTERY BACKED TO PROVIDE FOR FOUR HOURS LOSS OF AC POWER, FOLLOWED BY FIFTEEN MINUTES OF POWER LOSS. USING SECONDARY POWER FROM THE BATTERIES, SYSTEM IS ON EMERGENCY POWER. EACH CABINET CONTAINING MAIN FIRE ALARM CONTROL, POWER SUPPLIES AND AMPLIFIERS WILL BE POWERED BY DEDICATED, NON-GFI, 120 VOLT CIRCUITS. (SYSTEM IS ON E-POWER)

CENTRAL STATION MONITORING:

MONITORING PERFORMED BY OTHERS, AND IS NOT IN EDS ELECTRONICS SCOPE OF WORK. SIGNALS RECEIVED ARE AS FOLLOWS:

ZONE 1 - WATER FLOW
ZONE 2 - SUPERVISORY
ZONE 3 - FIRE ALARM
ZONE 4 - SYSTEM TROUBLE

THE SIGNALS ARE MONITORED BY:
ALARMCO
UL# 181617-001
2007 S. LAS VEGAS BLVD.
LAS VEGAS, NEVADA 89104
(702)382-5000 (PHONE)

SMOKE DETECTOR NOTE:

SMOKE DETECTORS MUST BE A MINIMUM OF FOUR INCHES FROM THE WALL, BETWEEN 4-12 INCHES FROM CEILING WHEN LOCATED ON THE WALL, AND A MINIMUM OF THREE FEET FROM ANY SUPPLY OR RETURN DIFFUSER. SMOKE DETECTOR TO BE 12 INCHES AWAY FROM SUCH LIGHT FIXTURES AND SPRINKLER HEADS. FIELD VERIFY CONDITIONS WHEN ROUGHING IN THE DETECTOR LOCATIONS TO MAINTAIN THESE REQUIREMENTS.

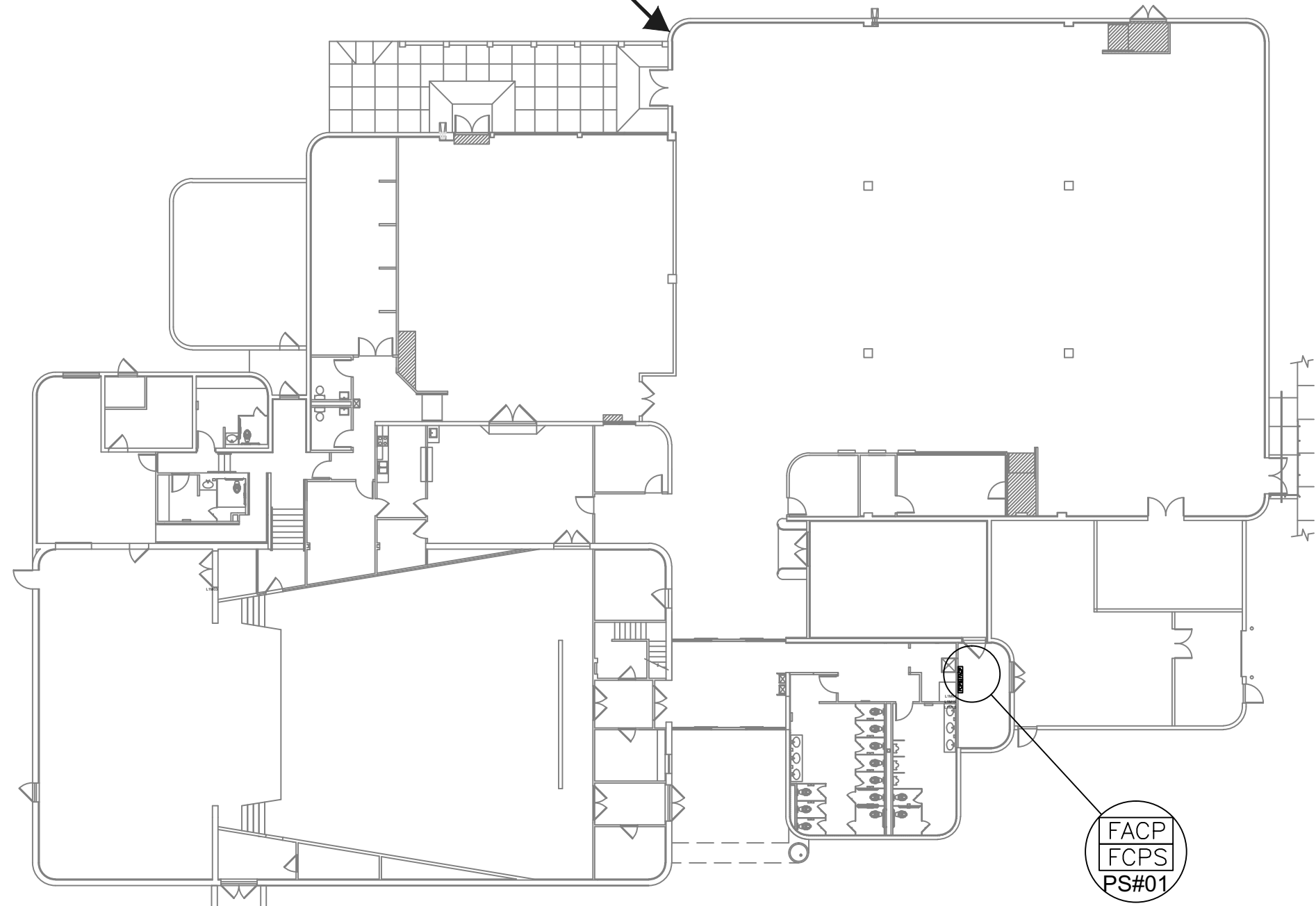
DO NOT DEVIATE FROM THE CONDUIT LAYOUT OR DESIGN OF THIS SYSTEM WITHOUT FIRST CONSULTING WITH EDS ELECTRONICS INC. (702) 871-3733. ADDITIONAL COST WILL BE INCURRED WITHOUT WRITTEN APPROVAL FROM EDS ELECTRONICS INC.

BUILDING OF WORK



SITE PLAN
NOT TO SCALE

AREA OF WORK



CHARLESTON HEIGHTS COMMUNITY CENTER
SCALE: NTS

AREA OF WORK

MEZZ. LVL.
SCALE: NTS

WIRE LEGEND

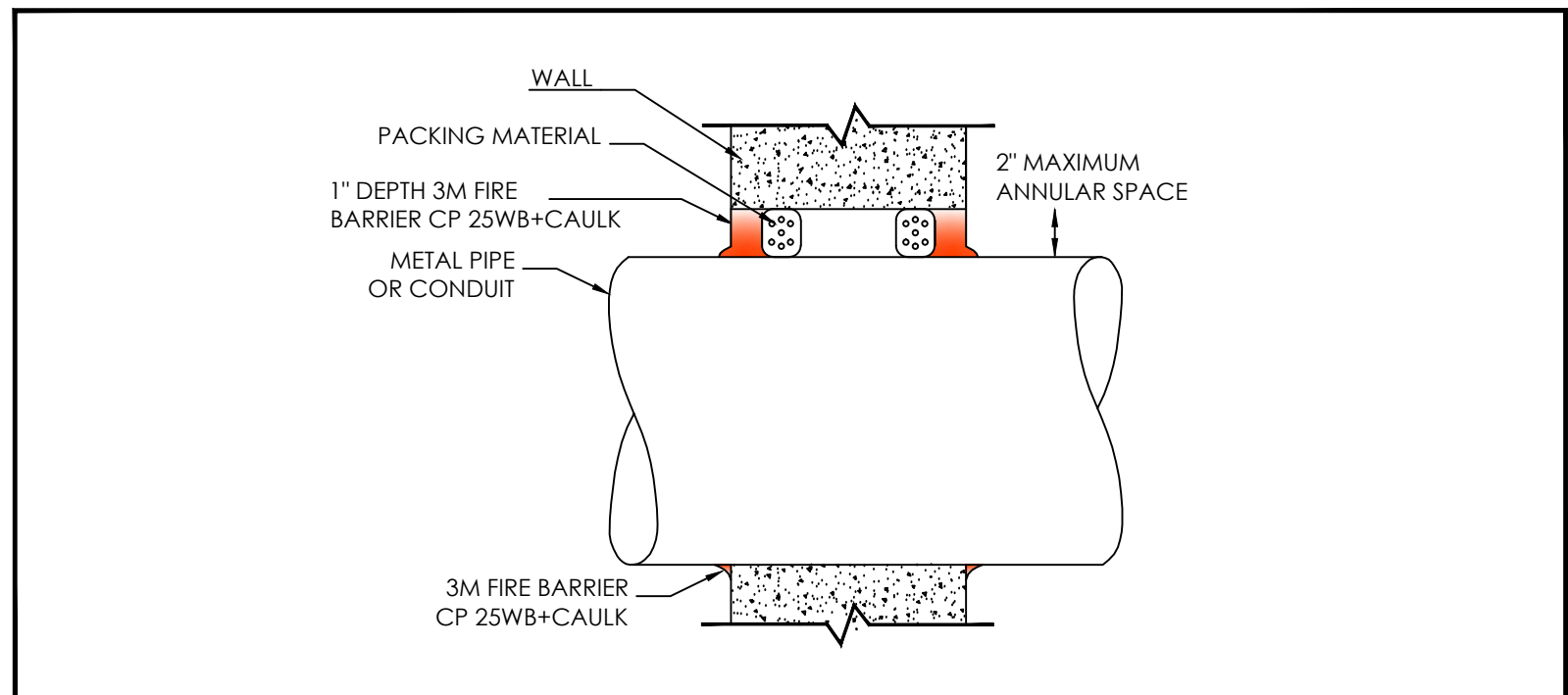
	WIRE SIZE/TYPE	INSULATION	DESCRIPTION
A	#18/4 STRANDED COPPER	CMG	ANNUNCIATOR PANEL COMMUNICATION & POWER
B	#14/2 SOLID COPPER	THHN	N.A.C. CLASS B/STYLE Y
C	#18/2 TWISTED/UNSHIELDED	FPLR	S.L.C. CLASS B/STYLE B
E	#18/2 SOLID COPPER	TFN	FAN SHUTDOWN
F	#18/2 SOLID TWISTED	THHN	REMOTE MICROPHONE POWER
H	#18/2 SOLID TWISTED	THHN	HIGH LEVEL AUDIO N.A.C.
J	#18/2 TWISTED SHIELDED	THHN	REMOTE MICROPHONE AUDIO

