CODE ANALYSIS

PROJECT SUMMARY:

Name of Project:	Medina Regional Hospital, New Specialty Clinic Building - Hondo		
Address:	3103 Ave		
	Hondo, Texas 78861		
County:	Medina		
Proposed Use:	Business		
Owner:	Medina Healthcare System		
Owner Address:	3100 AVENUE E		
	HONDO, TX 78861		
Owner Phone#:	(830) 426-7700		

Applicable Building Code:

The following codes are in use in the City of Hondo:

Code of Ordinances 2015 International Building Code

2015 International Residential Code

2015 International Mechanical Code

2015 International Energy Conservation Code

2015 International Property Maintenance Code

2015 International Private Sewage Disposal Code

2015 International Plumbing Code 2015 International Existing Building Code

2015 International Fire Code

2015 National Fire Protection Association (NFPA) 101 Life Safety Code

- 2016 National Fire Protection Association (NFPA) 72 National Fire Alarm and Signaling Code
- 2017 National Fire Protection Association (NFPA) 70 National Electric Code Note: Adopted Through Ordinance 1131-07-17

Construction Type:	V-B
Sprinkler System:	No
Building Height:	14'-0″
Number of Stories:	1
Mezzanine:	No
Gross Building Area:	4,300 SF
Number of Occupants:	43
Number of Required Exits:	1

2015 International Building Code Chapter 3 Use and Occupancy Classification

Section 304 Business Group B

Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

Professional services (architects, attorneys, dentists, physicians, engineers, etc.)

Chapter 5 General Building Heights and Areas

Section 504 Building Height and Number of Stories Building Height Allowable: 40 feet (Table 504.3, Type V-B, NS)

Building Height Provided: 14 feet Building Stories Provided: 1 story

Building Stories Allowable: 2 stories (Table 504.4, Type V-B, NS)

506.2 Allowable Area Determination

Building Area Allowable: 9,000 SF (Table506.2, B Occ., Type V, NS) Building Area Allowable Increase: 15,750 SF

Section 506.3 Frontage Increase

Building Area Provided: 4,300 SF

If= [F/P - 0.25]W/30 (Equation 5-5)

where:

If = Area increase due to frontage. *F* = Building perimeter that fronts on a public way or open space having 20 feet

(6096 mm) open minimum width (feet).

[PROVIDED: 325 LF] *P* = Perimeter of entire building (feet).

[PROVIDED: 325 LF]

W = Width of public way or open space (feet) in accordance with Section 506.3.2. Equation 5-4, W= (L1 x w1 + L2 x w2 + L3 x w3...)/F)

[PROVIDED: 30 LF] (

If= [<u>270/270</u> - 0.25]<u>30</u>/30 lf= [1 - 0.25]1

lf= <u>0.75</u>*<u>1</u>

lf= 0.75 9,000 SF * 0.75 = 6,750 SF INCREASE

9,000 SF * 6,750 SF = 15,750 SF TOTAL ALLOWABLE AREA

Chapter 6 Types of Construction

Section 601 General TABLE 601

FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS) BUILDING ELEMENT = TYPE V-B Primary structural frame f (see Section 202) = 0 Bearing walls = 0

Exterior = 0 Interior = 0 Nonbearing walls and partitions Exterior = 0 Floor construction and associated secondary members = 0

Roof construction and associated secondary members = 0

Section 602 Construction Classification **TABLE 602**

FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE a, d, g TYPE OF CONSTRUCTION = VB & ALL

OCCUPANCY GROUP B = 0 & 0

602.5 Type V

Type V construction is that type of construction in which the structural elements, exterior walls and interior walls are of any materials permitted by this code.

Chapter 10 Means of Egress

4,300 sf / 100 = 43 occupants building

Section 1004 Occupant Load (Table 1004.1.2) MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT FUNCTION OF SPACE = Business areas OCCUPANT LOAD FACTOR a = 100 gross a. Floor area in square feet per occupant.

1005.3.2 Other Egress Components

The capacity, in inches (mm), of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such component by a means of egress capacity factor of 0.2 inch (5.1 mm) per occupant. AREA = OFFICE

TOTAL # OF OCCUPANTS = 43

OCCUPANTS PER EA. OF 2 EXITS = 22

EGRESS CAPACITY FACTOR = 0.2

EGRESS WIDTH MINIMUM (INCHES) = 8.6 EGRESS WIDTH PROVIDED (INCHES) = 34

1005.5 Distribution of Minimum Width and Required Capacity

Where more than one exit, or access to more than one exit, is required, the means of egress shall be configured such that the loss of any one exit, or access to one exit, shall not reduce the available capacity or width to less than 50 percent of the required capacity or width.

[option selected for this project although not required]

1006.2.1 Egress Based on Occupant Load and Common Path of Egress Travel

Distance Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1.

[option selected for this project although not required]

TABLE 1006.2.1

SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY OCCUPANCY = B

MAXIMUM OCCUPANT LOAD OF SPACE = 49 MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet) Without Sprinkler System (feet) Occupant Load OL > 30 = 75

1007.1.1 Two Exits or Exit Access Doorways

Where two exits, exit access doorways, exit access stairways or ramps, or any combination thereof, are required from any portion of the exit access, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between them. Interlocking or scissor stairways shall be counted as one exit stairway.

[N/A: this project only requires 1 exit since occupancy is less than 49]

1008.2 Illumination Required

The means of egress serving a room or space shall be illuminated at all times that the room or space is occupied.

1008.3 Emergency Power for Illumination

The power supply for means of egress illumination shall normally be provided by the premises' electrical supply.

1009.1 Accessible Means of Egress Required

Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress.

1009.2 Continuity and Components

Each required accessible means of egress shall be continuous to a public way and shall consist of one or more of the following components: 1. Accessible routes complying with Section 1104.

1010.1.1 Size of Doors The required capacity of each door opening shall be sufficient for the occupant load thereof and shall provide a minimum clear width of 32 inches (813 mm). Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad).

1010.1.2.1 Direction of Swing

Pivot or side-hinged swinging doors shall swing in the direction of egress travel where serving a room or area containing an occupant load of 50 or more persons or a Group H occupancy.

1010.1.3 Door Opening Force

The force for pushing or pulling open interior swinging egress doors, other than fire doors, shall not exceed 5 pounds (22 N).

Section 1013 Exit Signs

1011.1 Where Required

Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. The path of egress travel to exits and within exits shall be marked by readily visible exit signs to clearly indicate the direction of egress travel in cases where the exit or the path of egress travel is not immediately visible to the occupants. Intervening means of egress doors within exits shall be marked by exit signs. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is more than 100 feet (30 480 mm) or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign. Exceptions:

1. Exit signs are not required in rooms or areas that require only one exit or exit access.

1029.7 Travel Distance

Exits and aisles shall be so located that the travel distance to an exit door shall be not greater than 200 feet (60 960 mm) measured along the line of travel in nonsprinklered buildings.

1029.8 Common Path of Egress Travel

The common path of egress travel shall not exceed 30 feet (9144 mm) from any seat to a point where an occupant has a choice of two paths of egress travel to two exits. Exceptions:

1. For areas serving less than 50 occupants, the common path of egress travel shall not exceed 75 feet (22 860 mm).

Chapter 29 Plumbing Systems

TABLE 2902.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES(a) (See Sections 2902.1.1 and 2902.2)

CLASSIFICATION

OCCUPANCY = B DESCRIPTION = Buildings for the transaction of business, professional services, other services involving merchandise, office buildings, banks, light industrial and similar uses

WATER CLOSETS: Male/Female = 1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50

(URINALS SEE SECTION 419.2 OF THE INTERNATIONAL PLUMBING CODE)

LAVATORIES = 1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80 DRINKING FOUNTAINS = 1 per 100 (SEE SECTION 410 OF THE INTERNATIONAL PLUMBING CODE)

OTHER = 1 service sink

(a) The fixtures shown are based on one fixture being the minimum required for the number of persons indicated or any fraction of the number of persons indicated. The number of occupants shall be determined by this code.

2015 International Energy Conservation Code

TABLE C402.1.3 **OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS, R-VALUE METHOD** (a) CLIMATE ZONE = 2 (All other) ROOFS: Insulation entirely above roof deck = R-25ci

WALLS: Metal framed = R-13 + R-5ci SLAB: Existing ci = Continuous insulation

(a) Assembly descriptions can be found in ANSI/ASHRAE/IESNA Appendix A.

OWNER INFORMATION

MEDINA HEALTHCARE SYSTEM 3200 AVENUE E HONDO, TX 78861

DESIGN TEAM

Architect	GRG ARCHITECTURE 118 Broadway, Suite 620 San Antonio, Texas 78205 (210) 447-7000
Civil Engineer	CDS MUERY ENGINEERS & SURVEYORS 100 NE Loop 410, Ste. 300 San Antonio, Texas 78216 210-581-1111
Structural Engineer	A-1 ENGINEERING 1006 Vance Jackson Rd. San Antonio, TX 78201 (210) 591-8829
MEP Engineer	AMZSA, LLC 10831 Wilson Oaks San Antonio, TX 78249 (210) 781-0878

LOCATION MAPS



AREA MAP



VICINITY MAP

Medina Healthcare System NEW ADMINISTRATION BUILDING RENOVATION Hondo, Texas



AVENUE G

DRAWING INDEX

<u>GENERAL (02 AUG 2024)</u>

COVER SHEET, CODE ANALYSIS, LIFE SAFETY PLAN AND GENERAL INFORMATION G000 ADA / TDLR ACCESSIBILITY INFORMATION G101

G102	ADA / TDLR ACCESSIBILITY INFORMATION
CIVIL (0	7.11.11 Y 2024)
0.00	
0.01	SHE DIMENSIONAL CONTROL AND REYNOTE PLAN
C.02	SHEDETAILS
C.03	GRADING AND DRAINAGE PLAN
ARCHIT	ECTURAL (02 AUG 2024)
AD101	ARCHITECTURAL SITE PLAN - DEMOLITION
A101	ARCHITECTURAL SITE PLAN - NEW WORK
A102	ENLARGED FRONT AND SIDE CANOPY PLAN AND DETAILS
A103	ENLARGED SIDE AND REAR CANOPY PLAN AND DETAILS
AD201	DEMOLITION PLAN
A201	FLOOR PLAN
A210	REFLECTED CEILING PLAN
A211	CEILING DETAILS
A221	
A222	SINGLE-PLY ROOF DETAILS
A301	EXTERIOR BUILDING ELEVATIONS
A302	EXTERIOR BUILDING ELEVATIONS
A401	WALL SECTIONS AND DETAILS
A402 A403	
A403 A/10	
A501	ENLARGED RECEPTION PLAN. ELEVATIONS AND MILLWORK DETAILS
A502	TOIL FT ROOM AND INTERIOR FLEVATIONS
A503	LOBBY INTERIOR ELEVATIONS
A510	TOILET ACCESSORIES AND MOUNTING HEIGHTS
A601	INTERIOR CASEWORK ELEVATIONS
A602	INTERIOR CASEWORK ELEVATIONS
A603	CASEWORK DETAILS
A604	CASEWORK DETAILS
A701	PLAN DETAILS
A801	DOOR SCHEDULE, DOOR AND WINDOW TYPES
A810	DOOR AND WINDOW DETAILS
A901	FINISH LEGENU Einish ei ood di ant einish schedi 11 e and signage
A302	TINISHT LOOK FLAN, FINISH SCHEDOLL AND SIGNAGE
STRUCT	<u>FURAL (02 AUG 2024)</u>
50.0 01 1	
51.1 61.2	
S1.Z S2.1	
S2 2	
S2.3	CANOPY FOUNDATION LAYOUT
S2.4	CANOPY MAIN BEAM FRAMING LAYOUT
S2.5	CANOPY SECONDARY BEAM FRAMING LAYOUT
S2.6	CANOPY RAFTER FRAMING LAYOUT
S2.7	CANOPY ROOF FRAMING LAYOUT
S3.1	METAL STUD FRAMING DETAILS
S3.2	SECTIONS
MECHA	NICAL (07 JUL 2024)
M-001	MECHANICAL SYMBOLS & ABBREVIATIONS
M-101	MECHANICAL FLOOR PLAN
M-501	MECHANICAL SCHEDULES AND REQUIREMENTS
ELECTR	RICAL (07 JUL 2024)
E101	FLOOR PLAN - LIGHTING
E201	FLOOR PLAN - POWER
E301	ELECTRICAL SYMBOLS AND ABBREVIATIONS

ELECTRICAL SPECIFICATIONS E302 F401 ONE-LINE DIAGRAM -ELECTRICAL ELECTRICAL SCHEDULES E501 PLUMBING (07 JUL 2024) P1 1 PLUMBING SANITARY SEWER AND VENT FLOOR PLAN PLUMBING DOMESTIC WATER FLOOR PLAN P1.2 PLUMBING FIXTURE SCHEDULES AND DETAILS P2.1

PLUMBING SPECIFICATIONS

P3.1

PLAN NORTH 1 LIFE SAFETY PLAN 1/16" = 1'-0"



architecture

118 BROADWAY, SUITE 620 SAN ANTONIO, TX. 78205 210.447.7000



MAIN EXIT 22 OCCUPANTS X 0.2 = 4.4" REQUIRED 34" PROVIDED 00000 -00000 SECONDARY EXIT 21 OCCUPANTS X 0.2 = 4.2" REQUIRED 34" PROVIDED LIFE SAFETY SYMBOLS LEGEND EGRESS POINT A: EXIT ACCESS DISTANCE 90' EXIT ACCESS DISTANCE (200' ALLOWABLE) TO MAIN EXIT 88' EXIT ACCESS DISTANCE (200' ALLOWABLE) TO FEC FIRE EXTINGUISHER CABINET SECONDARY EXIT

EM NEW NOVATION (\mathbf{O}) $\widetilde{\infty}$ Õ Ш υ Ω × \succ () S \mathbf{O} OND ARI CAF Ĭ Ω C HE, XATI **A** DINA 03 $\overline{}$ MEDI \mathcal{O}

Page Description

COVER SHEET, CODE ANALYSIS, LIFE SAFETY PLAN AND GENERAL INFORMATION

hese drawings and accompanying specifications are to be an instrument of service and shall remain property of the Architect. They are not to be used on other projects or extensions of this project except by agreement in writing and with appropriate compensation to the Architect.

Drawn By:	JA
Checked B	y: EG
Project No.	240224
Date:	02 AUG 2024
Page	

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DIRECTIONAL EXIT LIGHT









GENERAL NOTES

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. 2. CONTRACTOR WILL BE PROVIDED WITH GROUND CONTROL POINTS ESTABLISHING LAYOUT
- "CONTROL LINES" AS SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL OTHER LAYOUT AND GRADE CONTROL SURVEYING FOR CONSTRUCTION OF THE PROJECT.
- 3. EXISTING UNDERGROUND UTILITIES ARE SHOWN FROM AVAILABLE UTILITY RECORDS AND 8. UNLESS OTHERWISE SPECIFIED BY THE ARCHITECT OR IN THE LANDSCAPE OBSERVABLE SURFACE FEATURES. ACTUAL LOCATIONS MAY VERY AND UTILITIES NOT SHOWN ON THESE PLANS MAY EXIST. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANIES AND OWNER PERSONNEL FOR ASSISTANCE IN LOCATING ALL UNDERGROUND FACILITIES IN THE PROJECT AREA PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATION AND GRADE OF UNDERGROUND FACILITIES WELL AHEAD OF CONSTRUCTION OPERATIONS AND SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND REPLACEMENT OF ALL DAMAGED UTILITIES AND FOR DAMAGES CAUSED TO OWNER OR OTHER PARTIES ARISING FROM SERVICE INTERRUPTION OR LOSS OF USE.
- 4. CONTRACTOR SHALL BE RESPONSIBLE FOR PERMANENT SERVICE TERMINATION ASSOCIATED WITH LITULTY LINES TO BE DEVICINE OF ADVIDANCE OF ADVIDANCE OF ADVIDANCE OF ADVIDANCE OF THEIR NATURE OF THE WATERIALS WITH UTILITY LINES TO BE REMOVED OR ABANDONED.
- 5. THE UTILITY GRADES AND ELEVATIONS ARE CRITICAL AT ALL UTILITY CROSSINGS SHOWN ON 10. ALL HANDICAP CURBS RAMPS, ACCESSIBLE ROUTE RAMPS, SIGNAGE, AND SYMBOLS SHALL THE DRAWINGS. CONTRACTOR SHALL VERIFY EXISTING UTILITY GRADES AND CONFIRM ADEQUATE CLEARANCE AT ALL CROSSINGS. THIS CONFIRMATION SHALL BE PRESENTED FOR REVIEW AND DISCUSSION PRIOR TO START OF UTILITY WORK.
- 6. WHERE NECESSARY, CONTRACTOR SHALL PROVIDE FOR BARRICADES AND TRAFFIC CONTROL DEVICES AS PER THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).

- REMOVED.
- CONFORM TO THE LATEST EDITION OF THE TEXAS ACCESSIBILITY STANDARDS REQUIRED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION.

-O- EX POWER POLE ← EX GUY WIRE OTTE EX TRAFFIC SIGNAL POLE -Ŏ- EX LIGHT POLE EX GROUND LIGHT EX ELECTRICAL MANHOLI EX ELECTRICAL TOWER © EX GAS VALVE G EX GAS METER 🛩 EX FAUCET M EX WATER METER W EX WATER VALVE ► EX FIRE HYDRANT (o) EX SPRINKLER HEAD -O-___ EX TELEPHONE POLE DOWNSPOUT SURFACE = GRID X 1.00017 SITE BENCHMARK #1 NORTHING: 13,672,038.87 EASTING: 1,925,732.01 ELEVATION: 872.34 DESCRIPTION: WEST OF CP #101. SITE BENCHMARK #2 NORTHING: 13.671.741.27 EASTING: 1,925,667.44 ELEVATION: 873.46 DESCRIPTION: CP #102. 100 101 102 DEMOLITION NOTES:

PROJECT.

ACCEPTED.

EXISTING UTILITY LEGEND

- REMOVAL OR TRIMMING IS IDENTIFIED ON THE PLANS OR IS NECESSARY FOR CONSTRUCTION OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION OF ARCHITECT/LANDSCAPE ARCHITECT IF UNIDENTIFIED REMOVAL OR TRIMMING BECOMES
- PLACEMENT AND SUPPLY: TOPSOIL SHALL BE STRIPPED AND STOCKPILED SEPARATELY FROM ALL OTHER MATERIALS IN ACCORDANCE WITH THE SPECIFICATIONS. STOCKPILED TOPSOIL MATERIAL SHALL BE SPREAD AND COMPACTED TO A DEPTH OF 6" TO ESTABLISH FINISHED GRADE IN ALL AREAS THAT ARE NOT TO BE PAVED. SHOULD STOCKPILED TOPSOIL FAIL TO COVER ALL AREAS TO A COMPACTED DEPTH OF 6", CONTRACTOR SHALL SUPPLY ADDITIONAL TOPSOIL FROM APPROVED OFF SITE SOURCES TO ESTABLISH FINISHED GRADE WITHOUT ADDITIONAL COMPENSATION.
- OR BLOCKAGE OF SURFACE DRAINAGE.

- 7. AS APPLICABLE, TREES ON SITE ARE TO REMAIN IN UNDAMAGED CONDITION UNLESS 12. CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES AS NECESSARY TO PREVENT DAMAGE TO ADJACENT PROPERTIES AND TO CONFORM TO LOCAL JURISDICTIONAL AUTHORITY REQUIREMENTS.
- NECESSARY. RESPONSE TO SUCH NOTIFICATION IS REQUIRED BEFORE TREE REMOVAL OR TRIMMING MAY PROCEED. 13. WHERE FINISHED CONTOURS ARE SHOWN TO MATCH EXISTING CONTOURS ON THE GRADING PLANS, NO GRADE SEPARATION IS ALLOWABLE. CONTRACTOR SHALL ADJUST FINISHED CONTOURS AS NECESSARY TO ACCOMPLISH THIS REQUIREMENT.
- PLANS/SPECIFICATIONS THE FOLLOWING STATEMENT SHALL APPLY TO TOPSOIL SALVAGE, 14. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/ EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTORS IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITY OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
 - 15. CONTRACTOR SHALL FURNISH THE ARCHITECT/ENGINEER WITH AN AS-BUILT PLAN INDICATING THE ACTUAL MEASUREMENT AND LOCATION OF UTILITY LINES AND SITE IMPROVEMENTS INSTALLED.
- 11. CONTRACTOR IS RESPONSIBLE FOR GRADING ALL DISTURBED AREAS TO PREVENT PONDING 16. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON COMPLETION.
 - 17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL, OR BETTER, CONDITION ANY DAMAGE DONE TO EXISTING TREES, BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS, OR DRIVEWAYS (NO SEPARATE PAY ITEMS).

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SAN ANTONIO, TX. 78205 ALL ITEMS LISTED IN LEGEND MAY EXISTING LEGEND 210.447.7000 NOT BE PRESENT ON SITE A HORIZONTAL CONTROL POINT BENCHMARK Architect — — — — FR — — — FR — EX FIRE PIPELINE BORE HOLE EX BOLLARD ------ WTR ------ EX WATER PIPELINE O EX DOWNSPOUT DOCUMENTS ARE INCOMPLETE ———— — — IRR ——— EX IRRIGATION PIPELINE AND MAY NOT BE USED FOR ---- UE---- UE- EX UNDERGROUND ELECTRIC ් EX FLAG POLE REGULATORY APPROVAL, EX ELECTRICAL PEDESTAL OHE — EX OVERHEAD ELECTRIC ---- EX SIGN PERMIT, OR CONSTRUCTION. EX MAILBOX EX ELECTRICAL METER ------ FOC ------ EX FIBER OPTIC (・) ex tree ----- UCM ----- EX UNDERGROUND COMMUNICATION Edward A. Garza E EX ELECTRICAL JUNCTION BOX ———— онс ——— EX OVERHEAD COMMUNICATION ×500.15 EX SPOT ELEVATION Texas Registration # 15906 -500' EX CONTOUR LINE — X — EX BARDED WIRE FENCE → EX CHAIN LINK FENCE EX WROUGHT IRON FENCE Consultant ----------------------EX WIRE FENCE CDS Muery F-1733 — EX WOODEN FENCE — // ——— Image: Image C EX COMMUNICATION PEDESTAL C EX COMMUNICATION PULL BOX EX TELEPHONE PEDESTAL 73075 (T) EX TELEPHONE MANHOLE S EX SANITARY SEWER MANHOLE © EX SANITARY CLEAN OUT (D) EX STORM DRAIN MANHOLE SCALE IN FEET Revisions: EX MISCELLANEOUS MANHOLE 1''=10'GRID NORTH, TEXAS STATE PLANE COORDINATE SYSTEM, HORIZONTAL DATUM= NAD83(2011)EPOCH:2010, TEXAS SOUTH CENTRAL ZONE (4204) (US SURVEY FT) VERTICAL DATUM = NAVD88 VRS GEOID12A SURFACE ADJUSTMENT FACTOR=1.00017 PROJECT COORDINATES DATA IS BASED ON CONTROL POINT #100 N. 13,671,854.44, E. 1,925,672.22 (SURFACE) JOB #124181, FB #9463, PGS. 70-74 TION SET CHISELED SQUARE WITH "X" ALONG NORTH CURB OF 31ST STREET, APPROX. 50' NORTH OF "MEDINA METHODIST HEALTHCARE" SIGN AND APPROX. 120' >Ó ŻŻ ш SET CHISELED SQUARE WITH "X" ALONG EAST CURB ŇN NO H OF AVENUE G, APPROX. 88' SOUTHWEST OF THE SOUTHWEST CORNER OF THE MEDINA METHODIST HEALTHCARE BUILDING AND APPROX. 133' WEST OF EGIONAL ION BUIL 103 AVE Q DO, TX 78 HORIZONTAL CONTROL ATIO 31 POINT NO. | NORTHING | EASTING | DESCRIPTION TRA F 13,671,854.44 | 1,925,672.22 | CP_SET_1/2IRWR0 13,672,044.69 | 1,925,856.44 | CP_SET1/2IRWR0 MEDI 13,671,729.49 | 1,925,800.90 | CP SET 1/2IRWRO 1. CONTRACTOR TO LOCATE, MAINTAIN, AND SUPPORT ALL EXISTING AND PROPOSED UTILITIES THROUGHOUT THE DURATION OF THE PROJECT. 2. CONTRACTOR SHALL TERMINATE ALL UTILITIES THAT ARE DESIGNATED TO BE REMOVED. Ш TERMINATION SHALL BE IN ACCORDANCE WITH APPLICABLE CODES. 3. CONTRACTOR SHALL REMOVE TREES DESIGNATED TO BE REMOVED. CONTRACTOR TO PROTECT AND MAINTAIN TREES DESIGNATED TO REMAIN IN ACCORDANCE WITH THE LANDSCAPE ARCHITECT REQUIREMENTS AND LOCAL JURISDICTION FOR THE DURATION OF THE 4. CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION. Page Description EXISTING SITE 5. CONTRACTOR SHALL USE NECESSARY MEANS TO PREVENT SPREAD OF DUST FOR THE DURATION OF THE PROJECT CONSTRUCTION. CONTROL, 6. SEE SEDIMENTATION AND EROSION PLAN FOR PLACEMENT OF SWPPP MEASURES. TOPOGRAPHY AND DEMOLITION PLAN 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING FROM THE SITE ALL ITEMS SHOWN TO BE DEMOLISHED UNLESS OTHERWISE INDICATED. ALL MATERIALS SHALL BE DEMOLISHED AND REMOVED FROM SITE IN ACCORDANCE WITH ALL APPLICABLE, FEDERAL, STATE AND LOCAL REGULATIONS. hese drawings and accompanying specifications are to be an instrument of the Architect. They are not to be used on other projects or extensions of 8. ALL EXISTING ITEMS NOT SPECIFICALLY NOTED TO BE DEMOLISHED SHALL REMAIN. this project except by agreement in writing and with CONTRACTOR IS RESPONSIBLE FOR REPLACING EXISTING ITEMS REMOVED DURING appropriate compensation to the Architect. DEMOLITION THAT WERE TO REMAIN. 9. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ALL UTILITY COMPANIES REGARDING REMOVAL OF EXISTING SERVICES, POWER POLES TO BE REMOVED, VERIFYING UTILITIES ARE SHUT OFF OR DISCONNECTED, AND THAT ALL POSSIBLE SAFETY PRECAUTIONS HAVE BEEN Drawn By: ENACTED TO ENSURE THE SAFEST ENVIRONMENT FOR ALL PERSONNEL. Checked By: 10. ALL NECESSARY EROSION CONTROL MEASURES ARE TO BE IN PLACE PRIOR TO CONSTRUCTION. EROSION CONTROL MEASURES ARE TO BE MAINTAINED AND IN WORKING CONDITION AT ALL TIMES. Project No. 11. THE CONTRACTOR SHALL SAW CUT EXISTING PAVEMENT, CURBS AND SIDEWALKS AT NEW PAVEMENT, CURB AND SIDEWALK JUNCTURES, NO JAGGED OR IRREGULAR CUTS WILL BE 23 JULY 2024 Date: Page 12. THE CONTRACTOR SHALL PROTECT ALL PROPERTY PINS, BENCH MARKS, CONSTRUCTION STAKES, HUBS, OR OTHER KEY CONTROL POINTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO RE-ESTABLISH ANY SUCH POINTS AT THEIR OWN EXPENSE. 13. THE USE OF EXPLOSIVES WILL NOT BE PERMITTED. 14. THE CONTRACTOR SHALL MAINTAIN THE SITE IN A CLEAN AND ORDERLY MANNER.

- 1. ALL WORK WITHIN STATE, COUNTY, AND/OR CITY RIGHT-OF-WAYS SHALL BE PERFORMED IN ACCORDANCE WITH EACH ENTITY'S GOVERNING RULES AND STANDARDS. CONTRACTOR SHALL MAINTAIN A COPY OF ALL NECESSARY PERMITS ON THE JOBSITE WHEN WORKING IN PUBLIC RIGHT-OF-WAYS.
- COVERED IN THE SPECIFICATIONS OR GEOTECHNICAL REPORT SHALL CONFORM TO ALL APPLICABLE CITY, COUNTY OR TXDOT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION).
- 5. NO WORK SHALL BE PERFORMED IN A PUBLIC RIGHT-OF-WAY WITHOUT A PERMIT.

- 8. ALL STANDARD PERPENDICULAR PARKING STALLS ARE 9' X 18' AND COMPACT PARKING STALLS ARE 8' X 16'

ENGINEERS SURVEYORS 100 NE LOOP 410, STE. 300 SAN ANTONIO, TEXAS 78216 (210) 581-1111 | TBPE NO. F-1733 | TBPLS NO. 100495-00

EXISTING UTILITY LEGEND ALL ITEMS LISTED IN LEGEND MAY EXISTING LEGEND NOT BE PRESENT ON SITE A HORIZONTAL CONTROL POINT -O- EX POWER POLE ← EX GUY WIRE — — — — UG— — — UG— EX NATURAL GAS PIPELINE BENCHMARK OTRE EX TRAFFIC SIGNAL POLE BORE HOLE — — — — FR — — — FR — EX FIRE PIPELINE -ḋ- EX LIGHT POLE EX BOLLARD ------ EX IRRIGATION PIPELINE EX GROUND LIGHT EX DOWNSPOUT ් EX FLAG POLE E EX ELECTRICAL MANHOLE — — — — UE— — — UE— EX UNDERGROUND ELECTRIC OHE — EX OVERHEAD ELECTRIC E EX ELECTRICAL PEDESTAL ---- EX SIGN E EX ELECTRICAL METER EX MAILBOX (•) EX TREE EX ELECTRICAL TOWER ------ UCM EX UNDERGROUND COMMUNICATION × 500.15 EX SPOT ELEVATION E EX ELECTRICAL JUNCTION BOX ------ OHC ----- EX OVERHEAD COMMUNICATION —500' EX CONTOUR LINE ③ EX GAS VALVE G EX GAS METER — X — EX BARDED WIRE FENCE → EX CHAIN LINK FENCE EX WATER METER EX WROUGHT IRON FENCE W EX WATER VALVE —O— EX WIRE FENCE ⊨ EX FIRE HYDRANT -----------------------EX WOODEN FENCE (o) EX SPRINKLER HEAD IN ■ EX IRRIGATION CONTROL VALVE C EX COMMUNICATION PEDESTAL PROPOSED LEGEND C EX COMMUNICATION PULL BOX C1 KEYNOTE EX TELEPHONE PEDESTAL EX TELEPHONE MANHOLE SIDEWALK DRAIN -O-___ EX TELEPHONE POLE RAMP CURB _____ SIGN EX SANITARY SEWER MANHOLE SCALE IN FEET 💿 🛛 EX SANITARY CLEAN OUT 1''=10(D) EX STORM DRAIN MANHOLE EX MISCELLANEOUS MANHOLE

GRG

architecture

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Edward A. Garza Texas Registration # 15906

GRID NORTH, TEXAS STATE PLANE COORDINATE SYSTEM, HORIZONTAL DATUM= NAD83(2011)EPOCH:2010, TEXAS SOUTH CENTRAL ZONE (4204) (US SURVEY FT) VERTICAL DATUM = NAVD88 VRS GEOID12A

SURFACE ADJUSTMENT FACTOR=1.00017

SURFACE = GRID X 1.00017

PROJECT COORDINATES DATA IS BASED ON CONTROL POINT #100 N. 13,671,854.44, E. 1,925,672.22 (SURFACE) JOB #124181, FB #9463, PGS. 70-74

SITE BENCHMARK #1

NORTHING: 13,672,038.87

EASTING: 1,925,732.01

SET CHISELED SQUARE WITH "X" ALONG NORTH CURB OF 31ST STREET, APPROX. 50' NORTH OF "MEDINA METHODIST HEALTHCARE" SIGN AND APPROX. 120' WEST OF CP #101.

SITE BENCHMARK #2

NORTHING: 13,671,741.27 EASTING: 1,925,667.44

ELEVATION: 873.46

SET CHISELED SQUARE WITH "X" ALONG EAST CURB OF AVENUE G, APPROX. 88' SOUTHWEST OF THE SOUTHWEST CORNER OF THE MEDINA METHODIST HEALTHCARE BUILDING AND APPROX. 133' WEST OF

HORIZONTAL CONTROL

V <i>O.</i>	NORTHING	EASTING	DESCRIPTION
	13,671,854.44	1,925,672.22	CP SET 1/2IRWRC
	13,672,044.69	1,925,856.44	CP SET1/2IRWRC
	13,671,729.49	1,925,800.90	CP SET 1/2IRWRC

KEYNOTES		
(A1) ASPHALT PVMT: LIGHT DUTY(SEE SHT. C.02)		
C1 CONCRETE SIDEWALK(SEE SHT. C.02)		
C2 SIDEWALK DRAIN BOX(SINGLE)(SEE SHT. C.02)		
D1 CURB: STANDARD CURB AND GUTTER(6" HIGH) (SEE SHT. C.02)		
E1 PRECAST CONCRETE WHEEL STOP(SEE SHT. C.02)		
PVMT MRKG: INTERNATIONAL HANDICAP SYMBOL(SEE SHT. C.02)		
PVMT MRKG: 4" WIDE PAINTED WHITE STRIPE (SEE SHT. C.02)		
PVMT MRKG: ACCESSIBLE AISLE STRIPING (SEE SHT. C.02)		
S1 SIGN:HANDICAP ONLY(SEE SHT. C.02)		
W1 TYPE "B" WHEELCHAIR RAMP (SEE SHT. C.02)		
W2 TYPE "C" WHEELCHAIR RAMP (SEE SHT. C.02)		
ST1 SIDEWALK CANOPY(SEE STRUCTURAL DRAWINGS)		
•		

TION >0 ŻΚ RE NNA REGIONAL HOSPI STRATION BUILDING R 3103 AVE G. HONDO, TX 78861 MEDIN 3 Ш

Page Description SITE DIMENSIONAL CONTROL AND KEYNOTE PLAN

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Drawn By:		CDSm
Checked By:		JER
Project No) .	124181
Date:	23	JULY 2024
Page		

C.01

GRADING NOTES

- 1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THIS SCOPE OF WORK WHERE NOT SPECIFICALLY COVERED IN THE SPECIFICATIONS OR GEOTECHNICAL REPORT SHALL CONFORM TO ALL APPLICABLE CITY, COUNTY AND TXDOT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION).
- 2. SITE PREPARATION, GRADING, EXCAVATION AND FILL SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT AND SPECIFICATIONS.
- 3. ALL SELECT FILL MATERIAL PROVIDED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING AND COMPACTING. 4. ALL ELEVATIONS AND PROPOSED CONTOURS SHOWN ON THIS GRADING PLAN REFLECT FINISHED GRADES. THE THICKNESS OF PAVING, BASE, GRASS, TOPSOIL, AND MULCH MUST
- BE SUBTRACTED TO OBTAIN SUBGRADE ELEVATIONS. 5. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
- 6. THE CONTRACTOR SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
- 8. THE CONTRACTOR SHALL REMOVE TOP SOIL, GRASS, ROOTS, DEBRIS, ETC. AND DISPOSE OFF

ED LEGEND NOTE

-O- EX POWER POLE ← EX GUY WIRE -🏷 🛛 EX LIGHT POLE G EX GAS VALVE G EX GAS METER 🛩 EX FAUCET EX MISCELLANEOUS MANHOLE

SURFACE = GRID X 1.00017 JOB #124181, FB #9463, PGS. 70-74

DOWNSPOUT

SITE BENCHMARK #1 EASTING: 1,925,732.01 ELEVATION: 872.34 DESCRIPTION: WEST OF CP #101.

DESCRIPTION: CP #102.

HORIZONTAL CONTROL			
POINT NO.	NORTHING	EASTING	DESCRIPTION
100	13,671,854.44	1,925,672.22	CP SET 1/2IRWRC
101	13,672,044.69	1,925,856.44	CP SET1/2IRWRC
102	13,671,729.49	1,925,800.90	CP SET 1/2IRWRC

	SITE THOSE MATERIALS NOT SUITABLE FOR EMBANKMENT AND TOPSOIL. CLEAN STRIPPINGS AND TOPSOIL MAY BE STOCKPILED ON SITE FOR REUSE IN A LOCATION SPECIFIED BY THE OWNER.
9.	THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE STABILIZATION. ALL DISTURBED AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND TPDES/SWPPP REQUIREMENTS. REFERENCE THE LANDSCAPE ARCHITECT'S PLAN, IF APPLICABLE.
10.	THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS (USE OF SILT FENCES, ETC.) TO KEEP DRAINAGE AND SILT FROM WASHING ONTO ADJACENT PROPERTY, STREETS, OR DRAINAGE WAYS. CONTRACTOR SHALL IMMEDIATELY REMOVE SILT/DEBRIS WHICH WASHES OFFSITE OR INTO EXISTING STORM DRAIN SYSTEMS. (SEE SWPPP PLANS & TPDES BOOK).
11.	THE CONTRACTOR SHALL OBTAIN GRADES SHOWN HEREON WITHIN $+/-$ ONE-TENTH (0.10) FOOT.
40	IN DRODOCED DAVING ADEAG IT IS INTENDED THAT THE MINIMUM ODADE IS 400 AND

12. IN PROPOSED PAVING AREAS, IT IS INTENDED THAT THE MINIMUM GRADE IS 1%. ALL EARTHEN SLOPES SHALL BE A MAXIMUM OF 3:1 AND A MINIMUM OF 1.0% UNLESS OTHERWISE SHOWN.

13. THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING SITE AND PROPOSED IMPROVEMENTS.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL, OR BETTER, CONDITION ANY DAMAGE DONE TO EXISTING TREES, BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS, OR DRIVEWAYS (NO SEPARATE PAY ITEMS).

- 15. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN WORKING NEAR UTILITIES, GAS LINES, SEWER, OR EXISTING APPURTENANCES. PRIOR TO PERFORMING ANY EXCAVATION, CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND ASSURE HIMSELF THAT ALL UTILITIES HAVE BEEN ADEQUATELY LOCATED AND IDENTIFIED. THE ENGINEER SHALL BE NOTIFIED IF ANY UTILITY CONFLICTS ARE DISCOVERED.
- 16. POSITIVE DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE SCOPE OF THE PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.
- 17. FOR FILL PLACEMENT ON HILL SIDES OR STEEP SLOPE AREAS, THE CONTRACTOR SHALL REFERENCE THE PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT FOR SPECIAL INSTRUCTIONS REGARDING BENCHING.

18. NO WORK SHALL BE PERFORMED IN A PUBLIC RIGHT-OF-WAY WITHOUT A PERMIT.

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EXISTING UTILITY LEGEND

ALL ITEMS LISTED IN LEGEND MAY NOT BE PRESENT ON SITE OTRE EX TRAFFIC SIGNAL POLE EX GROUND LIGHT EX ELECTRICAL MANHOLE EX ELECTRICAL PEDESTAL E EX ELECTRICAL METER EX ELECTRICAL TOWER 🕅 🛛 EX WATER METER W EX WATER VALVE ⊨ EX FIRE HYDRANT (o) EX SPRINKLER HEAD Image: State S © EX COMMUNICATION PEDESTAL **EX COMMUNICATION PULL BOX** EX TELEPHONE PEDESTAL (T) EX TELEPHONE MANHOLE -O-___ EX TELEPHONE POLE (S) EX SANITARY SEWER MANHOLE © EX SANITARY CLEAN OUT (D) EX STORM DRAIN MANHOLE

SCALE IN FEET

1"=10'

PROPOSED LEGEND

× <i>872.64</i>	EXISTING SPOT
	EX CONTOUR
_ 873.46	PROPOSED SPOT
G=874.12 ₊	GUTTER ELEV
	FLOW ARROW

GRG

architecture

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Edward A. Garza Texas Registration # 15906

GRID NORTH, TEXAS STATE PLANE COORDINATE SYSTEM, HORIZONTAL DATUM= NAD83(2011)EPOCH:2010, TEXAS SOUTH CENTRAL ZONE (4204) (US SURVEY FT)

VERTICAL DATUM = NAVD88 VRS GEOID12A

SURFACE ADJUSTMENT FACTOR=1.00017

PROJECT COORDINATES DATA IS BASED ON CONTROL POINT #100 N. 13,671,854.44, E. 1,925,672.22 (SURFACE)

NORTHING: 13,672,038.87

SET CHISELED SQUARE WITH "X" ALONG NORTH CURB OF 31ST STREET, APPROX. 50' NORTH OF "MEDINA METHODIST HEALTHCARE" SIGN AND APPROX. 120'

SITE BENCHMARK #2

NORTHING: 13.671.741.27 EASTING: 1,925,667.44

ELEVATION: 873.46

SET CHISELED SQUARE WITH "X" ALONG EAST CURB OF AVENUE G, APPROX. 88' SOUTHWEST OF THE SOUTHWEST CORNER OF THE MEDINA METHODIST HEALTHCARE BUILDING AND APPROX. 133' WEST OF

Page Description GRADING AND DRAINAGE PLAN

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C.03

1 SITE PLAN - DEMOLITION 1/8" = 1'-0"

GENERAL NOTES - DEMO SITE PLAN

- 01. CONTRACTOR SHALL REVIEW AND/OR COORDINATE ALL SITE WORK TO BE REMOVED PRIOR TO THE START OF DEMOLITION. PROTECT ALL ADJACENT AREAS; PATCH AND REPAIR ANY AND ALL AREAS DAMAGED. COORDINATE WITH CIVIL AND MEP DOCUMENTS EXISTING SITE UTILITIES. ALSO COORDINATE ANY AFFECTED UTILITIES WITH OWNER PRIOR TO COMMENCEMENT OF WORK TO ENSURE CURRENT FACILITY OPERATION IS NOT IMPACTED BY THE WORK.
- 02. CONTRACTOR OF WORK SHALL VERIFY IN THE FIELD ALL CONDITIONS BOTH NEW AND EXISTING WHICH AFFECT WORK TO BE DONE OR RELEVANT THERETO, INCLUDING, BUT NOT LIMITED TO PROPERTY LINE DIMENSIONS. SETBACK, EASEMENTS, RESTRICTIONS, EXACT LOCATIONS OF ALL CONSTRUCTION EXISTING AND NEW, DRIVEWAYS, WALKS, APRONS, UTILITIES, GRADES AND DRAINAGE. SHOULD ANY QUESTION OR DISCREPANCIES ARISE PRIOR TO BEGINNING CONSTRUCTION OR DURING ANY PHASE OF CONSTRUCTION, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT FOR REVIEW AND CLARIFICATION BEFORE PROCEEDING WITH THAT PORTION OF THE WORK OR ANY PART RELATED THERETO.
- 03. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE DONE IN ACCORDANCE WITH APPLICABLE CODES, ORDINANCES, AND REGULATION. CONTRACTOR SHALL OBTAIN AND BE RESPONSIBLE FOR ALL FEES AND PERMITS REQUIRED AND ASSOCIATED WITH ALL PHASES OF THE WORK AND WITHIN SCOPE OF THE CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO WATER AND SEWER FEES, DRIVEWAY AND SIDEWALK FEES, ETC. THE LOCATION OF UTILITIES SHOWN ON THE SITE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL UTILITIES BEFORE STARTING CONSTRUCTION.

