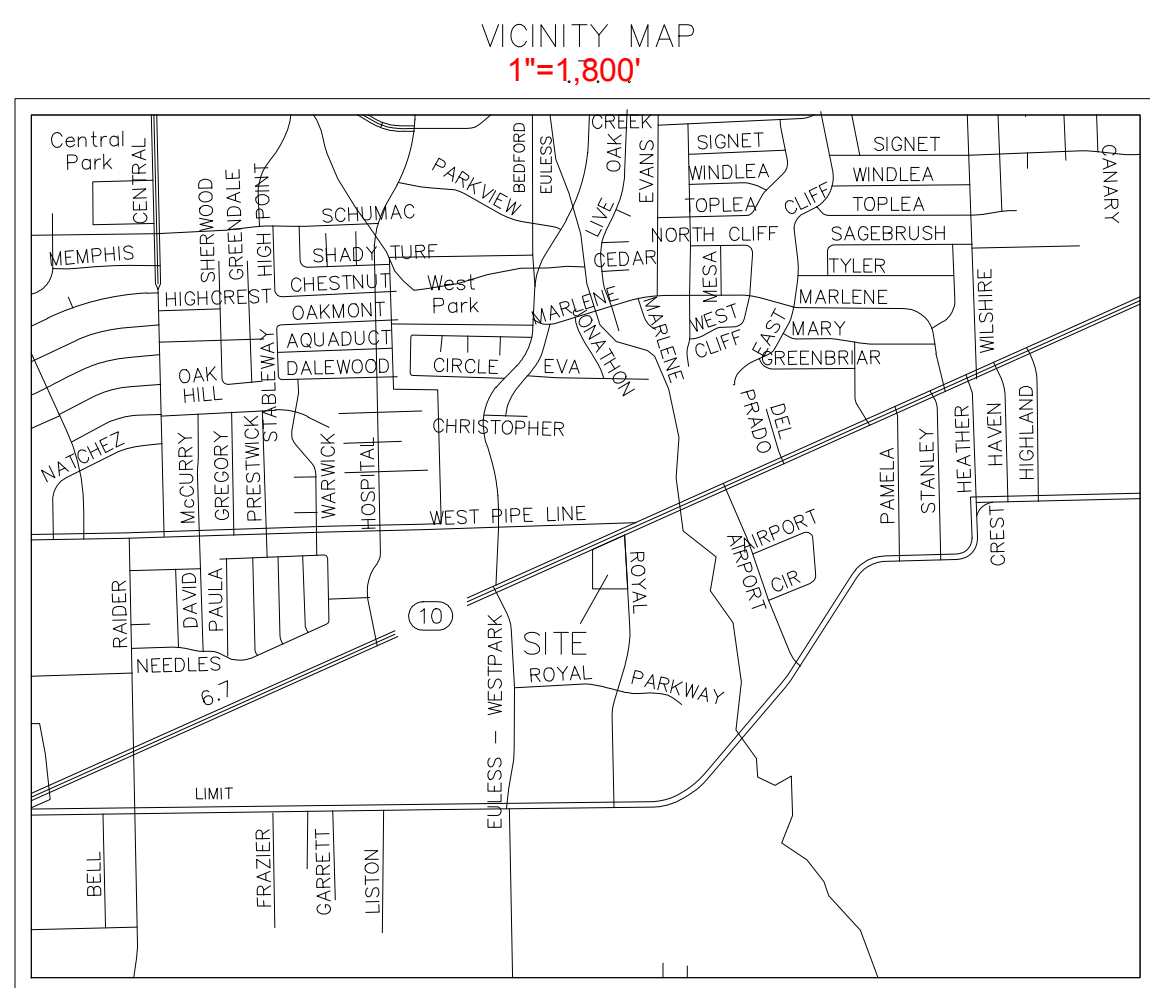


RENOVATION NEPALESE CULTURE AND SPIRITUAL CENTER

1212 ROYAL PARKWAY
EULESS, TX. 76040



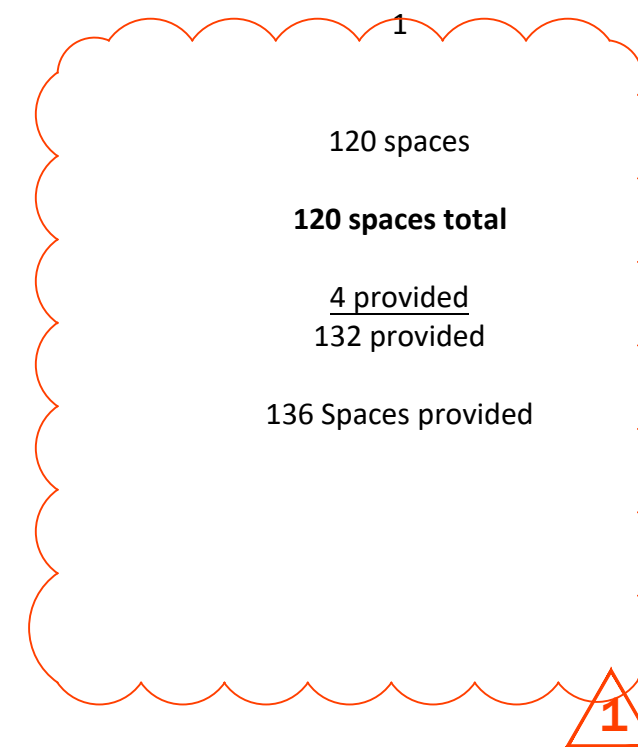
SITE LOCATION MAP



VICINITY MAP
1"=1,800'

CODE ANALYSIS

Building Code	2015 IBC with City of Euless Amendments and 2014 NEC
Occupancy Classification	Group A-2, Group B, Group E
Building Area	15,000 sf
Stories	1
Sprinkler System	Yes
Construction Type (Table 601)	II-B
Allowable Area (Table 506.2a)	
Group A-2, S1	38,000sf
Group B, S1	92,000sf
Group E, S1	58,000sf
Area separation requirement (Table 508.4)	1hr between E/B and A/B
Allowable Height (Table 504.3)	55 ft
Occupant Load (Section 1004)	1027
Plumbing Fixture Requirements (Table 2902.1)	
Women	
Toilets	4
Lavatories	2
Men	
Toilets	2
Lavatories	2
Drinking Fountains	1
Parking	
Parking Required	120 spaces
Handicap Spaces required/provided	4 provided
Regular parking spaces	132 provided
Total Spaces Provided	136 Spaces provided



DRAWING INDEX

GENERAL INFORMATION		<input type="checkbox"/> INCLUDED IN ISSUE
		<input type="checkbox"/> NOT INCLUDED IN ISSUE
		<input type="checkbox"/> ADDENDUM #

G0.00	PROJECT COVER SHEET	
G2.00	ACCESSIBILITY DRAWINGS AND NOTES	

CIVIL		<input type="checkbox"/> INCLUDED IN ISSUE
		<input type="checkbox"/> NOT INCLUDED IN ISSUE
		<input type="checkbox"/> ADDENDUM #

G1.0	CIVIL COVER SHEET
C1.0	EXISTING AREA DRAINAGE MAP
C1.1	PROPOSED AREA DRAINAGE MAP
C1.2	POND DETAILS
C2.0	UTILITY PLAN
C3.0	SITE DETAILS

ARCHITECTURAL

		<input type="checkbox"/> INCLUDED IN ISSUE
		<input type="checkbox"/> NOT INCLUDED IN ISSUE
		<input type="checkbox"/> ADDENDUM #

SHEET #	SHEET TITLE
A0.0	SITE PLAN
A0.01	PHASING PLAN
A0.1	LANDSCAPE PLAN
A0.2	IRRIGATION PLAN
A0.3	IRRIGATION DETAILS
A1.0	DEMOLITION FLOORPLAN
A1.1	FLOORPLAN
A1.2	ENLARGED KITCHEN PLAN
A1.3	ENLARGED BATHROOM PLAN
A2.0	EXTERIOR ELEVATIONS
A4.0	WALL TYPES
A5.0	DOOR+ WINDOW SCHEDULE
A5.1	ROOM FINISH SCHEDULE
A6.0	REFLECTED CLG PLAN
A7.0	EMERGENCY EGRESS PLAN

MECHANICAL

		<input type="checkbox"/> INCLUDED IN ISSUE
		<input type="checkbox"/> NOT INCLUDED IN ISSUE
		<input type="checkbox"/> ADDENDUM #

SHEET #	SHEET TITLE
M01	MECHANICAL GENERAL INFORMATION
M1	MECHANICAL PLAN

PLUMBING		<input type="checkbox"/> INCLUDED IN ISSUE
		<input type="checkbox"/> NOT INCLUDED IN ISSUE
		<input type="checkbox"/> ADDENDUM #

P01	PLUMBING GENERAL INFORMATION
P1	PLUMBING PLAN
P2	HVAC PLUMBING PLAN
P3	PLUMBING PLAN ISOMETRICS

ELECTRICAL

		<input type="checkbox"/> INCLUDED IN ISSUE
		<input type="checkbox"/> NOT INCLUDED IN ISSUE
		<input type="checkbox"/> ADDENDUM #

SHEET #	SHEET TITLE
E0.1	GENERAL ELECTRICAL INFORMATION
E1	POWER PLAN
E2	LIGHTING PLAN
E3	HVAC POWER PLAN

CAPTIVEAIRE

		<input type="checkbox"/> INCLUDED IN ISSUE
		<input type="checkbox"/> NOT INCLUDED IN ISSUE
		<input type="checkbox"/> ADDENDUM #

SHEET #	SHEET TITLE
A1-10	CAPTIVEAIRE SHEETS

TABS2020017687

ARCHITECT:

INTEGRATED LLC
TBA FIRM BR-1707
7700 WINDROSE AVE.
PLANO, TX. 75024
972.802.4507
DAVID@ARTEC.SOLUTIONS

MEP ENGINEER:

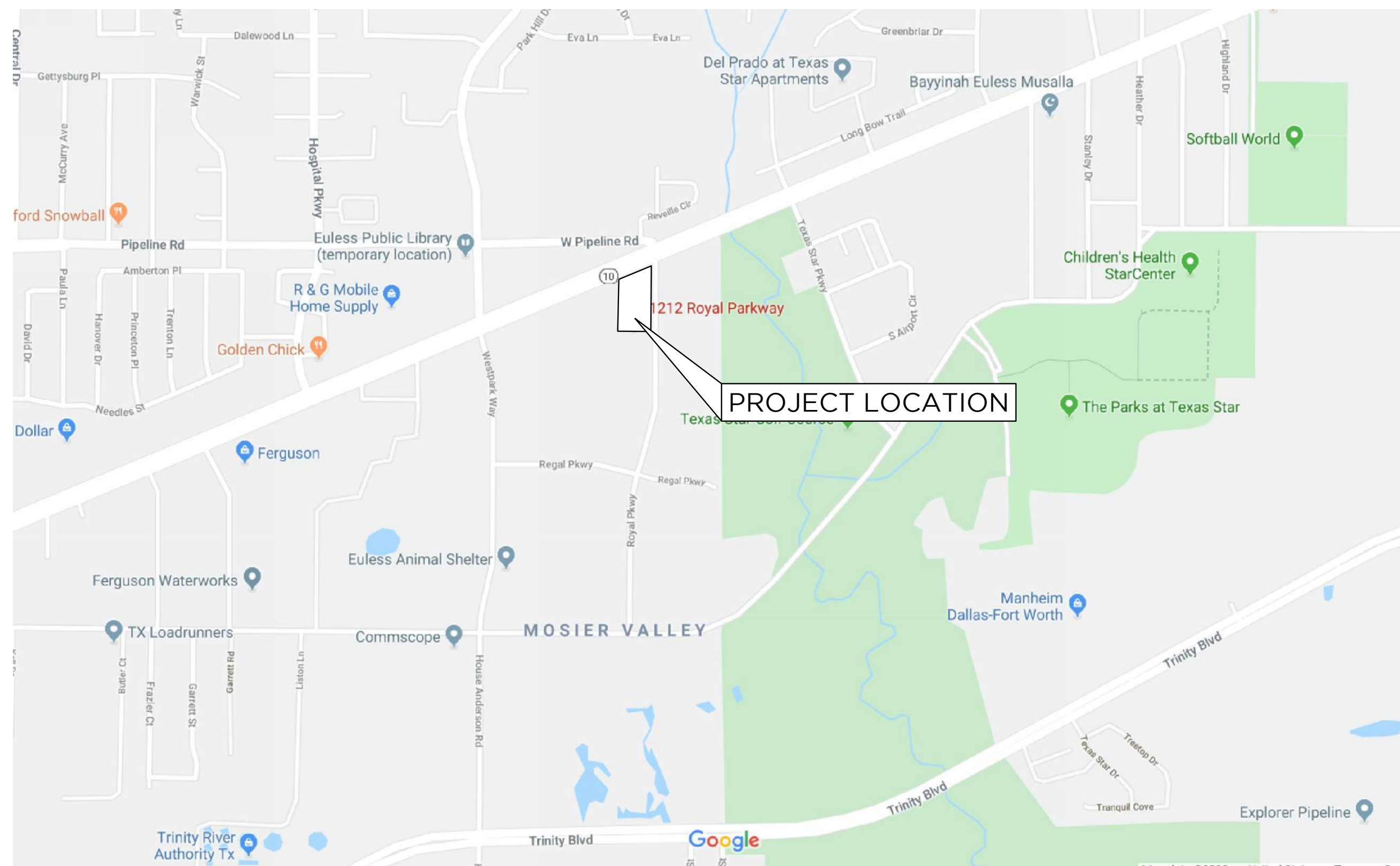
IMPERIUM ENGINEERING INC.
FIRM # 20059
304 PARK MEADOWS
EULESS, TX. 76039
915.202.9820
IMPERIUMENGINEERINGINC@GMAIL.COM

FACILITY	DIMENSION	FACILITY	DIMENSION	FACILITY	DIMENSION	FACILITY	DIMENSION	FACILITY	DIMENSION	FACILITY	DIMENSION	FACILITY	DIMENSION
□ PUBLIC □ RETAIL	□ 16" x 18"	□ PUBLIC □ RETAIL	□ 36" MIN	□ PUBLIC □ RETAIL	□ 33" x 36"	□ PUBLIC □ RETAIL	□ 17" MAX	□ PUBLIC □ RETAIL	□ 34" MAX	□ PUBLIC □ RETAIL	□ 46" MAX	□ PUBLIC □ RETAIL	□ 17" x 19"
A STANDARD STALL		B GRAB BAR REAR WALLS		C GRAB BAR SIDE WALLS		D ELONGATED RIM URINAL		E LATCHATOR FRONT APPROACH		F PUBLIC TELEPHONE SIDE APPROACH		G WATER CLOSET	
H MIRRORS IN BATHROOMS		I DISPENSERS CONTROLS SWITCHES FRONT APPROACH		J DISPENSERS CONTROLS SWITCHES SIDE APPROACH		K ALL MOUNTED DRINKING FOUNTAIN		L CHANGES IN LEVEL		M MULTIPLE CURB RAM FLARED SIDES		N CURB RAM FLARED SIDES	
O STAIR HANDRAIL EXTENSION AT BOTTOM		P STAIR HANDRAIL EXTENSION AT TOP		Q DOOR SIGNAGE LOCATION		R SIGN HEIGHT DETAIL		S SINGING DOOR FRONT APPROACH		T SINGING DOOR LATCH APPROACH		U SINGING DOOR LATCH APPROACH	
V SINGING DOOR HINGE APPROACH		W SINGING DOOR HINGE APPROACH		X SINGING DOOR FRONT APPROACH		CONTROLS AND OPERATING MECHANISMS							
HEIGHT: SWITCHES, THERMOSTATS, CONTROLS, DISPENSERS, RECEIPT TABLES AND THE HIGHEST OPERABLE PART OF OTHER OPERABLE EQUIPMENT SHALL BE PLACED NO HIGHER THAN 44" A.F.F. FOR FRONT APPROACH AND 48" FOR SIDE APPROACH AND WITHIN THE REACH RANGES REQUIRED BY THE 2012 TAS & 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.							FLUSH CONTROLS: FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. CONTROLS FOR FLUSH VALVES SHALL BE MOUNTED ON THE SIDE SIDE OF TOILET. TOP OF FLUSH CONTROL VALVE UNIT SHALL BE MOUNTED 1 1/2" CLEAR FROM BOTTOM OF GRAB BAR.						
OPERATION: CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBS.							GRAB BARS						
OUTSIDE DIAMETER: THE OUTSIDE DIAMETER OR WIDTH OF THE GRIPPING SURFACES OF A HANDRAIL OR GRAB BAR SHALL BE 1 1/4" MIN. TO 2" MAX. OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE.							CLEARANCE: THE SPACE BETWEEN ALL HAND AND GRAB BARS SHALL BE 1 1/2" MIN.						
STRESSES: ALLOWABLE STRESSES SHALL NOT BE EXCEEDED FOR MATERIALS USED WHEN A VERTICAL OR HORIZONTAL FORCE OF 250 POUNDS (1112 N) IS APPLIED AT AN ANGLE POINT ON THE GRAB BAR, FASTENER, MOUNTING DEVICE OR SUPPORTING STRUCTURE.							ROTATION: GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.						
EDGES: SHARP OR ABRASIVE ELEMENTS ARE NOT ACCEPTABLE FOR A HANDRAIL OR GRAB BAR AND ALL OTHER SURFACE ADJACENT TO IT. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8".							GENERAL NOTES						
1. DETAILS ON THIS SHEET COMPLY WITH THE 2012 TEXAS ACCESSIBILITY STANDARDS (2012 TAS) AND THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.							2. DETAILS SHOWN ON THIS SHEET ARE INFORMATIONAL. REFER TO THE FLOOR PLANS, ELEVATIONS, DETAILS, SPECIFICATIONS SHOWN IN THE CONSTRUCTION DOCUMENTS FOR SPECIFIC REQUIREMENTS. THE CONSTRUCTION DOCUMENTS SHALL TAKE PRECEDENCE OVER THIS SHEET. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR FURTHER INSTRUCTIONS.						
EE RAMPS HANDRAIL EXTENSIONS													

SUP GRADING & DRAINAGE PLAN

1212 ROYAL PARKWAY
EULESS, TEXAS 76040

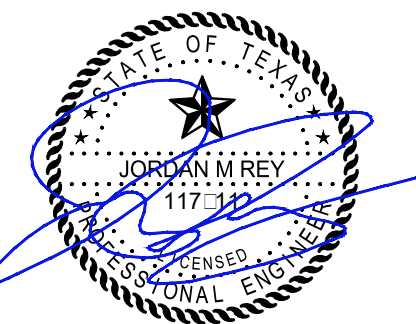
SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
G-1.0	COVER SHEET
C-1.0	EXISTING DRAINAGE AREA MAP
C-1.1	PROPOSED DRAINAGE & OVERALL GRADING
C-1.2	POND DETAILS
C-2.0	CONCEPTUAL UTILITY PLAN
C-3.0	SITE DETAILS



SITE LOCATION MAP

PROJECT LEGEND

	PROPOSED	EXISTING
PROPERTY LINE	---	---
EASEMENT	---	---
TREE REMOVAL	✕	
CURB AND GUTTER	====	====
SILT FENCE	— SF —	
5' CLASS A REINFORCED CONCRETE	■	
8" REINFORCED CONCRETE PAVEMENT	■	
SIDEWALK PAVEMENT	■	
PAVEMENT REMOVAL (ASPH)		▨
PAVEMENT REMOVAL (CONC)		▩
COORDINATE POINT NUMBER (SEE TABLE, EACH SHEET, FOR COORD. INFORMATION.)	⑨	
SURFACE CONTOUR	566	566
SPOT ELEVATIONS	403.74	403.74
FINISHED FLOOR ELEVATION		FF=403.74
TRAFFIC SIGN	—	—
SANITARY SEWER	— SS —	— SS —
WATER METER		⊗ WM
BUILDING LINE		▨
STORM DRAIN		—
GAS LINE		— G —
OVERHEAD ELECTRIC LINES		— OHE —
CONTROL POINT	⊕ CP-864	
BENCHMARK	⊕ BM-503	
TRAFFIC SIGNAL POLE	• TSP	
TRAFFIC SIGNAL CONTROLLER	□ TSC	
TELEPHONE PEDESTAL	□ TPEd	
GAS METER	⊗ GM	
LIGHT STANDARD	⊙ LP	
POWER POLE	⊙ PP	
WATERLINE	— W —	— W —
WATER VALVE	⊕ WV	
FIRE HYDRANT	⊕ FH	
SPRINKLER CONTROL VALVE	⊗ SCV	
ELECTRIC PULL BOX	□ PB	
ELECTRIC METER	⊗ EM	
ELECTRIC JUNCTION BOX	⊗ EB	
SANITARY SEWER CLEANOUT	○ SSCo	
WATER FAUCET	⊕ WF	
SODDED AREA	■	
UNDERGROUND DATA	— UC —	— UC —



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PROJECT

1212 ROYAL PARKWAY
EULESS TEXAS 76040
ORIGINAL ISSUE

REVISIONS

TITLE:

COVER SHEET

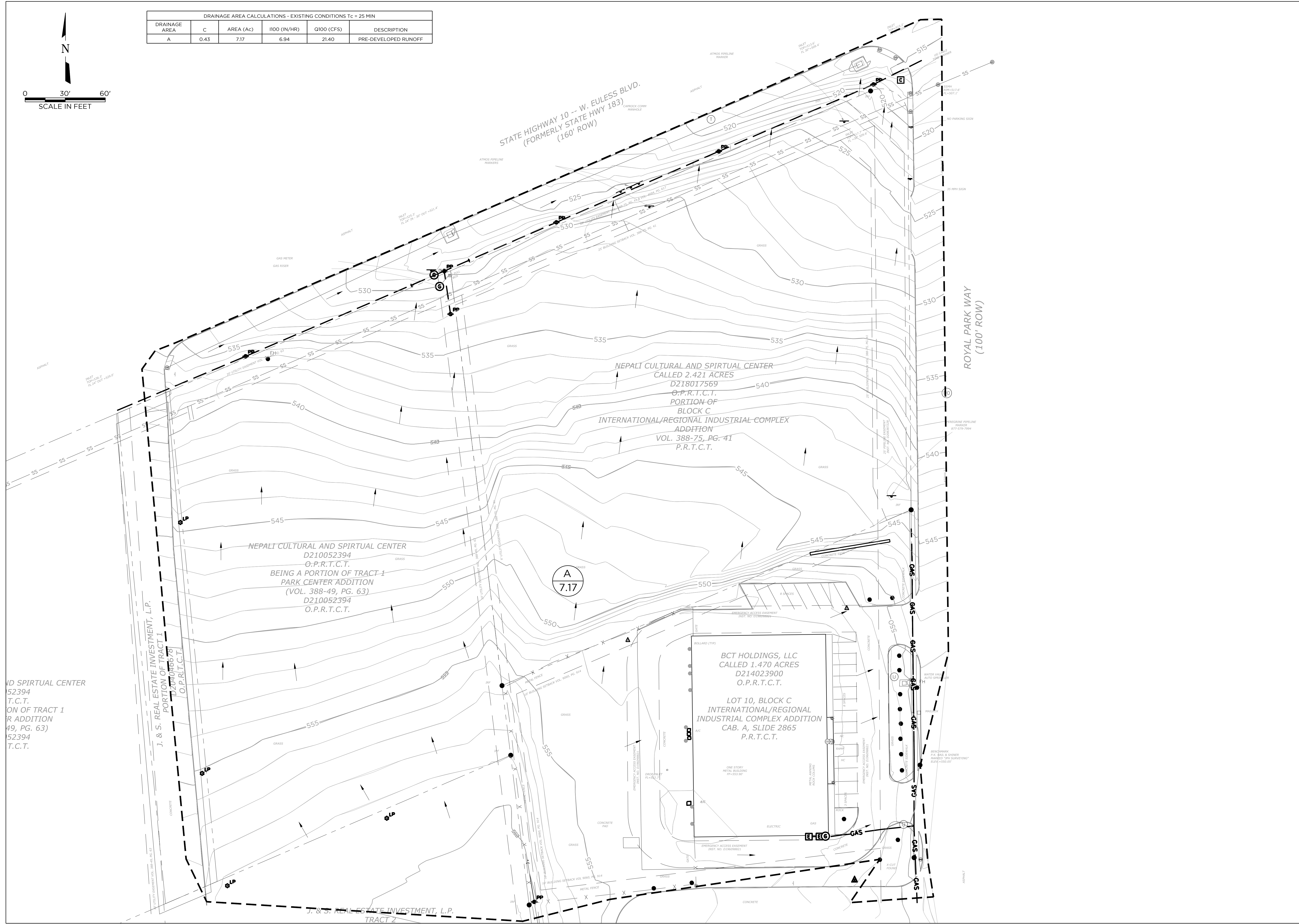
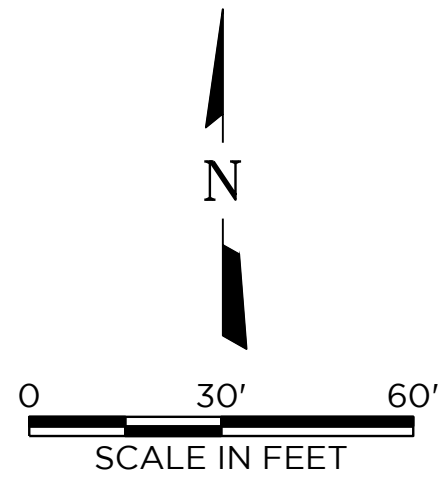
PROJECT NUMBER: 20.02.01

DATE: 12/27/19

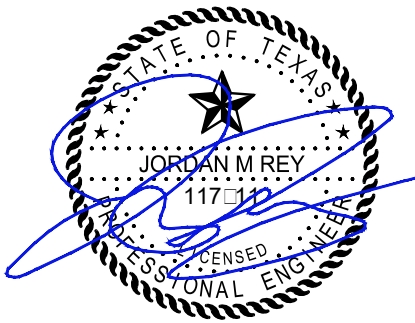
SHEET:

G-1.0

DRAINAGE AREA CALCULATIONS - EXISTING CONDITIONS Tc = 25 MIN					
DRAINAGE AREA	C	AREA (Ac)	I100 (IN/HR)	Q100 (CFS)	DESCRIPTION
A	0.43	7.17	6.94	21.40	PRE-DEVELOPED RUNOFF



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214.799.3505



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PROJECT
NEPALI MANDIR
1212 ROYAL PARKWAY
EULESS TEXAS 76040
ORIGINAL ISSUE

SUP
DOCUMENTS
REVISIONS

TITLE: **EXISTING DRAINAGE AREA MAP**

PROJECT NUMBER: 20.02.01

DATE: 12/27/19

SHEET:

C-1.0

ND SPIRITUAL CENTER
52394
T.C.T.
ON OF TRACT 1
R ADDITION
49, PG. 63)
52394
T.C.T.

J. & S. REAL ESTATE INVESTMENT, L.P.
PORTION OF TRACT 1
D210052394
O.P.R.T.C.T.

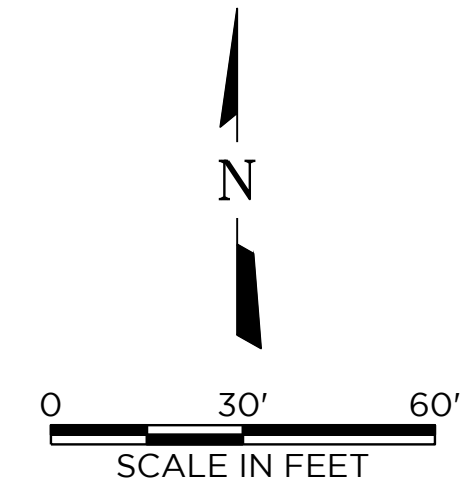
NEPALI CULTURAL AND SPIRITUAL CENTER
D210052394
O.P.R.T.C.T.
BEING A PORTION OF TRACT 1
PARK CENTER ADDITION
(VOL. 388-49, PG. 63)
D210052394
O.P.R.T.C.T.

A
7.17

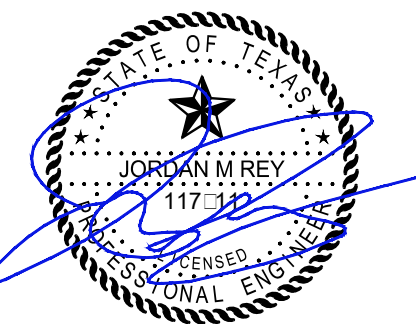
BCT HOLDINGS, LLC
CALLED 1.470 ACRES
D214023900
O.P.R.T.C.T.

LOT 10, BLOCK C
INTERNATIONAL/REGIONAL
INDUSTRIAL COMPLEX ADDITION
CAB. A, SLIDE 2865
P.R.T.C.T.

J. & S. REAL ESTATE INVESTMENT, L.P.
TRACT 2



DRAINAGE AREA CALCULATIONS - PROPOSED CONDITIONS Tc = 25 MIN					
DRAINAGE AREA	C	AREA (AC)	I100 (IN/HR)	Q100 (CFS)	DESCRIPTION
A	0.9	4.81	6.33	27.41	SURFACE TO DETENTION TO HWY
B	0.9	0.74	6.33	4.22	EXISTING SURFACE TO ROYAL PARK
TOTAL ONSITE:		5.55		31.63	



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PROJECT
NEPALI MANDIR
1212 ROYAL PARKWAY
EULESS TEXAS 76040
ORIGINAL ISSUE

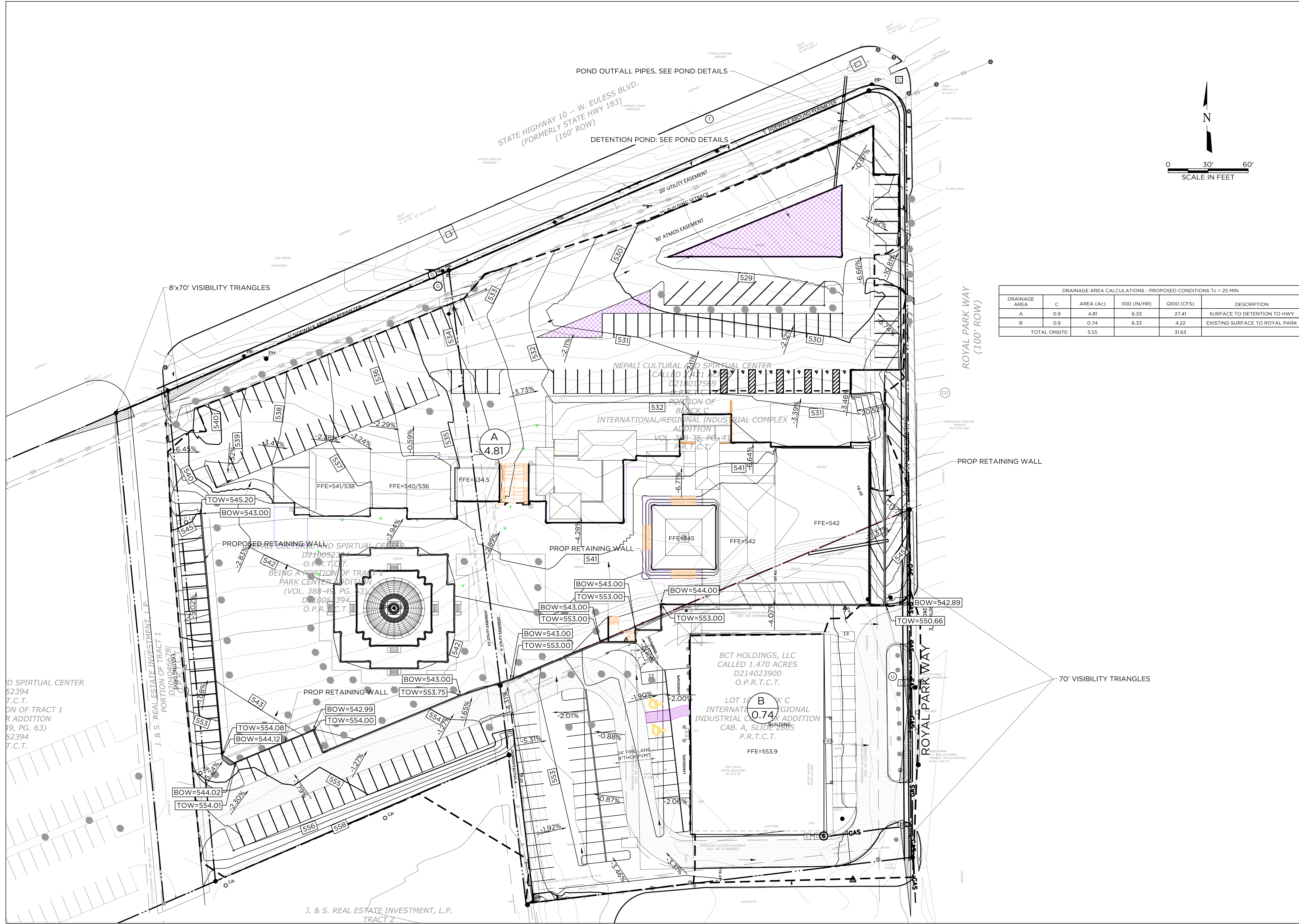
SUP
DOCUMENTS
REVISIONS

PROPOSED
DRAINAGE & OVERALL GRADING

PROJECT NUMBER: 20.02.01

DATE: 12/27/19

SHEET:



D SPIRITUAL CENTER
52394
T.C.T.
ON OF TRACT 1
R ADDITION
49, PG. 63)
52394
T.C.T.

J. & S. REAL ESTATE INVESTMENT, L.P.
PORTION OF TRACT 1
D214023900
O.P.R.T.C.T.

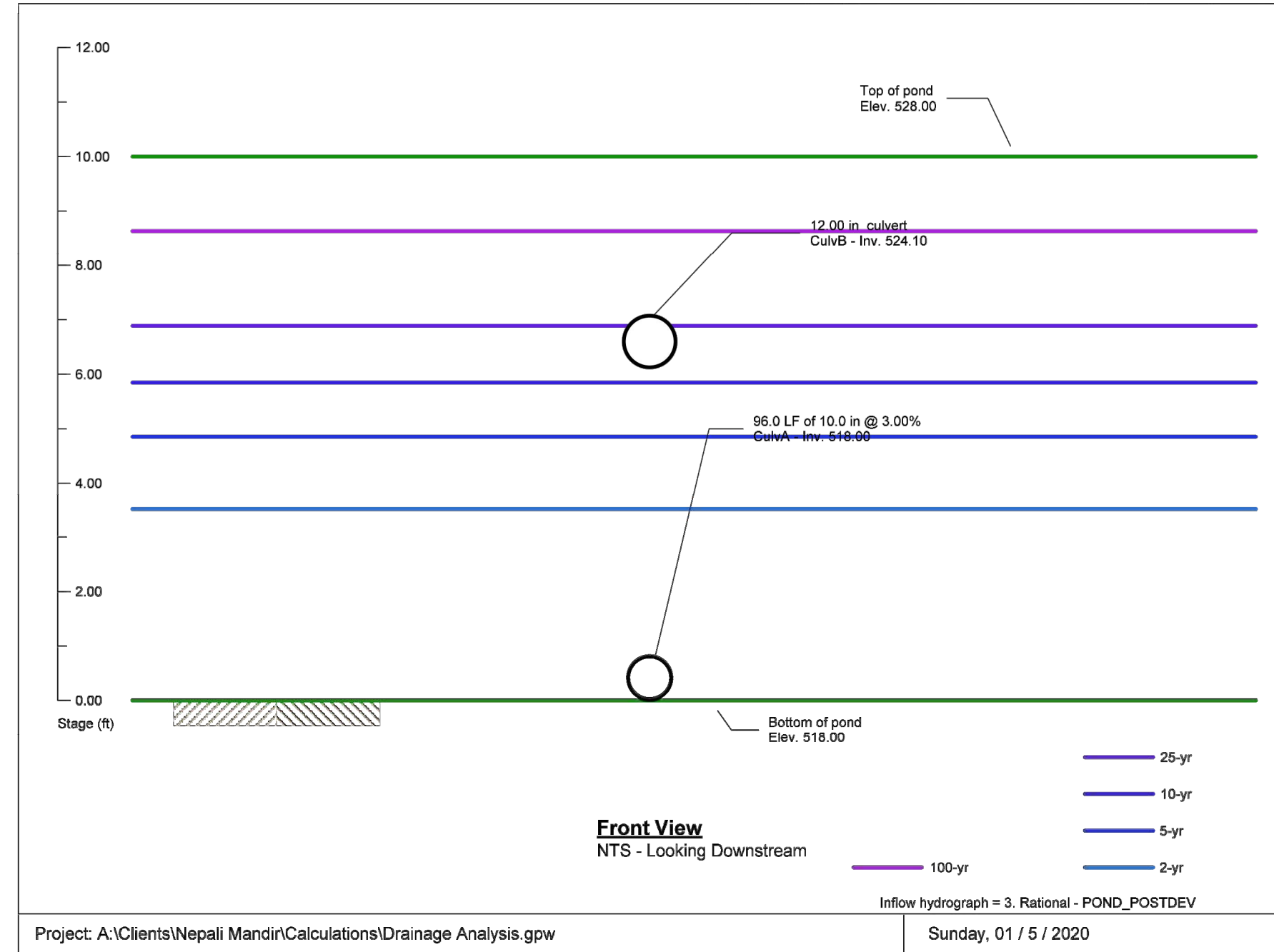
RETAINING WALL AND SPIRITUAL CENTER
D210052394
O.P.R.T.C.T.
BEING A PORTION OF TRACT 1
PARK CENTER ADDITION
(VOL. 388-49, PG. 63)
D210061394
O.P.R.T.C.T.

BCT HOLDINGS, LLC
CALLED 1.470 ACRES
D214023900
O.P.R.T.C.T.
LOT 1 BLOCK C
INTERNATIONAL/REGIONAL
INDUSTRIAL COMPLEX ADDITION
CAB. A, SLIDE 2865
P.R.T.C.T.
FFE=553.9

J. & S. REAL ESTATE INVESTMENT, L.P.
TRACT 2

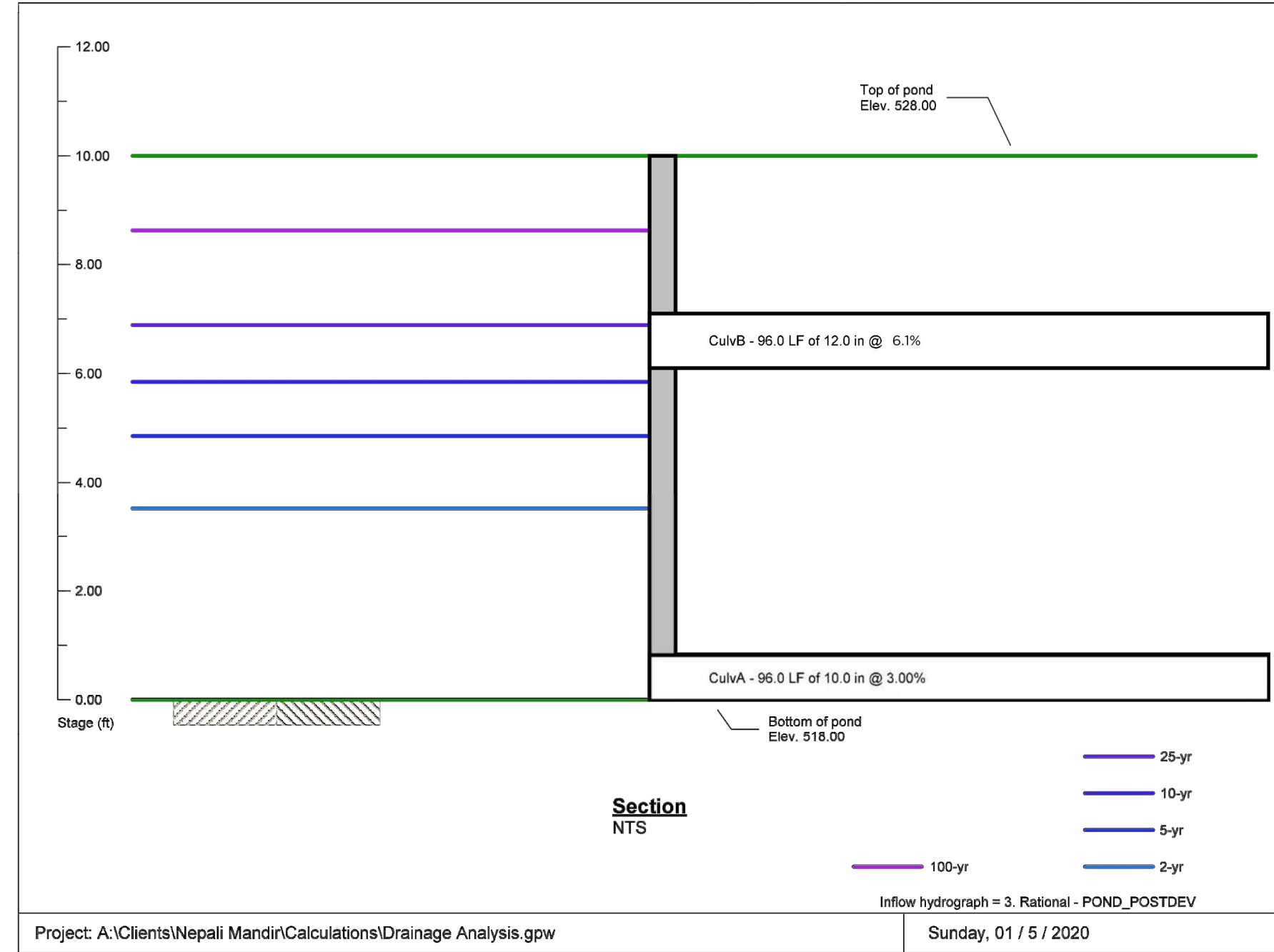
Pond No. 1 - NEPALI POND

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020



Pond No. 1 - NEPALI POND

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020



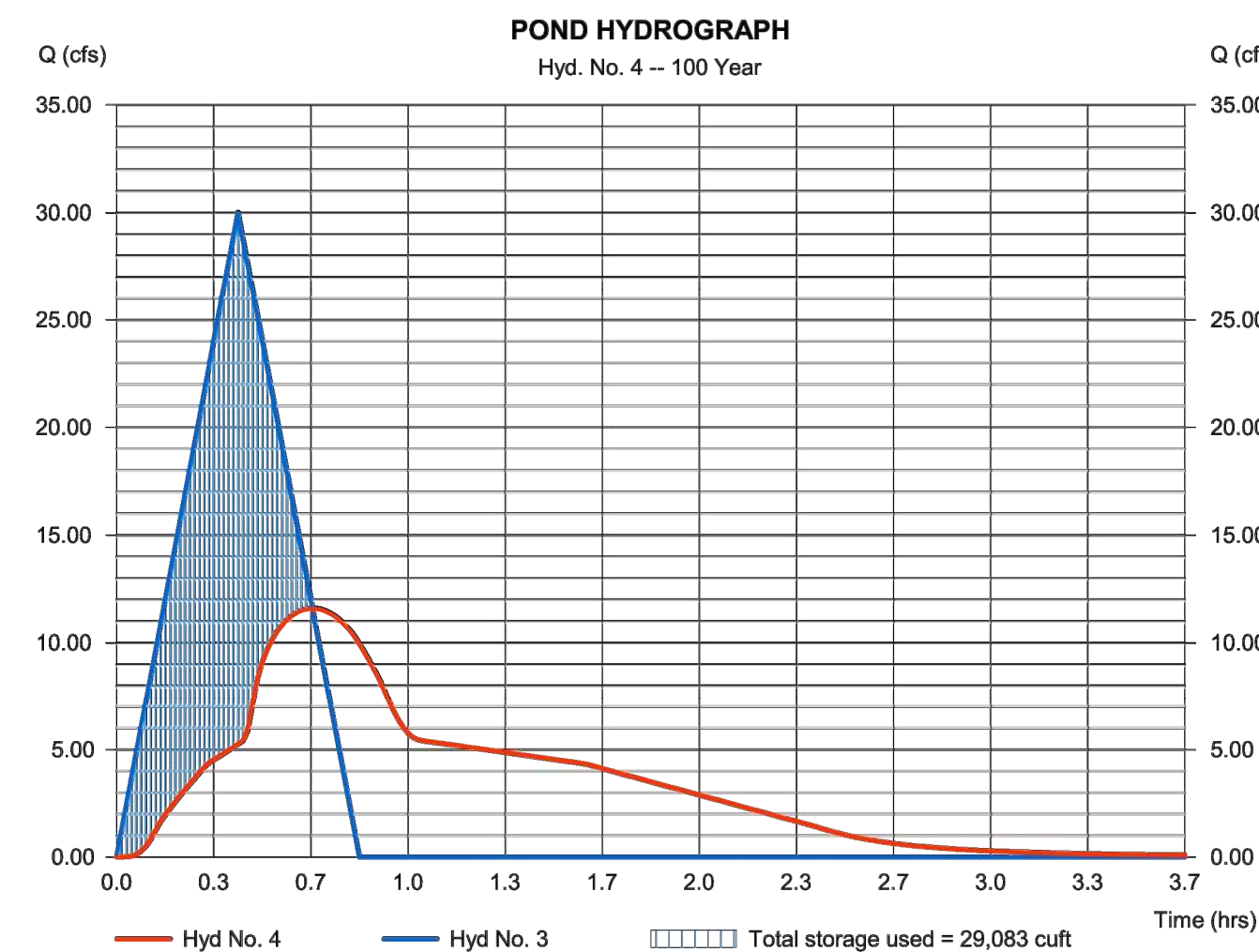
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Sunday, 01 / 5 / 2020

Hyd. No. 4
POND HYDROGRAPH

Hydrograph type = Reservoir Peak discharge = 11.61 cfs
Storm frequency = 100 yrs Time to peak = 0.67 hrs
Time interval = 1 min Hyd. volume = 45,028 cuft
Inflow hyd. No. = 3 - POND_POSTDEV Max. Elevation = 526.64 ft
Reservoir name = NEPALI POND Max. Storage = 29,083 cuft

Storage Indication method used.



Pond Report

3

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Sunday, 01 / 5 / 2020

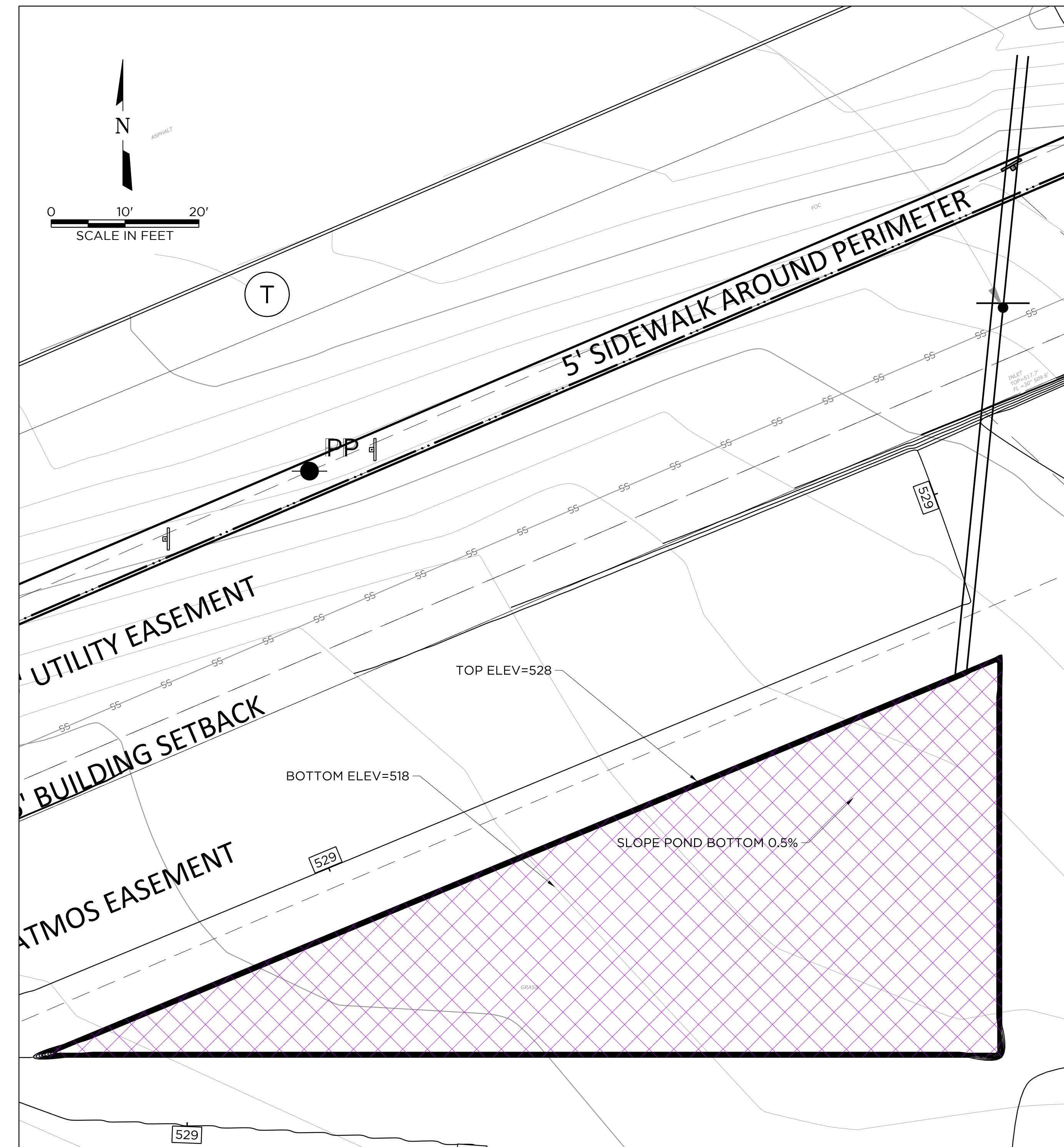
Pond No. 1 - NEPALI POND
Pond Data
Contours - User-defined contour areas. Conic method used for volume calculation. Beginning Elevation = 518.00 ft

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	518.00	3,368	0	0
1.00	519.00	3,368	3,368	3,368
2.00	520.00	3,368	3,368	6,735
3.00	521.00	3,368	3,368	10,103
4.00	522.00	3,368	3,368	13,471
5.00	523.00	3,368	3,368	16,838
6.00	524.00	3,368	3,368	20,206
7.00	525.00	3,368	3,368	23,574
8.00	526.00	3,368	3,368	26,941
9.00	527.00	3,368	3,368	30,309
10.00	528.00	3,368	3,368	33,677

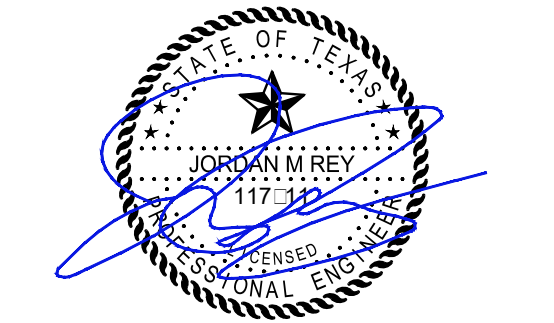
Culvert / Orifice Structures				Weir Structures			
Rise (in)	No. Barrels	Invert EL. (ft)	Length (ft)	[A]	[B]	[C]	[D]
= 10.00	= 1	= 518.00	= 96.00	= 0.00	= 0.00	= 0.00	= 0.00
= 12.00	= 1	= 524.10	= 0.00	= 0.00	= 0.00	= 0.00	= 0.00
= 3.00	= 0	= 0.00	= 0.00	= 3.33	= 3.33	= 3.33	= 3.33
= 0.15	= 0.15	= 0.15	= n/a	= No	= No	= No	= No
= 0.60	= 0.60	= 0.60	= No	= 0.00 (by Contour)			
= n/a	= No	= No	= No	= 0.00			

Note: Culvert/Orifice outfalls are analyzed under inlet (i) and outlet (o) control. Weir weirs checked for orifice conditions (c) and submergence (s).

Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	518.00	0.00	0.00	—	—	—	—	—	—	—	—	0.000
1.00	3,368	519.00	2.01 ic	0.00	—	—	—	—	—	—	—	—	2.006
2.00	6,735	520.00	3.30 ic	0.00	—	—	—	—	—	—	—	—	3.304
3.00	10,103	521.00	4.22 ic	0.00	—	—	—	—	—	—	—	—	4.220
4.00	13,471	522.00	4.68 oc	0.00	—	—	—	—	—	—	—	—	4.679
5.00	16,838	523.00	5.05 oc	0.00	—	—	—	—	—	—	—	—	5.051
6.00	20,206	524.00	5.40 oc	0.00	—	—	—	—	—	—	—	—	5.397
7.00	23,574	525.00	5.72 oc	2.41 ic	—	—	—	—	—	—	—	—	8.128
8.00	26,941	526.00	6.03 oc	4.47 ic	—	—	—	—	—	—	—	—	10.50
9.00	30,309	527.00	6.32 oc	6.96 ic	—	—	—	—	—	—	—	—	12.18
10.00	33,677	528.00	6.60 oc	6.97 ic	—	—	—	—	—	—	—	—	13.58



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PROJECT
NEPALI MANDIR
1212 ROYAL PARKWAY
EULESS TEXAS 76040
ORIGINAL ISSUE

SUP DOCUMENTS
REVISIONS

TITLE:
POND DETAILS
PROJECT NUMBER: 20.02.01
DATE: 12/27/19
SHEET:

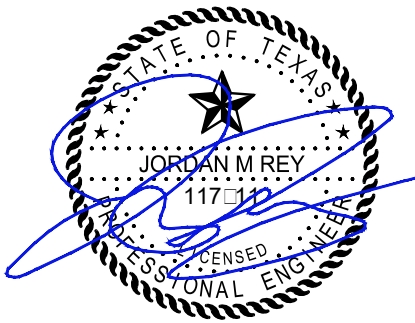
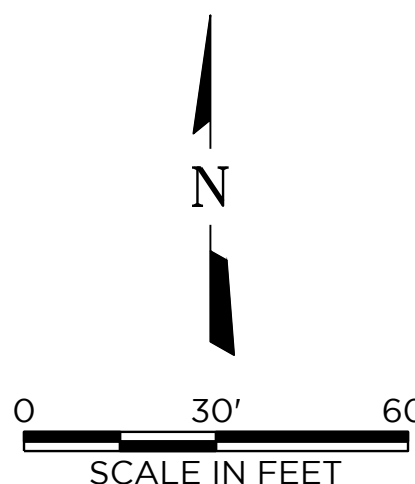
C-1.2

UTILITY MATERIAL SPECIFICATIONS	
DESCRIPTION	SPECIFICATION
3" WATER LINE AND SMALLER	AWWA C901 & ASTM F714 PE PIPE
GAS LINES	ASTM D-25 13 DIRECT BURIAL PE PIPE
SANITARY SEWER (4" TO 15")	SDR35 MEETING ASTM D3034
SANITARY SEWER (150 PSI PRESSURE-RATED)	SDR26 MEETING ASTM D2241

NOTES:
 1. THIS IS A CONCEPTUAL UTILITY PLAN FOR ZONING PURPOSES - A FOR-CONSTRUCTION UTILITY PLAN MUST BE COMPLETED AS PART OF THE CONSTRUCTION DOCUMENTS FOR CONSTRUCTION.



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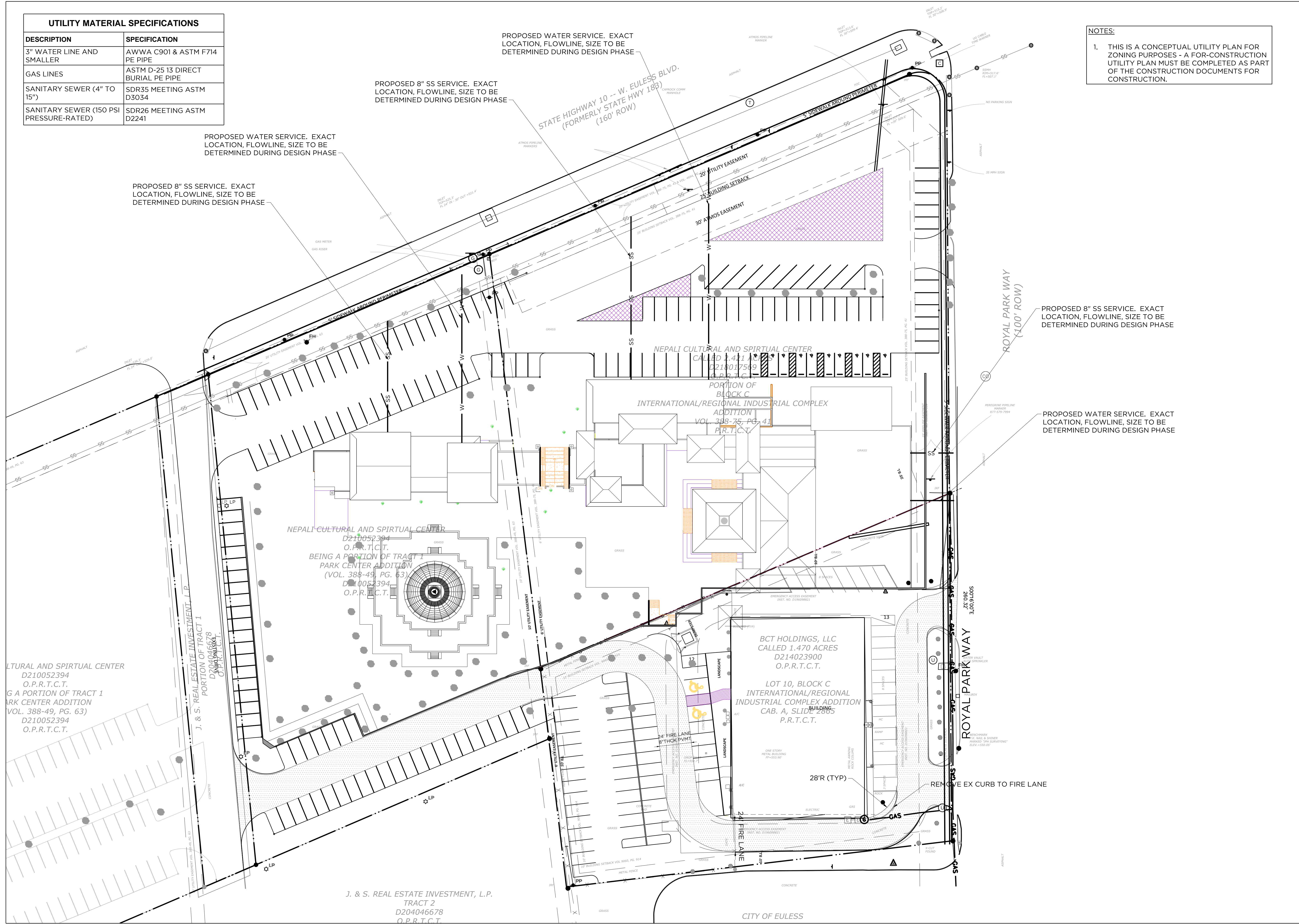
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PROJECT
NEPALI MANDIR
 1212 ROYAL PARKWAY
 EULESS TEXAS 76040
 ORIGINAL ISSUE

SUP
DOCUMENTS
 REVISIONS

TITLE:
CONCEPTUAL UTILITY PLAN
 PROJECT NUMBER: 20.02.01
 DATE: 12/27/19
 SHEET:

C-2.0



NEPALI CULTURAL AND SPIRITUAL CENTER
 D210052394
 O.P.R.T.C.T.
 BEING A PORTION OF TRACT 1
 PARK CENTER ADDITION
 (VOL. 388-49, PG. 63)
 D210052394
 O.P.R.T.C.T.

J. & S. REAL ESTATE INVESTMENT, L.P.
 PORTION OF TRACT 1
 D204046678
 O.P.R.T.C.T.

NEPALI CULTURAL AND SPIRITUAL CENTER
 D210052394
 O.P.R.T.C.T.
 BEING A PORTION OF TRACT 1
 PARK CENTER ADDITION
 (VOL. 388-49, PG. 63)
 D210052394
 O.P.R.T.C.T.

PROPOSED WATER SERVICE. EXACT LOCATION, FLOWLINE, SIZE TO BE DETERMINED DURING DESIGN PHASE

PROPOSED 8" SS SERVICE. EXACT LOCATION, FLOWLINE, SIZE TO BE DETERMINED DURING DESIGN PHASE

PROPOSED WATER SERVICE. EXACT LOCATION, FLOWLINE, SIZE TO BE DETERMINED DURING DESIGN PHASE

PROPOSED 8" SS SERVICE. EXACT LOCATION, FLOWLINE, SIZE TO BE DETERMINED DURING DESIGN PHASE

STATE HIGHWAY 10 -- W. EULESS BLVD.
 (FORMERLY STATE HWY 183)
 (160' ROW)

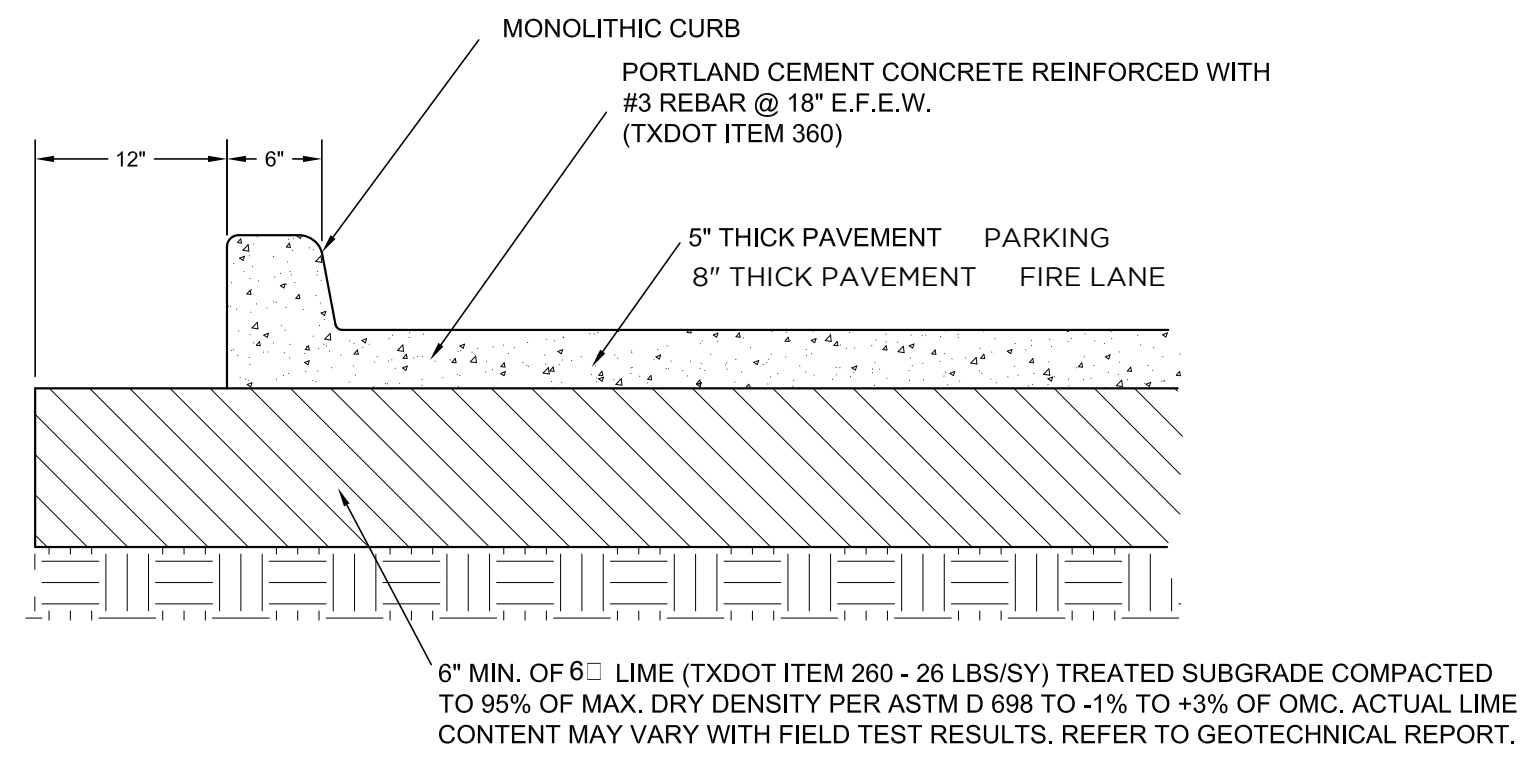
ROYAL PARK WAY
 (100' ROW)

PROPOSED 8" SS SERVICE. EXACT LOCATION, FLOWLINE, SIZE TO BE DETERMINED DURING DESIGN PHASE

PROPOSED WATER SERVICE. EXACT LOCATION, FLOWLINE, SIZE TO BE DETERMINED DURING DESIGN PHASE

J. & S. REAL ESTATE INVESTMENT, L.P.
 TRACT 2
 D204046678
 O.P.R.T.C.T.

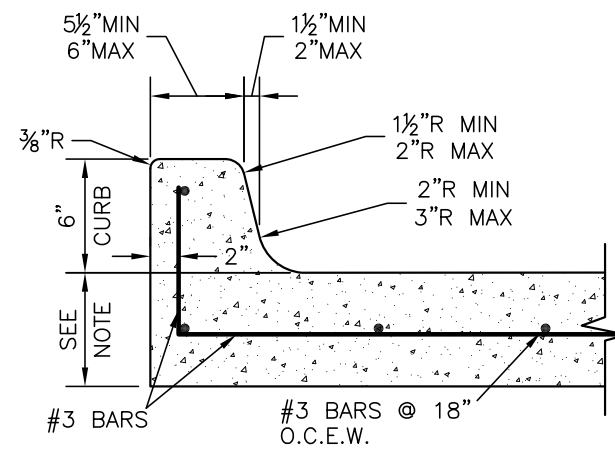
CITY OF EULESS



- CONCRETE STRENGTH NOTES:
- CONCRETE SHALL MEET TXDOT ITEM 360 AND HAVE A MIN. 28 DAY COMPRESSIVE STRENGTH OF 3,600 psi MIN., WITH 4-6% AIR ENTRAINMENT.
 - FOR DRIVEWAYS IN CITY ROW, CONCRETE TO HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4,500 psi MIN.