DEVICE LEGEND

SYMBOL	QTY.	PART NUMBER	MFR.	DESCRIPTION
	1	NFS2-3030	NOTIFIER	FIRE ALARM CONTROL PANEL, WALL MOUNTED Ø72" TO TOP OF CABINET.
	1	FDU-80	NOTIFIER	FIRE ALARM ANNUNCIATOR PANEL, WALL MOUNTED Ø60" TO TOP OF THE PANEL. USE 4" SQUARE BACK BOX WITH SINGLE GANG RING.
	1	EQBB-D4	NOTIFIER	EQ CABINET CONTAINING DAA2-5070 DIGITAL AUDIO AMPLIFIERS WITH BDA-70, REQUIRES 4 GANG BOX WITH A 3 GANG MUDDING.
	1	FCPS-2458	NOTIFIER	FIELD CHARGING POWER SUPPLY, WALL MOUNTED AT 72" TO TOP OF THE CABINET. USE CABINET PROVIDED BY EDS ELECTRONICS INC.
	1	RM-1	NOTIFIER	REMOTE MICROPHONE
	1	FSP-851	NOTIFIER	SMOKE DETECTOR (PHOTOELECTRIC), CEILING MOUNTED, USE 4" SQUARE DEEP BACK BOX WITH SINGLE GANG RING.
	2	FMM-101	NOTIFIER	MONITOR MODULE, MOUNTED IN ANY ACCESSIBLE LOCATION. USE 4" SQUARE DEEP BACK BOX.
	0	FCM-1	NOTIFIER	CONTROL MODULE, MOUNTED IN ANY ACCESSIBLE LOCATION. USE 4" SQUARE DEEP BACK BOX.
	1	NBG-12LX	NOTIFIER	PULL STATION, WALL MOUNTED AT 45" TO ACTUATOR OF DEVICE, USE 4" SQUARE DEEP BACK BOX WITH SINGLE GANG RING.
	4	FRM-1	NOTIFIER	RELAY MODULE, MOUNTED IN ANY ACCESSIBLE LOCATION. USE 4" SQUARE DEEP BACK BOX.
	29	SPCWL	SYSTEM SENSOR	SPEAKER, CEILING MOUNTED, USE 4" SQUARE DEEP BACK BOX WITH EXTENSION RING. (XXW=WATTAGE)
	38	SPSCWL	SYSTEM SENSOR	SPEAKER/STROBE, CEILING MOUNTED, USE 4" SQUARE DEEP BACK BOX WITH EXTENSION RING. (XXcd=CANDELA, XXW=WATTAGE)
	4	SPSWL	SYSTEM SENSOR	SPEAKER/STROBE, WALL MOUNTED Ø +90"-96" ABOVE FINISHED FLOOR, USE 4" SQUARE DEEP BACK BOX WITH EXTENSION RING. (XXcd=CANDELA, XXW=WATTAGE)
	1	P2RHK-120	SYSTEM SENSOR	EXTERIOR WEATHERPROOF HORN/STROBE, WALL MOUNTED BETWEEN +96"-120" A.F.F., USE WEATHERPROOF BACK BOX PROVIDED BY EDS ELECTRONICS.
	7	MINOVAIR FLEX DNR WITH FSP-851 FRM-1	NOTIFIER	DUCT MOUNTED SMOKE DETECTOR HOUSING WITH NOTIFIER FSP-851 SMOKE DETECTOR HEAD AND NOTIFIER FRM-1 RELAY MODULE (TO BE INSTALLED IN T-GRID CEILING). INSTALLED AND WIRED BY EDS ELECTRONICS.
	-	-	-	EXISTING AIR HANDLING UNIT (AHU), BY OTHERS, TO REMAIN AS SHOWN.
	-	-	-	EXISTING WATER FLOW SWITCH, TO REMAIN AS SHOWN.
	-	-	-	EXISTING TAMPER VALVE, TO REMAIN AS SHOWN.
	-	-	-	ALL FIRE ALARM WIRING SHALL BE IN METAL CLAD CABLE OR MINIMUM 3/4" OR U.N.O. 1/2", 1", 2" EMT/FLEX CONDUIT, OR OTHER APPROVED METAL-CLADDING SYSTEM, INSTALLED PER ADOPTED NFPA 70, THE NEC.
	-	-	-	JUNCTION/PULL BOX, SIZED FOR CONDUIT BEING USED.
	-	-	-	E.O.L. (END OF LINE) RESISTOR
	99	TOTAL NEW DEVICE COUNT		

SYMBOL KEY PLAN:

GREY = EXISTING APPLIANCE
BLACK = NEW APPLIANCE



(TYP.) UL FIREWALL PENETRATION DETAIL
SCALE: NOT TO SCALE

HOLES THROUGH WALLS AND CEILINGS, CHASES, SHAFTS ETC., FOR THE PASSAGE OF CABLE OR CONDUIT SHALL BE MADE SO AS TO SUBSTANTIALLY PRESERVE THE INTEGRITY OF THE FIRE RATING OF SUCH SURFACES OR PASSAGES IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC) 300-21

SYSTEM OPERATION MATRIX

ACTION:	A	B	C	D	E	F	G	H
1 ACTIVATION OF WATER FLOW SWITCH								
2 ACTIVATION OF TAMPER VALVE								
3 ACTIVATION OF SMOKE DETECTOR								
4 ACTIVATION OF HEAT DETECTOR								
5 ACTIVATION OF MANUAL PULL STATION								
6 ACTIVATION OF ANY DUCT DETECTOR								
7 TROUBLE AT FIRE ALARM PANEL								

REACTION:

ACTIVATION OF ALL INITIATION DEVICES WILL NOT INITIATE NOTIFICATION APPLIANCES. WATER FLOW, TAMPER VALVE, HEAT DETECTOR, SMOKE DETECTOR, AND MANUAL PULL STATION WILL INITIATE A SILENT ALARM SIGNAL TO CENTRAL STATION. SMOKE DETECTOR, HEAT DETECTOR, AND MANUAL PULL STATION WILL INITIATE A SILENT ALARM SIGNAL TO CENTRAL STATION. SMOKE DETECTOR, HEAT DETECTOR, AND MANUAL PULL STATION WILL INITIATE A SILENT ALARM SIGNAL TO CENTRAL STATION.

EDS ELECTRONICS INC.
2675 WEST CHEYENNE AVENUE
NORTH LAS VEGAS, NV 89032
PHONE: (702) 871-3733 FAX: (702) 871-3199
CONTRACTORS LICENSE: 35144A
LICENSE LIMIT \$950,000.00

VISIT US AT: WWW.EDSELECTRONICS.COM

NO.	DATE	REVISION	BY
△	1/10/18	CHANGES PER FIELD PER PERMIT #339910	M.P.C.

CHARLESTON HEIGHTS COMMUNITY CENTER
800 BRUSH STREET
LAS VEGAS, NV 89107
APN: 138-36-801-002

THESE PLANS WERE PREPARED BY, AND ARE THE PROPERTY OF, EDS ELECTRONICS INC., A NEVADA LICENSED FIRE ALARM CONTRACTOR. NEVADA STATE FIRE ALARM LICENSE #: F169 CONTRACTOR LICENSE #: 35144A MASTER CARD #: 1450 LICENSE CLASSIFICATION C2, c, d LICENSE LIMIT \$950,000.00
SIGNATURE: _____
MASTER/G.I.: EDWIN B. RAUGUST
DATE: _____

FIRE PROTECTION ENGINEERING TECHNOLOGY FIRE ALARM SYSTEMS NICET CERTIFIED LEVEL IV
SIGNATURE: _____ JOSEPH H. LYNN
CERTIFICATION # 120241
DATE: _____

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PROJECT:
CHARLESTON HEIGHTS COMMUNITY COVER SHEET

TYPE OF SYSTEM:
FIRE ALARM SYSTEM

DRAWN BY:
M.P.C.

CHECKED BY:
J.H.L.

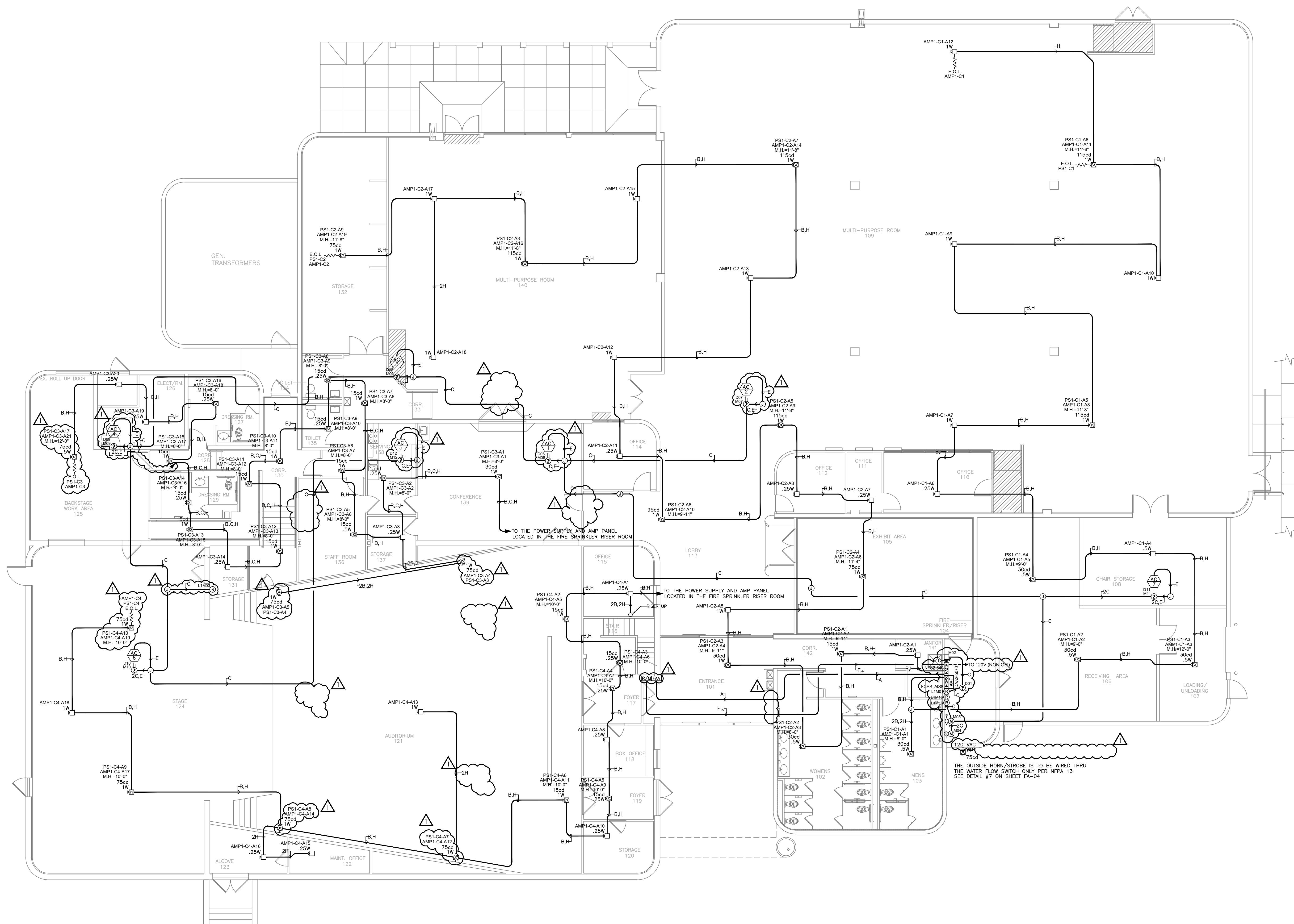
DATE:
2/27/2017

SCALE:
NONE

JOB #:
3941

SHEET

FA-01



CHARLESTON HEIGHTS COMMUNITY CENTER - FIRE ALARM PLAN
SCALE: 1/8"=1'-0"

MH=MOUNTING HEIGHT A.F.F.

