PROPOSED ACTIVITY CENTER FOR THE
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK, TEXAS 78613

GENERAL NOTES

- ALL WORK TO BE PERFORMED ACCORDING TO APPLICABLE CODES AND ORDINANACES, IN THE BEST MANNER OF THE TRADE, PER MANUFACTURER'S PUBLISHED SPECIFICATIONS.
- THE A.I.A. GENERAL CONDITIONS, 2017 EDITION IS PART OF THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL VISIT THE SITE AND INFORM HIMSELF AND THE SUB-CONTRACTOR REGARDING THE FACILITIES. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR WORK OF MATERIAL OMITTED FROM THE CONTRACT PROPOSAL DUE TO THE CONTRACTOR'S FAILURE TO SO INFORM HIMSELF BY SUCH INVESTIGATION. ADVISE THE ARCHITECT OF DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND THOSE SHOWN OR NOTED ON THESE DOCUMENTS.
- THE CONTRACTOR AND SUB-CONTRACTOR SHALL PAY FOR ALL PERMITS AND RELATED REQUIRED CHARGES.
- DO NOT SCALE DRAWINGS.
- ALL CONSTRUCTION TO BE WARRANTEED FOR ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION UNLESS SPECIFIED OTHERWISE. DEFECTS RESULTING FROM FAULTY MATERIALS AND/OR WORKMANSHIP DURING THE GUARANTEE PERIOD SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- ALL PROPOSED HARDWARE, GRAPHICS AND PLUMBING SHALL SATISFY THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT OR THE ACCESSIBILITY CODE HAVING JURISDICTION.
  - I. THIS INCLUDES, BUT IS NOT LIMITED TO THRESHOLDS, HINGES, CLOSERS, SLIDING OR FOLDING HARDWARE.
  - II. HARDWARE REQUIRED FOR DOOR PASSAGE SHALL BE MOUNTED NO HIGHER THAN 4'-0" ABOVE FINISHED FLOOR.
  - III. HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.
  - IV. FAUCETS SHALL BE EITHER LEVER-OPERATED, PUSH-TYPE, OR ELECTRONICALLY CONTROLLED MECHANISMS. IF SELF-CLOSING VALVES ARE USED, THE FAUCET SHALL REMAIN OPEN FOR AT LEAST 10 SECONDS.
- IF ANY ITEMS ARE DAMAGED AS A RESULT OF WORK IN THE CONTRACT, THEY MUST BE REPAIRED, AS A MINIMUM STANDARD, TO THEIR CONDITION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, OR TO THEIR CONDITION SCHEDULED IN THE CONSTRUCTION DOCUMENTS.
- SIGNIFICANT CONSTRUCTION DEBRIS THAT DEVELOPS BETWEEN COLLECTIONS BY A WASTE REMOVAL COMPANY, MUST BE GATHERED TOGETHER AND PLACED IN A LOCATION SO AS NOT TO CAUSE DISRUPTION TO THE OPERATION OF THE TENANTS' BUSINESS. THE TENANTS' TRASH DUMPSTERS MAY NOT BE USED FOR CONSTRUCTION DEBRIS.
- CONSTRUCTION WILL OCCUR WHILE TENANTS ARE OPERATING THEIR BUSINESSES WITH CUSTOMERS COMING TO THE BUILDING. THEREFORE, IT IS CRITICAL THAT THE CONTRACTOR PROTECT THE TENANTS, THEIR EMPLOYEES, VENDORS, AUTOMOBILES, PROPERTY, ETC. DURING THE CONSTRUCTION IN THIS CONTRACT.
- DURING THE TERM OF THE CONTRACT, THE CONTRACTOR AND EACH SUB-CONTRACTOR SHALL, AT HIS OWN EXPENSE, PURCHASE AND MAINTAIN INSURANCE IN COMPANIES PROPERLY LICENSED AND SATISFACTORY TO THE OWNER.
- THE CONTRACTOR'S BID PROPOSAL SHALL BE ACCOMPANIED BY A CERTIFICATE OF INSURANCE INDICATING THE TYPE OF INSURANCE, POLICY EFFECTIVE AND EXPIRATION DATES, AND LIABILITY LIMITS THE CONTRACTOR CARRIES. IF THE OWNER REQUESTS ANY MODIFICATIONS TO THE INSURANCE COVERAGE INDICATED ON THE CERTIFICATE OF INSURANCE, RESULTING IN AN INCREASE IN PREMIUMS, THAT INCREASE WILL BE ADDED TO THE CONTRACT SUM. IF THE OWNER REQUESTS THE CONTRACTOR TO FURNISH A BOND, LIKEWISE, THE COST OF THAT BOND WILL BE ADDED TO THE CONTRACT SUM.
- WHERE CONSTRUCTION REQUIRES REMOVAL OF CONCRETE SLAB, REPLACE IT AND ITS EARTHWORK TO MATCH EXISTING. SAWCUT. NO JACK HAMMERS ALLOWED.
- COMPLETED SPACE SHALL BE BROOM CLEAN.
- ROOF PENETRATIONS TO BE IN THIS CONTRACT & PERFORMED BY PROJECT'S ROOFER.
- GROUT ALL RECESSES LEVEL WITH EXISTING FLOOR SLAB. FILL ALL CRACKS WITH EPOXY AND ENSURE SMOOTH AND LEVEL SLABS THROUGHOUT LEASE SPACE.
- REPAIR OR REPLACE ALL DAMAGED GYPSUM BOARD FOR ENTIRE LEASE SPACE.
- REPAIR ALL ROOF LEAKS AND WATER PENETRATIONS.
- TRIM EXPOSED BOLTS AND CONDUIT LEVEL WITH FLOOR SLAB.
- PLUMBING, ELECTRICAL AND H.V.A.C. TO BE IN GOOD WORKING CONDITION AND WARRANTED FOR ONE YEAR AFTER LEASE COMMENCEMENT.

INDEX OF DRAWINGS

ISSUED		DATE: 12.15.2022 DESCRIPTION: FOR PRICING
GENERAL		
A0.0	COVER SHEET	●
A0.1	ACCESSIBILITY STANDARDS	●
A0.2	ACCESSIBILITY STANDARDS	●
ARCHITECTURAL		
AS1.0	SITE PLAN	●
AS1.1	SITE DETAILS	●
AS1.2	FENCE TYPE & SITE DETAILS	●
AS1.3	SIDEWALK PLAN	●
A1.0	FIRST FLOOR PLAN	●
A1.1	SECOND FLOOR PLAN	●
A1.2	FIRST FLOOR REFLECTED CEILING PLAN	●
A1.3	SECOND FLOOR REFLECTED CEILING PLAN	●
A1.4	CLEARSTORY PLAN	●
A1.5	ROOF PLAN & DETAILS	●
A1.6	COURT DIMENSIONS	●
A1.7	KITCHEN EQUIPMENT PLAN	●
A1.8	KITCHEN EQUIPMENT ELEVATIONS	●
A1.9	OCCUPANCY PLAN	●
A2.0	EXTERIOR ELEVATIONS	●
A2.01	PANEL SCREEN MOTIF & ARTICULATION CALCULATIONS	●
A2.1	EXTERIOR ELEVATIONS	●
A2.11	ARTICULATION FLOOR PLANS	●
A3.0	BUILDING SECTIONS	●
A3.1	BUILDING SECTIONS	●
A3.2	BUILDING SECTIONS	●
A4.0	BUILDING SECTIONS	●
A4.1	BUILDING SECTIONS	●
A4.2	BUILDING SECTIONS	●
A4.3	BUILDING SECTIONS	●
A4.4	BUILDING SECTIONS	●
A4.5	BUILDING SECTIONS	●
A5.0	SECTION DETAILS	●
A5.1	SECTION DETAILS	●
A5.2	SECTION DETAILS	●
A5.3	SECTION DETAILS	●
A6.0	PLAN DETAILS	●
A6.1	PLAN DETAILS	●
A7.0	ENLARGED PLAN & RESTROOM SCHEDULES	●
A7.1	DOOR, STOREFRONT & WINDOW SCHEDULES	●
A7.2	PARTITION & DETAILS	●
A7.3	RECEPTION AREA	●
A7.4	DOOR & FINISH SCHEDULES	●
A7.5	DOOR SCHEDULE	●
A7.6	MEETING ROOM FOLDABLE PARTITION	●
A8.0	STAIR PLANS, ELEVATOR PLAN & DETAILS	●
A8.1	STAIR DETAILS	●
STRUCTURAL		
S0.0	GENERAL NOTES	●
S0.1	GENERAL NOTES	●
S0.2	GENERAL NOTES	●
S0.3	GENERAL NOTES	●
S0.4	SPECIAL INSPECTIONS	●
S1.1	FOUNDATION PLAN	●
S2.1	SECOND FLOOR FRAMING PLAN	●
S2.2	ROOF FRAMING PLAN	●
S2.3	ROOF CANOPY FRAMING PLAN	●
S3.1	PANEL ELEVATIONS	●
S3.2	PANEL ELEVATIONS	●
S3.3	PANEL ELEVATIONS	●
S3.4	PANEL ELEVATIONS	●
S3.5	PANEL ELEVATIONS	●
S3.6	PANEL DETAILS	●
S4.1	FOUNDATION DETAILS	●
S4.2	FOUNDATION DETAILS	●
S4.3	FOUNDATION DETAILS	●
S5.1	FLOOR FRAMING DETAILS	●
S6.1	ROOF FRAMING DETAILS	●
S6.2	ROOF FRAMING DETAILS	●
S6.3	ROOF FRAMING DETAILS	●
MEP		
M1.01	MECHANICAL SYMBOLS AND ABBREVIATIONS	●
M2.01	MECHANICAL PARTIAL FIRST FLOOR PLAN	●
M2.02	MECHANICAL PARTIAL FIRST FLOOR PLAN	●
M2.03	MECHANICAL SECOND FLOOR PLAN	●
M2.04	MECHANICAL ROOF PLAN	●
M3.01	MECHANICAL DETAILS	●
M3.02	MECHANICAL DETAILS	●
M4.01	MECHANICAL SCHEDULES	●
E1.0	ELECTRICAL ABBREVIATION, LEGEND AND NOTES	●
E2.0	ELECTRICAL SITE PLAN	●
E3.1	LIGHTING PLAN LEVEL 01	●
E3.2	LIGHTING PLAN LEVEL 02	●
E4.1	POWER PLAN LEVEL 01	●
E4.2	POWER PLAN LEVEL 02	●
E4.3	ELECTRICAL ROOF PLAN	●
E5.1	FIRE ALARM FLOOR PLAN LEVEL 01	●
E5.2	FIRE ALARM FLOOR PLAN LEVEL 02	●
E6.1	ELECTRICAL PANEL SCHEDULES & RISER DIAGRAM	●
E6.2	ELECTRICAL PANEL SCHEDULES & RISER DIAGRAM	●
E7.0	ELECTRICAL DETAILS	●
E8.0	ELECTRICAL SPECIFICATIONS	●
P1.01	PLUMBING ABBREVIATION, LEGEND AND NOTES	●
P2.01	PLUMBING PARTIAL FIRST FLOOR PLAN	●
P2.02	PLUMBING PARTIAL FIRST FLOOR PLAN	●
P2.03	PLUMBING SECOND FLOOR PLAN - SANITARY	●
P2.04	PLUMBING ROOF PLAN	●
P3.01	PLUMBING ENLARGED FLOOR PLANS - SANITARY	●
P3.02	PLUMBING ENLARGED FLOOR PLANS - WATER	●
P4.01	PLUMBING RISER DIAGRAMS - SANITARY	●
P4.02	PLUMBING RISER DIAGRAMS - DOMESTIC WATER	●
P4.03	PLUMBING RISER DIAGRAMS - GAS	●
P5.01	PLUMBING DETAILS	●
P6.01	PLUMBING DETAILS	●

INDEX OF DRAWINGS CONT.

ISSUED		DATE: 12.15.2022 DESCRIPTION: FOR PRICING
LANDSCAPE		
L1.1	LANDSCAPE PLAN	●
L1.2	LANDSCAPE PLAN	●
L1.3	LANDSCAPE DETAILS	●
L2.1	IRRIGATION PLAN	●
L2.2	IRRIGATION PLAN	●
L2.3	IRRIGATION DETAILS	●
KITCHEN		
FS1.0	FOOD SERVICE GENERAL NOTES	●
F2.0	EQUIPMENT PLAN	●
FS2.2	EQUIPMENT ELEVATIONS	●
FS2.3	EQUIPMENT ELEVATIONS	●
FS3.0	ELECTRICAL ROUGH-IN	●
FS4.0	PLUMBING ROUGH-IN	●
FS5.0	FLOOR PLAN	●
FS6.0	HOOD	●
FS6.1	HOOD - SPLASH PANEL LAYOUT	●
FS6.2	KEF-1	●
FS6.3	KEF-2	●
FS6.4	KSF	●
FS6.5	FSS	●
FS6.6	CONTROLS	●

N VICINITY MAP
N.T.S.

PROJECT DATA:

PROJECT DESCRIPTION:
THE PROJECT IS A 32,020 S.F. MULTI-STORY COMMUNITY CENTER WITH MULTIPLE FLEX SPACES, WARMING KITCHEN AND GYMNASIUM

BUILDING CODE:
2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL RESIDENTIAL CODE
2021 INTERNATIONAL FIRE CODE
2021 INTERNATIONAL PLUMBING CODE
2021 INTERNATIONAL MECHANICAL CODE
2021 INTERNATIONAL ENERGY CONSERVATION CODE
2020 NATIONAL ELECTRICAL CODE

CODE/ORDINANCE INFORMATION:

GROSS AREA	32,020 S.F.
CONSTRUCTION TYPE	II-B - FULLY SPRINKLED
ALLOWABLE AREA	38,000 S.F.
ALLOWABLE HEIGHT	75 FEET
ALLOWABLE STORIES	3
OCCUPANCY ASSEMBLEY	TYPES A-3, B & S
OCCUPANCY LOAD	1,454 TOTAL

TOTAL OCCUPANT LOAD - 1,386

A-3 LOUNGE - 1,135 SQ FT/15 = 76 OCCUPANTS
A-3 FITNESS - 593 SQ FT/50 = 12 OCCUPANTS
A-3 LOBBY - 785 SQ FT/15 = 53 OCCUPANTS
A-3 GYMNASIUM - 16,250 SQ FT/15 = 1,084 OCCUPANTS
A-3 LIBRARY 1 - 267 SQ FT/50 = 6 OCCUPANTS
A-3 LIBRARY 2 - 282 SQ FT/50 = 6 OCCUPANTS
A-3 FLEX ROOM - 262 SQ FT/15 = 18 OCCUPANTS
A-3 FLEX ROOM - 480 SQ FT/15 = 32 OCCUPANTS
A-3 FLEX ROOM - 368 SQ FT/15 = 25 OCCUPANTS
A-3 FLEX ROOM - 513 SQ FT/15 = 35 OCCUPANTS
A-3 FLEX ROOM - 368 SQ FT/15 = 25 OCCUPANTS
S STORAGE - 955 SQ FT/300 = 4 OCCUPANTS
S IT - 63 SQ FT/300 = 1 OCCUPANTS
S IT - 62 SQ FT/300 = 1 OCCUPANTS
B MEDIA - 121 SQ FT/150 = 1 OCCUPANTS
B KITCHEN - 1,057 SQ FT/200 = 6 OCCUPANTS
B OFFICE - 61 SQ FT/150 = 1 OCCUPANTS

EXIT WIDTH CALCULATIONS:

A-3 LOUNGE - 76 OCCUPANTS X 0.20 = 15.2"
A-3 FITNESS - 12 OCCUPANTS X 0.20 = 2.4"
A-3 LOBBY - 53 OCCUPANTS X 0.20 = 10.6"
A-3 GYMNASIUM - 1,084 OCCUPANTS X 0.20 = 216.8"
A-3 LIBRARY 1 - 6 OCCUPANTS X 0.20 = 1.2"
A-3 FLEX ROOM - 18 OCCUPANTS X 0.20 = 3.6"
A-3 FLEX ROOM - 32 OCCUPANTS X 0.20 = 6.4"
A-3 FLEX ROOM - 25 OCCUPANTS X 0.20 = 5"
A-3 FLEX ROOM - 35 OCCUPANTS X 0.20 = 7"
A-3 FLEX ROOM - 25 OCCUPANTS X 0.20 = 5"
A-3 LIBRARY 2 - 6 OCCUPANTS X 0.20 = 1.2"
S STORAGE - 4 OCCUPANTS X 0.20 = 0.8"
S IT - 1 OCCUPANTS X 0.20 = 0.2"
S IT - 1 OCCUPANTS X 0.20 = 0.2"
B MEDIA - 1 OCCUPANTS X 0.20 = 0.2"
B KITCHEN - 6 OCCUPANTS X 0.20 = 1.2"
B OFFICE - 1 OCCUPANTS X 0.20 = 0.2"

ASSEMBLY A3 (GYM) - 216.8"/ 2 = 108.4"
(1/2 OF A3 GYM) + STORAGE + MEDIA
108.40" + 0.80" + 0.20 = 109.4" REQUIRED EXIT WIDTH
144" EXIT WIDTH PROVIDED

(1/2 OF A3 - GYM) + FLEX + FLEX + FLEX + FLEX + FLEX + LIBRARY 1 + LIBRARY 2 + IT + IT
108.4" + 3.60" + 6.40" + 5" + 7" + 5" + 1.20" + 1.20" + 0.20" + 0.20" =
138.2" REQUIRED EXIT WIDTH
144" EXIT WIDTH PROVIDED

KITCHEN 1.2" =
1.2" REQUIRED EXIT WIDTH
72" EXIT WIDTH PROVIDED

LOUNGE + FITNESS = 15.20" + 2.40" =
17.6" REQUIRED EXIT WIDTH
36" EXIT WIDTH PROVIDED

LOBBY + OFFICE = 10.6 + 0.20" =
10.80" REQUIRED EXIT WIDTH
36" EXIT WIDTH PROVIDED

* FIRE SPRINKLER & ALARM TO BE SUBMITTED AS A DIFFERED SUBMITTAL

PROPOSED BUILDING:
TOTAL OCCUPANCY: 1386 OCCUPANTS
OCCUPANCY TYPE: ASSEMBLY A-3
RESTROOM REQUIREMENTS

REQUIRED FIXTURES					
W/C MEN	W/C WOMEN	LAV	D. F	M. SINK	SHOWERS
693 / 125	727 / 65	1386/ 200	1454 / 500	--	--
6	11	7	3	1	-
FIXTURES PROVIDED					
W/C MEN	W/C WOMEN	LAV	D. F	M. SINK	SHOWERS
12	13	5M-5W	3	3	2
FAMILY RESTROOM					
W/C UNISEX		LAV	D. F	M. SINK	SHOWERS
2		1	-	-	-

EGRESS WIDTH REQUIRED FOR DOORS
EGRESS WIDTH PER OCCUPANT SERVED IS 0.20 inchs IF SPRINKLED

REFER TO SHEET A1.9 FOR ILLUSTRATIONS OF EGRESS PLAN

EGRESS WIDTH REQUIRED FOR STAIRS
EGRESS WIDTH PER OCCUPANT SERVED IS 0.30 inchs IN SPRINKLED

	OCCUPANCY	REQUIRED WIDTH	PROVIDED WIDTH PER STAIRS	PROVIDED WIDTH
SECOND FLOOR	68 occ. x 0.30	20.5 inches	52 inches	104 inches

EXITS ACCESS TRAVEL DISTANCE

OCCUPANCY	MAXIMUM DISTANCE ALLOWED
FIRST FLOOR	250'
SECOND FLOOR	250'

MINIMUM CORRIDOR WIDTH

REQUIRED	PROVIDED
44"	108"

ALL LUMBER & PLYWOOD USED IN THE BUILDING SHALL BE FIRE RETARDANT & ALL ACOUSTICAL INSULATION USED IN THE BUILDING SHALL HAVE A FLAME SPREAD NO GREATER THAN 25.

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OWNER:
URC FOUNDATION
11940 JOLLYVILLE ROAD, SUITE 110-N
AUSTIN, TX 78759

ARCHITECT:
OSBORN & VANE ARCHITECTS, INC.
2000 BERING DR., SUITE 410
HOUSTON, TEXAS 77057
(713) 781-5262
Ben Sundin
bsundin@ovarc.com
Jignesh Divecha
jdivecha@ovarc.com

CIVIL ENGINEER:
(RETAINED BY OWNER):
BLEYL ENGINEERING
7701 San Felipe, Suite 200
Austin, TX 78729
(512) 454 2400
STEVEN IHNEN, PE
sihnen@bleylengineering.com

STRUCTURAL ENGINEER:
CJB ENGINEERS
3200 WILCREST DRIVE, SUITE 305
HOUSTON, TEXAS 77042
(713) 780-3345
BRITT GARDNER
bgardner@cjgengineers.com

MEP ENGINEER:
JRD ENGINEERING
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
(713) 367-3132
JAVAID DHUKA
jdhuka@jrdeng.com

LANDSCAPE ARCHITECT:
CMB LANDSCAPE ARCHITECTURE
18135 FM362
NAVASOTA, TEXAS 77868
(832) 428-1209
CHARLES BRIDGES
cbridges@cmblandarch.com

KITCHEN CONSULTANT
(RETAINED BY OWNER):
ACE-MART RESTAURANT SUPPLY
6700 GULF FREEWAY
HOUSTON, TEXAS 77087
(361) 277-5523
ETHAN CURRY
ecurry@acemart.com

OSBORN & VANE ARCHITECTS, inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

Project No.	22037
Drawn	JD
Checked	BS

COVER SHEET

Sheet No. A0.0

302 FLOOR OR GROUND SURFACES

302.1 General. Floor and ground surfaces shall be stable, firm, and slip resistant and shall comply with 302.

302.2 Carpet. Carpet or carpet tile shall be securely attached and shall have a firm cushion, pad, or backing or no cushion or pad. Carpet or carpet tile shall have a level loop, textured loop, level cut pile, or level cut/uncut pile texture. Pile height shall be 1/2 inch maximum. Exposed edges of carpet shall be fastened to floor surfaces and shall have trim on the entire length of the exposed edge. Carpet edge trim shall comply with 303.

302.3 Openings. Openings in floor or ground surfaces shall not allow passage of a sphere more than 1/2 inch diameter. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

303 CHANGES IN LEVEL

303.2 Vertical. Changes in level of 1/4 inch high maximum shall be permitted to be vertical.

303.3 Beveled. Changes in level between 1/4 inch high minimum and 1/2 inch high maximum shall be beveled with a slope not steeper than 1:2.

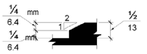


Figure 303.3 Beveled Change in Level

304 TURNING SPACE

304.2 Floor or Ground Surfaces. Floor or ground surfaces of a turning space shall comply with 302. Changes in level are not permitted.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

304.3.1 Circular Space. The turning space shall be a space of 60 inches diameter minimum. The space shall be permitted to include knee and toe clearance complying with 306.

304.3.2 T-Shaped Space. The turning space shall be a T-shaped space within a 60 inch square minimum with arms and base 36 inches wide minimum. Each arm of the T shall be clear of obstructions 12 inches minimum in each direction and the base shall be clear of obstructions 24 inches minimum. The space shall be permitted to include knee and toe clearance complying with 306 only at the end of either the base or one arm.

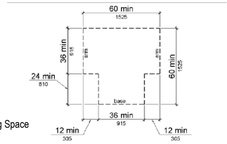


Figure 304.3.2 T-Shaped Turning Space

304.4 Door Swing. Doors shall be permitted to swing into turning spaces.

305 CLEAR FLOOR OR GROUND SPACE

305.2 Floor or Ground Surfaces. Floor or ground surfaces of a clear floor or ground space shall comply with 302. Changes in level are not permitted.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

305.3 Size. The clear floor or ground space shall be 30 inches minimum by 48 inches minimum.

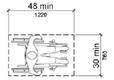


Figure 305.3 Clear Floor or Ground Space

305.5 Position. Unless otherwise specified, clear floor or ground space shall be positioned for either forward or parallel approach to an element.

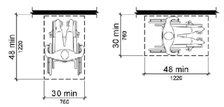


Figure 305.5 Position of Clear Floor or Ground Space

305.6 Approach. One full unobstructed side of the clear floor or ground space shall adjoin an accessible route or adjoin another clear floor or ground space.

306 KNEE AND TOE CLEARANCE

306.1 General. Where space beneath an element is included as part of clear floor or ground space or turning space, the space shall comply with 306. Additional space shall not be prohibited beneath an element but shall not be considered as part of the clear floor or ground space or turning space.

306.2 Toe Clearance.
306.2.1 General. Space under an element between the finish floor or ground and 9 inches above the finish floor or ground shall be considered toe clearance and shall comply with 306.2.

306.2.2 Maximum Depth. Toe clearance shall extend 25 inches maximum under an element.

306.2.3 Minimum Required Depth. Where toe clearance is required at an element as part of a clear floor space, the toe clearance shall extend 17 inches minimum under the element.

306.2.4 Additional Clearance. Space extending greater than 6 inches beyond the available knee clearance at 9 inches above the finish floor or ground shall not be considered toe clearance.

306.2.5 Width. Toe clearance shall be 30 inches wide minimum.

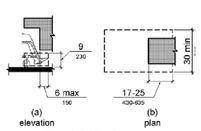


Figure 306.2 Toe Clearance

306.3 Knee Clearance.
306.3.1 General. Space under an element between 9 inches and 27 inches above the finish floor or ground shall be considered knee clearance and shall comply with 306.3.

306.3.2 Maximum Depth. Knee clearance shall extend 25 inches maximum under an element at 9 inches above the finish floor or ground.

306.3.3 Minimum Required Depth. Where knee clearance is required under an element as part of a clear floor space, the knee clearance shall be 11 inches deep minimum at 9 inches above the finish floor or ground, and 8 inches deep minimum at 27 inches above the finish floor or ground.

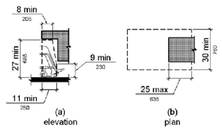


Figure 306.3 Knee Clearance

306.3.4 Clearance Reduction. Between 9 inches and 27 inches above the finish floor or ground, the knee clearance shall be permitted to reduce at a rate of 1 inch in depth for each 6 inches in height.

306.3.5 Width. Knee clearance shall be 30 inches wide minimum.

307 PROTRUDING OBJECTS

307.2 Protrusion Limits. Objects with leading edges more than 27 inches and not more than 80 inches above the finish floor or ground shall protrude 4 inches maximum horizontally into the circulation path.

EXCEPTION: Handrails shall be permitted to protrude 4 1/2 inches maximum.

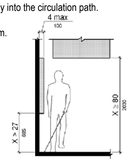


Figure 307.2 Limits of Protruding Objects

307.3 Post-Mounted Objects. Free-standing objects mounted on posts or pylons shall overhang circulation paths 12 inches maximum when located 27 inches minimum and 80 inches maximum above the finish floor or ground. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches, the lowest edge of such sign or obstruction shall be 27 inches maximum or 80 inches minimum above the finish floor or ground.

EXCEPTION: The sloping portions of handrails serving stairs and ramps shall not be required to comply with 307.3.

307.4 Vertical Clearance. Vertical clearance shall be 80 inches high minimum. Guardrails or other barriers shall be provided where the vertical clearance is less than 80 inches high. The leading edge of such guardrail or barrier shall be located 27 inches maximum above the finish floor or ground.

EXCEPTION: Door closers and door stops shall be permitted to be 78 inches minimum above the finish floor or ground.

307.5 Required Clear Width. Protruding objects shall not reduce the clear width required for accessible routes.

308 REACH RANGES

Advisory 308.1 General. The following table provides guidance on reach ranges for children according to age where building elements such as coat hooks, lockers, or operable parts are designed for use primarily by children. These dimensions apply to either forward or side reaches. Accessible elements and operable parts designed for adult use or children over age 12 can be located outside these ranges but must be within the adult reach ranges required by 308.

Children's Reach Ranges

Forward or Side Reach	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
High (maximum)	36 in	40 in	44 in
Low (minimum)	20 in	18 in	16 in

308.2 Forward Reach
308.2.1 Unobstructed. Where a forward reach is unobstructed, the high forward reach shall be 48 inches maximum and the low forward reach shall be 15 inches minimum above the finish floor or ground.

308.2.2 Obstructed High Reach. Where a high forward reach is over an obstruction, the clear floor space shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48 inches maximum where the reach depth is 20 inches maximum. Where the reach depth exceeds 20 inches, the high forward reach shall be 44 inches maximum and the reach depth shall be 25 inches maximum.

308.3 Side Reach
308.3.1 Unobstructed. Where a clear floor or ground space allows a parallel approach to an element and the side reach is unobstructed, the high side reach shall be 48 inches maximum and the low side reach shall be 15 inches minimum above the finish floor or ground.

1. An obstruction shall be permitted between the clear floor or ground space and the element where the depth of the obstruction is 10 inches maximum.

308.3.2 Obstructed High Reach. Where a clear floor or ground space allows a parallel approach to an element and the high side reach is over an obstruction, the height of the obstruction shall be 34 inches maximum and the depth of the obstruction shall be 24 inches maximum. The high side reach shall be 48 inches maximum for a reach depth of 10 inches maximum. Where the reach depth exceeds 10 inches, the high side reach shall be 46 inches maximum for a reach depth of 24 inches maximum.

EXCEPTIONS:
1. The top of washing machines and clothes dryers shall be permitted to be 36 inches maximum above the finish floor.
EXCEPTIONS:
309 OPERABLE PARTS

309.2 Clear Floor Space. A clear floor or ground space complying with 305 shall be provided.

309.3 Height. Operable parts shall be placed within one or more of the reach ranges specified in 308.

309.4 Operation. Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds maximum.

403 WALKING SURFACES

403.3 Slope. The running slope of walking surfaces shall not be steeper than 1:20. The cross slope of walking surfaces shall not be steeper than 1:48.

403.4 Changes in Level. Changes in level shall comply with 303.

404 DOORS, DOORWAYS, AND GATES

404.2.2 Double-Leaf Doors and Gates. At least one of the active leaves of doorways with two leaves shall comply with 404.2.3 and 404.2.4.

404.2.3 Clear Width. Door openings shall provide a clear width of 32 inches minimum. 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. Openings more than 24 inches deep shall provide a clear opening of 36 inches minimum. There shall be no projections into the required clear opening width lower than 34 inches above the finish floor or ground. Projections into the clear opening width between 34 inches and 80 inches above the finish floor or ground shall not exceed 4 inches.

EXCEPTIONS:
1. In alterations, a projection of 5/8 inch maximum into the required clear width shall be permitted for the latch side stop.
2. Door closers and door stops shall be permitted to be 78 inches minimum above the finish floor or ground.

404.2.4 Maneuvering Clearances. Minimum maneuvering clearances at doors and gates shall comply with 404.2.4. Maneuvering clearances shall extend the full width of the doorway and the required latch side or hinge side clearance.

404.2.4.1 Swinging Doors and Gates. Swinging doors and gates shall have maneuvering clearances complying with Table 404.2.4.1.

Table 404.2.4.1 Maneuvering Clearances at Manual Swinging Doors and Gates

Type of Use		Minimum Maneuvering Clearance	
Approach Direction	Door or Gate Side	Perpendicular to Doorway	Parallel to Doorway (beyond latch side unless noted)
From front	Pull	60 inches	18 inches
From front	Push	48 inches	0 inches [1]
From hinge side	Pull	60 inches	36 inches
From hinge side	Pull	54 inches	42 inches
From hinge side	Push	42 inches [2]	22 inches [3]
From latch side	Pull	48 inches (4)	24 inches
From latch side	Push	42 inches (4)	24 inches

1. Add 12 inches if closer and latch are provided.
2. Add 6 inches if closer and latch are provided.
3. Beyond hinge side.
4. Add 6 inches if closer is provided.

404.2.5 Thresholds. Thresholds, if provided at doorways, shall be 1/2 inch high maximum. Raised thresholds and changes in level at doorways shall comply with 302 and 303.

EXCEPTION: Existing or altered thresholds 3/4 inch high maximum that have a beveled edge on each side with a slope not steeper than 1:2 shall not be required to comply with 404.2.5.

404.2.7 Door and Gate Hardware. Handles, pulls, latches, locks, and other operable parts on doors and gates shall comply with 309.4. Operable parts of such hardware shall be 34 inches minimum and 48 inches maximum above the finish floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.

EXCEPTIONS:
1. Existing locks shall be permitted in any location at existing glazed doors without stiles, existing overhead rolling doors or grilles, and similar existing doors or grilles that are designed with locks that are activated only at the top or bottom rail.
2. Access gates in barrier walls and fences protecting pools, spas, and hot tubs shall be permitted to have operable parts of the release of latch on self-latching devices at 54 inches maximum above the finish floor or ground provided the self-latching devices are not also self-locking devices and operated by means of a key, electronic opener, or integral combination lock.

404.2.8.1 Door Closers and Gate Closers. Door closers and gate closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door to a position of 12 degrees from the latch is 5 seconds minimum.

404.2.8.2 Spring Hinges. Door and gate spring hinges shall be adjusted so that from the open position of 70 degrees, the door or gate shall move to the closed position in 1.5 seconds minimum.

404.2.9 Door and Gate Opening Force. Fire doors shall have a minimum opening force allowable by the appropriate administrative authority. The force for pushing or pulling open a door or gate other than fire doors shall be as follows:

1. Interior hinged doors and gates: 5 pounds maximum.
2. Sliding or folding doors: 5 pounds maximum.

These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door or gate in a closed position.

405 RAMPS

405.2 Slope. Ramp runs shall have a running slope not steeper than 1:12.

405.3 Cross Slope. Cross slope of ramp runs shall not be steeper than 1:48.

405.5 Clear Width. The clear width of a ramp run and, where handrails are provided, the clear width between handrails shall be 36 inches minimum.

405.6 Rise. The rise for any ramp run shall be 30 inches maximum.

405.7 Landings. Ramps shall have landings at the top and the bottom of each ramp run.

405.8 Handrails. Ramp runs with a rise greater than 6 inches shall have handrails complying with 505.

405.9 Edge Protection. Edge protection shall be provided on each side of ramp runs and at each side of ramp landings.

406 CURB RAMPS

406.2 Counter Slope. Counter slopes of adjoining gutters and road surfaces immediately adjacent to the curb ramp shall not be steeper than 1:20. The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be at the same level.

Figure 406.2 Counter Slope of Surfaces Adjacent to Curb Ramps

502 PARKING SPACES

502.2 Vehicle Spaces. Car parking spaces shall be 96 inches wide minimum and van parking spaces shall be 132 inches wide minimum, shall be marked to define the width, and shall have an adjacent access aisle complying with 502.3.

EXCEPTION: Van parking spaces shall be permitted to be 96 inches wide minimum where the access aisle is 96 inches wide minimum.

502.3.1 Width. Access aisles serving car and van parking spaces shall be 60 inches wide minimum.

502.3.2 Length . Access aisles shall extend the full length of the parking spaces they serve.

502.4 Floor or Ground Surfaces. Parking spaces and access aisles serving them shall comply with 302. Access aisles shall be at the same level as the parking spaces they serve. Changes in level are not permitted.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

502.5 Vertical Clearance. Parking spaces for vans and access aisles and vehicular routes serving them shall provide a vertical clearance of 98 inches minimum.

502.6 Identification. Parking space identification signs shall include the International Symbol of Accessibility complying with 703.7.2.1. Signs identifying van parking spaces shall contain the designation "van accessible." Signs shall be 60 inches minimum above the finish floor or ground surface measured to the bottom of the sign.

503 PASSENGER LOADING ZONES

503.2 Vehicle Pull-Up Space. Passenger loading zones shall provide a vehicular pull-up space 96 inches wide minimum and 20 feet long minimum.

503.3.1 Width. Access aisles serving vehicle pull-up spaces shall be 60 inches wide minimum.

503.3.2 Length. Access aisles shall extend the full length of the vehicle pull-up spaces they serve

503.3.3 Marking. Access aisles shall be marked so as to discourage parking in them.

503.4 Floor and Ground Surfaces. Vehicle pull-up spaces and access aisles serving them shall comply with 302. Access aisles shall be at the same level as the vehicle pull-up space they serve. Changes in level are not permitted.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

503.5 Vertical Clearance. Vehicle pull-up spaces, access aisles serving them, and a vehicular route from an entrance to the passenger loading zone, and from the passenger loading zone to a vehicular exit shall provide a vertical clearance of 114 inches minimum.

505 HANDRAILS

505.1 General. Handrails provided along walking surfaces complying with 403, required at ramps complying with 405, and required at stairs complying with 504 shall comply.

505.2 Where Required. Handrails shall be provided on both sides of stairs and ramps.

EXCEPTION: In assembly areas, handrails shall not be required on both sides of aisle ramps where a handrail is provided at either side or within the aisle width.

505.3 Continuity. Handrails shall be continuous within the full length of each stair flight or ramp run. Inside handrails on switchback or dogleg stairs and ramps shall be continuous between flights or runs.

EXCEPTION: In assembly areas, handrails on ramps shall not be required to be continuous in aisles serving seating.

505.4 Height. Top of gripping surfaces of handrails shall be 34 inches (865 mm) minimum and 38 inches (965 mm) maximum vertically above walking surfaces, stair nosings, and ramp surfaces. Handrails shall be at a consistent height above walking surfaces, stair nosings, and ramp surfaces.

Advisory 505.4 Height. When children are the principal users in a building or facility (e.g., elementary schools), a second set of handrails at an appropriate height can assist them and aid in preventing accidents. A maximum height of 28 inches measured to the top of the gripping surface from the ramp surface or stair nosing is recommended for handrails designed for children. Sufficient vertical clearance between upper and lower handrails, 9 inches minimum, should be provided to help prevent entrapment.

505.5 Clearance. Clearance between handrail gripping surfaces and adjacent surfaces shall be 1 1/2 inches (38 mm) minimum.

Figure 505.5 Handrail Clearance

Figure 505.6 Horizontal Projections Below Gripping Surface

505.6 Gripping Surface. Handrail gripping surfaces shall be continuous along their length and shall not be obstructed along their tops or sides. The bottoms of handrail gripping surfaces shall not be obstructed for more than 20 percent of their length. Where provided, horizontal projections shall occur 1 1/2 inches minimum below the bottom of the handrail gripping surface.

EXCEPTIONS:
1. Where handrails are provided along walking surfaces with slopes not steeper than 1:20, the bottoms of handrail gripping surfaces shall be permitted to be obstructed along their entire length where they are integral to crash rails or bumper guards.
2. The distance between horizontal projections and the bottom of the gripping surface shall be permitted to be reduced by 1/8 inch for each 1/2 inch of additional handrail perimeter dimension that exceeds 4 inches.

505.7.1 Circular Cross Section. Handrail gripping surfaces with a circular cross section shall have an outside diameter of 1 1/4 inches minimum and 2 inches maximum.

505.7.2 Non-Circular Cross Sections. Handrail gripping surfaces with a non-circular cross section shall have a perimeter dimension of 4 inches minimum and 6 1/4 inches maximum, and a cross-section dimension of 2 1/4 inches maximum.

505.8 Surfaces. Handrail gripping surfaces and any surfaces adjacent to them shall be free of sharp or abrasive elements and shall have rounded edges.

505.9 Fittings. Handrails shall not rotate within their fittings.

505.10 Handrail Extensions. Handrail gripping surfaces shall extend beyond and in the same direction of stair flights and ramp runs in accordance with 505.10.

EXCEPTIONS:
1. Extensions shall not be required for continuous handrails at the inside turn of switchback or dogleg stairs and ramps.
2. In assembly areas, extensions shall not be required for ramp handrails in aisles serving seating where the handrails are discontinuous to provide access to seating and to permit crossovers within aisles.
3. In alterations, full extensions of handrails shall not be required where such extensions would be hazardous due to plan configuration.

505.10.1 Top and Bottom Extension at Ramps. Ramp handrails shall extend horizontally above the landing for 12 inches minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent ramp run.

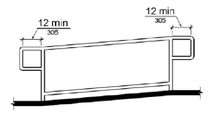


Figure 505.10.1 Top and Bottom Handrail Extension at Ramps

505.10.2 Top Extension at Stairs. At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches minimum beginning directly above the first riser nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

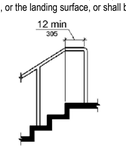


Figure 505.10.2 Top Handrail Extension at Stairs

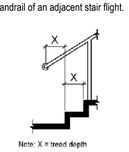


Figure 505.10.3 Bottom Handrail Extension at Stairs

505.10.3 Bottom Extension at Stairs. At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance at least equal to one tread depth beyond the last riser nosing. Extension shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

602 DRINKING FOUNTAINS

602.2 Clear Floor Space. Units shall have a clear floor or ground space complying with 305 positioned for a forward approach and centered on the unit. Knee and toe clearance complying with 306 shall be provided.

EXCEPTION: A parallel approach complying with 305 shall be permitted at units for children's use where the spout is 30 inches maximum above the finish floor or ground and is 3 1/2 inches maximum from the front edge of the unit, including bumpers.

602.3 Operable Parts. Operable parts shall comply with 309.

602.4 Spout Height. Spout outlets shall be 36 inches maximum above the finish floor or ground.

602.5 Spout Location. The spout shall be located 15 inches minimum from the vertical support and 5 inches maximum from the front edge of the unit, including bumpers.

Figure 602.5 Drinking Fountain Spout Location

602.7 Drinking Fountains for Standing Persons. Spout outlets of drinking fountains for standing persons shall be 38 inches minimum and 43 inches maximum above the finish floor or ground.

603 TOILET AND BATHING ROOMS

603.2 Clearances. Clearances shall comply with 603.2.

603.2.1 Turning Space. Turning space complying with 304 shall be provided within the room.

603.2.2 Overlap. Required clear floor spaces, clearance at fixtures, and turning space shall be permitted to overlap.

603.2.3 Door Swing. Doors shall not swing into the clear floor space or clearance required for any fixture. Doors shall be permitted to swing into the required turning space.

EXCEPTIONS:
1. Doors to a toilet room or bathing room for a single occupant accessed only through a private office and not for common use or public use shall be permitted to swing into the clear floor space or clearance provided the swing of the door can be reversed to comply with 603.2.3.
2. Where the toilet room or bathing room is for individual use and a clear floor space complying with 305.3 is provided within the room beyond the arc of the door swing, doors shall be permitted to swing into the clear floor space or clearance required for any fixture.

603.3 Mirrors. Mirrors located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 40 inches maximum above the finish floor or ground. Mirrors not located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 35 inches maximum above the finish floor or ground.

Advisory 603.3 Mirrors. A single full-length mirror can accommodate a greater number of people, including children. In order for mirrors to be usable by people who are ambulatory and people who use wheelchairs, the top edge of mirrors should be 74 inches minimum from the floor or ground.

603.4 Coat Hooks and Shelves. Coat hooks shall be located within one of the reach ranges specified in 308. Shelves shall be located 40 inches minimum and 48 inches maximum above the finish floor.

604 WATER CLOSETS AND TOILET COMPARTMENTS

604.2 Location. The water closet shall be positioned with a wall or partition to the rear and to one side. The centerline of the water closet shall be 16 inches minimum to 18 inches maximum from the side wall or partition, except that the water closet shall be 17 inches minimum and 19 inches maximum from the side wall or partition in the ambulatory accessible toilet compartment specified in 604.8.2. Water closets shall be arranged for a left-hand or right-hand approach.

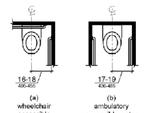


Figure 604.2 Water Closet Location

Figure 604.3.1 Size of Clearance at Water Closets

604.3.1 Size. Clearance around a water closet shall be 60 inches minimum measured perpendicular from the side wall and 56 inches minimum measured perpendicular from the rear wall.

604.3.2 Overlap. The required clearance around the water closet shall be permitted to overlap the water closet, associated grab bars, dispensers, sanitary napkin disposal units, coat hooks, shelves, accessible routes, clear floor space and clearances required at other fixtures, and the turning space. No other fixtures or obstructions shall be located within the required water closet clearance.

604.4 Seats. The seat height of a water closet above the finish floor shall be 17 inches minimum and 19 inches maximum measured to the top of the seat. Seats shall not be sprung to return to a lifted position.

604.5 Grab Bars. Grab bars for water closets shall comply with 609. Grab bars shall be provided on the side wall closest to the water closet and on the rear wall.

604.5.1 Side Wall. The side wall grab bar shall be 42 inches long minimum, located 12 inches maximum from the rear wall and extending 54 inches minimum from the rear wall.

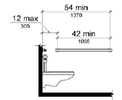


Figure 604.5.1 Side Wall Grab Bar at Water Closets

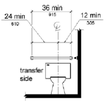


Figure 604.5.2 Rear Wall Grab Bar at Water Closets

604.5.2 Rear Wall. The rear wall grab bar shall be 36 inches long minimum and extend from the centerline of the water closet 12 inches minimum on one side and 24 inches minimum on the other side.

EXCEPTIONS:
1. The rear grab bar shall be permitted to be 24 inches long minimum, centered on the water closet, where wall space does not permit a length of 36 inches minimum due to the location of a recessed fixture adjacent to the water closet.
2. Where an administrative authority requires flush controls for flush valves to be located in a position that conflicts with the location of the rear grab bar, then the rear grab bar shall be permitted to be split or shifted to the open side of the toilet area.

604.6 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with 309. Flush controls shall be located on the open side of the water closet except in ambulatory accessible compartments.

604.7 Dispensers. Toilet paper dispensers shall comply with 309.4 and shall be 7 inches minimum and 9 inches maximum in front of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 15 inches minimum and 48 inches maximum above the finish floor and shall not be located behind grab bars. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow.

Advisory 604.7 Dispensers. If toilet paper dispensers are installed above the side wall grab bar, the outlet of the toilet paper dispenser must be 48 inches maximum above the finish floor and the top of the gripping surface of the grab bar must be 33 inches minimum and 36 inches maximum above the finish floor.

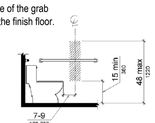


Figure 604.7 Dispenser Outlet Location

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

Project No. 22037
Drawn JD
Checked BS

ACCESSIBILITY STANDARDS

Sheet No. A0.1

604.8 Toilet Compartments. Wheelchair accessible toilet compartments shall meet the requirements of 604.8.1 and 604.8.3. Compartments containing more than one plumbing fixture shall comply with 603.

604.8.1 Wheelchair Accessible Compartments. Wheelchair accessible compartments shall comply with 604.8.1.

604.8.1.1 Size. Wheelchair accessible compartments shall be 60 inches wide minimum measured perpendicular to the side wall, and 56 inches deep minimum for wall hung water closets and 59 inches deep minimum for floor mounted water closets measured perpendicular to the rear wall. Wheelchair accessible compartments for children's use shall be 60 inches wide minimum measured perpendicular to the side wall, and 59 inches deep minimum for wall hung and floor mounted water closets measured perpendicular to the rear wall.

Advisory 604.8.1.1 Size. The minimum space required in toilet compartments is provided so that a person using a wheelchair can maneuver into position at the water closet. This space cannot be obstructed by baby changing tables or other fixtures or conveniences, except as specified at 604.3.2 (Overlap). If toilet compartments are to be used to house fixtures other than those associated with the water closet, they must be designed to exceed the minimum space requirements. Convenience fixtures such as baby changing tables must also be accessible to people with disabilities as well as to other users. Toilet compartments that are designed to meet, and not exceed, the minimum space requirements may not provide adequate space for maneuvering into position at a baby changing table.

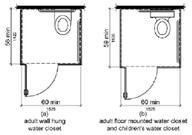


Figure 604.8.1.1 Size of Wheelchair Accessible Toilet Compartment

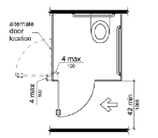


Figure 604.8.1.2 Wheelchair Accessible Toilet Compartment Doors

604.8.1.2 Doors. Toilet compartment doors, including door hardware, shall comply with 404 except that if the approach is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction shall be 42 inches minimum. Doors shall be located in the front partition or in the side wall or partition farthest from the water closet. Where located in the front partition, the door opening shall be 4 inches maximum from the side wall or partition farthest from the water closet. Where located in the side wall or partition, the door opening shall be 4 inches maximum from the front partition. The door shall be self-closing. A door pull complying with 404.2.7 shall be placed on both sides of the door near the latch. Toilet compartment doors shall not swing into the minimum required compartment area.

604.8.1.4 Toe Clearance. The front partition and at least one side partition shall provide a toe clearance of 9 inches minimum above the finish floor and 6 inches deep minimum beyond the compartment-side face of the partition, exclusive of partition support members. Compartments for children's use shall provide a toe clearance of 12 inches minimum above the finish floor.

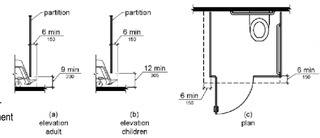


Figure 604.8.1.4 Wheelchair Accessible Toilet Compartment Toe Clearance

604.8.1.5 Grab Bars. Grab bars shall comply with 609. A side-wall grab bar complying with 604.5.1 shall be provided and shall be located on the wall closest to the water closet. In addition, a rear-wall grab bar complying with 604.5.2 shall be provided.

604.8.2 Ambulatory Accessible Compartments. Ambulatory accessible compartments shall comply with 604.8.2.

604.8.2.1 Size. Ambulatory accessible compartments shall have a depth of 60 inches (1525 mm) minimum and a width of 35 inches (890 mm) minimum and 37 inches (940 mm) maximum.

604.8.2.2 Doors. Toilet compartment doors, including door hardware, shall comply with 404, except that if the approach is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction shall be 42 inches (1065 mm) minimum. The door shall be self-closing. A door pull complying with 404.2.7 shall be placed on both sides of the door near the latch. Toilet compartment doors shall not swing into the minimum required compartment area.

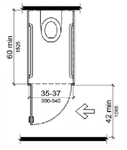


Figure 604.8.2 Ambulatory Accessible Toilet Compartment

604.8.2.3 Grab Bars. Grab bars shall comply with 609. A side-wall grab bar complying with 604.5.1 shall be provided on both sides of the compartment.

604.8.3 Coat Hooks and Shelves. Coat hooks shall be located within one of the reach ranges specified in 308. Shelves shall be located 40 inches minimum and 48 inches maximum above the finish floor.

Figure 604.8.2 Ambulatory Accessible Toilet Compartment

604.9 Water Closets and Toilet Compartments for Children's Use. Water closets and toilet compartments for children's use shall comply with 604.9.

Advisory Specifications for Water Closets Serving Children Ages 3 through 12

	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
Water Closet Centerline	12 inches	12 to 15 inches	15 to 18 inches
Toilet Seat Height	11 to 12 inches	12 to 15 inches	15 to 17 inches
Grab Bar Height	18 to 20 inches	20 to 25 inches	25 to 27 inches
Dispenser Height	14 inches	14 to 17 inches	17 to 19 inches

604.9.1 Location. The water closet shall be located with a wall or partition to the rear and to one side. The centerline of the water closet shall be 12 inches minimum and 18 inches maximum from the side wall or partition, except that the water closet shall be 17 inches minimum and 19 inches maximum from the side wall or partition in the ambulatory accessible toilet compartment specified in 604.8.2. Compartments shall be arranged for left-hand or right-hand approach to the water closet.

604.9.2 Clearance. Clearance around a water closet shall comply with 604.3.

604.9.3 Height. The height of water closets shall be 11 inches minimum and 17 inches maximum measured to the top of the seat. Seats shall not be sprung to return to a lifted position.

604.9.4 Grab Bars. Grab bars for water closets shall comply with 604.5.

604.9.5 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with 309.2 and 309.4 and shall be installed 36 inches maximum above the finish floor. Flush controls shall be located on the open side of the water closet except in ambulatory accessible compartments complying with 604.8.2.

604.9.6 Dispensers. Toilet paper dispensers shall comply with 309.4 and shall be 7 inches minimum and 9 inches maximum in front of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 14 inches minimum and 19 inches maximum above the finish floor. There shall be a clearance of 1 1/2 inches minimum below the grab bar. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow.

605 URINALS

605.2 Height and Depth. Urinals shall be the stall-type or the wall-hung type with the rim 17 inches maximum above the finish floor or ground. Urinals shall be 13 1/2 inches deep minimum measured from the outer face of the urinal rim to the back of the fixture.

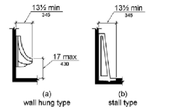


Figure 605.2 Height and Depth of Urinals

605.3 Clear Floor Space. A clear floor or ground space complying with 305 positioned for forward approach shall be provided.

605.4 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with 309.

606 LAVATORIES AND SINKS

606.2 Clear Floor Space. A clear floor space complying with 305, positioned for a forward approach, and knee and toe clearance complying with 306 shall be provided.

EXCEPTIONS:
1. A parallel approach complying with 305 shall be permitted to a kitchen sink in a space where a cook top or conventional range is not provided and to wet bars.
2. A lavatory in a toilet room or bathing facility for a single occupant accessed only through a private office and not for common use or public use shall not be required to provide knee and toe clearance complying with 306.
3. In residential dwelling units, cabinetry shall be permitted under lavatories and kitchen sinks provided that all of the following conditions are met:
   (a) the cabinetry can be removed without removal or replacement of the fixture;
   (b) the finish floor extends under the cabinetry; and
   (c) the walls behind and surrounding the cabinetry are finished.
4. A knee clearance of 24 inches minimum above the finish floor or ground shall be permitted at lavatories and sinks used primarily by children 6 through 12 years where the rim or counter surface is 31 inches maximum above the finish floor or ground.
5. A parallel approach complying with 305 shall be permitted to lavatories and sinks used primarily by children 5 years and younger.
6. The dip of the overflow shall not be considered in determining knee and toe clearances.
7. No more than one bowl of a multi-bowl sink shall be required to provide knee and toe clearance complying with 306.

606.3 Height. Lavatories and sinks shall be installed with the front of the higher of the rim or counter surface 34 inches maximum above the finish floor or ground.

606.4 Faucets. Controls for faucets shall comply with 309. Hand-operated metering faucets shall remain open for 10 seconds minimum.

606.5 Exposed Pipes and Surfaces. Water supply and drain pipes under lavatories and sinks shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under lavatories and sinks

609 GRAB BARS

609.2 Cross Section. Grab bars shall have a cross section complying with 609.2.1 or 609.2.2.

609.2.1 Circular Cross Section. Grab bars with circular cross sections shall have an outside diameter of 1 1/4 inches minimum and 2 inches maximum.

609.2.2 Non-Circular Cross Section. Grab bars with non-circular cross sections shall have a cross-section dimension of 2 inches maximum and a perimeter dimension of 4 inches minimum and 4.8 inches maximum.

609.3 Spacing. The space between the wall and the grab bar shall be 1 1/2 inches. The space between the grab bar and projecting objects below and at the ends shall be 1 1/2 inches minimum. The space between the grab bar and projecting objects above shall be 12 inches minimum.

EXCEPTION: The space between the grab bars and shower controls, shower fittings, and other grab bars above shall be permitted to be 1 1/2 inches minimum.

609.4 Position of Grab Bars. Grab bars shall be installed in a horizontal position, 33 inches minimum and 36 inches maximum above the finish floor measured to the top of the gripping surface, except that at water closets for children's use complying with 604.9, grab bars shall be installed in a horizontal position 18 inches minimum and 27 inches maximum above the finish floor measured to the top of the gripping surface.

609.5 Surface Hazards. Grab bars and any wall or other surfaces adjacent to grab bars shall be free of sharp or abrasive elements and shall have rounded edges.

609.6 Fittings. Grab bars shall not rotate within their fittings.

609.7 Installation. Grab bars shall be installed in any manner that provides a gripping surface at the specified locations and that does not obstruct the required clear floor space.

609.8 Structural Strength. Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 pounds is applied at any point on the grab bar, fastener, mounting device, or supporting structure.

702 FIRE ALARM SYSTEMS

702.1 General. Fire alarm systems shall have permanently installed audible and visible alarms complying with NFPA 72 (1999 or 2002 edition), except that the maximum allowable sound level of audible notification appliances complying with section 4-3.2.1 of NFPA 72 (1999 edition) shall have a sound level no more than 110 dB at the minimum hearing distance from the audible appliance. In addition, alarms in guest rooms required to provide communication features shall comply with sections 4-3 and 4-4 of NFPA 72 (1999 edition) or sections 7.4 and 7.5 of NFPA 72 (2002 edition).

703 SIGNS

703.1 General. Signs shall comply with 703. Where both visual and tactile characters are required, either one sign with both visual and tactile characters, or two separate signs, one with visual, and one with tactile characters, shall be provided.

703.2 Raised Characters. Raised characters shall comply with 703.2 and shall be duplicated in braille complying with 703.3. Raised characters shall be installed in accordance with 703.4.

Advisory 703.2 Raised Characters. Signs that are designed to be read by touch should not have sharp or abrasive edges.

703.2.1 Depth. Raised characters shall be 1/32 inch minimum above their background.

703.2.2 Case. Characters shall be uppercase.

703.2.3 Style. Characters shall be sans serif. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

703.2.4 Character Proportions. Characters shall be selected from fonts where the width of the uppercase letter "O" is 55 percent minimum and 110 percent maximum of the height of the uppercase letter "I".

703.2.5 Character Height. Character height measured vertically from the baseline of the character shall be 5/8 inch minimum and 2 inches maximum based on the height of the uppercase letter "I".

EXCEPTION: Where separate raised and visual characters with the same information are provided, raised character height shall be permitted to be 1/2 inch minimum.

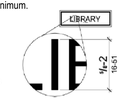


Figure 703.2.5 Height of Raised Characters

703.2.6 Stroke Thickness. Stroke thickness of the uppercase letter "I" shall be 15 percent maximum of the height of the character.

703.2.7 Character Spacing. Character spacing shall be measured between the two closest points of adjacent raised characters within a message, excluding word spaces. Where characters have rectangular cross sections, spacing between individual raised characters shall be 1/8 inch minimum and 4 times the raised character stroke width maximum. Where characters have other cross sections, spacing between individual raised characters shall be 1/16 inch minimum and 4 times the raised character stroke width maximum at the base of the cross sections, and 1/8 inch minimum and 4 times the raised character stroke width maximum at the top of the cross sections. Characters shall be separated from raised borders and decorative elements 3/8 inch minimum.

703.2.8 Line Spacing. Spacing between the baselines of separate lines of raised characters within a message shall be 135 percent minimum and 170 percent maximum of the raised character height.

703.3 Braille. Braille shall be contracted (Grade 2) and shall comply with 703.3 and 703.4.

703.3.1 Dimensions and Capitalization. Braille dots shall have a domed or rounded shape and shall comply with Table 703.3.1. The indication of an uppercase letter or letters shall only be used before the first word of sentences, proper nouns and names, individual letters of the alphabet, initials, and acronyms.

Table 703.3.1 Braille Dimensions

Measurement Range	Minimum in Inches Maximum in Inches
Dot base diameter	0.059 (1.5 mm) to 0.063 (1.6 mm)
Distance between two dots in the same cell [1]	0.090 (2.3 mm) to 0.100 (2.5 mm)
Distance between corresponding dots in adjacent cells [1]	0.241 (6.1 mm) to 0.300 (7.6 mm)
Dot height	0.025 (0.6 mm) to 0.037 (0.9 mm)
Distance between corresponding dots from one cell directly below [1]	0.395 (10 mm) to 0.400 (10.2 mm)

1. Measured center to center.

703.3.2 Position. Braille shall be positioned below the corresponding text. If text is multi-lined, braille shall be placed below the entire text. Braille shall be separated 3/8 inch minimum from any other tactile characters and 3/8 inch minimum from raised borders and decorative elements.

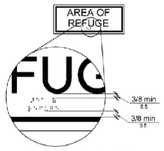


Figure 703.3.2 Position of Braille Floor or Ground

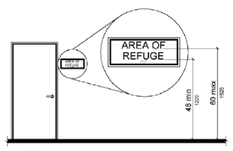


Figure 703.4.1 Height of Tactile Characters Above Finish

703.4 Installation Height and Location. Signs with tactile characters shall comply with 703.4.

703.4.1 Height Above Finish Floor or Ground. Tactile characters on signs shall be located 48 inches minimum above the finish floor or ground surface, measured from the baseline of the lowest tactile character and 60 inches maximum above the finish floor or ground surface, measured from the baseline of the highest tactile character.

703.4.2 Location. Where a tactile sign is provided at a door, the sign shall be located alongside the door at the latch side. Where a tactile sign is provided at double doors with one active leaf, the sign shall be located on the inactive leaf. Where a tactile sign is provided at double doors with two active leafs, the sign shall be located to the right of the right hand door. Where there is no wall space at the latch side of a single door or at the right side of double doors, signs shall be located on the nearest adjacent wall. Signs containing tactile characters shall be located so that a clear floor space of 18 inches minimum by 18 inches minimum, centered on the tactile characters, is provided beyond the arc of any door swing between the closed position and 45 degree open position.

EXCEPTION: Signs with tactile characters shall be permitted on the push side of doors with closers and without hold-open devices.

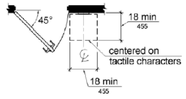


Figure 703.4.2 Location of Tactile Signs at Doors

703.6 Pictograms. Pictograms shall comply with 703.6.

703.6.1 Pictogram Field. Pictograms shall have a field height of 6 inches minimum. Characters and braille shall not be located in the pictogram field.

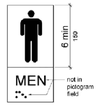


Figure 703.6.1 Pictogram Field

703.6.2 Finish and Contrast. Pictograms and their field shall have a non-glare finish. Pictograms shall contrast with their field with either a light pictogram on a dark field or a dark pictogram on a light field.

Advisory 703.6.2 Finish and Contrast. Signs are more legible for persons with low vision when characters contrast as much as possible with their background. Additional factors affecting the ease with which the text can be distinguished from its background include shadows cast by lighting sources, surface glare, and the uniformity of the text and background colors and textures.

703.6.3 Text Descriptors. Pictograms shall have text descriptors located directly below the pictogram field. Text descriptors shall comply with 703.2, 703.3 and 703.4.

703.7 Symbols of Accessibility. Symbols of accessibility shall comply with 703.7.

703.7.1 Finish and Contrast. Symbols of accessibility and their background shall have a non-glare finish. Symbols of accessibility shall contrast with their background with either a light symbol on a dark background or a dark symbol on a light background.

703.7.2 Symbols.
703.7.2.1 International Symbol of Accessibility. The International Symbol of Accessibility shall comply with Figure 703.7.2.1.

Figure 703.7.2.1 International Symbol of Accessibility

Figure 703.7.2.2 International Symbol of TTY

703.7.2.2 International Symbol of TTY. The International Symbol of TTY shall comply with Figure 703.7.2.2. Figure 703.7.2.2 International Symbol of TTY

703.7.2.3 Volume Control Telephones. Telephones with a volume control shall be identified by a pictogram of a telephone handset with radiating sound waves on a square field such as shown in Figure 703.7.2.3.

Figure 703.7.2.3 Volume Control Telephone

Figure 703.7.2.4 International Symbol of Access for Hearing Loss

703.7.2.4 Assistive Listening Systems. Assistive listening systems shall be identified by the International Symbol of Access for Hearing Loss complying with Figure 703.7.2.4.

704 TELEPHONES

704.2 Wheelchair Accessible Telephones. Wheelchair accessible telephones shall comply with 704.2.

704.2.1 Clear Floor or Ground Space. A clear floor or ground space complying with 305 shall be provided. The clear floor or ground space shall not be obstructed by bases, enclosures, or seats.

Advisory 704.2.1 Clear Floor or Ground Space. Because clear floor and ground space is required to be unobstructed, telephones, enclosures and related telephone book storage cannot encroach on the required clear floor or ground space and must comply with the provisions for protruding objects. (See Section 307).

704.2.1.1 Parallel Approach. Where a parallel approach is provided, the distance from the edge of the telephone enclosure to the face of the telephone unit shall be 10 inches maximum.

704.2.1.2 Forward Approach. Where a forward approach is provided, the distance from the front edge of a counter within the telephone enclosure to the face of the telephone unit shall be 20 inches maximum.

704.2.2 Operable Parts. Operable parts shall comply with 309. Telephones shall have push-button controls where such service is available.

704.2.3 Telephone Directories. Telephone directories, where provided, shall be located in accordance with 309.

704.2.4 Cord Length. The cord from the telephone to the handset shall be 29 inches long minimum.

704.3 Volume Control Telephones. Public telephones required to have volume controls shall be equipped with a receive volume control that provides a gain adjustable up to 20 dB minimum. For incremental volume control, provide at least one intermediate step of 12 dB of gain minimum. An automatic reset shall be provided.

803 DRESSING, FITTING, AND LOCKER ROOMS

803.1 General. Dressing, fitting, and locker rooms shall comply with 803.

803.2 Turning Space. Turning space complying with 304 shall be provided within the room.

803.3 Door Swing. Doors shall not swing into the room unless a clear floor or ground space complying with 305.3 is provided beyond the arc of the door swing.

803.4 Benches. A bench complying with 903 shall be provided within the room.

803.5 Coat Hooks and Shelves. Coat hooks provided within the room shall be located within one of the reach ranges specified in 308. Shelves shall be 40 inches minimum and 48 inches maximum above the finish floor or ground.

811 STORAGE

811.1 General. Storage shall comply with 811.

811.2 Clear Floor or Ground Space. A clear floor or ground space complying with 305 shall be provided.

811.3 Height. Storage elements shall comply with at least one of the reach ranges specified in 308.

811.4 Operable Parts. Operable parts shall comply with 309.

902 DINING SURFACES AND WORK SURFACES

902.1 General. Dining surfaces and work surfaces shall comply with 902.2 and 902.3.

EXCEPTION: Dining surfaces and work surfaces for children's use shall be permitted to comply with 902.4.

Advisory 902.1 General. Dining surfaces include, but are not limited to, bars, tables, lunch counters, and booths. Examples of work surfaces include writing surfaces, study carrels, student laboratory stations, baby changing and other tables or fixtures for personal grooming, coupon counters, and where covered by the ABA scoping provisions, employee work stations.

902.2 Clear Floor or Ground Space. A clear floor space complying with 305 positioned for a forward approach shall be provided. Knee and toe clearance complying with 306 shall be provided.

902.3 Height. The tops of dining surfaces and work surfaces shall be 28 inches minimum and 34 inches maximum above the finish floor or ground.

902.4 Dining Surfaces and Work Surfaces for Children's Use. Accessible dining surfaces and work surfaces for children's use shall comply with 902.4.

EXCEPTION: Dining surfaces and work surfaces that are used primarily by children 5 years and younger shall not be required to comply with 902.4 where a clear floor or ground space complying with 305 positioned for a parallel approach is provided.

902.4.1 Clear Floor or Ground Space. A clear floor space complying with 305 positioned for forward approach shall be provided. Knee and toe clearance complying with 306 shall be provided, except that knee clearance 24 inches minimum above the finish floor or ground shall be permitted.

902.4.2 Height. The tops of tables and counters shall be 26 inches minimum and 30 inches maximum above the finish floor or ground.

903 BENCHES

903.1 General. Benches shall comply with 903.

903.2 Clear Floor or Ground Space. Clear floor or ground space complying with 305 shall be provided and shall be positioned at the end of the bench seat and parallel to the short axis of the bench.

903.3 Size. Benches shall have seats that are 42 inches long minimum and 20 inches deep minimum and 24 inches deep maximum.

903.4 Back Support. The bench shall provide for back support or shall be affixed to a wall. Back support shall be 42 inches long minimum and shall extend from a point 2 inches maximum above the seat surface to a point 18 inches minimum above the seat surface. Back support shall be 2 1/2 inches maximum from the rear edge of the seat measured horizontally.

903.5 Height. The top of the bench seat surface shall be 17 inches minimum and 19 inches maximum above the finish floor or ground.

903.6 Structural Strength. Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 pounds is applied at any point on the seat, fastener, mounting device, or supporting structure.

903.7 Wet Locations. Where installed in wet locations, the surface of the seat shall be slip resistant and shall not accumulate water.

904 CHECK-OUT AISLES AND SALES AND SERVICE COUNTERS

904.1 General. Check-out aisles and sales and service counters shall comply with the applicable requirements of 904.

904.2 Approach. All portions of counters required to comply with 904 shall be located adjacent to a walking surface complying with 403.

904.3 Check-Out Aisles. Check-out aisles shall comply with 904.3.

904.3.1 Aisle. Aisles shall comply with 403.

904.3.2 Counter. The counter surface height shall be 38 inches maximum above the finish floor or ground. The top of the counter edge protection shall be 2 inches maximum above the top of the counter surface on the aisle side of the check-out counter.

904.3.3 Check Writing Surfaces. Where provided, check writing surfaces shall comply with 902.3.

904.4 Sales and Service Counters. Sales counters and service counters shall comply with 904.4.1 or 904.4.2. The accessible portion of the counter top shall extend the same depth as the sales or service counter top.

EXCEPTION: In alterations, when the provision of a counter complying with 904.4 would result in a reduction of the number of existing counters at work stations or a reduction of the number of existing mail boxes, the counter shall be permitted to have a portion which is 24 inches long minimum complying with 904.4.1 provided that the required clear floor or ground space is centered on the accessible length of the counter.

904.4.1 Parallel Approach. A portion of the counter surface that is 36 inches long minimum and 36 inches high maximum above the finish floor shall be provided. A clear floor or ground space complying with 305 shall be positioned for a parallel approach adjacent to the 36 inch minimum length of counter.

EXCEPTION: Where the provided counter surface is less than 36 inches long, the entire counter surface shall be 36 inches high maximum above the finish floor.

904.4.2 Forward Approach. A portion of the counter surface that is 30 inches long minimum and 36 inches high maximum shall be provided. Knee and toe space complying with 306 shall be provided under the counter. A clear floor or ground space complying with 305 shall be positioned for a forward approach to the counter.

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS, inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

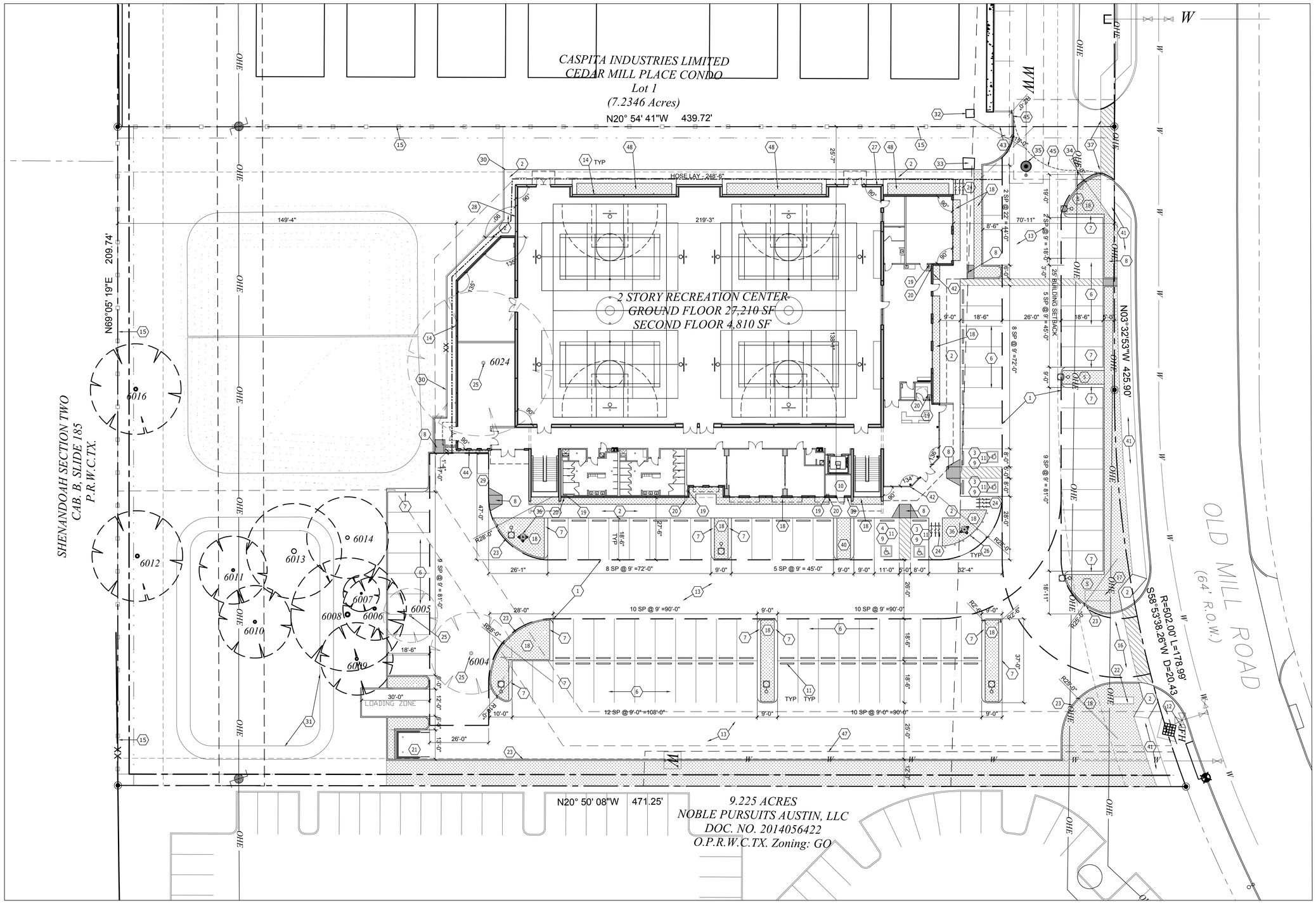
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

Project No. 22037
Drawn JD
Checked BS

ACCESSIBILITY STANDARDS

Sheet No. A0.2



FIRE LANE PAINT STRIPE PER CITY OF CEDAR PARK

SUBSECTION 503.3.1 STRIPING SHALL BE ADDED TO READ AS FOLLOWS: FIRE APPARATUS ACCESS ROADS SHALL BE MARKED BY PAINTED LINES OF RED TRAFFIC PAINT SIX INCHES IN WIDTH TO SHOW THE BOUNDARIES OF THE LANE. THE WORDS "FIRE LANE TOW-AWAY ZONE" SHALL APPEAR IN FOUR INCH WHITE LETTERS AT THIRTY-FIVE (35) FEET INTERVALS ON THE RED BORDER MARKINGS ALONG BOTH SIDES OF THE FIRE LANES. CURB FACING SHALL BE USED WHEN AVAILABLE; FIRE LANE STRIPING SHALL BE CONTINUOUS THROUGHOUT THE DESIGNATED FIRE LANE AND SHALL LAY DOWN ALONG BACKSIDE OF HEAD IN PARKING SPACES.

SUBSECTION 503.3.2 SIGNS SHALL BE ADDED TO READ AS FOLLOWS: SIGNS SHALL READ "FIRE LANE TOWAWAY ZONE" AND SHALL BE TWELVE (12) INCHES WIDE AND EIGHTEEN (18) INCHES HIGH. SIGNS SHALL BE PAINTED ON A WHITE BACKGROUND WITH LETTERS AND BORDERS IN RED, USING NOT LESS THAN TWO (2) INCH LETTERING. SIGNS SHALL BE PERMANENTLY AFFIXED TO A STATIONARY POST AND THE BOTTOM OF THE SIGN SHALL BE SIX FEET, SIX INCHES ABOVE FINISHED GRADE. SIGNS SHALL BE SPACED NOT MORE THAN FIFTY (50) FEET APART. SIGNS MAY BE INSTALLED ON PERMANENT BUILDINGS OR WALLS IF APPROVED BY THE FIRE CODE OFFICIAL.

LIGHT SOURCES SHALL BE COMPLETELY CONCEALED WITHIN OPAQUE HOUSINGS AND SHALL NOT BE VISIBLE FROM ADJACENT STREETS OR PROPERTIES. ALL EXTERIOR LIGHTING FIXTURES SHALL BE FULL CUT-OFF TYPE FIXTURES. LIGHTING FIXTURES SHALL BE NO MORE THAN TWENTY-FIVE (25) FEET IN HEIGHT AS MEASURED FROM ADJACENT, FINISHED GRADE. (SEC. 12.12.021 (A)(6)(8))

TREE SURVEY

BENCHMARK LIST:
BM-01 = 'SQUARE' CUT ON TOP OF CURB ELEV. = 963.01'
BM-02 = 'SQUARE' CUT ON N.E. CORNER OF INLET ELEV. = 957.18'

TREE LIST:

6004	ELM	10", 9", & 8"
6005	ELM	13"
6006	ELM	15"
6007	POST OAK	9"
6008	POST OAK	21" & 12"
6009	POST OAK	17"
6010	POST OAK	16"
6011	POST OAK	12" & 9"
6012	POST OAK	21"
6013	POST OAK	17" & 13"
6014	POST OAK	18"
6016	POST OAK	21"
6024	POST OAK	23" & 21"

PARKING REQUIREMENTS:
GYM (16,940 SF) - 4 COURTS @ 3 PER COURT = 12 SPACES
2 QTY - 21' BLEACHERS @ 1 PER 4 DESIGN CAPACITY) = 7 SPACES
1 ST FLOOR AREA - 10,270 SF/200 = 52 SPACES
2 ND FLOOR OFFICES - 4,810 SF/300 = 17 SPACES
TOTAL PARKING REQUIRED = 88 QTY
TOTAL PARKING PROVIDED = 95 QTY
TOTAL COMPACT PROVIDED = 0 QTY
TOTAL PARALLEL PARKING PROVIDED = 2 QTY
TOTAL LOADING ZONE (30' X 12') = 1 QTY
TOTAL ADA PROVIDED = 4 QTY

NORTH

1 SITE PLAN
SCALE: 1" = 30'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

NOTES TO SHEET

1. FIRE LANE PAINT STRIPE PER CITY OF CEDAR PARK REGULATIONS.
2. CONCRETE WALK. RE: CIVIL DRAWINGS.
3. HANDICAP PARKING SPACE (01/AS1.1)
4. HANDICAP PARKING SPACE (01/AS1.1) VAN ACCESSIBLE
5. PARKING LIGHT STANDARD (17/AS1.1)
6. 4" WIDE PAINTED PARKING STRIPE - TYPICAL.
7. LANDSCAPE CONCRETE CURB, (10A/AS1.1)
8. RAMP, (18/AS1.1 & 19/AS1.1)
9. HANDICAP SIGN, (16/AS1.1)
10. SPRINKLER RISER ROOM, RE: A1.0 FLOOR PLAN.
11. CONCRETE WHEEL STOP, (15/AS1.1)
12. EXISTING FIRE HYDRANT TO REMAIN.
13. CONCRETE PAVING, RE: CIVIL
14. 6" x 6" DIA DOWNSPOUTS CONNECTED TO UNDERGROUND STORM
15. NEW 8' MASONRY FENCING - TYPE 1 (01/AS1.2)
16. NEW DRIVEWAY (RE: CIVIL)
17. PROPOSED NEW FIRE VAULT & WATER METER (2" DOMESTIC AND 3/4" IRRIGATION) (RE: CIVIL)
18. LANDSCAPED AREA. RE: LANDSCAPE DRAWINGS
19. 6" INTERNAL ROOF DRAINS (CONNECTING TO STORM)
20. 6" OVER FLOW ROOF DRAIN
21. TRASH ENCLOSURE (02A/AS1.1)
22. MONUMENT SIGN (PER CEDAR PARK SIGN ORDINANCE) RE: ELECTRICAL
23. NEW 6" CONCRETE CURB (10/AS1.1)
24. BIKE RACK. RE: 20/AS1.1
25. REFER TO LANDSCAPE DRAWINGS FOR TREE MITIGATION
26. LIGHTED BOLLARD. RE: MEP DRAWINGS
27. NEW GAS METER, RE: MEP
28. NEW ELECTRICAL SERVICE . RE: MEP
29. NEW GREASE TRAP (RE: MEP)
30. NEW 6' FENCING - (RE: CIVIL SHEETS FOR DETAIL)
31. FUTURE OUTDOOR PLAY AREAS AND TRAIL (CRUSHED GRANITE)
32. EXISTING TRANSFORMER PAD-RESIDENTUAL
33. EXISTING DRAIN GRATE (RE: CIVIL)
34. EXISTING GAS SIGN/SERVICE-CONTRACTOR TO MOVE INTO ISLAND
35. EXISTING MH & CLEAN OUT (RE: CIVIL)
36. NEW FIRE HYDRANT (RE: CIVIL)
37. EXISTING DRIVEWAY
38. FDC CONNECTION
39. KNOX BOX
40. LANDSCAPE AREA-NO BUSHES OR TREES
41. EXISTING CONCRETE WALK (RE: CIVIL)
42. 2" X 3" CANOPY DOWNSPOUT - TIED TO STORM AT FRONT ENTRY
43. LINE UP NEW 8' MASONRY FENCE AT END OF ADJACENT PROPERTY FENCE CORNER
44. 6" BOLLARD (RE: 8B/AS1.1)
45. EXISTING CURB AND GUTTER TO BE REMOVED-ADJUST CURB TO DIE INTO ADJACENT PARKING STALL
46. NEW INTEGRAL PLANTERS WITH SITTING; RE; LANDSCAPE DRAWINGS)
47. EXISTING *WATER/WASTEWATER AND PUBLIC UTILITY EASEMENT* TO BE VACATED OR RELEASED
48. NEW INTEGRAL PLANTERS WITH SEATING, RE LANDSCAPE DRAWINGS & 02/AS1.2

COORDINATE NEW 8' MASONRY WALL WITH ADJACENT NEIGHBOR PRIOR TO CONSTRUCTING AND DEMO EXISTING FENCING.

OSBORN & VANE ARCHITECTS, Inc.

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

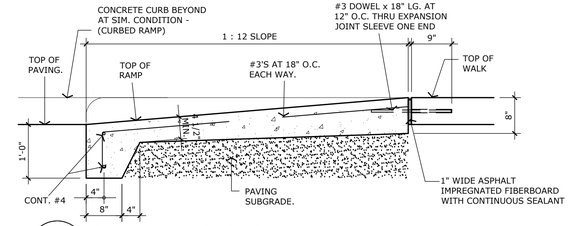
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

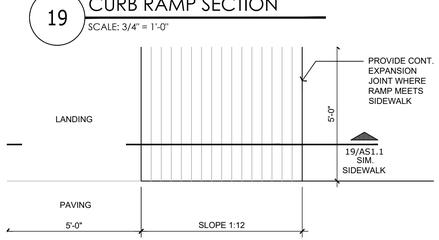
Project No.	22037
Drawn	JD
Checked	BS

SITE PLAN

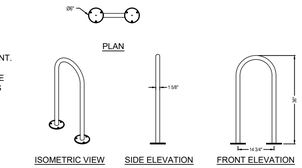
Sheet No. AS1.0



19 CURB RAMP SECTION
SCALE: 3/4" = 1'-0"

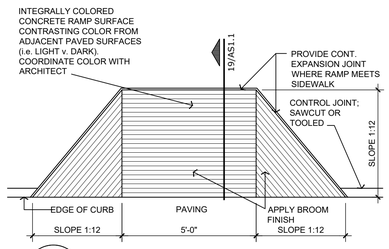


18 SIDEWALK
SCALE: 3/8" = 1'-0"

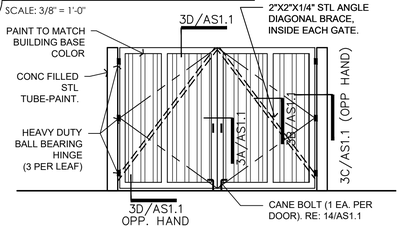


SPECIFICATIONS
- GALVANIZED OR STAINLESS STEEL SINGLE BIKE RACK FOR AREAS WITH LIMITED SPACE, OR MULTI-USE **MATERIAL:** 1 5/8" O.D. GALVANIZED STEEL

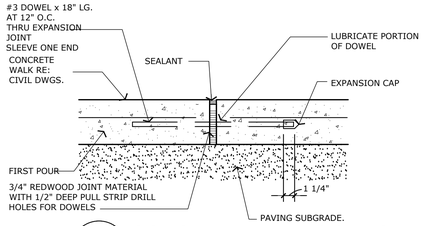
20 BIKE RACK
SCALE: 1/4" = 1'-0"



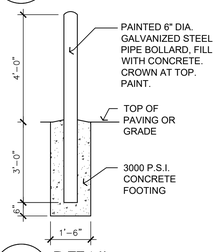
13A ADA RAMP
SCALE: 3/8" = 1'-0"



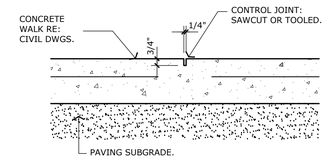
13 DETAIL
SCALE: 1/4" = 1'-0"



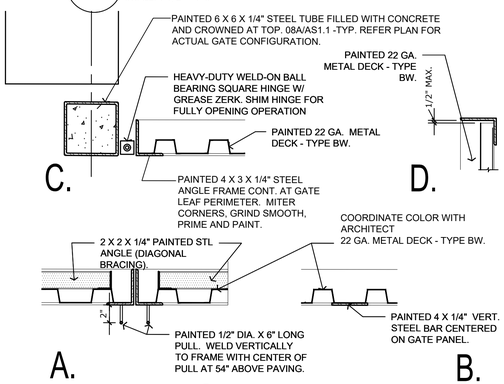
09 CONC. WALK EXPANSION JOINT
SCALE: 1 1/2" = 1'-0"



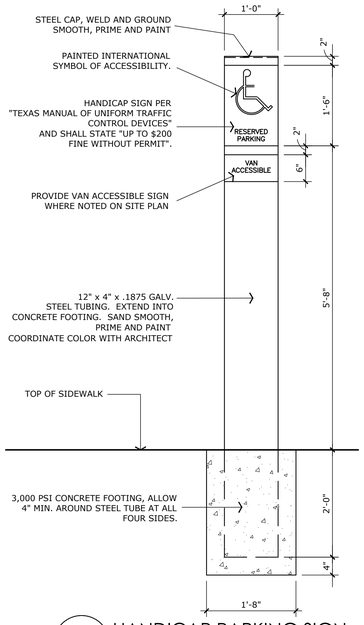
08B DETAIL
SCALE: 1/2" = 1'-0"



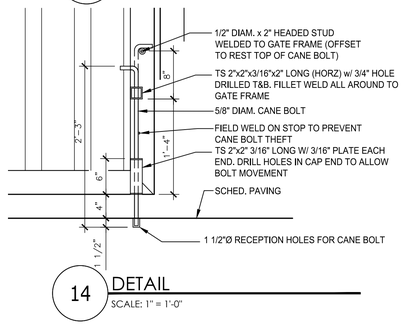
4 CONC. WALK CONTROL JOINT
SCALE: 1 1/2" = 1'-0"



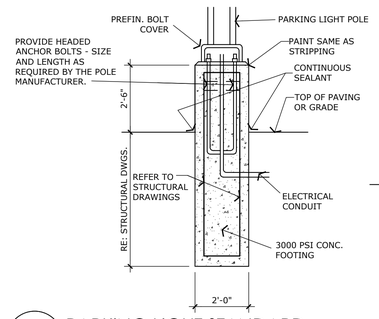
03 DETAIL
SCALE: 1-1/2" = 1'-0"



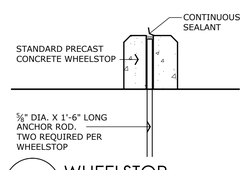
16 HANDICAP PARKING SIGN
SCALE: 3/4" = 1'-0"



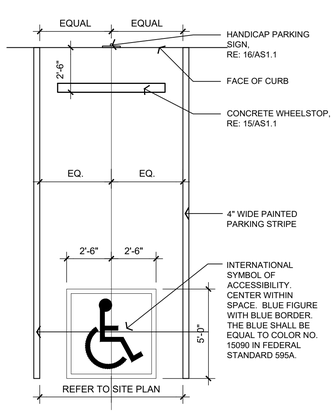
14 DETAIL
SCALE: 1" = 1'-0"



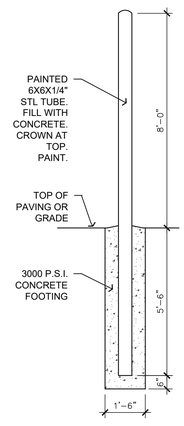
17 PARKING LIGHT STANDARD
SCALE: 3/8" = 1'-0"



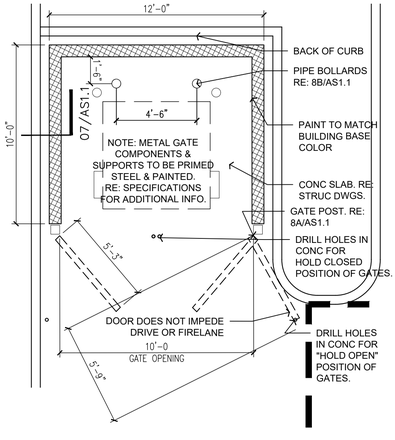
15 WHEELSTOP
SCALE: 1 1/2" = 1'-0"



11 HANDICAP PARKING SPACE
SCALE: 1/4" = 1'-0"

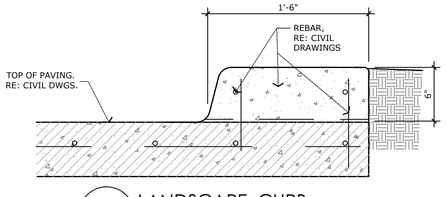


08A DETAIL
SCALE: 1/2" = 1'-0"

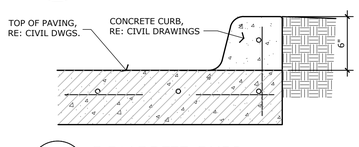


02A DETAIL
SCALE: 1/4" = 1'-0"

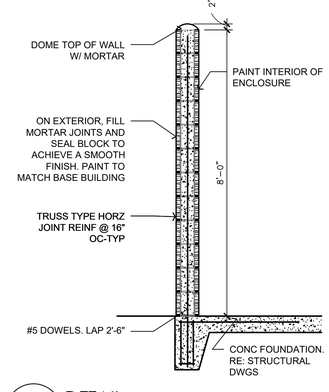
02 NOT USED
SCALE: 1/4" = 1'-0"



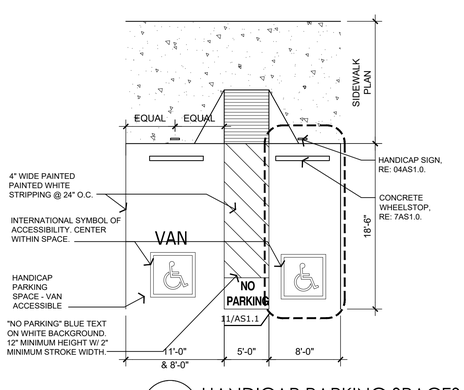
10A LANDSCAPE CURB
SCALE: 1 1/2" = 1'-0"



10 CONCRETE CURB
SCALE: 1 1/2" = 1'-0"



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



01 HANDICAP PARKING SPACES
SCALE: 1/8" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

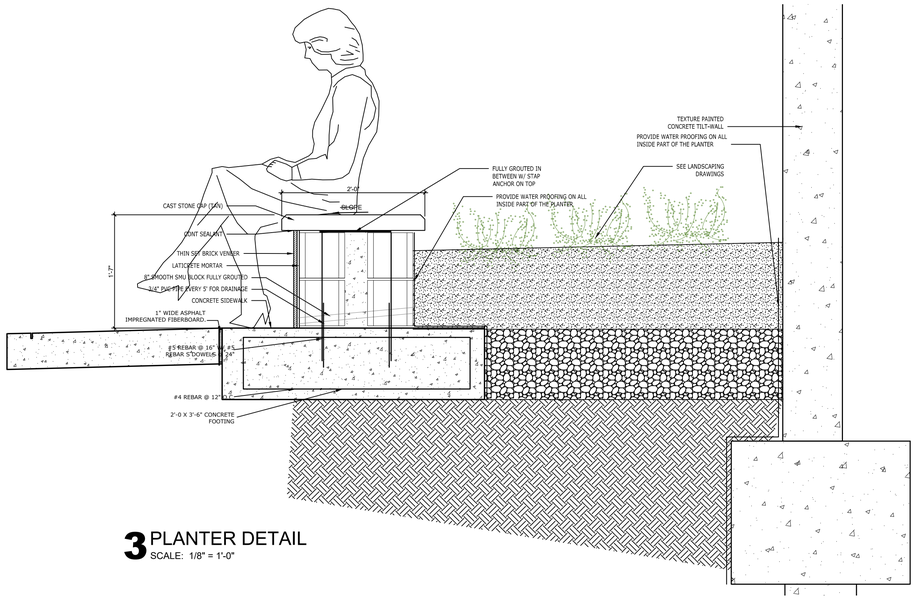
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

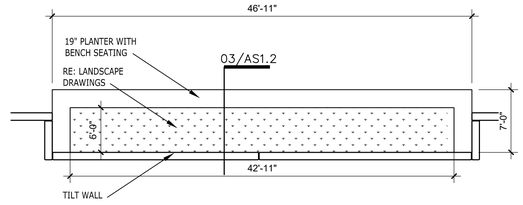
Project No.	22037
Drawn	JD
Checked	BS

SITE DETAILS

Sheet No. AS1.1

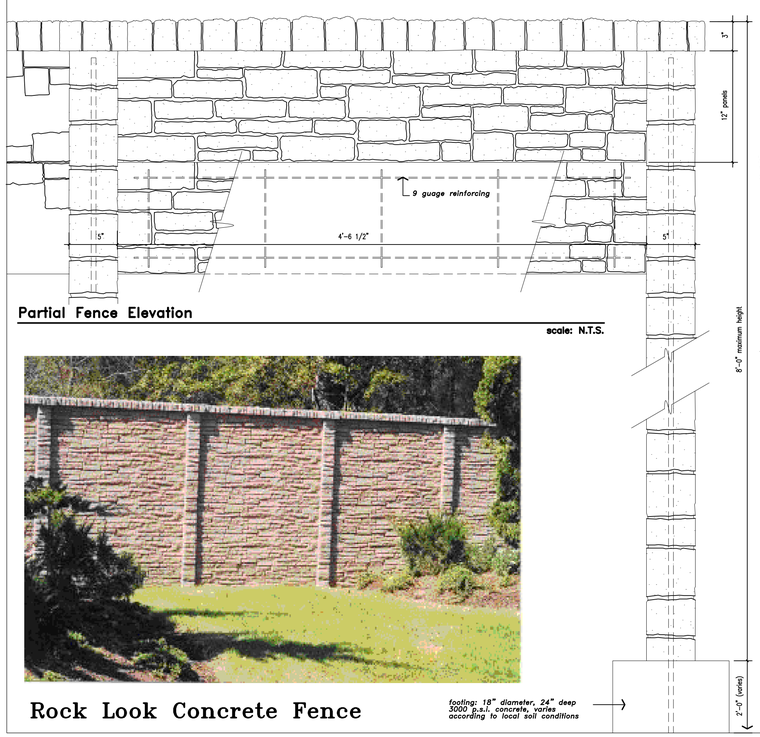


3 PLANTER DETAIL
SCALE: 1/8" = 1'-0"



2 TYPICAL PLANTER
SCALE: 1/8" = 1'-0"

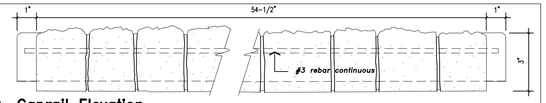
FENCECRETE AMERICA, LTD.
manufacturers of precast concrete fencing and masonry wall systems
15089 tradesmen drive san antonio, texas 78249 210-492-7911 800-229-7811 www.fencecrete.com



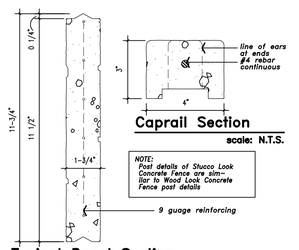
Partial Fence Elevation
scale: N.T.S.