CONCRETE PAVEMENT SECTION

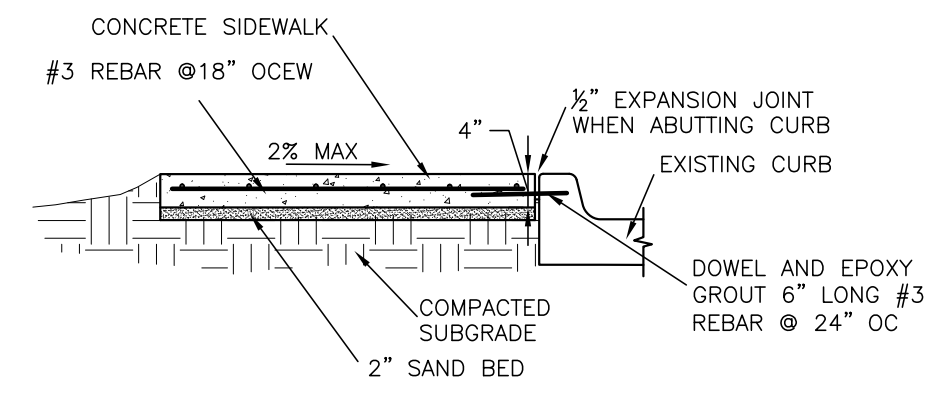
NTS



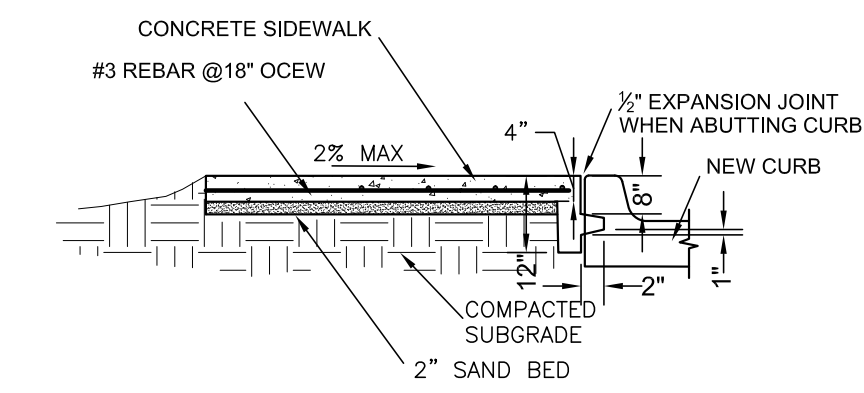
NOTE:
THIS DIMENSION WILL VARY. REFER TO PAVEMENT SECTION DETAIL FOR HEAVY/REGULAR DUTY PAVEMENT DIMENSION.

PAVEMENT SECTION - MONOLITHIC CURB

NTS



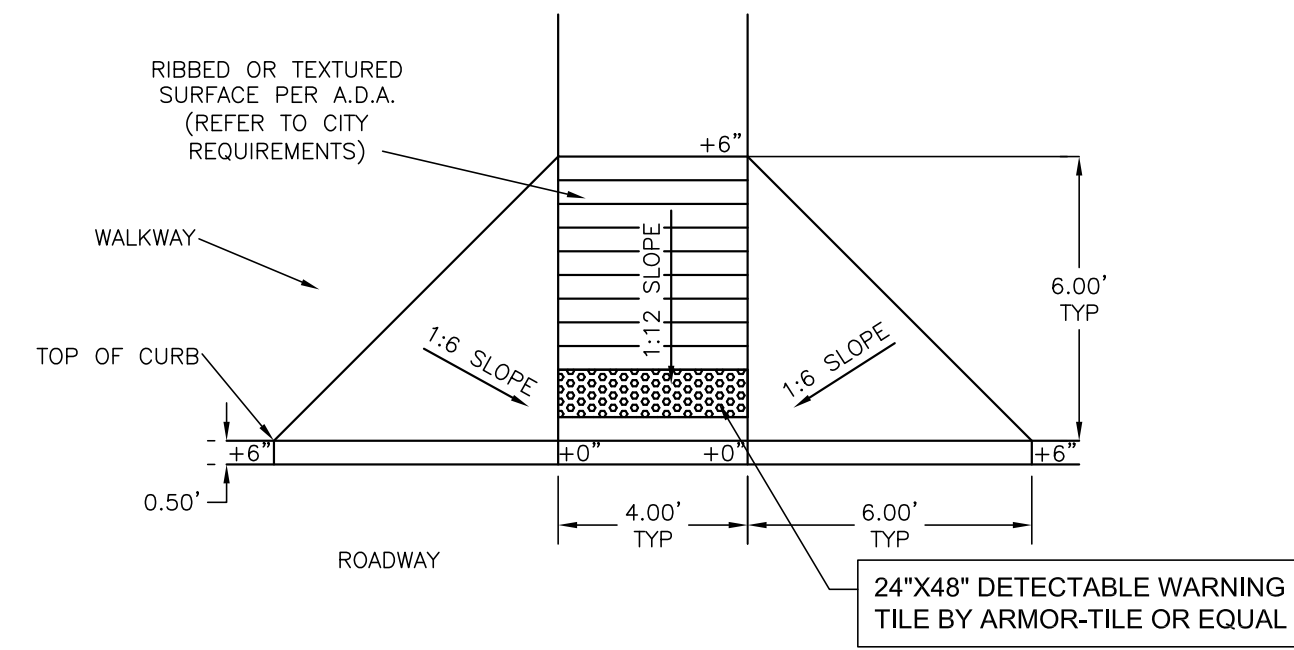
TYPICAL SIDEWALK AGAINST EXISTING CURB



TYPICAL SIDEWALK AGAINST NEW CURB

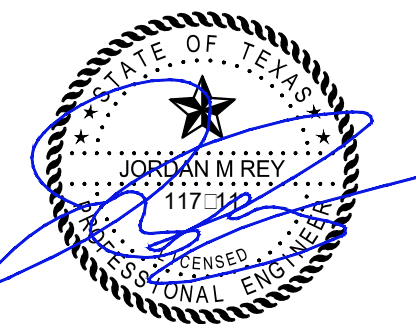
NOTE:

- ALL HOMECOMB IN THE BACK OF CURB TO BE TROWEL PLASTERED BEFORE POURING SIDEWALK.
- LUG MAY BE FORMED BY SHAPING SUBGRADE TO THE APPROXIMATE DIMENSIONS SHOWN.
- ALL SIDEWALK SUBGRADE TO BE LIME STABILIZED SUBGRADE OR SELECT FILL WITH PI BETWEEN 10 - 18.
- SUBGRADE TO BE COMPACTED TO ASTM D 968 TO ±3% OF OMC
- EXPANSION JOINTS TO BE PROVIDED AT STREET JOINTS AT A MAXIMUM OF 40' DISTANCE.



BARRIER FREE RAMP DETAIL

NTS



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PROJECT
NEPALI MANDIR
1212 ROYAL PARKWAY
EULESS TEXAS 76040

ORIGINAL ISSUE

SUP
DOCUMENTS
REVISIONS

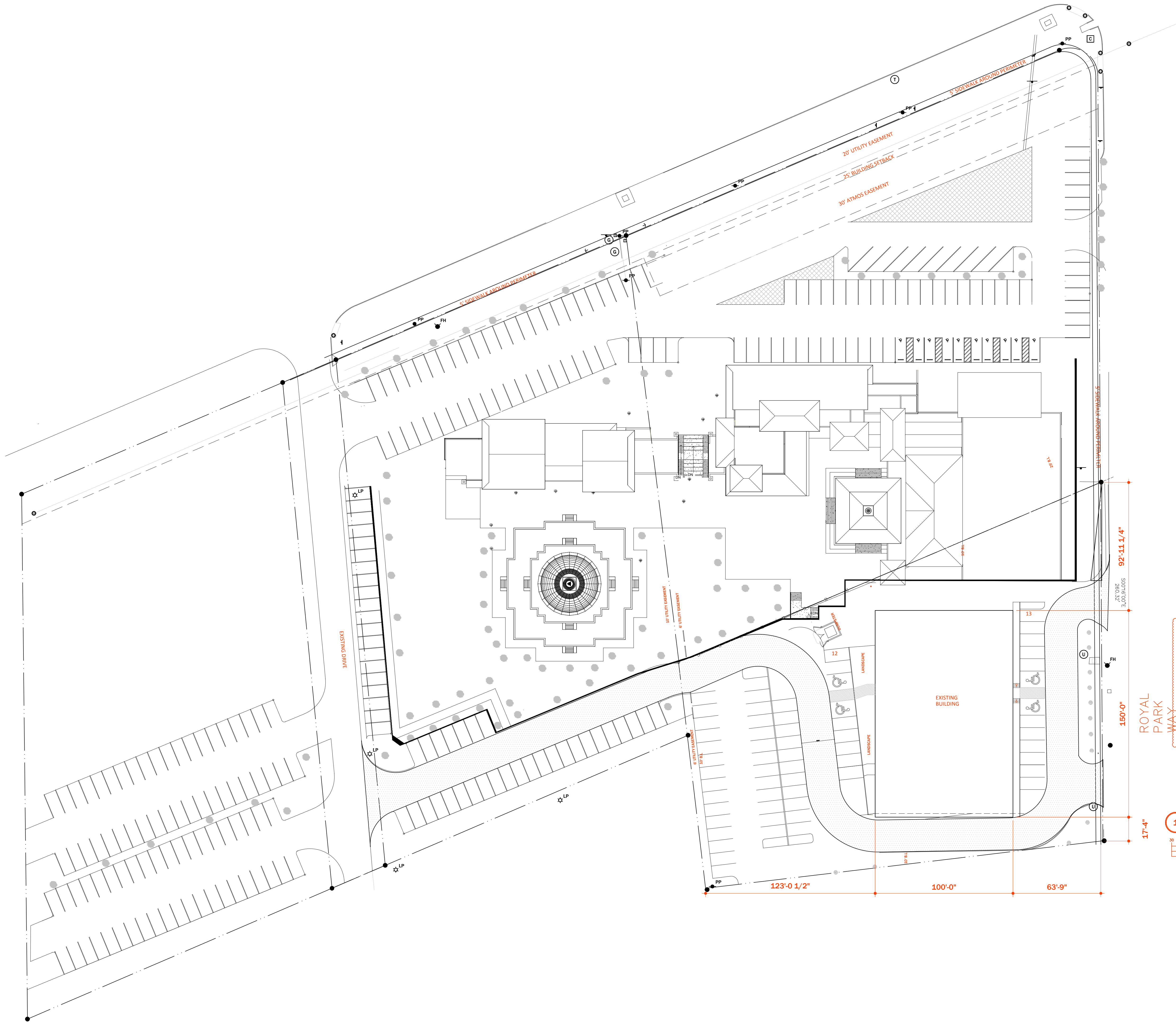
TITLE:

SITE DETAILS
PROJECT NUMBER: 20.02.01

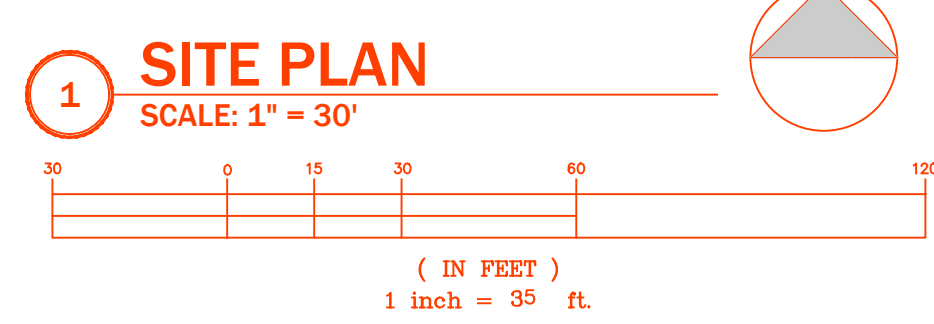
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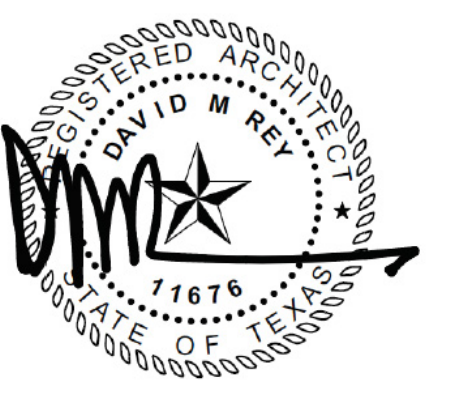
C-3.0



NOTE:
 THE ENTIRE FIRE LANE WILL BE
 INSTALLED FROM ROYAL
 PARKWAY TO EXISTING FIRE
 LANE ON WEST SIDE, PRIOR TO
 INSTALLING ANY FURNITURE OR
 APPROVAL FOR OCCUPANCY



REVISION NO.	DATE
1	07/10/2020
2	07/30/2020
3	08/14/2020
4	
5	
6	



Affixation Date: 08/14/2020

**SITE
 PLAN**

SCALE: X"=1'-0"

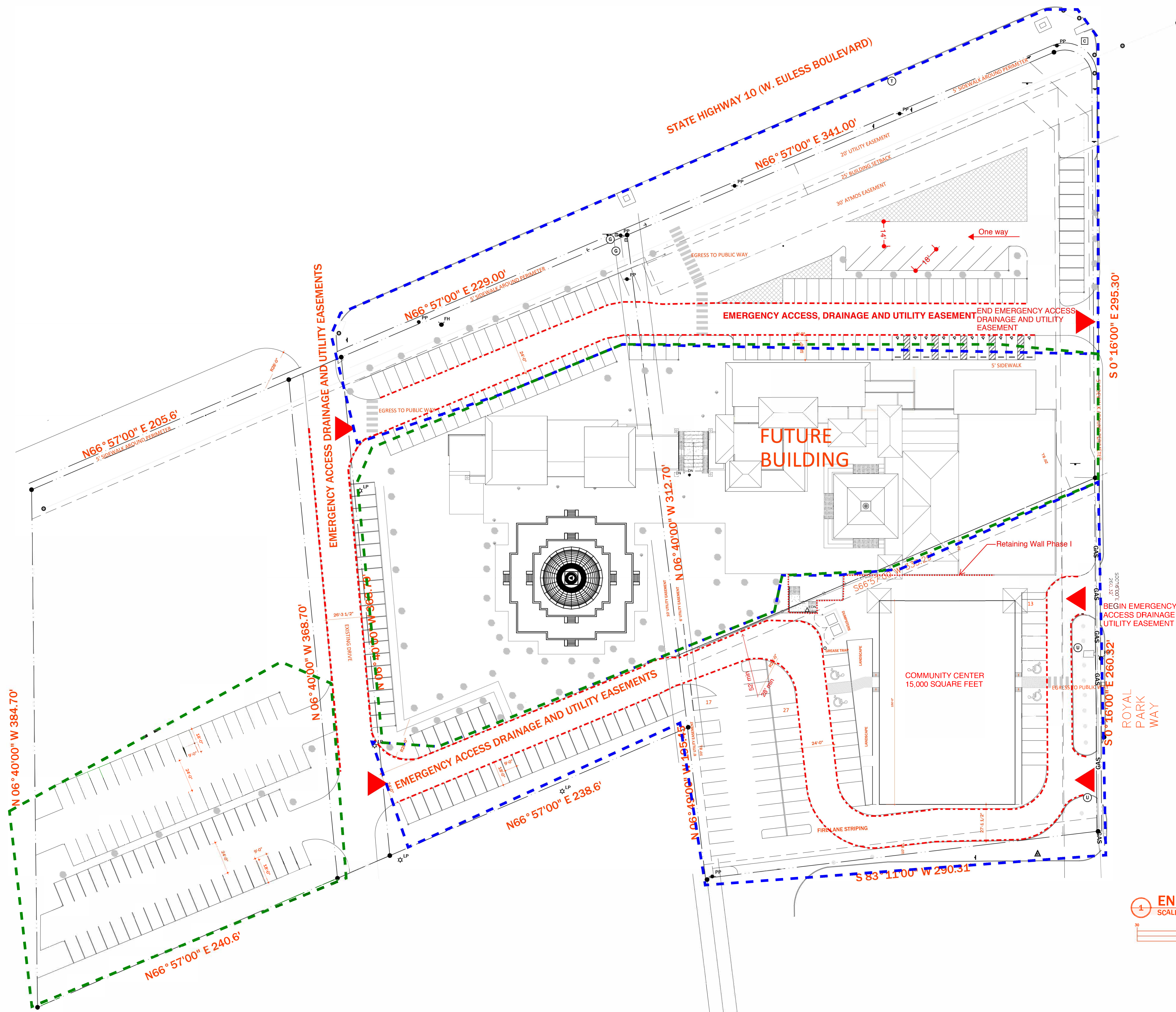
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DRAWN BY: YOU

LANDSCAPING CALCULATIONS

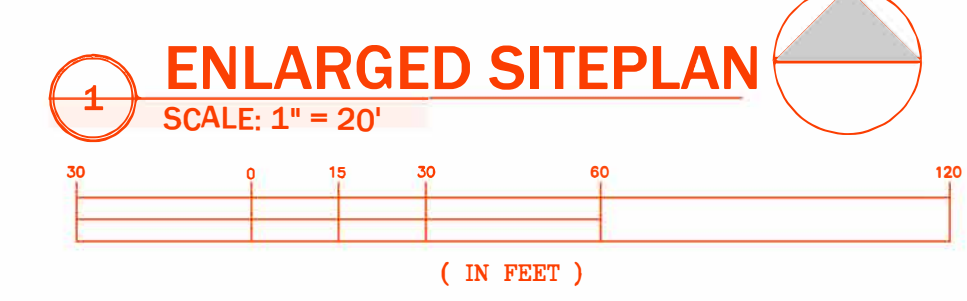
STREETYARD: 31,856 S.F.

LANDSCAPING: 61,689 S.F.



PHASE I CONSTRUCTION

PHASE II CONSTRUCTION



Affixation Date: 05/20/2020

PHASING PLAN

SCALE: 1" = 20'

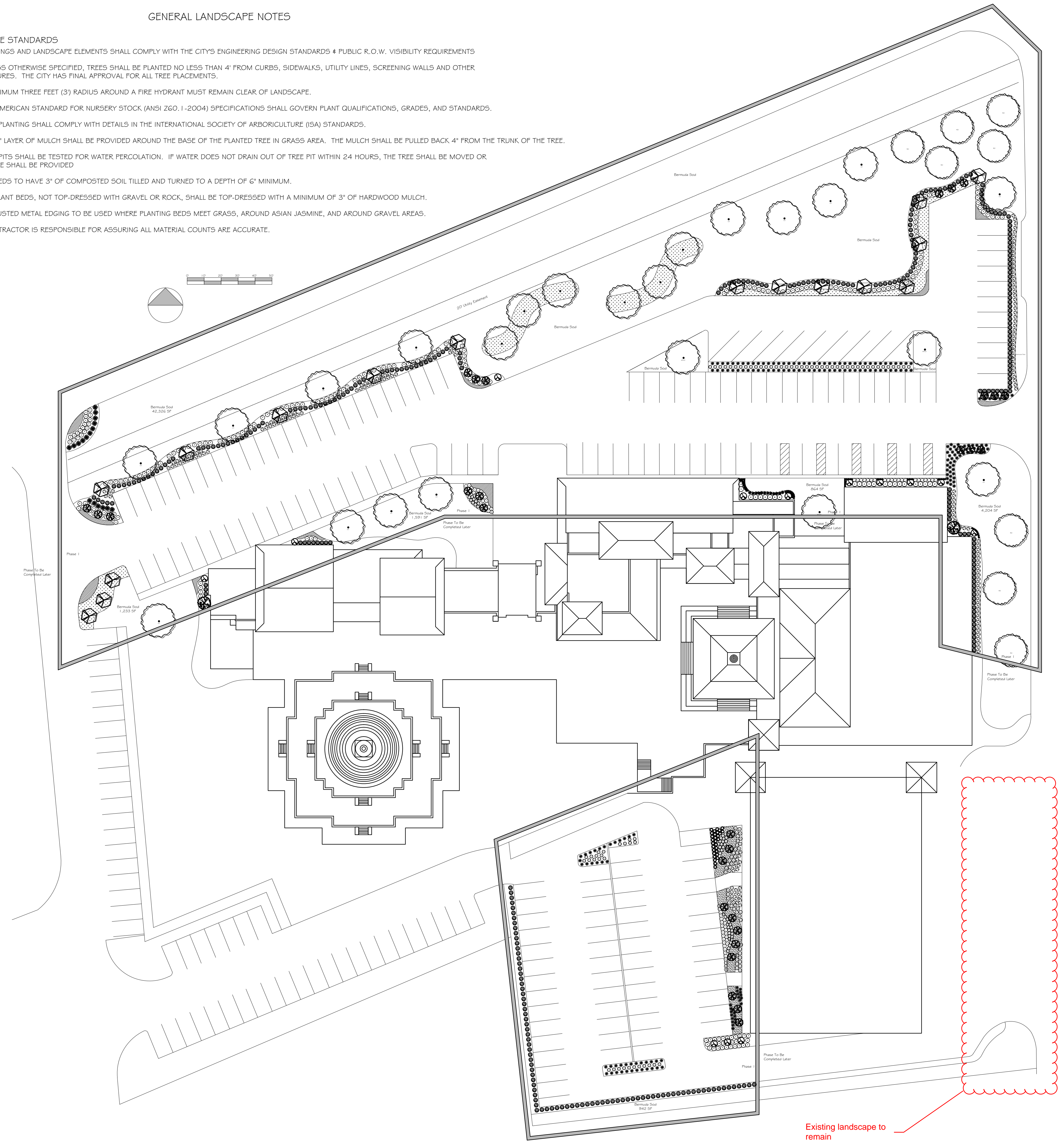
A0.01

DRAWN BY: YOU

PLANT LEGEND					
SYMBOL	AMOUNT	COMMON NAME	SCIENTIFIC NAME	SIZE	SPACING
	15	LIVE OAK	QUERCUS VIRGINIANA	5" CALIPER	AS SHOWN
	3	MULTI-TRUNK LIVE OAK	QUERCUS VIRGINIANA	5" CALIPER	AS SHOWN
	8	SHUMARD RED OAK	QUERCUS SHUMARDI	5" CALIPER	AS SHOWN
	13	MAGNOLIA 'D.D. BLANCHARD'	MAGNOLIA GRANDIFLORA 'DD BLANCHARD'	100 GALLON	AS SHOWN
	2	LITTLE GEM MAGNOLIA	MAGNOLIA GRANDIFLORA 'LITTLE GEM'	100 GALLON	AS SHOWN
	32	EASTERN REDBUD	CERCIS CANADENSIS	45 GALLON	AS SHOWN
	13	NELLIE R. STEVENS HOLLY	ILEX 'NELLIE R. STEVENS'	45 GALLON	AS SHOWN
	24	JAPANESE YEW HICKS	JAPANESE YEW HICKSII	7 GALLON	AS SHOWN
	229	DWARF YAUPON HOLLY	ILEX VOMITORIA 'NANA'	7 GALLON	AS SHOWN
	331	DWARF BURFORD HOLLY	ILEX CORNUTA 'DWARF BURFORD'	7 GALLON	AS SHOWN
	17	SUNSHINE LIGUSTRUM	LIGUSTRUM SINENSE 'SUNSHINE'	7 GALLON	AS SHOWN
	168	ABELIA 'KALEIDOSCOPE'	ABELIA X GRANDIFLORA 'KALEIDOSCOPE'	3 GALLON	AS SHOWN
	113	MEXICAN BUSH SAGE	SALVIA LEUCANTHA	3 GALLON	AS SHOWN
	51	DWARF POMEGRANATE	PUNICA GRANATUM 'NANA'	3 GALLON	AS SHOWN
	21	DWARF GARDENIA	GARDENIA RADICANS	3 GALLON	24" O.C.
	12	HOLLY FERN	CYRTOMIUM FALCATUM	3 GALLON	24" O.C.
	29	SALVIA GREGGI - PINK	SALVIA GREGGI	3 GALLON	24" O.C.
	212	PINK MUHLY GRASS	MUHLENBERGIA CAPILLARIS	1 GALLON	36" O.C. OR AS SHOWN
	58	SHASTA DAISY	LEUCANTHEMUM X SUPERBUM	1 GALLON	24" O.C. OR AS SHOWN
	66	LIRIOPE 'BIG BLUE'	LIRIOPE MUSCARI	1 GALLON	12" O.C.
	550	BLACK STAR GRAVEL	2" DEPTH RIVER ROCK BED WITH LANDSCAPE FABRIC BENEATH <1" SIZE - METAL EDGING AROUND	SQUARE FEET	100% COVERAGE
	471	ANNUAL COLOR	4" POTS COLOR SCHEME - RED/PINK/WHITE	SQUARE FEET	100% COVERAGE
	2,522	ASIAN JASMINE GROUNDCOVER	4" POTS BROWN METAL EDGING AROUND	SQUARE FEET	100% COVERAGE
	51,160	BERMUDA SOD TIF 419		SQUARE FEET	100% COVERAGE
	2,115	4" BROWN METAL EDGING		LINEAR FEET	

GENERAL LANDSCAPE NOTES

- LANDSCAPE STANDARDS
1. PLANTINGS AND LANDSCAPE ELEMENTS SHALL COMPLY WITH THE CITY'S ENGINEERING DESIGN STANDARDS & PUBLIC R.O.W. VISIBILITY REQUIREMENTS
 2. UNLESS OTHERWISE SPECIFIED, TREES SHALL BE PLANTED NO LESS THAN 4' FROM CURBS, SIDEWALKS, UTILITY LINES, SCREENING WALLS AND OTHER STRUCTURES. THE CITY HAS FINAL APPROVAL FOR ALL TREE PLACEMENTS.
 3. A MINIMUM THREE FEET (3') RADIUS AROUND A FIRE HYDRANT MUST REMAIN CLEAR OF LANDSCAPE.
 4. THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2004) SPECIFICATIONS SHALL GOVERN PLANT QUALIFICATIONS, GRADES, AND STANDARDS.
 5. TREE PLANTING SHALL COMPLY WITH DETAILS IN THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) STANDARDS.
 6. A 2-3" LAYER OF MULCH SHALL BE PROVIDED AROUND THE BASE OF THE PLANTED TREE IN GRASS AREA. THE MULCH SHALL BE PULLED BACK 4" FROM THE TRUNK OF THE TREE.
 7. TREE PITS SHALL BE TESTED FOR WATER PERCOLATION. IF WATER DOES NOT DRAIN OUT OF TREE PIT WITHIN 24 HOURS, THE TREE SHALL BE MOVED OR DRAINAGE SHALL BE PROVIDED
 8. ALL BEDS TO HAVE 3" OF COMPOSTED SOIL TILLED AND TURNED TO A DEPTH OF 6" MINIMUM.
 9. ALL PLANT BEDS, NOT TOP-DRESSED WITH GRAVEL OR ROCK, SHALL BE TOP-DRESSED WITH A MINIMUM OF 3" OF HARDWOOD MULCH.
 10. 4" RUSTED METAL EDGING TO BE USED WHERE PLANTING BEDS MEET GRASS, AROUND ASIAN JASMINE, AND AROUND GRAVEL AREAS.
11. CONTRACTOR IS RESPONSIBLE FOR ASSURING ALL MATERIAL COUNTS ARE ACCURATE.



ARTEC INTEGRATED LLC
7700 WINDROSE AVE
SUITE 6330
PLANO, TEXAS 75024
TYPE ENGINEERING FIRM # 18272
TYPE ARCHITECTURE BR-1107
artec solutions
972.862.4507

PROJECT
NEPALI MANDIR

1212 ROYAL PARKWAY
EULESS TEXAS, 76040

DATE	PROJECT NO.	DATE NO.

REVISION	DATE
1	
2	
3	
4	
5	
6	

PROJECT
NEPALI MANDIR

1212 ROYAL PARKWAY
 EULESS TEXAS,
 76040

DATE:	PROJECT NO.	DATE NO.

REVISION	DATE
1	
2	
3	
4	
5	
6	

Quantity	Symbol	Description	Part Number	Pressure	Flow	Radius
Sprinklers						
15	●	Hunter MP1000 180° - PROCS-04-PRS30	MP1000 90-210'	30 psi	0.32 gpm/12 ft	
1	●	Hunter MP1000 360° - PROCS-04-PRS30	MP1000 360'	30 psi	0.65 gpm/12 ft	
166	●	Hunter MP2000 180° - PROCS-04-PRS30	MP2000 90-210'	30 psi	0.63 gpm/17 ft	
2	●	Hunter MP2000 270° - PROCS-04-PRS30	MP2000 216-270'	30 psi	0.98 gpm/17 ft	
6	●	Hunter MP2000 360° - PROCS-04-PRS30	MP2000 360'	30 psi	0.33 gpm/17 ft	
10	●	Hunter MP2000 90° - PROCS-04-PRS30	MP2000 90-210'	30 psi	1.27 gpm/18 ft	
31	●	Hunter MP2000 180° - PROCS-04-PRS30	MP2000 90-210'	30 psi	1.58 gpm/27 ft	
44	●	Hunter MP2000 360° - PROCS-04-PRS30	MP2000 360'	30 psi	1.14 gpm/27 ft	
20	●	Hunter MP3000 90° - PROCS-04-PRS30	MP3000 90-210'	30 psi	0.74 gpm/27 ft	
2	●	Rain Bird 10H - 1804	10H	30 psi	1.56 gpm/15 ft	
12	●	Rain Bird 10H - 1804	10H	30 psi	0.79 gpm/10 ft	
10	●	Rain Bird 10Q - 1804	10Q	30 psi	0.39 gpm/15 ft	
3	●	Rain Bird 12F - 1804	12F	30 psi	2.6 gpm/12 ft	
9	●	Rain Bird 12H - 1804	12H	30 psi	1.5 gpm/12 ft	
9	●	Rain Bird 12C - 1804	12C	30 psi	0.65 gpm/12 ft	
23	●	Rain Bird 1402	1402	30 psi	1.5 gpm/10 ft	
6	●	Rain Bird 1465T - 1804	1465T	30 psi	0.61 gpm/15 x 4 ft	
19	●	Rain Bird 1553T - 1804	1553T	30 psi	1.21 gpm/15 x 4 ft	
3	●	Rain Bird 5H - 1804	5H	30 psi	0.2 gpm/5 ft	
1	●	Rain Bird 5C - 1804	5C	30 psi	0.1 gpm/5 ft	
1	●	Rain Bird 5F - 1804	5F	30 psi	1.05 gpm/8 ft	
4	●	Rain Bird 5H - 1804	5H	30 psi	0.52 gpm/8 ft	
3	●	Rain Bird 5C - 1804	5C	30 psi	0.26 gpm/8 ft	
Meters/Pumps						
1	M	2 inch meter				
1	M	2 inch meter				
Backflow Devices						
2	B	Febco 850 - 2"	850 - 2"			
Control Valves						
132	V	Rain Bird 150-PGA Angle	150-PGA			
2	V	Rain Bird 200-PGA Angle	200-PGA Angle			
1	V	Rain Bird XCC-100-COM	XCC-100-COM			
4	V	Rain Bird XCC-100-PRB-COM	XCC-PRB-100-COM			
7	V	Rain Bird XCC-PRB-150-COM	XCC-PRB-150-COM			
Irrigation Accessories						
2	W	Febco 2" isolation valve	ESP-LXD			
1	W	Rain Bird ESP-LXD	ESP-LXD			
2	W	Wilkins 2" Wye Strainer SCL				
Lateral Line Pipe						
2305 ft	---	Class 200 3/4"	0			
4274 ft	---	Class 200 1"	0			
Mainline Pipe						
2765 ft	---	Class 200 2"	0			
Sleeving						
064 ft	---	Class 160 4"	0			
Drip Tubing						
10661 ft	---	Rain Bird XFS-06-18	XFS-06-18			

Each valve to have Rainbird FD-101 Turf Decoder
 Surge protection required every 500 feet. See manufacturer.
 LSP-1 Turf Line Surge protection required.

Required 2 wire path:
 See Rainbird install guide.

Water Source #2	Water Pressure	Flow	Elevation Change
2	30 psi	0.3 gpm	0 ft

Service Line Information	Flow	Pressure
1	0.3 gpm	30 psi

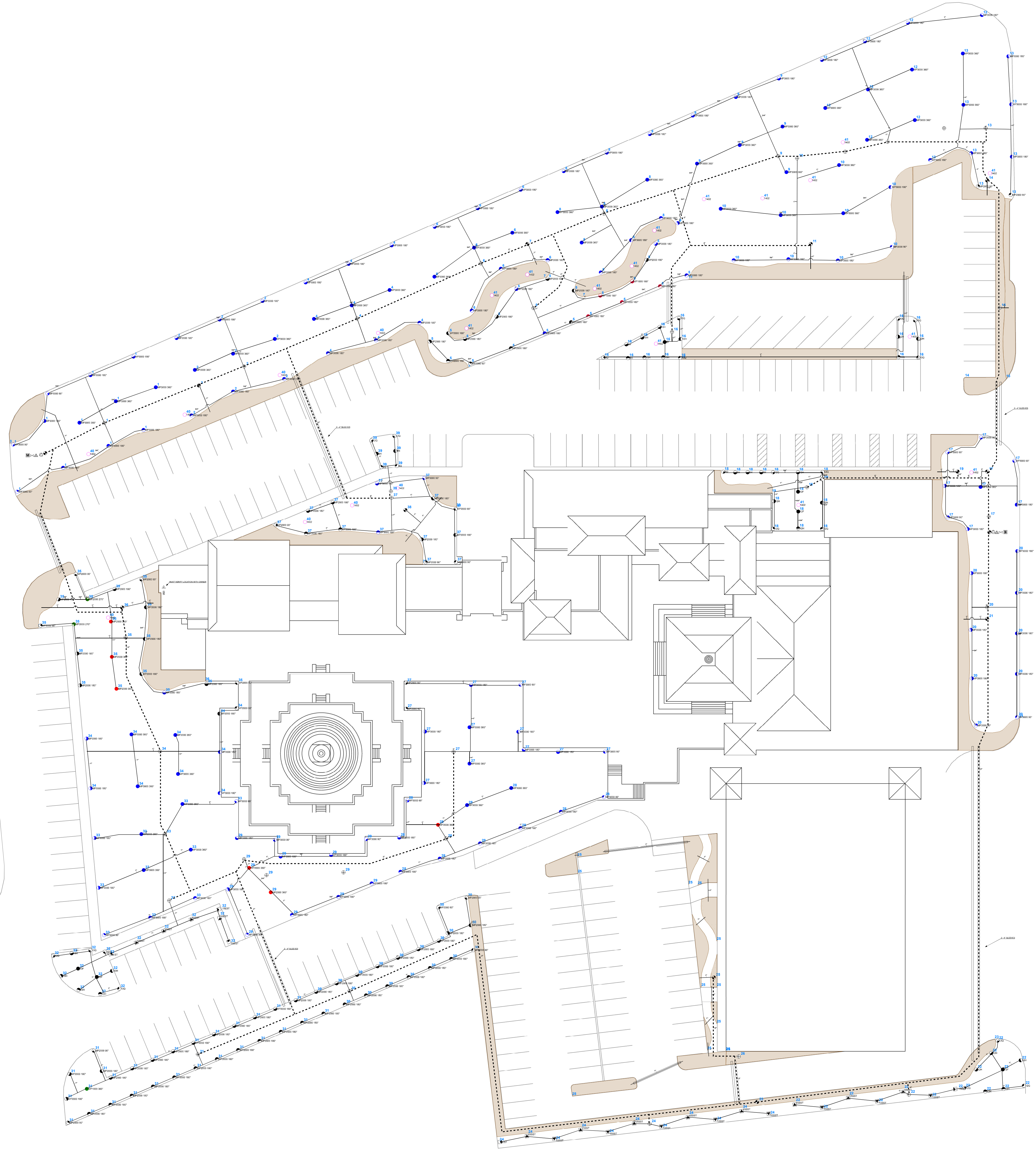
Water Source #1	Water Pressure	Flow	Elevation Change
2	30 psi	0.3 gpm	0 ft

Service Line Information	Flow	Pressure
1	0.3 gpm	30 psi

Recommendations	Flow	Pressure
1	0.3 gpm	30 psi

Zone #	Total Area	Total Flow	Pressure Rate
1	4038.22 SqFt	10.41 gpm	0.34 psi/hr
2	4038.22 SqFt	10.41 gpm	0.34 psi/hr
3	4038.22 SqFt	10.41 gpm	0.34 psi/hr
4	4038.22 SqFt	10.41 gpm	0.34 psi/hr
5	4038.22 SqFt	10.41 gpm	0.34 psi/hr
6	4038.22 SqFt	10.41 gpm	0.34 psi/hr
7	4038.22 SqFt	10.41 gpm	0.34 psi/hr
8	4038.22 SqFt	10.41 gpm	0.34 psi/hr
9	4038.22 SqFt	10.41 gpm	0.34 psi/hr
10	4038.22 SqFt	10.41 gpm	0.34 psi/hr
11	4038.22 SqFt	10.41 gpm	0.34 psi/hr
12	4038.22 SqFt	10.41 gpm	0.34 psi/hr
13	4038.22 SqFt	10.41 gpm	0.34 psi/hr
14	4038.22 SqFt	10.41 gpm	0.34 psi/hr
15	4038.22 SqFt	10.41 gpm	0.34 psi/hr
16	4038.22 SqFt	10.41 gpm	0.34 psi/hr
17	4038.22 SqFt	10.41 gpm	0.34 psi/hr
18	4038.22 SqFt	10.41 gpm	0.34 psi/hr
19	4038.22 SqFt	10.41 gpm	0.34 psi/hr
20	4038.22 SqFt	10.41 gpm	0.34 psi/hr
21	4038.22 SqFt	10.41 gpm	0.34 psi/hr
22	4038.22 SqFt	10.41 gpm	0.34 psi/hr
23	4038.22 SqFt	10.41 gpm	0.34 psi/hr
24	4038.22 SqFt	10.41 gpm	0.34 psi/hr
25	4038.22 SqFt	10.41 gpm	0.34 psi/hr
26	4038.22 SqFt	10.41 gpm	0.34 psi/hr
27	4038.22 SqFt	10.41 gpm	0.34 psi/hr
28	4038.22 SqFt	10.41 gpm	0.34 psi/hr
29	4038.22 SqFt	10.41 gpm	0.34 psi/hr
30	4038.22 SqFt	10.41 gpm	0.34 psi/hr
31	4038.22 SqFt	10.41 gpm	0.34 psi/hr
32	4038.22 SqFt	10.41 gpm	0.34 psi/hr
33	4038.22 SqFt	10.41 gpm	0.34 psi/hr
34	4038.22 SqFt	10.41 gpm	0.34 psi/hr
35	4038.22 SqFt	10.41 gpm	0.34 psi/hr
36	4038.22 SqFt	10.41 gpm	0.34 psi/hr
37	4038.22 SqFt	10.41 gpm	0.34 psi/hr
38	4038.22 SqFt	10.41 gpm	0.34 psi/hr
39	4038.22 SqFt	10.41 gpm	0.34 psi/hr
40	4038.22 SqFt	10.41 gpm	0.34 psi/hr
41	4038.22 SqFt	10.41 gpm	0.34 psi/hr

Zone #	Total Area	Total Flow	Pressure Rate
1	2765.15 SqFt	7.62 gpm	0.34 psi/hr
2	2765.15 SqFt	7.62 gpm	0.34 psi/hr
3	2765.15 SqFt	7.62 gpm	0.34 psi/hr
4	2765.15 SqFt	7.62 gpm	0.34 psi/hr
5	2765.15 SqFt	7.62 gpm	0.34 psi/hr
6	2765.15 SqFt	7.62 gpm	0.34 psi/hr
7	2765.15 SqFt	7.62 gpm	0.34 psi/hr
8	2765.15 SqFt	7.62 gpm	0.34 psi/hr
9	2765.15 SqFt	7.62 gpm	0.34 psi/hr
10	2765.15 SqFt	7.62 gpm	0.34 psi/hr
11	2765.15 SqFt	7.62 gpm	0.34 psi/hr
12	2765.15 SqFt	7.62 gpm	0.34 psi/hr
13	2765.15 SqFt	7.62 gpm	0.34 psi/hr
14	2765.15 SqFt	7.62 gpm	0.34 psi/hr
15	2765.15 SqFt	7.62 gpm	0.34 psi/hr
16	2765.15 SqFt	7.62 gpm	0.34 psi/hr
17	2765.15 SqFt	7.62 gpm	0.34 psi/hr
18	2765.15 SqFt	7.62 gpm	0.34 psi/hr
19	2765.15 SqFt	7.62 gpm	0.34 psi/hr
20	2765.15 SqFt	7.62 gpm	0.34 psi/hr
21	2765.15 SqFt	7.62 gpm	0.34 psi/hr
22	2765.15 SqFt	7.62 gpm	0.34 psi/hr
23	2765.15 SqFt	7.62 gpm	0.34 psi/hr
24	2765.15 SqFt	7.62 gpm	0.34 psi/hr
25	2765.15 SqFt	7.62 gpm	0.34 psi/hr
26	2765.15 SqFt	7.62 gpm	0.34 psi/hr
27	2765.15 SqFt	7.62 gpm	0.34 psi/hr
28	2765.15 SqFt	7.62 gpm	0.34 psi/hr
29	2765.15 SqFt	7.62 gpm	0.34 psi/hr
30	2765.15 SqFt	7.62 gpm	0.34 psi/hr
31	2765.15 SqFt	7.62 gpm	0.34 psi/hr
32	2765.15 SqFt	7.62 gpm	0.34 psi/hr
33	2765.15 SqFt	7.62 gpm	0.34 psi/hr
34	2765.15 SqFt	7.62 gpm	0.34 psi/hr
35	2765.15 SqFt	7.62 gpm	0.34 psi/hr
36	2765.15 SqFt	7.62 gpm	0.34 psi/hr
37	2765.15 SqFt	7.62 gpm	0.34 psi/hr
38	2765.15 SqFt	7.62 gpm	0.34 psi/hr
39	2765.15 SqFt	7.62 gpm	0.34 psi/hr
40	2765.15 SqFt	7.62 gpm	0.34 psi/hr
41	2765.15 SqFt	7.62 gpm	0.34 psi/hr

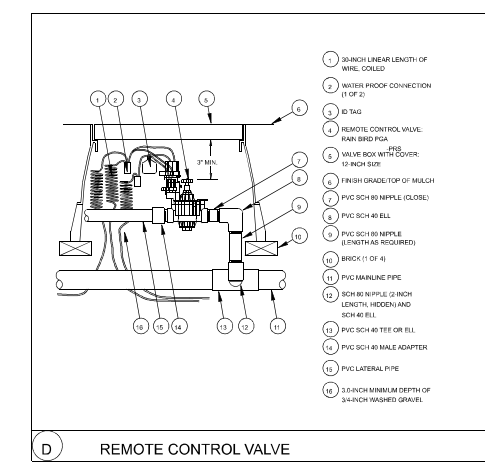
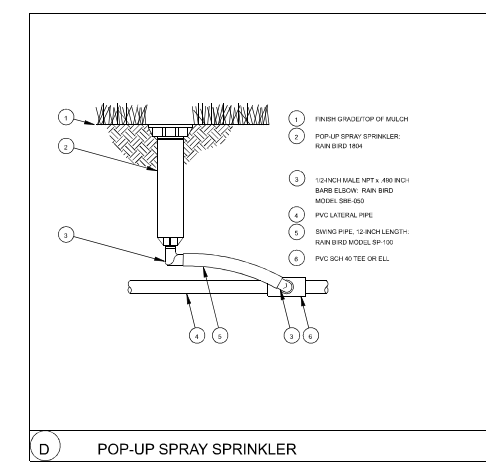
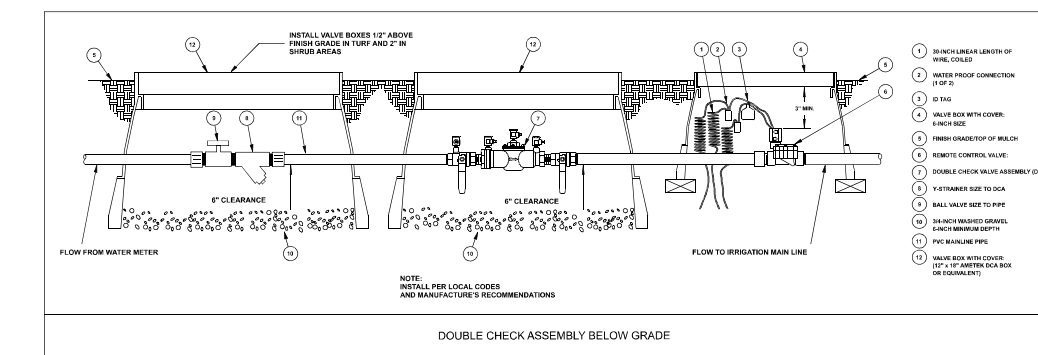
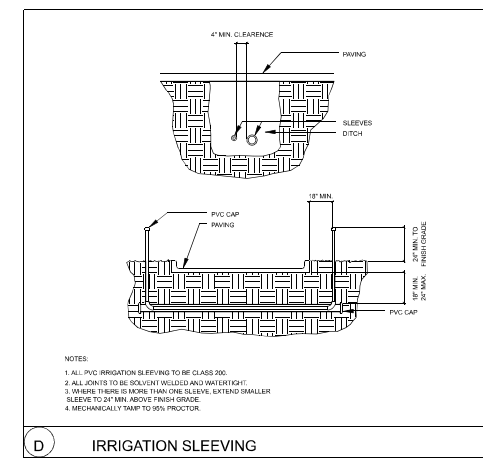
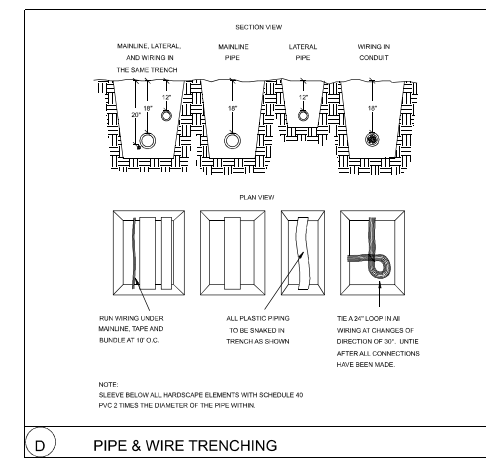


IRRIGATION PLAN

SCALE: 1" = 30'-0"

A0.2

DATE:	DATE
PROJECT NO.	NO.
REVISION	DATE
1	
2	
3	
4	
5	
6	



Quantity	Symbol	Description	Part Number	Pressure	Flow	Radius
Irrigation						
Sprinklers						
1	●	Hunter MP1000 180° - PROS-04-PRS30	MP1000 90-210°	30 psi	0.32 gpm 12 ft	
1	●	Hunter MP1000 360° - PROS-04-PRS30	MP1000 360°	30 psi	0.85 gpm 12 ft	
166	●	Hunter MP0000 180° - PROS-04-PRS30	MP0000 90-210°	30 psi	0.63 gpm 17 ft	
2	●	Hunter MP0000 270° - PROS-04-PRS30	MP0000 270-270°	30 psi	0.85 gpm 17 ft	
8	●	Hunter MP0000 360° - PROS-04-PRS30	MP0000 360°	30 psi	1.27 gpm 17 ft	
19	●	Hunter MP0000 80° - PROS-04-PRS30	MP0000 90-210°	30 psi	0.33 gpm 18 ft	
197	●	Hunter MP0000 180° - PROS-04-PRS30	MP0000 90-210°	30 psi	1.58 gpm 27 ft	
44	●	Hunter MP0000 360° - PROS-04-PRS30	MP0000 360°	30 psi	3.15 gpm 27 ft	
20	●	Hunter MP0000 80° - PROS-04-PRS30	MP0000 90-210°	30 psi	0.74 gpm 27 ft	
2	●	Rain Bird 150° - 1804	150°	30 psi	1.58 gpm 10 ft	
12	●	Rain Bird 150H - 1804	150H	30 psi	0.79 gpm 10 ft	
10	●	Rain Bird 150Q - 1804	150Q	30 psi	0.38 gpm 10 ft	
3	●	Rain Bird 12E - 1804	12E	30 psi	2.8 gpm 12 ft	
9	●	Rain Bird 12H - 1804	12H	30 psi	1.3 gpm 12 ft	
9	●	Rain Bird 12Q - 1804	12Q	30 psi	0.85 gpm 12 ft	
23	●	Rain Bird 140Z - 1804	140Z	30 psi	0.5 gpm 10 ft	
6	●	Rain Bird 15EST - 1804	15EST	30 psi	0.81 gpm 15 x 4 ft	
19	●	Rain Bird 15SST - 1804	15SST	30 psi	1.21 gpm 16 x 4 ft	
3	●	Rain Bird 5H - 1804	5H	30 psi	0.2 gpm 5 ft	
1	●	Rain Bird 5Q - 1804	5Q	30 psi	0.1 gpm 5 ft	
1	●	Rain Bird 8F - 1804	8F	30 psi	1.05 gpm 8 ft	
4	●	Rain Bird 8H - 1804	8H	30 psi	0.52 gpm 8 ft	
3	●	Rain Bird 8Q - 1804	8Q	30 psi	0.26 gpm 8 ft	
Meters/Pumps						
1	■	2 inch meter				
1	■	2 inch meter				
Backflow Devices						
2	□	Febco 850 - 2"	850 - 2"			
Control Valves						
32	▢	Rain Bird 150-PGA Angle	150-PGA			
2	▢	Rain Bird 200-PGA Angle	200-PGA			
1	▢	Rain Bird XCZ-100-COM	XCZ-100-COM			
4	▢	Rain Bird XCZ-100-PRB-COM	XCZ-PRB-100-COM			
7	▢	Rain Bird XCZ-PRB-100-COM	XCZ-PRB-100-COM			
Irrigation Accessories						
2	○	Nibco 2" isolation valve				
1	△	Rain Bird ESP-LXD	ESP-LXD			
1	△	Rain Bird Rain-View Sensor				
2	△	Wilkins 2" Wye Strainer SKL				
Lateral Line Pipe						
1205 ft	—	Class 200 3/4"	0			
4274 ft	—	Class 200 1"	0			
Mainline Pipe						
2765 ft	—	Class 200 2"	0			
Sleeving						
164 ft	—	Class 160 4"	0			
Drip Tubing						
17060 ft	—	Rain Bird XFS-06-18	XFS-06-18			

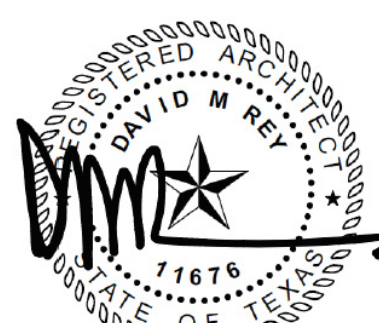


IRRIGATION
DETAILS

SCALE: X"=1'-0"

A0.3

DRAWN BY: YOU



Affixation Date: 05/20/2020

**DEMOLITION
PLAN**

SCALE: X"=1'-0"

A1.0

DRAWN BY: YOU



GENERAL NOTES

- REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL SHEET, WHERE APPLICABLE, FOR ADDITIONAL DEMO INFO.
- ON ALL WALLS SCHEDULED TO REMAIN, TO BE REWORKED, OR RECEIVE NEW FINISH, CONTRACTORS SHALL REMOVE ANY EXISTING EQUIPMENT AND SALVAGE FOR REINSTALLATION AS DIRECTED BY OWNER. CONTRACTOR IS TO PATCH ANY HOLES OR ABANDONED ANCHORS AND RETEXTURE WALLS IF NECESSARY, AND PREP FOR NEW FINISH AS SCHEDULED.
- NOTIFY ARCHITECT OF ANY DISCREPANCIES
- ALL ITEMS INDICATED TO BE SALVAGED ARE TO BE VERIFIED WITH THE OWNER. IF OWNER DECLINES SALVAGE, CONTRACTOR SHALL REMOVE ITEMS FROM THE SITE AND DISPOSE OF THEM PROPERLY.
- CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REINSTALLATION OF ANY PLUMBING FIXTURES, ELECTRICAL ITEMS, TOILET ACCESSORIES, WALL-HUNG EQUIPMENT, ETC. WHERE WALLS ARE TO RECEIVE NEW FINISHES. ALL ITEMS ARE TO BE REINSTALLED IN COMPLIANCE WITH T.A.S. REQUIREMENTS
- ALL HOLLOW CORE DOORS ARE TO BE REPLACED WITH SOLID-CORE DOORS.
- ALL EXISTING SOLID CORE DOORS ARE TO REMAIN AND BE REFINISHED AS SPECIFIED.
- REMOVE/REPAIR ANY ABANDONED WALL ANCHORS OR HOLES FOR NEW FINISH.
- PATCH AND REPAIR ALL WALLS, CEILING AND FLOORS WHERE DAMAGES DUE TO FIXTURE OR DEVICE REMOVAL/RELOCATION, MACH MATERIAL OR EXISTING SURROUNDING CONDITIONS.
- ALL EXISTING FLOORING TO BE REMOVED AS REQUIRED TO ACCOMMODATE NEW WORK. REFER TO FINISH SCHEDULE.

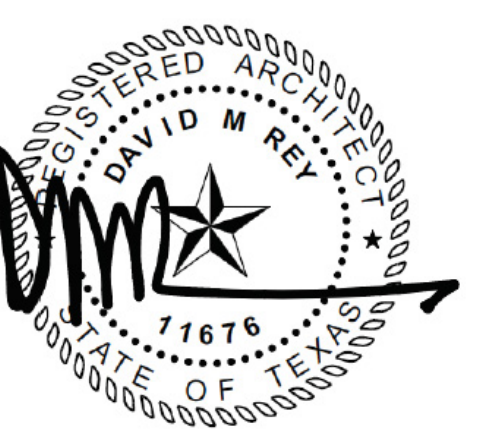
KEYED NOTES

- REMOVE EXISTING FLOORING AND BASE. PREPARE FLOOR FOR NEW FINISH. REFERENCE FINISH AND MATERIAL SCHEDULE.
- PREPARE WALLS TO REMAIN TO RECEIVE NEW PAINT. REPAIR ANY DAMAGE TO WALLS. RE-TEXTURE TO MATCH EXISTING.
- CEILING GRID TO REMAIN. REPLACE ALL CEILING TILES.

DEMOLITION PLAN LEGEND

- EXISTING DOOR TO REMAIN
- EXISTING WALL TO REMAIN
- EXISTING DOOR TO BE REMOVED
- EXISTING WALL TO BE REMOVED

1 DEMOLITION FLOORPLAN
SCALE: 3/16"=1'-0"

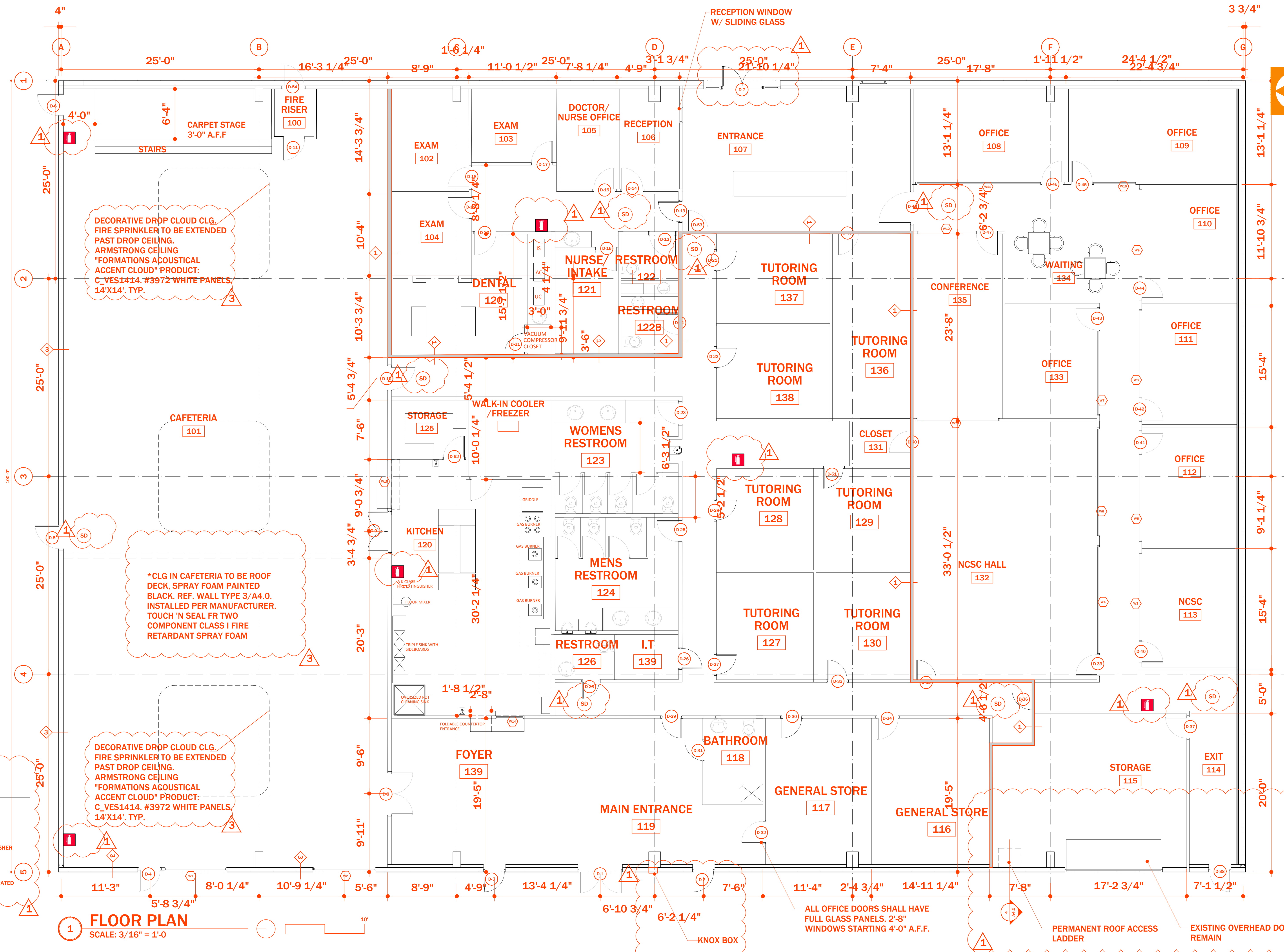


Affixation Date: 08/14/2020
FLOOR PLAN

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

A1.1

DRAWN BY: YOU



DECORATIVE DROP CLOUD CLG. FIRE SPRINKLER TO BE EXTENDED PAST DROP CEILING. ARMSTRONG CEILING "FORMATIONS ACOUSTICAL ACCENT CLOUD" PRODUCT: C_VES1414. #3972 WHITE PANELS 14'X14'. TYP.

*CLG IN CAFETERIA TO BE ROOF DECK, SPRAY FOAM PAINTED BLACK. REF. WALL TYPE 3/A4.0. INSTALLED PER MANUFACTURER. TOUCH 'N SEAL FR TWO COMPONENT CLASS I FIRE RETARDANT SPRAY FOAM

DECORATIVE DROP CLOUD CLG. FIRE SPRINKLER TO BE EXTENDED PAST DROP CEILING. ARMSTRONG CEILING "FORMATIONS ACOUSTICAL ACCENT CLOUD" PRODUCT: C_VES1414. #3972 WHITE PANELS 14'X14'. TYP.

ALL OFFICE DOORS SHALL HAVE FULL GLASS PANELS. 2'-8" WINDOWS STARTING 4'-0" A.F.F.