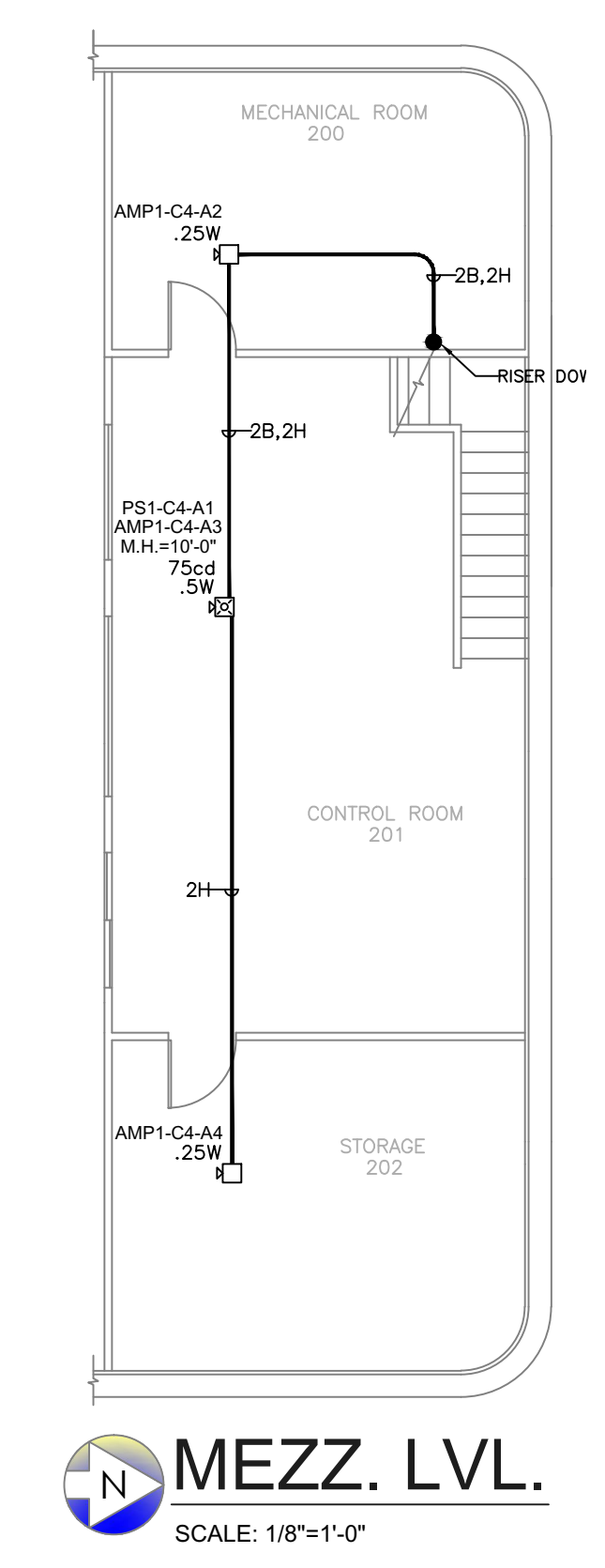
F.C.P.S. N.A.C. KEY:

PS# - C# - A#

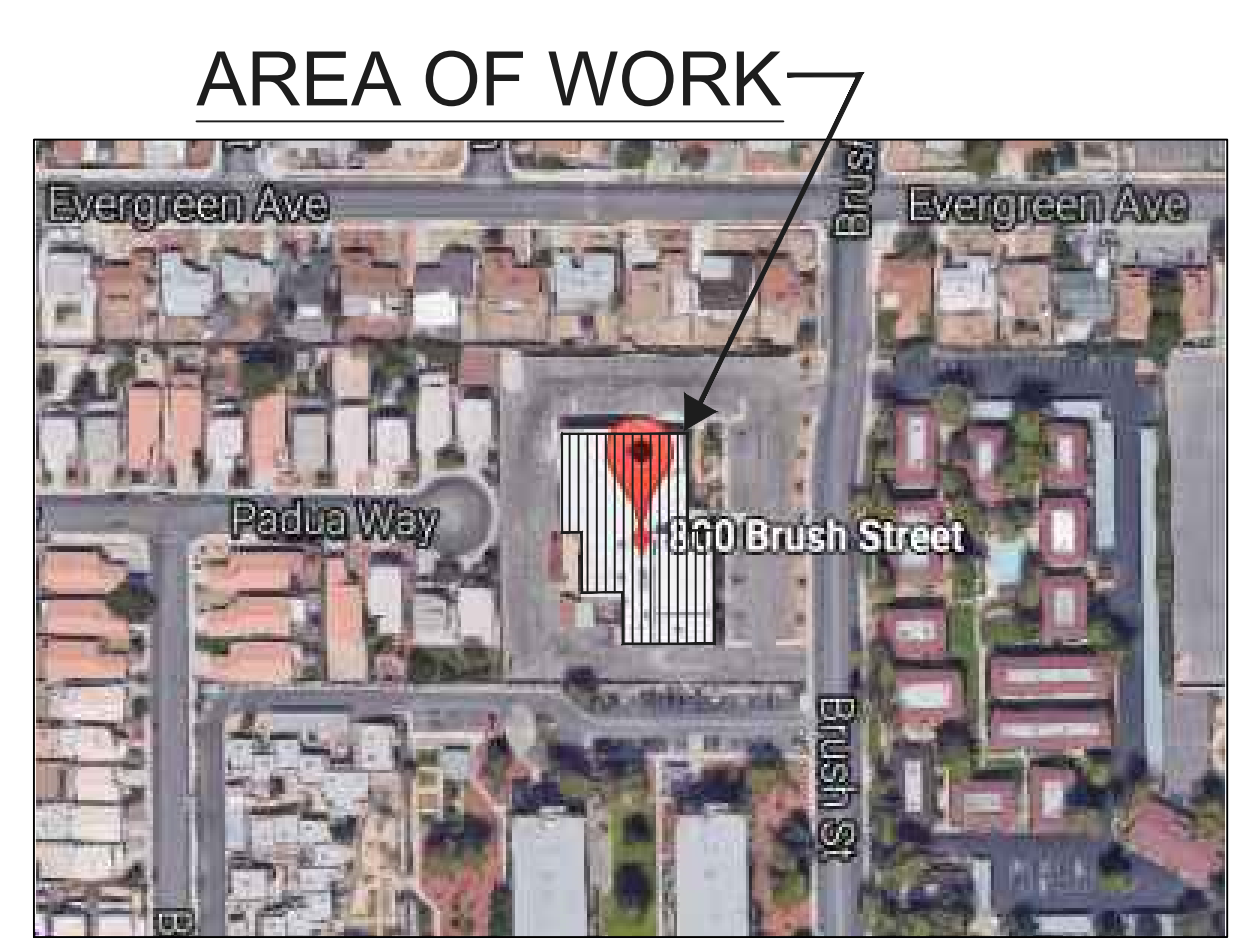
NOTIFICATION APPLIANCE NUMBER

NOTIFICATION CIRCUIT NUMBER

POWER SUPPLY NUMBER



MEZZ. LVL.
SCALE: 1/8"=1'-0"



2675 WEST CHEYENNE AVENUE
NORTH LAS VEGAS, NV 89032
PHONE: (702) 871-3733 FAX: (702) 871-3199
CONTRACTORS LICENSE 35144A
LICENSE LIMIT \$950,000.00
VISIT US AT: WWW.EDSELECTRONICS.COM

NO.	DATE	REVISION	BY
1	1/10/18	CHANGES PER FIELD PER PERMIT #339910	M.P.C.

CHARLESTON HEIGHTS COMMUNITY CENTER
800 BRUSH STREET
LAS VEGAS, NV 89107
APN: 138-36-801-002

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SIGNATURE: _____

MASTER/G.I.: EDWIN B. RAUGUST

DATE: _____

FIRE PROTECTION ENGINEERING TECHNOLOGY
FIRE ALARM SYSTEMS
NICET CERTIFIED LEVEL IV

SIGNATURE: _____

JOSEPH H. LYNN
CERTIFICATION # 120241

DATE: _____

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PROJECT:
CHARLESTON HEIGHTS COMMUNITY
FIRE ALARM PLAN

TYPE OF SYSTEM:
FIRE ALARM SYSTEM

DRAWN BY:
M.P.C.

CHECKED BY:
J.H.L.

DATE:
2/27/2017

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

JOB #:
3941

SHEET
FA-02

NOTIFIER®
by Honeywell

System Current Draw - NFS2-640

Total Current		Primary Non-Alarm - C1					Primary Alarm - C2				
		Power (Amps)					Power (Amps)				
C1	0.341 A	0.00 0.08 1.76 2.64 3.52 4.40					0.00 1.48 2.96 4.44 5.92 7.40				
C2	0.534 A										
C3	0.341 A										
C4	0.574 A										

Note: Only add devices on this sheet that are on the NFS2-640. If there are additional devices on other power supplies or voice systems use the appropriate worksheet.

Device	C1 - Primary Non-Alarm			C2 - Primary Alarm			C3 - Secondary Non-Alarm					
	Qty	Draw	Total	Qty	Draw	Total	Qty	Draw	Total			
I. System												
CPU2-640	1	x	0.26000	0.26000	1	x	0.26000	0.26000	1	x	0.36000	0.26000
GPS-24	1	x	0.00000	0.00000	1	x	0.00000	0.00000	1	x	0.04000	0.04000
II. Power Supplies/Chargers												
FCP-24SS Power Supplies	1	x	0.00000	0.00000	1	x	0.00000	0.00000	1	x	0.00000	0.00000
III. Voice Systems and Audio Equipment												
Desk Series	1	x	0.00000	0.00000	1	x	0.00000	0.00000	1	x	0.00000	0.00000
RM	1	x	0.00000	0.00000	1	x	0.00000	0.00000	1	x	0.00000	0.00000
IV. Annunciator Control System												
ACS	1	x	0.06430	0.06430	1	x	0.06430	0.06430	1	x	0.02500	0.02500

S. Initiating Devices (Do Not Add Devices on SC-loop if using Simple Callibration Method) Browse By: All Initiating Devices

Device	Qty	Draw	Total	Device	Qty	Draw	Total	
FSP-851	8	x	0.00030	0.00240	8	x	0.00030	0.00240
FM-1	1	x	0.00049		1	x	0.00049	
FM-101	2	x	0.00035	0.00070	2	x	0.00035	0.00070
FM-11	11	x	0.00006	0.00066	11	x	0.00006	0.00066
FM-11	1	x	0.00038	0.00038	1	x	0.00038	0.00038
NBG-12LX								
Total Non-Alarm:			0.341	Total Alarm:			0.534	
Total Standby Load:			0.341					

System Power Requirements

Notifier NFS2-640 Fire Alarm Control Panel

Protected Premises: CHARLESTON HEIGHTS COMMUNITY CENTER Address: 800 Brush Street City: Las Vegas State: NV Zip: 89107	Date: 2/27/2017
Prepared By: EDS Electronics Inc Phone: (702)871-3733 Address: 2675 W. Cheyenne Ave. Email: City: N Las Vegas State: NV Zip: 89032	

☐ Clear Project Information

AC Branch Current Requirements 5.00 AMPS @ 120 VAC ☐ Check

Current required by source to power the fire alarm system.

Primary Standby Load 0.34 Amps ☐ Check

Current load on the primary power supply during non-alarm conditions.

Primary Alarm Load 0.53 Amps ☐ Check

Current load on the primary power supply during alarm conditions.

Secondary Load Requirements 1.81 Amp Hours ☐ Check

Total Secondary Load from the calculation table below.