KEY NOTES - DEMO SITE PLAN

<u>NOTE</u>: REFER TO CIVIL, STRUCTURAL AND MEP DRAWINGS FOR ADDITIONAL INFORMATION. THESE KEYNOTES INDICATE GENERAL SCOPE OF WORK BUT SHALL NOT INHIBIT ULTIMATE USE AS FOLLOWS:

- (01.) INSULATE ALL TOILET ROOM WALLS WITH SOUND BATT BEFORE INSTALLATION OF GYP BOARD.
- (02.) REMOVE EXISTING CONCRETE SIDEWALK AND DRAIN BOX.
- 03.) REMOVE EXISTING STRIPING.
- (04.) REMOVE EXISTING GENERATOR. COORDINATE WITH OWNER FOR STORAGE.
- (05.) REMOVE EARTH IN PREPERATION FOR NEW SIDEWALK.
- (06.) REMOVE EXISTING PAD AND FENCING.

LEGEND - DEMO SITE PLAN EXISTING ELEMENT / STRUCTURE TO REMAIN. EXISTING ELEMENT / STRUCTURE TO BE DEMOLISHED. SIDEWALK DRAIN BOX DEMOLISHED CONCRETE TO BE DEMOLISHED

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GENERAL NOTES - SITE PLAN

- 01. UNDER NOT CIRCUMSTANCES SHALL ANY BASE OR PAVING MATERIAL (ASPHALT OR CONCRETE) BE PLACED WITHIN THE CONFINES OF ANY PLANTING ISLAND ON THE JOB SITE. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ANY MATERIAL FOUND TO HAVE BEEN PLACED IN SUCH AREAS AND RESTORING THE PLANTING BED TO BE READY AND SUITABLE FOR LANDSCAPE INSTALLATION AND IRRIGATION.
- 01. CONTRACTOR OF WORK SHALL VERIFY IN THE FIELD ALL CONDITIONS BOTH NEW AND EXISTING WHICH AFFECT WORK TO BE DONE OR RELEVANT THERETO, INCLUDING, BUT NOT LIMITED TO PROPERTY LINE DIMENSIONS. SETBACK, EASEMENTS, RESTRICTIONS, EXACT LOCATIONS OF ALL CONSTRUCTION EXISTING AND NEW, DRIVEWAYS, WALKS, APRONS, UTILITIES, GRADES AND DRAINAGE. SHOULD ANY QUESTION OR DISCREPANCIES ARISE PRIOR TO BEGINNING CONSTRUCTION OR DURING ANY PHASE OF CONSTRUCTION, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT FOR REVIEW AND CLARIFICATION BEFORE PROCEEDING WITH THAT PORTION OF THE WORK OR ANY PART RELATED THERETO.
- 01. ALL WORK PERFORMED BY THE CONTRACTOR SHALL BE DONE IN ACCORDANCE WITH APPLICABLE CODES, ORDINANCES, AND REGULATION. CONTRACTOR SHALL OBTAIN AND BE RESPONSIBLE FOR ALL FEES AND PERMITS REQUIRED AND ASSOCIATED WITH ALL PHASES OF THE WORK AND WITHIN SCOPE OF THE CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO WATER AND SEWER FEES, DRIVEWAY AND SIDEWALK FEES, ETC. THE LOCATION OF UTILITIES SHOWN ON THE SITE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL UTILITIES BEFORE STARTING CONSTRUCTION.
- 01. THE WORK AREA IS TO BE KEPT CLEAN AND ORDERLY AT ALL TIMES. REFUSE AND DEBRIS SHALL BE REMOVED ON A REGULAR BASIS.
- 01. ENSURE NEW FLATWORK, SIDEWALK AND ASPHALT MEET UP WITH THE EXISTING ADJACENT WORK FLUSH SURFACE WITHOUT INTERRUPTION.

KEY NOTES - SITE PLAN

<u>NOTE</u>: REFER TO CIVIL, STRUCTURAL AND MEP DRAWINGS FOR ADDITIONAL INFORMATION. THESE KEYNOTES INDICATE GENERAL SCOPE OF WORK BUT SHALL NOT INHIBIT ULTIMATE USE AS FOLLOWS:

- (01) CONCRETE FLUSH AT ACCESSIBLE PARKING.
- (02) CONCRETE FLUSH WITH ASPHALT PAVING.

LEGEND - SITE PLAN

PREFINISHED SIDEWALK DRAIN BOX

ASPHALT

CONCRETE

PREFINISHED METAL --TERMINATION FLASHING TO CONCEAL SOFFIT T&G EDGE

ADJUSTABLE VENEER ANCHOR -SECURED TO EXTERIOR WALL ASSEMBLY

SEALED T&G CANOPY DECK -

SINGLE PLY ROOFING WRAPPED -AND SECURED OVER EDGE TAPERED INSULATION -

TREATED WOOD BLOCKING -

PREFINISHED METAL THRU-WALL --FLASHING TO COVER GAP

OVER FLASHING WEEPS AT 24" O.C.

LAP WATER RESISTANT BARRIER

STONE -

MORTAR NET

SINGLE PLY ROOFING WRAPPED_ AND SECURED OVER EDGE

PREFINISHED METAL THRU-WALL __ FLASHING TO COVER GAP

2 CANOPY AT METAL WALL PANEL 3" = 1'-0"

1 <u>DEMOLITION PLAN</u> 1/4" = 1'-0"

DEMOLITION PLAN

Page Description

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AD201

GENERAL NOTES - NEW FLOOR PLAN

- A. CONTRACTOR SHALL COORDINATE INSPECTIONS (IF REQUIRED) BY STATE AND LOCAL AGENCIES AND MEET ANY APPLICABLE CODE FOR THE INTERIOR FINISH OUT RENOVATION PROJECT. NOTIFY ARCHITECT AND OWNER THROUGHOUT THE PROCESS.
- B. ALL DIMENSIONS TO FACE OF GYP. BD WALL UNLESS OTHERWISE NOTED ON THE PLANS.
- C. ALL WORK SHALL BE SCHEDULED IN A MANNER TO MAINTAIN THE OWNERS CONTINUOUS USE OF THE BUILDING.
- D. ALL CONSTRUCTION DEBRIS AND MATERIALS SHALL BE REMOVED WITH MINIMAL DISTURBANCE. COORDINATE DEBRIS REMOVAL AND DISPOSAL WITH THE OWNER'S REPRESENTATIVE CONSTRUCTION MANAGER. ENSURE EXISTING FLOORS, WALLS, CEILING, ETC. ARE PROTECTED DURING THE PROCESS.
- E. MAINTAIN A CLEAN AND SAFE WORK ENVIRONMENT AND ENSURE PUBLIC AREAS ARE FREE OF DEBRIS. PROPERLY DISPOSE OF ALL MATERIALS.
- F. LOCATE TEMPORARY WALLS WITH EXIT SIGNS WHERE REQUIRED. DO NOT BLOCK EXISTING FIRE EXITS. THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE BEFORE ERECTING TEMPORARY PARTITIONS FOR COORDINATION OF THESE WALLS.
- G. RENOVATION WORK WILL BE COORDINATED AND GOVERNED BY THE EXTENT AND REQUIREMENTS OF THE NEW CONSTRUCTION.
- H. SEE TAS/ADA SHEETS FOR TOILET ACCESSORY MOUNTING HEIGHTS.
- I. RECESSED ITEMS SHALL MAINTAIN WALL RATING ASSEMBLY.
- J. PROVIDE CAULK AT ALL INTERIOR DOOR FRAMES, PARTITIONS, DEVICE BOXES, ETC.
- K. MATCH EXISTING WALL ASSEMBLIES PER PLAN.
- L. PROVIDE GYP. BD. TO DECK WITH SOUND BATT AT ALL TOILET ROOMS.
- M. PROVIDE TOPPING SLAB AT EXTERIOR ENTRY. REF. STRUCTURAL.

CONCRETE TO BE DEMOLISHED

|G|R|C architecture 118 BROADWAY, SUITE 620 SAN ANTONIO, TX. 78205 210.447.7000 Architect 08/02/2024 Consultant Revisions: MEDINA HEALTHCARE SYSTEM NEW ADMINISTRATION BUILDING RENOVATION 8861 \sim \times HONDO, Ċ AVE 3103 Page Description FLOOR PLAN These drawings and accompanying specifications are to be an instrument of service and shall remain the property of the Architect. They are not to be used on other projects or extensions of this project except by agreement in writing and with appropriate compensation to the

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A201

1 REFLECTED CEILING PLAN 1/4" = 1'-0"

G P	ENERAL NOTES - REFLECTED CEILING LAN
A.	CONTRACTOR SHALL COORDINATE INSPECTIONS (IF REQUIRED) BY STATE AND LOCAL AGENCIES AND MEET ANY APPLICABLE CODE FOR RE-INSTALLATION AND ENSURE PROPER OPERATION OF ALL SYSTEMS. NOTIFY ARCHITECT AND OWNER THROUGHOUT THE PROCESS.
В.	CONTRACTOR SHALL MODIFY AND/OR PROVIDE ALL EQUIPMENT REQUIRED TO ENSURE PROPER OPERATION OF ALL FIRE ALARM, SMOKE DETECTION AND SPRINKLER SYSTEMS PER ALL GOVERNING REGULATIONS.
C.	CONTRACTOR SHALL VERIFY AND COORDINATE RCP WORK BEFORE START OF WORK. REPORT DISCREPANCIES TO ARCHITECT AND OWNER IMMEDIATELY UPON DISCOVERY.
D.	ALL WORK SHALL BE SCHEDULED IN A MANNER TO MAINTAIN THE OWNERS CONTINUOUS USE OF THE BUILDING.
E.	CEILING HEIGHTS PER PLANS, ADJUST SPRINKLER HEAD AS REQUIRED.
F.	RCP WORK WILL BE COORDINATED AND GOVERNED BY THE EXTENT AND REQUIREMENTS OF THE NEW CONSTRUCTION.
G.	CONTRACTOR SHALL MAINTAIN RATED AND NON-RATED WALL ASSEMBLIES AT ALL AREAS OF RENOVATION.
H.	PROTECT ALL EXISTING ADJACENT WORK TO REMAIN. PATCH, PREP AND REPAIR AREAS DAMAGED DURING DEMOLITION TO MATCH ADJACENT AREAS.
I.	REFER TO MEP DRAWINGS FOR COORDINATION AND LOCATION OF ALL LIGHTS AND AIR DIFFUSERS.
J.	LAY - IN SUSPENDED CEILING SYSTEMS SHALL COMPLY WITH REQUIREMENTS OF LISTED APPLICABLE CODES.
K.	COORDINATE LOCATION OF ALL ACCESS PANELS WITH MEP DRAWINGS.

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02 AUG 2024 Date: I Page

MTL. STUD KICKER ATTACHED TO BLDG. FRAME AS REQ'D.

GYP. BD. ON MTL. STUD – FRAMING (PAINT PER FINISH PLAN)

B.O. CEILING REF: RCP

4 GWB FURR DOWN STOREFRONT 1 1/2" = 1'-0"

MTL. STUD KICKER ATTACHED TO BLDG. FRAME AS REQ'D.

LEGEND/ SPECS.

B.O. CEILING REF: RCP

2 GWB FURR DOWN AT ACT1 1 1/2" = 1'-0"

MTL. STUD KICKER ATTACHED TO BLDG. FRAME AS REQ'D. ——

B.O. CEILING REF: RCP

ACT PANEL SUSPENSION SYSTEM INCLUDING WALL ANGLE.

1 <u>GWB FURR DOWN AT ACT</u> 1 1/2" = 1'-0"

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118 BROADWAY	Y, SUITE 620	
SAN ANTONIO, 210.447.7000	TX. 78205	
Architect	A GY RIA G	
Consultant		
Revisions:		
MEDINA HEALTHCARE SYSTEM NEW	ADMINISTRATION BUILDING RENOVATION 3103 AVE G. HONDO. TX 78861	
Page Descrip ROOF PLAN	tion	
These drawings and accon specifications are to be an and shall remain the prope They are not to be used on extensions of this project e writing and with appropriate Architect.	npanying instrument of service rty of the Architect. I other projects or except by agreement e compensation to th	e in ie
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1 SOUTH BUILDING ELEVATION 1/4" = 1'-0"

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		Revisions:
PREFENISHED COPING CAP	Level 4 14'-6"	MEDINA HEALTHCARE SYSTEM NEW DMINISTRATION BUILDING RENOVATION 3103 AVE G. HONDO, TX 78861
PREFINISHED METAL WALL PANEL PREFINISHED METAL GUTTER & DOWNSPOUT	Level 3 12' - 6"	Page Description EXTERIOR BUILDING
BRICK COL. CAP TO MATCH WAINSCOT BRICK WAINSCOT STONE	Level 1	ELEVATIONS These drawings and accompanying specifications are to be an instrument of service and shall remain the property of the Architect. They are not to be used on other projects or extensions of this project except by agreement in writing and with appropriate compensation to the Architect. Drawn By: STAFF Checked By: EG
2 1	0' - 0"	Project No. 240224 Date: 02 AUG 2024 Page A302

1 WALL SECTION - 02 3/4" = 1'-0"

1 WALL SECTION - 04 3/4" = 1'-0"

A402

3 WALL SECTION - 05 3/4" = 1'-0"

4 LUG AT GRADE 3" = 1'-0"

GENERAL NOTES

- 1. FOR HEIGHTS OF WALLS SEE BLD'G. SECTIONS OR ELEVATIONS.
- 2. EVERY WALL SHOWN ON PLAN SHALL BE ONE OF THE WALL TYPES SHOWN WHETHER KEYED ON THE PLAN OR NOT. IF WALL DOES NOT HAVE KEY, THEN REFER TO WALL SECTIONS FOR WALL CONSTRUCTION.
- 3. ALL EXPOSED WALLS THAT ARE PERPENDICULAR TO DECK SHOULD BE SEALED TIGHT TO UNDERSIDE OF INSULATION, COPE GYP. BD. AROUND DECK PANS.
- 4. ALL SOUND WALLS TO RECEIVE SEALANT AROUND CRACKS & GAPS OF EDGES @ FLOOR, CEILING AND JUNCTION BOXES.
- 5. ALL LOAD BEARING STUDS TO BE 16 GAUGE, REF. ALSO STRUCT. PLANS.
- 6. SEE WALL TYPE SYMBOL LEGEND ON PLAN SHEETS.
- 7. VERIFY WALL SHOWN ON PLAN SHALL BE ONE OF THE WALL TYPES SHOWN WHETHER KEYED ON THE PLAN OR NOT. IF WALL DOES NOT HAVE KEY, THEN PROVIDE 3-5/8" METAL STUD WALL TO DECK WITH ONE-LAYER GYPSUM WALL BOARD ON EACH SIDE WITH SOUND BATT INSULATION.

METAL STUD	SCHEDULE
INTERIOR NONLOAD BEARING	

UNBRACED HT.	WIDTH 3 5/8"	WIDTH 6" W
0- 10'	25 GA	25 GA
10'-15'	25 GA	25 GA
15'-20'	20 GA	25 GA
15'-20'	18 GA	20 GA
20'-25'	14 GA	18 GA

NOTE: MATCH EXISTING WALL ASSEMBLY AS NOTED ON PLAN

2 PARTITION TYPE D

|G|R|G

A410

02 AUG 2024

Page

- A&M HARDWARE, CONCEALED FLAT BRACKET #CFLAT24, EACH INSTALLED

GENERAL NOTES - TOILET ROOMS

- A. PROVIDE SCHLUDER (MODEL: JOLLY EDGE ALUMINUM PROFILES - MATTE WHITE) AT TOP OF VERTICAL TILE.
- B. ALIGN GROUT LINES OF VERTICAL TILE WITH GROUT LINES OF TILE FLOORING.
- C. PROVIDE EPOXY PAINT AT TOILET ROOMS. (PT4)

architecture

|G|R|G

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Architect

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MEDINA HEALTHCARE SYSTEM NEW	ADMINISTRATION BUILDING RENUVATION	3103 AVE G. HUNDU, IX 18861
Page Descript TOILET ROO INTERIOR EL	ion M AND EVATIC	ONS
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A5	02	

1' - 0"

"o

NOTES: NOT ALL ACCESSORIES MAY APPLY TO PROJECT - REFER TO ENLARGED TOILET PLANS AND ELEVATIONS FOR LOCATIONS SEE ACCESSIBILITY DETAIL SHEETS FOR ADDITIONAL REQUIREMENTS. *WHERE DISPENSERS (MARKED WITH AN "* ") ARE MOUNTED SO THAT A REACH OVER A BARRIER IS REQUIRED, THE ACCESSIBLE HEIGHTS SHALL BE 44" AFF. TO THE POINT INDICATED. (TYP.)

GENERAL MOUNTING HEIGHT & CLEARANCE NOTES

- VERTICAL DIMENSIONS SHOWN ON INTERIOR ELEVATION SHEETS (A6 & A7 SERIES) INDICATE A
- ALL DIMENSIONS SHOWN HERE ARE TO FACE OF FINISH, UNLESS NOTED OTHERWISE ELECTRICAL RECEPTACLES, COMMUNICATION OUTLETS, AND MEDICAL GAS OUTLETS ARE SHOWN ON THE ARCHITECTURAL ELEVATIONS FOR LOCATION AND COORDINATION WITH OTHER WORK. SEE ELECTRICAL, PLUMBING, AND MECHANICAL DRAWINGS AS WELL AS THE
- SEE DETAILS ON A8.20 FOR PARTITION BACKING PLATE REQUIREMENTS FOR ALL WALL
- COORDINATE 'GROUPING' OF OUTLETS AND SWITCHES WITH FURNITURE AND CASEWORK
- COORDINATE 'GROUPING AND ARRANGEMENT' OF ALL DEVICES PRIOR TO ROUGH IN WHERE MOUNTING HEIGHTS ARE THE SAME FOR (2) OR MORE DEVICES IN THE SAME LOCATION.

|G|R

4 CONFERENCE ROOM - 3D

2 BREAK ROOM - 3D

1 BREAK RM - ELEV. 1 1/2" = 1'-0"

A601

GYP FURRDOWN

FILLER

LEGEND - FINISHES

PLAM-2 - FINNISH OAK PLASTIC LAMINATE

RB1 - RUBBER BASE - LIGHT

RB2 - RUBBER BASE - DARK WF1 - FROSTED WINDOW FILM

|G|R|G architecture 118 BROADWAY, SUITE 620 SAN ANTONIO, TX. 78205 210.447.7000 Architect 08/02/2024 Consultant Revisions: MEDINA HEALTHCARE SYSTEM NEW ADMINISTRATION BUILDING RENOVATION 8861 \sim Υ HONDO, Ċ 3103 AVE Page Description INTERIOR CASEWORK ELEVATIONS These drawings and accompanying specifications are to be an instrument of service and shall remain the property of the Architect. They are not to be used on other projects or extensions of this project except by agreement in writing and with appropriate compensation to the Architect. Drawn By: STAFF EG Checked By: _____ Project No. 240224 Date: 02 AUG 2024 Page

CONT. 6" x 16 GA. GALV'D -BACKING PLATE SECURED WITH (2) #10 TEK SCREWS AT EACH METAL STUD - OR 2X WD BLOCKING AS REQ.

4 STANDARD WALL CABINET 1 1/2" = 1'-0"

 DRAWER PULL	
 RUBBER SILENCER (TYP.)	
 HARDWARE AS SELECTED BY ARCHITECT AND OWNER	GEND
 ADJUSTMENT SPACERS	Щ Ш
 CASEWORK INTERIOR, PLAM. ON 3/4" MDF ADJ. SHELF W/ EDGE BANDING, TYP. / FINISH ALL EDGES	/ARIES- REF
 CASEWORK DOOR, PLAM. ON 3/4" MDF / FINISH ALL EDGES, TYP.	
 RUBBER SILENCER (TYP.)	
 BASE AS Z SCHEDULED ⊃	-

INDICATED IN ELEVATIONS. BACKSPLASH TO MATCH SCHEDULED COUNTER TOP FINISH. PROVIDE CONTINUOUS BEAD OF CLEAR SEALANT AT TOP OF BACKSPLASH AND JOINT COUNTERTOP. ALIGN WITH EDGE OF COUNTER WHEN NO WALL OR CASE IS PRESENT. TERMINATE AT ALL WALL OR CASEWORK IF PRESENT

BACKSPLASH AS

CONT. 6" x 16 GA. GALV'D BACKING PLATE SECURED WITH (2) #10 TEK SCREWS AT ÉACH METAL STUD

PROVIDE POWER TO UNDER COUNTER MICROWAVE

2 BASE CABINET - DOOR / DRAWER 1 1/2" = 1'-0"

1 MICROWAVE CABINET 1 1/2" = 1'-0"

3 WALL CABINET - OPEN SHELF 1 1/2" = 1'-0"

BACKSPLASH AS INDICATED IN _____ ELEVATIONS. BACKSPLASH TO MATCH SCHEDULED COUNTER TOP FINISH. PROVIDE CONTINUOUS BEAD OF CLEAR SEALANT AT TOP OF COUNTERTOP. ALIGN WITH EDGE OF COUNTER WHEN NO

BACKSPLASH AND JOINT WALL OR CASE IS PRESENT. TERMINATE AT ALL WALL OR CASEWORK IF PRESENT

CONT. 6" x 16 GA. GALV'D -BACKING PLATE SECURED WITH

(2) #10 TEK SCREWS AT EACH

METAL STUD - OR 2X WD BLOCKING AS REQ. 3/8" PLAM. CLAD PLYWOOD BACK ON 1X WOOD

NAILERS

DC	<u>OR</u>	SCH	IEDU	JLF											
		DOOR	WIDTH			DOOR PANEL				S	DETAIL				
MARK	FRAME TYPE	SINGLE	PAIR	DOOR HEIGHT	ТҮРЕ	MATERIAL	FINISH	FRAME FINISH	GLAZING	HARDWARE SET	HEAD	JAMB	THRESHOLD	REMARKS	MARK
100A	ALUM	3'-0"		8'-0"	G1	ALUM	ALUM	ALUM	EXT	1	17/A810	17/A810 SIM	5&9/A810	GLASS DOOR IN ALUM FRAME	100A
100B	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		7	12/A810	8/A810			100B
100C	HM	3'-0"		7'-0"	F	SC	PLAM-1	PT-3		8	12/A810	8/A810			100C
101A		3'-0"		7'-0"	G2	SC	PLAM-2	PT-2	INT	1	11/A810	10/A810		GLASS DOOR IN FRAME-LESS	101A
101B	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2	INT	6	11/A810 SIM	10/A810 SIM		SC DOOR IN ALUM FRAME SYSTEM	101B
103	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-3		9	12/A810	8/A810			103
120	HM	3'-0"		7'-0"	F	HM	PT-3	PT-3		3	18/A810	18/A810 SIM	5/A810		120
121	HM	3'-0"		7'-0"	F	SC	PLAM-1	PT-2		6	12/A810	8/A810			121
121A	HM	3'-0"		7'-0"	F	SC	PLAM-1	PT-2		6	12/A810	8/A810			121A
122A	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		5	12/A810	8/A810			122A
122B	HM	3'-0"		7'-0"	F	HM	PT-3	PT-3		2	18/A810	18/A810 SIM	5/A810		122B
123	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		5	12/A810	8/A810			123
124	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		5	12/A811	8/A811			124
126		3'-0"		7'-0"	F	SC	PLAM-2	PT-2		5	12/A812	8/A812			126
128	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		5	12/A814	8/A814			128
130	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		4	12/A815	8/A815			130
141	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-3		9	12/A817	8/A817			141
142	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		5	12/A818	8/A818			142
144	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		5	12/A819	8/A819			144
146	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		9	12/A820	8/A820			146
161A								PT-3		10	12/A822 SIM	8/A822 SIM		CASED OPENING	161A
161B								PT-3		10	12/A822 SIM	8/A822 SIM		CASED OPENING	161B
162	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		5	12/A824	8/A824			162
163	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		5	12/A825	8/A825			163
164	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		5	12/A826	8/A826			164
166	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		5	12/A827	8/A827			166
168	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		5	12/A828	8/A828			168
170	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		5	12/A829	8/A829			170
172	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		5	12/A830	8/A830			172
174	HM	3'-0"		7'-0"	F	SC	PLAM-2	PT-2		5	12/A831	8/A831			174
180	HM	3'-0"		7'-0"	F	HM	PT-3	PT-3		3	18/A810	18/A810 SIM	5/A810		180

LEGEND - DOOR AND FRAME MATERIAL

ALUM - ALUMINUM

- SC SOLID CORE WOOD
- HM HOLLOW METAL CORE
- PLAM-1 WHITE PLASTIC LAMINATE
- PLAM-2 WOOD LOOK PLASTIC LAMINATE PT-2 - PAINT, LIGHT GREY
- PT-3 PAINT, DARK GREY

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- MTL. STUDS @ 16" O.C. - ACOUSTICAL SOUND BATTS – GYPSUM BOARD 1/2" / 1/2" - CAULKING JAMB ANCHORS - HOLLOW METAL FRAME

8 - INTERIOR H.M. DOOR JAMB

SCALE: 3" = 1'-0"

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7 - INT. ALUM. WINDOW HEAD SCALE: 3" = 1'-0"

5 - EXT. THRESHOLD TYPICAL

SCALE: 3" = 1'-0"

FINISHES LEGEND

PT1 - (GENERAL) - SHERWIN WILLIAMS SW7757 HIGH REFLECTIVE WHITE

PAINT

PT2 - (DOOR FRAMES) - SHERWIN WILLIAMS - LIGHT GREY
PT3 - (DOOR FRAMES) - SHERWIN WILLIAMS - DARK GREY
PT4 - (GENERAL) - SHERWIN WILLIAMS EPOXY
PLASTIC LAMINATE
PLAM-1 - (CABINETS & DOORS) - FORMICA PLASTIC LAMINATE - MILK MATTE FINISH 9634-58
PLAM-2 - (CABINETS, DOORS, AND WALLS) - FORMICA PLASTIC LAMINATE - FINNISH OAK MATTE TEXTURE 118-58
PLAM-3 - (WALLS) - FORMICA PLASTIC LAMINATE - FINNISH OAK MATTE TEXTURE 118-58 W/ FORMICA M4702-00 ATTACHED TO BACK
LUXURY VINYL TILE
LVT1 - INTERFACE LVT - EARTHEN FORMS COLLECTION HEARTH - MARBLE DUST A03504
LVT2 - INTERFACE LVT - EARTHEN FORMS COLLECTION HEARTH - GRIS A03502
CARPET TILE
CT1 - INTERFACE CARPET TILES - OPEN AIR COLLECTION 402 STRIA - NICKEL 103239
CT2 - INTERFACE CARPET TILES - OPEN AIR COLLECTION 402 NEUTRALS - NICKEL 107641
CT3 - INTERFACE CARPET TILES - STEP REPEAT COLLECTION - SR799 IRON 104936
RUBBER BASE
RB1 - ROPPE. RUBBER BASE - 4" SOMBER 671
RB2 - ROPPE. RUBBER BASE - 4" PEWTER 178

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MEDINA HEALTHCARE SYSTEM NEW ADMINISTRATION BUILDING RENOVATION Page Description FINISH LEGEND	3103 AVE G. HONDO, TX 78861
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Date:

TILE T1 - SHAWCONTRACT - CEMENTED 24X24 MATTE

SOLID SURFACE MATERIAL SSM1 - (TRANSATION / COUNTER TOPS) FORMICA - DESIGNER SERIES - 1/2" BIANCO MINERAL 758

ACOUSTICAL CEILING TILES ACT1 - ARMSTRONG - ULTIMA SQUARE LAY-IN 24X24 - 1910LEC IN WHITE (WH)

WINDOW FILM WF1 - 3M - FASARA GLASS FINISHES - FROST/MATTE SH2FNCR, FINE CRYSTAL

TRANSITIONS TT1 - SCHULTER, JOLLY EDGE ALUMINUM PROFILES - MATTE WHITE

3 MOUNTING HEIGHTS 1/2" = 1'-0"

NUMBER	ROOM NAME	WALL	FLOOR	BASE	COUNTER	CASEWORK	COMMENTS
100							
100	LOBB	FII, FLAW-2	LVT2				
101	CONFERENCE ROOM	PT1, PLAM-2, PLAM-3	CT1, LVT2	RB2	SSM1	PLAM-1	
103	TLT RM	PT4, T1	T1	T1			
120	CORRIDOR	PT1	LVT1, LVT2	RB1, RB2			
121	RECEPT	PT1	CT2	RB2	SSM1	PLAM-2	
121.A	REC STG	PT1	CT2	RB2			
122	CEO	PT1	CT2	RB2			
123	FUTURE	PT1	CT2	RB2			
124	COO	PT1	CT2	RB2			
126	EMPLOYEE ENG	PT1	CT2	RB2			
128	IT DIRECTOR	PT1	CT2	RB2			
130	ELEC/MECH	PT1	CON1	RB1			
140	CORRIDOR	PT1	LVT1, LVT2	RB1, RB2	SSM1	PLAM-2	
141	TLT RM	PT4, T1	T1	T1			
142	HR COORD	PT1	CT2	RB2			
144	VP OF HR	PT1	CT2	RB2			
146	TLT RM	PT4, T1	T1	T1			
160	CORRIDOR	PT1	LVT1, LVT2	RB1, RB2			
161	BREAK RM	PT1	LVT2	RB2	SSM1	PLAM-2	
162	AUDIT 2	PT1	CT2	RB2			
163	COMPTROLLER	PT1	CT2	RB2			
164	ACCNTS PAYABLE	PT1	CT2	RB2			
166	PAYROLL MGR	PT1	CT2	RB2			
168	AUDIT 1	PT1	CT2	RB2			
170	ACCOUNTANT	PT1	CT2	RB2			
172	CFO	PT1	CT2	RB2			
174	AP CLERK	PT1	CT2	RB2			
180	JAN/MECH	PT1	CON1	RB1			

2 SIGNAGE TYPE KEYS 3" = 1'-0"

FINISH PLAN - SYMBOLS NAME ROOM NAME ROOM NUMBER - ROOM NUMBER TYPICAL ROOM REFERENCE, WHERE OCCURS WALL BASE FLOOR REF: -----WPX WALL BASE TAG — CORNER GUARD — END CAP GUARD ----- FINISH <CASEWORK> ----- WALL BASE (A) - WALL SIGN TYPE **LEGEND - FINISHES** RB1 RUBBER BASE - LIGHT RUBBER BASE - DARK ------- CT1 - CARPET TILE - STRIA

CT2 - CARPET TILE - NEUTRAL
CT3 - CARPET TILE - WALKOFF MAT
T1 - TILE
LVT1 - LUXURY VINYL TILE - LIGHT
LVT2 - LUXURY VINYL TILE - DARK
CON1 - SEALED CONCRETE

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ADMINISTRATION BUILDING RENOVATION: INTERIOR WALL FRAMING AND CANOPY

ANY PARTY, REFERENCING THESE PLANS FOR PRICING OR CONSTRUCTION, SHALL VERIFY ALL FIELD CONDITIONS WHICH WILL AFFECT THEIR SCOPE OF WORK, THE PROCUREMENT OF MATERIAL, AND FABRICATION OF COMPONENTS FOR THE CONSTRUCTION SHOWN ON THESE PLANS PRIOR TO THE START OF CONSTRUCTION. UNLESS OTHERWISE INDICATED, THE DOCUMENTS DO NOT INDICATE THE MEANS AND METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL MEASURES TO PROTECT THE SAFETY OF THE PUBLIC ALONG WITH THE SAFETY OF PROPERTY AND HIMSELF, DURING CONSTRUCTION, SUCH MEASURES SHALL INCLUDE, BUT, NOT, BE LIMITED TO, RETAINING PROFESSIONAL TO AID IN DEVELOPING, SHORING SYSTEMS, AND INSPECTION OF THE ASSEMBLY AND MAINTENANCE OF BRACING AND SHORING SYSTEMS, DESIGN, CONSTRUCT, INSPECT AND MAINTAIN BRACING AND SHORING SYSTEMS TO SUSTAIN PRESCRIBED SERVICE LOADS PER THE INTERNATIONAL BUILDING CODE. THE CONTRACTOR WILL BE REQUIRED TO CORRECT AT HIS OWN EXPENSE ANY SUBSIDENCE, STRUCTURAL DAMAGE OR OTHER OBJECTIONAL CONDITIONS CAUSED BY HIS OPERATIONS.

3103 AVE G HONDO, TEXAS 78861

FOR **GRG ARCHITECTURE**

118 BROADWAY **SUITE 620** SAN ANTONIO, TEXAS 78205

A-1 ENGINEERING, LLC

S0.0 COVER SHEET **GENERAL NOTES** S1.1 S1.2 SCHEDULES S2.1 NEW INTERIOR TOPPING SLAB LAYOUT INTERIOR METAL STUD WALL LAYOUT S2.2 CANOPY FOUNDATION LAYOUT S2.3 S2.4 CANOPY MAIN BEAM FRAMING LAYOUT S2.5 CANOPY SECONDARY BEAM FRAMING LAYOUT S2.6 CANOPY RAFTER FRAMING LAYOUT S2.7 CANOPY ROOF FRAMING LAYOUT METAL STUD FRAMING DETAILS S3.1 S3.2 SECTIONS

INDEX OF DRAWINGS

ENGINEERING

F-12583 A-1 ENGINEERING, LLC STRUCTURAL ENGINEERING 1006 Vance Jackson Rd., San Antonio, Texas Ph. (210) 591-8829 401 Congress Ave., Suite 1540 Austin, Texas Ph. (512) 298-3360

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ISSUED FOR CONSTRUCTION

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STRUCTURAL GENERAL NOTES AND SPECIFICATIONS:

(01 40 00) STRUCTURAL GENERAL NOTES:

- THESE DOCUMENTS WERE PREPARED FOR THE SOLE USE OF THIS PROJECT. THIS SET 18) STRUCTURAL DESIGN IS BASED ON THE FOLLOWING LOADING CONDITIONS OF DOCUMENTS AND INDIVIDUAL SHEETS ARE COPY RIGHT PROTECTED AND MAY NOT BE REPRODUCED. DISTRIBUTED OR PUBLISHED TO THE PUBLIC OR FOR ANY OTHER USE, PROJECT, CONSTRUCTION, RESEARCH, ILLUSTRATION OR MEDIA WITHOUT EXPRESSED WRITTEN CONSENT BY A-1 ENGINEERING. THE PROJECT OWNER, CONTRACTORS AND CONSULTANTS THAT ARE BIDDING, CONSTRUCTING OR DESIGNING ELEMENTS FOR THIS PROJECT MAY REPRODUCE THESE DOCUMENTS FOR THEIR USE IN THEIR ENTIRETY.
- THE SPECIFICATIONS FOR FASTENERS, ANCHORING SYSTEMS, FRAMING MEMBERS, FOUNDATIONS, MATERIALS AND OVERALL STRUCTURAL DESIGNS PROVIDED IN THESE DOCUMENTS ARE SOLELY APPLICABLE TO THIS DESIGN. DO NOT USE OR INTERPRET THESE SPECIFICATIONS AND DESIGN FOR OTHER USES, PROJECTS OR CONSTRUCTION TYPES OR SYSTEMS.
- UNLESS NOTED OTHERWISE, A-1 ENGINEERING, LLC, IS NOT ACCEPTING THE RESPONSIBILITY OF "DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE" FOR THIS PROJECT. REFER TO CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE FOR GUIDANCE ON THE PROJECT SPECIAL INSPECTIONS AND THE LOCAL BUILDING OFFICIAL.
- THE TEXAS ARCHITECTURAL BARRIERS ACT (ARTICLE 9102, TEXAS CIVIL STATUTES) REQUIRES THE PRIME DESIGN CONSULTANT SUBMIT CONSTRUCTION DOCUMENTS FOR ALL PROJECTS WITH AN ESTIMATED CONSTRUCTION COST OF \$50,000 OR MORE TO THE TEXAS DEPARTMENT OF LICENSING AND REGULATION FOR REVIEW BEFORE COMMENCING CONSTRUCTION. FAILURE TO COMPLY MAY RESULT IN UP TO \$1,000 PER DAY ADMINISTRATIVE PENALTIES FOR EACH VIOLATION. THE OWNER AND PRIME DESIGN CONSULTANT UNDERSTAND A-1 ENGINEERING WILL PERFORM ONLY STRUCTURAL ENGINEERING SERVICES, WHICH DOES NOT INCLUDE SUBMITTING DOCUMENTS TO THE TEXAS DEPARTMENT OF LICENSING AND REGULATION.
- THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE CONDITIONS. IGNORANCE OF CONDITIONS IS NOT A BASIS FOR A CLAIM FOR ADDITIONAL COMPENSATION. LAYOUT THE BUILDING BY A LICENSED SURVEYOR.
- DRAWINGS OF SPECIFIC DETAILS ON THE DRAWINGS INDICATE THE INTENT OF THE STRUCTURAL DESIGN AND IN MOST CASES. ARE TYPICAL CONDITIONS OR VERY SIMILAR TO OTHER DETAILS. CONSIDER TYPICAL CONDITIONS NOT NECESSARILY NOTED AS TYPICAL AS TYPICAL FOR OTHER CONDITIONS. NOTIFY THE STRUCTURAL ENGINEER IF FIELD VERIFIED CONDITIONS LIMIT, INHIBIT OR PREVENT THE INTENDED DESIGN FROM BEING CONSTRUCTED.
- UNDERSTANDING THE STRUCTURAL REQUIREMENTS SHOWN ON THE STRUCTURAL DOCUMENTS REQUIRES COOPERATION AMONG ALL PARTIES INVOLVED. DESIGN AND CONSTRUCTION ARE COMPLEX. ALTHOUGH A-1 ENGINEERING DESIGNED THE PROJECT WITH DUE CARE AND DILIGENCE, WE DO NOT GUARANTEE PERFECTION. FOR OUR INTERPRETATION. CONSIDER UNRESOLVED DISCREPANCIES AS THE MORE COSTLY INTERPRETATION OF THE DISCREPANCY.
- COMBINING ALL CONSTRUCTION DOCUMENTS WITH THE STRUCTURAL DOCUMENTS DEFINES THE TOTAL PROJECT. THE STRUCTURAL DOCUMENTS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. VERIFY ALL FIELD CONDITIONS THAT AFFECT NEW AND EXISTING CONSTRUCTION BEFORE STARTING CONSTRUCTION. TAKE ALL MEASURES NECESSARY TO PROTECT THE SAFETY OF THE PUBLIC ALONG WITH THE SAFETY OF THE LIMITED TO BRACING AND SHORING OF DEAD LOADS, CONSTRUCTION LOADS AND WIND LOADS. CORRECT AT OWN EXPENSE ANY SUBSIDENCE STRUCTURAL DAMAGE OR OTHER OBJECTIONABLE CONDITIONS CAUSED BY YOUR OPERATIONS.
- THE STRUCTURAL DRAWINGS WERE DEVELOPED BASED ON OUR INTERPRETATION AND REFERENCE TO ARCHITECTURAL DRAWINGS PROVIDED TO A-1 ENGINEERING. OUR DIMENSIONS, LAYOUT, ORIENTATION, LUGS, DROPS, AND SLOPES SHOULD BE VERIFIED WITH THE ARCHITECT PRIOR TO CONSTRUCTION. A-1 ENGINEERING SHOULD BE 3.4) TRENCH BELOW THE SLAB THICKNESS FOR PLACING ELECTRICAL CONDUIT AND CONTACTED PRIOR TO CONSTRUCTION TO ADJUST VERIFIED DIMENSIONS SHOWN ON OUR PLANS.
- 10) WE RECOMMEND THE OWNER, CONTRACTORS AND DESIGN CONSULTANTS FOR THE PROJECT TO HAVE A PRE-CONSTRUCTION MEETING PRIOR TO COMMENCING CONSTRUCTION.
- QUESTIONS AND INQUIRIES BY CONTRACTORS TO THE STRUCTURAL ENGINEER (RFI)" PROCESS AND FORM DEVELOPED BY THE CONTRACTOR. ALLOW AT LEAST 5 BUSINESS DAYS FOR A RESPONSE. RFI'S RECEIVED AFTER 3PM WILL BE CONSIDERED RECEIVED THE NEXT BUSINESS DAY.
- 2) CONTRACTORS MAY PROPOSE ALTERNATIVE PRODUCTS AND DESIGNS FROM THOSE SPECIFIED IN THESE DOCUMENTS FOR REVIEW BY THE STRUCTURAL ENGINEER. ALTERNATIVE PRODUCTS AND DESIGNS SHOULD BE SUBMITTED WITH A COVER LETTER OR SUBMITTAL FORM EXPLAINING THE REASON FOR THE ALTERNATIVE PROPOSAL ALONG WITH SUPPORTING DOCUMENTATION THAT SHOWS OR EXPLAINS HOW THE PRODUCT OR DESIGN IS EQUIVALENT OR BETTER THAN THE SPECIFICATION IN THESE DOCUMENTS. SUBMITTAL OF THE ALTERNATIVE PRODUCTS OR DESIGNS DOES NOT IMPLY OR SUGGEST AUTOMATIC APPROVAL OF THE SUBMITTAL. ALTERNATIVE PRODUCTS OR DESIGNS USED IN LIEU OF THE SPECIFICATIONS AND DESIGN IN THESE DOCUMENTS WITHOUT APPROVAL MAY REQUIRE REMOVAL.
- 13) THE BUILDING CODE REQUIREMENTS FOR 2021 INTERNATIONAL BUILDING CODE IS THE BASIC CODE DOCUMENT USED IN THE PREPARATION OF THESE STRUCTURAL DOCUMENTS. ADDITIONAL CODES AND REFERENCES ARE AS NOTED. ALL STRUCTURAL WORK SHALL BE ACCORDING TO ALL LOCAL CODES IN ADDITION TO THIS BASIC CODE DOCUMENT.
- 14) THE STRUCTURAL ENGINEER-OF-RECORD PREPARED SPECIFICATIONS FOR STRUCTURAL RELATED PORTIONS OF THE PROJECT AND HAS INCLUDED THESE SPECIFICATIONS ON THE STRUCTURAL DRAWINGS. ARCHITECTURAL SPECIFICATIONS FOR NON-STRUCTURAL PORTIONS OF THE PROJECT ARE INCLUDED IN THE PROJECT MANUAL.
- 15) DIFFERENTIAL MOVEMENT OF THE FOUNDATION WILL OCCUR WITH VARIATIONS IN THE MOISTURE CONTENT OF THE SUBSURFACE SOILS. THE FINAL FINISHED ELEVATION SHOULD BE CONSIDERED TEMPORARY AND MAY FLUCTUATE WITH SEASONAL MOISTURE CONTENTS. VARIATIONS IN MOISTURE CONTENT MAY RESULT FROM SOURCES SUCH AS SEASONAL DRYING OF THE SOILS, BROKEN PLUMBING, IRRIGATION, AND PRECIPITATION. THE PROPERTY OWNER SHOULD IMPLEMENT A MAINTENANCE PLAN TO MONITOR AND REMEDIATE THE PONDING OF WATER IN AN EFFORT TO MINIMIZE THE FLUCTUATION OF THE FINISHED FLOOR ELEVATION. WE ANTICIPATE THE DIFFERENTIAL MOVEMENTS OF THE SUBSURFACE TO BE AT LEAST 1-INCH VERTICALLY.
- 16) THE FOUNDATION DESIGN DOES NOT CONSIDER THE REMOVAL AND REPLACEMENT OF SOILS OR THE CONDITIONING OF SOILS FOR GEOTECHNICAL PURPOSES. WE RECOMMEND CONSULTING WITH A GEOTECHNICAL ENGINEER FOR SITE SPECIFIC GEOTECHNICAL CONSIDERATIONS TO ACCOMMODATE OUR DESIGN.