PERMANENT ROOF ACCESS LADDER

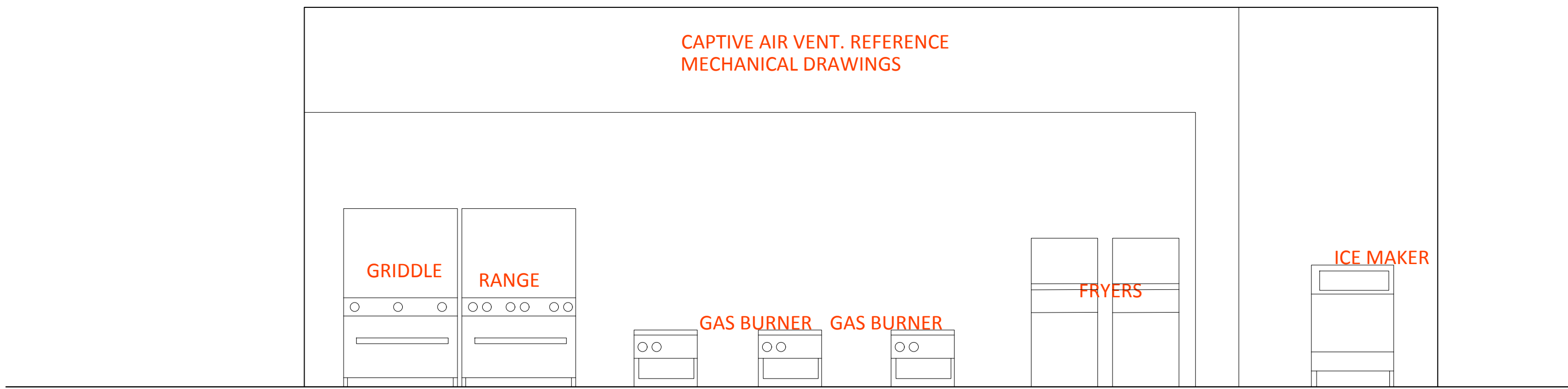
EXISTING OVERHEAD DOOR TO REMAIN

PLAN LEGEND

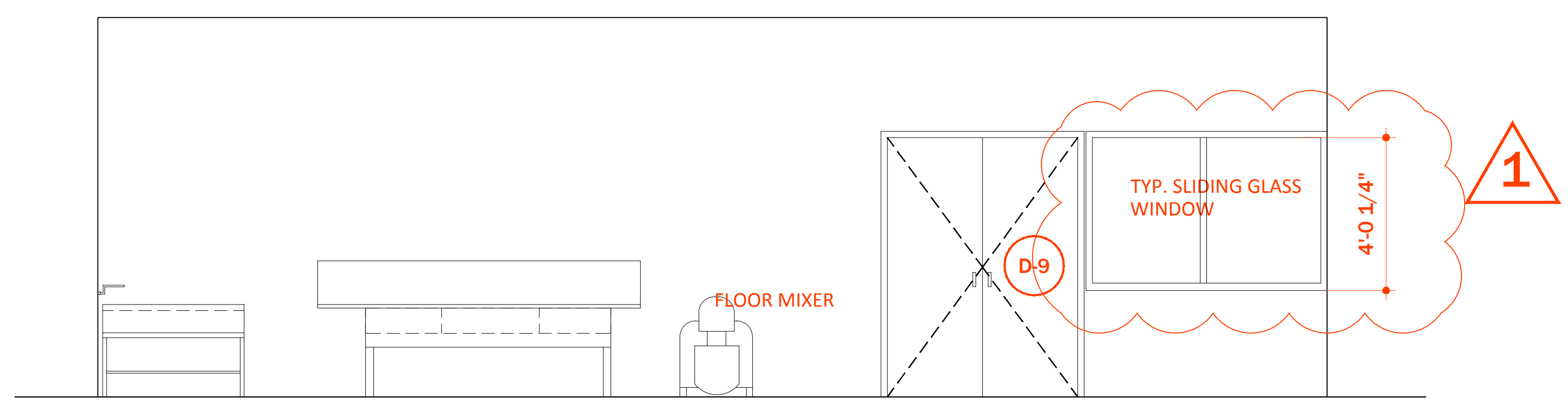
- 1 HOUR FIRE WALL
- EXISTING WALL
- TYP. FIRE EXTINGUISHER 2A:10B:C MIN. SIZE
- SMOKE DETECTOR REQUIRED IN NON-RATED EXIT CORRIDORS

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

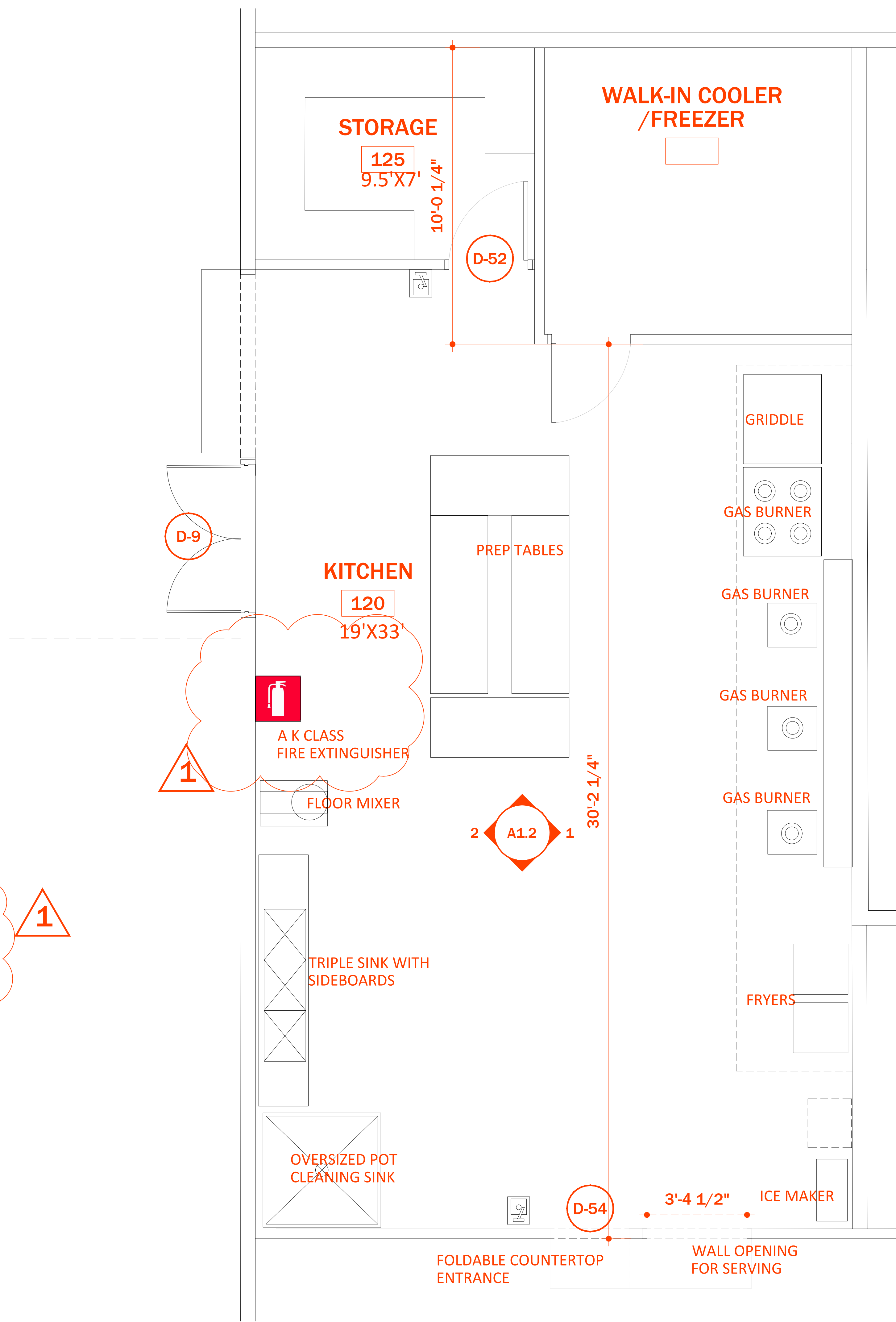
REVISION NO.	DATE
1	07/10/2020
2	
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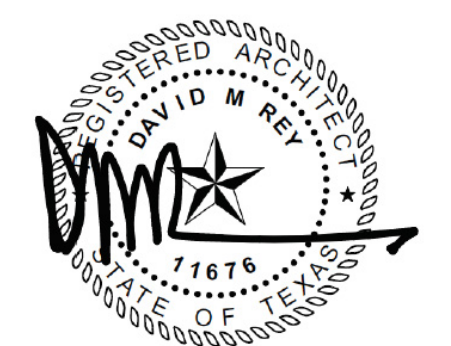
1 KITCHEN ELEVATION
SCALE: 3/8"=1'-0"



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



1 ENLARGED KITCHEN PLAN
SCALE: 1/2" = 1'-0"



Affixation Date: 07/10/2020

ENLARGED KITCHEN PLAN + ELEVATIONS

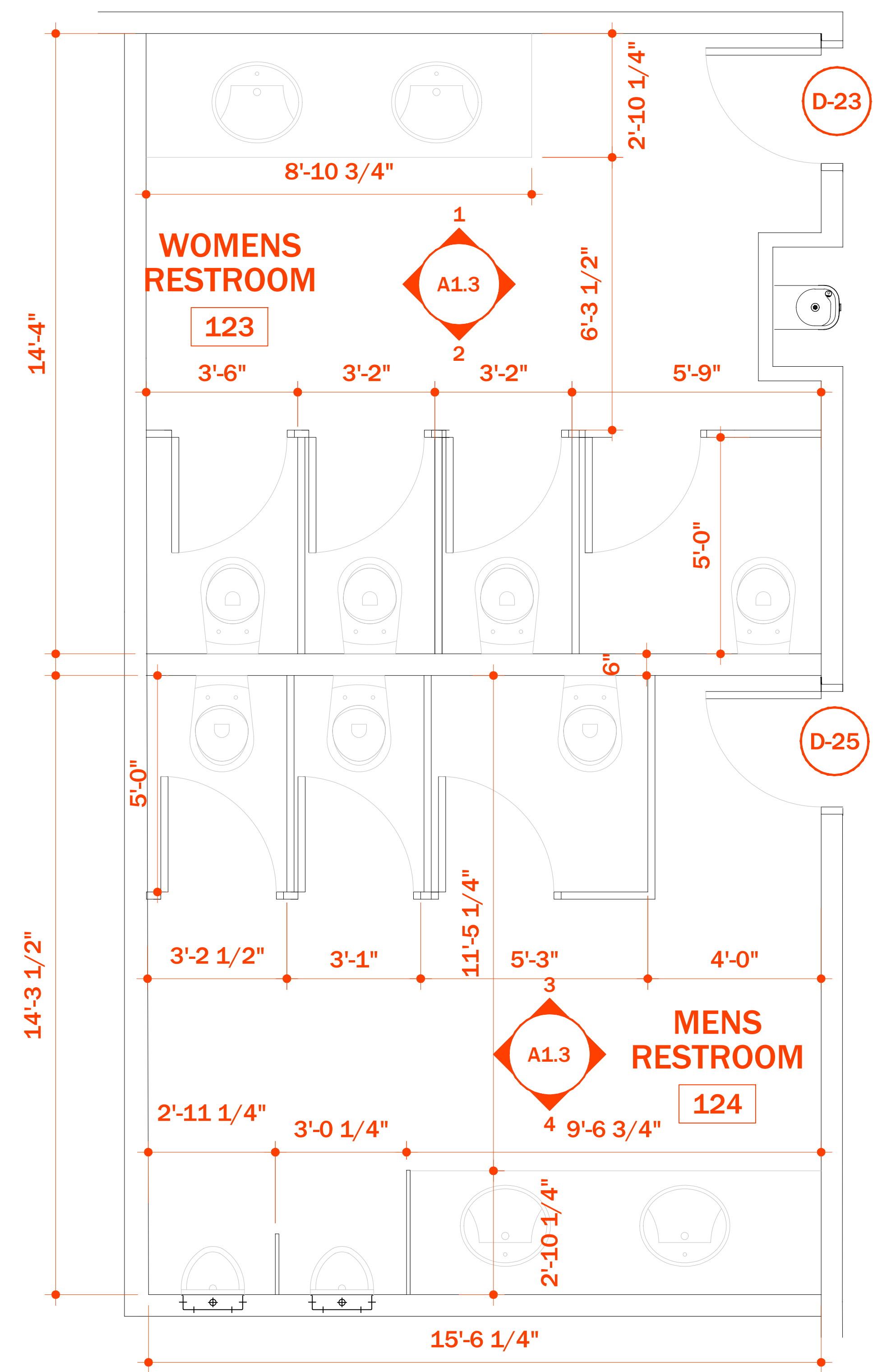
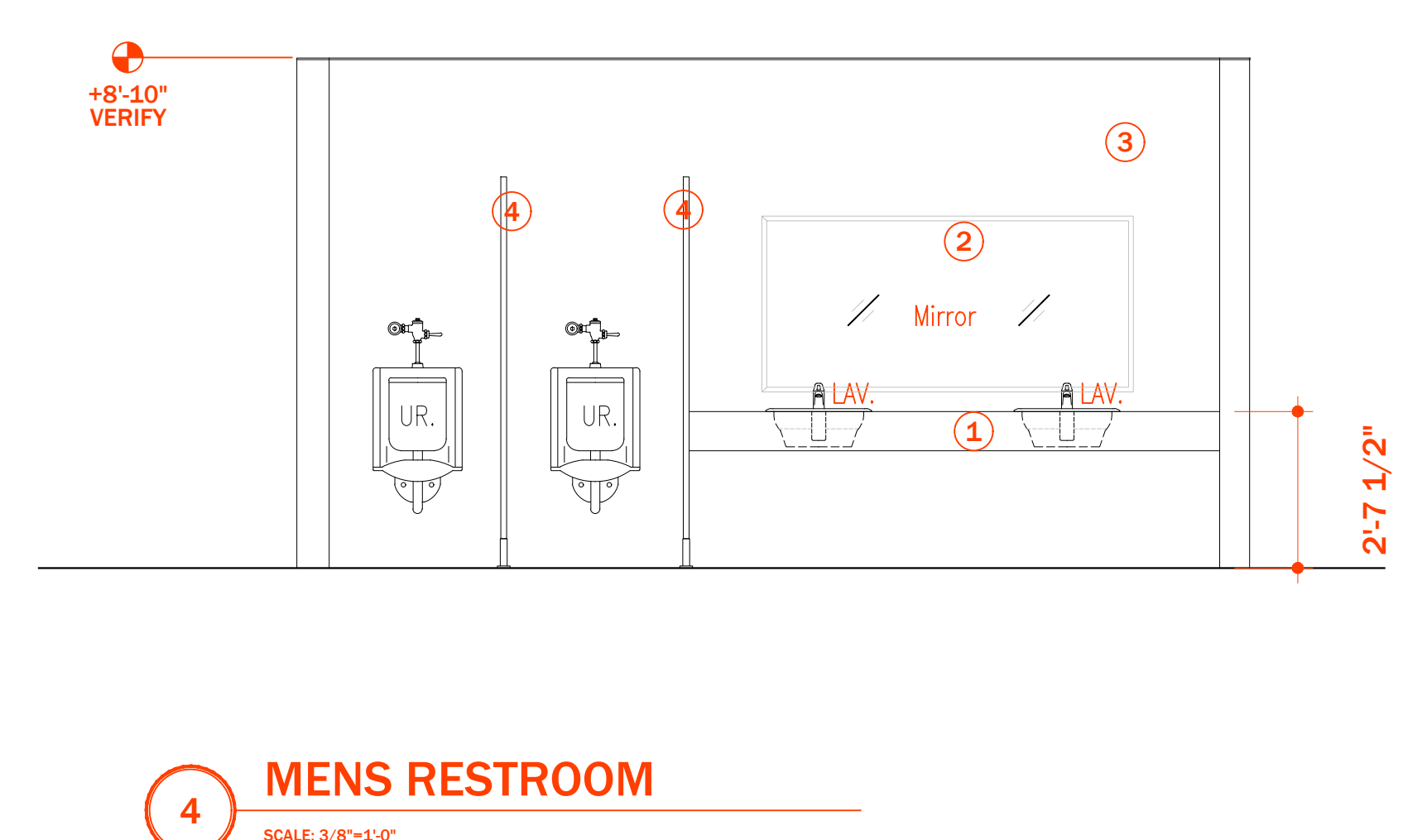
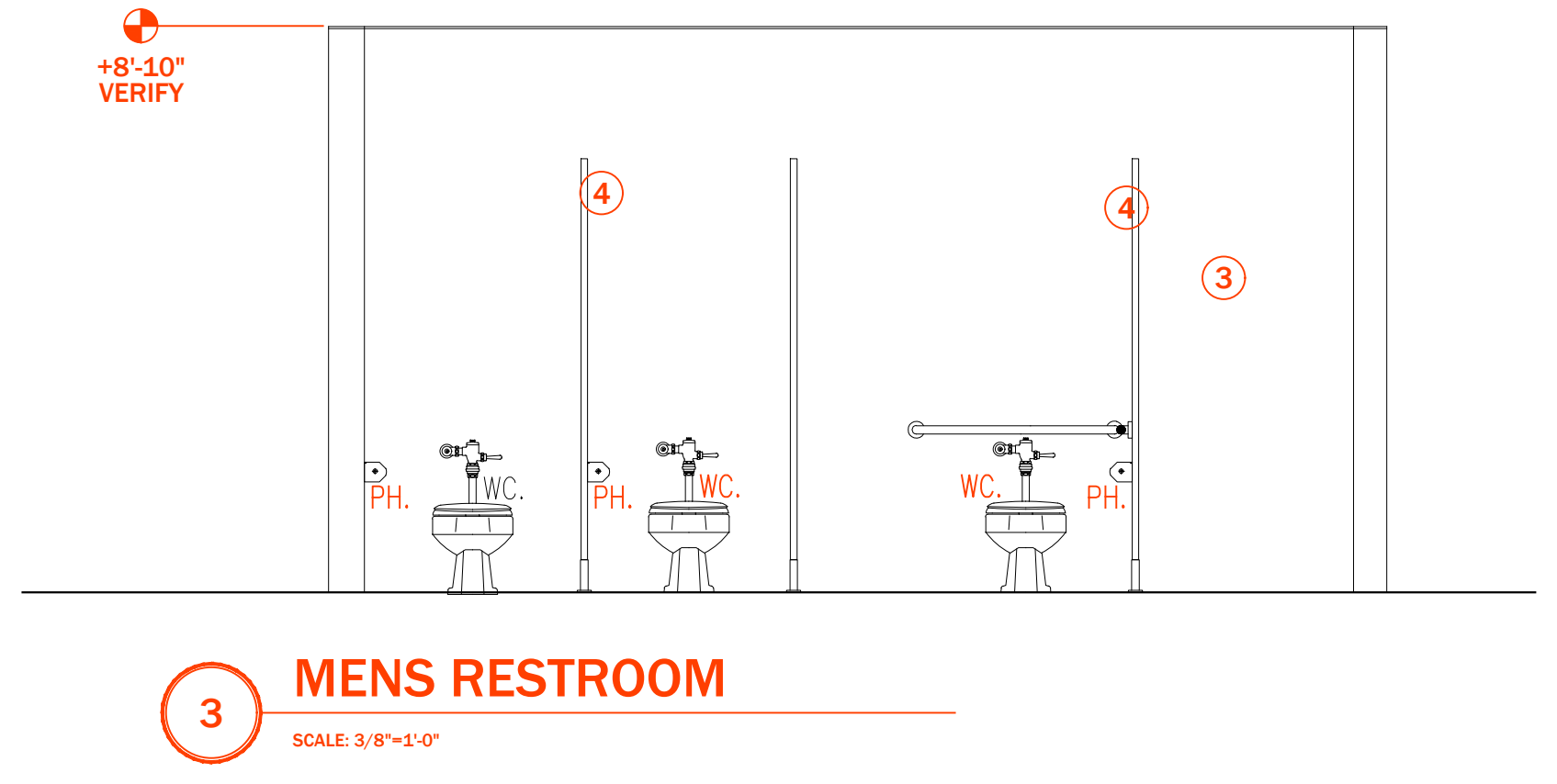
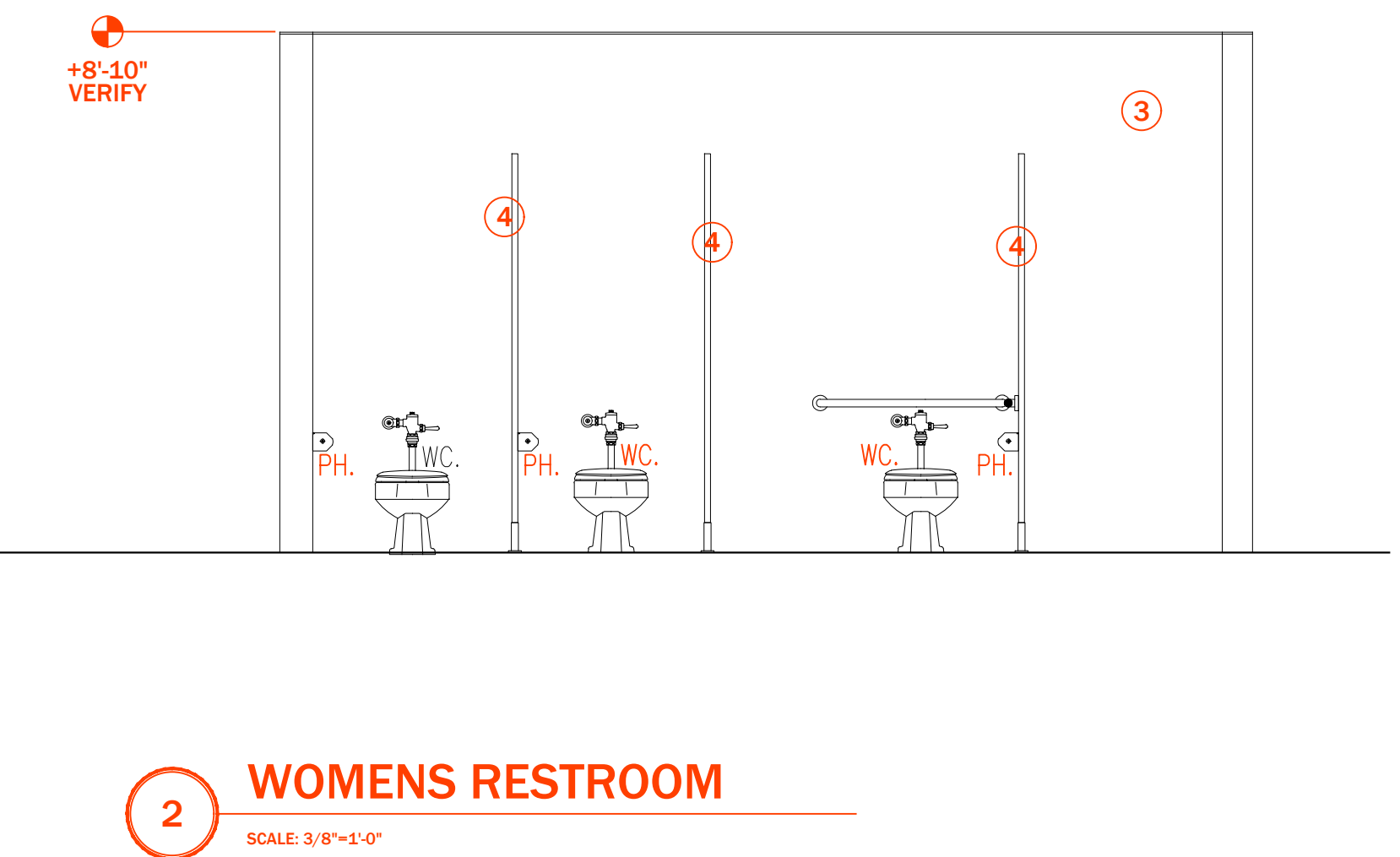
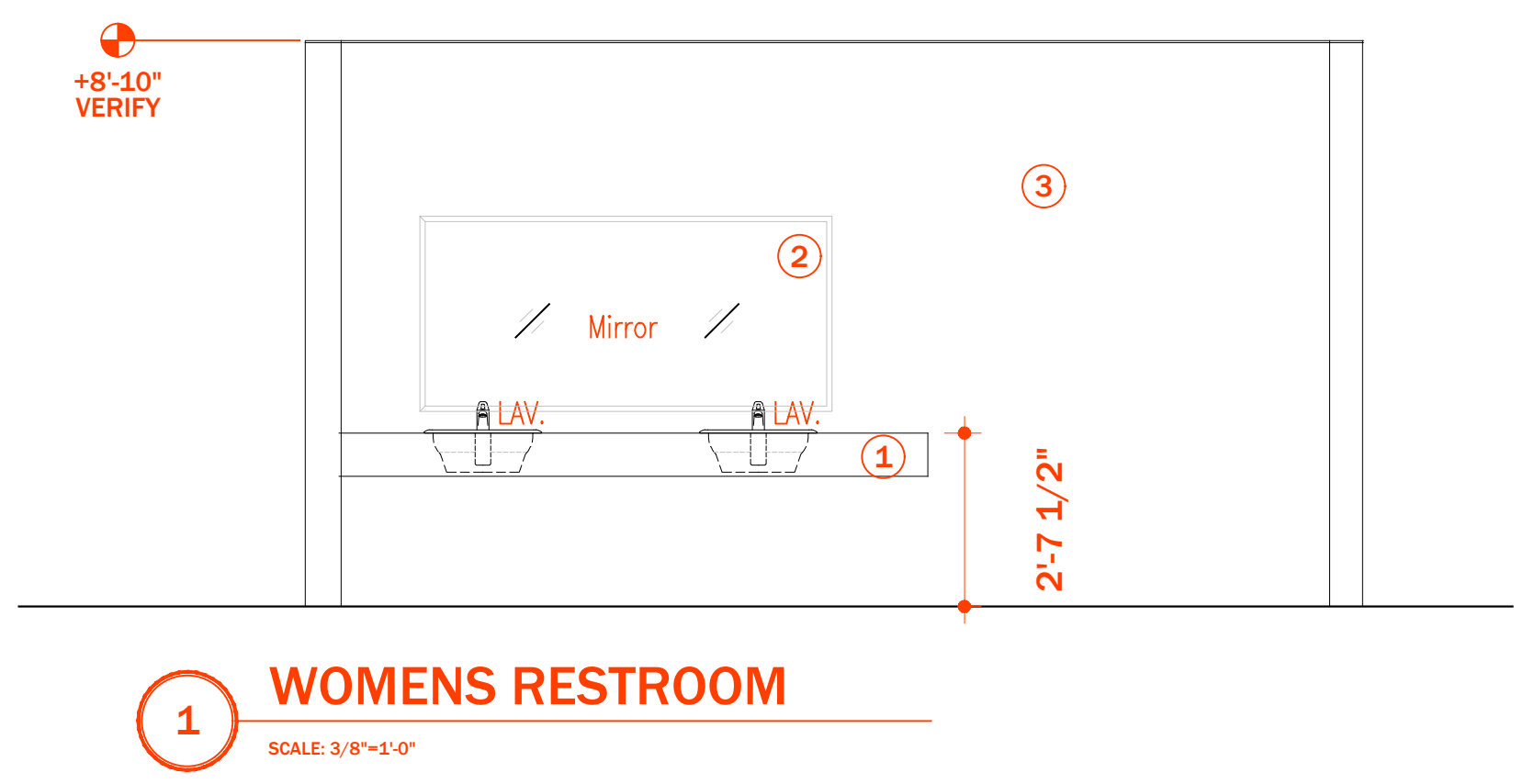
SCALE: X"=1'-0"

A1.2

DRAWN BY: YOU

KEYED NOTES

- ① SOLID SURFACE MATERIAL. FINISH SELECTED BY OWNER
- ② MIRROR SELECTED BY OWNER
- ③ WALL FINISH SELECTED BY OWNER
- ④ FLOOR MOUNTED STALL PARTITION. SELECTED BY OWNER



Affixation Date: 05/20/2020
 ENLARGED RESTROOM PLAN + ELEVATIONS

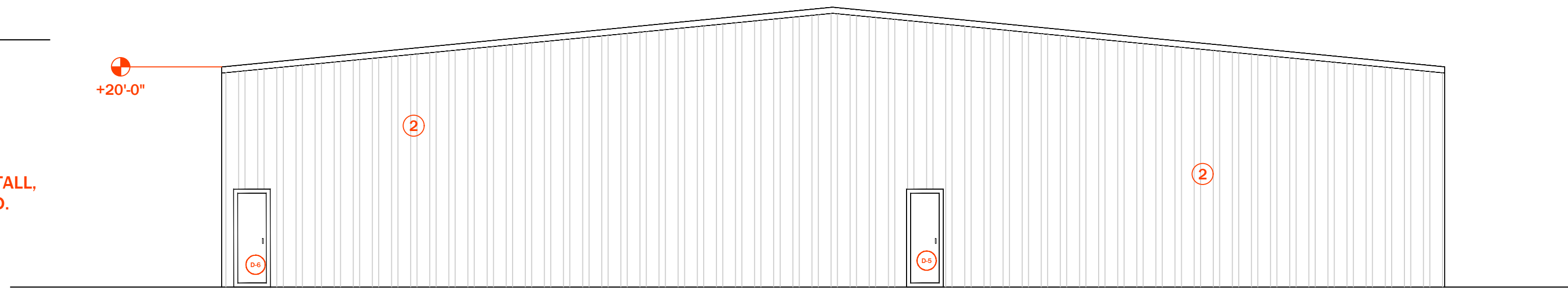
SCALE: X"=1'-0"

A1.3

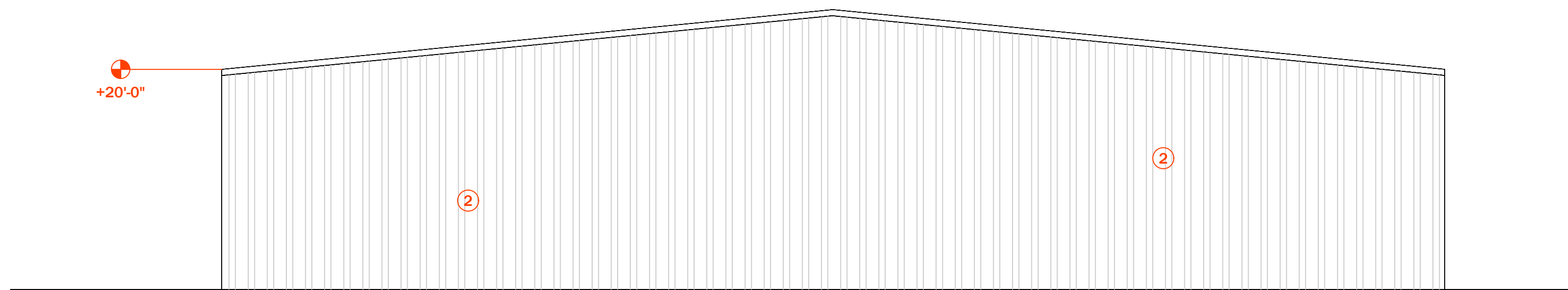
DRAWN BY: YOU

KEYED NOTES

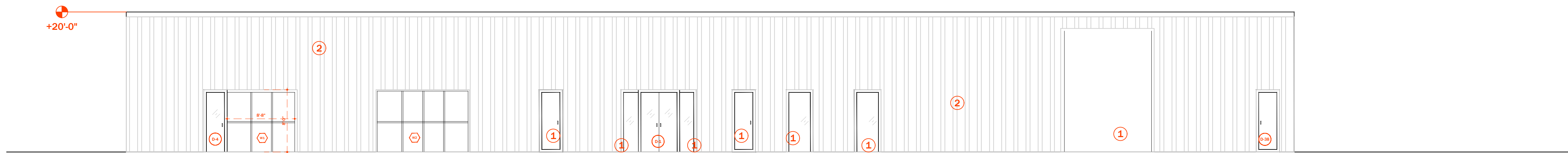
- ① EXISTING DOOR/WINDOW TO REMAIN
- ② EXISTING EXTERIOR FINISH TO REMAIN.
- ③ ADDRESS SIGNAGE SELECTED BY OWNER. 8" TALL, CONTRASTING COLOR WITH THE BACKGROUND. LIGHTING REQUIRED.



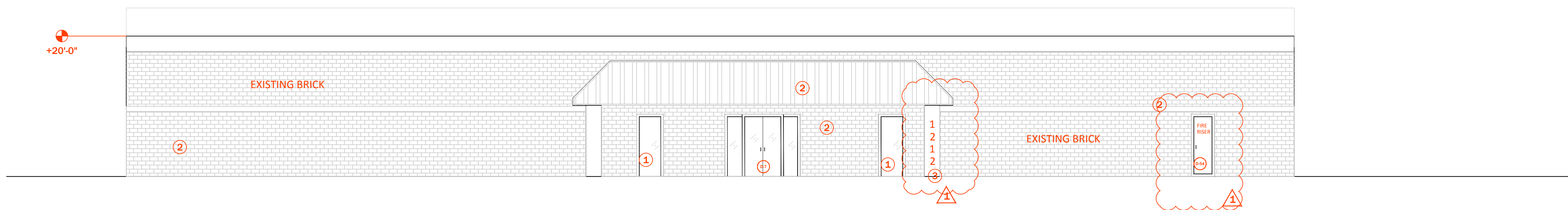
① NORTH SIDE ELEVATION
SCALE: 1/8" = 1'-0"



② SOUTH SIDE ELEVATION
SCALE: 1/8" = 1'-0"



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



④ EAST SIDE ELEVATION
SCALE: 1/8" = 1'-0"



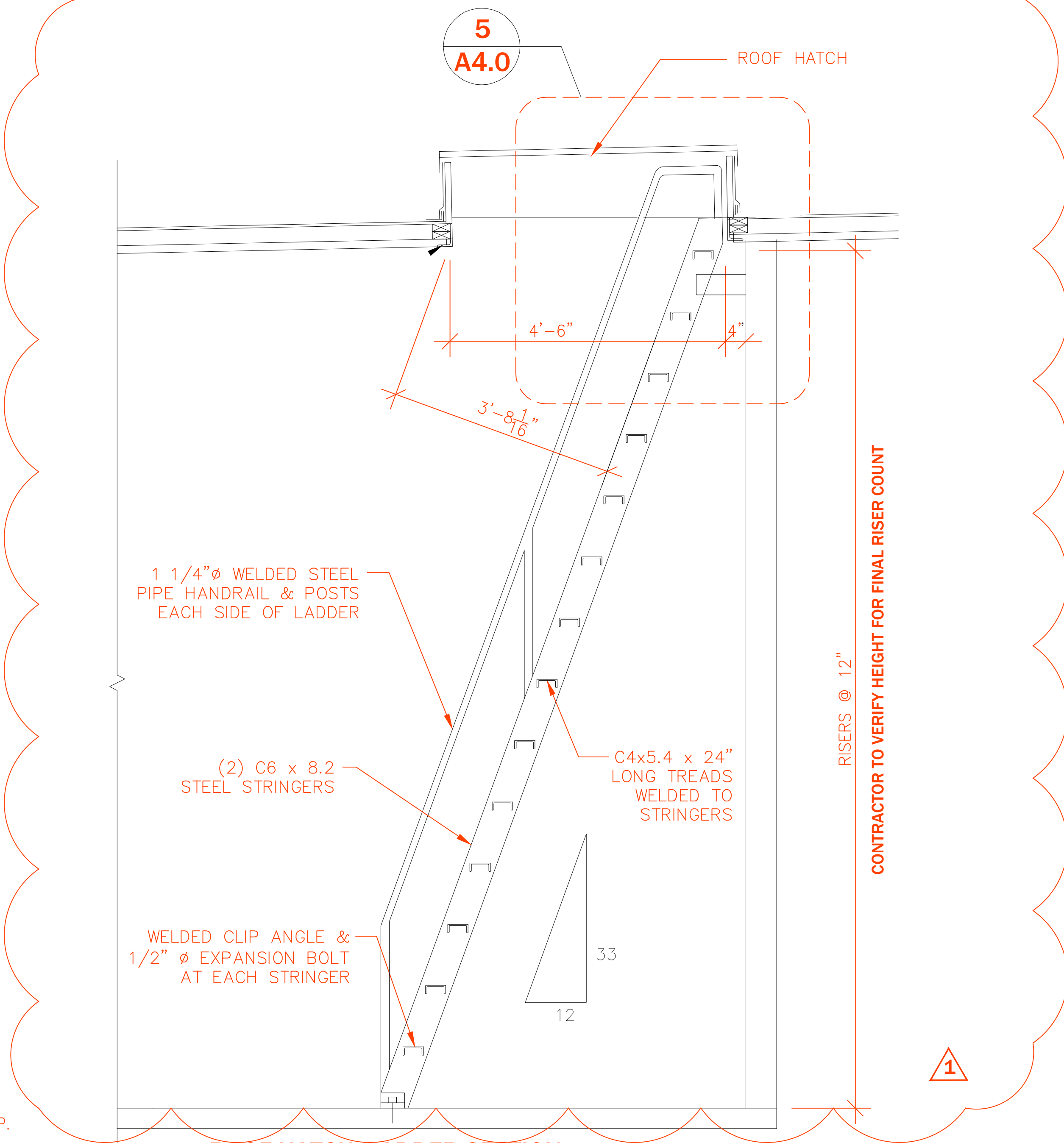
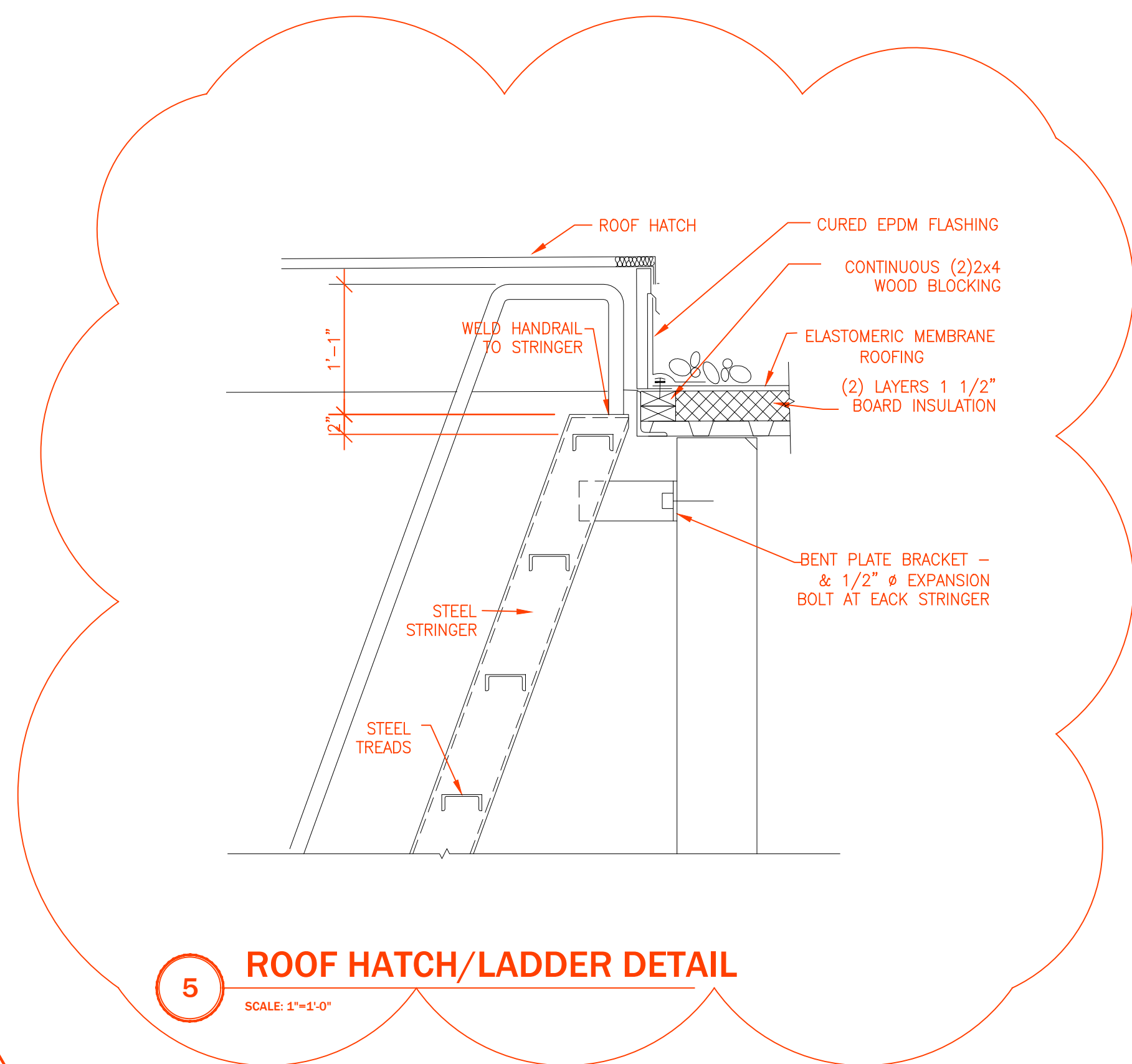
Affixation Date: 07/10/2020

ELEVATIONS

SCALE: X"=1'-0"

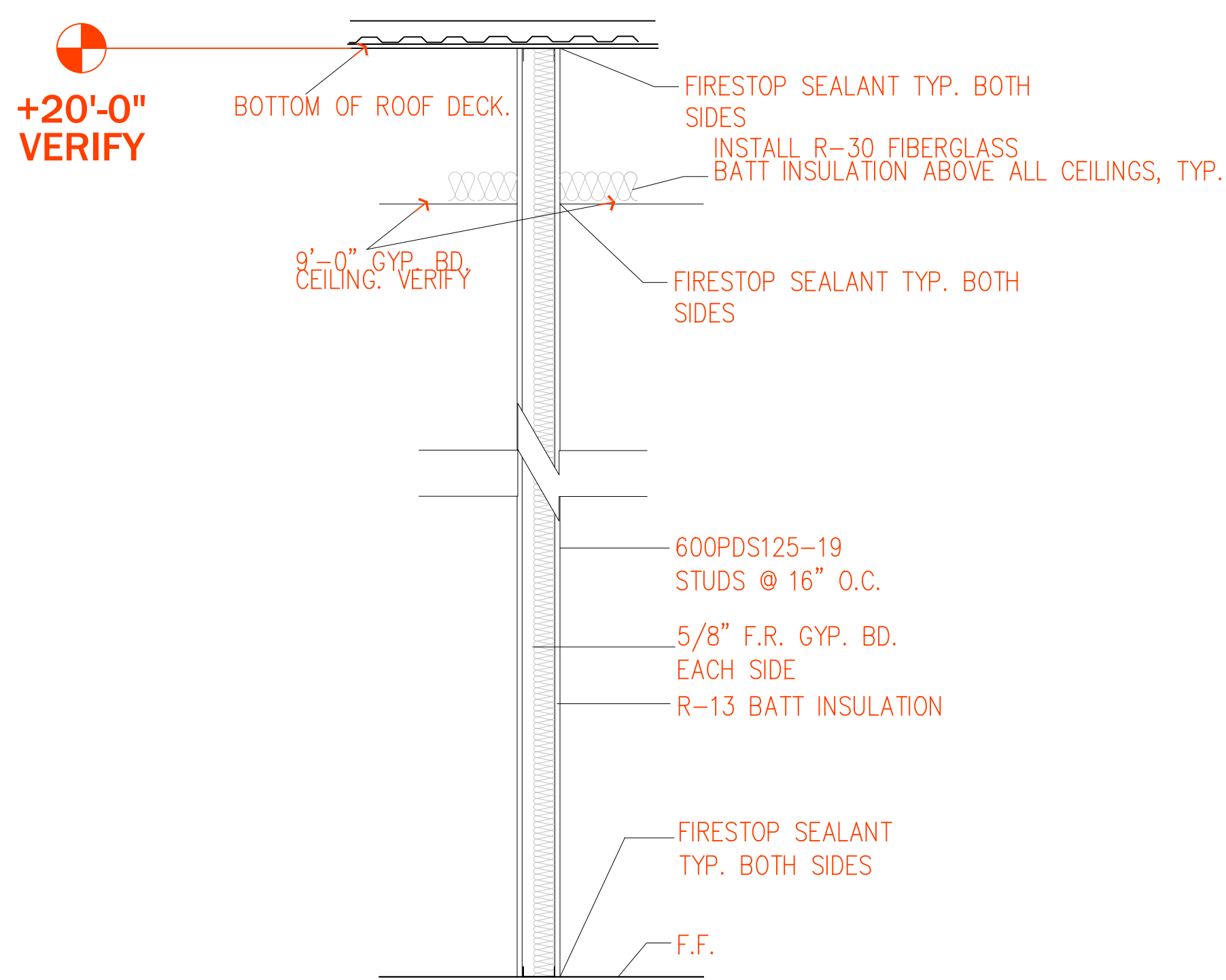
A2.0

DRAWN BY: YOU

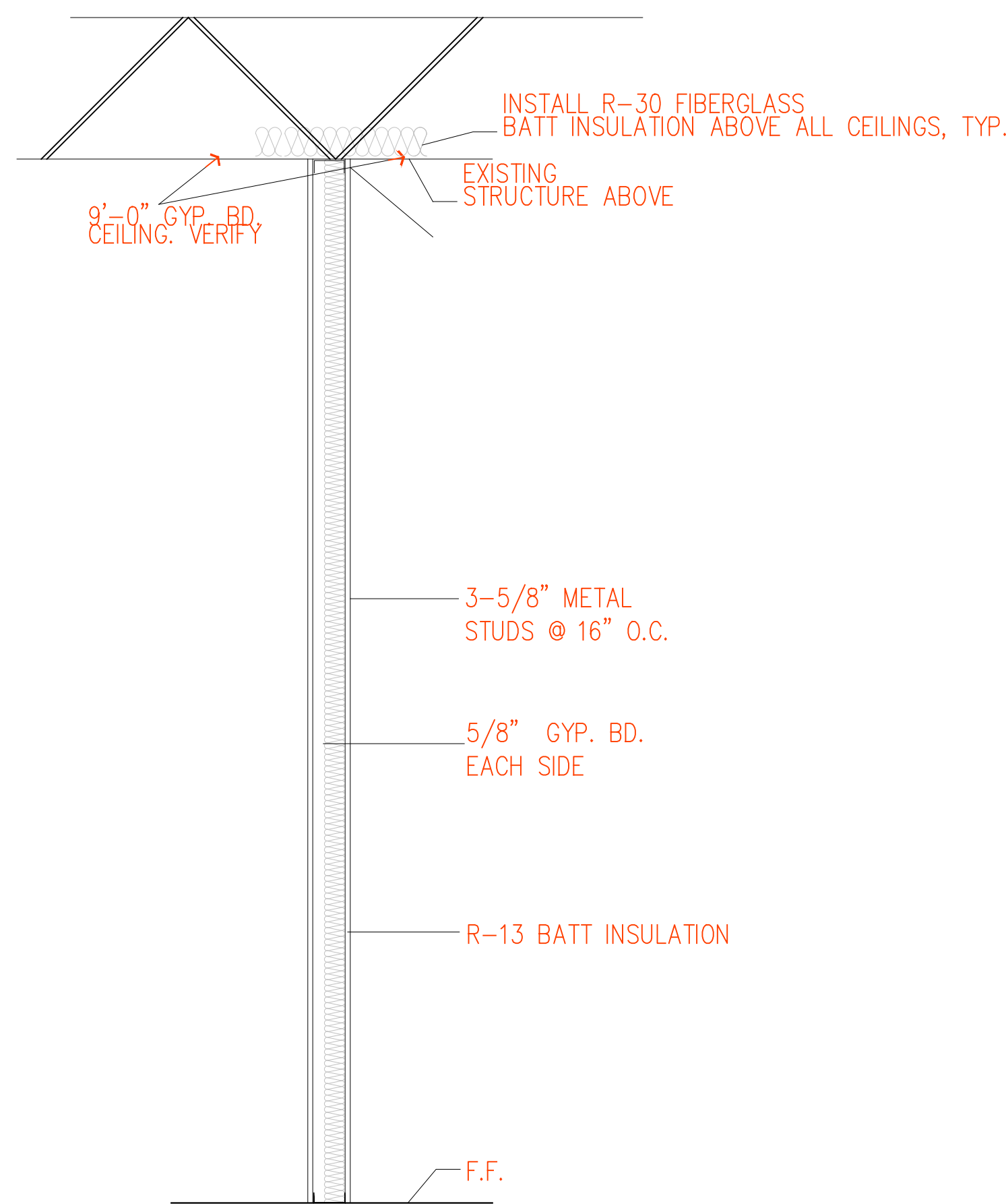


WALL TYPES

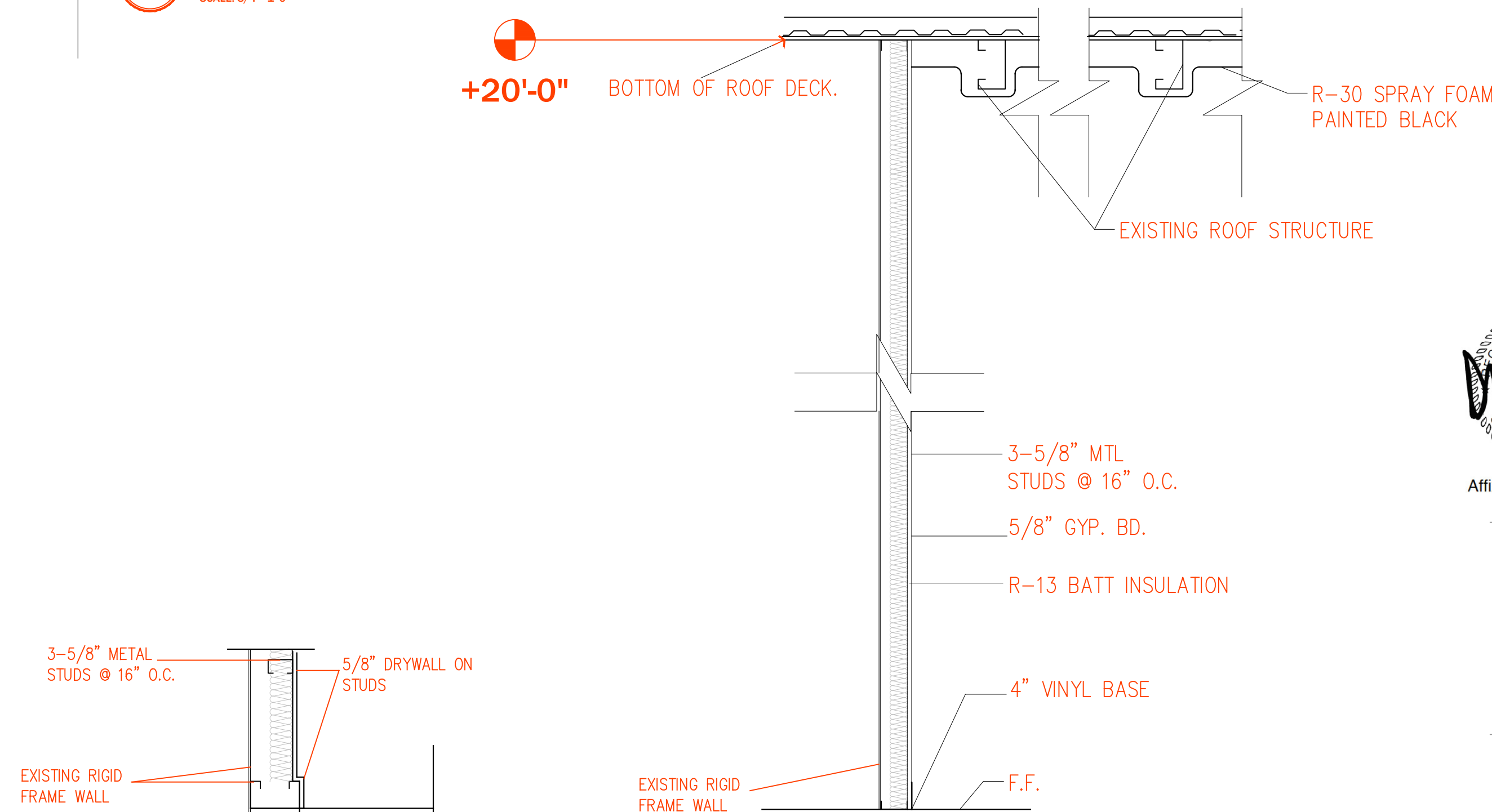
SCALE: 3/4" = 1' - 0"



1 1 HOUR UL - #U465

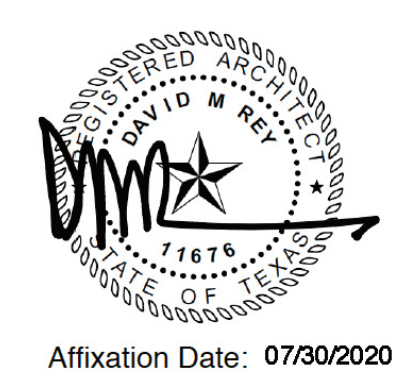


2 TYP. PARTITION WALLS UL - #U465



3 TYP. CAFETERIA WALL PLAN VIEW

TYP. CAFETERIA WALL SECTION



WALL SECTIONS + WALL TYPES

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

DOOR SCHEDULE

NO.	OPENING SIZE (W x H)	DOOR			FRAME		HARDWARE	COMMENTS
		TYPE	MAT'L	FINISH	MAT'L	FINISH		
1	6'-0" x 8'-0"		ALUM.	MANUF.	ALUM	MANUF.	1,2,3,4,7,8,9,10,11.	
2	3'-0" x 7'-0"		MTL	MANUF.	MTL	MANUF.	1,2,3,4,7,8,12	
3	3'-0" x 7'-0"		MTL	MANUF.	MTL	MANUF.	1,2,3,4,7,8,12	
4	3'-0" x 9'-0"		GLASS	MANUF.	MTL	MANUF.	1,2,3,4,7,8, 10,11, 12	
5	3'-0" x 7'-0"		MTL	MANUF.	MTL	MANUF.	1,2,3,4,7,8,12	
6	3'-0" x 7'-0"		MTL	MANUF.	MTL	MANUF.	1,2,3,4,7,8,9, 12	MUST BE KEYED OPERABLE FROM OUTSIDE
7	EXISTING TO REMAIN		ALUM.	MANUF.	ALUM	MANUF.	EXISTING TO REMAIN, ADD REQUIRED PANIC HARDWARE(12)	
8	6'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9,12	
9	6'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
10	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8, 12	EXIT SIGN ON CAFETERIA SIDE OF DOOR
11	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
12	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
13	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
14	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
15	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
16	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
17	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
18	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
19	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
20	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
21	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
22	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
23	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
24	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
25	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
26	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
27	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
28	EXISTING TO REMAIN		WD	MANUF.	MTL	MANUF.	EXISTING TO REMAIN	
29	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
30	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
31	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	

NO.	OPENING SIZE (W x H)	DOOR			FRAME		HARDWARE	COMMENTS
		TYPE	MAT'L	FINISH	MAT'L	FINISH		
32				MANUF.	ALUM	MANUF.		
33	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
34	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
35	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,3,7,8,9	3/4 HOUR RATED DOOR AND HARDWARE
36	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,3,7,8,9	3/4 HOUR RATED DOOR AND HARDWARE
37	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
38	3'-0" x 7'-0"		MTL	MANUF.	MTL	MANUF.	1,2,3,4,7,8,12	
39	3'-0" x 7'-0"		GLASS	MANUF.	MTL	MANUF.	1,7,8,9	
40	3'-0" x 7'-0"		GLASS	MANUF.	MTL	MANUF.	1,7,8,9	
41	3'-0" x 7'-0"		GLASS	MANUF.	MTL	MANUF.	1,7,8,9	
42	3'-0" x 7'-0"		GLASS	MANUF.	MTL	MANUF.	1,7,8,9	
43	3'-0" x 7'-0"		GLASS	MANUF.	MTL	MANUF.	1,7,8,9	
44	3'-0" x 7'-0"		GLASS	MANUF.	MTL	MANUF.	1,7,8,9	
45	3'-0" x 7'-0"		GLASS	MANUF.	MTL	MANUF.	1,7,8,9	
46	3'-0" x 7'-0"		GLASS	MANUF.	MTL	MANUF.	1,7,8,9	
47	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
48	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
49	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,3,7,8,9	3/4 HOUR RATED DOOR AND HARDWARE
50	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,3,7,8,9	3/4 HOUR RATED DOOR AND HARDWARE
51	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8,9	
52	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,7,8	
53	3'-0" x 7'-0"		WD	MANUF.	MTL	MANUF.	1,3,7,8,9	3/4 HOUR RATED DOOR AND HARDWARE
54	3'-0" x 7'-0"		MTL	MANUF.	MTL	MANUF.	1,7,8,9	SIGN "FIRE RISER" ON EXTERIOR

- DOOR HARDWARE :
- 4X4 HINGE, 15 PAIR
 - EXIT DEVICE
 - CLOSER
 - THRESHOLD & WEATHER STRIP
 - WALL STOP
 - FLOOR STOP
 - HINGE STOP
 - PASSAGE SET
 - LOCK SET
 - ENTRANCE LOCK
 - LEVER & PUSH BAR
 12. PANIC HARDWARE, TO COMPLY WITH UL305



ARTEC INTEGRATED LLC
7700 WINDROSE AVE
SUITE 6300
PLANO, TEXAS 75024
TYPE ENGINEERING FIRM # 16272
TYPE ARCHITECTURE BR 1107
arte solutions
502.802.4507

PROJECT
NEPALI MANDIR COMMUNITY CENTER

1212 ROYAL PARKWAY
EULESS TEXAS,
76040

DATE: PROJECT NO. DATE NO.
REVISION
1 07/10/2020
2 07/30/2020
3 08/14/2020
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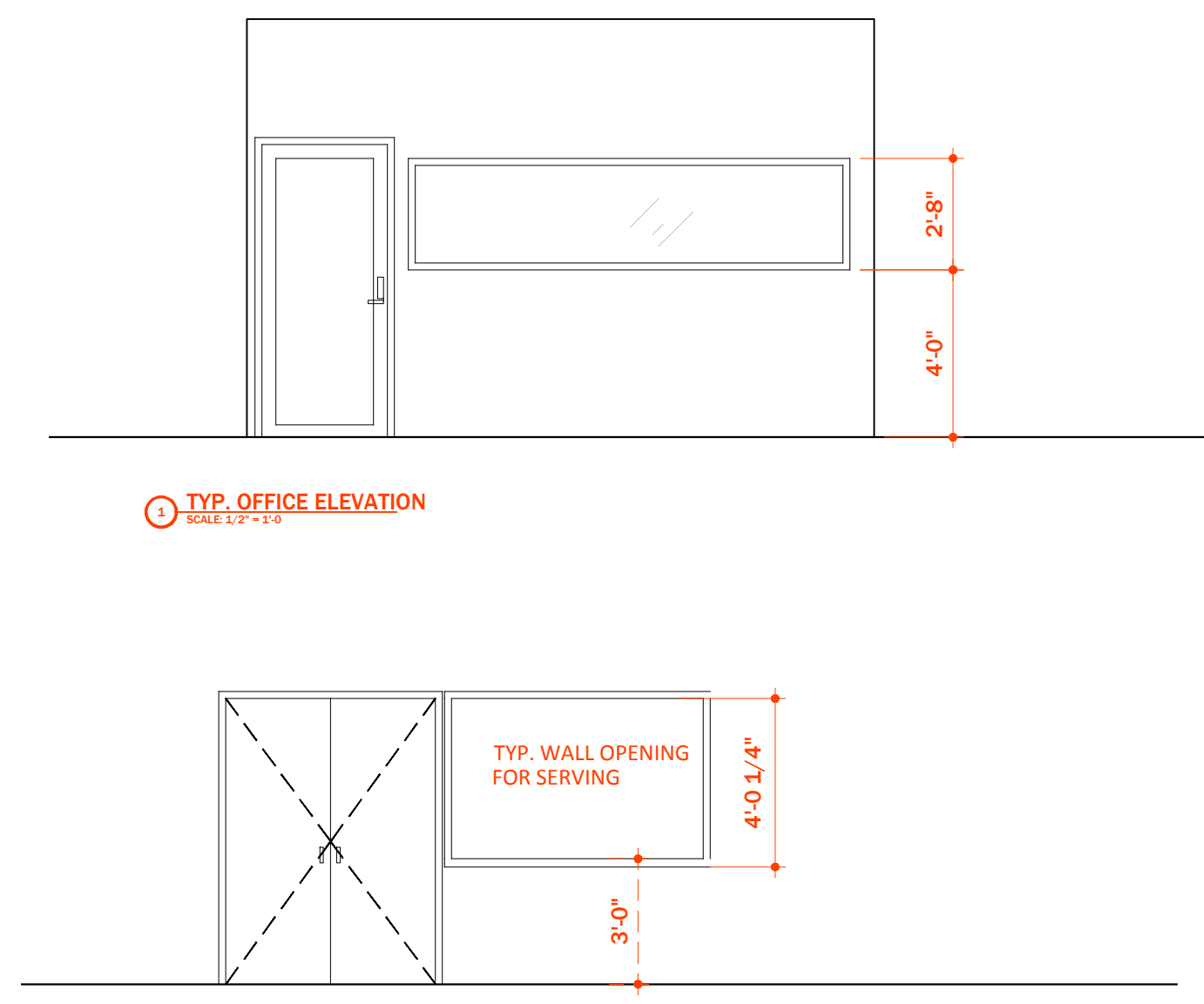
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**TABLE 508.4
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)**

OCCUPANCY	A, E		I-1 ^a , I-3, I-4		I-2		R ^b		F-2, S-2 ^b , U		B ^a , F-1, M, S-1		H-1		H-2		H-3, H-4		H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
A, E	N	N	1	2	2	NP	1	2	N	1	1	2	NP	NP	3	4	2	3	2	NP
I-1 ^a , I-3, I-4	—	—	N	N	2	NP	1	NP	1	2	1	2	NP	NP	3	NP	2	NP	2	NP
I-2	—	—	—	—	N	N	2	NP	2	NP	2	NP	NP	NP	3	NP	2	NP	2	NP
Ra	—	—	—	—	—	—	N	N	1'	2'	1	2	NP	NP	3	NP	2	NP	2	NP
F-2, S-2 ^b , U	—	—	—	—	—	—	—	—	N	N	1	2	NP	NP	3	4	2	3	2	NP
B ^a , F-1, M, S-1	—	—	—	—	—	—	—	—	—	—	N	N	NP	NP	2	3	1	2	1	NP

WINDOW SCHEDULE

NO.	OPENING SIZE (W x H)	FRAME		COMMENTS
		MAT'L	FINISH	
1	8'-8" x 8'-0"	ALUM	MANUF.	STOREFRONT WINDOW.
2	12'-0" x 9'-0"	MTL	MANUF.	STOREFRONT WINDOW.
3	11'-0" x 2'-8"	MTL	MANUF.	
4	13'-0" x 2'-8"	MTL	MANUF.	
5	11'-0" x 2'-8"	MTL	MANUF.	
6	13'-0" x 2'-8"	MTL	MANUF.	
7	10'-0" x 2'-8"	ALUM	MANUF.	
8	11'-0" x 2'-8"	MTL	MANUF.	
9	11'-0" x 2'-8"	MTL	MANUF.	
10	6'-0" x 2'-8"	MTL	MANUF.	
11	15'-0" x 2'-8"	MTL	MANUF.	
12	7'-0" x 2'-8"	MTL	MANUF.	
13	10'-0" x 2'-8"	MTL	MANUF.	
14	4'-0" x 4'-0"	MTL	MANUF.	WALL OPENING FOR SERVING. METAL OH DOOR ATTACHED
15	6'-0" x 4'-0"	MTL	MANUF.	WALL OPENING FOR SERVING. METAL OH DOOR ATTACHED



2



Affixation Date: 08/14/2020

SCHEDULES

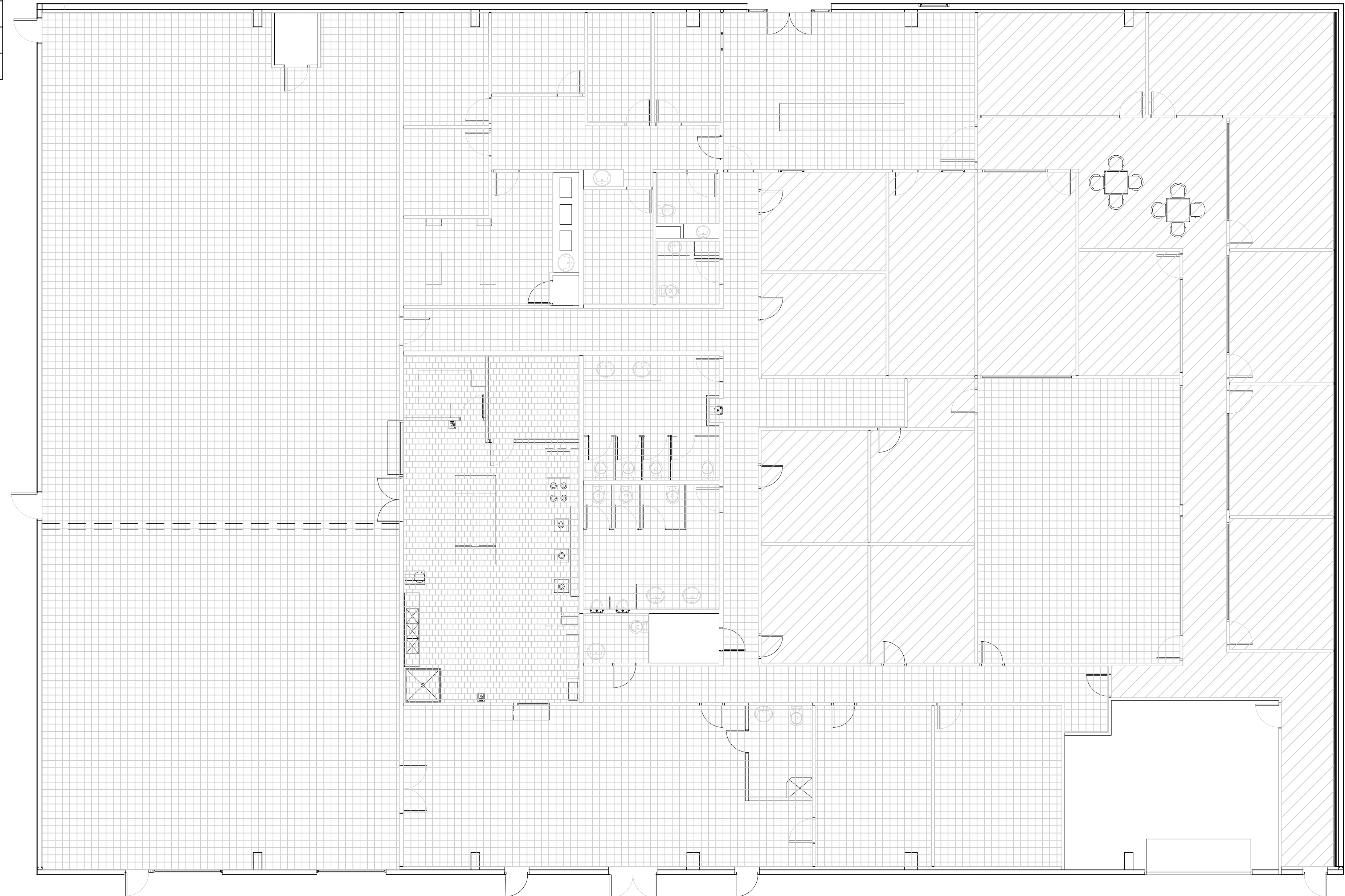
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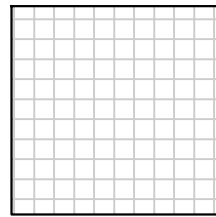
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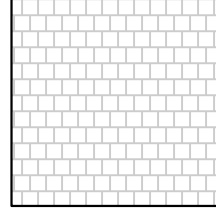
ROOM FINISH SCHEDULE

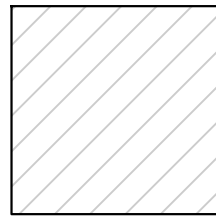
ROOM	DESCRIPTION	FLOOR	BASE	CEILING	WALLS	COMMENTS
101	CAFETERIA	CERAMIC TILE	4" VINYL BASE	PAINTED INSULATION W/ DECORATED DROP GRID	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
102	EXAM	CERAMIC TILE	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
103	EXAM	CERAMIC TILE	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
104	EXAM	CERAMIC TILE	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
105	DOCTOR OFFICE	CERAMIC TILE	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
106	RECEPTION	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
107	ENTRANCE	CERAMIC TILE	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
108	OFFICE	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
109	OFFICE	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
110	OFFICE	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
111	OFFICE	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
112	OFFICE	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
113	OFFICE	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
114	EXIT	CERAMIC TILE	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
115	STORAGE	EXISTING CONC.	EXISTING	EXISTING	EXISTING	ALL FINISHES TO BE SELECTED BY OWNER
116	GENERAL STORE	CERAMIC TILE	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
117	GENERAL STORE	CERAMIC TILE	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
118	BATHROOM	CERAMIC TILE	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
119	MAIN ENTRANCE	CERAMIC TILE	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
120	KITCHEN	NON-SLIP TILE	TILE BASE	ACOUSTIC CEILING PANEL	SEMI-GLOSS WASHABLE	ALL FINISHES TO BE SELECTED BY OWNER
121	NURSE/INTAKE	CERAMIC TILE	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
123	WOMEN'S RESTROOM	CERAMIC TILE	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
124	MEN'S RESTROOM	CERAMIC TILE	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
125	STORAGE	NON-SLIP TILE	TILE BASE	ACOUSTIC CEILING PANEL	SEMI-GLOSS WASHABLE	ALL FINISHES TO BE SELECTED BY OWNER

ROOM	DESCRIPTION	FLOOR	BASE	CEILING	WALLS	COMMENTS
126	RESTROOM	EXISTING TO REMAIN	EXISTING TO REMAIN	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
127	TUTORING ROOM	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
128	TUTORING ROOM	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
129	TUTORING ROOM	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
130	TUTORING ROOM	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
131	CLOSET	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
132	NCSH HALL	TILE	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
133	OFFICE	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
134	WAITING	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
135	CONFERENCE	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
136	TUTORING ROOM	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
137	TUTORING ROOM	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
138	TUTORING ROOM	CARPET	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER
139	FOYER	CERAMIC TILE	4" VINYL BASE	ACOUSTIC CEILING PANEL	PAINTED ORANGE PEEL TEXTURE.	ALL FINISHES TO BE SELECTED BY OWNER



 CERAMIC TILE

 NON-SLIP QUARRY TILE

 CARPET

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



ARTEC INTEGRATED LLC
7700 WINDROSE AVE
SUITE 6300
PLANO, TEXAS 75024
TYPE ENGINEERING FIRM # 18272
TYPE ARCHITECTURE 08-1107
arte-int.com
502.882.4507

PROJECT
NEPALI MANDIR COMMUNITY CENTER

1212 ROYAL PARKWAY
EULESS TEXAS,
76040

DATE: PROJECT NO. DATE NO.