Current Draw	Time (hours)	Total (AH)
Secondary Standby Load		
0.341 A	x	
	Required Standby Time	
	4 hours	1.37
Secondary Alarm Load		
0.574 A	x	
	Required Alarm Time	
	0.250 hours	0.14
	Total Secondary Load	1.51
	Derating factor	x 1.2
Secondary Load Requirements (Amp Hours)		1.81

☐ USA ☐ Canada

Battery Selection 18 Amp Hours ☐ Check

MODULES:

- M01 - RELAY MODULE, DAMPER CONTROL, IN FAC/ LAUNDRY RISER ROOM
- M02 - MONITOR MODULE, PULL STATION, FIRE SPRINKLER RISER ROOM 104
- M03 - RELAY MODULE, MUSIC SPLITDOWN IN STAGE CLOSET
- M04 - MONITOR MODULE, TAMPED DOWN, IN RISER ROOM 104
- M05 - MONITOR MODULE, WATERFLOW, FIRE SPRINKLER RISER ROOM 104
- M06 - RELAY MODULE, DUCT DETECTOR, AC-1, CONFERENCE 139
- M07 - RELAY MODULE, DUCT DETECTOR, AC-2, MULTI-PURPOSE ROOM 109
- M08 - RELAY MODULE, DUCT DETECTOR, AC-3, MULTI-PURPOSE ROOM 140
- M09 - RELAY MODULE, DUCT DETECTOR, AC-4, CORRIDOR 128
- M10 - RELAY MODULE, DUCT DETECTOR, AC-5, STAGE 124
- M11 - RELAY MODULE, DUCT DETECTOR, AC-7, CHAIR STORAGE 109
- M12 - RELAY MODULE, DUCT DETECTOR, AC-5, SERVING 138
- M13 - M14 SPARES
- M15 - RELAY MODULE, WATERFLOW TO CENTRAL STATION
- M16 - RELAY MODULE, GENERAL ALARM TO CENTRAL STATION
- M17 - M159 SPARES

DETECTORS:

- D01 - SMOKE, SMOKE DETECTOR, FIRE SPRINKLER RISER ROOM 104
- D02 - D05 - SPARES
- D03 - SMOKE, DUCT DETECTOR, AC-1, CONFERENCE 139
- D07 - SMOKE, DUCT DETECTOR, AC-2, MULTI-PURPOSE ROOM 109
- D08 - SMOKE, DUCT DETECTOR, AC-3, MULTI-PURPOSE ROOM 140
- D09 - SMOKE, DUCT DETECTOR, AC-4, CORRIDOR 128
- D10 - SMOKE, DUCT DETECTOR, AC-6, STAGE 124
- D11 - SMOKE, DUCT DETECTOR, AC-7, CHAIR STORAGE 109
- D12 - SMOKE, DUCT DETECTOR, AC-5, SERVING 138
- D13 - D159 SPARES



NOTIFIER DASH-5070 BATTERY CALCULATION

STANDBY CALCULATION

	QTY.	CURRENT (AMPS)	TOTAL (AMPS)
MAIN CIRCUIT BOARD (W/AC FAIL PROTECTOR)	1	0.350	0.350
END-OF-LINE RESISTOR	4	0.014	0.056
		TOTAL STANDBY =	0.394

ALARM CALCULATION

	QTY.	CURRENT (AMPS)	TOTAL (AMPS)
MAIN CIRCUIT BOARD (W/AC FAIL PROTECTOR)	1	0.145	0.145
CKT #1	1	0.124	0.124
CKT #2	1	0.219	0.219
CKT #3	1	0.187	0.187
CKT #4	1	0.156	0.156
		TOTAL ALARM =	0.831

TOTAL STANDBY = 0.394 A	4 HOURS OF STANDBY =	1.576 AMP-HRS
TOTAL ALARM = 0.831 A	0.25 ALARM TIME (15 MIN-25) =	0.208 AMP-HRS

TOTAL = 1.784 AMP-HRS

DERATED BY 20% = 1.2 X 1.784

TOTAL CALCULATED = 2.14 AMP-HRS

SIZE OF BATTERY TO BE USED

3-11 VOLT / 2.1 AMP-HR BATTERIES REQUIRED

N.A.C. LOAD CALCULATION

NOTIFIER DASH-5070

CIRCUIT #1		CURRENT	EXTENDED
QTY APPLICABLE	0.250 WATT	0.250 WATT	0.250 WATT
1	0.25 WATT SYSTEM SENSOR SPEAKER	0.500 WATT	2.500 WATT
1	1.00 WATT SYSTEM SENSOR SPEAKER	1.000 WATT	6.000 WATT
		CIRCUIT #1 =	8.750 WATT
CIRCUIT #2		CURRENT	EXTENDED
QTY APPLICABLE	0.250 WATT	0.250 WATT	1.000 WATT
1	0.25 WATT SYSTEM SENSOR SPEAKER	0.500 WATT	0.500 WATT
1	1.00 WATT SYSTEM SENSOR SPEAKER	1.000 WATT	10.000 WATT
		CIRCUIT #2 =	15.500 WATT
CIRCUIT #3		CURRENT	EXTENDED
QTY APPLICABLE	0.250 WATT	0.250 WATT	2.250 WATT
1	0.25 WATT SYSTEM SENSOR SPEAKER	0.500 WATT	1.000 WATT
10	1.00 WATT SYSTEM SENSOR SPEAKER	1.000 WATT	10.000 WATT
		CIRCUIT #3 =	13.250 WATT
CIRCUIT #4		CURRENT	EXTENDED
QTY APPLICABLE	0.250 WATT	0.250 WATT	2.500 WATT
1	0.25 WATT SYSTEM SENSOR SPEAKER	0.500 WATT	0.500 WATT
6	1.00 WATT SYSTEM SENSOR SPEAKER	1.000 WATT	6.000 WATT
		CIRCUIT #4 =	11.000 WATT
CIRCUIT #1		CURRENT	EXTENDED
		CIRCUIT #1 =	8.750 WATT
		CIRCUIT #2 =	15.500 WATT
		CIRCUIT #3 =	13.250 WATT
		CIRCUIT #4 =	11.000 WATT
		TOTAL	48.500 WATT

TOTAL WATT'S AVAILABLE - 90.00 WATT'S

METHOD PREPARED BY EDS ELECTRONICS INC.										AMP#1 CIRCUIT #1	
CROSS DRAW CALCULATIONS (WORST CASE) N.A. CIRCUITS										CLASS B	
VOLTAGE = OHMS LAW (OHMS X CURRENT = VOLTAGE)											
UTILIZING UL MAX CURRENT DRAW											
OHMS PER THOUGHT OF ONE CONDUCTOR											
38 GAUGE: 7.77		14 GAUGE: 3.07									
16 GAUGE: 4.89		12 GAUGE: 1.93									
CONDUIT											
LENGTH VOLTAGE											
APPLIANCE CURREN											
NUMBER	DRAW	WIRE	OHMS	CALCULATED	ACCUM.	BETWEEN	DROP PER	LENGTH	FROM	TO	
			PER FT	OHMS	OHMS	DEVICES	LENGTH	LENGTH	DEVICE	DEVICE	
1	0.007	18	7.77	0.65	0.65	0.0	0.003	18	AMP1	1	
2	0.007	18	7.77	1.32	1.32	49.00	0.007	29		1	2
3	0.007	18	7.77	1.98	1.98	1.66	0.014	104		1	3
4	0.007	18	7.77	2.66	2.66	0.00	0.017	134		1	4
5	0.007	18	7.77	3.35	2.533	29.53	0.019	163		1	5
6	0.004	18	7.77	4.55	3.092	36.00	0.019	199		1	6
7	0.004	18	7.77	5.29	3.388	0.00	0.020	218		1	7
8	0.014	18	7.77	6.45	3.823	28.00	0.041	246		7	8
9	0.014	18	7.77	7.932	4.75	60.00	0.073	306		8	9
10	0.014	18	7.77	9.71	5.710	56.00	0.074	362		9	10
11	0.014	18	7.77	11.59	6.630	36.00	0.083	388		10	11
12	0.014	18	7.77	13.46	6.735	48.00	0.098	436		11	12
TOTAL = 0.124											
TOTAL VOLTAGE DROP											
VOLTAGE APPLIED = 70.700											
VOLTAGE AT LAST DEVICE = 70.205											

METHOD PRE-CALCULATED BY EDS ELECTRONICS INC.										AMP#1 CIRCUIT #2									
VOLTAGE DROP FREQUENCIES (WORST CASE) N.A. CIRCUITS										CLASS 8									
FORMULA = OHMS LAW (OHMS X CURRENT = VOLTAGE)																			
UTILIZING UL MAX CURRENT DRAW																			
OHMS PER 1000FT OF ONE CONDUCTOR																			
18 GAUGE - 7.77		14 GAUGE - 3.07																	
16 GAUGE - 4.89		12 GAUGE - 1.93																	
										CONDUIT									
										LENGTH									
										VOLTAGE									
APPLIANCE CATALOG NUMBER	WIRE GAUGE	OHMS PER FT	OHMS CALCULATED	OHMS BETWEEN DEVICES	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	FROM DEVICE	TO DEVICE								
1	0.004	18	7.77	0.233	0.233	15.00	0.0008	15	15	AMP#1									
2	0.014	18	7.77	0.280	0.513	18.00	0.0203	33	33	1									
3	0.027	18	7.77	0.427	0.939	27.00	0.006	88	2										
4	0.014	18	7.77	0.582	1.544	31.00	0.000	91	3										
5	0.014	18	7.77	0.718	1.632	34.00	0.031	100	4										
6	0.014	18	7.77	0.928	2.160	36.00	0.006	139	5										
7	0.004	18	7.77	0.295	2.455	19.00	0.0087	158	6										
8	0.014	18	7.77	0.780	3.235	22.00	0.0007	178	7										
9	0.014	18	7.77	0.295	3.530	19.00	0.029	195	8										
10	0.014	18	7.77	0.637	3.667	41.00	0.019	236	9										
11	0.014	18	7.77	0.342	4.009	22.00	0.014	250	10										
12	0.014	18	7.77	0.342	4.351	22.00	0.015	280	11										
13	0.014	18	7.77	0.697	5.048	22.00	0.000	322	12										
14	0.014	18	7.77	0.697	5.745	30.00	0.078	364	13										
15	0.014	18	7.77	0.591	6.092	38.00	0.082	392	14										
16	0.014	18	7.77	0.549	6.636	31.00	0.075	427	15										
17	0.014	18	7.77	0.482	7.117	31.00	0.007	458	16										
18	0.014	18	7.77	0.897	7.615	32.00	0.027	590	17										
19	0.014	18	7.77	0.870	8.485	32.00	0.000	622	18										
TOTAL		0.219		TOTAL VOLTAGE DROP=		70.20	0.934												
				VOLTAGE APPLIED		70.20													
				VOLTAGE AT LAST DEVICE		69.786													
				VOLTAGE OF DEVICES =		70.7 VDC													

OHMS PER 1000 FT OF ONE CONDUCTOR				CONDUIT					
14 GAUGE - 7.77		14 GAUGE - 8.07		LENGTH		VOLTAGE			
16 GAUGE - 8.89		16 GAUGE - 1.93		FROM DEVICES		TO DEVICES			
APPLICABLE CURRENT	WIRE GAUGE	PERCENT	CALCULATED OHMS	CONDUIT OHMS	CONDUIT LENGTH	VOLTAGE	PERCENT		
NUMBER	DEVICES								
1	0.014	18	7.77	1.875	2.885	24.00	0.0264	120	AMP/1
2	0.014	18	7.77	3.763	1.238	20.00	0.0979	144	1
3	0.014	18	7.77	5.646	0.793	16.00	0.1686	161	2
4	0.014	18	7.77	7.531	2.813	20.00	0.0398	181	3
5	0.014	18	7.77	9.416	3.388	27.00	0.0394	278	4
6	0.014	18	7.77	11.301	4.967	36.00	0.0868	377	5
7	0.014	18	7.77	13.186	4.533	16.00	0.0644	293	6
8	0.014	18	7.77	15.071	7.295	27.00	0.0868	377	7
9	0.014	18	7.77	16.956	14.068	36.00	0.1719	326	8
10	0.014	18	7.77	18.841	5.253	12.00	0.0868	338	9
11	0.014	18	7.77	20.726	5.317	16.00	0.1080	358	10
12	0.014	18	7.77	22.611	10.259	13.00	0.0896	368	11
13	0.014	18	7.77	24.496	5.045	21.00	0.0898	389	12
14	0.014	18	7.77	26.381	8.295	18.00	0.0923	422	13
15	0.014	18	7.77	28.266	6.558	17.00	0.0928	449	14
16	0.014	18	7.77	30.151	14.407	24.00	0.1037	431	15
17	0.014	18	7.77	32.036	5.515	21.00	0.0928	465	16
18	0.014	18	7.77	33.921	7.242	21.00	0.0928	465	17
19	0.014	18	7.77	35.806	7.253	18.00	0.0866	484	18
20	0.014	18	7.77	37.691	23.74	15.00	0.0674	499	19
21	0.007	18	7.77	37.691	8.127	24.00	0.0675	523	20
TOTAL	0.387			TOTAL VOLTAGE		69.543			
				VOLTAGE APPLIED =		70.700			
				VOLTAGE AT LAST DEVICE =		69.751			
				VOLTAGE OF DEVICES =		70.700			