STRUCTURAL DESIGN CRITERIA

- 17) THE DESIGN OF STRUCTURAL FRAMING MEMBERS WAS BASED ON ALLOWABLE STRESS DESIGN METHODS
- DESIGN LOAD COMBINATIONS (ALLOWABLE STRESS DESIGN METHOD) D + I D + L + (LR OR S OR R)
 - D + (W OR 0.7E) + L + (LR OR S OR R) 0.6D + W 0.6D + 0.7E

- (WHERE APPLICABLE):
- REFER TO THE OWNER FOR AREA USE AND OCCUPANCY TO CORRELATE THE APPLICABLE LOADING CONDITION. A) IBC 1603.1.1: FLOOR LIVE LOADS:
 - DWELLING ROOMS = 40 PSF CANOPY
- B) IBC 1603.1.2: ROOF LIVE LOADS: • ROOF LIVE LOADS = 12/16/20 PSF, TRIBUTARY AREA CONSIDERED, 3) COLD-FORMED STEEL STRUCTURAL MEMBERS SHALL BE COLD FORMED TO SHAPE PONDING NOT CONSIDERED ROOF UPLIFT = 5 PSF
- C) DEAD LOADS:
- FLOOR = SELF WEIGHT ROOF = SELF WEIGHT
- D) IBC 1603.1.3: GROUND SNOW LOAD = 5 PSF, IMPORTANCE FACTOR (I) = 1.0 E) IBC 1603.1.4: WIND LOADS
- ASCE 7 METHOD 2 BUILDING AND OTHER STRUCTURES <= 60 V ULT AT EXP. C = 115 MPH
- STRUCTURE TYPE = BUILDING
- F) IBC 1603.1.9: ROOF RAIN LOAD RAIN INTENSITY: 4.25" PER HOUR
- 19) IBC 1603.1.6: SOIL DESIGN PARAMETERS:
 - THE SOILS SUPPORTING THE FOUNDATION ARE EXPANSIVE WITH AN EFFECTIVE PLASTICITY INDEX (PI) GREATER THAN OR EQUAL TO 15
- A) ALLOWABLE SOIL BEARING CAPACITY (F'P) TOTAL LOAD = 1500 PSF
- OF SLAB SUBGRADE FRICTION = 0.75 TO 1.00 OF SUBGRADE REACTION (K) = 200 PCI

(33 00 00) - CONCRETE (FOOTINGS):

- 3.1) CONSTRUCT FORMWORK TO MAINTAIN TOLERANCES AS OUTLINED IN ACI 347. REUSE FORMWORK ACCORDING TO ACI 347. EXTEND FORMWORK AT LEAST SIX (6) INCHES BELOW THE FINISH GRADE ELEVATION ON PERIMETER BEAMS, CUT TEMPORARY PORT OPENINGS IN ORDER TO DRAIN EXPOSED TRENCHES DURING CONSTRUCTION IN CASE OF INCLEMENT WEATHER.
- COMMUNICATION IS NECESSARY. IMMEDIATELY REPORT STRUCTURAL DISCREPANCIES 3.2) TRENCH GRADE BEAMS IN ORDER TO PROVIDE THE BEAM CROSS SECTION INDICATED. 11) WELD ACCORDING TO THE DRAWINGS REQUIREMENTS AND AS RECOMMENDED BY 3.8) COORDINATE STRUCTURAL ENGINEER'S REVIEW AND THE BUILDING OFFICIAL BEAM AND SLAB DEPTHS AND WIDTHS INDICATED ARE MINIMUM ACCEPTABLE SIZES. LARGER SIZE BEAMS AND SLABS FORMED BY LESS ACCURATE TRENCHING MAY REQUIRE ADDITIONAL REINFORCING NOT SHOWN WHICH SHALL BE DETERMINED BY THE STRUCTURAL ENGINEER DURING CONSTRUCTION REVIEW. ALL LOOSE DIRT FROM 12) TIGHTEN BOLTED CONNECTIONS ACCORDING TO THE SNUG-TIGHT METHOD. SIDES AND BOTTOMS OF TRENCHES SHALL BE REMOVED. CUT HAUNCHES ON EACH SIDE OF TRENCHES OF ADEQUATE SIZE TO MAINTAIN THE VERTICAL SIDES OF THE 13) COORDINATE STRUCTURAL ENGINEER'S REVIEW, THE BUILDING OFFICIAL INSPECTION TRENCH. EMBED THE PERIMETER FOUNDATION GRADE BEAM TO THE MINIMUM DEPTH SHOWN ON THE FOUNDATION DETAILS.
- STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT NOT BE 3.3) WHERE TREES EXIST WITHIN FIVE FEET OF FOUNDATION, DEEPEN BEAMS A MINIMUM OF 24-INCHES BELOW SPECIFIED BEAM DEPTH FOR A DISTANCE OF TEN FEET IN EACH DIRECTION OF TREE (TOTAL LENGTH OF TWENTY FEET). CUT OFF AND TREAT ALL ROOTS EXTENDING UNDER THE FOUNDATION TO PREVENT ANY FUTURE ROOT GROWTH UNDER THE FOUNDATION. REINFORCE THE DEEPENED BEAM SECTION WITH (2)-#6 BARS CONTINUOUS AND PROVIDE 'Z' TRANSITION BARS AT DEEPENED SECTION ENDS. LAP BOTTOM BEAM REINFORCING.
 - PLUMBING LINES. BURY ELECTRICAL CONDUIT AND PLUMBING LINES BELOW THE SLAB THICKNESS AND OUTSIDE OF THE GRADE BEAM TRENCHES. DO NOT PLACE CONDUIT OR PLUMBING PIPES UNDER AND PARALLEL TO GRADE BEAMS. WRAP ANY SEWER, STORM, WATER, OR ELECTRICAL PIPING LINES CROSSING GRADE BEAMS WITH PVC SLEEVES FOR PROTECTION FROM GROUND MOVEMENTS. EXTEND SLEEVES AT LEAST 6-INCHES PAST THE TRENCH WIDTH. ISOLATE CONCRETE-ENCASED GROUNDING ELECTRODE FROM STRUCTURAL REINFORCING.
- SHOULD BE SENT IN WRITING FOLLOWING A FORMAL "REQUEST FOR INFORMATION 3.5) REINFORCING STEEL SHALL COMPLY WITH THE REQUIREMENTS OF ASTM A-615, GRADE 3) TRACKS SHALL BE SECURELY ANCHORED TO FLOOR AND OVERHEAD STRUCTURE AND 60. REINFORCING STEEL SHALL BE CONTINUOUS WITH SPLICES LAPPED AT LEAST 40 DIAMETERS. STIRRUPS AND TIES MAY BE GRADE 40 FOR BARS #3 AND SMALLER. TIE WIRE SHALL BE 18 GAGE ANNEALED TYPE.
 - 3.6) FABRICATE BENT BARS ACCORDING TO ACI 315. INSTALL REINFORCING WITH CLEARANCE FOR CONCRETE COVERAGE AROUND REINFORCING STEEL ACCORDING TO ACI 318. SUBMIT FOR REVIEW FABRICATION AND PLACEMENT SHOP DRAWINGS 5) ROOF JOISTS SHALL BE SUPPLIED WITH BRIDGING LOCATED AT THIRD POINTS ON INDICATING BAR SIZES, SPACINGS, LENGTHS, LAPS, LOCATIONS, AND QUANTITIES OF REINFORCING STEEL, BENDING AND CUTTING SCHEDULES, AND SUPPORTING AND SPACING DEVICES.
 - 3.7) CONCRETE SHALL DEVELOP A 28-DAY COMPRESSIVE STRESS (F'C) OF AT LEAST 3.000 PSI. MIX CONCRETE ACCORDING TO ACI 301. WATER CEMENT RATIO SHALL NOT EXCEED 0.50 (3.000 PSI). USE A MAXIMUM AGGREGATE SIZE OF 1-1/8" OR ACCORDING TO ACI 318. MAXIMUM AGGREGATE SIZE BETWEEN BARS SHALL ALSO PERTAIN TO BETWEEN THE FORMS AND BARS.
 - 3.8) THE PROPORTIONS OF MATERIALS AND USE OF ADMIXTURES INFLUENCE THE CONCRETE STRENGTH ALONG WITH THE MEANS AND METHODS OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THAT THE CONCRETE IS SUITABLE FOR ITS INTENDED PURPOSE. THE ENGINEER RECOMMENDS THE CONTRACTOR CONSIDER THE FOLLOWING IN DETERMINING THE CONCRETE FOR THIS PROJECT: CEMENT SHALL BE TYPE 1 (GRAY). FLY ASH SHALL BE BORAL MATERIALS, CLASS C. IF FLY ASH IS USED, DO NOT EXCEED 20% OF THE TOTAL FLY ASH AND CEMENT USED BY WEIGHT. INCLUDE A POLYMERIC COMPOUND WATER-REDUCING ADMIXTURE THAT COMPLIES WITH ASTM C494. DO NOT ADD AN AIR ENTRAINMENT ADDITIVE. MIX SHALL RESULT IN A FINISHED CONCRETE PRODUCT WITH MOISTURE CONTENTS NECESSARY TO PROPERLY CURE THE CONCRETE. FLOOR SEALERS, HARDENERS, FINISHES AND COVERINGS SHALL BE COMPATIBLE WITH CONCRETE PROPERTIES (I.E., BUT NOT LIMITED TO, MOISTURE AND ALKALINITY PROPERTIES).
 - 3.9) BEFORE PLACEMENT OF ANY CONCRETE, SUBMIT CONCRETE MIX DESIGN(S) TO BE USED ON THE PROJECT. CONCRETE SHALL BE IN STRICT ACCORDANCE WITH THE MIX DESIGN.
 - 3.10) PLACE AND CURE CONCRETE ACCORDING TO ACI 302. IR. DO NOT USE CONCRETE THAT HAS NOT BEEN PLACED IN THE FORMS BEFORE 1.5 HOURS AFTER THE INITIAL MIXING WATER WAS ADDED, REGARDLESS OF TEMPERATURE OR SLUMP - NO EXCEPTIONS. FINISH ACCORDING TO ACI 117 TOLERANCES.
 - 3.11) COORDINATE STRUCTURAL ENGINEER'S REVIEW AND THE BUILDING OFFICIAL INSPECTION BEFORE EACH CONCRETE PLACEMENT. THE BUILDING OFFICIAL SHALL INSPECT FOOTINGS AND FOUNDATIONS (IBC SECTION 110). THE BUILDING OFFICIAL MAY ACCEPT A REVIEW BY THE STRUCTURAL ENGINEER IN PLACE OF THE BUILDING OFFICIAL CONDUCTING THE REVIEW.

ANY PARTY, REFERENCING THESE PLANS FOR PRICING OR CONSTRUCTION, SHALL VERIFY ALL FIELD CONDITIONS WHICH WILL AFFECT THEIR SCOPE OF WORK. THE PROCUREMENT OF MATERIAL, AND FABRICATION OF COMPONENTS FOR THE CONSTRUCTION SHOWN ON THESE PLANS PRIOR TO THE START OF CONSTRUCTION. UNLESS OTHERWISE INDICATED. THE DOCUMENTS DO NOT INDICATE THE MEANS AND METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL MEASURES TO PROTECT THE SAFETY OF THE PUBLIC ALONG WITH THE SAFETY OF PROPERTY AND HIMSELF, DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, RETAINING PROFESSIONAL TO AID IN DEVELOPING, SHORING AND BRACING SYSTEMS, AND INSPECTION OF THE ASSEMBLY AND MAINTENANCE OF BRACING AND SHORING SYSTEMS. DESIGN, CONSTRUCT, INSPECT AND MAINTAIN BRACING AND SHORING SYSTEMS TO SUSTAIN PRESCRIBED SERVICE LOADS PER THE INTERNATIONAL BUILDING CODE. THE CONTRACTOR WILL BE REQUIRED TO CORRECT AT HIS OWN EXPENSE ANY SUBSIDENCE. STRUCTURAL DAMAGE OR OTHER OBJECTIONAL CONDITIONS CAUSED BY HIS OPERATIONS.

- - MEMBER
 - DEPTH

(05 12 23) STRUCTURAL STEEL

ASTM A-36 (FY=36 KSI). ROLLED STEEL SHAPES SHALL BE STRUCTURAL QUALITY CARBON STEEL COMPLYING WITH ASTM A-36/A50 DUAL GRADE COMPLYING WITH ASTM A992 GRADE 50.

2) STRUCTURAL STEEL TUBULAR PRODUCTS SHALL BE COLD FORMED STRUCTURAL QUALITY CARBON STEEL, WELDED OR SEAMLESS, COMPLYING WITH ASTM A500, GRADE

FROM CARBON OR LOW-ALLOY, SHEET OR STRIP STEELS COMPLYING WITH ASTM A245 OR ASTM A374.

4) PIPE COLUMNS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-53B (TYPE E OR S).

5) STRUCTURAL STEEL MEMBERS FRAMING THE ENTRY CANOPY SHALL BE CONSTRUCTED 3.4) CONCRETE SHALL DEVELOP A 28-DAY COMPRESSIVE STRESS (F'C) OF AT LEAST 3.000 AS ARCHITECTURALLY EXPOSED STRUCTURAL STEEL AND SHALL COMPLY WITH SECTION 10, AISC 303-05: CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES

6) SUBMIT FOR REVIEW FABRICATION AND ERECTION SHOP DRAWINGS INDICATING PROFILES, SIZES, SPLICE LOCATIONS, SPACING AND LOCATIONS OF STRUCTURAL 3.5) THE PROPORTIONS OF MATERIALS AND USE OF ADMIXTURES INFLUENCE THE MEMBERS. CONNECTIONS, ATTACHMENTS, ANCHORAGES, FRAMED OPENINGS, SIZE AND TYPE OF FASTENERS AND LOADS.

7) INSPECTION OF FABRICATORS (IBC CHAPTER 1704.2) THE FABRICATOR SHALL SUBMIT TO THE RDPIRC WITH A COPY TO THE OWNER AND THE GENERAL CONTRACTOR A CERTIFICATE OF COMPLIANCE STATING THAT HE FABRICATED HIS WORK EITHER UNDER THE INSPECTION SERVICES OF A SPECIAL INSPECTOR OR UNDER THE INSPECTION SERVICES OF HIS NATIONALLY RECOGNIZED TRADE ORGANIZATION THAT REQUIRES QUALITY CONTROL INSPECTIONS.

8) FABRICATE AND ERECT ALL STRUCTURAL STEEL ACCORDING TO THE DRAWINGS AND AS AISC MANUAL OF STEEL CONSTRUCTION RECOMMENDS.

9) PRIME PAINT ALL STRUCTURAL STEEL WITH 1.0 TO 1.5 MIL DRY FILM THICKNESS ALKYD 3.6) BEFORE PLACEMENT OF ANY CONCRETE, SUBMIT CONCRETE MIX DESIGN(S) TO BE PRIMER OR EQUAL, EXCEPT FOR PLATES EMBEDDED IN CONCRETE.

10) HEADED STUD TYPE CONCRETE ANCHORS (HCA) SHALL CONFORM TO THE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. FOR BEAMS SUPPORTING COMPOSITE DECKS, SHEAR STUDS SHALL BE SPACED AT 18-INCHES MAXIMUM UNLESS NOTED OTHERWISE.

APPLICABLE AWS SPECIFICATIONS. ALL WELDS ARE 1/4-INCH SINGLE PASS FILLET WELDS UNLESS NOTED OTHERWISE.

AND THE SPECIAL INSPECTOR INSPECTION AND TESTING SERVICES.

THE BUILDING OFFICIAL SHALL INSPECT THE PRIMARY STRUCTURAL FRAMING. THE BUILDING OFFICIAL MAY ACCEPT A REVIEW BY A LICENSED PROFESSIONAL ENGINEER IN PLACE OF THE BUILDING OFFICIAL CONDUCTING HIS INSPECTION. (IBC CHAPTER 110.3.4)

(05 40 00) - METAL STUD FRAMING:

ALL LIGHTGAGE STRUCTURAL FRAMING MEMBERS, STUDS, TRACK, JOISTS, BRIDGING, AND LOADBEARING STUDS SHALL BE OF THE TYPE AND SIZE AS NOTED BELOW AND SHALL BE MANUFACTURED BY DIETRICH INDUSTRIES, INC. OR EQUIVALENT AND SHALL BE DESIGNED IN ACCORDANCE WITH AISI "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS".

2) ALL LIGHTGAGE MATERIAL SHALL BE FORMED FROM HOT DIPPED GALVANIZED STEEL G-60 COATING, MEETING ASTM SPECIFICATION A525 AND C64.5. GRADES AS FOLLOWS: 16 GAGE AND HEAVIER GRADE D (MIN 50 KSI YIELD) 18 GAGE AND LIGHTER GRADE B (MIN 33 KSI YIELD)

STUDS SHALL BE SEATED SQUARELY IN TRACK, PLUMBED OR ALIGNED, AND ATTACHED TO TRACKS OR CLIPS.

4) SPLICES IN AXIALLY LOADED STUDS AND ROOF JOISTS WILL NOT BE PERMITTED. PURLINS SHALL BEAR DIRECTLY ON STUDS AS SHOWN.

SPANS. BRIDGING SHALL CONSIST OF STANDARD V-BRIDGING CONTINUOUS AT TOP AND BOTTOM CHORD PERPENDICULAR TO JOISTS. ATTACH BRIDGING WITH SCREWS AT JOIST AND WITH "RAMSET" POWDER ACTUATED FASTENERS AT CONCRETE WALL PANELS. ADD SOLID BRIDGING BETWEEN LAST TWO JOISTS, SCREWED TO JOISTS & RAMSET TO WALL WITH 2" X 2" X 14 GA. CLIP ANGLE.

6) BRACING FOR NON-LOADBEARING STUDS SHALL CONSIST OF 1 ROW OF CONTINUOUS V-BRIDGING AT THE UNSHEATHED FACE ATTACHED TO EACH STUD WITH SCREWS LOCATED AT MIDHEIGHT. IN ADDITION, PLACE SOLID BRIDGING BETWEEN STUDS EVERY 20'-0" ON CENTER MAX. SPACING. BRACING FOR LOADBEARING STUDS SHALL BE AS DETAILED. (WHEELING BRIDGING CLIP & CR CHANNEL MAY BE SUBSTITUTED IF INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.)

PROVIDE 1/2-INCH GAP BETWEEN TRACK AND STUD WITH SLIDING CONNECTION AT TOP OF ALL NON-LOADBEARING WALLS TO ALLOW FOR THE DEFLECTION OF THE ROOF AND/OR FLOOR STRUCTURE.

 SUBMIT FOR REVIEW SHOP DRAWINGS BEFORE FABRICATION AND/OR DELIVERY. CLEARLY INDICATING THE NAME OF THE PROJECT, NAME OF SUPPLIER, NAME OF THE PRODUCT MANUFACTURER, PHYSICAL PROPERTIES OF THE STEEL SECTIONS PROVIDED, AND ALLOWABLE YIELD STRESS FOR THE MATERIAL PROVIDED.

F - FURRING CHANNEL

(33 00 01) CONCRETE TOPPING SLAB:

- 1) ROLLED STEEL PLATES AND BARS SHALL BE STRUCTURAL QUALITY COMPLYING WITH 3.1) CONSTRUCT FORMWORK TO MAINTAIN TOLERANCES AS OUTLINED IN ACI 347. REUSE FORMWORK ACCORDING TO ACI 347.
 - 3.2) REINFORCING STEEL SHALL COMPLY WITH THE REQUIREMENTS OF ASTM A-615, GRADE 60. REINFORCING STEEL SHALL BE CONTINUOUS WITH SPLICES LAPPED AT LEAST 40 DIAMETERS. STIRRUPS AND TIES MAY BE GRADE 40 FOR BARS #3 AND SMALLER. TIE WIRE SHALL BE 18 GAGE ANNEALED TYPE.
 - 3.3) FABRICATE BENT BARS ACCORDING TO ACI 315. INSTALL REINFORCING WITH CLEARANCE FOR CONCRETE COVERAGE AROUND REINFORCING STEEL ACCORDING TO ACI 318. SUBMIT FOR REVIEW FABRICATION AND PLACEMENT SHOP DRAWINGS INDICATING BAR SIZES, SPACINGS, LENGTHS, LAPS, LOCATIONS, AND QUANTITIES OF REINFORCING STEEL, BENDING AND CUTTING SCHEDULES, AND SUPPORTING AND SPACING DEVICES.
 - PSI. MIX CONCRETE ACCORDING TO ACI 301. WATER CEMENT RATIO SHALL NOT EXCEED 0.50 (5.000 PSI). USE A MAXIMUM AGGREGATE SIZE OF 3/8" OR ACCORDING TO ACI 318. MAXIMUM AGGREGATE SIZE BETWEEN BARS SHALL ALSO PERTAIN TO BETWEEN THE FORMS AND BARS.
 - CONCRETE STRENGTH ALONG WITH THE MEANS AND METHODS OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THAT THE CONCRETE IS SUITABLE FOR ITS INTENDED PURPOSE. THE ENGINEER RECOMMENDS THE CONTRACTOR CONSIDER THE FOLLOWING IN DETERMINING THE CONCRETE FOR THIS PROJECT: CEMENT SHALL BE TYPE 1 (GRAY). FLY ASH SHALL BE BORAL MATERIALS, CLASS C. IF FLY ASH IS USED, DO NOT EXCEED 20% OF THE TOTAL FLY ASH AND CEMENT USED BY WEIGHT. INCLUDE A POLYMERIC COMPOUND WATER-REDUCING ADMIXTURE THAT COMPLIES WITH ASTM C494. DO NOT ADD AN AIR ENTRAINMENT ADDITIVE. MIX SHALL RESULT IN A FINISHED CONCRETE PRODUCT WITH MOISTURE CONTENTS NECESSARY TO PROPERLY CURE THE CONCRETE. FLOOR SEALERS, HARDENERS, FINISHES AND COVERINGS SHALL BE COMPATIBLE WITH CONCRETE PROPERTIES (I.E., BUT NOT LIMITED TO, MOISTURE AND ALKALINITY PROPERTIES).
 - USED ON THE PROJECT. CONCRETE SHALL BE IN STRICT ACCORDANCE WITH THE MIX DESIGN
- REQUIREMENTS OF ASTM A 108-58T LOW CARBON STEEL AND SHALL BE FASTENED 3.7) PLACE AND CURE CONCRETE ACCORDING TO ACI 302. IR. DO NOT USE CONCRETE THAT HAS NOT BEEN PLACED IN THE FORMS BEFORE 1.5 HOURS AFTER THE INITIAL MIXING WATER WAS ADDED, REGARDLESS OF TEMPERATURE OR SLUMP - NO EXCEPTIONS. FINISH ACCORDING TO ACI 117 TOLERANCES.
 - INSPECTION BEFORE EACH CONCRETE PLACEMENT. THE BUILDING OFFICIAL SHALL INSPECT FOOTINGS AND FOUNDATIONS (IBC SECTION 110). THE BUILDING OFFICIAL MAY ACCEPT A REVIEW BY THE STRUCTURAL ENGINEER IN PLACE OF THE BUILDING OFFICIAL CONDUCTING THE REVIEW.

ENGINEERING

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TABLE #2

STRUCTURAL SHEATHING / DECKING SCHEDULE

STRUCTURAL SYSTEM	SHEATHING TYPE	EXPOSURE	THICKNESS (MIN.)	SPAN RATING	NAILING	NOTES	
		CATEGORY			EDGE SUPPORT	INTERIOR SUPPORT	NOTED
WALL SHEATHING	APA RATED SHEATHING	EXP. 1	7/16"	24/16	10d AT 6" O.C.	10d AT 12" O.C.	1,2,3,4
ROOF DECKING	APA RATED SHEATHING	EXP. 1	7/16"	24/16	8d AT 6" O.C.	8d AT 12" O.C.	1,2,3,4

NOTES:

1. STRUCTURAL PANELS SHALL BE LABELED / STAMPED WITH APA APPROVED MARKINGS AND LABELS SHOWING CONFORMANCE WITH SPECIFICATIONS.

2. ALL PANELS SHALL BE LAID OUT / ORIENTATED TO BE PERPENDICULAR TO SUPPORTS.

- 3. STAPLES MAY NOT BE SUBSTITUTED FOR NAILS.
- 4. BLOCK EDGES OF ALL WALL, ROOF, AND FLOOR SHEATHING PANELS.
- 5. O.C.= DENOTES ON-CENTER
- 6. TONGUE AND GROOVE

TABLE #12 (SEE FRAMING LAYOUT)

		LI	GHT GAUGE M	IETAL STUD W	ALL ASSEMBLY S	SCHEDULE		
STRUCTURAL LABEL	STUD SIZE	ANCHOR	TYPICAL STUD SPACING	QUANITY OF JAMB STUDS	TYPICAL ANCHOR SPACING	QUANITY OF ANCHORS AT JAMB	TOP TRACK	BOTTOM TRACK
	250S162-33	HILTI X-C 20 G3 MX	16" O.C.	2	24" O.C.	2	250T162-33	250T162-33
	362S162-43	HILTI X-C 20 G3 MX	16" O.C.	2	24" O.C.	2	362T125-43	362T125-43
	400S162-54	HILTI X-C 20 G3 MX	16" O.C.	2	24" O.C.	2	400T125-54	400T125-54

O.C. = DENOTES ON-CENTER U.N.O. = DENOTES UNLESS NOTED OTHERWISE

ANY PARTY, REFERENCING THESE PLANS FOR PRICING OR CONSTRUCTION, SHALL VERIFY ALL FIELD CONDITIONS WHICH WILL AFFECT THEIR SCOPE OF WORK, THE PROCUREMENT OF MATERIAL, AND FABRICATION OF COMPONENTS FOR THE CONSTRUCTION SHOWN ON THESE PLANS PRIOR TO THE START OF CONSTRUCTION. UNLESS OTHERWISE INDICATED, THE DOCUMENTS DO NOT INDICATE THE MEANS AND METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL MEASURES TO PROTECT THE SAFETY OF THE PUBLIC ALONG WITH THE SAFETY OF PROPERTY AND HIMSELF, DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, RETAINING PROFESSIONAL TO AID IN DEVELOPING, SHORING AND BRACING SYSTEMS, AND INSPECTION OF THE ASSEMBLY AND MAINTENANCE OF BRACING AND SHORING SYSTEMS. DESIGN, CONSTRUCT, INSPECT AND MAINTAIN BRACING AND SHORING SYSTEMS TO SUSTAIN PRESCRIBED SERVICE LOADS PER THE INTERNATIONAL BUILDING CODE. THE CONTRACTOR WILL BE REQUIRED TO CORRECT AT HIS OWN EXPENSE ANY SUBSIDENCE, STRUCTURAL DAMAGE OR OTHER OBJECTIONAL CONDITIONS CAUSED BY HIS OPERATIONS.

TABLE 3.2 SLAB REINFORCEMENT SCHEDULE REINFORCEMENT THICKNESS AREA LAP SPLICE FIELD VERIFY 4 x 4 - W29 x W29 24" MINIMUM TOPPING SLAB O.C. = DENOTES ON-CENTER

BEAM					SIEEL	JOLUMIN SC	CHEDULE	•	
	SIZE	MATERIAL	SPACING	LABEL	SIZE	MATERIAL	BASE MODEL	NOTES	architecture
(SB1) PI	PIPE 4 STD	A53 GRADE B	SEE LAYOUT	K7>	HSS 4 Ø x 1/4	A550 STEEL TUBE			118 BROADWAY, SUITE 620
SB2 PI	PIPE 3 STD	A53 GRADE B	SEE LAYOUT	КВ	HSS 4 x 3 x 1/4	A550 STEEL TUBE	SEE DETAIL 15/S3.1		210.447.7000
(SB3) HSS	ISS 4 x 3 x 1/4	A550 STEEL TUBE							Architect

TABLE #13 (SEE FRAMING LAYOUT)

	ME	ETAL STU	D HEADEF	R SCHEDI
MEMBER	STRUCTURAL LABEL	WEB A	TOP TRACK B	BOTTOM TRACK C
М3		600S162-54	362T125-54	362T125-54
M5		1000S162-54	362T125-54	362T125-54

O.C. = DENOTES ON-CENTER

THIS SHEET EXHIBITS LABELS IN COLOR. PRINTING OR VIEWING THIS SHEET IN BLACK AND WHITE MAY NOT BE ILLUSTRATED CORRECTLY.

MOISES A. CRUZ

Revisions:

FOUNDATION PLAN GENERAL NOTES:

- 1) PRIOR TO EXCAVATION OF SOILS FOR THE FOUNDATION, THE CONTRACTOR SHALL COORDINATE LOCATING EXISTING UTILITY LINES ACROSS THE SITE TO ENSURE THAT NO EXISTING UTILITIES ARE DISTURBED WITH THE EXCAVATION OF THE FOUNDATION.
- 2) SITE TOPOGRAPHY MAY REQUIRE FOR THE FOUNDATION GRADE BEAMS TO BE GREATER THAN 3-FEET IN TOTAL DEPTH. AT A MINIMUM, THE FOUNDATION PERIMETER GRADE BEAMS SHOULD BE CONSTRUCTED TO BE EMBEDDED AS SHOWN ON THE FOUNDATION DETAILS. AT A MINIMUM, THE FOUNDATION FINISHED FLOOR SHOULD BE AT LEAST 6-INCHES HIGHER THAN THE ADJACENT GROUND UNLESS NOTED OTHERWISE BY THE BUILDING DESIGNER OR A CIVIL ENGINEER FOR THE PROJECT.
- 3) ALL EXCAVATED MATERIAL SHOULD BE PROPERLY DISPOSED OF AND NOT REUSED WITHIN THE FOUNDATION FOOTPRINT UNLESS PERMITTED BY THE STRUCTURAL ENGINEER OR A GEOTECHNICAL ENGINEER FOR THE PROJECT.
- 4) THE CONTRACTOR SHOULD COORDINATE THE EXCAVATION OF THE FOUNDATION WITH NEARBY TREES TO PROTECT AND PRESERVE TREES THAT ARE INTENDED TO REMAIN. Architect EXCAVATION OF SOILS AROUND THE ROOTS OF TREES CAN PERMANENTLY DAMAGE TREES. A TREE ARBORIST SHOULD BE CONSULTED WITH IF TREE ROOTS ARE ENCOUNTERED OR IF THE EXCAVATION NEAR A TREE IS EXPECTED.
- 5) THE FOUNDATION DESIGN DOES NOT INCLUDE OR ACCOUNT FOR FLATWORK AROUND THE BUILDING. ALL SOILS AND FLATWORK AROUND THE BUILDING SHOULD BE CONSTRUCTED AND INSTALLED IN SUCH A MANNER THAT ENCOURAGES SURFACE WATER TO FLOW AWAY FROM THE BUILDING AND DOES NOT ALLOW FOR SURFACE WATER TO POND OR COLLECT NEAR THE BUILDING.
- 6) IN THE EVENT OF RAIN, THE FOUNDATION GRADE BEAMS SHOULD BE FULLY DRAINED OF ANY STANDING WATER. THE FOUNDATION GRADE BEAM BOTTOMS SHOULD BE CLEARED OF ANY LOOSE SOIL OR DEBRIS. ALLOW AT LEAST 48 HOURS FOR THE SOILS TO DRY | CONSULTANT, NEERING, L/O PRIOR TO PLACEMENT OF CONCRETE.
- 7) ANY EXISTING CONCRETE FOUNDATION ELEMENTS OR ASPHALT PAVEMENTS THAT ARE ENCOUNTERED DURING THE EXCAVATION OF THE FOUNDATION SHOULD BE FULLY REMOVED TO ALLOW FOR THE EXCAVATION OF THE FOUNDATION. LARGE SURFACES OF CONCRETE OR ASPHALT PAVEMENTS WITHIN THE FOUNDATION FOOTPRINT MAY REMAIN AND NOT BE DEMOLISHED PROVIDED THE PAVEMENT OR FLATWORK DOES NOT INTERFERE WITH THE CONSTRUCTION OF THE FOUNDATION ELEMENTS AS INTENDED ON THE PLANS.
- 8) THE FOUNDATION SHOULD BE CONSTRUCTED WITH THE ARCHITECTURAL OR BUILDING DESIGNER PLANS ON HAND AND IN A COORDINATED REFERENCE BETWEEN THE LATEST ARCHITECTURAL OR DESIGN PLANS AND THE STRUCTURAL PLANS. ANY DISCREPANCY BETWEEN THE PLANS SHOULD BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM TO Revisions: REVIEW.
- 9) THE CONTRACTOR SHALL COORDINATE INSPECTION AND REVIEW OF THE FOUNDATION CONSTRUCTION WITH THE OWNER AND THE DESIGN TEAM WITH AT LEAST 4 DAY NOTICE PRIOR TO THE DATE OF THE REQUIRED INSPECTION AND AT LEAST 7 DAYS PRIOR TO THE PLACEMENT OF CONCRETE. INSPECTION REQUESTS MADE AFTER 3PM WILL BE CONSIDERED REQUESTS MADE THE FOLLOWING DAY. REQUESTS MADE AFTER 3PM ON FRIDAYS WILL BE CONSIDERED REQUESTS MADE ON THE NEXT BUSINESS DAY.
- 10) THE CONTRACTOR SHOULD MAINTAIN AT LEAST ONE SUPERINTENDENT OR PROJECT MANAGER ON SITE DURING INSPECTION TO ADDRESS DISCREPANCIES.
- 11) THE ADEQUACY OF THE FOUNDATION FORM WORK, DIMENSIONS AND THE SQUARENESS OF THE FOUNDATION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 12) ALL CONCRETE BLEMISHES, HONEYCOMBS AND OTHER IMPERFECTIONS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM AND THE OWNER PRIOR TO REPAIR ATTEMPTS. REPAIRS TO HONEYCOMBS WITHOUT THE GUIDANCE OF THE STRUCTURAL ENGINEER MAY REQUIRE REWORK.
- 13) UNLESS NOTED OTHERWISE, INITIAL AND FINAL CURING OF THE CONCRETE SHALL BE BY WE CURING METHODS ONLY (CONTINUOUS SPRINKLING OR STEAM, OR MOISTURE RETAINING COVER).
- 14) DIMENSIONS SHOWN ASSOCIATED WITH ANY EXISTING ELEMENTS OR BUILDINGS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION AND DEVELOPMENT OF ANY FABRICATION AND ERECTION DRAWING.
- 15) ADDITIONAL REQUIREMENTS FOR MATERIAL SPECIFICATIONS, DIMENSIONS, REINFORCEMENT AND CONSTRUCTION IS FOUND IN THE STRUCTURAL GENERAL NOTES AND FOUNDATION DETAILS AND KEYNOTES IN THE PLAN SET. ANY DISCREPANCY BETWEEN THE DETAILS AND THE FOUNDATION LAYOUT SHOULD BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO COMPLETING THE CONSTRUCTION OF THE ELEMENTS AFFECTED BY THE DISCREPANCY.
- 16) ALL PLUMBING LINES THAT CROSS A FOUNDATION GRADE BEAM OR PENETRATE THROUGH A PERIMETER FOUNDATION GRADE BEAM SHALL BE SLEEVED WITH A SLEEVE THAT IS AT LEAST 3-INCHES LARGER THAN PLUMBING PIPE. THE SLEEVED PIPE SHOULD BE CENTERED IN THE SLEEVE.
- 17) THE GROUND IMMEDIATELY ADJACENT TO THE FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF NOT LESS THAN ONE UNIT VERTICAL IN 20 UNITS HORIZONTAL (5%) FOR A MINIMUM DISTANCE OF 10 FEET MEASURED PERPENDICULAR TO THE FACE OF THE WALL. IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF 2% AWAY FROM THE FOUNDATION.

KEYNOTES:

- $\langle 300 \rangle$ EXISTING FOUNDATION TO REMAIN
- (301) EDGE OF EXISTING FOUNDATION

302 TOPPING SLAB

LEGEND:

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FRAMING LAYOUT GENERAL NOTES:

- 1) THE FRAMING LAYOUT IS INTENDED TO SPECIFY THE MAIN STRUCTURAL MEMBERS AND ORIENTATION FOR THE ROOF, FLOOR, WALLS AND CEILING SYSTEM. FRAMING FOR BLOCKING, FURR DOWNS, STAIRS, DROPPED OR RAISED CEILING, REINFORCEMENT FOR WALL MOUNTED ITEMS, FIRE BLOCKING OR PROTECTION AND FRAMING MEMBERS FOR NON-STRUCTURAL ELEMENTS ARE NOT SHOWN AND MAYBE NEEDED. REFER TO THE ARCHITECTURAL/DESIGNER/OWNER PLANS AND OVERALL PROJECT SCOPE, SPECIFICATIONS AND LOCAL BUILDING CODES FOR FRAMING REQUIREMENTS BEYOND THE MAIN STRUCTURAL SYSTEM.
- 2) THE FRAMER SHOULD REFERENCE BOTH THE STRUCTURAL PLANS AND THE ARCHITECTURAL PLANS FOR COORDINATING AND ALIGNING SECOND FLOOR AND ROOF BEAMS AS NEEDED TO ADEQUATELY SUPPORT THE FRAMING. NOTIFY THE STRUCTURAL ENGINEER IF LOWER LEVEL WALLS AND BEAMS DO NOT ALIGN WITH THE LATEST ARCHITECTURAL PLANS.
- 3) DO NOT ALLOW NON-LOAD BEARING WALLS AND CEILINGS TO SUPPORT UPPER FLOORS OR ROOF FRAMING MEMBERS.
- 4) REFER TO STRUCTURAL GENERAL NOTES ON SHEET S1.1 FOR PROJECT SPECIFICATIONS.
- 5) REFER TO SCHEDULES AND TABLES ON SHEET S1.2 FOR DESIGN SPECIFICATIONS.
- 6) WHERE MEMBER SIZES, SPECIFICATIONS, OR DESIGN KEYNOTES ON STRUCTURAL DETAILS AND SECTIONS CONFLICT WITH PROJECT SPECIFICATIONS, SCHEDULES AND TABLES, THE PROJECT SPECIFICATIONS, SCHEDULES AND TABLES SHALL GOVERN FIRST.
- 7) NOTIFY THE STRUCTURAL ENGINEER IF FIELD VERIFIED CONDITIONS LIMIT, INHIBIT OR PREVENT THE STRUCTURAL FRAME FROM BEING CONSTRUCTED FOLLOWING FRAMING | **CONSULTANT**, NEERING, LI TECHNIQUES AND PRACTICES.
- 8) ALL FRAMING SHOULD REMAIN EXPOSED AND UNCONCEALED FOR REVIEW BY THE STRUCTURAL ENGINEER WHEN THE ENTIRE STRUCTURAL FRAME IS COMPLETE. THE CONTRACTOR SHOULD NOTIFY THE STRUCTURAL ENGINEER OF ANY AND ALL DEVIATIONS FROM THE PLANS FOR REVIEW BY THE STRUCTURAL ENGINEER. DEVIATIONS FROM THE PLANS MAY NOT BE ACCEPTED BY THE STRUCTURAL ENGINEER AND MAY REQUIRE THE FRAME TO BE REMOVED AND RECONSTRUCTED.
- 9) STRUCTURAL DESIGN OF ROOF FRAMING DOES NOT ACCOUNT FOR CONSTRUCTION LOADS OF ROOF MATERIAL STACKED.