REVISION DATE

1
2
3
4
5
6

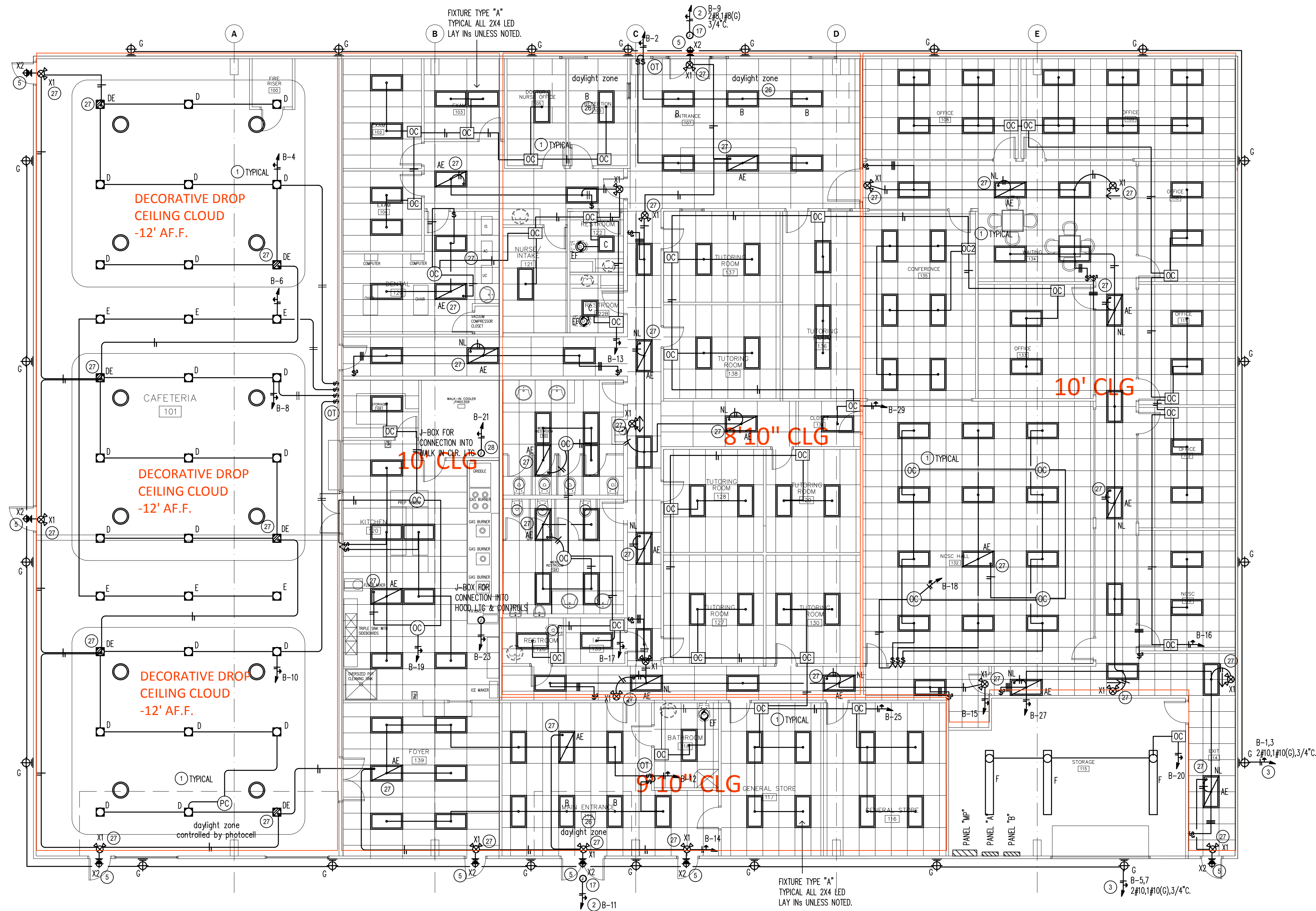


Affixation Date: 05/20/2020

FINISH PLAN + SCHEDULE

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

A5.1
DRAWN BY: YOU



ELECTRICAL KEYED NOTES:

- 1 PROVIDE SWITCHING OF LIGHT FIXTURES PER IECC 405.2.2 REQUIREMENTS.
- 2 EXTERIOR TIME CONTROLLER SHALL HAVE 7 DAY AND SEASONAL ADJUSTMENT WITH 4 HR. BACKUP PER IECC 405.2.4 REQUIREMENTS. TIMER TO BE ADJUSTED TO COME ON AT DUSK AND TURN OFF PER OWNERS DIRECTIONS AND SHALL COMPLY WITH LOCAL MUNICIPAL LIGHTING ORDINANCE.
- 3 EXTERIOR TIME CONTROLLER SHALL HAVE 7 DAY AND SEASONAL ADJUSTMENT WITH 4 HR. BACKUP PER IECC 405.2.4 REQUIREMENTS. TIMER TO BE ADJUSTED TO COME ON AT DUSK AND TURN OFF AT DAY BREAK. LIGHTS ON THIS CIRCUIT INTENDED FOR NIGHT TIME SECURITY.
- 4 HOT WATER RECIRCULATING PUMP TO BE CONTROLLED BY TIME CLOCK PER IECC 404.6 REQUIREMENTS.
- 5 PROVIDE EGRESS EXIT DISCHARGE ILLUMINATION PER IFC 1006 REQUIREMENTS.
- 6 INSTALL WEATHER RESISTANT WITH UV RESISTANCE COVER, GFI PROTECTED RECEPTACLE PER NEC 406.8.
- 7 INSTALL WEATHER RESISTANT WITH UV RESISTANCE COVER, GFI PROTECTED RECEPTACLE FOR HVAC EQUIPMENT PER NEC 210.63 AND NEC 406.8 REQUIREMENTS.
- 8 INSTALL GROUNDING AND BONDING PER NEC 250 REQUIREMENTS.
- 9 PROVIDE GROUNDING ELECTRODE SYSTEM PER NEC 250.50, 250.52 WITH PROPER BONDING.
- 10 PROVIDE INTERSYSTEM BONDING WITH MIN. # 6 AWG CU. PER NEC 250.94 REQUIREMENTS.
- 11 MOUNT RECEPTACLE AT +42" GFL.
- 12 GFI PROTECTED RECEPTACLE AS REQUIRED PER NEC 210.8 (B) (5).
- 13 PROVIDE GFI PROTECTED RECEPTACLE FOR DRINKING FOUNTAIN CONNECTION PER NEC 422.52.
- 14 PROVIDE MEANS OF CIRCUIT & EQUIPMENT PROTECTION PER NEC 440.21.
- 15 PROVIDE A COMPLETE PANEL DIRECTORY PER NEC 408.4 REQUIREMENTS.
- 16 ALL 15 AND 20 AMP 125 V. RECEPTACLES IN KITCHEN AREA TO BE GFI PROTECTED PER NEC 210.8 (B) (2).
- 17 WEATHER RESISTANT J-BOX ON FASCIA FOR SIGN CONNECTION. VERIFY EXACT LOCATION PRIOR TO ROUGH IN.
- 18 3/4" CONDUIT WITH PULL STRING UP TO ACCESSIBLE CEILING.
- 19 INSTALL SERVICE EQUIPMENT PER NEC 230 REQUIREMENTS AND OVERCURRENT PROTECTION PER NEC 240 REQUIREMENTS.
- 20 INSTALL METERING AND ENCLOSURE PER ELECTRIC UTILITY CO. REQUIREMENTS AND STANDARDS.
- 21 INSTALL PANELBOARDS PER NEC 408 REQUIREMENTS.
- 22 4"x8"x3/4" FIRE RETARDANT COATED PLYWOOD FOR TELEPHONE AND DATA EQUIPMENT MOUNTING.
- 23 CIRCUIT THRU SHUNT TRIP BREAKER CONNECTED INTO EXHAUST HOOD FIRE SUPPRESSION SYSTEM.
- 24 J-BOX FOR CONNECTION INTO FIRE SPRINKLER TAMPER SWITCH.
- 25 J-BOX FOR CONNECTION INTO FIRE SPRINKLER FLOW MONITOR.
- 26 FIXTURES IN THIS DAYLIGHT ZONE HAVE INTEGRAL OCCUPANCY AND PHOTOCELL SENSOR TO COMPLY WITH IECC SECTION 405 REQUIREMENTS.
- 27 EMERGENCY BATTERY PACK IN LIGHT FIXTURE TO BE WIRED INTO NON SWITCHED LIGHTING CIRCUIT.
- 28 COMPLY WITH NEC 300.7(A) FOR CONDUIT INSTALLATIONS AT COLD STORAGE AND EXTERIOR APPLICATIONS.

1 REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"



DATE:	PROJECT NO.:	DATE NO.:	DATE:



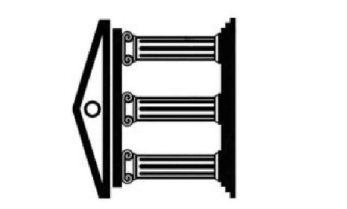
Affixation Date: 05/20/2020

REFLECTED CEILING PLAN

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

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DRAWN BY: YOU



MECHANICAL KEYED NOTES:

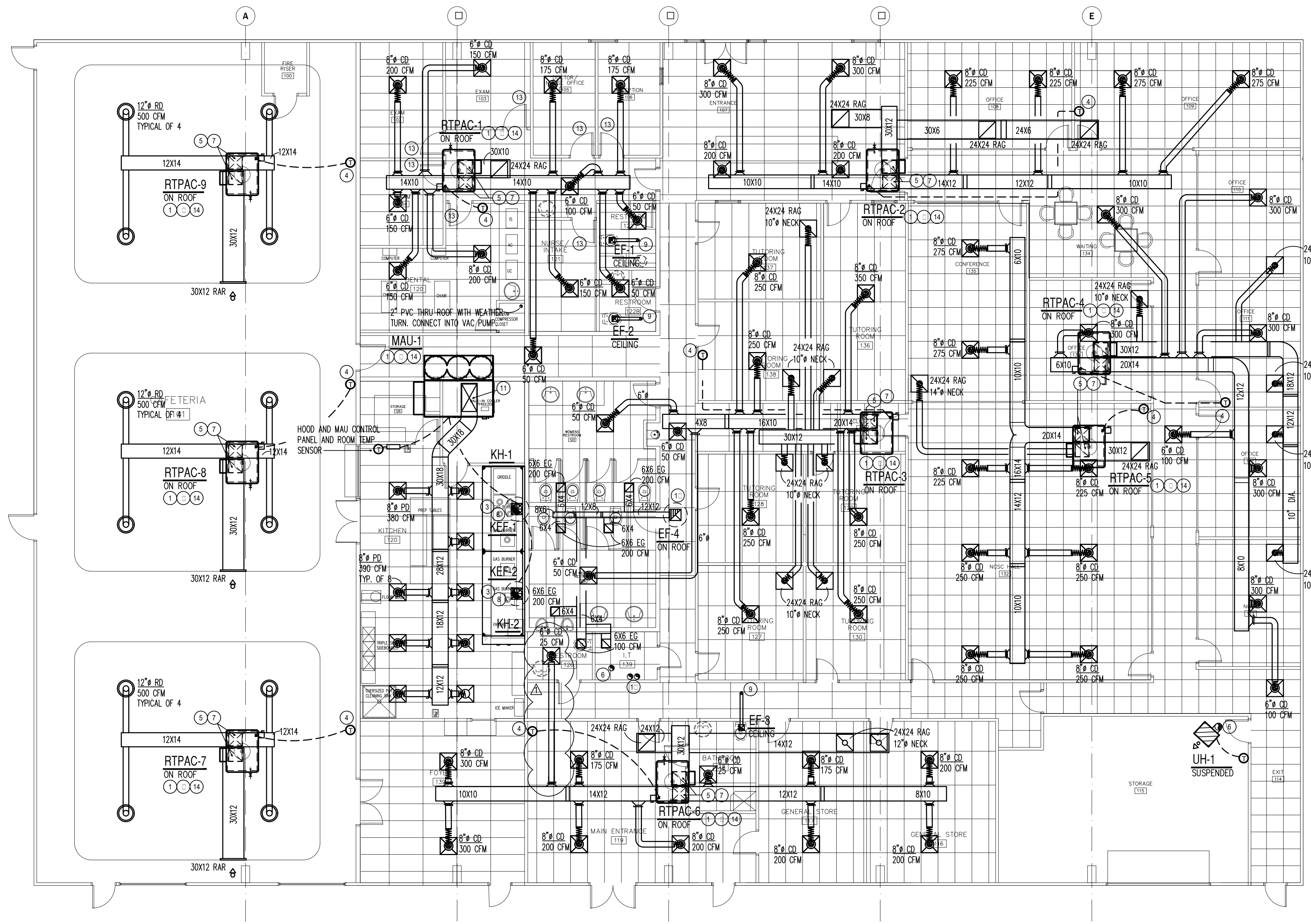
- 1 MOUNT UNIT WITH PROPER CLEARANCE OR INSTALL GUARD PER IMC 304.9 REQUIREMENTS.
- 2 DISCHARGE CONDENSATE AS REQUIRED PER IMC 307.2 AND IPC SECTION 314 REQUIREMENTS.
- 3 INSTALL GREASE EXHAUST DUCT AS REQUIRED IN IMC SECTION 506.
- 4 PROVIDE SOLID STATE PROGRAMMABLE T-STAT WITH 7 DAY & SET BACK FUNCTIONS PER IECC 403.2.4 REQUIREMENTS.
- 5 SUPPLY AND RETURN AIR DUCTS TO BE PROPERLY INSULATED AND SEALED PER IECC 403.2.7 REQUIREMENTS.
- 6 4" DOUBLE WALL FLUE UP THRU ROOF WITH FLUE CAP. FLUE VENT SHALL BE INSTALLED PER IMC 802 REQUIREMENTS.
- 7 FULL SIZE SUPPLY AND RETURN AIR DUCT DOWN THRU ROOF.
- 8 14" WELDED SEAM STAINLESS STEEL EXHAUST DUCT UP THRU ROOF TO EXH FAN.
- 9 4" EXHAUST DUCT UP THRU ROOF WITH WEATHER CAP.
- 10 (2) 6" COMBUSTION AIR DUCTS UP THRU ROOF WITH WEATHER CAP. INSTALL COMBUSTION AIR PER IMC SECTION 703, 708, 709 AND 710 REQUIREMENTS.
- 11 FULL SIZE MAKE UP AIR DUCT DOWN THRU ROOF.
- 12 12X12 EXHAUST DUCT UP THRU ROOF TO EXHAUST FAN.
- 13 UNDERCUT DOOR 1.5" FOR RETURN AIR.
- 14 MOUNT UNIT OVER EXISTING STRUCTURAL STEEL GRID. REFER TO STRUCTURAL PLANS FOR ADDITION SUPPORT REQUIREMENTS.

COMcheck Software Version 4.1.1.0
Mechanical Compliance Certificate

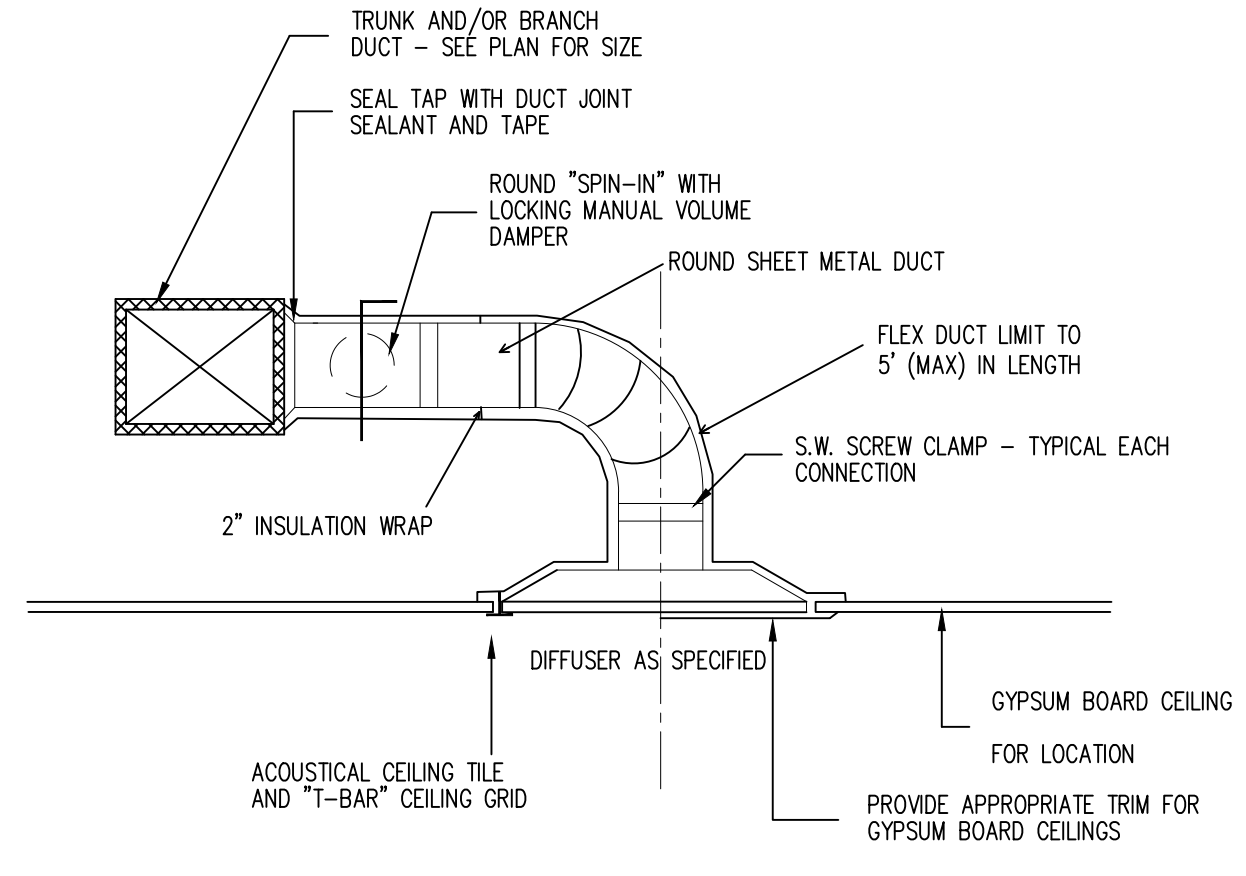
Project Information	
Energy Code:	2015 IECC
Project Title:	Euless, Texas
Location:	3a
Climate Zone:	New Construction
Project Type:	
Construction Site:	Owner/Agent: Designer/Contractor:
NAPALI MANDIR COMMUNITY CENTER, EULESS, TX	

Additional Efficiency Package(s)	
Unspecified	
Mechanical Systems List	
Quantity	System Type & Description
1	HVAC System 1 (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 75 kBtu/h Proposed Efficiency = 80.00% E1, Required Efficiency: 80.00% E1 or 78% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 48 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 14.00 SEER, Required Efficiency: 14.00 SEER Fan System: None
8	HVAC System 2 (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 96 kBtu/h Proposed Efficiency = 80.00% E1, Required Efficiency: 80.00% E1 or 78% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 60 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 14.00 SEER, Required Efficiency: 14.00 SEER Fan System: None
1	HVAC System 3 (Single Zone): Heating: 1 each - Unit Heater, Gas, Capacity = 30 kBtu/h Proposed Efficiency = 80.00% E1, Required Efficiency: 80.00% E1 Fan System: None

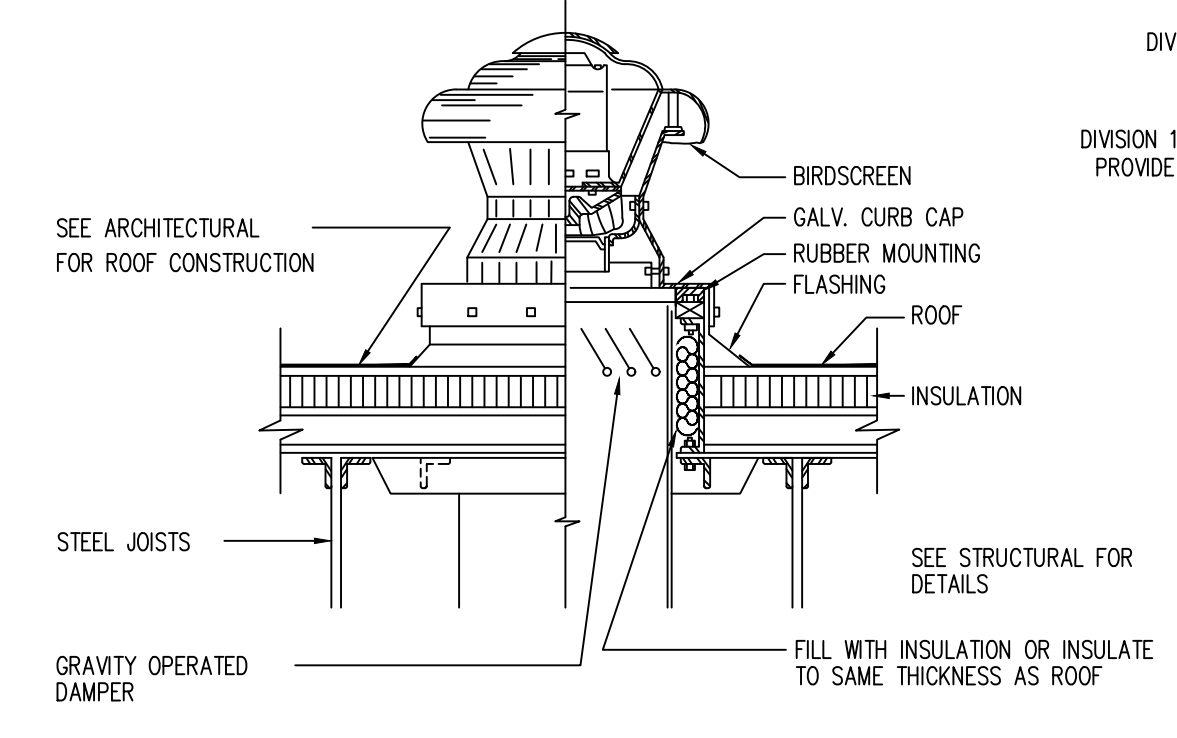
Mechanical Compliance Statement
Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.
IRVIN ROHRER PROJECT MANAGER *I. Rohrer* 7/10/20
Name - Title Signature Date



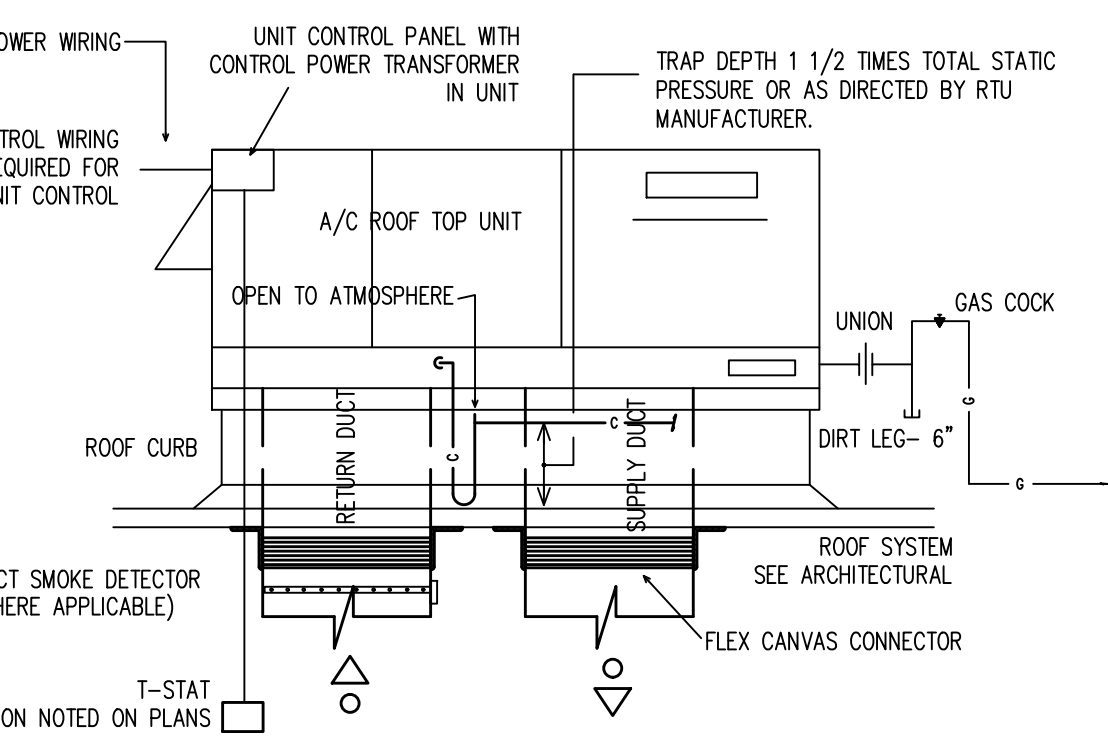
1 MECHANICAL PLAN
M1 SCALE: 1/8"=1'-0"



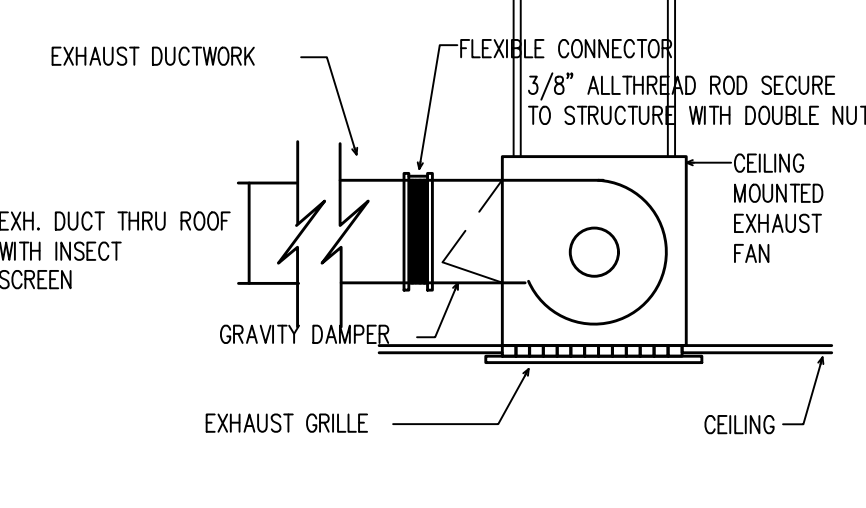
DUCT - DIFFUSER CONNECTION DETAIL
NO SCALE



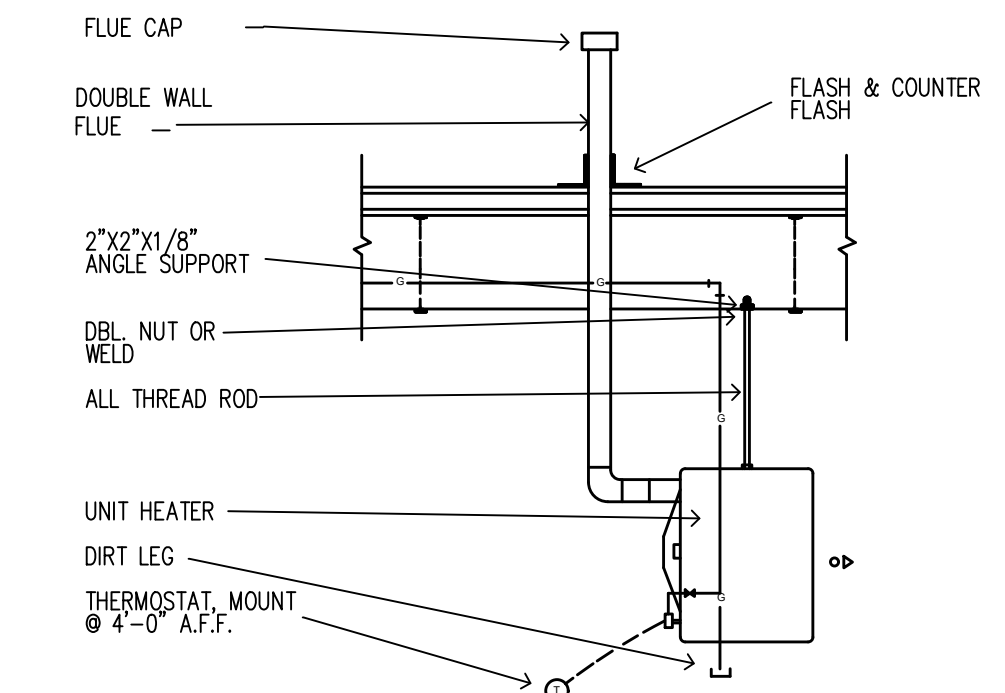
ROOF MOUNT EXHAUST CAN DETAIL
SCALE: NONE



PACKAGE ROOFTOP AC UNIT DETAIL
SCALE: NONE



CEILING MOUNT EXHAUST CAN DETAIL
SCALE: NONE



UNIT HEATER DETAIL
NO SCALE

GENERAL SPECIFICATION NOTE:

THE WORK INCLUDES PROVIDING NEW MATERIALS, FITTINGS AND ACCESSORIES NECESSARY FOR A COMPLETE FUNCTIONING PLUMBING SYSTEM. THE WORK ALSO INCLUDES ROUGH-IN AND FINAL CONNECTIONS SERVICE EQUIPMENT AND EQUIPMENT PROVIDED BY OTHERS. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES, ORDINANCES AND IS SUBJECT TO INSPECTION.

HOOK-UP CHARGES, PERMITS AND ALL OTHER EXPENSES RELATED TO A COMPLETE AND FUNCTIONING PLUMBING SYSTEM ARE INCLUDED AS A PART OF THIS SECTION.

THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK REQUIRED FOR THE PROJECT. THE DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, FIXTURES AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. REFER TO MANUFACTURER'S STANDARD DRAWINGS FOR PLUMBING FIXTURE INSTALLATION REQUIREMENTS. COMPLY WITH ALL APPLICABLE ADA INSTALLATION REQUIREMENTS.

COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.

PIPING SYSTEMS-GENERAL: ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES. INSTALL AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS, AND TO ALLOW FOR INSTALLATION OF OTHER WORK SUCH AS DUCTS AND ELECTRICAL CONDUIT. PROVIDE AN ISOLATING DIALECTRIC UNION AT ALL CONNECTIONS BETWEEN FERROUS PIPING AND NONFERROUS PIPING. ALL HANGERS SHALL BE COMPATIBLE WITH PIPING MATERIAL TO PREVENT CORROSION.

PROVIDE ALL FITTINGS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FACILITATE THE PLUMBING SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED.

SEWER AND WASTE PIPING: PROVIDE ALL DRAINS AND SEWERS WITHIN THE SPACE WITH CONNECTION TO THE LANDLORD'S EXISTING DRAINAGE SYSTEMS ON-SITE. SANITARY DRAINAGE PIPING ABOVE GRADE SHALL BE SCH. 40 PVC PIPE WITH SOLVENT WELD FITTINGS, OR CAST IRON HUBLESS PIPE WITH FITTINGS AND CONNECTIONS. BELOW GRADE PIPING SHALL BE SCH. 40 PVC PIPE WITH SOLVENT WELD FITTINGS, OR CAST IRON SERVICE WEIGHT HUB AND SPROUT PIPE WITH NEOPRENE GASKET JOINT SYSTEM. NO PVC DWV PIPING ALLOWED WITHIN CEILING VOIDS USED FOR NON-DUCTED RETURN AIR PLenum.

CONDENSATE AND INDIRECT DRAIN PIPING: TYPE M COPPER TUBING UP TO 1" ID, TYPE DWV TUBING AND FITTINGS FOR 1-1/4" AND LARGER SIZES. IF CLEANOUTS: PROVIDE CLEANOUTS AT THE END OF EACH HORIZONTAL RUN, AND AT THE BASE OF ALL VERTICAL WASTE AND DRAIN PIPES. CLEANOUTS SHALL BE OF THE SAME SIZE AS THE PIPES THEY SERVE, CONFORMING TO CODE REQUIREMENTS. PROVIDE SUITABLE WALL OR FLOOR CLEANOUTS WITH ACCESSORIES TO OBTAIN CLEAR VIEW.

WATER DISTRIBUTION PIPING: LAYOUT WATER PIPING SO THAT THE ENTIRE SYSTEM CAN BE DRAINED. HOT AND COLD WATER PIPING SHALL BE 1/2" MINIMUM TYPE L COPPER TUBING WITH WROUGHT COPPER FITTINGS AND SWEAT CONNECTIONS. PROVIDE MINIMUM 16" HIGH FULL AIR CHAMBER AT EACH FIXTURE STOP. INSTALL CHROME PLATED BRASS ESCUTOCHON PLATES AT ALL PENETRATIONS THROUGH FINISHED SURFACES (INCLUDING CABINET INTERIORS). USE TIN-ANTIMONY SOLDER, 95/5 FOR ALL SWEAT FITTINGS.

PIPE INSULATION: INSULATE ALL HOT AND COLD WATER PIPING. PROVIDE 1" PREFORMED FIBERGLASS, ASA-M, FLAME SPREAD 25, SMOKE DEVELOPED 50, ASTM C-547. WHEN PERMITTED BY LOCAL CODE, PROVIDE 1/2" SELF-ADHESIVE UNICELLULAR FOAM PIPE INSULATION WITH PREFORMED PVC FITTING COVERS (EQUAL TO SELF-ADHESIVE ARMBROUNG 2000) WITH K FACTOR OF 0.27 AT 75°F MEAN TEMPERATURE. INSULATE ALL EXPOSED CONDENSATE PIPING WITH WASTE TEMPERATURES BELOW 60°F.

SHUTOFF VALVES WITH UNIONS SHALL BE PROVIDED FOR SERVICE TO EACH PLUMBING FIXTURE, OR OTHER EQUIPMENT ITEM TO FACILITATE ISOLATION FOR REPAIR OR REPLACEMENT. VALVES SHALL BE EQUAL TO JENKINS #902-T BALL VALVE, CHROME-FINISHED BRONZE, TEFLON SEATS AND PACKING, 400 LB. W.O.C., SOLDER END.

ACCESS PANELS SHALL BE PROVIDED WHERE CONTROL DEVICES, VALVES, ETC. ARE CONCEALED WITHIN WALLS. WHERE ACCESS FOR ADJUSTMENT AND MAINTENANCE IS POSSIBLE THROUGH LAY-IN SUSPENDED CEILING, ACCESS PANELS ARE NOT REQUIRED.

SUPPLIES AND TRAPS: PROVIDE WATER SEALED TRAPS AND/OR SUPPLIES INSTALLED AS CLOSE AS POSSIBLE TO ALL PLUMBING FIXTURES AND DRAINS, HAVING A WASTE CONNECTION, OR REQUIRING WATER SERVICE.

EXPOSED TRAPS AND SUPPLIES IN EXPOSED AREAS (INCLUDING CABINET INTERIORS) SHALL BE CHROMIUM PLATED BRASS WITH CHROMIUM PLATED ESCUTOCHON PLATES. PROVIDE HAND-LAV GUARD KITS FOR HANDICAPPED INSTALLATIONS.

INSTALLATION: THOROUGHLY CLEAN ITEMS BEFORE INSTALLATION. CAP PIPE OPENINGS TO EXCLUDE DIRT UNTIL FIXTURES ARE INSTALLED AND FINAL CONNECTIONS HAVE BEEN MADE. PROCEED AS RAPIDLY AS CONSTRUCTION WILL PERMIT SET FIXTURES LEVEL AND IN PROPER ALIGNMENT. INSTALL SUPPLIES IN PROPER ALIGNMENT WITH FIXTURES. INSTALL SILICONE SEALANT BETWEEN FIXTURES AND ADJACENT MATERIAL FOR SANITARY JOINT, AND OMIT ESCUTOCHON.

REPAIR EXISTING PLUMBING SYSTEM COMPONENTS DAMAGED BY CONSTRUCTION OPERATIONS AND RESTORE TO ORIGINAL CONDITION.

TEST WATER SYSTEM UNDER 150 PSIG HYDROSTATIC PRESSURE, FOR A MINIMUM OF FOUR (4) HOURS. WHEN TESTING INDICATES MATERIALS OR WORKMANSHIP IS DEFICIENT, REPLACE OR REPAIR AS REQUIRED, AND REPEAT TEST UNTIL STANDARDS ARE ACHIEVED. PERFORM A STATIC TEST OF DWV SYSTEM. REPAIR OR REPLACE LEAKS.

NSF 61 CPVC OR ASTM F2023 RATED PEX PIPE WITH CHLORINE INHIBITOR PERMITTED FOR INSTALLATION WHERE APPROVED BY CODE.

GENERAL PLUMBING NOTE:

- SPECIFICATIONS, REFER TO "PLUMBING" SECTIONS 15400 SERIES AND ELSEWHERE IN DRAWINGS FOR FURTHER INFORMATION AND REQUIREMENTS FOR PLUMBING CONTRACTOR.
- SUSPEND ALL HORIZONTAL SERVICE PIPING SHOWN ON THIS PROJECT SUCH AS, BUT NOT LIMITED TO, WATER, SAN, WASTE, VENT, STORM WATER, GAS, ETC. FROM UNDERSIDE OF ROOF AND/OR FLOOR STRUCTURE, UNLESS OTHERWISE NOTED OR INDICATED. HOLD SUCH PIPING HIGH AS POSSIBLE. EXTEND PIPING DOWN IN WALLS, PARTITIONS, CHASES, ETC., TO SERVE FIXTURES AND EQUIPMENT AS SHOWN ON PLANS.
- CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
- COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE PIPE RISES, DROPS, AND OFFSETS, AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE PIPING, CONNECTIONS, FITTINGS, VALVES, OFFSETS, ETC. AND ALL MATERIALS NECESSARY FOR A COMPLETE SYSTEM. SUBMIT SHOP DRAWINGS PER THE SPECIFICATIONS.
- ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING ALL SECTIONS OF ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- PROVIDE BACKFLOW PREVENTION DEVICES, (BPD) IN WATER LINES FEEDING PLUMBING FIXTURES AND/OR EQUIPMENT, AS SHOWN ON PLANS AND ELSEWHERE AS REQUIRED BY LOCAL AUTHORITIES. USE DEVICES OF APPROVED TYPE AND MANUFACTURER (ATMOSPHERIC VACUUM, PRESSURE VACUUM, DOUBLE CHECK, AND REDUCED PRESSURE).
- VERIFY SERVICE CONNECTION POINTS, SIZES, ELEVATIONS, AND METERING LOCATIONS FOR PROJECT WITH LOCAL UTILITIES CO. AND/OR CIVIL ENGINEER. SERVICES TO INCLUDE BUT NOT LIMITED TO (DOMESTIC WATER, FIRE, SANITARY SEWER, STORM SEWER, GAS, ETC.)
- WATER PRESSURE: PLUMBING CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. IF PRESSURE AT BUILDING ENTRY PRIOR TO ALL LOCALLY REQUIRED DEVICES SUCH AS WATER METER, BACKFLOW PREVENTION DEVICES, ETC. IS LESS THAN 55 PSIG STATIC, CONTACT OWNER'S REPRESENTATIVES. IF PRESSURE IS IN EXCESS OF 80 PSIG STATIC, INSTALLATION OF PRESSURE REDUCING VALVE IS REQUIRED.
- WATER HAMMER ARRESTERS SHALL BE INSTALLED THROUGHOUT PLUMBING WATER SYSTEMS AS REQUIRED.
- WATER ENTRY SERVICE PIPING, NEW AND/OR REVISED, PLUMBING CONTRACTOR SHALL ENSURE AND PROVIDE MINIMUM OF 10'-0" LINEAR FEET OF METAL PIPING MATERIAL BELOW GRADE FOR CONNECTION OF ELECTRICAL SERVICE GROUNDING.

PLUMBING SPECIFICATION SECTION:

SECTION 15400 - PLUMBING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pipe and pipe fittings, valves.
- B. Plumbing specialties: Roof and floor drains, interceptors, cleanouts, backflow preventers, water hammer arresters, thermostatic mixing valves, hose bibbs/hydrants.
- C. Plumbing Fixtures.
- D. Plumbing Equipment.
- E. Identification.

1.02 SUBMITTALS (AS REQUIRED BY OWNER)

- A. Product Data: Provide for plumbing specialties, fixtures, and equipment.

1.03 WARRANTY

- A. Provide one year manufacturer's warranty.

1.04 SYSTEM DESCRIPTION

Provide complete and fully operational systems to meet requirements indicated and in accord with applicable codes and ordinances. Contractor must immediately notify Project Manager of any conflict between drawings or specifications and applicable codes or ordinances.

1.05 SUBSTITUTIONS

- A. Major Fixtures, equipment, devices and specialties shall be as noted on the drawings.
- B. Manufacturers shown or noted are intended for reference as to the quality and type of equipment desired. Comparable fixtures by other manufacturers will be considered for approval by the owner where the level of quality is equivalent.

PART 2 PRODUCTS

2.15 PIPING INSULATION

- A. Shall be provided for all domestic hot and cold water piping and rain leader piping above grade.
- B. Pipe insulation to be ASTM C547-77 class 1 preformed 1" fiberglass, 10 PCF max density (k-value=0.27 min.) with all purpose paper and foil jacket equal to Manville 3003 alloy, 7-14 temp.
- C. Factory cut 16 Mil thick stucco embossed aluminum jacketing w/ PVC elbow jackets.
- D. Provide vapor barrier on all pipe insulation.

2.16 MECHANICAL IDENTIFICATION

- A. Plastic Nameplates: Laminated three-layer plastic with engraved block letters on light background color.
- B. Plastic Tags: Laminated three-layer plastic with engraved block letters on light background color, minimum 1-1/2 inch (38 mm) diameter.

PART 3 EXECUTION

3.01 PREPARATION

- A. Ream pipe and tube ends. Remove burrs.
- B. Remove scale and dirt on inside and outside piping before assembly.
- C. Prepare piping connections to equipment with flanges or unions.
- D. Coordinate cutting or forming of roof or floor construction to receive drains to required invert elevations.
- E. Review shop drawings. Confirm location and size of fixtures and openings before rough-in and installation.
- F. Verify adjacent construction is ready to receive rough-in work of this Section. Coordinate sequence of work with other trades, controlling agencies, and service companies.

3.02 INSTALLATION

- A. Provide dielectric connections wherever joining dissimilar metals.
- B. Install piping to conserve building space and not interfere with use of space. Group piping whenever practical at common elevations.
- C. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.
- D. Provide clearance for installation of insulation and access to valves and fittings.
- E. Slope water piping and arrange to drain at low points.
- F. Install bell and spigot pipe with bell end upstream.
- G. Install specialties in accordance with manufacturer's instructions.
- H. Extend cleanouts to finished floor or wall surface. Lubricate threaded cleanout plugs with mixture of graphite and linseed oil. Ensure clearance at cleanout for rodding of drainage system.
- I. Install each fixture with chrome plated rigid or flexible supplies with screwdriver stops, reducers, and escutcheons.
- J. Adjust slope or valves for intended water flow rate to fixtures without splashing, noise, or overflow.
- K. Install water heaters in accordance with manufacturer's instructions and to AGA, NSF, NFPA, and UL requirements. Coordinate with plumbing piping and related fuel piping, gas venting, electrical work to achieve operating system.
- L. All water supplies throughout the project shall be adequately protected from water and air hammer by the use of water hammer arresters as required by local code. Water hammer arresters shall be located at or near the end of risers for each fixture or group of fixtures and at other locations deemed necessary to effect a quiet operating system.

- M. Connections to stacks and sewers shall be arranged so that operation of any fixture will not cause fluctuation of water level in traps of other fixtures.
- N. Vent Flashing Sleeves: Install on stacks passing through roof, secure over stack flashing in accordance with manufacturer's instructions.
 1. The top of each vent stack shall be vented through the roof by means of an increaser in cold area where frost may build up on vent stack.
 2. Where PVC pipe is used, vent stacks and floor drains above other rooms shall be flashed with collars and flashing materials suitable for the purpose. Lead flashing is not allowed on PVC vent stacks.
- O. Install all materials in accordance with manufacturer's instructions.

3.03 APPLICATION

- A. Use grooved mechanical couplings and fasteners, and dielectric connections only in accessible locations.
- B. Install unions downstream of valves and at equipment or apparatus connections.
- C. Install brass male adapters each side of valves in copper piped system. Sweat solder adapters to pipe.
- D. Install gate, ball valves for shut-off and to isolate equipment, part of systems, or vertical risers.
- E. Provide spring loaded check valves on discharge of water pumps.

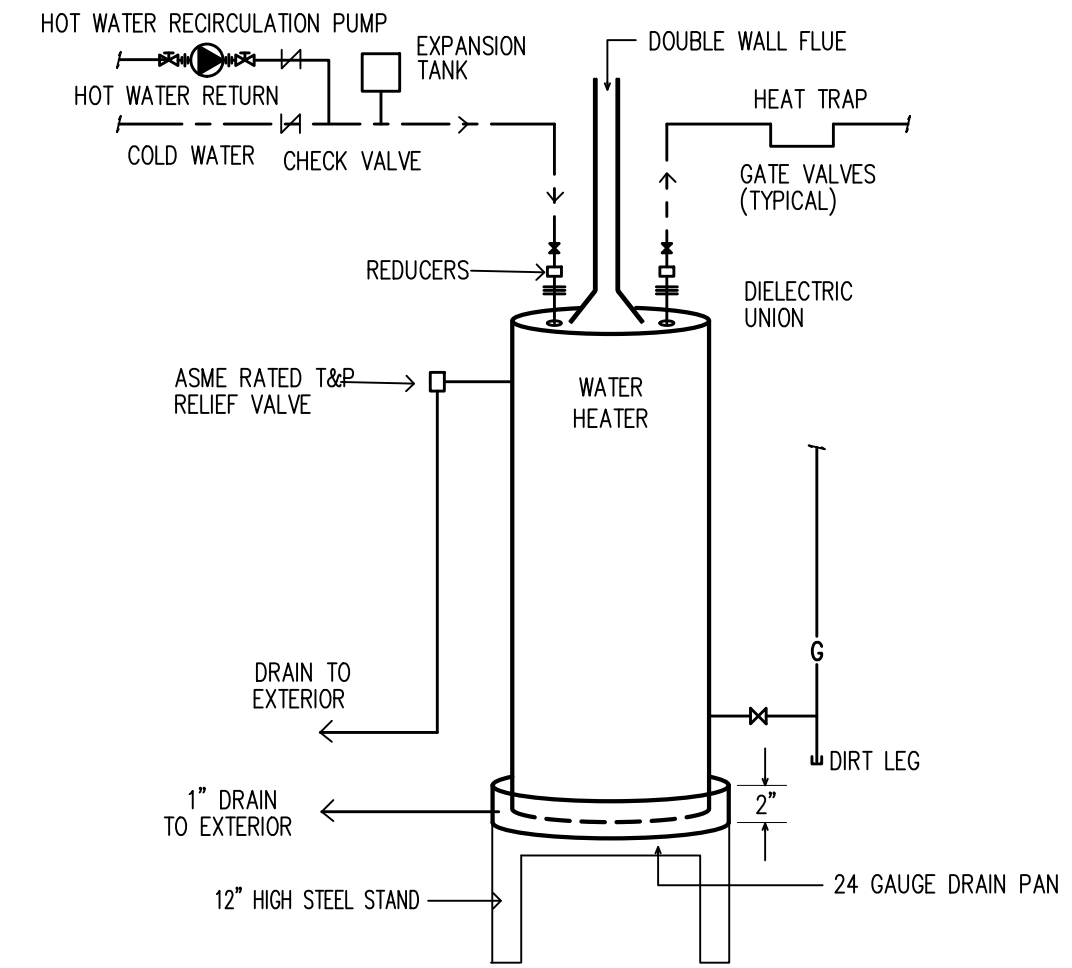
3.04 SERVICE CONNECTIONS

- A. Provide new sewer elevations. Before commencing work check invert elevations required for sewer connections, confirm inverts and ensure that these can be properly connected with slope for drainage and cover to avoid freezing.
- B. Provide new water service complete with water meter with pressure reducing valve backflow preventer. Provide sleeve in wall for service main and supported at wall, caulked and made watertight.

END OF SECTION

EQUIPMENT SCHEDULE:

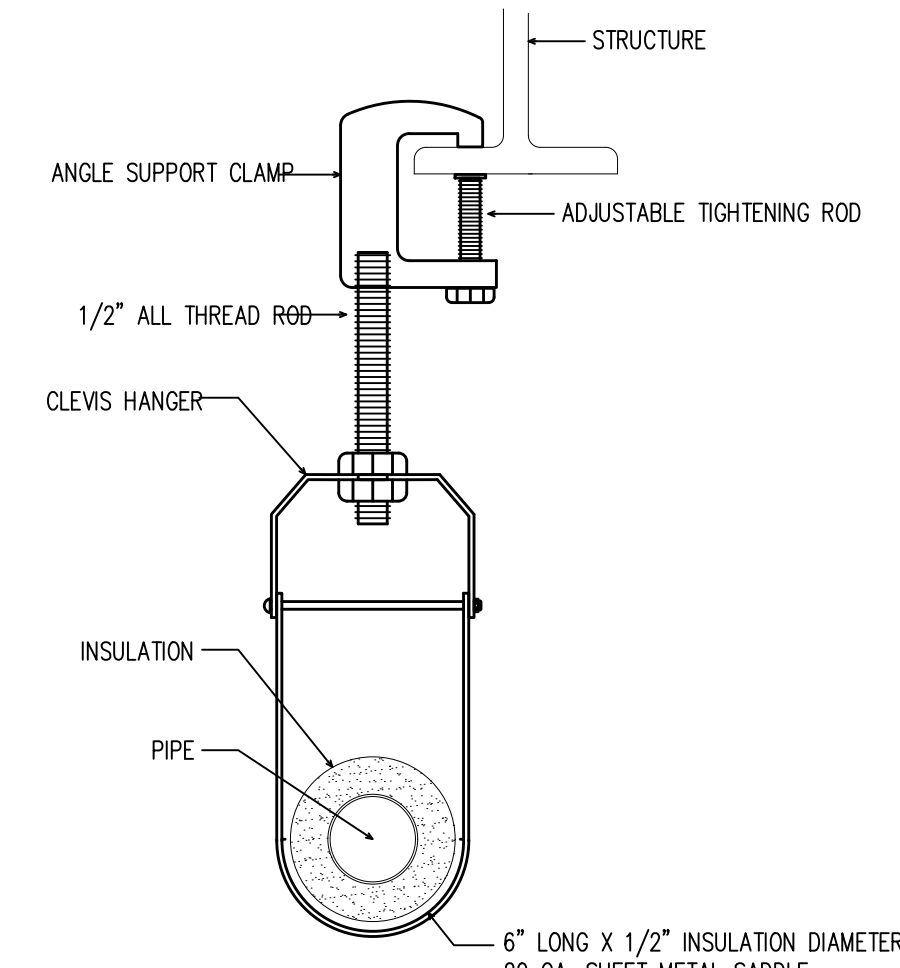
PLUMBING FIXTURE SCHEDULE		ROUGH-IN REQUIREMENTS				ACCESSORIES	
MARK	DESCRIPTION	MANUFACTURER AND MODEL NO. OR APPROVED EQUAL	DRAIN	VENT	COLD		HOT
WC	WATER CLOSET FLUSH TANK FLOOR MOUNTED	AMERICAN STANDARD 2333.100	3"	2"	3/4"	-	OLSONITE #95 OPEN FRONT SEAT PRESSURE ASSISTED SIPHON JET 1.6 GALLON FLUSH
HWC	WATER CLOSET FLUSH TANK FLOOR MOUNTED	AMERICAN STANDARD 2377.100	3"	2"	3/4"	-	OLSONITE #95 OPEN FRONT SEAT PRESSURE ASSISTED SIPHON JET 1.6 GALLON FLUSH
UR	URINAL	AMERICAN STANDARD 6501.010	2"	1-1/2"	3/4"	-	SLOAN 186-1 FLUSH VALVE 1 GALLON FLUSH ZURN Z-1221 CARRIER
HL	LAVATORY COUNTER MOUNTED VITREOUS CHINA	AMERICAN STANDARD 0476.028	2"	1-1/2"	1/2"	1/2"	AMERICAN STANDARD 5402.172V FAUCET WITH WRIST BLADE HANDLES AND GRID STRAINER. IF PLUMBING IS EXPOSED USE SKAL-GARD SG101 AND SG102 ON DRAIN AND SUPPLIES
HDF HI/LOW	ELECTRIC WATER COOLER BI-LEVEL ADULT	HALSEY TAYLOR HAC2F3BL-Q SS	2"	1-1/2"	1/2"	-	VANDAL RESISTANT KIT BRADLEY CANE TOUCH APRON
MS	MOP SINK	FIAT MSB-2424	2"	1 1/2"	1/2"	1/2"	FIAT 830-AA FAUCET, HOSE AND BRACKET NO. 832-AA-30" MOP HANGER NO. 889-CC-24"
GWHSO	WATER HEATER GAS FIRED 50 GALLON	STATE GHX 50 175 N	-	-	1"	1"	175,000 BTUH INPUT, 3" # FLUE UP THRU ROOF TO VENT CAP, 222 GALLON RECOVERY RATE AT 90°F. RISE. STATE ETC-2X EXPANSION TANK.
RP	RECIRCULATING PUMP	TACO 005	-	-	-	3/4"	CAPACITY OF 5 GPM AT 8' HEAD.
FD	FLOOR DRAIN ROUND STRAINER	ZURN ZN-4158	2" TO 4"	2"	-	-	TYPE B STRAINER OUTLET SIZE AS SHOWN ON DRAWINGS PROVIDE WITH TRAP GUARDS
FS	FLOOR SINK GENERAL USE	ZURN Z-1900-19	2"	2"	-	-	HINGED GRATE OUTLET SIZE AS SHOWN ON DRAWINGS
JCS	SINK THREE COMP. KITCHEN	BY KITCHEN EQUIPMENT SUPPLIER INSTALLED BY CONTRACTOR	2"	1-1/2"	1/2"	1/2"	
HS/FS	HANDICAP HAND SINK WALL MOUNTED	JUST # HCL 23520-T	2"	1-1/2"	1/2"	1/2"	PROVIDE W/ J1174-KS ADA FAUCET, AND A FLOOR SINK (FS) AS SPECIFIED ON PLUMBING EQUIPMENT SCHEDULE
GT	GREASE TRAP	PRECON PRECAST CONCRETE 500 GALLON PRECAST CONCRETE	4"	4"	-	-	5000 PSI TANK, 2 - COMPARTMENT WITH 20" ROUND MANHOLE, RING AND COVER AS REQUIRED PROVIDE WITH SAMPLING WELL PER MUNICIPALITY REQUIREMENTS
DS	DENTAL SINK COUNTER MOUNTED	PROVIDED BY OWNER, INSTALLED BY CONTRACTOR	2"	1-1/2"	1/2"	1/2"	



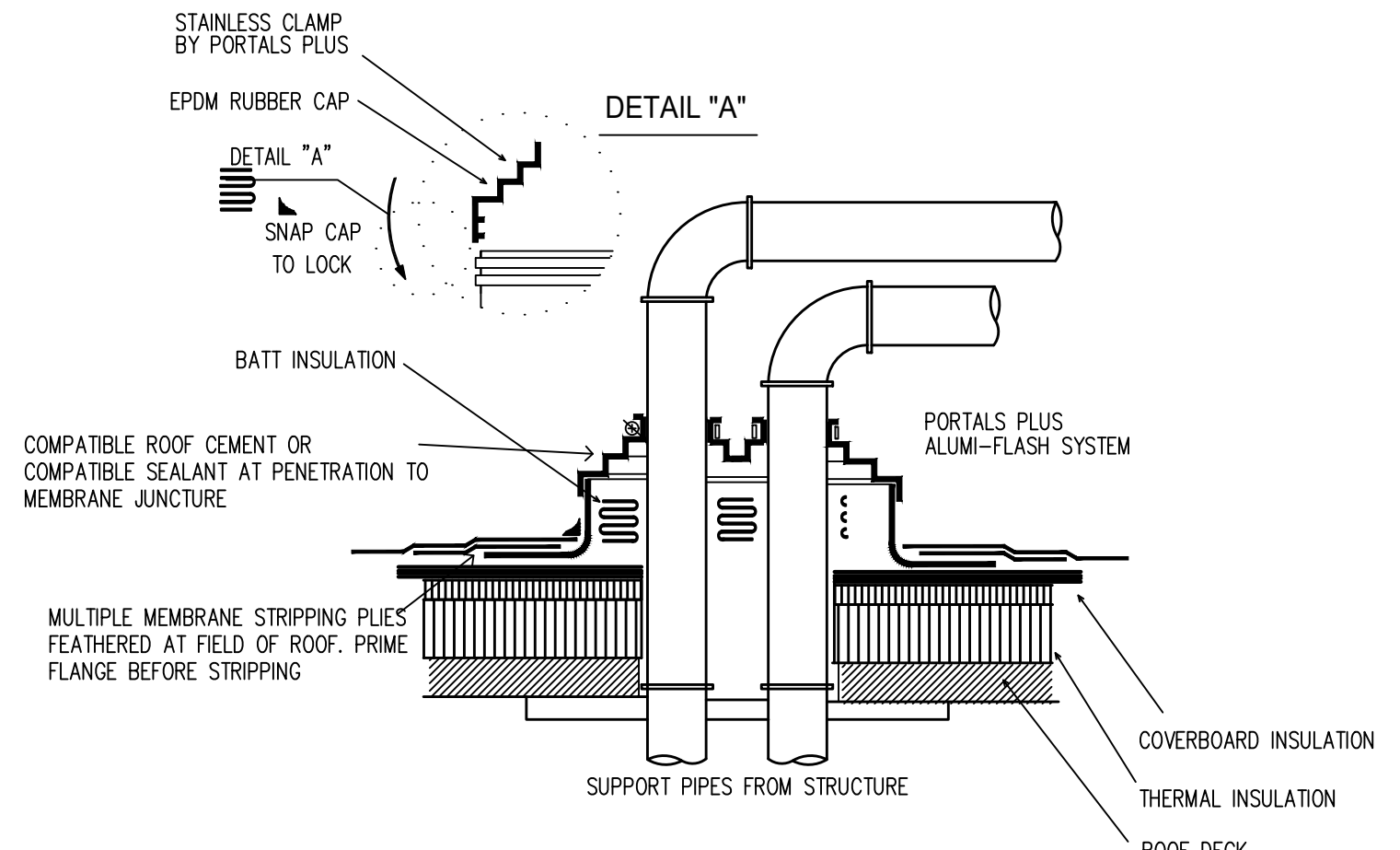
GA WATER HEATER DETAIL
NO SCALE

PLUMBING LEGEND:

- WASTE PIPING
- EXISTING WASTE PIPING
- VENT PIPING
- COLD WATER PIPING
- HOT WATER PIPING
- C- GAS PIPING
- C- CONDENSATE PIPING
- SCO SURFACE CLEAN OUT
- WCO WALL CLEAN OUT



PIPE SUPPORT DETAIL
SCALE: NONE



NOTE:

- THIS DETAIL ILLUSTRATES THE METHOD TO ELIMINATING PITCH POCKETS AND THE METHOD OF GROUPING PIPING THAT MUST PENETRATE THE ROOF

PIPE THRU ROOF DETAIL
NO SCALE



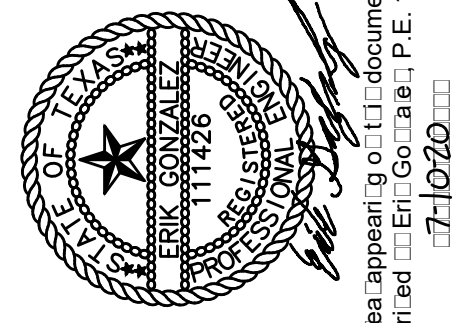
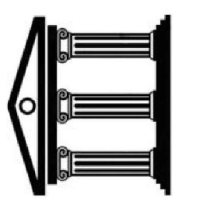
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PLANO, TEXAS 75024
TBE ARCHITECTURE BR-1707
artec.solutions
972.802.4507

PROJECT
NEPALI MANDIR COMMUNITY CENTER

1212 ROYAL PARKWAY
EULESS TEXAS, 76040
DATE: PROJECT NO.
DATE: NO.

REVISION	DATE
1	
2	
3	
4	
5	
6	

Imperium Engineering Inc.
3rd Fair Meadows
Eules, Texas 76039
817-252-2500
Firm # 2009
DHW-EP

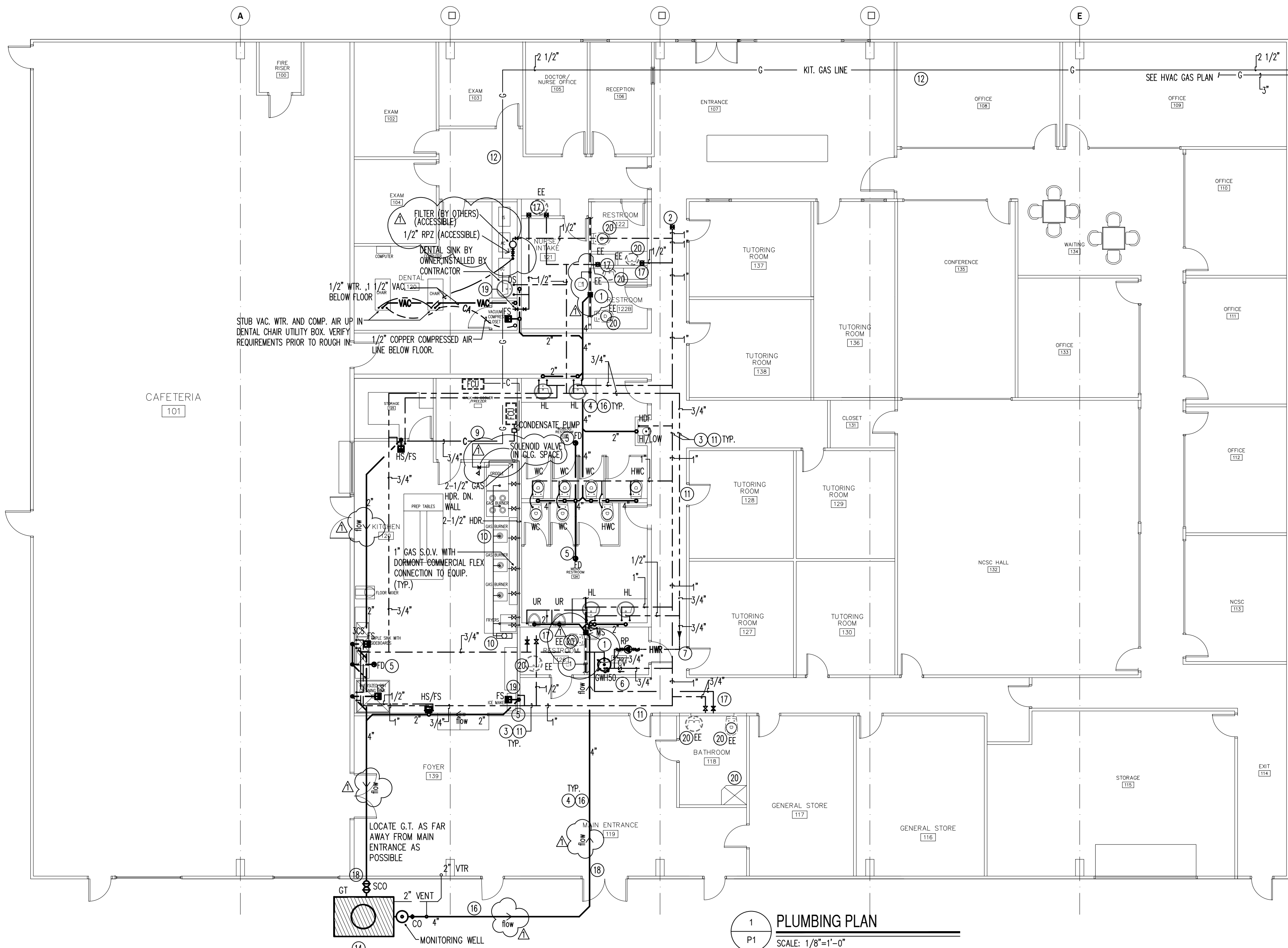


PLUMBING SPECS

SCALE: AS SHOWN

P01

DRAWN BY:



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

PLUMBING KEYED NOTES:

- 1. CONNECT INTO EXISTING MAIN SEWER LINE IN AREA. FIELD VERIFY EXACT LOCATION.
- 2. CONNECT INTO EXISTING MAIN WATER LINE IN AREA. FIELD VERIFY EXACT LOCATION.
- 3. DOMESTIC WATER SERVICE PIPE SHALL BE INSTALLED PER IPC 604.8, SECTION 605,606,607 AND 608 REQUIREMENTS.
- 4. BUILDING SEWER SHALL CONFORM TO IPC CHAPTER 7.
- 5. INSTALL TRAP GUARDS IN ALL FLOOR DRAIN AND FLOOR SINKS.
- 6. WATER HEATER DISCHARGE SHALL CONFORM WITH IPC 504.6.1.
- 7. HOT WATER RETURN PIPE SHALL BE INSULATED WITH 1" INSULATION PER IECC 404.5
- 8. WATER FLOW RATES SHALL CONFORM WITH TABLE 604.4 IPC FOR PLUMBING FIXTURES. PROVIDE FLOW RESTRICTORS AS REQUIRED.
- 9. DISCHARGE CONDENSATE AS REQUIRED PER IMC 307.2 AND IPC SECTION 314 REQUIREMENTS.
- 10. PROVIDE AUTOMATIC FIRE EXTINGUISHING SYSTEM FOR COMMERCIAL COOKING EQUIPMENT PER IBC 904.11 AND NFPA 96.
- 11. INSTALL PROPER PIPE SUPPORT PER IPC SECTION 308.
- 12. GAS PIPE RUN IN JOIST SPACE SECURED TO PREFAB PIPE SUPPORTS AT 10' ON CENTER AND AT ALL ELBOWS. PROVIDE EXPANSION OFFSETS AS REQUIRED.
- 13. DISCHARGE CONDENSATE INTO MOP SINK.
- 14. INSTALL INTERCEPTOR AND SEPARATOR PER IPC SECTION 100.3.
- 15. GAS METER (BY SERVING GAS CO) PLUMBING CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL WORK WITH GAS CO. INCLUDING SERVICE APPLICATIONS AND FORMS.
- 16. PROVIDE PROPER TRENCHING, EXCAVATION AND BACKFILL PER IPC SECTION 306.
- 17. CONNECT INTO EXISTING HOT AND COLD WATER LINES SERVING EXISTING PLUMBING FIXTURES TO REMAIN.
- 18. PROVIDE PIPE PROTECTION PER IPC SECTION 305.
- 19. PROVIDE BACKFLOW DEVICE CONNECTION PER IPC 608 REQUIREMENTS.
- 20. EXISTING PLUMBING FIXTURE TO REMAIN. CLEAN AND REPAIR AS REQUIRED FOR PROPER OPERATION.
- 21. APPROXIMATE LOCATION OF EXISTING 4" SEWER LINE. FIELD VERIFY EXACT LOCATION AND EXISTING INVERT PRIOR TO ROUGH IN CONNECTION OF NEW PLUMBING. NOTIFY ARCHITECT IF DISCREPANCIES EXIST WITH EXISTING INVERTS OR CONDITION OF EXISTING PIPING.