METHOD PREPARED BY EDS ELECTRONICS INC.												AMPHI-CIRCUIT #4	
VOLTAGE DROP CALCULATIONS (WORST CASE) IN A.C. CIRCUITS												CLASS B	
FORMULA - OHMS LAW (OHMS X CURRENT = VOLTAGE)													
UTILIZING MAX CURRENT DRAIN													
OHMS PER 1000FT OF ONE CONDUCTOR													
18 GAUGE = 7.77 14 GAUGE = 3.07													
16 GAUGE = 8.89 12 GAUGE = 1.93													
CONDUIT													
LENGTH VOLTAGE													
APPLIANCE CURRENT		WIRE	OHMS	CALCULATED	ACCUML.	BETWEEN DROP	ACCUML.	FROM	TOTAL				
NUMBER	DEVICES				OHMS	DEVICES		DEVICES	LENGTH	DEVICES			
2	0.004	18	7.77	1.166	1.166	25.00	0.0041	75	AMP	1		1	
2	0.004	18	7.77	0.233	1.399	15.00	0.0045	90		1	2	2	
0	0.007	18	7.77	0.331	1.730	20.00	0.0121	110		1	3	3	
4	0.004	18	7.77	0.455	2.186	29.00	0.0076	139		3	4	4	
5	0.012	18	7.77	1.010	3.196	55.00	0.0148	204		4	5	5	
7	0.004	18	7.77	0.325	3.521	60.00	0.0124	276		5	7	7	
7	0.004	18	7.77	0.325	3.846	10.00	0.0020	286		5	7	7	
8	0.004	18	7.77	0.218	4.064	14.00	0.0137	299		8		8	
10	0.004	18	7.77	0.235	4.299	18.00	0.0145	318		8		8	
10	0.004	18	7.77	0.373	4.672	11.00	0.0157	329		7	10	10	
13	0.014	18	7.77	1.064	5.736	38.00	0.0182	347		10		10	
12	0.014	18	7.77	0.528	6.264	34.00	0.0177	362		11		11	
13	0.014	18	7.77	0.544	5.610	35.00	0.0193	361		12		12	
13	0.014	18	7.77	1.010	6.620	21.00	0.0216	376		13		13	
15	0.004	18	7.77	0.185	6.807	12.00	0.0241	438		14		14	
16	0.014	18	7.77	1.186	6.993	12.00	0.0247	450		15		15	
16	0.014	18	7.77	0.777	7.770	9.00	0.0290	489		16		16	
18	0.014	18	7.77	0.435	8.205	28.00	0.0161	518		17		17	
18	0.014	18	7.77	0.451	8.656	12.00	0.0124	557		18		18	
TOTAL				0.156	TOTAL VOLTAGE DROP =				0.845				

QTY SPEAKERS		LOAD EACH	LOAD EXTENDED				
1	@	0.25 W	=	0.25 W			
5	@	0.50 W	=	2.50 W			
6	@	1.00 W	=	6.00 W			
		TOTAL CONSUMED =		8.750 W			
		TOTAL AVAILABLE =		50.000 W			

LENGTH OF WIRE USED (IN FEET) (D)	WIRE AWG	VOLTAGE ON LINE (VLine)	POWER ON AMP-LIFIER (WATTS) (P Rated)	CIRCUIT RESISTANCE BASED ON WIRE RESISTANCE OF 0.002/foot (RL = resistance)	POWER LOSS (in dB) (P loss)	PERCENTAGE OF POWER LOSS % Vloss = Vd
436	18	Vline = 70 V	PRated = 8.750 W	RL = 6.77544	Ploss = 0.10383923 dB	Veal = 2.60%

QTY		LOAD EACH		LOAD EXTENDED			
SPEAKERS							
4	@	0.25 W	=	1.00 W			
1	@	0.50 W	=	0.50 W			
14	@	1.00 W	=	14.00 W			
		TOTAL CONSUMED =		15.500 W			
		TOTAL AVAILABLE =		50.000 W			

LENGTH OF WIRE USED (IN FEET)	WIRE AWG	VOLTAGE ON LINE (V/Line)	POWER ON AMPLIFIER (WATTS)	CIRCUIT RESISTANCE BASED ON WIRE RESISTANCE OF 7.77 (1/1000 foot RL = resistance)	POWER LOSS (in dB)	PERCENTAGE OF POWER LOSS
(D)			(P Rated)		(P Loss)	% Vs - Vd
546	18	Vline = 70 V	PRated = 15.500 W	RL = 8.46484	Ploss = 0.22707852	Vd = 5.68%

QTY		LOAD EACH		LOAD EXTENDED					
SPEAKERS	@								
9	@	0.25 W	=	2.25 W					
2	@	0.50 W	=	1.00 W					
10	@	1.00 W	=	10.00 W					
		TOTAL COMBINED =		13.250 W					
		TOTAL AVAILABLE =		\$0.000 W					

LENGTH OF WIRE USED (IN FEET)	WIRE AWG	VOLTAGE ON LINE (VLine)	POWER ON AMP/LIPE (WATTS) (P Rated)	CIRCUIT RESISTANCE BASED ON WIRE RESISTANCE OF 7.77 (1/1000 FOOT (RL = resistance)	POWER LOSS (in dB) (P Loss)	PERCENTAGE OF POWER LOSS (Vs = Vs - Vd
523	18	Vline = 70 V	PRated = 13.250 W	RL = 8.12742	Ploss = 0.18681535	dB Vol = 4.67%

QTY		LOAD EACH		LOAD EXTENDED					
SPEAKERS									
30	@	0.15 W	=	4.50 W					
1	@	0.50 W	=	0.50 W					
8	@	1.00 W	=	8.00 W					
TOTAL CONSUMED =				13.00 W					
TOTAL AVAILABLE =				50.00 W					
LENGTH OF WIRE USED (IN FEET)	WIRE AWG	VOLTAGE ON LINE (VLine)	POWER ON AMP/LYFR (WATTS)	CIRCUIT RESISTANCE BASED ON WIRE RESISTANCE OF 7.77 1/1000 FOOT (RL = resistance)	POWER LOSS (in dB) (P Loss)	PERCENTAGE OF POWER LOSS % = Vs - Vd			
357	18	Vline = 70 V	PRated = 11.000 W	RL = 8.65578	Ploss = 0.16538147	dB	Vd = 4.14%		

NOTIFIER FCPS-2458 POWER SUPPLY BATTERY CALCULATION

STANDBY CALCULATION

	QTY	CURRENT (AMPS)	TOTAL (AMPS)
MAIN CIRCUIT BOARD (W/AC FAIL PROTECT)	1	0.002	0.002
END OF LINE RESISTOR	4	0.001	0.004
TOTAL STANDBY =			0.109

ALARM CALCULATION

	QTY	CURRENT (AMPS)	TOTAL (AMPS)
MAIN CIRCUIT BOARD (W/AC FAIL PROTECT)	1	0.145	0.145
NAC #1	1	0.568	0.568
NAC #3	1	0.997	0.997
NAC #4	1	0.921	0.921
NAC #6	1	0.752	0.752
AUX POWER- NON- RESTAIBLE	1	0.136	0.136
TOTAL ALARM =			3.559

TOTAL STANDBY =	0.109	X	4	HOURS OF STANDBY =	0.436	AMPH.HRS.
TOTAL ALARM =	3.559	X	0.25	ALARM TIME (5 MIN - 25%) =	0.880	AMPH.HRS.

TOTAL = 3.336 AMPH.HRS.

DERATE BY 20% = 4.17 AMPH.HRS.

SIZE OF BATTERY TO BE USED = 1.59 AMPH.HRS.

7.00 AMPH.HRS.

2 - 12V200 / 24AMP NR.BATTERIES REQUIRED

N.A.C. LOAD CALCULATIONS - POWER SUPPLY

NOTIFIER FCPS-2458

UTILIZING UL MAX CURRENT DRAW

CIRCUIT #1		CURRENT	EXTENDED
QTY/APPLIANCE			
4	30 CANDELA, SYSTEM SENSOR SPEAKER/STROBE	0.063 A =	0.252 AMPS.
2	115 CANDELA, SYSTEM SENSOR SPEAKER/STROBE	0.158 A =	0.316 AMPS.
		CIRCUIT #1 =	0.568 AMPS.
CIRCUIT #2		CURRENT	EXTENDED
QTY/APPLIANCE			
1	15 CANDELA, SYSTEM SENSOR SPEAKER/STROBE	0.041 A =	0.041 AMPS.
2	30 CANDELA, SYSTEM SENSOR SPEAKER/STROBE	0.063 A =	0.126 AMPS.
2	75 CANDELA, SYSTEM SENSOR SPEAKER/STROBE	0.111 A =	0.222 AMPS.
1	95 CANDELA, SYSTEM SENSOR SPEAKER/STROBE	0.134 A =	0.134 AMPS.
3	115 CANDELA, SYSTEM SENSOR SPEAKER/STROBE	0.158 A =	0.474 AMPS.
		CIRCUIT #2 =	0.997 AMPS.
CIRCUIT #3		CURRENT	EXTENDED
QTY/APPLIANCE			
13	15 CANDELA, SYSTEM SENSOR SPEAKER/STROBE	0.041 A =	0.533 AMPS.
1	30 CANDELA, SYSTEM SENSOR SPEAKER/STROBE	0.063 A =	0.063 AMPS.
2	75 CANDELA, SYSTEM SENSOR SPEAKER/STROBE	0.111 A =	0.111 AMPS.
2	75 CANDELA, SYSTEM SENSOR WALL SPK/STRO	0.107 A =	0.214 AMPS.
		CIRCUIT #3 =	0.921 AMPS.
CIRCUIT #4		CURRENT	EXTENDED
QTY/APPLIANCE			
5	15 CANDELA, SYSTEM SENSOR SPEAKER/STROBE	0.041 A =	0.205 AMPS.
2	75 CANDELA, SYSTEM SENSOR SPEAKER/STROBE	0.111 A =	0.222 AMPS.
2	75 CANDELA, SYSTEM SENSOR WALL SPK/STRO	0.107 A =	0.214 AMPS.
		CIRCUIT #4 =	0.752 AMPS.

CIRCUIT #1 = 0.568 AMPS.

CIRCUIT #2 = 0.997 AMPS.

CIRCUIT #3 = 0.921 AMPS.

CIRCUIT #4 = 0.752 AMPS.

TOTAL = 3.238 AMPS.