Rock Look Concrete Fence

footing: 18" diameter, 24" deep 3000 p.s.i. concrete, varies according to local soil conditions



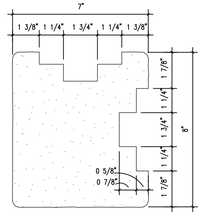
Caprail Elevation
scale: N.T.S.



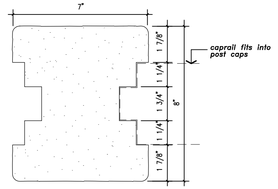
Caprail Section
scale: N.T.S.

NOTE:
Post details of Stucco Look Concrete Fence are similar to Wood Look Concrete Fence post details

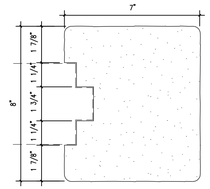
Typical Panel Section
scale: N.T.S.



Corner Post Cap
scale: N.T.S.



Running Post Cap
scale: N.T.S.



Stop Post Cap
scale: N.T.S.

notes:
1. The column height can be from 0 to a maximum of 10'-0" - with 8'-0" above grade.
2. All concrete shall be 5000 p.s.i.
3. All reinforcement shall be A.S.T.M. 615 grade 60. Special reinforcement is available upon special order.
4. Footing - 2 feet deep footing standard per column, 12" - 18" diameter. Depth and diameter can vary per local soil conditions.
5. Texture: All exposed sides have rock-like texture.
6. Gates: Shall have additional steel supports adjacent to concrete columns.
7. All steel reinforcement is prewelded with steel spacers so as to allow for maximum concrete coverage.
8. A special silicone sealant is used to lock the caprail and post caps in place. This sealant requires special tools for removal.

1 FENCE TYPE 1
SCALE: N.T.S.

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS, Inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

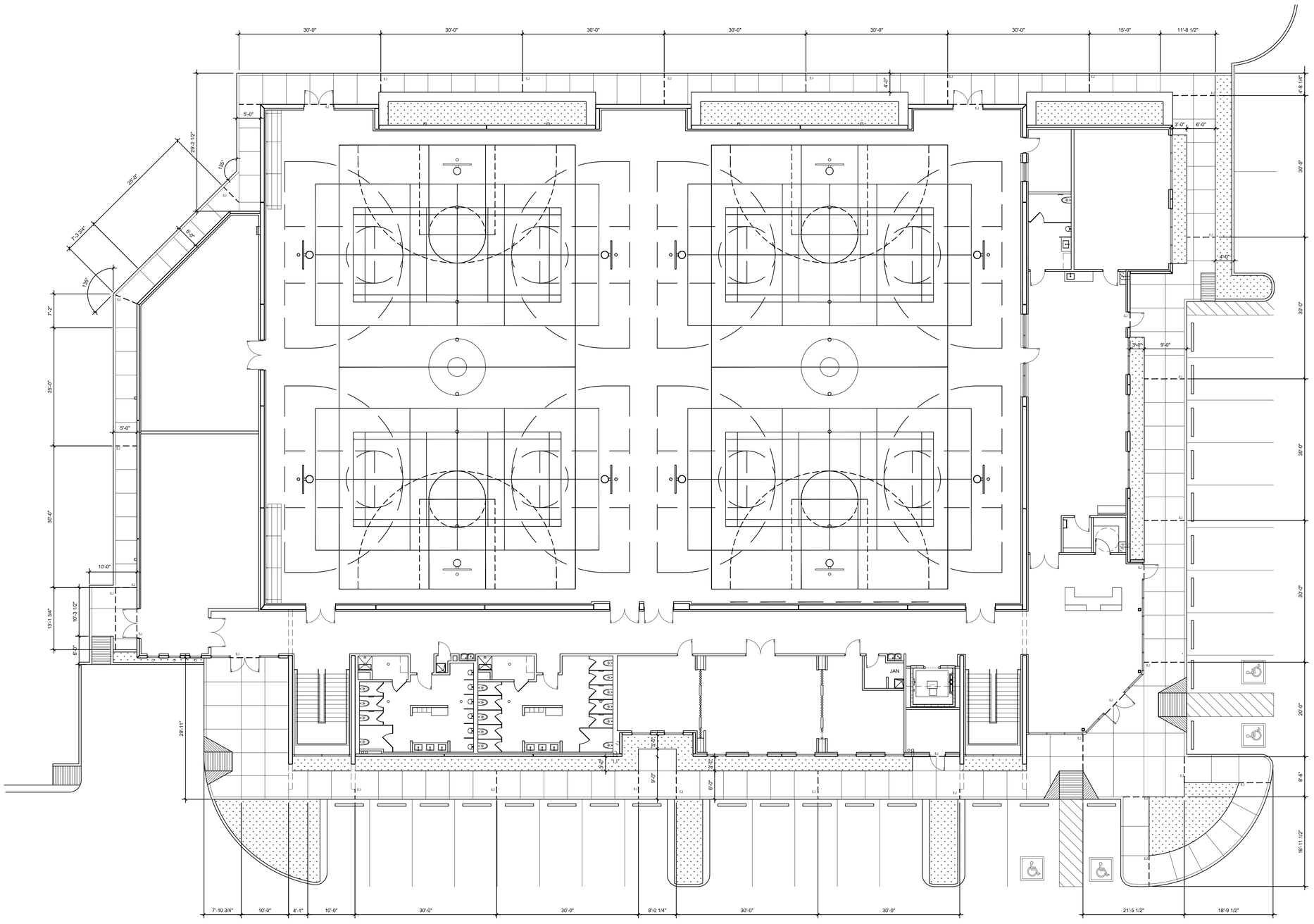
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

Project No.	22037
Drawn	JD
Checked	BS

FENCE TYPE & SITE DETAILS

Sheet No. AS1.2



1 SIDEWALK PLAN
SCALE: 3/32"=1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

Project No.	22037
Drawn	JD
Checked	BS

SIDEWALK PLAN

Sheet No. AS1.3

Date issued/revised

15 DECEMBER 2022 FOR PRICING

NOTES TO SHEET

1. G.C. TO COORDINATE ELECTRICAL PLUG AND DATA HEIGHTS W/OWNER)
2. DROPPED CURTAIN DIVIDER ABOVE. PROVIDE POWER. RE: ELECTRICAL DWGS.
3. ALUMINUM AND GLASS STOREFRONT DOOR.
4. ALUMINUM AND LOW "E" GLASS STOREFRONT SYSTEM.
5. STEEL COLUMN, TYPICAL; RE: STRUCTURAL DRAWINGS.
6. LINE OF CANOPY/LOUVER ABOVE.
7. 3-5/8" 20 GA. METAL STUDS @ 20" O.C. W/BATT INSULATION (ONLY AT EXTERIOR WALLS)
8. 6"X6" DOWNSPOUT TO BE TIED TO STORM-HOLD CLOSE TO BUILDING (RE: CIVIL)
9. SCHINDLER ELEVATOR 3500 SERIES.
10. MOP SINK W/FAUCET(RE: PLUMBING DRAWINGS)
11. ADA DRINKING FOUNTAIN (RE: PLUMBING DRAWINGS)
12. RECEPTION DESK. RE: CABINETRY DWGS
13. KITCHEN EQUIPMENT. RE: KITCHEN DRAWINGS.
14. BI-PARTITION ACCORDION DOORS, PROVIDE POWER. RE:6/A6.2
15. UNDERSIDE OF SOFFIT ABOVE
16. ROOF HATCH & LADDER (RE: 05/A4.5)
17. ELECTRICAL PANEL
18. PROVIDE POWER FOR EQUIPMENT CONTROLS. RE: ELECTRICAL DWGS.
19. PROVIDE 5/8" WATER RESISTANT BD OVER 3/4" PLYWOOD AT ALL KITCHEN WALLS W/WHITE FRP TO CEILING
20. 6" PRIMARY OVERFLOW DRAIN
21. GYMNASIUM WALLS TO HAVE 5/8" IMPACT RESISTANT GYPSUM BOARD AT BOTTOM 10'-0" A.F.F. ON INSIDE SURFACE ON ALL PERIMETER WALLS AT GYMNASIUM
22. FLOOR OUTLET, COORDINATE WITH OWNER. RE: ELECTRICAL DWGS.
23. PROVIDE POWER FOR CABINETRY
24. GYM FLOOR TO BE RECESSED 2-1/2", RE STRUCTURAL
25. FLOOR DRAIN, TYP
26. CANOPY DOWNSPOUT TIED TO STORM AT FRONT ENTRY (2"X3")
27. KEY SWITCH LOCATION FOR DIVIDER SCREEN AND GOALS
28. SCOREBOARD-PROVIDE PLYWOOD BACKING & ELECTRICAL
29. 2X2 STEEL TUBES FOR ALUMINUM EXTERIOR FRAME SUPPORT (RE: ELEVATIONS)

ALL DECKING & STRUCTURAL STEEL JOIST SHALL BE 1 HOUR RATED- UL 263 DESIGN G705
ALL 1 HR RATED WALL SHALL UL 263 DESIGN U419
SEE SHEET A7.5 FOR DETAILS

ALL LUMBER & PLYWOOD USED IN THE BUILDING SHALL BE FIRE RETARDANT & ALL ACOUSTICAL INSULATION USED IN THE BUILDING SHALL HAVE A FLAME SPREAD NO GREATER THAN 25.

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

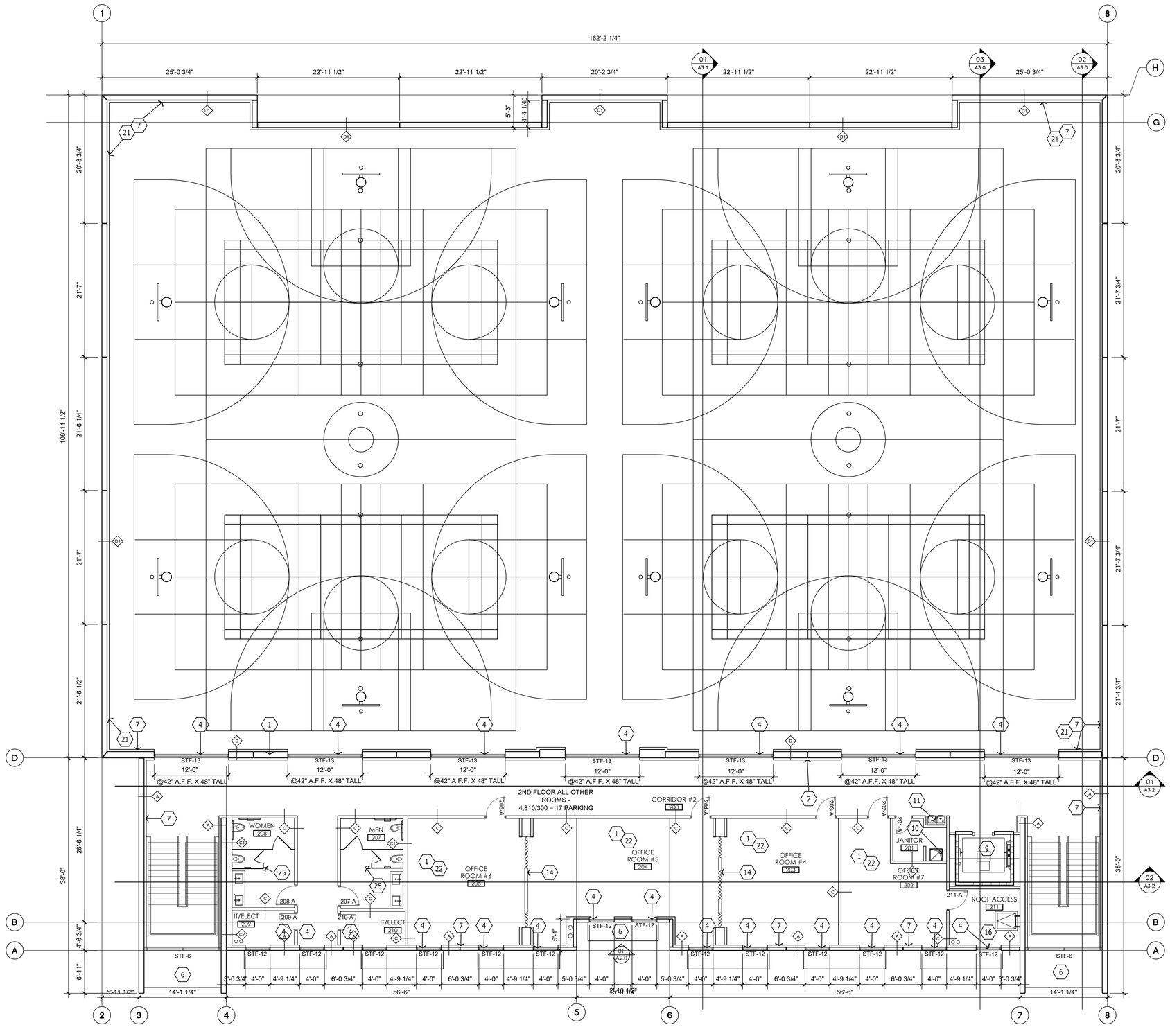
Project No.	22037
Drawn	JD
Checked	BS

FIRST FLOOR PLAN

Sheet No. A1.0

1 1ST FLOOR
SCALE: 3/32" = 1'-0"

NORTH



1 2ND FLOOR PLAN
SCALE: 1/8" = 1'-0"

NORTH

Date issued/revised

15 DECEMBER 2022 FOR PRICING

NOTES TO SHEET

1. G.C. TO COORDINATE ELECTRICAL PLUG AND DATA HEIGHTS W/OWNER)
2. DROPPED CURTAIN DIVIDER ABOVE. PROVIDE POWER. RE: ELECTRICAL DWGS.
3. ALUMINUM AND GLASS STOREFRONT DOOR.
4. ALUMINUM AND LOW "E" GLASS STOREFRONT SYSTEM.
5. STEEL COLUMN, TYPICAL; RE: STRUCTURAL DRAWINGS.
6. LINE OF CANOPY/LOUVER ABOVE.
7. 3-5/8" 20 GA. METAL STUDS @ 20" O.C. W/BATT INSULATION (ONLY AT EXTERIOR WALLS)
8. 6"X6" DOWNSPOUT TO BE TIED TO STORM-HOLD CLOSE TO BUILDING (RE: CIVIL)
9. SCHINDLER ELEVATOR 3500 SERIES.
10. MOP SINK W/FAUCET(RE: PLUMBING DRAWINGS)
11. ADA DRINKING FOUNTAIN (RE: PLUMBING DRAWINGS)
12. RECEPTION DESK. RE: XX/AX.X
13. KITCHEN EQUIPMENT. RE: KITCHEN DRAWINGS.
14. BI-PARTITION ACCORDION DOORS, PROVIDE POWER. RE:6/A6.2
15. UNDERSIDE OF SOFFIT ABOVE
16. ROOF HATCH & LADDER (RE: 05/A4.5)
17. ELECTRICAL PANEL
18. PROVIDE POWER FOR EQUIPMENT CONTROLS. RE: ELECTRICAL DWGS.
19. PROVIDE 5/8" WATER RESISTANT BD OVER 3/4" PLYWOOD AT ALL KITCHEN WALLS W/WHITE FRP TO CEILING.
20. 6" PRIMARY OVERFLOW DRAIN
21. GYMNASIUM WALLS TO HAVE 5/8" IMPACT RESISTANT GYPSUM BOARD AT BOTTOM 10'-0" A.F.F. ON INSIDE SURFACE ON ALL PERIMETER WALLS AT GYMNASIUM
22. FLOOR OUTLET, COORDINATE WITH OWNER. RE: ELECTRICAL DWGS.
23. PROVIDE POWER FOR CABINETRY

ALL DECKING & STRUCTURAL STEEL JOIST SHALL BE 1 HOUR RATED- UL 263 DESIGN G705
ALL 1 HR RATED WALL SHALL UL 263 DESIGN U419
SEE SHEET A7.5 FOR DETAILS

ALL LUMBER & PLYWOOD USED IN THE BUILDING SHALL BE FIRE RETARDANT & ALL ACOUSTICAL INSULATION USED IN THE BUILDING SHALL HAVE A FLAME SPREAD NO GREATER THAN 25.

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION
OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

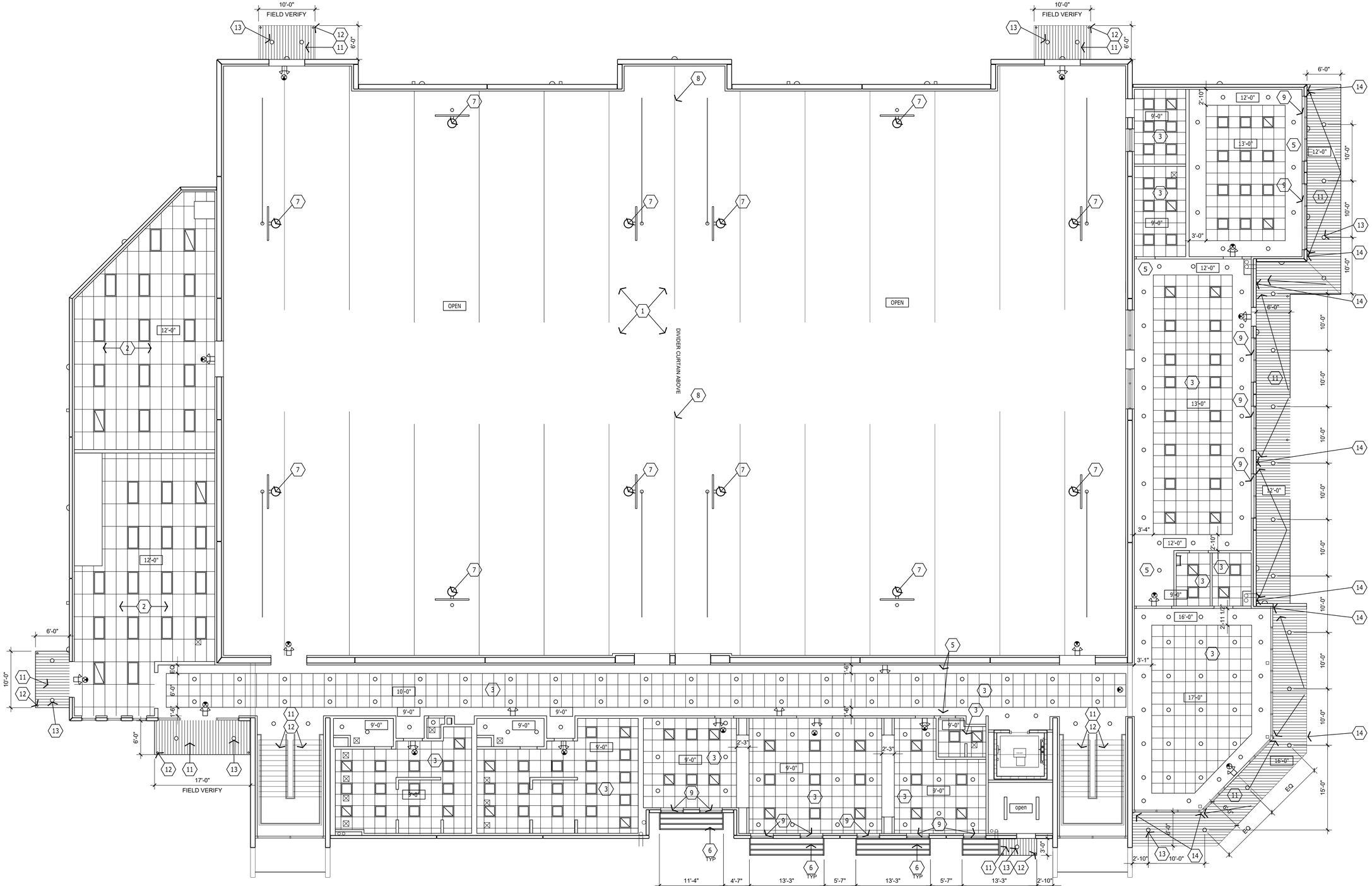
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

Project No.	22037
Drawn	JD
Checked	BS

SECOND FLOOR PLAN

Sheet No. A1.1



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

NORTH

Date issued/revised

15 DECEMBER 2022 FOR PRICING

SHEET NOTES

1. EXPOSED TO STRUCTURE ABOVE. ALL EXPOSED FRAMING AND DECK TO BE PAINTED (DRYFAL)
2. 2X4 ACOUSTICAL CEILING TILE (VINYL AT KITCHEN ONLY)
3. 2X2 ACOUSTICAL CEILING TILE
4. NOT USED
5. GYP. BD. CEILING (PAINT)
6. NEW CANOPY / LOUVER
7. BASKETBALL GOALS BELOW. PROVIDE POWER. RE: ELECTRICAL DRAWINGS
8. CURTAIN DIVIDER ABOVE
9. RECESSED ELECTRICAL ROLLER SHADES-PROVIDE POWER
10. FIXTURE TO BE MOUNTED @ BOTTOM CHORD OF STRUCTURE (VERIFY QTY WITH ELECTRICAL DWGS)
11. PREFINISHED METAL CANOPY.
12. PREFINISHED METAL SOFFIT. OUTSPOUT IN SOFFIT.
13. CANOPY DOWNLIGHTS, RE: ELECT. DWGS.
14. CANOPY. DOWNSPOUT TIED TO STORM AT FRONT ENTRY (2"X3")

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

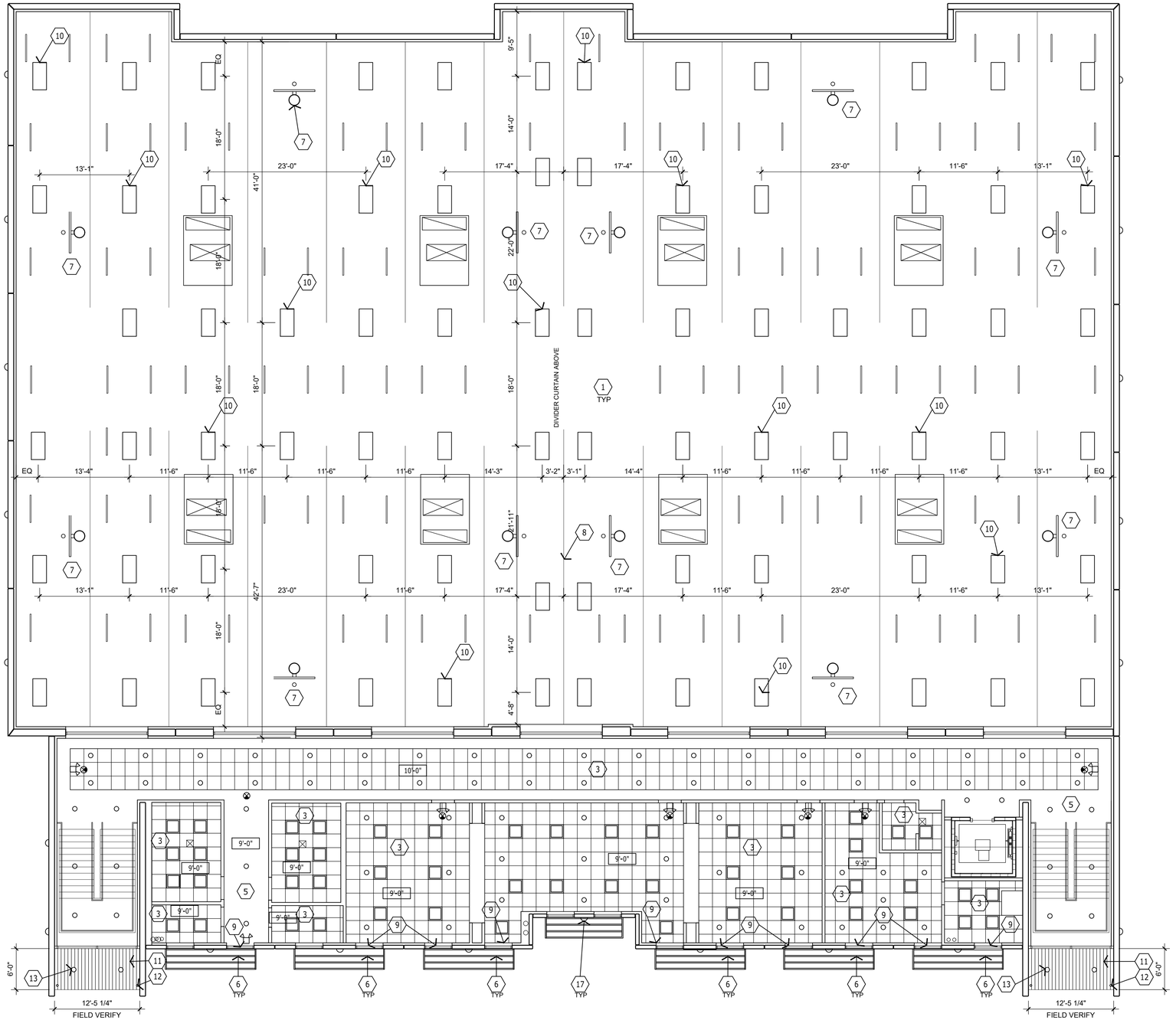
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

Project No.	22037
Drawn	JD
Checked	BS

FIRST FLOOR REFLECTED CEILING PLAN

Sheet No. A1.2



1 2ND FLOOR CEILING PLAN
SCALE: 1/8" = 1'-0"

NORTH

Date issued/revised

15 DECEMBER 2022 FOR PRICING

SHEET NOTES

1. EXPOSED TO STRUCTURE ABOVE. ALL EXPOSED FRAMING AND DECK TO BE PAINTED (DRYFAL)
2. 2X4 ACOUSTICAL CEILING TILE (VINYL AT KITCHEN ONLY)
3. 2X2 ACOUSTICAL CEILING TILE
4. NOT USED
5. GYP. BD. CEILING (PAINT)
6. NEW CANOPY / LOUVER
7. BASKETBALL GOALS BELOW. PROVIDE POWER. RE: ELECTRICAL DRAWINGS
8. CURTAIN DIVIDER ABOVE
9. RECESSED ELECTRICAL ROLLER SHADES-PROVIDE POWER
10. FIXTURE TO BE MOUNTED @ BOTTOM CHORD OF STRUCTURE (VERIFY QTY WITH ELECTRICAL DWG)
11. PREFINISHED METAL CANOPY.
12. PREFINISHED METAL SOFFIT. OUTSPOUT IN SOFFIT.
13. CANOPY DOWNLIGHTS, RE: ELECT. DWGS.

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

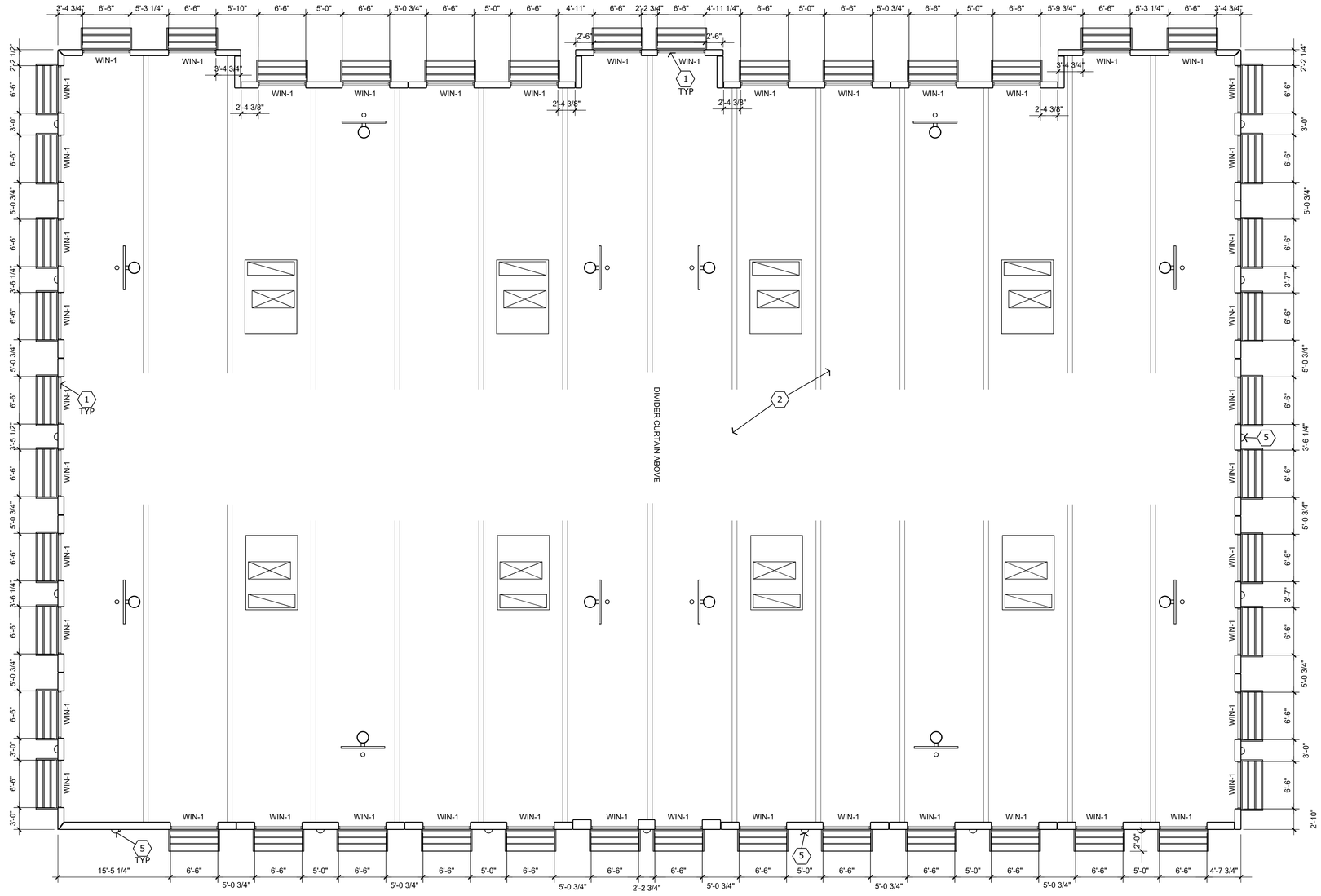
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

Project No.	22037
Drawn	JD
Checked	BS

SECOND FLOOR REFLECTED CEILING PLAN

Sheet No. A1.3



1 CLEARSTORY WINDOWS @ GYM

NORTH

Date issued/revised

15 DECEMBER 2022 FOR PRICING

NOTES TO SHEET

1. 1" INSULATED GLASS ANODIZED ALUMINUM FRAME (TINTED), TYPICAL
2. EXPOSED STRUCTURE, PAINT DRYFAL (SEE STRUCTURAL DRAWINGS)
3. LOUVERS (ANODIZED ALUMINUM) (24" TYP DEPTH)
4. NOT USED
5. ELECTRICAL DECORATIVE WALL SCONCE FIXTURE. RE: ELECTRICAL DRAWINGS (MOUNTED 15' MAX WITH IN 50' OF RESIDENTIAL) NO FIXTURE AT CLEAR- STORY WINDOW @ WEST ELEVATION (ADJACENT TO RESIDENTIAL) RE: ELECTRICAL SITE PLAN

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

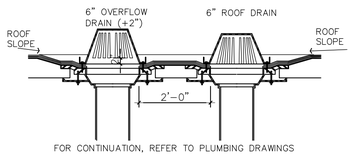
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

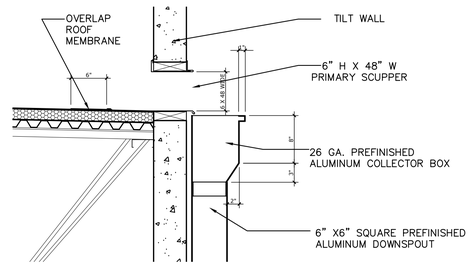
Project No.	22037
Drawn	JD
Checked	BS

CLEARSTORY PLAN

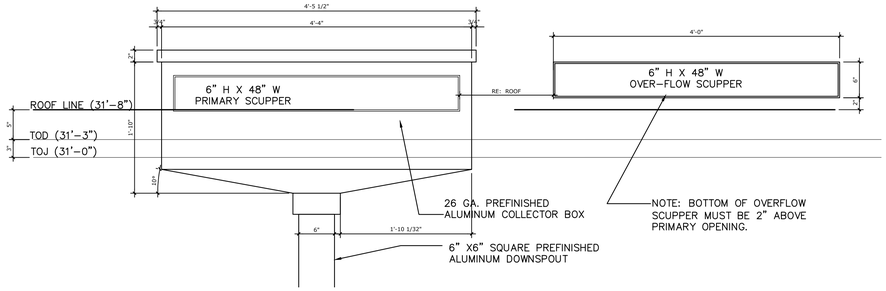
Sheet No. A1.4



06 ROOF & OVERFLOW DRAIN
SCALE: 1/2" = 1'-0"



05 LEADER DETAIL
SCALE: 1" = 1'-0"



04 LEADER/SCUPPER BOX DETAIL
SCALE: 1" = 1'-0"

ROOFING SYSTEM

2 layer of 2.5" insulbase polyisocyanurate insulation with 1/2" hp recovery board: Total value: MIN R25.00 (Roof R Value)
Install flat & tapered composite fiber board at sloped areas with roofing membrane to be TPO white 60 mil system complying with cool roofs.
Low slope up to 2:12 shall be provided with a roof covering where the exterior surface has:
A. A min. total solar reflectance of 0.70 when tested in accordance with one of the solar reflectance test methods listed below, and
B. A min. thermal emittance of 0.75 when tested in accordance with one of the thermal emittance test methods listed below
Solar Reflectance Test Methods:
ASTM C1546, ASTM E603, ASTM E1175, or ASTM E1618
Thermal Emittance Test Methods:
ASTM C835, ASTM C1771, or ASTM E408

roofing membrane to be TPO white 60 mil system complying with cool roofs.
Low slope up to 2:12 shall be provided with a roof covering where the exterior surface has:
A. A min. total solar reflectance of 0.70 when tested in accordance with one of the solar reflectance test methods listed below, and
B. A min. thermal emittance of 0.75 when tested in accordance with one of the thermal emittance test methods listed below
Solar Reflectance Test Methods:
ASTM C1546, ASTM E603, ASTM E1175, or ASTM E1618
Thermal Emittance Test Methods:
ASTM C835, ASTM C1771, or ASTM E408

SCUPPER AND DOWNSPOUT SIZING (INTENSITY BASED ON SMACNA 10 YEAR STORM)

GYM ROOF AREA: 16,250 S.F.
RAINFALL INTENSITY: 7.6 IN/HR

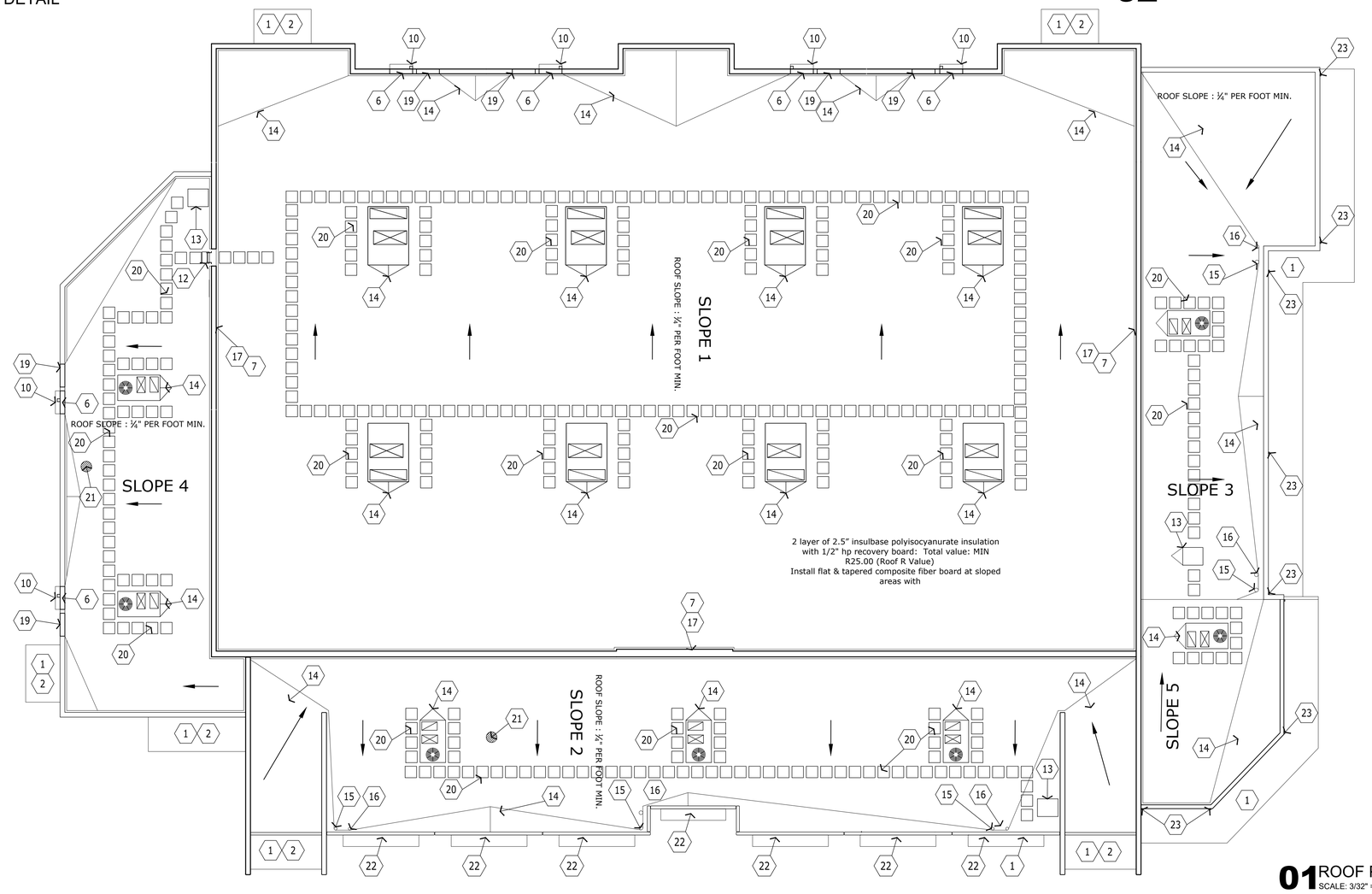
SCUPPER SIZING:
SMACNA TABLE 1-2, storms which should be exceeded only once in 10 years
(SMACNA table 1-2, rainfall data)
RAINFALL INTENSITY IN GPM: GPM = (0.0104) x (IPH) x (ROOF AREA)
GPM = 0.0104 x 7.6 x 16,250 = 1285 GPM-S.F. (entire roof)
HEAD HEIGHT IN INCHES: 3" (assumed)
determine head height: in inches of water at a point 6 ft back from scupper
SCUPPER CAPACITY: INTENSITY (GPM)/TOTAL NUMBER OF PROPOSED SCUPPER 1285 GPM/4 SCUPPERS = 322 GPM
FROM TABLE G-1: AT 4 PROPOSED SCUPPERS AND 2" HEAD EACH SCUPPER MUST BE 24" WIDE (TABLE G-1)
SCUPPER TOTAL: 4 SCUPPERS @ 48" WIDE

DOWNSPOUT SIZING:
SMACNA TABLE 1-2, storms which should be exceeded only once in 10 years
RAINFALL INTENSITY IN IN/HR: 7.6 IN/HR
CALCULATED ROOF AREA DRAINED PER DOWNSPOUT AREA: 160 S.F./S.I.
17,210 S.F./160 S.F. = 108 S.I. TOTAL DOWNSPOUT AREA. REQUIRED SIZE @ 4 DOWNSPOUTS 108/4 = 27 S.I.
(ASSUME 6"x6" SQUARE DOWNSPOUT = 36 S.I. EACH > 27 S.I.

ASSUME 4 QTY OF 6" X 48" PRIMARY & 4 QTY OF 6" X 48" SECONDARY SCUPPERS

NOTE: EMERGENCY OVERFLOW SYSTEM TO EQUAL REGULAR SYSTEM @ +2" ABOVE REGULAR SCUPPER

02 DRAINAGE CALCULATIONS



01 ROOF PLAN
SCALE: 3/32" = 1'-0"

NORTH

Date issued/revised

15 DECEMBER 2022 FOR PRICING

NOTES TO SHEET

1. PREFINISHED METAL CANOPY.
2. PREFINISHED METAL SOFFIT. OUTSPOUT IN SOFFIT.
3. CANOPY DOWNLIGHTS, RE: ELECT. DWGS.
4. ALUMINUM & GLASS STOREFRONT.
5. RECESSED DOWNLIGHT, RE: ELECT. DRAWINGS.
6. OVERFLOW SCUPPER (6" x 48" CENTERED ON WINDOW BELOW
7. PREFINISHED METAL CAP FLASHING.
8. PREFINISHED METAL COPING.
9. RECESSED ELECTRICAL ROLLER SHADES-PROVIDE POWER
10. PREFINISHED METAL LEADER BOX & 6" X 6" DOWNSPOUT & BUILT IN OVERFLOW .
11. EDGE OF ROOF LEVEL CHANGE
12. ROOF LADDER (2/A4.3)
13. ROOF HATCH - VERIFY LOCATION. REFER TO ROOF DETAILS 1/A4.3
14. ROOF CRICKET TAPERED RIGID INSULATION.
15. 6" ROOF DRAIN, RE: MEP & 8A1.1 (TYPICAL)
16. 6" OVERFLOW DRAIN, RE: MEP & 8A1.1 (TYPICAL)
17. CONCRETE TILT WALL PANEL.
18. EXTERIOR INSULATION FINISH SYSTEM (E.I.F.S.) BELOW
19. PRIMARY SCUPPER (6" x 48")
20. ROOF WALK-PADS
21. ROOFTOP EXHAUST FAN, RE: MECH. DRAWINGS.
22. PRE-FINISHED LOUVERS.
23. CANOPY AT ENTRANCE TO DRAIN TO 2x3 DOWNSPOUT-TIED TO STORM

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

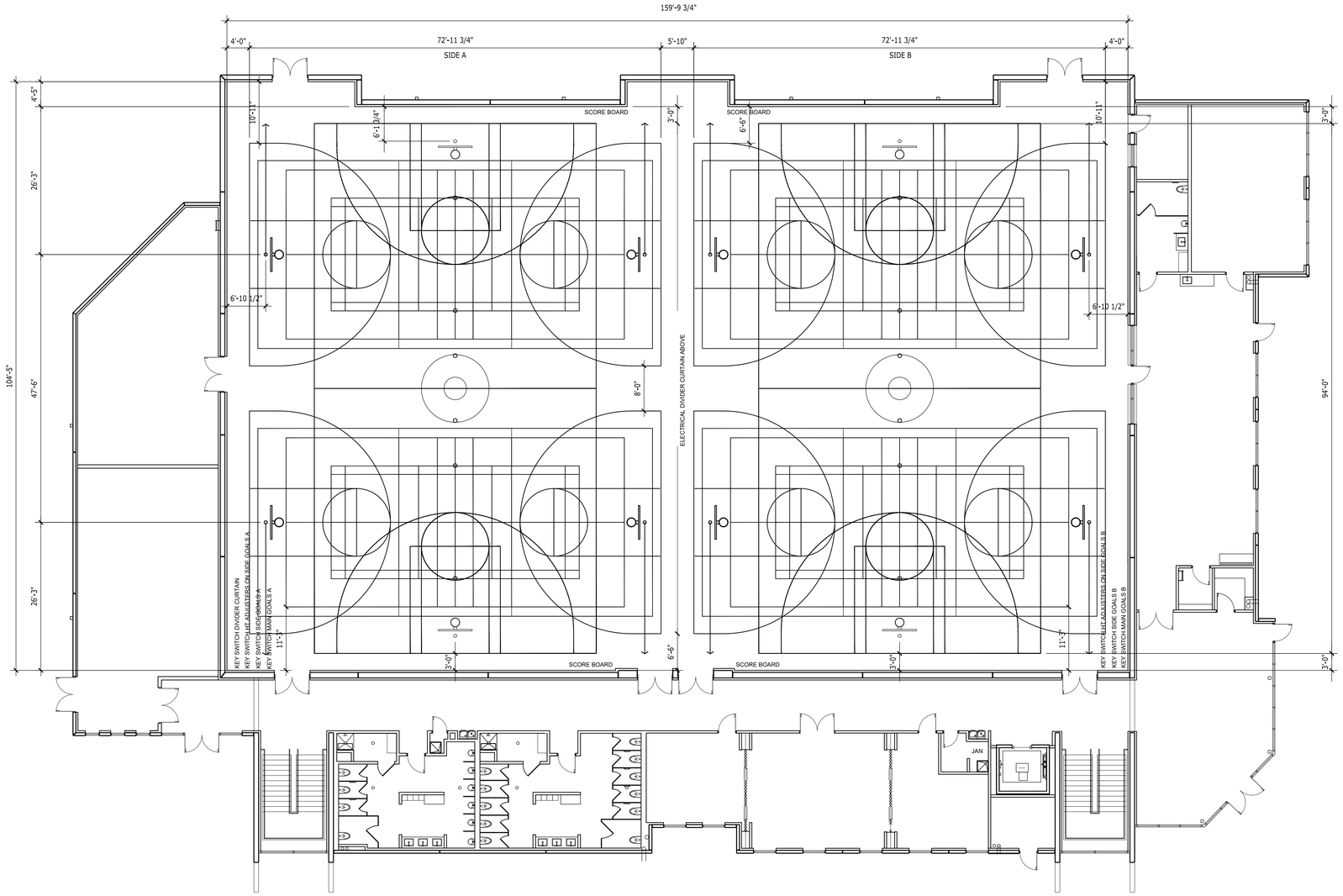
UNITY RECREATION CENTER

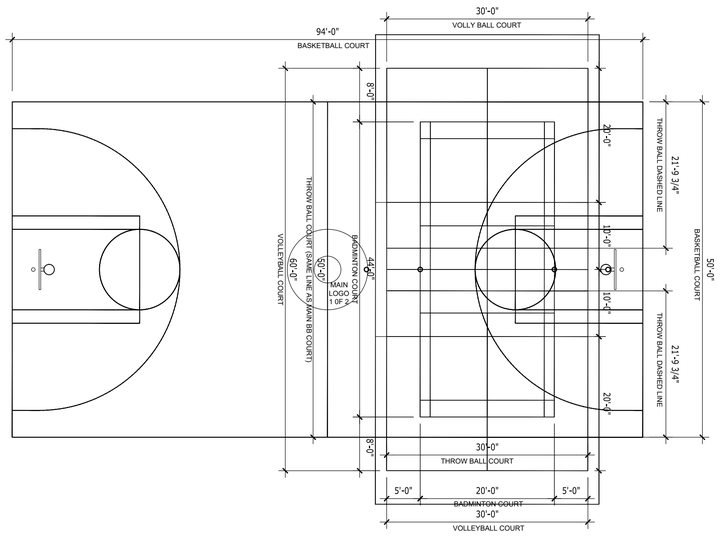
820 Old Mill Road
Cedar Park, Texas 78613

Project No.	22037
Drawn	JD
Checked	BS

ROOF PLAN & DETAILS

Sheet No. A1.5





1 COURT DIMENSION PLAN
SCALE: 3/32" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

NOTES TO SHEET

1. FLOOR INSERT HOLES FOR VOLLEYBALL NET POST, TYP AT ALL 4 COURTS. COORDINATE WITH SUPPLIER AND OWNER.
2. FLOOR INSERT HOLES FOR BADMINTON NET POST, TYP. AT ALL 4 COURTS. COORDINATE LOCATION WITH SUPPLIER AND OWNER
3. 2 TIER ALUMINUM BLEACHERS, CONSULT OWNER WITH TYPE BEFORE INSTALLING
4. INSTALL PORTER RECOMMENDED GANG OUTLET (RE: PORTER SPEC)
5. LOCATION OF BASKETBALL IMPACT WALL PADS-COORDINATE W/OWNER LOCATIONS
6. PROVIDE FLOOR OUTLETS (COORDINATE W/OWNER PRIOR TO POURING SLAB)
7. COORDINATE LOCATION OF KEY SWITCHES, FOR BASKETBALL GOALS, HEIGHT ADJUSTERS AND DIVIDER CURTAIN
8. PROVIDE ELECTRICAL AND PLYWOOD BACKING FOR SCOREBOARDS & HTS

*WOOD FLOOR, COVE BASE AND THRESHOLDS @ GYM & STRIPING EQUIPMENT BY GYMNASIUM EQUIPMENT PROVIDER, CONSULT OWNER FOR SPECIFIC STRIPING OR LOGO

ALL GYM EQUIPMENT TO BE PROVIDED BY OWNER, EXCEPT WOOD FLOOR. CONTRACTOR TO COORDINATE ANY ELECTRICAL.

OSBORN & VANE ARCHITECTS INC

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

Project No.	22037
Drawn	JD
Checked	BS

COURT DIMENTIONS

Sheet No. A1.6

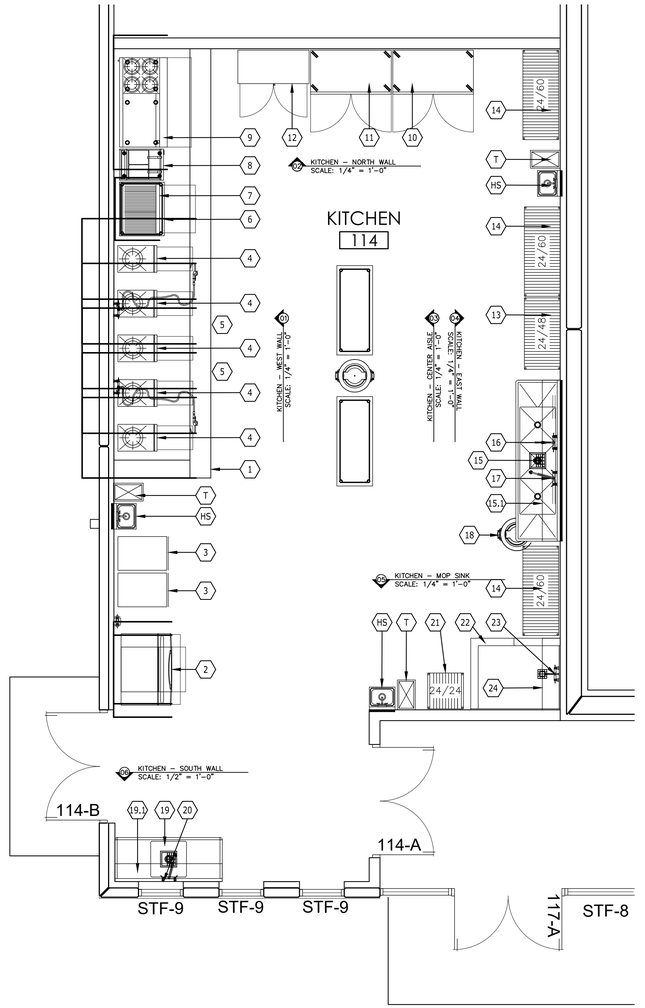
GENERAL NOTES:

1. CLEAN, REPAIR, TAPE, AND SAND SMOOTH ALL GYPSUM BOARD BEFORE PAINTING. REFER TO FINISH SCHEDULE.
2. SEE SHEET A1.0 FOR OVERALL FLOOR PLAN AND RESTROOM LOCATIONS
3. PROVIDE CONTINUOUS SEALANT AT SINKS AGAINST ADJACENT WALL.
4. PROVIDE CLEAR EPOXY SEALER ON RESTROOM FLOORS. ENSURE A SLIP RESISTANT TEXTURE.
5. ALL FINISHES IN THE KITCHEN, RESTROOM AND MOP SINK AREA TO BE LIGHT IN COLOR, NON-ABSORBENT AND EASILY CLEANABLE.
6. THE MOP SINK AREA TO HAVE FRP INSTALLED AT A MINIMUM OF AT LEAST 4 FT. HIGH FROM FLOOR UP AND EXTENDING A MINIMUM OF AT LEAST 2 FT. PAST THE SINK.
7. POLISHED CONCRETE FLOOR iF ANY:
   - SYSTEM MANUFACTURER: PROSOCO/CONSOLIDECK LS OR EQUAL
   - REPAIR CRACKS, CLEAN AND PREP PER POLISHED CONCRETE MANUFACTURER RECOMMENDATIONS.
   GRIND WITH 80 AND 150 GRIT METAL DIAMOND HEADS. POLISH USING 200, 400, 800 AND 1500 GRIT DIAMOND PADS AS NEEDED.
   PROGRESSIVELY GRIND, HONE AND POLISH SLAB AS NEEDED TO PRODUCE FINISHING REQUIREMENTS.
   APPLICATION OF HARDENER/DENSIFIER AND SEALER/ENHANCER PER MANUFACTURER'S RECOMMENDATIONS.
   - FINISHED GLOSS LEVEL 1- SEMI GLOSS
   PROVIDE NON-SLIP FINISH WITH A COEFFICIENT OF FRICTION OF 0.6 (WET AND DRY) PER ASTM C1028
   - PROVIDE A 10' X 10' TEST AREA FOR TENANT'S APPROVAL.
8. ALL INTERIOR WALL AND CEILING FINISHES SHALL BE CLASSIFIED IN ACCORDANCE WITH ASTM E 84. INTERIOR FINISHES TO MEET FLAME SPREAD AND SMOKE DEVELOPMENT OF IBC SEC. 803.
   SHALL BE MINIMUM OF CLASS 'B'.
   SHALL HAVE A FLAME SPREAD OF LESS THAN 25.
   SHALL HAVE A SMOKE DEVELOPED INDEX RATING OF LESS THAN 450.
9. CSP (CONCRETE SURFACE PROFILE) OF 2 WILL BE ACHIEVED. DYNAMIC CRACKS WILL BE CHASED OUT TO 1/4" - 3/8" AND FILLED WITH A PASTE EPOXY. 100% SOLIDS EPOXY WILL BE INSTALLED AT 16 MILS AND VINYL CHIPS WILL BE APPLIED TO REJECTION (FULL BROADCAST FINISH). AN ACRYLIC EMULSION FOLLOWED BY AN INDUSTRIAL GRADE URETHANE WILL BE INSTALLED OVER THE EPOXY AND CHIPS.

EQUIPMENT SCHEDULE

NO.	Q#	CATEGORY	MFR	MODEL	REMARKS
1	1	EXHAUST HOOD	ACCUREX	HOOD	-
2	1	ICE MAKER, CUBE-STYLE	MANITOWOC	IRT0900A	-
3	2	CABINET, COOK / HOLD / OVEN	CRES COR	1000CHSS2DE	-
4	5	STOCK POT RANGE, 1 TWO-RING BURNER	VULCAN	VSP100	-
4.1	5	BLUE HOSE GAS CONNECTOR KIT	DORMONT	1675KIT2S48	-
5	2	FAUCET, KETTLE / POT FILLER	T&S BRASS	B-0610-JJ	-
6	1	EQUIPMENT STAND	JOHN BOOS	EES8-3036-X	-
7	1	CHARBROILER, GAS, COUNTERTOP	VULCAN	VCRB36	-
7.1	1	BLUE HOSE GAS CONNECTOR KIT	DORMONT	1675KIT2S48	-
8	1	GAS FLOOR FRYER	VULCAN	LG500	-
8.1	1	BLUE HOSE GAS CONNECTOR KIT	DORMONT	1675KIT2S48	-
9	-	RANGE, 60", 4 BURNERS, 36" GRIDDLE	ROYAL RANGE OF CALIFORNIA	RDR-4G36	-
10	1	REACH-IN FREEZER	TRUE MFG. - GENERAL FOODSERVICE	TS-49F-HC	-
11	1	REACH-IN REFRIGERATOR	TRUE MFG. - GENERAL FOODSERVICE	T-49-HC	-
12	1	STORAGE CABINET	JOHN BOOS	TCH-224884-X	-
13	1	WIRE SHELVING UNIT	METRO	EZ2448BR-4	-
14	3	WIRE SHELVING UNIT	METRO	EZ2460BR-4	-
15	1	THREE (3) COMPARTMENT SINK	ADVANCE TABCO	FS-3-2424-18RL	-
15.1	1	OVERSHELF	JOHN BOOS	BHS12108PR	-
16	1	WALL / SPLASH MOUNT FAUCET	KROWNE	14-812L	-
17	1	PRE-RINSE FAUCET ASSEMBLY, WITH ADD ON FAUCET	KROWNE	17-109WL	-
18	2	COMMERCIAL WASTE CONTAINER	RUBBERMAID	FG263200GRAY	-
19	1	ONE (1) COMPARTMENT SINK	JOHN BOOS	E1S8-24-14T24-X	-
19.1	1	OVERSHELF	JOHN BOOS	BHS1272PR-X	-
20	1	PRE-RINSE FAUCET ASSEMBLY, WITH ADD ON FAUCET	KROWNE	17-109WL	-
21	1	WIRE SHELVING UNIT	METRO	SE-242474K4-S-4	-
22	1	MOP SINK	OMNI	-	-
23	1	SERVICE FAUCET	KROWNE	16-127	-
24	1	SHELVING, WALL MOUNTED	ADVANCE TABCO	WS-12-48	-
25	2	WORK TABLE, 60", STAINLESS STEEL TOP	JOHN BOOS	ST4-2460SSK	-
HS	3	HAND SINK	ADVANCE TABCO	7-PS-EC-X	-
T	3	TRASH CAN	RUBBERMAID	RUB3540GRAY	-

2 EQUIPMENT SCHEDULE
SCALE: NTS



1 KITCHEN FLOOR PLAN
SCALE:1/4" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

ALL KITCHEN EQUIPMENT TO BE PROVIDED BY OWNER.

INSTALL BY CONTRACTOR.

OSBORN & VANE ARCHITECTS, inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

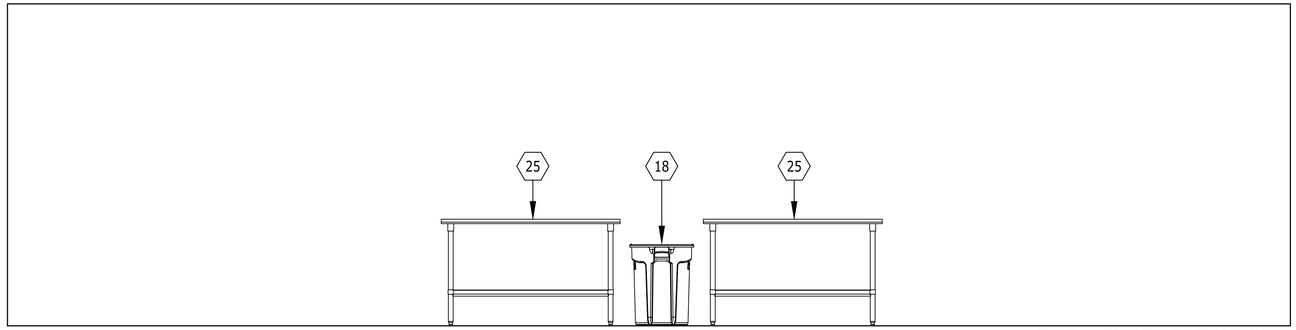
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK,TEXAS

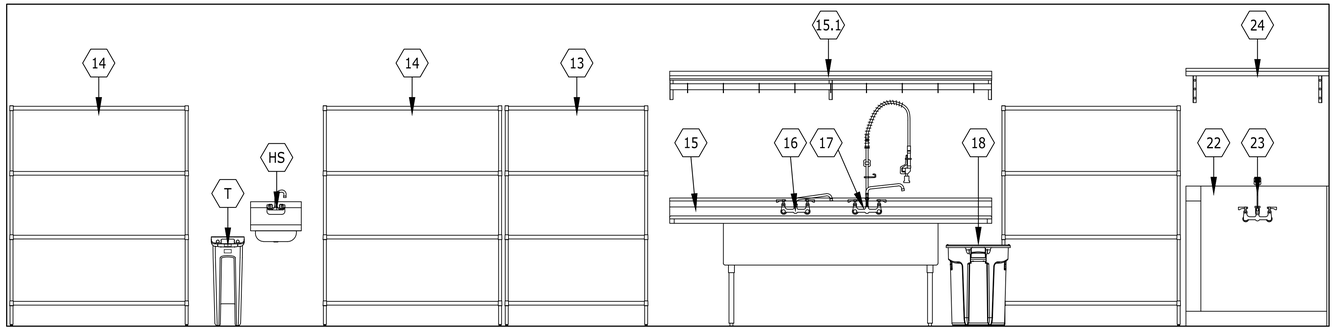
Project No.	22037
Drawn	ER
Checked	BS

KITCHEN EQUIPMENT

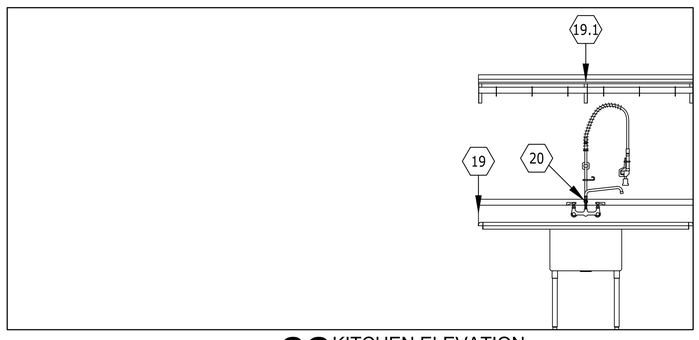
Sheet No. A1.7



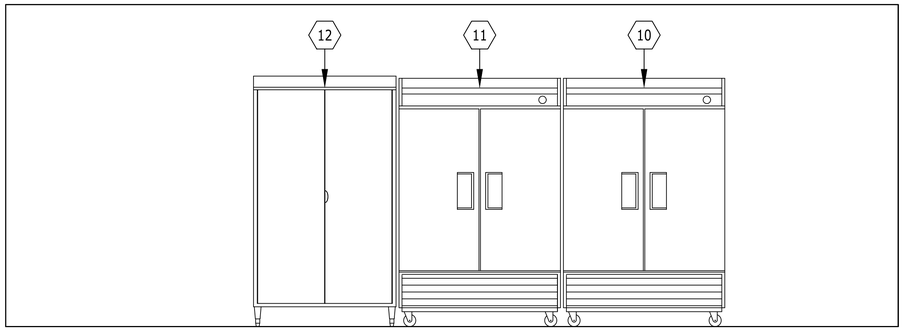
04 KITCHEN ELEVATION
SCALE:1/2" = 1'-0"



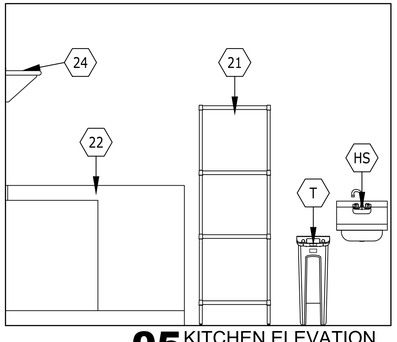
03 KITCHEN ELEVATION
SCALE:1/2" = 1'-0"



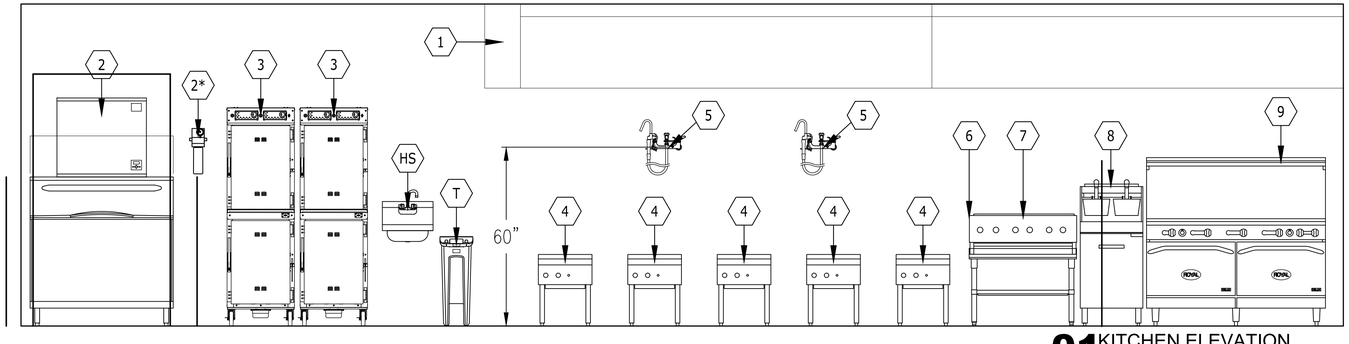
06 KITCHEN ELEVATION
SCALE:1/2" = 1'-0"



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



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



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

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS, inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK,TEXAS

Project No.	22037
Drawn	ER
Checked	BS

KITCHEN EQUIPMENT ELEVATIONS

Sheet No. A1.8

PROPOSED BUILDING:

TOTAL OCCUPANCY: 1386 OCCUPANTS
OCCUPANCY TYPE: ASSEMBLY A-3
RESTROOM REQUIREMENTS

REQUIRED FIXTURES					
W/C MEN	W/C WOMEN	LAV	D. F	M. SINK	SHOWERS
693 / 125	727 / 65	1386/ 200	1454 / 500	--	--
6	11	7	3	1	-
FIXTURES PROVIDED					
W/C MEN	W/C WOMEN	LAV	D. F	M. SINK	SHOWERS
12	13	5M-5W	3	3	2
FAMILY RESTROOM					
W/C UNISEX		LAV	D. F	M. SINK	SHOWERS
2		1	-	-	-

EGRESS WIDTH REQUIRED FOR DOORS

EGRESS WIDTH PER OCCUPANT SERVED IS 0.20 inchs IF SPRINKLED

REFER TO BREAKDOWN CALCULATIONS ON THIS SHEET

EGRESS WIDTH REQUIRED FOR STAIRS

EGRESS WIDTH PER OCCUPANT SERVED IS 0.30 inchs IN SPRINKLED

	OCCUPANCY	REQUIRED WIDTH	PROVIDED WIDTH PER STAIRS	PROVIDED WIDTH
SECOND FLOOR	68 occ. x 0.30	20.5 inches	52 inches	104 inches

EXITS ACCESS TRAVEL DISTANCE

OCCUPANCY	MAXIMUM DISTANCE ALLOWED
FIRST FLOOR	250'
SECOND FLOOR	250'

MINIMUM CORRIDOR WIDTH

REQUIRED	PROVIDED
44"	108"

TOTAL OCCUPANT LOAD - 1,386

A-3 LOUNGE - 1,135 SQ FT/15 = 76 OCCUPANTS
A-3 FITNESS - 593 SQ FT/50 = 12 OCCUPANTS
A-3 LOBBY - 785 SQ FT/15 = 53 OCCUPANTS
A-3 GYMNASIUM - 16,250 SQ FT/15 = 1,084 OCCUPANTS
A-3 LIBRARY 1 - 267 SQ FT/50 = 6 OCCUPANTS
A-3 LIBRARY 2 - 282 SQ FT/50 = 6 OCCUPANTS
A-3 FLEX ROOM - 262 SQ FT/15 = 18 OCCUPANTS
A-3 FLEX ROOM - 480 SQ FT/15 = 32 OCCUPANTS
A-3 FLEX ROOM - 368 SQ FT/15 = 25 OCCUPANTS
A-3 FLEX ROOM - 513 SQ FT/15 = 35 OCCUPANTS
A-3 FLEX ROOM - 368 SQ FT/15 = 25 OCCUPANTS
S STORAGE - 955 SQ FT/300 = 4 OCCUPANTS
S IT - 63 SQ FT/300 = 1 OCCUPANTS
S IT - 62 SQ FT/300 = 1 OCCUPANTS
B MEDIA - 121 SQ FT/150 = 1 OCCUPANTS
B KITCHEN - 1,057 SQ FT/200 = 6 OCCUPANTS
B OFFICE - 61 SQ FT/150 = 1 OCCUPANTS

EXIT WIDTH CALCULATIONS:

A-3 LOUNGE - 76 OCCUPANTS X 0.20 = 15.2"
A-3 FITNESS - 12 OCCUPANTS X 0.20 = 2.4"
A-3 LOBBY - 53 OCCUPANTS X 0.20 = 10.6"
A-3 GYMNASIUM - 1,084 OCCUPANTS X 0.20 = 216.8"
A-3 LIBRARY 1 - 6 OCCUPANTS X 0.20 = 1.2"
A-3 FLEX ROOM - 18 OCCUPANTS X 0.20 = 3.6"
A-3 FLEX ROOM - 32 OCCUPANTS X 0.20 = 6.4"
A-3 FLEX ROOM - 25 OCCUPANTS X 0.20 = 5"
A-3 FLEX ROOM - 35 OCCUPANTS X 0.20 = 7"
A-3 FLEX ROOM - 25 OCCUPANTS X 0.20 = 5"
A-3 LIBRARY 2 - 6 OCCUPANTS X 0.20 = 1.2"
S STORAGE - 4 OCCUPANTS X 0.20 = 0.8"
S IT - 1 OCCUPANTS X 0.20 = 0.2"
S IT - 1 OCCUPANTS X 0.20 = 0.2"
B MEDIA - 1 OCCUPANTS X 0.20 = 0.2"
B KITCHEN - 6 OCCUPANTS X 0.20 = 1.2"
B OFFICE - 1 OCCUPANTS X 0.20 = 0.2"

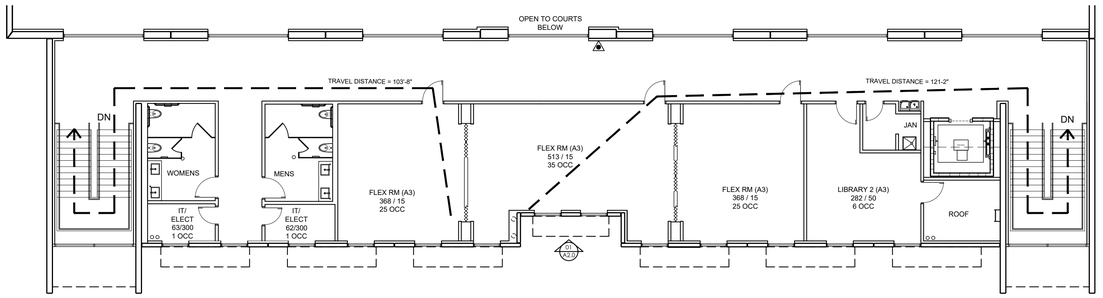
ASSEMBLY A3 (GYM) - 216.8"/ 2 = 108.4"
(1/2 OF A3 GYM) + STORAGE + MEDIA
108.40" + 0.80" + 0.20 = 109.4" REQUIRED EXIT WIDTH
144" EXIT WIDTH PROVIDED

(1/2 OF A3 - GYM) + FLEX + FLEX + FLEX + FLEX + FLEX + LIBRARY 1 + LIBRARY 2 + IT + IT
108.4" + 3.60" + 6.40" + 5" + 7" + 5" + 1.20" + 1.20" + 0.20" + 0.20" =
138.2" REQUIRED EXIT WIDTH
144" EXIT WIDTH PROVIDED

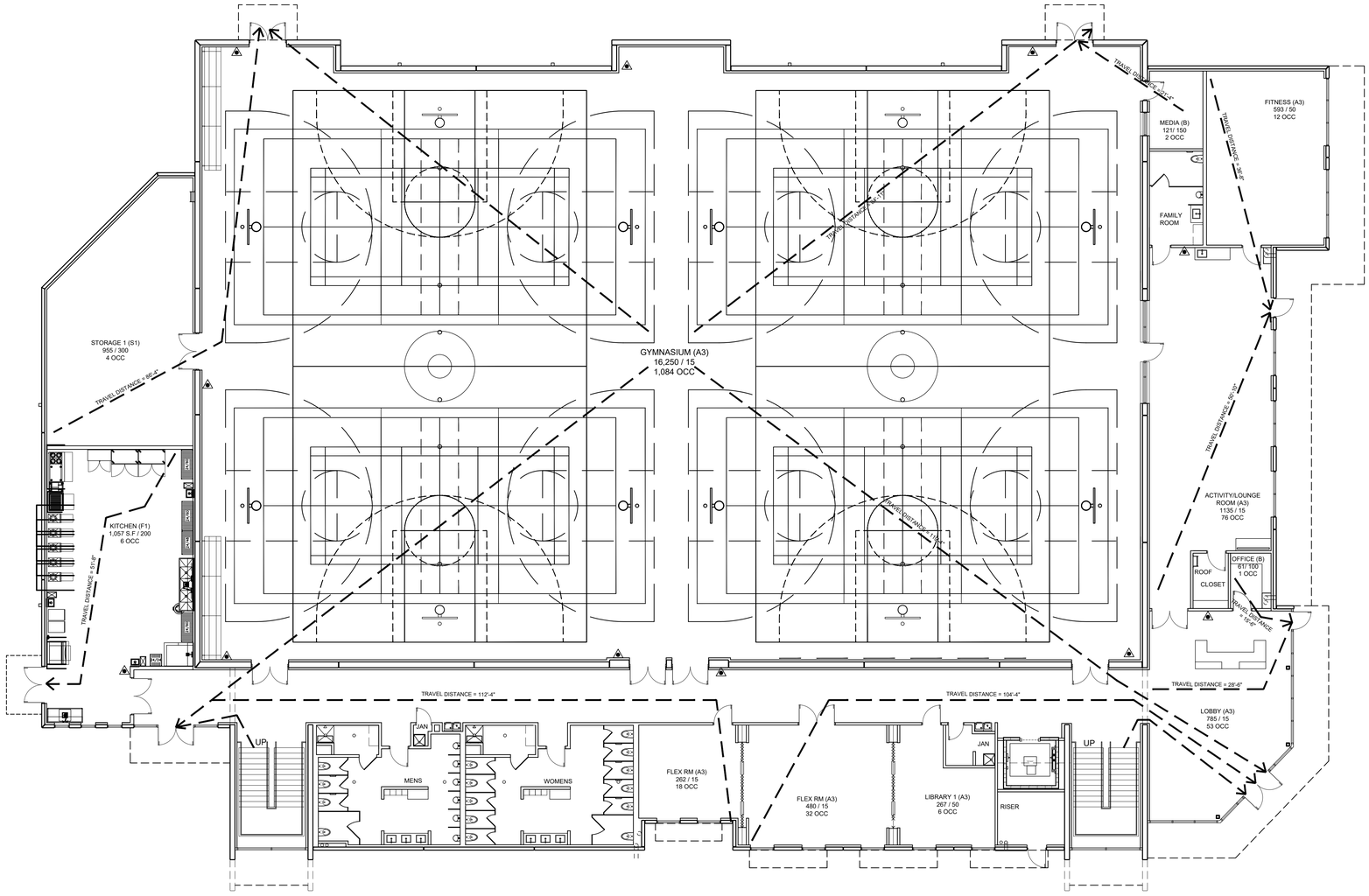
KITCHEN 1.2" =
1.2" REQUIRED EXIT WIDTH
72" EXIT WIDTH PROVIDED

LOUNGE + FITNESS = 15.20" + 2.40" =
17.6" REQUIRED EXIT WIDTH
36" EXIT WIDTH PROVIDED

LOBBY + OFFICE = 10.6 + 0.20" =
10.80" REQUIRED EXIT WIDTH
36" EXIT WIDTH PROVIDED



2ND FLOOR OCCUPANCY PLAN
SCALE: 3/32" = 1'-0"



1ST FLOOR OCCUPANCY PLAN
SCALE: 3/32" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

FIRE EXTINGUISHER PER FIRE MARSHALL REQUIREMENTS. VERIFY IF AN ENCLOSED FIRE EXTINGUISHER ARE REQUIRED AT GYMNASIUM WITH THE INSPECTOR

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

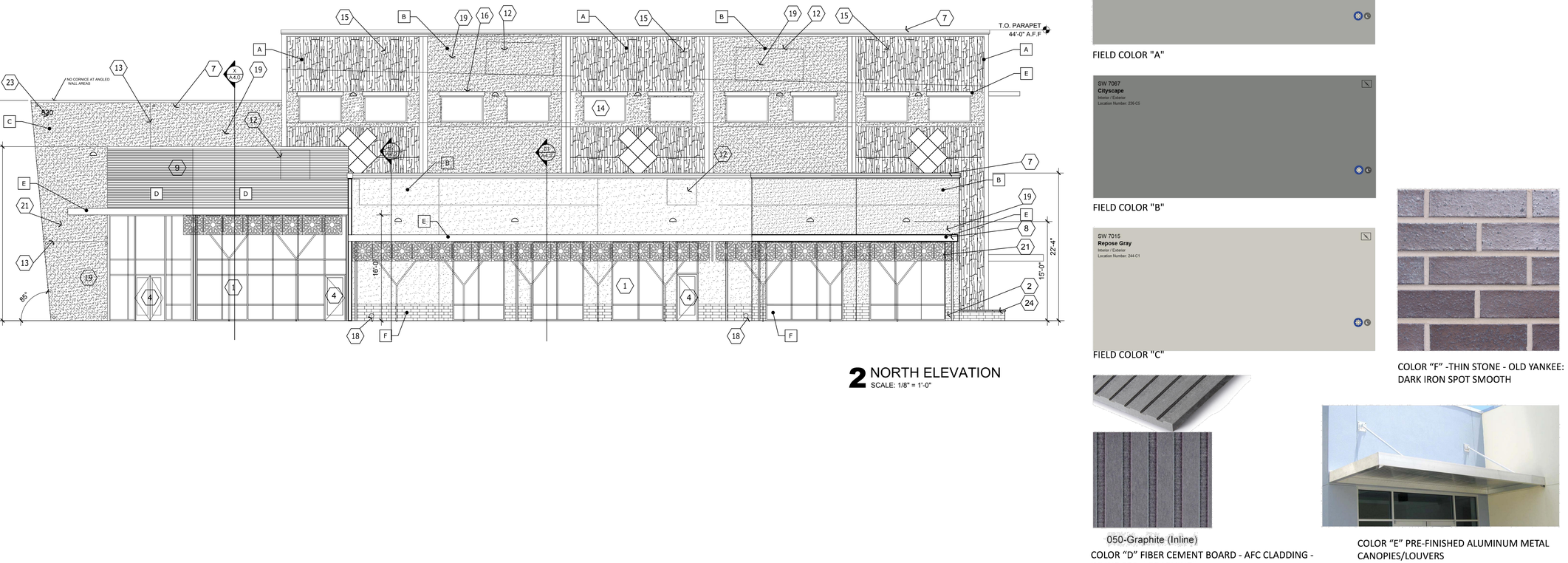
820 Old Mill Road
Cedar Park, Texas 78613

Project No.	22037
Drawn	JD
Checked	BS

OCCUPANCY PLAN

Sheet No. A1.9

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



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

FIELD COLOR "A"

FIELD COLOR "B"

FIELD COLOR "C"

COLOR “F” -THIN STONE - OLD YANKEE: DARK IRON SPOT SMOOTH

050-Graphite (Inline)

COLOR “D” FIBER CEMENT BOARD - AFC CLADDING - INLINE 050- "GRAPHINE"

COLOR “E” PRE-FINISHED ALUMINUM METAL CANOPIES/LOUVERS

Date issued/revised

15 DECEMBER 2022 FOR PRICING

NOTES TO SHEET

1. ALUMINUM AND 1" INSULATED LOW-E GLASS STOREFRONT SYSTEM, CLEAR ANODIZED.
2. THINK BRICK
3. ROOF LEVEL. RE: STRUCTURAL DRAWINGS.
4. 3'-0" x 9'-0" ALUMINUM CLEAR ANODIZED LOW-E GLASS STOREFRONT DOOR.
5. (2) 3'-0" X 9'-0" ALUMINUM CLEAR ANODIZED LOW-E GLASS STOREFRONT DOOR.
6. (2) 3'-0" X 9'-0" HOLLOW METAL DOOR & FRAME; PAINT.
7. PRE FINISHED METAL CAP FLASHING OVER EIFS CORNICE.
8. 6' ALUMINUM CANOPY (TO MATCH STOREFRONT COLOR)
9. FIBER CEMENT BOARD
10. 26 ga. 8"x8" PRE-FINISHED DOWNSPOUTS WITH OVERFLOW (TIES TO UNDERGROUND STORM. RE: CIVIL DRAWINGS)
11. CONCRETE TILT-WALL EXPANSION JOINT.
12. MECHANICAL UNIT ON ROOF
13. 2" x 3/4" CONCRETE REVEAL.
14. ALUMINUM AND 1" GLASS WINDOWS.
15. US FORMLINER - PATTERN #2/195 (GYSENBERG)
16. ALUMINUM LOUVERS 24" DEPTH
17. ELECTRICAL DECORATIVE WALL SCONCE FIXTURE. RE: ELECTRICAL DRAWINGS (MOUNTED 15' MAX WITH IN 50' OF RESIDENTIAL)
18. OVER-FLOW ROOF DRAIN WITH DOWNSPOUT NOZZLE
19. TEXTURED PAINT AT ALL TILT-WALL PANELS
20. STEEL ROOF LADDER; PAINT.
21. STAINLESS STEEL DECORATIVE MOTIFFS (TYP) RE: A2.1 FOR DETAILS
22. WELL LIGHTS (RE: SITE PLAN & ELECTRICAL)
23. BUILDING ADDRESS; FIELD VERIFICATION IS ACCEPTABLE FOR BEST LOCATION/ELEVATION PER IFC 505
24. INTEGRAL PLANTER BED WITH BENCH SEATING

COLORS:

A	FIELD COLOR "A" - SW 7066 "GRAY MATTERS
B	FIELD COLOR "B" - SW 7067 "CITYSCAPE"
C	FIELD COLOR "C" - SW 7015 "REPOSE GRAY"
D	FIBER CEMENT BOARD - AFC CLADDING - INLINE 050- "GRAPHINE"
E	PRE-FINISHED ALUMINUM METAL CANOPIES/LOUVERS
F	THIN STONE - OLD YANKEE: DARK IRON SPOT SMOOTH

ALL COLORS TO BE SELECTED BY THE THE ARCHITECT AND APPROVED BY OWNER.

IF MECHANICAL EQUIPMENT THAT IS MOUNTED ON A BUILDING WALL THAT IS WITHIN PUBLIC VIEW SHALL BE ENCLOSED, SCREENED BY OPAQUE FENCING,LANDSCAPING, OR PAINTED TO MATCH THE BUILDING FACADE." (SEC. 11.03.154(B)(1)(C))

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

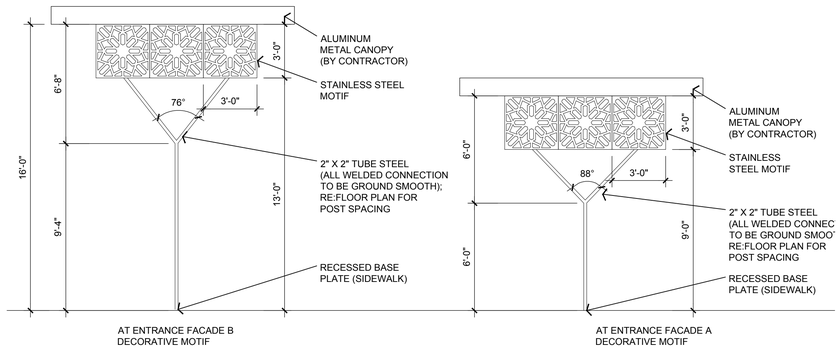
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

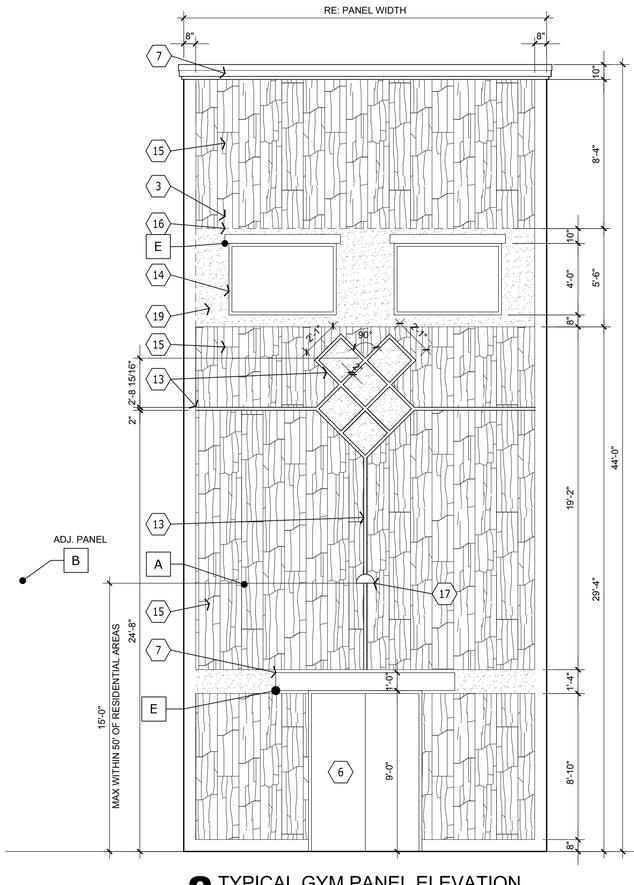
Project No.	22037
Drawn	JD
Checked	BS

EXTERIOR ELEVATIONS

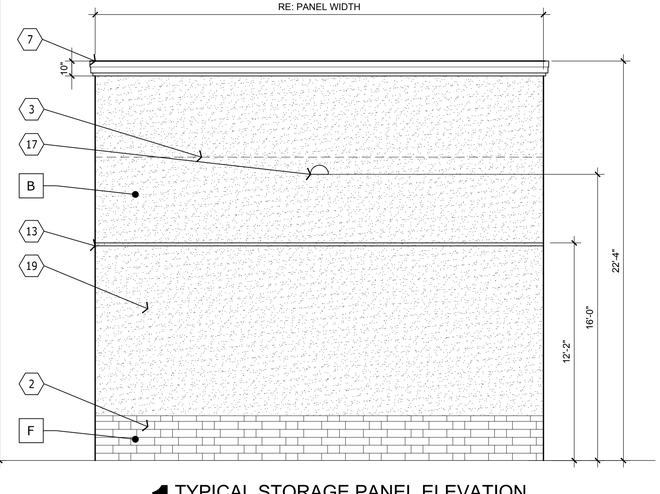
Sheet No. A2.0



3 TYPICAL ART MOTIF @ ENTRANCE
SCALE: 1/4" = 1'-0"



2 TYPICAL GYM PANEL ELEVATION
SCALE: 1/4" = 1'-0"



1 TYPICAL STORAGE PANEL ELEVATION
SCALE: 1/4" = 1'-0"

RECKLI®

2/195 GYSENBERG

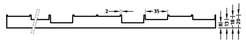
An abstract pattern with horizontally arranged, elongated rectangles. The little sticks jump forward and back and create a vivid effect.