DENTAL EQUIPMENT NOTES:

1. FINAL DENTAL CHAIR CONNECTIONS, LOCATIONS AND REQUIREMENTS TO BE FIELD COORDINATED WITH DENTAL EQUIPMENT SUPPLIER.
2. FIELD COORDINATE EXACT VACUUM LINE LOCATION AND CONNECTION TO DENTAL CHAIRS PRIOR TO SAW CUTTING CONCRETE SLAB. DENTAL EQUIPMENT CONTRACTOR TO PROVIDE TEMPLATE FOR DENTAL CHAIRS INDICATING EXACT LOCATIONS AND QUANTITIES OF UTILITY CONNECTIONS. DO NOT BEGIN INSTALLATION WORK UNTIL TEMPLATE HAS BEEN PROVIDED AND FIELD VERIFIED FOR ACCURACY.
3. CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED ACCESSORIES FOR DENTAL CHAIRS, TO MAKE THEM FULLY FUNCTIONAL. THIS MAY REQUIRE NEW ISOLATION VALVES, FLEXIBLE HOSES, UNIONS, ETC. FIELD COORDINATE WITH DENTAL EQUIPMENT SUPPLIER.
4. VERIFY REQUIREMENTS FOR ANY PLUMBING CONNECTIONS TO DENTAL EQUIPMENT WITH OWNER AND DENTAL EQUIPMENT SUPPLIER. DO NOT PLACE PLUMBING SUPPLY OR VENT LINES WHERE RECESSED TOWEL AND TISSUE DISPENSERS ARE TO BE LOCATED.

2015 IPC TABLE 1003.3.4.1 CAPACITY OF GREASE INTERCEPTORS

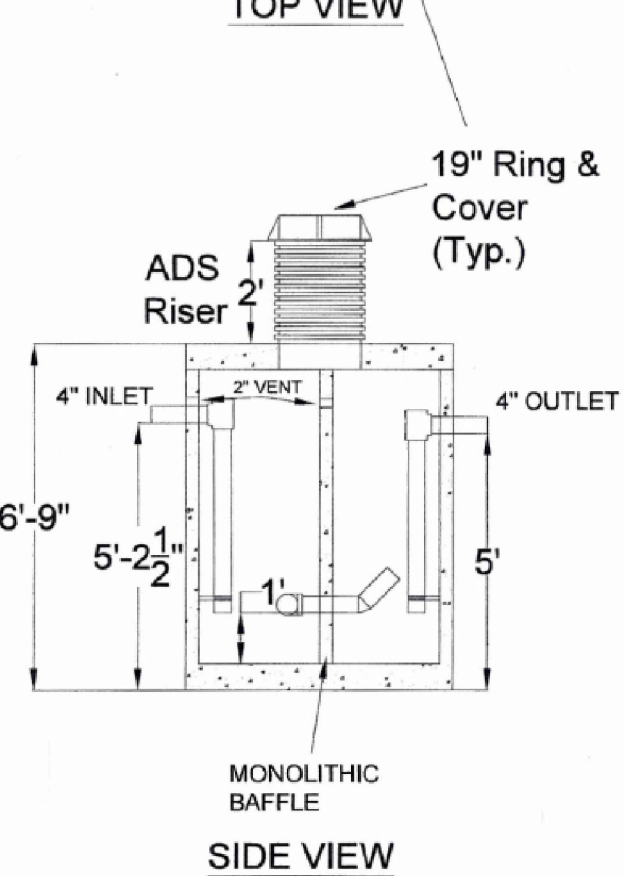
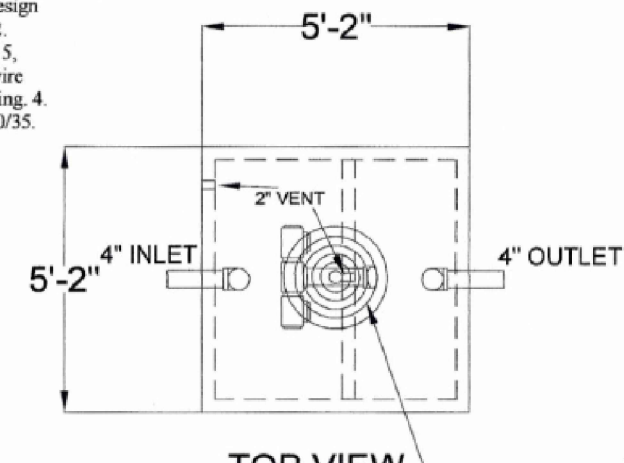
2015 IPC TABLE 709.1 DRAINAGE FIXTURE UNITS		
1. HAND SINKS	2 DFU x 2	= 4 DFU
2. FLOOR SINK	2 DFU	= 2 DFU
3. FLOOR DRAIN	2 DFU	= 2 DFU
TOTAL DFU	= 8	
1 DFU = 7.5 GPM	= 60 GPM	= 60 GPM

NO KITCHEN DISHWASHER MACHINE

4. KITCHEN 3 COMP. SINK	20X20X14 = 5,600 X 3	= 16,800 CI
5. KITCHEN POT SINK	30X30X24 = 21,600	= 21,600 CI
TOTAL CI.		= 38,400 CI
1 GALLON = 231 CU		
38,400/231 = 166 GALLONS		= 166 GPM
TOTAL GPM		= 226 GPM

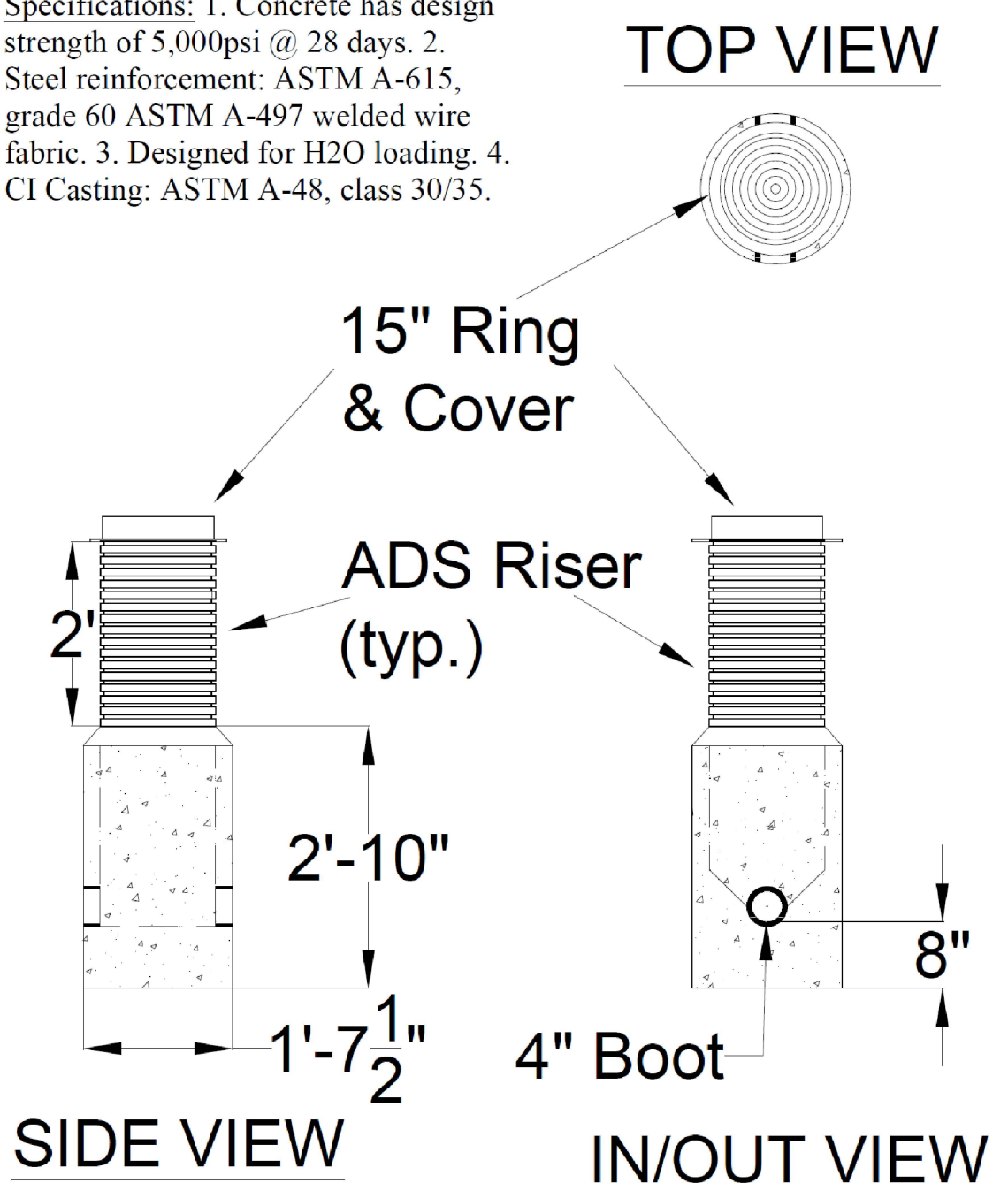
500 GALLON PRECAST CONCRETE INTERCEPTOR HAS A 250 GPM FLOW RATE 500 LB GREASE CAPACITY

Specifications: 1. Concrete has design strength of 5,000psi @ 28 days. 2. Steel reinforcement: ASTM A-615, grade 60 ASTM A-497 welded wire fabric. 3. Designed for H2O loading. 4. CI Casting: ASTM A-48, class 30/35.



3 GREASE TRAP SHOP DWG.
SCALE: NONE BASIS OF DESIGN

Specifications: 1. Concrete has design strength of 5,000psi @ 28 days. 2. Steel reinforcement: ASTM A-615, grade 60 ASTM A-497 welded wire fabric. 3. Designed for H2O loading. 4. CI Casting: ASTM A-48, class 30/35.



1 MONITORING WELL DETAIL
SCALE: NONE BASIS OF DESIGN

HVAC & WTR HTR. GAS LINE GAS DEMAND CALCULATIONS

EQUIPMENT	DEMAND
PACKAGE A/C UNIT X 9 UNITS @ 96,000 BTUH EACH	= 864,000 BTUH
M.A.U. X 1 UNIT @ 272,000 BTUH EACH	= 272,000 BTUH
UNIT HTR. X 1 UNIT @ 30,000 BTUH EACH	= 30,000 BTUH
WTR HTR. X 1 UNIT @ 175,000 BTUH EACH	= 175,000 BTUH
TOTAL DEMAND	= 1,341,000 BTUH

1,341,000 BTUH DIVIDED BY 1000 BTUH/CF. FT. = 1,341 CFH. TOTAL DEVELOPED PIPING LENGTH FOR METER EQUALS 225'. BASED ON TABLE 402.4(2) OF THE 2015 EDITION OF THE INTERNATIONAL FUEL GAS CODE, A (3") GAS LINE WILL CARRY 1,341 CFH OVER 225'. REMAINING BRANCH LINES WILL BE SIZED ACCORDING TO THE TOTAL DEVELOPED LENGTH, AND BASED ON TABLE 402.4(2).

SCHEDULE 40 METALLIC PIPE
GAS: NATURAL, --- INLET PRESSURE: LESS THAN 2 PSI, --- PRESSURE DROP: 0.5 IN. W.E., --- SPECIFIC GRAVITY 0.60

NOTES:
1. ALL INTERMEDIATE PRESSURE GAS PIPING TO BE WELDED.
2. ALL GAS FIRED EQUIPMENT / COMPONENTS SHALL BE PROVIDED WITH A DIRTLEG, GAS COCK AND UNION ON LOW PRESSURE GAS LINE.

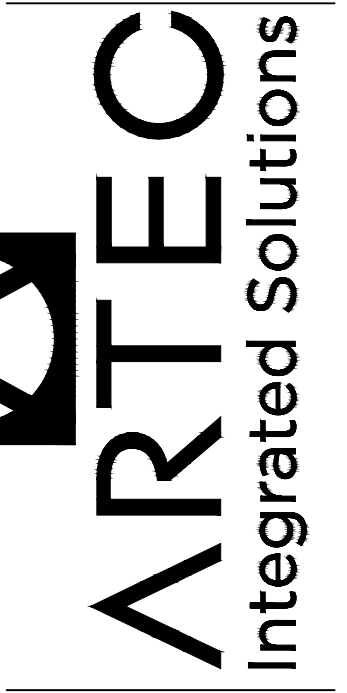
KITCHEN GAS LINE GAS DEMAND CALCULATIONS

EQUIPMENT	DEMAND
FRYERS X 2 UNITS @ 150,000 BTUH EACH	= 300,000 BTUH
RANGE/OVEN X 4 UNITS @ 102,000 BTUH EACH	= 408,000 BTUH
GRIDDLE X 1 UNIT @ 150,000 BTUH EACH	= 105,000 BTUH
TOTAL DEMAND	= 858,000 BTUH

858,000 BTUH DIVIDED BY 1000 BTUH/CF. FT. = 858 CFH. TOTAL DEVELOPED PIPING LENGTH FOR METER EQUALS 200'. BASED ON TABLE 402.4(2) OF THE 2015 EDITION OF THE INTERNATIONAL FUEL GAS CODE, A (2 1/2") GAS LINE WILL CARRY 858 CFH OVER 200'. REMAINING BRANCH LINES WILL BE SIZED ACCORDING TO THE TOTAL DEVELOPED LENGTH, AND BASED ON TABLE 402.4(2).

SCHEDULE 40 METALLIC PIPE
GAS: NATURAL, --- INLET PRESSURE: LESS THAN 2 PSI, --- PRESSURE DROP: 0.5 IN. W.E., --- SPECIFIC GRAVITY 0.60

NOTES:
1. ALL INTERMEDIATE PRESSURE GAS PIPING TO BE WELDED.
2. ALL GAS FIRED EQUIPMENT / COMPONENTS SHALL BE PROVIDED WITH A DIRTLEG, GAS COCK AND UNION ON LOW PRESSURE GAS LINE.

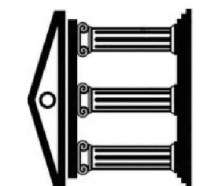


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PROJECT
NEPALI MANDIR COMMUNITY CENTER

1212 ROYAL PARKWAY
EULESS TEXAS, 76040
DATE: PROJECT NO.
DATE: PROJECT NO.
REVISION
7/10/20 EULESS PLAN
CHECK COMMENTS

Imperium Engineering Inc.
304 Park Meadows
Euless, Texas 76039
915 202 9820
Firm # 2059
817 201 6401
DFW • EP

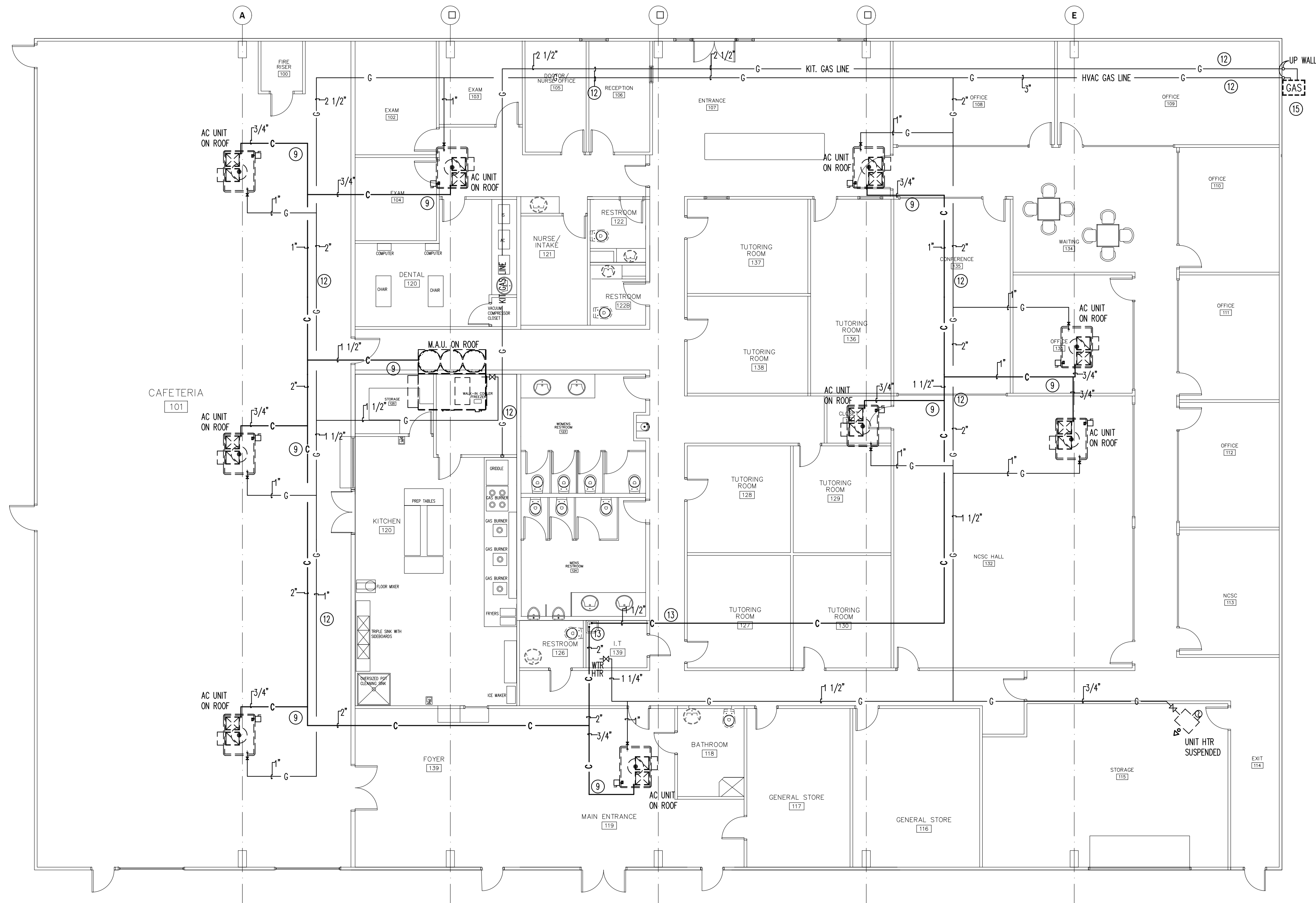


PLUMBING PLAN

SCALE: AS SHOWN

P1

DRAWN BY:



1 HVAC EQUIPMENT PLUMBING PLAN
 SCALE: 1/8"=1'-0"

PLUMBING KEYED NOTES:

- 1 CONNECT INTO EXISTING MAIN SEWER LINE IN AREA. FIELD VERIFY EXACT LOCATION.
- 2 CONNECT INTO EXISTING MAIN WATER LINE IN AREA. FIELD VERIFY EXACT LOCATION.
- 3 DOMESTIC WATER SERVICE PIPE SHALL BE INSTALLED PER IPC 604.8, SECTION 605,606,607 AND 608 REQUIREMENTS.
- 4 BUILDING SEWER SHALL CONFORM TO IPC CHAPTER 7.
- 5 INSTALL TRAP GUARDS IN ALL FLOOR DRAIN AND FLOOR SINKS.
- 6 WATER HEATER DISCHARGE SHALL CONFORM WITH IPC 504.6.1.
- 7 HOT WATER RETURN PIPE SHALL BE INSULATED WITH 1" INSULATION PER IECC 404.5
- 8 WATER FLOW RATES SHALL CONFORM WITH TABLE 604.4 IPC FOR PLUMBING FIXTURES. PROVIDE FLOW RESTRICTORS AS REQUIRED.
- 9 DISCHARGE CONDENSATE AS REQUIRED PER IMC 307.2 AND IPC SECTION 314 REQUIREMENTS.
- 10 PROVIDE AUTOMATIC FIRE EXTINGUISHING SYSTEM FOR COMMERCIAL COOKING EQUIPMENT PER IBC 904.11 AND NFPA 96.
- 11 INSTALL PROPER PIPE SUPPORT PER IPC SECTION 308.
- 12 GAS PIPE RUN IN JOIST SPACE SECURED TO PREFAB PIPE SUPPORTS AT 10' ON CENTER AND AT ALL ELBOWS. PROVIDE EXPANSION OFFSETS AS REQUIRED.
- 13 DISCHARGE CONDENSATE INTO MOP SINK.
- 14 INSTALL INTERCEPTOR AND SEPARATOR PER IPC SECTION 1003.
- 15 GAS METER (BY SERVING GAS CO) PLUMBING CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL WORK WITH GAS CO. INCLUDING SERVICE APPLICATIONS AND FORMS.
- 16 PROVIDE PROPER TRENCHING, EXCAVATION AND BACKFILL PER IPC SECTION 306.
- 17 CONNECT INTO EXISTING HOT AND COLD WATER LINES SERVING EXISTING PLUMBING FIXTURES TO REMAIN.
- 18 PROVIDE PIPE PROTECTION PER IPC SECTION 305.
- 19 PROVIDE BACKFLOW DEVICE CONNECTION PER IPC 608 REQUIREMENTS.
- 20 EXISTING PLUMBING FIXTURE TO REMAIN. CLEAN AND REPAIR AS REQUIRED FOR PROPER OPERATION.
- 21 APPROXIMATE LOCATION OF EXISTING 4" SEWER LINE. FIELD VERIFY EXACT LOCATION AND EXISTING INVERT PRIOR TO ROUGH IN CONNECTION OF NEW PLUMBING. NOTIFY ARCHITECT IF DISCREPANCIES EXIST WITH EXISTING INVERTS OR CONDITION OF EXISTING PIPING.

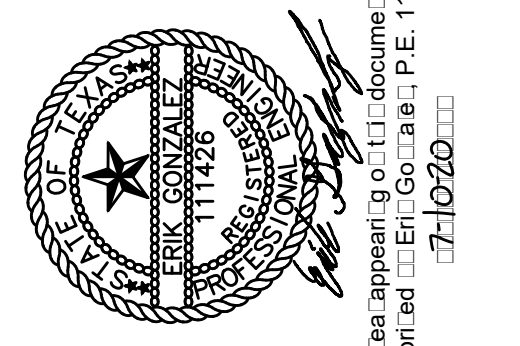
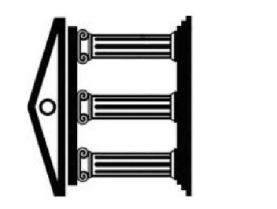


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PROJECT
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1212 ROYAL
 PARKWAY
 EULESS TEXAS,
 76040
 DATE: DATE
 PROJECT NO. NO.
 NO. DATE
 REVISION
 7/10/20 EULESS PLAN
 CHECK COMMENTS

Imperium Engineering Inc.
 304 Park Meadows
 Euless, Texas 76039
 915 202 8620
 817 201 6401
 DFW - EP
 Firm # 20099



HVAC PLUMBING
 PLAN

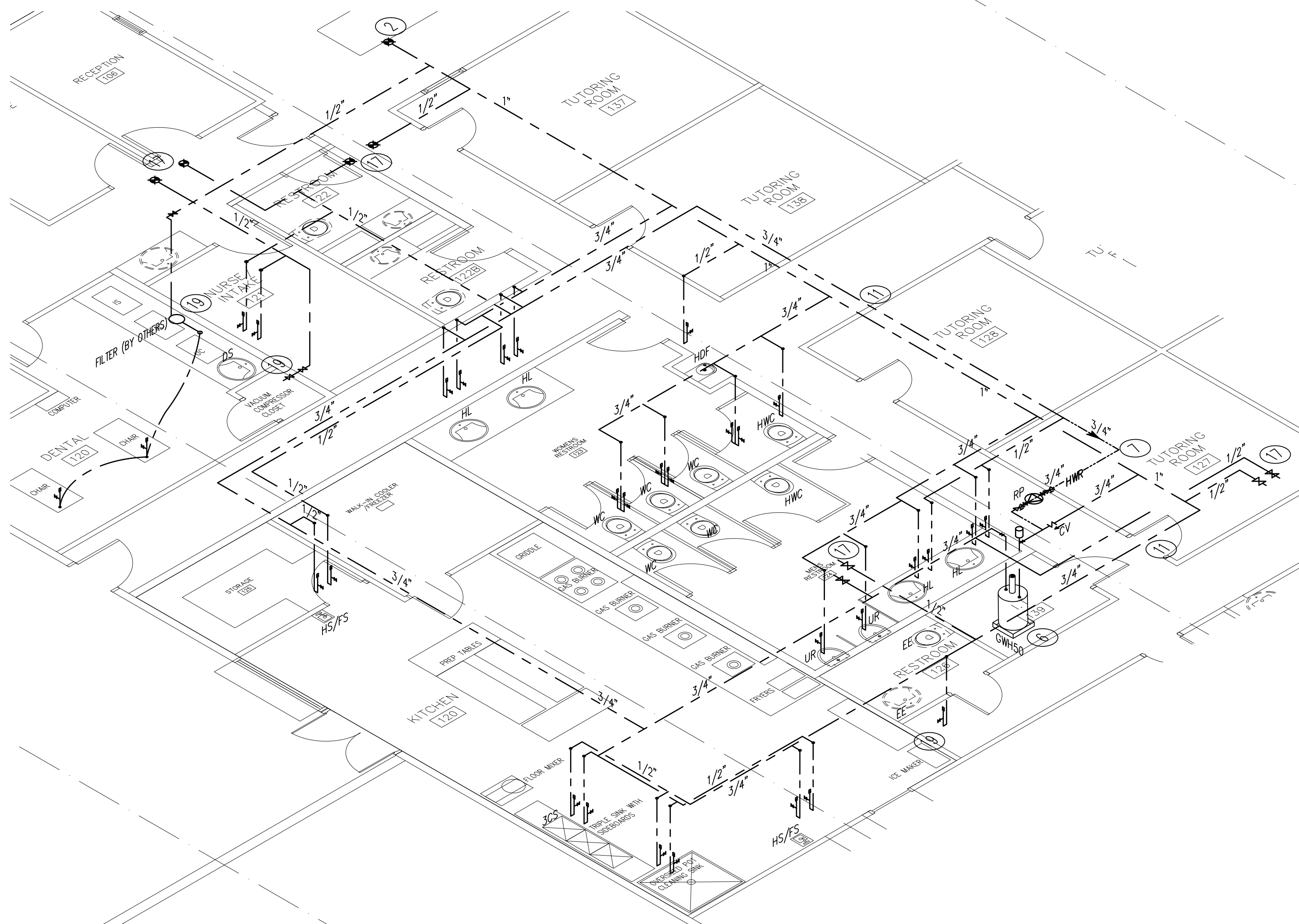
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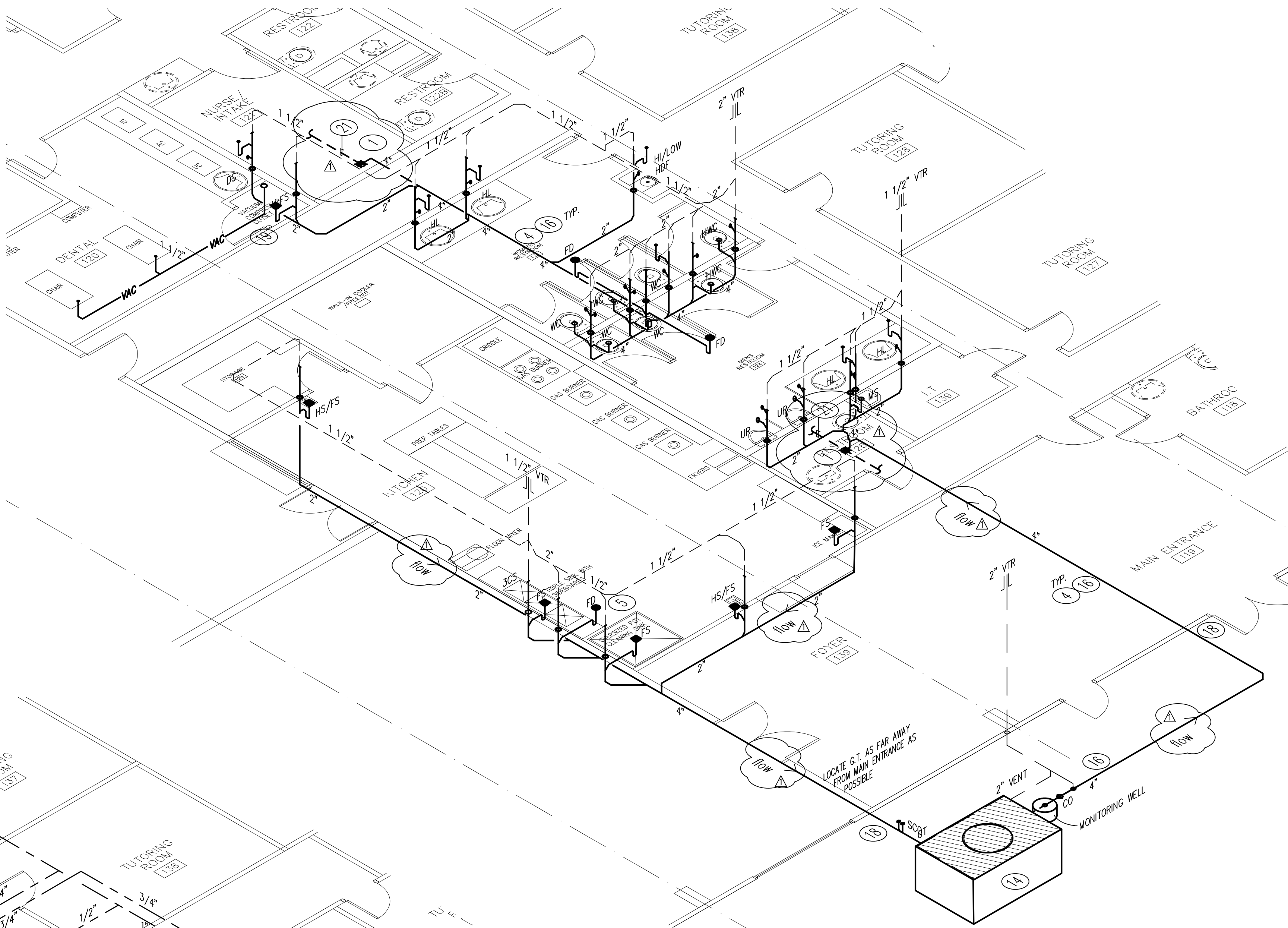
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PLUMBING KEYED NOTES:

- ① CONNECT INTO EXISTING MAIN SEWER LINE IN AREA. FIELD VERIFY EXACT LOCATION.
- ② CONNECT INTO EXISTING MAIN WATER LINE IN AREA. FIELD VERIFY EXACT LOCATION.
- ③ DOMESTIC WATER SERVICE PIPE SHALL BE INSTALLED PER IPC 604.8, SECTION 605,606,607 AND 608 REQUIREMENTS.
- ④ BUILDING SEWER SHALL CONFORM TO IPC CHAPTER 7.
- ⑤ INSTALL TRAP GUARDS IN ALL FLOOR DRAIN AND FLOOR SINKS.
- ⑥ WATER HEATER DISCHARGE SHALL CONFORM WITH IPC 504.6.1.
- ⑦ HOT WATER RETURN PIPE SHALL BE INSULATED WITH 1" INSULATION PER IECC 404.5.
- ⑧ WATER FLOW RATES SHALL CONFORM WITH TABLE 604.4 IPC FOR PLUMBING FIXTURES. PROVIDE FLOW RESTRICTORS AS REQUIRED.
- ⑨ DISCHARGE CONDENSATE AS REQUIRED PER IMC 307.2 AND IPC SECTION 314 REQUIREMENTS.
- ⑩ PROVIDE AUTOMATIC FIRE EXTINGUISHING SYSTEM FOR COMMERCIAL COOKING EQUIPMENT PER IBC 904.11 AND NFPA 96.
- ⑪ INSTALL PROPER PIPE SUPPORT PER IPC SECTION 308.
- ⑫ GAS PIPE RUN IN JOIST SPACE SECURED TO PREFAB PIPE SUPPORTS AT 10' ON CENTER AND AT ALL ELBOWS. PROVIDE EXPANSION OFFSETS AS REQUIRED.
- ⑬ DISCHARGE CONDENSATE INTO MOP SINK.
- ⑭ INSTALL INTERCEPTOR AND SEPARATOR PER IPC SECTION 1003.
- ⑮ GAS METER (BY SERVICING GAS CO) PLUMBING CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL WORK WITH GAS CO. INCLUDING SERVICE APPLICATIONS AND FORMS.
- ⑯ PROVIDE PROPER TRENCHING, EXCAVATION AND BACKFILL PER IPC SECTION 306.
- ⑰ CONNECT INTO EXISTING HOT AND COLD WATER LINES SERVING EXISTING PLUMBING FIXTURES TO REMAIN.
- ⑱ PROVIDE PIPE PROTECTION PER IPC SECTION 305.
- ⑲ PROVIDE BACKFLOW DEVICE CONNECTION PER IPC 608 REQUIREMENTS.
- ⑳ EXISTING PLUMBING FIXTURE TO REMAIN. CLEAN AND REPAIR AS REQUIRED FOR PROPER OPERATION.
- ㉑ APPROXIMATE LOCATION OF EXISTING 4" SEWER LINE. FIELD VERIFY EXACT LOCATION AND NEW PLUMBING. NOTIFY ARCHITECT IF DISCREPANCIES EXIST WITH EXISTING INVERTS OR CONDITION OF EXISTING PIPING.



HOT AND COLD WATER ISOMETRIC
SCALE: NONE



WASTE AND VENT ISOMETRIC
SCALE: NONE

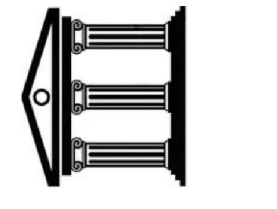


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PROJECT
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1212 ROYAL
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DATE: DATE
PROJECT NO. NO.
REVISION
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PLUMBING
PLAN
ISOMETRICS

SCALE: AS SHOWN

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DRAWN BY:

GENERAL ELECTRICAL NOTE:

THE ELECTRICAL WORK INCLUDES PROVIDING NEW MATERIALS, FIXTURES, DEVICES AND ACCESSORIES NECESSARY FOR A COMPLETE FUNCTIONING ELECTRICAL SYSTEM. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES OR ORDINANCES AND SUBJECT TO INSPECTION.

THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK REQUIRED FOR THE PROJECT. THE DRAWINGS FOR ELECTRICAL WORK ARE DIAGRAMMATIC, SHOWING THE LOCATION, TYPE DEVICES AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. PROVIDE ALL FIXTURES, LAMPS, DEVICES, ACCESSORIES, OFFSETS AND MATERIALS NECESSARY TO FACILITATE THE SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED.

COORDINATE WITH THE WORK OF OTHER SECTIONS. VERIFY EXISTING SITE CONDITIONS BEFORE BIDDING. MAKE ALL CONNECTIONS TO EQUIPMENT FURNISHED BY OTHERS. COMPLY WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.

ALL WORK SHALL COMPLY WITH LOCAL LAWS GOVERNING ELECTRICAL INSTALLATIONS, AND THE MOST RECENT EDITION OF THE "NATIONAL ELECTRIC CODE". PROVIDE CODE REQUIRED CLEARANCES AROUND ALL ELECTRICAL EQUIPMENT. OBTAIN ALL PERMITS RELATING TO ELECTRICAL WORK. MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL CONFORM TO NEMA, NATIONAL ELECTRIC CODE (NEC), AND UNDERWRITERS LABORATORIES (UL) STANDARDS IN EVERY CASE WHERE SUCH STANDARDS HAVE BEEN ESTABLISHED.

VERIFY VOLTAGE DROPS AND A.I.C. RATINGS FOR ALL EQUIPMENT CONNECTED AND VERIFY SIZE OF ELECTRICAL SYSTEM BREAKERS, CONDUITS, ETC.

ROOF PENETRATIONS SHALL COMPLY WITH "SMACNA" AND "MICA" STANDARDS, AND WITH THE REQUIREMENTS OF THE EXISTING ROOFING WARRANTY, IF APPLICABLE. DO NOT PERFORM ROOFING PENETRATIONS IN A MANNER WHICH WOULD VOID OR OTHERWISE LIMIT THE EXISTING ROOFING WARRANTY.

DISCONNECT SWITCHES SHALL BE STANDARD-DUTY, QUICK-MAKE, QUICK-BREAK TYPE NEMA 1 ENCLOSURE (NEMA 3R FOR OUTDOOR). SWITCHES SHALL BE AS MANUFACTURED BY SQUARE "D", GENERAL ELECTRIC, OR SIEMENS I.T.E. PROVIDE ALL FUSES AS MANUFACTURED BY BUSSMAN, GOLD-SHAMMUT, OR LITTLE-FUSE. ALL CONDUCTOR TERMINALS TO BE U.L. FOR MINIMUM 75°C. ALL DISCONNECT SWITCHES SHALL BE LABELED TO INDICATE EQUIPMENT SERVED.

BREAKERS TO BE THERMAL MAGNETIC TYPE, SNAP-IN, QUICK-MAKE, QUICK-BREAK TYPE SINGLE UNIT CONSTRUCTION, TWO AND THREE POLE BREAKERS SHALL BE SINGLE UNIT COMMON TRIP TYPE. ALL BREAKERS CONNECTED TO LIGHTING BRANCH CIRCUITS SHALL BE APPROVED FOR THAT USE AND MARKED "SMO".

GROUNDING SYSTEM: PERMANENTLY AND EFFECTIVELY GROUND ALL METALLIC CONDUITS, SUPPORTS, CABINETS, PANELBOARDS AND SYSTEM GROUNDING NEUTRAL. MAINTAIN CONTINUITY OF EQUIPMENT GROUND THROUGHOUT THE SYSTEM. GROUND CLAMPS SHALL BE APPROVED TYPE, SPECIFICALLY DESIGNED FOR GROUNDING. WHERE GROUNDING CONDUCTOR IS ENCLOSED IN CONDUIT, GROUND CLAMP SHALL BE OF A TYPE WHICH GROUND BOTH CONDUCTOR AND CONDUIT. ALL CIRCUITS IN FLEXIBLE CONDUIT OR PLASTIC CONDUIT SHALL INCLUDE A GROUND WIRE SIZED IN ACCORDANCE WITH "NEC" TABLE 250-66.

CONDUIT SHALL BE SIZED TO COMPLY WITH "NEC" FOR NUMBER AND SIZE OF CONDUCTORS INSTALLED, MINIMUM SIZE OF 1/2" ABOVE GRADE (UNLESS 3/4" IS REQUIRED) BY LOCAL JURISDICTION. PROVIDE SCHEDULE 40 PVC PLASTIC OR RIGID STEEL CONDUIT BELOW GRADE, MINIMUM SIZE OF 3/4". PROVIDE ELECTRICAL METAL TUBING (EMT) (EMT) (EMT) OR FLEXIBLE CONDUIT (IN LENGTHS 6'-0" OR LESS) FOR INTERIOR LOCATIONS. EXIT CONDUITS AND COUPLINGS SHALL BE SET-SCREW TYPE. CLAMP CONDUIT TO BOXES WITH BUSHINGS INSIDE AND LOCKOUT OUTSIDE.

MC CABLE PERMISSIBLE FOR INSTALLATION WHERE APPROVED BY CODE.

CONDUCTORS SHALL BE INSULATED SOFT ANNEALED 99K PURE COPPER WITH COLOR CODING, B & S GAGE, #10 AND SMALLER TO BE SOLID, #8 AND LARGER TO BE STRANDED, MINIMUM #12 UNLESS OTHERWISE INDICATED. ALUMINUM CONDUCTORS SHALL NOT BE ALLOWED. "THIN" MAY NOT BE USED UNDERGROUND, AT SERVICE ENTRANCES, OUTSIDE, OR IN WET LOCATIONS. ALL INSULATION TO BE RATED FOR 600 VOLT AND TYPES AS FOLLOWS:

#10 AND SMALLER: THW, THHN, OR THWN
#8 AND LARGER: THW OR THHN
SERVICE ENTRANCE: USE-RHW

DEVICES SHALL BE MANUFACTURED BY LEVITON OR EQUAL. ALL DEVICES AND COVER PLATES SHALL BE STAINLESS STEEL. STANDARD DUPLEX RECEPTACLES SHALL BE GROUNDING TYPE, 20 AMP, COMMERCIAL GRADE, OTHER DEVICES SHALL BE AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY THE EQUIPMENT ITEM INTENDED TO BE SERVED. WHERE SWITCHES ARE GROUPED, PROVIDE GANG PLATES.

LAYOUT BRANCH CIRCUIT WIRING AND ARRANGEMENT OF HOME RUNS FOR MAXIMUM ECONOMY AND EFFICIENCY. INCREASE WIRE SIZE IF VOLTAGE DROP EXCEEDS 3% OR CONDUCTOR LENGTH EXCEEDS 100 FEET.

CONCEAL WIRING SYSTEM IN WALL OR FLOOR CONSTRUCTION WHERE POSSIBLE. INSTALL CONDUIT PARALLEL TO BUILDING LINES AND TO CLEAR ALL OPENINGS, DEPRESSIONS, PIPES, DUCTS, STRUCTURE, ETC.

INSTALL CONDUIT CONTINUOUS BETWEEN BOXES AND CABINETS WITH NO MORE THAN FOUR (4) 90° BENDS. SECURELY FASTEN IN PLACE WITH STRAPS, HANGERS AND STEEL SUPPORTS AS REQUIRED. DO NOT SUPPORT CONDUIT FROM SUSPENDED CEILING GRID OR SUSPENSION WIRES. REAM CONDUIT ENDS BEFORE INSTALLATION AND THOROUGHLY CLEAN BEFORE INSTALLATION. GRENINS SHALL BE PLUGGED OR COVERED TO KEEP CONDUIT CLEAN. TERMINALS ON SWITCHES AND RECEPTACLES SHALL NOT BE USED TO "FEED-THRU" TO THE NEXT SWITCH OR RECEPTACLE. THE DISCONNECTING OR REMOVAL OF A DEVICE FROM A BOX SHALL NOT INTERFERE WITH OR INTERRUPT THE CONDUCTOR CONTINUITY.

CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EQUIPMENT AND SYSTEMS AGAINST HARMFUL EXPOSURE, OR ACCUMULATION OF DUST OR MOISTURE, FLOODING, CORROSION, AND ALL OTHER FORMS OF DAMAGE. CLEAN AND RESTORE DAMAGED FINISHES AND EQUIPMENT TO "LIKE-NEW" CONDITION.

ALL ELECTRICAL EQUIPMENT SHALL BE ADJUSTED AND TESTED FOR PROPER OPERATION. AFTER WIRES ARE IN PLACE AND CONNECTED TO DEVICES AND EQUIPMENT, THE SYSTEM SHALL BE TESTED FOR SHORTS AND GROUNDS. ALL HOT AND NEUTRAL CONDUCTORS, IF SHORTED OR GROUNDED, SHALL BE REMOVED AND REPLACED. ALL METERS, INSTRUMENTS, CABLE CONNECTIONS, EQUIPMENT, OR APPARATUS NECESSARY FOR MAKING ALL TESTS SHALL BE FURNISHED BY THIS CONTRACTOR.

ALL PANELBOARDS, SWITCHBOARDS, AND LINE VOLTAGE CONTROL EQUIPMENT SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTING, SERVICING, OR MAINTENANCE OF EQUIPMENT. MARKING SHALL BE SELF-ADHESIVE, COMMERCIAL LABEL CONFORMING TO N.E.C. 110.16 AND N.A.S.I. Z335.4 AS MANUFACTURED BY IDEAL OR APPROVED EQUI. COMPLY WITH LOCK-OUT, TAG-OUT PROCEDURES.

ELECTRICAL DESIGN HAS BEEN BASED ON THE INSTALLATION OF 75°C CONDUCTORS CONNECTED TO TERMINAL LUGS AND EQUIPMENT U.L. LISTED FOR A MINIMUM 75°C. CONDUCTORS TERMINATED ON EQUIPMENT WITH A LOWER RATING (60°C) OR NO RATING SHOWN TO HAVE CONDUCTOR SIZE INCREASED TO CONFORM TO N.E.C. TABLE 310-16 AND U.L. NO. 489 REQUIREMENTS.

SWITCHBOARDS, PANELBOARDS, DISCONNECT SWITCHES, TRANSFORMERS AND CONTACTORS ARE TO BE "LISTED" AND "IDENTIFIED" AS RATED FOR A MINIMUM OF 75°C CONDUCTOR TERMINATION.

ALL CONDUCTORS TO BE A MINIMUM OF #12 THHN/THWN, COPPER UNLESS NOTED OTHERWISE. BRANCH CIRCUIT RUNS WITH NO MARKS OR IDENTIFICATION ARE TO BE PROVIDED WITH ONE HOT, ONE NEUTRAL & ONE EQUIPMENT GROUND CONDUCTOR.

ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A PULL WIRE.

TELEPHONE CABLE TO BE FURNISHED AND INSTALLED BY OTHERS. ALL CABLING TO BE PLENUM RATED.

ELECTRICAL CONTRACTOR TO INCLUDE GROUND WIRE IN ALL RACEWAYS. SIZE RACEWAYS AS NECESSARY TO COMPLY WITH N.E.C.

REFER TO ARCHITECTURAL REFLECTED CEILING PLAN AND DETAILS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES AND ANY OTHER EQUIPMENT INSTALLED IN THE CEILING SYSTEM. VERIFY EXACT MOUNTING HEIGHTS AND FINISHES WITH ARCHITECT PRIOR TO ROUGH-IN.

CONTRACTOR SHALL COORDINATE INSTALLATION OF ELECTRICAL WORK ABOVE THE CEILING TO PROVIDE THE GREATEST POSSIBLE CLEARANCE FOR INSTALLATION OF PLUMBING AND MECHANICAL INSTALLATION. CONDUIT RUNS TO BE RUN THROUGH TRUSSES WHERE POSSIBLE.

ELECTRICAL CONTRACTOR TO VERIFY EXACT PLACEMENT OF ALL DEVICES SHOWN ON THE ELECTRICAL CONSTRUCTION DOCUMENTS WITH ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS PRIOR TO FINAL PLACEMENT.

WIRING IN PATIENT CARE AREAS SHALL COMPLY WITH NEC 517.13 (A) AND (B)
(A) WIRING METHODS - EFFECTIVE GROUND-FAULT CURRENT PATH
(B) INSULATED EGC - INSULATED COPPER EQUIPMENT GROUNDING CONDUCTOR

GENERAL ELECTRICAL SPECIFICATION:

BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Grounding and bonding.
- B. Connection of utilization equipment.
- C. Supports.
- D. Identification.
- E. Temporary electric service.

1.02 REGULATORY REQUIREMENTS

- A. Provide complete and fully operational systems to meet requirements indicated and conform to requirements of ANSI/NFPA 70, and all other applicable codes and ordinances. Contractor must immediately notify Project manager of any conflict between drawings or specifications and applicable codes or ordinances.
- B. Furnish products listed by Underwriters Laboratories, Inc. or other testing firm acceptable to authority having jurisdiction.

1.03 PROJECT CONDITIONS

- A. Verify field measurements and circuiting arrangements as are shown on drawings.

1.04 COORDINATION

- A. Obtain and review shop drawings, product data, and manufacturer's instructions for equipment furnished under other Sections to determine connection locations and requirements.
- B. Sequence rough-in of electrical connections to coordinate with installation and start-up of equipment furnished under other Sections.

PART 2 PRODUCTS

2.01 GROUNDING MATERIALS

- A. Ground Rod: Copper, 3/4 inch diameter x 10 foot length.
- B. Mechanical Connectors: Bronze.

2.02 BASIC MATERIALS

- A. Steel channels: Galvanized or painted steel.
- B. Miscellaneous Hardware: Treat for corrosion resistance.
- C. Nameplates: Engraved three-layer laminated plastic, black letters on white background.
- D. Wire and Cable Markers: Cloth markers or split sleeve type.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install ground electrodes at locations indicated.
- C. Provide bonding to meet regulatory requirements.
- D. Provide isolated equipment grounding conductor for circuits as indicated on drawings.
- E. Make electrical connections to utilization equipment in accordance with equipment manufacturer's instructions.
 1. Verify that wiring and outlet rough-in work is complete and that utilization equipment is ready for electrical connection, wiring, and energization.
 2. Make wiring connections in control panel or in wiring compartment of pre-wired equipment. Provide interconnecting wiring where indicated or as required.
 3. Install and connect disconnect switches, controllers, control stations, and control devices as indicated.
 4. Make conduit connections to equipment subject to movement and vibration using flexible conduit, ducts, liquid-tight flexible conduit in greasy, damp or wet locations.
 5. Install prefabricated cord set where connection with attachment plug is indicated or specified, or use attachment plug with suitable strain-relief clamps.
 6. Provide suitable strain-relief clamps for cord connections to outlet boxes and equipment connection boxes.

- F. Install support systems sized and fastened to accommodate weight of equipment and conduit, including wiring, which they carry.
 1. Fasten hanger rods, conduit clamps, and outlet and junction boxes to steel building structure using beam clappings.
 2. Use toggle bolts or hollow wall fasteners in hollow masonry, plaster, or gypsum board partitions and walls; expansion anchors or preset inserts in solid masonry walls; self-drilling anchors or expansion anchor on concrete surfaces; sheet metal screws in sheet metal studs; and wood screws in wood construction.
 3. Do not fasten supports to piping, ceiling support wires, ductwork, mechanical equipment, or conduit.
 4. Do not use powder-actuated anchors.
 5. Do not drill structural steel members.
 6. Fabricate supports from structural steel or steel channel.
 7. Install freestanding electrical equipment on concrete pads.
 8. Install surface-mounted cabinets and panelboards with minimum of four anchors.
 9. Bridge studs top and bottom with channels to support flush-mounted cabinets and panelboards in stud walls.

- G. Identify electrical distribution and control equipment, and loads served, to meet regulatory requirements and as indicated.
 1. Degrease and clean surfaces to receive nameplates.
 2. Secure nameplates to equipment fronts using screws, rivets, or adhesive, with edges parallel to equipment lines. Secure nameplate to inside face of recessed panelboard doors in finished locations.

- H. Install wire markers on each conductor in panelboard gutters, pull boxes, and at local connections.
 1. Use branch circuit or feeder number to identify power and lighting circuits.

- I. End of section

- J. End of section

- K. End of section

- L. End of section

- M. End of section

- N. End of section

- O. End of section

- P. End of section

- Q. End of section

- R. End of section

- S. End of section

- T. End of section

- U. End of section

- V. End of section

- W. End of section

- X. End of section

- Y. End of section

- Z. End of section

RACEWAYS

PART 1 GENERAL

- 1.01 SECTION INCLUDES
 - A. Conduit and fittings.
 - B. Surface raceway.
 - C. Wireway.
 - D. Electrical boxes.
 - E. Service fittings.

PART 2 PRODUCTS

2.01 PRODUCT REQUIREMENTS

- A. Use only specified raceway in the following locations:
 1. Installations in or Under Exterior Concrete Slab, or Undergrade: Rigid steel conduit, intermediate metal conduit, rigid PVC plastic conduit may be used where corrosive soil conditions exist. Conduits shall be encased in 3" of concrete.
 2. In or Under Interior Slab: Electrical metallic tubing, with concrete-light fittings, rigid PVC plastic conduit.
 3. Exposed Outdoor Locations: 5'-0" above grade or lower; rigid steel conduit or intermediate metal conduit. Above 5'-0" above grade, electrical metallic tubing. Use threaded or raintight fittings.
 4. Concealed Dry Interior Locations: Electrical metallic tubing.
 5. Exposed Dry Interior Locations: Electrical metallic tubing.

2.02 CONDUIT AND FITTINGS

- A. Conduit:
 1. Metal Conduit and Tubing: Galvanized steel.
 2. Flexible Metal Conduit: FSWM-C-568 and UL 1.
 3. Liquidtight Flexible Conduit: Flexible conduit with PVC jacket.
- B. Rigid PVC Plastic Conduit: NEMA TC 2; PVC. Use Schedule 40, 90 degrees C conduit in conformance with NEC Article 347.
- C. Rigid Steel Conduit: ANSI C 80.1 and UL 6.
- D. Intermediate Metal Conduit: FSWM-C-581 and UL 1242.

2.03 SERVICE FITTINGS

- A. Flush Floor Box Covers:
 1. Cover Material: Aluminum.
 2. Duplex Convenience Receptacle: Duplex flap.
 3. Provide brass, aluminum finish protective rings, split nozzle. Provide brass carpet rings.

2.04 ELECTRICAL BOXES

- A. Boxes:
 1. Sheet Metal: NEMA OS 1; galvanized steel.
 2. Cast Metal: Aluminum, deep type, gasket cover, threaded hubs.
 3. Nonmetallic: NEMA OS 2.
- B. Floor Boxes for Installation in Poured Concrete Floors: Semi-adjustable, formed steel.

2.05 SERVICE FITTINGS

- A. Flush Floor Box Covers:
 1. Cover Material: Aluminum.
 2. Duplex Convenience Receptacle: Duplex flap.
 3. Provide brass, aluminum finish protective rings, split nozzle. Provide brass carpet rings.

PART 3 EXECUTION

3.01 EXAMINATION AND PREPARATION

- A. Verify that supporting surfaces are ready to receive work.
- B. Electrical boxes are shown on drawings, in approximate locations, unless dimensioned.
 1. Obtain verification from Project Manager of floor box locations, and locations of outlets in offices and work areas, prior to rough-in.

3.02 INSTALLATION

- A. Arrange conduit to maximize headroom and to present neat appearance.
 1. Route exposed raceway parallel and perpendicular to walls and ceiling piping.
 2. Maintain minimum 6 inch clearance to piping and 12 inch clearance to heat surfaces such as flues and heating appliances.
 3. Maintain required fire, acoustic, and vapor barrier rating when penetrating walls, floors, and ceilings.
 4. Route conduit through roof openings for piping and ductwork when ceiling is in otherwise, route through roof jack with pitch pocket.
 5. Group in parallel runs where practical. Use rack constructed of steel channel. Maintain spacing between raceways or derate circuit ampacities to NFPA 70 requirements.
 6. Use conduit hangers and clamps; do not fasten with wire or perforated pipe straps.
 7. Use conduit bonds to make sharp changes in direction.
 8. Terminate conduit stubs with insulated bushings.
 9. Use suitable caps to protect installed raceway against entrance of dirt and moisture.

- B. Install electrical boxes as shown on the drawings, and as required for splices, taps, wire pulling, equipment connections and regulatory requirements.
 1. Use cast outlet box in unfinished locations, exposed to weather, and wet locations.
 2. Locate and install electrical boxes to allow access. Provide access panels if required.
 3. Locate and install electrical boxes to maximize headroom and to present neat mechanical appearance.
 4. Install pull boxes and junction boxes above accessible ceilings or in unfinished areas.
 5. Provide knockout closures for unused openings.
 6. Align wall-mounted outlet boxes for switches, thermostats, and similar devices.
 7. Install lighting outlets to locate luminaires as shown on reflected ceiling plan.

- C. Use recessed outlet boxes in finished areas and where indicated.
 1. Secure boxes to interior wall and partition studs, if in-dress.
 2. Use stamped steel stud bridges for flush outlets in hollow stud wall, and adjustable steel channel fasteners for flush ceiling outlet boxes.
 3. Coordinate masonry cutting to achieve neat openings for boxes.

- D. Install floor boxes in accordance with manufacturer's instructions.
 1. Set boxes level and flush with finish flooring material.

- E. Install service fittings in accordance with manufacturer's instructions.

- F. End of section

- G. End of section

- H. End of section

- I. End of section

- J. End of section

- K. End of section

- L. End of section

- M. End of section

- N. End of section

- O. End of section

- P. End of section

- Q. End of section

- R. End of section

- S. End of section

- T. End of section

WIRES AND CABLES

PART 1 GENERAL

- 1.01 SECTION INCLUDES
 - A. Wire and cable.
 - B. Wiring devices.
 - C. Service fittings.

1.02 QUALITY ASSURANCE

- A. Perform Work in accordance with NECA Standard of installation.