KEYNOTES:

501 SEE ELEVATION 1 ON SHEET S3.2 FOR NEW LIGHT GAUGE METAL FRAMING AT NEW EXTERIOR DOORS.

502 SEE ELEVATION 2 ON SHEET S3.2 FOR NEW LIGHT GAUGE METAL FRAMING AT NEW EXTERIOR WINDOWS.

LEGEND

$\langle X \rangle$	KEYNOTE
	2-1/2" METAL STUD WALL, SEE TABLE #12 ON SHEET S1.2
	3-5/8" METAL STUD WALL, SEE TABLE #12 ON SHEET S1.2
	4" METAL STUD WALL, SEE TABLE #12 ON SHEET S1.2
(M#)	6" METAL STUD HEADER, SEE TABLE #13 ON SHEET S1.2
(M#)	10" METAL STUD HEADER, SEE TABLE #13 ON SHEET S1.2
1/S3.2	ELEVATION VIEW

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FOUNDATION PLAN GENERAL NOTES:

- 1) PRIOR TO EXCAVATION OF SOILS FOR THE FOUNDATION, THE CONTRACTOR SHALL COORDINATE LOCATING EXISTING UTILITY LINES ACROSS THE SITE TO ENSURE THAT NO EXISTING UTILITIES ARE DISTURBED WITH THE EXCAVATION OF THE FOUNDATION.
- 2) SITE TOPOGRAPHY MAY REQUIRE FOR THE FOUNDATION GRADE BEAMS TO BE GREATER THAN 3-FEET IN TOTAL DEPTH, AT A MINIMUM, THE FOUNDATION PERIMETER GRADE BEAMS SHOULD BE CONSTRUCTED TO BE EMBEDDED AS SHOWN ON THE FOUNDATION DETAILS. AT A MINIMUM, THE FOUNDATION FINISHED FLOOR SHOULD BE AT LEAST 6-INCHES HIGHER THAN THE ADJACENT GROUND UNLESS NOTED OTHERWISE BY THE BUILDING DESIGNER OR A CIVIL ENGINEER FOR THE PROJECT.
- 3) ALL EXCAVATED MATERIAL SHOULD BE PROPERLY DISPOSED OF AND NOT REUSED WITHIN THE FOUNDATION FOOTPRINT UNLESS PERMITTED BY THE STRUCTURAL ENGINEER OR A GEOTECHNICAL ENGINEER FOR THE PROJECT.
- 4) THE CONTRACTOR SHOULD COORDINATE THE EXCAVATION OF THE FOUNDATION WITH NEARBY TREES TO PROTECT AND PRESERVE TREES THAT ARE INTENDED TO REMAIN. Architect EXCAVATION OF SOILS AROUND THE ROOTS OF TREES CAN PERMANENTLY DAMAGE TREES. A TREE ARBORIST SHOULD BE CONSULTED WITH IF TREE ROOTS ARE ENCOUNTERED OR IF THE EXCAVATION NEAR A TREE IS EXPECTED.
- 5) THE FOUNDATION DESIGN DOES NOT INCLUDE OR ACCOUNT FOR FLATWORK AROUND THE BUILDING. ALL SOILS AND FLATWORK AROUND THE BUILDING SHOULD BE CONSTRUCTED AND INSTALLED IN SUCH A MANNER THAT ENCOURAGES SURFACE WATER TO FLOW AWAY FROM THE BUILDING AND DOES NOT ALLOW FOR SURFACE WATER TO POND OR COLLECT NEAR THE BUILDING.
- 6) IN THE EVENT OF RAIN, THE FOUNDATION GRADE BEAMS SHOULD BE FULLY DRAINED OF ANY STANDING WATER. THE FOUNDATION GRADE BEAM BOTTOMS SHOULD BE CLEARED OF ANY LOOSE SOIL OR DEBRIS. ALLOW AT LEAST 48 HOURS FOR THE SOILS TO DRY | CONSULTANT, NEERING, L/O PRIOR TO PLACEMENT OF CONCRETE.
- 7) ANY EXISTING CONCRETE FOUNDATION ELEMENTS OR ASPHALT PAVEMENTS THAT ARE ENCOUNTERED DURING THE EXCAVATION OF THE FOUNDATION SHOULD BE FULLY REMOVED TO ALLOW FOR THE EXCAVATION OF THE FOUNDATION. LARGE SURFACES OF CONCRETE OR ASPHALT PAVEMENTS WITHIN THE FOUNDATION FOOTPRINT MAY REMAIN AND NOT BE DEMOLISHED PROVIDED THE PAVEMENT OR FLATWORK DOES NOT INTERFERE WITH THE CONSTRUCTION OF THE FOUNDATION ELEMENTS AS INTENDED ON THE PLANS.
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- 9) THE CONTRACTOR SHALL COORDINATE INSPECTION AND REVIEW OF THE FOUNDATION CONSTRUCTION WITH THE OWNER AND THE DESIGN TEAM WITH AT LEAST 4 DAY NOTICE PRIOR TO THE DATE OF THE REQUIRED INSPECTION AND AT LEAST 7 DAYS PRIOR TO THE PLACEMENT OF CONCRETE. INSPECTION REQUESTS MADE AFTER 3PM WILL BE CONSIDERED REQUESTS MADE THE FOLLOWING DAY. REQUESTS MADE AFTER 3PM ON FRIDAYS WILL BE CONSIDERED REQUESTS MADE ON THE NEXT BUSINESS DAY.
- 10) THE CONTRACTOR SHOULD MAINTAIN AT LEAST ONE SUPERINTENDENT OR PROJECT MANAGER ON SITE DURING INSPECTION TO ADDRESS DISCREPANCIES.
- 11) THE ADEQUACY OF THE FOUNDATION FORM WORK, DIMENSIONS AND THE SQUARENESS OF THE FOUNDATION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 12) ALL CONCRETE BLEMISHES, HONEYCOMBS AND OTHER IMPERFECTIONS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM AND THE OWNER PRIOR TO REPAIR ATTEMPTS. REPAIRS TO HONEYCOMBS WITHOUT THE GUIDANCE OF THE STRUCTURAL ENGINEER MAY REQUIRE REWORK.
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- 16) ALL PLUMBING LINES THAT CROSS A FOUNDATION GRADE BEAM OR PENETRATE THROUGH A PERIMETER FOUNDATION GRADE BEAM SHALL BE SLEEVED WITH A SLEEVE THAT IS AT LEAST 3-INCHES LARGER THAN PLUMBING PIPE. THE SLEEVED PIPE SHOULD BE CENTERED IN THE SLEEVE.
- 17) THE GROUND IMMEDIATELY ADJACENT TO THE FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF NOT LESS THAN ONE UNIT VERTICAL IN 20 UNITS HORIZONTAL (5%) FOR A MINIMUM DISTANCE OF 10 FEET MEASURED PERPENDICULAR TO THE FACE OF THE WALL. IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF 2% AWAY FROM THE FOUNDATION.

KEYNOTES:

- $\langle 202 \rangle$ EXISTING FOUNDATION TO REMAIN.
- 203 EDGE OF EXISTING FOUNDATION

SECTION VIEW

LEGEND

$\langle X \rangle$ KEYNOTE

CONCRETE FOOTING: SEE ASSOCIATED DETAIL ON SHEET S3.1

STEEL COLUMN: SEE TABLE 11 ON SHEET S1.2

 $\langle F\# \rangle$

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FRAMING LAYOUT GENERAL NOTES:

- 1) THE FRAMING LAYOUT IS INTENDED TO SPECIFY THE MAIN STRUCTURAL MEMBERS AND ORIENTATION FOR THE ROOF, FLOOR, WALLS AND CEILING SYSTEM. FRAMING FOR BLOCKING, FURR DOWNS, STAIRS, DROPPED OR RAISED CEILING, REINFORCEMENT FOR WALL MOUNTED ITEMS, FIRE BLOCKING OR PROTECTION AND FRAMING MEMBERS FOR NON-STRUCTURAL ELEMENTS ARE NOT SHOWN AND MAYBE NEEDED. REFER TO THE ARCHITECTURAL/DESIGNER/OWNER PLANS AND OVERALL PROJECT SCOPE, SPECIFICATIONS AND LOCAL BUILDING CODES FOR FRAMING REQUIREMENTS BEYOND THE MAIN STRUCTURAL SYSTEM.
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- 3) DO NOT ALLOW NON-LOAD BEARING WALLS AND CEILINGS TO SUPPORT UPPER FLOORS OR ROOF FRAMING MEMBERS.
- 4) REFER TO STRUCTURAL GENERAL NOTES ON SHEET S1.1 FOR PROJECT SPECIFICATIONS.
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- 8) ALL FRAMING SHOULD REMAIN EXPOSED AND UNCONCEALED FOR REVIEW BY THE STRUCTURAL ENGINEER WHEN THE ENTIRE STRUCTURAL FRAME IS COMPLETE. THE CONTRACTOR SHOULD NOTIFY THE STRUCTURAL ENGINEER OF ANY AND ALL DEVIATIONS FROM THE PLANS FOR REVIEW BY THE STRUCTURAL ENGINEER. DEVIATIONS FROM THE PLANS MAY NOT BE ACCEPTED BY THE STRUCTURAL ENGINEER AND MAY REQUIRE THE FRAME TO BE REMOVED AND RECONSTRUCTED.
- 9) STRUCTURAL DESIGN OF ROOF FRAMING DOES NOT ACCOUNT FOR CONSTRUCTION LOADS OF ROOF MATERIAL STACKED.

KEYNOTES:

- 603 EDGE OF EXISTING BUILDING
- $\langle 607 \rangle$ CANTILEVER FRAMING OVER SUPPORT BELOW
- 610 TOP OF BEAM TO MATCH TOP OF COLUMN. FIELD WELD TO COLUMN WITH 1/4" FILLET OR FLARE BEVEL AS REQUIRED ALL AROUND.
- $\langle 622 \rangle$ EXISTING FRAMING AND FOUNDATION TO REMAIN

LEGEND

(SB#)

SHEET

STEEL BEAM - SEE TABLE #10 ON SHEET S1.2

SECTION VIEW

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CONSTRUCT, INSPECT AND MAINTAIN BRACING AND SHORING SYSTEMS TO SUSTAIN PRESCRIBED SERVICE LOADS PER THE INTERNATIONAL BUILDING CODE. THE CONTRACTOR WILL BE REQUIRED TO CORRECT AT HIS OWN EXPENSE ANY SUBSIDENCE, STRUCTURAL DAMAGE OR OTHER

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FRAMING LAYOUT GENERAL NOTES:

- 1) THE FRAMING LAYOUT IS INTENDED TO SPECIFY THE MAIN STRUCTURAL MEMBERS AND ORIENTATION FOR THE ROOF, FLOOR, WALLS AND CEILING SYSTEM. FRAMING FOR BLOCKING, FURR DOWNS, STAIRS, DROPPED OR RAISED CEILING, REINFORCEMENT FOR WALL MOUNTED ITEMS, FIRE BLOCKING OR PROTECTION AND FRAMING MEMBERS FOR NON-STRUCTURAL ELEMENTS ARE NOT SHOWN AND MAYBE NEEDED. REFER TO THE ARCHITECTURAL/DESIGNER/OWNER PLANS AND OVERALL PROJECT SCOPE, SPECIFICATIONS AND LOCAL BUILDING CODES FOR FRAMING REQUIREMENTS BEYOND THE MAIN STRUCTURAL SYSTEM.
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- 9) STRUCTURAL DESIGN OF ROOF FRAMING DOES NOT ACCOUNT FOR CONSTRUCTION LOADS OF ROOF MATERIAL STACKED.

KEYNOTES:

- 603 EDGE OF EXISTING BUILDING
- (607) CANTILEVER FRAMING OVER SUPPORT BELOW
- (622) EXISTING FRAMING AND FOUNDATION TO REMAIN

LEGEND

KEYNOTE

STEEL BEAM - SEE TABLE #10 ON SHEET S1.2

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- 9) STRUCTURAL DESIGN OF ROOF FRAMING DOES NOT ACCOUNT FOR CONSTRUCTION LOADS OF ROOF MATERIAL STACKED.

KEYNOTES:

- 603 EDGE OF EXISTING BUILDING
- 605 STEEL ROOF JOIST: PIPE 1 STD., TYPICAL
- $\langle 607 \rangle$ CANTILEVER FRAMING OVER SUPPORT BELOW, TYPICAL.
- $\langle 622 \rangle$ EXISTING FRAMING AND FOUNDATION TO REMAIN

LEGEND

 $\langle X \rangle$

(SB#)

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KEYNOTE

STEEL BEAM - SEE TABLE #10 ON SHEET S1.2

SHEET SECTION VIEW

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CANOPY RAFTER

FRAMING LAYOUT

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FRAMING LAYOUT GENERAL NOTES:

1) THE FRAMING LAYOUT IS INTENDED TO SPECIFY THE MAIN STRUCTURAL MEMBERS AND ORIENTATION FOR THE ROOF, FLOOR, WALLS AND CEILING SYSTEM. FRAMING FOR BLOCKING, FURR DOWNS, STAIRS, DROPPED OR RAISED CEILING, REINFORCEMENT FOR WALL MOUNTED ITEMS, FIRE BLOCKING OR PROTECTION AND FRAMING MEMBERS FOR NON-STRUCTURAL ELEMENTS ARE NOT SHOWN AND MAYBE NEEDED. REFER TO THE ARCHITECTURAL/DESIGNER/OWNER PLANS AND OVERALL PROJECT SCOPE, SPECIFICATIONS AND LOCAL BUILDING CODES FOR FRAMING REQUIREMENTS BEYOND THE MAIN STRUCTURAL SYSTEM.

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Page Description

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A-1 ENGINEERING PROJECT # 24-10907

CANOPY ROOF

FRAMING LAYOUT

P.E

MAC

240224

2 August 2024

S2.7

These drawings and accompanying specifications are to be an instrument of the Architect. They are not to be used on other projects or extensions of this project except by agreement in writing and with appropriate compensation to the Architect.

SAN ANTONIO, TX. 78205

210.447.7000

Revisions:

- 2) THE FRAMER SHOULD REFERENCE BOTH THE STRUCTURAL PLANS AND THE ARCHITECTURAL PLANS FOR COORDINATING AND ALIGNING SECOND FLOOR AND ROOF BEAMS AS NEEDED TO ADEQUATELY SUPPORT THE FRAMING. NOTIFY THE STRUCTURAL ENGINEER IF LOWER LEVEL WALLS AND BEAMS DO NOT ALIGN WITH THE LATEST ARCHITECTURAL PLANS.
- 3) DO NOT ALLOW NON-LOAD BEARING WALLS AND CEILINGS TO SUPPORT UPPER FLOORS OR ROOF FRAMING MEMBERS.
- 4) REFER TO STRUCTURAL GENERAL NOTES ON SHEET S1.1 FOR PROJECT SPECIFICATIONS.
- 5) REFER TO SCHEDULES AND TABLES ON SHEET S1.2 FOR DESIGN SPECIFICATIONS.
- 6) WHERE MEMBER SIZES, SPECIFICATIONS, OR DESIGN KEYNOTES ON STRUCTURAL DETAILS AND SECTIONS CONFLICT WITH PROJECT SPECIFICATIONS, SCHEDULES AND TABLES, THE PROJECT SPECIFICATIONS, SCHEDULES AND TABLES SHALL GOVERN FIRST.
- 7) NOTIFY THE STRUCTURAL ENGINEER IF FIELD VERIFIED CONDITIONS LIMIT, INHIBIT OR PREVENT THE STRUCTURAL FRAME FROM BEING CONSTRUCTED FOLLOWING FRAMING CONSULTANT NEERING, L TECHNIQUES AND PRACTICES.
- 8) ALL FRAMING SHOULD REMAIN EXPOSED AND UNCONCEALED FOR REVIEW BY THE STRUCTURAL ENGINEER WHEN THE ENTIRE STRUCTURAL FRAME IS COMPLETE. THE CONTRACTOR SHOULD NOTIFY THE STRUCTURAL ENGINEER OF ANY AND ALL DEVIATIONS FROM THE PLANS FOR REVIEW BY THE STRUCTURAL ENGINEER. DEVIATIONS FROM THE PLANS MAY NOT BE ACCEPTED BY THE STRUCTURAL ENGINEER AND MAY REQUIRE THE FRAME TO BE REMOVED AND RECONSTRUCTED.
- 9) STRUCTURAL DESIGN OF ROOF FRAMING DOES NOT ACCOUNT FOR CONSTRUCTION LOADS OF ROOF MATERIAL STACKED.

KEYNOTES:

601 EDGE OF ROOF

603 EDGE OF EXISTING BUILDING

 $\langle 622 \rangle$ EXISTING FRAMING AND FOUNDATION TO REMAIN

LEGEND

 $\langle x \rangle$

R.T.A

KEYNOTE

DENOTES REFER TO ARCHITECT

SHEET

SECTION VIEW

ENGINEERING structural

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FRAMING KEY NOTES

1.1) EXISTING FOUNDATION TO REMAIN

- 3.1) CONCRETE FOUNDATION FIELD VERIFY. REFER TO STRUCTURAL FOUNDATION DESIGN.
- 3.10) ADD W.R. MEADOWS INTRALOK BONDING AGENT TO EXISTING CONCRETE PRIOR TO PLACEMENT OF NEW CONCRETE SLAB. MECHANICALLY ROUGHEN OR HIGH PRESSURE WATER-JET THE EXISTING CONCRETE SUBSTRATE TO A MINIMUM CONCRETE SURFACE PROFILE (CSP) OF CSP-4 OR HIGHER, DEPENDING ON SUBSTRATE CONDITION. REMOVE ALL UNSOUND CONCRETE AND PROVIDE A PROFILED, POROUS SURFACE. THE SUBSTRATE MUST BE DUST-FREE, AND FREE OF GREASE, OIL, DIRT, CURING COMPOUNDS, RELEASE AGENTS, OR ANY OTHER SURFACE OR PENETRATED CONTAMINANTS THAT WILL ADVERSELY AFFECT THE BOND. SANDING, WIRE BRUSHING, OR GRINDING ARE NOT APPROVED SURFACE PREPARATION METHODS. SUBSTRATE MUST BE SATURATED SURFACE DRY (SSD) AND FREE OF STANDING WATER. INTRALOK MUST BE THOROUGHLY WORKED AND SCRUBBED ONTO THE PREPARED CONCRETE SURFACE IN ORDER TO REALIZE MAXIMUM BONDING EFFICIENCY. THE CEMENTATIOUS MIX SHOULD BE APPLIED WHILE INTRALOK IS STILL TACKY. REFER TO WR MEADOWS FOR ADDITIONAL REQUIREMENTS.
- 3.12) 24-INCHES LONG #4 DOWELED AND EPOXIED INTO EXISTING SLAB AT 12-INCHES ON CENTER.
- 3.37) CONCRETE TOPPING SLAB REINFORCED WITH 100 PERCENT PURE NYLON FILAMENTIZED BUNDLES, AS MANUFACTURED BY NYCON, INC. (1-800-456-9266). FIBERS SHALL BE 3/4-INCH IN LENGTH AND MIXED AT MANUFACTURER'S RECOMMENDED AMOUNT.
- 3.66) SLAB HAIRPINS: ADD #3 U-SHAPED HAIR PINS AT 24" ON CENTER IN EACH DIRECTION THROUGHOUT THE FULL EXISTING FOUNDATION/SLAB. EPOXY THE HAIRPINS 3-INCHES INTO THE EXISTING SLAB. TIE NEW SLAB REINFORCEMENT TO HAIR PIN REINFORCEMENT.
- 3.76) REINFORCED CONCRETE FOOTING: ADD #4 REBAR AT 0'-9" ON CENTER MAXIMUM EACH WAY AT BOTTOM WITH 3" CLEAR FROM EDGE OF FORM.

5.20) CONTINUOUS LIGHT GAUGE TOP TRACK:

- AT STEEL BEAM: FASTEN TRACK TO STEEL BEAM WITH HILTI X-U P8 FASTENER AT 16-INCHES ON CENTER ALONG THE FULL LENGTH OF TRACK.
- AT PURLIN: FASTEN TRACK TO SUPPORT WITH NO. 10 SELF TAPPING TH SCREW AT EACH PURLIN SUPPORT
- AT STEEL DECK: FASTEN TRACK TO SUPPORT WITH NO. 10 SELF TAPPING TE SCREW AT 16-INCHES ON CENTER ALONG THE FULL LENGTH OF TRACK.

5.21) LIGHT GAUGE METAL STUD

- 5.22) DOUBLE LIGHT GAUGE METAL KING JACK FASTENED TO CRIPPLE STUD WITH NO.10 SELF TAPPING TEK SCREWS AT 8-INCHES ON CENTER.
- 5.24) CONTINUOUS LIGHT GAUGE BOTTOM TRACK
- 5.25) DOUBLE BUILT-UP LIGHT GAUGE BOXED BEAM.
- 5.27) TOP AND BOTTOM TRACK TO CREATE BOXED HEADER SHALL BE 362T200-43 OR 600T200-43. FASTEN MEMBERS TOGETHER WITH NO.10 TEK SCREWS AT 8-INCHES ON CENTER PER FLANGE.

5.28) CRIPPLE STUD

- 5.29) SILL BEND END OF SILL AT LEAST 6-INCHES TO FASTEN SILL TO CRIPPLE STUD. FASTEN SILL TO CRIPPLE STUD WITH (2) NO. 10 SELF TAPPING TEK SCREWS.
- 5.31) LIGHT GAUGE METAL BLOCKING WITH BENT ENDS TO FASTEN TO LIGHT GAUGE MEMBERS. ADD (2) NO.8 TEK SCREWS TO FASTEN BLOCKING.
- 5.32) 1-INCH WIDE x 18 GAUGE METAL STRAP AT LOCATIONS WERE LIGHT GAUGE METAL BLOCKING CANNOT BE ADDED (TYPICALLY AT PLUMBING/MECHANICAL CHASES). FASTEN STRAP TO STUDS WITH NO.8 TEK SCREWS.
- 5.33) BUILT UP LIGHT GAUGE METAL BOX COLUMN WITH SIMILAR STUD MEMBERS. FASTEN FLANGES OF MEMBERS TOGETHER WITH NO.10 TEK SCREWS AT 8-INCHES ON CENTER
- 5.34) LIGHT GAUGE TRACK TO BUILT-UP STUD WITH (6) NO. 10 TEK SCREWS.
- 5.46) WINDOW FRAME SILL CONNECTOR
- 5.50) FOR LIGHT GAUGE STEEL TO LIGHT GAUGE STEEL CONNECTION, SUCH AS TRACK TO STUD, USE ONE OF THE FOLLOWING OR EQUIVALENT: -#10 TEK SELF-TAPPING SCREW
- TYPICAL STUD ANCHORAGE
 5.51) USE HILTI X-C G3 MX OR EQUIVALENT TO FASTEN LIGHT GAUGE STEEL

 MEMBERS TO CONCRETE SURFACES

5.64) 4 x 4 x1/4 LIGHT GAUGE METAL COLUMN

ISSUED FOR CONSTRUCTION

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Page Description A-1 ENGINEERING PROJECT # 24-10907 METAL STUD

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S3.1

FRAMING KEY NOTES

GRIG

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ATION

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S3.2

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Architect

			PIPING DESIGNATION				
DOUBLE LINE	SINGLE LINE		EXAMPLE: 2" CH	WS	2" CHWS		
-[]		PIPE		SYSTEM SE			
-{		WELDED JOINT		INCHES)	PE SIZE (IN		
		SCREWED JOINT (OR GENERIC SINGLE LINE)	DUC	TWORK	SYMBOLS		
	- -	FLANGED JOINT		SIDEWALL C	GRILLE OR REGISTER		
	• • • • • • • • • • • • • • • • • • • •	UNION		MARK (SEE AND CONST	SCHEDULE FOR TYPE, SERVICE RUCTION) INCHES)		
	· · · · · · · · · · · · · · · · · · ·	GROOVED END JOINT		SLOT DIFFU	SER		
		BRAIDED FLEXIBLE COUPLING		OF SLOTS, N	SCHEDULE FOR WIDTH AND NUMBER NECK SIZE AND CONSTRUCTION)		
	· · · · · · · · · · · · · · · · · · ·	SPHERICAL FLEXIBLE COUPLING		DESIGN CFN	E1) A		
	· · · · · · · · · · · · · · · · · · ·	BELLOWS-TYPE FLEXIBLE COUPLING		DOOR GRILLE	OR (UNDERCUT HEIGHT SHOWN)		
	· · · · · · · · · · · · · · · · · · ·	MECHANICAL (BALL) JOINT		LOUVER			
		GROOVED END		SUPPLY AIRFLC	W HAUST AIRFLOW		
-=		FLANGED COUPLING			UME FAN-POWERED TERMINAL UNIT		
	- }				DE (1177. FUR ALL FAN-POWERED S) (OLLIME) OR CV/ (CONSTANT		
	'' 1			VOLUME) TERM (SHOWN WITH	INAL UNIT FERMINAL HEATING COIL)		
	≀	(LONG RADIUS UON)			DUCT UNDER POSITIVE PRESSURE,		
	ـــــــــــــــــــــــــــــــــــــ	ELBOW, 90 DEGREE (LONG RADIUS UON)					
	• • • • • • • • • • • • • • • • • • • •	ELBOW, 90 DEGREE - CHANGE IN DIRECTION			FLEXIBLE CONNECTION		
		TOWARD VIEWER ELBOW, 90 DEGREE -		VD	(PARALLEL BLADE UON)		
	- (-+	AWAY FROM VIEWER	OBD	OBD	OPPOSED BLADE DAMPER (OBD)		
		TEE		M	MOTORIZED VOLUME DAMPER, ACTUATOR TYPE AS SPECIFIED		
-{	· + O + · · · ·	TEE, BRANCH TOWARD VIEWER		BDD	BACKDRAFT DAMPER		
	- <u>}</u> +⊖ ≀	TEE, BRANCH AWAY FROM VIEWER			FIRE DAMPER (FD) OR COMBINATIO FIRE/SMOKE DAMPER (FSD)		
		LATERAL	FDx	FDx	 HORIZONTAL POSITION VERTICAL POSITION HOUR RATING 		
	· · · · · · · · · · · · · · · · · · ·	REDUCER - CONCENTRIC			ACCESS DOOR		
		REDUCER - ECCENTRIC	AD ∨AD				
-(- [САР		6	HUMIDIFIER		
-{	- <u>- X</u> i	ANCHOR			MITERED ELBOW (WITH TURNING VANES UON)		
<u>PG</u>	PG	PIPE ALIGNMENT GUIDE					
	_ BF,	BLIND FLANGE			RADIUS ELBOW (R=1.5W UON)		
ЩР <u> </u>	"						
d	- <u> </u>	TEST PORT			2-WAY T-SPLIT (FLOWS DIVERGING ONLY)		
- Contractor	· ·-[]1	PIPING WITH INSULATION			BRANCH DUCT TAP		
E E 	E E	TRACING TYPE AS NOTED (E=ELECTRIC, S=STEAM, HW=HOT WATER)			(FLOW TO OR FROM BRANCH DUCT)		
<u> </u>		SECONDARY CONTAINMENT (SLEEVED) PIPING			DUCT TRANSTITION, ASYMETRIC (RECT x RECT)		
		STRAINER - "Y" TYPE WITH BLOW DOWN			DUCT TRANSTITION, SYMETRIC (RECT x RECT)		
s C		STRAINER - BASKET TYPE			DUCT TRANSTITION (RECT x ROUND)		

	DUCTV	NORK	SYMBOLS				ABBREVIATIONS		
	INE SINGI			CHWPP	CHILLED WATER PRIMARY PUMP	HPS	HIGH PRESSURE STEAM		
				CHWR	CHILLED WATER RETURN	HR	HOUR	PHC	
	- W/D	— W/D		CHWS	CHILLED WATER SUPPLY CHILLED WATER SECONDARY PUMP	HS HSH	HUMIDITY SENSOR HUMIDITY SENSOR HIGH LIMIT	PHWR PHWS	PRIMARY HOT WATER RETURN PRIMARY HOT WATER SUPPLY
→ • W/D	$ \rightarrow $	W/D	UNLINED DUCTWORK. FIRST DIMENSION (W) IS SIDE SHOWN	CI	CAST IRON	HSTAT	HUMIDISTAT	PRS	PRESSURE REDUCING STATION
				CIP	CIRCUIT	HTHW HV	HIGH TEMPERATURE HOT WATER HOSE VALVE	PRV PRV	PRESSURE REDUCING VALVE PRESSURE REGULATING VALVE
	- W/D	— W/D		CKV		HVAC	HEATING, VENTILATING AND AIR CONDITIONING	PPM	PARTS PER MILLION
 ✓ W/D 		W/D	FIRST DIMENSION (W) IS SIDE SHOWN	CLG	COOLING	HVV HWB	HOT WATER HOT WATER BOILER	PLBG	PLOMBING PRESSURE
	DØ			CMP	CORRUGATED PIPE	HWC		PRI	
	- 00	DØ		COEF	COEFFICIENT	HWCP	HOT WATER CIRCULATING PUMP HOT WATER PUMP	PS PSF	POUNDS PER SQUARE FOOT
₹ • DØ		שט	ROUND DUCT. D = DIAMETER	COMPR	COMPRESSOR	HWR	HOT WATER RETURN	PSI	POUNDS PER SQUARE INCH
				CONDN	CONDENSATION	HYD	HYDRANT	PSID	POUNDS PER SQUARE INCH ABSOLUTE POUNDS PER SQUARE INCH DIFFERENTIAL
		W/DØ w/DØ	FLAT OVAL DUCT	CONN CPLG		HZ	HERTZ (FREQUENCY)	PSIG PSI	POUNDS PER SQUARE INCH GAUGE
₹ • W/DØ			(W=MAJOR AXIS WIDTH, D=MINOR AXIS DIAMETER)	CRP	CONDENSATE RETURN PUMP			PSV	PRESSURE SAFETY VALVE
				CT CU	COOLING TOWER COPPER	I/O	INPUT/OUTPUT	ΡΤ ΡΤΑC	PIPE THREAD, PNEUMATIC TUBE
	$\square \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc $	\bigcirc \bigcirc \land	FLEXIBLE DUCT	CU FT	CUBIC FEET	ICW	INDUSTRIAL CITY WATER (NON-POTABLE)	PTRV	PRESSURE TEMPERATURE RELIEF VALVE
	$\square + \square$		OFFSET, RECTANGULAR DUCT (45° ELBOWS LION)	CUIN	COBIC INCH CABINET UNIT HEATER	ID IE	INSIDE DIAMETER INVERT ELEVATION		
	<u> </u>			CV Cu		IHP	INDICATED HORSEPOWER	Q	TOTAL, TOTAL HEAT
8			OFFSET, ROUND DUCT (45° ELBOWS LION)	CW	CLOCKWISE, CONDENSER WATER	IN WC		QTY	QUANTITY
				CWP		INV			
<u> </u>			DIRECTION OF AIRFLOW	CWS	CONDENSER WATER SUPPLY	IP	IRON PIPE IRON PIPE SIZE, INCHES PER SECOND	R	RELOCATED
 		D		פח		IPT IP		RA	
	<u> </u>		AIR FLOW (R=RISE, D=DROP)	DBT	DRY BULB TEMPERATURE	IW	INDIRECT WASTE, INDUSTRIAL WASTE	RAD	RADIATOR
		' 		dB				RCVR RECT	
			DUCT UNDER NEGATIVE PRESSURE, SECTION TOWARD VIEWER	DCW	DOMESTIC COLD WATER	K	KELVIN [DEGREES]	REFR	REFRIGERATION, REFRIGERANT
				DDC DDCFP	DIRECT DIGITAL CONTROL DIRECT DIGITAL CONTROL FIFLD PANFL	k KIP	THERMAL CONDUCTIVITY THOUSAND POUNDS	RD RET	ROOF DRAIN RETURN
			DUCT UNDER POSITIVE PRESSURE,	DEG	DEGREES [CELSIUS OR FAHRENHEIT]	KIP FT	THOUSAND FOOT-POUNDS	RED	REDUCER
			SECTION TOWARD VIEWER	DENS DEWPT	DENSILY DEW POINT TEMPERATURE	KW KWh	KILOWATT KILOWATT HOUR	ĸ⊨v REF	REFERENCE
<u> </u>			DUCT UNDER NEGATIVE PRESSURE	DIA				RFGT	REFRIGERANT
			SECTION AWAY FROM VIEWER	DIFF		LAT	LEAVING AIR TEMPERATURE	RGH RH	RELATIVE HUMIDITY
				DIV		LB		RHC	
				DPS	DIFFERENTIAL PRESSURE SENSOR DIFFERENTIAL PRESSURE TRANSMITTER	LDBT	LINEAR FEET	RHV	REHEAT VALVE
	ABE	BREVI	ATIONS	DR DW/V	DRAIN DRAIN WASTE & VENT	LG	LENGTH	RLL RPM	REFRIGERANT LIQUID LINE
						LHG	LATENT HEAT GAIN	RPS	REVOLUTIONS PER SECOND
A AAV	AIR LINE	VENT		F	EXISTING	LMTD	LEAST MEAN TEMPERATURE DIFFERENCE	RSL RTU	REFRIGERANT SUCTION LINE
ABS	ABSOLUTE			EAT	ENTERING AIR TEMPERATURE	LPAS	LOW PRESSURE ALARM SWITCH	RV	RELIEF VALVE
ABV AC	ABOVE ALTERNATING CL	URRENT, AIR CL	JRTAIN	ECC ECON	ECCENTRIC ECONOMIZER	LPB LPC	LOW PRESSURE BOILER	S	SECOND
ACCU	AIR COOLED CON		T	ECU	EVAPORATIVE COOLING UNIT	LPDT	LOW PRESSURE DRIP TRAP SET	SA	SUPPLY AIR
ACHKV	ACCESS PANEL	CK VALVE		EDBI	ENTERING DRY BULB TEMPERATURE ENERGY EFFICIENCY RATIO	LPS LRA	LOW PRESSURE STEAM LOCKED ROTOR AMPS	SAF SAT	SUPPLY AIR FAN SATURATION
ACU		NG UNIT		EFF	EFFICIENCY	LT		SC	
ADP	APPARATUS DEV	N POINT		ENT	ENTERING	LTHW	LEAST TEMPERATURE DIFFERENCE	SF	SMORE DAMPER SAFETY FACTOR, SQUARE FEET
AF AFF	AIR FILTER			EOV		LVR		SHP	SHAFT HORSEPOWER
AHU	AIR HANDLING UN	NIT		ESP	EXTERNAL STATIC PRESSURE	LWCO	LOW WATER CUT-OFF	SH	SENSIBLE HEAT
AL I AMB	ALTITUDE AMBIENT			ET EVAP	EXPANSION TANK, ENTERING TEMPERATURE EVAPORATOR	LWT	LEAVING WATER TEMPERATURE	SHG SHGC	SENSIBLE HEAT GAIN SOLAR HEAT GAIN COEFFICIENT
AMP				EWBT	ENTERING WET BULB TEMPERATURE			SHR	SENSIBLE HEAT RATIO
APD	AIR PRESSURE D	OROP		EXCH	ENTERING WATER TEMPERATURE EXCHANGER	mA	MILLIAMPERES	SHWR	SECONDARY HOT WATER RETORN SECONDARY HOT WATER SUPPLY
APPROX	APPROXIMATE			EXH	EXHAUST	MAU	MAKE UP AIR UNIT	SLNT	SEALANT SEALEVEL
AS	AIR SEPARATOR			EXP JT	EXPANSION JOINT	MAX	MAXIMUM	SLV	SLEEVE
ASU ASV	AIR SUPPLY VEN ANGLE STOP VAL	IT LVE				MB MCA	MIXING BOX MINIMUM CIRCUIT AMPACITY	SMP SNSR	SUMP PUMP SENSOR
ATC	AUTOMATIC TEM	IPERATURE COI	NTROL	FA	FACE AREA, FREE AREA	MCC	MOTOR CONTROL CENTER	SOLV	SOLENOID VALVE
ATM	ATMOSPHERE ATMOSPHERIC V	/ENT		FCU FD	FAN COIL UNIT FIRE DAMPER	MCF MDC	THOUSAND CUBIC FEET MOTOR DIRECT CONNECT	SOV SP	SHUT OFF VALVE STATIC PRESSURE
AUV		IT		FDW		MET		SPEC	SPECIFICATION STAIDWELL DESSUBILITATION FAN
AVG	AVERAGE			°F	FACE-IO-FACE FAHRENHEIT [DEGREES]	MIN	MINIMUM	SPH	STATIC PRESSURE HIGH LIMIT
AWG	AMERICAN WIRE	GAUGE		FLM FL SW/		MOCP		SPL SPL V	STATIC PRESSURE LOW LIMIT
				FLA	FULL LOAD AMPS	MP	MEDIUM PRESSURE	SPS	STATIC PRESSURE SENSOR
B&S	BELL & SPIGOT			FLEX FLG	FLEXIBLE CONNECTION FLANGE	MPC MPH	MEDIUM PRESSURE CONDENSATE MILES PER HOUR	SQ SSP	SQUARE STAINLESS STEEL PIPE
B/B	BACK TO BACK			FL	FLOW LINE (FL)	MPS	MEDIUM PRESSURE STEAM	SST	STAINLESS STEEL
BAL BARO PR	BALANCE BAROMETRIC PR	RESSURE		FOB FOT	FLAT ON BOTTOM FLAT ON TOP	MPT MTD	MALE PIPE THREAD MEAN TEMPERATURE DIFFERENCE	STGEN	STEAM GENERATOR SOUND TRANSMISSION CLASS
BBD	BOILER BLOWDO	DWN		FLTR		MTHW	MEDIUM TEMPERATURE HOT WATER	STD	STANDARD
BFV	BUTTERFLY VAL	VE		FPM FPS	FEET PER SECOND	MU	MAKE-UP WATER	STP	STEAM STANDARD TEMPERATURE & PRESSURE
BFBP BFW	BOILER FEED BO	OSTER PUMP		FRP	FIBERGLASS REINFORCED PLASTIC			STR	STRAINER
BLDG	BUILDING			FSS	FREEZE STAT	NA	NOT APPLICABLE	SUP	SUPPLY
BHP BLR	BRAKE HORSEPC BOILER	OWER, BOILER I	HORSEPOWER	FT	FLOW TRANSMITTER, FOOT, FEET	NC NIC	NOISE CRITERIA, NORMALLY CLOSED	SV	SAFETY VALVE
BLW	BELOW	-		FP	FREEZING POINT	NO	NORMALLY OPEN, NUMBER	T	TEMPERATURE SENSOR
BLWDN BO	BLOW DOWN LIN BLOWOFF	1E		FTR FURN	FINNED TUBE RADIATION FURNACE, FURNISH	NPS NR	NOMINAL PIPE SIZE NOISE REDUCTION	TA	TEMPERATURE AND PRESSURE [VALVE] THROWAWAY
BOD		CT =		FVEL		NRC		TC	
BOS	BOTTOM OF STE	- EL		FVNR	FULL VULTAGE NUN-KEVEKSING	NI O	NUT TO SUALE	TCV	TEMPERATURE CONTROL PAINEL
BS BSP	BOTH SIDES BLACK STEEL PIE	PE		C^				TD TFMP	TEMPERATURE DIFFERENCE
BSTR	BOOSTER			GAL	GALLON	OA	OUTSIDE AIR	TFA	TO FLOOR ABOVE
BSS BT WLD	BUTT WELD	UCTURAL STEE	:L	GEN	GENERATOR, GENERAL GAI VANIZED IRON	OAF OAI	OUTSIDE AIR FAN OUTSIDE AIR INTAKE	tfb Thk	I O FLOOR BELOW THICK(NESS)
BTU	BRITISH THERMA			GIP	GALVANIZED IRON PIPE	OD	OUTSIDE DIAMETER	TMH	TOP OF MANHOLE
BV	BRITISH THERMA BALL VALVE	AL UNIT PER HO	UK	GLV GPD	GLOBE VALVE GALLONS PER DAY	OFCI OFD	OWNER FURNISHED / CONTRACTOR INSTALLED OVERFLOW DRAIN	inl TR	I UNNEL TONS OF REFRIGERATION
BW	BOTH WAYS			GPH	GALLONS PER HOUR	OGA	OIL GAUGE	TOP	
אזס	DIFASS			GPM GR	GALLONS PER MINUTE GLYCOL RETURN. GRAINS	OLVL OPRS	OIL LEVEL OIL PRESSURE	TS	I KANSFEK TUBE STEEL
				GS	GLYCOL SUPPLY	ORD		TSTAT	THERMOSTAT
с	[THERMAL] COND	DUCTANCE		GSH GTD	GRAND SENSIBLE HEAT GREATEST TEMPERATURE DIFFERENCE	OSP	OPERATING STEAM PRESSURE	U	HEAT TRANSFER COEFFICIENT
°C C-C	CELSIUS [DEGRE CENTER TO CEN	-ES] ITER		GTH	GRAND TOTAL HEAT	OVFL 07	OVERFLOW OUNCE	UH UON	UNIT HEATER

			G R G
	GENERAL NOTES]	architecture
REFER TO ALL BRAN SCHEDULI PROVIDE I NOT USE I PROVIDE I GRILLES L BALANCIN MAXIMUM ALL BALAN REMOTE I BOWDEN COVER PL WIRE. FLEX DUC ELECTRIC CONNECT	O SHEET M-001 FOR SYMBOLS, ABBREVIATIONS AND GENERAL NOTES. CH DUCTS TO BE SIZE OF GRILLE NECK LISTED ON THE AIR DEVICE E UNLESS NOTED OTHERWISE. BALANCING DAMPERS IN BRANCH DUCT TO ALL SUPPLY DIFFUSERS. DO DAMPER DIFFUSER FOR BALANCING. BALANCING DAMPER IN BRANCH DUCT TO ALL EXHAUST AND RETURN .OCATED IN HARD CEILINGS. DO NOT USE DAMPER AT GRILLE FOR G. DUCT TRANSITION ANGLE IS 30°. NCING DAMPERS THAT ARE INACCESSIBLE SHALL BE PROVIDED WITH A DAMPER OPERATOR, SIMILAR TO A YOUNG REGULATOR, 270-301-EZ REMOTE CABLE CONTROL CONCEALED CEILING REGULATOR WITH 3" .ATE, 5020CC ROUND MANUAL DAMPER AND BCW BOWDEN CASING AND T SHALL NOT EXCEED 5'-0" IN LENGTH. AL CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL ION POINTS WITH THE EQUIPMENT INSTALLER PRIOR TO ROUGH-IN.	Arct Arct C E TX. F am Con	nitect MANTONIO, TX. 78205 A47.7000 nitect MARTONIO, TX. 78205 A47.7000 NICLARY NICLARY NICLARY NANTONIO, TX. 78205 NICLARY NANTONIO, TX. 78205 NICLARY NANTONIO, TX. 78205 NICLARY NANTONIO, TX. 78205 NICLARY NANTONIO, TX. 78205 NICLARY NANTONIO, TX. 78205 NICLARY NANTONIO, TX. 78205 NICLARY NIC
NUMBER	KEYED NOTES (#) DESCRIPTION		MARK M. STEHNEY
		07	1/25/2024
1	ROUTE 6" DIAMETER EXHAUST DUCT UP THROUGH ROOF TO ROOF CAP. PROVIDE ROOF CAP WITH BIRD SCREEN AND BACKDRAFT DAMPER.	Rev	visions:
2	PROVIDE AIR HANDLER UNIT ON A RAISED PLATFORM WITH A 24" DEEP INTERNALLY LINED RETURN AIR PLENUM. ROUTE 3/4" CONDENSATE DRAIN TO FLOOR DRAIN.		
3	PROVIDE TWO-POSITION MOTORIZED DAMPER IN OUTSIDE AIR DUCT		
4	PROVIDE 18X12 OUTSIDE AIR LOUVER ON EXTERIOR WALL WITH A MINIMUM 0F 0.3 SQAURE FEET OF FREE AREA. COORDINATE EXACT LOCATION WITH ARCHITECT.		
5	ROUTE 3/4" CONDENSATE DRAIN DOWN TO LAVATORY TAILPIECE. COORDINATE WITH PLUMBING CONTRACTOR.		
6	PROVIDE 4" THICK CONCRETE HOUSEKEEPING PAD. PAD SHALL EXTEND 6" BEYOND UNITS IN ALL DIRECTIONS WITH 18" MINIMUM CLEARANCE BETWEEN UNITS.		
7			
8	PROVIDE 24" DEEP IN FERNALLY LINED RETURN AIR PLENUM. PLENUM SHALL BE SAME SIZE AS RETURN AIR OPENING.		
9	RETURN AIR DUCT SHALL BE OPEN-ENDED. OPEN-END SHALL BE COVERED WITH WIREMESH HARDWARE CLOTH.		
10	PROVIDE 8/8 RETURN AIR TRANSFER BOOT ABOVE CEILING.		7
11	PROVIDE 12/12 RETURN AIR TRANSFER BOOT ABOVE CEILING.		5
12	PROVIDE ACCESS PANEL FULL SIZE OF AIR HANDLING UNIT. COORDINATE WITH ARCHITECT.		ЛТК
		-	TAL

Page Description

These drawings and accompanying specifications are to be an instrument of the Architect. They are not to be used on other projects or extensions of this project except by agreement in writing and with appropriate compensation to the Architect.