DIMENSIONS

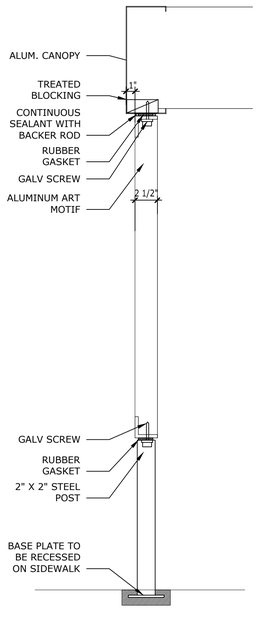
Uses	Dimensions (mm)	Order Number
100	▲ 3710 × ▼ 2230	C 2195
50	-	-
10	-	-

100-timer formliners are supplied in an individual dimension within the maximum indicated dimensions.

The specified widths of the 10-timer and 50-timer formliners are a fixed dimension and ensure the continuity of the structure in the case of linear patterns. The longitudinal direction of the pattern is variable and can be ordered from 1 m up to the maximum dimension in 50 cm steps.



4 TYPICAL FORM LINER
SCALE: N.T.S.



1A MOTIF DETAILS
SCALE: 1-1/2" = 1'-0"

FACADE TREATMENTS

EXTERIOR ELEVATION	FACADE A – EAST ELEV
MATERIAL:	SQUARE FOOTAGE
TOTAL FACADE	6,425 S.F.
EXT MATERIAL 1 – BRICK VENEER	610 S.F.
EXT MATERIAL 2 – TEXTURED TILT WALL (PAINTED MIN 2 CONTRASTING COLORS	3,744 S.F.
EXT MATERIAL 3 – COMPOSITE FIBER CEMENT BOARD)	233 S.F.
BUILDING WALL OFFSETS (ARTICULATION TABLE)	7 QTY
CANOPIES & LOUVERS	215 LF
EXTERIOR LIGHTING PROVIDED	20 QTY
ALUMINUM STOREFRONT & DISPLAY WINDOWS	1,838 S.F.

FACADE TREATMENTS

EXTERIOR ELEVATION	FACADE B – NORTH ELEV
MATERIAL:	SQUARE FOOTAGE
TOTAL FACADE	3,458 S.F.
EXT MATERIAL 1 – BRICK VENEER	110 S.F.
EXT MATERIAL 2 – TEXTURED TILT WALL (PAINTED MIN 2 CONTRASTING COLORS	1,785 S.F.
EXT MATERIAL 3 – COMPOSITE FIBER CEMENT BOARD	328 S.F.
BUILDING WALL OFFSETS (ARTICULATION TABLE)	4 QTY
CANOPIES	140 LF
EXTERIOR LIGHTING PROVIDED	6 QTY
ALUMINUM STOREFRONT & DISPLAY WINDOWS	1,235 S.F.

FACADE TREATMENTS
ELEVATION FACING REAR – SEEKING EXEMPTION PER SECTION 11.03.154-B-b.1 ADDITIONAL LANDSCAPING PER ORDINANCE WILL BE PROVIDED

EXTERIOR ELEVATION	FACADE C – WEST ELEV
MATERIAL:	SQUARE FOOTAGE
TOTAL FACADE	8,313 S.F.
EXT MATERIAL 1 – BRICK VENEER	230 S.F.
EXT MATERIAL 2 – TEXTURED TILT WALL W/FORM LINER (PAINTED) MIN 2 CONTRASTING COLORS	7,615 S.F.
EXT MATERIAL 3 – TEXTURE CHANGES WITH PATTERN MOTIF FORMLINERS	104 S.F.
BUILDING WALL OFFSETS (ARTICULATION TABLE)	7 QTY
CANOPIES & LOUVERS	124 LF
EXTERIOR LIGHTING PROVIDED– WALL & UP LIGHTING	11 QTY
DISPLAY WINDOWS	364 S.F.

FACADE TREATMENTS
ELEVATION FACING REAR – SEEKING EXEMPTION PER SECTION 11.03.154-B-b.1 ADDITIONAL LANDSCAPING PER ORDINANCE WILL BE PROVIDED

EXTERIOR ELEVATION	FACADE D – SOUTH ELEV
MATERIAL:	SQUARE FOOTAGE
TOTAL FACADE	3,064 S.F.
EXT MATERIAL 1 – TEXTURED TILT WALL (PAINTED MIN 2 CONTRASTING COLORS)	930 S.F.
EXT MATERIAL 2 – TEXTURE CHANGES WITH PATTERN MOTIF FORMLINERS	104 S.F.
EXT MATERIAL 3 – TEXTURE TILT WALL WITH FORMLINER	2,030 S.F.
BUILDING WALL OFFSETS (ARTICULATION TABLE)	4 QTY
CANOPIES & LOUVERS	6 LF
EXTERIOR LIGHTING PROVIDED– WALL & UP LIGHTING	6 QTY
DISPLAY WINDOWS	0 S.F.

ARTICULATION TABLE

EXTERIOR ELEVATION	FACADE A – EAST ELEV	
FACADE LENGTH – 213'-2 1/4"	ARTICULATION LENGTH	PROJECTION/RECESS (MIN 4'-1/4" REQUIREMENT)
RECESS A	32'-1"	27'-9-1/4"
RECESS B	14'-1-1/4"	6'-11"
PROJECTION A	56'-6"	4'-6-3/4"
RECESS C	15'-1/4"	4'-6-3/4"
PROJECTION B	56'-6"	4'-6-3/4"
RECESS D	14'-1-1/4"	6'-11"
RECESS E	24'-10-1/2	11'-7"
TOTAL PROJECTION PER FACADE	TOTAL 113'-0"	TOTAL FOR ALL PROJECTION 66'-10-1/2" OR 32.36%
TOTAL RECESS PER FACADE	TOTAL 100'-2-1/4"	

ARTICULATION TABLE

EXTERIOR ELEVATION	FACADE B – NORTH ELEV	
FACADE LENGTH – 146'-3-3/4"	ARTICULATION LENGTH	PROJECTION/RECESS (2'-11" MIN REQUIREMENT)
RECESS A	24'-6"	24'-10-1/2"
PROJECTION A	24'-0-3/4"	3'-0"
RECESS B	60'-9"	3'-0" / 9'-0"
PROJECTION B	37'-0"	9'-0"
TOTAL PROJECTION PER FACADE	TOTAL 61-0-3/4"	TOTAL FOR ALL PROJECTION 45'-10-1/2" OR 31.35%
TOTAL RECESS PER FACADE	TOTAL 85'-3"	

ARTICULATION TABLE
ELEVATION FACING REAR – SEEKING EXEMPTION PER SECTION 11.03.154-B-b.1

EXTERIOR ELEVATION	FACADE C – WEST ELEV	
FACADE LENGTH – 219'-3"	ARTICULATION LENGTH	PROJECTION/RECESS (FT)
RECESS A	30'-11-1/4"	1'-0" (MIN OFFSET MAINTAINED)
PROJECTION A	24'-9-1/2"	1'-0" (MIN OFFSET MAINTAINED)
RECESS B	46'-2-1/4"	1'-0" (MIN OFFSET MAINTAINED)
PROJECTION B	20'-2-3/4"	1'-0" (MIN OFFSET MAINTAINED)
RECESS C	46'-2-1/4"	1'-0" (MIN OFFSET MAINTAINED)
PROJECTION C	24'-9-1/2"	1'-0" (MIN OFFSET MAINTAINED)
RECESS D	46'-2-1/4"	44'-6-1/2"

ARTICULATION TABLE
ELEVATION FACING REAR – SEEKING EXEMPTION PER SECTION 11.03.154-B-b.1

EXTERIOR ELEVATION	FACADE D – SOUTH ELEV	
FACADE LENGTH – 147'-3-3/4"	ARTICULATION LENGTH	PROJECTION/RECESS (FT)
RECESS A	24'-11-3/4"	6'-5-1/2"
RECESS B	19'-6-3/4"	19'-7-3/4"
PROJECTION A	75'-0"	32'-1"
RECESS C	27'-9-1/4"	32'-1"

ENTRY ANIMATING FEATURES PER FIG. 11.08.154B

ENTRANCE FACADE A 960 S.F.	
DISPLAY WINDOWS, ENTRY AREAS & AWNINGS 620 S.F. PERCENTAGE = 64.58%	
ENTRANCE FACADE B 655 S.F.	
DISPLAY WINDOWS, ENTRY AREAS & AWNINGS 422 S.F. PERCENTAGE = 64.42%	

PUBLIC GROUND ENTRANCE FACADE

Date Issued/revised

15 DECEMBER 2022 FOR PRICING

NOTES TO SHEET

1. ALUMINUM AND 1" INSULATED LOW-E GLASS STOREFRONT SYSTEM, CLEAR ANODIZED.
2. THINK BRICK
3. ROOF LEVEL. RE: STRUCTURAL DRAWINGS.
4. 3'-0" x 9'-0" ALUMINUM CLEAR ANODIZED LOW-E GLASS STOREFRONT DOOR.
5. (2) 3'-0" X 9'-0" ALUMINUM CLEAR ANODIZED LOW-E GLASS STOREFRONT DOOR.
6. (2) 3'-0" X 9'-0" HOLLOW METAL DOOR & FRAME; PAINT.
7. PRE FINISHED METAL CAP FLASHING ON EIFS CORNICE-DETAIL 1A/A2.1)
8. 6' ALUMINUM CANOPY (TO MATCH STOREFRONT COLOR)
9. FIBER CEMENT BOARD
10. 26 ga. 9"x8" PRE-FINISHED DOWNSPOUTS WITH OVERFLOW (TIES TO UNDERGROUND STORM. RE: CIVIL DRAWINGS)
11. CONCRETE TILT-WALL EXPANSION JOINT.
12. MECHANICAL UNIT ON ROOF
13. 2" x 3/4" CONCRETE REVEAL.
14. ALUMINUM AND 1" GLASS WINDOWS.
15. US FORMLINER - PATTERN #2/195 (GYSENBERG)
16. ALUMINUM LOUVERS 24" DEPTH
17. ELECTRICAL DECORATIVE WALL SCONCE FIXTURE. RE: ELECTRICAL DRAWINGS (MOUNTED 15' MAX WITH IN 50' OF RESIDENTIAL)
18. OVER-FLOW ROOF DRAIN WITH DOWNSPOUT NOZZLE
19. TEXTURED PAINT AT ALL TILT-WALL PANELS
20. STEEL ROOF LADDER; PAINT.
21. STAINLESS STEEL DECORATIVE MOTIFFS (TYP)
22. WELL LIGHTS (RE: SITE PLAN & ELECTRICAL)

COLORS:

- A FIELD COLOR "A" - SW 7066 "GRAY MATTERS
- B FIELD COLOR "B" - SW 7067 "CITYSCAPE"
- C FIELD COLOR "C" - SW 7015 "REPOSE GRAY"
- D FIBER CEMENT BOARD - AFC CLADDING - INLINE 050 - "GRAPHITE"
- E PRE-FINISHED ALUMINUM METAL CANOPIES/LOUVERS
- F THIN STONE - OLD YANKEE; DARK IRON SPOT SMOOTH

ALL COLORS TO BE SELECTED BY THE THE ARCHITECT AND APPROVED BY OWNER.

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

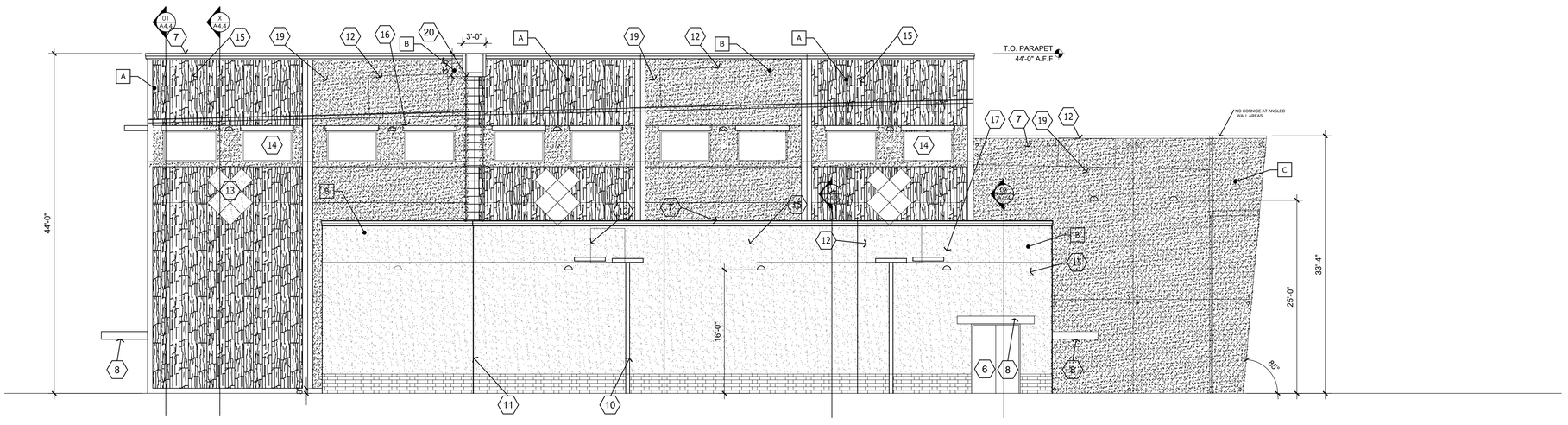
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

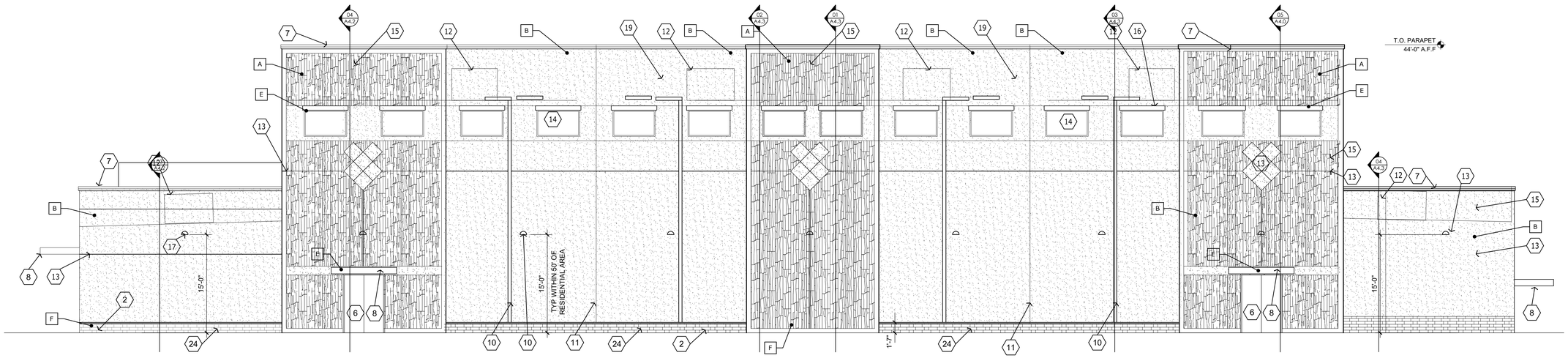
Project No. 22037
Drawn JD
Checked BS

PANEL,SCREEN MOTIF & ARTICULATION CALCULATIONS

Sheet No. A2.01



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



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

Date issued/revised

15 DECEMBER 2022 FOR PRICING

NOTES TO SHEET

1. ALUMINUM AND 1" INSULATED LOW-E GLASS STOREFRONT SYSTEM, CLEAR ANODIZED.
2. THINK BRICK
3. ROOF LEVEL. RE: STRUCTURAL DRAWINGS.
4. 3'-0" x 9'-0" ALUMINUM CLEAR ANODIZED LOW-E GLASS STOREFRONT DOOR.
5. (2) 3'-0" X 9'-0" ALUMINUM CLEAR ANODIZED LOW-E GLASS STOREFRONT DOOR.
6. (2) 3'-0" X 9'-0" HOLLOW METAL DOOR & FRAME; PAINT.
7. PREFINISHED METAL CAP FLASHING.
8. 6' ALUMINUM CANOPY (TO MATCH STOREFRONT COLOR)
9. FIBER CEMENT BOARD
10. 26 ga. 8"x8" PRE-FINISHED DOWNSPOUTS WITH OVERFLOW (TIES TO UNDERGROUND STORM. RE: CIVIL DRAWINGS)
11. CONCRETE TILT-WALL EXPANSION JOINT.
12. MECHANICAL UNIT ON ROOF
13. 2" x 3/4" CONCRETE REVEAL.
14. ALUMINUM AND 1" GLASS WINDOWS.
15. US FORMLINER - PATTERN #2/195 (GYSENBERG)
16. ALUMINUM LOUVERS 24" DEPTH
17. ELECTRICAL DECORATIVE WALL SCONCE FIXTURE. RE: ELECTRICAL DRAWINGS (MOUNTED 15' MAX WITH IN 50' OF RESIDENTIAL)
18. OVER-FLOW ROOF DRAIN WITH DOWNSPOUT NOZZLE
19. TEXTURED PAINT AT ALL TILT-WALL PANELS
20. STEEL ROOF LADDER; PAINT.
21. STAINLESS STEEL DECORATIVE MOTIFFS (TYP) RE: A2.1 FOR DETAILS
22. WELL LIGHTS (RE: SITE PLAN & ELECTRICAL)
23. BUILDING ADDRESS; FIELD VERIFICATION IS ACCEPTABLE FOR BEST LOCATION/ELEVATION PER IFC 505
24. INTEGRAL PLANTER BED WITH BENCH SEATING

COLORS:

A	FIELD COLOR "A" - SW 7066 "GRAY MATTERS
B	FIELD COLOR "B" - SW 7067 "CITYSCAPE"
C	FIELD COLOR "C" - SW 7015 "REPOSE GRAY"
D	FIBER CEMENT BOARD - AFC CLADDING - INLINE 050 - "GRAPHITE"
E	PRE-FINISHED ALUMINUM METAL CANOPIES/LOUVERS
F	THIN STONE - OLD YANKEE: DARK IRON SPOT SMOOTH

ALL COLORS TO BE SELECTED BY THE THE ARCHITECT AND APPROVED BY OWNER.

IF MECHANICAL EQUIPMENT THAT IS MOUNTED ON A BUILDING WALL THAT IS WITHIN PUBLIC VIEW SHALL BE ENCLOSED, SCREENED BY OPAQUE FENCING,LANDSCAPING, OR PAINTED TO MATCH THE BUILDING FACADE." (SEC. 11.03.154(B)(1)(C))

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

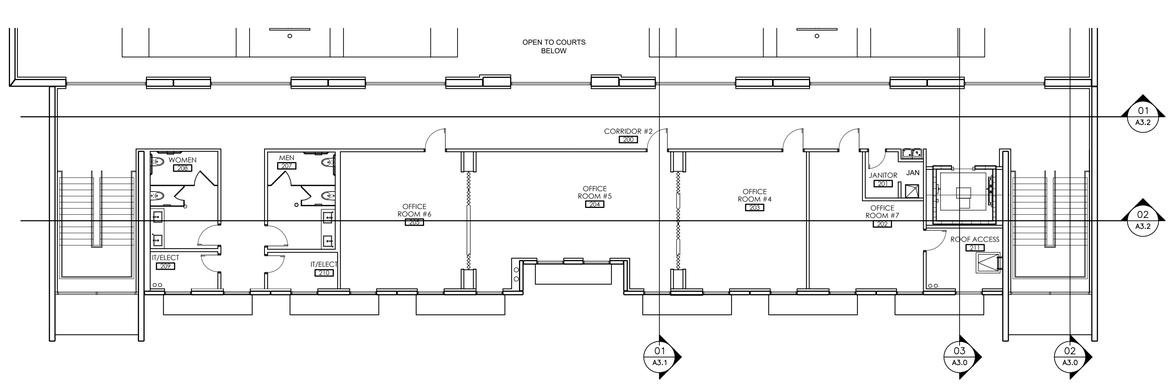
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

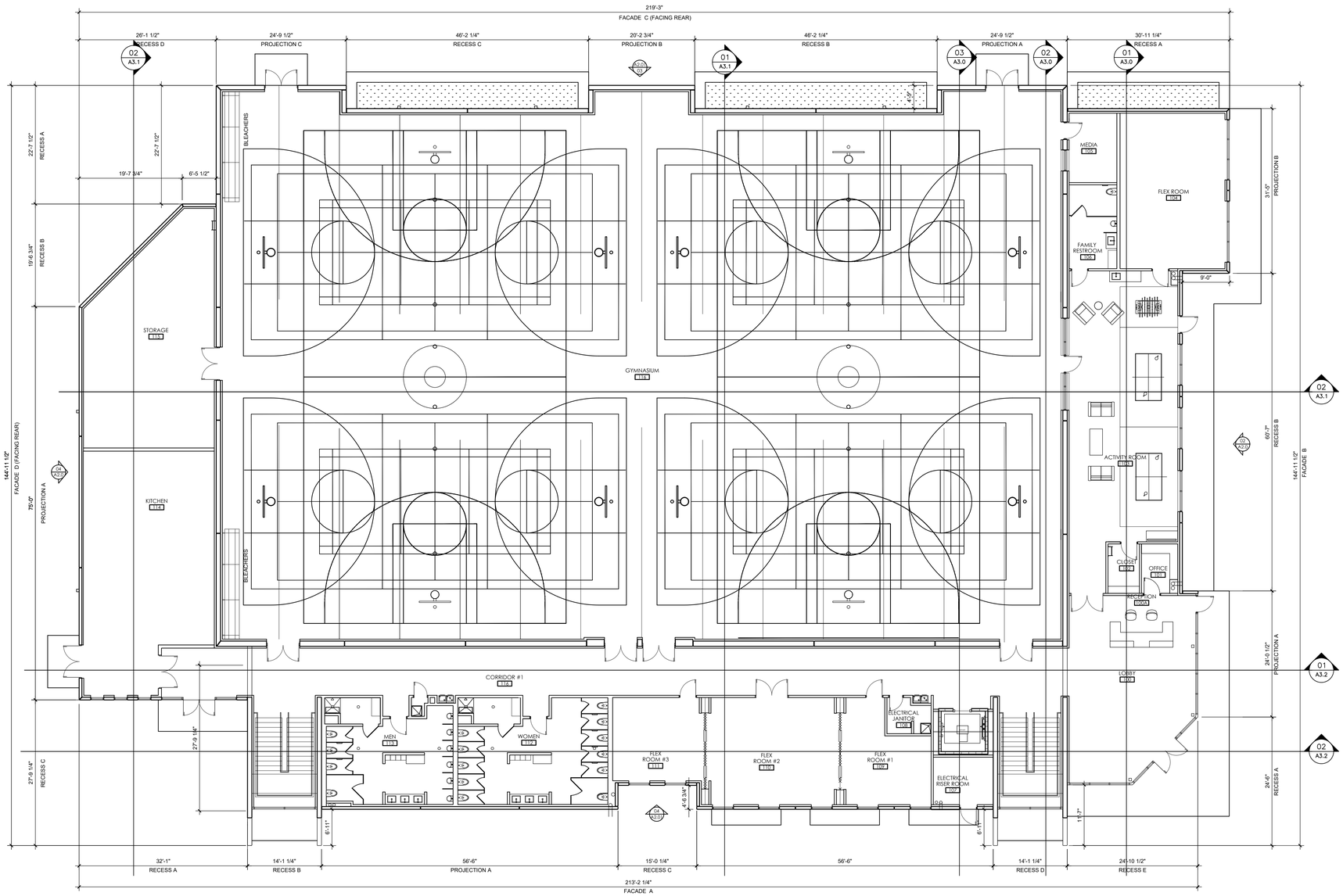
Project No.	22037
Drawn	JD
Checked	BS

EXTERIOR ELEVATIONS

Sheet No. A2.1



2 SECOND FLOOR PLAN
SCALE: 3/32" = 1'-0"



1 FIRST FLOOR PLAN
SCALE: 3/32" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS, Inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

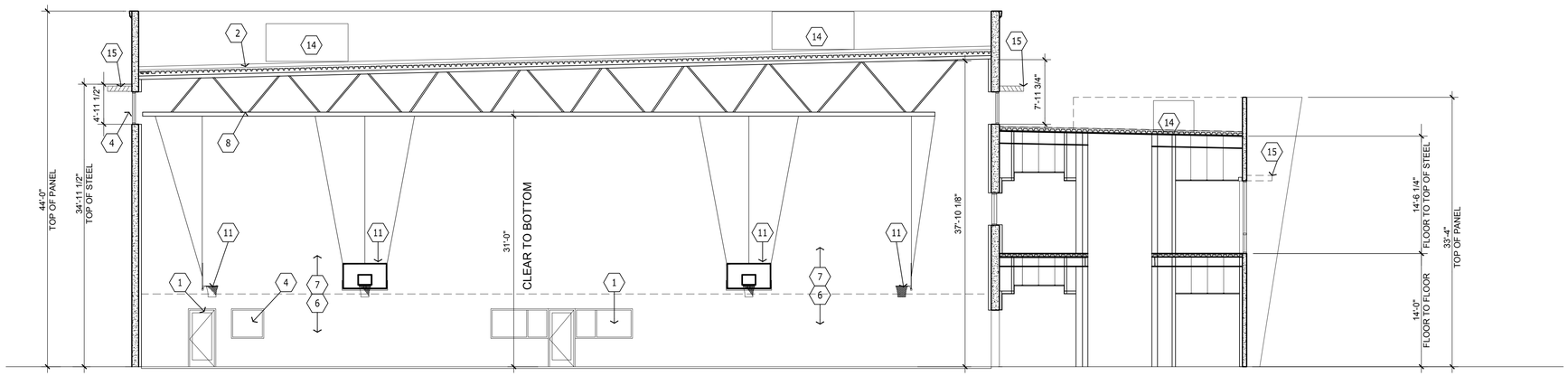
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

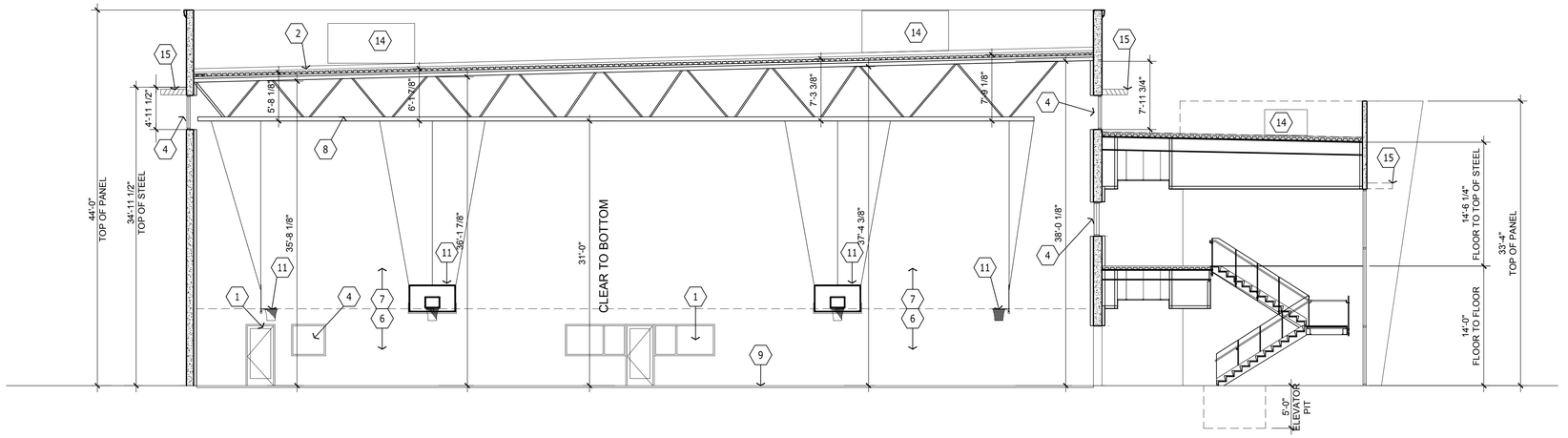
Project No.	22037
Drawn	JD
Checked	BS

ARTICULATION FLOOR PLANS

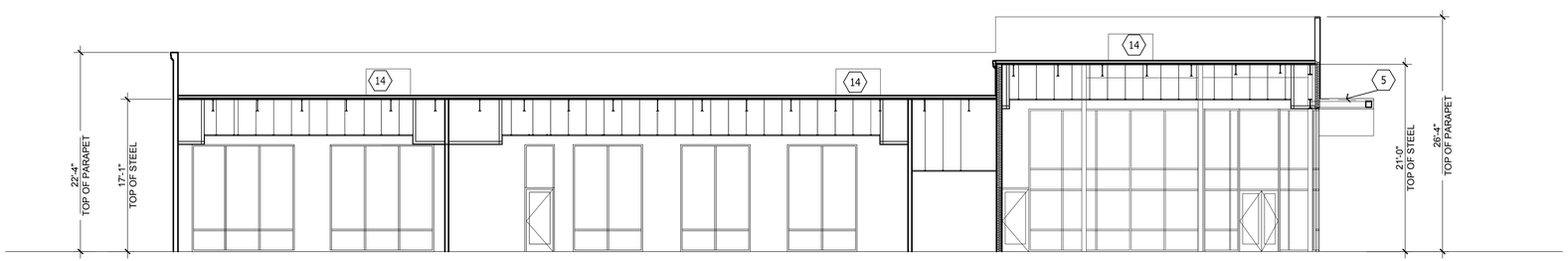
Sheet No. A2.11



3 BUILDING SECTION
SCALE: 1/8" = 1'-0"



2 BUILDING SECTION
SCALE: 1/8" = 1'-0"



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

Date issued/revised

15 DECEMBER 2022 FOR PRICING

NOTES TO SHEET

1. ALUMINUM AND 1" INSULATED LOW-E GLASS STOREFRONT SYSTEM, CLEAR ANODIZED.
2. ROOF LEVEL. RE: STRUCTURAL DRAWINGS
3. 3'-0" X 9'-0" HOLLOW METAL DOOR & FRAME; PAINTED.
4. INSULATED ALUMINUM 1" GLASS WINDOW.
5. 6' ALUMINUM CANOPY
6. 5/8" IMPACT RESISTANT GYPSUM BOARD AT BOTTOM 10'-0" A.F.F. ON ALL PERIMETER WALLS AT GYMNASIUM (PAINT-TBD)
7. 5/8" GYP BOARD (PAINT TBD)
8. PAINT ALL DECKING, STRUCTURE, CONDUITS, MECHANICAL AND OR ELECTRICAL PIPES, SPRINKLER LINES (VERIFY W/SUB) DRY-FALA CEILING PAINT (TBD)
9. GYMNASIUM WOOD FLOORING (RECESSED, RE: STRUCTURE)
10. GYMNASIUM SCORE BOARD (PROVIDE BLOCKING AND ELECTRICAL, RE: ELECTRICAL SCOREBOARD SPECS FOR EXACT LOCATION OF POWER)
11. BASKETBALL EQUIPMENT
12. GYMNASIUM DIVIDER SCREEN
13. GYMNASIUM WALL PADS (VERIFY W/EQUIPMENT)
14. MECHANICAL UNIT (FULLY SCREENED BY PARAPET WALLS
15. ALUMINUM LOUVERS

ALL LUMBER & PLYWOOD USED IN THE BUILDING SHALL BE FIRE RETARDANT & ALL ACOUSTICAL INSULATION USED IN THE BUILDING SHALL HAVE A FLAME SPREAD NO GREATER THAN 25.

DECORATIVE WALL SCONCES STANDARD @ ALL EXTERIOR WALLS

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

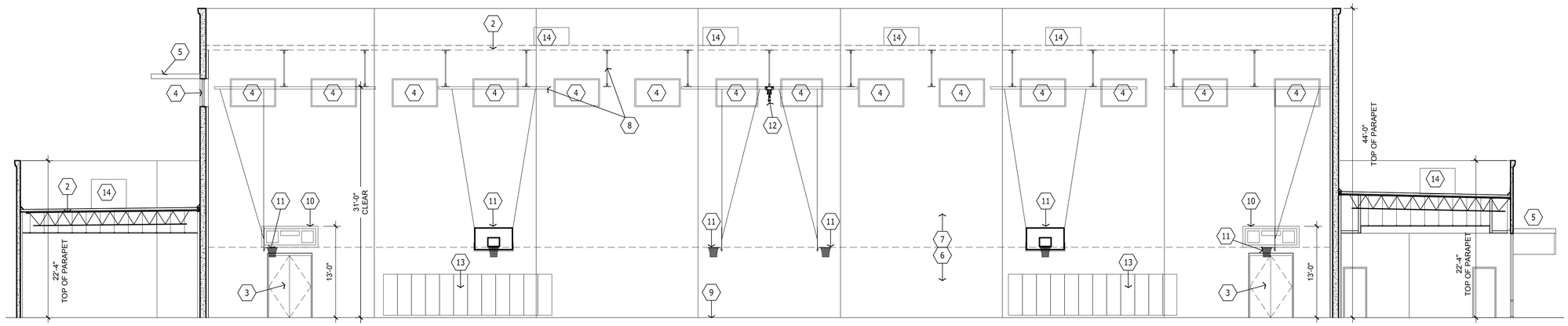
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

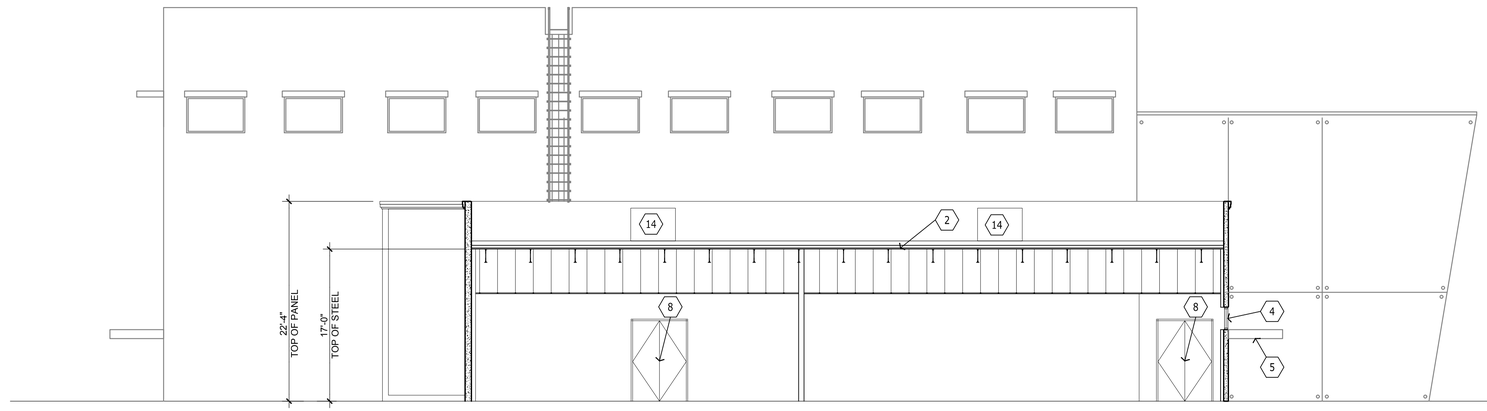
Project No.	22037
Drawn	JD
Checked	BS

BUILDING SECTIONS

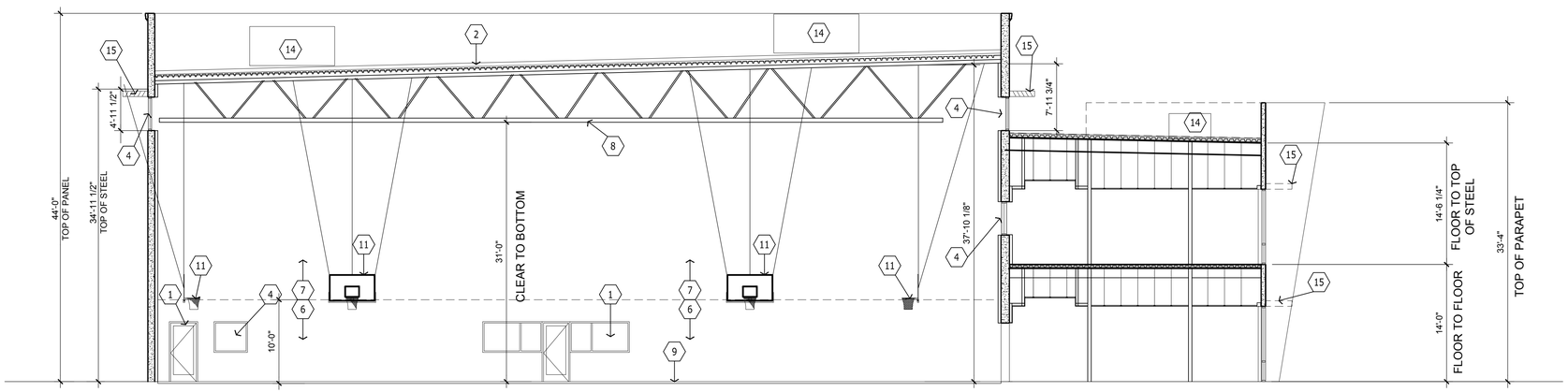
Sheet No. A3.0



3 BUILDING SECTION
SCALE: 1/8" = 1'-0"



2 BUILDING SECTION
SCALE: 1/8" = 1'-0"



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

15 DECEMBER 2022 FOR PRICING

NOTES TO SHEET

1. ALUMINUM AND 1" INSULATED LOW-E GLASS STOREFRONT SYSTEM, CLEAR ANODIZED.
2. ROOF LEVEL. RE: STRUCTURAL DRAWINGS
3. 3'-0" X 9'-0" HOLLOW METAL DOOR & FRAME; PAINTED.
4. INSULATED ALUMINUM 1" GLASS WINDOW.
5. 6' ALUMINUM CANOPY
6. 5/8" IMPACT RESISTANT GYPSUM BOARD AT BOTTOM 10'-0" A.F.F. ON ALL PERIMETER WALLS AT GYMNASIUI (PAINT-TBD)
7. 5/8" GYP BOARD (PAINT TBD)
8. PAINT ALL DECKING, STRUCTURE, CONDUITS, MECHANICAL AND OR ELECTRICAL PIPES, SPRINKLER LINES (VERIFY W/SUB) DRY-FALA CEILING PAINT (TBD
9. GYMNASIUM WOOD FLOORING (RECESSED, RE: STRUCTURE)
10. GYMNASIUM SCORE BOARD (PROVIDE BLOCKING ANI ELECTRICAL, RE: ELECTRICAL SCOREBOARD SPECS FOR EXACT LOCATION OF POWER)
11. BASKETBALL EQUIPMENT
12. GYMNASIUM DIVIDER SCREEN
13. GYMNASIUM WALL PADS (VERIFY W/EQUIPMENT)
14. MECHANICAL UNIT (FULLY SCREENED BY PARAPET WALLS
15. ALUMINUM LOUVERS

ALL LUMBER & PLYWOOD USED IN THE BUILDING SHALL BE FIRE RETARDANT & ALL ACOUSTICAL INSULATION USED IN THE BUILDING SHALL HAVE A FLAME SPREAD NO GREATER THAN 25.

DECORATIVE WALL SCONCES STANDARD @ ALL EXTERIOR WALLS

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

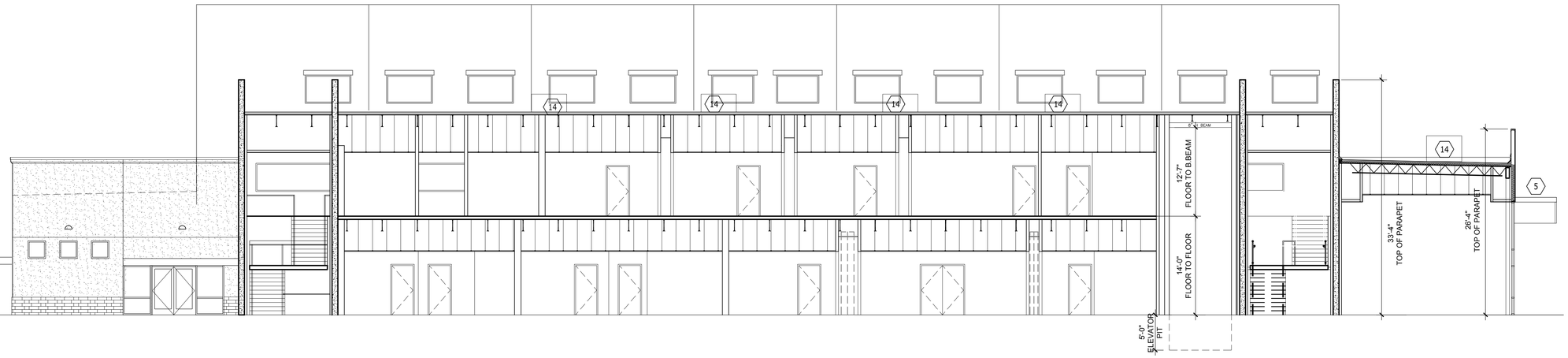
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

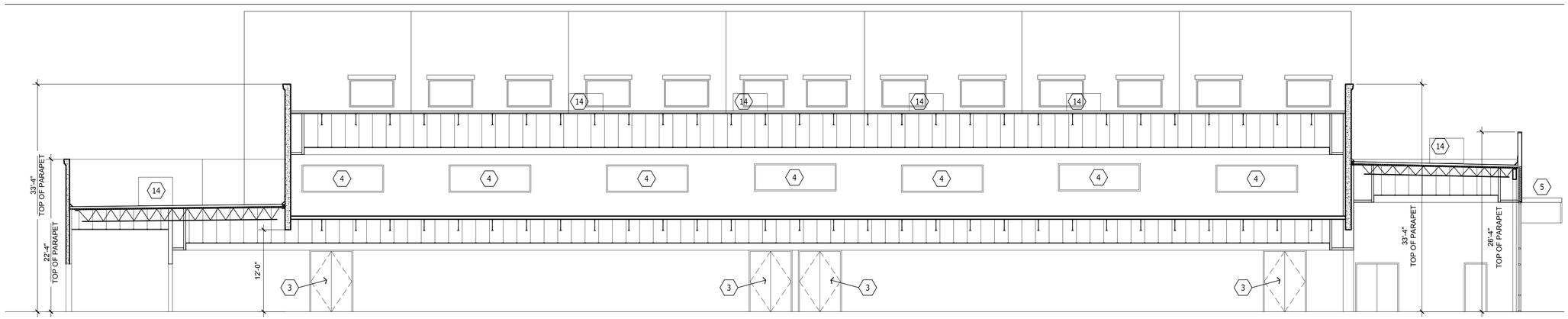
Project No.	22037
Drawn	JD
Checked	BS

BUILDING SECTIONS

Sheet No. A3.1



2 BUILDING SECTION
SCALE: 1/8" = 1'-0"



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

Date issued/revised

15 DECEMBER 2022 FOR PRICING

NOTES TO SHEET

1. ALUMINUM AND 1" INSULATED LOW-E GLASS STOREFRONT SYSTEM, CLEAR ANODIZED.
2. ROOF LEVEL. RE: STRUCTURAL DRAWINGS
3. 3'-0" X 9'-0" HOLLOW METAL DOOR & FRAME; PAINTED.
4. INSULATED ALUMINUM 1" GLASS WINDOW.
5. 6' ALUMINUM CANOPY
6. 5/8" IMPACT RESISTANT GYPSUM BOARD AT BOTTOM 10'-0" A.F.F. ON ALL PERIMETER WALLS AT GYMNASIUM (PAINT-TBD)
7. 5/8" GYP BOARD (PAINT TBD)
8. PAINT ALL DECKING, STRUCTURE, CONDUITS, MECHANICAL AND OR ELECTRICAL PIPES, SPRINKLER LINES (VERIFY W/SUB) DRY-FALA CEILING PAINT (TBD)
9. GYMNASIUM WOOD FLOORING (RECESSED, RE: STRUCTURE)
10. GYMNASIUM SCORE BOARD (PROVIDE BLOCKING AND ELECTRICAL, RE: ELECTRICAL SCOREBOARD SPECS FOR EXACT LOCATION OF POWER)
11. BASKETBALL EQUIPMENT
12. GYMNASIUM DIVIDER SCREEN
13. GYMNASIUM WALL PADS (VERIFY W/EQUIPMENT)
14. MECHANICAL UNIT (FULLY SCREENED BY PARAPET WALLS
15. ALUMINUM LOUVERS

ALL LUMBER & PLYWOOD USED IN THE BUILDING SHALL BE FIRE RETARDANT & ALL ACOUSTICAL INSULATION USED IN THE BUILDING SHALL HAVE A FLAME SPREAD NO GREATER THAN 25.

DECORATIVE WALL SCONCES STANDARD @ ALL EXTERIOR WALLS

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

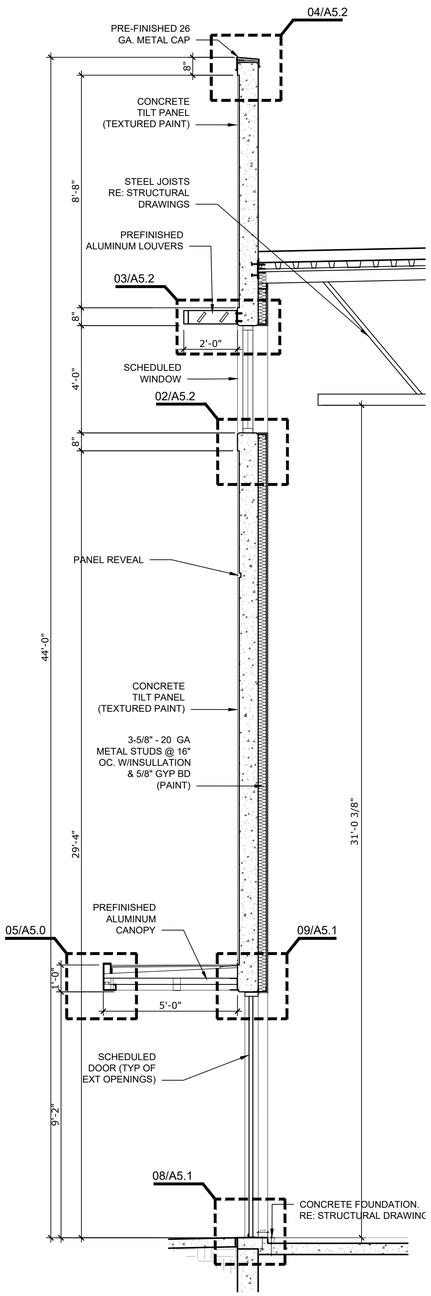
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

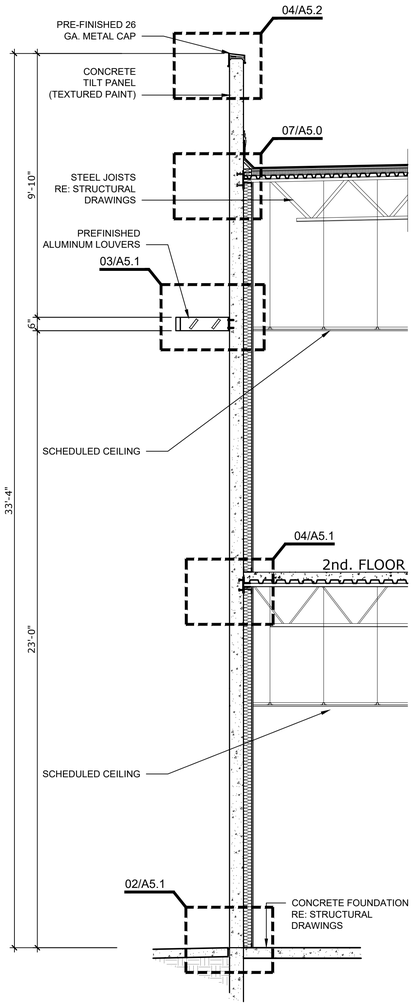
Project No.	22037
Drawn	JD
Checked	BS

BUILDING SECTIONS

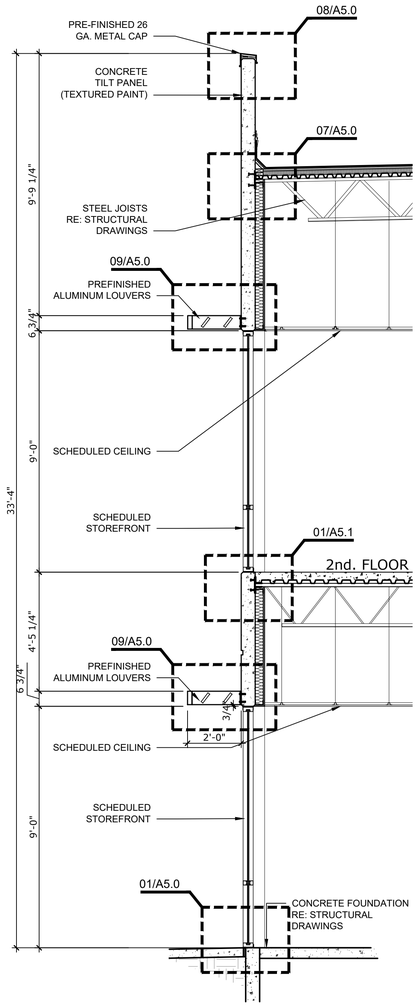
Sheet No. A3.2



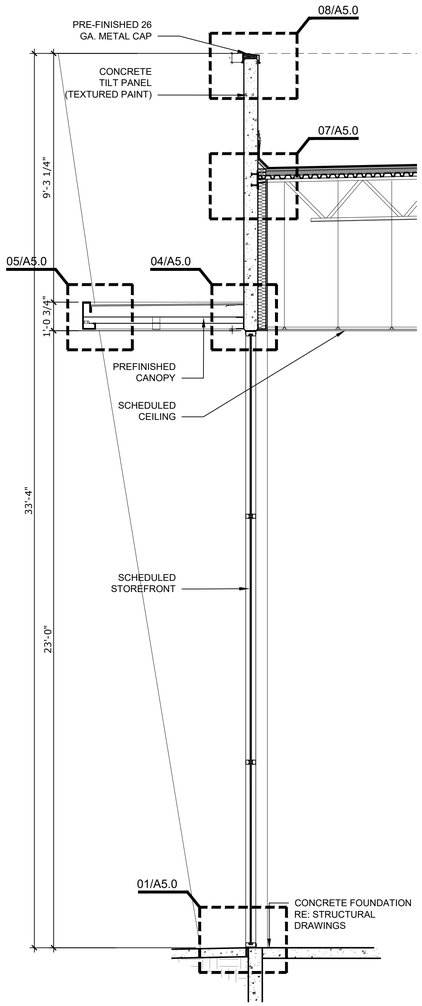
05 WALL SECTION
SCALE: 3/8" = 1'-0"



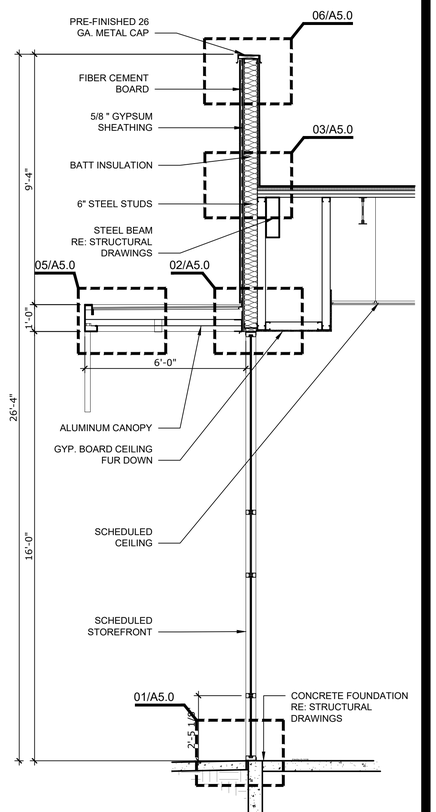
04 WALL SECTION
SCALE: 3/8" = 1'-0"



03 WALL SECTION
SCALE: 3/8" = 1'-0"



02 WALL SECTION
SCALE: 3/8" = 1'-0"



01 WALL SECTION
SCALE: 3/8" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS, inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

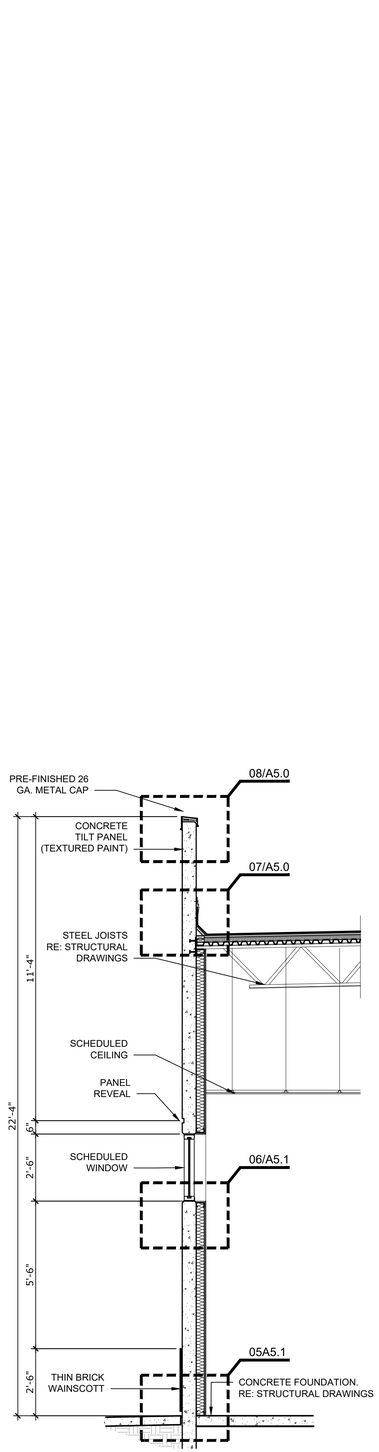
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK, TEXAS 78613

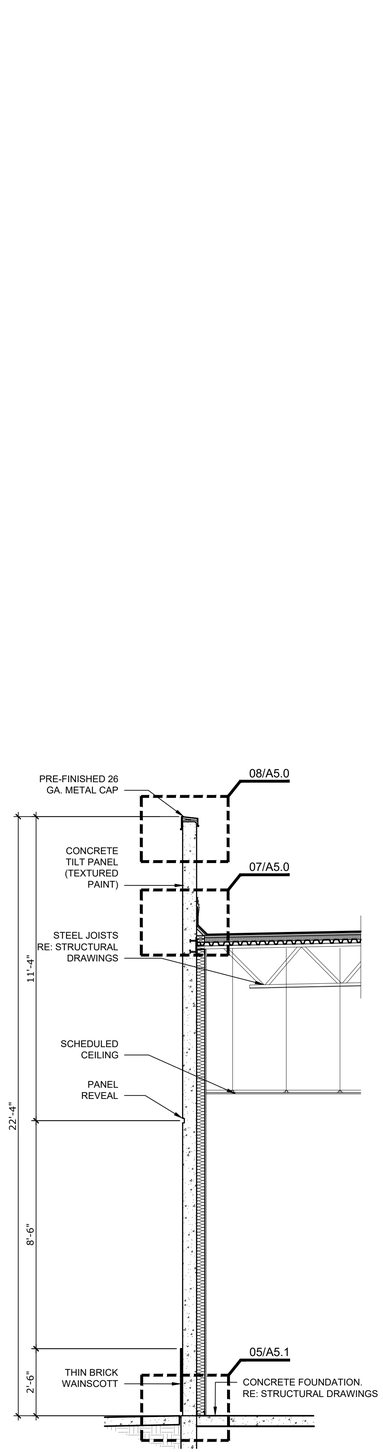
Project No.	22037
Drawn	JD
Checked	BS

BUILDING SECTIONS

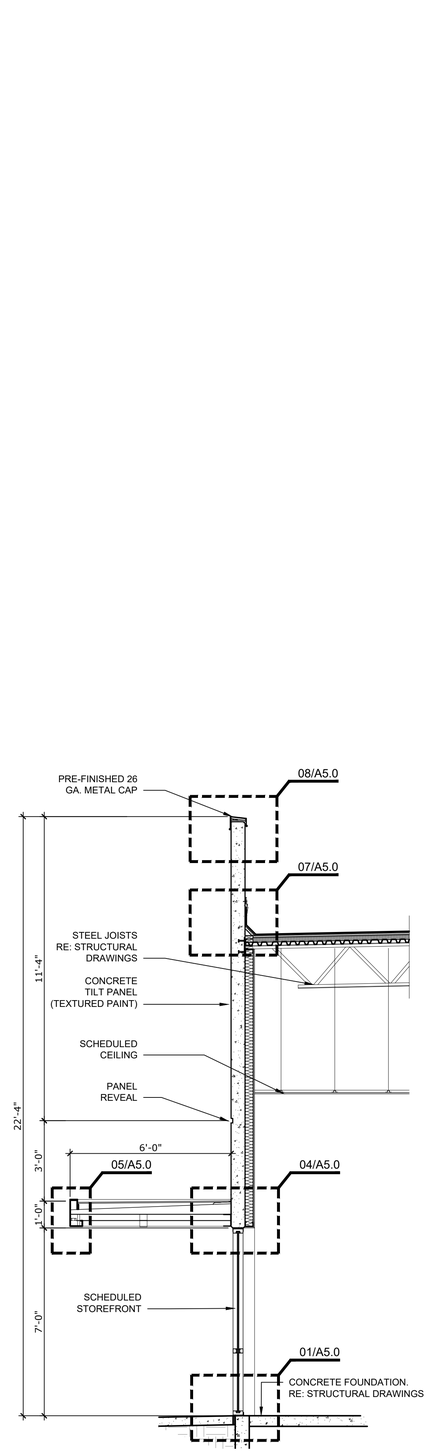
Sheet No. A4.0



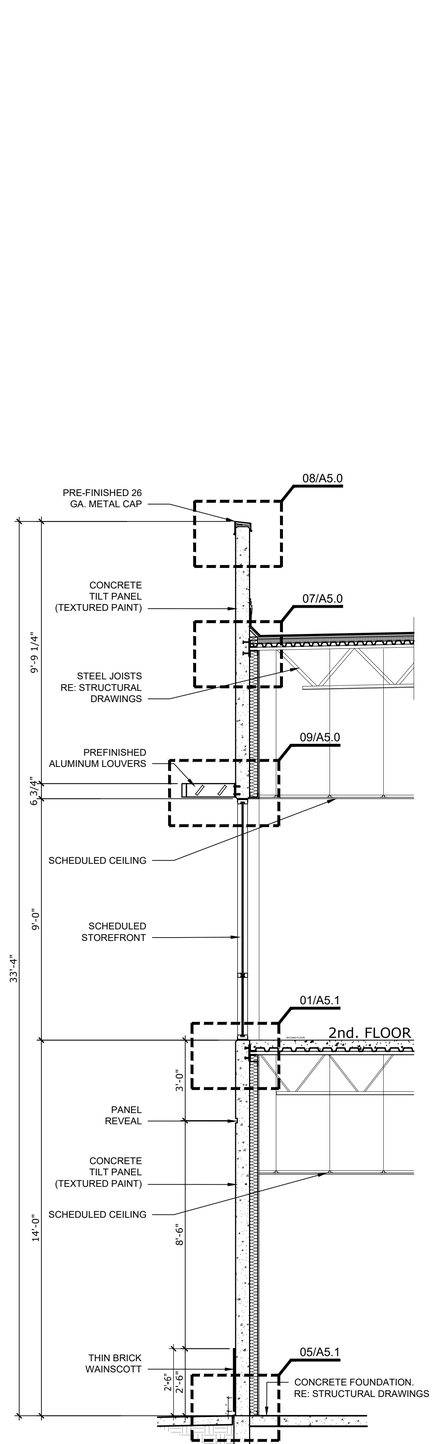
04 WALL SECTION
SCALE: 3/8" = 1'-0"



03 WALL SECTION
SCALE: 3/8" = 1'-0"



02 WALL SECTION
SCALE: 3/8" = 1'-0"



01 WALL SECTION
SCALE: 3/8" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

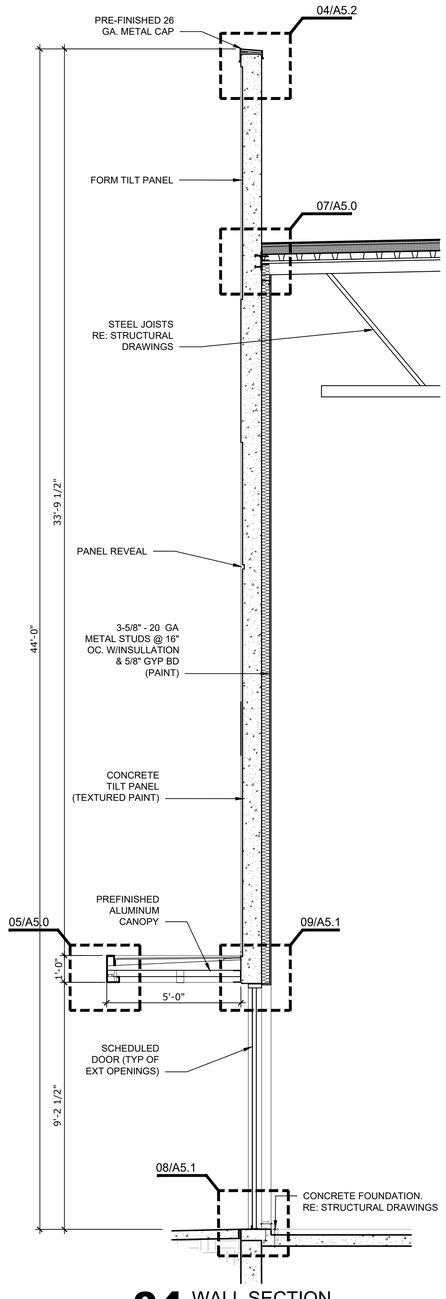
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK, TEXAS 78613

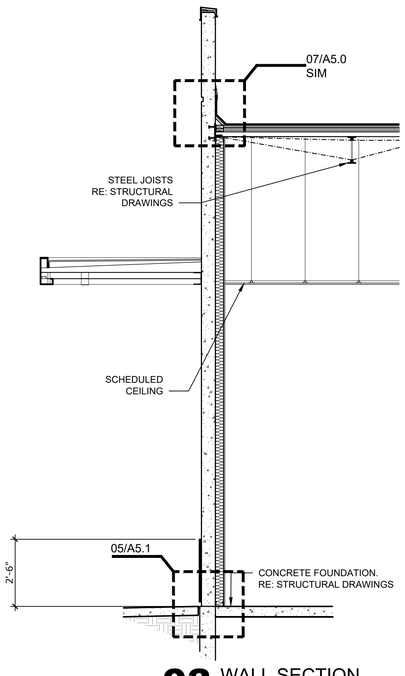
Project No.	22037
Drawn	JD
Checked	BS

BUILDING SECTIONS

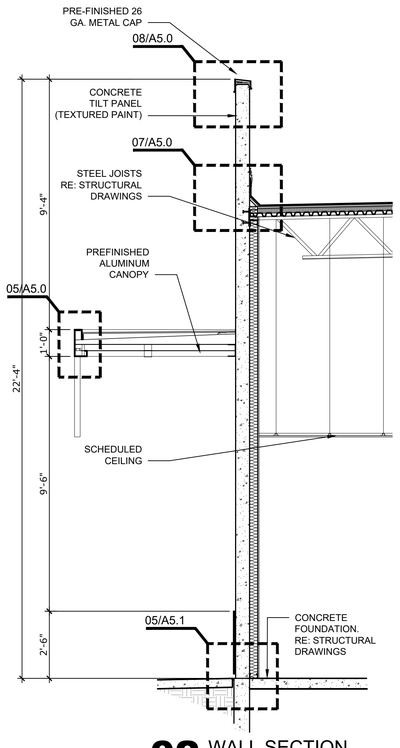
Sheet No. A4.1



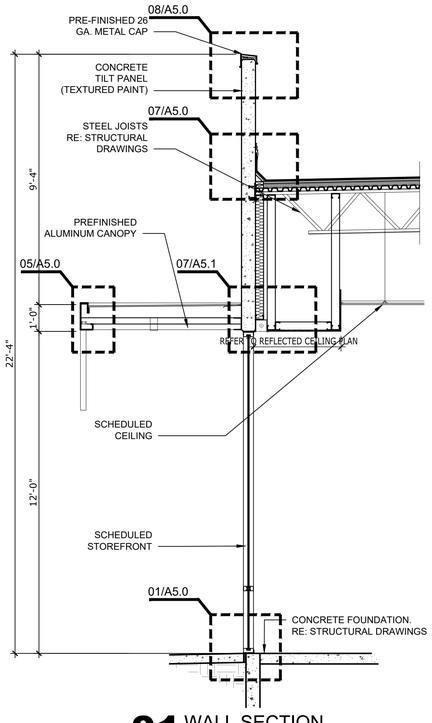
04 WALL SECTION
SCALE: 3/8" = 1'-0"



03 WALL SECTION
SCALE: 3/8" = 1'-0"



02 WALL SECTION
SCALE: 3/8" = 1'-0"



01 WALL SECTION
SCALE: 3/8" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS, inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

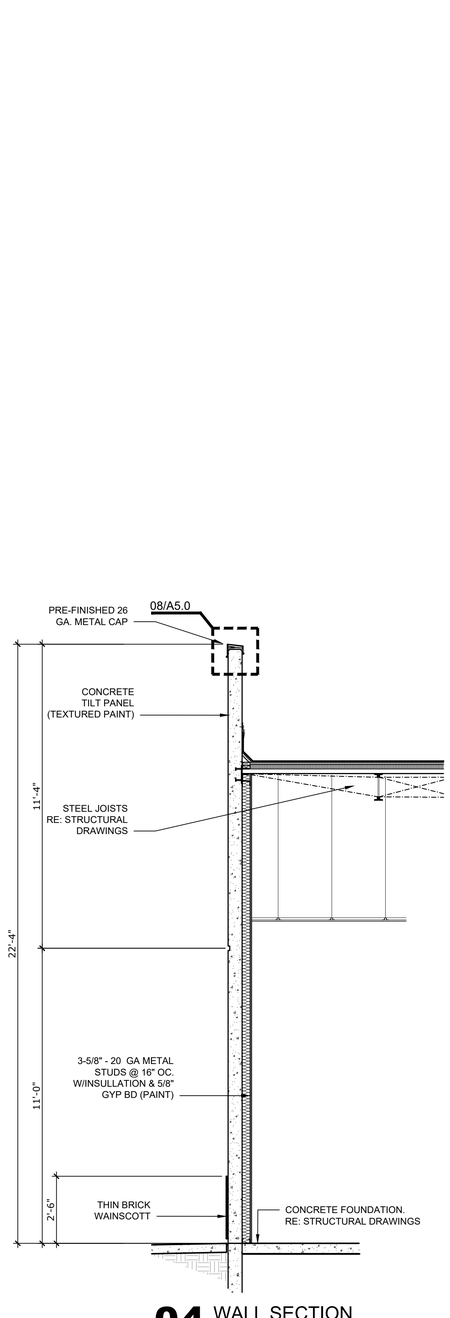
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK, TEXAS 78613

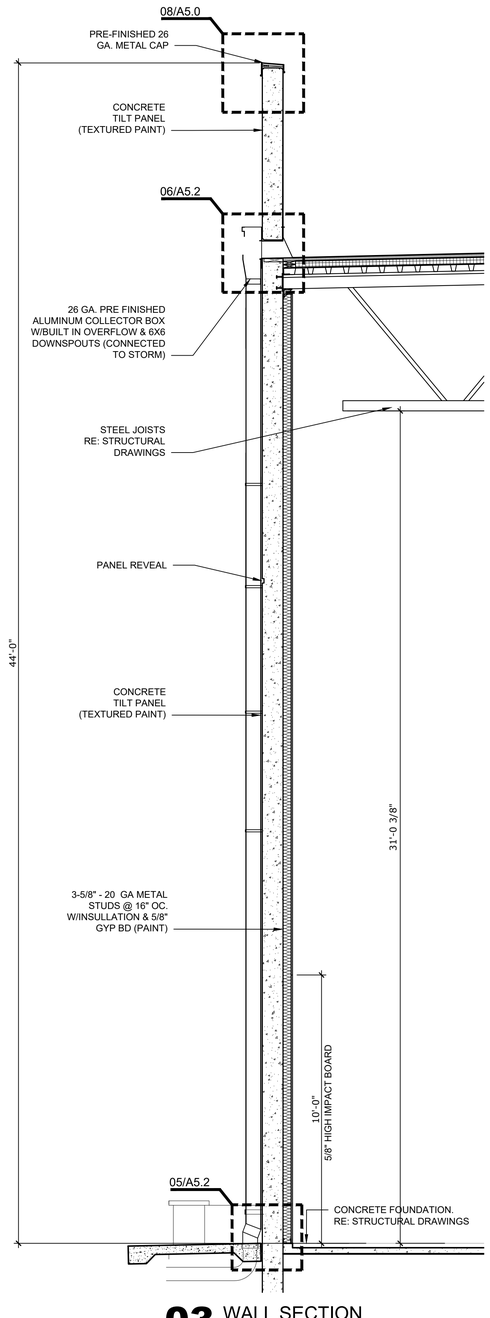
Project No.	22037
Drawn	JD
Checked	BS

BUILDING SECTIONS

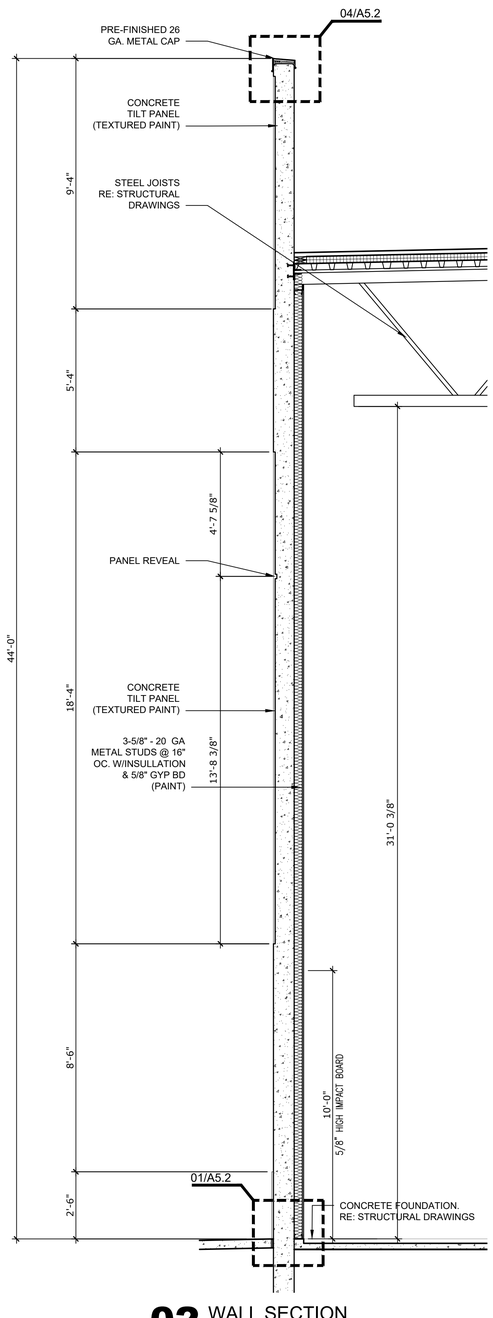
Sheet No. A4.2



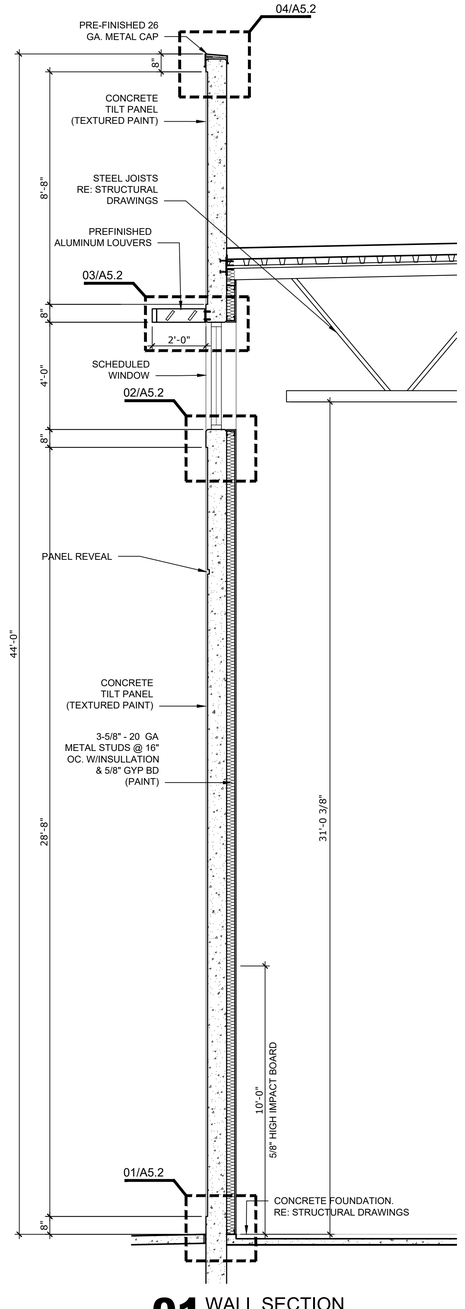
04 WALL SECTION
SCALE: 3/8" = 1'-0"



03 WALL SECTION
SCALE: 3/8" = 1'-0"



02 WALL SECTION
SCALE: 3/8" = 1'-0"



01 WALL SECTION
SCALE: 3/8" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS, Inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

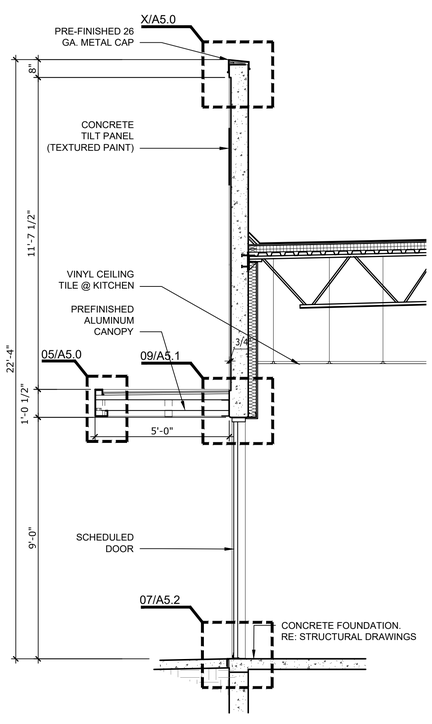
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK, TEXAS 78613

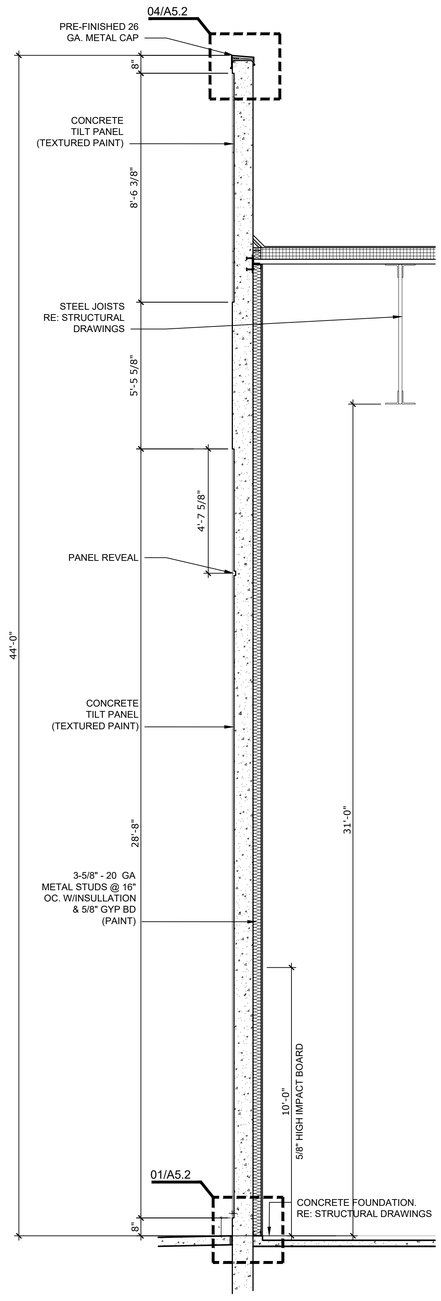
Project No.	22037
Drawn	JD
Checked	BS

BUILDING SECTIONS

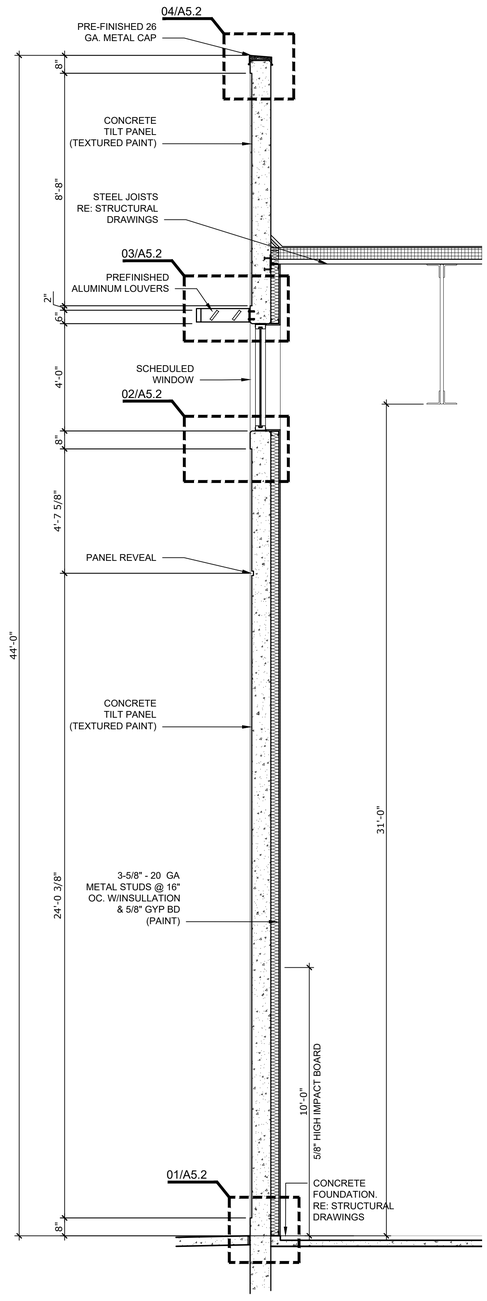
Sheet No. A4.3



03 WALL SECTION
SCALE: 3/8" = 1'-0"



02 WALL SECTION
SCALE: 3/8" = 1'-0"



01 WALL SECTION
SCALE: 3/8" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

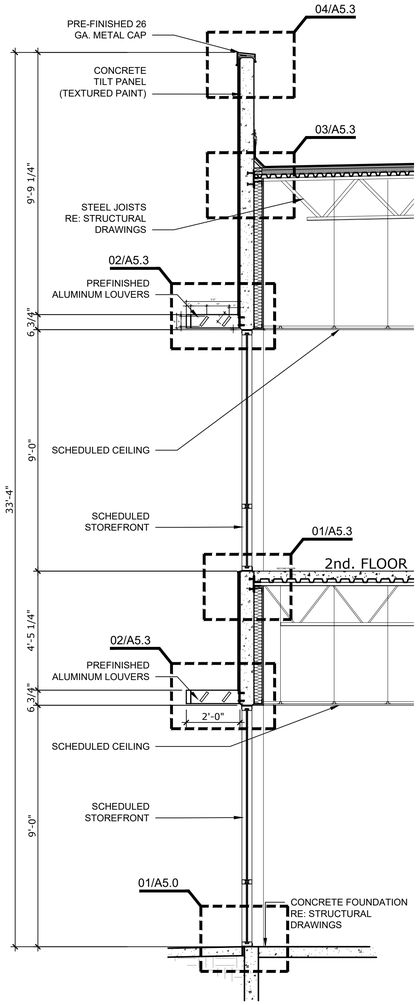
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK, TEXAS 78613

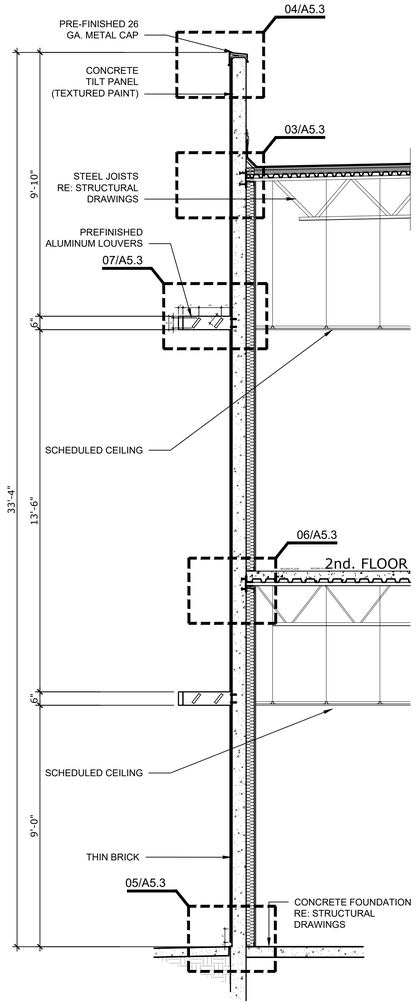
Project No.	22037
Drawn	JD
Checked	BS

BUILDING SECTIONS

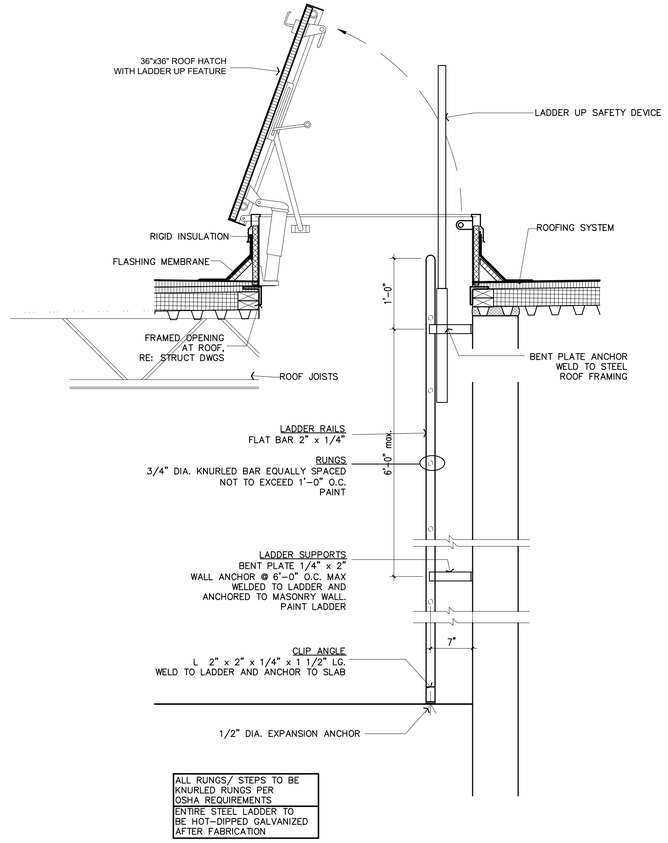
Sheet No. A4.4



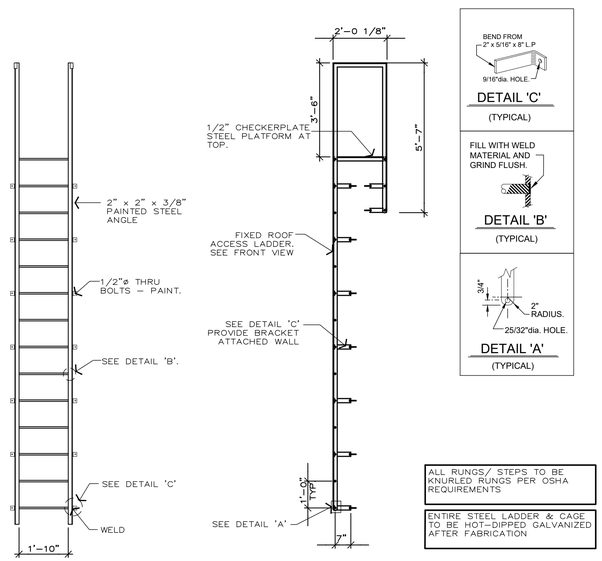
04 WALL SECTION
SCALE: 3/8" = 1'-0"



03 WALL SECTION
SCALE: 3/8" = 1'-0"



2 ROOF LADDER DETAIL INTERIOR
SCALE: 1" = 1'-0"



1 ROOF LADDER DETAIL EXTERIOR
SCALE: 3/8" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

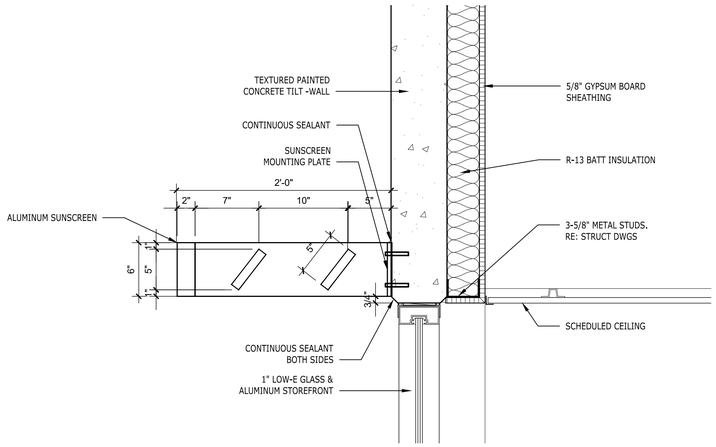
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK, TEXAS 78613

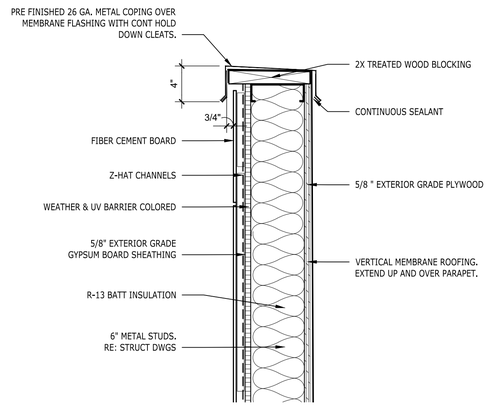
Project No.	22037
Drawn	JD
Checked	BS

BUILDING SECTIONS

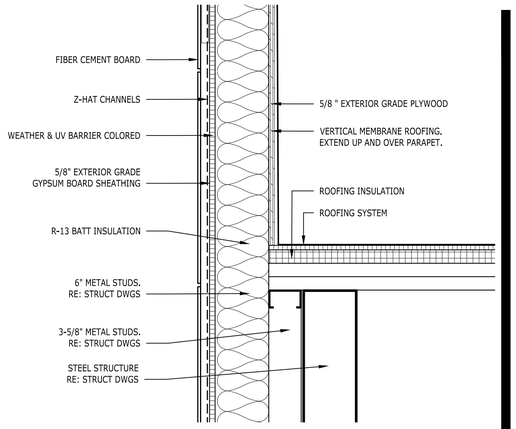
Sheet No. A4.5



09 DETAIL
SCALE: 3/8" = 1'-0"



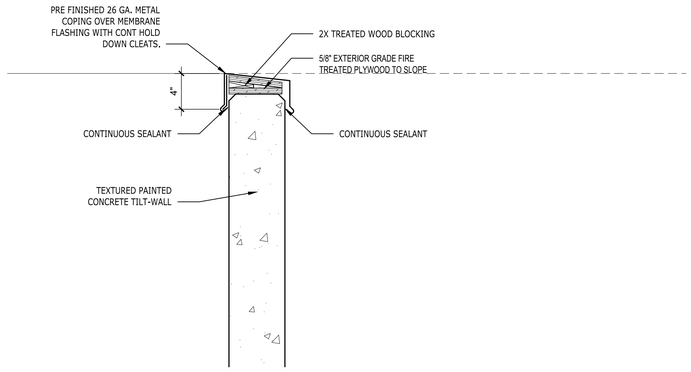
06 DETAIL
SCALE: 3/8" = 1'-0"



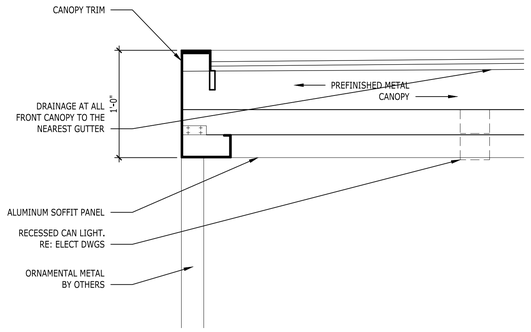
03 DETAIL
SCALE: 3/8" = 1'-0"

Date issued/revised

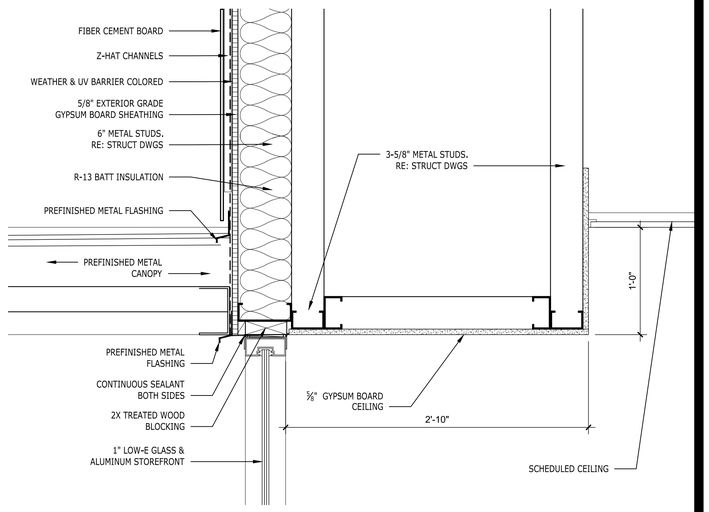
15 DECEMBER 2022 FOR PRICING



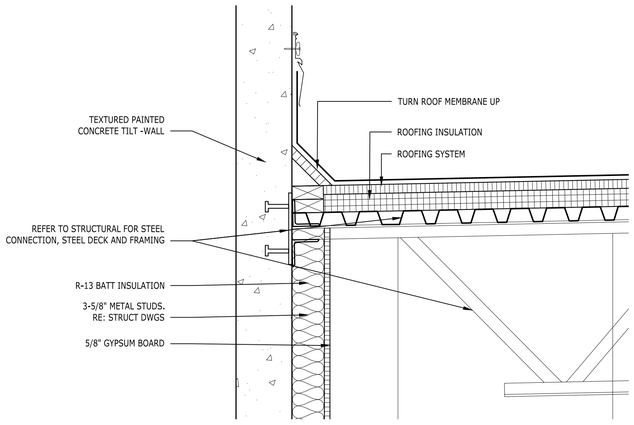
08 DETAIL
SCALE: 3/8" = 1'-0"