PART 2 PRODUCTS

- 2.01 WIRING METHODS
 - A. Concealed Interior Locations: Building wire in raceway.
 - B. Exposed Interior Locations: Building wire in raceway.
 - C. Above Accessible Ceilings: Building wire in raceway.
 - D. Wet or Damp Interior Locations: Building wire in raceway.
 - E. Exterior Locations: Building wire in raceways.
 - F. Underground Locations: Building wire in raceway.
 - G. Use no wire smaller than 12 AWG for power and lighting circuits.

2.02 WIRE AND CABLE

- A. Building Wire:
 1. Copper conductor (except as noted on drawings), 600 volt insulation, THW, THHN/THWN, 8 AWG, and larger stranded conductor smaller than 8 AWG, solid conductor.
 2. Thermostat and HVAC Unit Control Cable: As required by NEC Article 725.
 3. Cords: Oil-resistant thermoset insulated multiconductor flexible cord with identified equipment grounding conductor, suitable for hard usage in damp locations.

2.03 SERVICE FITTINGS

- A. Receptacle Service Fitting:
 1. Comply with UL 498 and NEMA WD1.
 2. Color: as specified.
 3. Device Plate: Type 302, stainless steel, satin finish.
 4. Configuration: One duplex.
- B. Wall Switches:
 1. Quiet type.
 2. Comply with UL 20 and NEMA WD1.
 3. Color: as specified.
 4. Device Plate: Type 302, stainless steel, satin finish.
 5. Configuration: As indicated on plan.

PART 3 EXECUTION

- 3.01 EXAMINATION AND PREPARATION
 - A. Verify that interior of building is physically protected from weather.
 - B. Verify that mechanical work which is likely to injure conductors has been completed.

- 3.02 INSTALLATION
 - A. Neatly train and secure wiring inside boxes, equipment, and panelboards.
 - B. Use wire pulling lubricant for pulling 4 AWG and larger wires.
 - C. Support cables above accessible ceilings to keep them from resting on ceiling tiles.
 - D. Make splices, taps, and terminations to carry full ampacity of conductors without perceptible temperature rise.
 - E. Terminate spare conductors with electrical tape.
 - F. Install wiring devices in accordance with manufacturer's instructions.

- G. Install wall plates flush and level.
 1. Install wall switches 48 inches above floor to top of switch, OFF position down.
 2. Install convenience receptacles 18 inches above floor to bottom of box.
 3. Install specific purpose receptacles at heights shown on drawings.
 4. Install cord and attachment plug caps on equipment under the provisions of Section 16050. Size cord for connected load and rating of branch circuit protection.

- H. Install decorative plates on switch, receptacle, and blank outlets in finished areas, using jumbo size plates for outlets installed in masonry walls.
 1. Install decorative plates on switch, receptacle, and blank outlets in finished areas, using jumbo size plates for outlets installed in masonry walls.
 2. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface-mounted outlets.

- I. Install wall plates flush and level.
 1. Install wall switches 48 inches above floor to top of switch, OFF position down.
 2. Install convenience receptacles 18 inches above floor to bottom of box.
 3. Install specific purpose receptacles at heights shown on drawings.
 4. Install cord and attachment plug caps on equipment under the provisions of Section 16050. Size cord for connected load and rating of branch circuit protection.

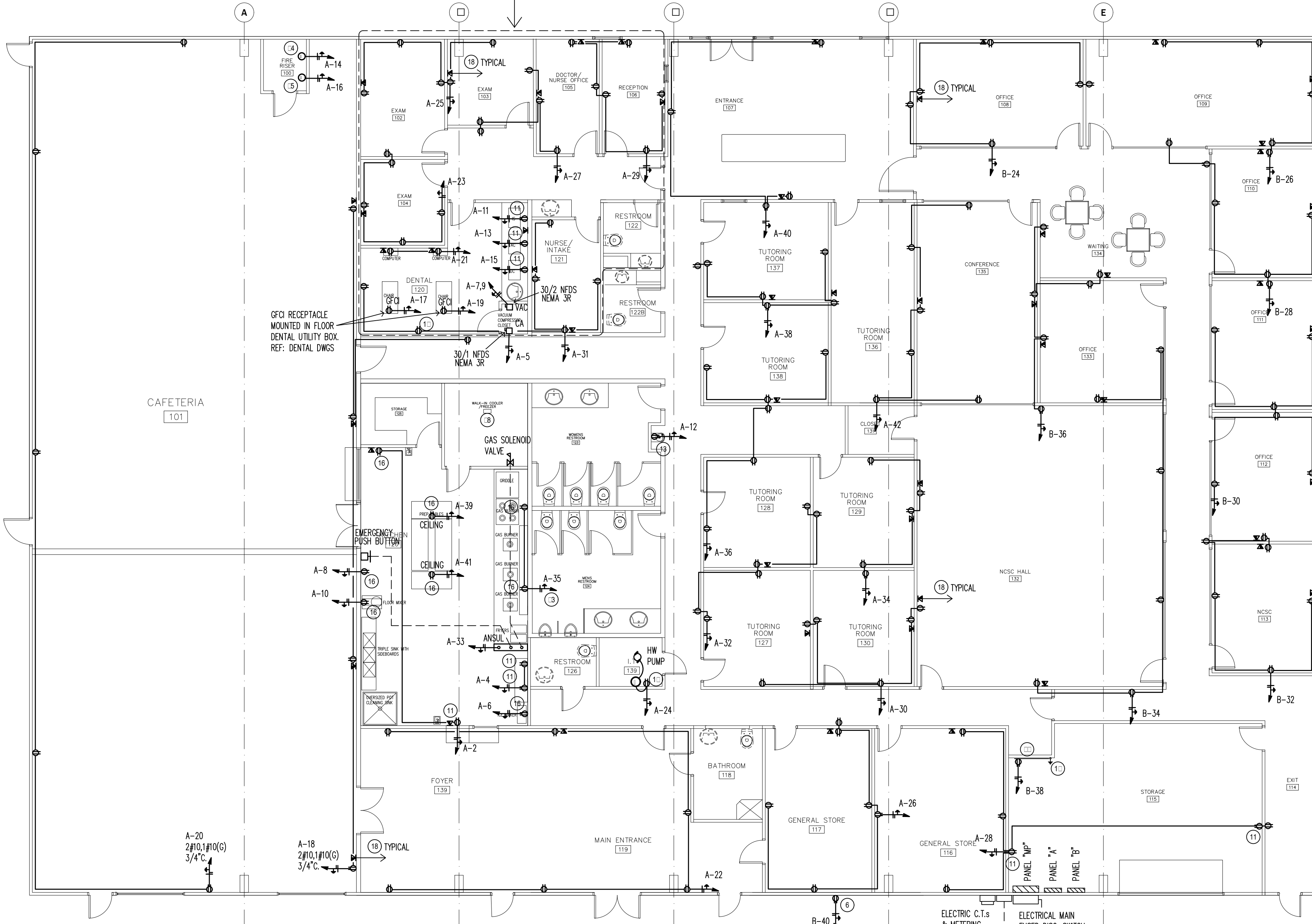
- J. Install decorative plates on switch, receptacle, and blank outlets in finished areas, using jumbo size plates for outlets installed in masonry walls.
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- K. Install wall plates flush and level.
 1. Install wall switches 48 inches above floor to top of switch, OFF position down.
 2. Install convenience receptacles 18 inches above floor to bottom of box.
 3. Install specific purpose receptacles at heights shown on drawings.
 4. Install cord and attachment plug caps on equipment under the provisions of Section 16050. Size cord for connected load and rating of branch circuit protection.

DATE:	DATE:
PROJECT NO.	PROJECT NO.
REVISION	DATE
1	
2	
3	
4	
5	
6	



WIRING IN PATIENT CARE AREAS SHALL COMPLY WITH NEC 517.13 (A) AND (B)
(A) WIRING METHODS - EFFECTIVE GROUND-Fault CURRENT PATH
(B) INSULATED EGC - INSULATED COPPER EQUIPMENT GROUNDING CONDUCTOR



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

ELECTRICAL KEYED NOTES:

- PROVIDE SWITCHING OF LIGHT FIXTURES PER IECC 405.2.2 REQUIREMENTS.
- EXTERIOR TIME CONTROLLER SHALL HAVE 7 DAY AND SEASONAL ADJUSTMENT WITH 4 HR. BACKUP PER IECC 405.2.4 REQUIREMENTS. TIMER TO BE ADJUSTED TO COME ON AT DUSK AND TURN OFF PER OWNERS DIRECTIONS AND SHALL COMPLY WITH LOCAL MUNICIPAL LIGHTING ORDINANCE.
- EXTERIOR TIME CONTROLLER SHALL HAVE 7 DAY AND SEASONAL ADJUSTMENT WITH 4 HR. BACKUP PER IECC 405.2.4 REQUIREMENTS. TIMER TO BE ADJUSTED TO COME ON AT DUSK AND TURN OFF AT DAY BREAK. LIGHTS ON THIS CIRCUIT INTENDED FOR NIGHT TIME SECURITY.
- HOT WATER RECIRCULATING PUMP TO BE CONTROLLED BY TIME CLOCK PER IECC 404.6 REQUIREMENTS.
- PROVIDE EGRESS EXIT DISCHARGE ILLUMINATION PER IFC 1006 REQUIREMENTS.
- INSTALL WEATHER RESISTANT WITH UV RESISTANCE COVER, GFI PROTECTED RECEPTACLE PER NEC 406.8.
- INSTALL WEATHER RESISTANT WITH UV RESISTANCE COVER, GFI PROTECTED RECEPTACLE FOR HVAC EQUIPMENT PER NEC 210.63 AND NEC 406.8 REQUIREMENTS.
- INSTALL GROUNDING AND BONDING PER NEC 250 REQUIREMENTS.
- PROVIDE GROUNDING ELECTRODE SYSTEM PER NEC 250.50, 250.52 WITH PROPER BONDING.
- PROVIDE INTERSYSTEM BONDING WITH MIN. # 6 AWG CU. PER NEC 250.94 REQUIREMENTS.
- MOUNT RECEPTACLE AT +42" GFI.
- GFI PROTECTED RECEPTACLE AS REQUIRED PER NEC 210.8 (B) (5).
- PROVIDE GFI PROTECTED RECEPTACLE FOR DRINKING FOUNTAIN CONNECTION PER NEC 422.52.
- PROVIDE MEANS OF CIRCUIT & EQUIPMENT PROTECTION PER NEC 440.21.
- PROVIDE A COMPLETE PANEL DIRECTORY PER NEC 408.4 REQUIREMENTS.
- ALL 15 AND 20 AMP 125 V. RECEPTACLES IN KITCHEN AREA TO BE GFI PROTECTED PER NEC 210.8 (B) (2).
- WEATHER RESISTANT J-BOX ON FASCIA FOR SIGN CONNECTION. VERIFY EXACT LOCATION PRIOR TO ROUGH IN.
- 3/4" CONDUIT WITH PULL STRING UP TO ACCESSIBLE CEILING.
- INSTALL SERVICE EQUIPMENT PER NEC 230 REQUIREMENTS AND OVERCURRENT PROTECTION PER NEC 240 REQUIREMENTS.
- INSTALL METERING AND ENCLOSURE PER ELECTRIC UTILITY CO. REQUIREMENTS AND STANDARDS.
- INSTALL PANELBOARDS PER NEC 408 REQUIREMENTS.
- 4"X8"X1/4" FIRE RETARDANT COATED PLYWOOD FOR TELEPHONE AND DATA EQUIPMENT MOUNTING.
- CIRCUIT THRU SHUNT TRIP BREAKER CONNECTED INTO EXHAUST HOOD FIRE SUPPRESSION SYSTEM.
- J-BOX FOR CONNECTION INTO FIRE SPRINKLER TAMPER SWITCH.
- J-BOX FOR CONNECTION INTO FIRE SPRINKLER FLOW MONITOR.
- FIXTURES IN THIS DAYLIGHT ZONE HAVE INTEGRAL OCCUPANCY AND PHOTOCELL SENSOR TO COMPLY WITH IECC SECTION 405 REQUIREMENTS.
- EMERGENCY BATTERY PACK IN LIGHT FIXTURE TO BE WRED INTO NON SWITCHED LIGHTING CIRCUIT.
- COMPLY WITH NEC 300.7(A) FOR CONDUIT INSTALLATIONS AT COLD STORAGE AND EXTERIOR APPLICATIONS.

AIC Calculation

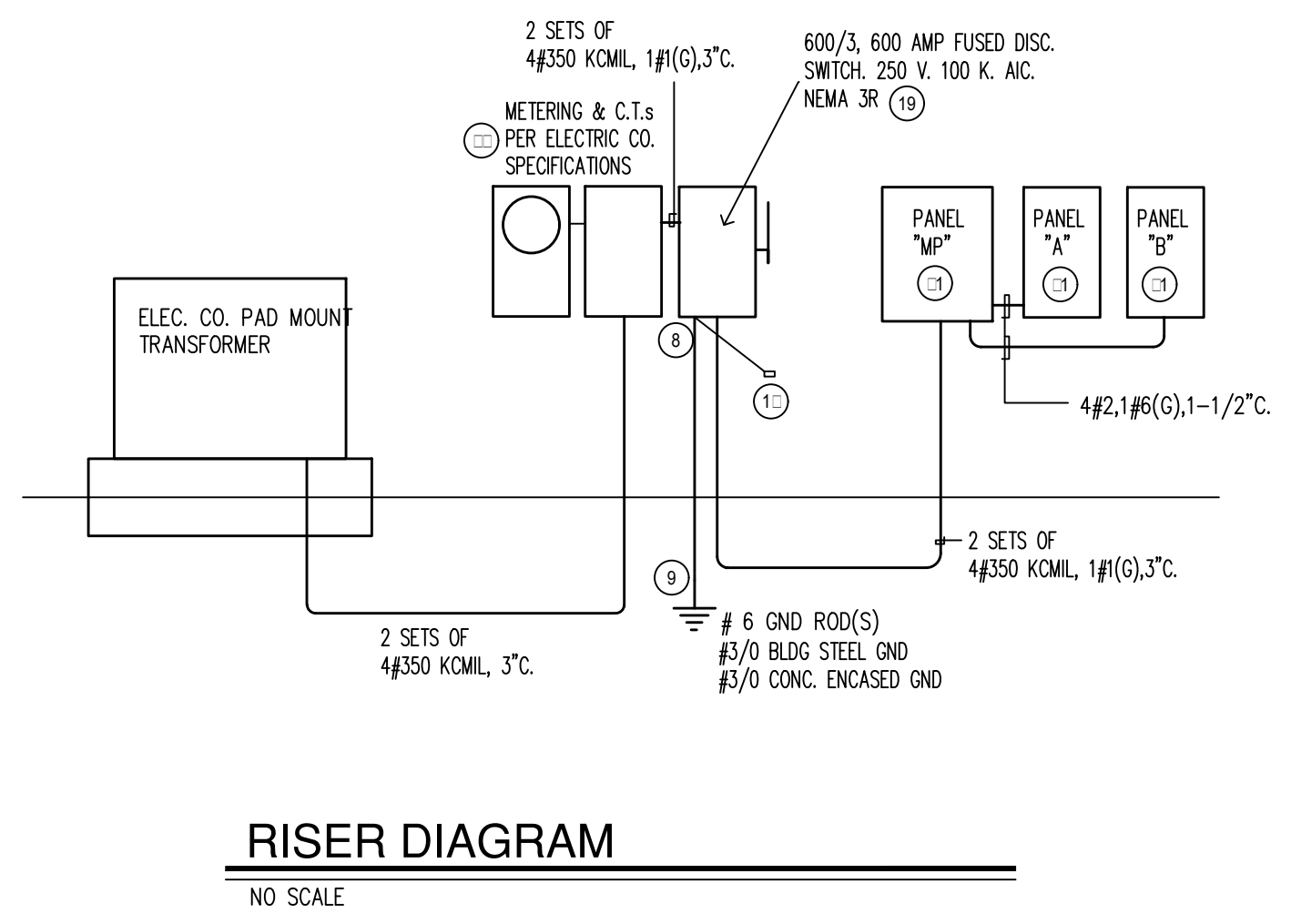
TRANSFORMER
208 Volts (L-L) 3 PHASE
150 KVA Z = 1.2 (%)

$$If = \frac{[KVA] \times [1000]}{(1.73) \times [Voltage]} = 416.4 \text{ AMPS}$$

$$Isc = \frac{[If] \times [100]}{Z} = 34698 \text{ AMPS}$$

Available fault current at transformer secondary **34698 AMPS**

For gear located at a distance of 10 feet of (n) conductors with constant value c.
c = 19703
n = 2
 $f = \frac{[Isc] \times (1.73) \times [length]}{(volts) \times c} = 0.0733$
m = $\frac{1}{1+f} = 0.9317$
Isc_new = m * Isc
Available fault current at gear: **32327 AMPS**
JUN FUSE LET THROUGH CURRENT = 8,000 AMPS



15 PANEL MP 208/120V, 3 PHASE, 4 WIRE, 225A MAIN LUGS, DOOR IN DOOR, SURFACE MOUNTED, GROUND BAR, NEUTRAL BAR, NEMA 1 ENCLOSURE, 10K AIC

CCT#	LOAD DESCRIPTION	BKR SIZE (VA)	LOAD (VA)	PHASE A	PHASE B	PHASE C	LOAD (VA)	BKR SIZE (VA)	LOAD DESCRIPTION	CCT#	
1	PANEL A	100/3	10072	19287			9215	100/3	PANEL B	2	
2			9712		20602		10890			4	
3			10000			20803	10000			6	
5	MAU	150/3	11640	14968			3328	50/2	RTPAC-1	8	
7			11640				3328			10	
11			11640				15696	4056	60/2	RTPAC-2	12
13	RTPAC-7	60/2	4056	8112			4056	60/2		14	
15			4056				8112	4056	60/2	RTPAC-3	16
17	RTPAC-8	60/2	4056				8112	4056	60/2		18
19			4056				8112	4056	60/2	RTPAC-4	20
21	RTPAC-9	60/2	4056				8112	4056	60/2		22
23			4056				8112	4056	60/2	RTPAC-5	24
25	WIF COND. UNIT	30/2	1875	5931			4056	60/2		26	
27			1875				5931	4056	60/2	RTPAC-6	28
29	WIC COND. UNIT	20/2	625				4681	4056			30
31			625	985			360	20/1	FCU COOLER	32	
33	FCU FREEZER	20/2	1350				2418	1080	20/1	KEF-1	34
35			1350				2418	1080	20/1	KEF-2	36
37	SPACE		0				0		SPACE	38	
39	SPACE		0				0		SPACE	40	
41	SPACE		0				0		SPACE	42	
PER PHASE TOTAL FEED THRU			57395	60143	59822				NOTES:		
TOTAL LOAD (KVA)			177.4	@208V	492						

15 PANEL A 208/120V, 3 PHASE, 4 WIRE, 225A MAIN LUGS, DOOR IN DOOR, SURFACE MOUNTED, GROUND BAR, NEUTRAL BAR, NEMA 1 ENCLOSURE, 10K AIC

CCT#	LOAD DESCRIPTION	BKR SIZE (VA)	LOAD (VA)	PHASE A	PHASE B	PHASE C	LOAD (VA)	BKR SIZE (VA)	LOAD DESCRIPTION	CCT#	
1	EXH. FAN	20/1	480	840			360	20/1	RCPTS	2	
3	UNIT HTR	20/1	360		720		360	20/1	RCPTS	4	
5	AIR COMP.	20/1	960		1680		720	20/1	RCPTS	6	
7	VACUUM	20/2	832	1552			720	20/1	RCPTS	8	
9			832		2332		1500	20/1	RCPTS	10	
11	DENTAL EQUIPMENT	20/1	720				1440	720	20/1	DF	12
13	DENTAL EQUIPMENT	20/1	720				1080	360	20/1	FIRE SPRINKLER TAMPER SWITCH	14
15	DENTAL EQUIPMENT	20/1	720				1080	360	20/1	FIRE SPRINKLER FLOW SWITCH	16
17	DENTAL CHAIR	20/1	480				1380	900	20/1	RCPTS	18
19	DENTAL CHAIR	20/1	480				1380	900	20/1	RCPTS	20
21	RCPTS	20/1	360				1440	1080	20/1	RCPTS	22
23	RCPTS	20/1	900				1260	360	20/1	HW PUMP	24
25	RCPTS	20/1	900	1980			1080	20/1	RCPTS	26	
27	RCPTS	20/1	900		1800		900	20/1	RCPTS	28	
29	RCPTS	20/1	1080				2160	1080	20/1	RCPTS	30
31	RCPTS	20/1	1080	2160			1080	20/1	RCPTS	32	
33	ANSUL	20/1	360				1260	900	20/1	RCPTS	34
35	RCPTS - COOK LINE	20/1	360				1440	1080	20/1	RCPTS	36
37			360				1080	1080	20/1	RCPTS	38
39	RCPTS	20/1	360				1080	720	20/1	RCPTS	40
41	RCPTS	20/1	360				1440	1080	20/1	RCPTS	42
PER PHASE TOTAL FEED THRU			10072	9712	10800				NOTES:		
TOTAL LOAD (KVA)			30.6	@208V	85						

15 PANEL B 208/120V, 3 PHASE, 4 WIRE, 125A MAIN LUGS, DOOR IN DOOR, SURFACE MOUNTED, GROUND BAR, NEUTRAL BAR, NEMA 1 ENCLOSURE, 10K AIC

CCT#	LOAD DESCRIPTION	BKR SIZE (VA)	LOAD (VA)	PHASE A	PHASE B	PHASE C	LOAD (VA)	BKR SIZE (VA)	LOAD DESCRIPTION	CCT#	
1	EXT. LTG	20/2	750	1200			450	20/1	LTG	2	
3			750		2090		1340	20/1	LTG	4	
5	EXT. LTG	20/2	750			1643	893	20/1	LTG	6	
7			750	2090			1340	20/1	LTG	8	
9	SIGN	20/1	800				2140	1340	20/1	LTG	10
11	SIGN	20/1	800				1775	975	20/1	LTG	12
13	LTG	20/1	1125	1485			360	20/1	LTG	14	
15	LTG	20/1	1050				2400	1350	20/1	LTG	16
17	LTG	20/1	750				1650	900	20/1	LTG	18
19	LTG	20/1	600				825	225	20/1	LTG	20
21	HOOD LTG & CONTROLS	20/1	360				540	180	20/1	LTG CONTROL	22
23	WALK IN LTG	20/1	360				1440	1080	20/1	RCPTS	24
25	LTG	20/1	1275	2175			900	20/1	RCPTS	26	
27	LTG	20/1	1200				2280	1080	20/1	RCPTS	28
29	LTG	20/1	975				2055	1080	20/1	RCPTS	30
31	SPARE	20/1					1080	1080	20/1	RCPTS	32
33	SPARE	20/1					1080	1080	20/1	RCPTS	34
35	SPARE	20/1					1080	1080	20/1	RCPTS	36
37	SPARE	20/1					360	20/1	TTB	38	
39	SPARE	20/1					360	20/1	EXTERIOR RCPT	40	
41	SPARE	20/1					360	20/1	ROOF RCPTS	42	
PER PHASE TOTAL FEED THRU			9215	10890	10003				NOTES:		
TOTAL LOAD (KVA)			30.1	@208V	84						



ELECTRICAL KEYED NOTES:

- PROVIDE SWITCHING OF LIGHT FIXTURES PER IECC 405.2.2 REQUIREMENTS.
- EXTERIOR TIME CONTROLLER SHALL HAVE 7 DAY AND SEASONAL ADJUSTMENT WITH 4 HR. BACKUP PER IECC 405.2.4 REQUIREMENTS. TIMER TO BE ADJUSTED TO COME ON AT DUSK AND TURN OFF PER OWNERS DIRECTIONS AND SHALL COMPLY WITH LOCAL MUNICIPAL LIGHTING ORDINANCE.
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- HOT WATER RECIRCULATING PUMP TO BE CONTROLLED BY TIME CLOCK PER IECC 404.6 REQUIREMENTS.
- PROVIDE EGRESS EXIT DISCHARGE ILLUMINATION PER IFC 1006 REQUIREMENTS.
- INSTALL WEATHER RESISTANT WITH UV RESISTANCE COVER, GFI PROTECTED RECEPTACLE PER NEC 406.8.
- INSTALL WEATHER RESISTANT WITH UV RESISTANCE COVER, GFI PROTECTED RECEPTACLE FOR HVAC EQUIPMENT PER NEC 210.63 AND NEC 406.8 REQUIREMENTS.
- INSTALL GROUNDING AND BONDING PER NEC 250 REQUIREMENTS.
- PROVIDE GROUNDING ELECTRODE SYSTEM PER NEC 250.50, 250.52 WITH PROPER BONDING.
- PROVIDE INTERSYSTEM BONDING WITH MIN. # 6 AWG CU. PER NEC 250.94 REQUIREMENTS.
- MOUNT RECEPTACLE AT +42" GFL.
- GFI PROTECTED RECEPTACLE AS REQUIRED PER NEC 210.8 (B) (5).
- COMPLY WITH NEC 300.7(A) FOR CONDUIT INSTALLATIONS AT COLD STORAGE AND EXTERIOR APPLICATIONS.
- PROVIDE MEANS OF CIRCUIT & EQUIPMENT PROTECTION PER NEC 440.21.
- PROVIDE A COMPLETE PANEL DIRECTORY PER NEC 408.4 REQUIREMENTS.
- ALL 15 AND 20 AMP 125 V. RECEPTACLES IN KITCHEN AREA TO BE GFI PROTECTED PER NEC 210.8 (B) (2).
- WEATHER RESISTANT J-BOX ON FASCIA FOR SIGN CONNECTION. VERIFY EXACT LOCATION PRIOR TO ROUGH IN.
- 3/4" CONDUIT WITH PULL STRING UP TO ACCESSIBLE CEILING.
- INSTALL SERVICE EQUIPMENT PER NEC 230 REQUIREMENTS AND STANDARDS.
- INSTALL METERING AND ENCLOSURE PER ELECTRIC UTILITY CO. REQUIREMENTS AND STANDARDS.
- INSTALL PANELBOARDS PER NEC 408 REQUIREMENTS.
- 4"x8"x3/4" FIRE RETARDANT COATED PLYWOOD FOR TELEPHONE AND DATA EQUIPMENT MOUNTING.
- CIRCUIT THRU SHUNT TRIP BREAKER CONNECTED INTO EXHAUST HOOD FIRE SUPPRESSION SYSTEM.
- J-BOX FOR CONNECTION INTO FIRE SPRINKLER TAMPER SWITCH.
- J-BOX FOR CONNECTION INTO FIRE SPRINKLER FLOW MONITOR.
- FIXTURES IN THIS DAYLIGHT ZONE HAVE INTEGRAL OCCUPANCY AND PHOTOCELL SENSOR TO COMPLY WITH IECC SECTION 405 REQUIREMENTS.
- EMERGENCY BATTERY PACK IN LIGHT FIXTURE TO BE WIRED INTO NON SWITCHED LIGHTING CIRCUIT.
- COMPLY WITH NEC 300.7(A) FOR CONDUIT INSTALLATIONS AT COLD STORAGE AND EXTERIOR APPLICATIONS.

COMcheck Software Version 4.1.1.0
Interior Lighting Compliance Certificate

Project Information
Energy Code: 2015 IECC
Project Title: New Construction
Project Type: New Construction
Construction Site: NAPALI MANDIR COMMUNITY CENTER, EULESS, TX
Owner/Agent: Designer/Contractor:

Additional Efficiency Package(s)
Unspecified

Area Category	Floor Area (ft ²)	Allowed Watts / ft ²	Allowed Watts (B X C)
1-Office	6800	0.82	5576
2-Dining/Family	5500	0.85	5225
3-School/University	2900	0.87	2522
Total Allowed Watts =			13063

Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	Lamps / Fixture	# of Fixtures	Watt.	(C X D)
1-Office LED 1: A:AE B: 2x4 LED; Other: LED 2: C:2x2 LED; Other: LED 3: D:DE LED DOWNLIGHT; Other: LED 4: E: LED PENDANT; Other: LED 5: F: F STRIP LED; Other:	1	142	48	6816
	1	2	31	62
	1	27	119	3213
	1	6	119	714
	1	3	60	180
2-Dining/Family 3-School/University	Total Proposed Watts = 10965			

Interior Lighting PASSES: Design 16% 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 2015 IECC requirements in COMcheck version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

IRVIN ROBER PROJECT-MANAGER Signature: I. Robere Date: 7/10/20

COMcheck Software Version 4.1.1.0
Exterior Lighting Compliance Certificate

Project Information
Energy Code: 2015 IECC
Project Title: New Construction
Project Type: Exterior Lighting Zone
Exterior Lighting Zone: 2 (Light Industrial area with limited nighttime use)

Allowed Exterior Lighting Power

Area/Surface Category	Quantity	Allowed Watts / Unit	Tradable Wattage	Allowed Watts (B X C)
Walkway >= 10 feet wide	14000 ft ²	0.14	Yes	1960
Total Tradable Watts (a) =			2160	
Total Allowed Watts =			2160	
Total Allowed Supplemental Watts (b) =			600	

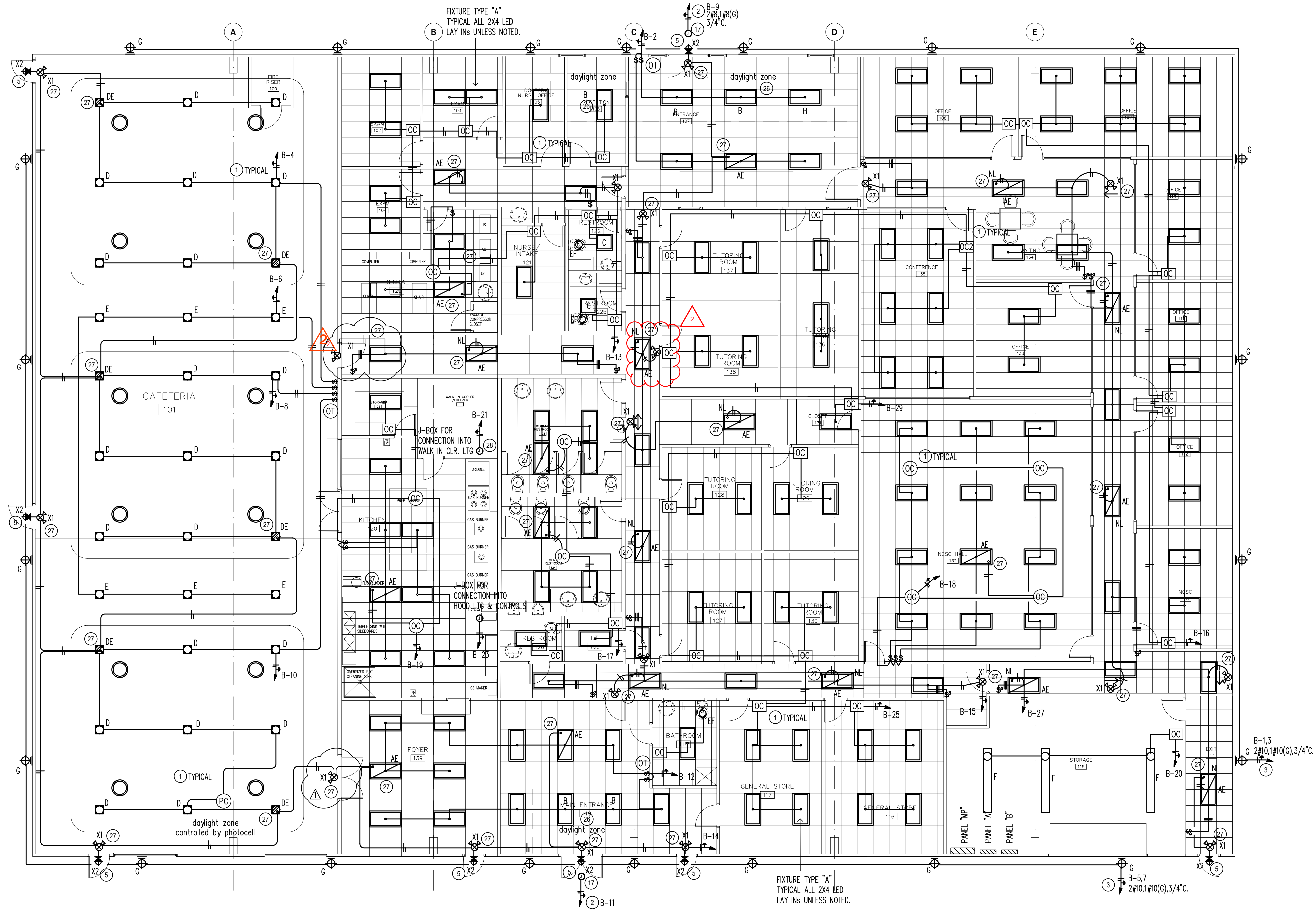
(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	Lamps / Fixture	# of Fixtures	Watt.	(C X D)
Walkway >= 10 feet wide (14000 ft ²): Tradable Wattage LED 1: G: WALL PACK; Other:	1	22	109	2398
Entry canopy (800 ft ²): Tradable Wattage	Total Tradable Proposed Watts = 2398			

Exterior Lighting PASSES: Design 13% better than code

Exterior Lighting Compliance Statement
Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2015 IECC requirements in COMcheck version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

IRVIN ROBER PROJECT-MANAGER Signature: I. Robere Date: 7/10/20

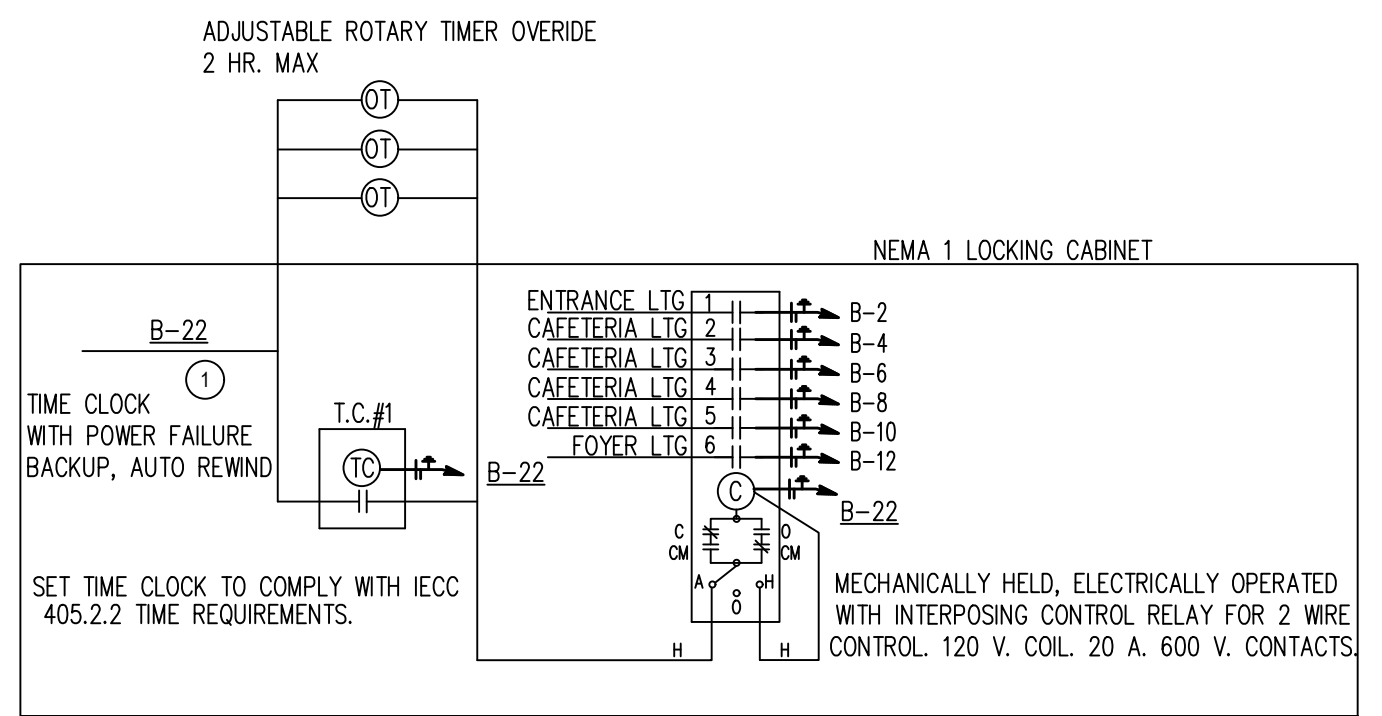


FIRE ALARM SYSTEM WITH VOICE ACTIVATION WILL BE INSTALLED.

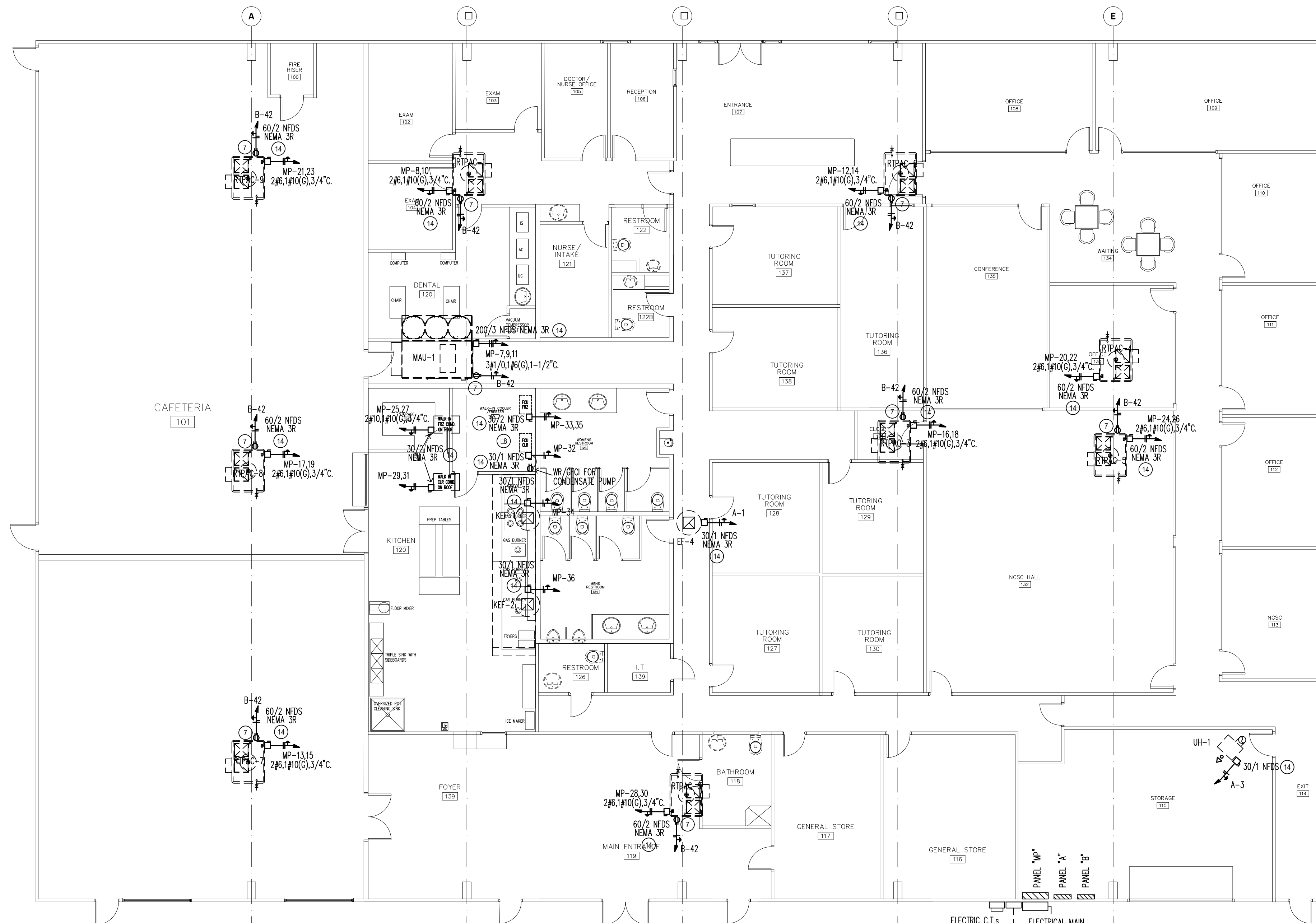
1 LIGHTING PLAN
SCALE: 1/8"=1'-0"

LIGHT FIXTURE SCHEDULE

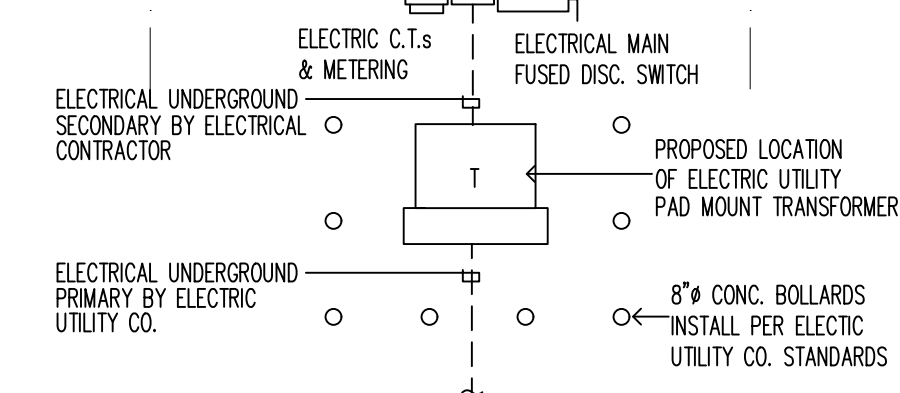
MANUFACTURER #	# LAMPS / TYPE	MOUNTING	VOLTS	REMARKS
A LITHONIA # 2BL146LADSMZ1LP840	48 w. LED	LAY IN	120	
AE LITHONIA # 2BL146LADSMZ1LP840EL14L	48 w. LED	LAY IN	120	EMERGENCY BATTERY PACK
B LITHONIA # 2BL146LADSMZ1LP840SDPD7ADXC	48 w. LED	LAY IN	120	INTEGRAL OCCUPANCY SENSOR/PHOTOCELL
C LITHONIA # 2BL1240LADSMZ1LP840	31 w. LED	LAY IN	120	
DE LITHONIA # LDN8408L08ARLSS	119 w. LED	RECESSED	120	
DEL LITHONIA # LDN8408L08ARLSS-EL	119 w. LED	RECESSED	120	EMERGENCY BATTERY PACK
E LITHONIA # LDN8408L08ARLSS-PM	119 w. LED	PENDANT	120	
F LITHONIA # 1ZL101966000MFST40K80CRWH	60 w. LED	SURFACE	120	
G LITHONIA # DSKW2LED30C100040K14M	109 w. LED	WALL	208	DARK SKY COMPLIANT
X1 LITHONIA # LHOMLED	WITH FIXTURE	UNIVERSAL	120	EMERGENCY BATTERY PACK
X2 LITHONIA # AFN	WITH FIXTURE	WALL	120	EMERGENCY BATTERY PACK



INTERIOR LIGHTING CONTROL SCHEMATIC
CAFETERIA, FOYER, MAIN ENTRANCE AND ENTRANCE LIGHTS

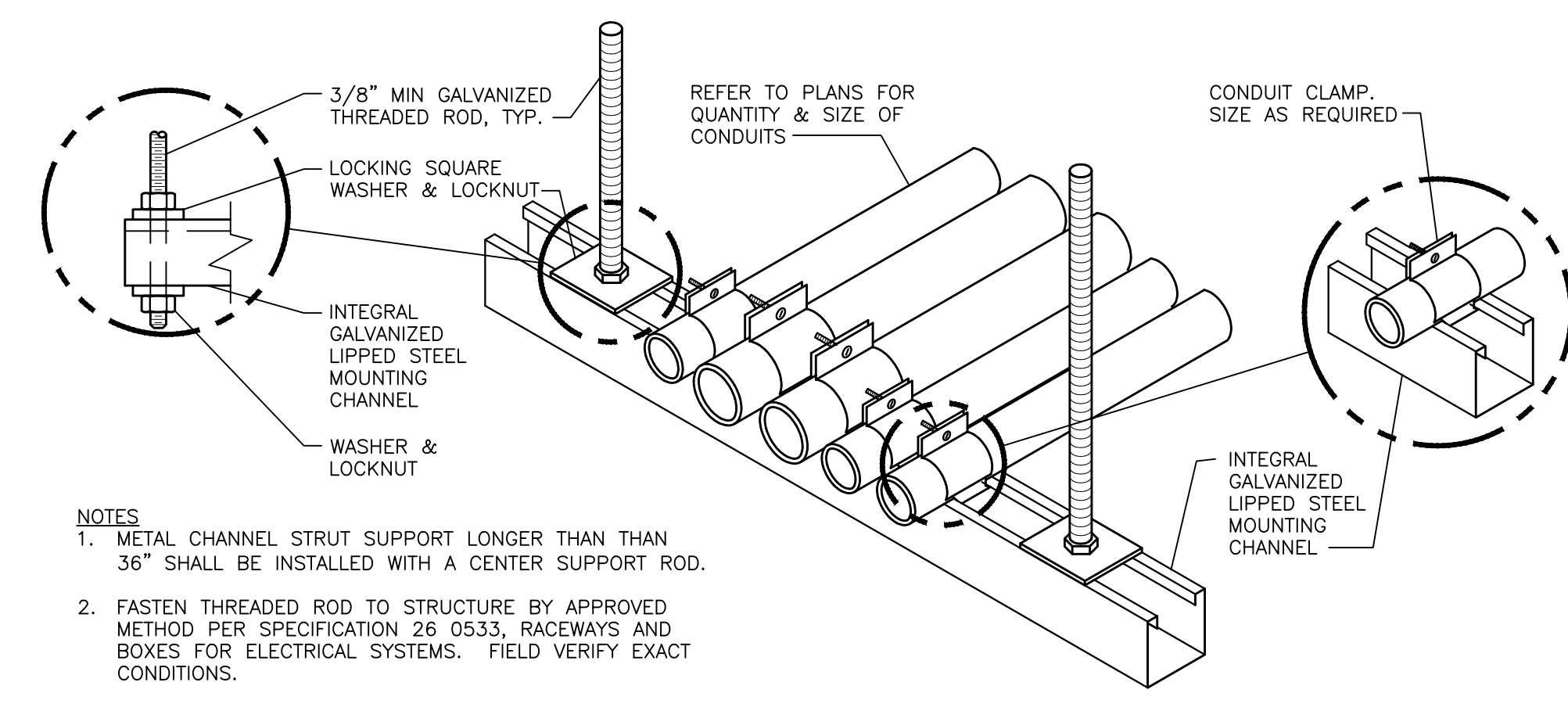


1 POWER PLAN - HVAC UNITS
 SCALE: 1/8"=1'-0"



ELECTRICAL KEYED NOTES:

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- 5 PROVIDE EGRESS EXIT DISCHARGE ILLUMINATION PER IFC 1006 REQUIREMENTS.
- 6 INSTALL WEATHER RESISTANT WITH UV RESISTANCE COVER, GFI PROTECTED RECEPTACLE PER NEC 406.8.
- 7 INSTALL WEATHER RESISTANT WITH UV RESISTANCE COVER, GFI PROTECTED RECEPTACLE FOR HVAC EQUIPMENT PER NEC 210.63 AND NEC 406.8 REQUIREMENTS.
- 8 INSTALL GROUNDING AND BONDING PER NEC 250 REQUIREMENTS.
- 9 PROVIDE GROUNDING ELECTRODE SYSTEM PER NEC 250.50, 250.52 WITH PROPER BONDING.
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- 18 3/4" CONDUIT WITH PULL STRING UP TO ACCESSIBLE CEILING.
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- 20 INSTALL METERING AND ENCLOSURE PER ELECTRIC UTILITY CO. REQUIREMENTS AND STANDARDS.
- 21 INSTALL PANELBOARDS PER NEC 408 REQUIREMENTS.
- 22 4'X8'X3/4" FIRE RETARDANT COATED PLYWOOD FOR TELEPHONE AND DATA EQUIPMENT MOUNTING.
- 23 CIRCUIT THRU SHUNT TRIP BREAKER CONNECTED INTO EXHAUST HOOD FIRE SUPPRESSION SYSTEM.
- 24 J-BOX FOR CONNECTION INTO FIRE SPRINKLER TAMPER SWITCH.
- 25 J-BOX FOR CONNECTION INTO FIRE SPRINKLER FLOW MONITOR.
- 26 FIXTURES IN THIS DAYLIGHT ZONE HAVE INTEGRAL OCCUPANCY AND PHOTOCELL SENSOR TO COMPLY WITH IECC SECTION 405 REQUIREMENTS.
- 27 EMERGENCY BATTERY PACK IN LIGHT FIXTURE TO BE WIRED INTO NON SWITCHED LIGHTING CIRCUIT.
- 28 COMPLY WITH NEC 300.7(A) FOR CONDUIT INSTALLATIONS AT COLD STORAGE AND EXTERIOR APPLICATIONS.



- NOTES**
1. METAL CHANNEL STRUT SUPPORT LONGER THAN THAN 36" SHALL BE INSTALLED WITH A CENTER SUPPORT ROD.
 2. FASTEN THREADED ROD TO STRUCTURE BY APPROVED METHOD PER SPECIFICATION 26 0533, RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS. FIELD VERIFY EXACT CONDITIONS.
 3. FOR TRAPEZE INSTALLATIONS IN SEISMIC AREAS REFER TO SPECIFICATION SECTION 10 05 41, SEISMIC RESTRAINT REQUIREMENTS FOR NON-STRUCTURAL COMPONENTS.

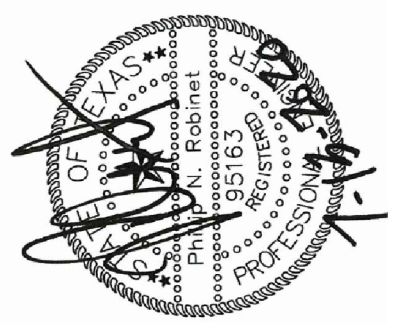
CONDUIT MOUNTING DETAIL



ARTECO INTEGRATED LLC 8018
 7700 WINDROSE AVE
 SUITE G300
 PLANO, TEXAS 75024
 TBPE ENGINEERING FIRM
 TBPE ARCHITECTURE BR-1707
 arteco.solutions
 972.802.4507

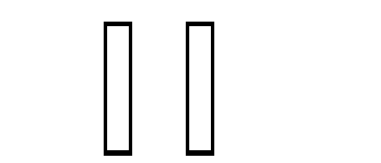
PROJECT
 NEPALI
 MANDIR
 COMMUNITY
 CENTER

1212 ROYAL
 PARKWAY
 EULESS TEXAS,
 76040
 DATE: DATE
 PROJECT NO. NO.
 REVISION DATE

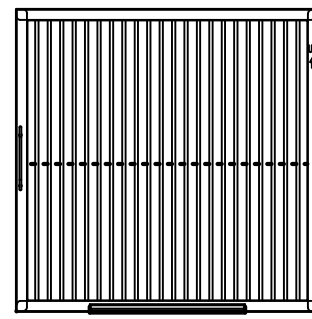


HVAC POWER PLAN

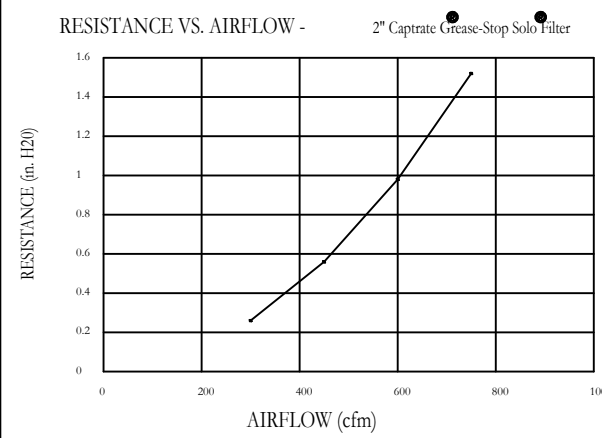
SCALE: AS SHOWN



DRAWN BY:



Captrate Grease-Stop Solo Filter



Filter Detail

CAPTRATE

EXHAUST CFM=LENGTH OF HOOD X CFM/LIN.FT. (LOAD)
 SUPPLY CFM=EXHAUST CFM X PERCENTAGE REQUIRED
 TOTAL DUCT AREA=144 X $\frac{CFM}{FPM(\cdot)}$
 DUCT LENGTH= $\frac{TOTAL DUCT AREA}{DUCT DEPTH}$

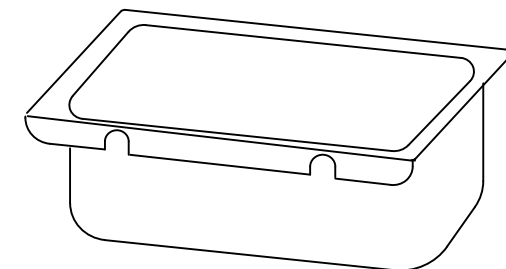
CALCULATIONS UTILIZED

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH:

- NFPA #86
- ETL SANITATION
- B.O.C.A. #93-16
- ICB O. 34416
- 3800 PSI & ESI NO. 93137
- E.T.L. LISTED 102900318PRT-00 COMPLIES WITH UL710, UL710 AND ULC-3546 STANDARDS.
- LOS ANGELES RR#8080
- ETL IS LISTED TO ULC STANDARDS

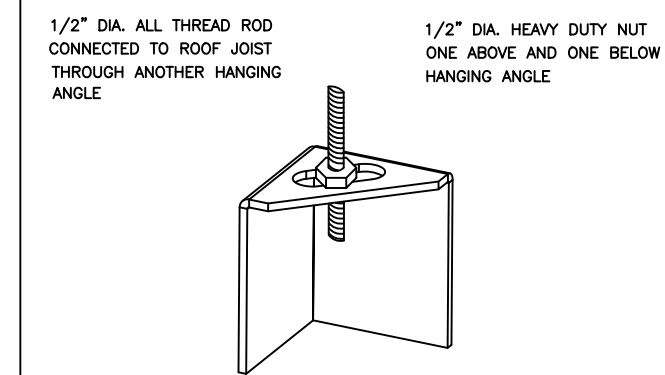


BUILDING CODES



Grease cup will be supported by 2 studs on the inside wall of the hood. The grease will drain through a concealed grease trough and into this removable cup.

1/2 Pint Grease Cup Detail



* ROD AND NUTS TO BE SUPPLIED BY INSTALLING CONTRACTOR HANGING ANGLE IS PRE-PUNCHED AT FACTORY

ND-2 HANGING ANGLE DETAIL

HANGING ANGLES WILL BE LOCATED IN THE FOLLOWING LOCATIONS FOR WALL CANOPIES

HOOD STYLE	DIM FROM REAR	DIM FROM FRONT (24" High Hood)	DIM FROM FRONT (30" High Hood)
Wall Exhaust Only	4.166"	2.25"	2.25"
		With MUA	2.25"
Back Shelf Exhaust Only	4.166"	2.25"	2.25"
		With MUA	2.25"
Condensate	2.25"	2.25"	

HANGING ANGLE LOCATIONS

HOOD INFORMATION - Job#4338925

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	TYPE	APPLIANCE DUTY	DESIGN CFM/Ft	TOTAL EXH. CFM	EXHAUST PLENUM RISER(S)						HOOD CONSTRUCTION	HOOD CONFIG.		
									WIDTH	LENG.	HEIGHT	DIA.	CFM	VEL.		S.P.	END TO END	RDW
1	KH-1	6030 ND-2	10' 0"	600 Deg.	I	Heavy	175	1750			4'	14'	1750	1637	-0.612'	430 SS Where Exposed	LEFT	FRONT
2	KH-2	6030 ND-2	10' 0"	600 Deg.	I	Heavy	175	1750			4'	14'	1750	1637	-0.612'	430 SS Where Exposed	RIGHT	FRONT

HOOD INFORMATION

HOOD NO.	TAG	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WGT
		TYPE	QTY.	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY.	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM TYPE	SIZE		
1	KH-1	Captrate Solo Filter	7	20"	16"	85% See Filter Spec.	3	Recessed	ND					YES	482 LBS
2	KH-2	Captrate Solo Filter	7	20"	16"	85% See Filter Spec.	3	Recessed	ND	Right	12"x60"x30"	Cap Electric Wet Chemical	4.0/4.0/4.0/4.0		1046 LBS

HOOD OPTIONS

HOOD NO.	TAG	OPTION
1	KH-1	FIELD WRAPPER 10.00' High Front
		BACKSPLASH 80.00' High X 253.00' Long 430 SS Vertical
		LEFT SIDESPLASH 80.00' High X 60.00' Long 430 SS Vertical
		LEFT END STANDOFF (FINISHED) 1' Wide 60' Long Insulated
		RISER SENSOR INSTALL 3IN DBL
		LEFT WALL AS END PANEL
		DI-PSP 8" 309CFM
		DI-PSP 8" 309CFM
		DI-PSP 8" 309CFM
		DI-PSP 8" 309CFM
		DI-PSP 8" 309CFM
		DI-PSP 8" 309CFM
2	KH-2	FIELD WRAPPER 10.00' High Front, Right
		STRUCTURAL FRONT PANEL
		RISER SENSOR INSTALL 3IN DBL
		RIGHT VERTICAL END PANEL 27" Top Width, 21" Bottom Width, 80" High Insulated 430 SS

DIFFUSER SCHEDULE

TAG	MODEL	CEILING HEIGHT	NOMINAL FACE SIZE	RISER DIA.	CFM	DUCT VELOCITY (FPM)	FACE DISCHARGE VELOCITY (FPM)	T50 AFF	S.P.	NOISE CRITERIA	LINKED FAN	LINKED HOOD
DI-PSP	DI-PSP-08-24X24	10'	24 X 24	8	309	886	92	7.00'	0.141'	37	CASRTU3-1.300-18-20T-DDAS	6030ND-2
DI-PSP	DI-PSP-08-24X24	10'	24 X 24	8	309	886	92	7.00'	0.141'	37	CASRTU3-1.300-18-20T-DDAS	6030ND-2
DI-PSP	DI-PSP-08-24X24	10'	24 X 24	8	309	886	92	7.00'	0.141'	37	CASRTU3-1.300-18-20T-DDAS	6030ND-2
DI-PSP	DI-PSP-08-24X24	10'	24 X 24	8	309	886	92	7.00'	0.141'	37	CASRTU3-1.300-18-20T-DDAS	6030ND-2
DI-PSP	DI-PSP-08-24X24	10'	24 X 24	8	309	886	92	7.00'	0.141'	37	CASRTU3-1.300-18-20T-DDAS	6030ND-2
DI-PSP	DI-PSP-08-24X24	10'	24 X 24	8	309	886	92	7.00'	0.141'	37	CASRTU3-1.300-18-20T-DDAS	6030ND-2
DI-PSP	DI-PSP-08-24X24	10'	24 X 24	8	309	886	92	7.00'	0.141'	37	CASRTU3-1.300-18-20T-DDAS	6030ND-2
DI-PSP	DI-PSP-08-24X24	10'	24 X 24	8	309	886	92	7.00'	0.141'	37	CASRTU3-1.300-18-20T-DDAS	6030ND-2
DI-PSP	DI-PSP-08-24X24	10'	24 X 24	8	309	886	92	7.00'	0.141'	37	CASRTU3-1.300-18-20T-DDAS	6030ND-2
DI-PSP	DI-PSP-08-24X24	10'	24 X 24	8	309	886	92	7.00'	0.141'	37	CASRTU3-1.300-18-20T-DDAS	6030ND-2

REVISIONS

DESCRIPTION	DATE:



Nepali Mandir Community Center
 1212 Royal Parkway,
 EULESS, TX, 76040

DATE: 5/11/2020
 DWG.#: 4338925
 DRAWN BY: mskertchly
 SCALE: 3/4" = 1'-0"
 MASTER DRAWING

FOR QUESTIONS, CALL
 ANDREW UPPERMAN: REGIONAL MANAGER
 PHONE: (817) 953-5611
 FAX: (817) 953-5611
 EMAIL: andrew.upperman@captiveaire.com

SHEET NO. 1

REVISIONS	
DESCRIPTION	DATE



CAPTIVE
 Dallas/Ft. Worth Mechanical
 www.captiveaire.com
 PO Box 48519, Watauga, TX, 76148 PHONE: (817) 953-5611 EMAIL: reg1317@captiveaire.com

Nepali Mandir Community Center
 1212 Royal Parkway,
 EULESS, TX, 76040

DATE: 5/11/2020

DWG.#: 4338925

DRAWN BY: mskertchly

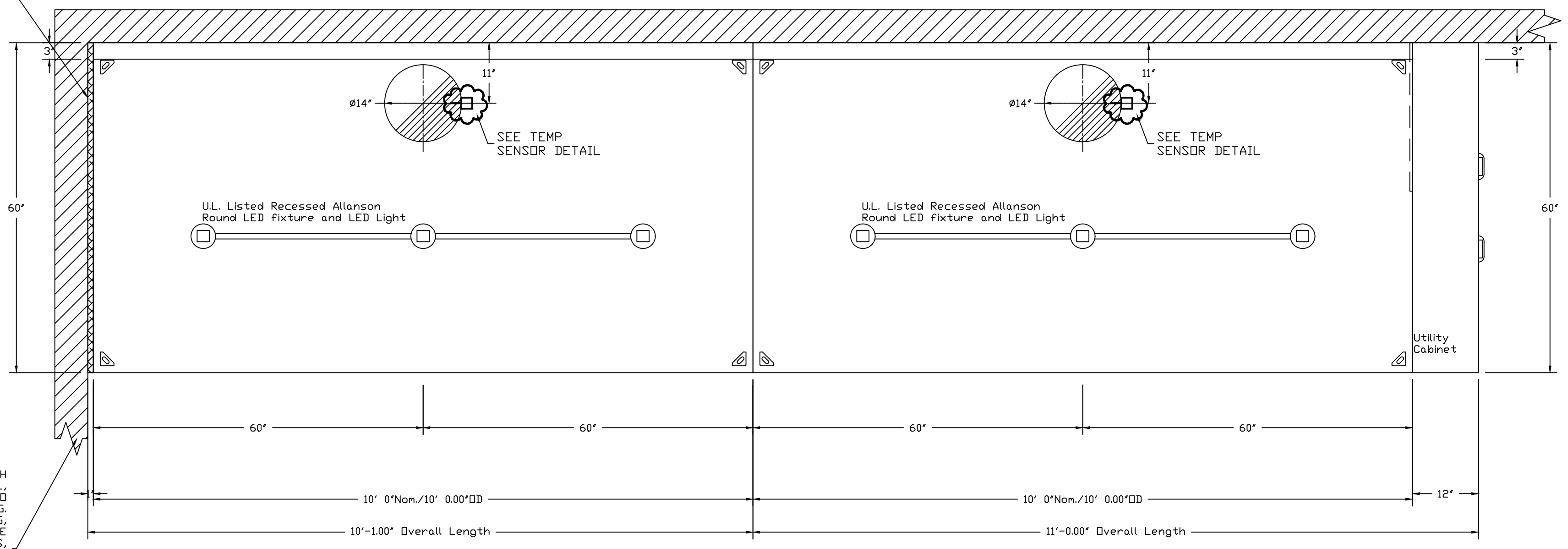
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MASTER DRAWING

SHEET NO. 2

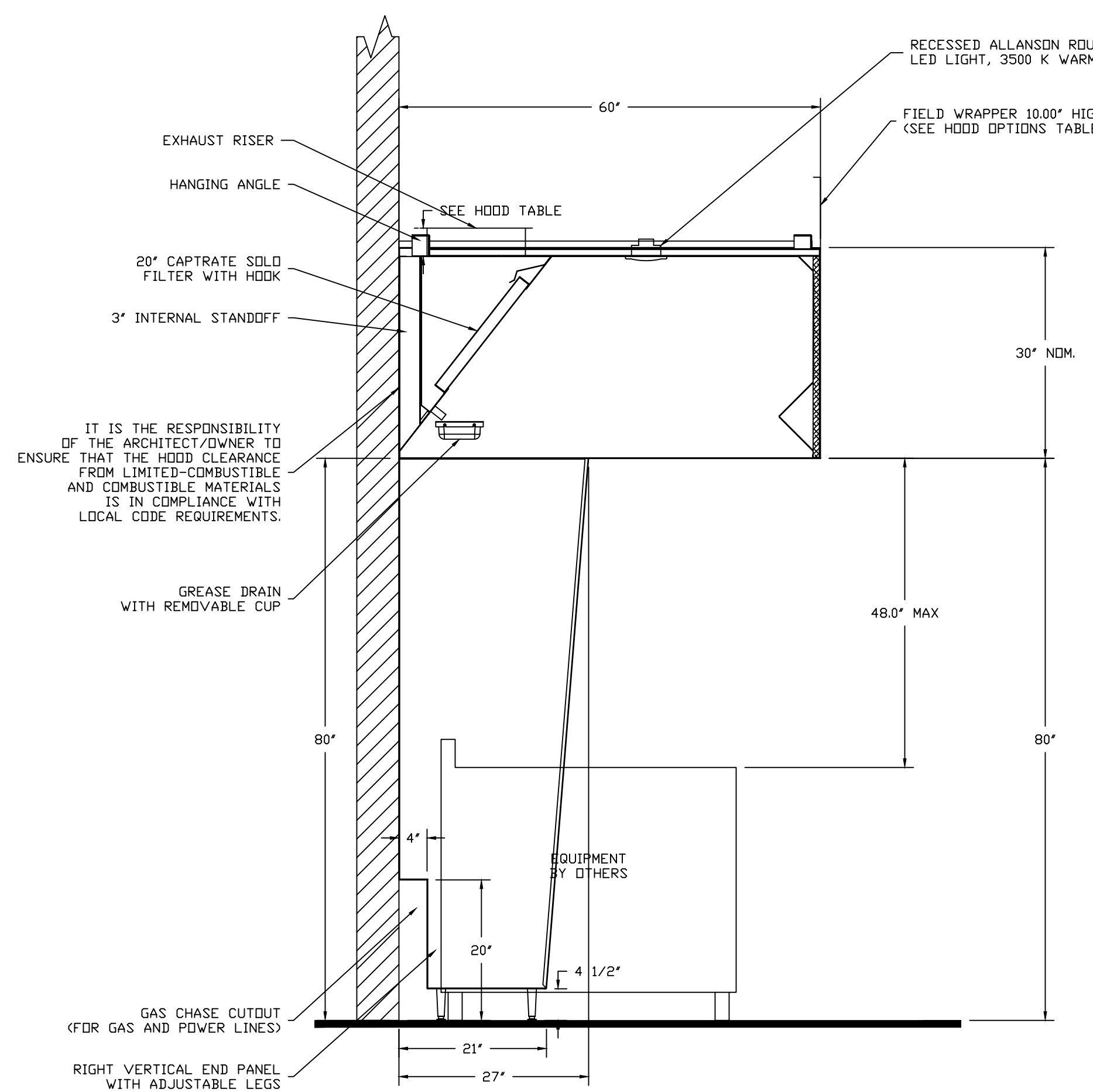
1" LAYER OF INSULATION FACTORY INSTALLED IN 100" END STANDOFF MEETS 0" REQUIREMENTS CLEARANCE TO COMBUSTIBLE SURFACES.