TOTAL AMPS AVAILABLE = 8.00 AMPS

METHOD PREPARED BY EDS ELECTRONICS INC										PCSP#1-CIRCUIT #1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
WIRE DRAPE CALCULATIONS (WORST CASE) A. C. CIRCUITS										CLASS 8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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METHOD PREPARED BY EDS ELECTRONICS INC.										PCSP#1-CIRCUIT #2	
THRU POWER DRAW CALCULATIONS (Worst CASE) A.C. CIRCUITS										CLASS 9	
FORMULA = OHMS LAW (OHMS = VOLTAGE / CURRENT)											
UTILIZING MIN MAX CURRENT DRAW											
THRU PER 1000FT OF SOLID CONDUCTOR											
18 GAUGE = 7.77		14 GAUGE = 3.07									
16 GAUGE = 4.89		12 GAUGE = 1.93									
CONDUCTOR											
APPLIANCE CURRENT		WIRE GAUGE		OHMS CALCULATED		ACCU. OHMS		BETWEEN DEVICES		ACCU. FROM DEVICES	
NUMBER	DRAW	GAUGE	PERKFT	OHMS	OHMS	DEVICES	DEVICES	LENGTH	LENGTH	DEVICE	TO
1	0.001	14	3.07	0.184	0.184	27	0.0075	388	27.025	1	1
2	0.063	14	3.07	0.166	0.350	27	0.020	387	54.045	1	2
3	0.063	14	3.07	0.166	0.516	27	0.037	386	81.072	88	3
4	0.111	14	3.07	0.264	0.684	43	0.080	131	119.152	131	4
5	0.158	14	3.07	0.362	1.046	46	0.174	177	146.626	177	5
6	0.158	14	3.07	0.362	1.371	109	0.314	321	178.040	321	6
7	0.198	14	3.07	0.441	1.812	109	0.314	321	219.454	321	7
8	0.198	14	3.07	0.441	2.252	67	0.264	383	245.718	383	8
9	0.198	14	3.07	0.441	2.693	27	0.075	453	292.793	453	9
TOTAL = 0.997						TOTAL VOLTAGE DROP =		0.374			
						VOLTAGE APPLIED =		20.400			
						VOLTAGE AT LAST DEVICE =		19.990			
						VOLTAGE AT DEVICES =		15 TO 33 VDC			

METHOD PREPARED BY EDS ELECTRONICS INC.												PCSP#1-CIRCUIT #3	
TOTAL DRAW CALCULATIONS (WORST CASE) A.C. CIRCUITS												CLASS 9	
FORMULA = OHMS LAW (OHMS X CURRENT = VOLTAGE)													
UTILIZING MAX CURRENT DRAW													
CONDUIT													
LENGTH													
BETWEEN DROP PER VOLTAGE													
FROM												TO	
DEVICES												DEVICE	
APPLIANCE	18 GAUGE	14 GAUGE	10 GAUGE	CALCULATED	ACCUM.	OHMS	OHMS	DEVICES	VOLTAGE	LENGTH	FROM	TO	
NUMBER	DRAW	GAUGE	PER KFT	OHMS	OHMS								
1	0.063	14	3.07	0.768	0.768	1.25	0.084	125	125	125	PCSP#1	1	
2	0.061	14	3.07	0.747	0.515	24	0.075	140	140	140	2	2	
3	0.061	14	3.07	0.726	1.196	48	0.118	140	140	140	3	3	
4	0.107	14	3.07	0.221	1.326	96	0.415	216	216	216	4	4	
5	0.061	14	3.07	0.362	1.688	144	0.602	275	275	275	5	5	
6	0.061	14	3.07	0.098	1.787	192	0.073	291	5	6	6	6	
7	0.061	14	3.07	0.117	1.903	240	0.078	310	6	7	7	7	
8	0.061	14	3.07	0.080	1.983	288	0.081	324	8	8	8	8	
9	0.061	14	3.07	0.074	2.063	336	0.084	336	9	9	9	9	
10	0.061	14	3.07	0.104	2.167	384	0.089	352	10	10	10	10	
11	0.061	14	3.07	0.080	2.247	432	0.091	366	10	11	11	11	
12	0.061	14	3.07	0.129	2.376	480	0.097	382	11	12	12	12	
13	0.061	14	3.07	0.127	2.503	528	0.101	398	12	13	13	13	
14	0.061	14	3.07	0.053	2.636	576	0.106	424	13	14	14	14	
15	0.061	14	3.07	0.080	2.716	624	0.113	437	14	15	15	15	
16	0.107	14	3.07	0.120	2.818	672	0.115	450	15	16	16	16	
17	0.111	14	3.07	0.303	3.119	720	0.162	589	16	17	17	17	
TOTAL = 0.921												TOTAL VOLTAGE DROP = 1.754	
												VOLTAGE APPLIED = 18.000	
												VOLTAGE AT LAST DEVICE = 16.246	
												VOLTAGE OF DEVICES = 16 TO 23 VDC	

METHOD PREPARED BY EDS ELECTRONICS INC.										PCSP#1-CIRCUIT #14	
VOLTAGE DROP CALCULATIONS (Worst Case) i.e. A.C. CIRCUITS										CLASS 9	
FORMULA = OHMS LAW (OHMS X CURRENT = VOLTAGE)											
UTILIZING MAX CURRENT DRAIN											
		WIRE		CUMULATIVE		VOLTAGE		FROM		TO	
APPLIANCE CURRENT		GAUGE		PERM. LENGTH		BETWEEN DEVICES		PERM. LENGTH		DEVICES	
NUMBER		SIZE		OHMS		OHMS		OHMS		DEVICE	
1	0.111	14	3.07	0.583	0.583	95	0.6647	95	EPSC DKT	1	1
2	0.081	14	3.07	0.276	0.860	45	0.052	140	1	2	2
3	0.081	14	3.07	0.127	0.987	80	0.003	160	3	3	3
4	0.081	14	3.07	0.060	1.044	100	0.0028	170	3	4	4
5	0.081	14	3.07	0.135	1.179	27	0.0083	192	4	5	5
6	0.081	14	3.07	0.145	1.320	23	0.0041	215	5	6	6
7	0.107	14	3.07	0.209	1.529	34	0.1836	249	6	7	7
8	0.107	14	3.07	0.213	1.742	35	0.1868	284	7	8	8
9	0.111	14	3.07	0.221	1.965	36	0.2181	320	8	9	9
10	0.111	14	3.07	0.335	2.284	37	0.2535	377	9	10	10
TOTAL		0.752		TOTAL VOLTAGE DROP		VOLTAGE APPLIED =		20.290			
						VOLTAGE AT LAST DEVICE		15.425			
								15 to 23 VDC			

EDS
ELECTRONICS INC.

2675 WEST CHIETENNE AVENUE
NORTH LAS VEGAS, NV 89032
PHONE: (702) 871-3733 FAX: (702) 871-3199
CONTRACTORS LICENSE: 35144A
LICENSE LIMIT \$950,000.00

VISIT US AT: WWW.EDSELECTRONICSINC.COM

NO.	DATE	REVISION	BY
△	6/13/17	CHANGES PER FIELD PER PERMIT # 339910	M.P.C.

LESTON HEIGHTS COMM
800 BRUSH STREET
LAS VEGAS, NV 89107
APN: 138-36-801-002

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A NEVADA LICENSED FIRE ALARM
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NEVADA STATE FIRE ALARM
LICENSE #: F169
CONTRACTOR LICENSE #: 35144A
MASTER CARD #: 1450
LICENSE CLASSIFICATION C2, c, d
LICENSE LIMIT \$950,000.00

EDWIN B. RAUGUST

FIRE PROTECTION
ENGINEERING TECHNOLOGY
FIRE ALARM SYSTEMS
NICET CERTIFIED LEVEL IV

SIGNATURE: _____
JOSEPH H. LYNN
CERTIFICATION # 120241
DATE: _____

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PROJECT:
CHARLESTON HEIGHTS
COMMUNITY
BATTERY CALCULATIONS

TYPE OF SYSTEM:
FIRE ALARM SYSTEM

DRAWN BY:
M.P.C.

CHECKED BY:
J.H.L.