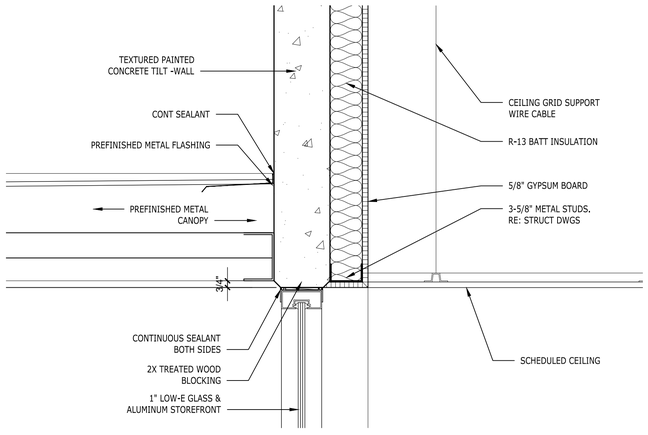
05 DETAIL
SCALE: 3/8" = 1'-0"



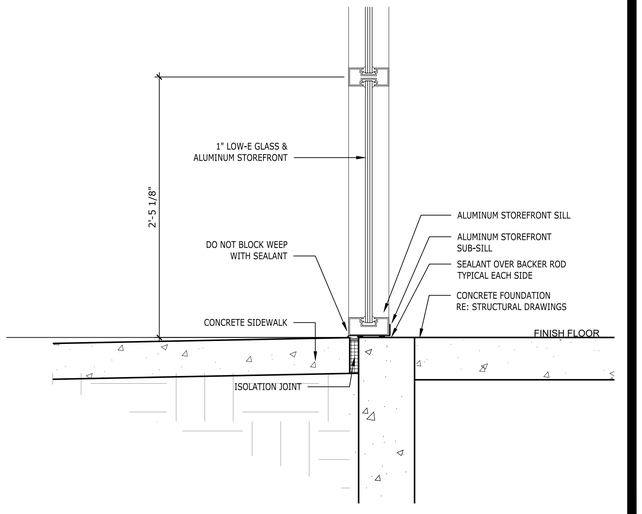
02 DETAIL
SCALE: 3/8" = 1'-0"



07 DETAIL
SCALE: 3/8" = 1'-0"



04 DETAIL
SCALE: 3/8" = 1'-0"



01 DETAIL
SCALE: 3/8" = 1'-0"

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT
FOR REGULATORY APPROVAL,
PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

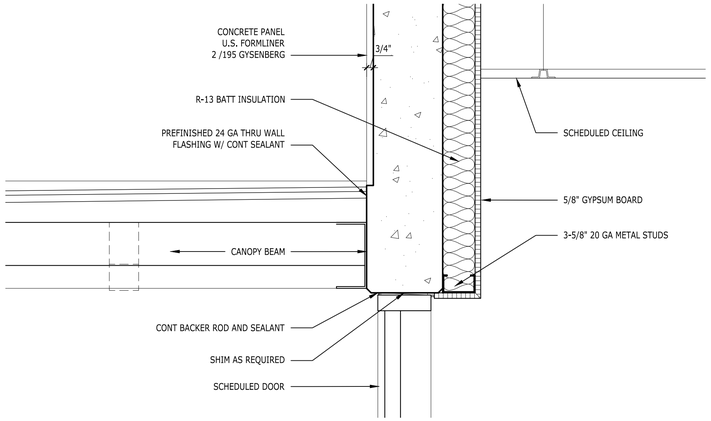
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK, TEXAS 78613

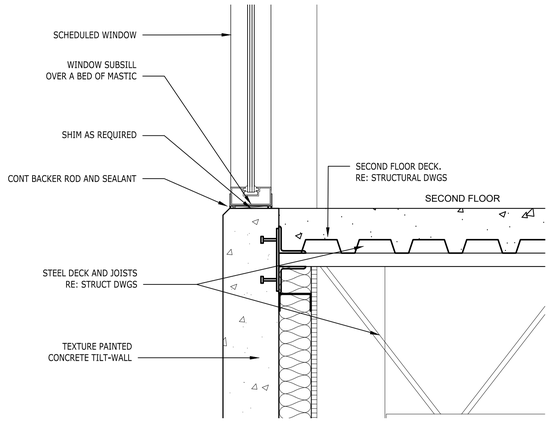
Project No.	22037
Drawn	JD
Checked	BS

SECTION DETAILS

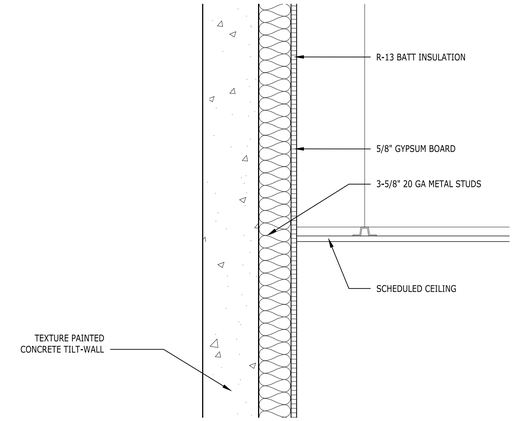
Sheet No. A5.0



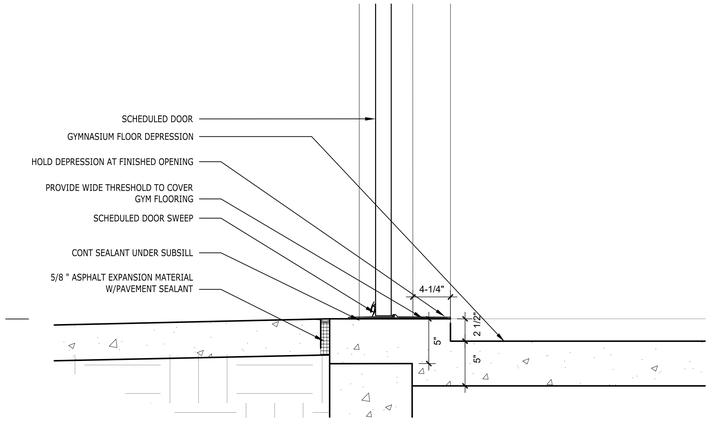
09 DETAIL
SCALE: 3/8" = 1'-0"



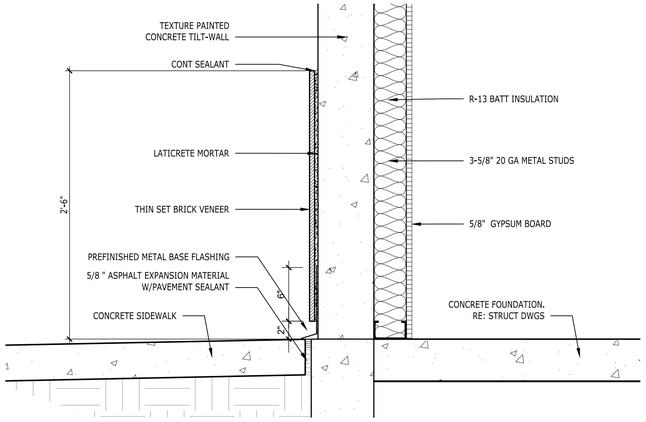
06 DETAIL
SCALE: 3/8" = 1'-0"



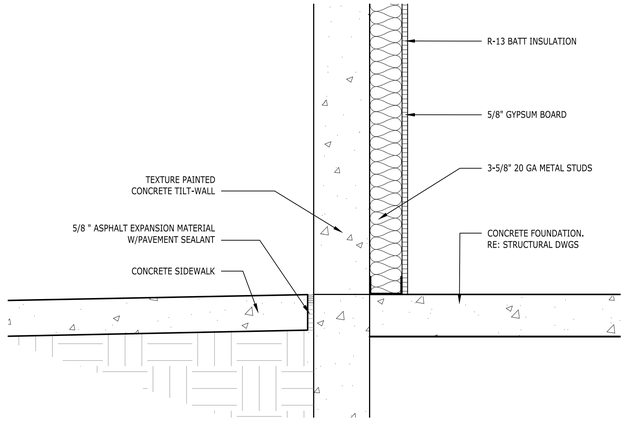
03 DETAIL
SCALE: 3/8" = 1'-0"



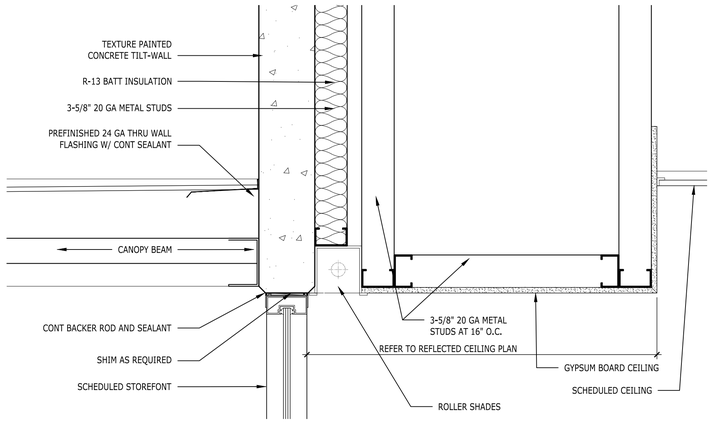
08 DETAIL
SCALE: 3/8" = 1'-0"



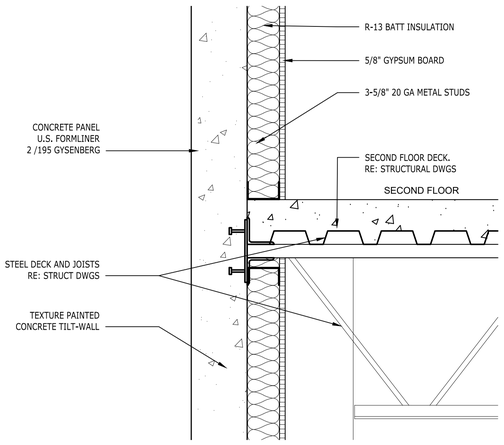
05 DETAIL
SCALE: 3/8" = 1'-0"



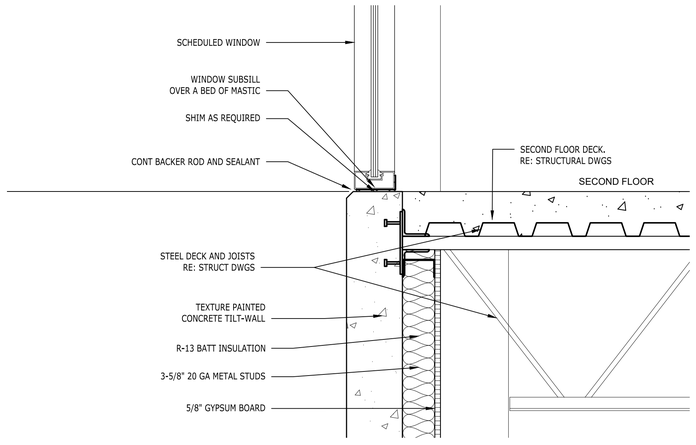
02 DETAIL
SCALE: 3/8" = 1'-0"



07 DETAIL
SCALE: 3/8" = 1'-0"



04 DETAIL
SCALE: 3/8" = 1'-0"



01 DETAIL
SCALE: 3/8" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS, inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

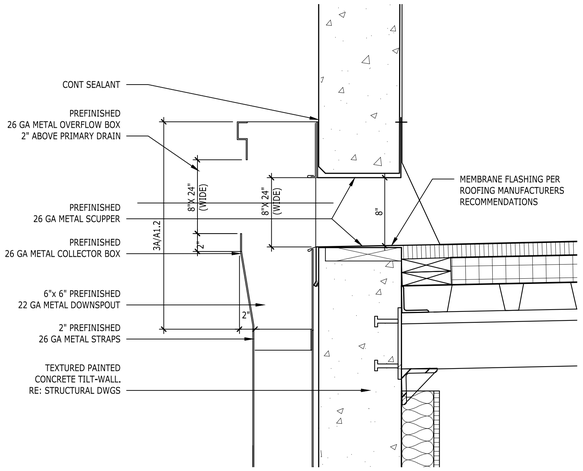
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK, TEXAS 78613

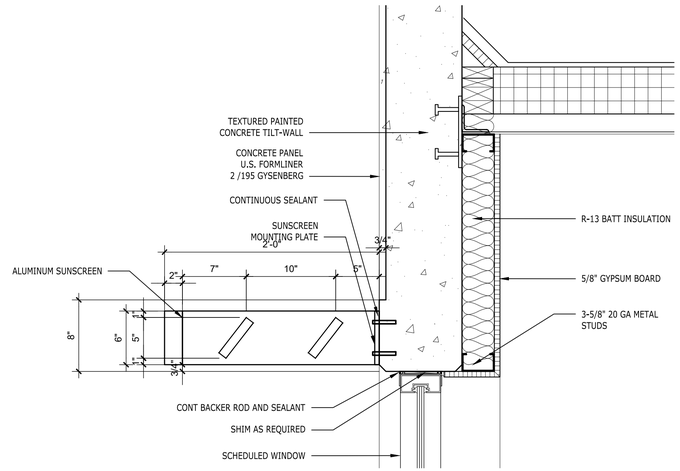
Project No.	22037
Drawn	JD
Checked	BS

SECTION DETAILS

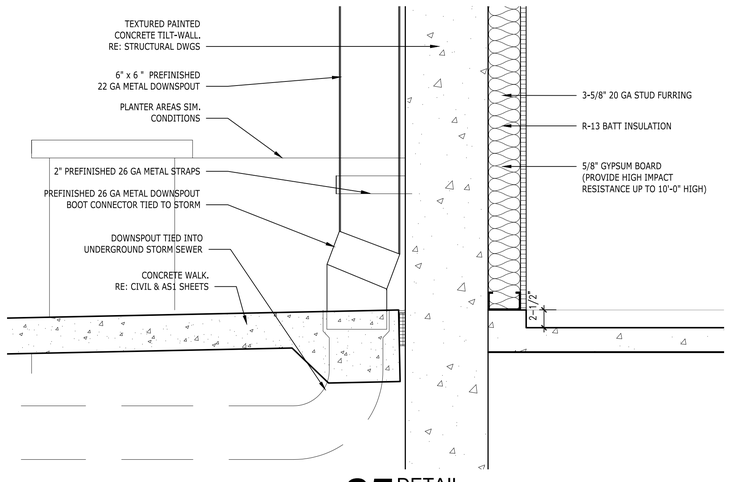
Sheet No. A5.1



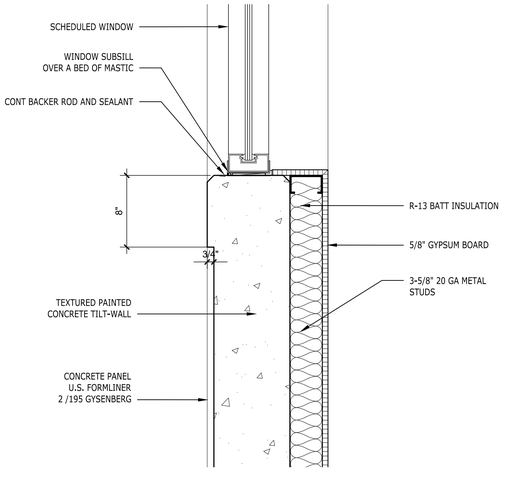
06 DETAIL
SCALE: 3/8" = 1'-0"



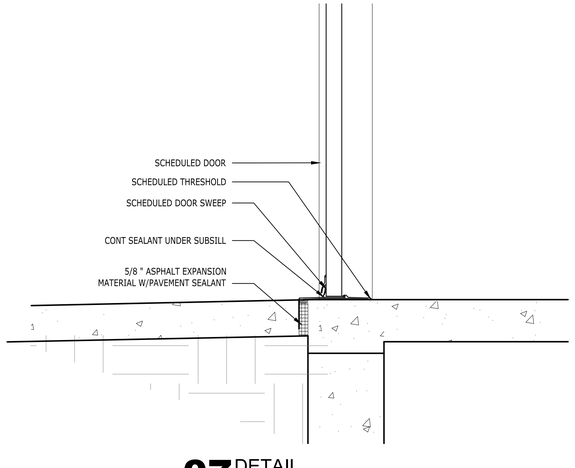
03 DETAIL
SCALE: 3/8" = 1'-0"



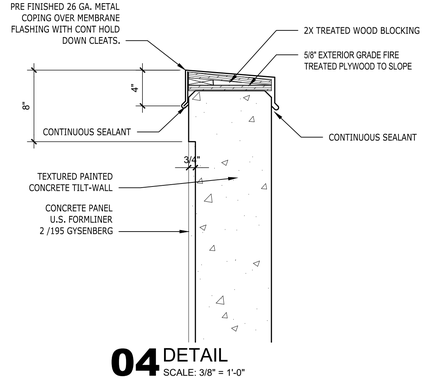
05 DETAIL
SCALE: 3/8" = 1'-0"



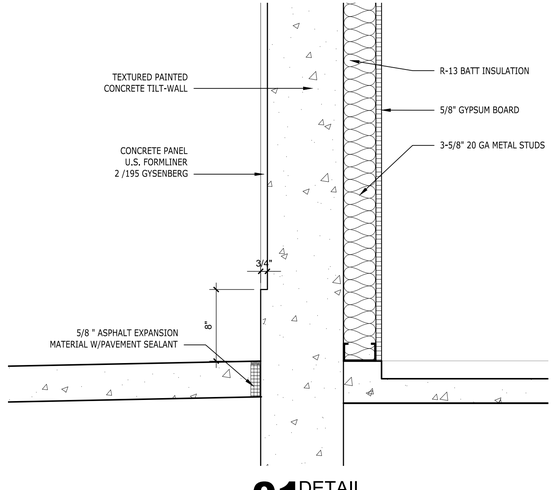
02 DETAIL
SCALE: 3/8" = 1'-0"



07 DETAIL
SCALE: 3/8" = 1'-0"



04 DETAIL
SCALE: 3/8" = 1'-0"



01 DETAIL
SCALE: 3/8" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS, inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT
FOR REGULATORY APPROVAL,
PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

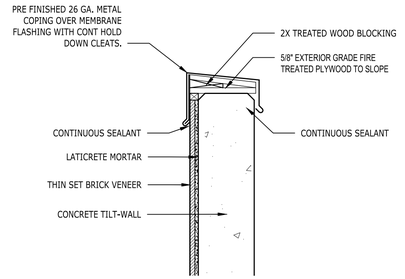
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK, TEXAS 78613

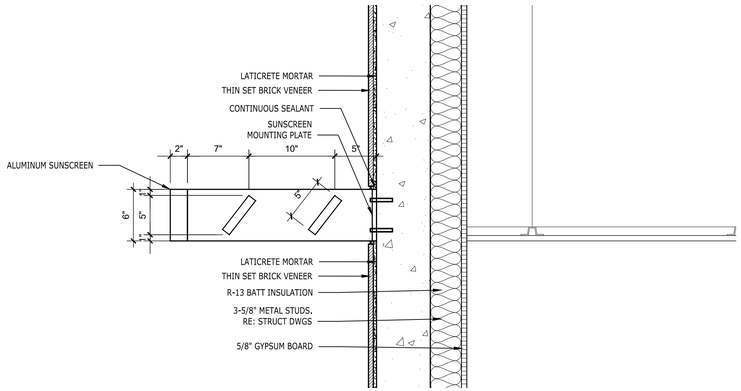
Project No.	22037
Drawn	JD
Checked	BS

SECTION DETAILS

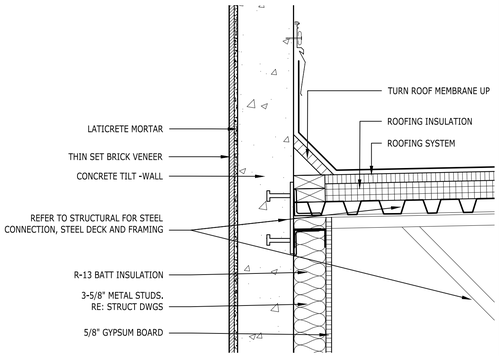
Sheet No. A5.2



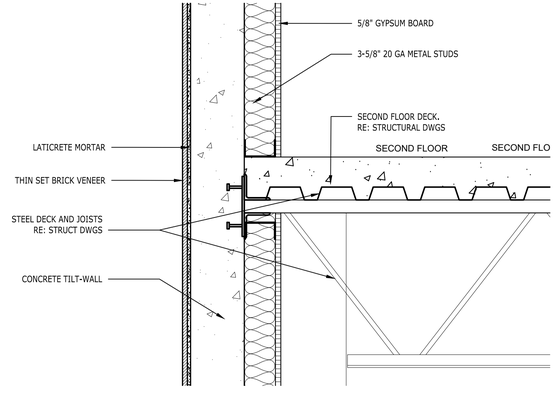
04 DETAIL
SCALE: 3/8" = 1'-0"



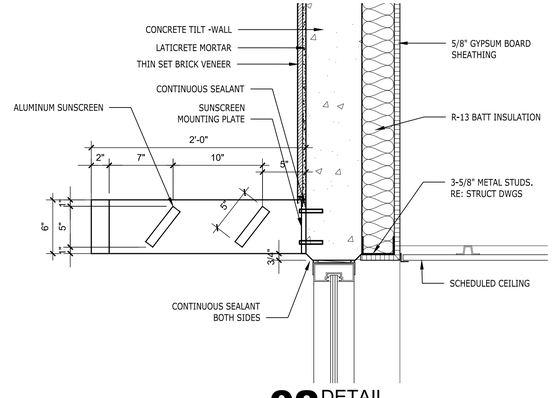
07 DETAIL
SCALE: 3/8" = 1'-0"



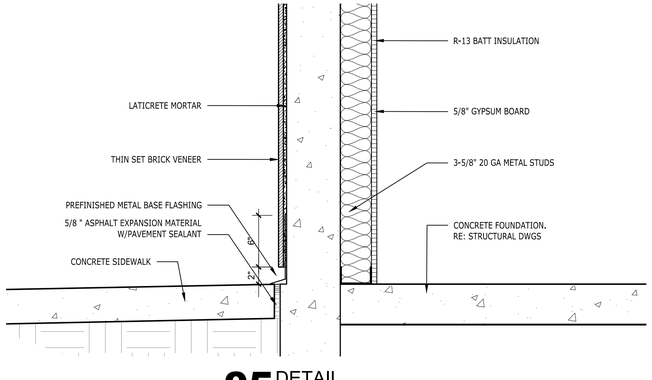
03 DETAIL
SCALE: 3/8" = 1'-0"



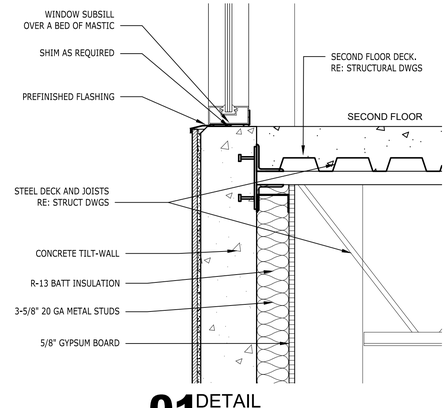
06 DETAIL
SCALE: 3/8" = 1'-0"



02 DETAIL
SCALE: 3/8" = 1'-0"



05 DETAIL
SCALE: 3/8" = 1'-0"



01 DETAIL
SCALE: 3/8" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS, inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

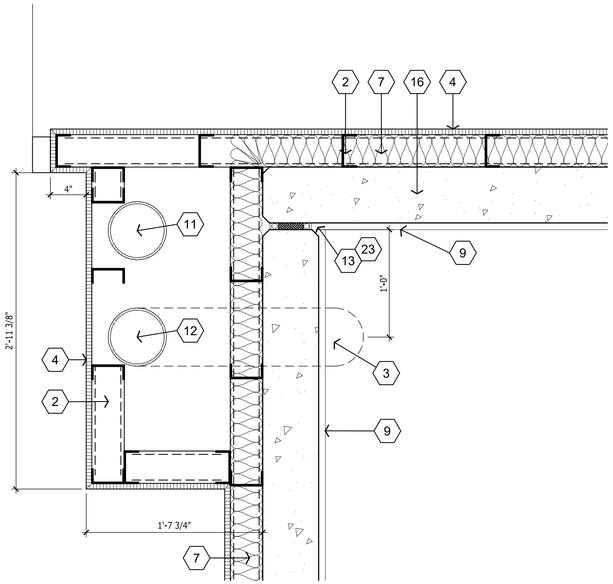
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK, TEXAS 78613

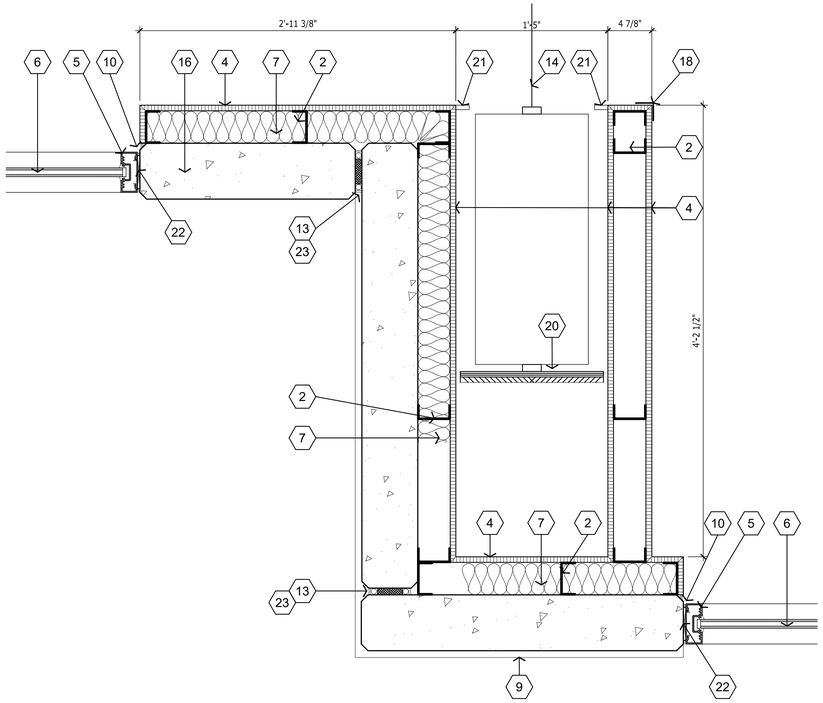
Project No.	22037
Drawn	JD
Checked	BS

SECTION DETAILS

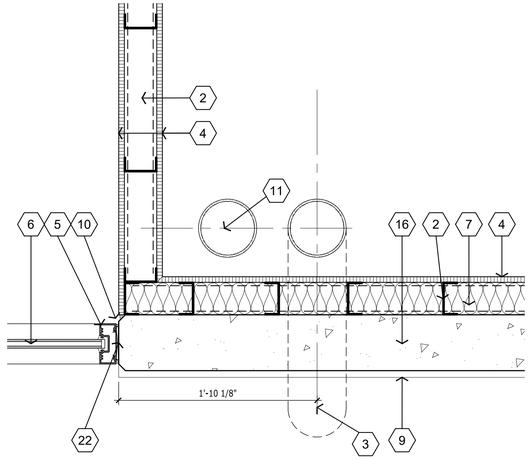
Sheet No. A5.3



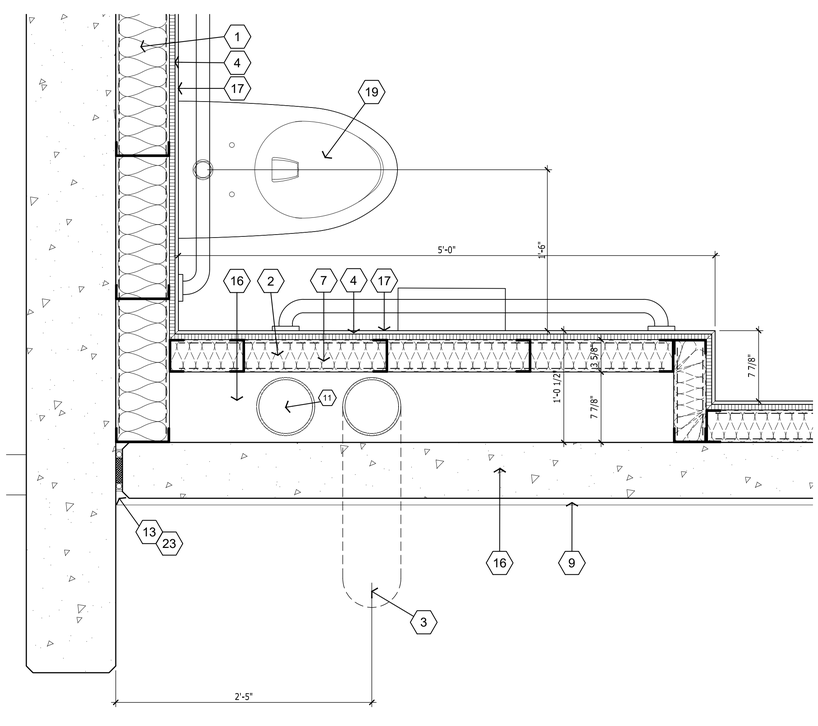
05 DETAIL
SCALE: 1 1/2" = 1'-0"



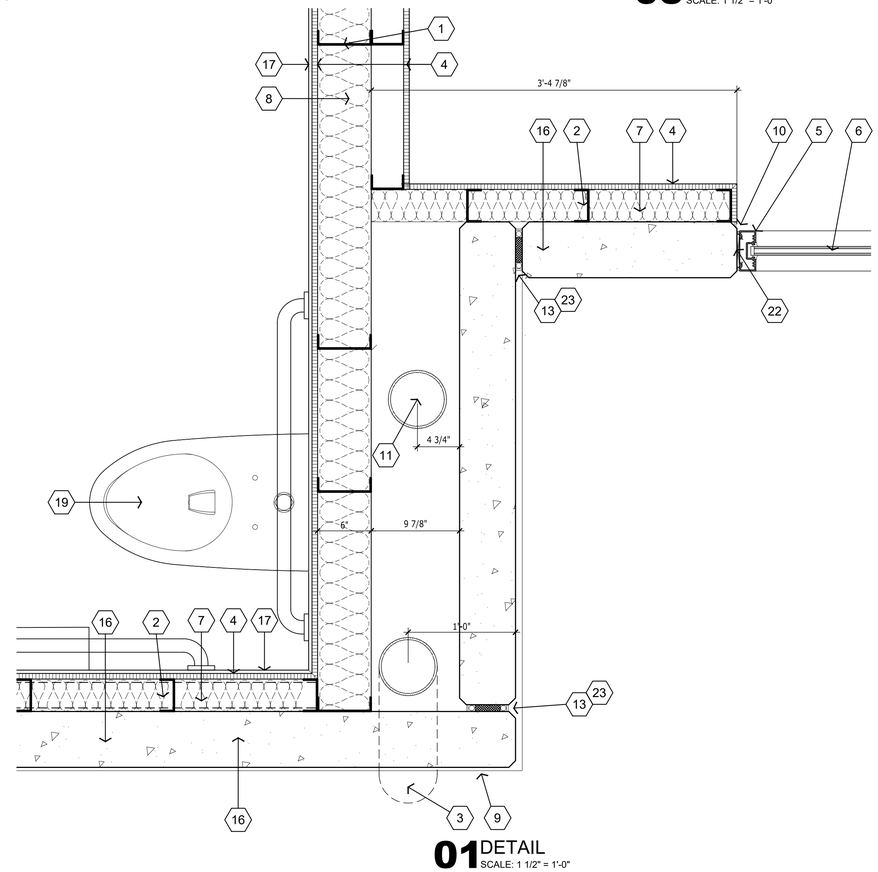
04 DETAIL
SCALE: 1 1/2" = 1'-0"



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



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



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

Date issued/revised

15 DECEMBER 2022 FOR PRICING

NOTES TO SHEET

1. 6" 20GA GALV. STEEL STUDS @ 16" O.C.
2. 3-5/8" 20GA STEEL STUDS @ 16" O.C.
3. 6" OVERFLOW ROOF DRAIN DOWNSPOUT NOZZLE
4. 5/8" GYPSUM BOARD (WATER RESISTANT BD. AT ALL WET AREAS), PAINT
5. ALUMINUM STOREFRONT FRAME/WINDOW - ANODIZED ALUMINUM
6. 1" FIXED INSULATED GLASS, RE: SPECS
7. BATT INSULATION. RE: SPECS
8. SOUND INSULATION. RE: SPECS
9. THIN BRICK BELOW.
10. CONTINUOUS SEALANT
11. PRIMARY ROOF DRAIN LEADER: CONNECT TO STORM. RE: CIVIL
12. SCHEDULED DOOR
13. CONTINUOUS SEALANT OVER BACKER ROD
14. ROOM DIVIDER (RE: SPECS)
15. CABINETRY
16. CONCRETE TILE WALL, PAINT (RE: STRUCTURAL)
17. WALL TILE FULL HEIGHT
18. CORNER BEAD
19. PLUMBING FIXTURE
20. 3/4" X 1'-4" PLYWOOD SLIDING PANEL COVERED W/FABRIC SAME AS DOOR
21. 1" X 1-1/2" REMOVABLE SLIDING PANEL STOPS BY G.C.
22. ½" SHIM
23. CONCRETE EXPANSION JOINT

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

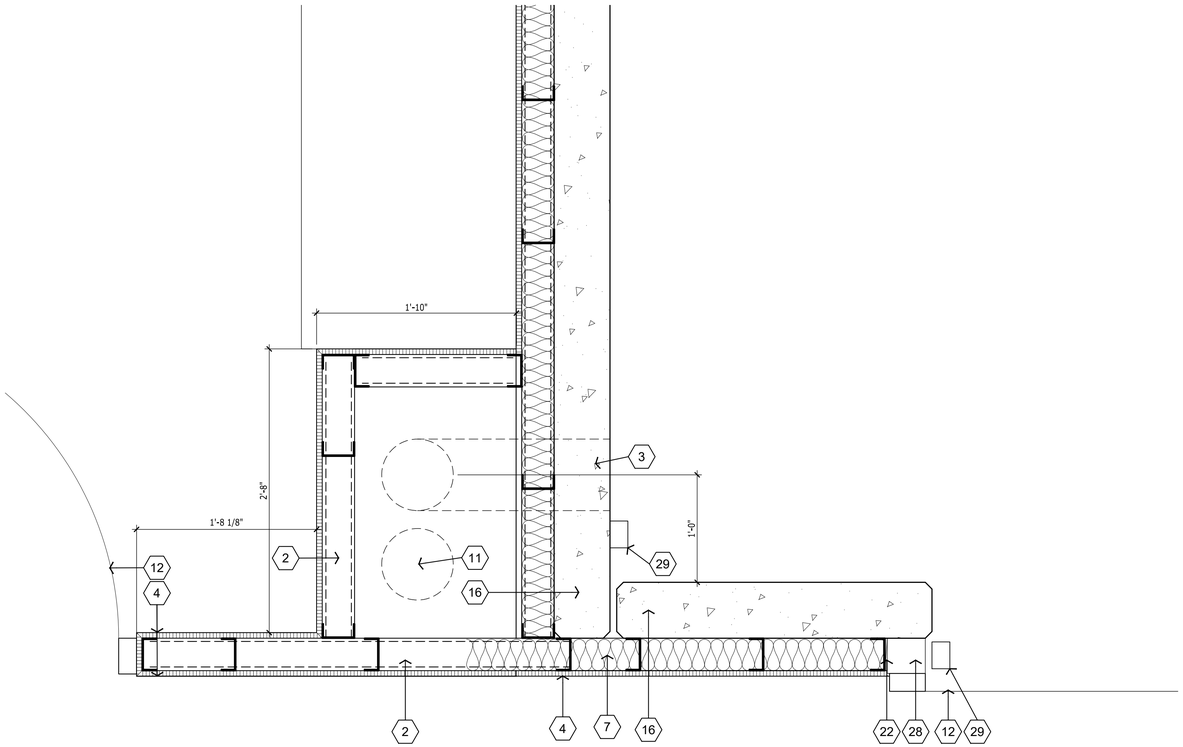
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK,TEXAS

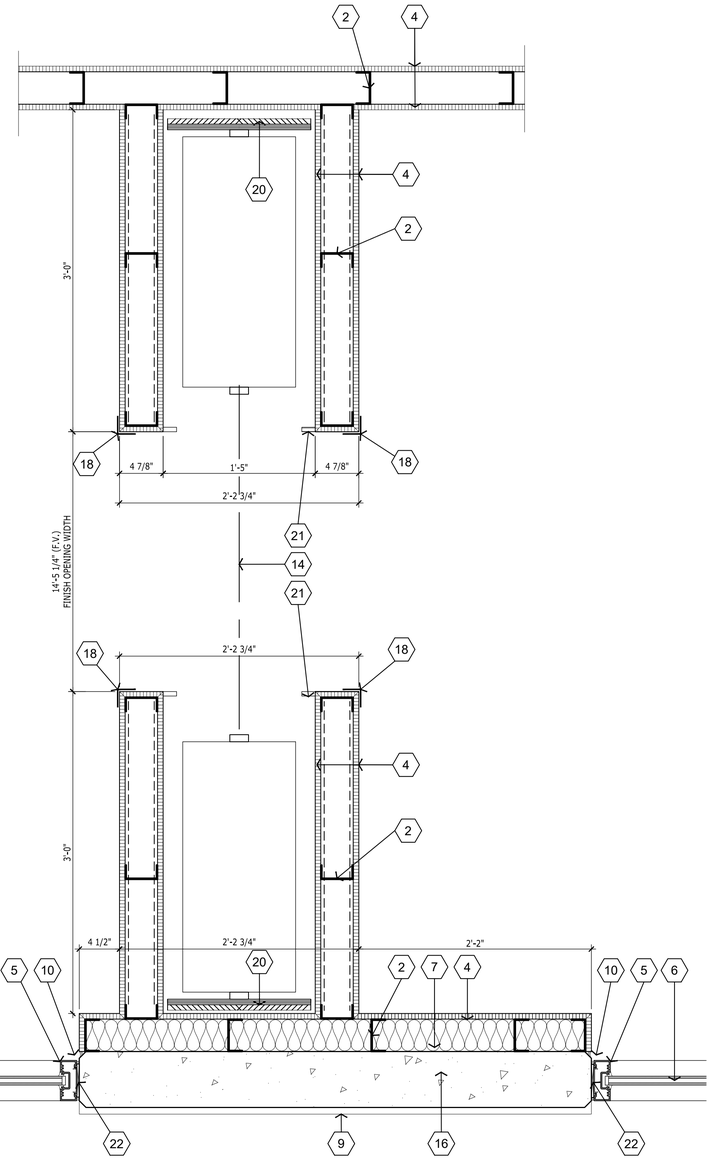
Project No.	22037
Drawn	ER
Checked	BS

PLAN DETAILS

Sheet No. A6.0



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



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

Date issued/revised

15 DECEMBER 2022 FOR PRICING

NOTES TO SHEET

1. 6" 20GA GALV. STEEL STUDS @ 16" O.C.
2. 3-5/8" 20GA STEEL STUDS @ 16" O.C.
3. 6" OVERFLOW ROOF DRAIN DOWNSPOUT NOZZLE
4. 5/8" GYPSUM BOARD (WATER RESISTANT BD. AT ALL WET AREAS), PAINT
5. ALUMINUM STOREFRONT FRAME/WINDOW - ANODIZED ALUMINUM
6. 1" FIXED INSULATED GLASS, RE: SPECS
7. BATT INSULATION. RE: SPECS
8. SOUND INSULATION. RE: SPECS
9. THIN BRICK BELOW.
10. CONTINUOUS SEALANT
11. PRIMARY ROOF DRAIN LEADER: CONNECT TO STORM. RE: CIVIL
12. SCHEDULED DOOR
13. CONTINUOUS SEALANT OVER BACKER ROD
14. ROOM DIVIDER (RE: SPECS)-CONTRACTOR TO ENSURE METAL TRACK ABOVE FOR STRUCTURAL SUPPORT
15. CABINETRY
16. CONCRETE TILE WALL, PAINT (RE: STRUCTURAL)
17. WALL TILE FULL HEIGHT
18. CORNER BEAD
19. PLUMBING FIXTURE
20. 3/4" X 1'-4" PLYWOOD SLIDING PANEL COVERED W/FABRIC SAME AS DOOR
21. 1" X 1-1/2" REMOVABLE SLIDING PANEL STOPS BY G.C.
22. ½" SHIM
23. CONCRETE EXPANSION JOINT
24. 6" 18GA GALV. STEEL STUDS @ 16" O.C.
25. 6" 18GA GALV. STEEL STUDS @ 12" O.C.
26. 5/8" SHEATHING
27. 3/4" STUCCO W/ SELF FURRING LATH
28. ALUMINUM BREAK METAL (TO MATCH STOREFRONT)
29. 2"X3" CANOPY GUTTER (TIED TO STORM)

OSBORN & VANE ARCHITECTS, inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK,TEXAS

Project No.	22037
Drawn	ER
Checked	BS

PLAN DETAILS

Sheet No. A6.1

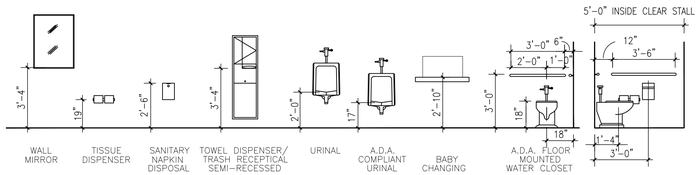
TOILET/JAN. ROOM SCHEDULE

No.	ITEM	REMARKS
T1	GRAB BARS	STAINLESS STEEL 36" & 42" STRAIGHT SATIN FINISH
T2	WATER CLOSETS	RE: MEP DRAWINGS (AUTO FLUSH)
T3	TOILET PARTITIONS	PRE-FINISHED TOILET PARTITIONS ("ASI" POWDER COATED)
T4	RECESSED BABY CHANGING STATION	KOHALA BRAND (ADA APPROVED)
T5	URINAL	RE: MEP DRAWINGS (AUTO)
T6	HAND DRYER	ADA COMLIANT (EXCEL THIN AIR HAND DRYER)
T7	SOAP DISPENSER	SOAP DISPENSER (COORDINATE EXACT TYPES WITH OWNER)
T8	SELF-RIMMING LAVATORY SINK W/QUARTZ TOP	KOHLER VERTICYL K-2882-0 WHITE
T8A	FAUCET	AUTO SLOAN FAUCET BASYS EFX300 HARDWIRE, BRUSHED NICKEL
T9	TISSUE DISPENSER	DOUBLE ROLL DISPENSER
T10	MIRROR	MAX 40" AFF TO EDGE (VERFY W/OWNER OF QTY)
T11	COAT HOOK WITH BUMPER	ALUMINUM COAT HOOK LOCATED AT EACH TOILET PARTITION DOOR
T12	MOP SINK AND FAUCET	RE: MEP DRAWINGS FOR MOP SINK
T13	MOP AND BROOM HOLDER	RE: SPECS
T14	URINAL SCREEN	18" - PRE-FINISHED TOILET PARTITIONS ("ASI" POWDER COATED)
T15	DRINKING FOUNTAIN (EDF)	HI/LOW ADA DRINKING STATION (W/ADA SKIRT)
T16	SHOWER SEAT	FOLDABLE ADA COMPLIANT SHOWER SEAT

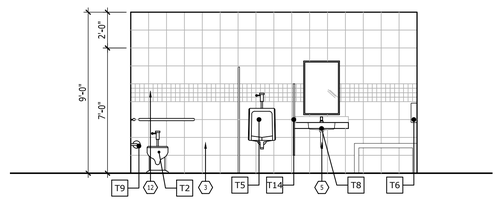
1.) CONTRACTOR TO PROVIDE AND INSTALL UNDER LAVATORY GUARDS AT ALL WALL HUNG LAVATORIES.
2.) LAVATORY GUARDS SHALL BE INSULATED MOLDED VINYL PIPING COVERINGS.
3.) CONTRACTOR TO PROVIDE BLOCKING IN ALL WALLS TO SUPPORT WALL HUNG ACCESSORIES.
4.) REFER TO SPECS FOR ANY DISCREPANCIES
5.) VICOSTONE 2CM QUARTZ - (VERIFY W/OWNER OF COLOR)

14 TOILET/JAN. ROOM SCHEDULE
SCALE: 1/4" = 1'-0"

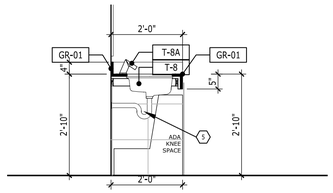
ALL BATHROOM FIXTURES, ACCESSORIES & MOUNTING HEIGHTS MUST COMPLY WITH TAS



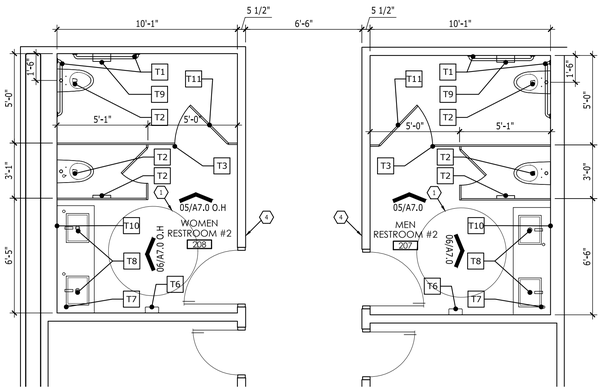
15 A.D.A MOUNTING HEIGHTS
SCALE: 1/4" = 1'-0"



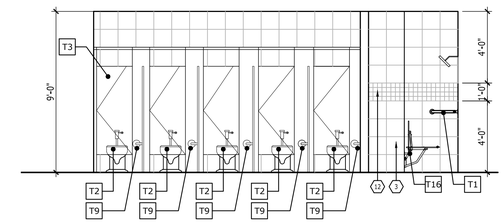
04 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



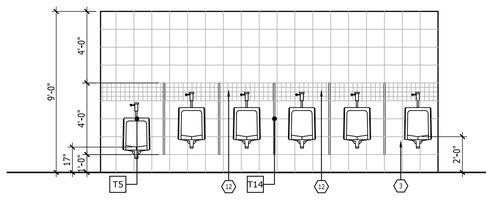
07 R.R VANITY
SCALE: 1/4" = 1'-0"



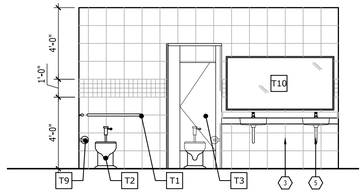
03 ENLARGED PLAN
SCALE: 1/4" = 1'-0"



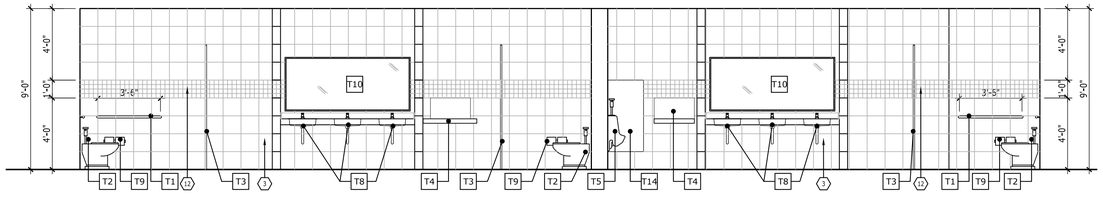
12 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



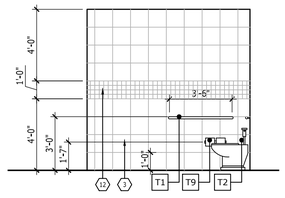
13 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



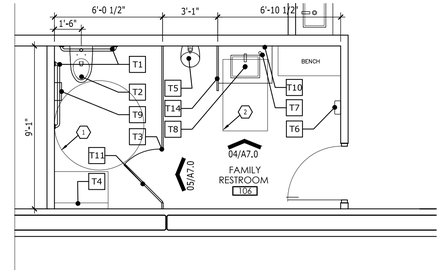
06 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



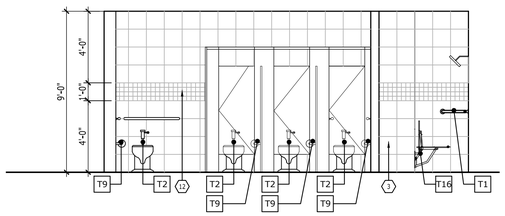
11 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



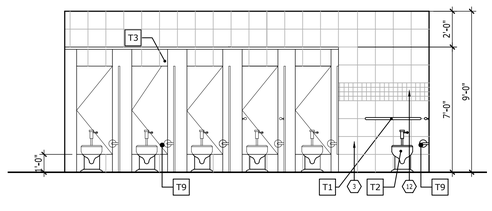
05 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



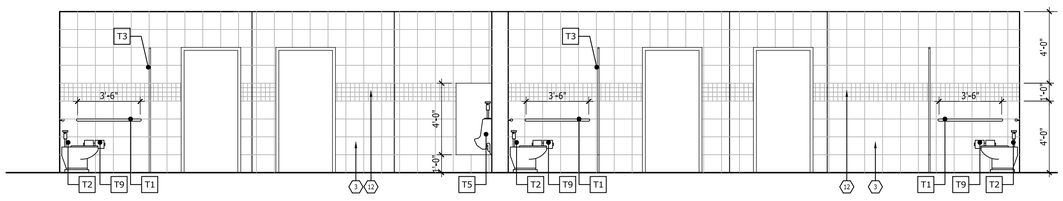
02 ENLARGED PLAN
SCALE: 1/4" = 1'-0"



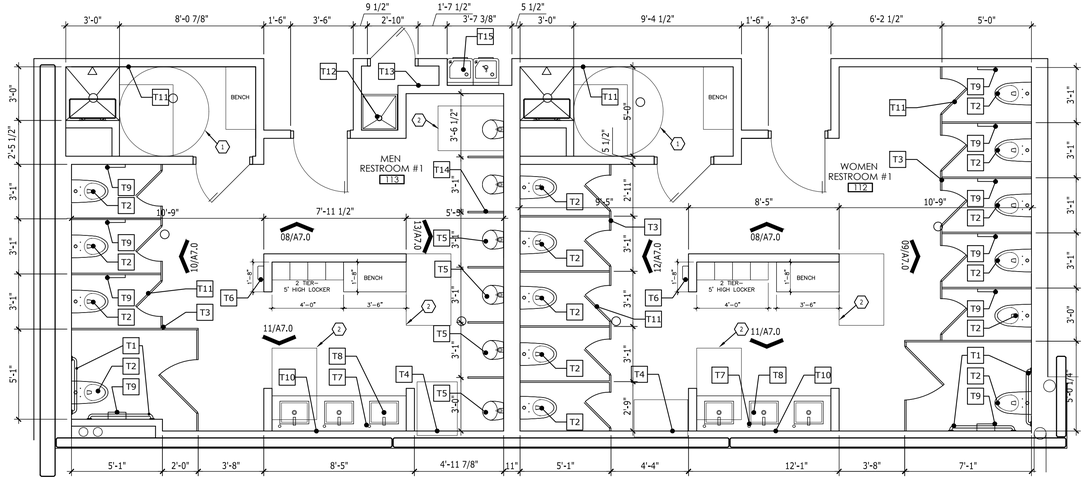
10 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



09 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



08 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



01 ENLARGED PLAN
SCALE: 1/4" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

(#) NOTES TO SHEET:

1. 60" TURNING DIAMETER.
2. 30" X 48" CLEAR FLOOR SPACE.
3. CERAMIC TILE W/SCHULTER SYSTEM. COLOR TO BE SELECTED.
4. ADA-COMPLIANT RESTROOM SIGN WITH RAISED BRAILLE LETTERING.
5. HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

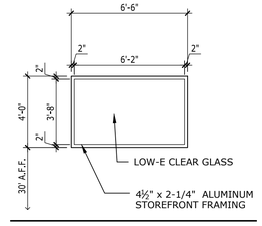
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK,TEXAS

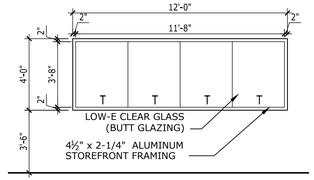
Project No.	22037
Drawn	ER
Checked	BS

ENLARGED PLAN
& RESTROOM SCHEDULES

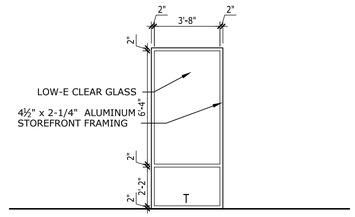
Sheet No. A7.0



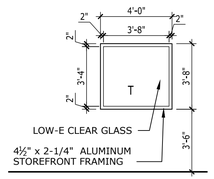
WIN-1



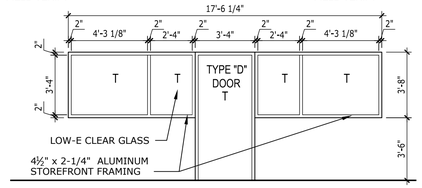
STF-13
FIELD VERIFY



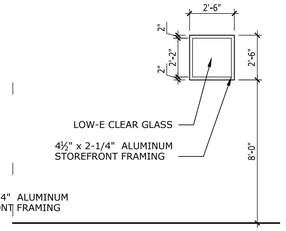
STF-12
FIELD VERIFY



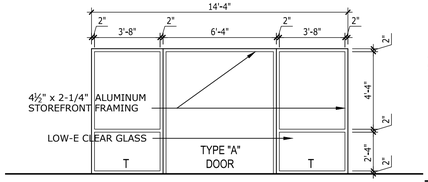
STF-11
FIELD VERIFY



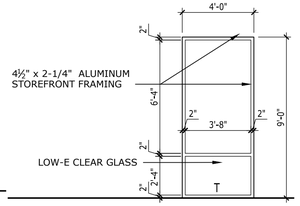
STF-10
FIELD VERIFY



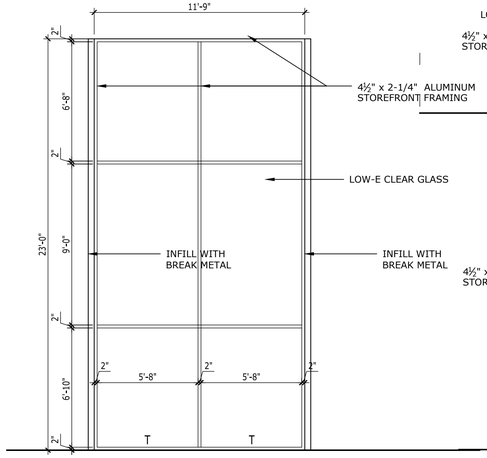
STF-9
FIELD VERIFY



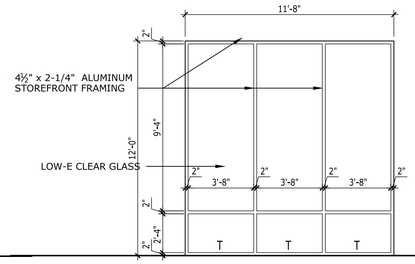
STF-8
FIELD VERIFY



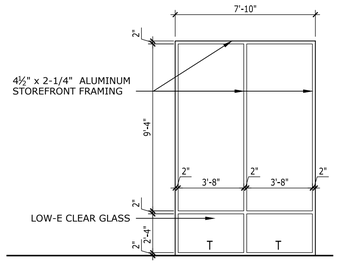
STF-7
FIELD VERIFY



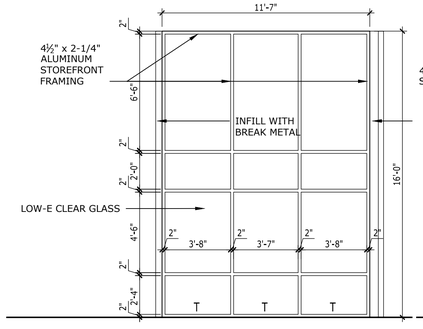
STF-6
FIELD VERIFY



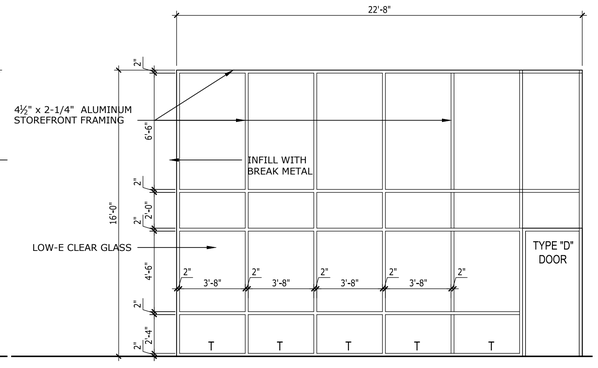
STF-5
FIELD VERIFY



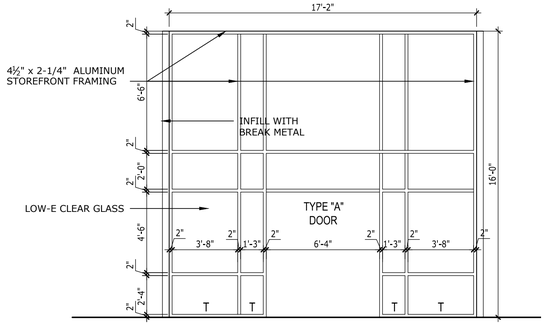
STF-4
FIELD VERIFY



STF-3
FIELD VERIFY



STF-2
FIELD VERIFY



STF-1
FIELD VERIFY

01 STOREFRONT / WINDOW ELEVATIONS
SCALE: 1/4" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

COORDINATE ALL STOREFRONT & WINDOW OPENING AS PER STOREFRONT SUBMITTAL-ALL STOREFRONT TO BE ON SOLAR BAN 70XL OR EQUAL

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

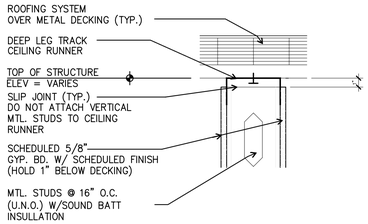
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK,TEXAS

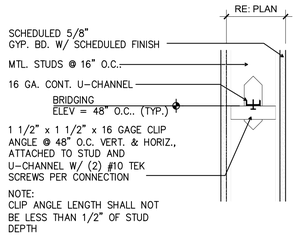
Project No.	22037
Drawn	ER
Checked	BS

DOOR, STOREFRONT & WINDOW SCHEDULES

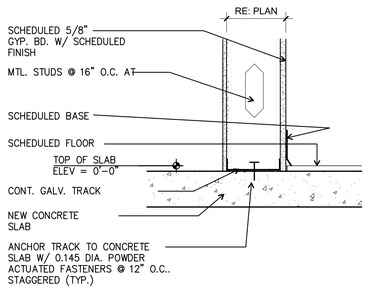
Sheet No. A7.1



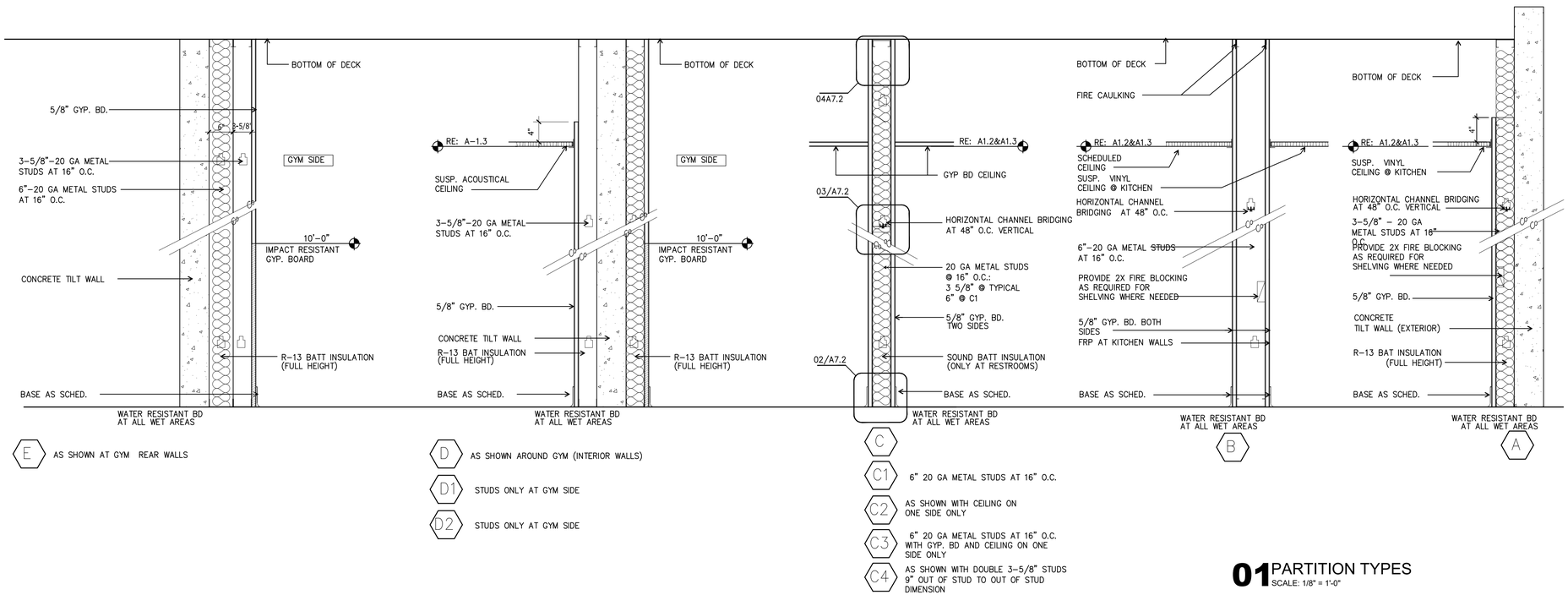
04 SLIP JOINT
SCALE: N.T.S.



03 BRIDGING DETAIL
SCALE: N.T.S.



02 TRACK RUNNER
SCALE: N.T.S.



01 PARTITION TYPES
SCALE: 1/8" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS, inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

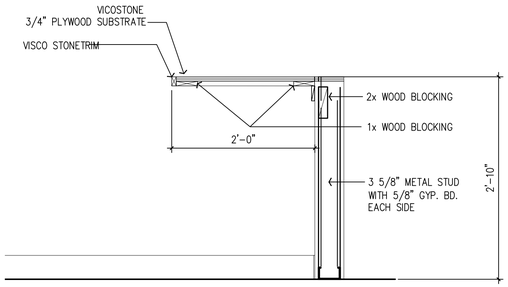
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK,TEXAS

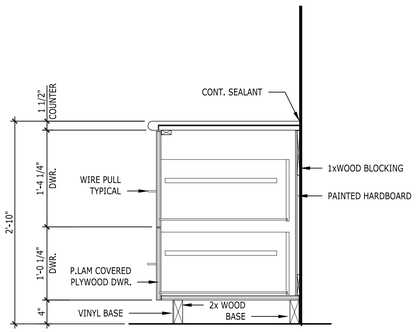
Project No.	22037
Drawn	ER
Checked	BS

PARTITION TYPES & DETAILS

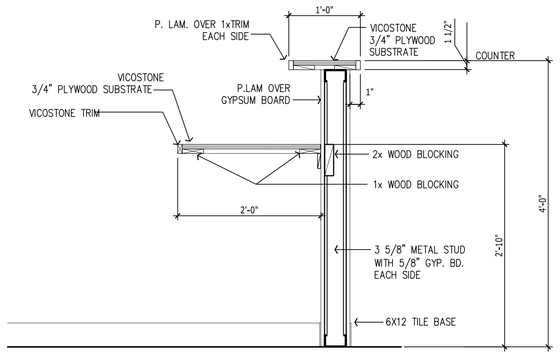
Sheet No. A7.2



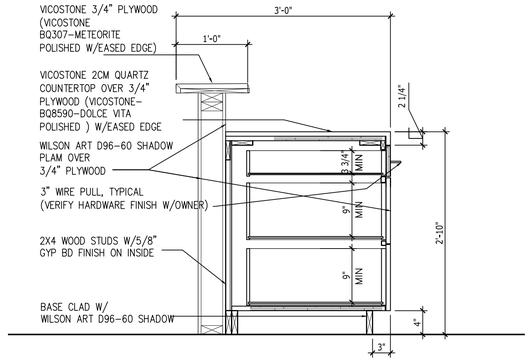
8 DETAIL
SCALE: 1" = 1'-0"



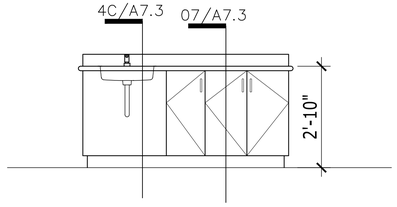
7 DETAIL
SCALE: 1" = 1'-0"



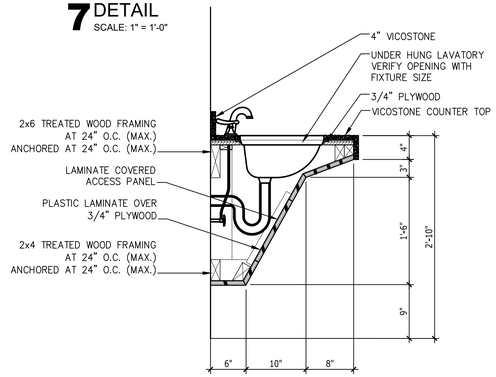
6 DETAIL
SCALE: 1" = 1'-0"



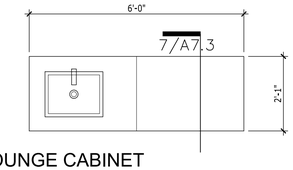
5 DETAIL
SCALE: 1" = 1'-0"



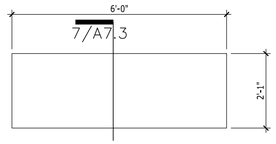
4B CABINETRY TYPICAL AT LOUNGE
SCALE: 1/2 = 1'-0"



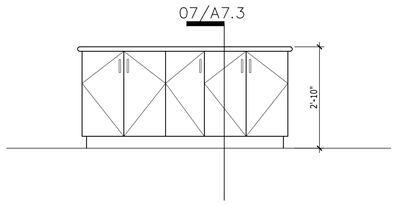
4C DETAIL
SCALE: 1" = 1'-0"



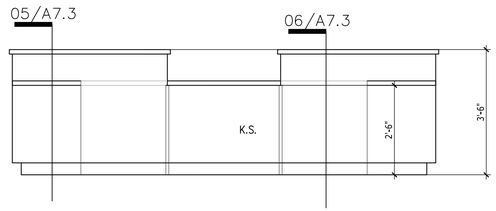
1C LOUNGE CABINET
SCALE: 1/2 = 1'-0"



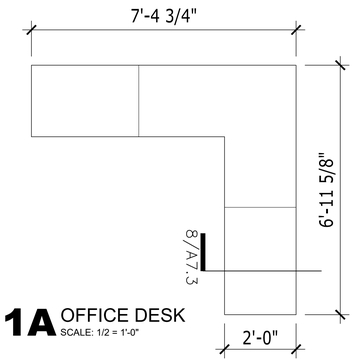
1B LOUNGE CABINET
SCALE: 1/2 = 1'-0"



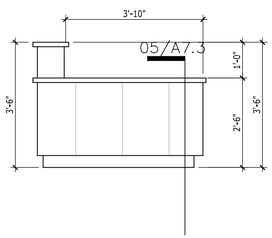
4A CABINETRY TYPICAL AT LOUNGE
SCALE: 1/2 = 1'-0"



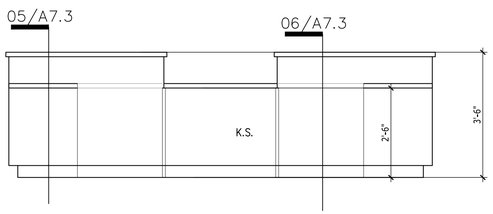
4 RECEPTION DESK
SCALE: 1/2 = 1'-0"



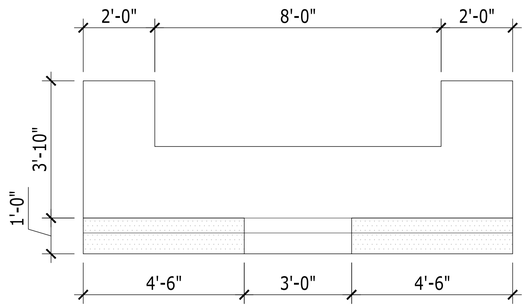
1A OFFICE DESK
SCALE: 1/2 = 1'-0"



3 RECEPTION DESK
SCALE: 1/2 = 1'-0"



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



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

Date issued/revised

15 DECEMBER 2022 FOR PRICING

VERIFY ALL MATERIALS AND FINISH W/OWNER PRIOR TO COMMENCING WORK. NOTE ALL CABINET DRAWERS, SHELF SIZES & QUANTITY TO BE VERIFY BY OWNER
RECEPTION DESK MUST COMPLY WITH ADA DESIGN REQUREMENT PER SECTION TAS 904.4.1 OR 904.4.2
COORDINATE RECEPTION DESK W/OWNER FOR DESIGN AND REQUIREMENTS PRIOR TO CONSTRUCTION DRAWERS AND CABINETS TO HAVE CONCEALED HARDWARE (FINISH W/OWNER)

MILLWORK NOTES:

- COMPLY WITH (AWI) ARCHITECTURAL WOODWORK STANDARDS
- FABRICATE TO (AWI) "CUSTOM" QUALITY STANDARDS
- ARCHITECTURAL LAMINATE CABINETS
  EXPOSED SURFACES INCLUDE:

  BACKSPLASHES
  EDGES
  CABINETS DOORS
  DRAWER FACES

  TO BE HIGH PRESSURE DECORATIVE LAMINATE ON 3/4" PLYWOOD WITH MDX AS AN OPTION

  SEMI-EXPOSED SURFACES INCLUDE:
  CABINET SHELVES
  CABINET BOTTOMS
  CABINET TOPS

  TO BE THERMOSET DECORATIVE OVERLAY (MELAMINE) ON PLYWOOD WITH MDX OR PARTICAL BOARD AS AN OPTION

- DRAWER BACKS AND SIDES TO BE SOLID WOOD PAINTED.
- DRAWER BOTTOMS AND CABINET BACKS TO BE HARDBOARD PAINTED.
- CONCEALED SURFACES MILL OPTION
- ALL EDGES BANDED WITH PLASTIC LAMINATE
- ALL CABINET, BACK SPLASH & SHELVES TO BE WILSON ART D96-60 SHADOW LAMINATE (VERIFY ALL FINISHES WITH OWNER)

OSBORN & VANE ARCHITECTS, inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK,TEXAS

Project No.	22037
Drawn	ER
Checked	BS

RECEPTION AREA

Sheet No. A7.3

ROOM FINISH SCHEDULE

ROOM No.	ROOM NAME	FLOOR: SEALED CONCRETE SC-01	FLOOR: COMMERCIAL CARPET CPT-01	FLOOR: 12" x 24" PORCELIN TILE PTL-01	FLOOR: 24" x 24" PORCELIN TILE PTL-02	FLOOR: GYMNASIUM WOOD WD-01	FLOOR: 6 X 6 SURETHREAD TILE KT-01	BASE: 4" VINYL BASE B-01	BASE: KITCHEN BASE B-02	BASE: CERAMIC COVE BASE B-03	BASE: GYM. VENTED BASE B-04	BASE: 3X12 PORCELAIN TILE B-05	WALLS: PAINT PT-01	WALLS: FRP @ 48" A.F.F. FRP-1	WALLS: PORCELIN TILE FULL HT CWT-01	WALLS: FRP FULL HT FRP-1	CEILING: GYPSUM BOARD CEILING	CEILING: 2'x2' SUSPENDED TILE ACT-01	CEILING: 2'x4' VINYL TILE ACT-02	CEILING: 2'x4' SUSPENDED TILE ACT-03	CEILING: OPEN	* PER TABLE 803.9 IBC 2012 REMARKS
100	LOBBY				●							●	●				●	●				
100A	RECEPTION				●							●	●				●	●				
101	OFFICE		●					●					●					●				
102	CLOSET		●					●					●					●				
103	LOUNGE		●					●					●				●	●				FIREPROOF 1HR DECK
104	FITNESS ROOM		●					●					●				●	●				
105	MEDIA		●					●					●					●				
106	FAMILY RESTROOM			●									●		●			●				SCHLUTER COVE BASE
107	ELECTRICAL / RISER	●						●					●	●							●	PAINT STRUCTURE
108	ELECT /JANITOR #1			●						●			●	●				●				
109	LIBRARY #1		●					●					●					●				
110	FLEX ROOM #2		●					●					●					●				
111	FLEX ROOM #3		●					●					●					●				
112	WOMEN RESTROOM #1			●									●		●			●				SCHLUTER COVE BASE
113	MEN RESTROOM #1			●									●		●			●				SCHLUTER COVE BASE
114	KITCHEN						●		●							●			●			KITCHEN COVE BASE
115	STORAGE	●						●					●						●	●		
116	CORRIDOR #1			●	●							●	●				●	●				BORDER PTL-A ON FLR
117	GYMNASIUM					●					●		●								●	PAINT STRUCTURE
200	CORRIDOR #2			●	●							●	●				●	●				BORDER PTL-A ON FLR
201	ELECT /JANITOR #1			●						●			●	●				●				
202	LIBRARY #2		●					●					●					●				
203	FLEX ROOM #4		●					●					●					●				
204	FLEX ROOM #5		●					●					●					●				
205	FLEX ROOM #6		●					●					●					●				
207	MEN RESTROOM #2			●									●		●			●				SCHLUTER COVE BASE
208	WOMEN RESTROOM #2			●									●		●			●				SCHLUTER COVE BASE
209	IT / ELECT #1			●						●			●	●				●				
210	IT / ELECT #2			●						●			●	●				●				
211	ROOF ACCESS			●						●			●	●							●	PAINT STRUCTURE

TILE - DALTILE UNITY SERIES W/BORDER ACCENTS ON RESTROOM WALL COLOR TBD
KITCHEN TILE - DALTILE SURETHREAD RED 6X6
VERIFY PAINT ON DOOR AND DOOR FRAMES PER OWNER
DRYFALL PAINT AT ALL EXPOSED STRUCTURE AS PER ROOM SCHEDULE
ALL INTERIOR & EXTERIOR COLORS TO BE DETERMINED BY THE OWNER-WILSONART LAMINATE

01 INTERIOR FINISH SCHEDULE
SCALE: N.T.S.

INTERIOR FINISH SCHEDULE

FLOORING

CODE	MANUFACTURER	COLOR	DESCRIPTION	LOCATION
KT-01	DALTILE	SURETHREAD 0Q76 - GREY	6"X 6" KITCHEN FLOOR TILE	KITCHEN ONLY
PTL-01	DALTILE	UNITY "ASHGREY" P405	12" X 24" TILE	MENS & WOMENS RESTROOM
PTL-02	DALTILE	UNITY "AVORIO" P400	24" X 24" TILE	CORRIDORS & FOYER
CPT-01	MANNINGTON	RELAY - EXCHANGE - "DIAL TONE"	24" X 24" CARPET TILE	

BASE

CODE	MANUFACTURER	COLOR	DESCRIPTION	
B-01	JOHNSONITE	JOHNSONITE 29 - "MOONROCK"	4" VINYL BASE	
B-02	DALTILE	SURETHREAD 0Q76 - GREY	KITCHEN COVE BASE	
B-03	DALTILE	UNITY "ASHGREY" P405	3" x 12" BULLNOSE TILE	
B-04	GYM WOOD	BY OTHERS	BY OTHERS	

CEILING

CODE	MANUFACTURER	COLOR	DESCRIPTION	
ACT-01	USG SHEETROCK	24" x 24" RADAR ACOUSTICAL PANEL COLOR: WHITE	GRID: ARMSTRONG DX/DXL WHITE	
ACT-02	USG SHEETROCK	24" x 48" CLIMAPLUS VINYL FACED. COLOR: WHITE	WASHABLE SURFACE. GRID: ARMSTRONG DX/DXL WHITE	KITCHEN ONLY
ACT-03	USG SHEETROCK	24" x 48" RADAR ACOUSTICAL PANEL COLOR: WHITE	GRID: ARMSTRONG DX/DXL WHITE	STORAGE ROOM ONLY

PAINT AND WALL COVERING

CODE	MANUFACTURER	COLOR	DESCRIPTION	
PT-1	SHERWIN WILLIAMS	ACCENT COLOR - COLOR TO BE SELECTED BY OWNER	EGGSHELL FINISH	MAIN INTERIOR COLOR
FRP-1	ARMSTRONG	WHITE	FIBERGLASS REINFORCED PLASTIC	
WPT-01	DALTILE	UNITY "AVORIO" P400	12" X 12" WALL TILE	MENS & WOMENS RESTROOM

02 FINISH SCHEDULE LEGEND
SCALE: N.T.S.

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

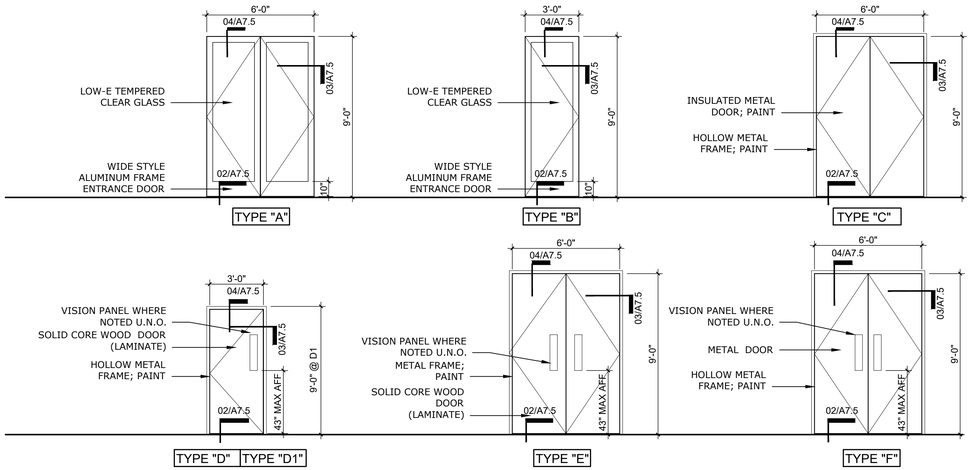
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK,TEXAS

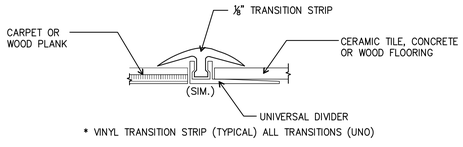
Project No. 22037
Drawn ER
Checked BS

DOOR & FINISH SCHEDULES

Sheet No. A7.4

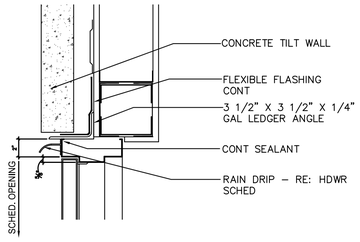


06 DOOR TYPES
SCALE: 1/4" = 1'-0"

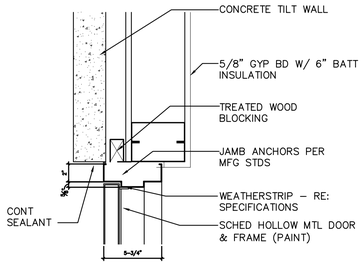


* VINYL TRANSITION STRIP (TYPICAL) ALL TRANSITIONS (UNO)

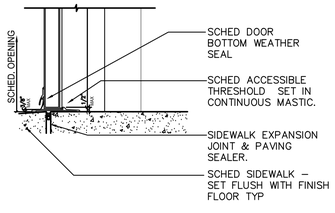
05 THRESHOLD (TYPICAL)
SCALE: N.T.S.



04 DOOR HEADER
SCALE: N.T.S.



03 DOOR JAMB
SCALE: N.T.S.



02 DOOR SILL
SCALE: N.T.S.

DOOR SCHEDULE

DOOR LOCATION		DOOR			FRAME		
NO.		TYPE	SIZE	MATERIAL	MATERIAL	HDW SET	REMARKS
100-A	LOBBY	A	(2) 3'-0"x9'-0"x1 3/4"	ALUM./GLASS	ALUMINUM		
100-B	LOBBY	A	(2) 3'-0"x9'-0"x1 3/4"	ALUM./GLASS	ALUMINUM		
101-A	OFFICE	D	3'-0x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		
102-A	CLOSET	D	3'-0x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		
103-A	ACTIVITY ROOM	A	(2) 3'-0"x9'-0"x1 3/4"	ALUM./GLASS	ALUMINUM		
103-B	ACTIVITY ROOM	B	3'-0"x9'-0"x1 3/4"	ALUM./GLASS	ALUMINUM		
104-A	FITNESS ROOM	B	3'-0"x9'-0"x1 3/4"	ALUM./GLASS	ALUMINUM		
105-A	MEDIA	D	3'-0x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		
106-A	FAMILY RESTROOM	D	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		PUSH/PULL HARDWARE
107-A	ELECTRICAL / RISER	D	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		18" X 18" LOUVER AT BOTTOM
108-A	ELECT /JANITOR #1	D	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		18" X 18" LOUVER AT BOTTOM
109-A	LIBRARY #1	D1	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		5" X 24" VISION PANEL
110-A	FLEX ROOM #2	E	(2) 3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		5" X 24" VISION PANEL
111-A	FLEX ROOM #3	D1	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		5" X 24" VISION PANEL
112-A	WOMEN RESTROOM #1	D	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		PUSH/PULL HARDWARE
112-B	WOMEN RESTROOM #1	D	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		SHOWER / PRIVACY HARDWARE
113-A	MEN RESTROOM #1	D	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		PUSH/PULL HARDWARE
113-B	MEN RESTROOM #1	D	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		SHOWER / PRIVACY HARDWARE
114-A	KITCHEN	E	(2) 3'-0"x9'-0"x1 3/4"	SMOOTH METAL	H. METAL		1 HR FIRE RATED DR. / FRM. & VISION PANEL
114-B	KITCHEN	C	(2) 3'-0"x9'-0"x1 3/4"	INSULATED METAL	H. METAL		
116-A	GYMNASIUM	B	3'-0"x9'-0"x1 3/4"	ALUM./GLASS	ALUMINUM		
116-B	GYMNASIUM	F	(2) 3'-0"x9'-0"x1 3/4"	METAL DOOR	H. METAL		5" X 24" VISION PANEL , KICKPLATE
116-C	GYMNASIUM	F	(2) 3'-0"x9'-0"x1 3/4"	METAL DOOR	H. METAL		5" X 24" VISION PANEL , KICKPLATE
116-D	GYMNASIUM	F	(2) 3'-0"x9'-0"x1 3/4"	METAL DOOR	H. METAL		5" X 24" VISION PANEL , KICKPLATE
116-E	GYMNASIUM	F	(2) 3'-0"x9'-0"x1 3/4"	METAL DOOR	H. METAL		5" X 24" VISION PANEL , KICKPLATE
116-F	GYMNASIUM	F	(2) 3'-0"x9'-0"x1 3/4"	METAL DOOR	H. METAL		5" X 24" VISION PANEL , KICKPLATE
116-G	GYMNASIUM	F	(2) 3'-0"x9'-0"x1 3/4"	METAL DOOR	H. METAL		5" X 24" VISION PANEL , KICKPLATE
116-H	GYMNASIUM	F	(2) 3'-0"x9'-0"x1 3/4"	METAL DOOR	H. METAL		5" X 24" VISION PANEL , KICKPLATE
117-A	CORRIDOR	A	(2) 3'-0"x9'-0"x1 3/4"	ALUM./GLASS	ALUMINUM		
117-B	CORRIDOR	D	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		18" X 18" LOUVER AT BOTTOM
201-A	JANITOR	D	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		18" X 18" LOUVER AT BOTTOM
202-A	LIBRARY #2	D1	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		5" X 24" VISION PANEL
203-A	FLEX ROOM #4	D1	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		5" X 24" VISION PANEL
204-A	FLEX ROOM #5	D1	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		5" X 24" VISION PANEL
205-A	FLEX ROOM #6	D1	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		5" X 24" VISION PANEL
206-A	FLEX ROOM #7	D1	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		5" X 24" VISION PANEL
207-A	MEN RESTROOM #2	D	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		PUSH/PULL HARDWARE
208-A	WOMEN RESTROOM #2	D	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		PUSH/PULL HARDWARE
209-A	IT / ELECT #1	D	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		18" X 18" LOUVER AT BOTTOM
210-A	IT / ELECT #2	D	3'-0"x9'-0"x1 3/4"	S.C. WOOD DOOR	H. METAL		18" X 18" LOUVER AT BOTTOM

ALL DOOR & FRAME COLOR TO BE DETERMINED
ALL WOOD DOOR TO BE LAMINATED - FINISH TO BE WILSONART - COLOR T.B.D.
VISION PANEL TO BE LOCATED 43" MAX HT FROM F.F.
ALL 9' DOORS TO HAVE DOUBLE BLOCKING AT JAMBS

1 DOOR SCHEDULE
SCALE: N.T.S.

Date issued/revised

15 DECEMBER 2022 FOR PRICING

* CONTRACTOR SUBMIT SAMPLE AND DRAWINGS PRIOR TO ORDERING

OSBORN & VANE ARCHITECTS, inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK,TEXAS

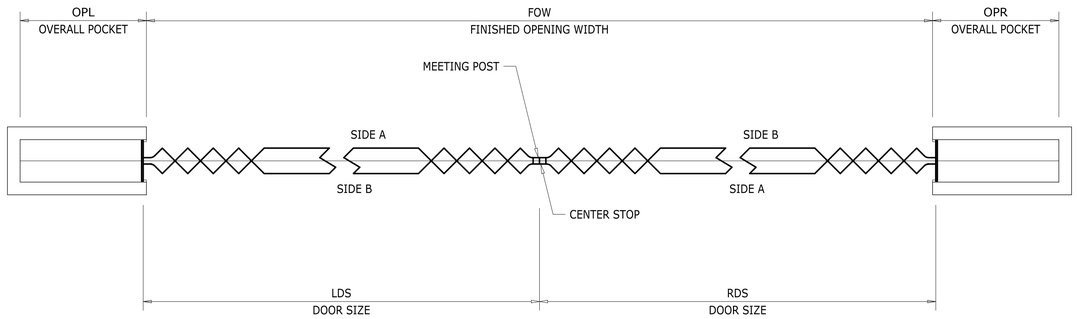
Project No. 22037
Drawn ER
Checked BS

DOOR SCHEDULE

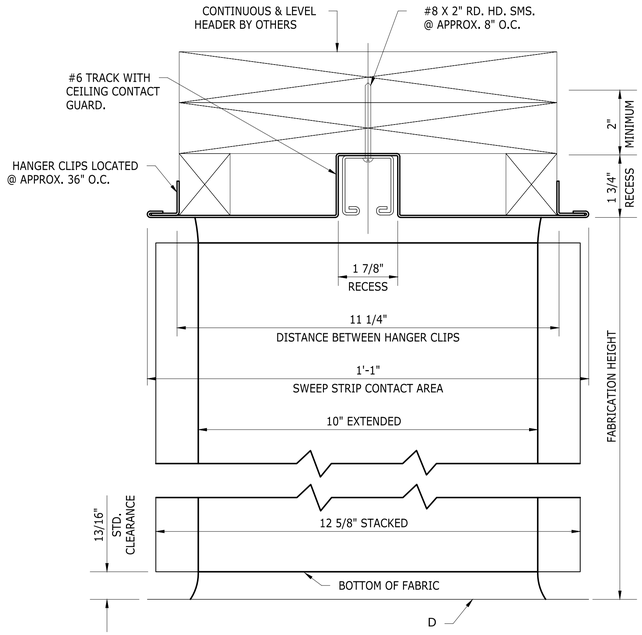
Sheet No. A7.5

GENERAL NOTES:

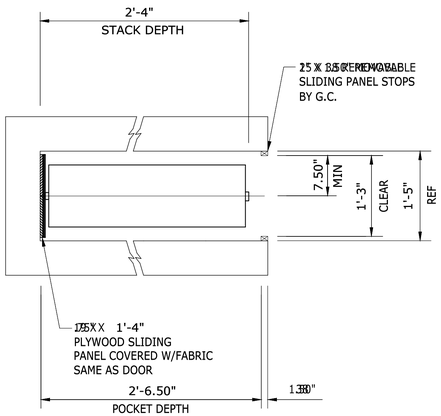
1. HEADER AND FLOOR MUST BE LEVEL AND JAMBS PLUMB WITH NO OBSTRUCTIONS SUCH AS BASEBOARD, MOLDINGS, CORNICES, CONVECTORS, ETC.
2. CONTINUOUS HEADER BLOCKING AND SUPPORT, JAMBS AND ALL ADJACENT FINISH TO BE FURNISHED AND INSTALLED BY GENERAL CONTRACTOR.
3. CONT. HEADER BLOCKING AND SUPPORT REQUIREMENTS TO BE DETERMINED BY OTHERS.
4. CEILING CONTACT GUARD TO BE FURNISHED BY MODERNFOLD DISTRIBUTOR.
5. DOORS TO RECIEVE PULL IN LATCH #62 WITH 31" PENDANT PULLS.
6. DOOR(S) TO RECEIVE 2" BELOW NORMAL EXTENDED BOTTOM SWEEP, BOTH SIDES.