Drawn By	:	DRW
Checked I	Зу:	СНК
Project No).	240224
Date:	25 JU	LY 2024
Page		
MECHANICAL	- FLOOR	PLANS - LEVEL 01

M-101

23 00 00 BASIC MECHANICAL REQUIREMENTS:

1. DUCTWORK RUNOUTS TO AIR DEVICES SHALL BE RIGID ROUND SHEETMETAL. FLEXIBLE DUCT MAY BE UTILIZED FOR THE LAST 72" MAX. OF THE RUNOUT.

ALL ROUND SPIN-IN TAPS IN LOW PRESSURE DUCTWORK DOWNSTREAM OF VAV BOXES SHALL BE MADE WITH A DAMPER EXTRACTOR SPIN-IN COLLAR. DAMPERS SHALL INCLUDE A 2" HIGH

CONTROL HANDLE STAND-OFF. 3. THE CONTRACTOR SHALL FURNISH SUBMITTALS FOR ALL NEW EQUIPMENT MATERIALS, CONTROLS, AND FIXTURES TO BE PROVIDED. SEAL ALL NEW AND EXISTING PIPE, CONDUIT, AND DUCT PENETRATIONS RATED WALLS AND FLOOR SLABS WITH FIRE CAULKING, WHICH THRU FIRE SHALL BE EQUAL TO 3M BRAND CP25WP FIRE CAULK AND AS APPROVED BY THE ARCHITECT. INSTALL CAULKING IN

STRICT ACCORDANCE WITH ALL MANUFACTURERS RECOMMENDATIONS AND WRITTEN INSTRUCTIONS AND IN STRICT ACCORDANCE WITH ALL APPLICABLE UL DETAILS. SEAL ALL PENETRATIONS AT ALL WALLS EXTENDING FROM FLOOR TO STRUCTURE WITH SOUND-PROOFING SEALANT MATERIAL. REFER TO ADJACENT DUCTWORK PENETRATION SPECIFICATION. 6. <u>PROJECT CLOSE-OUT</u> - THE HVAC CONTRACTOR SHALL PERFORM THE FOLLOWING TASKS UPON PROJECT COMPLETION.

6.1. PROVIDE AND INSTALL CLEAN FILTERS FOR ALL EQUIPMENT SERVING THIS INCLUDING THE BASE BUILDING AIR HANDLING UNIT. LEASE 6.2. SUBMIT TWO (2) COPIES OF HVAC TEST-ADJUST-BALANCE REPORTS TO THE ARCHITECT/ENGINEER FOR REVIEW.

6.3. SUBMIT TWO (2) COPIES OF OWNERS MAINTENANCE MANUALS. THE MANUALS SHALL INCLUDE RATINGS, CAPACITIES, PARTS LISTS, WIRING DIAGRAMS, SERVICE/MAINTENANCE RECOMMENDATIONS, APPROVED SHOP DRAWINGS, SUBMITTALS, AND WARRANTIES. 6.4. SUBMIT WRITTEN RESPONSE TO ALL FIELD REPORTS INDICATING CORRECTIVE ACTIONS TAKEN AND DATE CORRECTIVE ACTION WAS TAKEN TO TH ARCHITECT/ENGINEER FOR REVIEW.

TESTING AND BALANCING: TAB WORK IS TO BE PERFORMED BY AN AABC CERTIFIED TEST AND WITH EXPERIENCE IN TESTING AND BALANCING THE BALANCE FIRM SYSTEMS AND EQUIPMENT FURNISHED UNDER DIVISION 23. THE TAB FIRM IS TO BE APPROVED BY THE A/E AND OWNER'S REPRESENTATIVE. THE TAB FIRM IS TO GUARANTEE THAT THE TEST AND BALANCE WORK WILL BE PERFORMED IN ACCORDANCE WITH AABC STANDARDS AND PROCEDURES. A PRELIMINARY REPORT AND AGENDA SHALL BE SUBMITTED BY THE CONTRACTOR AND APPROVED PRIOR TO THE START

OF TESTING AND BALANCING WORK. 8. REFER TO GENERAL NOTES ON DWG. M-001 FOR ADDITIONAL REQUIREMENTS.

23 00 50 BASIC MECHANICAL MATERIALS AND METHODS:

ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF FEDERAL, STATE, AND LOCAL CODES, ORDINANCES, FACTORY MUTUAL REQUIREMENTS, AND REGULATIONS APPLICABLE TO WORK OF THIS DIVISION. IN ADDITION, THE WORK SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS, IF ANY, OF THE LOCAL UTILITY COMPANIES SERVICING THE PROJECT. CODES AND ORDINANCES INCLUDE, BUT ARE NOT LIMITED TO: THE 201.2 VIRGINIA STATEWIDE BUILDING CODE.

THE DRAWINGS ARE DIAGRAMATIC ONLY AND ARE NOT INTENDED TO BE EXACT IN SPECIFIC DETAIL FOR FINAL INSTALLATION OF THE WORK OF THIS DIVISION DUE TO THE SCALE.

THE WORK UNDER THIS DIVISION SHALL INCLUDE ALL WARRANTIES PROVIDED BY EQUIPMENT MANUFACTURERS. FURNISH COPIES OF WARRANTIES AND OPERATION & MAINTENANCE MANUALS TO OWNER PRIOR TO FINAL ACCEPTANCE.

SUPPORTS AND ANCHORS:

A. DUCT SUPPORT MATERIAL SHALL BE COLD ROLL FORMED 12 OR 14 GAUGE STEEL CHANNELS, HOT DIPPED GALVANIZED WITH IN-TURNED EDGES PUNCHED AS REQUIRED FOR THIS APPLICATION COMPLYING WITH ASTM A570 GR 33. NUTS, BOLTS, FASTENERS, & FITTINGS SHALL BE PUNCH PRESS FORMED FROM HOT ROLLED, HOT DIP GALVANIZED STEEL CONFORMING TO ASTM A576 & A570 GR 33. NUTS SHALL BE SPRING LOADED & ENDS SHAPED TO PERMIT QUARTER TURN LOCK IN THE FRAMING MEMBER. ALL COMPONENTS SHALL BE THE PRODUCT OF ONE MANUFACTURER. SUPPORTS BY UNISTRUT, KINDORF, B-LINE OR EQUAL ARE ACCEPTABLE.

DUCT SUPPORT INSTALLATION:

A. THE MAXIMUM PERMITTED SUPPORT SPACING FOR DUCTS WITH AREAS UP TO 4 SQUARE FEET IS 5 FEET. INSTALL HANGERS CLOSE TO TRANSVERSE JOINTS OF MAIN DUCTS AND BRANCH, CLINCH COLLAR BRANCH CONNECTIONS AND THE FIRST BRANCH ELBOWS AFTER NESTED SPLITS. LOCATE HANGERS OF DUCT PENETRATING WALLS OR PARTITIONS AS THOUGH THE WALLS WILL CONTRIBUTE NO SUPPORT TO THE DUCT. INSTALL SUPPORTS IN PAIRS ON EXACT OPPOSITE SIDES OF DUCT W/HORIZONTAL SUPPORT UNDER BOTTOM OF DUCT. INSTALL DUCT SUPPORTS FROM FLOORS, GRADE, OR WALLS WHERE APPLICABLE. PROVIDE MIN. OF ONE SET OF SUPPORTS FOR SHORT DUCT BRANCHES 3' OR LESS IN LENGTH. LOCATE DUCT SUPPORTS APPROXIMATELY 2 TO 24 INCHES FROM THE OUTLETS OR FLEXIBLE CONNECTIONS OF PACKAGED HVAC UNITS. ALTERNATE DUCT SUPPORT SYSTEM BY MIRO; MODEL 6-DS OR 8-DS MAY BE USED IN LIEU OF THE ABOVE SPECIFIED CHANNEL SYSTEM. INSTALL PER LATEST SMACNA GUIDELINES.

DUCTWORK PENETRATIONS:

A. WHERE DUCTWORK PENETRATES WALLS, CLOSE OFF ANNULAR SPACE BETWEEN DUCT AND ADJACENT WORK WITH FIRE STOPPING INSULATION AND SEAL AIR/SOUND TIGHT. PROVIDE CLOSE FITTING METAL COLLAR OR ESCUTCHEONS AT BOTH SIDES OF PENETRATIONS.

VIBRATION ISOLATION:

A. ALL VIBRATION ISOLATION DEVICES SHALL BE DESIGNED AND FURNISHED BY A SINGLE MANUFACTURER OR SUPPLIER.

DUCTWORK INSULATION:

A. ALL INSULATION MATERIALS SHALL BE UL LISTED. CONCEALED SUPPLY AIR DUCTWORK, RECTANGULAR OR ROUND SHALL BE 2" THICKNESS, FLEXIBLE GLASS FIBER, COMMERCIAL GRADE, K VALUE OF 0.24 MAXIMUM AT 75 DEGREES F; 1.5 PCF DENSITY; FOIL SCRIM FACING, WITH A MINIMUM INSTALLED VALUE OF R-5. SUPPLY DIFFUSERS SHALL BE INSULATED WITH THE SAME INSULATION TYPE AS THE DUCTWORK, BUT WITH A 1" THICKNESS. PROVIDE PRODUCTS WITH FLAME-SPREAD AND SMOKE-DEVELOPED INDICES OF 25 AND 50 FEET RESPECTIVELY, ACCORDING TO ASTM E 84 BY A TESTING AGENCY ACCEPTABLE TO THE AUTHORITIES HAVING JURISDICTION. PROVIDE DUCTWORK INSULATION WITH AN R-VALUE OF 6 FOR ALL SUPPLY, RETURN AND OUTDOOR AIR DUCTWORK.

DUCTWORK:

A. CLASS 1 DUCTWORK IS RATED FOR A MAXIMUM OF 1" WG PRESSURE, AND IS DEFINED AS; SUPPLY AIR DUCTWORK DOWNSTREAM OF FAN COIL UNITS, RETURN AIR, AND GENERAL EXHAUST DUCTWORK. MATERIALS SHALL BE NONCOMBUSTIBLE OR CONFORM TO REQUIREMENTS FOR CLASS I; OR CLASS III AIR DUCT MATERIALS OR UL 181.

STEEL DUCT SHALL BE ASTM A525 OR ASTM A527 GALVANIZED STEEL SHEET, LOCK-FORMING QUALITY, WITH ZINC COATING OF 1.25 OZ PER SQUARE FOOT FOR EACH SIDE IN CONFORMANCE WITH ASTM A90. FLEXIBLE DUCT SHALL BE GALVANIZED STEEL INTERLOCKING SPIRAL OR FABRIC SUPPORTED BY HELICALLY WOUND SPRING STEEL WIRE OR FLAT STEEL BANDS RATED TO 2" WG POSITIVE AND 1.5" WG NEGATIVE FOR CLASS I - 1" WG PRESSURE DUCTS AND TO 15" WG POSITIVE FOR CLASS III - 3" WG PRESSURE DUCTS. FLEXIBLE DUCT IS TO BE INSULATED WITH FACTORY INSTALLED FLEXIBLE GLASS FIBER INSULATION, ENCLOSED BY SEAMLESS ALUMINUM PIGMENTED PLASTIC VAPOR BARRIER JACKET: MAXIMUM 0.23 K VALUE AT 75°F. FASTENERS SHALL BE RIVETS, BOLTS OR SHEET METAL SCREWS. SEALANT SHALL BE NON-HARDENING, WATER RESISTANT, FIRE RESISTIVE, COMPATIBLE WITH MATING MATERIALS; LIQUID USED ALONE OR WITH TAPE, OR HEAVY MASTIC. SEALANT SHALL BE EQUIVALENT TO UNITED MCGILL UNI-SEAL DUCT SEALER (WATER BASED) INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION RECOMMENDATIONS. CONSTRUCT Ts, BENDS, AND ELBOWS WITH A RADIUS OF NOT LESS THAN 1-1/2 TIMES WIDTH OF DUCT ON CENTERLINE WHERE NOT POSSIBLE AND WHERE RECTANGULAR ELBOWS ARE USED, PROVIDE AIR FOIL TURNING VANES. TRANSITION DUCT SIZES GRADUALLY, NOT EXCEEDING 15° DIVERGENCE WHENEVER POSSIBLE. DIVERGENCE UP STREAM OF EQUIPMENT SHALL NOT EXCEED 30°; CONVERGENCE 20°. CONCEALED SUPPLY AND MAKE-UP AIR DUCTWORK SHALL BE FABRICATED FROM STEEL. SLOPE TOP OF HORIZONTAL DUCTWORK TO PREVENT WATER POOLING OR STANDING @ 1/8" PER FOOT. INSTALL PER LATEST SMACNA GUIDELINES. MAXIMUM FLEX DUCT LENGTH SHALL NOT EXCEED 72".

EXHAUST FANS:

A. PRODUCT REQUIRENT	IN 15.
A.A. PERFORMANCE R	ATINGS: DETERMINED IN ACCORDANCE WITH AMCA 210
AND	BEARING THE AMCA CERTIFIED RATING SEAL
A.B. SOUND RATINGS:	AMCA 301, TESTED TO AMCA 300, AND BEARING AMCA
CERTIFIED	SOUND RATING SEAL.
A.C. FABRICATION:	CONFORM TO AMCA 99.
A.D. UL COMPLIANCE:	UL LISTED AND LABELED, DESIGNED, MANUFACTURED,
AND	TESTED IN ACCORDANCE WITH UL 705.

B. FAN UNIT: DIRECT DRIVEN AS INDICATED ON PLANS, CEILING MOUNTED, WITH BACKDRAFT DAMPER. C. DISCONNECT SWITCH: FACTORY WIRED, NON-FUSIBLE, IN HOUSING FOR OVERLOAD PROTECTED MOTOR UNLESS OTHERWISE NOTED. THERMAL

DUCTWORK ACCESSORIES: A. VOLUME DAMPERS

A.A. GENERAL DESCRIPTION: FACTORY FABRICATED, WITH REQUIRED HARDWARE AND ACCESSORIES. STIFFEN DAMPER BLADES FOR STABILITY. INCLUDE REGULATOR TO HOLD SINGLE-BLADE DAMPERS IN A FIXED LOCKING QUADRANT POSITION WITHOUT VIBRATION. ON DAMPERS OVER 30" LONG PROVIDE LOCKING DEVICE ON BOTH SIDES. CLOSE DUCT PENETRATIONS FOR DAMPER COMPONENTS TO SEAL DUCT CONSISTENT WITH PRESSURE CLASS. ON INSULATED DUCTS MOUNT QUADRANT REGULATORS ON STAND-OFF MOUNTING BRACKETS OR BASES A.B. STANDARD VOLUME DAMPERS: MULTIPLE- OR SINGLE-BLADE, PARALLEL- OR OPPOSED-BLADE DESIGN AS INDICATED, STANDARD LEAKAGE RATING, WITH LINKAGE AIRSTREAM, AND SUITABLE FOR HORIZONTAL OR VERTICAL OUTSIDE **APPLICATIONS** A.B.A. STEEL FRAMES: HAT-SHAPED, GALVANIZED SHEET STEEL CHANNELS, MINIMUM OF 0.064 INCH THICK, WITH MITERED AND WELDED CORNERS; FRAMES WITH FLANGES WHERE INDICATED FOR ATTACHING TO WALLS AND FLANGELESS FRAMES WHERE INDICATED FOR INSTALLING IN DUCTS. A.B.B. ROLL-FORMED STEEL BLADES: 0.064-INCH- THICK, GALVANIZED SHEET STEEL. A.B.C. BLADE AXLES: GALVANIZED STEEL. A.B.D. BEARINGS: MOLDED SYNTHETIC. A.B.E. TIE BARS AND BRACKETS: GALVANIZED STEEL. A.C. JACKSHAFT: 1-INCH- DIAMETER, GALVANIZED-STEEL PIPE ROTATING WITHIN PIPE-ASSEMBLY MOUNTED ON SUPPORTS AT EACH MULLION AND AT EACH END BEARING OF MULTIPLE-DAMPER ASSEMBLIES. A.C.A. LENGTH AND NUMBER OF MOUNTINGS: APPROPRIATE TO CONNECT LINKAGE EACH DAMPER IN MULTIPLE-DAMPER ASSEMBLY. A.D. DAMPER HARDWARE: ZINC-PLATED, DIE-CAST CORE WITH DIAL AND HANDLE MADE OF INCH- THICK ZINC-PLATED STEEL, AND A 3/4-INCH HEXAGON LOCKING NUT. 3/32-INCLUDE CENTER HOLE TO SUIT DAMPER OPERATING-ROD SIZE. INCLUDE ELEVATED PLATFORM FOR INSULATED DUCT MOUNTING. B. MOTORIZED CONTROL DAMPERS B.A. GENERAL DESCRIPTION: LOW LEAKAGE, DOUBLE-SKIN, AIRFOIL-BLADE GALVANIZED-DAMPERS WITH COMPRESSIBLE JAMB SEALS AND EXTRUDED-VINYL BLADE STEEL EDGE SEALS, IN PARALLEL-BLADE ARRANGEMENT WITH STEEL OPERATING RODS

D.D.C. UP TO 24 BY 48 INCHES: THREE HINGES AND TWO COMPRESSION LATCHES. D.D.D. SIZES 24 BY 48 INCHES AND LARGER: ONE ADDITIONAL HINGE. D.E. DOOR: DOUBLE WALL, DUCT MOUNTING, AND ROUND; FABRICATED OF GALVANIZED METAL WITH INSULATION FILL AND 1-INCH THICKNESS. INCLUDE CAM SHEET

LATCHES D.F. FRAME: GALVANIZED SHEET STEEL, WITH SPIN-IN NOTCHED FRAME.

INCH BUTT OR PIANO HINGE AND CAM LATCHES.

METERS AND GAGES: A. METAL-CASE, LIQUID-IN-GLASS THERMOMETERS

ROTATING IN STAINLESS-

MOUNTED IN A SINGLE

AUTOMATICALLY

1-1/2-INCH- WIDE, DOUBLE-

D. DUCT-MOUNTING ACCESS DOORS

PRESSURE CLASS

SET 3/4 INCH O.C.; SUPPORT WITH

INCHES O.C.; AND SET INTO VANE RUNNERS

C. TURNING VANES

A.A. CASE: DIE-CAST ALUMINUM OR BRASS, 9 INCHES LONG. A.B. TUBE: RED OR BLUE READING, MERCURY FILLED, WITH MAGNIFYING LENS. A.C. TUBE BACKGROUND: SATIN-FACED, NONREFLECTIVE ALUMINUM WITH PERMANENTLY ETCHED SCALE MARKINGS. A.D. WINDOW: PLASTIC.

A.E. CONNECTOR: ADJUSTABLE TYPE, 180 DEGREES IN VERTICAL PLANE, 360 DEGREES IN HORIZONTAL PLANE, WITH LOCKING DEVICE. A.F. STEM: COPPER-PLATED STEEL, ALUMINUM, OR BRASS FOR THERMOWELL AND OF LENGTH TO SUIT INSTALLATION. INSTALLATION A.G. ACCURACY: PLUS OR MINUS 1 PERCENT OF RANGE OR PLUS OR MINUS 1 SCALE TO MAXIMUM OF 1.5 PERCENT OF RANGE. DIVISION

B. THERMOWELLS B.A. DESCRIPTION: PRESSURE-TIGHT. SOCKET-TYPE METAL FITTING MADE FOR INSERTION INTO PIPING AND OF TYPE, DIAMETER, AND LENGTH REQUIRED TO HOLD THERMOMETER

C. PRESSURE GAGES C.A. DIRECT-MOUNTING, DIAL-TYPE PRESSURE GAGES: INDICATING-DIAL TYPE COMPLYING

ASME B40.100. WITH C.B. CASE: LIQUID-FILLED TYPE, DRAWN STEEL OR CAST ALUMINUM . 4-1/2-INCH DIAMETER.

C.C. PRESSURE-ELEMENT ASSEMBLY: BOURDON TUBE, UNLESS OTHERWISE INDICATED. C.D. PRESSURE CONNECTION: BRASS, NPS 1/4, BOTTOM-OUTLET TYPE UNLESS BACK-OUTI FT TYPE IS INDICATED.

C.E. MOVEMENT: MECHANICAL, WITH LINK TO PRESSURE ELEMENT AND CONNECTION TO POINTER C.F. DIAL: SATIN-FACED, NONREFLECTIVE ALUMINUM WITH PERMANENTLY ETCHED SCALE

MARKINGS C.G. POINTER: RED OR OTHER DARK-COLOR METAL.

C.H. WINDOW: GLASS OR NON-BREAKABLE PLASTIC.

C.I. RING: METAL. C.J. ACCURACY: GRADE A, PLUS OR MINUS 1 PERCENT OF MIDDLE HALF SCALE. VACUUM-PRESSURE RANGE: 30-IN. HG OF VACUUM TO 15 PSIG OF C.J.A. PRESSURE RANGE FOR FLUIDS UNDER PRESSURE: TWO TIMES OPERATING

C.J.B. PRESSURE. C.K. PRESSURE-GAGE FITTINGS:

C.K.A. VALVES: NPS 1/4 BRASS OR STAINLESS-STEEL NEEDLE TYPE. C.K.B. SYPHONS: NPS 1/4 COIL OF BRASS TUBING WITH THREADED ENDS. D. TEST PLUGS

A.A. DESCRIPTION: CORROSION-RESISTANT BRASS OR STAINLESS-STEEL BODY WITH CORE INSERTS AND GASKETED AND THREADED CAP, WITH EXTENDED STEM FOR UNITS TO BE INSTALLED IN INSULATED PIPING.

A.B. MINIMUM PRESSURE AND TEMPERATURE RATING: 500 PSIG AT 200 DEG F A.C. CORE INSERTS: ONE OR TWO SELF-SEALING RUBBER VALVES. A.C.A. INSERT MATERIAL FOR AIR OR WATER SERVICE AT MINUS 30 TO PLUS 275 SHALL BE EPDM. DEGE

STEEL SLEEVE SINTERED BRONZE OR NYLON BEARINGS GALVANIZED-STEEL FRAME, AND WITH OPERATING RODS CONNECTED WITH A COMMON LINKAGE. LEAKAGE RATE SHALL NOT EXCEED 3 CFM/SQ. FT. AT 1-INCH WG AND 8 CFM/SQ. FT. AT 4-INCH WG.

C.A. FABRICATE TO COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS--METAL AND FLEXIBLE" FOR VANES AND VANE RUNNERS. VANE RUNNERS SHALL ALIGN VANES.MANUFACTURED TURNING VANES: FABRICATE VANE, CURVED BLADES OF GALVANIZED SHEET STEEL BARS PERPENDICULAR TO BLADES SET 2 SUITABLE FOR DUCT MOUNTING.

D.A. GENERAL DESCRIPTION: FABRICATE DOORS AIRTIGHT AND SUITABLE FOR DUCT

D.B. DOOR: DOUBLE WALL, DUCT MOUNTING, AND RECTANGULAR; FABRICATED OF GALVANIZED SHEET METAL WITH INSULATION FILL AND THICKNESS AS INDICATED FOR DUCT PRESSURE CLASS. INCLUDE VISION PANEL WHERE INDICATED. INCLUDE 1-BY-1-

D.C. FRAME: GALVANIZED SHEET STEEL, WITH BEND-OVER TABS AND FOAM GASKETS. D.D. PROVIDE NUMBER OF HINGES AND LOCKS AS FOLLOWS: D.D.A. LESS THAN 12 INCHES SQUARE: SECURE WITH TWO SASH LOCKS. D.D.B. UP TO 18 INCHES SQUARE: TWO HINGES AND TWO SASH LOCKS.

						AIR DEVICE S	CHEDULE	
MARK	AIRFLOW (CFM)	NOM. SIZE (IN x IN)	MOUNTING TYPE	RECTANGULAR CONNECTION SIZE (IN x IN)	ROUND CONNECTION SIZE (IN)	MANUFACTURER	MODEL	
Q	0 - 150	24 x 24	LAY-IN	22 x 22	8	TITUS	50F	EGG CI
Α	0 - 120	24 x 24	LAY-IN	6 x 6	6	TITUS	TDCA-AA	MODUL
В	121 - 250	24 x 24	LAY-IN	9 x 9	8	TITUS	TDCA-AA	MODUL
G	0 - 120	12 x 12	SURFACE	6 x 6	6	TITUS	TDCA-AA	MODUL IS INDI
AA	SEE PLANS	SEE PLANS	SIDEWALL	SEE PLANS	-	TITUS	300FL	ALUMIN

		DX SPLIT SYSTE	M SCHEDU	LE (ELECTI	RIC HEAT)	
		MARK	AHU-1	AHU-2	AHU-3	
RAL		SERVES	CEO	CONFERENCE	CFO	
	RAL	SUPPLY AIR (CFM)	1,295	875	1,075	
	ENE	OUTSIDE AIR (CFM)	200	100	150	
	G	EXT. SP. (IN W.G.)	0.75	0.75	0.75	
		FAN MOTOR HORSEPOWER	0.5	0.33	0.5	
		BELT/DIRECT DRIVE	DIRECT	DIRECT	DIRECT	
	OIL	TOTAL COOLING (MBH)	39.4	29.1	33.3	
	NG C	SENSIBLE COOLING (MBH)	27.9	18.9	22.9	
		ENTERING AIR TEMP. DB/WB (F)	78.4/66.9	77.9/66.7	78.3/66.8	
	8	LEAVING AIR TEMP. DB/WB (F)	58.1/56.9	57.6/55.7	58.3/56.6	
	NG	TOTAL HEATING (KW/STAGES)	10.8/1	5.7/1	10.8/1	
	EATII	ENTERING AIR TEMP. DB (F)	60	65	60	
	王	LEAVING AIR TEMP. DB (F)	86.2	85.7	91.6	
	RIC	VOLTS/PHASE/HERTZ	208/3/60	208/1/60	208/3/60	
	ECTI	MCA	42	38	42	
	Ц	МОСР	45	40	45	
		MANUFACTURER	TRANE	TRANE	TRANE	
	S	MODEL	GAM5	GAM5	GAM5	
	BASI	NOMINAL TONS	3.5	2.5	3	
	_	WEIGHT (LBS)	163	140	150	
		NOTES	4, 5, 6, 7, 8	4, 5, 6, 7, 8	4, 5, 6, 7, 8	
		MARK	CU-1	CU-2	CU-3	
	SAL	STEPS OF CAPACITY	1	1	1	
	ENEF	SEER2 (MINIMUM)	15	14.6	15.5	
	9	EER2 (ARI)	12.5	12	13	
		AMBIENT AIR	105	105	105	
	RIC	VOLTS/PHASE/HERTZ	208/3/60	208/1/60	208/3/60	
	ECT	MCA	15	16	12	
	Ш	МОСР	25	25	20	
5 [MANUFACTURER	TRANE	TRANE	TRANE	
	S	MODEL	4TTA4	4TTR4	4TTA4	
	BASI	NOMINAL TONS	3.5	2.5	3	
	_	WEIGHT (LBS)	216	183	183	
		NOTES	1, 2, 3	1, 2, 3	1, 2, 3	
דר	=0.					

. PROVIDE REFRIGERANT PIPING IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

		-
DESIGNATION	SERVICE	MAN
EF-1	RESTROOM	GI
EF-2	RESTROOM	GF
EF-3	RESTROOM	Gł
NOTES:		
1. PROVIDE W	ITH FAN MOUNTED SPEE	D CC
2. INTERLOCK	WITH LIGHTS IN RESTRO	OM.

- FLEXIBLE DUCT, 6'-0" MAXIMUM DEVELOPED LENGTH - DUCT SUPPORT FOR FLEXIBLE DUCTWORK TO PROVIDE A LONG RADIUS CONNECTION TO THE AIR DEVICE. NO COMPRESSION OR PINCH POINTS IN THE FLEXIBLE DUCTWORK IS ALLOWED. - PROVIDE W/ INSULATED BACKPAN FOR SUPPLY AIR AND PRETREATED MAKE-UP SPIN-IN TAP W/SQUARE DAMPER ROD & DAMPER OPERATOR WITH LOCKING QUADRANT. PROVIDE SHEETMETAL STANDOFF TO CLEAR INSULATION CEILING -- LAY-IN TYPE SURFACE MOUNT TYPE - GRILLE OR DIFFUSER

SIDEWALL BRANCH CONNECTION SHOWN IN THIS DETAIL IS THE PREFERRED CEILING SUPPLY AIR DEVICE RUNOUT CONNECTION METHOD.

FLEXIBLE DUCT RUNOUT TO **CEILING AIR DEVICE DETAIL**

. PROVIDE CONDENSER COIL COATING AND HAIL GUARDS.

PROVIDE SINGLE POINT ELECTRICAL CONNECTION.

. PROVIDE DRAIN PAN WITH AUXILARY OVERFLOW SWITCH TO SHUT-OFF UNIT.

. DOUBLE WALL FOAMED CABINET WITH 2% OR LESS AIR LEAKAGE.

5. PROVIDE PROGRAMMABLE THERMOSTAT

2. PROVIDE LOW AMBIENT CONTROL.

8. HIGH EFFICIENCY ECM MOTOR.

REMARKS CRATE STYLE RETURN OR EXHAUST GRILLE, ALUMINUM CONSTRUCTION WITH 1/2" x 1/2" x 1/2" GRID. LAR LOUVERED FACE SUPPLY DIFFUSER. ALUMINUM CONSTRUCTION. LAR LOUVERED FACE SUPPLY DIFFUSER. ALUMINUM CONSTRUCTION. LAR LOUVERED FACE SUPPLY DIFFUSER. ALUMINUM CONSTRUCTION AND ALUMINUM PLASTER FRAME. WHERE FD SYMBOL

ICATED ON GRILLE IN DRAWINGS USE SIMILAR GRILLE WITH INTEGRAL FIRE DAMPER. INUM SUPPLY REGISTER, DOUBLE DEFLECTION, AND FRONT BLADES PARALLEL TO THE LONG DIMENSION.

	F	FAN SC	HEDULE						
						FAN DATA			
MANUFACTURER	MODEL NUMBER	NOTES	TYPE	DRIVE	CFM	STATIC PRESSURE (" W.G.)	MOTOR HP. (MIN.)	ELECTRICAL (V/HZ/PH)	RPM (MAX.)
GREENHECK	SP-A125	1,2	CEILING	DIRECT	75	0.25	18 WATTS	115/1/60	1054
GREENHECK	SP-A125	1,2	CEILING	DIRECT	75	0.25	18 WATTS	115/1/60	1054
GREENHECK	SP-A125	1,2	CEILING	DIRECT	75	0.25	18 WATTS	115/1/60	1054

SPEED CONTROLLER, DISCONNECT WITCH, AND BACKDRAFT DAMPER

DUCT BRANCH TAKE-OFFS

MEDIUM PRESSURE DUCT RUNOUT

SCALE: NTS

G	R	G
architectu	re	
118 BROADWAY, SAN ANTONIO, T 210.447.7000	SUITE X. 7820	620 5
Architect		
ANZ CONSUL ENGIN TX. FIRM REG. PH: 210-78 amartinez@am	S T I E E #F-1 1-08 z-sa.	A N G R S 5885 78 com
Consultant OF MARK M. S 1103 07/25/2024	TEHNE 29	
Revisions:		
MEDINA REGIONAL HOSPITAL NEW ADMINISTRATION BUILDING RENOVATI	3103 AVE G.	
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Checked By:		CHK
Project No.	24	0224
⊔ate: 25 J Page	JULY	2024
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M-501

THE CONTRACTOR SHALL COMPLETE THE TASKS BELOW TO COMMISSION THE LIGHTING CONTROL SYSTEM AND SUBMIT WRITTEN DOCUMENTATION DETAILING THE TASKS BELOW. FOR EACH TASK, LIST THE DATE PERFORMED, PERSON COMPLETING THE TASK,

<u>GENERAL NOTES</u>

- 1. CONNECT ALL EXIT (XA), EGRESS (XB) AND NIGHT LIGHTS (NL) UNSWITCHED U.O.N. AND CIRCUITED TO L1-1. SINGLE BATTERY POWERED LAMP SHALL OPERATE ON POWER FAILURE. EXIT SIGNS SHALL BURN 24 HOURS/DAY.
- 2. ALL LIGHTING FIXTURES SHALL BE CONTROLLED VIA TIME SWITCH, U.O.N. RE: 2/E1.0 FOR CONTROLS DIAGRAM.
- 3. CONNECT EXISTING BUILDING EXTERIOR LIGHTING TO NEW CIRCUITS AS INDICATED ON PANELBOARD 'L1'.

KEYED NOTES

- 24/7/365-DAY PROGRAMMABLE TIME SWITCH TORK #DZM200A, 2-CHANNEL WITH 365 DAY ADVANCED HOLIDAY SCHEDULING, OR EQUIVALENT.
- 4-POLE, 30A RATED NEMA 1 ENCLOSED, MECHANICALLY HELD CONTACTOR WITH 120V CONTROL COIL, 2-WIRE CONTROL RELAY, MOMENTARY CONTACT ADAPTERS AND H-O-A IN COVER. LOCATE ADJACENT TO PANEL.
- 6-POLE, 30A RATED NEMA 1 ENCLOSED, MECHANICALLY HELD CONTACTOR WITH 120V CONTROL COIL, 2-WIRE CONTROL RELAY, MOMENTARY CONTACT ADAPTERS AND H-O-A IN COVER. LOCATE ADJACENT TO PANEL.

GRG

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Page Description
FLOOR PLAN - LIGHTING

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Drawn By	:	DRW
Checked I	By:	СНК
Project No).	240224
Date:	25	JULY 2024
Page		

GENERAL NOTES

- 1. CONTRACTOR SHALL CONCEAL ALL RACEWAYS. ON EXISTING CMU WALLS WHERE IMPOSSIBLE TO CONCEAL, PROVIDE WIREMOLD 700 SERIES SURFACE RACEWAY SYSTEM. EXISTING DEVICE BOXES AND CONCEALED RACEWAY MAY BE REUSED AS APPROPRIATE FOR NEW DEVICES. IF NOT REUSED, REMOVE CONDUCTORS AND PROVIDE BLANK PLATE.
- 2. ALL 125-VOLT AND 250-VOLT NON-LOCKING TYPE RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

<u>KEYED NOTES</u>

- SEE MOTOR CONNECTION SCHEDULE ON SHEET E4.0 FOR WIRE, CONDUIT, AND DISCONNECT SIZES AND BRANCH CIRCUIT CONNECTION.
- COORDINATE TV OUTLETS LOCATIONS W/ OWNER.

118 BROADWAY, SUITE 620 SAN ANTONIO, TX. 78205 ARChitect AMAZSAA ANDELSAA C O N S U L T I N G I.S. FIRM REG. #F-158855 PH: 210-781-0878 amartinez@amz-sa.com Consultant 7-25-24 ABERRO E. MARTINEZ Intervisions: Intervision: Intervi	118 BROADWAY, SUITE 620 SAN ANTONIO, TX. 78205 210.447.7000 ARChitect AMAZSAA AMAZSAA SAN ANTONIO, TX. 78205 210.447.7000 ARChitect AMAZSAA SAN ANTONIO, TX. 78205 210.447.7000 AMAZSAA SAN ANTONIO, TX. 78205 ST. FIRM REG. #F-158855 PH: 210-781-0878 amartinez@amz-sa.com Consultant 7-25-24 SAN ANTONING NULL SAN ANTONING NULL SAN ANTONING NULL SAN ANTONING NULL SAN ANTONICE	ecture	archite
Architect ARS2SA C O N S U L T I NG S N G I N E E R S TX. FIRM REG. #F-15885 marctinez@anz=sa.com Consultant 7-25-24 	Architect ARCASAA	WAY, SUITE 620 IIO, TX. 78205 0	118 BROAD SAN ANTON 210.447.7000
Consultant 102236 102236 Revisions:	Consultant 7-25-24	ZSA ULTING NEERS REG. #F-15885 0-781-0878 @amz-sa.com	Architect CONSENGI TX. FIRM F PH: 210 amartinez
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Page Description FLOOR PLAN - POWER These drawings and accompanying specifications are to be an instrument of the Architect. They are not to be used on other projects or extensions of this project except by agreement in writing and with appropriate compensation to the Architect. Drawn By: DRW Checked By: CHK Project No. 240224 Date: 25 JULY 2024	Page Description FLOOR PLAN - POWER	NEW ADMINISTRATION BUILDING RENOVATIO 3103 AVE G. HONDO, TX 78861	MEDINA REGIONAL HOSPITAL
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	GENERAL	
∕M∕	MOTOR CONNECTION	Φ
\boxtimes	MAGNETIC MOTOR STARTER	GFILLWP
×	COMBINATION MOTOR STARTER/DISC SWITCH	Ψ
⊡ or →~	DISCONNECT SWITCH, $30/3/600/NF/N1 = 30 \text{ AMP}/3 \text{ POLE}/600 \text{ VOLT}$, NON-FUSED/NEMA 1 ENCLOSURE UON. (N3R = NEMA 3R). ALL SWITCHES SHALL BE <u>HEAVY DUTY TYPE</u> .	♣
╔╴┉╶╱╢═┚┝╴	FUSED DISCONNECT SWITCH	Φ
- 6 -	THERMAL AND/OR MAGNETIC CIRCUIT BREAKER, RATING AND NO. OF POLES AS INDICATED.	
	TRANSFORMER, RATING AS INDICATED.	
ተ	CURRENT TRANSFORMER, RATING AND NO. AS INDICATED.	¢
<u>∮</u> _	GROUND CONNECTION.	
S	SPEAKER	
Sv	SPEAKER W/ INTEGRAL VOLUME CONTROL	▼
Ø	JUNCTION BOX	
Ø	PHOTOCELL	∇
R	RELAY	
C or - -	CONTACTOR, RATING AND NO. OF POLES AS INDICATED.	V
Т	TIME SWITCH	
IC	INTERCOM	ΤV
IC c	INTERCOM CONSOLE	
\$ _M	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD(S) UON, SIZED PER ACTUAL NAMEPLATE RATING.	
-	PANEL 120/208V	
	PANEL 480/277V	\$ \$2
	UTILITY COMPANY METER	\$3
MFM	DIGITAL SOLID STATE MULTI-FUNCTION METER.	\$4 \$к
E	EQUIPMENT CONNECTION. COORDINATE WITH MANUFACTURERS' REPRESENTATIVE.	\$ WP
●	PUSHBUTTON	\$D \$т
PB	PULL BOX, SIZE PER NEC, UON.	•
SPD	SURGE PROTECTION DEVICE SYSTEM.	ΫI R
	PLYWOOD TELEPHONE BACKBOARD, 4' X 8' X 3/4" THICK	\$s
-UP-	UNDERGROUND PRIMARY ELECTRIC UTILITY	·
-US-	UNDERGROUND SECONDARY ELECTRIC UTILITY	OS
-UT-	UNDERGROUND TELEPHONE UTILITY	
	LUMINAIRES	_
FA	FLUORESCENT LIGHT FIXTURE, LETTER INDICATES FIXTURE TYPE.	∨ AV
FA OR OF FD	LIGHT FIXTURE CONNECTED TO EMERGENCY LIGHTING CIRCUIT.	\bigotimes
ē	EXIT LIGHT. PROVIDE DIRECTIONAL CHEVRON(S) (ARROW(S)	\heartsuit

	FLUORESCENT LIGHT FIXTURE, LETTER INDICATES FIXTURE TYPE.	AV
	LIGHT FIXTURE CONNECTED TO EMERGENCY LIGHTING CIRCUIT.	\bigotimes
2	EXIT LIGHT. PROVIDE DIRECTIONAL CHEVRON(S) (ARROW(S) AS INDICATED ON PLANS.)	
)	WALL MOUNTED LIGHTING FIXTURE	
	DUAL LAMP EMERGENCY LIGHTING FIXTURE	R
	POLE WITH LUMINAIRE. LETTERS DENOTE TYPE.	SD
		©0⊲
	RACEWAYS	D
	CONDUIT RUN CONCEALED IN WALL OR CEILING.	F
	CONDUIT CONCEALED IN OR BELOW FLOOR SLAB.	FS
	SWITCH LEG	SS
		F/SD
L1-2,4,6	BRANCH CIRCUIT HOMERUN SUBSCRIPT "L1" INDICATES PANEL AND 2,4,6 INDICATES BREAKER	DH
• •	POSITION. 1/2"C., 2#12 AND 1#12 GND MIN.	$\mathbb{A} \triangleleft$

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<u>Symbols and abbreviations</u>

(SOME SYMBOLS MAY NOT BE APPLICABLE TO THIS PROJECT)

ABBREVIATIONS

OUTLETS	A
DUPLEX RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5–20R, 18" AFF UON.	A
DUPLEX RECEPTACLE, (GFI – GROUND FAULT INTERRUPTING,	Al
WP – WEATHERPROOF)	Af
DOUBLE DUPLEX RECEPTACLE (QUAD) WITH COMMON COVER PLATE.	AF
	A
SPECIAL PURPOSE RECEPTACLE, SIZE AND NEMA CONFIGURATION AS INDICATED, INSTALL 18" AFF UON.	A۱
FLUSH FLOOR OUTLETS RECEPTACLES AS DESCRIBED ABOVE	B
	C
FLUSH FLOOR TELEPHONE AND DATA OUTLETS.	C
DUPLEX RECEPTACLE HORIZONTALLY MOUNTED 6" ABOVE COUNTER	C
TOP, UON.	C
COMBINATION RECEPTACLE AND TELE/DATA OUTLET INSTALLED IN FLOOR BOX.	C
TELEPHONE OUTLET 18" AFF UON. PROVIDE 4" SQUARE BACK	C
BOX/COVER PLATE. INSTALL 3/4" CONDUIT WITH BUSHING AND PULL STRINGS. STUBBED TO ACCESSIBLE CEILING.	D
	D
INSTALL 3/4" CONDUIT WITH BUSHING AND PULL STRING, STUBBED	D
TO ACCESSIBLE CEILING.	D
COMBINATION TELEPHONE AND DATA OUTLET 18" AFF UON. PROVIDE 4"	D
AND PULL STRING, STUBBED TO ACCESSIBLE CEILING.	E
TV OUTLET 18" AFF UON. PROVIDE 4" SQUARE BACK BOX/COVER PLATE.	E
INSTALL 3/4" CONDUIT WITH BUSHING AND PULL STRING, STUBBED TO ACCESSIBLE CEILING.	E
	E
	E
<u>SWITCHES</u>	F/
	OUTLETS DUPLEX RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5–20R, 18" AFF UON. DUPLEX RECEPTACLE, (GFI – GROUND FAULT INTERRUPTING, WP – WEATHERPROOF) DUBLE DUPLEX RECEPTACLE (QUAD) WITH COMMON COVER PLATE. SIMILAR TO ABOVE. SPECIAL PURPOSE RECEPTACLE, SIZE AND NEMA CONFIGURATION AS INDICATED, INSTALL 18" AFF UON. FLUSH FLOOR OUTLETS, RECEPTACLES AS DESCRIBED ABOVE. FLUSH FLOOR TELEPHONE AND DATA OUTLETS. DUPLEX RECEPTACLE HORIZONTALLY MOUNTED 6" ABOVE COUNTER TOP, UON. COMBINATION RECEPTACLE AND TELE/DATA OUTLET INSTALLED IN FLUSH FLOOR OUTLET 18" AFF UON. PROVIDE 4" SQUARE BACK BOX/COVER PLATE. INSTALL 3/4" CONDUIT WITH BUSHING AND PULL STRINGS, STUBBED TO ACCESSIBLE CELLING. DATA OUTLET 18" AFF UON. PROVIDE 4" SQUARE BACK BOX/COVER PLATE. INSTALL 3/4" CONDUIT WITH BUSHING AND PULL STRING, STUBBED TO ACCESSIBLE CELLING. COMBINATION TELEPHONE AND DATA OUTLET 18" AFF UON. PROVIDE 4" SQUARE BACK BOX/COVER PLATE. INSTALL 3/4" CONDUIT WITH BUSHING AND PULL STRING, STUBBED TO ACCESSIBLE CELLING. TV OUTLET 18" AFF UON. PROVIDE 4" SQUARE BACK BOX/COVER PLATE. INSTALL 3/4" CONDUIT WITH BUSHING AND PULL STRING, STUBBED TO ACCESSIBLE

SINGLE POLE SWITCH, 48" AFF UON. DOUBLE POLE SWITCH, 48" AFF UON. THREE-WAY SWITCH, 48" AFF UON. FOUR-WAY SWITCH, 48" AFF UON. KEYED SWITCH, 48" AFF UON. WEATHERPROOF SWITCH, 48" AFF UON. DIMMER SWITCH, 600W UON, 48" AFF UON. TIMER SWITCH, 600W UON, 48" AFF UON. WATT STOPPER TS-400

VACANCY SENSOR MANUAL ON SWITCH. GREENGATE, ONW-D-1001-MV-N-X WALL MOUNTED IN SWITCH BOX AT 48" AFF UON. COLOR BY ARCHITECT. VACANCY SENSOR MANUAL ON SWITCH. GREENGATE GMDS-W, TO BE USED WITH CEILING MOUNTED VACANCY SENSOR SWITCH. WALL MOUNTED IN SWITCH BOX AT 48" AFF UON. VACANCY SENSOR SWITCH. GREENGATE OAC-DT-2000-R WITH

SP20-MV POWER PACK, UON. CEILING MOUNTED, UON.