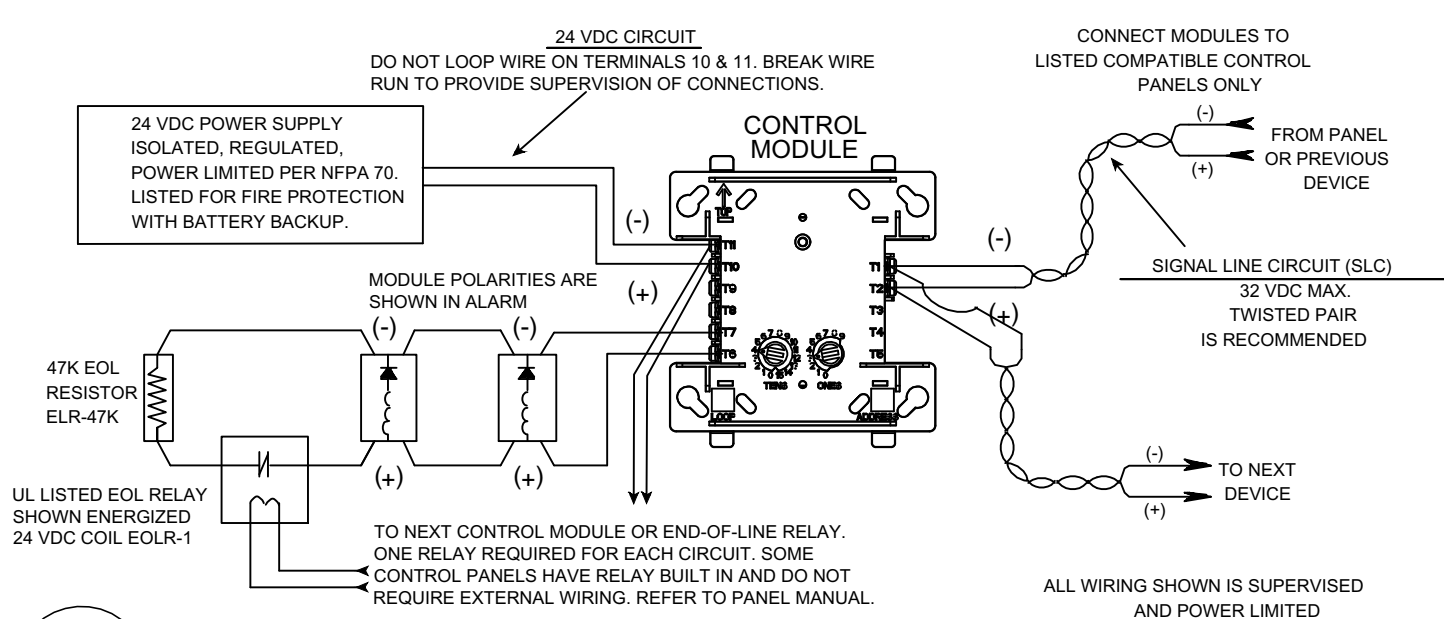
DATE:
4/5/2017

SCALE:
NONE

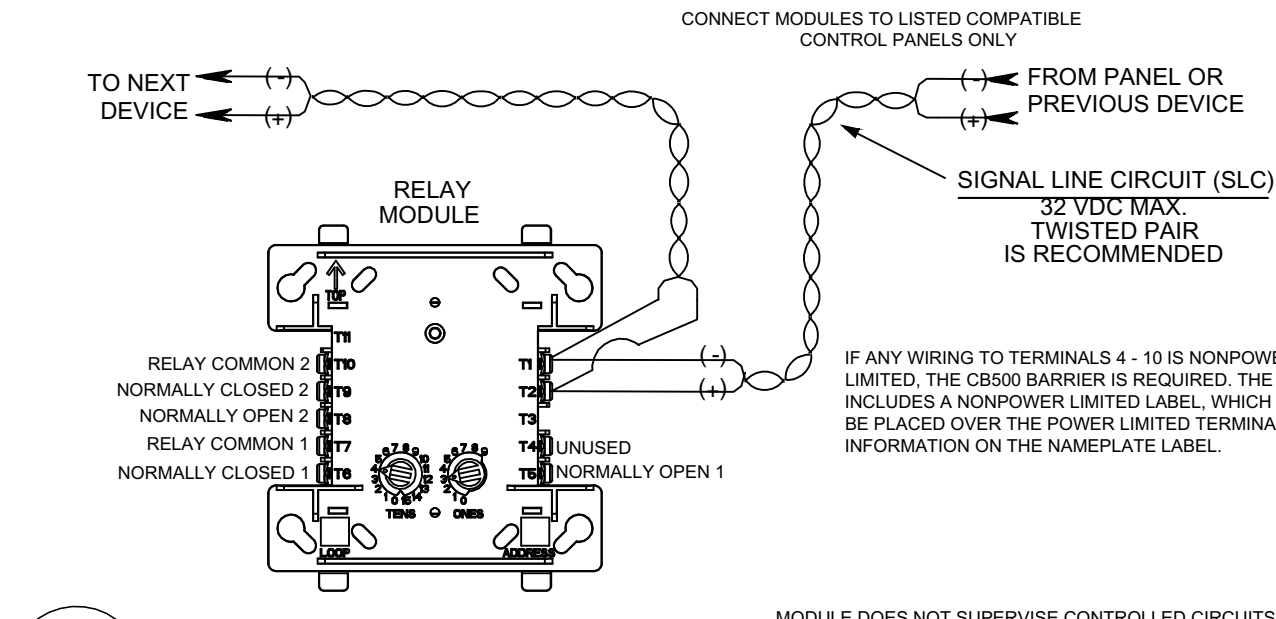
JOB #:
3941

SHEET

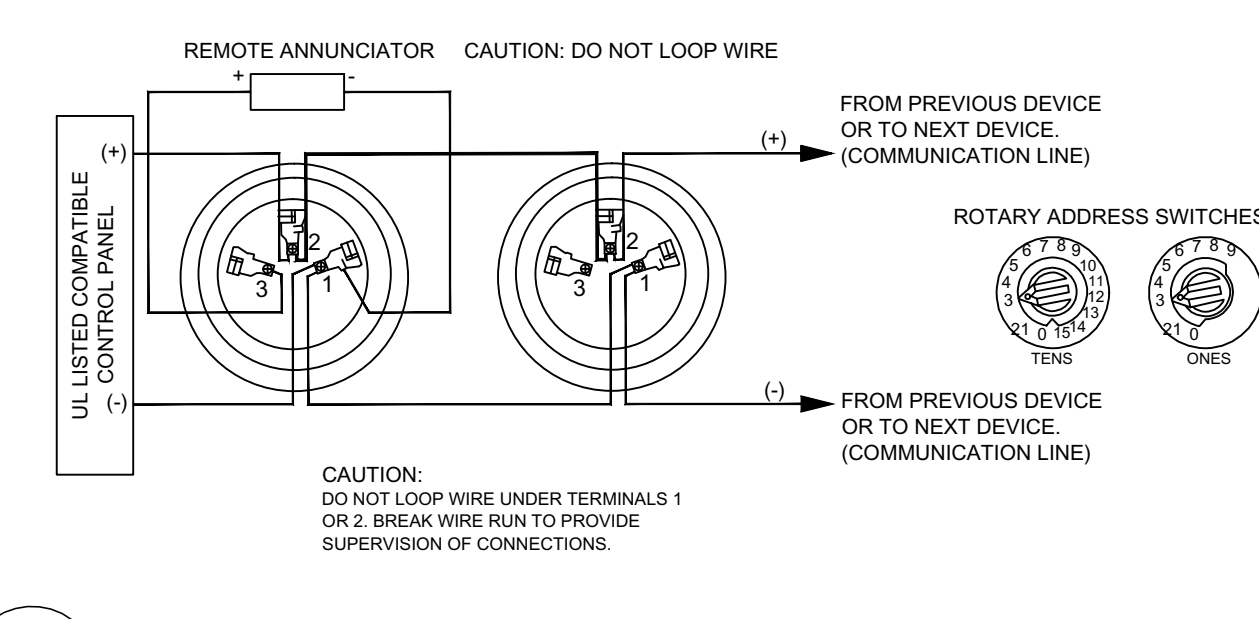
FA-03



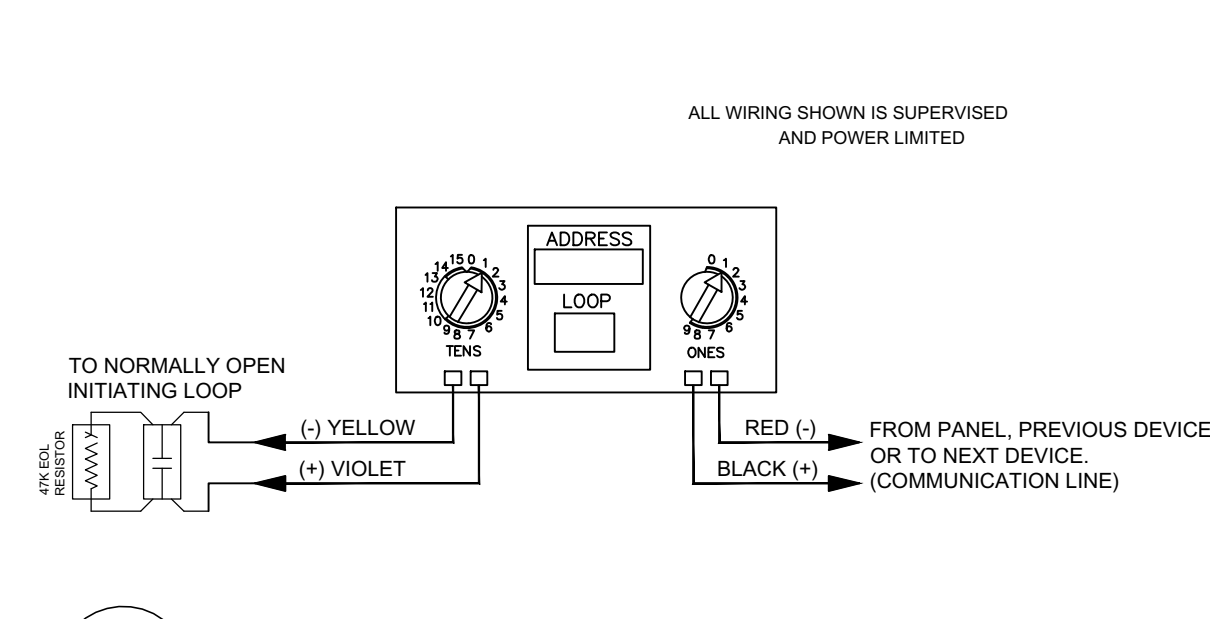
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4 **CONTROL MODULE**
NOT TO SCALE



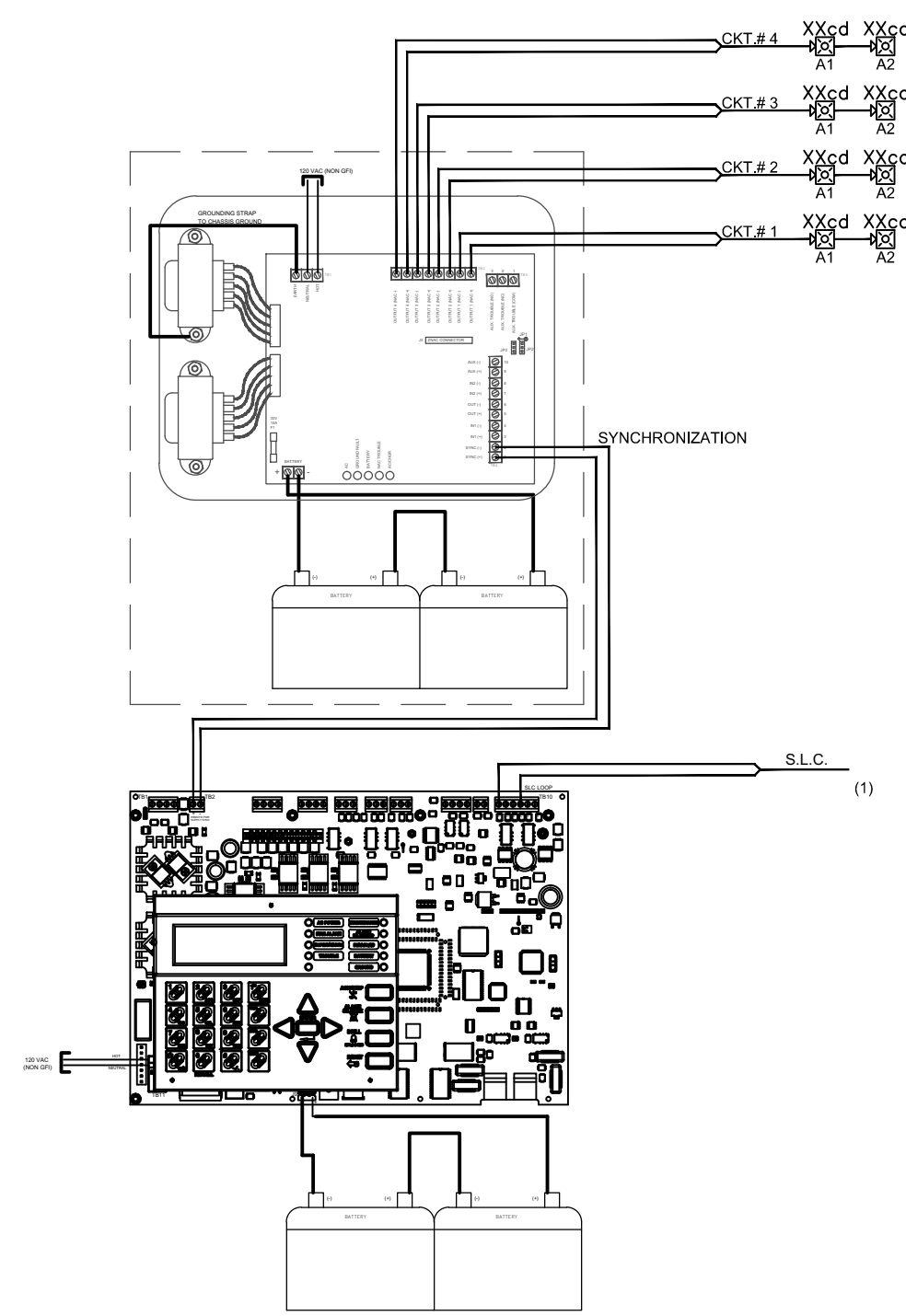
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4 **RELAY MODULE**
NOT TO SCALE



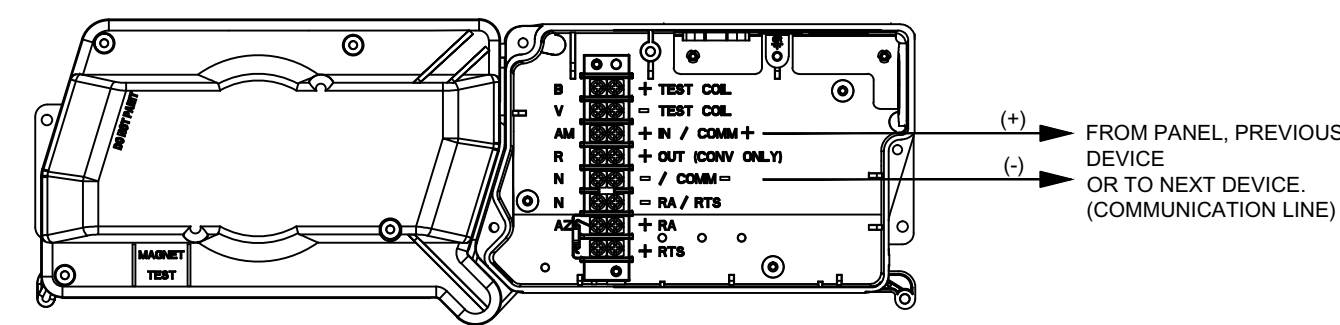
3
4 **PHOTOELECTRIC SMOKE DETECTOR**
NOT TO SCALE