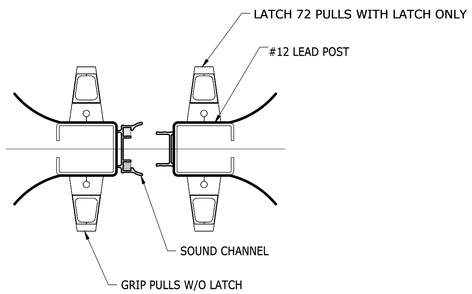
DOOR PLAN



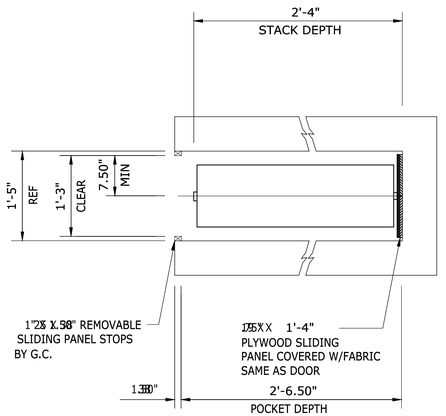
HEAD & FLOOR DETAIL



POCKET DETAIL



#12 MEETING POST DETAIL



POCKET DETAIL

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

Date issued/revised

15 DECEMBER 2022 FOR PRICING

* CONTRACTOR SUBMIT SAMPLE AND DRAWINGS PRIOR TO ORDERING

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

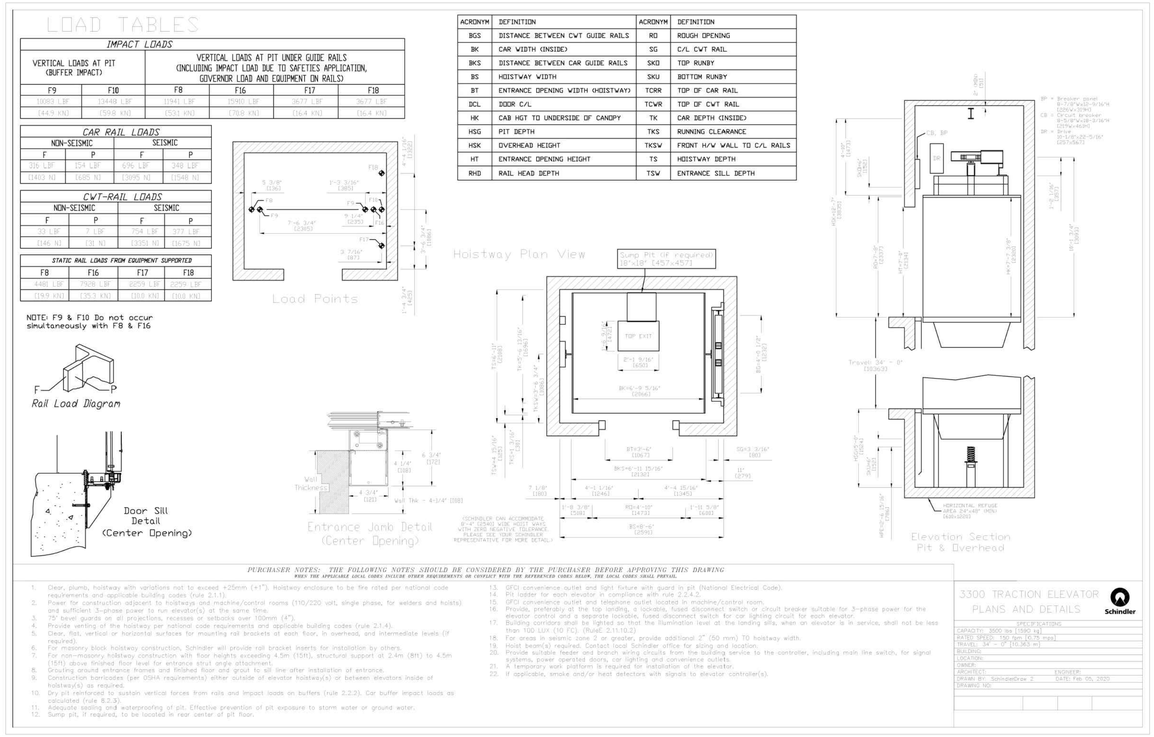
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK,TEXAS

Project No.	22037
Drawn	ER
Checked	BS

MEETING ROOM
FOLDABLE PARTITION

Sheet No. A7.6



1. PAINT STEEL STAIR ASSEMBLIES, HANDRAILS AND BRACKETS.

2. ELEVATOR HOISTWAYS AND EQUIPMENT ROOMS SHALL BE ONE HOUR FIRE RATED PER U.L. DESIGN #905

3. PAINT INTERIOR C.M.U. WHERE EXPOSED TO VIEW IN PUBLIC AREAS.

4. G.C. TO VERIFY CLEARANCES & INSTALLATION REQUIREMENTS WITH ELEVATOR SUPPLIER PRIOR TO CONSTRUCTION.

5. G.C. TO VERIFY ELEVATOR PIT SIZE AND REQUIREMENTS WITH ELEVATOR SUPPLIER.

6. G.C. TO VERIFY CLEARANCES FOR SPRINKLER/ STANDPIPE EQUIPMENT WITH SPRINKLER SYSTEM DESIGNER PRIOR TO CONSTRUCTION.

7. SEAL ALL PENETRATIONS IN FIRE-RATED WALL AND FLOOR ASSEMBLIES w/ GROUT OR APPROVED U.L. LISTED FIRE-RATED CAULKING.

8. ADJOINING ALL ELEVATOR DOORS ON UPPER FLOORS, INSTALL A SIGN STATING: "IN FIRE EMERGENCIES DO NOT USE ELEVATOR, USE STAIRS" WITH 1/2" MIN. LETTER HGT. AND WITH RAISED BRAILLE.

9. PHONE BY OWNER (RE: SPECS) VERIFY CLEARANCE w/ ELEVATOR MANUFACTURER.

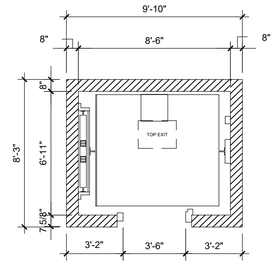
10. KEY BOX MOUNTED 60" O.C A.F.F. SIGNAGE SHALL READ: ELEVATOR KEYS LETTERS SHALL HAVE MIN. HEIGHT OF 1" WITH WIDTH OF 0.125 IN AND LETTERS MUST BE OF A CONTRASTING COLOR TO THE BACKGROUND

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

FINISH MATERIAL:

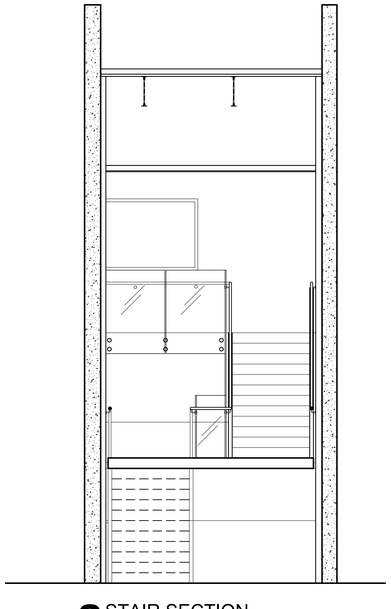
- CAB INTERIOR WALL FINISH: STAINLESS STEEL
- CEILING: BRUSHED STAINLESS STEEL W/ DOWN LIT LED LIGHTING
- FLOOR: 1/4" CHECKERED ALUMINUM PLATE, SECURED WITH FLATHEAD COUNTERSUNK GALV. STEEL SCREWS
- HANDRAIL: STRAIGHT RECTANGULAR BRUSHED ALUMINUM
- INTERIOR FACE OF DOOR & CAB FRONT: STAINLESS STEEL
- EXTERIOR DOOR STAINLESS STEEL

NOTE:
ALL INTERIOR FINISHES BY ELEVATOR MANUFACTURER
EXCEPT FLOORING

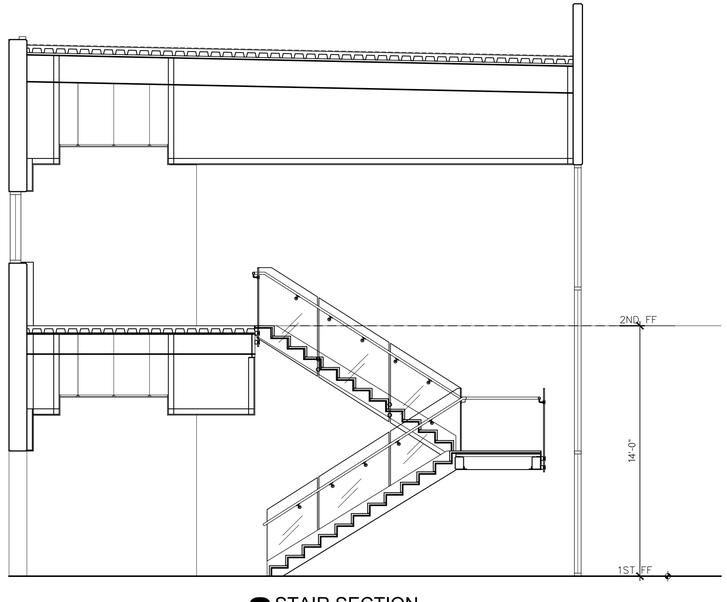


USG-C-H STUDS W/1" SHAFT LINER AT INTERIOR WALL OF ELEVATOR (TYPICAL)

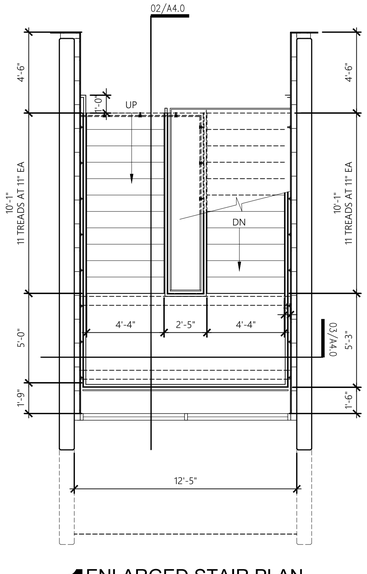
02 ELEVATOR PLAN
SCALE: 1/4" = 1'-0"



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



2 STAIR SECTION
SCALE: 1/4" = 1'-0"



1 ENLARGED STAIR PLAN
SCALE: 1/4" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5282
Fax 713 781 5347
Members American Institute of Architects

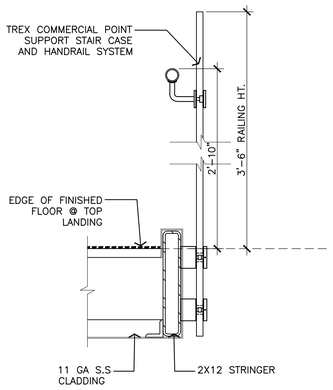
UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK,TEXAS

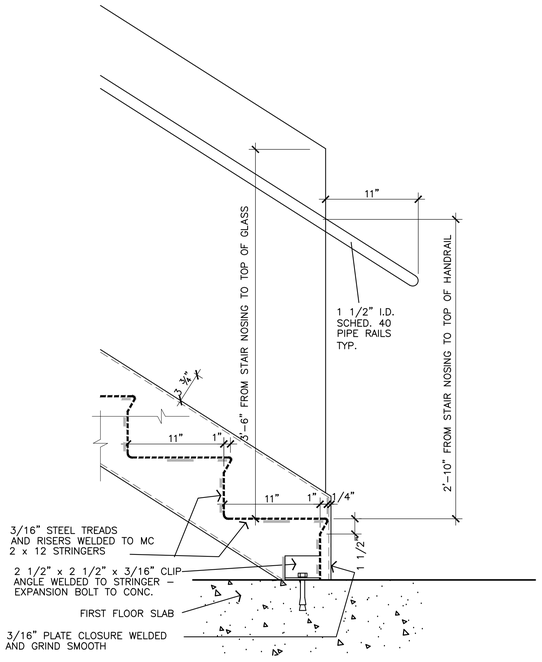
Project No. 22037
Drawn ER
Checked BS

STAIR PLANS, ELEVATOR PLAN & DETAILS

Sheet No. A8.0



10 STAIR LANDING
SCALE: 1 1/2" = 1'-0"

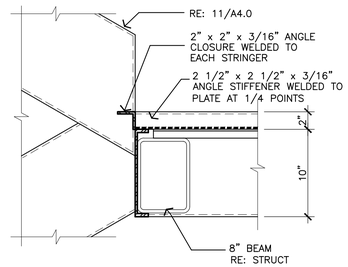


7 LEVEL 1 STAIR STRINGER
SCALE: 1 1/2" = 1'-0"

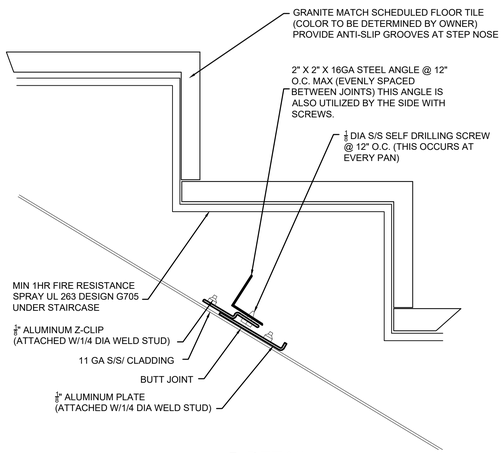
9 NOT USED

6 NOT USED

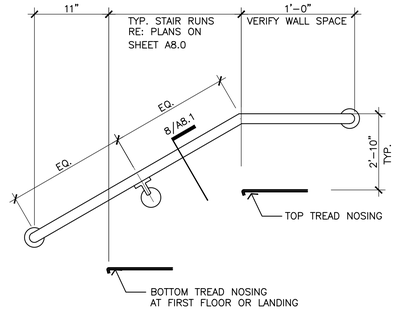
8 ELEVATION OF WALL HANDRAIL
SCALE: 3" = 1'-0"



5 STAIR STRINGER AT LANDING
SCALE: 1 1/2" = 1'-0"

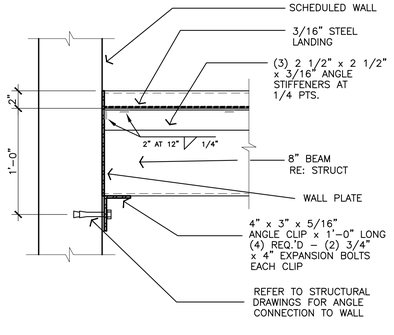


4 DETAIL
SCALE: 3" = 1'-0"



3 ELEVATION OF WALL HANDRAIL
SCALE: 1 1/2" = 1'-0"

2 NOT USED



1 STAIR LANDING AT WALL
SCALE: 1 1/2" = 1'-0"

Date issued/revised

15 DECEMBER 2022 FOR PRICING

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

THESE DOCUMENTS ARE NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

OSBORN & VANE ARCHITECTS, Inc.
BEN CHRISTOPHER SUNDIN
TEXAS LICENSE NO. 19072

UNITY RECREATION CENTER

820 OLD MILL ROAD
CEDAR PARK,TEXAS

Project No. 22037
Drawn ER
Checked BS

STAIR DETAILS

Sheet No. A8.1

GENERAL NOTES

A. THE NOTES AND SPECIFICATIONS PROVIDED ON THE STRUCTURAL DRAWINGS ARE EXCERPTS FROM THE RELATING PROJECT SPECIFICATIONS. THEY ARE NEITHER COMPLETE NOR DO THEY REPLACE THE CONTRACT SPECIFICATIONS.

B. MEANS AND METHODS: THE STRUCTURAL DRAWINGS DEPICT THE STRUCTURE IN ITS FINAL CONSTRUCTED CONFIGURATION UNLESS SO STATED OR NOTED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND PROVIDE ALL TEMPORARY SUPPORTS REQUIRED FOR THE EXECUTION OF THE CONTRACT INCLUDING BUT NOT LIMITED TO: GUYS, BRACES, SHORES, RE-SHORES, FALSEWORK, ANY TEMPORARY SUPPORTS OR TEMPORARY ANCHORS. NEITHER CONSTRUCTION MEANS AND METHODS NOR CONSTRUCTION SAFETY ARE PART OF THE STRUCTURAL ENGINEER'S EXPERTISE OR SCOPE OF WORK. THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS ARE FULLY RESPONSIBLE FOR THE MEANS AND METHODS USED TO CONSTRUCT THE STRUCTURE AND FOR FULL COMPLIANCE WITH ALL JOB SAFETY RELATED REGULATIONS AND CONDITIONS AT THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS RELATING TO THE SPECIFIC STRUCTURAL ERECTION ITEMS ADDRESSED IN THE LATEST OSHA REGULATIONS.

C. LIMITED SITE VISITS IF ANY BY THE STRUCTURAL ENGINEER OF RECORD (SER) ARE SOLELY TO OBSERVE COMPLETED PARTS OF THE STRUCTURE. THE STRUCTURAL ENGINEER OF RECORD (SER) IS NEITHER QUALIFIED TO OBSERVE NOR COMMENT ON CONSTRUCTION MEANS AND METHODS AND JOB SITE SAFETY.

D. PRINCIPAL OPENINGS ARE SHOWN ON THE DRAWINGS. SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR OPENINGS, SLEEVES, CURBS, INSERTS, DEPRESSIONS, ETC., NOT SHOWN.

E. TYPICAL DETAILS: GENERAL DETAILS AND NOTES ON THESE SHEETS SHALL APPLY UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS. ALL WORK OR CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES, REGULATION AND SAFETY REQUIREMENTS. ALL DETAILS ARE TYPICAL UNLESS NOTED OTHERWISE. DETAILS SHALL APPLY TO ALL SIMILAR AND LIKE CONDITIONS.

F. DISCREPANCIES: THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS. UPON RECEIPT OF SUCH INFORMATION, THE ENGINEER WILL SEND WRITTEN INSTRUCTIONS TO ALL CONCERNED. ANY SUCH DISCREPANCY, OMISSION, OR VARIATION NOT REPORTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND WORK SHALL BE PERFORMED IN A MANNER AS DIRECTED BY THE ENGINEER AT NO COST TO THE PROJECT.

G. EXCAVATION: THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH THE LOCAL BUILDING DEPARTMENT

H. COORDINATION AND OTHER TRADES: IT IS NOT THE INTENT THAT THE STRUCTURAL DRAWINGS BE VIEWED AS STAND ALONE DRAWINGS WITH RESPECT TO PROJECT DIMENSIONS OR ANY OTHER COMPONENT OF THE CONSTRUCTION THAT CAN AND MAY BE IDENTIFIED IN OTHER PARTS OF THE CONTRACT DOCUMENTS. IT REQUIRES THE ENTIRE SET OF CONTRACT DOCUMENTS TO PROPERLY CONSTRUCT THE STRUCTURE AS WELL AS OTHER COMPONENTS OF THE BUILDING. ANCHORS REQUIRED FOR ANCHORING MEP EQUIPMENT AND / OR PIPING ARE NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL DETERMINE AND COORDINATE REQUIREMENTS FROM OTHER DISCIPLINES AND SHALL PROVIDE APPROPRIATE ALLOWANCES INTO THE BID. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASSEMBLE AND COORDINATE THE REQUIREMENTS OF ALL COMPONENTS OF THE CONTRACT DOCUMENTS IN ORDER TO PROPERLY IMPLEMENT THE REQUIREMENTS OF THE CONTRACT. SEE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF PIPES, VENTS, CHASES, DUCTS AND OTHER OPENINGS AND DETAILS NOT SHOWN ON THESE STRUCTURAL DRAWINGS. ALL DIMENSIONS ARE TO BE CHECKED AND VERIFIED WITH THE ARCHITECTURAL DRAWINGS.

I. SEE ARCHITECTURAL DRAWINGS FOR ELEVATIONS NOT SHOWN. THE CONTRACTOR SHALL COMPARE THE STRUCTURAL SECTIONS WITH THE ARCHITECTURAL SECTIONS AND REPORT ANY DISCREPANCY TO THE ARCHITECT PRIOR TO FABRICATING OR INSTALLING STRUCTURAL MEMBERS.

J. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE GRADES WITH THE CIVIL ENGINEER'S GRADING PLAN AND THE LANDSCAPE ARCHITECT'S PLAN.

K. THE DRAWINGS IN THE STRUCTURAL DOCUMENTS ARE NOT TO BE SCALED FOR ANY PURPOSE, INCLUDING THE DETERMINATION OF QUANTITIES AND THE FIT UP OF MATERIALS.

L. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO PROVIDE SUCH DOCUMENTS TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBERS AND ERECTION IN THE FIELD.

M. PRECONSTRUCTION MEETINGS: THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING PRECONSTRUCTION MEETINGS FOR THE FOUNDATION AND SUPERSTRUCTURE ELEMENTS OF THE PRIMARY FRAME WITH A MINIMUM OF TWO WEEKS OF NOTICE PRIOR TO START OF THE RELEVANT WORK. ATTENDEES SHALL INCLUDE THE CONTRACTORS, APPROPRIATE SUBCONTRACTORS, FABRICATORS, INSPECTORS, ARCHITECT/ENGINEERS. THE MEETING AGENDA SHALL INCLUDE THE FOLLOWING ITEMS: REVIEW OF WORK SCOPE, PROJECT SCHEDULE FOR THE ELEMENTS BEING DISCUSSED, CONTACT INFORMATION OF RESPONSIBLE PARTIES, INSPECTION POINTS FOR BOTH SER AND SPECIAL INSPECTOR, REVIEW OF MATERIALS AND ANY SPECIAL DESIGN ISSUES, CLARIFICATIONS, TESTING AND ACCEPTANCE, AND ANY OTHER TOPIC DEEMED APPROPRIATE BY THE CONTRACTOR, ARCHITECT OR STRUCTURAL ENGINEER.

N. COLD-FORMED WALL STUDS AND CONNECTIONS SHALL BE DESIGNED AND SEALED BY A LICENSED ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED. THE CALCULATIONS AND DETAILED DRAWINGS SHALL BE SUBMITTED FOR APPROVAL SHOWING ALL CALCULATIONS, INCLUDING DESIGN LOADS, MEMBER SIZES AND CONNECTIONS.

GENERAL NOTES

O. SHOP DRAWINGS SHALL BE NEW DRAWINGS PRODUCED BY THE CONTRACTOR. ILLEGIBLE REPRODUCTIONS OF THE DESIGN DRAWINGS WILL BE REJECTED. THE USE OF REPRODUCTIONS OR ELECTRONIC FILES OF THE STRUCTURAL DRAWINGS FOR THE PREPARATION OF SHOP DRAWINGS IS NOT ACCEPTABLE WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE ENGINEER OF RECORD. IF SUCH AUTHORIZATION IS OBTAINED, DO NOT SUBMIT SHOP DRAWINGS WITH THE CONTRACT DOCUMENT TITLE BLOCK AND/OR THE SEAL OF THE REGISTERED ENGINEER OF RECORD AFFIXED. ALTERATION OF A SEALED DOCUMENTS WITHOUT PROPER NOTIFICATION OF THE RESPONSIBLE ENGINEER IS AN OFFENSE OF THE ENGINEERING PRACTICE ACT. THE USE OF REPRODUCTIONS OR ELECTRONIC FILES OF THESE CONTRACT DRAWINGS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT, AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS OR OMISSIONS THAT MAY OCCUR HEREON. DRAWINGS REQUIRING A SPECIALTY STRUCTURAL ENGINEER (SSR) SHALL HAVE CALCULATIONS AND DRAWINGS SEALED BY A LICENSED ENGINEER IN THE STATE OF THE PROJECT.

P. SHOP DRAWINGS ARE AN AID FOR FIELD PLACEMENT, AND ARE SUPERSEDED BY THE STRUCTURAL DRAWINGS. IT IS NOT THE INTENT THAT THE STRUCTURAL DRAWINGS BE VIEWED AS DETAILED SHOP OR ERECTION DRAWINGS. VARIOUS DIMENSIONS REQUIRED FOR PROPER FIT-UP OF THE COMPONENTS OF THE STRUCTURE MUST BE DETERMINED FROM THE INFORMATION THAT IS PROVIDED ELSEWHERE IN THE CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S AND THEIR DETAILER'S OR SUBCONTRACTOR'S RESPONSIBILITY TO ESTABLISH AND TO CALCULATE AND VERIFY THESE DIMENSIONS AS REQUIRED TO ACHIEVE PROPER FIT-UP OF MATERIALS AND TO ACHIEVE COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE CERTAIN THAT ALL CONSTRUCTION IS IN FULL AGREEMENT WITH THE LATEST STRUCTURAL DRAWINGS.

Q. OMISSION FROM THE SHOP DRAWINGS OF ANY REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF COMPLYING WITH THE OMITTED REQUIREMENTS, EVEN IF THE SHOP DRAWINGS HAVE BEEN REVIEWED, APPROVED AND RETURNED.

R. SHOP DRAWING REVIEW PROCESS - ALL SHOP DRAWINGS WILL BE REVIEWED AND RETURNED IN THE ORDER RECEIVED UNLESS OTHER SPECIFIC INSTRUCTIONS ARE RECEIVED. FOR PROJECTS WITH MULTIPLE WORK AREAS, THE SHOP DRAWINGS MUST BE DIVIDE INTO THE SAME OR SIMILAR AREAS WITH EACH AREA SUBMITTED INDIVIDUALLY UNDER A SEPARATE TRANSMITTAL. IF THE SHOP DRAWINGS ARE NOT DIVIDED INTO AREAS PER THE CONTRACT DOCUMENTS, THAT SUBMITTAL WILL BE REJECTED. EACH SUBMITTAL WILL BE REVIEWED INDIVIDUALLY AND REQUIRE AN INDIVIDUAL TIME FRAME OF TEN (10) WORKING DAYS PER SUBMITTAL. IF MULTIPLE SUBMITTALS ARE RECEIVED WITHIN THE REVIEW TIME FRAME OF A PRIOR SUBMITTAL, THEY WILL BE REVIEWED CONSECUTIVELY EACH WITH ITS OWN INDIVIDUAL REVIEW TIME FRAME THAT BEGINS ONCE THE PRIOR SUBMITTAL IS RETURNED. THIS GIVES EACH SUBMITTAL A TEN (10) WORKING DAY REVIEW WINDOW.

S. RETURNED SHOP DRAWINGS STAMPED "NOTE MARKINGS" OR "APPROVED AS NOTED" ARE ASSUMED TO BE APPROVED ONCE ALL THE COMMENTS HAVE BEEN INCORPORATED. THE SER WILL ONLY REVIEW SUBMITTALS ONE ADDITIONAL TIME AND ONLY IF THEY ARE MARKED "REVISE AND RESUBMIT" OR "REJECTED". ANY FURTHER REVIEWS OF THE SAME OR SIMILAR SUBMITTALS WILL BE AT THE GENERAL CONTRACTORS EXPENSE WITH PAYMENT FOR SERVICES RENDERED PRIOR TO THE RETURN OF THE APPROVAL DRAWINGS.

T. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELAYS CAUSED BY REJECTION OF INADEQUATE, INCOMPLETE OR INCORRECT SHOP DRAWINGS.

U. SHOP DRAWINGS THAT ARE NOT SPECIFICALLY REQUIRED BY THE GENERAL NOTES OR SPECIFICATIONS WILL NOT BE REVIEWED OR RETURNED.

V. MINIMUM SHOP DRAWING SUBMITTAL REQUIREMENTS INCLUDE:

- CONCRETE MIX DESIGNS FOR EACH CLASS OF CONCRETE WITH TEST DATA
- CONCRETE ACCESSORIES (VAPOR RETARDER, REINFORCING SUPPORT CHAIRS, VOID FORMS, ETC.)
- CONCRETE REINFORCING SHOP DRAWINGS
- STRUCTURAL STEEL SHOP DRAWINGS
- STEEL STAIR, LADDER AND HANDRAIL SHOP DRAWINGS (SEALED BY A LICENSED ENGINEER)
- STEEL JOIST SHOP DRAWINGS
- STEEL DECK SHOP DRAWINGS
- TILT WALL EMBED SHOP DRAWINGS
- TILT WALL LIFTING AND BRACING BOOKS (SEALED BY A LICENSED ENGINEER)
- COLD-FORMED METAL STUDS AND CONNECTION SHOP DRAWINGS AND CALCULATIONS (SEALED BY LICENSED ENGINEER)
- GLAZED ALUMINUM FRAMING SYSTEMS SHOP DRAWINGS AND CALCULATIONS (SEALED BY LICENSED ENGINEER)
- PRE-FABRICATED CANOPY FRAMING SYSTEMS SHOP DRAWINGS AND CALCULATIONS (SEALED BY A LICENSED ENGINEER)

W. CRANES, CONCRETE TRUCKS AND ALL OTHER HEAVILY LOADED VEHICLES ARE NOT TO BE DRIVEN ACROSS GRADE BEAMS OR BUILDING SLABS.

X. ALL SHORING REQUIRED TO TEMPORARILY SUPPORT CONSTRUCTION LOADS DURING THE CONSTRUCTION OF THE PROJECT SHALL BE DESIGNED AND SEALED BY A LICENSED ENGINEER. ALL EXISTING STRUCTURES AND NEW STRUCTURES SUPPORTING SHORING LOADS SHALL ALSO BE ANALYZED TO DETERMINE IF THEY ARE CAPABLE OF SUPPORTING THE REQUIRED LOADS AND SHALL BE REVIEWED BY A LICENSED ENGINEER. SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL.

Y. ERECTION OF STRUCTURAL STEEL MAY NOT BEGIN UNTIL CONCRETE FOUNDATION HAS CURED FOR A MINIMUM OF THREE DAYS. STRUCTURAL STEEL OR OTHER HEAVY LOADS SHALL NOT BE STOCKPILED ON ANY SLAB UNTIL IT HAS CURED FOR A MINIMUM OF THREE DAYS.

Z. NON CONFORMING WORK, REMEDIAL REPAIRS, AND FIELD MODIFICATIONS — ALL NON CONFORMING WORK AND ASSOCIATED REMEDIAL REPAIRS OR FIELD MODIFICATIONS, INCLUDING ENGINEERING, QUALITY REVIEW AND DRAFTING OF ANY NEW DETAILS OR DOCUMENT REVISIONS, SUBMITTED AS A REQUEST FOR INFORMATION (RFI) AND DEEMED TO REQUIRE ADDITIONAL ENGINEERING OR DRAFTING SERVICES MAY BE BILLED AS AN ADDITIONAL SERVICE AT THE CONTRACTORS EXPENSE AT THE SOLE DISCRETION OF THE SER. THE SER MAY WITHHOLD FUTURE SERVICES UNTIL PAYMENT IS RECEIVED.

GENERAL NOTES

AA. NOTE THAT THE GROUND FLOOR SLAB IS A GROUND SUPPORTED SLAB AT GRADE AS PER THE DESIGN RECOMMENDED IN THE GEOTECHNICAL REPORT. IT IS NOT A STRUCTURAL SLAB AND AS SUCH IT IS NOT DESIGNED FOR ANY EXTERNAL UPWARD OR DOWNWARD LOADS, IT IS INTENDED TO BE ENTIRELY SUPPORTED BY THE PREPARED GROUND UNDER THE SLAB. THE CONTRACTOR SHOULD NOTE THAT THE PERFORMANCE OF THE SLAB AS DESIGNED AND INTENDED BY THE GEOTECHNICAL ENGINEER IS HIGHLY DEPENDENT ON HOW WELL THE CONTRACTOR FOLLOWS THE SITE PREPARATION INSTRUCTIONS IN THE GEOTECHNICAL REPORT. THE ARCHITECT SHALL ADVISE THE OWNER THAT THE PERFORMANCE OF THE SLAB INVOLVES SOME RISK, AND THAT SLAB ON GRADE MAY EXPERIENCE VERTICAL MOVEMENTS OF 1-1/2 INCHES OR MORE DEPENDING ON CLIMATIC FACTORS AND IS DEPENDENT ON ENVIRONMENTAL CONDITIONS OVER WHICH THE OWNER HAS CONTROL OF AFTER OCCUPANCY OF THE BUILDING. FURTHERMORE, A SLAB ON GRADE CAN EXPERIENCE VERTICAL MOVEMENT BASED ON CHANGES IN THE MOISTURE CONTENT OF THE UNDERLYING SOILS AND THAT STRUCTURAL SLABS WOULD LIMIT THIS RISK AT A GREATER UP-FRONT COST TO THE PROJECT. THE ARCHITECT, CONTRACTOR AND THE OWNER SHOULD CONSULT WITH THE GEOTECHNICAL ENGINEER IF THERE ARE ANY QUESTIONS CONCERNING CONSTRUCTION, PERFORMANCE AND RISKS INVOLVED WITH GROUND SUPPORTED SLAB AT GRADE CONSTRUCTION.

DESIGN CRITERIA:

BUILDING CODE: INTERNATIONAL BUILDING CODE, 2021 EDITION, ASCE 7-16

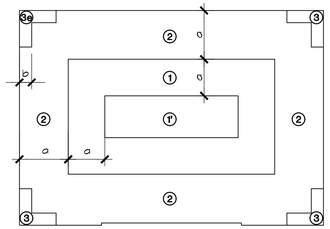
LIVE LOAD:

ROOF:	20 PSF
FLOORS:	
CLASSROOMS	40 PSF + 15 PSF PARTITION
CORRIDORS	100 PSF (80 PSF ABOVE THE FIRST LEVEL)
OFFICE	50 PSF + 15 PSF PARTITION
STAIRS AND EXITS	100 PSF + 300 LBS. CONCENTRATED LOAD AT TREAD MIDSPAN
HANDRAILS & GUARDRAILS	200 LBS. ANY DIRECTION OR 50 PLF

WIND LOAD:

VELOCITY (BASIC) 113	MPH	THREE SECOND GUST ASCE 7-16
EXPOSURE B		
RISK CATEGORY III		
INTERNAL PRESSURE COEFFICIENT, G_{CPI}	+/- 0.18	

MAIN WIND FORCE RESISTING SYSTEM (MWFRS):	
MAXIMUM HORIZONTAL INTERIOR PRESSURE	[ ] PSF
MAXIMUM HORIZONTAL EXTERIOR PRESSURE	[ ] PSF
MAXIMUM GROSS UPLIFT INTERIOR ZONE	[ ] PSF
MAXIMUM GROSS UPLIFT EXTERIOR ZONE	[ ] PSF
CORNER ZONE WIDTH	['- "] FROM EACH CORNER



COMPONENTS AND CLADDING — GROSS ROOF UPLIFT IN PSF		
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)	
	50	200
INTERIOR ZONE/ZONE 1		
EXTERIOR ZONE/ZONE 2		
CORNERS AND OVERHANGS/ZONE 3		
RELIABLE DEAD LOAD	5 PSF	
CORNER ZONE WIDTH	X '- X" FROM EACH CORNER	

COMPONENTS AND CLADDING — WALLS IN PSF		
ZONE	EFFECTIVE WIND AREA (SQUARE FEET)	
	50	200
INTERIOR ZONE/ZONE 4		
EXTERIOR (CORNER) ZONE/ZONE 5		
CORNER ZONE WIDTH	X '- X" FROM EACH CORNER	

ALLOWABLE SOIL BEARING CAPACITY:
(AT 6'—0" BELOW EXISTING GRADE AND A MINIMUM 5'-0" EMBEDMENT INTO THE WEATHERED LIMESTONE)

TOTAL LOAD	15,000 PSF

ALLOWABLE SKIN FRICTION CAPACITY ---- 2500 PSF
(BEGINNING AT 5'-0" EMBEDMENT INTO THE WEATHERED LIMESTONE)

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING
NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive•Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5282
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

GENERAL NOTES

Sheet No. S0.0

2221079

EARTHWORK

1. SITE PREPARATION FOR THE BUILDING PAD SHALL CONSIST OF THE REMOVAL OF EXISTING PAVEMENT, VEGETATION, ORGANIC MATTER AND ANY ADDITIONAL MATERIAL AS NECESSARY TO PROVIDE THE REQUIRED AMOUNT OF FILL UNDER THE BUILDING.
2. THE SUBGRADE SHALL BE PROOFROLLED WITH A HEAVY, RUBBER-TIRED VEHICLE (STATIC WEIGHT OF AT LEAST 20 TONS AND WITH TIRE PRESSURES OF AT LEAST 90 PSI). THE CONTRACTOR SHALL MAKE AT LEAST TWO COMPLETE PASSES OVER THE AREA WITH THE SECOND PASS PERPENDICULAR TO THE FIRST PASS. AREAS OF THE SUBGRADE THAT ARE OBSERVED TO BE SOFT OR WEAK SHALL BE OVEREXCAVATED AND REPLACED WITH PROPERLY COMPACTED SELECT FILL.
3. SUBGRADE SHALL THEN BE SCARIFIED AND MOISTURE CONDITIONED TO MATCH THE BUILDING PAD PERIMETER TO A SIX (6) INCH DEPTH AND THEN RECOMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALL BE BETWEEN OPTIMUM AND +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT. PROVIDE A MINIMUM OF FOUR (4) FIELD DENSITY TESTS ON THE SUBGRADE OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER.
4. SELECT FILL MATERIAL FOR THE BUILDING PAD SHALL BE AN INORGANIC SANDY CLAY WITH A LIQUID LIMIT BETWEEN 26 AND 34 AND PLASTICITY INDEX BETWEEN 6 AND 16. STRUCTURAL SELECT FILL PAD MATERIAL SHALL BE TESTED FOR ACCEPTABILITY AND A MOISTURE DENSITY CURVE SHALL BE ESTABLISHED.
5. SELECT FILL SHALL BE PLACED IN EIGHT INCH LOOSE LIFTS AND COMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALL BE BETWEEN -2 AND +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT FOR SELECT FILL. SELECT FILL MATERIAL SHALL EXTEND TO 5'-0" BEYOND THE BUILDING PERIMETER. PROVIDE A MINIMUM OF FOUR (4) FIELD DENSITY TESTS ON EACH LIFT OF SELECT FILL OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER.
6. SELECT FILL MATERIAL FOR THE BUILDING PAD SHALL BE A CRUSHED LIMESTONE BASE MATERIAL MEETING THE REQUIREMENTS OF TxDOT 2014 STANDARD SPECIFICATION ITEM 247, TYPE A, GRADE 4. MAXIMUM PLASTICITY INDEX SHALL BE 12 AND THE MAXIMUM LIQUID LIMIT SHALL BE 40. THE GRADATION OF THE MATERIAL SHALL BE AS FOLLOWS:

RETAINED ON THE 1-3/4" SCREEN	0%
RETAINED ON THE 1/4" SCREEN	45% — 75%
RETAINED ON THE NO. 4 SIEVE	45% — 75%
RETAINED ON THE NO. 40 SIEVE	50% — 85%

7. SELECT FILL BASE MATERIAL SHALL BE PLACED IN EIGHT INCH LOOSE LIFTS AND COMPACTED TO BETWEEN 98 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALL BE BETWEEN -2 AND +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT FOR SELECT FILL. SELECT FILL MATERIAL SHALL EXTEND TO 5'-0" BEYOND THE BUILDING PERIMETER. PROVIDE A MINIMUM OF FOUR (4) FIELD DENSITY TESTS ON EACH LIFT OF SELECT FILL OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER.
8. SELECT FILL MATERIAL SHALL BE TESTED DURING PLACEMENT OF EACH LIFT FOR THE ATTERBERG LIMITS IN ACCORDANCE WITH ASTM D4318-98 METHOD B "STANDARD TEST METHOD FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS" TO VERIFY THAT THE SELECT FILL MATERIAL IS IN ACCORDANCE WITH THE ORIGINALLY APPROVED SELECT FILL MATERIAL. PROVIDE A MINIMUM OF ONE (1) TEST PER LIFT OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER WITH A MAXIMUM OF TEN (10) PER LIFT.
9. CONTRACTOR SHALL MAINTAIN A CLEAN EXCAVATION THAT IS FREE OF WATER 100% OF THE TIME. CONTRACTOR SHALL PROVIDE PUMPS AS REQUIRED TO REMOVE ANY WATER AT ALL TIMES.
10. THE SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING PAD DURING BUILDING PAD INSTALLATION AND WHEN THE BUILDING PAD AND BUILDING ARE COMPLETED.
11. PLUMBING AND UTILITY TRENCHES WITHIN THE BUILDING PAD SHALL HAVE PIPING BEDDED ON 6" MINIMUM OF CEMENT STABILIZED SAND WITH 4" MINIMUM ALL AROUND. BACKFILL IN UTILITY TRENCHES SHALL CONSIST OF COMPACTED SELECT FILL. PROVIDE A 1'-0" WIDE BENTONITE CLAY PLUG OR FAT CLAY (PI>50) FOR THE FULL DEPTH AND WIDTH OF THE UTILITY TRENCH TO A MINIMUM OF 1'-0" ABOVE THE BOTTOM OF THE FOUNDATION AT THE EXTERIOR FACE OF BUILDING FOUNDATIONS WHERE UTILITY TRENCHES ENTER THE BUILDING.
12. PROVIDE A MINIMUM (TWELVE (12) INCH FAT CLAY CAP (PI>50) FOR A MINIMUM OF 5'-0" AROUND THE PERIMETER OF THE BUILDING. THE CAP SHALL EXTEND AS REQUIRED TO COVER THE LIMITS OF THE BUILDING PAD EXCAVATION AND SELECT FILL BUILDING PAD MATERIALS.

SITE DRAINAGE

1. GRADE THE SITE TO PROVIDE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS AND SLABS. WATER SHALL NOT BE ALLOWED TO POND ADJACENT TO THE BUILDING FOUNDATIONS OR SLABS.
2. AS A MINIMUM REQUIREMENT, ALL DOWNSPOUTS FROM ROOF DRAINS AND GUTTERS SHALL BE COLLECTED AND PIPED AWAY FROM THE BUILDING. WHEN WATER IS NOT PIPED AWAY FROM THE BUILDING, DOWNSPOUTS SHALL DUMP ONTO A CAST IN PLACE 4" THICK X 3'-0" WIDE CONCRETE SWALE REINFORCED WITH #4 AT 12" ON CENTER EACH WAY AND EXTENDING 10'-0" OUT FROM THE BUILDING. REFER TO ARCHITECTURAL AND CIVIL FOR PAVING AND DRAINGAGE.
3. TREES AND VEGETATION SHALL NOT BE ALLOWED WITHIN A DISTANCE EQUAL TO THREE QUARTERS THEIR ULTIMATE HEIGHT AWAY FROM THE BUILDING.
4. IRRIGATE VEGETATION AND SOILS ADJACENT TO BUILDING (NO MORE THAN 15 MINUTES THREE TIMES A WEEK) ON AN AS NEEDED BASIS TO MAINTAIN UNIFORM SOIL MOISTURE CONDITIONS AROUND THE PERIMETER OF THE BUILDING FOLLOWING CONSTRUCTION.

FOUNDATIONS

1. PREPARED GRADE AREA UNDER ALL BUILDING SLABS AND GRADE BEAMS SHALL BE COVERED WITH A 15 MIL WATER VAPOR RETARDER MEETING THE REQUIREMENTS OF ASTM E 1745 (LATEST EDITION), CLASS A OR BETTER WITH MAXIMUM WATER PERMEANCE OF 0.01 PERMS WHEN TESTED IN ACCORDANCE WITH ASTM E96. THE WATER VAPOR RETARDER SHALL BE INSTALLED, LAPPED AND TAPED WITH MANUFACTURER'S APPROVED PRODUCT IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM E 1643 (LATEST EDITION). PENETRATIONS SHALL SEALED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
2. FOUNDATION DETAILING SHOWN ON THE DRAWINGS IS BASED ON A FOUNDATION DESIGN SPECIFIED IN THE SOIL REPORT BY GEOSCIENCE ENGINEERS, LLC., REPORT NO. 22-DG3152, DATED AUGUST 02, 2022. THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT SHALL NOT SUPERSEDE THE REQUIREMENTS SHOWN ON THE DESIGN DRAWINGS OR IN THE SPECIFICATIONS WHEN THE REQUIREMENTS SHOWN ON THE DRAWINGS ARE GREATER THAN THOSE SHOWN IN THE GEOTECHNICAL REPORT. THE CONTRACTOR IS REQUIRED TO SECURE A COPY OF THE GEOTECHNICAL REPORT FROM THE OWNER AND TO HAVE A COPY ON THE JOB SITE AT ALL TIMES FOR HIS USE AND REFERENCE.
3. FOUNDATION DETAILING SHOWN ON THE DRAWINGS IS BASED ON A MINIMUM OF FOUR FEET AND SIX INCHES (4'-6") OF SELECT FILL MATERIAL BENEATH THE FLOOR SLAB AND SHALL EXTEND TO 5'-0" BEYOND THE BUILDING PERIMETER.
4. ALL BACKFILL FOR BURIED PIPES AND CONDUIT WITHIN THE BUILDING PAD AND EXTENDING OUT MINIMUM 5'-0" BEYOND THE BUILDING SHALL BE BACKFILLED WITH SELECT FILL BACKFILL. DO NOT USE SAND BACKFILL. A 2'-0" WIDE BENTONITE PLUG SHALL BE PROVIDED IN ALL UTILITY TRENCHES AT THE FACE OF THE BUILDING FOUNDATION. SEE DETAIL 2/S4.1 FOR DETAIL AT PIPE BUILDING ENTRY.
5. CONDUITS SHALL NOT BE PLACED IN THE CONCRETE SLAB. CONDUITS SHALL BE PLACED IN THE SELECT FILL MATERIAL BENEATH THE VAPOR RETARDER. ALL PENETRATIONS OF THE VAPOR RETARDER SHALL BE SEALED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS. CONDUIT TRENCHES WITHIN THE BUILDING PAD SHALL BE LIMITED TO A MAXIMUM WIDTH OF TWO FEET AND BE SPACED NO CLOSER THAN FOUR FEET CENTER TO CENTER. CONDUITS STACKED WITHIN A SINGLE TRENCH SHALL BE SEPARATED VERTICALLY BY TWO TIMES THE DIAMETER OF THE LARGEST CONDUIT OR 12 INCHES MINIMUM. COMPACTED SELECT FILL OR OTHER APPROPRIATE COMPACTED FILL MATERIAL SHALL BE USED BETWEEN STACKED CONDUITS.
6. THE FLOOR SLAB SUBGRADE SHALL BE PROPERLY COMPACTED, PROOF ROLLED AND SHALL BE FREE OF STANDING WATER, MUD AND FROZEN SOILS.
7. SLABS ON GROUND SHALL HAVE CONSTRUCTION JOINTS OR CRACK CONTROL JOINTS (REFER TO TYPICAL DETAILS) AT EACH COLUMN LINE AND IN EACH DIRECTION. ADDITIONAL CRACK CONTROL JOINTS SHALL BE PROVIDED SUCH THAT NO AREA BOUNDED BY CONSTRUCTION AND/OR CRACK CONTROL JOINTS CONTAINS MORE THAN 250 SQUARE FEET AND THE RESULTING ASPECT RATIO OF LONG SIDE TO SHORT SIDE DIMENSIONS OF THE BOUNDED SLAB AREA DOES NOT EXCEED 1.5 TO 1. CRACK CONTROL JOINTS SHALL BE MADE USING A "SOFT-CUT" CONCRETE SAW AS SOON AS THE SLAB WILL SUPPORT THE WEIGHT OF THE SAW AND OPERATOR WITHOUT DISTURBING THE FINAL FINISH. THIS SHOULD BE WITHIN THE FIRST SIX HOURS AFTER PLACEMENT. THE CRACK CONTROL JOINTS SHALL BE CUT A MAXIMUM WIDTH OF 1/8 INCH AND A MINIMUM DEPTH OF 1/3 THE SLAB THICKNESS. REFER TO THE TYPICAL DETAILS AND DRAWINGS FOR INFORMATION ON CONTROL JOINTS, CONSTRUCTION JOINTS, REINFORCING DETAILS, JOINT SEALANT, AND TYPICAL JOINT LAYOUT.
8. WHERE SLABS ARE TO RECEIVE SENSITIVE ARCHITECTURAL FLOOR FINISHES, ALL JOINTS IN THE SLAB CONSTRUCTION SHALL BE PLACED TO ALIGN WITH JOINTS IN THE FLOOR FINISHES.
9. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SHORING OF WALLS WHICH ARE ULTIMATELY SUPPORTED TOP AND BOTTOM. SUCH SHORING SHALL NOT BE REMOVED UNTIL ALL SUPPORTING ELEMENTS ARE IN PLACE, THE COMPACTION OF ALL BACKFILL AGAINST THE WALL HAS BEEN COMPLETED, AND THE CONCRETE IN THE WALLS AND SUPPORTING ELEMENTS HAS ATTAINED THE SPECIFIED 28 DAY COMPRESSIVE STRENGTH (f'c').
10. EXCAVATIONS FOR SPREAD FOOTING, COMBINED FOOTING, CONTINUOUS FOOTINGS AND/OR MAT FOUNDATIONS SHALL BE CLEANED AND HAND TAMPED TO A UNIFORM SURFACE. FOOTING EXCAVATIONS SHALL HAVE THE SIDE AND BOTTOM TEMPORARILY LINED WITH 6 MIL VAPOR BARRIER IF CONCRETE PLACEMENT DOES NOT OCCUR WITHIN 24 HOURS OF FOOTING EXCAVATION. SEAL SLABS MAY BE REQUIRED BASED ON GROUND WATER CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS, AND COST ASSOCIATED WITH ALL SEAL SLABS. REFER TO THE GEOTECHNICAL REPORT FOR GROUND WATER OR POTENTIAL PERCHED WATER CONDITIONS.
11. REINFORCEMENT PLACEMENT SEQUENCE FOR FOOTINGS AND MATS IS NOTED FOR MAJOR REINFORCEMENT BAR LAYERS ONLY. IN SPREAD FOOTINGS OR MATS, THE CONTRACTOR SHALL COORDINATE AND SEQUENCE ALL OTHER BAR PLACEMENTS AS REQUIRED TO CONFORM TO THE CONTRACT DOCUMENTS.
12. FOUNDATION CONDITIONS THAT DIFFER FROM THOSE NOTED IN THE CONTRACT DOCUMENTS OR AS DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT, GEOTECHNICAL ENGINEER AND SER BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.
13. CONTRACTOR SHALL NOTIFY THE ARCHITECT AND SER AT LEAST 48 HOURS PRIOR TO PLACEMENT OF CONCRETE IN FOOTINGS.
14. CONTRACTOR SHALL BE PREPARED TO USE TEMPORARY CASING AS REQUIRED TO FINISH THE DRILLED FOOTINGS. CASING SIZE SHALL HAVE AN INTERIOR DIAMETER EQUAL TO THE SPECIFIED SHAFT SIZE SHOWN ON THE PLANS. CONTRACTOR SHALL PROVIDE A UNIT PRICE FOR A DRY DRILLED SHAFT AND FOR A CASED DRILLED SHAFT.
15. THE BUILDING SITE MAY HAVE SOME BURIED EXISTING FOUNDATIONS AND UTILITIES. IF THESE FOUNDATIONS OR UTILITIES ARE ENCOUNTERED DURING DRILLING OPERATIONS, THE SINGLE DRILLED FOOTING SHALL BE REPLACED WITH TWO SYMMETRICALLY PLACED FOOTINGS AND A STRAP BEAM AS SHOWN IN 10/S4.1. THE CONTRACTOR SHALL PROVIDE A UNIT COST FOR EACH OCCURRENCE. SEAL ANY UTILITY LINES DISCOVERED WITH CONCRETE.
16. ALL FOOTINGS SHALL BE CONSOLIDATED WITH A CONCRETE VIBRATOR AS PER THE REQUIREMENTS OF ACI 318 AND ACI 308R, LATEST EDITION.
17. DRILLED FOOTINGS SHALL BE POURED IMMEDIATELY UPON COMPLETION OF EXCAVATION AND CLEANING OF FOOTING BEARING SURFACE. UNDER NO CIRCUMSTANCES SHOULD DRILLED FOOTINGS/PIERS SHOULD NOT REMAIN OPEN OVER NIGHT. ALL SPOILS FROM THE DRILLED FOOTING EXCAVATIONS SHALL BE REMOVED FROM THE BUILDING PAD.
18. IF DRILLED AND UNDERREAMED FOOTINGS CANNOT BE FORMED DUE TO CAVING SOILS, THE ARCHITECT, GEOTECHNICAL ENGINEER AND SER SHALL BE NOTIFIED IMMEDIATELY BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.
19. TOPS OF DRILLED FOOTINGS SHALL NOT HAVE "MUSHROOMED" OR FLARED TOPS. CONTRACTOR SHALL USE SONUTUBE, SURETOP OR APPROVED EQUAL TO FORM TOP OF PIERS TERMINATED AT GRADE LEVEL. CONCRETE OF FLARED TOP FOOTINGS SHALL BE REMOVED PRIOR TO FORMING AND PLACING OF THE CONCRETE IN PIER CAPS OR GRADE BEAMS. TOPS OF ALL PIERS SHALL BE CLEANED PRIOR TO THE PLACEMENT OF CONCRETE.
20. PROVIDE A TREMIE TO PLACE CONCRETE IN DRILLED FOOTINGS SO THAT CONCRETE DOES NOT FREE FALL OVER 10'-0".
21. PROVIDE PIER SLEDS TO MAINTAIN 3" MINIMUM CLEAR COVER ON FOOTING SHAFT REINFORCING, PIERS SLEDS SHALL BE STAGGERED ALONG THE VERTICAL REINFORCING. DO NOT PLACE SLEDS AT THE SAME LOCATION.

CONCRETE

1. ALL CONCRETE REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, EXCEPT WHERE NOTED. NO. 10 THROUGH NO. 18 BARS SHALL CONFORM TO ASTM A615, GRADE 75. DEFORMED BAR ANCHORS SHALL CONFORM TO ASTM A496, GR 70. ALL BARS SHALL BE NEW OR RECYCLED DOMESTIC BILLET STEEL OF A DOMESTIC MANUFACTURE.
2. CONCRETE IN THE FOLLOWING AREAS SHALL HAVE SAND AND CRUSHED CARBONATE AGGREGATE CONFORMING TO ASTM C33 FOR NORMAL WEIGHT CONCRETE AND LIGHT WEIGHT AGGREGATES CONFORMING TO ASTM C330, TYPE I PORTLAND CEMENT CONFORMING TO ASTM C150, AND THE FOLLOWING DESIGNATED COMPRESSIVE STRENGTH (f'c) IN 28 DAYS:

CONCRETE USE OR CLASS	MINIMUM 28 DAY COMPRESSIVE STRENGTH (f'c)	MAXIMUM WATER CEMENT RATIO	SLUMP (INCHES)
FOOTINGS	3000 PSI	0.50	5 TO 8
SLABS ON GROUND	3000 PSI	0.45	3 TO 5
ALL OTHER CONCRETE	3000 PSI	0.50	3 TO 5
TILT WALLS	2500 PSI AT LIFTING	0.45	3 TO 5
ELEVATED SLABS ON METAL DECK (3/4" MAX. AGGREGATE SIZE)	3500 PSI	0.45	3 TO 5
SLUMP SHALL BE MEASURED FROM SAMPLES TAKEN AT THE POINT OF DISCHARGE UNLESS AGREED TO IN WRITING PRIOR TO CONCRETE PLACEMENT			

NOTE: CONCRETE SUPPLIER SHALL BE AWARE OF CEMENTS THAT CAN CAUSE LATE ETTRINGITE FORMATION IN THE CEMENT PASTE AND BE PREPARED TO SHOW THAT THE CEMENTS USED WILL NOT CAUSE THIS PROBLEM.

3. FLY ASH MAY BE USED AS A POZZOLAN TO REPLACE A PORTION OF THE PORTLAND CEMENT IN A CONCRETE MIXTURE, SUBJECT TO THE APPROVAL OF THE ARCHITECT AND SER. FLY ASH, WHEN USED, SHALL CONFORM TO ASTM C618 TYPE 'C'. CONCRETE MIXTURES CONTAINING FLY ASH SHALL BE PROPORTIONED TO ACCOUNT FOR THE PROPERTIES OF THE SPECIFIC FLY ASH AND TO ACCOUNT FOR THE SPECIFIC PROPERTIES OF THE FLY ASH CONCRETE THUS RESULTING, INCLUDING BUT NOT LIMITED TO WATER CEMENT RATION AND MINIMUM 28 DAY COMPRESSIVE STRENGTH. THE RATIO OF THE AMOUNT BY VOLUME OF FLY ASH TO THE TOTAL AMOUNT BY VOLUME OF CEMENTITIOUS MATERIAL (INCLUDING THE FLY ASH) SHALL NOT EXCEED 25 PERCENT.
4. FLY ASH IS NOT PERMITTED IN SLABS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND SER.
5. AIR ENTRAINMENT IS REQUIRED ONLY IN HARD ROCK CONCRETE PERMANENTLY EXPOSED TO WEATHER CONDITIONS. WHERE LIGHTWEIGHT CONCRETE IS SPECIFIED, AIR ENTRAINMENT IS REQUIRED FOR ALL EXPOSURE CONDITIONS. PERCENT AIR ENTRAINMENT LISTED IS PLUS/MINUS 1.5%. DO NOT AIR-ENTRAIN INTERIOR FLOOR SLABS THAT RECEIVE HARD TROWEL FINISH.
6. ALL WELDED WIRE FABRIC SHALL BE SMOOTH ROUND WIRE IN FLAT SHEETS AND SHALL CONFORM TO ASTM A185.
7. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS FOLLOWS; SEE SEC. 7.7 ACI 318, LATEST EDITION FOR CONDITIONS NOT NOTED. PROVIDE CHAIR SUPPORTS (AZTEC CASTLE CHAIR, WHC SERIES 'E' OR EQUAL) TO ADEQUATELY SUPPORT BARS FOR PROPER CLEARANCE AS RECOMMENDED BY THE AMERICAN CONCRETE INSTITUTE AND THE CONCRETE REINFORCING STEEL INSTITUTE. SLAB ON GRADE REINFORCEMENT SHALL BE SUPPORTED AT 45-INCH MAXIMUM INTERVALS OR EVERY THIRD BAR. UTILITY OR CONCRETE BRICKS ARE NOT ALLOWED AS REINFORCING SUPPORTS.

MINIMUM CONCRETE COVER REQUIREMENTS	
LOCATION	MINIMUM COVER
FOOTINGS	3 INCHES
GRADE BEAMS	3 INCHES BOTTOM 2 INCHES SIDES — FORMED SURFACE 3 INCHES SIDES — EARTH FORMED 1 — 1/2 INCHES TOP
SLAB ON GROUND	1 INCH TOP

8. NO HORIZONTAL JOINTS WILL BE PERMITTED IN CONCRETE EXCEPT WHERE THEY NORMALLY OCCUR OR WHERE NOTED. NO JOINTS BETWEEN PILASTERS AND GRADE BEAM THAT ARE MEANT TO BE MONOLITHIC. VERTICAL JOINTS SHALL OCCUR AT CENTER SPANS OR AT LOCATIONS APPROVED BY THE STRUCTURAL ENGINEER.
9. CONSTRUCTION JOINTS BETWEEN PIERS AND PIER CAPS OR GRADE BEAMS, FOOTINGS AND WALLS OR COLUMNS, OR WALLS, COLUMNS, BEAMS AND THE FLOOR SYSTEM THEY SHALL SUPPORT SHALL BE PREPARED BY ROUGHENING THE SURFACE CONTACT SURFACE TO A FULL AMPLITUDE ON 1/4" LEAVING THE CONTACT SURFACE CLEAN AND FREE OF ALL LAITANCE.
10. DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI PUBLICATION 315, LATEST EDITION "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" AND ACI SP -66 "DETAILING MANUAL". PLACING OF REINFORCING BARS SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315R "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" AND CRSI "MANUAL OF STANDARD PRACTICE". ALL HOOKED BARS SHOWN IN DETAILS SHALL HAVE STANDARD HOOKS UNLESS NOTED OTHERWISE.
11. REINFORCING BARS SHALL NOT BE WELDED WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER. REINFORCING STEEL THAT REQUIRES WELDING SHALL CONFORM TO ASTM A706, WITH GRADES AS SHOWN ABOVE.
12. UNLESS BARS ARE SPECIFICALLY SHOWN IN THE BAR BENDING DIAGRAMS ON THE SCHEDULES, PROVIDE BARS AS FOLLOWS:
    - A) PROVIDE STANDARD 90 DEGREE HOOK ON TOP BARS AT CANTILEVER ENDS.
    - B) SPLICE BOTTOM BARS DIRECTLY OVER MEMBER SUPPORTS, UNLESS NOTED OTHERWISE.
    - C) SPLICE TOP AND INTERMEDIATE BARS AT THE CENTER LINE BETWEEN MEMBER SUPPORTS, UNLESS NOTED OTHERWISE.
    - D) SPLICE VERTICAL BARS IN WALLS ONLY AT FLOOR LINES, UNLESS NOTED OTHERWISE. HORIZONTAL BARS SHALL BE SPLICED AS SPECIFIED FOR TOP, BOTTOM, AND INTERMEDIATE BARS OF BEAMS.
    - E) CENTER BARS NOTED AS "AT SUPT'S." OVER MEMBER SUPPORTS, AND CENTER BARS NOTES AS "BTWN. SUPT'S," BETWEEN SUPPORTS.
    - F) PLACE BARS NOTED AS "2ND LAYER" BELOW THE PRIMARY TOP BARS (OR ABOVE THE PRIMARY BOTTOM BARS) AND PROVIDE #11 SPACER BARS PLACED AT INTERVALS OF 4'-0" BETWEEN THE TWO LAYERS OF BARS.
    - G) SPLICE VERTICAL BARS IN COLUMNS ONLY AT FLOOR LINES, UNLESS NOTED OTHERWISE. COLUMN BAR SPLICES SHALL BE AS SHOWN IN THE COLUMN SCHEDULE.
    - H) PROVIDE CORNER BARS FOR EACH HORIZONTAL BAR AT THE INSIDE AND OUTSIDE FACES OF INTERSECTING BEAMS OR WALLS. REFER TO CORNER BAR DETAILS IN THE TYPICAL DETAILS.
    - I) REFER TO THE COLUMN REINFORCING DIAGRAMS FOR ADDITIONAL TIES ABOVE AND BELOW THE FLOOR FRAMING MEMBERS.

CONCRETE

13. BARS SHOWN IN THE SCHEDULE TO HOOK AT DISCONTINUOUS ENDS SHALL HAVE THE HOOK PLACED HORIZONTALLY AT EXTERIOR CORNERS.
14. PROVIDE NO, 3 DOWELS X 2'-0" AT 1'-6" ON CENTER, WITH A 90 DEGREE HOOK AT ALL EDGES OF CONCRETE SLABS, UNLESS DETAILED OTHERWISE.
15. PROVIDE FOUNDATION DOWELS TO MATCH MASONRY WALL REINFORCEMENT. DOWELS SHALL EXTEND INTO THE CONCRETE AND CMU PER THE LAP SCHEDULES.
16. ALL CONTINUOUS REINFORCEMENT SHALL LAP 40 BAR DIAMETERS AT SPLICES. PROVIDE (1) NO. 6 x 6'-0" TOP AND BOTTOM (TWO 36" LEGS WITH 90 DEGREE BEND) AT EACH FACE OF GRADE BEAMS AT CORNERS AND INTERSECTIONS, AND AT 18" ON CENTER VERTICALLY AT WALLS.
17. PROVIDE (1) NO. 4 BAR x 4'-0" FOR ELEVATED SLABS AND (2) NO. 5 BARS x 4'-0" FOR SLAB ON GROUND AT ALL RE-ENTRANT CORNERS. PROVIDE (1) NO. 4 BAR x 4'-0" AROUND ALL RECTANGULAR OPENINGS OR COLUMN BLOCK OUTS UNLESS NOTED OTHERWISE. FOR ELEVATED SLABS, PLACE THE DIAGONAL BARS WITH 1 INCH OF CLEARANCE FROM TOP AND THE SIDES OF THE SLAB AT THE CORNERS. FOR SLAB ON GRADE, PLACE THE BARS AT MID DEPTH OR BELOW THE REINFORCING MAT AND 3 INCHES CLEAR FROM THE CORNER.
18. CONDUITS ARE NOT ALLOWED IN SLABS, BEAMS, WALLS OR COLUMNS. ALL CONDUITS SHALL BE SUSPENDED FROM OR ATTACHED TO THE CONCRETE STRUCTURE.
19. PROVIDE SLEEVES, MECHANICAL OPENINGS, CONDUITS, PIPES, RECESSES, DEPRESSIONS, CURBS AND ALL EMBEDDED ITEMS AS SHOWN ON THE ARCHITECTURAL AND MECHANICAL DRAWINGS OR AS REQUIRED BY EQUIPMENT MANUFACTURERS. MINIMUM CONCRETE BETWEEN SLEEVES SHALL BE 6". SHOP DRAWINGS SHALL CLEARLY INDICATE THE INSTALLATION OF THESE ITEMS. ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED TO 3/4"x3/4" MINIMUM UNLESS NOTED OTHERWISE. DO NOT PROVIDE CHAMFERS AT INSIDE FACE OF OVERHEAD DOORS OR AT STOREFRONT OPENINGS.
20. BESIDES FOLLOWING ARTICLE 6.3 OF ACI 318 FOR EMBEDDED ITEMS FOLLOWING REQUIREMENTS SHALL BE MET:
    - A) THE MINIMUM CLEAR DISTANCE BETWEEN CONDUITS AND PIPES SHALL BE 6".
    - B) NONE PERMITTED IN COLUMNS WITHOUT PRIOR APPROVAL
21. ALL CONSTRUCTION JOINTS IN BEAMS AND WALLS SHALL BE PROVIDED WITH SHEAR KEYS AS SHOWN IN DETAILS.
22. SLEEVES PASSING HORIZONTALLY THROUGH GRADE BEAMS:
    - A) LOCATE AT MIDDLE THIRD OF BEAM SPAN - MINIMUM 6" AWAY FROM AN INTERIOR MEMBER.
    - B) LOCATE AT MIDDLE THIRD OF BEAM DEPTH.
    - C) MAXIMUM DIAMETER OF SLEEVE TO BE ONE THIRD OF BEAM DEPTH OR 8" (WHICHEVER IS LESS).
    - D) SPACING TO BE AT LEAST THREE SLEEVE DIAMETERS OR 6" (WHICHEVER IS GREATER).
    - E) ADD ONE ADDITIONAL SCHEDULED STIRRUP ON EITHER SIDE OF THE SLEEVE. ADD (2) #5 x 5'-0" TOP AND BOTTOM CENTERED AT SLEEVE.
    - F) NO SLEEVES LONGITUDINALLY IN BEAMS. PASS SLEEVES ONLY AT RIGHT ANGLES TO BEAMS.
23. ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE, ACI 301, LATEST EDITION.
24. ALL CONCRETE SHALL BE CONSOLIDATED WITH A CONCRETE VIBRATOR AS PER THE REQUIREMENTS OF ACI 318 AND ACI 308R, LATEST EDITION.
25. HOT WEATHER CONCRETING SHALL CONFORM TO ACI305 AND COLD WEATHER CONCRETING SHALL CONFORM TO ACI 306.
26. ALL BASE PLATES AND ANCHOR RODS SHALL BE PROTECTED WITH 3" (MIN.) OF CONCRETE. ANCHOR RODS SHALL BE FABRICATED FROM FULL BODIED STEEL RODS CONFORMING TO ASTM F1554 GR 36, WASHERS CONFORMING TO ASTM F884 AND NUTS CONFORMING TO ASTM A194 OR A563 AND HAVING THE SAME DIAMETER AS THE BOLT DIAMETER. BOLTS SHALL BE SET USING RIGID TEMPLATES.

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING
NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive•Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5282
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

GENERAL NOTES

Sheet No. S0.1

2221079

STRUCTURAL STEEL

1. ALL GROUT USED UNDER STEEL COLUMN BASE PLATES SHALL BE OF NON-SHRINKABLE TYPE CONFORMING TO ASTM C1090 AND THE CORPS OF ENGINEERS SPECIFICATION CRD-C-621 AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 6000 PSI. 100 PERCENT OF VOID UNDER ALL BASE PLATES IS TO BE GROUTED. ALL BASE PLATES WITH A DIMENSION GREATER THAN 24" SHALL HAVE TWO 1" DIAMETER GROUT HOLES. IF THE SPACE UNDER A COLUMN BASE PLATE IS LESS THAN 1/4", A PRESSURE INJECTION SYSTEM SHALL BE USED. PRE-GROUTING OF THE BASE PLATES IS NOT PERMITTED
2. ALL STRUCTURAL STEEL DESIGN, DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO ALLOWABLE STRENGTH DESIGN (ASD) ACCORDING TO THE 2005 AISC SPECIFICATION.
3. ALL WELDING SHALL CONFORM TO THE STANDARDS OF THE THIRTEENTH EDITION OF THE MANUAL STEEL CONSTRUCTION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AND THE AMERICAN WELDING SOCIETY ANSI/AWS D1.1 STRUCTURAL WELDING CODE-STEEL. WELDING OF REINFORCING BARS SHALL COMPLY TO THE AMERICAN WELDING SOCIETY AWS D1.4. SHORT CIRCUIT TRANSFER FOR THE GAS METAL ARC WELDING PROCESS IS NOT PERMITTED.
4. ELECTRODES FOR ALL FIELD AND SHOP WELDING SHALL BE CLASS E70XX LOW HYDROGEN.
5. ALL STRUCTURAL STEEL ROLLED SHAPES SHALL CONFORM TO ASTM A992, AND ALL ANGLES, BARS, CHANNELS AND PLATES SHALL CONFORM TO ASTM A36. ALL SQUARE AND RECTANGULAR TUBES (Fy 50 KSI) SHALL CONFORM TO ASTM A500 GRADE C AND ROUND PIPES (Fy 50 KSI) SHALL CONFORM TO ASTM A500 GR C. ALL COLD-FORMED GIRTS AND PURLINS SHALL CONFORM TO ASTM A570M GR. 55.
6. ALL STRUCTURAL STEEL DETAILS AND CONNECTIONS SHALL CONFORM TO STANDARDS OF THE AISC. DOUBLE CONNECTIONS THROUGH COLUMN WEBS, BEAMS THAT FRAME OVER THE TOP OF COLUMNS, AND BEAM TO BEAM CONNECTIONS SHALL HAVE A BEAM ERECTION SEAT OR A STAGGERED CONNECTION WITH AT LEAST ONE INSTALLED BOLT REMAINING IN PLACE TO SUPPORT THE FIRST BEAM WHILE THE SECOND BEAM IS BEING ERECTED.
7. CONNECTIONS NOT DETAILED ON THE DRAWINGS SHALL BE SELECTED FROM THE TABLES IN PART 10 OF THE THIRTEENTH EDITION OF THE MANUAL OF STEEL CONSTRUCTION OF THE AISC. TABLE 10–1 MAY BE USED FOR ALL-BOLTED DOUBLE ANGLE CONNECTIONS. TABLE 10-2 MAY BE USED FOR WELDED/BOLTED DOUBLE ANGLE CONNECTIONS. TABLE 10-3 MAY BE USED FOR ALL-WELDED DOUBLE ANGLE CONNECTIONS. BEAM REACTIONS USED SHALL BE ONE-HALF THE TOTAL ALLOWABLE UNIFORM LOAD GIVEN IN TABLE 3-6 THROUGH 3-9 IN PART 3 OF THE MANUAL OF STEEL CONSTRUCTION OF THE AISC. CONNECTIONS FOR COMPOSITE BEAMS SHALL HAVE THE STANDARD AISC CAPACITY INCREASED BY 35 PERCENT.
8. ALL MISCELLANEOUS WELDS (FIELD OR SHOP) SHALL BE MINIMUM SIZE FILLET ALL AROUND IN ACCORDANCE WITH AISC. IT IS ASSUMED TO BE THE PLATE THICKNESS OF THE THINNEST PIECE MINUS 1/16". WELDING OF CONTINUOUS MEMBERS SHALL BE A MINIMUM OF 2 INCHES OF 3/16 INCH FILLET STITCH WELDS AT 12 INCHES O.C., STAGGERED EACH SIDE, UNLESS OTHERWISE NOTED. COLUMN BASE PLATES, CAP PLATES AND STIFFENER PLATES SHALL BE WELDED ALL AROUND.
9. PROVIDE COLUMN CAP PLATES AS FOLLOWS UNLESS NOTED OR DETAILED OTHERWISE:
   - A) FOR DECK BEARING — 1/4 INCH THICK FOR ALL HSS SECTIONS AND WIDE FLANGE SECTIONS WHERE BEAMS DO NOT FRAME INTO BOTH SIDES OF THE WEB
   - B) FOR JOIST BEARING
     - 1) K-SERIES JOISTS — 1/2 INCH THICK
     - 2) LH AND DLH — 3/4 INCH THICK
     - 3) JOIST GIRDERS — 1 INCH THICK
   - C) FOR BEAM BEARING — SEE TYPICAL DETAILS OF 3/4 INCH MINIMUM UNLESS NOTED OTHERWISE
   - D) FOR MOMENT CONNECTS — REFER TO TYPICAL MOMENT CONNECTION DETAILS
   - E) ALWAYS PROVIDE CAP PLATES FOR SQUARE, RECTANGULAR, AND ROUND HSS COLUMNS
10. WEB STIFFENERS SHALL BE PROVIDED IN WIDE FLANGE SHAPES AS FOLLOWS:
    - A) COLUMN WEBS AT FULLY DEVELOPED MOMENT CONNECTIONS — STIFFENERS SHALL BE COMPLETE PENETRATION GROOVE WELDED WITH SAME THICKNESS AND GRADE AS THE BEAM FLANGES. WHERE MOMENT CONNECTIONS OCCUR ON COLUMN FLANGES AND COLUMN WEBS, STIFFENER THICKNESS SHALL BE EQUAL THE VECTOR SUMMATION OF THE RESPECTIVE BEAM FLANGE THICKNESSES.
    - B) BEAM WEBS WHERE BEAMS BEAR ON A COLUMN — SAME THICKNESS AND STRENGTH AS COLUMN FLANGES.
    - C) BEAM WEBS WHERE COLUMN BEARS ON A BEAM (POST UP OR STUB COLUMN) — SAME THICKNESS AND STRENGTH AS COLUMN FLANGES.
11. PROVIDE ALL NECESSARY HOLES IN MISCELLANEOUS STRUCTURAL STEEL MEMBERS FOR ATTACHMENT OF NON-STRUCTURAL ITEMS (IE: HOLES FOR WINDOW HEAD ANCHORS), SEE ARCHITECTURAL DRAWINGS FOR REQUIREMENTS.
12. SPLICING OF STRUCTURAL STEEL MEMBERS WHERE NOT DETAILED IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
13. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS): WHERE NOTED ON PLANS OR BY THE ARCHITECT SHALL CONFORM TO AISC 303 SECTION 10
14. ALL CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL CONFORM TO ASTM A325 EXCEPT WHERE NOTED OTHERWISE. MINIMUM SIZE SHALL BE 3/4 INCH DIAMETER UNLESS NOTED OTHERWISE. BOLTS SHALL BE DIRECT TENSION INDICATING BOLTS CONFORMING TO ASTM F1852 WITH HARDENED WASHERS UNDER THE NUT AND SACRIFICIAL SPLINES. HEX NUTS SHALL CONFORM TO ASTM A563 AND WASHERS SHALL CONFORM TO ASTM F436.
15. SHOP BOLTED CONNECTIONS ARE PERMISSIBLE IF SUFFICIENT BOLT CLEARANCE IS AVAILABLE FOR TIGHTENING OF HIGH STRENGTH BOLTS. CLEARANCES SHALL BE IN ACCORDANCE WITH TABLE 7-16 AND 7-17 OF THE THIRTEENTH EDITION OF THE MANUAL OF STEEL CONSTRUCTION OF THE AISC. ALL STEEL MEMBERS AND ASSEMBLIES SHALL BE SHOP FABRICATED TO THE GREATEST EXTENT POSSIBLE. TRUSSES SHALL BE FULLY SHOP ASSEMBLED. FIELD SPLICES FOR SHIPPING SHALL ONLY BE AS APPROVED BY THE ENGINEER OF RECORD. THE STEEL FABRICATOR AND THE STEEL ERECTOR SHALL COORDINATE THE SHOP FABRICATION, SHIPPING AND ERECTION OF ALL STRUCTURAL MEMBERS AND ASSEMBLIES.
16. ALL OPEN-WEB STEEL JOISTS AND BRIDGING SHALL CONFORM TO THE STEEL JOIST INSTITUTE SPECIFICATIONS FOR THE JOIST TYPES INDICATED. JOISTS SHALL BE CAMBERED. AMOUNT OF CAMBER SHALL BE IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE SPECIFICATIONS. JOIST SUPPLIER SHALL ADJUST CAMBERS AT JOISTS ADJACENT TO EACH OTHER WITH VARYING LENGTHS AND AT JOISTS ADJACENT TO STEEL BEAM LINES OF SET ELEVATION SO THAT ELEVATIONS PRIOR TO ERECTION OF DECK DO NOT VARY BY MORE THAN 1" FOR ADJACENT MEMBERS. JOISTS ENDS SHALL BE STAGGERED FOR NARROW BEAMS TO ACHIEVE 2 1/2-INCH MINIMUM BEARING. STEEL FABRICATOR SHALL PROVIDE JUMPER PLATE AND STIFFENER PLATE TO MATCH BEAM FLANGE THICKNESS OFF BEAM FLANGE AS REQUIRED AT SKEWED JOIST LOCATIONS TO PROVIDE JOIST MINIMUM BEARING REQUIREMENTS. JOISTS REQUIRING REPAIR OR MODIFICATION DUE TO FABRICATION ERROR OR DAMAGE DURING SHIPPING SHALL BE REPLACED WITH NEW JOISTS.
17. JOIST BRIDGING SHALL BE WELDED TO STEEL BEAMS OR DECK SUPPORT ANGLES AT ENDS. AT JOIST SPANS WHERE CALLED FOR ON THE DRAWINGS OR WHERE REQUIRED BY SJI, BOLTED DIAGONAL BRIDGING NEAREST THE CENTER OF THE SPAN SHALL BE INSTALLED AT EACH JOIST PRIOR TO THE SLACKENING OF HOISTING LINES.
18. JOISTS SPANNING FORTY (40) FEET AND GREATER OR REQUIRING BRIDGING PER SJI SHALL BE HAVE AT LEAST ONE END FIELD BOLTED TO THE SUPPORT STRUCTURE BEFORE HOISTING CABLES ARE RELEASED. JOISTS SPANNING OVER SIXTY (60) FEET OR AS REQUIRED PER SJI SHALL HAVE BOTH ENDS FIELD BOLTED TO THE SUPPORT STRUCTURE. FINAL ATTACHMENT SHALL BE IN PLACE AND BRIDGING INSTALLED PER THE REQUIREMENTS OF OSHA CONSTRUCTION SAFETY AND HEALTH STANDARDS, SUBPART R, 29 CFR 1926 BEFORE HOISTING CABLES ARE RELEASED. FINAL ATTACHMENT OF ALL JOISTS TO THE SUPPORT STRUCTURE SHALL BE WELDED PER SJI SPECIFICATIONS.

STRUCTURAL STEEL

19. EXTEND BOTTOM CHORD OF THE THREE JOISTS NEAREST EACH COLUMN UNLESS SHOWN OTHERWISE AND BOTH ENDS OF JOIST SHALL BE FIELD BOLTED TO THE SUPPORT STRUCTURE BEFORE HOISTING CABLES ARE RELEASED. PROVIDE A 6"x6" STABILIZER PLATE TO RECEIVE JOIST BOTTOM CHORD AT ALL COLUMN LOCATIONS; THE PLATE SHALL EXTEND A MINIMUM OF 3" BELOW JOIST BOTTOM CHORD. PROVIDE A 13/16" DIAMETER HOLE IN STABILIZER PLATE FOR GUYING CABLE. PROVIDE WT6x15 OFF BEAM BOTTOM FLANGE TO RECEIVE JOIST BOTTOM CHORD EXTENSION AT JOIST LOCATED ADJACENT TO COLUMN. BOTTOM CHORD EXTENSION MATERIAL SHALL BE L2x2x1/4 MINIMUM.
20. ROOF SYSTEM OVER OPEN-WEB STEEL JOISTS SHALL BE RIGID INSULATION BOARD ON 1 1/2" DEEP, 22 GAGE, TYPE B GALVANIZED (CONFORMING TO ASTM A924-94, WITH MINIMUM COATING CLASS OF G90 AS DEFINED IN ASTM A653-94) DECK FROM COLD ROLLED STEEL CONFORMING TO ASTM A653-99 OR ASTM A611 WITH Fy=33 KSI, AND HAVING A MINIMUM MOMENT OF INERTIA OF 0.169 INCH TO THE FOURTH PER FOOT OF WIDTH. SIDELAPS SHALL BE FASTENED WITH #10 TEKS AT 1'-0" ON CENTER MAX. (3 MIN. PER SPAN) DECK ATTACHMENT SHALL BE HILTI X-HSN-24(1/8"- 3/8" INCLUSIVE) OR OR X-ENP19 (1/4" OR THICKER) AS RECOMMENDED BY THE MANUFACTURER OR WELD DECK THROUGH 5/8" DIAMETER PUDDLE WELDS TO SUPPORTING MEMBERS AT 1'-0" ON CENTER AT END LAPS AND AT INTERMEDIATE SUPPORTS. AT SPANDREL BEAMS OR DECK SUPPORT ANGLES AND FOR A 10'-0" SQUARE AREA AT CORNERS WELD DECK TO ALL SUPPORTS AT 6" ON CENTER.
21. FLOOR SLAB SHALL BE 3 1/2" NORMAL WEIGHT CONCRETE, AS DESCRIBED IN NOTE ABOVE, ON 1 1/2" DEEP 18 GA. GALVANIZED (CONFORMING TO ASTM A924-94, WITH MINIMUM COATING CLASS OF G60 AS DEFINED IN ASTM A653-94) CORRUGATED COMPOSITE DECK FROM COLD ROLLED STEEL CONFORMING TO ASTM A653-99 OR ASTM A611 WITH Fy=40 KSI, AND HAVING A SECTION MODULUS OF 0.315 CU. IN. PER FOOT OF WIDTH. SIDELAPS SHALL BE WELDED OR BUTTON PUNCHED AT MIDSPAN OR 3'-0" ON CENTER MAX. WELD DECK TO SUPPORTING MEMBERS AT 1'-0" ON CENTER MAXIMUM WITH 5/8 IN. DIAMETER PUDDLE WELDS. WELD DECK TO SUPPORTING MEMBERS AT 6" ON CENTER AT SPANDREL BEAMS OR DECK SUPPORT ANGLES. REINFORCE SLAB WITH 6x6 — W2.9xW2.9 WELDED WIRE FABRIC LAPPED ONE MESH AT SPLICES SHEAR STUD CONNECTORS APPLIED THROUGH THE DECK TO SUPPORTING MEMBERS CAN BE USED TO REPLACE THE PUDDLE WELDS.
22. STEEL DECK SHALL ALWAYS BE INSTALLED WITH DIRECTION OF FLUTES PERPENDICULAR TO STEEL FRAMING MEMBERS. DECK SHALL BE CUT TO INSURE A MINIMUM OF THREE SPANS PER DECK WIDTH.
23. ALL STEEL FLOOR CONSTRUCTION HAS BEEN DESIGNED IN ACCORDANCE WITH AISC PROVISIONS NOT TO REQUIRE TEMPORARY SHORING DURING CONSTRUCTION. HOWEVER, THE STEEL BEAMS WILL DEFLECT FROM THE WEIGHT OF THE WET CONCRETE. THE CONTRACTOR IS HEREBY ALERTED THAT THE BEAMS HAVE BEEN CAMBERED TO ACCOUNT FOR WET CONCRETE DEFLECTIONS.
24. COMPOSITE CONCRETE FLOOR CONSTRUCTION UTILIZING UNSHORED CONSTRUCTION SHALL BE SCREEDED TO A UNIFORM THICKNESS ABOVE THE METAL DECK.
25. ALL BRICK SUPPORT ANGLES ARE DESIGNED TO FULLY SUPPORT THE BRICK VENEER WITH SOME NORMAL DEFLECTION AS THE BRICK IS INSTALLED. LEDGER ANGLE FOR FASCIA BRICK SUPPORT SHALL BE INSTALLED SUCH THAT THE SWEEP OR CAMBER DOES NOT EXCEED 1/8 INCH DEVIATION FROM STRAIGHT. BRICK SHALL BE INSTALLED WITHOUT SHORING THE SUPPORT ANGLE DURING CONSTRUCTION. SHORING THE BRICK DURING CONSTRUCTION CAN RESULT IN HORIZONTAL BED JOINT CRACKING WHEN THE SHORES ARE REMOVED.
26. HEADED ANCHORS SHALL BE MANUFACTURED FROM COLD DRAWN WIRE CONFORMING TO ASTM A108, GR.50 WITH FLUXED ENDS. STUDS SHALL BE AUTOMATICALLY END WELDED WITH SUITABLE STUD WELDING EQUIPMENT IN ACCORDANCE WITH AWS D1.1. STUDS FOR EMBEDDED PLATES AND OTHER ANCHORS SHALL BE SHOP WELDED. STUDS FOR COMPOSITE BEAMS SHALL BE FIELD WELDED.
27. ALL STRUCTURAL STEEL WHICH IS OUTSIDE THE BUILDING ENVELOPE SHALL BE HOT DIPPED GALVANIZED. ZINC COATING SHALL MEET THE REQUIREMENTS OF ASTM 123-73, WITH A MINIMUM COATING CLASS OF GR100 AND SHALL BE APPLIED AFTER FABRICATION. ALL FIELD WELDS SHALL BE GROUND SMOOTH AND TOUCHED UP WITH A ZINC RICH PAINT.
28. STEEL COLUMNS SHALL BE SPLICED A MINIMUM OF 4'-0" ABOVE THE FINISH FLOOR IN STORIES WHERE SPLICES OCCUR. COLUMNS SHALL BE SPLICED EVERY TWO LEVELS. COLUMNS SHALL HAVE A HOLES FOR 3/4" DIAMETER SAFETY CABLES OR PLATES WITH A HOLE WELDED TO THE COLUMN. PROVIDE AN L3x3x1/4 DECK SUPPORT ANGLE ON ALL SIDES OF THE COLUMN.
29. THE GENERAL CONTRACTOR AND HIS SUBCONTRACTOR'S SHALL COMPLY TO OSHA 29 CFR 1926 SUBPART R, SAFETY STANDARDS FOR STEEL ERECTION.
30. AS SCOPE AND PERFORMANCE DOCUMENTS, THE DRAWINGS AND SPECIFICATIONS DO NOT INDICATE OR DESCRIBE ALL OF THE WORK REQUIRED FOR THE PERFORMANCE AND COMPLETION OF THIS WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE FABRICATION AND INSTALLATION OF ALL MISCELLANEOUS METAL ITEMS INDICATED, DESCRIBED, OR IMPLIED ON THE STRUCTURAL AND/OR THE ARCHITECTURAL DRAWINGS. MISCELLANEOUS STEEL ITEMS, WITHIN AN ASSEMBLY AND NOT ATTACHED TO THE STRUCTURE, ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS WHETHER THEY ARE SHOWN OR NOT SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS. SUCH ASSEMBLIES INCLUDE BUT ARE NOT LIMITED TO, EXTERIOR AND INTERIOR WALL ASSEMBLIES, CEILING ASSEMBLIES, PARTITION ASSEMBLIES, SHELF AND CABINET ASSEMBLIES AND ALL OTHER SIMILAR ASSEMBLIES. ANY MISCELLANEOUS METAL ITEMS INDICATED ON THE ARCHITECTURAL DRAWINGS AND NOT SHOWN ON STRUCTURAL DRAWINGS SHALL BE A MINIMUM OF L4x4x1/2", C7x9.8, 3/8" PLATE OR TS4x4x3/8" UNLESS OTHERWISE APPROVED BY THE STRUCTURAL ENGINEER.
31. THE GENERAL CONTRACTOR AND THE ELEVATOR SUPPLIER SHALL REVIEW THE STRUCTURAL DRAWINGS FOR FLOOR TO FLOOR AND FLOOR TO ROOF HEIGHTS FOR THE REQUIRED DISTANCE BETWEEN BRACE POINTS FOR THEIR RAIL DESIGN. HOIST BEAMS HAVE BEEN SHOWN ON THE PLANS, IF NOT SHOWN PROVIDE A W18x50 MINIMUM HOIST BEAM UNLESS OTHERWISE SPECIFIED BY THE STRUCTURAL ENGINEER OF RECORD. BRACING REQUIREMENTS FOR THE TOP OF THE RAIL OR INTERMEDIATE RAIL BRACE POINTS SHALL BE COORDINATED WITH THE STRUCTURAL DRAWINGS. IF BRACING IS REQUIRED BUT NOT SHOWN, PROVIDE A MINIMUM OF TS6x6X1/4 VERTICAL POST OR HANGER ATTACHED TO THE STRUCTURE WITH W8x10 BEAMS OR C7x9.8 CHANNELS SPANNING BETWEEN FRAMING MEMBERS. ALL MISCELLANEOUS STEEL MEMBERS REQUIRED TO ATTACH RAILS AT RAIL BRACE POINTS SHALL BE SUPPLIED BY THE ELEVATOR SUPPLIER. ELEVATOR MACHINE BEAM OR SHIVE BEAM LOADS SHALL BE COORDINATED WITH THE STRUCTURAL DRAWINGS. LOADS AND LOAD LOCATIONS VARYING FROM THE LOADS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE VERIFIED WITH THE STRUCTURAL ENGINEER OF RECORD. THE FRAMING SHOWN ON THE DRAWINGS IS BASED ON AN ELEVATOR MODEL NO.__________ AS MANUFACTURED BY ______________________. IF THE ELEVATOR MANUFACTURER AND/OR MODEL NUMBER CHANGES, THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REVISIONS TO THE FOUNDATIONS AND THE FLOOR AND ROOF FRAMING AS REQUIRED DUE TO THE CHANGE IN THE ELEVATOR TYPE INDICATED.

MECHANICAL UNIT, DUCTWORK, ELECTRICAL CONDUIT AND PIPE SUPPORT FROM STEEL JOISTS AND BEAMS

1. THE FOLLOWING CRITERIA SHALL APPLY TO HANGING NEW MECHANICAL UNITS, DUCTWORK, ELECTRICAL CONDUITS AND ALL PIPING (MECHANICAL AND PLUMBING) ON STEEL JOIST IN NEW AND EXISTING CONSTRUCTION
   - A) ALL SUPPORTS FOR MECHANICAL UNITS AND DUCTWORK SHALL BE PROVIDED SUCH THAT INDIVIDUAL LOADS ARE LIMITED TO 250 LBS. WITH A MAXIMUM OF TWO HANGERS PER JOIST
   - B) SUPPORTS FOR MULTIPLE RUNS OF PIPING 4 INCH TO 6 INCH DIAMETER SHALL BE STAGGERED SUCH THAT ONE JOIST SUPPORTS NO MORE THAN TWO PIPES. SPACING OF THE SHALL BE IN ACCORDANCE WITH INDUSTRY STANDARDS, THE MECHANICAL OR PLUMBING CONTRACT DOCUMENTS OR 8 FEET ON CENTER MAXIMUM.
   - C) SUPPORTS FOR MULTIPLE RUNS OF PIPING 8 INCH TO 10 INCH DIAMETER SHALL BE STAGGERED SUCH THAT ONE JOIST SUPPORTS NO MORE THAN TWO PIPES. SPACING OF THE SHALL BE IN ACCORDANCE WITH INDUSTRY STANDARDS, THE MECHANICAL OR PLUMBING CONTRACT DOCUMENTS OR 6 FEET ON CENTER MAXIMUM.
   - D) FOR PIPING 12 INCHES DIAMETER AND LARGER OR FOR CASES WHERE THE CRITERIA ABOVE CANNOT BE MAINTAINED, SUPPLEMENTARY SHALL BE PROVIDED TO SUPPORT THE PIPES ON NEW OR EXISTING STEEL GIRDERS (WIDE FLANGES BEAMS) AND BEARING WALLS.
2. MECHANICAL UNIT AND PIPING SUPPORTS SHALL NOT OCCUR ON THE SAME JOISTS.
3. IN NO CASE SHALL THE TOTAL WEIGHT SUPPORTED BY A SINGLE JOIST EXCEED 500 LBS. UNLESS THE JOIST IS SPECIFICALLY DESIGNED FOR HIGHER LOADS OR NOTED AS PROVIDING MECHANICAL OR PIPE SUPPORT ON THE PLANS.