<u>FIRE ALARM</u>

VISUAL (STROBE) SIGNAL DEVICE. + 80" AFF UON.

AUDIO/VISUAL (SPEAKER/STROBE) SIGNAL DEVICE. + 80" AFF UON. OR 6" BELOW CEILING, WHICHEVER IS LOWER.

FIRE ALARM AUDIO/VISUAL DEVICE, CEILING MOUNTED, UON.

FIRE ALARM VISUAL DEVICE, CEILING MOUNTED, UON.

FIRE ALARM CONTROL PANEL

SD⊲

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FIRE ALARM REMOTE ANNUNCIATOR

FIRE ALARM FIXED-TEMPERATURE RATE-OF-RISE HEAT DETECTOR, 135°C UON.

SMOKE DETECTOR, CEILING MOUNTED UON.

SMOKE DETECTOR WITH INTEGRAL HORN, CEILING MOUNTED UON.

SMOKE DETECTOR DUCT MOUNTED FIRE ALARM MANUAL STATION, INSTALL 48" AFF.

SPRINKLER SYSTEM FLOW SWITCH BY DIVISION 15.

SPRINKLER SYSTEM SUPERVISORY SWITCH BY DIVISION 15.

COMBINATION FIRE AND SMOKE DAMPER BY DIVISION 15.

MAGNETIC DOOR HOLDER.

FIRE ALARM AUDIO DEVICE. + 80" AFF UON. OR 6" BELOW CEILING, WHICHEVER IS LOWER.

A	AMPERE(S)	GALV	GALVANIZED
AC	ABOVE COUNTER (6" ABOVE UON)	GEC	GROUNDING EQUIPMEN
AIC	AMPERE INTERRUPTING CAPACITY	GFCI	GROUND FAULT CIRCU
AFF	ABOVE FINISHED FLOOR	GFI	GROUND FAULT INTER
AFG	ABOVE FINISHED GRADE	GND	GROUND
ATS	AUTOMATIC TRANSFER SWITCH	GRS	GALVANIZED RIGID STE
AWG	AMERICAN WIRE GAUGE	HID	HIGH INTENSITY DISCH
BLDG	BUILDING	HP	HORESEPOWER
СВ	CIRCUIT BREAKER	HOA	HAND OFF AUTOMATIC
CCTV	CLOSED CIRCUIT TV	HVAC	HEATING/VENTILATING/
СКТ	CIRCUIT	HZ	HERTZ
COND	CONDUCTOR	ID	INSIDE DIAMETER
CPU	CENTRAL PROCESSING UNIT	IMC	INTERMEDIATE STEEL
СТ	CURRENT TRANSFORMER	IN	INCHES
DIA	DIAMTER	INCD	INCANDESCENT
DISC	DISCONNECT	JB	JUNCTION BOX
DIST	DISTRIBUTION	KCMIL	THOUSAND CIRCULAR
DN	DOWN	KV	KILOVOLT
DWGS	DRAWINGS	KVA	KILOVOLT AMPERE
EC	EMPTY CONDUIT	KW	KILOWATT
EGC	EQUIPMENT GROUNDING CONDUCTOR	MAX	MAXIMUM
EMT	ELECTRICAL METALLIC TUBING	МСВ	MAIN CIRCUIT BREAKE
EQMT	EQUIPMENT	MCC	MOTOR CONTROL CEN
EXTG	EXISTING	MDP	MAIN DISTRIBUTION P/
FACP	FIRE ALARM CONTROL PANEL	MECH	MECHANICAL
Fluor	FLUORESCENT	MFG	MANUFACTURER
FT	FEET, FOOT	мн	METAL HALIDE
		MIN	MINIMUM
		MLO	MAIN LUGS ONLY
		MSB	MAIN SWITCHBOARD
		MTD	MOUNTED
		MTG	MOUNTING

MFG	CATALOG NUMBER	MOUNTING	NO.	WATTS	TYPES	VOLTS	NOTES
LITHONIA	STAK 2X4 4000LM 80CRI 40K SOL MIN1 ZT MVOLT	Recessed	1	33	LED	UNV	
LITHONIA	STAK 2X4 4000LM 80CRI 40K SOL MIN1 ZT MVOLT E10WLCP	Recessed	1	33	LED	UNV	1
LITHONIA	LBR6 ALO2 SWW1 AR LSS WD MVOLT UGZ	Recessed	1	25	LED	UNV	
LITHONIA	LBR6 ALO2 SWW1 AR LSS WD MVOLT UGZ E10WCP	Recessed	1	25	LED	UNV	1
LITHONIA	STAK 2X2 4000LM 80CRI 40K COL MIN1 ZT MVOLT	Recessed	1	33	LED	UNV	
LITHONIA	STAK 2X2 4000LM 80CRI 40K COL MIN1 ZT MVOLT E10WLCP	Recessed	1	33	LED	UNV	11
LITHONIA	LQM S W 3 R 120/277 EL N	Surface	1				3
Lithonia	AFO X MVOLT N SD	Surface	1	5		Mvolt	2,3
TES							
NT PRODUCTS FR DATA) AS LONG A <u>S</u>	ROM DIFFERENT MANUFACTURERS MAY BE AC IS THEY ARE SUBMITTED ONE WEEK PRIOR TO	CEPTABLE AS	ALTERNA EW AND	ATE SUBSTI	TUTIONS (S BY ENGINE	UBSTITUTE PR EER AND ARCH	ODUCTS SHALL H. IITECT.
	LITHONIA	STAK 2X4 4000LM 80CRI 40K SOL MIN1 ZT LITHONIA MVOLT STAK 2X4 4000LM 80CRI 40K SOL MIN1 ZT LITHONIA MVOLT E10WLCP LITHONIA LBR6 ALO2 SWW1 AR LSS WD MVOLT LITHONIA UGZ LITHONIA UGZ LITHONIA UGZ LITHONIA UGZ E10WCP STAK 2X2 4000LM 80CRI 40K COL MIN1 ZT LITHONIA MVOLT STAK 2X2 4000LM 80CRI 40K COL MIN1 ZT MVOLT STAK 2X2 4000LM 80CRI 40K COL MIN1 ZT LITHONIA MVOLT E10WLCP LITHONIA LQM S W 3 R 120/277 EL N LITHONIA LQM S W 3 R 120/277 EL N LITHONIA AFO X MVOLT N SD TES NT PRODUCTS FROM DIFFERENT MANUFACTURERS MAY BE ACOATA) AS LONG AS THEY ARE SUBMITTED ONE WEEK PRIOR TO SATA) AS LONG AS THEY ARE SUBMITTED ONE WEEK PRIOR TO SATA) AS LONG AS THEY ARE SUBMITTED ONE WEEK PRIOR TO SATA)	STAK 2X4 4000LM 80CRI 40K SOL MIN1 ZT Recessed LITHONIA MVOLT Recessed STAK 2X4 4000LM 80CRI 40K SOL MIN1 ZT Recessed LITHONIA MVOLT E10WLCP Recessed LITHONIA LBR6 ALO2 SWW1 AR LSS WD MVOLT Recessed LITHONIA UGZ Recessed LITHONIA UGZ E10WCP Recessed LITHONIA UGZ E10WCP Recessed LITHONIA UGZ E10WCP Recessed LITHONIA WOLT Recessed LITHONIA MVOLT Recessed STAK 2X2 4000LM 80CRI 40K COL MIN1 ZT Recessed LITHONIA MVOLT Recessed LITHONIA MVOLT Recessed LITHONIA MVOLT Recessed LITHONIA LQM S W 3 R 120/277 EL N Surface LITHONIA LQM S W 3 R 120/277 EL N Surface Lithonia AFO X MVOLT N SD Surface TES TES Surface NT PRODUCTS FROM DIFFERENT MANUFACTURERS MAY BE ACCEPTABLE AS 3ATA) AS LONG AS THEY ARE SUBMITTED ONE WEEK PRIOR TO BID FOR REVI S SUTERY PACK WHERE INDICATED WITH AN "E" SUFFIX OR HALE S	LITHONIA STAK 2X4 4000LM 80CRI 40K SOL MIN1 ZT MVOLT Recessed 1 LITHONIA STAK 2X4 4000LM 80CRI 40K SOL MIN1 ZT MVOLT E10WLCP Recessed 1 LITHONIA LBR6 ALO2 SWW1 AR LSS WD MVOLT UGZ Recessed 1 LITHONIA UGZ Recessed 1 LITHONIA UGZ Recessed 1 LITHONIA UGZ E10WCP Recessed 1 LITHONIA UGZ E10WCP Recessed 1 LITHONIA WOLT Recessed 1 LITHONIA MVOLT Recessed 1 LITHONIA MVOLT Recessed 1 STAK 2X2 4000LM 80CRI 40K COL MIN1 ZT MVOLT Recessed 1 LITHONIA MVOLT E10WLCP Recessed 1 LITHONIA LQM S W 3 R 120/277 EL N Surface 1 LITHONIA LQM S W 3 R 120/277 EL N Surface 1 LITHONIA LQM S W 3 R 120/277 EL N Surface 1 LITHONIA LQM S W 3 R 120/277 EL N Surface 1 LITHONIA AFO X MVOLT N SD Surface 1 LITHONIA	LITHONIA STAK 2X4 4000LM 80CRI 40K SOL MIN1 ZT Recessed 1 33 LITHONIA MVOLT Recessed 1 33 LITHONIA MVOLT E10WLCP Recessed 1 33 LITHONIA LBR6 ALO2 SWW1 AR LSS WD MVOLT Recessed 1 25 LITHONIA UGZ LBR6 ALO2 SWW1 AR LSS WD MVOLT Recessed 1 25 LITHONIA UGZ E10WCP Recessed 1 25 LITHONIA UGZ E4000LM 80CRI 40K COL MIN1 ZT Recessed 1 33 LITHONIA MVOLT Recessed 1 33 LITHONIA STAK 2X2 4000LM 80CRI 40K COL MIN1 ZT Recessed 1 33 LITHONIA MVOLT Recessed 1 33 LITHONIA MVOLT Recessed 1 33 LITHONIA MVOLT NVOLT Recessed 1 33 LITHONIA STAK 2X2 4000LM 80CRI 40K COL MIN1 ZT Recessed 1 33 LITHONIA LQM S W 3 R 120/277 EL N Surface 1 5 LITHONIA LQM S W 3 R 120/277 EL N<	LITHONIA STAK 2X4 4000LM 80CRI 40K SOL MIN1 ZT MVOLT Recessed 1 33 LED LITHONIA MYOLT Recessed 1 33 LED LITHONIA MYOLT E10WLCP Recessed 1 33 LED LITHONIA LBR6 ALO2 SWW1 AR LSS WD MVOLT UGZ Recessed 1 25 LED LITHONIA UGZ E10WCP Recessed 1 25 LED LITHONIA UGZ E10WCP Recessed 1 25 LED LITHONIA UGZ E10WCP Recessed 1 33 LED STAK 2X2 4000LM 80CRI 40K COL MIN1 ZT HITHONIA Recessed 1 33 LED STAK 2X2 4000LM 80CRI 40K COL MIN1 ZT MVOLT E10WLCP Recessed 1 33 LED LITHONIA MVOLT E10WLCP Recessed 1 33 LED LITHONIA LQM S W 3 R 120/277 EL N Surface 1 5 LITHONIA LQM S W 3 R 120/277 EL N Surface 1 5 LITHONIA AFO X MVOLT N SD Surface 1 5 TES TP PRODUCTS FROM DIFFERENT	LITHONIA STAK 2X4 4000LM 80CRI 40K SOL MIN1 ZT Recessed 1 33 LED UNV LITHONIA MVOLT STAK 2X4 4000LM 80CRI 40K SOL MIN1 ZT Recessed 1 33 LED UNV LITHONIA MVOLT E10WLCP Recessed 1 25 LED UNV LITHONIA UGZ UGZ Recessed 1 25 LED UNV LITHONIA UGZ UGZ Recessed 1 25 LED UNV LITHONIA UGZ UGZ Recessed 1 25 LED UNV LITHONIA UGZ E10WCP Recessed 1 25 LED UNV LITHONIA STAK 2X2 4000LM 80CRI 40K COL MIN1 ZT Recessed 1 33 LED UNV LITHONIA MVOLT E10WLCP Recessed 1 33 LED UNV LITHONIA MVOLT E10WLCP Recessed 1 33 LED UNV LITHONIA LQM S W 3 R 120/277 EL N Surface 1 5 Mvolt LITHONIA LQM S W 3 R 120/277 EL

	NA
QUIPMENT CONDUCTOR	NC
CIRCUIT INTERRUPTER	NF
interrupter	NL
	NO
GID STEEL	00
(DISCHARGE	OFC
OMATIC	ОН
LATING/AIR CONDITIONING	OHI
	PA
ER	PB
STEEL CONDUIT	PH
	PNI
	PW
	QTZ
CULAR MILS	RCF
	REF
ERE	RTU
	SC
	SQ
BREAKER	SW
OL CENTER	TEL
TION PANEL	TV
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ILY	۷
DARD	VA
	VFD
	W
	W/
	WP
	XFN

NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NF	NONFUSIBLE
NL	NIGHT LIGHT
NO	NORMALLY OPEN
00	ON CENTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OH	OVERHEAD
OHE	OVERHEAD ELECTRICAL
PA	PUBLIC ADDRESS
PB	PUSH BUTTON
PH	PHASE
PNL	PANELBOARD
PWR	POWER
QTZ	QUARTZ
RCPT	RECEPTACLE
REFR	REFRIGERATOR
rtu	ROOFTOP UNIT
SC	SPLIT CIRCUIT
SQ FT	SQUARE FOOT
SWBD	SWITCHBOARD
TELE	TELEPHONE
TV	TELEVISION
UGE	UNDERGROUND ELECTRICAL
UT	UNDERGROUND TELEPHONE
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLT(S)
VA	VOLT AMPERE
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE, WATT(S)
W/	WITH
WP	WEATHERPROOF
XFMR	TRANSFORMER
Z	IMPEDANCE

GRG

architecture

ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL

- 1.1 General Conditions A. The General, Special, and Other Conditions of the Architectural. Mechanical and Vendor documents shall be considered an integral part of these Electrical Specifications. B. Reference to "Contractor" in this specification shall mean "Electrical Contractor (EC)",
- unless otherwise noted. All work specified herein is the responsibility of the Electrical Contractor unless specifically noted otherwise.
- 1.2 Scope of Work
- A. Furnish all labor, materials, equipment, tools, and other items necessary for, or incidental to, installation of a complete electrical system as required for this project. 3. Also include all other work and miscellaneous equipment not specifically mentioned, but reasonably inferred, that are required for a fully functional and tested system.
- 1.3 Drawings and Documents A. The Drawings and Specifications form a complete set of plans for the electrical work for this project. What is required by either shall be as binding as if required by both. In the event the Drawings and Specifications are in conflict, the greater requirement or cost shall be included in bid, or if time, a clarification will be issued.
- . Bidders shall examine and include all other trade and equipment Vendor Drawinas and Specifications to avoid omissions, duplications, and to insure complete installation of all work for electrical.
- C. The Electrical Drawings are diagrammatic and are intended to show approximate location only. Placement of electrical equipment and devices shall not interfere with locations or clearances of other trades' materials or equipment. Coordinate the placement of electrical devices with Architectural plans, elevations and details.
-). The direct routing of conduits and wiring is not assured. Exact requirements shall be governed by the conditions of the project site. Extra lengths of wiring or the addition of pull or junction boxes, etc., necessitated by such conditions, shall be included in the Bid.
- .4 Codes, Inspections, and Fees A. The completed electrical installation shall comply with the latest edition of the National Electrical Code as well as all applicable Federal, State, and Local Codes, Regulations, and standards including interpretations by appropriate Authorities Having Jurisdiction. Where the Drawings and Specifications call for workmanship or materials in excess of code or regulatory requirements, the Drawings and Specifications shall aovern.
- B. The work specified herein shall be subject to inspection and approval by authorized representatives of the National Board of Fire Underwriters, State and Local Authorities Having Jurisdiction, and the Engineer. The Contractor shall make the necessary arrangements to have the electrical work inspected by appropriate inspector(s) and shall
- provide two (2) copies of final signed "Certificate of Inspection" to the Owner. C. Obtain and pay for all licenses, permits, fees and charges for all work installed by the Contractor. Contractor is responsible to pay all fees and charges levied by the Electric Utility Company for connection to electric services.

1.5 Job Site Safety

- A. The Contractor is be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of work. This requirement will apply continuously and not be limited to normal working hours. B. No act. drawing review or construction review by the Owner, the Engineers or their
- Consultants, is intended to include review of the adequacy of the Contractor's safety measures in, on, or near the construction site. 1.6 Conditions at the Site
- A. Examine the site and be familiar with all existing building conditions and limitations prior to submitting bid. No extra payment will be allowed for work required because of these conditions, or if information is visible or readily attainable, for any limitation or misunderstanding of existing conditions.
- B. Any discrepancies from these documents should be reported to the Architect/Engineer prior to bid.
- .7 Workmanship and Contractor Qualifications A. Install electrical equipment and materials in a neat and workmanlike manner by persons experienced and skilled in the trade. Only the best quality workmanship will be accepted Haphazard or poor installation will be cause for rejection of work. All exposed components of the electrical systems shall be square and true with building lines and
- B. Contractor shall be licensed in the state in which the project is located.
- 1.8 Coordination of Work
- A. Give careful consideration to the work of the general, mechanical and all other contractors/subcontractors on the project. Organize and phase the electrical work so that it will not interfere with the work of other trades.
- 3. Drawings and Specifications for other trades and general construction drawings shall be consulted for coordination information, details, dimensions, etc. Coordinate all shafts, chases, furred spaces, suspended ceiling, locations of equipment, etc. C. The location of all outlets, wiring, and equipment shall be verified. The electrical
- requirements of any equipment shall be verified with actual equipment or approved Shop Drawings prior to any rough in work. Notify Engineer of any discrepancies. Dimensions given on the Drawings shall take precedence over scaled dimensions.
- Dimensions, whether calculated or scaled, shall be verified in the field. E. Check actual job conditions before fabricating work. Coordinate with other trades to avoid rework due to field conditions. Changes or additions, subject to additional compensation, which are made without written authorization and an agreed price, shall be at the Contractor's risk and expense.
- Coordinate routing of all conduit and wire concealed in walls, soffits or ceilinas provided by the General Contractor. Field coordinate all work to conceal installations not coordinated or specifically approved by the Architect and Engineer. G. Verify items such as door swings, window locations, casework, etc., before installing any
- electrical equipment or devices H. Make minor adjustments to work where requested by the Owner or the Owner's representative when adjustments are necessary for proper operation and within the intent of the contract.
- 1.9 Materials and Equipment A. Unless otherwise specified, all material and equipment shall be new and manufactured by approved or listed manufacturers. All materials and equipment shall meet the
- requirements of all governing codes. B. All material and equipment shall be listed and labeled by Underwriters Laboratories, Inc. (UL), as conforming to its standards in every case where such a standard has been established for that type of material or equipment.
- C. Obtain written approval to use any proposed substitute material or equipment before contracting to purchase such substitutes. The Owner reserves the right to require the removal of any material or equipment which does not have this written approval and which does not comply with the Specifications, regardless of the state of installation of such equipment. D. Where equipment supplied by the Contractor has characteristics other than as specified
- herein, the Contractor shall, at no additional cost to the Owner, remove and replace the electrical work necessitated by the substituted product.

1.10 Temporary Installations

- A. Comply with the Owner and General Contractor requirements. All work to be in conformance with NEC article 590, temporary installations. 3. Electric power system: Provide an electrical distribution system of sufficient size,
- capacity, and power characteristics required for all construction operations. C. Provide new Temporary Electrical service as required for the project. Utilize existing building electrical distribution if available, and supplement as required for the project
- conditions. For new service construction, coordinate with the utility to provide temporary service for the duration of construction so as not to interfere with new service construction. Pay for all utility charges associated with the temporary service including energy bills. D. Lighting: Provide temporary lighting with local switching throughout all areas of
- construction. Provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
- E. Where light fixtures exist in the area of construction, utilize existing lights and outlets as much as practical to meet these requirements. Clean and re-lamp each fixture used for temporary at end of construction.
- . Remove all temporary installation electrical equipment at the end of the project. Patch and seal sleeve openings.

1.11 Demolition

- A. Where electrical work to remain is damaged or disturbed in the course of the work, remove damaged portions and install new products of equal capacity, quality, and
- 3. Accessible work indicated to be demolished: Remove exposed electrical installation in its C. Abandoned work: Cut and remove buried raceway and wiring indicated to be abandoned
- in place 2 inches below the surface of adjacent construction. Cap and patch surface to match existing finish. . Removal: Remove demolished material from the project site.
- . Temporary disconnection: Remove, store, clean, reinstall, reconnect, and make operational components indicated for relocation.

1.12 Cutting and Patching

- A. Perform all core drilling, cutting and patching necessary for the completion of the electrical work for this project. No structural members shall be disturbed without obtaining written permission of the Engineer.
- B. Any surface which is disturbed in any way by the Contractor shall be repaired and refinished to provide a surface equal in strength, durability, and appearance to the original surface.
- C. Where it is necessary to drill or cut concrete surfaces, the edges shall be sharply defined Holes shall be made with a rotary drill. Cuts shall be made with a concrete saw unless some other method of making specific cuts is approved by the Engineer.
-). Penetrations through smoke, fire, hazardous area, or other rated separations shall be fire sealed to preserve the ratings of the separations. E. All cutting, drilling, patching, repairing, and refinishing shall be done by persons skilled in
- appropriate trades. F. Clean away all rubbish and litter generated during electrical installation.

- 1.13 Shop Drawings and Submittals
- A. Submit Shop Drawings for all new items of electrical equipment. Three (3) sets of Shop Drawings shall be submitted for review. In lieu of hard copies of Shop Drawings, the Contractor can submit electronic PDF versions of the Shop Drawinas for review. All Shop drawing submittals shall allow for a minimum of 7 working days for Engineer review.
- B. Shop Drawings shall be detailed, dimensioned manufacturers' drawings. Each set of documents shall list the project name and address, and Contractor's name, address, and telephone number. An index page shall list individually all the items in the submittal with references to type designations or other identifiers noted on Drawings.
- C. Assure that Shop Drawings are complete before submittal. Submittal to the Enaineer shall be via the General Contractor and, where required, the Architect. Shop Drawings not signed by both the Contractor and the General Contractor shall be returned. D. Cross out any information or options not being provided or does not apply to the project.
- Failure to do so assumes that all equipment, options and accessories shown in the Shop drawing submittal is included. E. Provide a list for any item submitted in the Shop Drawings which is a substitution for specified products. If the Contractor uses materials other than those specified and fails to
- call attention to the differences between these materials and those specified, the Contractor shall be responsible for replacement, at no additional cost to the Owner, of any such materials determined by the Engineer to be unacceptable . The approval stamp on the Shop Drawings does not relieve the Contractor or the supplier

of responsibility for full contract compliance.

- 1.14 Maintenance Manual and Record Drawings A. Furnish the Owner with two (2) printed copies and two (2) digital data DVD's of a manual covering the operation and maintenance of all equipment provided under this contract The manuals shall be in a 3-ring, loose leaf, heavy duty binder and submitted to the
- Architect/Engineer for approval. Each manual shall contain the following: 1. Complete manufacturer catalog data, manufacturer's literature, wiring diagrams, detailed operating instructions, and a complete listing of suppliers and distributors where replacement parts and maintenance services are available for all eauipment.
- 2. Physical description and installation instructions and user's manual and operating instructions. 3. Replaceable parts list. Include replacement lamps per fixture type.
- 4. Inspection certificates, signed by the appropriate inspector, shall be furnished in the maintenance manual. 5. Manufacturer's warranty.
- 6. Data DVD with indexed PDF documents of all the manual content of items 1-5
- B. Markup a set of construction documents as work progresses, to show actual circuit routing with dimensioned information, sizes types, etc., equipment location changes, and any other changes or deviations between project work, as built, and the contract documents. Markings shall be neat, legible, and permanent. Upon completion of the work, the Contractor transfer applicable markings to second set of documents and provide both sets of record documents to the Owner.

1.15 Clean—Up

- A. Rid the premises of scrap materials, trash and debris both during construction and at completion of project. Leave the building and surrounding area in a clean and orderly
- 1.16 Acceptance Demonstration and Training A. Perform system start-up, testing and programming prior to Owner's training. Do not schedule demonstrations until systems are completely ready to turn over to the Owner as
- B. Demonstrate to the Owner the operation of the electrical installations, including any and all special items installed by him or installed under his supervision. The timing of the demonstration will be determined by the Owner upon completion of the work. Properly set automatic time switches to perform switching operations in accordance with schedules provided by the Owner's Representative, and demonstrate (using the manufacturer's operating instructions) how to override, test and program lighting/systems.
- 1.17 Rebate Programs A. Provide the Owner with all rebate forms, filled out with applicable project information, for utility or product rebate programs to which the Owner is eligible.

1.18 Guarantees and Warranties

- A. Furnish the Owner with a written guarantee for the period of one (1) year against the failure of any part of the electrical systems installed under the Specifications due to faulty material or workmanship, without any charges, to the Owner. Guarantee period to start upon substantial completion or as specified under general and special conditions. Lamps
- shall be operable on the start date of, but excluded from, the augrantee. B. Assure that any extended warranties to which the Owner is eligible, are passed on to the Owner

PART 2 - PRODUCTS

- 2.1 Material Approva A. All materials must be new and bear Underwriter's Laboratories (UL) label. Materials that
- are not covered by UL testing standards shall be tested and approved by an independent testing laboratory or a governmental agency. Material not in accordance with these Specifications may be rejected either before or after installation
- 2.2 Conductors and Cables
- A. Electrical conductors shall be building wire, except where other type of wire or cable is specifically indicated. B. Building wire conductors shall be soft-drawn annealed copper, having a conductivity of not less than 98% pure copper. Conductor sizes are American Wire Gauge (AWG) or circular mils (KCMIL) as follows:
- 1. #12 AWG solid copper.
- 2. #10 AWG and larger shall be stranded copper.
- Branch circuits to be color coded, color impregnated wire.
 Insulation type: XHHW, XHHW-2, THHW, or THWN-2, color coded, color impregnated
- D. AC. core clad or Romex cables are not allowed. Type MC cables with green ground
- conductor allowed only where noted in Part 3 Execution. E. Light fixtures shall not be used as a raceway unless listed and marked as a raceway in
- accordance with NEC Article 410.64 and as noted in Part 3 Execution. F. Electrical conduit installations must be supported per the N.E.C. and not exceed 10 feet
- between supports. Electrical conduit installations must be a minimum of 3/4" EMT. G. Cord Drops and Portable Appliance Connections: Type SO, oil proof, hard service cord with stainless—steel, wire—mesh, strain relief device at terminations to suit application.
- 2.3 Low Voltage Conductors and Cables A. UTP cable: Category 6, 100-ohm, four-pair. Listed and Labeled by an NRTL acceptable to Authorities Having Jurisdiction as complying with UL 444 and NFPA 70. UTP Cable Connecting Hardware: IDC type, using modules designed for punch—down caps or tools.
- Cables shall be terminated with connecting hardware of the same category or higher. Plenum rated. B. RS-232 Cable: Plenum rated, Type CMP, two pair, No. 22 AWG, stranded copper: each
- pair 100 percent shielded, copper drain wire. C. RS—485 Cable: Plenum rated, Type CMP, two twisted pair, No. 22 AWG, stranded copper, unshielded.
- D. Coaxial cable for CATV, MATV and DBS:
- RG-6: 16 AWG, solid, copper-covered steel conductor; gas-injected, foam-PE insulation. Double shielded with 100 percent aluminum-foil shield and 60 percent aluminum braid. Plenum rated, Type CMP. Use where the coaxial cable will be
- 2. RG-59 20 AWG, solid, copper-covered steel conductor; gas-injected, foam-PE insulation. Double shielded with 100 percent aluminum-foil shield and 40 percent aluminum braid. Plenum rated, Type CMP. Use for single device or from a tap or E. Control Circuits:
- 1. Low voltage control cable: twisted pairs #16 AWG with overall shield. 2. Class 1 Control Circuits: Stranded copper, Type THWN or XHHN, in raceway or
- cable with armor jacket. 3. Class 2 Control Circuits: Stranded copper, Type THWN or XHHN, in raceway, power-limited cable, concealed in building finishes, cable with armor jacket or
- power-limited tray cable, in cable tray and on hangers. 4. Class 3 Remote-Control and Signal Circuits: Stranded copper, Type TW or Type TF, complying with UL 83.
- 2.4 Grounding and Bonding

8'x5/8" copper clad steel.

2.5 Conduit Hangers

manufacturer.

- A. Circuits, metal raceway systems, and all other permanently installed electrical equipment shall be solidly grounded in accordance with the National Electrical Code to form a continuous, permanent and effective grounding system. B. Grounding conductor connections shall be made with solderless pressure type fittings.
- Where welded connections are practical, connections may be made by the use of suitable welding process. All connections shall be made in strict conformance with the manufacturer's recommendations.
- C. To maintain uninterrupted electrical continuity, flexible raceway sections must have conductance eaual to that of the system's inflexible raceway. Raceway fittings listed must be such as to ensure existence of a permanent bond. Grounding bushings shall be provided to ground conduits to control center ground. All new equipment shall be grounded to the existing grounding system. D. Include a separate bare ground conductor in all flexible metal cable of the same size as
- phase conductor. İsolated ground conductors: green colored insulation with continuous yellow stripe.
- F. Bonding interior metal ducts: bond metal air ducts to equipment arounding conductors of associated fans, blowers, electric heaters, and air cleaners. Install tinned bonding iumper to bond across flexible duct connections to achieve continuity. G. Ground rods to be 10'x3/4" copper clad steel. Ground rods at exterior area lights to be

A. For individual conduit runs not directly fastened to the structure, use threaded rod and

B. Galvanized steel slotted channel support systems with fittings and supports by the same

hangers manufactured by Caddy, Unistrut or Powerstrut.

2.6 Raceways and Outlet Boxes

A. Provide raceways, fittings, connectors and accessories for a complete raceway system. Raceways include: 1. Rigid steel: hot-dipped galvanized

2. Intermediate metal conduit (IMC): hot-dipped galvanized.

- 3. Electrical metallic tubing (EMT): electro-galvanized.
- 4. Wireways: enamel finish, hinged type. 5. Flexible metallic conduit: for final connection in dry locations less than 6'lengths.
- Liquid tight flexible metal conduit: for final connection in damp or wet locations less than 6' lengths.
- B. Provide fittings and accessories approved for the purpose equal in all respects to the conduit or raceway. EMT connectors and couplings shall be steel setscrew type indoors and steel compression type in damp or wet locations and outdoors. C. Outlet boxes: 4" square $x \ 1-1/2$ " deep (or larger) galvanized sheet steel KO-type with plaster ring and cover for general interior use. Cast metal type FS or FD with matching
- screw covers for exterior and exposed interior locations (gasketed in damp or wet locations) D. Junction boxes shall be same as outlet boxes up to 42 cu. In. Use code-aguae steel in
- larger sizes with surface or flush-type screw-mounted trim covers. Boxes and covers painted with inhibitor-primed paint inside and out. E. Pull boxes shall be same as junction boxes unless indicated otherwise on the Drawings,
- F. Telephone outlet boxes shall be the type and size required by the serving telephone company but not smaller than 4-11/16" square x 2-1/2" deep with single-gang ring. Other onfigurations as shown on the plan.
- 2.7 Cable Trays A. Wire basket cable tray: 12" wide by 3" deep. Furnish with accessories, hangers, splices, cable dropouts manufactured by the cable tray supplier. Cable tray to be galvanized steel, center hung or wall hung on angle mounts.
- 2.8 Underground Raceways A. Conduits below grade to be schedule 40 PVC electrical conduit with fittinas and
- accessories by the same manufacturer. 1. Schedule 80 PCV electrical conduit, fiberalass electrical conduit. concrete encased
- electrical conduit, concrete capped electrical conduit or concrete duct banks as shown on the Drawinas.
- 2.9 Identification and Labeling A. Label all control devices and device enclosures with individual name plates or leaend
- plates. B. Individual name or legend plates to be black laminated plastic plates with white cut letters. Paper, foil or tape markers attached with adhesives shall not be used. C. Engraved, laminated acrylic or melamine label, punched or drilled for screw mounting. White letters on a dark-gray background. Minimum letter height shall be 3/8 inch.
- D. Equipment to be labeled: Panelboards, electrical cabinets, and enclosures.
- 2. Access doors and panels for concealed electrical items. 5. Electrical breakers in existing distribution panels.
- . Transformers. 5. Emergency system boxes and enclosure
- 6. Disconnect switches.
- . Enclosed circuit breakers. 8. Motor starters.
-). Push-button stations. 10. Contactors.
- 11. Remote-controlled switches, dimmer modules, and control devices. 12. Panels, terminal cabinets, and racks.
- E. Accessible raceways and cables of auxiliary systems: Identify the following systems at panel and junction box locations within each room as follows: 1. Fire alarm system: Red boxes and covers.
- 2. 120/208 volt: Mark covers with panel and circuit numbers
- 3. 277/480 volt: Mark covers with panel and circuit numbers. Receptacles: Identify panelboard and circuit number from which served. Use hot,
- stamped or engraved machine printing with black filled lettering on face of plate, and durable wire markers or tags inside outlet boxes.
- 2.10 Lighting Control Devices
- . Time switches: Solid state programmable unit with multiple channels for exterior lighting B. Outdoor photoelectric switches: Solid state with dry contacts and metal oxide surge
- C. Indoor photoelectric switches: Ceiling mounted solid state light level sensor connected to day lighting relays. D. Indoor occupancy sensor to be dual technology with solid state separate external relay
- unit for ceiling mounted units. E. Wall box occupancy sensors to have adaptive technology with time delay, quantity of integral switches as shown on the Drawings (minimum of one (1) switch). F. Lighting contactors: Mechanically held, non- fused switch with 2 wire solid state control
- G. Emergency shunt relay: Normally closed electrically held with automatic switching
- contacts to bypass local room controls H. Wall mounted programmable dimming control: installed where shown on the Drawings with scene selector and multi-station dimming over ride controls. Lutron Graphic Eye
- . LÉD wall box dimmers: rated for quantity and type of fixtures shown on Drawings. Divide switch legs and add additional dimmers to meet manufacturer's recommendation.
- 2.11 Dry Type Transformers A. Transformer to be 480V delta primary to 120/208V, 3PH, 4W secondary with 2-5% taps above and below normal voltage. Transformer to be 150deg C rise, TP-1 Energy Code rated. Transformer grounding shall be per NEC. Additional K ratings, electrostatic shields, weather hoods, etc. as shown on the Drawings.
- 2.12 Panelboards A. Panelboards shall be Schneider Electric style #NQ for 100-400A, I-Line for 400A-800A or equal by Cutler-Hammer, G.E., or Siemens. B. Panelboards shall be dead front safety type with enclosures of code grade steel.
- Oversize gutters shall be provided for feed through where indicated or required. Where double lugs are not permitted by local code, a suitable pull box or gutter adjacent to panels shall be provided for connections. C. Panelboards shall have trim and flat locking doors with both hinges and trim clamps
- completely concealed. Panels to be door in door construction, Door locks shall be flush with the cover. All door locks shall be common keyed. Two (2) keys shall be provided for each panelboard. A clear plastic-covered typewritten circuit directory shall be mounted in a card holder attached to the inner side of the door. Panelboards shall have black plastic plates with ½—inch high white cut letters stating panelboard number and voltage. Where
- panelboards are in public areas, identification plates shall be inside door. D. Buses shall be made from 98 percent electrolytic copper or 55 percent conductivity aluminum and shall be independently supported (without dependence upon the circuit breakers). Where breakers and/or switches are listed in the schedules as "space only",
- this shall include extended bus and mounting provisions. E. Circuit breakers shall be bolt-on and shall have bolted line and load terminals. All branch circuit breakers shall be guick-make, guick-break, thermal magnetic, common trip on all multi-pole breakers and have a minimum UL short circuit rating as shown on the
- Drawings. Each breaker shall have its current rating engraved, in easy to read numbers, on the toggle handle. All breakers used for lighting switching control shall be UL listed "SWD" switching duty. All breakers used for motor or high inductance loads shall be HACR rated
- F. Fusible factory assembled panelboards shall be Schneider Electric QMB for 225A-1600A or equal by Cutler-Hammer, G.E., or Siemens with requirements noted above. 1. Trims to 4 piece without door for NEMA 1; with door where noted on the Drawings
- or for NEMA 3R/5/12. 2. Fused switches: NEMA KS 1, Type HD. Twin, side by side mount for 30A-200A. Sinale mount for 400A and above.
- 3. Furnish rejection fuses as noted in 2.14 below.
- 2.13 Wiring Devices A. Wiring devices shall be installed in metal device boxes.
- B. Switches and receptacles shall be Hubbell, Bryant, Leviton, pass & Seymour, or approved equal subject to approval by the Architect, color shall be grey for normal power
- and red for emergency power. Special color device outlets and matching coverplate as noted on the plans. C. Switches shall be heavy duty grade, ac quiet type, 20-amp, 120/277-volt, with silver alloy
- contacts, equal to Hubbell #5362. D. General purpose duplex receptacles shall be heavy duty grade NEMA 5-20R, 20-amp,
- 125-volt, 3-wire grounding type devices with brass one piece ground strap; third pole grounding to the outlet box. E. Hospital grade duplex receptacles in patient care areas per NEC Article 517.
- F. Ground fault circuit interrupt (GFI) duplex receptacles shall be heavy duty grade, 20-amp devices wired so that each unit is self-contained. GFI receptacles shall not be connected to feed through unless specifically noted on the Drawings. G. Receptacles in damp or wet locations to have NEC Weather Resistant rating.
- H. Tamper Resistant rating in areas required by the NEC.
- AFCI outlets where required by the NEC. J. Isolated ground receptacles to be orange in color.
- K. Surge Protective Device (SPD) type 3 duplex receptacle with indication light and audible L. Cover plates to be stainless steel type 302. Special color plastic cover plates to match
- Style Line type receptacles as noted on the plans with matching colors. M. Weatherproof duplex receptacles shall be GFCI protected with "while-in-use" weatherproof coverplates.