INSTALLER MUST CONFIRM HOOD IS INSTALLED SUCH THAT THE SPECIFIED WALL, ACTING AS AN END PANEL, IS MATED TIGHT TO THE CORRECT END OF HOOD TO ACHIEVE A REDUCED MINIMUM EXHAUST CFM LISTING. NON-COMPLIANCE WILL NULLIFY THE ETL LISTING, VOID THE MANUFACTURER'S WARRANTY, AND HOLD THE CONTRACTOR LIABLE FOR ANY AND ALL LOSSES, COSTS, AND EXPENSES RELATED TO THE NON-COMFORMANCE OF THE MANUFACTURER'S SPECIFIED INSTRUCTION. THE WALL ACTING AS AN END PANEL MUST EXTEND NO LESS THAN 20" FROM THE INTERSECTING WALL ON WHICH HOOD IS MOUNTED AND MUST EXTEND NO LESS THAN 20" UNDER BOTTOM OF HOOD TO BE ELIGIBLE FOR REDUCED MINIMUM EXHAUST CFM LISTING.



PLAN VIEW - Hood #1 (KH-1)
 10'-0.00" LONG 60.30ND-2

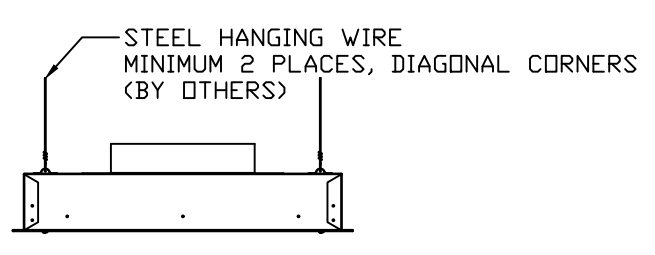
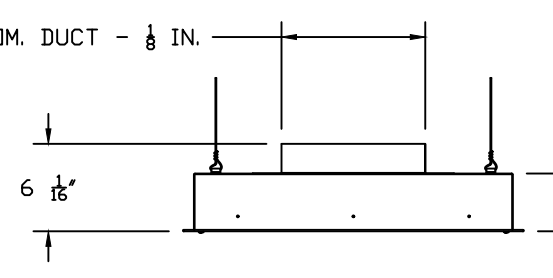
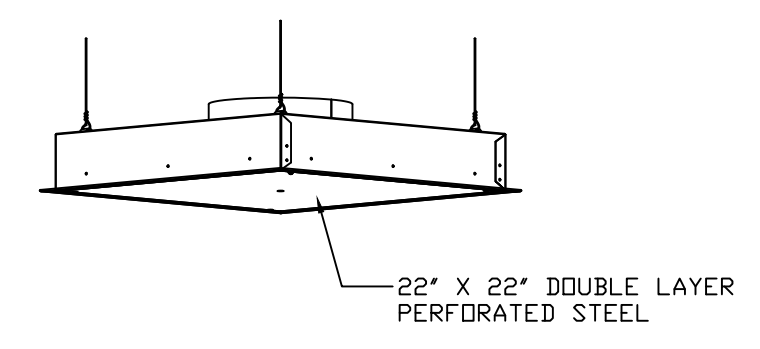
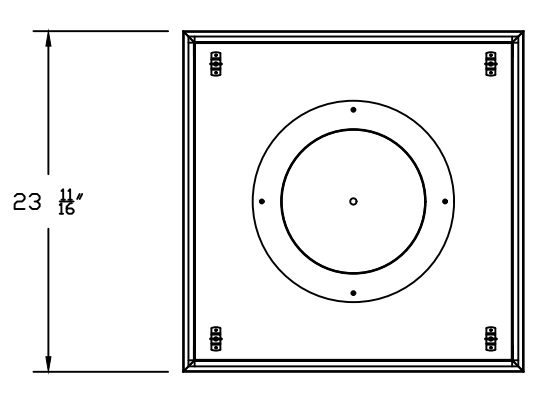
PLAN VIEW - Hood #2 (KH-2)
 11'-0.00" LONG 60.30ND-2



SECTION VIEW - MODEL 6030ND-2
 HOOD - #2 (KH-2)

RECESSED ALLANSON ROUND LED FIXTURE AND LED LIGHT, 3500 K WARM OUTPUT.

FIELD WRAPPER 10.00" HIGH (SEE HOOD OPTIONS TABLE)

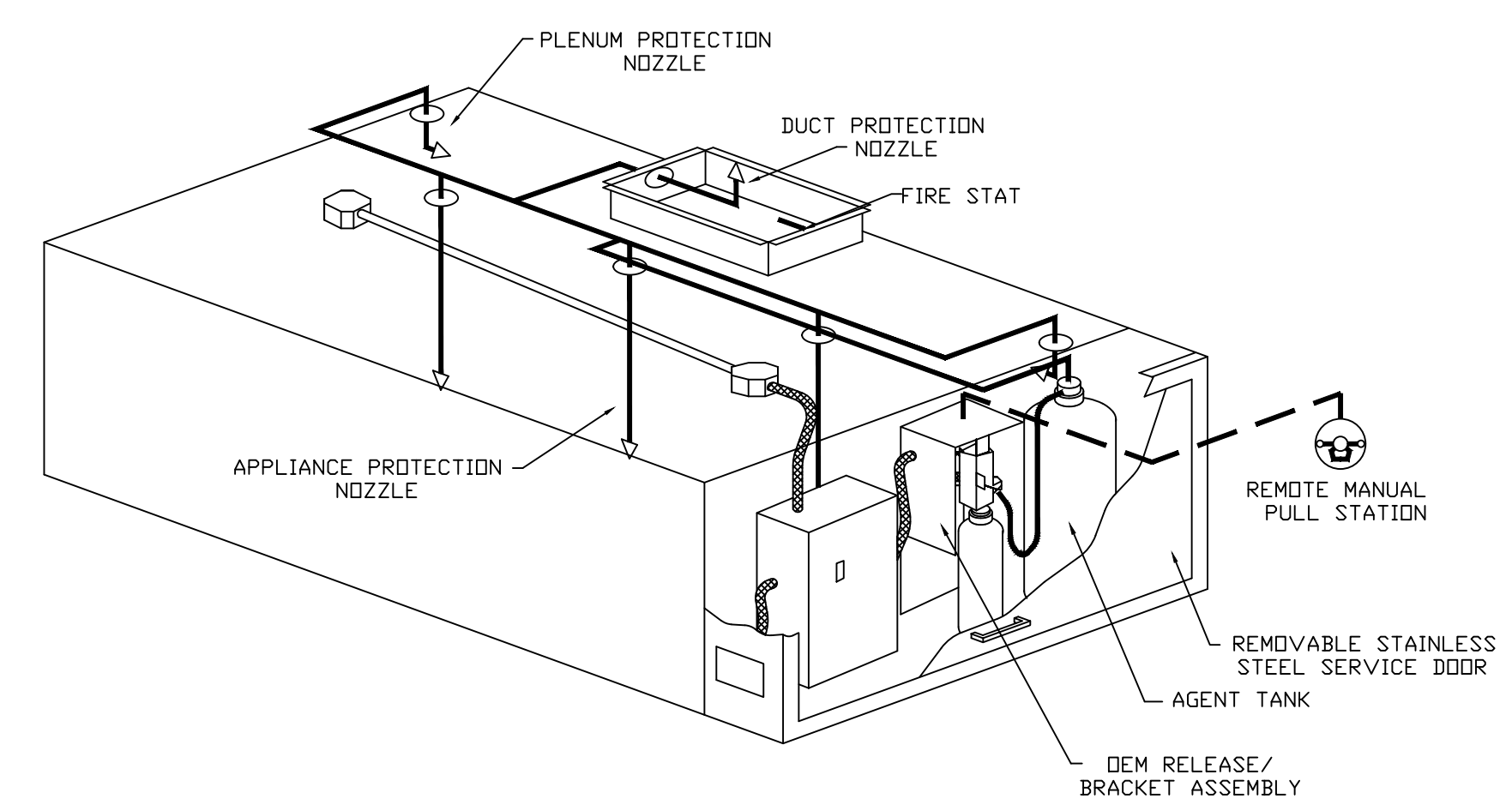


INSTALLATION NOTES:
 INTENDED FOR INSTALLATION IN LAY IN (DROP) CEILING.
 INSTALL SLIDING RADIAL DAMPER ON TOP SIDE OF COLLAR.

FEATURES:
 STAINLESS STEEL PERFORATION AND TRIM
 REMOVABLE PERFORATION FOR PLENUM CLEANING
 DOUBLE PERFORATION FOR EVEN AIR DISTRIBUTION
 1/2" THICK INSULATION ON EXTERIOR TOP AND SIDES
 APPROX. WEIGHT = 20 lbs
 TO BE USED FOR FULLY CONDITIONED AIR ONLY

VERTICAL THROW DATA (Ft)			
CFM	T150	T100	T50
600	1.25	3.00	7.75
500	0.50	2.50	6.25
400	---	1.25	4.50
300	---	---	3.75

DIFFUSER SPECIFICATION



TYPICAL ELECTRIC WET CHEMICAL

FOR QUESTIONS, CALL
 ANDREW UPPERMAN: REGIONAL MANAGER
 PHONE: (817) 953-5611
 FAX: (817) 953-5611
 EMAIL: andrew.upperman@captiveaire.com

EXHAUST FAN INFORMATION - Job#4338925

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	MOTOR ENCL.	H.P.	B.H.P.	Ø	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS.)	SDNES
1	KEF-1	DUBSHFA	1750	1.000	1359	TEAD-ECM	0.750	0.4460	1	115	8.9	554 FPM	88	15.7
2	KEF-2	DUBSHFA	1750	1.000	1359	TEAD-ECM	0.750	0.4460	1	115	8.9	554 FPM	88	15.7

DOAS/RTU FAN SCHEDULE - Job#4338925

FAN UNIT NO.	TAG	DOAS/RTU MODEL #	BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	ESP.	RPM	H.P.	B.H.P.	Ø	VOLT	MCA	MDCP	WEIGHT (LBS.)	SDNES
3	RTU-1	CASRTU3-1.300-18-20T-DOAS	18P-3	0	3500	3500	0.350	1336	5.000	1.9980	3	208	97.6A	150A	2962	13.9

DOAS/RTU COOLING SCHEDULE

FAN UNIT NO.	TAG	COMPRESSOR			OUTDOOR FAN				INDOOR COIL		OUTSIDE AIR DB TEMP.	OUTSIDE AIR WB TEMP.	MIXED AIR DB TEMP.	MIXED AIR WB TEMP.	LEAVING DB TEMP.	LEAVING WB TEMP.	LEAVING DP TEMP.	TOTAL CAPACITY	SENSIBLE CAPACITY	LATENT CAPACITY	REHEAT LEAVING DB TEMP.	REHEAT LEAVING WB TEMP.	DESIRED REHEAT CAPACITY	MAX REHEAT CAPACITY	REHEAT LEAVING RELATIVE HUMIDITY	MOISTURE REMOVAL RATE	IEER
		TONNAGE	VOLTAGE	Ø	MOTOR VOLTAGE	MOTOR Ø	MOTOR FREQUENCY	MOTOR QTY	ROWS	FACE AREA																	
3	RTU-1	20	190-240	3	200-240	3	60	3	7	11.9 SQFT.	105.0°F	79.0°F	105.0°F	79.0°F	61.2°F	56.5°F	53.4°F	264.0 MBH	154.9 MBH	109.1 MBH	70.0°F	60.3°F	33.5 MBH	129.6 MBH	57	98.8 LBS/HR	18.2

DOAS/RTU HEATING SCHEDULE

FAN UNIT NO.	TAG	INPUT BTUS	OUTPUT BTUS	TEMP. RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
3	RTU-1	272431	217945	54 deg F	7 in. w.c. - 14 in. w.c.	Natural	80

FAN OPTIONS

FAN UNIT NO.	TAG	OPTION (Qty. - Descr.)
1	KEF-1	1 - Grease Box 1 - ECM Wiring Package - PWM Signal from ECPM03 Prewire (TELCO Motor), CCW Rotation
2	KEF-2	1 - Grease Box 1 - ECM Wiring Package - PWM Signal from ECPM03 Prewire (TELCO Motor), CCW Rotation
3	RTU-1	1 - Single Point Electrical Connection for RTU. QNTY 1 750va Transformer Used. If a Non-DCV Prewire controls this unit, the #28, #47, #1A, or #12 Option Prewire must be selected. Do not provide supply starter in prewire.
		1 - RTU Size 3 Down Discharge
		1 - 2" MERV 13 Filters For Size 3 RTU. Qty 4.
		1 - 2" MERV 8 Filters For Size 3 RTU. Qty 4.
		1 - Overheat Stat
		1 - 20 Ton Modulating Cooling Option, 208/230V. R410A Refrigerant, Variable Speed Compressor, ECM Condensing Fan(s).
		1 - RTU Fixed 100% DA Intake Control
		1 - RTU Size 3 No Return
		1 - Inlet Pressure Gauge, 0-35"
		1 - Manifold Pressure Gauge, 0 to 10" w.c., 1 Furnace
1 - Commercial Smoke Detector/Alarm Interlock (Supplied by Others)		
1 - 20 Ton Modulating Reheat Option. Discharge Relative Humidity Control.		
1 - Size 3 RTU Curb Duct Hanger		
1 - Clogged Filter Switch with notification on HMI		
1 - Size 3 RTU Convenience Outlet (GFCI), 15 amp - Requires Separate 120V Connection. Includes receptacle, cover and J box.		
1 - RTU 3 Hall Guard		
1 - Unit Mounted VFD configured for DCV		

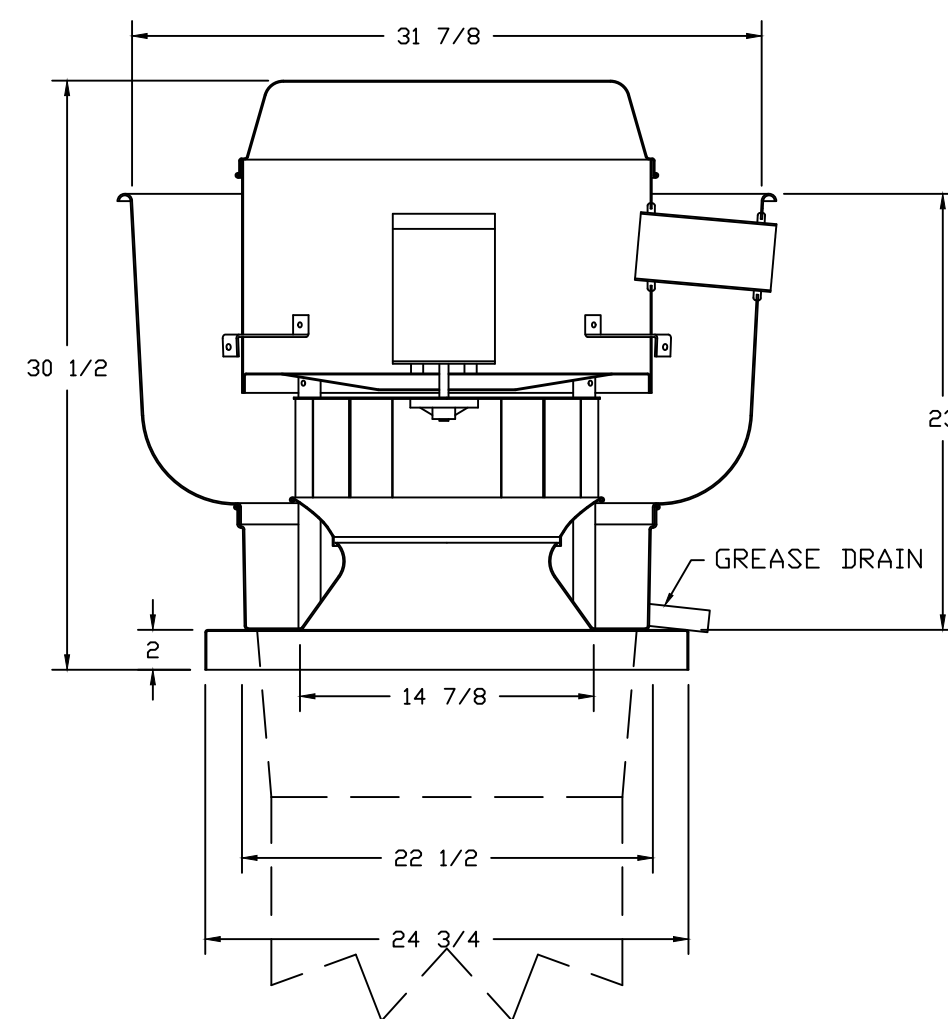
FAN ACCESSORIES

FAN UNIT NO.	TAG	EXHAUST				SUPPLY		
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	KEF-1	YES						
2	KEF-2	YES						

CURB ASSEMBLIES

NO.	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF-1	36 LBS	Curb	23.000"W x 23.000"L x 20.000"H Vented Hinged
2	# 2	KEF-2	36 LBS	Curb	23.000"W x 23.000"L x 20.000"H Vented Hinged
3	# 3	RTU-1	74 LBS	Curb	59.500"W x 91.000"L x 14.000"H Insulated

FANS #1 (KEF-1), #2 (KEF-2) - DUBSHFA EXHAUST FAN



FEATURES:

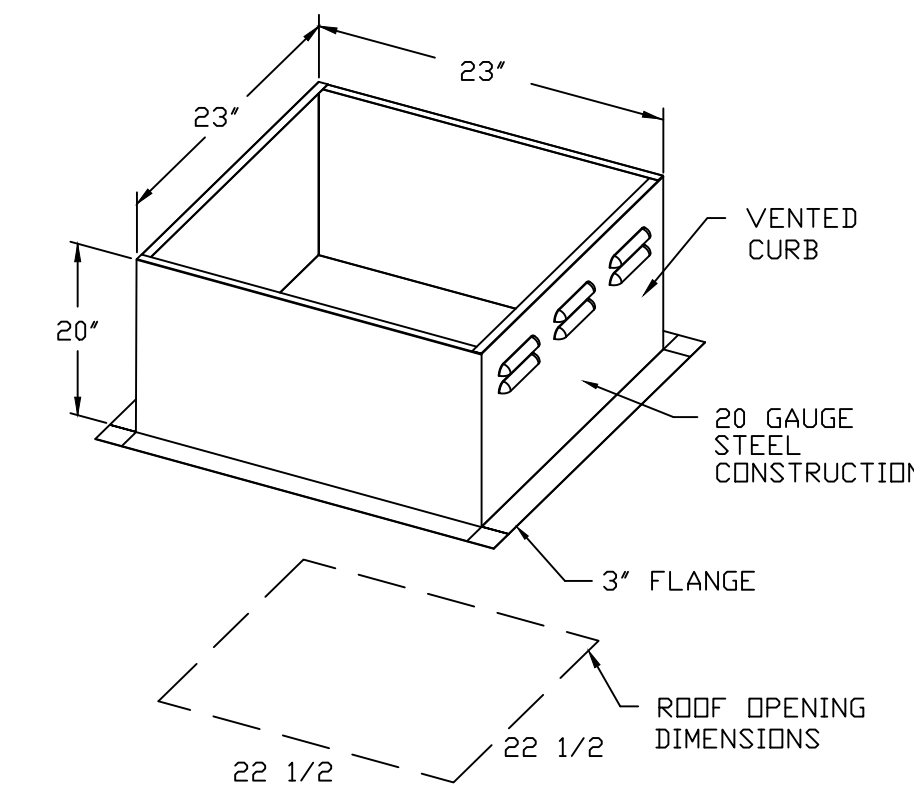
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS)
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL762 AND ULC-5645
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHERPROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

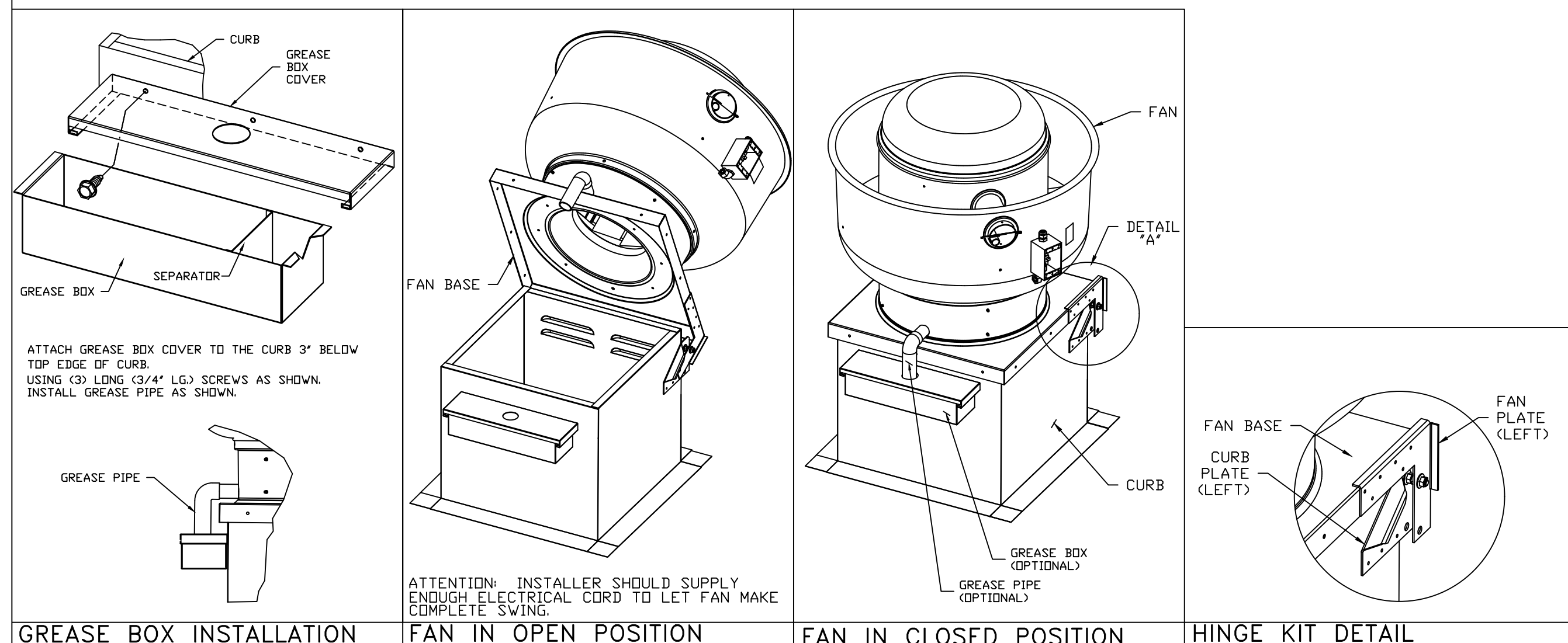
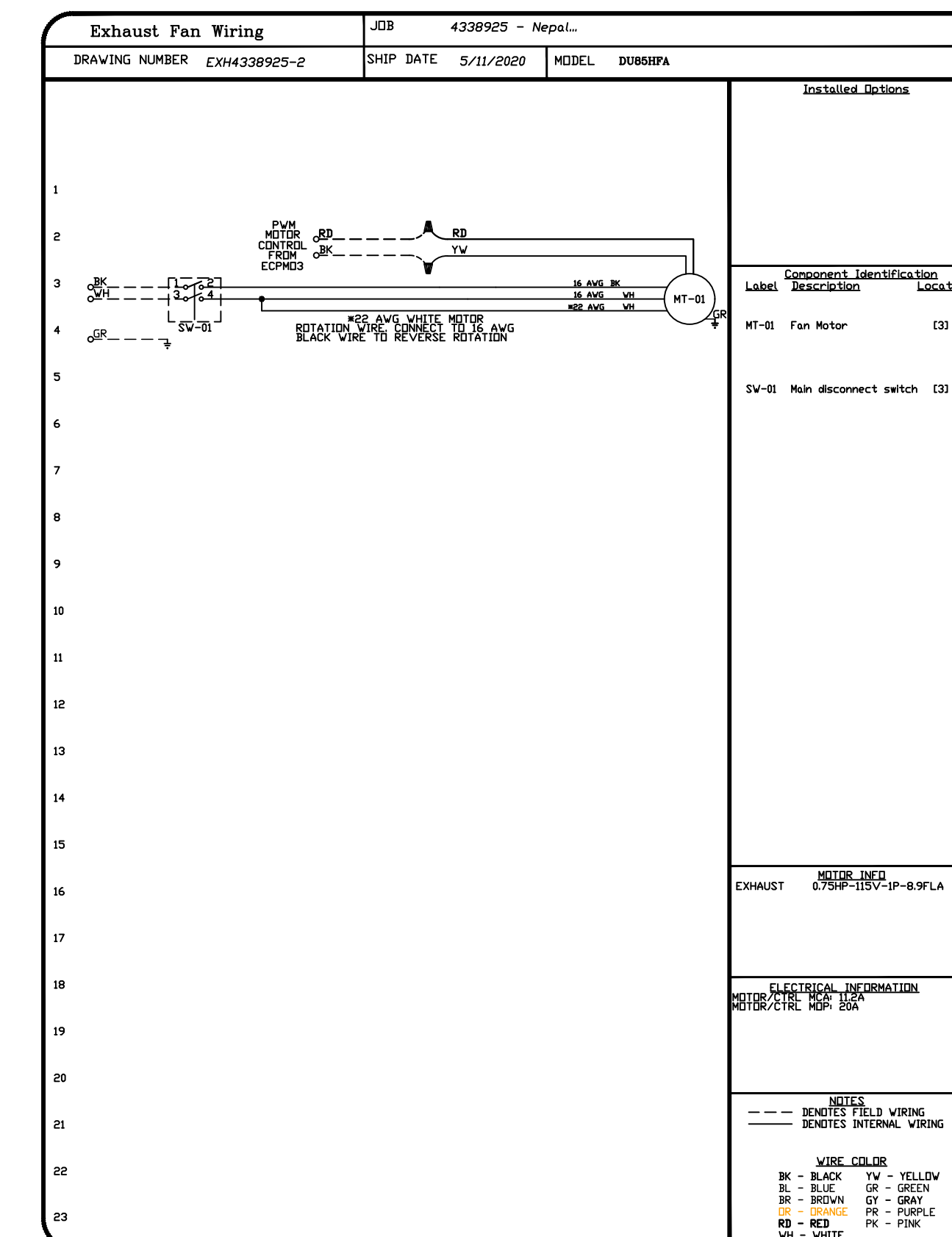
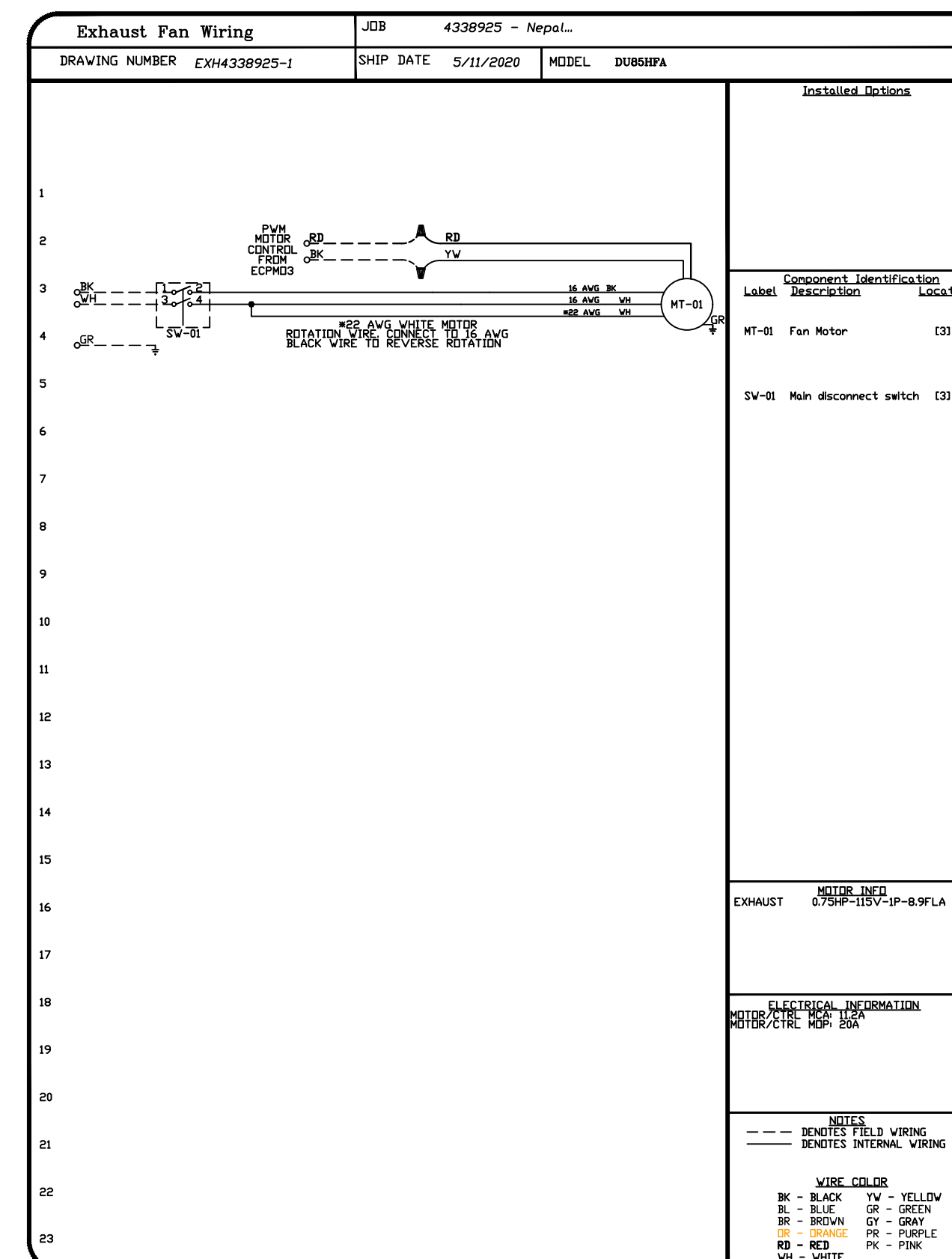
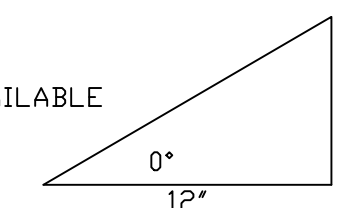
OPTIONS

GREASE BOX.
ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION.



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

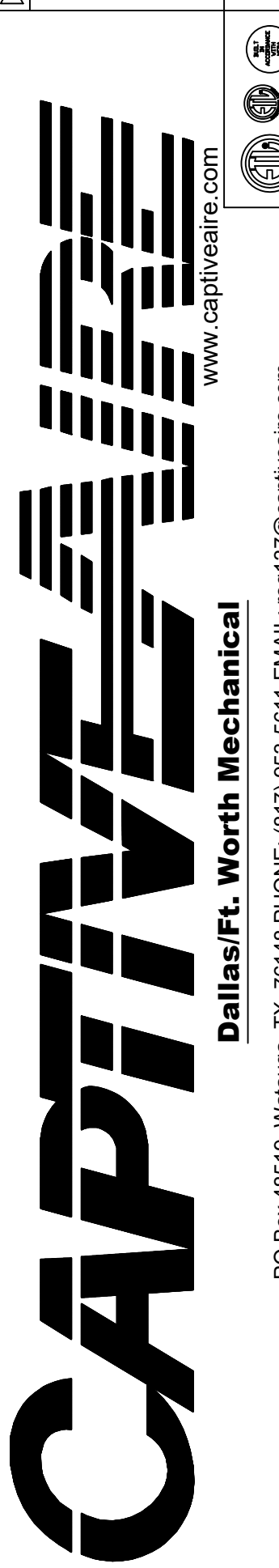
SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE



FOR QUESTIONS, CALL
ANDREW UPPERMAN: REGIONAL MANAGER
PHONE: (817) 953-5611
FAX: (817) 953-5611
EMAIL: andrew.upperman@captiveaire.com

REVISIONS

NO.	DESCRIPTION	DATE



Nepali Mandir Community Center
1212 Royal Parkway,
EULESS, TX, 76040

DATE: 5/11/2020

DWG.#: 4338925

DRAWN BY: msketchly

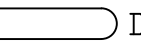
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MASTER DRAWING

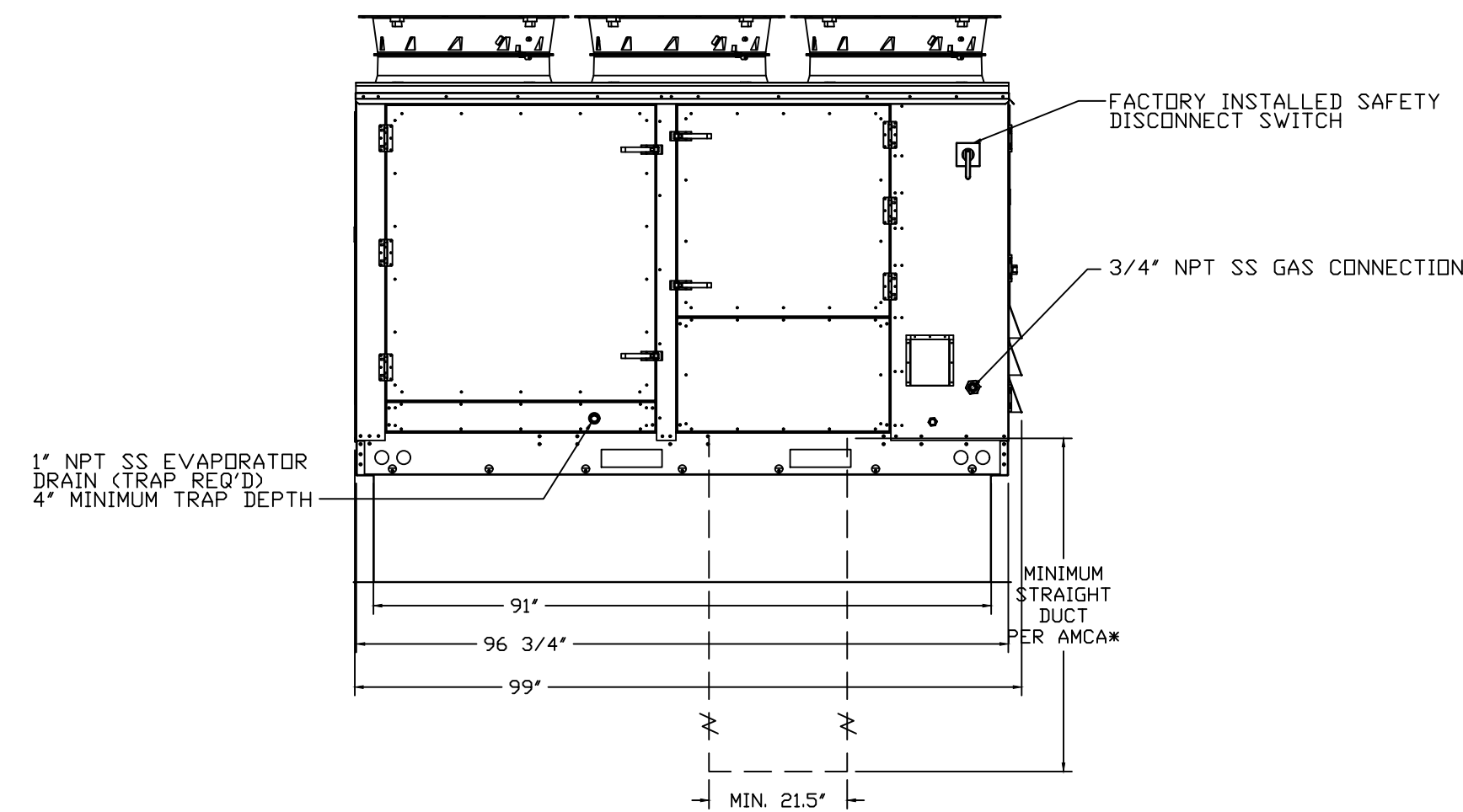
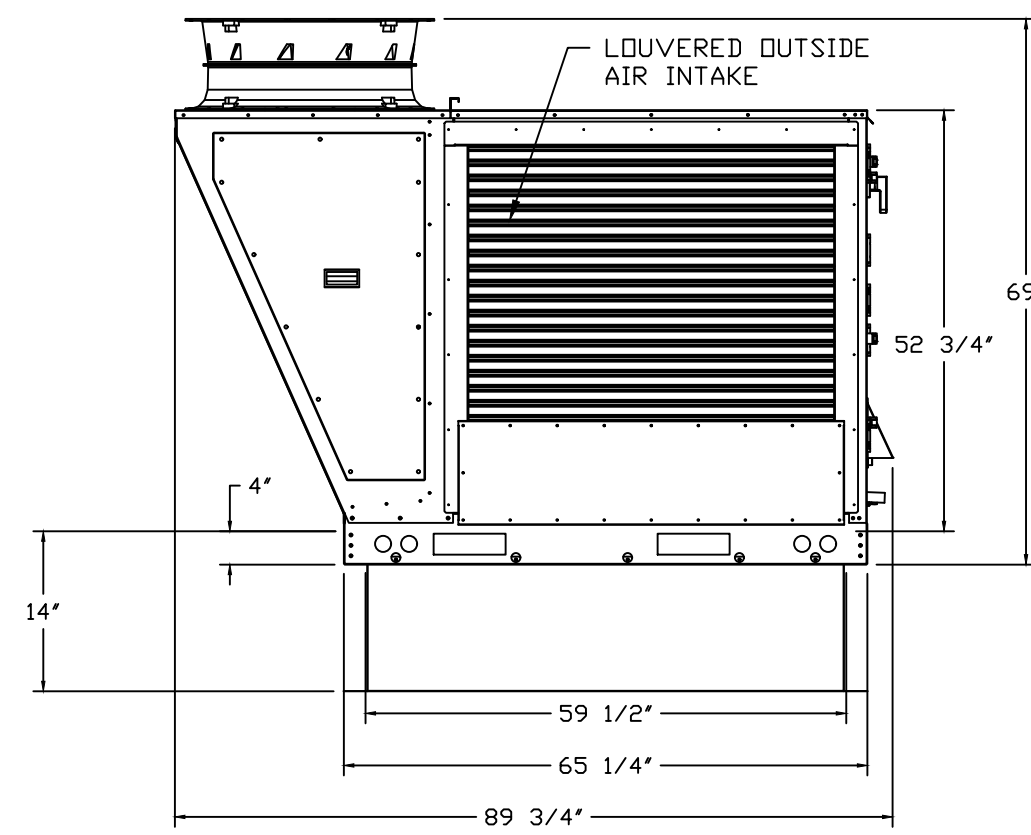
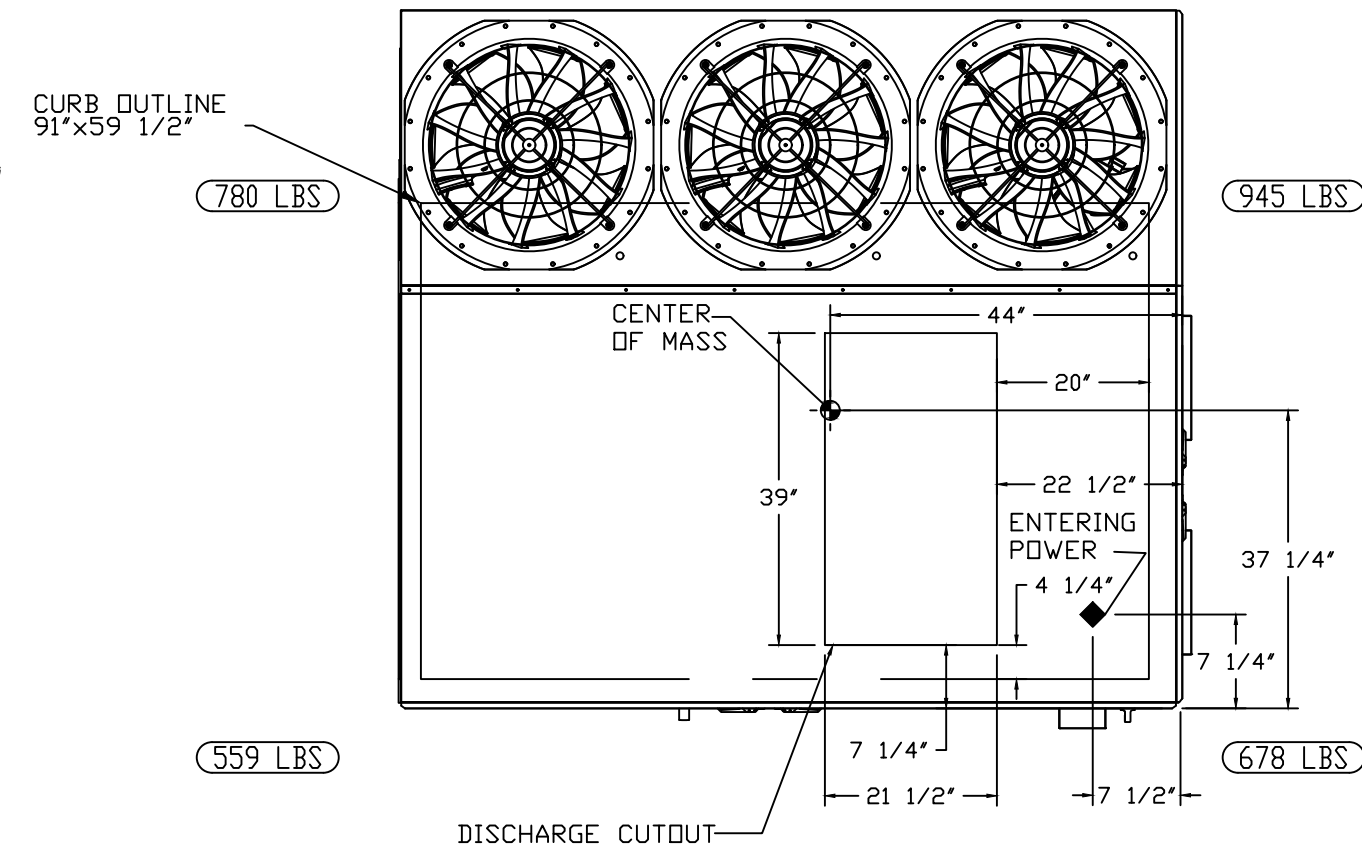
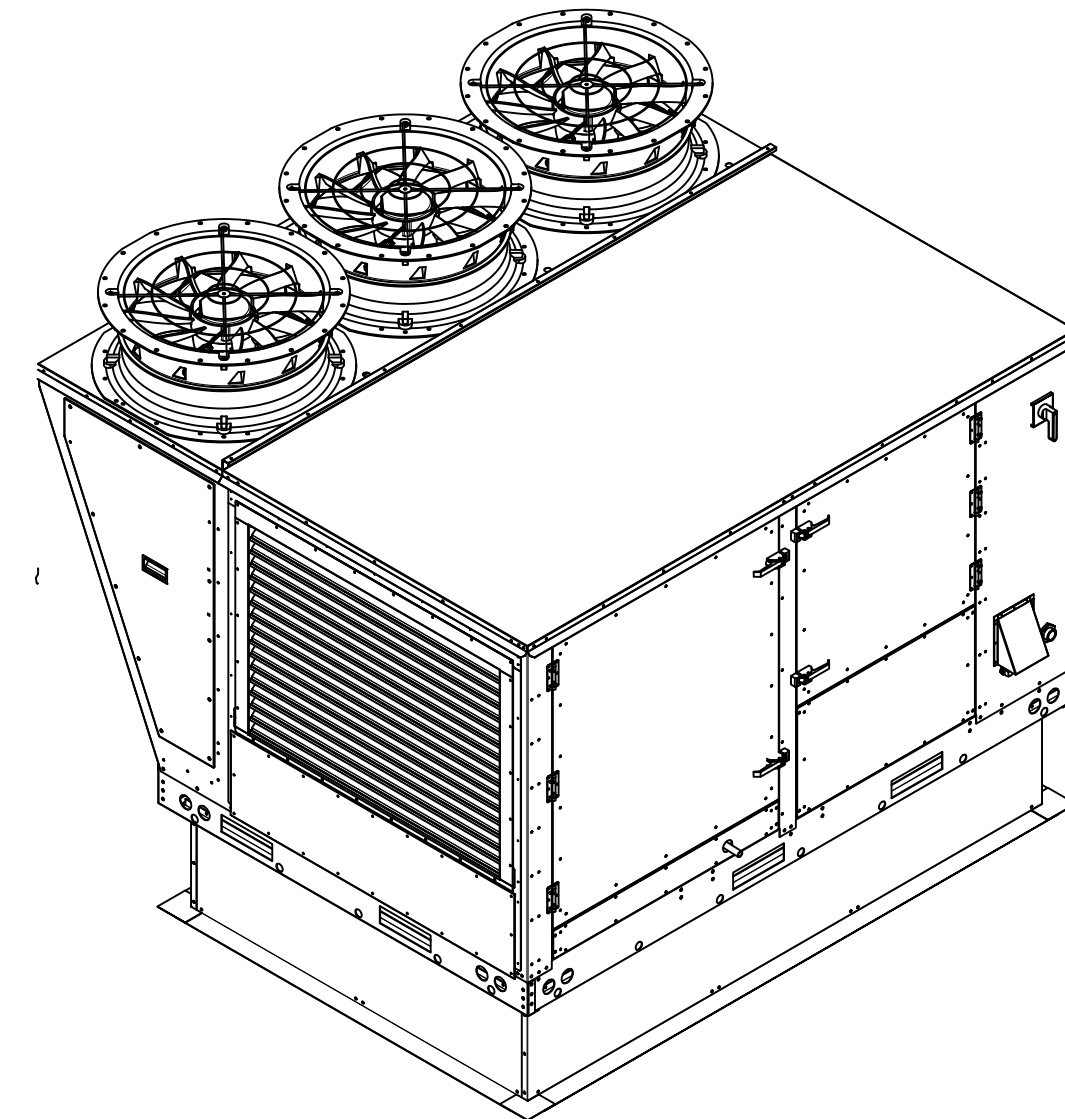
SHEET NO. 3

FAN #3 CASRTU3-1.300-18-20T-DDAS - HEATER (RTU-1)

NOTES:

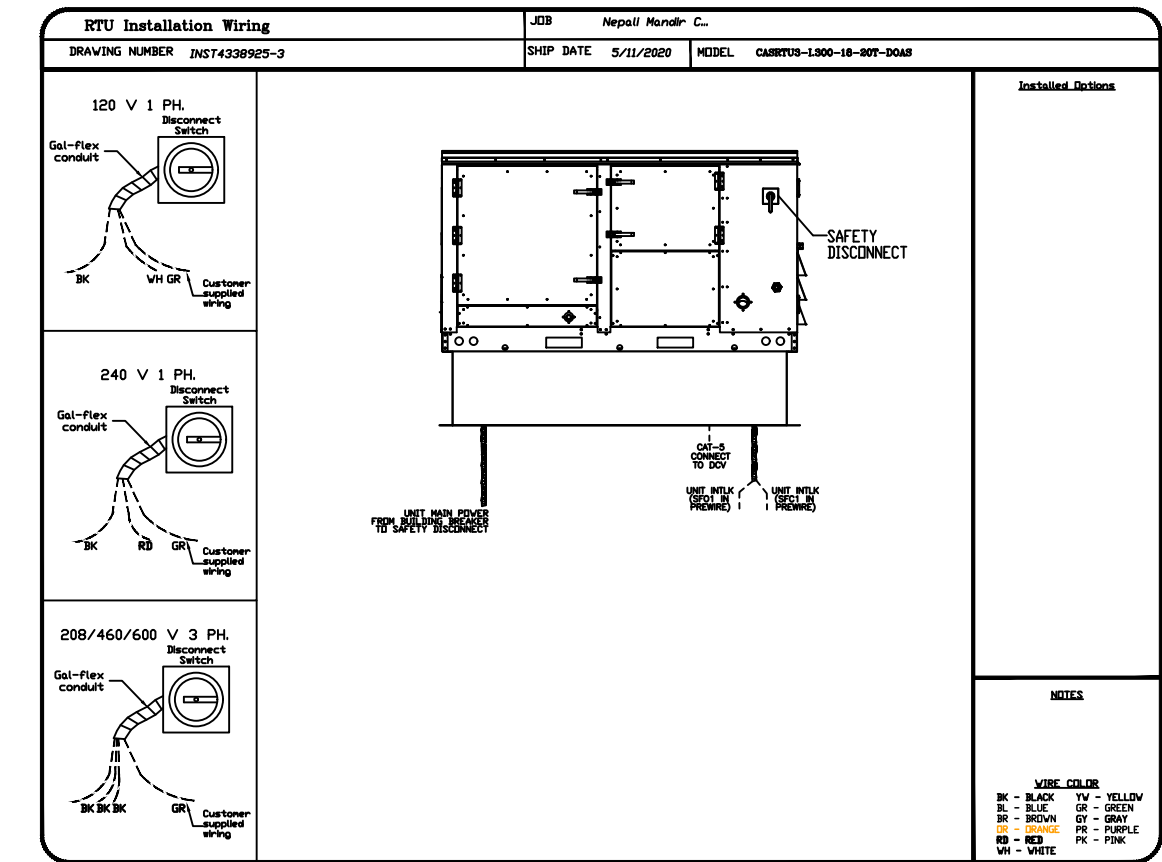
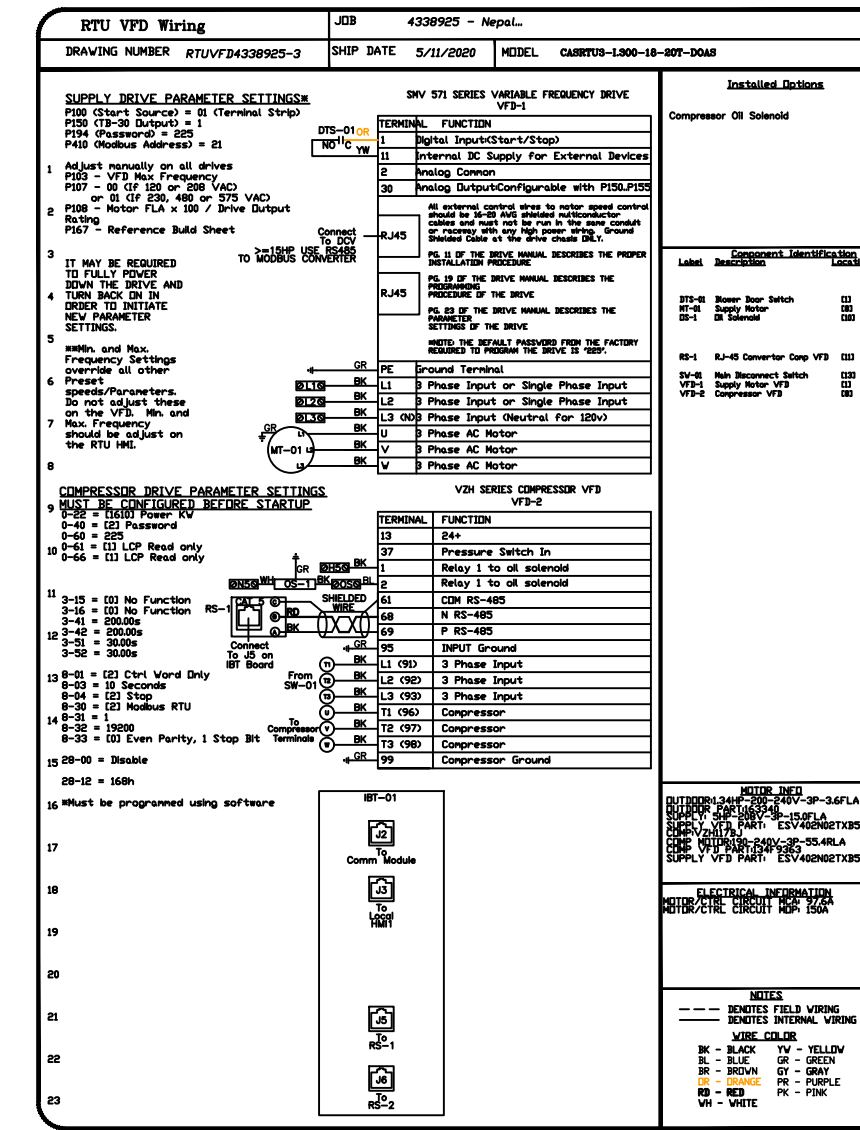
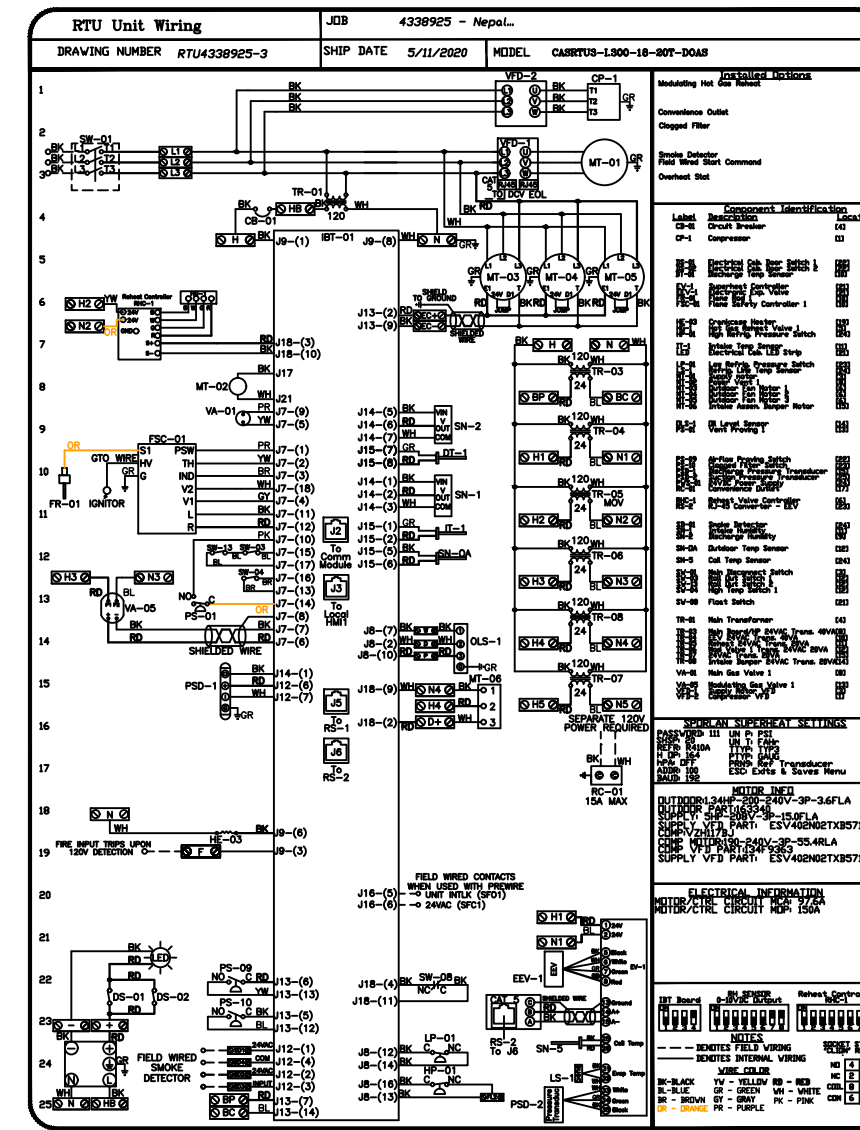
- DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
-  DENOTES CORNER WEIGHT.
- ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.

*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 21.5" x 39"



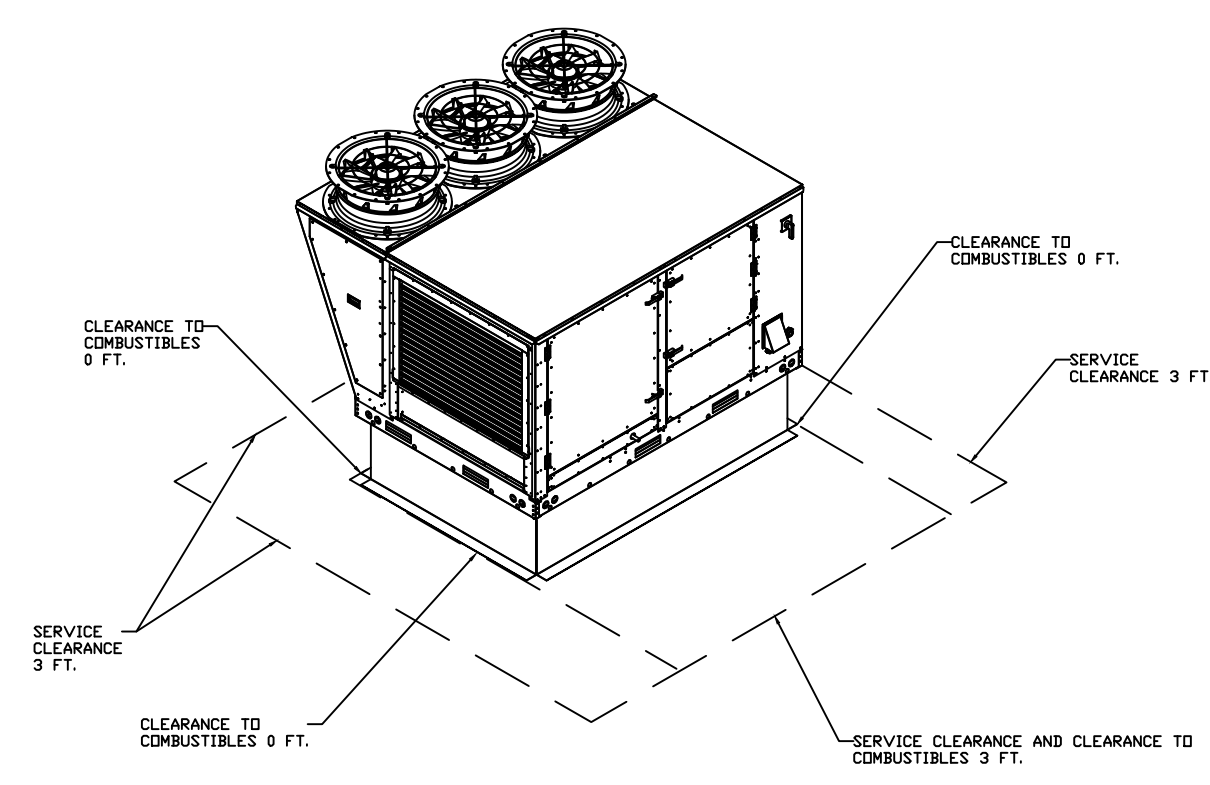
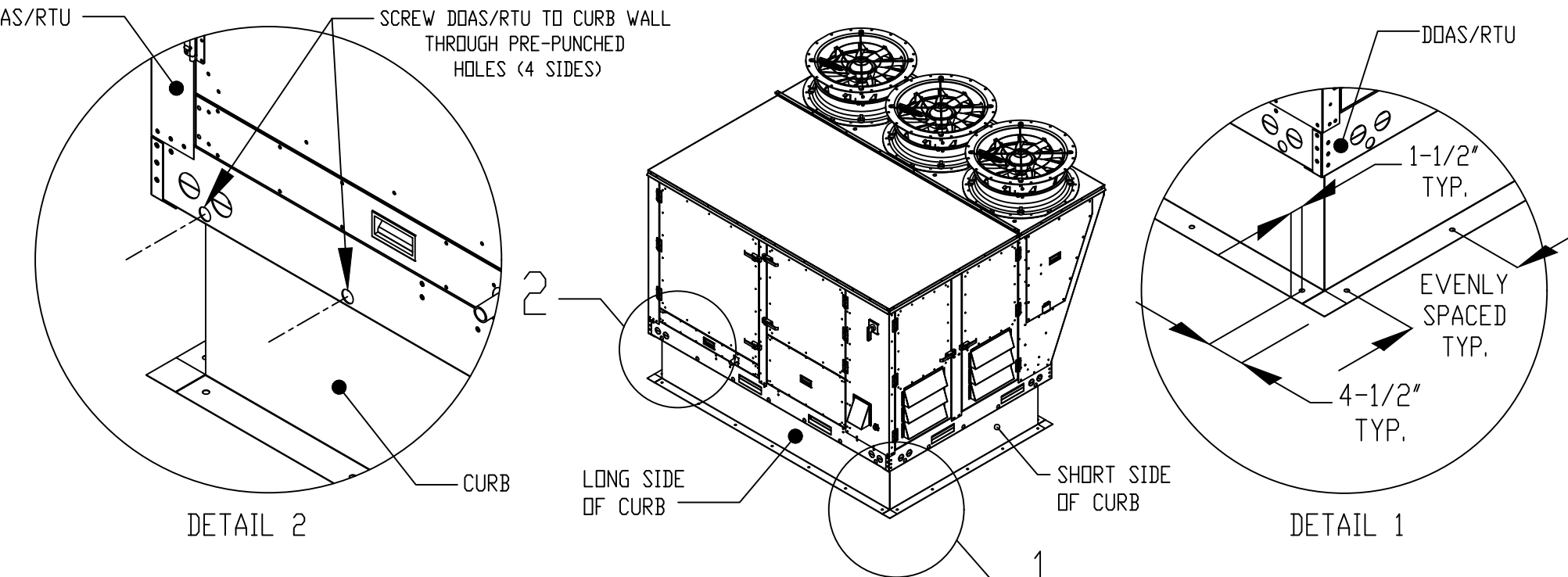
OPTIONS

- SINGLE POINT ELECTRICAL CONNECTION FOR RTU. QNTY 1 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "E2" OPTION PREWIRE MUST BE SELECTED. DO NOT PROVIDE SUPPLY STARTER IN PREWIRE.
- RTU SIZE 3 DOWN DISCHARGE
- 2" MERV 13 FILTERS FOR SIZE 3 RTU. QTY 4.
- 2" MERV 8 FILTERS FOR SIZE 3 RTU. QTY 4.
- OVERHEAT STAT
- 20 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FAN(S).
- RTU FIXED 100% DA INTAKE CONTROL
- RTU SIZE 3 NO RETURN
- INLET PRESSURE GAUGE, 0-35"
- MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
- COMMERCIAL SMOKE DETECTOR/ALARM INTERLOCK (SUPPLIED BY OTHERS)
- 20 TON MODULATING REHEAT OPTION. DISCHARGE RELATIVE HUMIDITY CONTROL.
- SIZE 3 RTU CURB DUCT HANGER
- CLOGGED FILTER SWITCH WITH NOTIFICATION ON HMI
- SIZE 3 RTU CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J BOX.
- RTU 3 HAIL GUARD
- UNIT MOUNTED VFD CONFIGURED FOR DCV

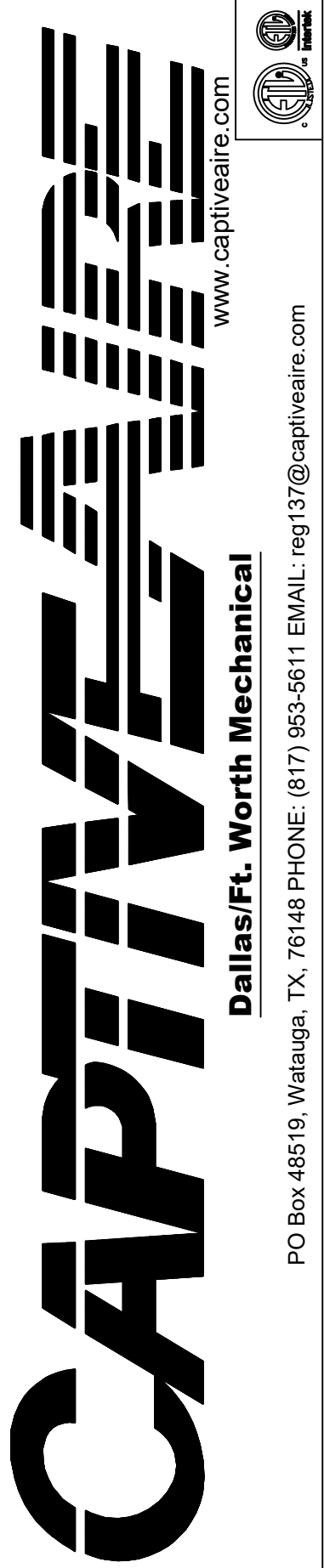


TYPICAL DDAS/RTU ROOF MOUNTING INSTALLATION INSTRUCTIONS

- Secure the curb to the roof framing members by drilling 1/4" pilot holes in the curb flanges at locations shown in the diagram below. Using 3/8" x 2" zinc plated steel lag bolts, and zinc plated washers, screw through the curb flanges and into the roof framing members. A minimum of (5) lag bolts on each short side, and (7) lag bolts on each long side is required.
- Secure the unit base to the side walls of the curb using (24) 1/4"-14 x 2" self-drilling, steel zinc plated screws. Pre-punched holes have been provided for each screw location.