STRUCTURAL STEEL

4. ALL MECHANICAL PIPING AND LARGE CONDUITS HANGING OF THE STRUCTURE SHALL BE SUPPORTED BY 5/8" DIAMETER ASTM A36 ALL THREAD ROD UNLESS NOTED OTHERWISE IN THE DRAWINGS.
5. ALL PIPES AND CONDUITS SHALL BE HUNG FROM BEAM CLAMPS ON BEAMS OR FROM THE TOP CHORD OF THE JOIST AT A PANEL POINT LOCATIONS. HANGING FROM JOIST BOTTOM CHORD IS NOT ALLOWED ON JOISTS. PIPING AND CONDUITS SHALL BE HUNG FROM JOIST TOP CHORD WITH ALL THREAD ROD WITH NUT AND WASHER TOP AND BOTTOM OF THE JOIST TOP CHORD AT PANEL POINT LOCATIONS OR PROVIDE TRAPEZE (UNISTRUT P1000 OR EQUAL) BETWEEN TWO JOISTS MINIMUM AT JOIST PANEL POINT LOCATIONS.
6. ALL SUPPORT POINTS SHALL BE LOCALLY REINFORCED ACCORDING TO THE TYPICAL DETAILS.
7. DO NOT USE BEAM CLAMPS TO SUPPORT DUCTWORK, CONDUIT OR PIPING FROM STEEL JOISTS.
8. ALL THREAD HANGERS SHALL BE PLACED AT OR WITHIN 3 INCHES OF PANEL POINT AND BETWEEN THE JOIST TOP CHORDS. USE PROPER WASHERS OR PLATES TO SUPPORT THE WEIGHT
9. HANGERS LOCATED AT JOIST TOP CHORD LOCATIONS OTHER THAN THE PANEL POINTS SHALL BE LOCALLY REINFORCED ACCORDING TO THE TYPICAL DETAILS.
10. DO NOT SUPPORT PIPING FROM JOIST BRIDGING.
11. PIPE HANGER REQUIREMENTS:

SIZE	WEIGHT	MAX. SPACING OF HANGERS
4" DIA.	16 PLF	10'
6" DIA.	32 PLF	10'
8" DIA.	50 PLF	10'
10" DIA.	75 PLF	5'
12" DIA.	100 PLF	5'

PLF = POUNDS PER LINEAR FOOT

PIPES OF (2) TWO OR MORE IN NUMBER AND LARGER THAN 4" INCH DIAMETER SHALL BE HUNG AT 5'-0" ON CENTER MAXIMUM

MASONRY WALL NOTES

1. THE STRUCTURAL PLANS ONLY SHOW THE LOAD BEARING "STRUCTURAL" MASONRY.
2. MASONRY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH PART 3 OF ACI 531 "BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY CONSTRUCTION".
3. ALL CONCRETE MASONRY UNITS SHALL BE HOLLOW LOAD BEARING UNITS CONFORMING TO THE REQUIREMENTS OF ASTM C90, TYPE I AND THE QUALITY CONTROL STANDARDS OF THE CONCRETE MASONRY ASSOCIATION.
4. NORMAL WEIGHT CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C90, TYPE II, WITH A MINIMUM DESIGN COMPRESSIVE STRENGTH OF 3,750 PSI. CONCRETE MASONRY UNITS USED BELOW GRADE SHALL BE COMPOSED OF NORMAL WEIGHT AGGREGATE. LIGHT WEIGHT CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C331 WITH A MINIMUM DESIGN COMPRESSIVE STRENGTH OF 3,750 PSI. CONCRETE MASONRY UNITS USED ABOVE GRADE SHALL BE COMPOSED OF LIGHTWEIGHT AGGREGATE.
5. ALL MASONRY UNITS SHALL HAVE A MINIMUM NET COMPRESSIVE STRENGTH OF 3,750 PSI AND A MINIMUM NET TENSILE STRENGTH OF NOT LESS THAN 125 PSI, WHEN TESTED IN ACCORDANCE WITH THE METHODS SET FORTH IN THE QUALITY CONTROL STANDARDS OF THE CONCRETE MASONRY ASSOCIATION.
6. MASONRY UNITS SHALL HAVE CURED FOR NOT LESS THAN 28 DAYS WHEN PLACED IN THE STRUCTURE.
7. ALL MASONRY UNITS SHALL HAVE A MAXIMUM LINEAR SHRINKAGE OF .065 OF 1% FROM THE SATURATED TO THE OVEN DRY CONDITION, WHEN TESTED IN ACCORDANCE WITH THE METHODS SET FORTH IN THE QUALITY CONTROL STANDARDS OF THE CONCRETE MASONRY ASSOCIATION.
8. MASONRY MORTAR SHALL BE FRESHLY PREPARED, UNIFORMLY MIXED AND SHALL CONFORM TO ASTM C270, TYPE 'S' WITH A MINIMUM COMPRESSIVE STRENGTH OF 1,800 PSI AT 28 DAYS. MASONRY CEMENT AND MORTAR CEMENT SHALL NOT BE USED. USE ASTM C270 TYPE 'M' MORTAR WITH A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS IS REQUIRED IN BELOW GRADE APPLICATIONS. FOR MULTI WYTHE WALLS USE THE SAME TYPE OF MORTAR FOR EACH WYTHE.
9. BRICK MORTAR SHALL BE FRESHLY PREPARED, UNIFORMLY MIXED, AND SHALL CONFORM TO ASTM C270, TYPE 'N' WITH A MINIMUM COMPRESSIVE STRENGTH OF 1,800 PSI AT 28 DAYS.
10. GROUT MIXTURES SHALL CONFORM TO ASTM C476 WITH A 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI AND A MAXIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
11. CONCRETE MASONRY CONSTRUCTION SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF THE MASONRY (f'm) SHALL BE 2500 PSI ON THE NET CROSS SECTIONAL AREA AT 28 DAYS.
12. ALL CELLS WITH REINFORCING BARS SHALL BE GROUTED SOLID AND CONCRETE MASONRY UNITS LOCATED BELOW GRADE SHALL HAVE ALL CELLS FULLY GROUTED. REINFORCING STEEL SHALL CONSIST OF DEFORMED GRADE 60 BARS CONFORMING TO ASTM A615. BARS SHALL BE NEW BILLET STEEL OF A DOMESTIC MANUFACTURE. ALL CELLS TO BE GROUTED SHALL BE CLEAN AND FREE OF EXCESS MORTAR AND FOREIGN MATERIALS.
13. ALL CELLS SHOWN TO HAVE DRILLED EXPANSION ANCHORS, EMBEDDED HEADED STUDS OR OTHER EMBEDDED ANCHORS SHALL BE GROUTED SOLID.
14. HORIZONTAL JOINT REINFORCEMENT SPACED AT 16 INCHES ON CENTER MAX. VERTICALLY SHALL CONFORM TO ASTM A951 WITH A MINIMUM YIELD STRENGTH OF 70,000 PSI AND A MINIMUM SIZE OF 9 GAGE FOR SIDE RODS AND 9 GAGE FOR TRUSS RODS.
15. BOND BEAM BLOCKS SHALL BE OPEN BOTTOM UNITS AND ARE TO BE USED AT THE TOPS OF WALLS AND AT THE MID-HEIGHT OF WALL OR AT 8'-0" ON CENTER VERTICALLY MAXIMUM UNLESS NOTED OTHERWISE ON THE DRAWINGS. PROVIDE (2) NO. 4 BARS IN A SOLID GROUTED BOND BEAM UNLESS NOTED OTHERWISE. LINTEL BLOCKS SHALL NOT BE USED IN PLACE OF BOND BEAM BLOCKS. BOND BEAMS TO STOP AND START AT EVERY THIRD VERTICAL CONTROL JOINT. BOND BEAM TO BE CUT AT EVERY VERTICAL CONTROL JOINT BUT REINFORCING TO REMAIN CONTINUOUS.
16. OPENINGS IN MASONRY WALLS SHALL HAVE EITHER MASONRY OR STEEL LINTELS AS DETAILED ON THE DRAWINGS. WHEN NO LINTEL IS DETAILED A MINIMUM OF (2) NO. 4 BARS IN A SOLID GROUTED LINTEL BLOCK SHALL BE INSTALLED. THE BARS SHALL EXTEND A MINIMUM OF EIGHT INCHES BEYOND THE EDGE OF THE OPENING AND THE JAMB AT EACH SIDE OF THE OPENING SHALL BE GROUTED SOLID FOR A DISTANCE OF EIGHT INCHES WITH A NO. 5 VERTICAL MINIMUM AT EACH JAMB. LAP BARS 2'-0" MIN. OR 40 BAR DIAMETERS AT SPLICES, INTERSECTIONS AND CORNERS.
17. LINTEL BLOCKS SHALL BE "U" SHAPED UNITS WITH SOLID BOTTOMS AND ARE TO BE USED OVER WINDOW AND DOOR OPENINGS. BOND BEAM BLOCKS SHALL BE OPEN BOTTOM UNITS AND ARE TO BE USED AT THE TOPS OF WALLS AND AT THE MID-HEIGHT OF WALL OR AT 8'-0" ON CENTER VERTICALLY MAXIMUM UNLESS NOTED OTHERWISE ON THE DRAWINGS. PROVIDE (2) NO. 4 BARS IN A SOLID GROUTED BOND BEAM UNLESS NOTED OTHERWISE. LINTEL BLOCKS SHALL NOT BE USED IN PLACE OF BOND BEAM BLOCKS. VERTICAL REINFORCING SHALL EXTEND THROUGH ALL BOND BEAMS. BOND BEAMS TO STOP AND START AT EVERY THIRD VERTICAL CONTROL JOINT. BOND BEAM TO BE CUT AT EVERY VERTICAL CONTROL JOINT BUT REINFORCING TO REMAIN CONTINUOUS THRU THE CONTROL JOINT.
18. STEEL LINTELS SHALL BEAR 8 INCHES MINIMUM AT EACH END ON FLASHING ABOVE AND BELOW THE ANGLE. VERTICAL CONTROL JOINTS SHALL EXTEND UP FROM THE END OF THE STEEL LINTEL, UNLESS 15# FELT OR FLASHING IS PROVIDED TOP AND BOTTOM OF LINTEL ANGLE WHERE ANGLE BEARS ON BRICK.
19. MASONRY WALLS SHALL HAVE VERTICAL CONTROL JOINTS AT APPROXIMATELY SIXTEEN (16) FEET TO TWENTY-FOUR (24) FEET ON CENTER AND FOUR (4) FEET MAXIMUM FROM CORNERS OR AT A MAXIMUM HEIGHT/LENGTH RATIO OF 1.5 FOR UNREINFORCED WALLS AND H/L OF 2 FOR REINFORCED WALLS. COORDINATE THE LOCATION OF JOINTS WITH THE ARCHITECT. PROVIDE HECKMANN NO. 351 CONTROL JOINT ANCHORS AT 16 INCHES ON CENTER VERTICALLY AT BRICK MASONRY AND HECKMANN NO. 350 CONTROL JOINT ANCHORS AT 16 INCHES ON CENTER VERTICALLY AT CONCRETE MASONRY UNITS.
20. AT FREE VERTICAL EDGES, CORNERS AND INTERSECTIONS OF WALLS PROVIDE AT LEAST (1) NO. 5 VERTICAL IN GROUT FILLED END CORE, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
21. PROVIDE A MINIMUM OF NO. 4 AT 48 INCHES ON CENTER VERTICAL WALL REINFORCING AND DOWELS IN FULLY GROUTED CELLS AT ALL EXTERIOR AND INTERIOR WALLS UNLESS A GREATER REINFORCING IS SHOWN ON THE PLANS OR IN THE DETAILS. PROVIDE 1/2 INCH DIAMETER DEFORMED BAR ANCHORS AT 48 INCHES ON CENTER WELDED TO STEEL MEMBERS SUPPORTING MASONRY ABOVE UNLESS NOTED OTHERWISE ON THE DRAWINGS.
22. PROVIDE HOHMAN AND BARNARD RB-8 REBAR POSITIONERS OR EQUAL AT EVERY THIRD COURSE AND AT SPLICE LOCATIONS.
23. ALL MASONRY TIES TO BACKUP STRUCTURE SHALL BE [HOT DIP GALVANIZED OR STAINLESS STEEL]. PROVIDE A HECKMANN NO. 315 ANCHOR WITH NO. 316 TRIANGULAR TIE ON COLUMNS AT 16 INCHES (15 INCHES AT KING SIZE BRICK) ON CENTER VERTICALLY AND A HECKMANN NO. 191 OR 192 ANCHORS ON EACH SIDE OF ALL BEAMS AT 16 INCHES ON CENTER HORIZONTALLY UNLESS NOTED OTHERWISE ON THE DRAWINGS. MASONRY TIES TO WALL STUDS SHALL BE A HECKMANN NO. 316 TRIANGULAR TIE WITH A HECKMANN NO. 315-C SCREW ON ANCHOR STRAP OR HECKMANN #77 WING NUT POS-I-TIE ANCHOR SPACED 16 INCHES (15 INCHES AT KING SIZE BRICK) ON CENTER HORIZONTALLY AND 16 INCHES ON CENTER VERTICALLY. AT TOP OF WALLS AND AT WALL CORNERS AND INTERSECTIONS PROVIDE TWO VERTICAL ROWS OF ANCHORS SPACED 16 INCHES APART AND 16 INCHES ON CENTER VERTICALLY. TRIANGULAR TIES SHALL EXTEND 3/4 INCH FROM FACE OF MASONRY. ANCHOR STRAPS SHALL BE ATTACHED TO METAL STUDS WITH TWO (2) #10-16x 1-1/2 INCHES CADMIUM PLATED HEX HEAD SHEET METAL SCREWS WITH NEOPRENE WASHER.
24. ANCHOR WOOD SILLS (PRESSURE TREATED) TO CMU WITH 1/2 INCH DIA. x 9 INCHES LONG HOT-DIP GALVANIZED, HOOKED ANCHOR BOLTS WITH 9/16 INCH WIDE TYPE 'B' HOT-DIP GALVANIZED WASHERS EMBEDDED 7 INCH MINIMUM AT 24 INCHES MAX. ON CENTER. AT CORNERS AND DOOR OPENINGS PROVIDE ONE ANCHOR BOLT AT 8 INCHES IN EACH DIRECTION FROM CORNER. PROVIDE TWO BOLTS MINIMUM PER PIECE OF SILL PLATE.
25. ALL MASONRY DESIGN IS BASED CHAPTER 21 OF INTERNATIONAL BUILDING CODE, LATEST EDITION AND ACI 530/TMS 402, LATEST EDITION.
26. TOPS OF ALL NON-LOAD BEARING INTERIOR WALLS SHALL BE BRACED ACCORDING TO THE SPECIFIC SECTION INDICATED ON PLAN OR THE TYPICAL DETAILS.

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING
NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive • Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

GENERAL NOTES

Sheet No. S0.2 2221079

TILT-UP CONCRETE WALL PANELS:

1. GENERAL CONTRACTOR SHALL REVIEW AND VERIFY ALL PANEL DIMENSIONS, OPENINGS, BEAM AND JOIST POCKET LOCATIONS, WELD PLATE LOCATIONS AND REPORT ANY DISCREPANCIES TO THE STRUCTURAL ENGINEER OF RECORD PRIOR TO CASTING PANELS.
2. THE PANELS ARE DRAWN VIEWED FROM THE INTERIOR, UNLESS NOTED OTHERWISE, AND SHALL BE CAST WITH THE EXTERIOR FACE DOWN.
3. EXPOSED EDGES SHALL BE CHAMFERED, EXCEPT AT INSIDE FACE OF OVERHEAD DOORS AND STOREFRONT OPENINGS. SEE ARCHITECTURAL DRAWINGS AND COORDINATE ALL PANEL FINISHES, REVEALS, CHAMFERS, ETC.
4. THE PANELS HAVE BEEN DESIGNED FOR THE IN-SERVICE CONDITIONS ONLY. ADDITIONAL REINFORCEMENT, STRONG BACKS, ETC. MAY BE REQUIRED FOR LIFTING. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PANEL LIFTING DESIGN AND METHODS. THE PANEL LIFTING AND BRACING BOOKS SHALL BE SEALED BY A LICENSED ENGINEER IN THE STATE OF THE PROJECT.
5. THE CONTRACTOR SHALL DISTRIBUTE CRANE LOADS ON THE SLAB ON GRADE IN SUCH A MANNER SO AS NOT TO CRACK OR OTHERWISE DAMAGE THE SLAB.
6. AFTER SETTING OF THE PANELS, THE PANELS MAY HAVE TO BE SHIMMED TWICE AND LIFTED WITH AIRBAGS IF SOME SHORT-TERM SETTLEMENT OF THE FOOTIGN OCCURS AT THE TIME OF PANEL PLACEMENT.
7. LIFTING INSERTS VISIBLE AFTER FINAL CONSTRUCTION SHALL BE PATCHED AND FINISHED TO MEET THE ARCHITECT'S APPROVAL.
8. TEMPORARY BRACING OF PANELS SHALL NOT BE REMOVED UNTIL AFTER GROUT HAS BEEN INSTALLED BETWEEN THE PANEL AND THE CONCRETE FOOTING, THE SLAB LEAVE OUT HAS BEEN POURED, ALL PERMANENT CONNECTIONS OF THE FLOOR AND ROOF FRAMING TO THE TILT WALL PANELS HAVE BEEN MADE AND THE FLOOR AND ROOF DIAPHRAGM CONSTRUCTION HAS BEEN COMPLETED.
9. PROVIDE I-#5 (FOR EACH MAT OF STEEL) CONTINUOUS AT THE TOP AND SIDES OF PANELS. AT THE HEAD, JAMBS AND SILLS OF ALL OPENINGS AND EACH FUTURE KNOCK OUT OPENING, PROVIDE 2-#6 (I NS AND I FS) THAT EXTEND 24 INCHES MINIMUM PAST THE LIMITS OF THE OPENINGS.
10. PROVIDE 2-#6 BOTTOM WITH STANDARD HOOK EACH END FOR SPANDREL PANELS AND ALL FULL HEIGHT PANELS.
11. PROVIDE I-#5 X 4'-0" (FOR EACH MAT OF STEEL) DIAGONAL BAR AT THE CORNERS OF ALL OPENINGS, FUTURE KNOCKOUT OPENINGS, AND AT THE CORNER OF NOTCHES IN PANELS.
12. UNLESS OTHERWISE NOTED, PROVIDE 3-#6 FULL HEIGHT BARS AT GIRDER OR BEAM BEARING LOCATIONS.
13. MINIMUM PANEL REINFORCEMENT SHALL BE AS FOLLOWS EXCEPT WHERE SHOWN OTHERWISE ON THE DRAWINGS:

PANEL STRUCTURAL THICKNESS	REINFORCEMENT	
	VERTICAL	HORIZONTAL
5 1/2" TO 6 3/4"	#5 AT 12" OC	#4 AT 12" OC
7" TO 8 1/4"	#6 AT 12" OC	#4 AT 12" OC
8 1/2" TO 11 1/4"	#5 AT 12" OC VERT EA FACE	#4 AT 12" OC HORIZ EA FACE

THE VERTICAL BARS SHALL BE CENTERED IN THE PANEL. ALLOW I 1/2" CLEAR COVER FOR PANELS WITH TWO LAYERS OF REINFORCING. SEE PANEL ELEVATIONS FOR ADDITIONAL REINFORCING REQUIREMENTS.

STRUCTURAL TESTING AND INSPECTIONS

EARTHWORK TESTING

1. DURING EARTHWORK OPERATIONS KEEP A COMPETENT TRAINED TECHNICIAN ASSIGNED TO THE PROJECT. SERVICES PROVIDED SHALL INCLUDE:
   - A) OBSERVE STRIPPING OPERATIONS AND EVALUATE THE REQUIRED STRIPPING DEPTH DURING THESE OPERATIONS.
   - B) OBSERVE PROOFROLLING OPERATIONS AFTER SITE STRIPPING. DETERMINE IF ANY SOFT SPOTS NEED TO BE UNDERCUT TO FIRM SOILS, REPLACED WITH SELECT FILL AND RECOMPACTED.
   - C) VERIFY THAT THE SUBGRADE SHALL THEN BE SCARIFIED AND MOISTURE CONDITIONED TO A SIX (6) INCH DEPTH AND THEN RECOMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALL BE BETWEEN OPTIMUM AND +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT. PROVIDE A MINIMUM OF FOUR (4) FIELD DENSITY TESTS ON THE SUBGRADE OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER.
   - D) STRUCTURAL SELECT FILL PAD MATERIAL SHALL BE TESTED FOR ACCEPTABILITY AND A MOISTURE DENSITY CURVE SHALL BE ESTABLISHED. SELECT FILL MATERIAL SHALL BE AN INORGANIC SANDY CLAY WITH LIQUID LIMIT BETWEEN 26 AND 35 AND PLASTICITY INDEX BETWEEN 6 AND 16.
   - E) SELECT FILL SHALL BE PLACED IN EIGHT INCH LOOSE LIFTS AND COMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALL BE BETWEEN -2 AND +3 PERCENT OF THE OPTIMUM MOISTURE CONTENT FOR SELECT FILL.
   - F) SELECT FILL MATERIAL SHALL BE TESTED DURING PLACEMENT OF EACH LIFT FOR THE ATTERBERG LIMITS IN ACCORDANCE WITH ASTM D4318-98 METHOD B "STANDARD TEST METHOD FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS" TO VERIFY THAT THE SELECT FILL MATERIAL IS IN ACCORDANCE WITH THE ORIGINALLY APPROVED SELECT FILL MATERIAL. PROVIDE A MINIMUM OF ONE (1) TEST PER LIFT OR ONE (1) FOR EVERY 2,500 SQUARE FEET WHICHEVER IS GREATER WITH A MAXIMUM OF TEN (10) PER LIFT.
   - G) OBSERVE THE EXCAVATION DAILY AND ENSURE THAT THE CONTRACTOR MAINTAINS A CLEAN EXCAVATION THAT IS FREE OF WATER 100% OF THE TIME. CONTRACTOR SHALL PROVIDE PUMPS AS REQUIRED TO REMOVE ANY WATER AT ALL TIMES.
   - H) OBSERVE GRADING OPERATIONS TO ENSURE THAT PROPER DRAINAGE AWAY FROM THE BUILDING PAD IS PROVIDED.

DRILLED FOOTINGS TESTING

1. DURING DRILLED FOOTING OPERATIONS KEEP A COMPETENT TRAINED TECHNICIAN ASSIGNED TO THE PROJECT. SERVICES PROVIDED SHALL INCLUDE:
   - A) OBSERVING THE BOTTOM OF SHAFT FOR CLEANLINESS.
   - B) CHECKING SHAFT FOR CONFORMANCE TO REQUIRED TOLERANCES. FOOTINGS SHALL BE WITHIN 3" OF THEIR REQUIRED LOCATIONS AND SHAFTS SHALL NOT BE OUT OF PLUMB BY MORE THAN 2 PERCENT OF THE SHAFT LENGTH.
   - C) CHECKING SHAFT BOTTOM FOR PROPER BEARING MATERIAL.
   - D) NOTING DEPTH AND DIAMETER OF ALL FOOTINGS.
   - E) VERIFY QUANTITY, SIZE AND LOCATION OF REINFORCEMENT.
   - F) CHECK FOR CAVING OF SHAFT OR BELL WALLS.
   - G) CHECKING THAT THE BELL IS CONCENTRIC WITH THE SHAFT.
2. ENSURE THAT THE SPOILS FROM THE DRILLED FOOTING EXCAVATIONS ARE REMOVED FROM THE BUILDING PAD AND THAT THE PAD IS MOISTURE CONDITIONED AND RECOMPACTED AS SPECIFIED.

CONCRETE TESTING

1. CONCRETE MIX DESIGNS SHALL BE SUBMITTED FOR REVIEW INDICATING CONFORMANCE WITH ACI 318, LATEST EDITION, CHAPTER 5, SECTION 5.3.
2. SLUMP TESTS, CONFORMING TO ASTM C143, SHALL BE TAKEN AT THE POINT OF DISCHARGE AT THE SAME RATE AS NOTED BELOW IN NOTE NUMBER 5.
3. AIR CONTENT TESTS CONFORMING TO ASTM C173, VOLUMETRIC METHOD FOR LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE; ASTM C231 PRESSURE METHOD FOR NORMAL WEIGHT CONCRETE; SHALL BE TAKEN FOR EACH DAY'S POUR OF EACH TYPE OF AIR-ENTRAINED CONCRETE.
4. CONCRETE TEMPERATURE SHALL BE TESTED HOURLY WHEN AIR TEMPERATURE IS 40 DEG F (4 DEG C) AND BELOW, WHEN 80 DEG F (27 DEG C) AND ABOVE, AND EACH TIME A SET OF COMPRESSION TEST SPECIMENS IS MADE.
5. ONE SET OF FOUR COMPRESSION TEST SPECIMENS CONFORMING TO ASTM C31 SHALL BE MOLDED AND STORED FOR LABORATORY-CURED SPECIMENS. COMPRESSIVE STRENGTH TESTS SHALL CONFORM TO ASTM C39 AND SHALL CONSIST OF ONE SET FOR EACH DAY'S POUR EXCEEDING 5 CU. YDS. PLUS ADDITIONAL SETS FOR EACH 50 CU. YDS. MORE THAN THE FIRST 25 CU. YDS OF EACH CONCRETE CLASS PLACED IN ANY ONE DAY. ONE SPECIMEN SHALL BE TESTED AT 7 DAYS, TWO SPECIMENS SHALL BE TESTED AT 28 DAYS, AND ONE SPECIMEN SHALL BE RETAINED FOR LATER TESTING AS REQUIRED.
6. VERIFY CONCRETE IS BEING CONSOLIDATED IN ACCORDANCE WITH THE RECOMMENDATIONS OF ACI 318 AND ACI 308R, LATEST EDITION.
7. VERIFY THAT POST INSTALLED ANCHORS ARE AS SPECIFIED AND THAT THE ANCHORS ARE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.

REINFORCING STEEL INSTALLATION

1. DURING CAST-IN-PLACE CONCRETE STRUCTURAL MEMBER REINFORCING PLACEMENT OPERATIONS KEEP A COMPETENT TRAINED TECHNICIAN ASSIGNED TO THE PROJECT. INSPECT REINFORCING UTILIZING ACI 311.4R "GUIDE FOR CONCRETE INSPECTION" AS A GUIDE. SERVICES PROVIDED SHALL INCLUDE:
   - A) VERIFY TYPE AND GRADE OF ALL REINFORCING STEEL.
   - B) VERIFY REBAR IS FREE OF OIL, DIRT, EXCESSIVE RUST AND FROM DAMAGE IN SHIPMENT TO SITE.
   - C) VERIFY REINFORCING IS ADEQUATELY TIED, CHAIRED AND SUPPORTED TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT.
   - D) VERIFY MINIMUM AND MAXIMUM CLEAR DISTANCES BETWEEN BARS AND MINIMUM STRUCTURAL DISTANCE TO OUTSIDE OF CONCRETE.
   - E) VERIFY QUANTITY, SIZE AND LOCATION OF REINFORCEMENT.
   - F) VERIFY MINIMUM CONCRETE COVER IS MAINTAINED BETWEEN REBAR AND SURFACE OF CONCRETE.
   - G) VERIFY SIZE AND PLACEMENT OF REBAR. VERIFY LAP LENGTHS, LOCATIONS AND STAGGERS AND VERIFY BENDS FOR MINIMUM DIAMETER, SLOPE AND LENGTH. VERIFY HOOKED BAR LENGTHS AND LOCATIONS.

STRUCTURAL STEEL TESTING

1. CERTIFY WELDERS FOR THE WELD TYPES IN THE PROJECT AND CONDUCT INSPECTIONS AND TESTS AS REQUIRED, AS A MINIMUM, WELDERS SHALL BE AISC CERTIFIED. RECORD TYPES AND LOCATIONS OF DEFECTS FOUND IN WORK. RECORD WORK REQUIRED AND PERFORMED TO CORRECT DEFICIENCIES.
2. VISUALLY INSPECT 100% OF ALL FILLET WELDS.
3. ALL WELDS THAT FAIL SHALL BE REWELDED AND RETESTED UNTIL THEY PASS THE TEST. TEST TWO ADDITIONAL WELDS AT THE CONTRACTOR'S EXPENSE FOR EVERY WELD FAILURE.
4. VISUALLY INSPECT WELDS ON 100% OF ALL STUDS AND TEST 10% BY THE METHOD DESCRIBED BELOW IN COMPLIANCE WITH AWS D1.1. HEADED STUD SHALL BE TESTED BY ALTERNATELY BENDING 30 DEG. IN OPPOSITE DIRECTIONS FROM ITS ORIGINAL AXIS BY EITHER STRIKING THE STUDS WITH A HAMMER ON THE UNWELDED END OR PLACING A PIPE OR OTHER SUITABLE HOLLOW DEVICE OVER THE STUD AND MANUALLY OR MECHANICALLY BENDING THE STUD. IF FAILURE RATE IS 10% OR GREATER, TEST 100% OF STUDS AT CONTRACTOR'S EXPENSE UNTIL FAILURE RATE FALLS BELOW 10%. IF A VISUAL INSPECTION REVEALS ANY STUD THAT DOES NOT SHOW A FULL 360 DEG. FLASH (AS DEFINED IN AWS D1.1) OR ANY STUD THAT HAS BEEN REPAIRED BY WELDING, SUCH STUD SHALL BE BENT TO AN ANGLE OF APPROXIMATELY 15 DEGREES FROM ITS ORIGINAL AXIS. THE DIRECTION OF BENDING FOR STUDS WITH LESS THAN 360 DEGREES FLASH SHALL BE OPPOSITE TO THE MISSING PORTION OF FLASH.
5. BOLTS SHALL BE VISUALLY INSPECTED WHEN TWIST-OFF SPLINES ARE USED, OTHERWISE BOLTS SHALL BE SNUG TIGHT.
6. ALL FULL PENETRATION WELDS AT MOMENT CONNECTIONS REQUIRING TESTING SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING LABORATORY USING NON-DESTRUCTIVE TESTING METHODS. FOR SHOP WELDS, CERTIFICATION SHALL BE SUBMITTED PRIOR TO SHIPPING TO THE JOB SITE. FOR FIELD WELDS, CERTIFICATION SHALL BE SUBMITTED PRIOR FLOOR DECK INSTALLATION AND CONCRETE PLACEMENT AND PRIOR TO COVERING CONNECTIONS WITH FIREPROOFING OR ARCHITECTURAL FINISHES.

MASONRY TESTING

1. MASONRY TESTING SHALL CONSIST OF A QUALIFIED TESTING LABORATORY PROVIDING THE FOLLOWING SERVICES:
   - A) VERIFY QUANTITY, SIZE AND SPACING OF REQUIRED REINFORCING SHOWN ON THE DRAWINGS.
   - B) OBSERVE THE INSTALLATION OF MASONRY UNITS.
   - C) INSPECTION OF GROUT SPACE, IMMEDIATELY PRIOR TO CLOSING OF CLEANOUTS AND PRIOR TO ALL GROUTING OPERATIONS. VERIFY THAT THE SPECIFIED CELLS HAVE BEEN FULLY GROUTED.
   - D) MONITOR THE PROPORTIONING, MIXING AND CONSISTENCY OF MORTAR AND GROUT. PROVIDE 28 DAY COMPRESSIVE STRENGTH TESTS ON EACH GROUT MIX IN ACCORDANCE WITH ASTM C1019. COMPRESSION TEST MASONRY PRISMS FOR EACH TYPE OF WALL CONSTRUCTION IN ACCORDANCE WITH ASTM C1314. CONTRACTOR SHALL PREPARE ONE SET OF PRISMS FOR TESTING AT 28 DAYS. TESTS ARE TO BE CONDUCTED FOR EACH 2000 SQUARE FEET OF WALL INSTALLED, BUT NOT LESS THAN TWO TESTS.

SPECIAL INSPECTIONS AND STRUCTURAL TESTING

SPECIAL INSPECTION WORK AND THE FINAL LETTER OF COMPLIANCE HAVE NOT BEEN INCLUDED IN THE STRUCTURAL ENGINEER OF RECORD'S SCOPE OF SERVICES. THE OWNER IS RESPONSIBLE FOR OBTAINING THE SERVICES OF THE SPECIAL INSPECTOR AND THE TESTING LABORATORY. SPECIAL INSPECTIONS CAN BE PROVIDED BY AN INDEPENDENT SPECIAL INSPECTOR APPROVED BY THE BUILDING AUTHORITY. THE SPECIAL INSPECTION WORK DOES NOT INCLUDE THE TESTING LABORATORY SERVICES AS CALLED FOR ON THE DRAWINGS. ARRANGEMENTS FOR SPECIAL INSPECTIONS SHOULD BE MADE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE TESTING LABORATORY AND SPECIAL INSPECTOR IN A TIMELY MANNER PRIOR TO PROCEEDING WITH CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK REQUIRING INSPECTIONS WITHOUT THE TESTING LABORATORY'S OR SPECIAL INSPECTOR'S PRESENCE.

STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS

THE STRUCTURAL SPECIAL INSPECTOR SHALL KEEP RECORDS OF ALL STRUCTURAL INSPECTIONS AND SHALL FURNISH INSPECTION REPORTS TO THE OWNER AND THE STRUCTURAL REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE (SRDP). DISCOVERED DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF SUCH DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND THE SRDP. THE SPECIAL INSPECTION PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES.

A FINAL REPORT OF SPECIAL INSPECTION DOCUMENTING COMPLETION OF ALL SPECIAL INSPECTIONS, TESTING AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED TO THE OWNER AND THE SRDP PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY AND USE.

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING
NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive•Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS, Inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

GENERAL NOTES

Sheet No. S0.3

2221079

STRUCTURAL SCHEDULE OF SPECIAL INSPECTIONS

QUALIFICATIONS OF INSPECTORS AND TESTING TECHNICIANS

THE QUALIFICATIONS OF ALL PERSONNEL PERFORMING SPECIAL INSPECTION AND TESTING ACTIVITIES ARE SUBJECT TO THE APPROVAL OF THE OWNER. THE CREDENTIALS OF ALL INSPECTORS AND TESTING TECHNICIANS SHALL BE PROVIDED TO THE SPECIAL INSPECTOR FOR THEIR RECORDS.

KEY FOR MINIMUM QUALIFICATION OF INSPECTION AGENTS

WHEN THE REGISTERED DESIGN PROFESSION IN RESPONSIBLE CHARGE OR SPECIAL INSPECTOR OF RECORD DEEMS APPROPRIATE THAT THE INDIVIDUAL PERFORMING THE STIPULATED TEST OR INSPECTION HAVE A SPECIFIC CERTIFICATION, LICENSE OR EXPERIENCE AS INDICATED BELOW. SUCH REQUIREMENT SHALL BE LISTED BELOW AND SHALL BE CLEARLY IDENTIFIED WITHIN THE SCHEDULE UNDER THE AGENT QUALIFICATION DESIGNATION.

PE/SE STRUCTURAL ENGINEER
A LICENSED SE OR PE SPECIALIZING IN THE DESIGN OF BUILDING STRUCTURES

PE/GE GEOTECHNCIAL ENGINEER
A LICENSED PE SPECIALIZING IN SOIL MECHANICS AND FOUNDATIONS

EIT OR ENGINEER IN TRAINING
A GRADUATE ENGINEER WHO HAS PASSED THE FUNDAMENTALS OF ENGINEERING EXAM

EXPERIENCED TESTING TECHNICIAN

ETT OR EXPERIENCED TESTING TECHNICIAN
AN EXPERIENCED TESTING TECHNICIAN WITH A MINIMUM OF 5 YEARS EXPERIENCE WITH THE STIPULATED TEST OR INSPECTION

AMERICAN CONCRETE INSTITUTE (ACI) CERTIFICATION
ACI-CFTT CONCRETE FIELD TESTING TECHNICIAN - GRADE I
ACI-CCI CONCRETE CONSTRUCTION INSPECTOR
ACI-LTT LABORATORY TESTING TECHNICIAN - GRADE I&2
ACI-STT STRENGTH TESTING TECHNICIAN

AMERICAN WELDING SOCIETY (AWS) CERTIFICATION
AWS-CWI CERTIFIED WELDING INSPECTOR
AWS/AISC-SSI CERTIFIED STRUCTURAL STEEL INSPECTOR

CHAPTER 17 OF THE 2021 INTERNATIONAL BUILDING CODE IS INTERPRETED TO REQUIRE SPECIAL INSPECTION FOR THE FOLLOWING ITEMS IN THE FOLLOWING TABLES:

SCHEDULE OF SPECIAL INSPECTIONS

VERIFICATION/INSPECTION	CAST-IN-PLACE DEEP FOUNDATIONS INSPECTION		
IBC SECTION 1705.8, TABLE 1705.8	EXTENT CONTINUOUS, PERIODIC	COMMENTS	AGENT PE/GE, EIT OR ETT
1. INSPECT DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT	CONTINUOUS	IBC 1705.8	ETT
2. VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, BELL DIAMETERS (IF APPLICABLE), HEIGHTS, EMBEDMENTS INTO BEDROCK (IF APPLICABLE) AND ADEQUATE END-BEARING STRATA CAPACITY. RECORD CONCRETE OR GROUT VOLUMES	CONTINUOUS	IBC 1705.8	ETT
3. FOR CONCRETE ELEMENTS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.3			ETT

SCHEDULE OF SPECIAL INSPECTIONS

VERIFICATION/INSPECTION	STRUCTURAL STEEL INSPECTION		
IBC SECTION 1705.2, AISC 360-10	EXTENT CONTINUOUS, PERIODIC	COMMENTS	AGENT PE/GE, EIT OR ETT
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:			
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	PERIODIC	AISC 360 SECTION A3.3 AND ALL APPLICABLE ASTM MATERIAL STANDARDS	ETT
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	PERIODIC		ETT
2. INSPECTION OF HIGH-STRENGTH BOLTING:			
A. SNUG-TIGHT JOINTS	PERIODIC	AISC 360 SECTION M2.5 IBC 1704.3.3	AWS/AISC-SSI
B. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITH MATCHMARKING, TWIST-OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION	PERIODIC		
C. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION.	CONTINUOUS		
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD- FORMED STEEL DECK			
A. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360	PERIODIC	AISC 360 SECTION M5.5	ETT
B. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	PERIODIC	ALL APPLICABLE ASTM MATERIAL STANDARDS	ETT
C. MANUFACTURER'S CERTIFIED TEST REPORTS	PERIODIC		ETT
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS			
A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.	PERIODIC	AISC 360, SECTION A3.5 AND APPLICABLE AWS AS DOCUMENTS	ETT
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	PERIODIC		ETT
5. INSPECTION OF WELDING A. STRUCTURAL STEEL AND COLD-FORMED STEEL DECK			
1) COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	CONTINUOUS	AWS D1.1 IBC 1704.3.1	AWS-CWI
2) MULTIPASS FILLET WELDS	CONTINUOUS		
3) SINGLE-PASS FILLED WELDS > 5/16"	CONTINUOUS		
4) PLUG AND SLOT WELDS	CONTINUOUS		
5) SINGLE-PASS FILLET WELDS ≤ 5/16"	PERIODIC		
6) FLOOR AND ROOF DECK WELDS	PERIODIC	AWS D1.3	AWS-CWI
B. REINFORCING STEEL			
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706	PERIODIC	AWS D1.4 ACI 318- SECTION 3.5.2	AWS-CWI
2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT.	CONTINUOUS		
3) SHEAR REINFORCEMENT	CONTINUOUS		
4) OTHER REINFORCING STEEL	PERIODIC		
6. INSPECTION OF STEEL FRAMED JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS:			
A. DETAILS SUCH AS BRACING AND STIFFENING	PERIODIC	IBC 1704.3.2	ETT
B. MEMBER LOCATIONS	PERIODIC		
C. APPLICATION OF JOINT DETAILS AT EACH CONNECTION	PERIODIC		

SCHEDULE OF SPECIAL INSPECTIONS

VERIFICATION/INSPECTION	SOIL/FOUNDATION INSPECTION			
IBC SECTION 1705.6, TABLE 1705.6	EXTENT CONTINUOUS, PERIODIC	COMMENTS		AGENT PE/GE, EIT OR ETT
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	PERIODIC			ETT
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	PERIODIC			ETT
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	PERIODIC			ETT
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	CONTINUOUS			ETT
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	PERIODIC			ETT

SCHEDULE OF SPECIAL INSPECTIONS

VERIFICATION/INSPECTION	MASONRY LEVEL 1 INSPECTION				
IBC SECTION 1705.4 TMS 402/ACI 530/ASCE 5 TMS 602/ACI 530.1/ASCE 6	EXTENT CONTINUOUS, PERIODIC	COMMENTS			AGENT PE/GE, EIT OR ETT
		IBC SECTION	TMS 402 ACI 530 ASCE 5	TMS 602 ACI 530.1 ASCE 6	
1. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED	PERIODIC			ART. 1.5	ETT
2. VERIFICATION OF f'm AND f'AAC PRIOR TO CONSTRUCTION EXCEPT WHERE SPECIFICALLY EXEMPTED BY THIS CODE	PERIODIC			ART. 1.4B	ETT
3. VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO THE SITE FOR SELF-CONSOLIDATING GROUT	CONTINUOUS			ART. 1.5B.1.b.3	ETT
4. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:					
A. PROPORTIONS OF SITE-PREPARED MORTAR	PERIODIC			ART. 2.6A	ETT
B. CONSTRUCTION OF MORTAR JOINTS	PERIODIC			ART. 3.3B	ETT
C. LOCATION OF REINFORCEMENT, CONNECTORS, PRESTRESSING TENDONS AND ANCHORAGES	PERIODIC			ART. 3.4, 3.6A	
D. PRESTRESSING TECHNIQUE	PERIODIC			ART. 3.6B	
E. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	PERIODIC			ART. 2.4B 2.4H	
5. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:					
A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	PERIODIC			ART. 3.3F	ETT
B. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION	PERIODIC		SEC. 1.2.2(e) 1.16.1		ETT
C. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT, ANCHOR BOLTS, PRESTRESSING TENDONS AND ANCHORAGES	PERIODIC		SEC. 1.15	ART. 2.4, 3.4	ETT
D. WELDING OF REINFORCING BARS	CONTINUOUS		SEC. 2.1.9.7.2c 3.3.3.4(b)		AWS-CWI
E. PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F).	PERIODIC	SEC. 2104.3 2104.4		ART. 1.8C 1.8D	ETT
F. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	CONTINUOUS			ART. 3.6B	
6. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:					
A. GROUT SPACE IS CLEAN	PERIODIC			ART. 3.2D	ETT
B. PLACEMENT OF REINFORCEMENT AND CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES	PERIODIC		SEC 1.13	ART. 3.4	
C. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS.	PERIODIC			ART. 2.6B	
D. CONSTRUCTION OF MORTAR JOINTS	PERIODIC			ART. 3.3B	ETT
7. GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE:	CONTINUOUS			ART. 3.5	ETT
A. GROUTING OF PRESTRESSING BONDED TENDONS	CONTINUOUS			ART. 3.6C	
8. PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED	PERIODIC		SEC 2105.2.2 2105.3	ART. 1.4	ETT

SCHEDULE OF SPECIAL INSPECTIONS

VERIFICATION/INSPECTION	OPEN-WEB STEEL JOISTS AND JOIST GIRDERS		
IBC SECTION 1705.2.3, TABLE 1705.2.3	EXTENT CONTINUOUS, PERIODIC	COMMENTS	AGENT PE/GE, EIT OR ETT
1. INSTALLATION OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS		SJI SPECIFICATIONS LISTED IN SECTION 2207.1	ETT
A. END CONNECTIONS - WELDING OR BOLTED	PERIODIC	SJI SPECIFICATIONS LISTED IN SECTION 2207.1	ETT
B. BRIDGING - HORIZONTAL OR DIAGONAL			
1. STANDARD BRIDGING	PERIODIC		
2. BRIDGING THAT DIFFERS FROM SJI SPECIFICATIONS LISTED IN SECTION 2207.1	PERIODIC		

SCHEDULE OF SPECIAL INSPECTIONS

VERIFICATION/INSPECTION	CONCRETE INSPECTION		
IBC SECTION 1705.3, TABLE 1705.3	EXTENT CONTINUOUS, PERIODIC	COMMENTS	AGENT PE/GE, EIT OR ETT
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	PERIODIC	ACI 318- Ch. 20, 25.2, 25.3, 26.6.1-26.6.3 IBC 1908.4	ETT
2. REINFORCING BAR WELDING:			
A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	PERIODIC	AWS D1.4 ACI 318- 26.6.4	AWS-CWI
B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"	PERIODIC		
C. INSPECT ALL OTHER WELDS	CONTINUOUS		
3. INSPECT ANCHORS CAST IN CONCRETE	PERIODIC	ACI 318- 17.8.2	ETT
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS			
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	CONTINUOUS	ACI 318- 17.8.2.4	ETT
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A	PERIODIC	ACI 318- 17.8.2	
5. VERIFY USE OF REQUIRED MIX DESIGN	PERIODIC	ACI 318- Ch. 19, 26.4.3, 26.4.4 IBC 1904.1, 1904.2, 1908.2, 1908.3	ETT
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONRETE	CONTINUOUS	ASTM C 172 ASTM C 31 ACI 318- 26.4, 26.12 IBC 1908.8	ACI-CFTT OR ACI-STT
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	CONTINUOUS	ACI 318- 26.5 IBC 1908.6, 1908.7, 1908.8	ETT
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	PERIODIC	ACI 318- 26.5.3-26.5.5 IBC 1908.9	ETT
9. INSPECT PRESTRESSED CONCRETE FOR:			
A. APPLICATION OF PRESTRESSING FORCES	CONTINUOUS	ACI 318- 26.10	ETT
B. GROUTING OF BONDED PRESTRESSING TENDONS	CONTINUOUS		
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS	PERIODIC	ACI 318- Ch. 26.8	ETT
11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	PERIODIC	ACI 318- 26.11.1.2	ETT
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	PERIODIC	ACI 318- 26.11.1.2(b)	ETT

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive•Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

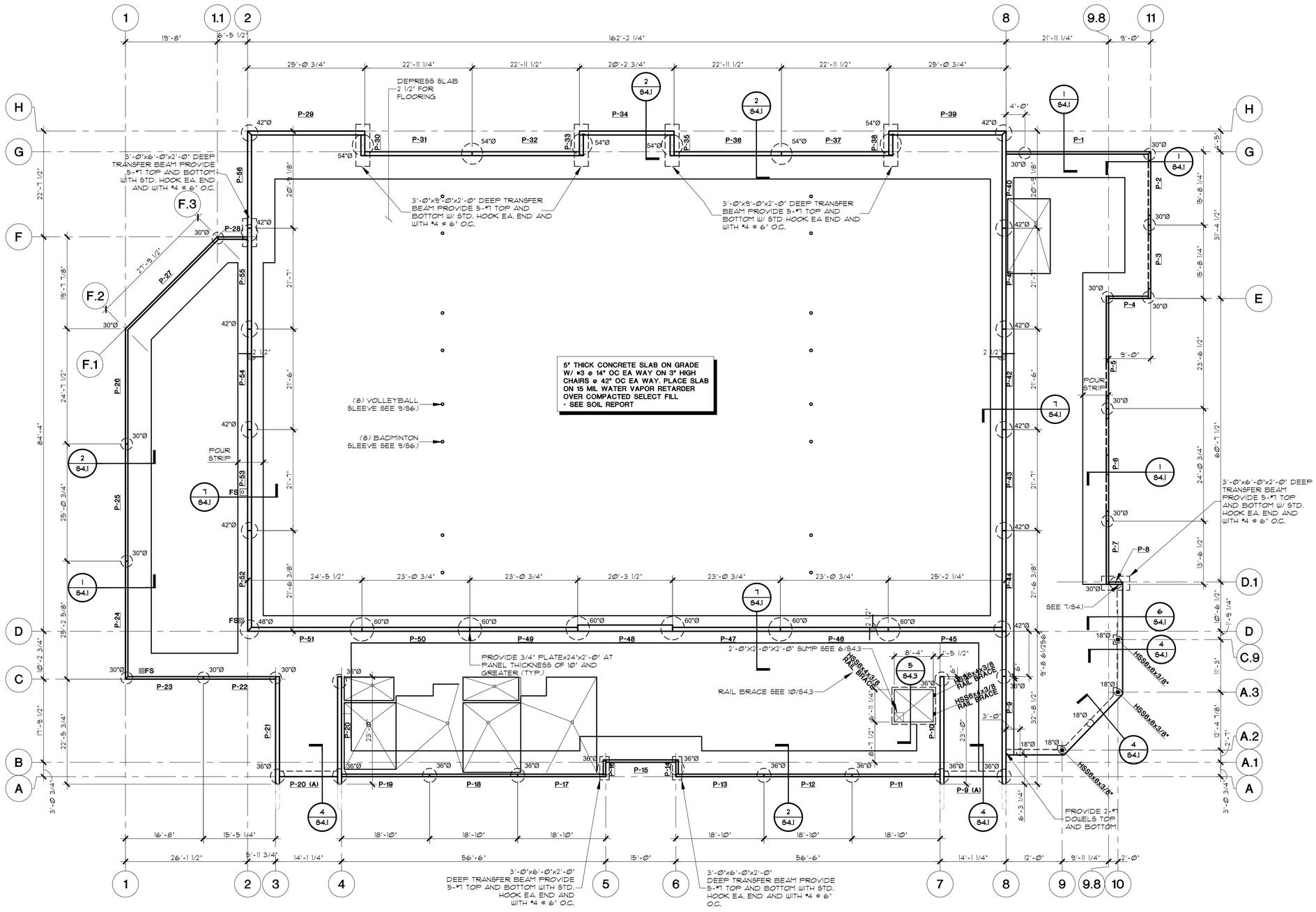
UNITY RECREATION CENTER

802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

SPECIAL INSPECTIONS

Sheet No. S0.4 2221079



FOUNDATION PLAN

SCALE: 3/32"-1'-0"

INDICATES COLUMN SIZE SEE 12/S4.3 FOR BASE PLATES & ANCHOR BOLT

HSS8x8x1/4"

INDICATES SHAFT DIA. SEE 10/S4.1 FOR REINF.

36"Ø

INDICATES FLOOR DRAIN SEE 11/S4.3

LEGEND

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive•Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

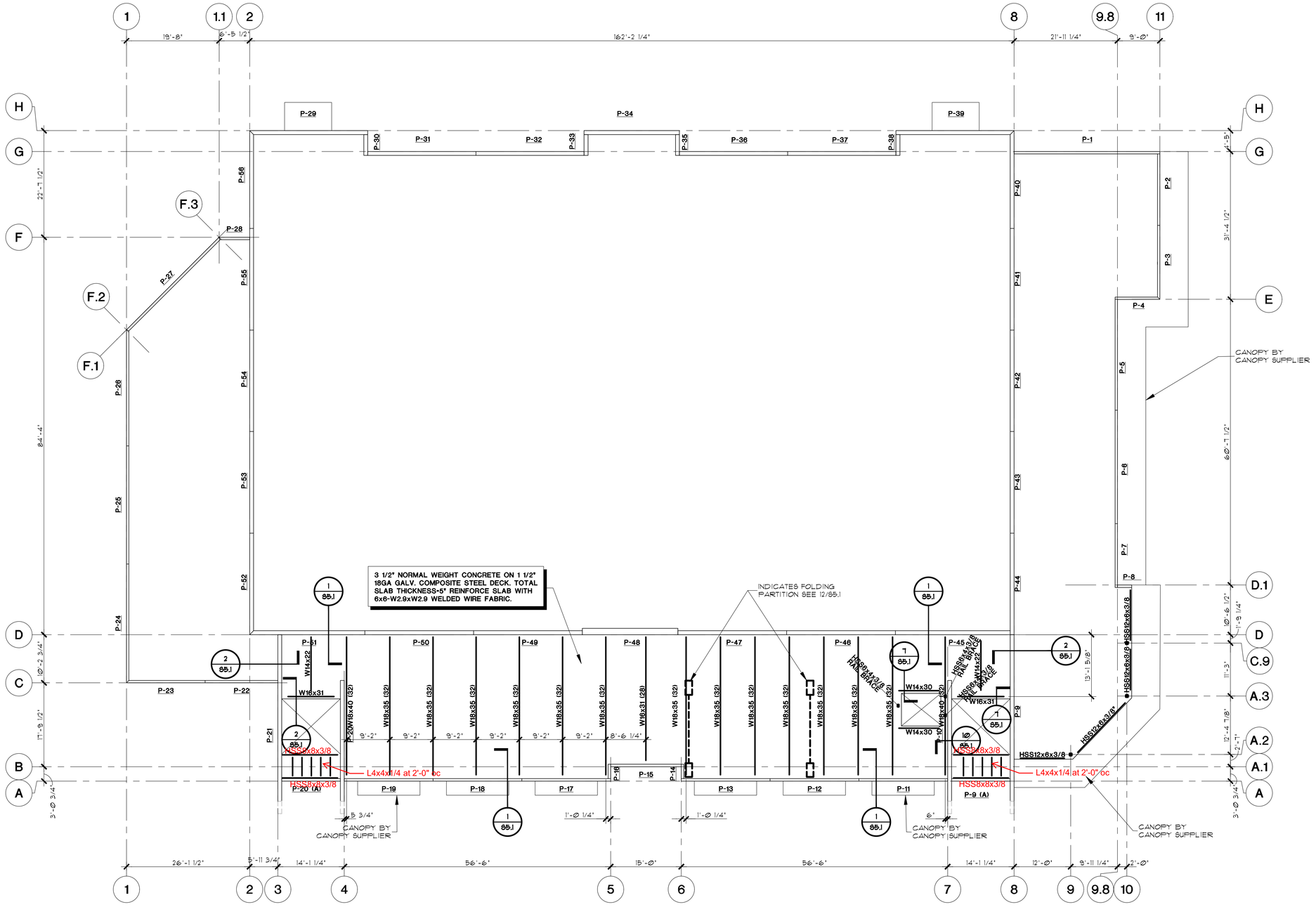
802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

FOUNDATION PLAN

Sheet No. S1.1

2221079



NOTE:
TOP OF STEEL ELEVATION (BOTTOM OF DECK) - AS NOTED ABOVE FINISH FLOOR ELEVATION - 13'-7", UNLESS NOTED OTHERWISE THUS (+/-). DETAILER TO COORDINATE STEEL JOIST SEAT DEPTH REQUIREMENTS WITH JOIST SUPPLIER. ALL ROOF SLOPES INDICATED THUS (⟋) TO BE UNIFORM BETWEEN HIGH / LOW ELEVATIONS GIVEN IN PLAN.

SECOND FLOOR FRAMING PLAN

SCALE: 3/32"-1'-0"

NORTH

DENOTES NO. OF EQUALLY SPACED SHEAR STUDS. PROVIDE 3/4"ø X 4" HSA IF NO STUDS ARE INDICATED. PROVIDE AT 1'-0" OC MIN.

DENOTES CAMBER

INDICATES DISTANCE BELOW TOP OF STEEL

W16x31 (4) c-3/4" (-1'-0")

BEAM LEGEND

Date issued/revised
15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive • Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

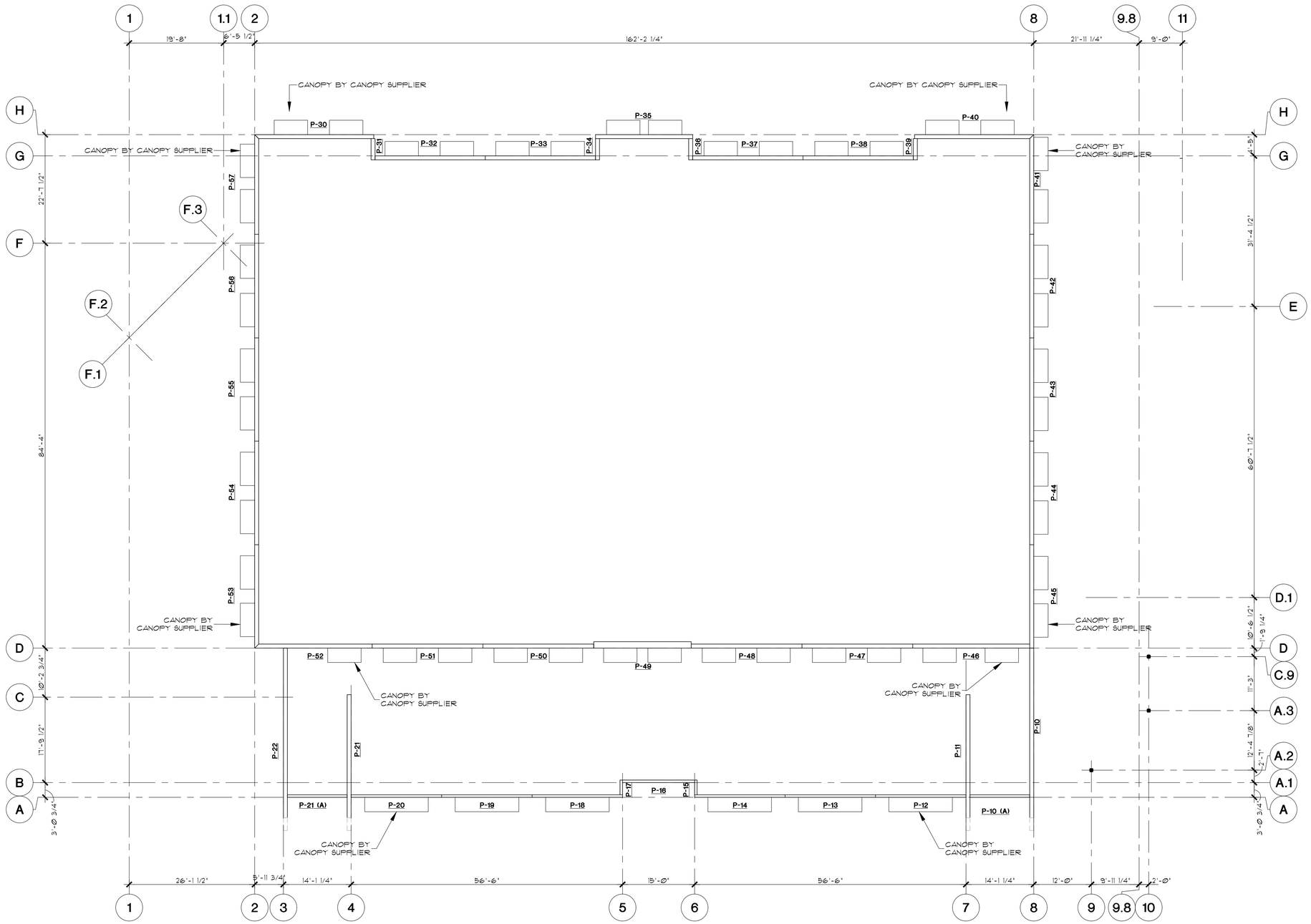
802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

SECOND FLOOR FRAMING PLAN

Sheet No. S2.1

2221079



UPPPER LEVEL CANOPY PLAN

SCALE: 3/32"=1'-0"

NORTH

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive•Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

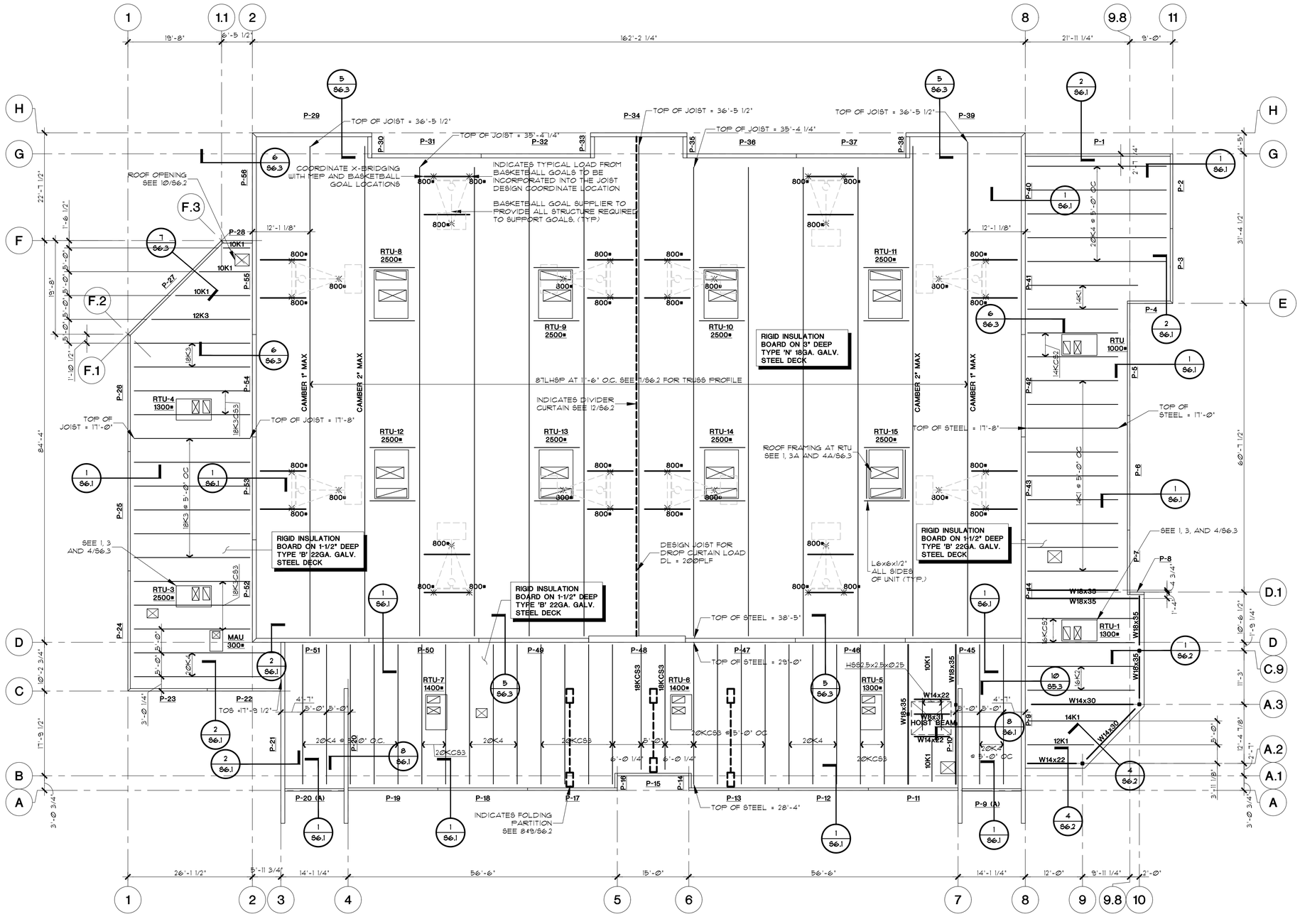
802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

CANOPY PLAN

Sheet No. S2.3

2221079



NOTE:
TOP OF STEEL ELEVATION (BOTTOM OF DECK) = AS NOTED ABOVE FINISH FLOOR ELEVATION = 0'-0", UNLESS NOTED OTHERWISE THUS (+/-). DETAILER TO COORDINATE STEEL JOIST SEAT DEPTH REQUIREMENTS WITH JOIST SUPPLIER. ALL ROOF SLOPES INDICATED THUS (⟋⟍) TO BE UNIFORM BETWEEN HIGH / LOW ELEVATIONS GIVEN IN PLAN.

ROOF FRAMING PLAN

SCALE: 3/32"=1'-0"

DENOTES NO. OF EQUALLY SPACED SHEAR STUDS. PROVIDE 3/4"ø X 4" HSA IF NO STUDS ARE INDICATED. PROVIDE AT 1'-0" OC MIN.

DENOTES CAMBER

INDICATES DISTANCE BELOW TOP OF STEEL

W16x31 (4) c-3/4" (-1'-0")

BEAM LEGEND

Date issued/revised
15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive•Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5282
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

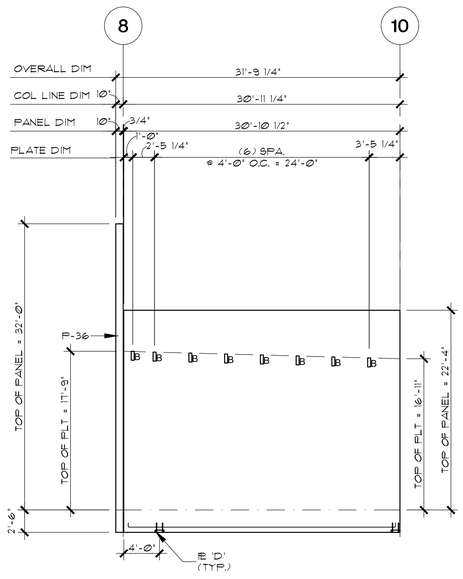
802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

ROOF FRAMING PLAN

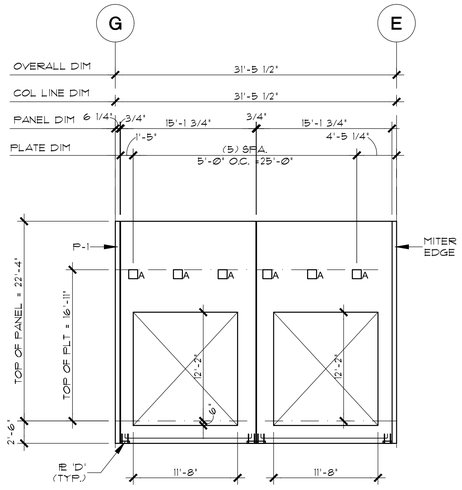
Sheet No. S2.2

2221079



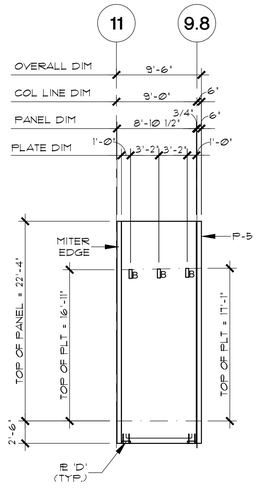
P-1

6 1/4" THICK PANELS



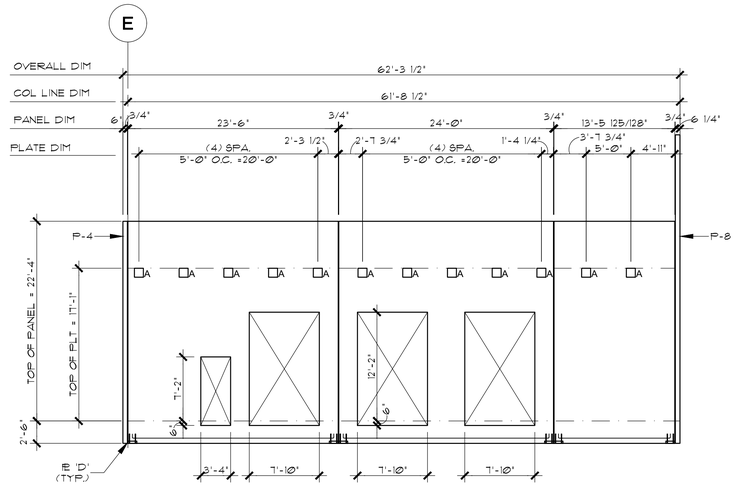
P-2 P-3

6 1/4" THICK PANELS



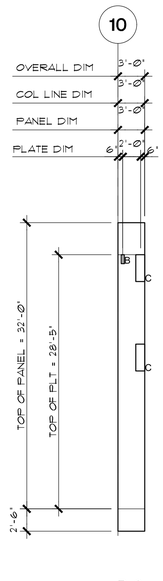
P-4

6 1/4" THICK PANELS

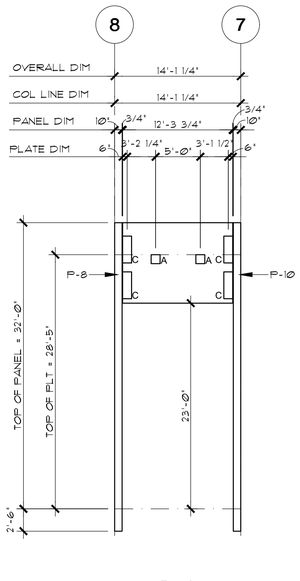


P-5 P-6 P-7

6 1/4" THICK PANELS

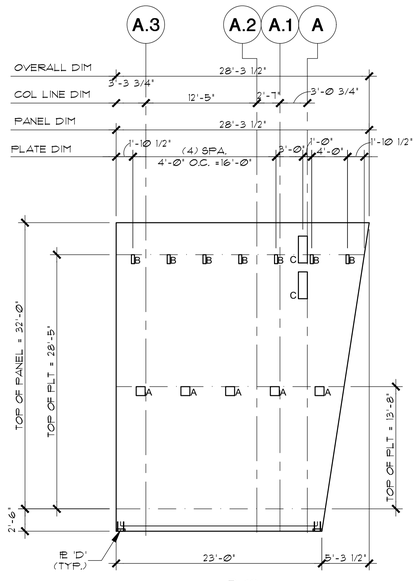


P-8



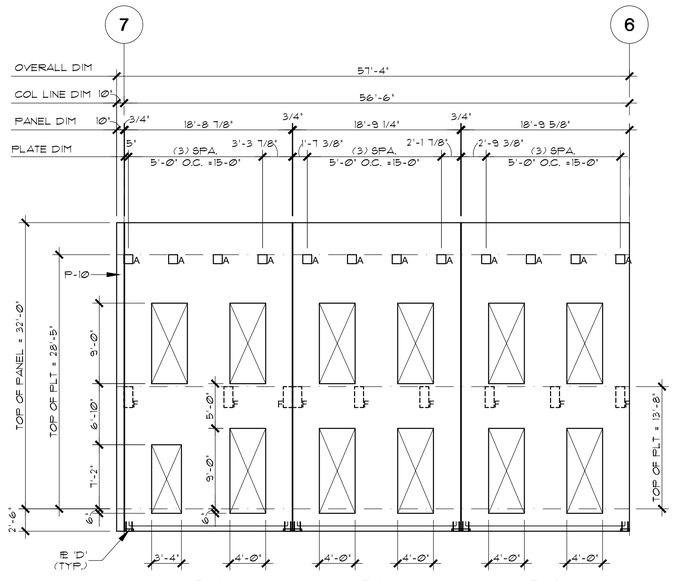
P-9A

6 1/4" THICK PANELS



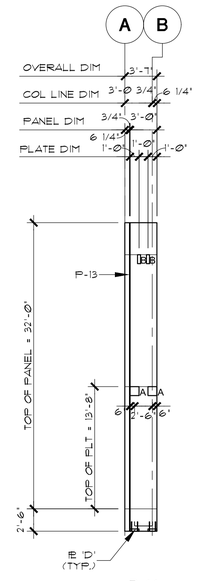
P-10

10" THICK PANELS



P-11 P-12 P-13

6 1/4" THICK PANELS



P-14

6 1/4" THICK PANELS

COORDINATE ALL OPENING SIZES & LOCATIONS PRIOR TO POURING PANELS. SEE ARCH. DRAWINGS FOR REVEALS, CHAMFERS, ETC.

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive•Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5282
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

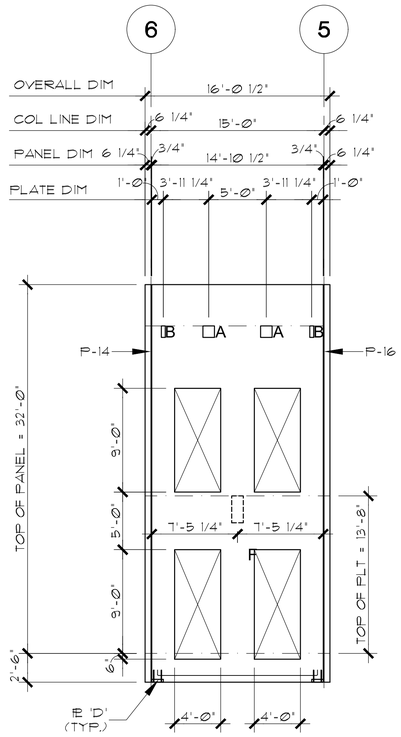
802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

PANEL ELEVATIONS

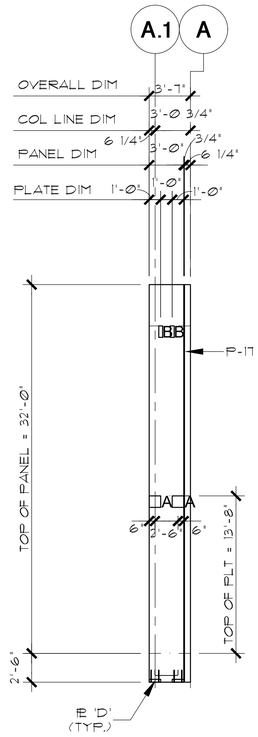
Sheet No. S3.1

2221079



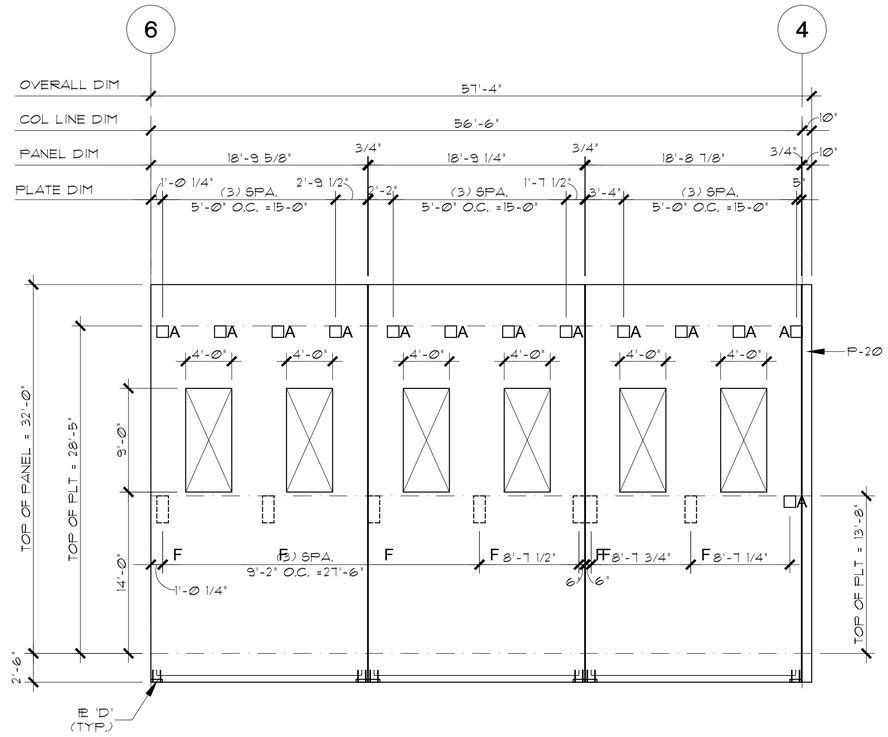
P-15

6 1/4" THICK PANELS



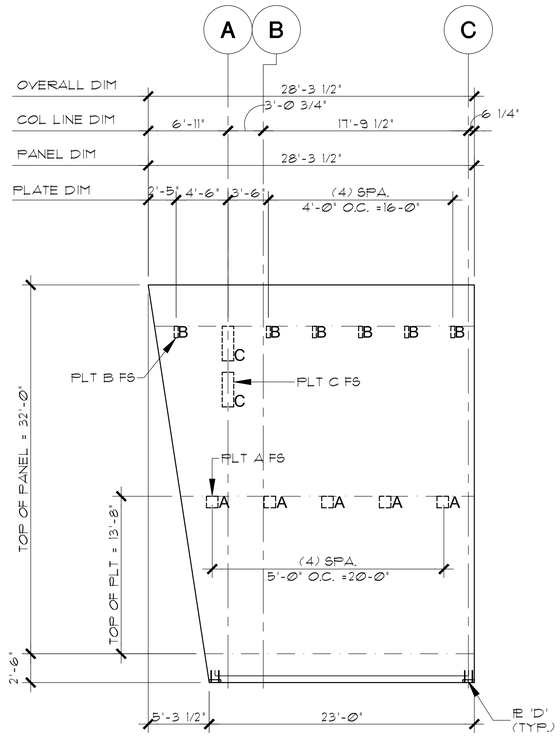
P-16

6 1/4" THICK PANELS



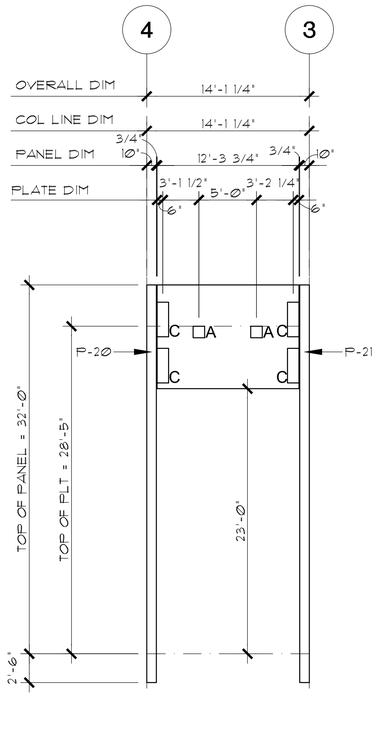
P-17 P-18 P-19

6 1/4" THICK PANELS



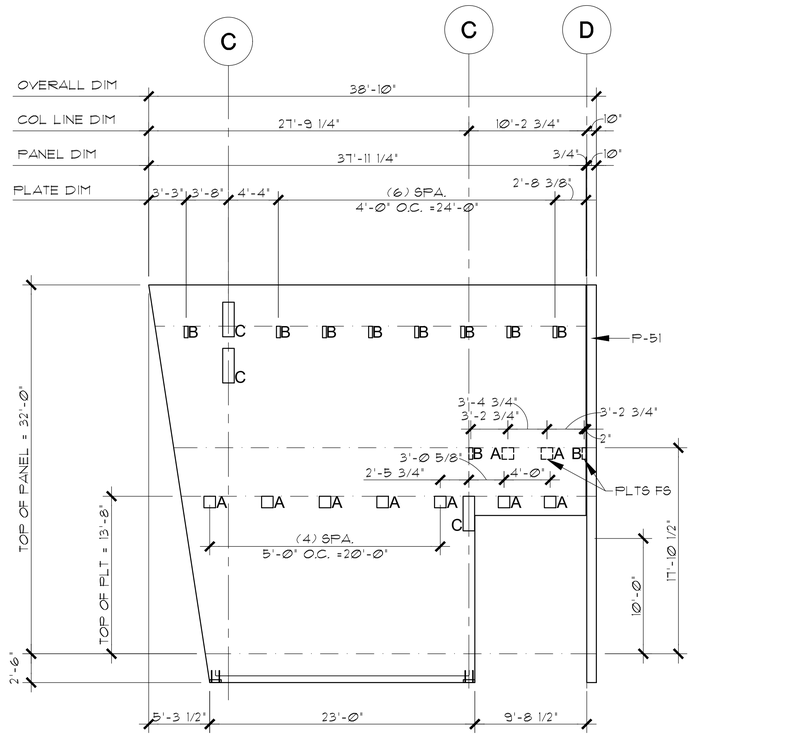
P-20

10" THICK PANELS



P-20 (A)

6 1/4" THICK PANELS



P-21

10" THICK PANELS

COORDINATE ALL OPENING SIZES & LOCATIONS PRIOR TO POURING PANELS. SEE ARCH. DRAWINGS FOR REVEALS, CHAMFERS, ETC.

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive•Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5282
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

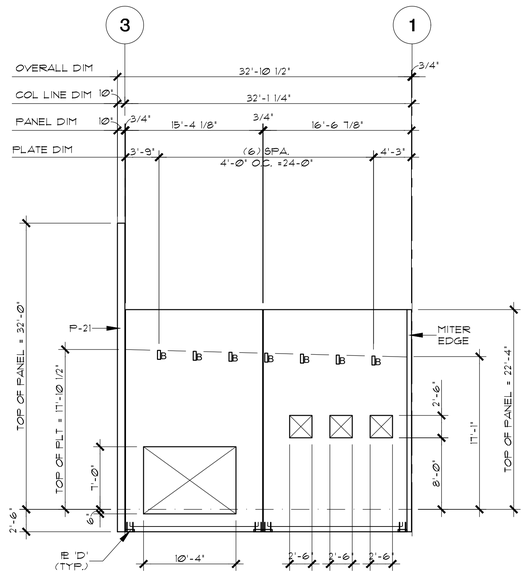
802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

PANEL ELEVATIONS

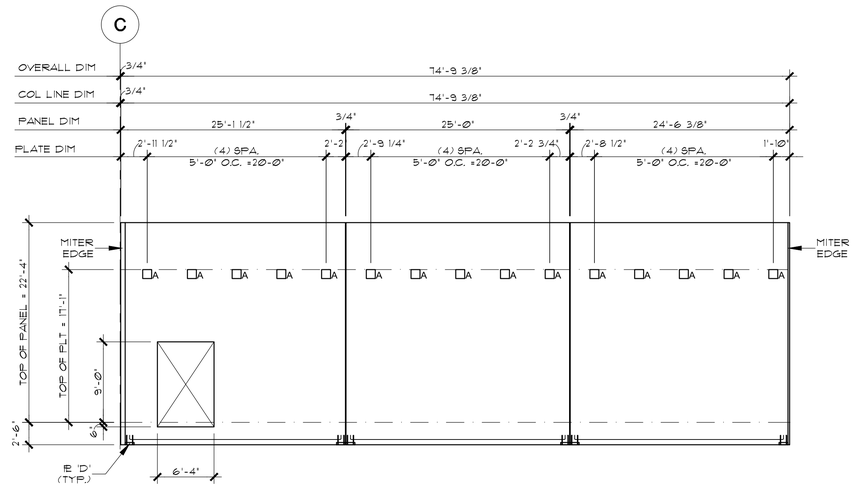
Sheet No. S3.2

2221079



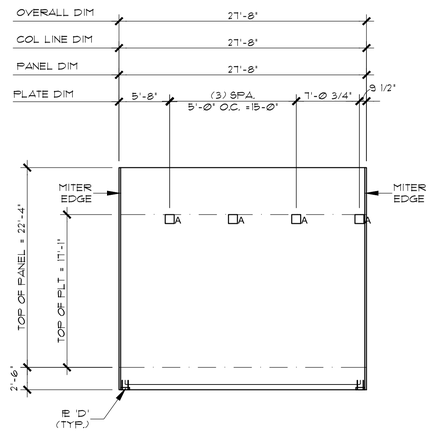
P-22 P-23

6 1/4" THICK PANELS



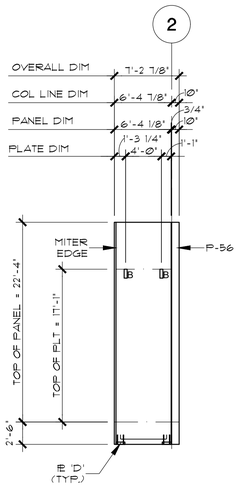
P-24 P-25 P-26

6 1/4" THICK PANELS



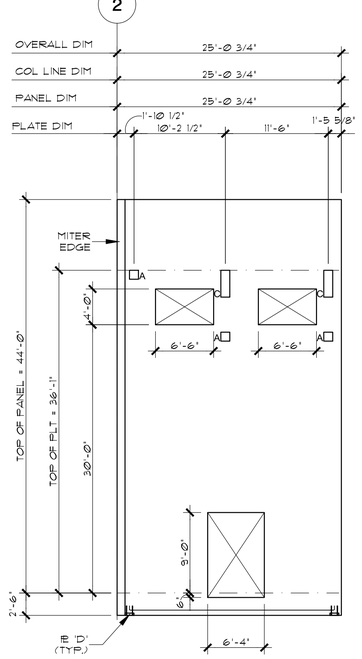
P-27

6 1/4" THICK PANELS

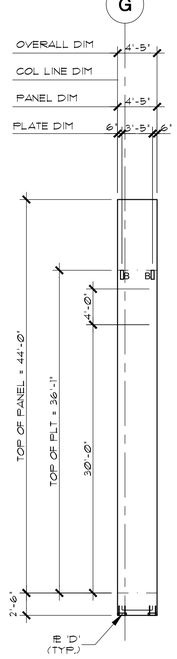


P-28

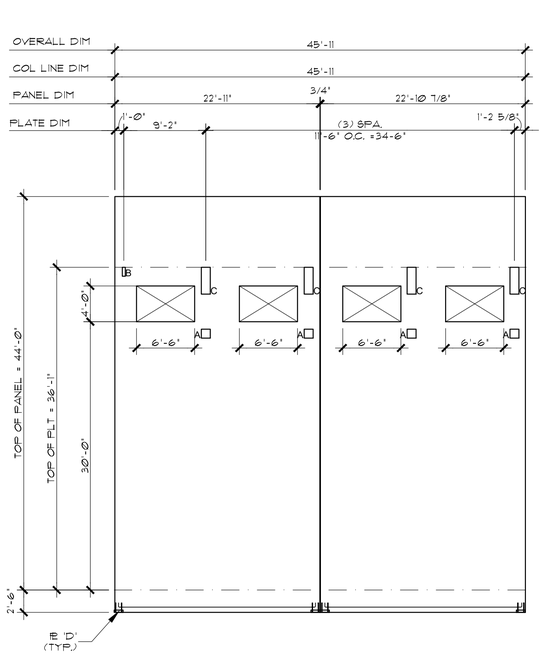
6 1/4" THICK PANELS



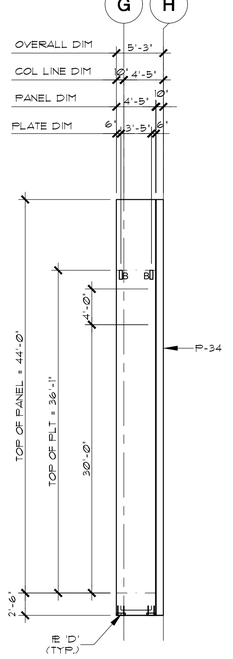
P-29



P-30



P-31 P-32



P-33

COORDINATE ALL OPENING SIZES & LOCATIONS PRIOR TO POURING PANELS. SEE ARCH. DRAWINGS FOR REVEALS, CHAMFERS, ETC.

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive•Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

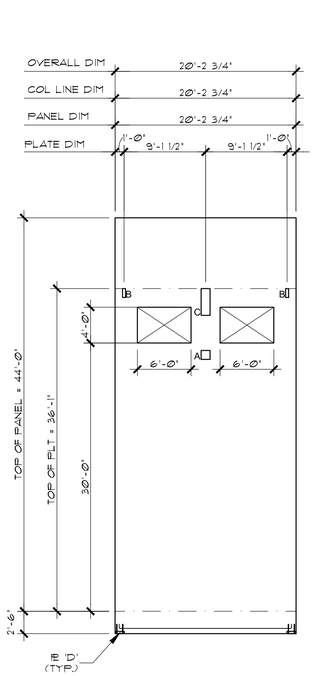
802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

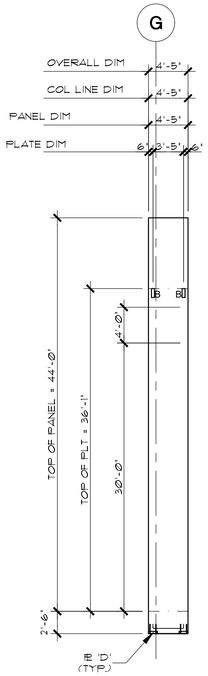
PANEL ELEVATIONS

Sheet No. S3.3

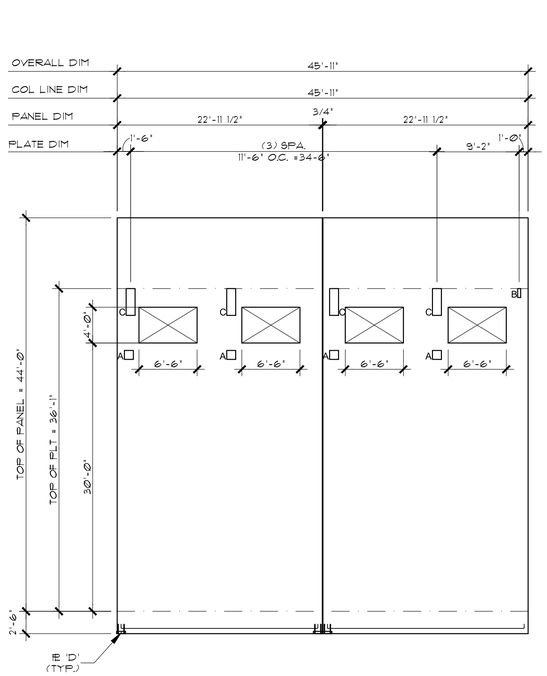
2221079



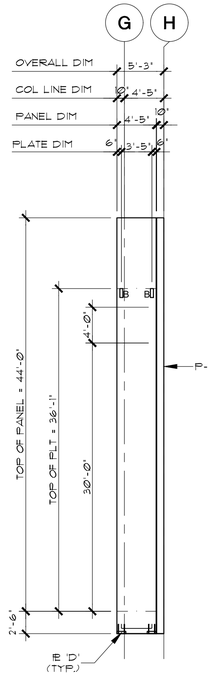
P-34



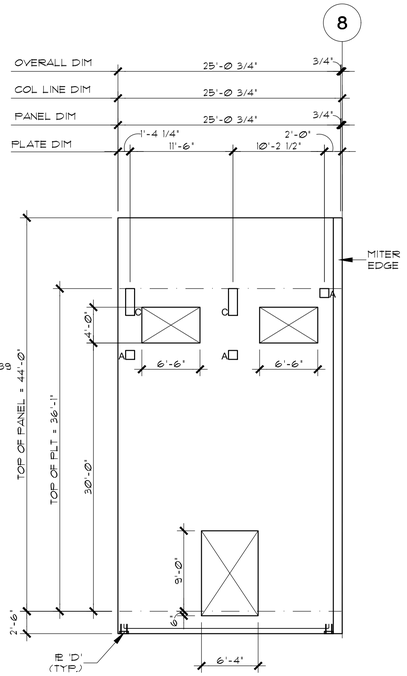
P-35



P-36 P-37

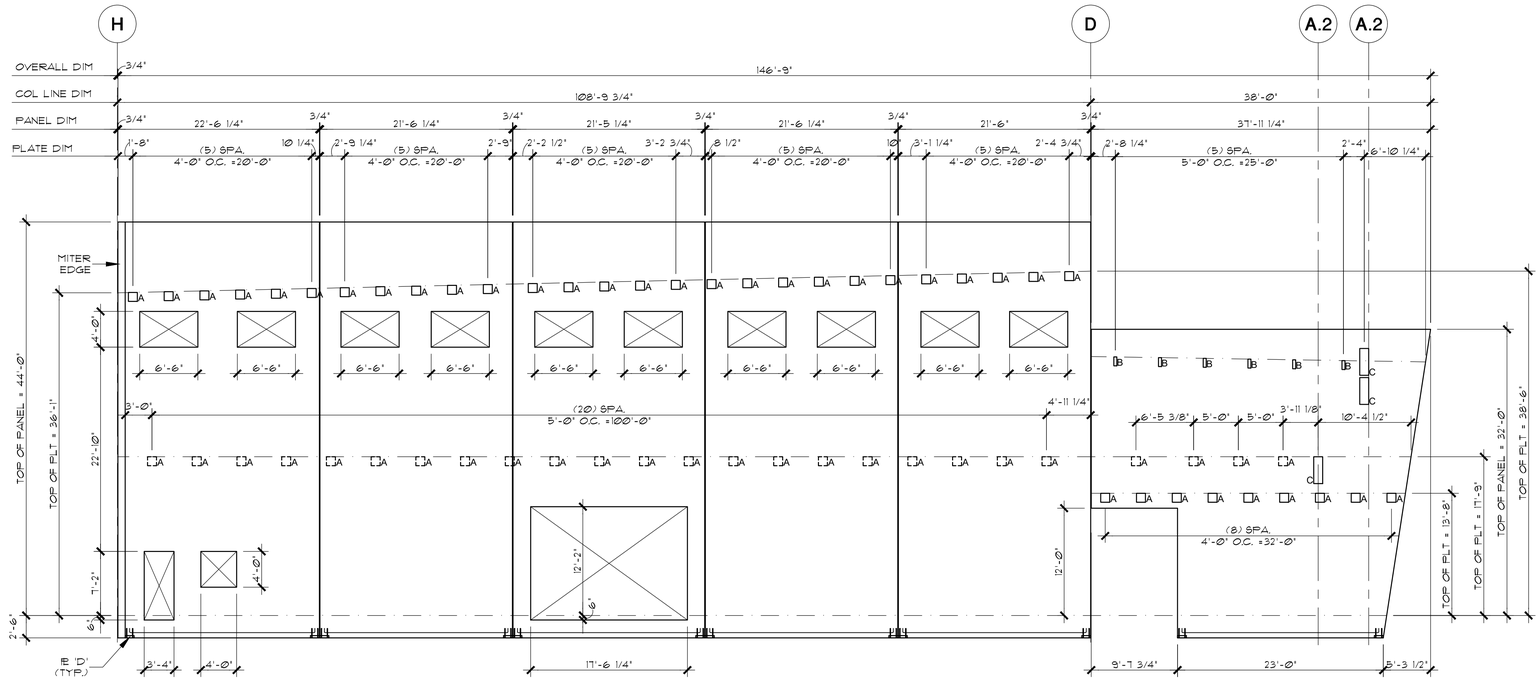


P-38



P-39

10" THICK PANELS



P-40 P-41 P-42 P-43 P-44 P-9

10" THICK PANELS

COORDINATE ALL OPENING SIZES & LOCATIONS PRIOR TO POURING PANELS. SEE ARCH. DRAWINGS FOR REVEALS, CHAMFERS, ETC.