A. Fuses shall be one-time cartridge fuses manufactured by Busman, Gould Shawmut, or

- B. The Contractor shall furnish and install fuses of the types and ratings designated in the Drawings and Specifications in each fusible device installed by the Contractor. 1. Feeder and branch circuits class RK1 time delay. 2. Motor circuits class RK5 time delay.
- 3. Control circuit fuses to be time delay
- 2.15 Enclosed Switches, Circuit Breakers and Controllers Disconnect switches shall be heavy duty, AC, single throw safety switches, built in accordance with NEMA requirements with a voidable full cover interlock and guick-make quick-break mechanism. Each switch shall be fusible unless non-fusible (NF) is specifically indicated. Switches shall be in NEMA 1 enclosures in dry locations and NEMA 3R where exposed to the weather. B. Provide auxiliary contacts to shut down VFD prior to disconnecting power. Provide
- rejection fuses where noted.
- C. Full voltage non reversing starters size 0 minimum.). All starters to be combination starters and molded case circuit breaker or fused
- disconnect as noted on the Drawings with cover mounted HOA and pilot lights. E. Fractional HP starters quick make quick break single pole switches for integrally
- protected motors. F. Multi pole horse power rated switches or enclosed circuit breakers in flush NEMA 1
- enclosures where motors are located in finished spaces.
- G. All devices NEMA rated for the environment they are located.
- 2.16 Surge Protective Devices (SPDs)
- . Service entrance: modular design with peak single impulse surge current rating of 240ka per mode/480ka. Type 2 Surge Suppression (SPD) at the main electrical service shown on the Drawings. B. Panelboard suppressors: non modular design with peak single impulse surge current
- rating of 120ka per mode/240ka. Type 2 Surge Suppression (SPD) at panelboards or separately derived systems shown on the Drawings. Type 3 Surge Suppression (SPD) at point of use: duplex receptacle; integral to wiring device.
- 2.17 Lighting Fixtures
- A. Fluorescent fixtures: 32 watt. T-8 High Efficiency Jamps (Jamps shall have a minimum mean of 2950 lumens), with multi-volt electronic ballasts. Provide programmed start ballasts with end of life circuitry on occupancy sensor controlled fixtures. B. Verify that the Lighting Supplier has provided a disconnect switch per N.E.C.
- 410.130(G)(1) for all fluorescent fixtures. C. Electromagnetic-interference filters: factory installed to suppress conducted
- electromagnetic-interference as required by mil-std-461E. Fabricate lighting fixtures with one filter per ballast. D. Dimming ballasts to be 0-10V compatible with the dimming controller selected.
- 2.18 Fire Alarm System
- A. Electrical Contractor shall provide new fire alarm system as required by National, State, or Local Codes, or Local Fire Authority Having Jurisdiction Furnish and install devices, components, etc., as required and as directed by the Enforcing Agency. Provide all required submissions to the Authority Having Jurisdiction and pay for required fees B. UL-certified addressable system, with multiplexed signal transmission. dedicated to
- fire-alarm service only. C. Locations of devices on Drawings are suggested locations; adjustments may be made by
- fire alarm system supplier to meet the requirements of the installed components. The Contractor shall pay any fees associated with work to be done by others regarding the fire alarm system including graphical updates, programming, etc. D. Wiring shall be in conduit and installed in complete conformance with manufacturer
- recommendations. When acceptable by Authority Having Jurisdiction, plenum rated cable may be used above suspended ceilings. However, conduit shall be provided in walls. Include cost of an authorized representative of the fire alarm manufacturer to supervise final connections and check all system functions upon completion of the
- E. Provide additional control cards and power supplies if required. . Install detection where required by Code and where shown on the drawings.
- G. Provide software operating and upgrade manuals. H. Connect fire alarm contact(s) of sprinkler system to flow switches, supervised valve and
- air duct detectors to fire alarm system. I. If required, connect fire alarm devices (air duct detectors, etc.) and any other associated equipment to dedicated 120V circuits.
- J. Rated strobe light output: 15/30/75/110 CD, selected in the field. Install where required by Code and where shown on the drawings.
- 2.19 Voice/Data Systems
- A. All telephone and network systems and cabling shall be provided by the Owner's communications cabling contractor. The Contractor is to install an empty conduit, backbox and junction box system for installation of the Owner's communications system
- by others. B. For each telephone, data or telephone/data outlet indicated on the Drawinas provide a 4" square box with single gang ring, and 3/4" conduit concealed from device to the nearest accessible ceiling, floor space or accessible access panel in hard ceilings, unless noted
- C. Install conduit bushings on conduit ends. Install pull cord in all conduits. D. The Owner shall furnish and install the wire, cable, connecting devices, and provide testing for wiring systems to be used as signal pathways for low voltage systems to be used as signal pathways for low voltage system specified in this section where called for
- in the Drawings. E. The Contractor shall coordinate the installation and schedule for all low voltage systems of this section with the Owner and adjacent affected tenants. The Contractor shall run all
- necessary conduits with pull wires, pull and junction boxes. F. Were low voltage systems pass through another tenant space or area not controlled by the Owner, the Contractor shall install complete conduit system in those spaces for the Owner's wiring.
- 2.20 Other Low Voltage Systems
- A. MATV/CATV: For each television (TV) outlet indicated on the Drawings, provide a 4" square box with single gang ring, and 1 1/4" conduit stubbed into accessible ceiling or joist space. Owner's Vendor to provide all telephone and network systems and wiring.
- B. A/V: For each audio/visual (AV) outlet indicated on the Drawings, provide a 4" square box with single gang ring, and 1 1/4" conduit stubbed into accessible ceiling or joist space. Owner's Vendor to provide all telephone and network systems and wiring. 1. For each VGA (VGA) outlet indicated on the Drawings, provide a 4" square box with single gang ring, and 1 1/4" conduit stubbed into accessible ceiling or joist space. Owner's Vendor to provide all telephone and network systems and wiring.
- 2. Security and Duress System. 3. Card Access System.
- PART 3 EXECUTION
- 3.1 General
- A. Electric system layouts indicated on the Drawings are generally diagrammatic and shall be followed as closely as actual construction and work of other trades will permit. Govern exact routing of cable and wiring and the locations of outlets by the structure and equipment served. Take all dimensions from Architectural drawings.
- 3. Consult all other drawings, verify scales and report any dimensional discrepancies or other conflicts with Owner before submitting bid. C. All home runs to panelboards are indicated as starting from the outlet nearest the panel and continuing in the general direction of that panel. Continue such circuits to the panel as through the routes were completely indicated. Terminate homeruns of signal, alarm
- and communication systems in a similar manner. D. Avoid cutting and boring holes through structure or structural members wherever possible. Obtain prior approval of Owner and conform to all structural requirements when
- cutting or boring the structure is necessary and permitted E. Furnish and install all necessary hardware, hangers, blocking, brackets, bracing, runners,
- etc., required for equipment specified under this section. F. Provide necessary backing required to insure rigid mounting of outlet boxes.
- 3.2 Conductors and Cables

3.3 Low Voltage Conductors and Cables

supports independent of the ceiling supports.

conduit ends.

- A. Provide #12 branch circuit conductors for all 120 volt, 20 amp circuits less than 75' (100' for 277 volt circuits). Provide #10 branch circuit conductors for all 120 volt, 20 amp circuits over 75' (100' for 277 volt circuits).
- . Where more than three current carrying conductors are installed in a single raceway (e.g. combining multi-circuit homeruns), conductor ampacity shall be de-rated as required by
- C. Provide dedicated neutral circuits for all 120V and 277V branch circuits. D. Megger and record insulation resistance of all 600 volt insulated conductors size $\frac{#4}{0}$ and larger using 500 volt megger for one minute. Make tests with circuits isolated from source and load.

A. All low voltage cables installed in a metal box and raceway system to an accessible

B. Minimum conduit size is 3/1" with larger sizes noted on plan. Install plastic bushing on

supports. Utilize D rings, J hooks or approved nylon straps to hold cables and provide

C. Group and bundle low voltage cables and provide support independent of ceiling

- A. The building and electrical systems shall be arounded and bonded in accordance with the B. Electrical service and separately derived alternating current systems shall be grounded i
- C. All feeder and branch circuits shall have a green copper ground conductor run with the D. Provide Code required #6 or larger ground conductor and 12" ground bus at
- A. Conduit and cable support devices to be steel with hangers and supports suitable for
- B. Steel slotted support systems with Manufacturer's galvanized steel coating.
- C. Fabricated metal equipment support assemblies to be bolted structural steel or stee slotted support systems calculated by a registered structural Engineer. D. Concrete bases installed by the Electrical Contractor. Base to be nominally 3000 PSI concrete with dimensions noted on the Drawings. Install for all floor mounted electrical
- B. Conduit shall be rigid steel, IMC or EMT as follows:

3.4 Grounding and Bonding

3.5 Hangers and Supports

equipment.

3.6 Raceways and Boxes

Recessed lighting fixtures.

not exceeding 6' in length.

2. Motor connections

3. At building joints.

are not allowed.

structures.

diffusers, etc.

... Conduit supports:

mechanical ducts or pipes.

he building structure.

M. Conduit penetration:

N. Outlet boxes:

sized as required.

3.8 Underground Raceways

corrosion protection

3.9 Identification

and heavy duty bolted cover.

D. Color code wires as follows:

3.10 Lighting Control Devices

source of power to operate.

3.11 Low Voltage Transformers

on the Drawings.

3.12 Panelboards

3.13 Wiring Devices

neutral blade at the top

2. 120/208V black, red, blue, white, green.

3. 277/480V brown, orange, yellow, gray, green.

groups of branch circuit conduits.

3.7 Cable Trav

receptacle branch circuit wiring.

NEC, IEEE and best practices

phase and neutral conductors.

accordance with NEC. Article 250

telecommunication demarcation location

A. Enclose all electrical power wiring in conduit.

flexible metal conduit and appropriate fittings.

H. Install nylon pull cords in all empty conduits.

with device outlets noted on plans.

mechanical work or avoid any conflict.

Provide escutcheon for each conduit below ceiling.

standing equipment and furniture partitions.

K. General conduit installation:

raceway or cable to be supported.

- . Above ground: use rigid steel or IMC only. 2. Locations subject to mechanical injury. Rigid steel or IMC only. 5. Dry locations and not subject to mechanical injury: EMT, IMC or rigid steel conduit. Use flexible conduits in the following applications:
- 4. At wet locations, flexible conduit shall be liquid tight type. D. Metal clad cable with green ground conductor allowed only for the following conditions
 Above accessible ceilings for final connections from junction boxes to light fixtures
- 2. Final connection not exceeding 6' in length to rotating or vibrating equipment. . Allowed for branch circuits fished into existing wall construction 4. Allowed in new casework or built up structures where flexibility is required.
- E. Conduit cast in concrete floors are not allowed. . Motor and transformer connections in dry locations shall be made with flexible metal conduit. Motor connections in damp or wet locations shall be made with liquid tight
- G. Fittings for EMT shall be steel compression type in exterior or damp locations. Fittings for other raceways shall be steel set-screw type style in interior dry locations. Die cast fitting
- I. Provide expansion fittings crossing all expansion joints or spanning between isolated J. Surface raceways to be a 2 compartment style similar to Wiremold G-4000 white finish
- . Run all conduit concealed unless otherwise noted or shown. Run all conduit parallel to or at right angles to center lines of columns and beams. 5. Conduits above ceiling shall not obstruct removal of ceiling tiles, lighting fixtures, air
- 4. Conduits shall not cross any duct shaft or area designated as future duct shaft horizontally. Conduit riser, when allowed in duct shaft must be coordinated with
- 1. Support conduits with Underwriter's Laboratories listed steel conduit supports at intervals required by the National Electric Code. Wires or sheet metal strips are not acceptable for conduit support. Use conduit hangers for all conduits not directly fastened to structure and for all multiple conduit runs. Do not attach any conduit to
- 2. Avoid attaching conduit to fan plenums. When it is necessary to support conduit from fan plenum, provide a length of flexible conduit between portions attached fan plenum and portion attached to the building to minimize transmission of vibration to
- . Fire rated floor or wall: Install conduit in conduit sleeve or framed opening. Seal penetration with fire retardant sealant specified herein. Roof or exterior wall: Avoid penetrating roof or exterior wall where possible.
 Where penetrations are necessary, building weatherproof integrity must be
- preserved. 3. Sound insulated or air plenum wall: Install conduit in conduit sleeve and seal penetration as detailed on the Drawings. 4. Non—fire rated dry wall: Conduit sleeves are not required. Penetrations must be
- sealed with plaster prior to painting. Penetrations made after wall finish is applied must be as small as possible and provided with escutcheons, one on each side of 5. Suspended ceiling: Cut hole as small as possible to permit conduit penetration.
- . Provide outlet boxes and pull boxes as required to accommodate lighting and
- 2. Outlet boxes must not be installed back-to-back. Outlet boxes used for wall box dimmers may not be ganged. Outlet boxes used for wall box dimmers must be de-rated when grouped under one cover. 4. Provide cast steel floor boxes to accommodate power and data connections to free
- 5. All outlet boxes shall be two-gang or 4" square x 2" deep minimum with plaster ring 6. Exterior boxes for branch circuits to be cast aluminum with threaded hubs.
- A. Hang cable tray with threaded rod below mechanical ductwork and piping above finished lay in ceiling. All cable trays to be center hung or angle wall hung for unobstructed cable
- A. Underground conduits shall be schedule 40 PVC buried in earth. Transitions through concrete slabs, pre manufactured bends or elbows to be intermediate steel conduit with B. Exterior branch circuit or feeder handholes to be cast fiberalass resin with open bottom C. Install underground traceable, plastic warning tape 12" above each feeder conduit or
- D. Minimum raceway burial depth shall be 24—inches below finished grade to top of the raceway.
- A. Provide nameplates for switchgears, panelboards, and all similar devices. Nameplates shall be screwed (no adhesive) engraved plastic or photo-etched metallic nameplate identification showing panel designation, voltage and phase in minimum 1/4" high letters. B. Provide machine labels on all lighting switches and convenience and special purpose receptacles to show panel and circuit number to which the device is connected. C. Panelboard schedule: After completion of work, provide typewritten updated panelboard schedules for all panelboard in a metal framed circuit directory inside cover. with plastic
- 1. Voltage phase A phase, B phase, C, neutral ground.
- Provide Brady wire markers where number of conductors in a box exceeds four.
- A. Controllers: Furnish 120 volt power to each control panel and time switch requiring a
- A. Transformers mounted on neoprene pads to prevent vibration transmission. Transformers to be mounted on 4" concrete housekeeping pads or trapeze hung as noted
- A. Where panelboards are flush mounted in walls, provide a minimum of 4-1" conduits stubbed to an accessible ceiling above the panel. B. Circuit numbers appearing on Drawings shall be used for reference only. Actual connections shall be in accordance with phasing of the cabinet and load balance requirements. Room numbers or names used for circuit identification shall corresponded to name plates installed on room doors by the General Contractor or as selected by the Owner and shall be verified as these may not be the same as room titles on the
- C. Top of panelboard tubs shall be 6'-6" above finished floor.
- A. Install hospital-grade receptacles in patient-care areas. Install with the ground pin or

- B. The Contractor shall furnish and install wall plates for all flush mounted wiring devices and all flush mounted special system outlets. Sectional wall plates shall not be used. Blank plates shall be installed over all outlets provided for future use. Wall plates shall be stainless steel as manufactured by eagle, Bryant, general electric, Hubbell or Leviton. Vall plates shall be secured with matching screws. Enaraved wall plates shall have back
- C. The Contractor shall furnish and install outlets for and make final electrical connections to all electrically powered equipment indicated on the plans or equipment schedules.
- A. The Contractor shall furnish and store, at a location directed by the Owner, three (3) spare fuses of each size and type installed during this project. The Contractor shall provide a spare fuse list in the maintenance manuals.
- 3.15 Enclosed Switches, Circuit Breakers and Controllers A. The Contractor shall obtain exact information pertaining to location, electrical characteristics, and wiring for equipment furnished by others from the Contractor furnishing the equipment. This information shall be verified by examining nameplates and manufacturer's wiring diagrams. Any discrepancy between the equipment requirements and the provisions made by these Specifications shall be reported. Equipment damaged as a result of the Contractor's failure to observe manufacturer's requirements shall be
- replaced or repaired by the Contractor. The thermal protection elements in manual starters shall be rechecked with name plate data at the site before operation of the equipment. Where necessary, the thermal protection elements shall be changed to properly protect the equipment. B. Furnish and install manual thermal protection for all motors not integrally equipped with
- thermal protection. C. The Contractor shall furnish and install final electrical connections to all motors and electrically powered equipment indicated on the plans or equipment schedule. D. Furnish and install a disconnect switch immediately ahead of and adjacent to each
- magnetic motor starter or appliance unless the motor appliance is located adjacent and within sight of the serving panelboard, circuit breaker or switch. Verify all equipment nameplate current ratings prior to installation. E. Provide a fused disconnect switch on any transformer secondary where secondary
- conductors exceed 25' from terminal to secondary overcurrent device. F. The Contractor shall furnish and install disconnect switches having the number of poles and ampere ratings as shown on the Drawings and as specified in equipment schedules.
- 3.16 Surge Protective Devices (SPDs) A. Installed in accordance with NEC Article 285.
- B. Install an OCPD or disconnect as required to comply with the UL listing of the SPD. C. Install SPDs with conductors between suppressor and points of attachment as short and straight as possible, and adjust circuit—breaker positions to achieve shortest and straightest leads. Do not splice and extend SPD leads unless specifically permitted by manufacturer. Do not exceed manufacturer's recommended lead length. Do not bond neutral and ground.
- D. Use crimped connectors and splices only. Wire nuts are unacceptable
- 3.17 Lighting
 A. Lighting fixtures: Set level, plumb, and square with ceilings and walls complying with NFPA 70 for fixture supports. Install new lamps in each fixture.
- B. Suspended Lighting Fixture Support:
 1. Pendants and Rods: Where longer than 48 inches, brace to limit swinging. 2. Stem-Mounted, Single-Unit Fixtures: Suspend with twin-stem hangers.
- 5. Continuous Rows: Use tubing or stem for wiring at one point and tubing or rod for suspension for each unit length of fixture chassis, including one at each end. Alternate: flexible cord connection for single circuit. C. Adjust and aim lighting fixtures to provide required light intensities on vertical surfaces or at directions noted on Drawings. Provide additional adjustments for Owner prior to final
- turnover or at substantial completion. D. Lighting fixtures mounted in continuous rows may be end fed with only the circuits feeding the row (passing trough of other circuits not allowed) with each row fed from
- individual junction boxes at the end feed point. E. Lighting fixtures must have individual feeds to each fixture. "Daisy-Chaining" of fixtures not allowed. The lighting fixture whips must be 6-feet long or less.
- 3.18 Fire Alarm System A. Refer to Part 2 for installation information.
- 3.19 Voice/Data System
- A. Refer to Part 2 for installation information 3.20 Low Voltage Systems A. Refer to Part 2 for installation informatior
- END OF SECTION

architecture

118 BROADWAY, SUITE 620 SAN ANTONIO, TX, 78205 210.447.7000

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Revisions:

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Page Description ELECTRICAL SPECIFICATIONS

These drawings and accompanying specifications are to be an instrument of the Architect. They are not to be used on other projects or extensions of this project except by agreement in writing and with appropriate compensation to the Architect.

Drawn By:		DRW
Checked By:		СНК
Project N	0.	240224
Date:	25 J	ULY 2024
Page		

EQUIPMENT	HEAT(KW)	VOLTS/PH	HP/KW/MCA	WIRE & CONDUIT SIZES	DISCONNECT SWITCH	STARTER W/HOA	BRANCH CKT	NOTES
AHU-1	10.8KW	208/3	42A	3#6, 1#10 GND, 1"C.	DISCONNECT SWITCH	SINGLE POINT CONNECTION	L2-1,3,5	3
AHU-2	5.7KW	208/3	38A	2#8, 1#10 GND, 3/4"C.	600V,60A,3P,NF,NEMA 1	SINGLE POINT CONNECTION	L2-7,9	3
AHU-3	10.8KW	208/3	42A	3#6, 1#10 GND, 1"C.	600V,60A,3P,NF,NEMA 1	SINGLE POINT CONNECTION	L2-11,13,15	3
CU-1	N/A	208/3	15A	3#10, 1#10 GND, 1/2"C.	600V,30A,3P,NF,NEMA 3R	N/A	DP1-7,9,11	3
CU-2	N/A	208/3	16A	2#10, 1#10 GND, 1/2"C.	600V,30A,3P,NF,NEMA 3R	N/A	DP1-13,15	3
CU-3	N/A	208/3	12A	3#12, 1#12 GND, 1/2"C.	600V,20A,3P,NF,NEMA 3R	N/A	DP1-17,19,21	3
EF-1	N/A	120/1	18W	2#12, 1#12 GND, 1/2"C.	120V,20A,1P,MMS	N/A	L2-17	2,3
EF-2	N/A	120/1	18W	2#12, 1#12 GND, 1/2"C.	120V,20A,1P,MMS	N/A	L2-17	2,3
EF-3	N/A	120/1	18W	2#12, 1#12 GND, 1/2"C.	120V,20A,1P,MMS	N/A	L2-17	2,3
EWH1	N/A	208/3	6KW	3#10, 1#10 GND, 1/2"C.	600V,30A,3P,NF,NEMA 1	N/A	L2-2,4,6	
HWRP1	N/A	120/1	1/12HP	2#12, 1#12 GND, 1/2"C.	120V,20A,1P,MMS	N/A	L2-8	
	-							
	-						1	
NOTES		Second Sec	and the second					
1. ALL DISCON	NECT SWITCH	IES W/ STA	RTERS SHALL	BE OF COMBINATION DISC/S	TARTER TYPE.			-

TRANSFORMER	~			E					ANAL	YS
{∭ ∪ті⊔тү со. 	Meter 1			SE	RVICE	VOLTAG NCY :	E :	120/208 OFFICE	3V, 3 PHAS E	SE, 4
				1	LOAL	D DESCI	RIPTIC	DN	KVA	
					(a) C	ONNECT	ED LO	ADS		
EW 400 AMP MTS 120/20 PH, 4W	3V,				(b)	4300	SF X 3	5 VA/	SF(220.12)	
				 2	RECE	PTACLES	S			
				3	HVAC	2				_
NEW DP1, 208Y120V, 3P,	4W 400A BUS W/ GROUND BUS	25ka RMS Sym e	RACING NEMA 3R	4	MISC	EQUIPN	ENT			
	•	+								
			SEE PANEL		-			-		
	3P	3P	SCHEDULE ON E501 FOR ADDITIONAL	5	25% l	ARGEST	MOTO	R		
			CIRCUITS			25% x	34	Amp x0).208x 1.732	2
						-				
NEW 4#1/0, 1#6GND	, NEW 4#1/0, 1#6GND,	~						SUBTC	TAL	
2°C.	2°C.			PI	ROBO	SED SE	RVIC	ECA	PACITY	ΔΤ
									Aonn	-
(BOND TO UTRAL)										
PIPE										
D. 1 ^{°°} C. (BOND										
NCRETE										

1 ONE-LINE DIAGRAM - ELECTRICAL SCALE: NTS

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4 WIRE						
CONN	DIV.	DESIGN	REMAR	<s< td=""><td></td><td></td></s<>		
LOAD KVA	%	LOAD KVA				
2.92	125%	0.00				
15.05	125%	18.81	Code large	er than connec	ted N.E.C	. 220-12
17.46		13.73	First 10K	/A + 50% Rem	naining	
30.57		30.57	N.E.C. Ar	ticle 220-13		
7.82		7.82				
3.06		3.06				
72.00	KMA	73.00		205 20	AMD	
73.90	KVA	/3.99	KVA	205.39	AMP.	
208Y/12	0.	144	KVA	400	AMPS	

GRG architecture 118 BROADWAY, SUITE 620 SAN ANTONIO, TX. 78205 210.447.7000 Architect AI CONSULTING ENGINEERS TX. FIRM REG. **#**F-15885 PH: 210-781-0878 amartinez@amz-sa.com Consultant 7-25-24 × ALBERTO E. MARTINEZ 102236 Revisions: MEDINA REGIONAL HOSPITAL NEW ADMINISTRATION BUILDING RENOVATION 3103 AVE G. HONDO, TX 78861 Page Description ONE-LINE DIAGRAM -ELECTRICAL These drawings and accompanying specifications are to be an instrument of the Architect. They are not to be used on other projects or extensions of this project except by agreement in writing and with appropriate compensation to the Architect. Drawn By: DRW CHK Checked By:

Project No. 240224 25 JULY 2024 Date: Page

PANE VOLTAG 400A MA BUSES:4	ELBO E: 208Y/ IN BREA 100A; NE	ARD [120V 3 PI KER UTRAL -	DP1 (I HASE 4 \ 100%; EC	NEMA 3R) WIRE		LOCA MOU Isc =	TION NTIN 25kA	N: EX IG: SI A RM	URF MS S	RIOR FACE SYM	BRACIN	G				
VA:L	VA:R	VA:A/C	VA:O	LOAD	BKR	скт				скт	BKR	LOAD	VA:L	VA:R	VA:AC	VA:O
595	5400	0	1100	PANEL 'L1'	125/3	1	x			2	150/3	PANEL 'L2'	0	0	11226	2120
1542	5040	0	600			3		x		4			0	0	11226	2000
778	7020	0	0			5			x	6			0	0	8118	2000
1		1800		CU-1	25/3	7	X			8	20/1	SPARE	· · · · · · · · · · · · · · · · · · ·			
		1800			1.1.1.1.1.1	9	2	X		10	20/1	SPARE				
		1800			1	11			X	12	20/1	SPARE			1	
L	1	1664		CU-2	25/2	13	X			14	20/1	SPARE				
1		1664	1		1	15	2	X		16		SPACE				
1		1440		CU-3	20/3	17	()		X	18		SPACE		1	(
1		1440	())	19	X			20		SPACE		1	· · · · ·	
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VAI (LIC	HTING)			2915	CONNE	CTED		-		-	-	364	4 DEMAN)		
VA:R (RE	CEPTAC	CLES)		17460	CONNE	CTED						1373	0 DEMAN	5		
VA A/C(IVAC)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		43618	CONNE	CTED		-				4361	8 DEMAN	5		
VAO (O	THER)			7820	CONNE	CTED						782		5		
VA. TOT	AL			71813	CONNE	CTED		-				6881	2 DEMAN	5		
AMPS: T	OTAL			199	CONNE	CTED						REFER TO LOAD ANALYSIS ON E401	DEMAND)		
L	R	A/C	0		TOTAL											
595	5400	16130	3220	VA CONNECTED TO A PHASE	25345	5 VA =				211		AMPS CONNECTED TO A PHASE	@ 120 VC	DLTS		
1542	5040	16130	2600	VA CONNECTED TO B PHASE	25312	2 VA =				211		AMPS CONNECTED TO B PHASE	@ 120 VC	DLTS		
778	7020	11358	2000	VA CONNECTED TO C PHASE	21156	VA =				176		AMPS CONNECTED TO C PHASE	@ 120 VC	DLTS		
2915	17460	43618	7820	TOTAL	71813	3										

VOLTAG	ELBO	ARD 120V 3 PI	L2 HASE 4	WIRE		LOC. MOL	ATIO	ON: S	SEE I SUR	PLANS						
225A MA BUSES:	AIN LUGS 225A; NE	UTRAL -	100%; E	QUIPMENT GROUND.		lsc =	= 10	kA R	RMS	SYM	BRACIN	IG				
VA:L	VA:R	VA:A/C	VA:O	LOAD	BKR	скт	-		Ĩ.	скт	BKR	LOAD	VA:L	VA:R	VA:AC	VA:O
	P	4032		AHU-1 (10.8KW)	45/3	1	X			2	253	EWH1 (6KW)			1	2000
		4032	-		2.4	3	3	X		4						2000
		4032		and the state of the		5	5		X	6				1	1	2000
		3162		AHU-2 (5.7KW)	40/2	5	X			8	20/1	HWRP1 (1/12HP)			1	120
		3162			1-7.15	9)	X		10	20/1	SPARE				
1)	4032	· · · · · · · · · · · · · · · · · · ·	AHU-3 (10.8KW)	45/3	11	1		X	12	20/1	SPARE			1	
		4032				13	3 X			14	20/1	SPARE				
		4032			1	15	5	X		16	20/1	SPARE				
1		54		EF-1, EF-2, EF-3	20/1	17	7		X	18	20/1	SPARE			1	
1	P			SPARE	20/1	19	X			20	20/1	SPARE			· · · · · · · · ·	
1		1		SPARE	20/1	21		X		22	20/1	SPARE)	
		(1	SPARE	20/1	23	3		X	24	20/1	SPARE		1		
1	· · · · · · · ·	(II]	SPACE	20/1	25	X			26	20/1	SPACE				
		1		SPACE	20/1	27	7	X		28	20/1	SPACE				
(T)	· · · · · · · · · · · · · · · · · · ·	(IIII)		SPACE	20/1	29			X	30	20/1	SPACE				
1		(*************************************		SPACE	20/1	31	X			32	20/1	SPACE				
		1		SPACE	20/1	33	3	X		34	20/1	SPACE		1		
				SPACE	20/1	35	5	1.1	X	36	20/1	SPACE				
		1	1	SPACE	20/1	37	X	1		38	20/1	SPACE				
1				SPACE	20/1	39)	X		40	20/1	SPACE		1		
		1		SPACE	20/1	41			X	42	20/1	SPACE				
VA:L (LI	GHTING)			0	CONNEG	CTED		0.5	100			A REAL PROPERTY AND A REAL	0			
VA:R (R	ECEPTA	CLES)		0	CONNE	CTED	c) i						0 DEMAN	D		
VA:A/C	HVAC)			30570	CONNEG	CTED						3057	0 DEMAN	D		
VA:0 (0	THER)			6120	CONNE	CTED	1					612	0 DEMAN	D		
VA: TOT	AL			36690 CONNECTED		3669	0 DEMAN	D								
AMPS: 1	TOTAL			102	102 CONNECTED 102 DEMAND		D									
L	R	A/C	0		TOTAL	1										
0	0	11226	2120	VA CONNECTED TO A PHASE	13346	VA =	-			111		AMPS CONNECTED TO A PHASE	@ 120 V	OLTS		
0	0	11226	2000	VA CONNECTED TO B PHASE	13226	VA =	-			110		AMPS CONNECTED TO B PHASE	@ 120 V	OLTS		
0	0	8118	2000	VA CONNECTED TO C PHASE	10118	VA =	-		1	84		AMPS CONNECTED TO C PHASE	@ 120 V	OLTS		
0	0	30570	6120	TOTAL	36690	1							5			

PANE	LBO	ARD L	.1			LOCATI	ON: S	SEEI	PLANS						
OLTAG	E: 208Y/	120V 3 PH	ASE 4	WIRE		MOUNT	ING:	SUR	FACE						
125A MA	IN LUGS		000/. 5			lsc = 10	kA F	RMS	SYM	BRACIN	IG				
305E5:1	25A; NE	UTRAL -	100%; EC	QUIPMENT GROUND.					-						
VA:L	VA:R	VA:A/C	VA:O	LOAD	BKR	скт		Î.	скт	BKR	LOAD	VA:L	VA:R	VA:AC	VA:O
100		1		EXIT AND EGRESS LTG.	20/1	1 X	1		2	20/1	TIME SWITCH				100
380	T	1		L - OFFICES	20/1	3	X		4	20/1	R - OFFICE 128, ELEC/MECH 130		1080		
578				L - OFFICES	20/1	5		X	6	20/1	R - OFFICE 126		720	1	
495		(a		L - CORRIDORS	20/1	7 X			8	20/1	R - OFFICE 124		720		
962		<u>.</u>		L - CONF. RM., R/R, BREAK	20/1	9	X		10	20/1	R - CEO 122		900		
				SPARE	20/1	11		X	12	20/1	R - RECEPT 121		1080		
				SPARE	20/1	13 X			14	20/1	R - LOBBY 100		900		
200		1	-	BLDG. EXTERIOR LTG.	20/1	15	X		16	20/1	R - OFFICE 174		720		
200				BLDG. EXTERIOR LTG.	20/1	17		X	18	20/1	R - OFFICE 172		720	1	
		1		SPARE	20/1	19 X			20	20/1	R - OFFICE 163		720	· · · · · · · ·	
				SPARE	20/1	21	X		22	20/1	REFRIG BREAK RM. 161				60
	900			R - OFFICE 123	20/1	23	1	X	24	20/1	COUNTER - BREAK RM. 161		360	1	
	720			R - OFFICE 142	20/1	25 X			26	20/1	MICROWAVE - BREAK RM. 161		1		100
	900			R - OFFICE 144	20/1	27	X		28	20/1	COUNTER - BREAK RM. 161		360		10 A A
	900			R - OFFICE 162, JAN/MECH	20/1	29		X	30	20/1	R - BREAK RM. 161		900	1000	
· · · · · · · · ·	360	· · · · · · · · · · · · · · · · · · ·		R - CORRIDOR 140	20/1	31 X			32	20/1	R - OFFICES 168, 170		1080		
	360			COPIER	20/1	33	X		34	20/1	R - OFFICE 166	1	720		· · · · · ·
	720		-	R - R/R	20/1	35	1	X	36	20/1	R - OFFICE 164		720		
	540	1		R - CONF. RM. 101	20/1	37 X	1	1	38	20/1	R - R/R 146	1	360		-
1	1.1.1	i	1	SPARE	20/1	39	X		40	20/1	SPARE	1.			
				SPARE	20/1	41		X	42	20/1	SPARE	1	_		
A:L (LIC	HTING)	1000		2915	CONNEG	CTED	1	100			3644	DEMAND)		-
A:R (RE	CEPTAC	LES)		17460	CONNEG	CTED		1			13730	DEMAND)		
A:A/C(H	IVAC)			0	CONNEG	CTED					0	DEMAND)		
A:0 (01	HER)			1700	CONNEG	CTED					1700	DEMAND)		
A: TOTA	AL /			22075	CONNEG	CTED					19074	DEMAND)		
AMPS: T	OTAL			61	CONNEG	CTED					53	DEMAND)		
L	R	A/C	0		TOTAL										
595	5400	0	1100	VA CONNECTED TO A PHASE	7095	VA =			59		AMPS CONNECTED TO A PHASE	@ 120 VC	LTS		
1542	5040	0	600	VA CONNECTED TO B PHASE	7182	VA =			60		AMPS CONNECTED TO B PHASE	@ 120 VC	LTS		
778	7020	0	0	VA CONNECTED TO C PHASE	7798	VA =		1	65		AMPS CONNECTED TO C PHASE	@ 120 VC	LTS		
2915	17460	0	1700	TOTAL	22075			-				0.111.0	A 10 E 1		1

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Page Description ELECTRICAL SCHEDULES

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)<u>PLUMBING SANITARY SEWER AND VENT FLOOR PLAN</u> scale: 1/4"=1'-0"

PLUMBING GENERAL NOTES:

- 1. THE CONTRACTOR SHALL ROUGH IN AND MAKE FINAL CONNECTIONS FOR FIXTURES AND EQUIPMENT, INCLUDING P-TRAPS, TRIM, WASTE, WATER SUPPLIES AND DRAINS. PROVIDE SHUT-OFF VALVES AS REQUIRED BY CODE.
- 2. INSULATE ALL HOT WATER PIPING WITH 1" INSULATION; DROPS INSIDE INTERIOR STUD
- REQUIRED.

ADOPTED CODES, AMENDMENTS AND AHJ.

SANITARY SEWER SYSTEM AS REQUIRED.

PLUMBING KEYED NOTES:

AIR GAP AS REQUIRED.

WITH PROSET TRAP GUARD.

NOT ALL APPLY TO PROJECT

WSFU PER FIX

6

2

.07

3

HUB DRAIN

QUANTITY

3

3

1

1

FIXTURES

MOP SINK

WSFUs

WATER CLOEST

LAVATORY/SINK

LAVATORY/SINK (PRVT)

= 1-1/2" PIPE PER IPC 2018

TAILPIECE.

6 SINK.

- 3. VENT PIPING ROUTED CONCEALED OVERHEAD. SUPPORT FROM STRUCTURE AS

- WALL SHALL BE 1/2" INSULATION.

4. ROUTE SANITARY SEWER (SS) AT 1% SLOPE. UNLESS INDICATED OTHERWISE.

5. ALL WASTE, VENT, CW & HW PLUMBING SHALL BE INSTALLED PER LATEST CITY

6. CONTRACTOR SHALL COORDINATE LOCATION SIZE AND ORIENTATION OF THE EXISTING SANITARY SEWER PIPING BELOW FLOOR AND MAKE NECESSARY ADJUSTMENTS TO THE

7. CONTRACTOR SHALL VERIFY THE LOCATION OF THE DOMESTIC WATER PIPING ON SITE AND SHALL REVISE THE DOMESTIC WATER SYSTEM AS REQUIRED.

 $\langle 1 \rangle$ contractor shall verify location, size, depth and orientation of existing SANITARY SEWER (SS) UNDERGROUND AND PROVIDE NEW CONNECTION TO EXISTING SS. MODIFY PIPING AS RÉQUIRED TO ACCOMMODATE NEW CONNECTION.

 $\langle 2 \rangle$ 2" SS DOWN AND 1-1/2" VENT UP IN WALL TO OVERHEAD ABOVE CEILING.

 $\langle 3 \rangle$ 4" SS BELOW FLOOR AND 2" VENT UP IN WALL TO OVERHEAD ABOVE CEILING. $\langle 4 \rangle$ NEW 4" YARD CLEAN-OUT. COORDINATE DEPTH OF SS WITH PERIMETER GRADE BEAM.

 $\langle 5 \rangle$ 3" SS BELOW FLOOR AND 1–1/2" VENT UP IN WALL TO OVERHEAD ABOVE CEILING. MAKE NEW VENT PIPE CONNECTION TO EXISTING VENT SYSTEM AND VTR SERVING OLD MOP

 $\langle 7 \rangle$ route new 3" vent piping to location of existing vent piping system overhead ABOVE CEILING. MAKE NEW VENT PIPE CONNECTION TO EXISTING VENT SYSTEM AND VTR.

 $\langle 8 \rangle$ electric tank type water heater located above mop sink suspended from OVERHEAD STRUCTURE. ROUTE WATER HEATER T&P DRAIN AND DRAIN PAN DRAIN DISCHARGE TO MOP SINK BELOW. TERMINATE DISCHARGE PIPING ABOVE MOP SINK WITH

 $\langle 9 \rangle$ 3" HUB DRAIN TO SERVE CONDENSATE DISCHARGE FROM A/C UNIT. 3" SS BELOW FLOOR] AND 2" VENT UP IN WALL TO OVERHEAD ABOVE CEILING TO VTR. PROVIDE HUB DRAIN

(10) ROUTE 2" VENT PIPING UP THRU ROOF TO VTR. SEAL PENETRATION WATER TIGHT.

(11) COORDINATE WITH MECHANICAL EQUIPMENT INSTALLER FOR CONDENSATE DRAIN AT SINK

PLUMBING LEGEND AND ABBREVIATIONS

NUT ALL APPLT TU F	RUJECI		
SS	SANITARY SEWER/WASTE PIPING	C.W.	COLD WATER
	VENT/REVENT PIPING	H.W.	HOT WATER
<u>—ю́—</u>	BALL VALVE	+D	PIPE DROP
/	CHECK VALVE	+0	PIPE RISE
	COLD WATER SUPPLY PIPING	₽ -HB1	HOSE BIB
	HOT WATER SUPPLY PIPING		NEW PIPING CONNECTION
	HOT WATER RETURN PIPING	$\langle 1 \rangle$	PLUMBING KEYED NOTE
G	NATURAL GAS PIPING		
GW	GREASE WASTE PIPING		
Ø CO	CLEANOUT		
্স্ FD	FLOOR DRAIN		

DOMESTIC WATER - WSFU

SUBTOTAL BLDG FIX

18

6

.07

3

27.07

FIXTURES	QUANTITY	dfu Per fix	subtotal BLDG FIX
WATER CLOEST	3	4	12
LAVATORY/SINK	3	1	3
LAVATORY/SINK (PRVT)	1	1	1
MOP SINK	1	4	4
TOTAL DFUs			20

TOTAL WATER DEMAND LOAD APPROX: 27.07 WSFUs PROJECTED DIVERSITY @ 80% = 21.65 WSFUs 19.26 WSFUs = APPROX. 36 GPM

TOTAL WASTE LOAD APPROX: 20 DFUs ALLOWED DFUS: 4" DRAIN PIPE AT 1/8" PER FOOT = 180 DFUs PER IPC 2018

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1Hazer 07/25/2024 Revisions:

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P1.[′] PLUMBING SANITARY SEWER AND VENT FLOOR PLAN

Page

)<u>PLUMBING DOMESTIC WATER FLOOR PLAN</u> scale: 1/4"=1'-0"

PLUMBING GENERAL NOTES:

- 1. THE CONTRACTOR SHALL ROUGH IN AND MAKE FINAL CONNECTIONS FOR FIXTURES AND EQUIPMENT, INCLUDING P-TRAPS, TRIM, WASTE, WATER SUPPLIES AND DRAINS. PROVIDE SHUT-OFF VALVES AS REQUIRED BY CODE.
- 2. INSULATE ALL HOT WATER PIPING WITH 1" INSULATION; DROPS INSIDE INTERIOR STUD WALL SHALL BE 1/2" INSULATION.
- 3. VENT PIPING ROUTED CONCEALED OVERHEAD. SUPPORT FROM STRUCTURE AS REQUIRED.
- 4. ROUTE SANITARY SEWER (SS) AT 1% SLOPE. UNLESS INDICATED OTHERWISE.
- 5. ALL WASTE, VENT, CW & HW PLUMBING SHALL BE INSTALLED PER LATEST CITY ADOPTED CODES, AMENDMENTS AND AHJ.
- 6. CONTRACTOR SHALL COORDINATE LOCATION SIZE AND ORIENTATION OF THE EXISTING SANITARY SEWER PIPING BELOW FLOOR AND MAKE NECESSARY ADJUSTMENTS TO THE SANITARY SEWER SYSTEM AS REQUIRED.
- 7. CONTRACTOR SHALL VERIFY THE LOCATION OF THE DOMESTIC WATER PIPING OVERHEAD ABOVE CEILING ON SITE AND SHALL REVISE THE DOMESTIC WATER SYSTEM AS REQUIRED.
- 8. WHERE VALVES, WATER HAMMER ARRESTORS OR OTHER SERVICEABLE ACCESSORIES, ARE LOCATED ABOVE HARD CEILINGS OR IN WALLS, PROVIDE ACCESS PANEL EQUAL TO MIFAB MDW12X12-C-VP.