REVISIONS	
DESCRIPTION	DATE:



Nepali Mandir Community Center
1212 Royal Parkway,
EULESS, TX, 76040

DATE: 5/11/2020
DWG #: 4338925
DRAWN BY: mskertchly
SCALE: 1/2" = 1'-0"
MASTER DRAWING

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SHEET NO. 4

Model: CASRTU Specifications

SECTION 23 13
FACTORY FABRICATED PACKAGED, 100% OUTDOOR, HEATING AND COOLING
HMXCP AIR UNITS

SPECIFICATIONS

TAG: IDMS-1

PART 1 - GENERAL

1. SUMMARY

A. The Section includes packaged heating and cooling units capable of supplying up to 100 percent outdoor air.

12. SUBMITTALS

A. The manufacturer assumes no liability for the use or results of use of this document. This specification is to be reviewed by the engineer to confirm requirements of the project and building codes are met.
B. As the manufacturer continues product development, it reserves the right to change design and specifications without notice.

13. SEISMIC DESIGN

A. Should project be located within a seismic zone requiring special provisions for support and restraint of equipment, components, and piping, see Section 23 05 01 - Seismic, Vents and Flood Load Design for additional requirements.

14. WIND LOAD DESIGN

A. Refer to Section 23 05 01, Seismic, Wind, Flood Load Design for additional requirements.
B. Main Base rated up to 150psf per TAS 201, 202 & 203 packed with 20' curb or shorter.

15. QUALITY ASSURANCE

A. All models shall be ETL listed and comply with safety standards UL 1995, and CSA Std. C222, No. 256-01. Units outfitted with indirect fired heaters shall also comply with ANSI Z83.9-2013, and CSA 2.6-2013.

16. WARRANTY

A. All units shall be provided with the following standard warranties:
1. 10-Year (non-prorated) parts warranty covering the entire unit when accompanied by a company approved service plan. 5-Year (non-prorated) parts warranty covering the entire unit otherwise.

B. This warranty shall not apply if:

- 1. The equipment is not installed by a qualified installer per the manufacturer's installation instructions shipped with the product.
- 2. The equipment is not installed in accordance with Federal, state and local codes and regulations for proper operation.
- 3. The equipment is misused or neglected, or not maintained per the manufacturer's maintenance instructions.
- 4. The equipment is not operated within its published capacity.
- 5. The invoice is not paid when the terms of the sales agreement.

C. The manufacturer shall not be liable for incidental and consequential losses and damages potentially attributable to malfunctioning equipment. Should any part of the equipment prove to be defective in material or workmanship within the 10 year period in the warranty provided by the manufacturer, such parts will be repaired or replaced by manufacturer at no charge. The buyer shall pay all labor costs incurred in connection with such repairs or replacement. Customers shall not be returned without manufacturer's prior authorization and all returned equipment shall be shipped by the buyer, freight prepaid to a destination determined by the manufacturer.

PART 2 - PRODUCTS

21. GENERAL

A. Supply single zone one piece packaged units that are complete as per the following specification, deliver all capacities schedules, and conform to design indicated herein. Alternate layouts or dimensional changes will not be accepted.

22. CABINET

A. Units(A) shall be constructed of minimum 20ga. G-90 galvanized steel riveted together via structural pop-rivets. All metal shall be CNC bent for precise assembly.

1. Rigging Provisions: The unit shall have a structural base constructed of minimum 1/4ga. G-90 galvanized steel, and include full sized fork pockets and lifting points on all four sides.

2. Roof Construction: The lid shall be fabricated by forming a double-standing, self-locking seam that requires no additional support. Roof shall be pitched to allow for proper drainage.

3. Exterior Wall Construction: All exterior walls shall consist of a double wall, G-90 galvanized steel construction insulated with 2in. thick, foil-faced, R13 closed cell foam.

4. Service Access Doors: All door joints shall be gasketed around their perimeter, and allow for doors to be mounted via removable, spring actuated, stainless steel hinges with stainless steel rivets, and self-compressing seals. Each compartment shall have removable access panels to allow for ease of service and maintainability. Electrical cabinet access doors shall have a door lock mechanism. All doors shall have stainless steel hinges which are also lockable. Electrical cabinet doors shall be outfitted with schematic/manual pouches formed into the door, along with wiring diagrams attached to the interior of the door from the factory.

B. Interior interior and exterior casing shall be constructed of minimum 20 GA G90 galvanized steel with no painting, and shall have surpassed a salt spray corrosion test as per ASTM B 117.

C. Entire unit shall be Main-Base and rated up to 150psf per TAS 201, 202 & 203 on any units utilizing a 30' or shorter factory provided roof curb.

23. AIR-FLOW CONFIGURATIONS

A. Unit shall be configurable for both down (vertical) discharge through base of unit, or side discharge through the cabinet. Unit shall also be configurable to both down (vertical) return or side return into the cabinet.

B. Unit intake airflow configuration shall be through use of a fresh/outdoor and return air damper.
1. Damper shall exceed ASHRAE Class 1A standard for low leakage. Damper assembly shall be a single assembly, and outfitted with an integral bird screen and lower/gutter system to divert any drainage through the base of the unit - intake air hood not required.

2. Actuator: A single direct drive damper actuator shall be used with spring return to ensure that the outdoor air section closes when not powered.

24. SUPPLY AIR BLOWER AND MOTOR

A. All supply fans shall be direct drive (belt-driven not acceptable) variable speed plenum fans.
B. Blower Motor: Motor shall be a premium efficiency motor available as:
1. Open Drip Proof (ODP) or Totally Enclosed Fan Cooled (TEFC) motor driven by a Variable Frequency Drive.
2. Electronically Commutated Motor (ECM).

C. Fans to be selected at or near efficiency peak. (Submit fan curves)
D. Blower and motor assembly shall be dynamically balanced. The entire blower and motor assembly shall be mounted on rubber vibration isolators. Wheels balanced as per ASHRAE 90.4-96, Balance Quality and Vibration Levels For Fans.

25. REFRIGERATION SYSTEM

A. Unit shall utilize a variable speed inverter duty scroll compressor with the following features:
1. Modulation Compressor shall be capable of precise speed modulation from 150-1000 on B, 10, & 125 Ton units, and 250-1000 on 15, 20, 22, 25, & 30 Ton units.

2. Refrigerant: Unit shall be factory charged with R410A refrigerant.
3. Vibration Isolation Compressor shall be mounted on rubber vibration isolators to reduce transmission of vibration to the building structure.

4. Internal Overload Protection Compressor shall include internal thermal overload protection to protect against excessive motor temperatures.
5. Crankcase Heater Compressor shall include a crankcase heater to protect against liquid flood-back and emission of oil fumes on start-up. The crankcase heater must return powered when compressor is not in operation.

6. Oil Management Unit shall utilize both passive and active oil return management using DI Level Sensor and scheduled oil boosts.
7. Monitored Envelope Unit shall monitor all critical refrigeration points to ensure compressor does not operate outside of safe operating envelope.

B. Throttling Logic: Unit shall allow for high head pressure monitoring throttle mode for high ambient operation, and low suction pressure throttle mode for low capacity operation on any conditions resulting in low suction pressure.
9. Pump-Down Active pump-down mode with discharge line check valve to protect against liquid migration into compressor during idle times.

10. Defrost mode in optional Heat Pump: When outdoor coils are deemed at risk of freezing, the unit shall simultaneously turn on auxiliary heat while running the heat pump in cooling mode to melt defrost outdoor coils as needed while still maintain desired leaving air temperatures.
B. The unit shall be outfitted with the following:
1. Indoor Coil: Indoor coil shall be a high efficiency 5-7 row coil design with aluminum fins mechanically bonded to copper tubes. Coil is staggered to increase turbulence, reduce the coil bypass factor, and ultimately slow the air stays within the coil.
2. Electronic Expansion Valve: Each refrigeration circuit will be outfitted with an electronic expansion valve metering device which can be throttled from 0-100% open to allow for precise superheat control.
3. Indoor Coil Drain Pan: The indoor coil shall be outfitted with a sloped stainless steel drain pan. This pan shall be insulated along the entire base to prevent condensation, and outfitted with a safety overflow switch which will automatically shut down cooling operation prior to water overflowing the drain pan. In the event of a drain clog, the entire drain pan shall be 30 GA Stainless Steel construction and wrap beneath the entire coil with flashing on entering side of coil to ensure capture of all condensate. Drain pan discharge pipe shall also be stainless steel construction. Drain pan shall be pitched to exceed ASHRAE 62.1 standard.
4. Base of the condensing coil cabinet shall be pitched away from the unit as a safety to ensure all draining exits away from the curb.

5. Optional Hot Gas Reheat Coil: The unit shall include an optional copper tube and aluminum fin hot gas reheat coil mounted downstream of the indoor coil. This coil shall be controlled via fully modulating hot gas reheat valve to provide precise reheat temperature control. This coil shall include the addition of an evaporator coil leaving condition sensor to maintain a coil dew point. This also prevents operation of a deminification coil when intake dew point conditions are found to be below space dew point conditions, preventing wasted energy.

6. Outdoor (Condenser) Coil: Outdoor coil shall be a high efficiency coil design with aluminum fins mechanically bonded to copper tubes. The coil shall be downward sloped to protect coil from hail damage. Optional hail guards may also be outfitted to the outdoor coil for added protection from hail blowing off of the roof of the unit up the coil.
7. Outdoor Fans: The outdoor coil shall have a vertical discharge outfitted with quiet, efficient, fully modulating Electronically Commutated Motor (ECM) condensing fans. These fans shall modulate to maintain a temperature differential between outside air and the outdoor coil.

C. To help mitigate any long-term potential for leaks or hardware failures, the unit shall be outfitted with the following protection measures:
1. Suction line accumulator for added protection against liquid entering suction line of compressor.
2. Hi-Flow, low pressure drop, filter drier.
3. Electronic Expansion Valve (EEV) for precise superheat control. EEV shall open partially allowing system pressure equalization prior to activation of the compressor.
4. On optional heat pump units, use of a single 3-way reheat valve to prevent obstructions due to valve failure.
5. Protective rubber sleeves installed on all distribution lines of indoor coil to prevent wear from rubbing.
6. All refrigeration parts shall be short-stub assembly and any access port with a transducer or switch is mounted vertically to mitigate risk of bent/cracked stub joints.
7. Refrigeration circuit shall be mechanically CNC pre-bent tubing wherever possible with minimal brazed joints to minimize points for potential refrigeration leaks.
8. Factory tested for leaks via high pressure nitrogen decay and helium tracer gas testing.
9. Suction line temperature sensor failure detection.
10. Preventative failure alerts through a manufacturer provided, cloud based, cellular remote monitoring system.

26. HEATING SYSTEM

A. The gas burner shall be an indirect-fired, push-through type, using natural (LPG) gas or an on-gas supply pressure to the unit (two minimum NG Gas, 11.0"WC, minimum LP Gas).
B. Burner shall be a tubular in-shot fired design capable of using natural or LP type gas. Each burner ignition shall be direct-spark design with remote flame sensing at inlet of the last firing tube of the gas manifold.
C. Direct-sparking sequence shall last through the complete duration of the trial for ignition period for guaranteed light-off. Burner shall always be lit at maximum gas flow and combustion airflow for guaranteed light-off. Each burner ignition module shall have LED indicators for troubleshooting and a set of exposed terminals for testing flame induction signal.

C. All furnaces shall be controlled by an electronic VeriFire-type fully modulating control system capable of achieving 80% combustion efficiency over the entire gas firing range of the unit.
D. Each furnace shall have:
1. A minimum turndown ratio of 64 for natural gas and 51 for LP gas while maintaining a constant 80% efficiency (90% for high efficiency furnace option). No cold air bypass of the heat exchanger.
2. Each furnace heat exchanger shall be a bent-tube style design made entirely of type 409 stainless steel.
3. Stainless steel Duct Seal Connection for gas connection.
4. Nonfail and Input gas pressure gauges.
5. Factory piped condensate drain to exterior of cabinet.
6. A combustion flue to be installed on adjacent side as combustion intake with integrated high velocity wind cap.
7. A blocked vent safety airflow switch with high temperature silicone tubing operating off of absolute pressure measured inside of the power vent blower housing.
8. A high temperature auto-recycling unit with a maximum non-adjustable set point.
9. A manual reset high temperature flame roll out switch with a non-adjustable set point.
10. Each furnace compartment shall have a removable post and panel that allows the furnace to be easily removed for service and maintainability.
11. An emergency assembly for exhausting flue gases with a PSC or ECM type motor that is securely mounted and easily accessible/removable for service.
12. A 0-10"WC gas pressure gauge installed on the gas manifold.

E. Each electric heater shall have:

- 1. SCR electric inserts for side on discharge supply.
- 2. Electric coils are controlled using SCR controls. SCR is the proportioning type controller. Unit modulates the heater and supplies the exact amount of power to match the heat demand with a 100 turndown per stage with full modulation between minimum turndown and max output.

27. FILTERS

A. Provide filters as part of unit. All filters shall be furnished and installed to meet the performance requirements set forth in the schedule and as specified under another section of this work.
B. All filters shall be installed on tracks for easy removal from the unit.
C. Up to 3 layers of outdoor air filtration installed. Unit shall ship with a 27 washable metal mesh outdoor air filter. More air shall have optional 2" MERV-8 and MERV-13 Filters. 4" MERV-10 or 4" MERV-11 HEPA Filter banks factory installed.
D. Unit shall have an optional adjustable pressure differential sensor for the filter bank to alert in the event of a clogged filter.

28. ELECTRICAL

A. All controls shall be pre-wired and housed in an insulated electrical cabinet within the unit to protect against risk of condensation.
B. All direct fired and cooling only units shall be provided with single point electrical connection.
C. Unit shall be provided with a door safety switch that de-energizes the supply fan when the door is opened.
D. Unit shall be provided with a factory mounted averaging intake air temperature sensor to allow for accurate intake temperature readings regardless of how the DA/RA sensors are positioned.
E. The electrical cabinet shall be outfitted with the following:
1. LED electrical cabinet service light with automatic activation upon door switch.
2. Color wiring schematics, laminated to the interior wall of the cabinet doors.
3. Factory mounted disconnect with unit button knockouts.
4. A LED backlit, LED Human-Machine Interface (HMI) shall be mounted within the unit's control cabinet to allow for all set points configuration and refrigeration system monitoring at the unit.
5. Up to 4 additional space mounted HMI's available. Additional HMI's shall allow for full programming capabilities and are outfitted with integral temperature and humidity sensors. Additional HMI's shall be capable of being individually averaged for space temperature/humidity readings. All HMI's shall be wired using standard CAT5e cables.
6. Optional 120V, 15A unit powered or unpowered convenience outlet.
G. All sensors shall be wired back to the main control board that continuously monitors all critical components and makes decisions based on pre-determined logic to accurately control the following:
1. PID logic to control heater modulation ensuring precise discharge/space temperature control.
2. PID logic to control compressor speed to provide precise control over evaporative coil temperatures, leaving air point, and discharge/space temperatures.
3. PID logic for Outdoor fan modulation to maintain an optimal outdoor coil temperature.
4. PID logic for Electronic Expansion Valve (EEV) position to maintain a precise superheat temperature.
5. PID logic for Modulating Reheat valve to limit supply air temperature and relative humidity based off of space or discharge conditions.

29. CONTROLS

A. Unit shall be outfitted with a control board to allow for full control of the entire unit.
B. Provide air flow switch on the supply fan system to sense air flow with available set of contacts for connection to BMS for airflow alerts.
C. All unit controls shall be compatible with BACnet and LonWorks based building management systems.
D. All units shall be outfitted with DALI/IEC cloud based monitoring, which monitors every point of operation. Provides configurable automated fault alert e-mails, and remote control capabilities.
E. Integrated cellular module to provide remote connection to monitoring services to view both real time and historical unit operation. Data shall be stored a minimum of 3 years on the cloud. Data sample rate shall be a maximum of 60 seconds.

F. Temperature Control System

1. Low-ambient Cooling Unit: Is factory outfitted with logic allowing for low-ambient operation of the DX system down to 15F outdoor temperatures purely through software utilizing the standard factory modulating components.
2. Discharge Temp Control (Heating): Unit modulates the burner flame current supply in the case of electric heating to accurately maintain the desired discharge temperature set point and compensate for fluctuations in entering air temperature, air volume and % of DA using heating PID controls designed specifically for the IDMS.
3. Recharge Temp Control (Cooling): Unit modulates the compressor frequency to accurately maintain the desired evaporative coil dew point measured via a coil mounted temperature sensor between the evaporative and hot gas reheat coils. A fully modulating hot gas reheat valve shall utilize excess waste heat from the condensing section feed the hot gas reheat coil with the precise amount of heat needed to accurately reheat the airstream in order to maintain a desired temperature set point while compensating for fluctuations in entering air temperature, air volume and % of DA using proprietary deminification PID controls designed specifically for the IDMS.

4. Discharge Temp Control (Heat Pump): Unit modulates the compressor frequency to accurately maintain the desired discharge temperature set point and compensate for fluctuations in entering air temperature, air volume and % of DA using heating PID controls designed specifically for the IDMS. Minimum and maximum discharge set points can be set to limit the temperature entering the space. When ambient temperatures drop below a user configurable minimum outdoor air temperature set point, the unit is not able to maintain a user configurable minimum discharge temp for 5 minutes. The heat pump will initiate its backup heat source. Initiation of backup heater operation shall ensure discharge temps are maintained prior to disabling heat pump to make sure discharge temps are never impacted during chargeover. An optional additional HMI or room thermostat can be used to determine the space temperature. In the case that no temperature sensor is available in the space, the unit will use an internal return temperature sensor.
5. Discharge Humidity Control (Dehumidification): Unit modulates the compressor frequency to accurately maintain a desired evaporative coil dew point measured via a coil mounted temperature sensor between the evaporative and hot gas reheat coils. A fully modulating hot gas reheat valve shall utilize excess waste heat from the condensing section feed the hot gas reheat coil with the precise amount of heat needed to accurately reheat the airstream in order to maintain a desired temperature set point while compensating for fluctuations in entering air temperature, air volume and % of DA using proprietary deminification PID controls designed specifically for the IDMS.
6. Space Temp Control (Heating): Unit modulates the burner flame current supply in the case of electric heating to accurately maintain the desired space temperature set point and compensate for fluctuations in entering air temperature, air volume and % of DA using heating PID controls designed specifically for the IDMS. Minimum and maximum discharge set points can be set to limit the temperature entering the space. An optional additional HMI or room thermostat can be used to determine the space temperature. In the case that no temperature sensor is available in the space, the unit will use an internal return temperature sensor.
7. Space Temp Control (Cooling): Unit modulates the compressor frequency to accurately maintain the desired space temperature set point and compensate for fluctuations in entering air temperature, air volume and % of DA using cooling logic when in heat pump mode) PID controls designed specifically for the IDMS. Minimum and maximum discharge set points can be set to limit the temperature entering the space. An optional additional HMI or room thermostat can be used to determine the space temperature. In the case that no temperature sensor is available in the space, the unit will use an internal return temperature sensor.
8. Space Temp Control (Heat Pump): Unit modulates the compressor frequency to accurately maintain the desired space temperature set point and compensate for fluctuations in entering air temperature, air volume and % of DA using heating PID controls designed specifically for the IDMS. Minimum and maximum discharge set points can be set to limit the temperature entering the space. An optional additional HMI or room thermostat can be used to determine the space temperature. In the case that no temperature sensor is available in the space, the unit will use an internal return temperature sensor.
9. Space Humidity Control (Dehumidification): Unit modulates the compressor frequency to accurately maintain a desired evaporative coil dew point measured via a coil mounted temperature sensor between the evaporative and hot gas reheat coils. A fully modulating hot gas reheat valve shall utilize excess waste heat from the condensing section feed the hot gas reheat coil with the precise amount of heat needed to accurately reheat the airstream in order to maintain a desired temperature set point while compensating for fluctuations in entering air temperature, air volume and % of DA using proprietary deminification PID controls designed specifically for the IDMS.
10. Advanced Total Unit Economizer: The control system is outfitted standard, without need for any additional hardware, with an Advanced Total Unit Economizer which will take maximum advantage of as much energy available temperature outdoor air conditions in order to run the compressor the minimum amount required at any given incoming air conditions. If the outdoor space and relative humidity permits, the units will be capable of completely modulating and shutting off compressor to provide free cooling and deminification as the outdoor air conditions allow.

G. Activation Controls
1. Activate Based on Intake Heating: Unit will activate heating when the intake temperature drops below the desired set point.
2. Activate Based on Intake Cooling: Unit will activate cooling when the intake temperature rises above the desired set point.
3. Activate Based on Intake Dehumidification: Unit will activate dehumidification when the intake conditions rise above the desired intake set point, with activation set points configured to a Dew Point, Relative Humidity or a combination of Dew Point/Relative Humidity.
4. Activate Based on Space Heating: Unit will activate heating when the space temperature drops below the desired set point.
5. Activate Based on Space Cooling: Unit will activate cooling when the space temperature rises above the desired set point.
6. Activate Based on Space Dehumidification: Unit will activate dehumidification when the space set point rises above the desired space set point, with activation set points configured to a Dew Point, Relative Humidity or a combination of Dew Point/Relative Humidity.
7. Activate Based on Both Heating: Unit will activate heating when the space AND intake temperature drop below the desired set point.
8. Activate Based on Both Cooling: Unit will activate cooling when the space AND intake temperature rise above the desired set point.
9. Activate Based on Both Dehumidification: Unit will activate dehumidification when the space and intake set point rise above the desired space or intake set point, with activation set points configured to a Dew Point, Relative Humidity or a combination of Dew Point/Relative Humidity.
10. Activate Based on Either Heating: Unit will activate heating when the space OR intake temperature drops below the desired set point.
11. Activate Based on Either Cooling: Unit will activate cooling when the space OR intake temperature rises above the desired set point.
12. Activate Based on Either Dehumidification: Unit will activate dehumidification when the space or intake set point rises above the desired space or intake set point, with activation set points configured to a Dew Point, Relative Humidity or a combination of Dew Point/Relative Humidity.
13. Activate Based on Heat Heating: Unit will activate heating when the space thermostat sends a 24V signal to W and G on the main control board. Unit will modulate to maintain a constant discharge heat set point.
14. Activate Based on Heat Cooling: Unit will activate cooling when the space thermostat sends a 24V signal to Y and G on the main control board. Unit will modulate to maintain a constant discharge cool set point.

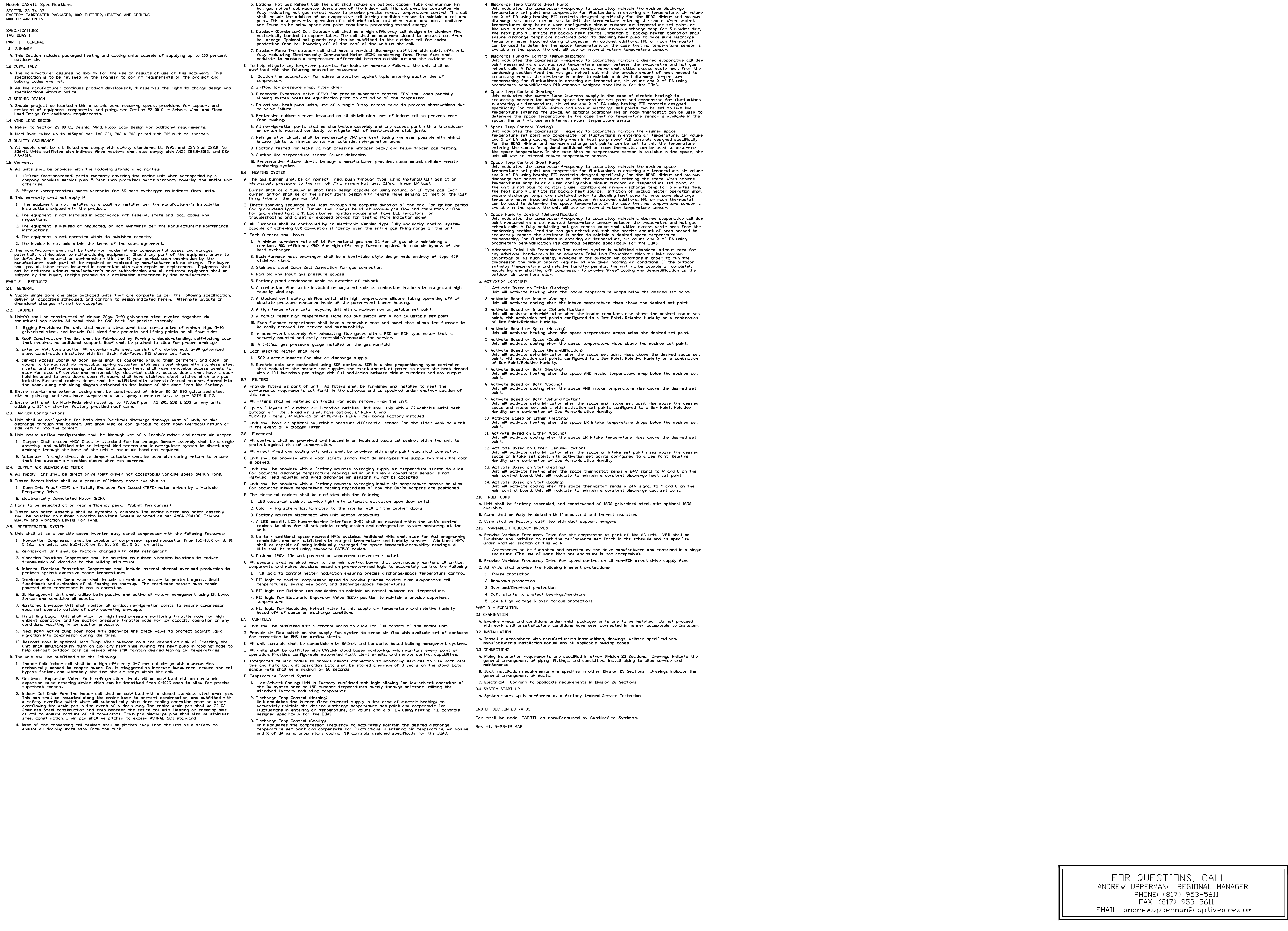
210. RDDF CURB
A. Unit shall be factory assembled, and constructed of IBGA galvanized steel, with optional 16GA available.
B. Curb shall be fully insulated with 1" acoustical and thermal insulation.
C. Curb shall be factory outfitted with duct support hangers.
211. VARIABLE FREQUENCY DRIVES
A. Provide Variable Frequency Drive for the compressor as part of the AC unit. VFD shall be furnished and installed to meet the performance set forth in the schedule and as specified under another section of this work.
1. Accessories to be furnished and contained in a single enclosure. (The use of more than one enclosure is not acceptable).
B. Provide Variable Frequency Drive for speed control on all non-ECM direct drive supply fans.
C. All VFD's shall provide the following inherent protections:
1. Phase protection
2. Brownout protection
3. Overload/Overheat protection
4. Soft starts to protect bearings/hardware.
5. Low & High voltage & over-torque protections.

PART 3 - EXECUTIVE

31. EXAMINATION

A. Examine areas and conditions under which packaged units are to be installed. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to installer.
32. INSTALLATION
A. Install in accordance with manufacturer's instructions, drawings, written specifications, manufacturer's installation manual and all applicable building codes.
33. CONNECTIONS
A. Piping installation requirements are specified in other Division 23 Sections. Drawings indicate the general arrangement of piping, fittings, and specialties. Install piping to allow service and maintenance.
B. Duct installation requirements are specified in other Division 23 Sections. Drawings indicate the general arrangement of ducts.
C. Electrical: Conform to applicable requirements in Division 26 Sections.
34. SYSTEM START-UP
A. System start-up is performed by a factory trained Service Technician.
END OF SECTION 23 13 33

Fan shall be model CASRTU as manufactured by Captivaire Systems.
Rev #1, 5-28-19 MAP



REVISIONS table with columns for DESCRIPTION and DATE.



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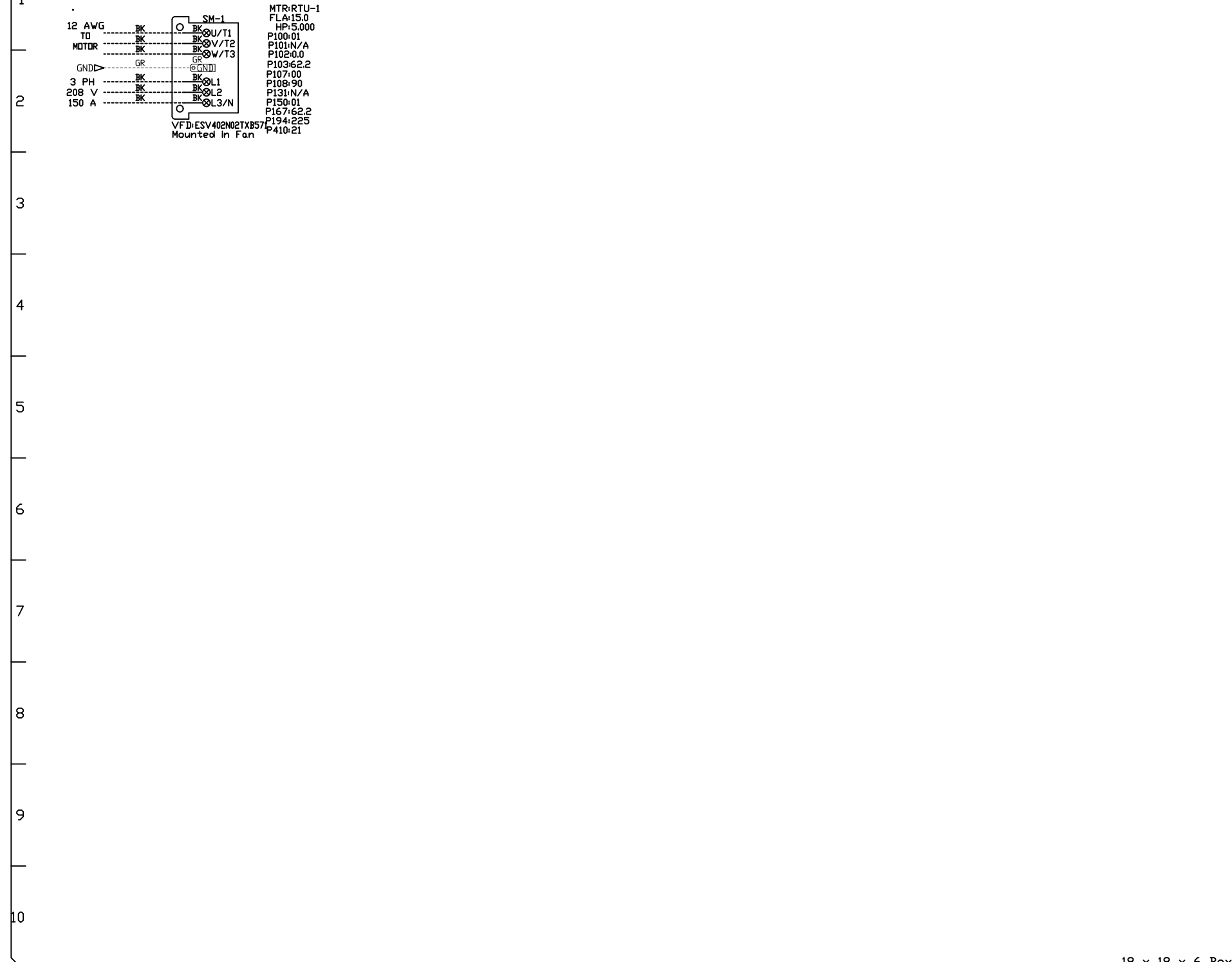
Nepali Mandir Community Center
1212 Royal Parkway,
EULESS, TX, 76040

DATE: 5/11/2020
DWG #: 4338925
DRAWN BY: mskertchly
SCALE: 3/4" = 1'-0"
MASTER DRAWING

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SHEET NO. 5

MOTOR POWER CIRCUITS - SEE INSTALLATION DIAGRAM FOR FIELD WIRING REQUIREMENTS.



FACTORY WIRING SCHEMATIC CIRCUIT BOARDS
 DCV Rev. 2.10.00
 HMI Rev. 2.10.00

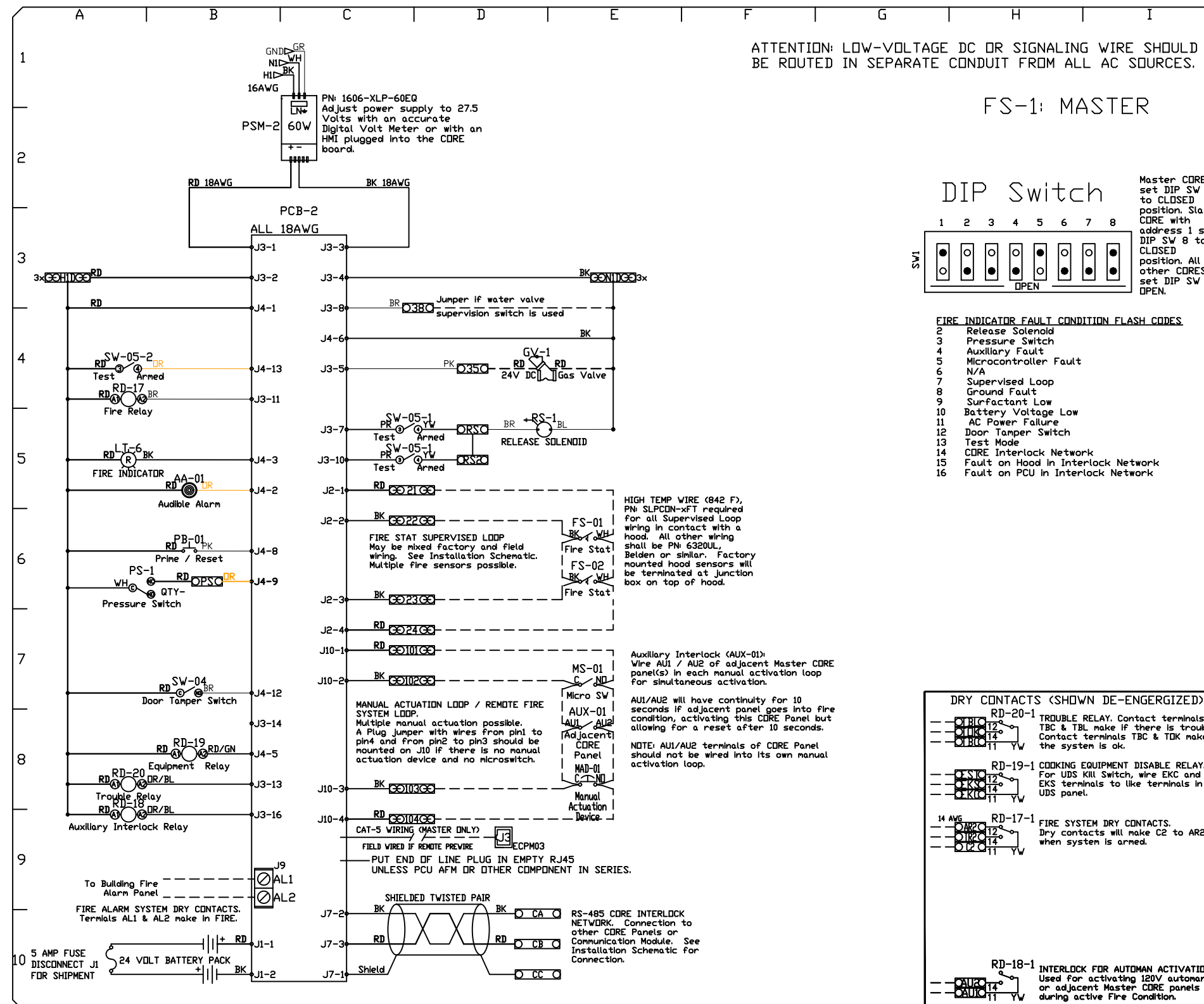
COMPONENT LIST

12 AWG	12 AWG
10 AWG	10 AWG
8 AWG	8 AWG
6 AWG	6 AWG
4 AWG	4 AWG

LEGEND

- Blue - FIELD WIRING
- Black - FACTORY WIRING
- Yellow - 24VDC
- Red - 120VAC

JOB NAME
 Nepali Mandir Co.
 1212 Royal Parkway, EULESS, TX, 76040



FACTORY WIRING SCHEMATIC CIRCUIT BOARDS
 DCV Rev. 2.10.00
 HMI Rev. 2.10.00

COMPONENT LIST

12 AWG	12 AWG
10 AWG	10 AWG
8 AWG	8 AWG
6 AWG	6 AWG
4 AWG	4 AWG

LEGEND

- Blue - FIELD WIRING
- Black - FACTORY WIRING
- Yellow - 24VDC
- Red - 120VAC

JOB NAME
 Nepali Mandir Co.
 1212 Royal Parkway, EULESS, TX, 76040

Demand Control Ventilation Hood Control Panel Specifications:

- Controls shall be listed by ETL (UL 508A) and shall comply with demand ventilation system shutdown requirements outlined in IECC 403.2.8 (2015).
- The control enclosure shall be NEMA 1 rated and listed for installation inside of the exhaust hood utility cabinet. The control enclosure may be constructed of stainless steel or painted steel.
- Temperature probe(s) located in the exhaust duct riser(s) shall be constructed of stainless steel.
- A digital controller shall be provided to activate the hood exhaust fans dynamically based on a fixed differential between the ambient and duct temperatures sensors. This function shall meet the requirements of IMC 507.1.1.
- A digital controller shall provide adjustable hysteresis settings to prevent cycling of the fans after the cooking appliances have been turned off and/or the heat in the exhaust system is reduced.
- A digital controller shall provide an adjustable minimum fan run-time setting to prevent fan cycling.
- Variable Frequency Drives (VFDs) shall be provided for fans as required. The digital controller shall modulate the VFDs between a minimum setpoint and a maximum setpoint on demand. The duct temperature sensor input(s) to the digital controller shall be used to calculate the speed reference signal.
- The VFD speed range of operation shall be from 0% to 100% for the system, with the actual minimum speed set as required to meet minimum ventilation requirements.
- An internal algorithm to the digital controller shall modulate supply fan VFD speed proportional to all exhaust fans that are located in the same fan group as the supply fan.
- The system shall operate in PREP MODE during light cooking load or COOL DOWN MODE when sufficient heat remains underneath the hood system after cooking operations have completed. Operation during either of these periods will disable the supply fans and provide an exhaust fan speed that is equal to the minimum ventilation requirement.
- A digital controller shall disable the supply fan(s), activate the exhaust fan(s), activate the appliance shunt trip, and disable an electric gas valve automatically when fire condition is detected on a covered hood.
- A digital controller shall allow for external BMS fan control via Dry Contact (external control shall not override fan operation logic as required by code).
- An LCD interface shall be provided with the following features:
 - a. On/Off push button fan & light switch activation
 - b. Integrated gas valve reset for electronic gas valves (no reset relay required)
 - c. VFD Fault display with audible & visual alarm notification
 - d. Duct temperature sensor failure detection with audible & visual alarm notification
 - e. Mis-wired duct temperature sensor detection with audible & visual alarm notification
 - f. A single low voltage Cat-5 RJ45 wiring connection
 - g. An energy savings indicator that utilizes measured kWh from the VFDs

Sequence of Operations:

- The hood control panel is capable of operating in one or more of the following states at any given time:
- **Automatic:** The system operates based on the differential between room temperature and the temperature at the hood cavity or exhaust duct collar. Fans activate at a configurable temperature differential threshold. Depending on the job configuration each fan zone can be configured as static or dynamic. These terms refer to whether a variable motor (such as EC Motors or VFD driven motors) modulate with temperature. If the panel is equipped with variable speed fans and the zone is defined as "dynamic", these will modulate within a user-defined range based on the temperature differential. Panels equipped with variable speed fans and a fan zone defined as "static", fans will run at a set speed calculated for the drive. Demand control ventilation systems are capable of modulating exhaust and make up air fan speeds per the requirements outlined in IECC 403.2.8.
 - **Manual:** The system operates based on human input from an HMI.
 - **Schedule:** A weekly schedule can be set to run fans for a specified period throughout the day. There are three occupied times per day to allow for the user to set up a time that is suitable to their needs. Any time that is within the defined occupied time, the system will run at modulation mode and follow the fan procedure algorithm based on temperature during this time. During unoccupied time, the system will have an extra offset to prevent unintended activation of the system during a time where the system is not being occupied.
 - **Other:** The system operates based on the input from an external source (DDC, BMS or hard-wired interlock)

FOR QUESTIONS, CALL
 ANDREW UPPERMAN: REGIONAL MANAGER
 PHONE: (817) 953-5611
 FAX: (817) 953-5611
 EMAIL: andrew.upperman@captiveaire.com

REVISIONS

NO.	DESCRIPTION	DATE

CAPTIVE

Nepali Mandir Community Center
 1212 Royal Parkway,
 EULESS, TX, 76040

DATE: 5/11/2020
 DWG #: 4338925
 DRAWN BY: msketchly
 SCALE: 3/4" = 1'-0"
 MASTER DRAWING

SHEET NO. 8

PO Box 48519, Watauga, TX, 76148 PHONE: (817) 953-5611 EMAIL: reg137@captiveaire.com

DuctWork #1 Parts - Job#4338925

Tag	Part #	CFM	S.P.	Weight	Velocity	QTY	Description
P1	DW1445DWASY-2R-S	1750	-0.0438	19.87	1637.02	1	Double Wall Duct - 14' Inner 45 Duct - 2 Layers Reduced Clearance - 18' Stainless Steel Outer Shell.
P2	DW1445DWASY-2R-S	1750	-0.0625	19.87	1637.02	1	Double Wall Duct - 14' Inner 45 Duct - 2 Layers Reduced Clearance - 18' Stainless Steel Outer Shell.
P3	DW1447DWLT-2R-S	1750	-0.0186	62.39	1637.02	1	Double Wall Duct - 14' Inner Duct, 47' long - 2 Layers Reduced Clearance - 18' Stainless Steel Outer Shell.
P4	DW1435DWLT-2R-S	1750	-0.0139	46.53	1637.02	1	Double Wall Duct - 14' Inner Duct, 35' long - 2 Layers Reduced Clearance - 18' Stainless Steel Outer Shell.
P5	DW1447DWAJDT-2R-S	1750	-0.0155	93.06	1637.02	1	Double Wall Adjustable Duct Transition Plate - 14' Inner Duct - 2 Layers Reduced Clearance - 18' Stainless Steel Outer Shell. Min Length = 11' / Max Length = 48.5' / Adjustment = 30.5' / Adjustable Section May Need To Be Cut.
Assembled w/P6							Includes single and double wall 'V' Clamps.
P6	DW2314TPDBEX	1750	0	8.00	1637.02	1	Duct to Curb Transition 3/4' Down Turn, 23' Curb to 14' Duct, 16 GA Aluminized. Used on NCA14FA & NCA14HPFA. Transition Plate DD is 23.5' Designed For Use With Exhaust Fan. Non-Standard Part.
Assembled w/P5							
System at P6		1750	-0.7663				
P7	DW1445DWASY-2R-S	1750	-0.0438	19.87	1637.02	1	Double Wall Duct - 14' Inner 45 Duct - 2 Layers Reduced Clearance - 18' Stainless Steel Outer Shell.
P8	DW1445DWASY-2R-S	1750	-0.0625	19.87	1637.02	1	Double Wall Duct - 14' Inner 45 Duct - 2 Layers Reduced Clearance - 18' Stainless Steel Outer Shell.
P9	DW1447DWLT-2R-S	1750	-0.0186	62.39	1637.02	1	Double Wall Duct - 14' Inner Duct, 47' long - 2 Layers Reduced Clearance - 18' Stainless Steel Outer Shell.
P10	DW1435DWLT-2R-S	1750	-0.0139	46.53	1637.02	1	Double Wall Duct - 14' Inner Duct, 35' long - 2 Layers Reduced Clearance - 18' Stainless Steel Outer Shell.
P11	DW1447DWAJDT-2R-S	1750	-0.0155	93.06	1637.02	1	Double Wall Adjustable Duct Transition Plate - 14' Inner Duct - 2 Layers Reduced Clearance - 18' Stainless Steel Outer Shell. Min Length = 11' / Max Length = 48.5' / Adjustment = 30.5' / Adjustable Section May Need To Be Cut.
Assembled w/P12							Includes single and double wall 'V' Clamps.
P12	DW2314TPDBEX	1750	0	8.00	1637.02	1	Duct to Curb Transition 3/4' Down Turn, 23' Curb to 14' Duct, 16 GA Aluminized. Used on NCA14FA & NCA14HPFA. Transition Plate DD is 23.5' Designed For Use With Exhaust Fan. Non-Standard Part.
Assembled w/P11							
System at P12		1750	-0.7663				
	DW18DWRISER-2R-S			8.15		1	Double Wall Riser Cover - Used On 14' Inner Riser, 4' long - 2 Layers Reduced Clearance - 18' Stainless Steel Outer Riser Shell Assembly. Includes Insulation & Single V Clamps For Inner & Outer Connections.
	DW18DWRISER-2R-S			8.15		1	Double Wall Riser Cover - Used On 14' Inner Riser, 4' long - 2 Layers Reduced Clearance - 18' Stainless Steel Outer Riser Shell Assembly. Includes Insulation & Single V Clamps For Inner & Outer Connections.
	3M-2000PLUS			0.80		3	Duct - 3M Fire Barrier 2000 Plus Silicone - Used as sealant to Seal Duct Joints.
	DW14DWCLASY-2R-S			7.21		6	Duct - 14' Duct - 18' Double 'V' Clamp - 2R Insulation & Single 'V' Clamp Included - Reduced Clearance.
Total Weight				561.40			

SINGLE WALL FACTORY BUILT DUCTWORK

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16' PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16' PER LINEAR FOOT.

DUCT DIAMETER	HORIZONTAL SUPPORT (ft)	VERTICAL WALL SUPPORT (ft)	VERTICAL CURB SUPPORT (ft)
8"	10'	10'	24'
10"	10'	10'	24'
12"	10'	10'	24'
14"	10'	10'	24'
16"	10'	10'	24'
18"	10'	10'	24'
20"	10'	10'	24'
22"	10'	10'	24'
24"	10'	10'	24'

DOUBLE WALL FACTORY BUILT DUCTWORK

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16' PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16' PER LINEAR FOOT.

HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (ft)
8"	7'
10"	7'
12"	7'
14"	7'
16"	7'
18"	5'
20"	5'
22"	5'
24"	5'
26"	5'
28"	5'
30"	5'
32"	5'
34"	5'
36"	5'

VERTICAL			
TYPE	WALL SUPPORT (ft)	CURB SUPPORT (ft)	FLOOR SUPPORT (ft)
2R & 2R HT (8'-16')	20'	24'	24'
2R (18')	18'	24'	24'
3R & 3Z (8'-24')	10'	24'	24'
3Z (26' -36')	10'	20'	20'

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 Dallas/Ft. Worth Mechanical
 PO Box 48519, Watauga, TX, 76148 PHONE: (817) 953-5611 EMAIL: reg137@captiveaire.com

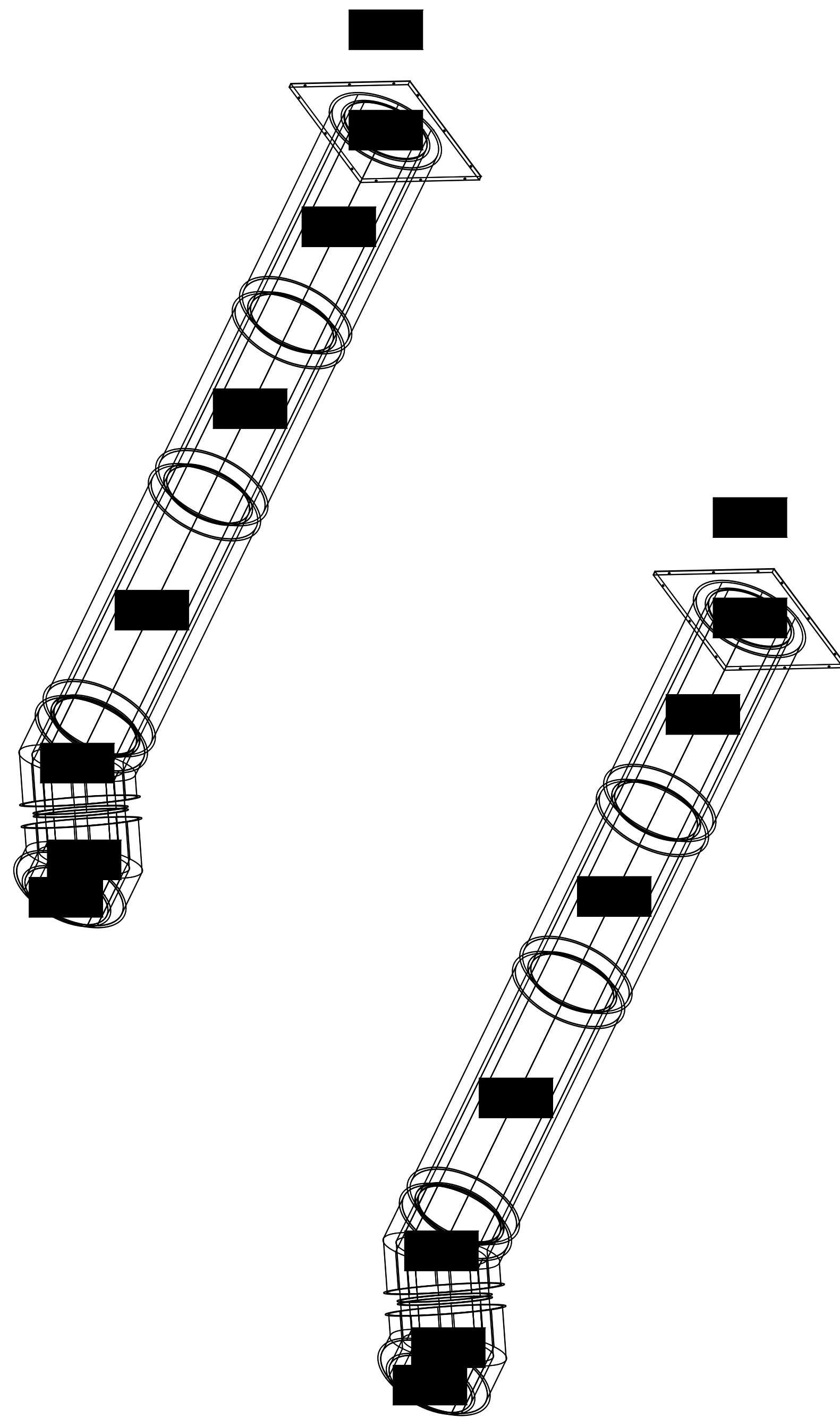
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DATE: 5/11/2020
 DWG.#: 4338925
 DRAWN BY: mskertchly
 SCALE: 3/4" = 1'-0"
 MASTER DRAWING

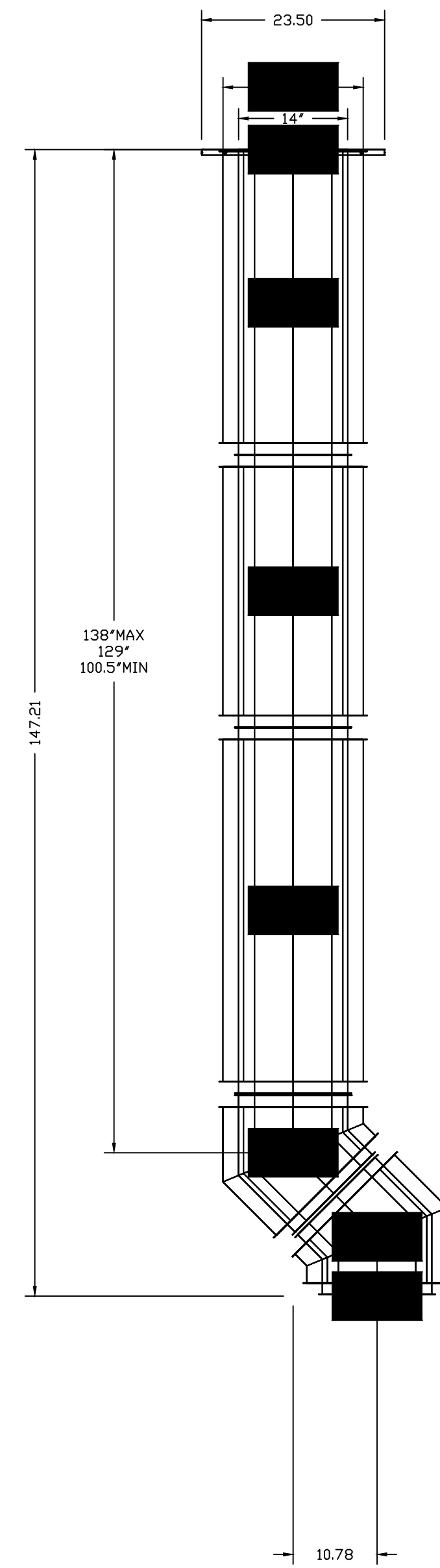
SHEET NO. 9

DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.

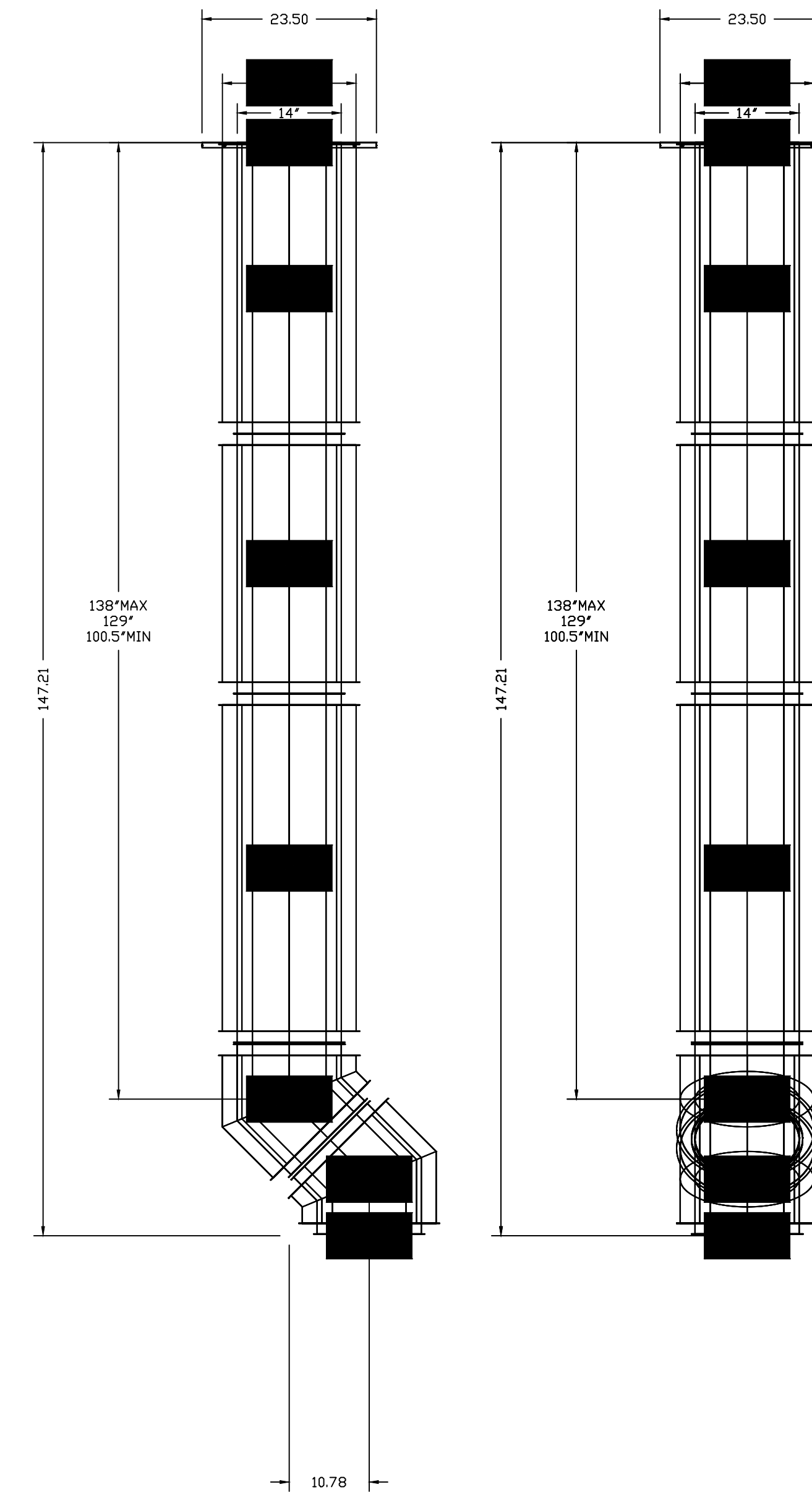
DuctWork #1 SE View



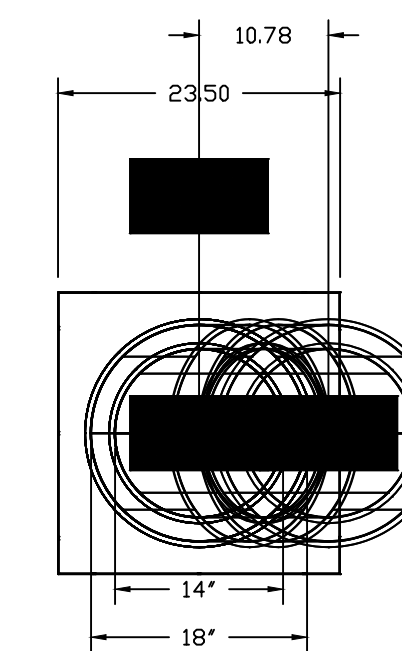
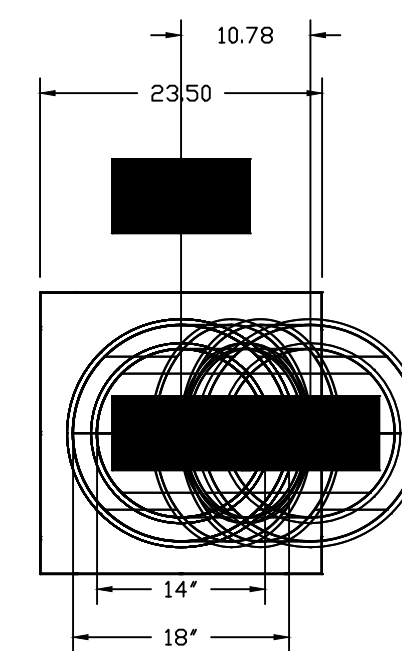
DuctWork #1 Front View



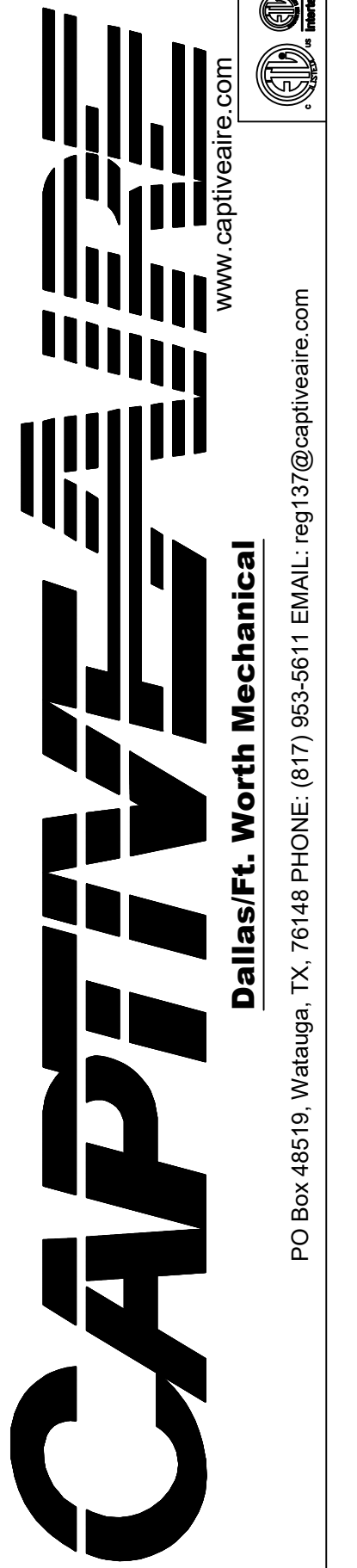
DuctWork #1 Side View



DuctWork #1 Top View



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