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive•Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

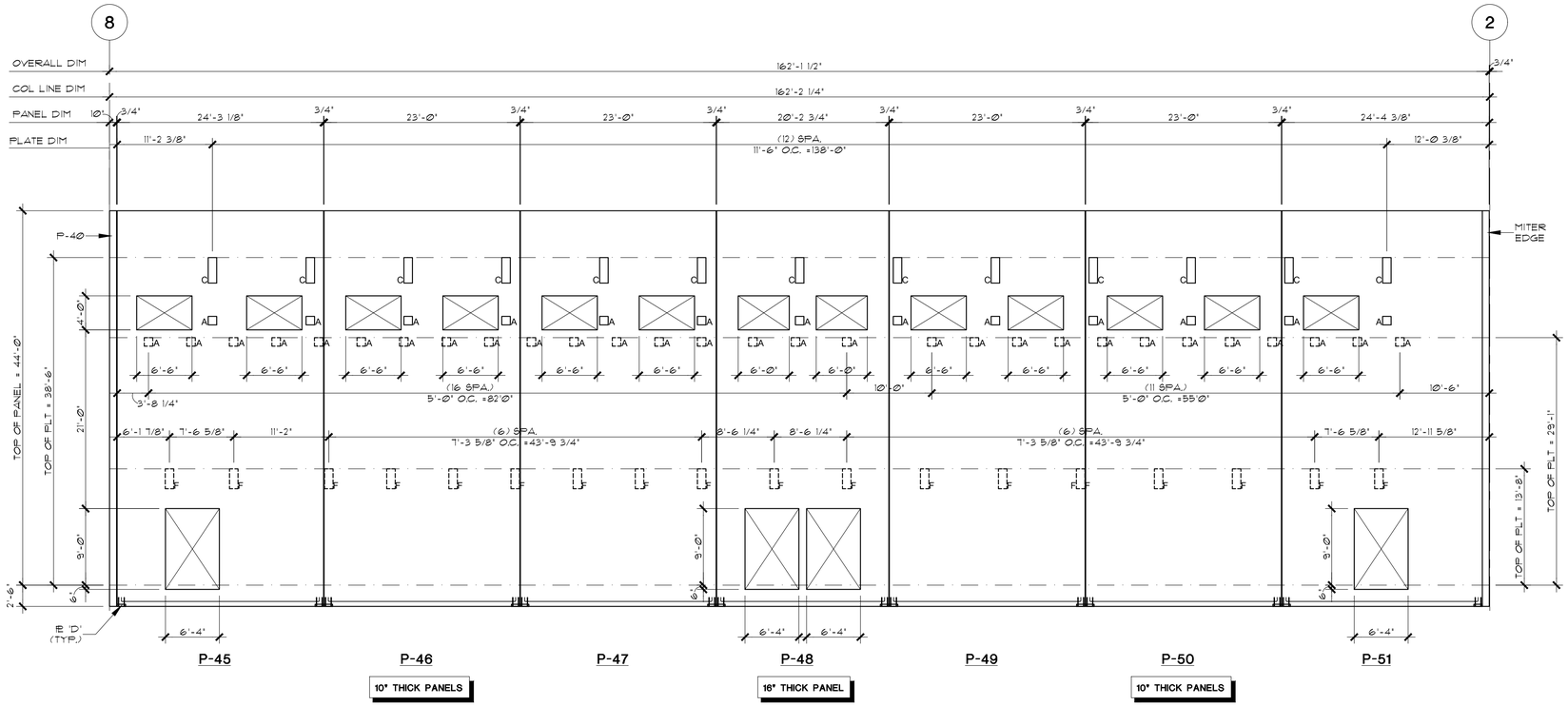
802 Old Mill Rd.
Cedar Park, Texas 78613

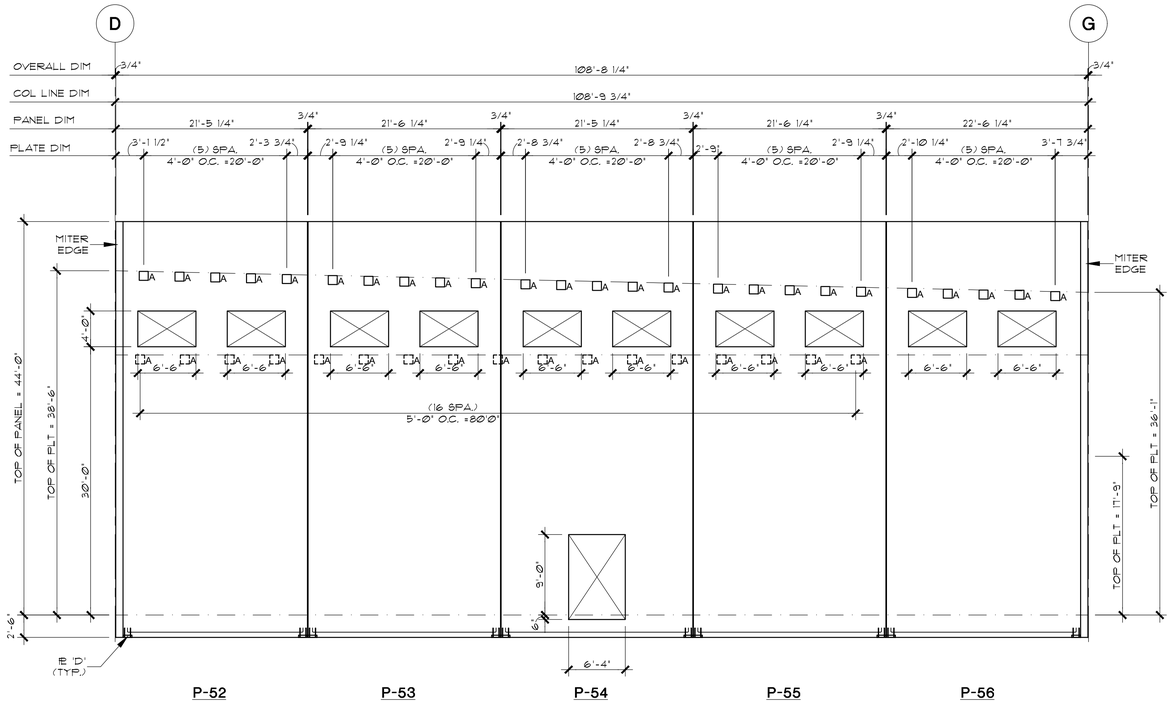
Project No. 22037
Drawn JG
Checked BG

PANEL ELEVATIONS

Sheet No. S3.4

2221079





COORDINATE ALL OPENING SIZES & LOCATIONS PRIOR TO POURING PANELS. SEE ARCH. DRAWINGS FOR REVEALS, CHAMFERS, ETC.

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive•Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5282
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

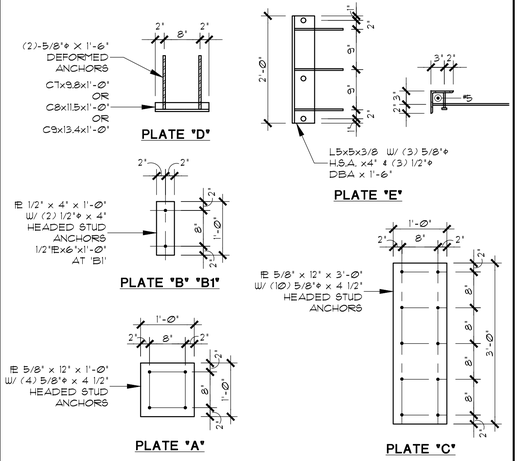
802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

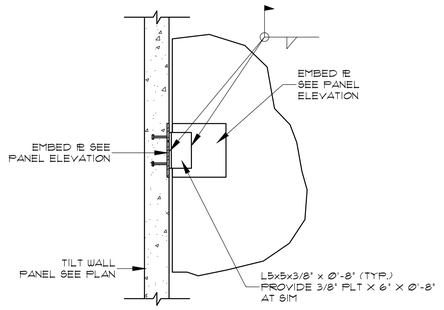
PANEL ELEVATIONS

Sheet No. S3.5

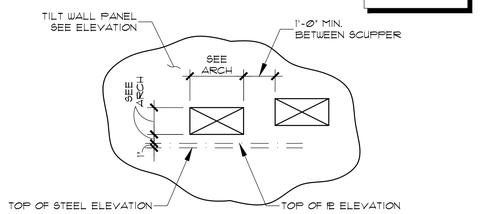
2221079



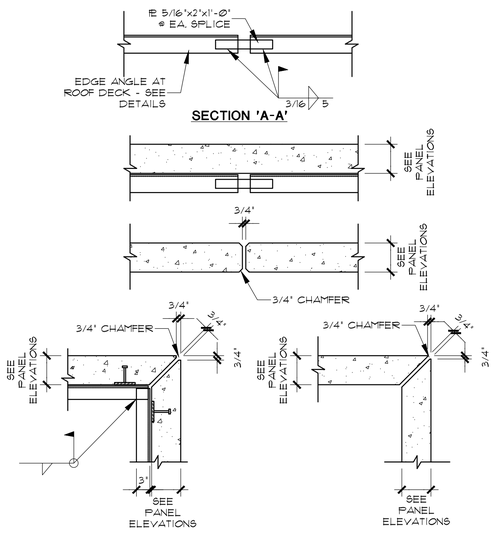
12 EMBED PLATES
SCALE:3/4" = 1'-0"

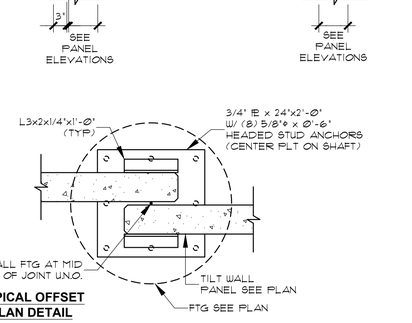


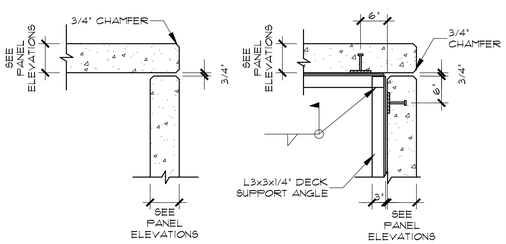
9 JUMPER CONNECTION
SCALE:3/4" = 1'-0"



6 SCUPPER DETAIL
SCALE:3/4" = 1'-0"

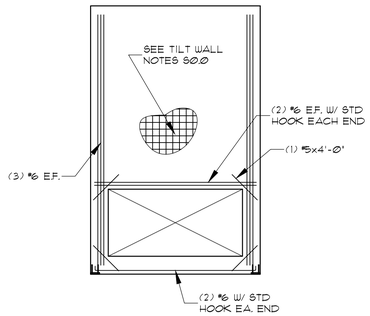




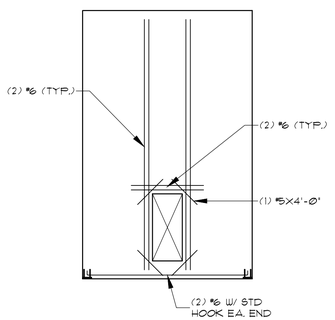


1 TYPICAL PANEL JOINTS
SCALE:3/4" = 1'-0"

COORDINATE ALL OPENING, SIZES & LOCATIONS PRIOR TO POURING PANELS. SEE ARCH DRAWINGS FOR REVEALS, CHAMFERS, ETC.



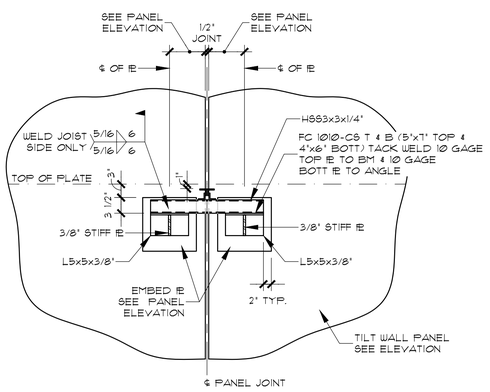
OPENINGS GREATER THAN 8'-0"



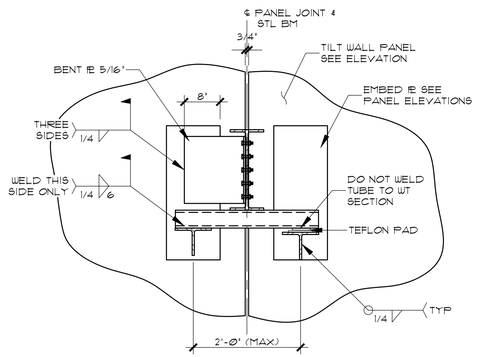
OPENINGS LESS THAN 8'-0"

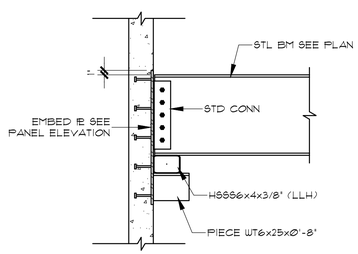
10 TYPICAL PANEL REINFORCING
SCALE:1/8" = 1'-0"

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



7 DETAIL AT JOIST AT PANEL JOINT
SCALE:3/4" = 1'-0"





SECTION "A"

4 BEAM BEARING AT PANEL JOINT
SCALE:NTS

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive•Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

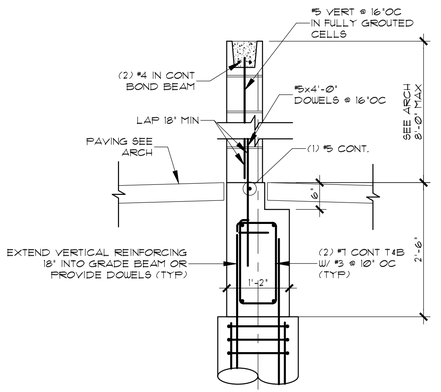
802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

PANEL DETAILS

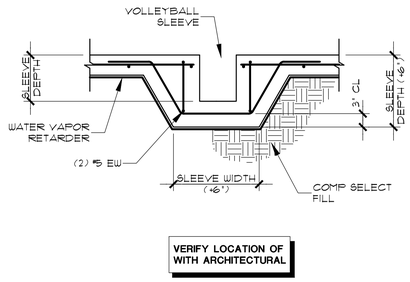
Sheet No. S3.6

2221079



12 DETAIL @ DUMPSTER SCREEN WALL

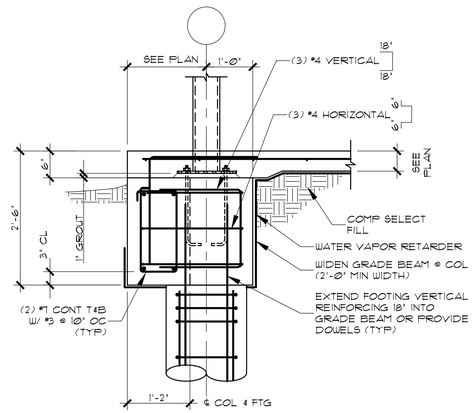
SCALE:3/4" = 1'-0"



VERIFY LOCATION OF WITH ARCHITECTURAL

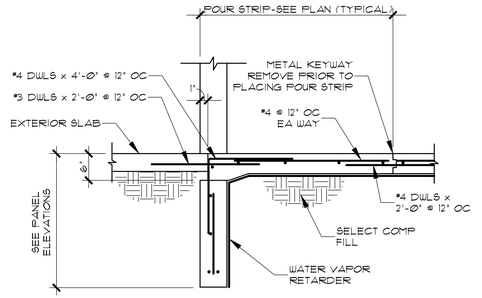
9 VOLLEYBALL SLEEVE DETAIL

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



6 EXTERIOR GRADE BEAM AT COLUMN

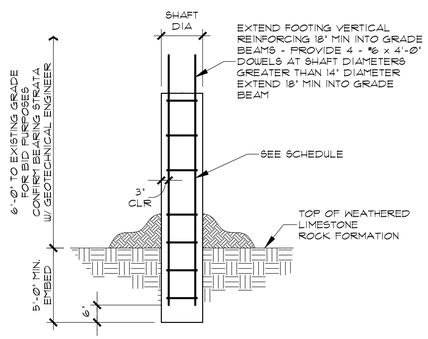
SCALE:3/4" = 1'-0"



3 DETAIL AT OPENING

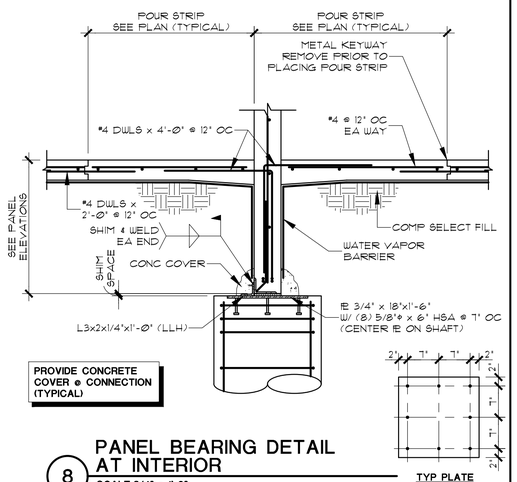
SCALE:3/4" = 1'-0"

FOOTING SCHEDULE		
SHAFT DIA.	VERT. BARS	TIES
12"	4 – #5	#3 @ 10"
14"	4 – #5	#3 @ 10"
16"	4 – #5	#3 @ 10"
18"	4 – #6	#3 @ 12"
20"	4 – #6	#3 @ 12"
22"	6 – #6	#3 @ 14"
24"	6 – #6	#3 @ 14"
26"	6 – #7	#3 @ 16"
28"	6 – #7	#3 @ 16"
30"	6 – #8	#3 @ 18"
32"	6 – #8	#3 @ 18"
34"	8 – #8	#3 @ 18"
36"	8 – #8	#3 @ 18"
42"	8 – #9	#3 @ 18"
48"	8 – #10	#3 @ 18"
54"	8 – #10	#3 @ 18"
60"	8 – #10	#3 @ 18"



10 STRAIGHT SHAFT DRILLED FOOTING DETAIL

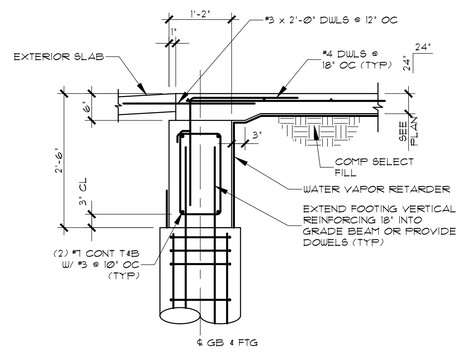
SCALE:NTS



8 PANEL BEARING DETAIL AT INTERIOR

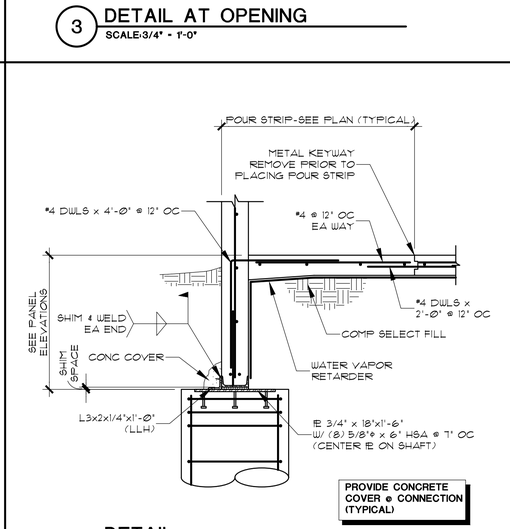
SCALE:3/4" = 1'-0"

NOTE: WHEN NOT DIMENSIONED ON PLAN, PLACE INTERMEDIATE FOOTING @ EQUAL SPACES BETWEEN COLUMN FOOTINGS.



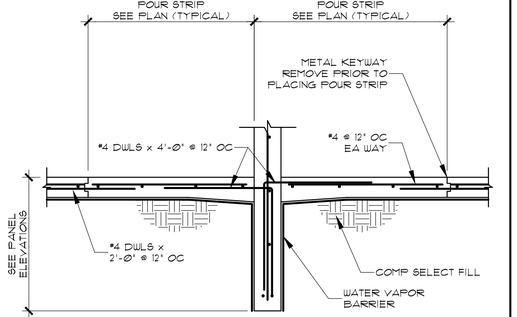
5 INTERMEDIATE FOOTING DETAIL

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



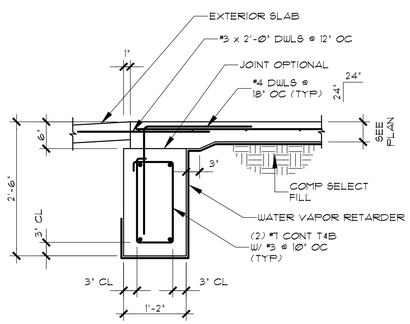
2 DETAIL AT PANEL BEARING

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



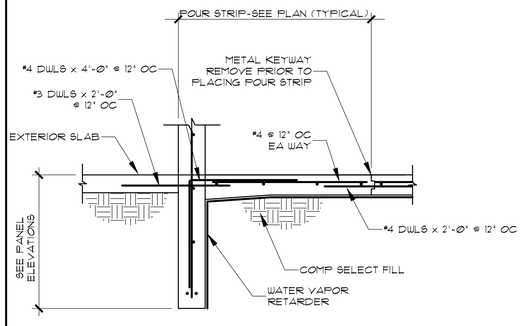
7 DETAIL AT INTERIOR PANEL

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



4 GRADE BEAM AT EXTERIOR SLAB

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



1 DETAIL AT PANEL

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

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive • Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

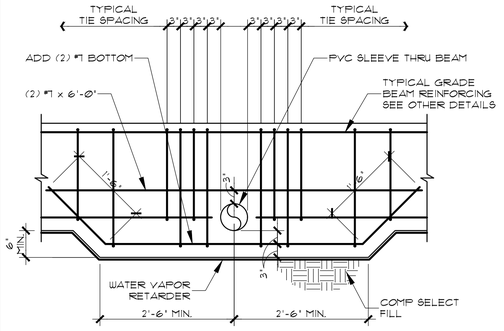
802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

FOUNDATION DETAILS

Sheet No. S4.1

2221079

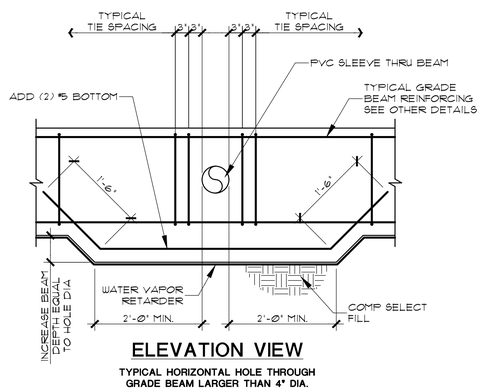


ELEVATION VIEW

TYPICAL HORIZONTAL HOLE THROUGH GRADE BEAM LARGER THAN 4" DIA.

12 GRADE BEAM PENETRATION (MAIN REINF INTERRUPTED)

SCALE:NTS

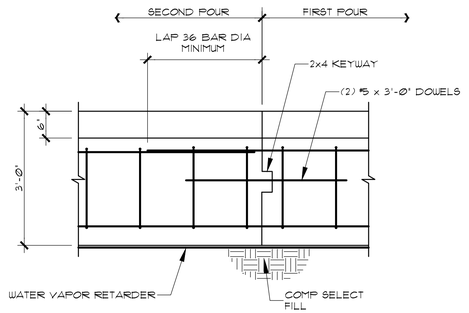


ELEVATION VIEW

TYPICAL HORIZONTAL HOLE THROUGH GRADE BEAM LARGER THAN 4" DIA.

9 GRADE BEAM PENETRATION DETAIL

SCALE:NTS



ELEVATION VIEW

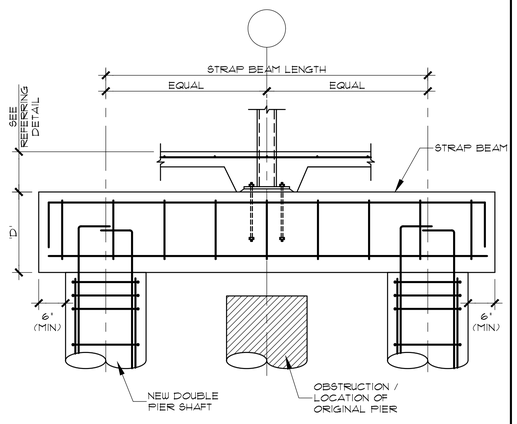
LOCATE JOINTS IN MIDDLE THIRD OF BEAM SPAN BETWEEN SUPPORTS

6 GRADE BEAM CONSTRUCTION JOINT

SCALE:NTS

3 DETAIL

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



STRAP BEAM SCHEDULE					
ORIG SINGLE BELL DIAM	DBL PIER BELL SIZE	DBL PIER SHAFT SIZE	STRAP BEAM LENGTH (℄)	STRAP BEAM (W X D)	STRAP BEAM REINFORCING
24", 36"	30"	12"	5'-0"	30"x24"	(5) #7 T&B #4 @ 9" OC
42", 48"	36"	12"	6'-0"	30"x24"	(5) #7 T&B #4 @ 9" OC
54", 60"	48"	18"	8'-0"	30"x24"	(6) #7 T&B #4 @ 9" OC
66', 72"	54"	18"	9'-0"	30"x24"	(6) #7 T&B #4 @ 9" OC
72", 80"	60"	24"	10'-0"	30"x24"	(6) #7 T&B #4 @ 9" OC

10 OBSTRUCTION DETAIL

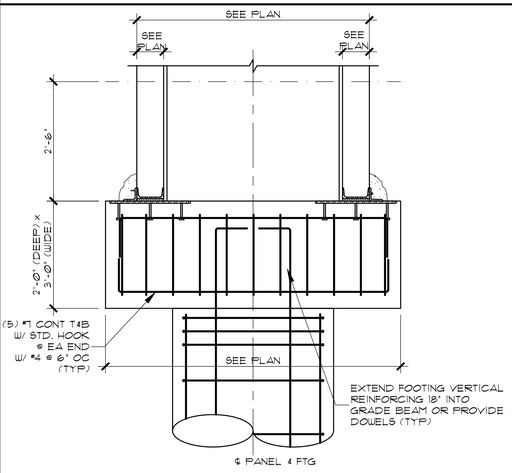
SCALE:NTS

PLAN VIEW

TYPICAL VERTICAL HOLE THROUGH GRADE BEAM LARGER THAN 4" DIA.

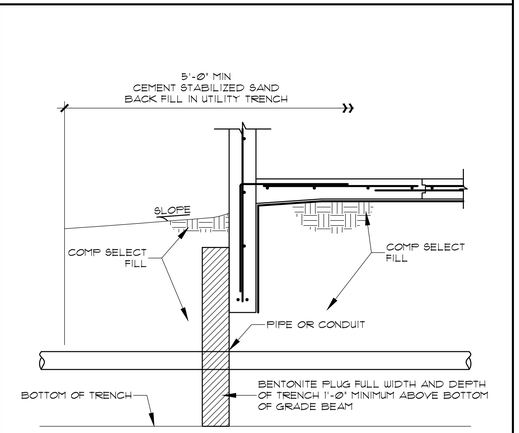
8 GRADE BEAM PENETRATION DETAIL

SCALE:NTS



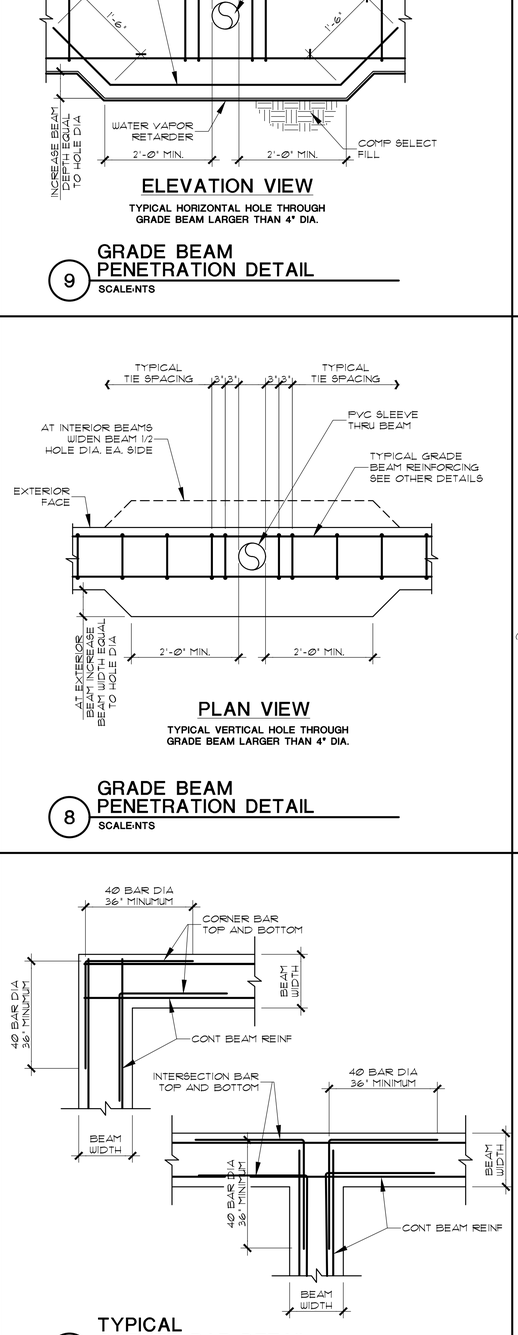
5 TRANSFER BEAM DETAIL

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



2 PIPE ENTRY DETAIL

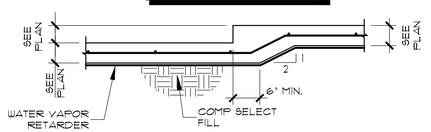
SCALE:NTS



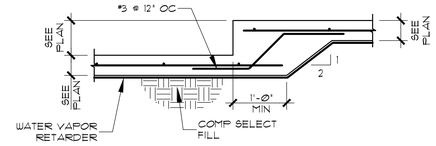
7 TYPICAL CORNER BAR DETAIL

SCALE:NTS

CONTRACTOR TO COORD. ALL SLAB RECESS LOCATIONS AND DEPTHS WITH ARCH. DRAWINGS AND FLOORING REQUIREMENTS.



SLAB RECESS LESS THAN 3" DEEP

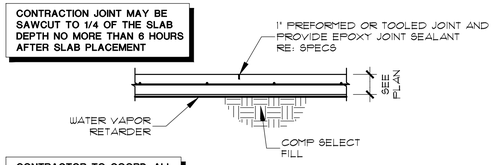


SLAB RECESS 3" TO 10" DEEP

4 SLAB RECESS

SCALE:NTS

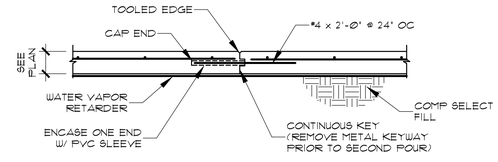
CONTRACTION JOINT MAY BE SAWCUT TO 1/4 OF THE SLAB DEPTH NO MORE THAN 6 HOURS AFTER SLAB PLACEMENT



CONTRACTOR TO COORD. ALL JOINT LOCATIONS WITH ARCH. DRAWINGS AND FLOORING REQUIREMENTS.

SLAB CONTRACTION JOINT

SEE PLAN FOR LOCATION OR SPACE AT 15' x 15' MAXIMUM IN EACH DIRECTION



SLAB CONSTRUCTION JOINT

NOTE: AT CONTRACTOR'S OPTION, CONSTRUCTION JOINT MAY BE USED IN LIEU OF CONTRACTION JOINT.

1 SLAB JOINT DETAIL

SCALE:NTS

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive • Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS, inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

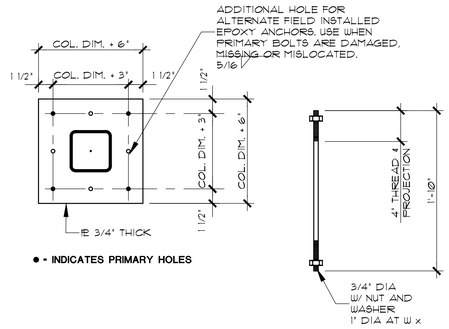
802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

FOUNDATION DETAILS

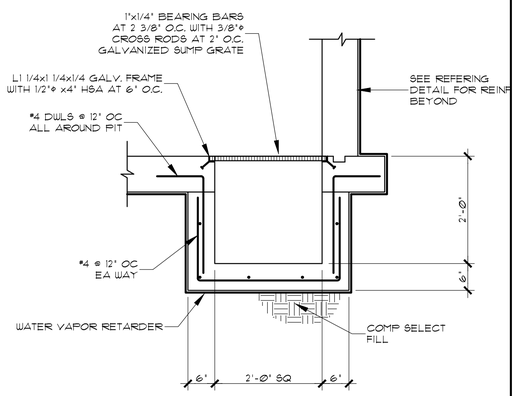
Sheet No. S4.2

2221079

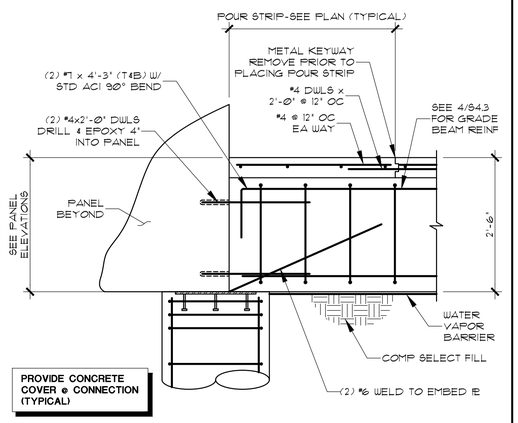


12 DETAIL
SCALE:3/4" = 1'-0"

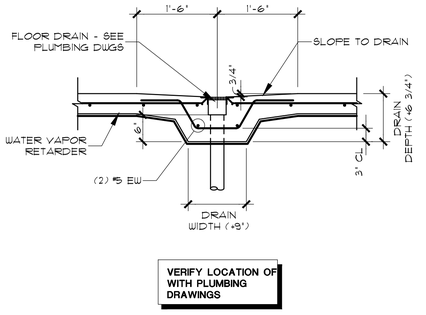
9 DETAIL
SCALE:3/4" = 1'-0"



6 SUMP PIT DETAIL
SCALE:3/4" = 1'-0"

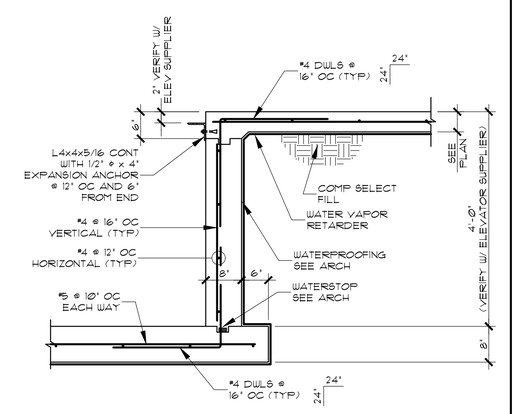


3 DETAIL AT GRADE BEAM AND PANEL
SCALE:3/4" = 1'-0"

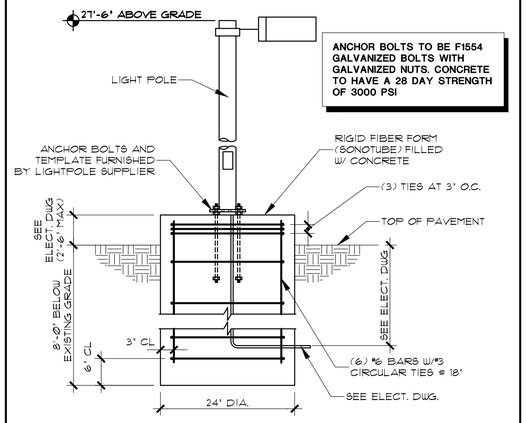


11 FLOOR DRAIN DETAIL
SCALE:3/4" = 1'-0"

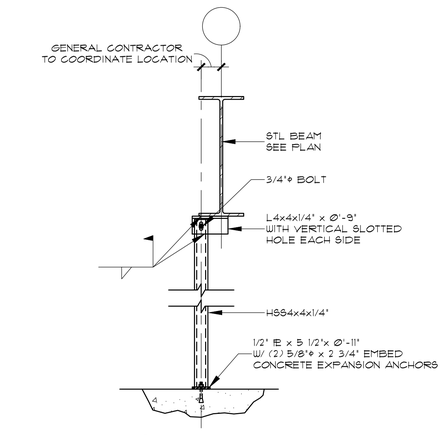
8 DETAIL
SCALE:3/4" = 1'-0"



5 ELEVATOR PIT DETAIL
SCALE:3/4" = 1'-0"

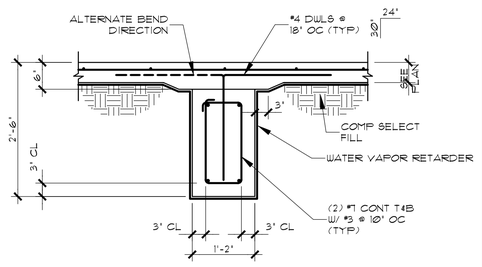


2 LIGHTPOLE FOUNDATION DETAIL
SCALE:3/4" = 1'-0"

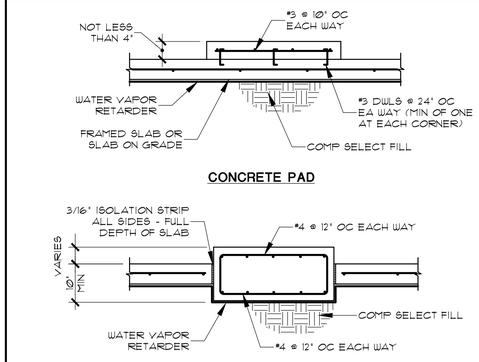


10 ELEVATOR RAIL BRACE DETAIL
SCALE:3/4" = 1'-0"

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



4 INTERIOR GRADE BEAM DETAIL
SCALE:3/4" = 1'-0"



NOTE: VERIFY ALL PAD AND BASE LOCATIONS, DIMENSIONS, AND ADEQUACY WITH THE MECHANICAL ENGINEER AND THE INDIVIDUAL EQUIPMENT REQUIREMENTS. MECHANICAL ENGINEER TO SPECIFY ISOLATION DATA.

1 PAD AND BASE DETAIL
SCALE:NTS

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive • Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

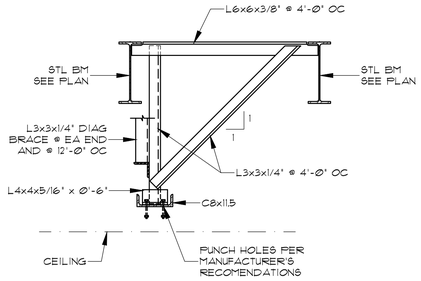
802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

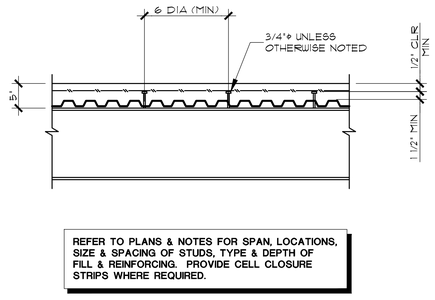
FOUNDATION DETAILS

Sheet No. S4.3

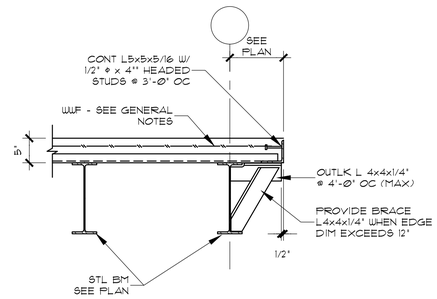
2221079



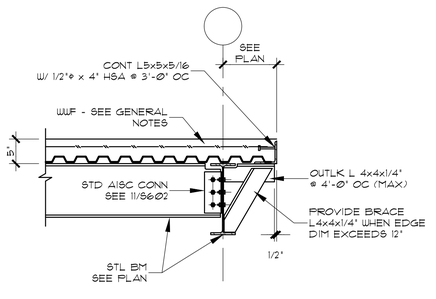
12 TYPICAL FOLDING PARTITION BRACE DETAIL
SCALE:3/4" = 1'-0"



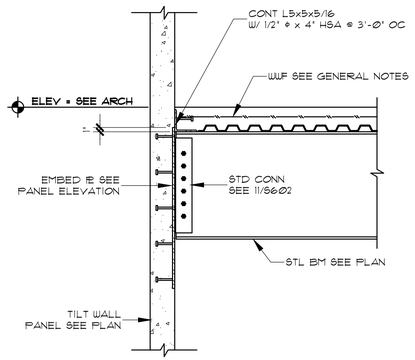
9 TYPICAL STUD PLACEMENT DETAIL
SCALE:3/4" = 1'-0"



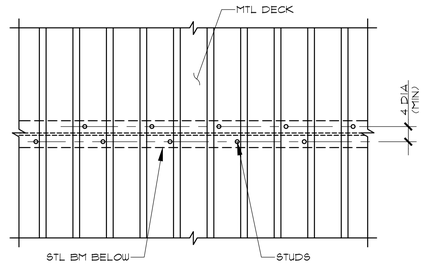
6 TYPICAL EDGE DETAIL
SCALE:3/4" = 1'-0"



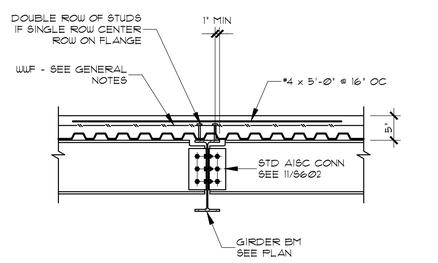
3 TYPICAL EDGE DETAIL
SCALE:3/4" = 1'-0"



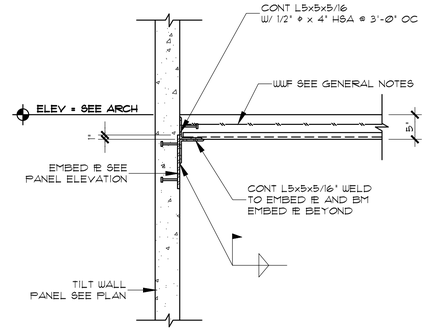
11 DETAIL AT BEAM BEARING
SCALE:3/4" = 1'-0"



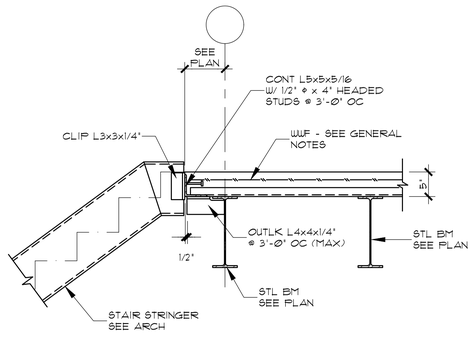
8 TYPICAL STUD PLACEMENT PLAN
SCALE:3/4" = 1'-0"



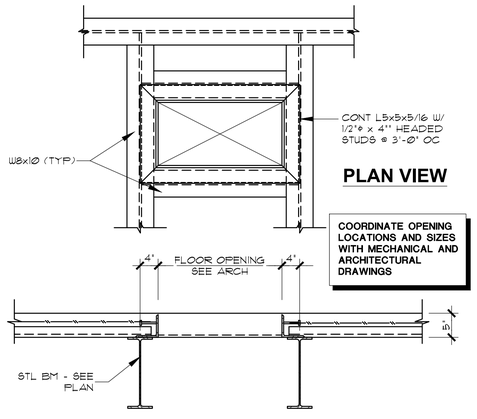
5 TYPICAL INTERIOR GIRDER BEAM DETAIL
SCALE:3/4" = 1'-0"



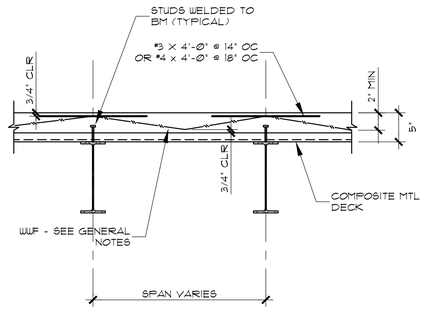
2 TYPICAL EXTERIOR DETAIL AT FLOOR DECK BEARING
SCALE:3/4" = 1'-0"



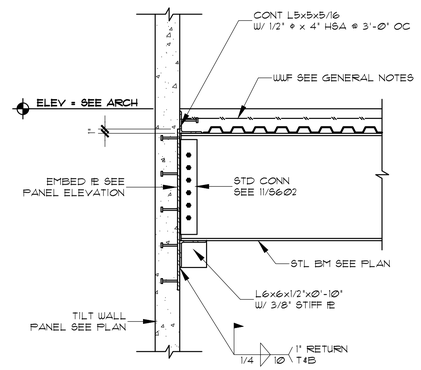
10 TYPICAL STAIR STRINGER CONNECTION DETAIL
SCALE:3/4" = 1'-0"



7 TYPICAL FLOOR OPENING DETAIL
SCALE:3/4" = 1'-0"



4 TYPICAL REINFORCING AT COMPOSITE BEAM
SCALE:3/4" = 1'-0"



1 DETAIL AT BEAM BEARING
SCALE:3/4" = 1'-0"

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING
NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive • Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS, inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

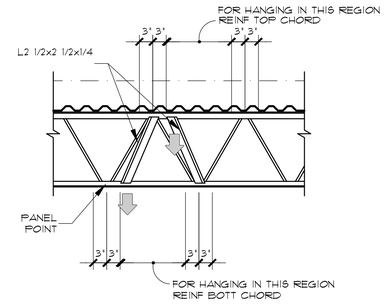
802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

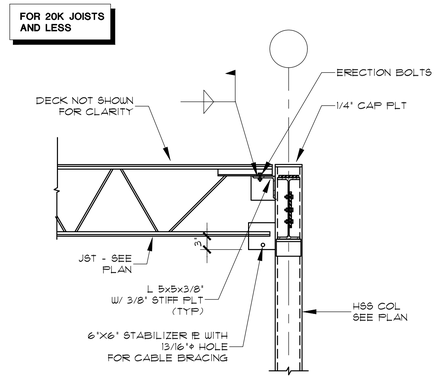
FLOOR FRAMING DETAILS

Sheet No. S5.1

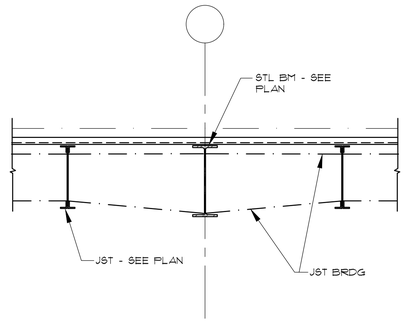
2221079



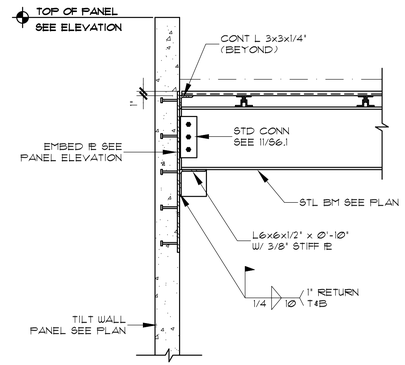
12 TYPICAL HANGING LOADS DETAIL
SCALE: 3/4" = 1'-0"



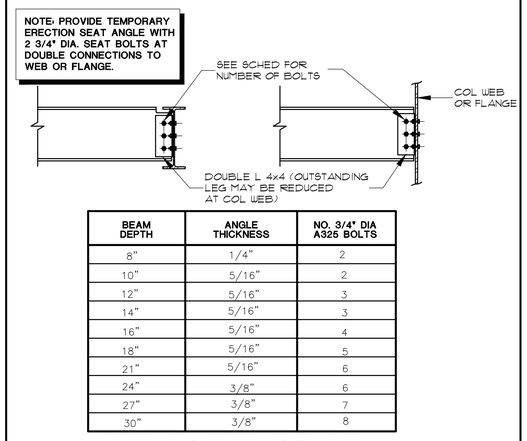
9 TYPICAL JOIST TO COLUMN CONNECTION DETAIL
SCALE: 3/4" = 1'-0"



6 TYPICAL INTERIOR DETAIL
SCALE: 3/4" = 1'-0"

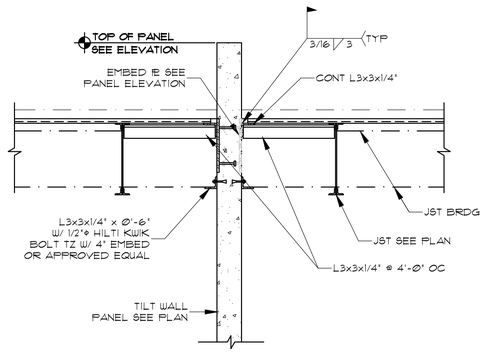


3 DETAIL AT GIRDER BEARING
SCALE: 3/4" = 1'-0"

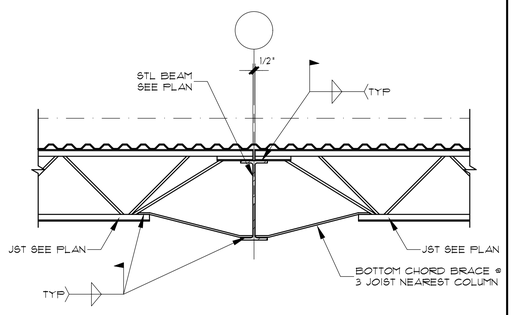


BEAM DEPTH	ANGLE THICKNESS	NO. 3/4" DIA A325 BOLTS
8"	1/4"	2
10"	5/16"	2
12"	5/16"	3
14"	5/16"	3
16"	5/16"	4
18"	5/16"	5
21"	5/16"	6
24"	3/8"	6
27"	3/8"	7
30"	3/8"	8

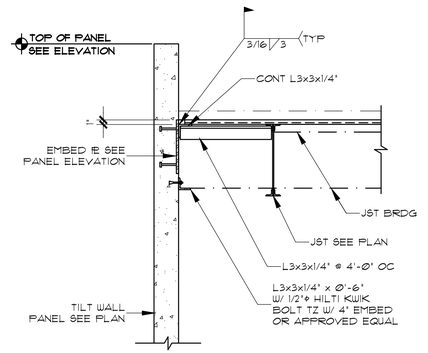
11 BEAM TO BEAM/COLUMN CONNECTION TABLE
SCALE: NTS



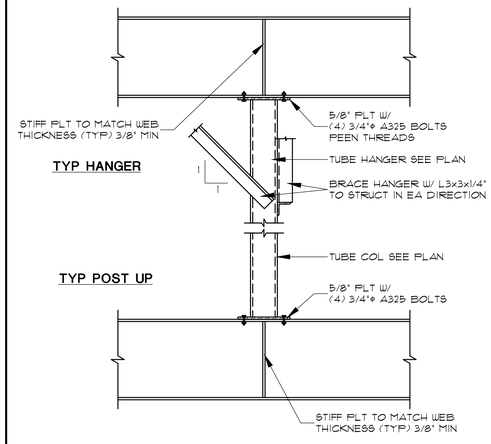
8 TYPICAL INTERIOR DETAIL AT JOIST BEARING
SCALE: 3/4" = 1'-0"



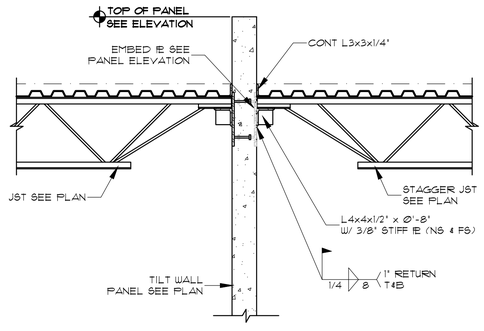
5 TYPICAL INTERIOR DETAIL
SCALE: 3/4" = 1'-0"



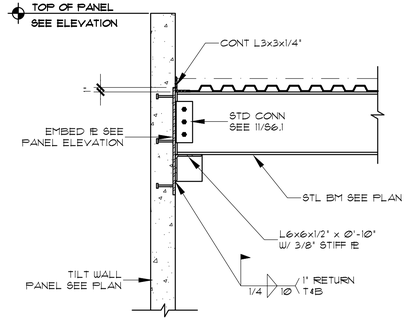
2 TYPICAL EXTERIOR DETAIL AT ROOF
SCALE: 3/4" = 1'-0"



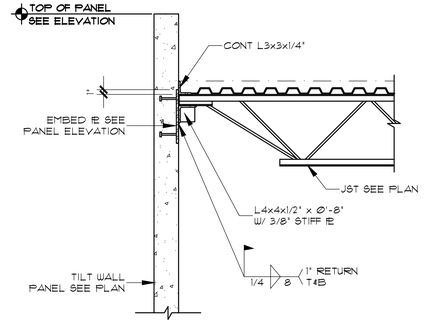
10 HANGER AND POST UP DETAIL
SCALE: NTS



7 TYPICAL INTERIOR DETAIL AT JOIST BEARING
SCALE: 3/4" = 1'-0"



4 DETAIL AT BEAM BEARING
SCALE: 3/4" = 1'-0"



1 TYPICAL EXTERIOR JOIST BEARING AT ROOF
SCALE: 3/4" = 1'-0"

Date issued/revised
15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive•Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

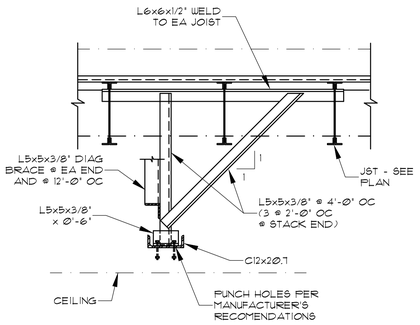
802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

ROOF FRAMING DETAILS

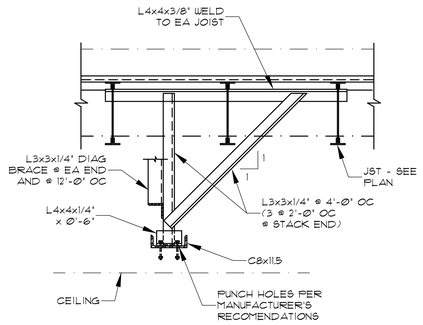
Sheet No. S6.1

2221079



12 DIVIDER WALL SUPPORT DETAIL

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

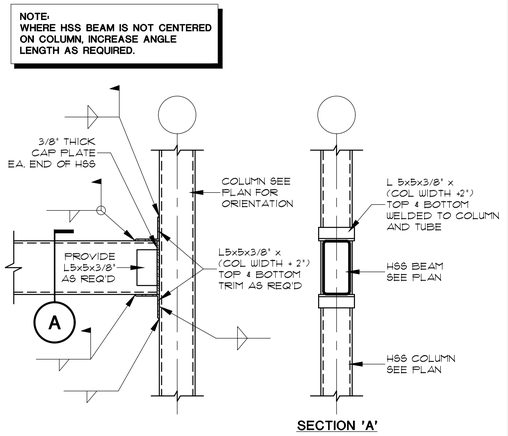


9 FOLDING PARTITION DETAIL

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

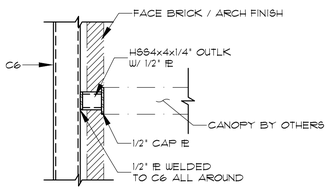
6 FOLDING PARTITION DETAIL

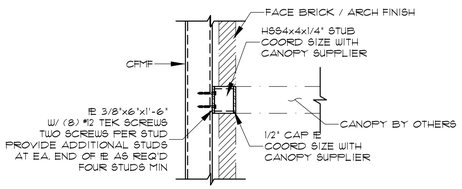
SCALE:3/4" = 1'-0"



3 TYPICAL TUBE TO COLUMN CONNECTION DETAIL

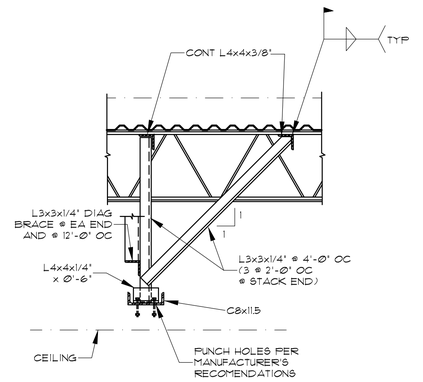
SCALE:NTS





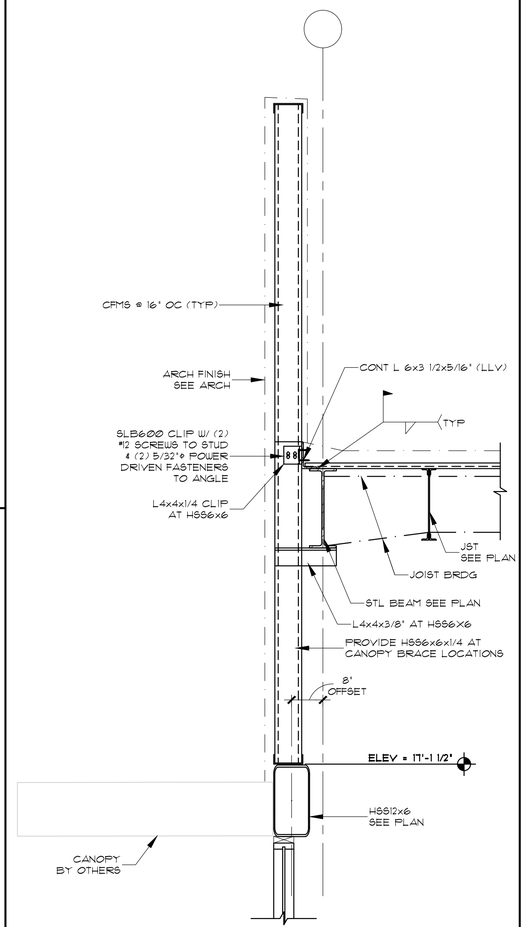
11 CANOPY CONNX DETAIL

SCALE:NTS



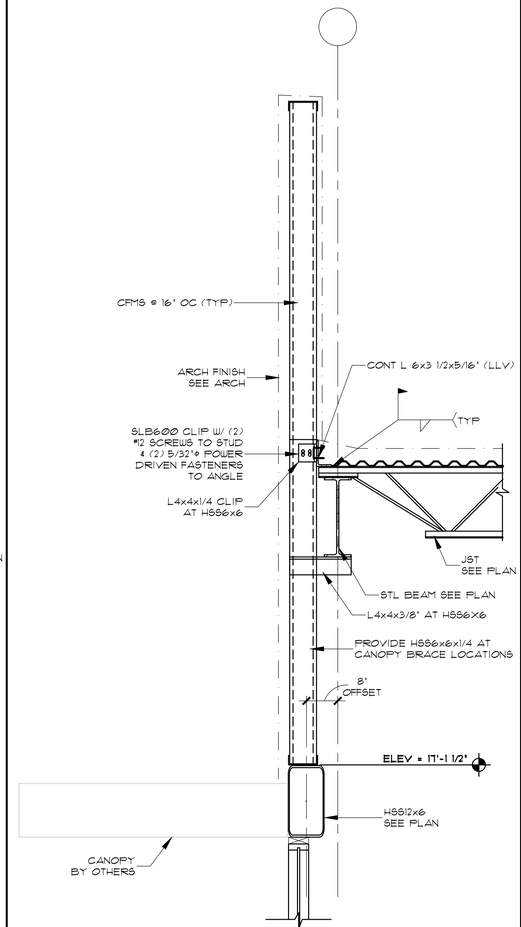
8 FOLDING PARTITION DETAIL

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



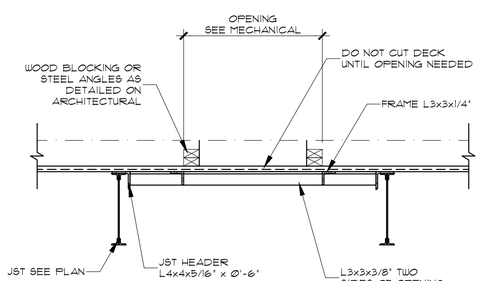
4 DETAIL

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



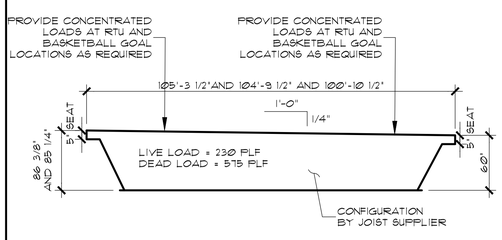
1 DETAIL

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



10 TYPICAL ROOF OPENING

SCALE:NTS



87LHSP
TOP CHORD SINGLE PITCHED UNDERSLUNG
LOADING DIAGRAM

7 JOIST LOAD DIAGRAM

SCALE:NTS

Date issued/revised

15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING NOT FOR CONSTRUCTION

ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive•Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

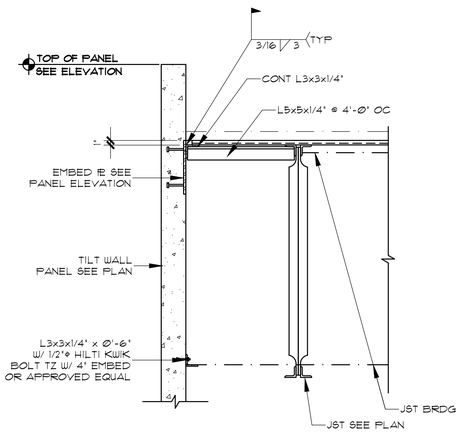
ROOF FRAMING DETAILS

Sheet No. S6.2

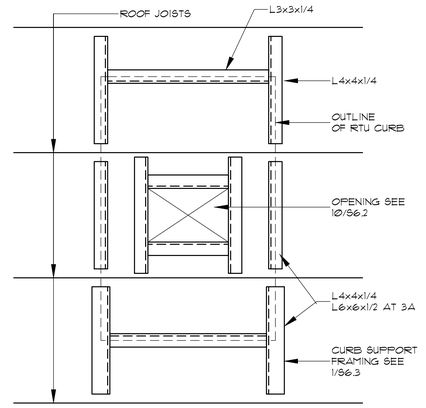
2221079

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

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

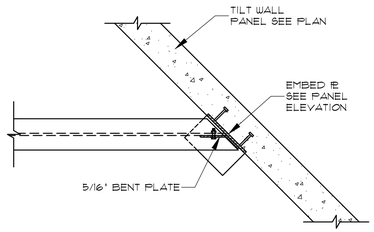


6 TYPICAL EXTERIOR JOIST BEARING AT ROOF
SCALE:3/4" = 1'-0"

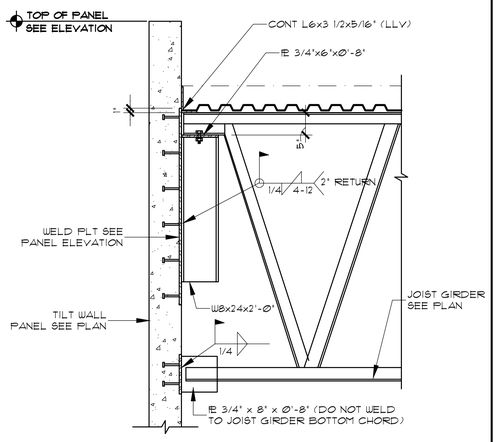


3 ROOF TOP UNIT SUPPORT FRAMING PLAN
SCALE:NTS

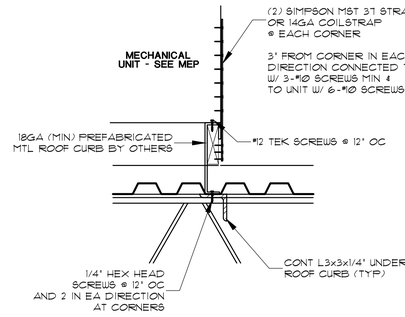
11 DETAIL
SCALE:3/4" = 1'-0"



8 PLAN AT SKEWED BEAM SUPPORT
SCALE:3/4" = 1'-0"



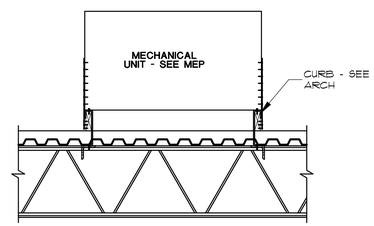
5 DETAIL AT LONG SPAN TRUSS BEARING
SCALE:3/4" = 1'-0"



BLOW UP DETAIL (NTS)

DESIGN CRITERIA

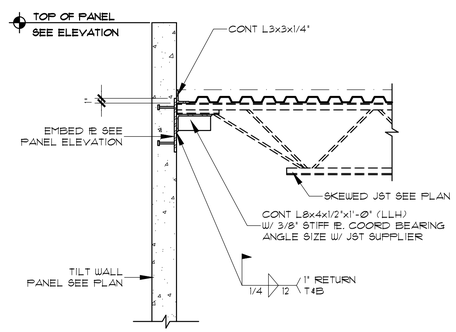
INTERNATIONAL BUILDING CODE 2021
WIND VELOCITY 115 MPH (3-SEC) GUST
(BASIC) ASCE 7-16
EXPOSURE - B
RISK CATEGORY II



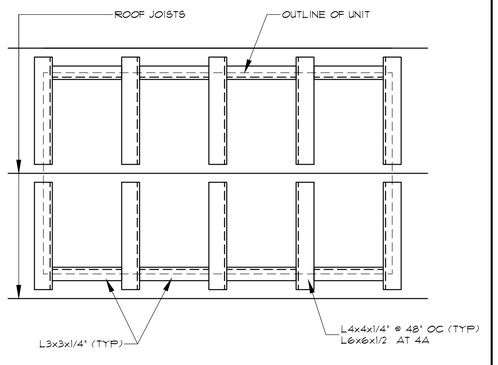
PROVIDE L 3x3x1/4" UNDER MECH UNIT CURB IN EACH DIRECTION WHERE CURB RUNS PARALLEL TO JOIST PROVIDE L 4x4x1/4" @ 48" OC BETWEEN JOIST WITH L 3x3x1/4" BETWEEN L 4X4 UNDER CURB

1 TYPICAL SUPPORT AT MECH UNIT
SCALE:NTS

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



7 DETAIL AT SKEWED JOIST BEARING
SCALE:3/4" = 1'-0"



4 ROOF TOP UNIT SUPPORT FRAMING
SCALE:NTS

Date issued/revised
15 DEC 2022 - FOR PRICING AND BIDDING

ISSUED FOR REVIEW & PRICING
NOT FOR CONSTRUCTION
ENGINEER: BRITT GARDNER, P.E.
LICENSE NUMBER: 90958

THIS DOCUMENT IS RELEASED FOR PRICING. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT

DATE: 12/15/2022

CJG Engineers
Texas Engineering
Firm Reg. No. F-170
3200 Wilcrest Drive • Suite 305
Houston, Texas 77042
713.780.3345

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

802 Old Mill Rd.
Cedar Park, Texas 78613

Project No. 22037
Drawn JG
Checked BG

ROOF FRAMING DETAILS

Sheet No. S6.3

2221079

GENERAL NOTES

1. INSTALLATION SHALL CONFORM WITH THE NATIONAL ELECTRICAL CODE (NEC) AND ALL OTHER APPLICABLE NATIONAL, STATE AND LOCAL CODES AND ORDINANCES RELATING TO BUILDING AND PUBLIC SAFETY.
2. ALL MATERIALS FURNISHED SHALL BE NEW AND LISTED BY UNDERWRITERS' LABORATORIES (UL) OR OTHER NATIONALLY RECOGNIZED TESTING LABORATORY.
3. ALL 600V CONDUCTORS SHALL BE THHN/THWN SOFT DRAWN ANNEALED COPPER. CONDUCTORS #10 AND SMALLER SHALL BE SOLID OR STRANDED, #8 AND LARGER STRANDED. CONDUCTORS SHALL BE COLOR CODED AS FOLLOWS: 208/120 VOLT SYSTEMS: PHASE A BLACK; B RED; C BLUE; NEUTRAL WHITE. 480/277 VOLT SYSTEMS: PHASE A BROWN; B PURPLE; C YELLOW; NEUTRAL GRAY. ALL GROUNDING CONDUCTORS SHALL BE GREEN.
4. ALL RACEWAY AND ELECTRICAL EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH NEC. PROVIDE AN INSULATED GREEN GROUNDING CONDUCTOR IN ALL CONDUITS. PROVIDE FLEXIBLE CONDUIT FOR CONNECTIONS TO VIBRATING EQUIPMENT, 3' MIN. TO 6' MAX. LENGTH, WATER TIGHT IN WET LOCATIONS. FLEXIBLE CONDUIT SHALL HAVE A GROUNDING JUMPER WIRE INSIDE AND OUTSIDE OF THE RACEWAY. ALL CONDUITS AND ELECTRICAL EQUIPMENT SHALL BE RIGIDLY SUPPORTED. RACEWAY SHALL NOT BE SUPPORTED FROM SUSPENDED CEILINGS OR CEILING SUPPORTS. OUTLET BOXES IN DRY AND INTERIOR LOCATIONS SHALL BE GALVANIZED STEEL. THOSE OUTDOORS AND IN WET LOCATIONS SHALL BE CAST TYPE FS WITH CASKETED COVERS.
5. DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE. NEMA–1 FOR INDOOR AND NEMA–3R FOR OUTDOOR.
6. ALL POWER CONDUCTORS SHALL BE INSTALLED IN RACEWAY. CONDUIT SHALL BE EMT IN DRY AND NON–HAZARDOUS INTERIOR LOCATIONS. WHERE INSTALLED IN WET OR HAZARDOUS LOCATIONS OR OUTDOORS, PROVIDE IMC OR RIGID GALVANIZED STEEL.
7. REMOVE ALL ABANDONED CONDUIT, POWER WIRING AND ELECTRICAL DEVICES WITHIN THE AREA OF WORK.
8. PROVIDE UL LISTED FIRE SEAL ASSEMBLY AT ALL ELECTRICAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS.
9. TYPE MC ARMORED CABLE MAY BE USED IN LENGTHS OF 30' OR LESS WHERE ALLOWED BY LOCAL CODES. INSTALLATION SHALL COMPLY WITH NEC ARTICLE 330. TYPE MC MAY BE USED ONLY FOR #10 AND #12 BRANCH CIRCUITS AND SHALL CONTAIN A GREEN GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NEC. TYPE MC SHALL NOT BE USED FOR HOME RUNS PANELBOARDS. WITHIN THE AREA OF WORK, REMOVE ALL EXISTING TYPE MC WIRING THAT IS BROKEN AND REPLACE WITH NEW OF EQUIVALENT CONFIGURATION AND WIRE SIZE; COORDINATE ANY REQUIRED OUTAGES WITH OWNER.
10. PROVIDE ENGRAVED LAMINATED PLASTIC NAMEPLATES FOR NEW AND EXISTING PANELBOARDS. NAMEPLATES SHALL HAVE ¼" HIGH WHITE–ON–BLACK BLOCK TEXT FOR NORMAL POWER, AND COLOR CODING AS ESTABLISHED FOR THE EXISTING FACILITY FOR EMERGENCY PANELBOARDS.
11. PANELBOARDS SHALL HAVE MINIMUM FAULT CURRENT INTERRUPTING RATINGS OF 10KAIC FOR 208/120 VOLT OR 240/120 VOLTS, AND 14KAIC FOR 480/277 VOLTS. UNLESS OTHERWISE NOTED.
12. CLEAN DIRT AND TRASH OFF TOPS AND EXPOSED SURFACES OF ALL EXISTING GUTTERS, PANELS, SWITCHES AND OTHER ELECTRICAL ENCLOSURES. VACUUM AND REMOVE PARTS AND DEBRIS FROM THE ENCLOSURE INTERIORS.
13. USE A TORQUE WRENCH TO TIGHTEN ALL NEW AND EXISTING MECHANICAL FEEDER AND BRANCH CIRCUIT LUGS.
14. WITHIN ALL EXISTING ELECTRICAL EQUIPMENT ENCLOSURES WITHIN THE AREA OF WORK, REPLACE ALL CONDUCTORS CONTAINING SPLICES WITH NEW WIRE OF EQUIVALENT SIZE, TYPE AND COLOR OUT TO THE NEAREST ACCESS BOX. ALL WIRING SHALL TERMINATE ON PROPER SCREW TERMINAL LUGS. COORDINATE ANY REQUIRED OUTAGES WITH OWNER.
15. CONTRACTOR SHALL WARRANT ELECTRICAL WORK AGAINST FAULTY MATERIAL OR WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER.
16. WITHIN THE AREA OF WORK, USE A TORQUE WRENCH TO TIGHTEN ALL NEW AND EXISTING MECHANICAL FEEDER AND BRANCH CIRCUIT LUGS.

TELECOMMUNICATIONS

- TELEPHONE OUTLET
- DATA OUTLET
- TELEPHONE/DATA OUTLET
- TELEPHONE/DATA OUTLET/VIDEO
- FLOOR MOUNTED DATA OUTLET
- FLOOR TELEPHONE OUTLET
- FLOOR TELEPHONE/DATA OUTLET
- FLOOR TELEPHONE/DATA OUTLET/VIDEO
- TELECOMMUNICATION TERMINAL BOARD (TTB)
- G GROUNDING BAR
- TELEVISION CABLE OUTLET

CIRCUITING & WIRING

- CONDUIT CONCEALED IN WALL OR ABOVE CEILING
- CONDUIT CONCEALED IN WALL OR BELOW GRADE OR SLAB
- CONDUIT EXPOSED
- IH–2,4,6 BRANCH CIRCUIT HOMERUN. CURVED TICK MARK DENOTES GROUND. LONG TICK MARK DENOTES NEUTRAL. SHORT TICK MARK DENOTES PHASE. IH–2,4,6 DENOTES PANEL IH, CIRCUITS 2,4,6
- 2,4 DENOTES NUMBER OF CIRCUITS. 2,4 DENOTES CIRCUIT NUMBERS.
- SHARED CIRCUIT

POWER EQUIPMENT & DEVICES

- PANELBOARD
- DISTRIBUTION PANELBOARD
- DISCONNECT SWITCH – UNFUSED
- DISCONNECT SWITCH – FUSED
- 100/80/3 SUBSCRIPTS DENOTES DEVICE RATING/FUSE SIZE NUMBER OF POLES
- MOTOR STARTER
- COMBINATION MOTOR STARTER/DISCONNECT SWITCH
- MOTOR
- ATS AUTOMATIC TRANSFER SWITCH
- 400/3 EQUIPMENT RATING (AMPS/POLE)
- TRANSFORMER

RECEPTACLES

- DUPLEX RECEPTACLE
- GFI RECEPTACLE
- ISOLATED GROUND DUPLEX RECEPTACLE
- QUAD RECEPTACLE
- QUAD GFI RECEPTACLE
- ISOLATED GROUND QUAD RECEPTACLE
- SIMPLEX RECEPTACLE
- DUPLEX RECEPTACLE WITH SWITCH
- RECEPTACLE NEMA 5–20R
- SPECIAL NEMA CONFIGURATION RECEPTACLE
- FLOOR MOUNTED DUPLEX RECEPTACLE
- FLOOR GFI RECEPTACLE
- FLOOR ISOLATED GROUND DUPLEX RECEPTACLE
- FLOOR MOUNTED JUNCTION BOX
- FLOOR SPECIAL NEMA CONFIGURATION RECEPTACLE
- FLOOR QUAD RECEPTACLES
- FLOOR ISOLATED GROUND QUAD RECEPTACLES
- FLOOR SIMPLEX RECEPTACLE

ABBREVIATIONS

A,AMPS	AMPERES	HOA	HAND–OFF–AUTOMATIC	PB	PUSH BUTTON
A/C	AIR CONDITIONING	HP	HORSEPOWER	PDU	POWER DISTRIBUTION UNIT
AC	ALTERNATING CURRENT	HPS	HIGH PRESSURE SODIUM	PF	POWER FACTOR
AHU	AIR HANDLING UNIT	HV	HIGH VOLTAGE	PH	PHASE
AFF	ABOVE FINISHED FLOOR	HZ	HERTZ	PNL	PANEL
AL	ALUMINUM			PRI	PRIMARY
AIC	AMPERES INTERRUPTING CAPACITY (SYMMETRIC)	ID	INSIDE DIAMETER	PT	POTENTIAL TRANSFORMER
		IMC	INTERMEDIATE METAL CONDUIT	PVC	POLY–VINYL CHLORIDE
AM	AMMETER	IN	INCH (ES)		
ATS	AUTOMATIC TRANSFER SWITCH			R	RED (PILOT LIGHT)
AUTO	AUTOMATIC	JB	JUNCTION BOX	RC	REMOTE CONTROL
AWG	AMERICAN WIRE GAUGE			RE	REFER
AS	AMPERE SENSOR RATING	KCMIL	THOUSAND CIRCULAR MILLS	RGS	RIGID GALVANIZED STEEL
BAS	BUILDING AUTOMATION SYSTEM	KV	KILOVOLT	SC	SHORT CIRCUIT
BLDG	BUILDING	KVA	KILOVOLT AMPERE	SEC	SECONDARY
		KVAR	KILOVOLT AMPERE REACTIVE	SPDT	SINGLE POLE DOUBLE THROW
C	CONDUIT	KW	KILOWATT	SPEC	SPECIFICATIONS
CAT	CATALOG	KWH	KILOWATT HOUR	SPST	SINGLE POLE SINGLE THROW
CB	CIRCUIT BREAKER			SS	STAINLESS STEEL
CCTV	CLOSED CIRCUIT TELEVISION	L	LENGTH	STD	STANDARD
CKT	CIRCUIT	LV	LOW VOLTAGE	SW	SWITCH
CLG	CEILING			SYM	SYMMETRICAL
CT	CURRENT TRANSFORMER	M	MOTOR	TB	TERMINAL BLOCK
CU	COPPER	mA	MILLIAMPERES	TC	TIME CLOCK
		m	METER	TEL	TELEPHONE
DC	DIRECT CURRENT	MAX	MAXIMUM	TEMP	TEMPERATURE
DIA	DIAMETER	MCC	MOTOR CONTROL CENTER	TTB	TELECOMMUNICATION TERMINAL BOARD
DN	DOWN	MECH	MECHANICAL		
DP	DOUBLE POLE	MH	MANHOLE, MOUNTING HEIGHT, METAL HALIDE	TV	TELEVISION
DPDT	DOUBLE POLE DOUBLE THROW			TYP	TYPICAL
DWG	DRAWING	MIN	MINIMUM		
		MISC	MISCELLANEOUS	UL	UNDERWRITERS LABORATORIES
EDH	ELECTRIC DUCT HEATER	mm	MILLIMETERS	UON	UNLESS OTHERWISE NOTED
EMT	ELECTRICAL METALLIC TUBING	MTD	MOUNTED		
EWC	ELECTRIC WATER COOLER	MTG	MOUNTING	V	VOLT, VOLTAGE
EF	EXHAUST FAN	MV	MERCURY VAPOR	VA	VOLT AMPERES
		MW	MEGAWATTS	VAC	VOLTS ALTERNATING CURRENT
FACP	FIRE ALARM CONTROL PANEL			VAR	VARIALBE, VOLT AMPERES REACTIVE
FC	FOOT CANDLE	N	NEUTRAL		
FCU	FAN COIL UNIT	NA	NOT APPLICABLE	VD	VOLTAGE DROP
FLA	FULL LOAD AMPERES	NC	NORMALLY CLOSED	VFD	VARIABLE FREQUENCY DRIVE
FT	FEET	NEC	NATIONAL ELECTRICAL CODE	VM	VOLTMETER
		NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	W	WIDTH, WATTS
G	GREEN (PILOT LIGHT)			W/	WITH
GA	GAUGE	NO	NORMALLY OPEN	W/O	WITHOUT
GFI	GROUND FAULT INTERRUPTER	NTS	NOT TO SCALE	WE	WITH ENCLOSURE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER			WP	WEATHERPROOF
		OC	ON CENTER		
GND	GROUND	OD	OUTSIDE DIAMETER	XFMR	TRANSFORMER
		OL	OVERLOAD	XP	EXPLOSION PROOF

STANDARD MOUNTING HEIGHTS

EXIT SIGNS (WALL MOUNTED, BOTTOM)	80"
PANELBOARD (TOP)	72"
RECEPTACLES (CENTERLINE)	18"
RECEPTACLES (EXTERIOR)	24"
RECEPTACLES IN EQUIPMENT ROOMS	48"
SWITCHES (CENTERLINE)	48"
TELEPHONE, DATA OUTLETS (CENTERLINE)	18"

LIGHTING CONTROLS

- $ LIGHT SWITCH
- $3 3–WAY LIGHT SWITCH
- $K KEYED LIGHT SWITCH
- $M WALL MOUNTED OCCUPANCY SENSOR SWITCH
- CEILING MOUNTED OCCUPANCY SENSOR
- PHOTOCELL
- $M3 3–WAY WALL MOUNTED OCCUPANCY SENSOR SWITCH

LIGHTING FIXTURE SCHEDULE

(FIXTURES CAN BE SUBSTITUTED WITH EQUAL)

FIXTURE TYPE	MANUFACTURE	MOUNTING	LAMP TYPE	VOLTAGE	REMARKS
AA	METALUX HBLED–LD5–36HE–W–A–UNV–L850–2–CD–3	SUSPENSION 5000K	LED 211 WATTS	277	2X4 LED HIGH BAY EFFICIENCY LUMINAIRE, PROVIDE WIRE HOOK AND CHAIN SET AS REQUIRE
AE	METALUX HBLED–LD5–36HE–W–A–UNV–L850–2–CD–3–EL14W	SUSPENSION 5000K	LED 211 WATTS	277	2X4 LED HIGH BAY EFFICIENCY LUMINAIRE, WITH BATTERY PACK PROVIDE WIRE HOOK AND CHAIN SET AS REQUIRE
BB	METALUX D3X WD–35L–9–40–LD5–UNV–22–T1–STD	RECESSED 4000K	LED 31 WATTS	277	2X2 LED ROUND PERFORATED PROVIDE HARDWARE AS REQUIRE
BE	COOPER LIGHTING CORELITE D3X WD–35L–9–40–LD5–UNV–22–T1–STD–EL14W	RECESSED 4000K	LED 31 WATTS	277	2X2 LED ROUND PERFORATED PROVIDE BATTERY PACK AND OTHER HARDWARE AS REQUIRE
C	HALO HC615D010–HM60525940–61WDC	RECESSED 4000K	LED 27.5 WATTS	120–277	6 INCH LED DOWNLIGHT
CE	HALO HC615D010–HM60525940–61WDC–REMV14	RECESSED 4000K	LED 27.5 WATTS	120–277	6 INCH LED DOWNLIGHT PROVIDE BATTERY PACK AND OTHER HARDWARE AS REQUIRE
DD	METALUX 24GR–LD5–48–F125–UNV–L940–CD–1	RECESSED 4000K	LED 38 WATTS	UNV	2X4 LED TROFFER WITH ACRYLIC SHIELDING PROVIDE HARDWARE AS REQUIRE
DE	METALUX 24GR–LD5–48–F125–UNV–EL14W–L940–CD–1	RECESSED 4000K	LED 38 WATTS	UNV	2X4 LED TROFFER WITH ACRYLIC SHIELDING PROVIDE BATTERY PACK AND OTHER HARDWARE AS REQUIRE
FF	METALUX 4SNLED–LD5–30SL–LW–UNV–L840–CDI–U	SURFACE 4000K	LED 25 WATTS	UNIVERSAL	4 FOOT LONG LENSED LED STRIP ROUND LENS DAMP LOCATION
FE	METALUX 4SNLED–LD5–30SL–LW–UNV–EL14W–L840–CDI–U	SURFACE 4000K	LED 25 WATTS	UNIVERSAL	4 FOOT LONG LENSED LED STRIP ROUND LENS DAMP LOCATION WITH BATTERY PACK
OA POLE	BEACON VP–2–320–L–145–4K94W STAR LIGHTING POLE TB4250702	POLE 22'–0" 4000K	LED 150 WATTS	277	LED SINGLE HEAD POLE LIGHT WITH ONBAORD PHOTOCELL AND MOTION SENSOR. INSTALLED ON 22' POLE WITH 3' CONCRETE POLE BASE
OB POLE	BEACON VP–1–160–L–160–4K–9–3–BC STAR LIGHTING POLE TB4250702	POLE 19'–0" 4000K	LED 133 WATTS	277	LED SINGLE HEAD POLE LIGHT WITH ONBAORD PHOTOCELL AND MOTION SENSOR. INSTALLED ON 19' POLE WITH 3' CONCRETE POLE BASE
OC POLE	BEACON VP–1–160–L–160–4K–9–3–BC STAR LIGHTING POLE TB4250702	POLE 19'–0" 4000K	LED 133 WATTS	277	LED SINGLE HEAD POLE LIGHT WITH ONBAORD PHOTOCELL AND MOTION SENSOR. INSTALLED ON 19' POLE WITH 3' CONCRETE POLE BASE
OD	.hess MSC1100/F–NW–UNV–BZA DIM	BOLLARD 4000K	LED 15W	120	ILLUMINATED BOLLARD WITH RGBW LIGHT 43.6 INCH TALL, 6.8 INCH SQ
MM	LITHONIA LIGHTING OLVTWM	SURFACE 4000K	15 WATTS LED	UNV	ELEVATOR PIT LIGHT
WA	SOLAVANTI LIGHITNG BLR D67450–AN	SURFACE 4000K	LED 7 WATTS	UNV	WALL MOUNT WET LOCATION IP66 RATING
XA	COOPER LIGHTING – SURE–LITES EUX6–G–SD	RECESSED	INCLUDED	120	LED EXIT SIGN EMERGENCY PACK CHEVRON DIRECTIONAL AS REQUIRED

LIGHTING (SEE LIGHT FIXTURE SCHEDULE)

- 2X4 LED LIGHTING FIXTURE
- LED LIGHTING FIXTURE – BATTERY BACK–UP
- 2X2 LED LIGHTING FIXTURE
- 2X2 LED LIGHTING FIXTURE – BATTERY BACK–UP
- 2X2 LED LIGHTING FIXTURE – NIGHT LIGHT
- 1X1 LIGHTING FIXTURE
- 1X4 LED LIGHTING FIXTURE
- 1X4 LED LIGHTING FIXTURE – BATTERY BACK–UP
- STAGGERED LED STRIP FIXTURE
- LED FIXTURE – WALL MOUNTED
- INCANDESCENT, HID, OR LED DOWN LIGHT
- DOWN LIGHT WITH BATTERY BACK–UP
- WALL MOUNTED LIGHTING FIXTURE
- WALL SCONCE LIGHTING FIXTURE
- WALL PACK LIGHTING FIXTURE
- EMERGENCY LIGHTING UNIT
- TRACK LIGHT
- CEILING MOUNTED EXIT LIGHT
- JB ELECTRICAL JUNCTION BOX

MISCELLANEOUS

- X KEYNOTE IDENTIFICATION
- SD DUCT SMOKE DETECTOR
- POWER COMPANY METER
- M ELECTRICAL METER
- SP CEILING MOUNTED SPEAKER
- CT CURRENT TRANSFORMER
- A ACCESS CONTROL
C = CARD ACCESS
P = PROXIMITY PAD
K = KEY PAD
- C DOOR CONTACT
- CCTV CCTV CAMERA
- FH FIRE ALARM HORN
- FP FIRE ALARM PULL STATION
- FS FIRE ALARM STROBE

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

ELECTRICAL ABBREVIATION, LEGEND AND NOTES

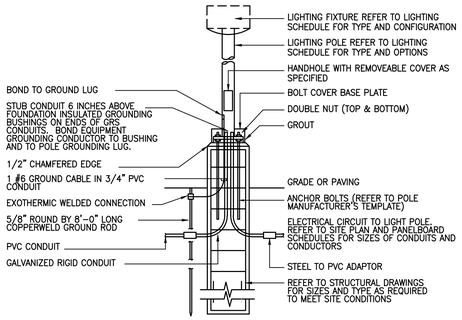
UNITY RECREATION CENTER

802 Old Mill Road
Cedar Park, TEXAS 78613

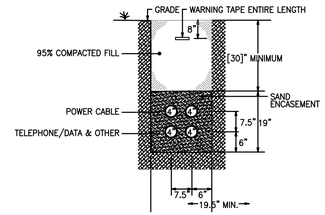
Project No. 032022
Drawn JRD
Checked

Sheet No. E1.0

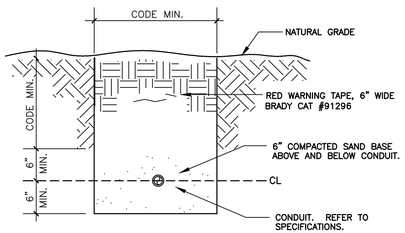
1 ELECTRICAL ABBREVIATION, LEGEND AND NOTES
SCALE: NONE



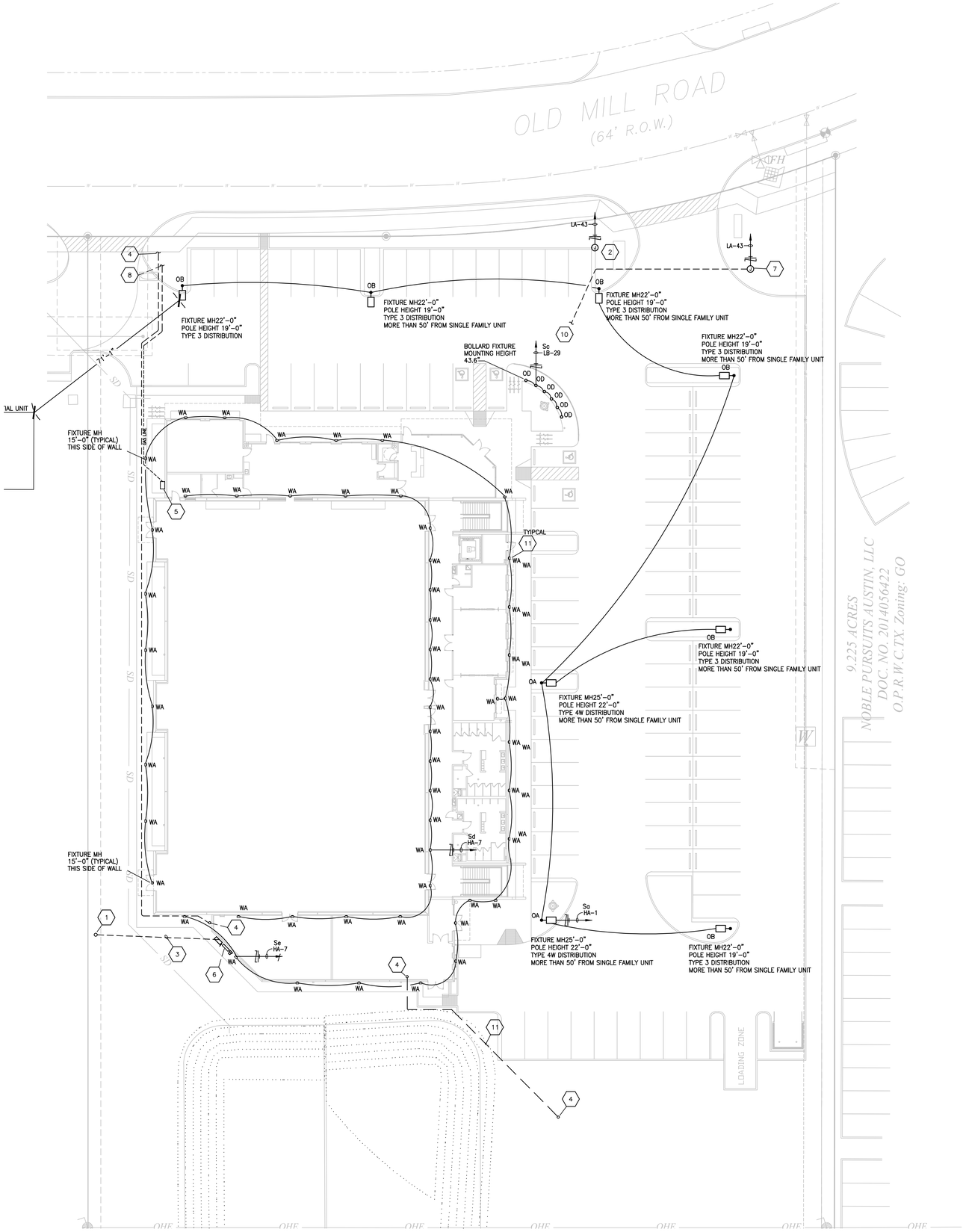
2 POLE FOUNDATION DETAIL
SCALE: NONE



3 FOUR CONDUIT DIRECT BURIED DUCTBANK DETAIL
SCALE: NONE



4 BURIED BRANCH CIRCUIT CONDUIT DETAIL
SCALE: NONE



1 ELECTRICAL SITE PLAN
SCALE: 1:20

GENERAL NOTES

1. PROVIDE ALL TRENCHING, BACKFILLING, AND CONDUIT FROM THE UTILITY COMPANY POWER SOURCE TO THE SERVICE ENTRANCE.
2. ALL UNDERGROUND CONDUIT SHALL HAVE LONG RADIUS ELBOWS.
3. CONTACT THE LOCAL UTILITY COMPANY AND ARRANGE FOR SERVICE AS INDICATED ON DRAWINGS. INCLUDE ALL COSTS, CHARGES, FEES ETC. INCURRED BY LOCAL UTILITY IN BID. PROVIDE ALL MATERIALS AS REQUIRED BY LOCAL UTILITY FOR ELECTRICAL SERVICE INSTALLATION. ALL WORK SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF LOCAL AUTHORITIES.
4. PRIOR TO SUBMITTING A BID, AND TO OBTAIN THE COST OF SUCH WORK, CONTACT THE TELEPHONE AND CABLE TELEVISION COMPANIES AND COORDINATE THE EXACT LOCATION ON THE SITE FOR TERMINATION OF UNDERGROUND PROVISIONAL CONDUITS FOR COMMUNICATIONS (TELEPHONE) AND TELEVISION CABLING. COODINATE EXACT ROUTING OF THE PROVISIONAL CONDUITS WITH OTHER UTILITIES AND WORK ASSOCIATED WITH THE SITE. OBTAIN FROM THE UTILITY COMPANY, IN WRITING, SPECIFICATIONS AND DETAILED REQUIREMENTS OF THE PROVISIONS, INCLUDING BUT NOT LIMITED TO, ADDITIONAL PULL BOX SPECIFICATIONS, ROUTING LIMITATIONS, ETC. SO THAT ALL REQUIRED PROVISIONS OF THE UTILITY COMPANY ARE PROVIDED UNDER THIS CONTRACT.
5. CONTRACTOR SHALL ADJUST ALL POLE AND WALL MOUNTED LIGHT FIXTURES TO PRODUCE OPTIMUM RESULTS. ENGINEER TO APPROVE OPTIMUM SOLUTION.
6. LIGHT SOURCES SHALL BE COMPLETELY CONCEALED WITHIN OPAQUE HOUSINGS AND SHALL NOT BE VISIBLE FROM ADJACENT STREETS OR PROPERTIES. ALL EXTERIOR LIGHTING FIXTURES SHALL BE FULL CUT-OFF TYPE FIXTURES. LIGHTING FIXTURE SHALL BE NO MORE THAN TWENTY-FIVE (25) FEET IN HEIGHT AS MEASURED FROM ADJACENT, FINISHED GRADE.