PLUMBING KEYED NOTES:

- $\langle 1 \rangle$ contractor shall verify location of existing incoming domestic water value. PROVIDE NEW 1-1/2" CONNECTION TO EXISTING CW. MODIFY PIPING AS REQUIRED TO ACCOMMODATE NEW CONNECTION.
- $\langle 2 \rangle$ RISE 1-1/2" CW UP IN FULL HEIGHT WALL TO OVERHEAD ABOVE CEILING.
- $\overline{\langle 3 \rangle}$ provide line size 1/4 turn service valve on CW line above ceiling. Make final CONNECTIONS AS REQUIRED.
- $\langle 4 \rangle$ ROUTE 1/2" CW TO HOSE BIB (HB1). PROVIDE LINE SIZE 1/4 TURN SERVICE VALVE ON
- CW LINE ABOVE CEILING. MAKE FINAL CONNECTIONS AS REQUIRED.
- CONNECTIONS AS REQUIRED.
- $\langle 6 \rangle$ ROUTE 1" CW TO WATER CLOSET (WC1) FLUSH VALVE. MAKE FINAL CONNECTIONS AS REQUIRED.
- $\langle 7 \rangle$ provide water hammer arrestor as indicated. Provide access panel as required. REFER TO PLUMBING GENERAL NOTE #8 ABOVE.
- $\langle 8 \rangle$ ROUTE 1/2" CW TO REFRIGERATOR WALL BOX (RWB1). MAKE FINAL CONNECTIONS AS REQUIRED.
- $\langle 9 \rangle$ ROUTE 3/4" CW TO NEW TANK TYPE WATER HEATER. PROVIDE 1/4 TURN ISOLATION BALL
- (1) PROVIDE CIRCULATION PUMP ON HWR CONNECTION TO CW. REFER TO DETAIL 5 ON SHEET P2.0.
- (1) ROUTE NEW 1/2" CW & HW TO NEW MOP SINK FAUCET. MAKE FINAL CONNECTIONS AS REQUIRED.

PIPE MATERIAL LIST ALL PLUMBING TO COMPLY WITH WITH ALL LOCAL CODES AND GOVERNING JURISDICTION REQUIREMENTS. WATER PIPE TO BE TYPE L COPPER WITH WROT COPPER FITTINGS USING 95/5 SOLDER CONTAINING NO LEAD. VENTS AND SANITARY SEWER LINES TO BE SCH. 40 PVC WITH SOLVENT WELD DRAINAGE PATTERN FITTINGS. UNDER FLOOR WATER WILL BE TYPE L COPPER WITH NO JOINTS UNDER SLAB IN SLEEVE. ALL HOT WATER AND COLD WATER SUBJECT TO FREEZE WILL BE INSULATED. 5. DOMESTIC WATER PIPING LOCATED ABOVE SLAB, CAN BE CROSS-LINKED POLYETHYLENE (PEX) PLASTIC PIPING AND TUBING. 6. ALL PIPING THAT WILL BE EXPOSED TO RETURN AIR PLENUM SPACE. PROVIDE UL LISTED & TESTED MATERIAL WRAPPED AROUND NON-PLENUM RATED PLASTIC PIPE.

 $\langle 5 \rangle$ ROUTE 1/2" CW & HW TO LAVATORY/HAND SINK (L1/HS1) ANGLE STOPS. MAKE FINAL

VALVE AT WATER HEATER WATER CONNECTIONS. MAKE FINAL CONNECTIONS AS REQUIRED.

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PLUMBING DOMESTIC WATER FLOOR PLAN

PLUMBING FIXTURE SCHEDULE

	FIXTURE	DESCRIPTION
WC1	WATER CLOSET AMERICAN STANDARD MADERA "FLOW WISE" WC1 (ADA) = #3461001.020	WHITE VITREOUS CHINA, <u>FLOOR MTD</u> ., ELONGATED FLUSH BOWL, 1.28 GALLON PER FLUSH. ADA 16.5 CHAIR HEIGHT. SUPPLY: FLUSH VALVE ZURN AQUAFLUSH PLUS # Z6000PL-HET, 1.28 GAL. PER FLUSH. SEAT:BEMIS # 1655C, WHITE, ELONGATED, OPEN-FRONT SEAT WITH STAINLESS STEEL SELF-SUSTAINING CHECK HINGE TUBE AND POST.
L1	LAVATORY, ADA AMERICAN STANDARD STUDIO #0614000.20	WHITE VITREOUS CHINA, UNDERMOUNT, 4" CENTERS (19 $3/4$ " X 13 $3/4$ ") PROVIDE AND INSTALL A WATTS MODEL NO. LF1170 THERMOSTATIC MIXING VALVE BELOW SINK. TRIM: AMERICAN STANDARD RELIANT 3 SINGLE CONTROL FAUCET #7385.003 WITH GRID STRAINER DRAIN ASSEMBLY, PROVIDE N MAX FLOW AERATOR. SUPPLY: MCGUIRES 1/2" IPS LOOSE KEY ANGLE STOP WITH 1/2" OD FLEXIBLE RISER. WASTE: MCGUIRES PERF. GRID STRAINER WITH $1-1/4$ " X 6", ADJ 17 GA. #PW155WC. TRAP: MCGUIRES #8902 C.P. BRASS P-TRAP W/CO., TUBING WASTE AND ESCUTCHEON, $1-1/4$ " X $1-1/2$ " SIZE, OFFSET. P-TRAP DRAIN, PROTECTIVE ENCLOSURE UNDER SINK TO BE TRUEBRO "LAV SHIELD" NO. 2018-AS-L. PROVIDE LAV TAILPIECE IN TOILET ROOM 141 WITH CONDENSATE CONNECTION.
SK1	SINK COUNTERTOP (ADA)	SINK: 3 HOLE PUNCH DROP IN STAINLESS STEEL SINK. PROVIDE AND INSTALL A WATTS MODEL NO. LF1170 THERMOS VALVE BELOW SINK. FAUCET: CHICAGO FAUCET #786-E35XKABCP WITH 4" WRIST BLADE HANDLES, RIGID/SWING GOOSENECK. PROVIDE WIMAX FLOW AERATOR. DRAIN: MCGUIRES PERF, GRID STRAINER WITH $1-1/4$ " X 6", ADJ 17 GA. #PW155WC. P-TRAP: MCGUIRES #8902 C.P. BRASS P-TRAP W/CO., TUBING WASTE AND ESCUTCHEON, $1-1/4$ " SIZE, OFFSET P-TRAP DRAIN, PROTECTIVE ENCLOSURE UNDER SINK TO BE TRUEBRO "LAV SHIELD" NO. 2018-AS-L. SUPPLY LINE: MCGUIRES 1/2" IPS LOOSE KEY ANGLE STOP WITH 1/2" OD, LEAD FREE LOOSE KEY STOP WITH BRAIE STEEL SUPPLIES.
MS1	MOP SINK FIAT MODEL NO. TSBC3000 24" x 24"	PRECAST TERRAZZO MOP SERVICE BASIN, STEEL CAPS, #830—AA SERVICE FAUCET, #899—CC SILICO 3" WASTE AND P—TRAP, HOSE AND HOSE BRACKET #832—AA, MOP HANGER #889—CC. (HOT AND G
EWH1	ELEC. WATER HEATER A.O. SMITH MODEL NO. DEL—30	30 GALLON STORAGE CAPACITY, 3KW, DUAL 3000 WATT ELEMENTS AT 208V, 3 PHASE, 15 GALLON RECOVERY @ 80°F, INSULATED AND JACKETED, ANODE, ON-OFF SWITCH; WATTS 100XL $3/4$ " T & P VALVE. PROVIDE WITH FACTORY INSTALLED HEAT TRAPS AND NON-CORROSIVE AUX. DRAIN PAN. WAT HEATER SIZE $30-7/8$ " TALL X $21-3/4$ " DIA., WEIGHT=350 LBS.
HWRP1	RECIRCULATING PUMP	THE DOMESTIC TEMPERED WATER RECIRCULATING PUMP SHALL BE A GRUNDFOS MODEL #UP15-18 BS PUMP WITH BRC IMPELLER, 1/12 HP, 115V, 1 PH., 60 Hz. WITH 10.5 TOTAL FEET OF HEAD AND 4.0 GPM. PUMP CONTROLS SHALL SH INCLUDE AQUASTAT ON AT 115°F AND OFF AT 120°F AND A CODE APPROVED TIMER.

MISCELLANEOUS PLUMBING SCHEDULE

EXPANSION TANK ET–1	FLO-FAB MODEL NO. HDB-20; BUTYL BLADDER, A.S.M.E. APPROVED, TANK VOLUME: 8 GAL., MAX. TEMP: 240°F, MAX. PRESS: 125 PSI., TANK ACCEPTANCE: 2.7 GAL., 1/2" CONNECTION.
WATER HAMMER ARRESTOR WHA1	WADE "SHOKSTOP" SERIES, WITH ALL STAINLESS STEEL HOUSING AND BELLOWS PRECHARGED WITH AIR. INSTALL IN ACCORDANCE WITH PFE STANDARD WH201. UNIT SHALL BEAR PDI RATINGS OF: 'A' (W—5), 'B' (W—10), 'C' (W—20), 'D' (W—50).
INTERIOR CLEANOUT FINISHED WALL WCO	ZURN MODEL Z—1468—VP, ROUND STAINLESS STEEL WALL ACCESS COVER COMPLETE WITH SECURING SCREW AND BRON RAISED HEX HEAD PLUG.
EXTERIOR YARD CLEANOUT YCO	MODEL #Z1400-HD EXTRA HEAVY DUTY, CAST IRON BODY WITH ROUND ADJUSTABLE NICKEL BRONZE COVER, GASKET SEAL, ABS PLUG.
WATER VALVE BOX RWB1	OATEY MODEL #37385, FIRE RATED ICE-MAKER BOX, PVC 0.25 IN BRASS VALVE WITH HAMMER ARRESTOR.
HOSE BIBB HB1	WOODFORD #26 WALL FAUCET, WITH ANTI-SIPHON VACUUM BREAKER AND LOOSE KEY HANDLE.
HUB DRAIN HD1	PVC 3" HUB DRAIN WITH 3" X 2" REDUCER AND 3" DEEP SEAL P—TRAP. PROVIDE DRAIN BODY WITH TAPPED TRAP PRIMER CONNECTION WHERE INDICATED. INSTALL RIM OF HUB 1/2" MIN., 1" MAX. AFF.

GENERAL PLUMBING NOTES

ALL ITEMS OF THIS SCHEDULE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR UNLESS DESIGNATED OTHERWISE. COORDINATE THE ROUGH-IN OF SERVICES FOR/AND FINAL CONNECTION OF EQUIPMENT ITEMS WITH THE GENERAL CONTRACTOR/ARCHITECT/OWNER.

 ALL WATER PIPING SHALL BE FIBERGLASS INSULATED WITH MINIMUM THICKNESS AS PER SPECIFICATIONS.
 ALL SERVICE VALVES OTHER THAN THOSE SPECIFIED SHALL BE BALL VALVES, FULL PORT SWEAT TYPE NIBCO S585S. WITH 125 LB. RATING.
 VENT RISERS TO BE STRAPPED TO WALL.

SECTION 15050 - BASIC PLUMBING MATERIALS AND METHODS

PART 1 – GENERAL 1.1 SUMMARY

- A. THIS SECTION INCLUDES THE FOLLOWING:
- 1. PIPING INSTALLATION INSTRUCTIONS COMMON TO MOST PIPING SYSTEMS.
- PART 2 EXECUTION

2.1 PIPING SYSTEMS - COMMON REQUIREMENTS

- A. INSTALL PIPING INDICATED TO BE EXPOSED AND PIPING IN EQUIPMENT ROOMS AND SERVICE AREAS AT RIGHT ANGLES OR PARALLEL TO BUILDING WALLS. DIAGONAL RUNS ARE PROHIBITED UNLESS SPECIFICALLY INDICATED OTHERWISE INSTALL PIPING ABOVE ACCESSIBLE CEILINGS TO ALLOW SUFFICIENT SPACE FOR CEILING PANEL REMOVAL.
- INSTALL PIPING AT INDICATED SLOPES.
- INSTALL PIPING FREE OF SAGS AND BENDS.
- INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS.
- INSTALL PIPING TO ALLOW APPLICATION OF INSULATION. INSTALL ESCUTCHEONS FOR PENETRATIONS OF WALLS, CEILINGS, AND FLOORS.
- H. INSTALL SLEEVES FOR PIPES PASSING THROUGH CONCRETE AND MASONRY WALLS, GYPSUM-BOARD PARTITIONS, AND CONCRETE FLOOR AND ROOF SLABS.

2.2 PIPING CONNECTIONS

- A. MAKE CONNECTIONS ACCORDING TO THE FOLLOWING, UNLESS OTHERWISE INDICATED: INSTALL UNIONS, IN PIPING NPS 2 AND SMALLER, ADJACENT TO EACH VALVE AND AT FINAL CONNECTION
 - TO EACH PIECE OF EQUIPMENT. 2. INSTALL FLANGES, IN PIPING NPS 2-1/2 AND LARGER, ADJACENT TO FLANGED VALVES AND AT FINAL CONNECTION TO EACH PIECE OF EQUIPMENT.
 - WET PIPING SYSTEMS: INSTALL DIELECTRIC COUPLING AND NIPPLE FITTINGS TO CONNECT PIPING

MATERIALS OF DISSIMILAR METALS.

SECTION 15060 - HANGERS AND SUPPORTS

PART 1 – GENERAL

1.1 SUMMARY

A. THIS SECTION INCLUDES HANGERS AND SUPPORTS FOR MECHANICAL SYSTEM PIPING AND EQUIPMENT.

- PART 2 EXECUTION
- 2.1 PIPING HANGERS
- A. PIPE HANGERS USED ARE TO BE MANUFACTURED AND INSTALLED ACCORDING TO SPECIFICATIONS SP-58-1975 (PIPE HANGERS AND SUPPORTS - MATERIALS, DESIGN AND MANUFACTURE) AND SP-89-1978 (PIPE HANGERS AND SUPPORTS - FABRICATION AND INSTALLATION PRACTICES) OF THE MANUFACTURERS STANDARDIZATION SOCIETY (MSS).
- B. PIPE HANGER SELECTION AND APPLICATION WILL FOLLOW RECOMMENDATIONS OF MSS SP-69-1976 (PIPE HANGERS AND SUPPORTS - SELECTION AND APPLICATION).
- C. HANGERS USED DIRECTLY ON COPPER PIPE WILL BE COPPER OR CADMIUM PLATED. ALL OTHER HANGERS AND CHANNELS, ANGLES, AND SUPPORTING STEEL SHALL BE CARBON STEEL WITH A BLACK FINISH. TWO (2) OR MORE PIPES RUNNING PARALLEL MAY BE SUPPORTED ON TRAPEZE HANGERS.
- HANGERS SHALL BE LOCATED AT WITHIN 2' OF EACH CHANGE OF DIRECTION. WHERE INDIVIDUAL HANGERS ARE USED OUTSIDE OF INSULATION, APPLY A 9-INCH LENGTH OF 15 LB. DENSITY URETHANE INSULATION OR FOAMLESS TO PIPE AT POINT OF HANGING. PLACE HANGERS OUTSIDE OF INSULATION WITH A INSULATION SHIELD OF GALVANIZED METAL EXTENDING NOT LESS THAN 6" ON BOTH SIDES OF THE SUPPORT BEARING AREA, COVERING A MINIMUM OF HALF OF THE PIPE CIRCUMFERENCE. SHIELD TO BE MADE 12" IN LENGTH AND A MINIMUM OF 20 GAUGE OF GALVANIZED MEAL. AS AN OPTION, PIPE SHALL BE PROTECTED AT THE POINT OF SUPPORT BY A 360-DEGREE INSERT OF HIGH DENSITY, 100 PSI, WATERPROOFED CALCIUM SILICATE, ENCASED IN 360-DEGREE SHEET METAL SHIELD. INSERT TO BE SAME THICKNESS AS ADJOINING PIPE INSULATION.
- F. TRAPEZE HANGERS SUSPEND PIPING INSTALLED ON TRAPEZE HANGERS FROM CONCRETE INSETS OR APPROVED STRUCTURAL CLIPS. CONSTRUCT TRAPEZE HANGERS OF ANGLE IRON, UNISTRUT CHANNELS OR OTHER STRUCTURAL SHAPES WITH FLAT SURFACES FOR POINT OF SUPPORT.
- G. HANGERS IN GENERAL INSTALL ALL PIPING SO THAT IT WILL BE FREE TO EXPAND AND CONTRACT WITHOUT CREATING UNDUE STRESSES IN PIPING SYSTEM.
- 2.2 ADJUSTING
- A. HANGER ADJUSTMENT: ADJUST HANGERS TO DISTRIBUTE LOADS EQUALLY ON ATTACHMENTS AND TO ACHIEVE INDICATED SLOPE OF PIPE

SECTION 15075 – PLUMBING IDENTIFICATION

PART 1 – GENERAL

1.1 SUMMARY

- A. THIS SECTION INCLUDES THE FOLLOWING MECHANICAL IDENTIFICATION MATERIALS AND THEIR INSTALLATION:
- 2.1 PIPING IDENTIFICATION DEVICES
- A. PROVIDE "OPTI-CODE" PIPE MARKERS AND BRASS VALVE TAGS AS MANUFACTURED BY SETON NAMEPLATE CORPORATION OR AN APPROVED EQUAL. PIPE MARKERS SHALL BE SPACED 20'-0" ON CENTER AND 10'-0" FROM ALL 90 DEGREE ELBOWS.

SECTION 15083 - PIPE INSULATION

PART 1 – GENERAL

1.1 SUMMARY

- A. THIS SECTION INCLUDES SEMI-RIGID AND FLEXIBLE PIPING INSULATION. INSULATING CEMENTS, FIELD-APPLIED JACKETS, ACCESSORIES AND ATTACHMENTS, AND SEALING COMPOUNDS.
- 1.2 QUALITY ASSURANCE
- A. FIRE-TEST-RESPONSE CHARACTERISTICS: PROVIDE PRODUCTS WITH FLAME-SPREAD AND SMOKE-DEVELOPED CAPABILITIES OF 25 AND 50 FOR PVC PIPING IN RETURN AIR PLENUMS, RESPECTIVELY, ACCORDING TO ASTM E 84 BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.

PART 2 – PRODUCTS

- 2.1 PIPE INSULATION MATERIALS
- A. PROVIDE PIPING INSULATION OF MOLDED FIBERGLASS. THE INSULATION WILL BE USED FOR WATER PIPING INCLUDING HOT WATER SUPPLY LINES SUBJECT TO FREEZING OR CONDENSATION, CONDENSATE DRAINS, AND HORIZONTAL PORTIONS OF WASTE LINES ABOVE GRADE WHICH RECEIVE CONDENSATE FROM AIR HANDLING UNITS.
- PART 3 EXECUTION

3.1 PIPES

- A. APPLY INSULATION TO CLEAN, DRY PIPE. BUTT SEGMENTS FIRMLY TOGETHER. WHERE PIPING IS INTERRUPTED BY FITTINGS, FLANGES, VALVES, OR HANGERS, AND AT INTERVALS NOT TO EXCEED 25 FEET ON STRAIGHT RUNS, FORM AN ISOLATING SEAL BETWEEN INSULATION AND PIPE BY LIBERAL APPLICATION OF ADHESIVE TO EXPOSED JOINT FACES AND ALONG 4 INCHES OF PIPE. ALL TURNS AND BENDS SHALL BE FITTED WITH PREMOLDED FITTING COVERS. MITERING OF THESE COMPONENTS SHALL NOT BE ACCEPTABLE.
- 3.2 FLANGES
- A. AT FLANGES, SEAL OFF INSULATION WITH BF 30-35 VAPOR BARRIER MASTIC. APPLY ADDED LAYERS OF INSULATION AT LEAST 2 INCHES WIDE AND OF THE REQUIRED THICKNESS TO MAKE THE OUTSIDE DIAMETER OF THE INSULATION EQUAL TO THE OUTSIDE DIAMETER OF THE FLANGES. VAPOR SEAL EACH LAYER COMPLETELY AND INDEPENDENTLY WITH ADHESIVE. APPLY A FINAL RING OF INSULATION OF FULL THICKNESS AND LONG ENOUGH TO COVER THE BUILT-UP SECTION.
- 3.3 VALVES AND FITTINGS
- A. SEAL OFF THE PIPE INSULATION AT VALVES AND FITTINGS, WITH BF 30-35 VAPOR BARRIER MASTIC. COVER VALVES AND FITTINGS WITH MOLDED OR MITERED FITTING COVERS AND VAPOR SEAL AS SPECIFIED FOR FLANGES.
- B. CARRY THE INSULATION ON THE VALVE BONNET FULL THICKNESS TO THE PACKING NUT OR TO THE STUFFING BOX. MAKE THE TOP OF THE INSULATION BOX PARALLEL TO THE VALVE WHEEL, TO FORM A SQUARE CORNER AT THE INTERSECTION WITH THE BONNET COVERING.
- C. OMIT INSULATION AT SCREWED UNIONS AND AT VALVES SMALLER THAN 1'

3.4 PIPE INSULATION APPLICATION SCHEDULE A. INSULATING MATERIALS AND METHODS OF APPLICATION ARE BASED ON KNAUF ASJ/SSL-11 PRODUCTS. PERMEABILITY OF VAPOR BARRIER JACKETS.

SECTION 15110 - VALVES

- PART 1 GENERAL
- 1.1 SUMMARY
- A. THIS SECTION INCLUDES GENERAL-DUTY VALVES:
- 1.2 SUBMITTALS
- PRODUCT DATA: FOR EACH TYPE OF VALVE INDICATED. INCLUDE BODY. SEATING. AND TRIM MATERIALS. VALVE DESIGN, PRESSURE AND TEMPERATURE CLASSIFICATIONS, END CONNECTIONS, ARRANGEMENT, DIMENSIONS, AND REQUIRED CLEARANCES. INCLUDE LIST INDICATING VALVE AND ITS APPLICATION. INCLUDE RATED CAPACITIES, FURNISHED SPECIALTIES, AND ACCESSORIES.

PART 2 – EXECUTION

- 2.1 VALVE APPLICATIONS
- WATER PIPING CONTROL AND SERVICE VALVES SHALL BE PROVIDED BY THIS CONTRACTOR WHERE REQUIRED TO ADEQUATELY CONTROL AND ISOLATE THE VARIOUS WATER PIPING SYSTEMS. VALVES SHALL BE AS MANUFACTURED BY NIBCO, CRANE, STOCKHAM, JOMAR, JENKINS, KENNEDY, WALWORTH OR GRINNELL AND EQUAL TO NIBCO NUMBERS AS STATED BELOW:
- THE MAIN SHUT-OFF VALVE, INSIDE THE BUILDING ON THE WATER SUPPLY WILL BE A GATE VALVE. PROVIDE THE VALVE EQUAL TO NIBCO SOLDER JOINT, 125 LB. BRONZE GATE WITH RISING STEM AND DOUBLE-DISC. THIS VALVE SHALL BE SELECTED AT ONE FULL PIPE SIZE LARGER THAN THAT SPECIFIED ON THE PLAN. ALL OTHER VALVES THROUGHOUT THE WATER PIPING SHALL BE EQUAL TO NIBCO S-585-70 SOLDER
- JOINT, 125 LB., AND BRASS BALL VALVES WITH FULL PORT OPENINGS. CHECK VALVES SHALL BE EQUAL TO NIBCO, 600 SERIES, SPRING CHECK WITH BRONZE BODY. TEMPERATURE AND PRESSURE RELIEF VALVES SHALL BE ASME RATED WATTS VALVE OR APPROVED EQUAL.

SECTION 15140 - WATER PIPING

PART 1 – GENERAL

- 1.1 SUMMARY
- A. THIS SECTION INCLUDES WATER PIPING INSIDE THE BUILDING.
- PART 2 PRODUCTS
- ALLOY. JOINTS TO BE ASTM B 32 SOLDER.
- PART 3 EXECUTION

3.1 EXCAVATION

- SAFETY AND HEALTH ADMINISTRATIONS STANDARD AND INTERPRETATIONS.
- 3.2 JOINT CONSTRUCTION
- 3.3 HANGER AND SUPPORT INSTALLATION
- 3.4 FIELD QUALITY CONTROL
- A. INSPECT WATER PIPING AS FOLLOWS: APPROVED BY AUTHORITIES HAVING JURISDICTION.
- B. TEST WATER PIPING AS FOLLOWS:

- SUBJECTED TO THE PRESSURE MENTIONED ABOVE.
- SATISFACTORY RESULTS ARE OBTAINED.

3.5 CLEANING

PARTS PER MILLION.

PART 1 – GENERAL

- 1.1 SUMMARY
- AUTHORITIES HAVING JURISDICTION. INSIDE THE BUILDING:
- PIPE, TUBE, AND FITTINGS. SPECIAL PIPE FITTINGS.

- 2.1 PIPING MATERIALS

OTHERS WILL BE ACCEPTABLE PROVIDED THEY ARE EQUAL IN INSULATING COEFFICIENTS AND HAVE SIMILAR

A. WATER PIPING LOCATED ABOVE THE BUILDING SLAB, SHALL BE ASTM B 88 TYPE "L" HARD DRAWN COMMERCIAL COPPER WATER PIPE. FITTINGS TO BE ASME B 16.18, CAST BRONZE OR ASTM B 16.22 WROUGHT COPPER DIELECTRIC INSULATING COUPLINGS SHALL BE PROVIDED BETWEEN FERROUS AND COPPER PIPING SYSTEMS.

TRENCHES FOR ALL UNDERGROUND PIPING SYSTEMS SHALL BE EXCAVATED TO THE REQUIRED DEPTHS. IN THE CASE OF SEWER LINES, THE BOTTOM OF THE TRENCHES SHALL BE GRADED TO SECURE THE NECESSARY FALL. NEVER ALLOW THE SEWER LINES TO COME IN CONTACT WITH UNDERGROUND REFRIGERANT PIPING. SANITARY SEWER LINES OUTSIDE THE BUILDING SHOULD BE KEPT AS DEEP AS PRACTICABLE WITH A MINIMUM COVER OF 12". PROVIDE CLEAN WASHED SAND FILL 6" BELOW, ON TOP AND BOTH SIDES OF THE LINES, TAMPED TO MAXIMUM COMPACTION INSIDE THE TRENCH LOCATED INSIDE OR OUTSIDE THE BUILDING.

ALL TRENCH EXCAVATION REQUIRED ON THIS PROJECT SHALL BE ACCOMPLISHED AS REQUIRED BY THE PROVISIONS AS PART 1926, SUBPART P-EXCAVATIONS, TRENCHING AND SHORING OF THE OCCUPATIONAL

SOLDERED JOINTS: USE ASTM B 813, WATER-FLUSHABLE, LEAD-FREE FLUX, ASTM B 32, LEAD-FREE-ALLOY SOLDER, AND ASTM B 828 PROCEDURE, UNLESS OTHERWISE INDICATED.

A. PIPE HANGER AND SUPPORT DEVICES ARE SPECIFIED IN DIVISION 15 SECTION "HANGERS AND SUPPORTS."

1. DO NOT ENCLOSE, COVER, OR PUT PIPING INTO OPERATION UNTIL IT HAS BEEN INSPECTED AND REINSPECTION: IF AUTHORITIES HAVING JURISDICTION FIND THAT PIPING WILL NOT PASS TEST OR INSPECTION, MAKE REQUIRED CORRECTIONS AND ARRANGE FOR REINSPECTION.

LEAVE NEW, ALTERED, EXTENDED, OR REPLACED WATER PIPING UNCOVERED AND UNCONCEALED UNTIL IT HAS BEEN TESTED AND APPROVED. EXPOSE WORK THAT WAS COVERED OR CONCEALED BEFORE IT WAS

WATER PIPING SYSTEMS: WATER PIPING SYSTEMS SHALL BE PROPERLY TESTED TO A HYDROSTATIC PRESSURE OF ONE HUNDRED AND FIFTY POUNDS (150 PSI) PER SQUARE INCH GAUGE FOR A PERIOD OF NOT LESS THAN EIGHT HOURS. DURING THIS TEST PERIOD, ALL LEAKS IN PIPE, FITTINGS AND ACCESSORIES, IN THE PARTICULAR PIPING SYSTEM, WHICH IS BEING TESTED, SHALL BE STOPPED AND THE HYDROSTATIC TEST SHALL AGAIN BE APPLIED. THIS PROCEDURE SHALL BE REPEATED FOR AN ENTIRE EIGHT-HOUR PERIOD AND NO LEAKS CAN BE FOUND WHILE THE SYSTEM BEING TESTED IS 3. REPAIR LEAKS AND DEFECTS WITH NEW MATERIALS AND RETEST PIPING OR PORTION THEREOF UNTIL

A. THE ENTIRE WATER PIPING SYSTEM UPON COMPLETION SHALL BE STERILIZED WITH A SOLUTION CONTAINING NOT LESS THAN 50 PARTS PER MILLION OF CHLORINE. THE STERILIZATION SOLUTION SHALL BE ALLOWED TO REMAIN IN THE SYSTEM FOR A PERIOD OF TWENTY-FOUR (24) HOURS, DURING WHICH TIME ALL VALVES AND FAUCETS SHALL BE OPENED AND CLOSED SEVERAL TIMES. AFTER STERILIZATION, THE SOLUTION SHALL BE FLUSHED FROM THE SYSTEM WITH CLEAN WATER UNTIL THE RESIDUAL CHLORINE CONTENT IS NOT GREATER THAN 0.2

SECTION 15150 - SANITARY WASTE AND VENT PIPING

THIS SECTION INCLUDES THE FOLLOWING SOIL AND WASTE, SANITARY DRAINAGE AND VENT PIPING DO NOT ENCLOSE, COVER, OR PUT PIPING INTO OPERATION UNTIL IT IS INSPECTED AND APPROVED BY

PART 2 – PRODUCTS

2.1 PIPING MATERIALS

- A. SANITARY WASTE AND VENT PIPING WITHIN THE BUILDING BELOW GRADE TO BE:
- PVC, ASTM D 1785/D 2729 SCHEDULE 40; INSTALLED PER ASTM D 2321; SOLVENT WELD WITH ASTM D 2564 SOLVENT CEMENT, INSTALLED PER THE REQUIREMENTS OF ASTM D 2855 JOINTS. B. SANITARY WASTE AND VENT PIPING WITHIN THE BUILDING ABOVE GRADE TO BE:
- 1. PVC. ASTM D 1785/D 2665 SCHEDULE 40: PVC FITTINGS ASTM D 3311/D 2665 DRAINAGE PATTERN. WITH BELL AND SPIGOT ENDS TO BE FURNISHED BY THE SAME MANUFACTURER AS PIPE OR APPROVED EQUAL: ASTM D 2855. SOLVENT WELD WITH ASTM D 2564 SOLVENT CEMENT JOINTS.

PART 3 – EXECUTION

3.1 PIPING INSTALLATION

- A. DURING INSTALLATION, NOTIFY AUTHORITIES HAVING JURISDICTION AT LEAST 24 HOURS BEFORE INSPECTION MUST BE MADE. PERFORM TESTS SPECIFIED BELOW IN PRESENCE OF AUTHORITIES HAVING JURISDICTION.
- 3.2 HANGER AND SUPPORT INSTALLATION
- A. PIPE HANGERS AND SUPPORTS ARE SPECIFIED IN DIVISION 15 SECTION "HANGERS AND SUPPORTS."

3.3 FIELD QUALITY CONTROL

- A. HORIZONTAL WASTE AND SOIL PIPE 2 1/2" AND SMALLER SHALL BE GIVEN A GRADE OF 1/4" PER FOOT AND PIPING 3" AND LARGER SHALL BE GRADED AT 1/8" PER FOOT.
- B. REINSPECTION: IF AUTHORITIES HAVING JURISDICTION FIND THAT PIPING WILL NOT PASS TEST OR INSPECTION, MAKE REQUIRED CORRECTIONS AND ARRANGE FOR REINSPECTION.
- C. SANITARY DRAINS: PIPES SHALL HAVE ALL OUTLETS TEMPORARILY PLUGGED. THE PIPES SHALL BE FILLED WITH WATER TESTING THE SYSTEM IN SECTION SUCH THAT NO SECTION SHALL BE TESTED WITH LESS THAN 10-FOOT (10') HEAD OF WATER. IF AFTER TWENTY-FOUR (24) HOURS, THE LEVEL OF THE WATER HAS BEEN LOWERED BY LEAKAGE, THE LEAKS MUST BE FOUND AND STOPPED BY THIS CONTRACTOR, AND THE WATER LEVEL SHALL AGAIN BE RAISED AND THE TEST REPEATED UNTIL AFTER TWENTY-FOUR HOUR RETENTION PERIOD THERE SHALL BE NO PERCEPTIBLE LOWERING OF THE WATER LEVEL OF THE SYSTEM BEING TESTED.

3.4 CLEANING

- A. CLEAN INTERIOR OF PIPING. REMOVE DIRT AND DEBRIS AS WORK PROGRESSES.
- B. PROTECT DRAINS DURING REMAINDER OF CONSTRUCTION PERIOD TO AVOID CLOGGING WITH DIRT AND DEBRIS AND TO PREVENT DAMAGE FROM TRAFFIC AND CONSTRUCTION WORK. C. PLACE PLUGS IN ENDS OF UNCOMPLETED PIPING AT END OF DAY AND WHEN WORK STOPS.

SECTION 15430 - PLUMBING SPECIALTIES

PART 1 – GENERAL

1.1 SUMMARY

- A. THIS SECTION INCLUDES PLUMBING SPECIALTIES:
- 1.2 SUBMITTALS
- A. PRODUCT DATA: INCLUDE RATED CAPACITIES AND INDICATE MATERIALS, FINISHES, DIMENSIONS, REQUIRED CLEARANCES, AND METHODS OF ASSEMBLY OF COMPONENTS, AND PIPING AND WIRING CONNECTIONS FOR THE FOLLOWING:
- WATER HAMMER ARRESTERS, AIR VENTS, AND TRAP SEAL PRIMER VALVES AND SYSTEMS. 2. COMPLY WITH NSF 61, "DRINKING WATER SYSTEM COMPONENTS--HEALTH EFFECTS, SECTIONS 1 THROUGH 9," FOR POTABLE WATER PLUMBING SPECIALTIES.

SECTION 15440 - PLUMBING FIXTURES

PART 1 - GENERAL

1.1 SUMMARY

A. THIS SECTION INCLUDES PLUMBING FIXTURES:

1.2 SUBMITTALS

A. FIXTURES AND ASSOCIATED TRIM: MANUFACTURER'S PRODUCT DATA SHOWING DIEMNSIONS, CERTIFICATIONS, MATERIALS AND INSTALLATION INSTRUCTIONS.

1.3 QUALITY ASSURANCE

- A. ALL PLUMBING FIXTURES AND TRIM SHALL BE MANUFACTURED IN THE UNITED STATES.
- 1.4 PLUMBING FIXTURES:
- A. REFER TO PLUMBING FIXTURE SCHEDULE.

PART 2 – EXECUTION

2.1 INSTALLATION

- A. REFER TO DIVISION 15 SECTION "BASIC MECHANICAL MATERIALS AND METHODS" FOR PIPING JOINING MATERIALS, JOINT CONSTRUCTION, AND BASIC INSTALLATION REQUIREMENTS.
- B. CLEAN-OUTS: THE SIZES OF CLEAN-OUTS SHALL BE IDENTICAL WITH THE SIZE OF THE SOIL OR WASTE LINES IN WHICH THEY ARE PLACED, EXCEPT WHERE CLEAN-OUTS LARGER THAN FOUR INCHES (4") IN DIAMETER WILL NOT BE REQUIRED. CLEAN-OUTS SHALL BE INSTALLED AS INDICATED ON PLANS. ALL CLEAN-OUTS LOCATED IN EXTERIOR LOCATIONS SHALL BE ENCASED IN 24" X 24" X 6" CONCRETE PAD UNLESS INSTALLED IN A CONCRETE WALK, DRIVE OR OTHER CONCRETE AREAS. ALL CLEAN-OUTS INSTALLED IN WALLS OR OTHER PAINTED SURFACES SHALL BE OF A TYPE FURNISHED IN PRIME COAT TO BE PAINTED ON THE JOB TO MATCH THE SURFACE IN WHICH THEY ARE INSTALLED. ALL COVER PLATES ON CLEAN-OUTS SHALL BE ATTACHED WITH VANDAL-PROOF SCREWS.
- C. CLEAN-OUTS SHALL BE BY MIFAB OR APPROVED EQUAL.
- WHERE COPPER PIPE PASSES THROUGH SHEET METAL STUDS, USE PVC INSERTS FROM "PLASTIC ODDITIES" TO D. ISOLATE PIPE FROM THE STUDS. ALSO USE IPC APPROVED TYPE ISOLATION TAPE AROUND THE CIRCUMFERENCE OF ALL COPPER WATER TUBING, WHERE STEEL PIPE SUPPORTS AND STEEL PIPE DAMPS WOULD COME IN CONTACT WITH COPPER TUBING. INSTALL TWO TO THREE WRAPS AT EACH PIPE SUPPORT
- INSTALL ESCUTCHEONS AT WALL, FLOOR, AND CEILING PENETRATIONS IN EXPOSED FINISHED LOCATIONS AND WITHIN CABINETS AND MILLWORK. USE DEEP-PATTERN ESCUTCHEONS IF REQUIRED TO CONCEAL PROTRUDING PIPE FITTINGS.

GENERAL PLUMBING NOTES

- 1. ALL WATER PIPING SHALL BE FIBERGLASS INSULATED WITH MINIMUM THICKNESS AS PER SPECIFICATIONS.
- VENT RISERS TO BE STRAPPED TO WALL. 3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST CODES AND THE REQUIREMENTS STATED IN THE APPLICABLE SECTIONS OF THE NATIONAL FIRE CODES (NFPA STANDARDS) CURRENT AT THE TIME OF ISSUANCE OF THE CONSTRUCTION DOCUMENTS. AMENDMENTS TO THESE CODES AS SET FORTH BY THE AUTHORITY HAVING JURISDICTION SHALL SUPERSEDE THE INTERNATIONAL CODES AND NFPA STANDARDS AS ISSUED.
- 4. PRIOR TO BIDDING, THE PLUMBING CONTRACTOR SHALL VISIT THE JOB SITE TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND TO VERIFY LOCATIONS, SIZE AND QUANTITIES OF EXISTING UTILITIES. SUBMITTAL OF A BID SHALL SIGNIFY A WILLINGNESS TO COMPLY WITH THE CONSTRUCTION DOCUMENTS AND AN ACCEPTANCE OF ON-SITE CONDITIONS AS THEY EXIST. 5. THE EXISTENCE AND LOCATION OF SITE IMPROVEMENTS, UTILITIES, MECHANICAL SYSTEMS,
- ELECTRICAL SYSTEMS AND OTHER CONSTRUCTION INDICATED AS EXISTING ARE NOT GUARANTEED. BEFORE BEGINNING WORK, INVESTIGATE AND VERIFY THE EXISTENCE AND LOCATION OF MECHANICAL AND ELECTRICAL SYSTEMS AND OTHER CONSTRUCTION AFFECTING THE WORK. COOPERATE FULLY WITH SEPARATE CONTRACTORS SO THAT WORK ON THOSE CONTRACTS MAY BE CARRIED OUT SMOOTHLY, WITHOUT INTERFERING WITH OR DELAYING WORK UNDER THIS CONTRACT. COORDINATE THE WORK OF THIS CONTRACT WITH WORK PERFORMED UNDER
- SEPARATE CONTRACTS. 7. THE INSTALLER IS RESPONSIBLE FOR COORDINATING WITH OTHER TRADES. THE INSTALLER SHALL NOT INSTALL OR FABRICATE ANY WORK SHOWN UNTIL ALL SUCH WORK IS FULLY COORDINATED. FURNISH AND INSTALL ADDITIONAL PIPING, OFFSETS, AND FITTINGS AS REQUIRED TO COORDINATE THE INSTALLATION WITH OTHER TRADES AS PART OF THE WORK.
- 8. THE DRAWINGS ARE DIAGRAMMATIC ONLY AND SHALL NOT BE SCALED. NOT ALL ITEMS CAN BE SHOWN. THE CONTRACTOR SHALL FURNISH AND INSTALL COMPONENTS, EQUIPMENT, PIPING, HANGERS, ETC. AS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
- 9. CLEAN AND PROTECT CONSTRUCTION IN PROGRESS AND ADJOINING MATERIALS ALREADY IN PLACE. APPLY PROTECTIVE COVERING WHERE REQUIRED TO ENSURE PROTECTION FROM DAMAGE OR DETERIORATION. DAMAGED EQUIPMENT OR MATERIALS SHALL BE REMOVED FROM THE PROJECT SITE AND REPLACED AT NO COST TO THE OWNER.
- 10. PERFORM MAINTENANCE ON COMPLETED CONSTRUCTION AS FREQUENTLY AS NECESSARY THROUGH THE CONSTRUCTION PERIOD. ADJUST AND LUBRICATE OPERABLE COMPONENTS TO ENSURE OPERABILITY WITHOUT DAMAGING EFFECTS.
- 11. SUPERVISE CONSTRUCTION OPERATIONS TO ASSURE THAT ALL WORK IS INSTALLED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
- 12. SANITARY SEWER PIPING 2" AND SMALLER TO BE INSTALLED AT A 2% SLOPE AND SANITARY SEWER PIPING 3" AND LARGER TO BE INSTALLED AT A 1% SLOPE. 13. PROVIDE A THERMOSTATIC MIXING VALVE WATTS MODEL #LF1170 UNDER LAVATORIES/SINKS.
- PROVIDE DELIVERY TEMPERATURE OF 108°. 14. HOT/COLD WATER PIPING INSTALLED ABOVE CEILING; VENT PIPING TO BE INSTALLED ABOVE CEILING; WASTE PIPING TO BE INSTALLED BELOW FLOOR.

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Revisions:

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PLUMBING SPECIFICATIONS