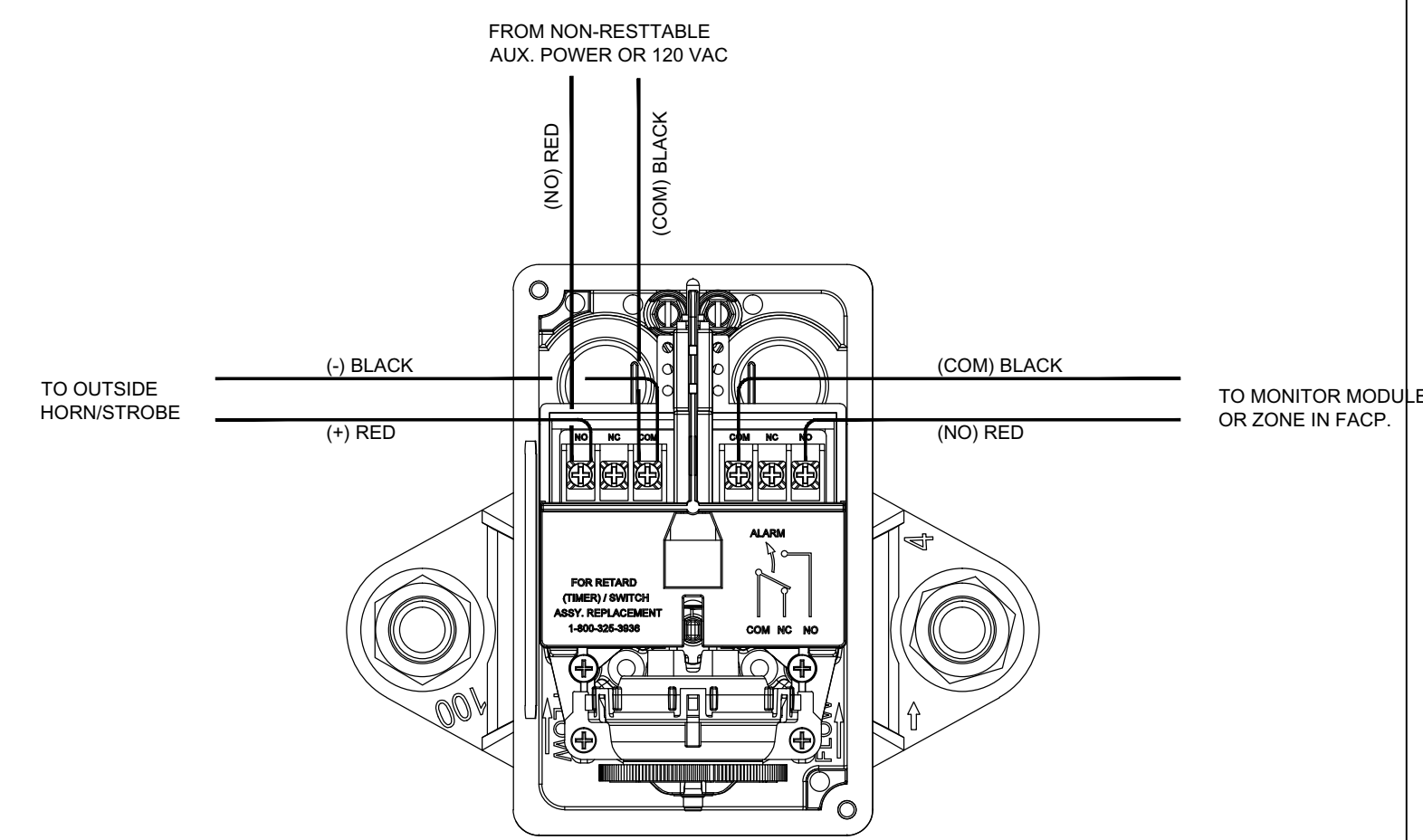
4
4 **MONITOR MODULE**
NOT TO SCALE



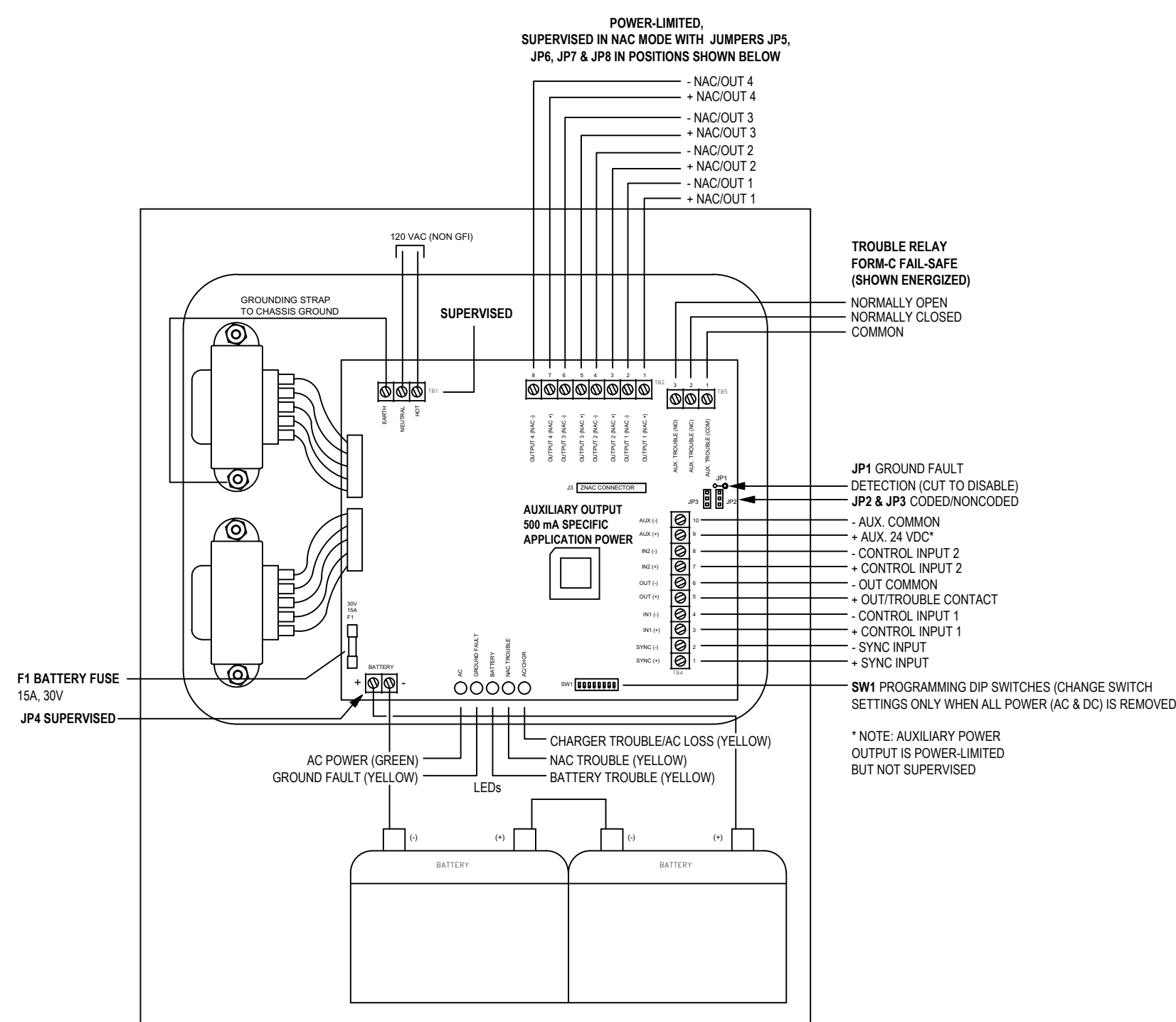
5
4 **MAIN BOARD WIRING DETAIL**
NOT TO SCALE



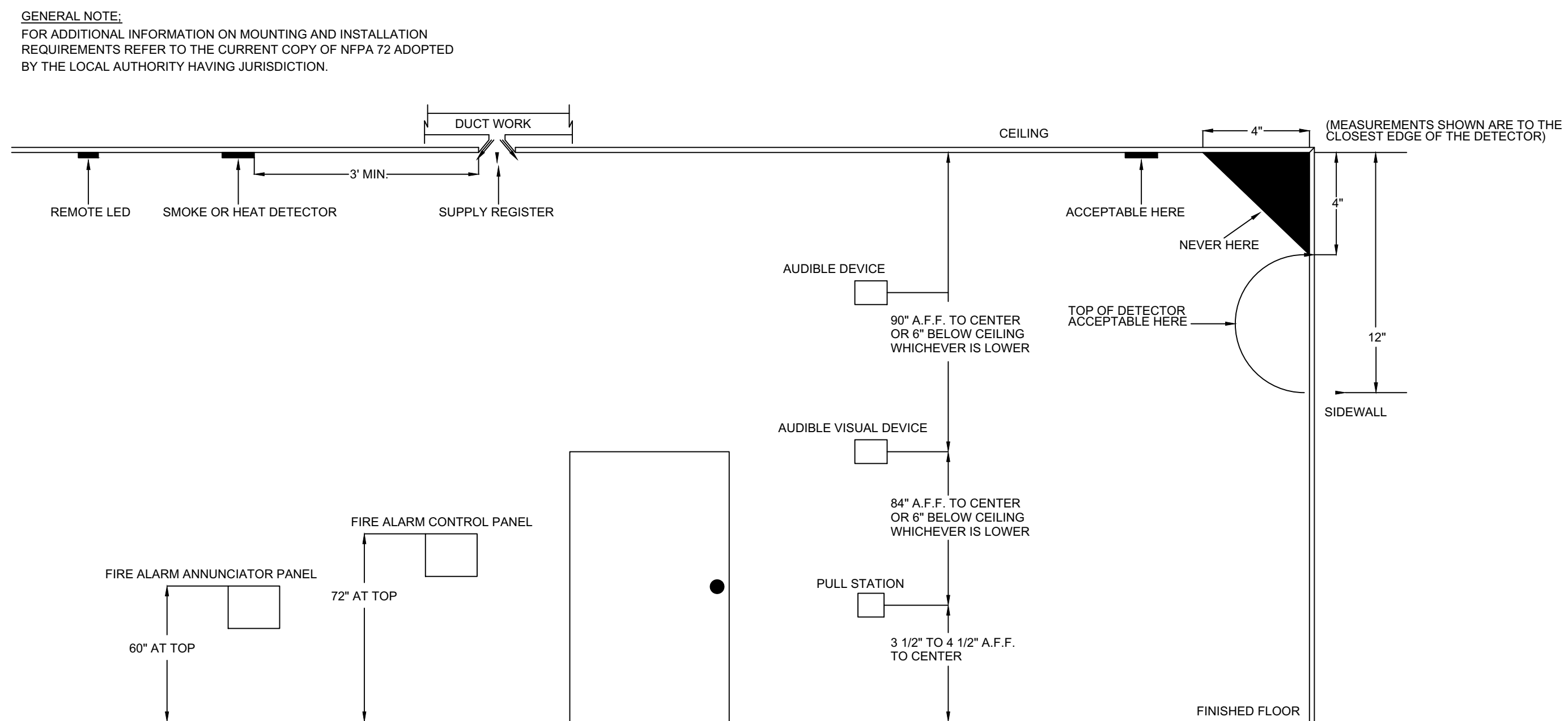
6
4 **SYSTEM SENSOR DNR DUCT SMOKE DETECTOR**
NOT TO SCALE



7
4 **FLOW SWITCH WIRING DETAIL**
NOT TO SCALE



8
4 **FCPS-24S POWER SUPPLY DETAIL LAYOUT**
NOT TO SCALE



FIRE ALARM MOUNTING HEIGHT DETAILS

NO.	DATE	REVISION	BY
1	1/10/18	CHANGES PER FIELD PER PERMIT #339910	M.P.C.
2			
3			
4			

CHARLESTON HEIGHTS COMMUNITY
800 BRUSH STREET
LAS VEGAS, NV 89107
APN: 138-36-801-002

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NEVADA STATE FIRE ALARM
LICENSE #: F169
CONTRACTOR LICENSE #: 35144A
MASTER CARD #: 1450
LICENSE CLASSIFICATION C2, c. d
LICENSE LIMIT \$950,000.00
SIGNATURE: _____
MASTER/G.I.: EDWIN B. RAUGUST
DATE: _____

FIRE PROTECTION
ENGINEERING TECHNOLOGY
FIRE ALARM SYSTEMS
NICET CERTIFIED LEVEL IV
SIGNATURE: _____
JOSEPH H. LYNN
CERTIFICATION # 120241
DATE: _____

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PROJECT:
CHARLESTON HEIGHTS
COMMUNITY
INSTALLATION DETAILS

TYPE OF SYSTEM:
FIRE ALARM SYSTEM

DRAWN BY:
M.P.C.

CHECKED BY:
J.H.L.

DATE:
4/5/2017

SCALE:
NONE

JOB #:
3941

SHEET

FA-04