KEYED NOTES

1. APPROXIMATE LOCATION OF NEW POWER COMPANY POLE. VERIFY AND COORDINATE LOCATION WITH UTILITY COMPANY.
2. J-BOX FOR MONUMENT SIGN, PROVIDE 1 CONDUIT WITH PULL STRING. FIELD VERIFY EXACT LOCATION.
3. (3) 4" CONDUITS BURIED AT 36" FOR POWER AND TELEPHONE/DATA AND CATV SERVICE WITH PULL STRINGS. REFER TO DETAIL RISER DIAGRAM FOR CONDUITS AND FEEDER SIZES.
4. STUB UP CONDUIT WITH PULL STRINGS 6" AFF IN STORAGE ROOM AND CAP. COORDINATE EXACT LOCATION WITH ARCHITECT.
5. APPROXIMATE LOCATION OF NEW GAS METER. COORDINATE LOCATION WITH UTILITY COMPANY.
6. REFER TO RISER DIAGRAM FOR EQUIPMENT ARRANGEMENT.
7. J-BOX FOR FUTURE GATE POWER. PROVIDE 1 INCH CONDUIT WITH PULL STRINGS STUB UP 6 INCH AFG AND CAP.
8. APPROXIMATE LOCATION OF GAS LINE CONNECTION. COORDINATE WITH LOCAL GAS COMPANY.
9. (1) 4" CONDUITS BURIED AT 36" FOR TELEPHONE/DATA AND CATV SERVICE WITH PULL STRINGS.
10. (1) 2" CONDUITS BURIED AT 36" FOR POWER STUB UP CONDUIT WITH PULL STRINGS 6: AFF IN STORAGE ROOM AND CAP. COORDINATE EXACT LOCATION WITH ARCHITECT.
11. (1) 4" CONDUITS BURIED AT 18" FOR FUTURE ELECTRICAL SERVICE WITH PULL STRINGS.

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

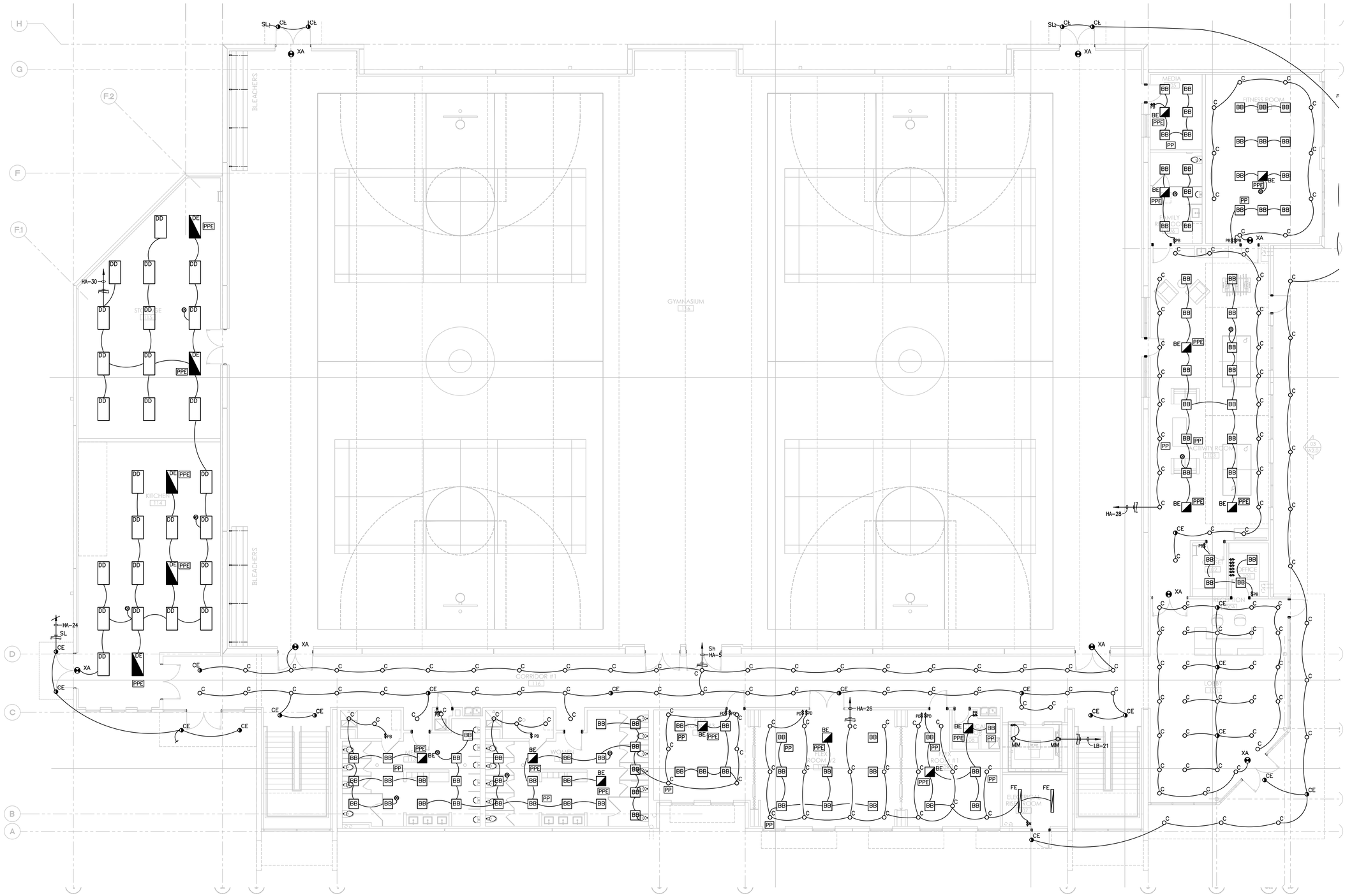
UNITY RECREATION CENTER

802 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

ELECTRICAL SITE PLAN

Sheet No. E2.0



GENERAL NOTES

1. COORDINATE ALL WORK WITH EACH SUB CONTRACTOR AND GENERAL CONTRACTOR (STRUCTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING) PRIOR TO INSTALLATION AND CONNECTION OF EQUIPMENT.
2. COORDINATE ALL LOCATION WITH ARCHITECTURAL PLANS.

KEYED NOTES

1. BATTERY BACKUP POWER LIGHT FIXTURE FOR EMERGENCY OPERATION, CIRCUIT VIA INVERTER AND LIGHTING CONTROL PANEL.
2. BACK WALL LIGHT FIXTURE SHALL BE MOUNTED AT 7'-0" A.F.F.

PRPE nPP16 DS ER
EMERGENCY POWER/RELAY PACK

WSC PDT SA
WALL SWITCH SENSOR, PASSIVE DUAL TECHNOLOGY

PB nPODM
LOW VOLTAGE PUSH-BUTTON

PBB nPODM 2P
3-WAY LOW VOLTAGE PUSH-BUTTON

PD nPODMDX
LOW VOLTAGE PUSH-BUTTON
RAISE/LOWER DIMMING

PDD nPODM2PDX
LOW VOLTAGE PUSH-BUTTON 2-POLE
RAISE/LOWER DIMMING

PRP nPP16 DS
POWER/RELAY PACK

CE NCM PDT 9
LOW VOLTAGE CEILING MOUNT SENSOR PASSIVE DUAL TECHNOLOGY

PP nPP16
POWER RELAY PACK

PPE nPP16ER
POWER RELAY PACK EMERGENCY OPERATION

PPD nPP16D SA
POWER RELAY PACK OCCUPANCY CONTROLLED DIMMING

PPDE NPP16DERSA
POWER RELAY PACK OCCUPANCY CONTROLLED DIMMING EMERGENCY OPERATION

N 1 ELECTRICAL LIGHTING PLAN - LEVEL 01
SCALE: 1/8" = 1'-0"

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

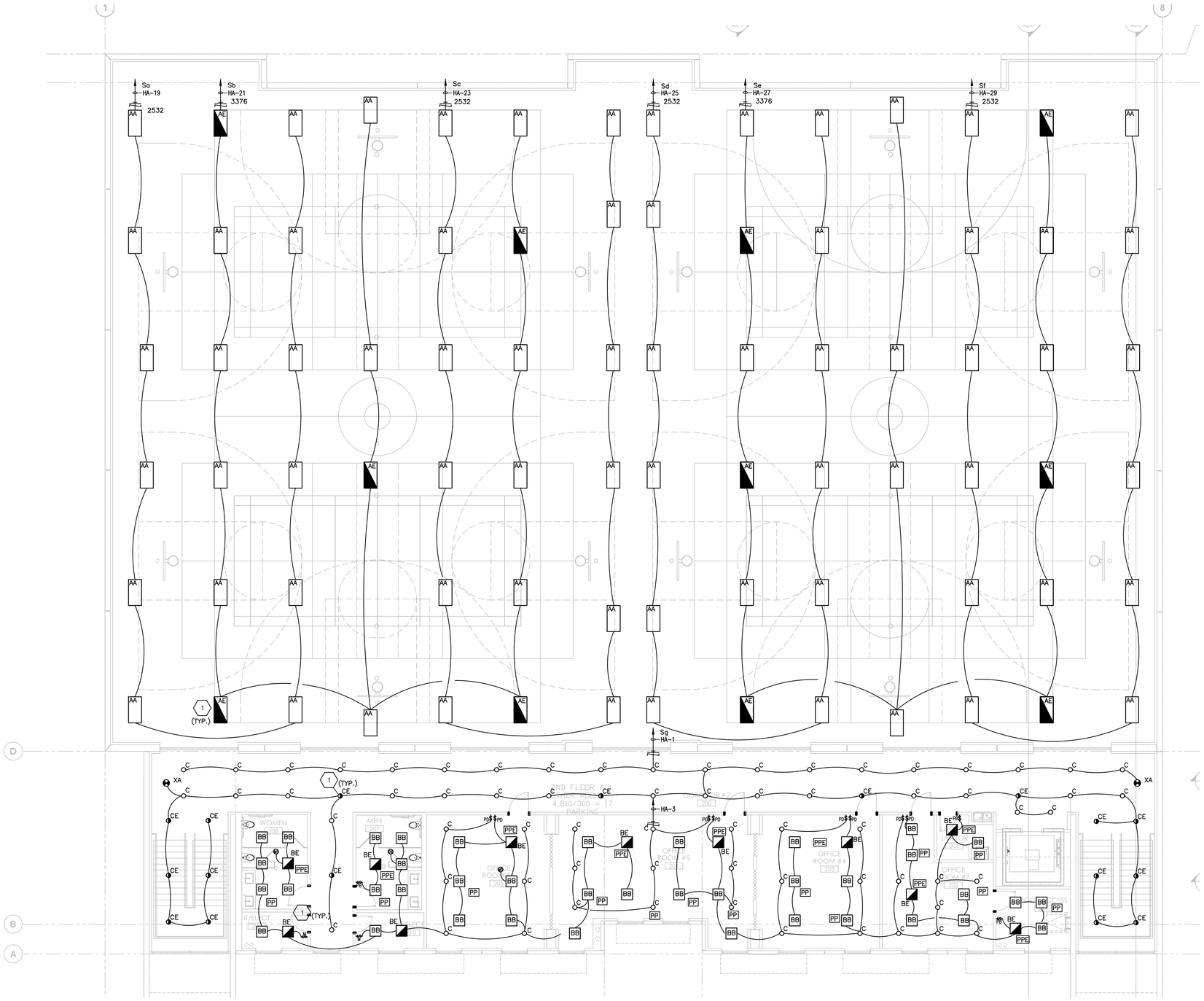
UNITY RECREATION CENTER

802 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

LIGHTING PLAN
LEVEL 01

Sheet No. E3.1



LIGHTING CONTROL PANEL SCHEDULE
LCP
STORAGE 1
ARP INTENC16NLT 32, 16SPR RELAYS MVOLT NEMA 1 INCLOSURE WITH ARPA PC 2VB HLK SM

RELAY NO.	ZONE	PART	EM	VOLTAGE	CIRCUIT NO.	LOCATION	INPUT OVERRIDE
1	Sa	SPR	NO	277	HA-19	GYM LIGHTING	SW1
2	Sb	SPR	NO	277	HA-21	GYM LIGHTING	SW2
3	Sc	SPR	NO	277	HA-23	GYM LIGHTING	SW3
4	Sd	SPR	NO	277	HA-25	GYM LIGHTING	SW4
5	Se	SPR	NO	277	HA-27	GYM LIGHTING	SW5
6	Sf	SPR	NO	277	HA-29	GYM LIGHTING	SW6
7	Sg	SPR	NO	277	HA-1	2ND FLOOR CORRIDOR LIGHTING	SW7
8	Sh	SPR	NO	277	HA-5	1ST FLOOR CORRIDOR LIGHTING	SW8
9	SPARE	SPR	NO			SPARE	SW9
10	Si	SPR	NO	277	HA-20	OUTDOOR AREA LIGHTING	SW10
11	Sk	SPR	NO	277	HA-22	OUTDOOR BUILDING LIGHTS	SW11
12	Sl	SPR	NO	277	HA-24	BUILDING SOFFIT LIGHTS	SW12
13	Sm	SPR	NO	120	LA-16	BUILDING SIGN	SW13
14	SPARE	SPR	NO				
15	SPARE	SPR	NO				
16	SPARE	SPR	NO				

GENERAL NOTES

1. COORDINATE ALL WORK WITH EACH SUB CONTRACTOR AND GENERAL CONTRACTOR (STRUCTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING) PRIOR TO INSTALLATION AND CONNECTION OF EQUIPMENT.
2. COORDINATE ALL LOCATION WITH ARCHITECTURAL PLANS.

KEYED NOTES

1. BATTERY BACKUP POWER LIGHT FIXTURE FOR EMERGENCY OPERATION. CIRCUIT VIA INVERTER AND LIGHTING CONTROL PANEL.
2. BACK WALL LIGHT FIXTURE SHALL BE MOUNTED AT 7'-0" A.F.F.

PRPE nPP16 DS ER
EMERGENCY POWER/RELAY PACK

$CC WSX PDT SA
WALL SWITCH SENSOR, PASSIVE DUAL TECHNOLOGY

$PB nPODM
LOW VOLTAGE PUSH-BUTTON

$2PB nPODM 2P
3-WAY LOW VOLTAGE PUSH-BUTTON

$PD nPODMDX
LOW VOLTAGE PUSH-BUTTON RAISE/LOWER DIMMING

$2PD nPODM2PDX
LOW VOLTAGE PUSH-BUTTON 2-POLE RAISE/LOWER DIMMING

PRP nPP16 DS
POWER/RELAY PACK

CM NCM PDT 9
LOW VOLTAGE CEILING MOUNT SENSOR PASSIVE DUAL TECHNOLOGY

PP nPP16
POWER RELAY PACK

PPE nPP16ER
POWER RELAY PACK EMERGENCY OPERATION

PPD nPP16D SA
POWER RELAY PACK OCCUPANCY CONTROLLED DIMMING

PPDE NPP16DERSA
POWER RELAY PACK OCCUPANCY CONTROLLED DIMMING EMERGENCY OPERATION

N 1 ELECTRICAL LIGHTING PLAN - LEVEL 02
SCALE: 1/8" = 1'-0"

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering
JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

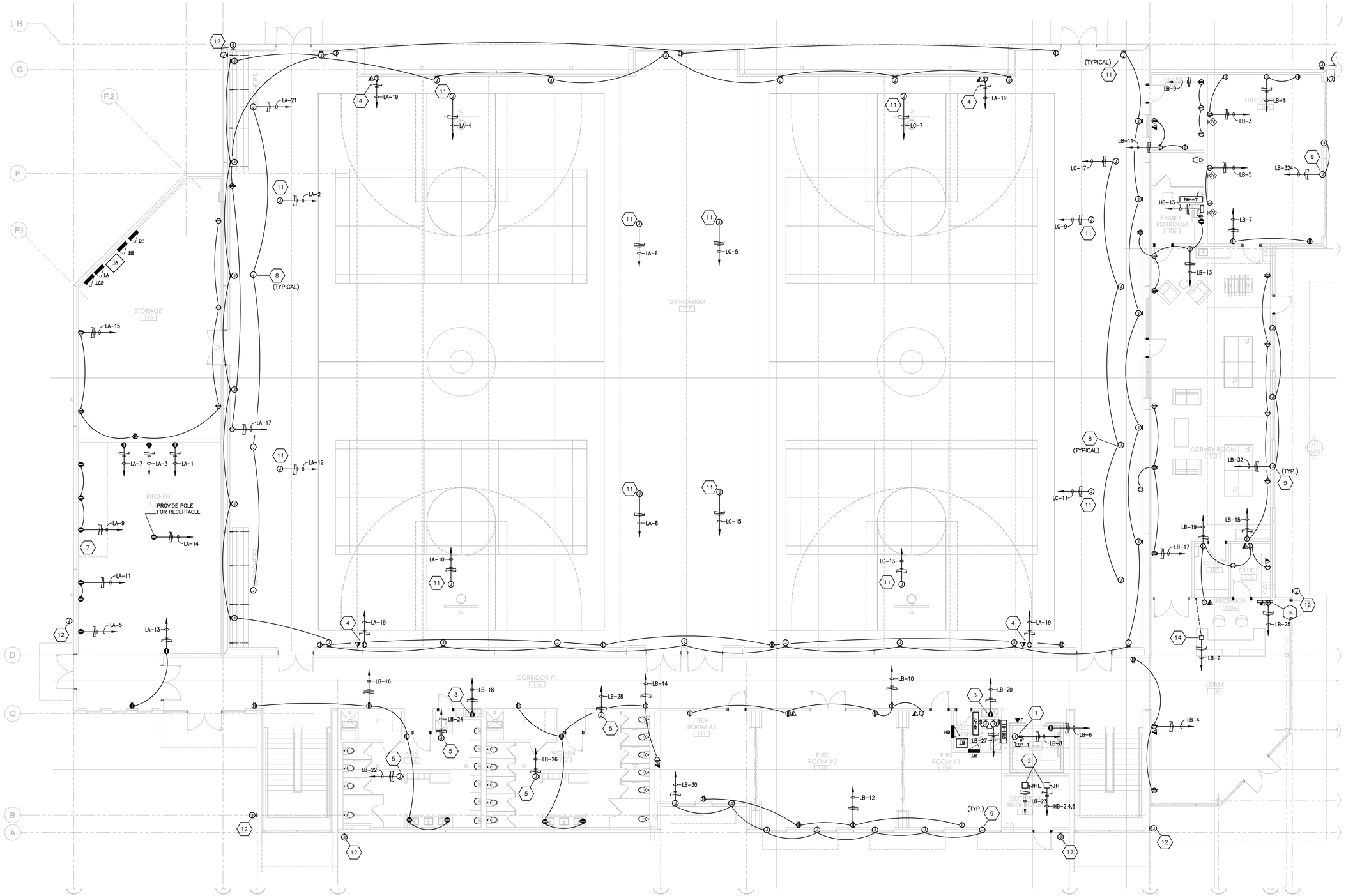
UNITY RECREATION CENTER

802 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

LIGHTING PLAN
LEVEL 02

Sheet No. E3.2



KEYED NOTES

1. CONNECTION FOR ESP–1 ELEVATOR SUMP PUMP.
2. PROVIDE DISCONNECT SWITCHES FOR ELEVATOR POWER AND CONTROL. COORDINATE WITH ELEVATOR VENDOR FOR DETAILS
3. PROVIDE RECEPTACLE FOR TWO STATION WALL MOUNT WATER COOLER.
4. PROVIDE RECEPTACLE AND DATA FOR SCOREBOARD DISPLAY. VERIFY EXACT LOCATION WITH ARCHITECT.
5. CONNECTION FOR HAND DRYER. VERIFY EXACT LOCATION WITH OWNER. PROVIDE XLERATOR (XL–SB) BRUSHED STAINLESS STEEL WITH NOISE REDUCTION NOZZLE 120V. CIRCUIT BREAKER SHALL BE LOCKABLE TYPE.
6. PROVIDE RECEPTACLE FOR FIRE ALARM CONTROL PANEL. VERIFY EXACT LOCATION WITH ARCHITECT.
7. J–BOX FOR KITCHEN EXHAUST FANS, VERIFY LOCATION WITH KITCHEN CONSULTANT.
8. J–BOX MOUNT UNDERNEATH CEILING JOIST. VERIFY EXACT LOCATION WITH ARCHITECT.
9. J–BOX FOR ROLLER SHADS. COORDINATE LOCATION WITH ARCHITECT.
10. J–BOX AND DISCONNECT SWITCH FOR ELECTRICAL WATER HEATER.
11. PROVIDE J–BOX FOR MOTORIZED BASKETBALL BACKSTOPS. VERIFY EXACT LOCATION WITH ARCHITECT.
12. PROVIDE WALL MOUNT J–BOX AT 16'–0" AFF. FOR SECURITY CAMERA, ROUTE ONE INCH CONDUIT TO OFFICE 103, VERIFY EXACT LOCATION WITH OWNER. REFER TO POWER CIRCUIT LA–27.
13. PROVIDE WALL MOUNT J–BOX AT 18" BELOW CEILING. VERY 20' APART IN ONE INCH CONDUIT FOR SPEAKER WIRING. ROUTE CONDUIT TO OFFICE 101. VERIFY EXACT LOCATION WITH OWNER.
14. PROVIDE FLOOR BOX WITH RECEPTACLES AND DATA OUTLETS, ROUTE DATA IN 1 INCH CONDUIT AND POWER IN 1 INCH CONDUIT.

GENERAL NOTES

1. COORDINATE ALL WORK WITH EACH SUB CONTRACTOR AND GENERAL CONTRACTOR (STRUCTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING) PRIOR TO INSTALLATION AND CONNECTION OF EQUIPMENT.
2. COORDINATE ALL LOCATION WITH ARCHITECTURAL PLANS.
3. REFER TO E1.0 FOR LIGHTING FIXTURE SCHEDULE
4. ALL EXIT SIGN SHALL BE WITH BATTERY POWER PROVIDE UN–SWITCHED HOT LEG
5. 4'X8'X3/4" PLYWOOD TELEPHONE TERMINAL BACKBOARD (TTB) INSTALL #8 THW GND. WIRE TO NEAREST PANELBAORD AND CONNECT TO EQUIPMENT GROUND BUS.
6. CONTRACTOR TO CONFIRM LED LAMP AND DIMMER ARE COMPATIBILITY PER LAMP MANUFACTURE.

1 ELECTRICAL POWER PLAN - LEVEL 01

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

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

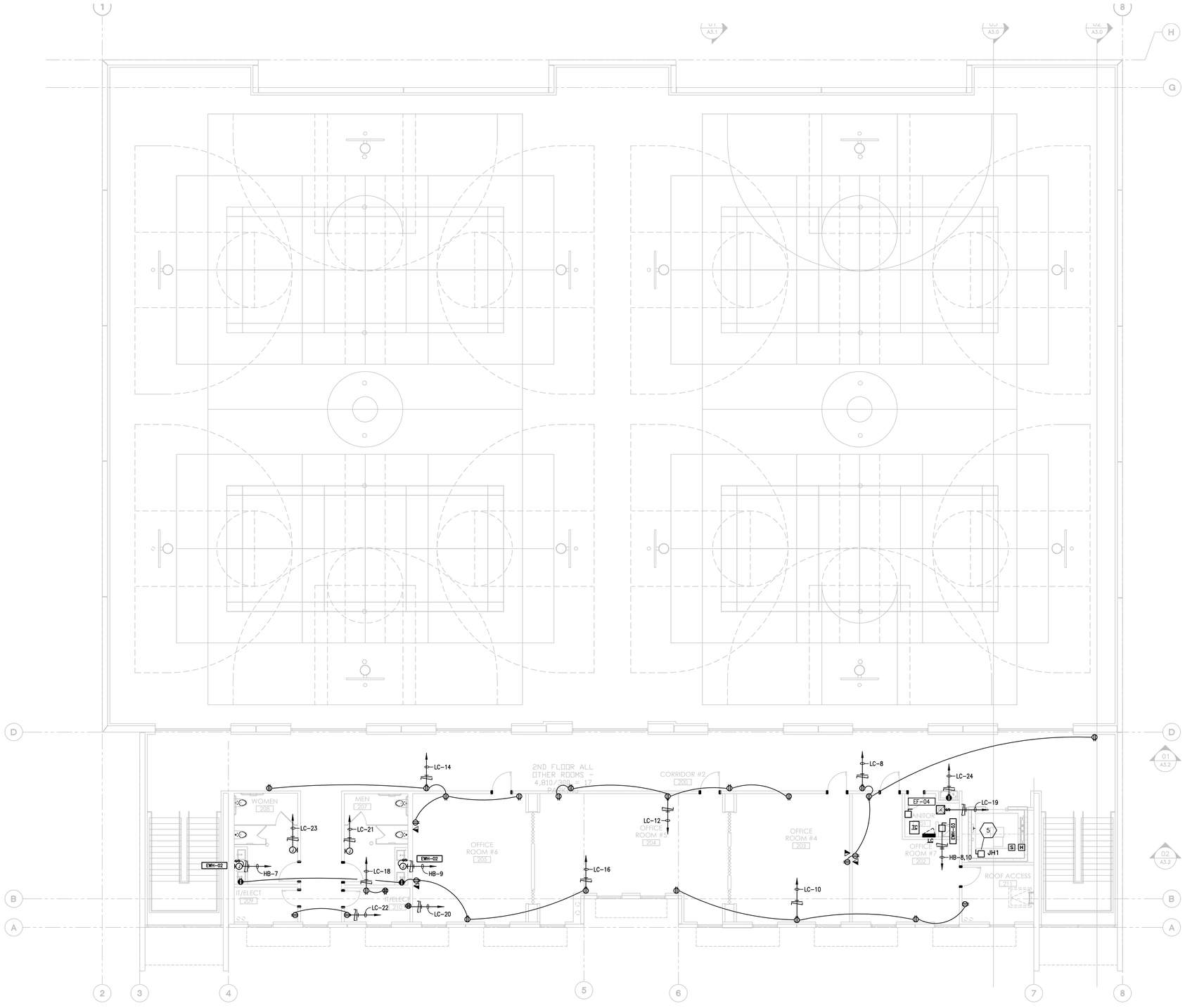
UNITY RECREATION CENTER

802 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

POWER PLAN
LEVEL 01

Sheet No. E4.1



N 1 ELECTRICAL POWER PLAN - LEVEL 02
SCALE: 1/8" = 1'-0"

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

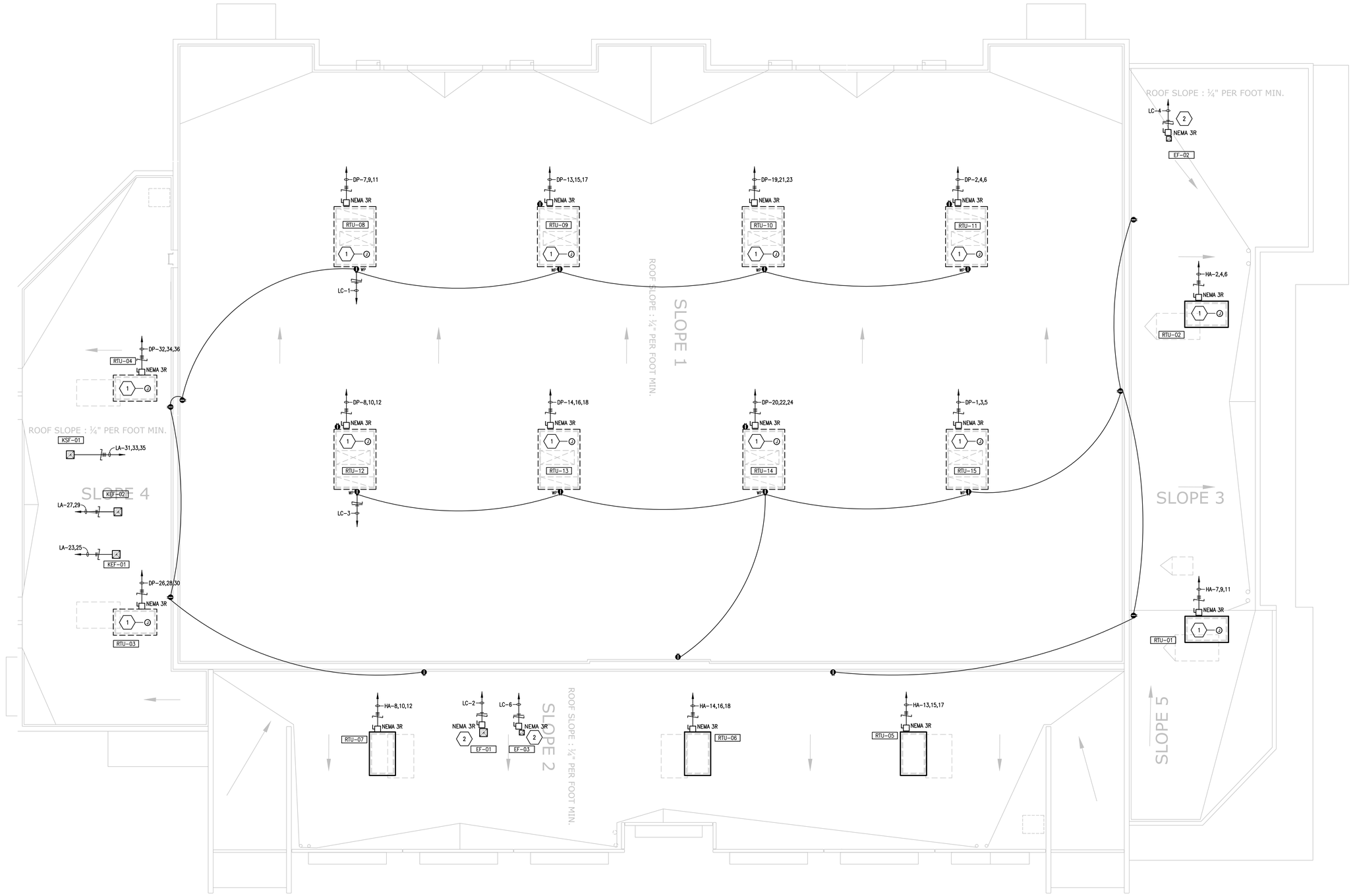
UNITY RECREATION CENTER

802 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

POWER PLAN
LEVEL 02

Sheet No. E3.2



KEYED NOTES

1. J-BOX FOR DUCT SMOKE DETECTOR CONNECT TO CIRCUIT LA-1. REFER TO 2/E4.2 FOR DETAILS.
2. CONNECT EXHAUST FAN TO ROOM LIGHT FIXTURE CONTROL PROVIDE RELAY AS REQUIRED.

GENERAL NOTES

1. COORDINATE ALL WORK WITH EACH SUB CONTRACTOR AND GENERAL CONTRACTOR (STRUCTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING) PRIOR TO INSTALLATION AND CONNECTION OF EQUIPMENT.

N 1 ELECTRICAL ROOF PLAN
SCALE: 1/8" = 1'-0"

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

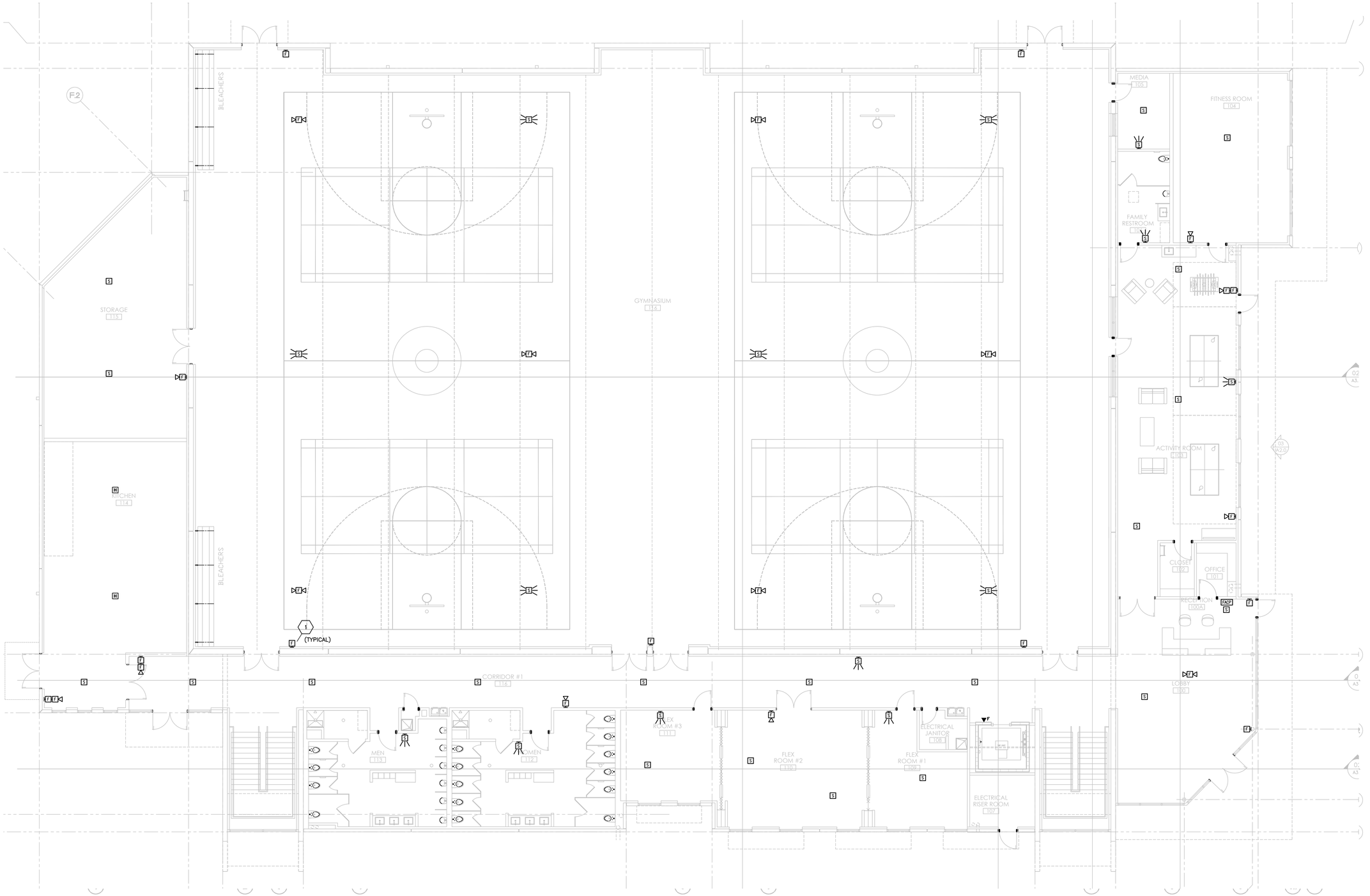
UNITY RECREATION CENTER

802 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

ELECTRICAL ROOF PLAN

Sheet No. E4.3



KEYED NOTES

1. PROVIDE WITH APPROVED POLYCARBONATE COVER IN GYMNASIUM FOR ALL WALL MOUNTED FIRE ALARM DEVICES.

GENERAL NOTES

1. COORDINATE ALL WORK WITH EACH SUB CONTRACTOR AND GENERAL CONTRACTOR (STRUCTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING) PRIOR TO INSTALLATION AND CONNECTION OF EQUIPMENT.
2. COORDINATE ALL LOCATION WITH ARCHITECTURAL PLANS.
3. FIRE ALARM SYSTEM DESIGN, INSTALLATION AND MATERIALS SHALL BE IN ACCORDANCE WITH NFPA 70 AND NFPA 72. SYSTEM SHALL ALSO MEET ALL APPLICABLE BUILDING CODES, FIRE CODES AND THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER. VERIFY REQUIREMENTS PRIOR TO BID SUBMITTAL.
4. INFORMATION ON CONTRACT DOCUMENTS IS GENERAL INFORMATION AND FOR BID PURPOSES ONLY. PERFORM REQUIRED CALCULATIONS AND COORDINATE WITH OTHER TRADES.
5. THE FIRE ALARM CONTROL PANEL (FACP) LOCATION SHALL BE COORDINATED WITH THE FIRE DEPARTMENT AND AHJ PRIOR TO INSTALLATION.

N 1 ELECTRICAL FIRE ALARM PLAN - LEVEL 01
SCALE: 1/8" = 1'-0"

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering
JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

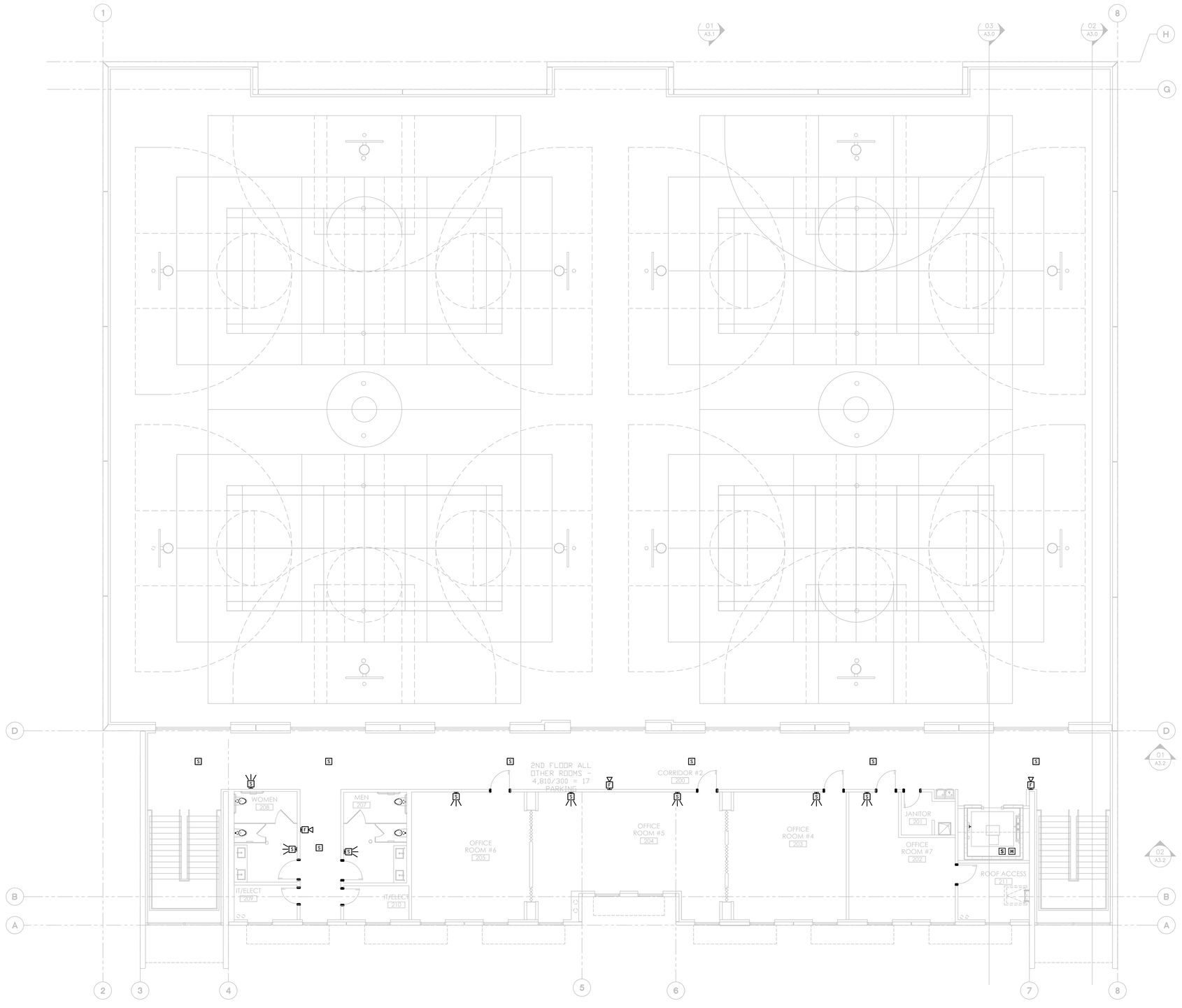
UNITY RECREATION CENTER

802 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

FIRE ALARM FLOOR PLAN LEVEL 01

Sheet No. E5.1



N 1 FIRE ALARM FLOOR PLAN - LEVEL 02
SCALE: 1/8" = 1'-0"

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

802 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

FIRE ALARM FLOOR PLAN
LEVEL 02

Sheet No. E5.2

LIGHTING PANELBOARD — PANEL HA

400 AMP MCB | 3 PHASE | ENCLOSURE TYPE: NEMA 1R
480 VOLT P-P | 4 WIRE | MOUNTING TYPE: SURFACE
277 VOLT P-N | 65k AIC INTERRUPT RATING | GROUND BUS BAR: YES

LOAD TYPE	LOAD DESCRIPTION	LOAD (VA)	LOAD (AMP) ØA	ØB	ØC	(N)	CABLE SIZE	BREAKER AMP /P	Ckt	BREAKER Ckt	AMP /P	CABLE SIZE	LOAD (AMP) ØA	ØB	ØC	(N)	LOAD (VA)	LOAD DESCRIPTION	LOAD TYPE
IL	2ND FLR CORRIDOR LIGHTING	1513	5.5			5.5	#12	20 /1	1	2	40 /3	#8	29.0				24110	RTU-2	AC
IL	2ND FLOOR FLEX ROOM LIGHTING	2458		8.9		8.9	#12	20 /1	3	4				29.0				---	AC
IL	2ND FLR CORRIDOR LIGHTING	1612			5.8	5.8	#12	20 /1	5	6					29.0			---	AC
AC	RTU-1	14965	18.0				#10	30 /3	7	8	40 /3	#8	25.0				20785	RTU-7	AC
AC	---			18.0			#10		9	10				25.0				---	AC
AC	---				18.0		#10		11	12					25.0			---	AC
AC	RTU-5	17459	21.0				#10	30 /3	13	14	40 /3	#8	29.0				24110	RTU-6	AC
AC	---			21.0			#10		15	16				29.0				---	AC
AC	---				21.0		#10		17	18					29.0			---	AC
IL	GYM LIGHTING	2532	9.1			9.1	#10	20 /1	19	20	20 /1	#12	11.2			11.2	3100	OUTDOOR AREA LIGHTING	OL
IL	GYM LIGHTING	3376		12.2		12.2	#10	20 /1	21	22	20 /1	#12		7.2			1997	OUTDOOR WALL BUILDING LIGHTS	OL
IL	GYM LIGHTING	2532			9.1	9.1	#10	20 /1	23	24	20 /1	#12			2.8		770	SOFFIT LIGHTING	OL
IL	GYM LIGHTING	2532	9.1			9.1	#10	20 /1	25	26	20 /1	#12	9.0			9.0	2489	1ST FLR FLEX RM LIGHITNG	IL
IL	GYM LIGHTING	3376		12.2		12.2	#10	20 /1	27	28	20 /1	#12		12.6			3493	ACTIVITY ROOM AREA LIGHTING	IL
IL	GYM LIGHTING	2532			9.1	9.1	#10	20 /1	29	30	20 /1	#12			4.0		1102	KITCHEN & STORAGE LIGHITNG	IL
	SPARE							20 /1	31	32	20 /1							SPARE	
	SPARE							20 /1	33	34	20 /1							SPARE	
	SPARE							20 /1	35	36	20 /1							SPARE	
SF	TRANSFORMER TA	45000	54.1				#4	70 /3	37	38	45 /3							SPARE	
SF	---			54.1			#4		39	40								SPARE	
SF	---				54.1		#4		41	42								SPARE	

CONNECTED LOADS

TYPE	DESCRIPTION	(KVA)	ØA	ØB	ØC	(N)
AC	A/C REFRIGERATION	101.43	122.0	122.0	122.0	122.0
EH	ELECTRIC HEAT					
IL	INDOOR LIGHTING	29.55	32.7	45.9	28.1	45.9
KE	KITCHEN EQUIPMENT					
MC	MISCELLANEOUS CONTINUOUS					
MM	MISCELLANEOUS MOTORS					
NC	MISCELLANEOUS NON-CONTINUS					
OL	OUTDOOR LIGHTING	5.87	11.2	7.2	2.8	11.2
RE	RECEPTACLES					
WH	WATER HEATING					
EX	EXISTING DEMAND					
SF	SUB-FEED PANEL	45.00	54.1	54.1	54.1	54.1
	LARGEST MOTOR					
	TOTAL PHASE CONNECTED LOAD	181.84	220.0	229.2	207.0	

NEC COMPUTED DEMAND LOADS

FCTR	ØA	ØB	ØC	(N)	(KVA)	DESCRIPTION	TYPE
1.00	122.0	122.0	122.0	122.0	101.43	A/C REFRIGERATION	AC
1.00						ELECTRIC HEAT	EH
1.25	40.9	57.3	35.1	57.3	36.93	INDOOR LIGHTING	IL
0.65						KITCHEN EQUIPMENT	KE
1.25						MISCELLANEOUS CONTINUOUS	MC
1.00						MISCELLANEOUS MOTORS	MM
1.00						MISCELLANEOUS NON-CONTINUS	NC
1.25	14.0	9.0	3.5	14.0	7.33	OUTDOOR LIGHTING	OL
						RECEPTACLES (NEC TABLE 220-44)	RE
1.00						WATER HEATING	WH
1.25						EXISTING DEMAND	EX
1.00	54.1	54.1	54.1	54.1	45.00	SUB-FEED	SF
0.25						LARGEST MOTOR	
	231.0	242.5	214.7	242.5	190.7	TOTAL PHASE DEMAND LOAD	

PANELBOARD — PANEL DP

1000 AMP MCB GFCI | 3 PHASE | ENCLOSURE TYPE: NEMA 1R
480 VOLT P-P | 4 WIRE | MOUNTING TYPE: SURFACE/FLOOR
277 VOLT P-N | 65k AIC INTERRUPT RATING | GROUND BUS BAR: YES

LOAD TYPE	LOAD DESCRIPTION	LOAD (VA)	LOAD (AMP) ØA	ØB	ØC	(N)	CABLE SIZE	BREAKER AMP /P	Ckt	BREAKER Ckt	AMP /P	CABLE SIZE	LOAD (AMP) ØA	ØB	ØC	(N)	LOAD (VA)	LOAD DESCRIPTION	LOAD TYPE
AC	RTU-15	44895	54.0				#4	70 /3	1	2	70 /3	#4	54.0				44895	RTU-11	AC
AC	---			54.0			#4		3	4				54.0				---	AC
AC	---				54.0		#4		5	6					54.0			---	AC
AC	RTU-8	44895	54.0				#4	70 /3	7	8	70 /3	#4	54.0				44895	RTU-12	AC
AC	---			54.0			#4		9	10				54.0				---	AC
AC	---				54.0		#4		11	12					54.0			---	AC
AC	RTU-9	44895	54.0				#4	70 /3	13	14	70 /3	#4	54.0				44895	RTU-13	AC
AC	---			54.0			#4		15	16				54.0				---	AC
AC	---				54.0		#4		17	18					54.0			---	AC
AC	RTU-10	44895	54.0				#4	70 /3	19	20	70 /3	#4	54.0				44895	RTU-14	AC
AC	---			54.0			#4		21	22				54.0				---	AC
AC	---				54.0		#4		23	24					54.0			---	AC
SF	PANEL HA	201579	242.5				500KCM	400 /3	25	26	70 /3	#4	54.0				44895	RTU-3	AC
SF	---			242.5			500KCM		27	28				54.0				---	AC
SF	---				242.5		500KCM		29	30					54.0			---	AC
SF	PANEL HB	99783	120.0				#1	125 /3	31	32	70 /3	#4	54.0				44895	RTU-4	AC
SF	---			120.0			#1		33	34				54.0				---	AC
SF	---				120.0		#1		35	36					54.0			---	AC
	SPARE							70 /3	37	38	70 /3							SPARE	
	---								39	40								---	
	---								41	42								---	

CONNECTED LOADS

TYPE	DESCRIPTION	(KVA)	ØA	ØB	ØC	(N)
AC	A/C REFRIGERATION	448.95	540.0	540.0	540.0	540.0
EH	ELECTRIC HEAT					
IL	INDOOR LIGHTING					
KE	KITCHEN EQUIPMENT					
MC	MISCELLANEOUS CONTINUOUS					
MM	MISCELLANEOUS MOTORS					
NC	MISCELLANEOUS NON-CONTINUS					
OL	OUTDOOR LIGHTING					
RE	RECEPTACLES					
WH	WATER HEATING					
EX	EXISTING DEMAND					
SF	SUB-FEED	301.36	362.5	362.5	362.5	362.5
	LARGEST MOTOR					
	TOTAL PHASE CONNECTED LOAD	750.31	902.5	902.5	902.5	

NEC COMPUTED DEMAND LOADS

FCTR	ØA	ØB	ØC	(N)	(KVA)	DESCRIPTION	TYPE
1.00	540.0	540.0	540.0	540.0	448.95	A/C REFRIGERATION	AC
1.00						ELECTRIC HEAT	EH
1.25						INDOOR LIGHTING	IL
0.65						KITCHEN EQUIPMENT	KE
1.25						MISCELLANEOUS CONTINUOUS	MC
1.00						MISCELLANEOUS MOTORS	MM
1.00						MISCELLANEOUS NON-CONTINUS	NC
1.25						OUTDOOR LIGHTING	OL
						RECEPTACLES (NEC TABLE 220-44)	RE
1.00						WATER HEATING	WH
1.25						EXISTING DEMAND	EX
1.00	362.5	362.5	362.5	362.5	301.36	SUB-FEED	SF
0.25						LARGEST MOTOR	
	902.5	902.5	902.5	902.5	750.31	TOTAL PHASE DEMAND LOAD	

LIGHTING PANELBOARD — PANEL LA

175 AMP MCB | 3 PHASE | ENCLOSURE TYPE: NEMA 1R
208 VOLT P-P | 4 WIRE | MOUNTING TYPE: SURFACE
120 VOLT P-N | 18K AIC INTERRUPT RATING | GROUND BUS BAR: YES

LOAD TYPE	LOAD DESCRIPTION	LOAD (VA)	LOAD (AMP) ØA	ØB	ØC	(N)	CABLE SIZE	BREAKER AMP /P	Ckt	BREAKER Ckt	AMP /P	CABLE SIZE	LOAD (AMP) ØA	ØB	ØC	(N)	LOAD (VA)	LOAD DESCRIPTION	LOAD TYPE
KE	REACH-IN FREEZER	1800	15.0			15.0	#12	20 /1	1	2	20 /1	#12	12.3			12.3	1471	J-BOX FOR WINCH	NC
KE	REACH-IN REFRIGERATOR	1800		15.0		15.0	#12	20 /1	3	4	20 /1	#12		12.3			1471	J-BOX FOR WINCH	NC
KE	ICE MAKER, CUBE-STYLE	1800			15.0	15.0	#12	20 /1	5	6	20 /1	#12			12.3		1471	J-BOX FOR WINCH	NC
RE	RECEPTACLES	360	3.0			3.0	#12	20 /1	7	8	20 /1	#12	12.3			12.3	1471	J-BOX FOR WINCH	NC
RE	RECEPTACLES	360		3.0		3.0	#12	20 /1	9	10	20 /1	#12		12.3			1471	J-BOX FOR WINCH	NC
RE	RECEPTACLES	360			3.0	3.0	#12	20 /1	11	12	20 /1	#12			12.3		1471	J-BOX FOR WINCH	NC
RE	RECEPTACLES	360	3.0			3.0	#12	20 /1	13	14	20 /1	#12	3.0			3.0	360	RECEPTACLES	RE
RE	RECEPTACLES	1080		9.0		9.0	#12	20 /1	15	16	20 /1	#12		5.0			600	BUILDING SIGNAGE	OL
RE	RECEPTACLES	900			7.5	7.5	#12	20 /1	17	18	20 /1	#12			9.3		1115	POWER GATE	NC
NC	SCOREBOARD DISPLAY	800	6.7			6.7	#12	20 /1	19	20	20 /1							SPARE	
NC	J-BOX	800		6.7		6.7	#12	20 /1	21	22	20 /1							SPARE	
NC	KEF-01	1320			6.3		#12	20 /2	23	24	20 /1							SPARE	
NC	---		6.3				#12		25	26	20 /1							SPARE	
NC	KEF-02	1320		6.3			#12	20 /2	27	28	20 /1							SPARE	
NC	---				6.3		#12		29	30	20 /1							SPACE	
NC	KSF-01	2654	7.4				#12	20 /3	31	32	20 /1							SPACE	
NC	---			7.4			#12		33	34	20 /1							SPACE	
NC	---				7.4		#12		35	36	20 /1							SPACE	
	SPACE							20 /1	37	38	20 /1							SPACE	
	SPACE							20 /1	39	40	20 /1							SPACE	
	SPACE							20 /1	41	42	20 /2							SPACE	

CONNECTED LOADS

TYPE	DESCRIPTION	(KVA)	ØA	ØB	ØC	(N)
AC	A/C REFRIGERATION					
EH	ELECTRIC HEAT					
IL	INDOOR LIGHTING					
KE	KITCHEN EQUIPMENT	5.40	15.0	15.0	15.0	15.0
MC	MISCELLANEOUS CONTINUOUS					
MM	MISCELLANEOUS MOTORS					
NC	MISCELLANEOUS NON-CONTINUS	16.83	44.9	44.9	53.9	53.9
OL	OUTDOOR LIGHTING	0.60		5.0		5.0
RE	RECEPTACLES	3.78	9.0	12.0	10.5	12.0
WH	WATER HEATING					
EX	EXISTING DEMAND					
SF	SUB-FEED					
	LARGEST MOTOR					
	TOTAL PHASE CONNECTED LOAD	26.61	68.9	76.9	79.4	79.4

NEC COMPUTED DEMAND LOADS

FCTR	ØA	ØB	ØC	(N)	(KVA)	DESCRIPTION	TYPE
1.00						A/C REFRIGERATION	AC
1.00						ELECTRIC HEAT	EH
1.25						INDOOR LIGHTING	IL
0.65	9.8	9.8	9.8	9.8	3.51	KITCHEN EQUIPMENT	KE
1.25						MISCELLANEOUS CONTINUOUS	MC
1.00						MISCELLANEOUS MOTORS	MM
1.00	44.9	44.9	53.9	53.9	16.83	MISCELLANEOUS NON-CONTINUS	NC
1.25		6.3		6.3	0.75	OUTDOOR LIGHTING	OL
1.00	9.0	12.0	10.5	12.0	3.78	RECEPTACLES (NEC TABLE 220-44)	RE
1.00						WATER HEATING	WH
1.25						EXISTING DEMAND	EX
1.00						SUB-FEED	SF
0.25						LARGEST MOTOR	
	63.6	72.9	74.1	74.1		TOTAL PHASE DEMAND LOAD	

LIGHTING PANELBOARD — PANEL LB

110 AMP MCB | 3 PHASE | ENCLOSURE TYPE: NEMA 1R
208 VOLT P-P | 4 WIRE | MOUNTING TYPE: RECESSED
120 VOLT P-N | 18K AIC INTERRUPT RATING | GROUND BUS BAR: YES

LOAD TYPE	LOAD DESCRIPTION	LOAD (VA)	LOAD (AMP) ØA	ØB	ØC	(N)	CABLE SIZE	BREAKER AMP /P	Ckt	BREAKER Ckt	AMP /P	CABLE SIZE	LOAD (AMP) ØA	ØB	ØC	(N)	LOAD (VA)	LOAD DESCRIPTION	LOAD TYPE
RE	RECEPTACLES	360	3.0			3.0	#12	20 /1	1	2	20 /1	#12	3.0			3.0	360	RECEPTACLES	RE
RE	RECEPTACLES	360		3.0		3.0	#12	20 /1	3	4	20 /1	#12		4.5			540	RECEPTACLES	RE
RE	RECEPTACLES	360			3.0	3.0	#12	20 /1	5	6	20 /1	#12						RECEPTACLES	RE
RE	RECEPTACLES	360	3.0			3.0	#12	20 /1	7	8	20 /1	#12	0.5			0.5	60	ESP-1	NC
RE	RECEPTACLES	540		4.5		4.5	#12	20 /1	9	10	20 /1	#12		7.5			900	RECEPTACLES	RE
RE	RECEPTACLES	540			4.5	4.5	#12	20 /1	11	12	20 /1	#12			6.0		720	RECEPTACLES	RE
RE	RECEPTACLES	1080	9.0			9.0	#12	20 /1	13	14	20 /1	#12	9.0			9.0	1080	RECEPTACLES	RE
RE	RECEPTACLES	900		7.5		7.5	#12	20 /1	15	16	20 /1	#12		7.5			900	RECEPTACLES	RE
RE	RECEPTACLES	720			6.0	6.0	#12	20 /1	17	18	20 /1	#12			6.7		800	DRINKING FOUNTAIN	NC
RE	RECEPTACLES	1080	9.0			9.0	#12	20 /1	19	20	20 /1	#12	6.7			6.7	800	DRINKING FOUNTAIN	NC
NC	ELEVATOR PIT LIGHTS GFI	504		4.2		4.2	#12	20 /1	21	22	20 /1	#12		12.5			1500	HAND DRYER	NC
NC	SUMP PUMP ELEVATOR PIT	504			4.2	4.2	#12	20 /1	23	24	20 /1	#12			12.5		1500	HAND DRYER	NC
MC	FIRE ALARM CONTROL PANEL	600	5.0			5.0	#12	20 /1	25	26	20 /1	#12	12.5			12.5	1500	HAND DRYER	NC
NC	RP-01 & GWH-01	500		4.2		4.2	#12	20 /1	27	28	20 /1	#12		12.5			1500	HAND DRYER	NC
	SPARE							20 /1	29	30	20 /1	#12			10.0		1200	ROLLER SHADS	NC
	SPACE							20 /1	31	32	20 /1	#12	10.0			10.0	1200	ROLLER SHADS	NC
	SPACE							20 /1	33	34	20 /1	#12		10.0			1200	ROLLER SHADS	NC
	SPACE							20 /1	35	36	20 /1							SPACE	
	SPACE							20 /1	37	38	20 /1							SPACE	
	SPACE							20 /1	39	40	20 /1							SPACE	
	SPACE							20 /1	41	42	20 /1							SPACE	

CONNECTED LOADS

TYPE	DESCRIPTION	(KVA)	ØA	ØB	ØC	(N)
AC	A/C REFRIGERATION					
EH	ELECTRIC HEAT					
IL	INDOOR LIGHTING					
KE	KITCHEN EQUIPMENT					
MC	MISCELLANEOUS CONTINUOUS	0.60	5.0			5.0
MM	MISCELLANEOUS MOTORS					
NC	MISCELLANEOUS NON-CONTINUS	12.77	29.7	43.4	33.4	43.4
OL	OUTDOOR LIGHTING					
RE	RECEPTACLES	10.80	36.0	34.5	19.5	36.0
WH	WATER HEATING					
EX	EXISTING DEMAND					
SF	SUB-FEED PANEL					
	LARGEST MOTOR					
	TOTAL PHASE CONNECTED LOAD	24.17	70.7	77.9	52.9	77.9

NEC COMPUTED DEMAND LOADS

FCTR	ØA	ØB	ØC	(N)	(KVA)	DESCRIPTION	TYPE
1.00						A/C REFRIGERATION	AC
1.00						ELECTRIC HEAT	EH
1.25						INDOOR LIGHTING	IL
0.65						KITCHEN EQUIPMENT	KE
1.25	6.3			6.3	0.75	MISCELLANEOUS CONTINUOUS	MC
1.00						MISCELLANEOUS MOTORS	MM
1.00	29.7	43.4	33.4	43.4	12.77	MISCELLANEOUS NON-CONTINUS	NC
1.25						OUTDOOR LIGHTING	OL
1.00	36.0	34.5	19.5	36.0	10.80	RECEPTACLES (NEC TABLE 220-44)	RE
1.00						WATER HEATING	WH
1.25						EXISTING DEMAND	EX
1.00						SUB-FEED	SF
0.25						LARGEST MOTOR	
	71.9	77.9	52.9	77.9		TOTAL PHASE DEMAND LOAD	

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

802 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

ELECTRICAL PANEL SCHEDULES AND RISER DIAGRAM

Sheet No. E6.1

LIGHTING PANELBOARD — PANEL LC

125 AMP MCB | 3 PHASE | ENCLOSURE TYPE: NEMA 1R
208 VOLT P–P | 4 WIRE | MOUNTING TYPE: SURFACE
120 VOLT P–N | 18K AIC INTERRUPT RATING | GROUND BUS BAR: YES

LOAD TYPE	LOAD DESCRIPTION	LOAD (VA)	LOAD (AMP) ØA	ØB	ØC	(N)	CABLE SIZE	BREAKER AMP /P	Ckt	Ckt	BREAKER AMP /P	CABLE SIZE	LOAD (AMP) ØA	ØB	ØC	(N)	LOAD (VA)	LOAD DESCRIPTION	LOAD TYPE
RE	ROOF RECEPTACLES	1440	12.0			12.0	#12	20 /1	1	2	20 /1	#12	0.5			0.5	60	EF–01	MM
RE	ROOF RECEPTACLES	1620		13.5		13.5	#12	20 /1	3	4	20 /1	#12		0.3			30	EF–02	MM
NC	J–BOX FOR WINCH	1471			12.3	12.3	#12	20 /1	5	6	20 /1	#12			0.3		30	EF–03	MM
NC	J–BOX FOR WINCH	1471	12.3			12.3	#12	20 /1	7	8	20 /1	#12	7.5			7.5	900	RECEPTACLES	RE
NC	J–BOX FOR WINCH	1471		12.3		12.3	#12	20 /1	9	10	20 /1	#12		6.0			720	RECEPTACLES	RE
NC	J–BOX FOR WINCH	1471			12.3	12.3	#12	20 /1	11	12	20 /1	#12			7.5		900	RECEPTACLES	RE
NC	J–BOX FOR WINCH	1471	12.3			12.3	#12	20 /1	13	14	20 /1	#12	7.5			7.5	900	RECEPTACLES	RE
NC	J–BOX FOR WINCH	1471		12.3		12.3	#12	20 /1	15	16	20 /1	#12		7.5			900	RECEPTACLES	RE
NC	J–BOX FOR OWNER USE	800			6.7	6.7	#12	20 /1	17	18	20 /1	#12			4.5		540	RECEPTACLES	RE
NC	EF–04	694	5.8			5.8	#12	20 /1	19	20	20 /1	#12	3.0			3.0	360	RECEPTACLES	RE
NC	HAND DRYER 207	1500		12.5		12.5	#12	20 /1	21	22	20 /1	#12		3.0			360	RECEPTACLES	RE
NC	HAND DRYER 208	1500			12.5	12.5	#12	20 /1	23	24	20 /1	#12			5.0		600	DRINKING FOUNTAIN	NC
	SPARE							20 /1	25	26	20 /1							SPARE	
	SPARE							20 /1	27	28	20 /1							SPARE	
	SPARE							30 /1	29	30	20 /1							SPARE	
	SPACE							20 /1	31	32	20 /1							SPACE	
	SPACE							20 /1	33	34	20 /1							SPACE	
	SPACE							20 /1	35	36	20 /1							SPACE	
	SPACE							20 /1	37	38	20 /1							SPACE	
	SPACE							20 /1	39	40	20 /1							SPACE	
	SPACE							20 /1	41	42	20 /1							SPACE	

CONNECTED LOADS

TYPE	DESCRIPTION	(KVA)	ØA	ØB	ØC	(N)
AC	A/C REFRIGERATION					
EH	ELECTRIC HEAT					
IL	INDOOR LIGHTING					
KE	KITCHEN EQUIPMENT					
MC	MISCELLANEOUS CONTINUOUS					
MM	MISCELLANEOUS MOTORS	0.12	0.5	0.3	0.3	0.5
NC	MISCELLANEOUS NON–CONTINUS	13.92	30.3	37.0	48.7	48.7
OL	OUTDOOR LIGHTING					
RE	RECEPTACLES	8.64	30.0	30.0	12.0	30.0
WH	WATER HEATING					
EX	EXISTING DEMAND					
SF	SUB–FEED					
	LARGEST MOTOR					
	TOTAL PHASE CONNECTED LOAD	22.68	60.8	67.3	60.9	67.3

NEC COMPUTED DEMAND LOADS

FCTR	ØA	ØB	ØC	(N)	(KVA)	DESCRIPTION	TYPE
1.00						A/C REFRIGERATION	AC
1.00						ELECTRIC HEAT	EH
1.25						INDOOR LIGHTING	IL
0.65						KITCHEN EQUIPMENT	KE
1.25						MISCELLANEOUS CONTINUOUS	MC
1.00	0.5	0.3	0.3	0.5	0.12	MISCELLANEOUS MOTORS	MM
1.00	30.3	37.0	48.7	48.7	13.92	MISCELLANEOUS NON–CONTINUS	NC
1.25						OUTDOOR LIGHTING	OL
1.00	30.0	30.0	12.0	30.0	8.64	RECEPTACLES (NEC TABLE 220–44)	RE
1.00						WATER HEATING	WH
1.25						EXISTING DEMAND	EX
1.00						SUB–FEED	SF
0.25						LARGEST MOTOR	
	60.8	67.3	60.9	67.3		TOTAL PHASE DEMAND LOAD	

LIGHTING PANELBOARD — PANEL HB

200 AMP MCB | 3 PHASE | ENCLOSURE TYPE: NEMA 1R
480 VOLT P–P | 4 WIRE | MOUNTING TYPE: SURFACE
277 VOLT P–N | 65k AIC INTERRUPT RATING | GROUND BUS BAR: YES

LOAD TYPE	LOAD DESCRIPTION	LOAD (VA)	LOAD (AMP) ØA	ØB	ØC	(N)	CABLE SIZE	BREAKER AMP /P	Ckt	Ckt	BREAKER AMP /P	CABLE SIZE	LOAD (AMP) ØA	ØB	ØC	(N)	LOAD (VA)	LOAD DESCRIPTION	LOAD TYPE
SF	TRANSFORMER TB	30000	36.1				#6	50 /3	1	2	30 /3	#10	21.0				17459	ELEVATOR J–BOX JH	NC
SF	---			36.1			#6		3	4				21.0				---	NC
SF	---				36.1		#6		5	6					21.0			---	NC
WH	EWH–02	4100	14.8			14.8	#10	30 /1	7	8	40 /2	#8	33.3				16000	EWH–03	WH
WH	EWH–02	4100		14.8		14.8	#10	30 /1	9	10				33.3				---	WH
WH	EWH–01	4100			14.8	14.8	#10	30 /1	11	12	20 /1							SPARE	
WH	EWH–01	4100	14.8			14.8	#10	30 /1	13	14	20 /1							SPARE	
	SPARE							20 /1	15	16	20 /1							SPARE	
	SPACE							20 /1	17	18	20 /1							SPACE	

CONNECTED LOADS

TYPE	DESCRIPTION	(KVA)	ØA	ØB	ØC	(N)
AC	A/C REFRIGERATION					
EH	ELECTRIC HEAT					
IL	INDOOR LIGHTING					
KE	KITCHEN EQUIPMENT					
MC	MISCELLANEOUS CONTINUOUS					
MM	MISCELLANEOUS MOTORS					
NC	MISCELLANEOUS NON–CONTINUS	17.46	21.0	21.0	21.0	21.0
OL	OUTDOOR LIGHTING					
RE	RECEPTACLES					
WH	WATER HEATING	32.40	62.9	48.1	14.8	62.9
EX	EXISTING DEMAND					
SF	SUB–FEED PANEL	30.00	36.1	36.1	36.1	36.1
	LARGEST MOTOR					
	TOTAL PHASE CONNECTED LOAD	79.86	120.0	105.2	71.9	

NEC COMPUTED DEMAND LOADS

FCTR	ØA	ØB	ØC	(N)	(KVA)	DESCRIPTION	TYPE
1.00						A/C REFRIGERATION	AC
1.00						ELECTRIC HEAT	EH
1.25						INDOOR LIGHTING	IL
0.65						KITCHEN EQUIPMENT	KE
1.25						MISCELLANEOUS CONTINUOUS	MC
1.00						MISCELLANEOUS MOTORS	MM
1.00	21.0	21.0	21.0	21.0	17.46	MISCELLANEOUS NON–CONTINUS	NC
1.25						OUTDOOR LIGHTING	OL
						RECEPTACLES (NEC TABLE 220–44)	RE
1.00	62.9	48.1	14.8	62.9	32.40	WATER HEATING	WH
1.25						EXISTING DEMAND	EX
1.00	36.1	36.1	36.1	36.1	30.00	SUB–FEED	SF
0.25						LARGEST MOTOR	
	120.0	105.2	71.9	120.0	79.9	TOTAL PHASE DEMAND LOAD	

PRELIMINARY ELECTRICAL LOAD ANALYSIS

VOLT P–P 480 | PROJECT: UNITY RECREATION CENTER
VOLT P–L 277
PHASE 3 | BUILDING SQUARE FOOTAGE: 28,150
WIRE 4

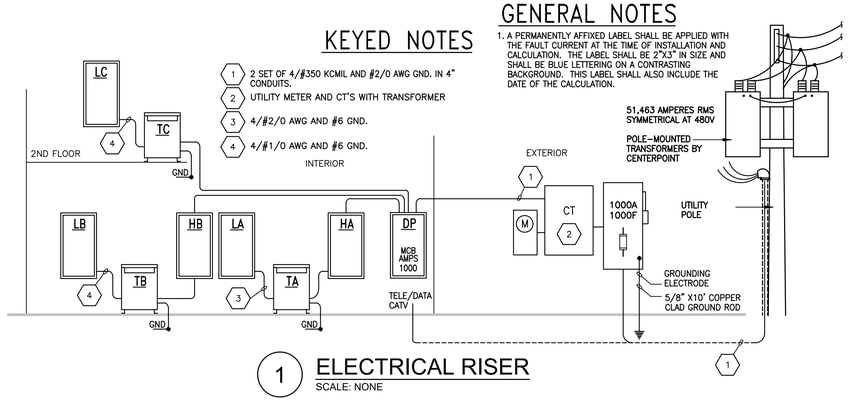
DESCRIPTION	CONNECTED LOAD VA	ØA	ØB	ØC	N	NEC CALCULATED LOAD KVA	ØA	ØB	ØC	N	FACTOR	DESCRIPTION
A/C REFRIGERATION	550376	662.0	662.0	662.0	662.0	550.4	662	662	662		1.00	LESS THAN HEAT
ELECTRIC HEAT											1.00	ELECTRICAL HEAT
INDOOR LIGHTING	29547	35.5	35.5	35.5	35.5	36.9	44.4	44.4	44.4	44.4	1.25	125% of CONNECTED
KITCHEN EQUIPMENT	5400	6.5	6.5	6.5	6.5	3.5	4.2	4.2	4.2	4.2	0.65	NO COMMERCIAL KITCHEN
MISCELLANEOUS CONTINUOUS	600	0.7	0.7	0.7	0.7	0.8	0.9	0.9	0.9	0.9	1.25	125% of CONTINUOUS
MISCELLANEOUS MOTORS	120	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	1.25	125% of the LARGER of CONNECTED OR TABLE 220–3(a)
MISCELLANEOUS NON–CONTINUS	43523	52.4	52.4	52.4	52.4	43.5	52.4	52.4	52.4	52.4	1.00	100% of CONNECTED
OUTDOOR LIGHTING	6467	7.8	7.8	7.8	7.8	8.1	9.7	9.7	9.7	9.7	1.25	125% of CONNECTED
RECEPTACLES	23220	27.9	27.9	27.9	27.9	16.6	20.0	20.0	20.0	0.0	100%&50%	NEC TABLE 220–13
WATER HEATING											1.00	100% of CONNECTED
EXISTING DEMAND											1.25	MAXIMUM RECORDED DEMAND
25% LARGEST MOTOR											0.25	25% of LARGEST MOTOR ADDED
TOTAL		659.9	793.8	793.8	793.8	793.8	AMP					
CAPACITY		831.4	1000.0	1000.0	1000.0	1000.0	AMP					
SPARE CAPACITY		171.4	206.2	206.2	206.2	206.2	AMP					

KEYED NOTES

1. 2 SET OF 4/#350 KCMIL AND #2/0 AWG GND. IN 4" CONDUITS.
2. UTILITY METER AND CT'S WITH TRANSFORMER
3. 4/#2/0 AWG AND #6 GND.
4. 4/#1/0 AWG AND #6 GND.

GENERAL NOTES

1. A PERMANENTLY AFFIXED LABEL SHALL BE APPLIED WITH THE FAULT CURRENT AT THE TIME OF INSTALLATION AND CALCULATION. THE LABEL SHALL BE 2"X3" IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. THIS LABEL SHALL ALSO INCLUDE THE DATE OF THE CALCULATION.



1 ELECTRICAL RISER
SCALE: NONE

LIGHTING CONTROL PANEL SCHEDULE
LCP
STORAGE 1
ARP INTENC16NLT 32, 16SPR RELAYS MVOLT NEMA 1 INCLOSURE WITH ARPA PC 2VB HLK SM

RELAY NO.	ZONE	PART	EM	VOLTAGE	CIRCUIT NO.	LOCATION	INPUT OVERRIDE
1	Sa	SPR	NO	277	HA–19	GYM LIGHTING	SW1
2	Sb	SPR	NO	277	HA–21	GYM LIGHTING	SW2
3	Sc	SPR	NO	277	HA–23	GYM LIGHTING	SW3
4	Sd	SPR	NO	277	HA–25	GYM LIGHTING	SW4
5	Se	SPR	NO	277	HA–27	GYM LIGHTING	SW5
6	Sf	SPR	NO	277	HA–29	GYM LIGHTING	SW6
7	Sg	SPR	NO	277	HA–1	2ND FLOOR CORRIDOR LIGHTING	SW7
8	Sh	SPR	NO	277	HA–5	1ST FLOOR CORRIDOR LIGHTING	SW8
9	SPARE	SPR	NO			SPARE	SW9
10	Sj	SPR	NO	277	HA–20	OUTDOOR AREA LIGHTING	SW10
11	Sk	SPR	NO	277	HA–22	OUTDOOR BUILDING LIGHTS	SW11
12	Sl	SPR	NO	277	HA–24	BUILDING SOFFIT LIGHTS	SW12
13	Sm	SPR	NO	120	LA–16	BUILDING SIGN	SW13
14	SPARE	SPR	NO				
15	SPARE	SPR	NO				
16	SPARE	SPR	NO				

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

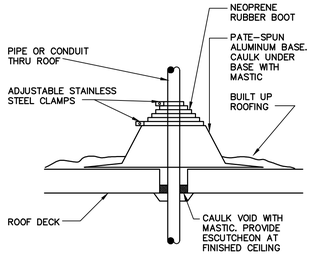
UNITY RECREATION CENTER

802 Old Mill Road
Cedar Park, TEXAS 78613

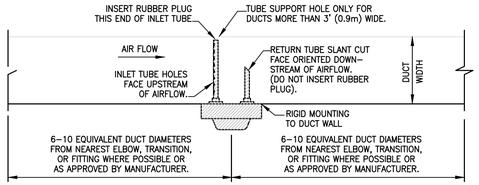
Project No. 032022
Drawn JRD
Checked

ELECTRICAL PANEL SCHEDULES AND RISER DIAGRAM

Sheet No. E6.2



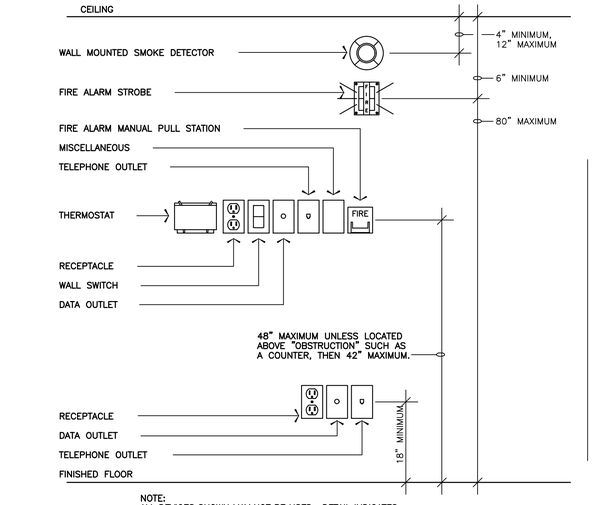
7 CONDUIT PENETRATION THRU ROOF
SCALE: NONE



NOTES:

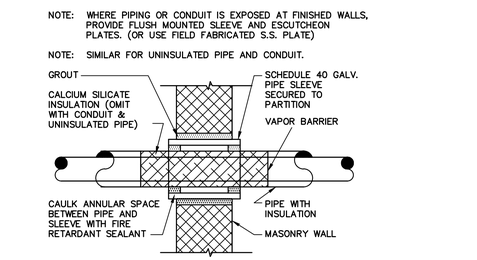
1. DETECTORS SHALL BE ACCESSIBLE FOR CLEANING AND SHALL BE MOUNTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
2. THE LOCATION OF ALL DETECTORS IN AIR DUCT SYSTEMS SHALL BE PERMANENTLY AND CLEARLY IDENTIFIED WITH MINIMUM 1/2" LETTERING.
3. DETECTORS SHALL BE LISTED FOR PROPER OPERATION OVER THE COMPLETE RANGE OF AIR VELOCITIES, TEMPERATURE, AND HUMIDITY EXPECTED AT THE DETECTOR WHEN THE AIR-HANDLING SYSTEM IS OPERATING.
4. ALL PENETRATIONS OF A RETURN AIR DUCT IN THE VICINITY OF DETECTORS INSTALLED ON OR IN AN AIR DUCT SHALL SHALL BE SEALED TO PREVENT ENTRANCE OF SURROUNDING AIR AND POSSIBLE DILUTION OR REDIRECTION OF SMOKE WITHIN THE DUCT.
5. PROVIDE REMOTE ALARM INDICATORS FOR IN-DUCT SMOKE DETECTORS THAT ARE INSTALLED IN LOCATIONS AND/OR ARRANGEMENTS WHERE THE DETECTOR'S ALARM INDICATOR IS NOT READILY VISIBLE TO RESPONDING PERSONNEL. REMOTE ALARM INDICATORS SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION AND SHALL BE CLEARLY LABELED TO INDICATE BOTH THEIR FUNCTION (e.g. "IN-DUCT SMOKE DETECTOR ALARM") AND THE AIR-HANDLING UNIT(S) ASSOCIATED WITH EACH DETECTOR.

4 DUCT SMOKE DETECTOR DETAIL
SCALE: NONE

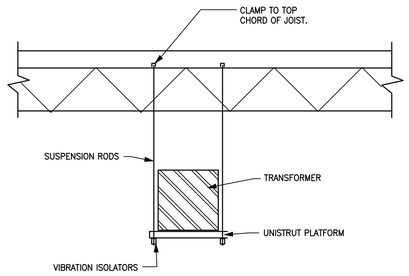


NOTE:
ALL DEVICES SHOWN MAY NOT BE USED. DETAIL INDICATES TYPICAL MOUNTING HEIGHTS ONLY.

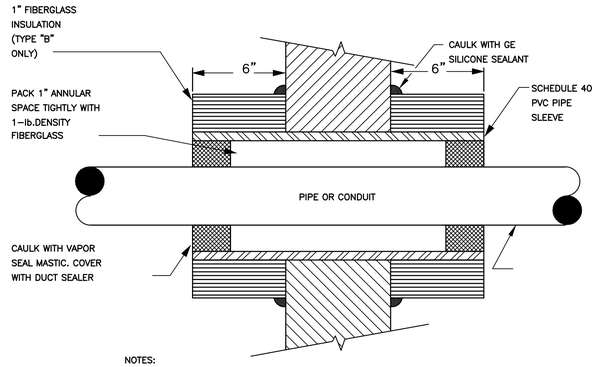
1 MOUNTING HEIGHT DETAIL
SCALE: NONE



8 PIPE OR CONDUIT SLEEVE THRU FIRE RATED WALL
SCALE: NONE

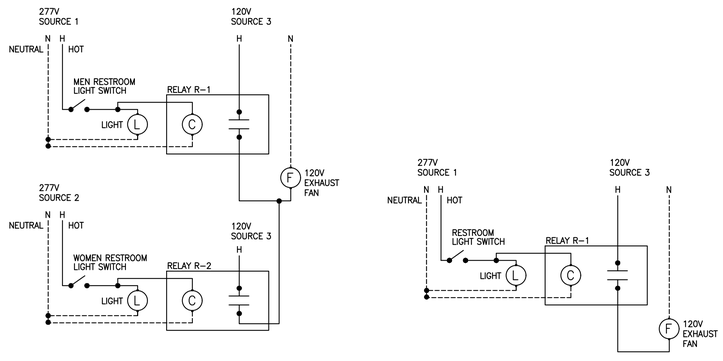


5 TRANSFORMER MOUNTING DETAIL
SCALE: NONE

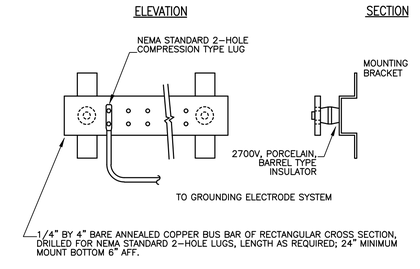


NOTES:
1. TYPICAL TREATMENT FOR PLUMBING PIPES AND H.V.A.C. PIPING FOR NON-FIRE-RATED WALLS
2. SIZE SLEEVE TO ACCEPT CONDUIT
3. FOR FIRE WALLS PROVIDE U.L. APPROVED SEAL ASSEMBLE FOR OPENING SIZE AND WALL TYPE.

2 CONDUIT SEALANT THRU WALLS
SCALE: NONE



6 RESTROOM LIGHT SWTICH WITH FAN
SCALE: NONE



3 GROUND BUS DETAIL
SCALE: NONE

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering
JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

802 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

ELECTRICAL DETAILS

Sheet No. E7.0

BASIC ELECTRICAL REQUIREMENTS
PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. THE REQUIREMENTS OF GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, AND DIVISION 1 APPLY TO THE WORK IN DIVISION 16.

1.02 SUMMARY

A. ALL REQUIREMENTS UNDER DIVISION 1 AND THE GENERAL AND SUPPLEMENTARY CONDITIONS OF THESE SPECIFICATIONS APPLY TO THIS SECTION AND DIVISION. WHERE THE REQUIREMENTS OF THIS SECTION AND DIVISION EXCEED THOSE OF DIVISION 1, THIS SECTION AND DIVISION TAKE PRECEDENCE. BECOME THOROUGHLY FAMILIAR WITH ALL THEIR CONTENTS AS TO REQUIREMENTS THAT AFFECT THIS DIVISION, SECTION OR BOTH. WORK REQUIRED UNDER THIS DIVISION INCLUDES ALL MATERIAL, EQUIPMENT, APPLIANCES, AND LABOR REQUIRED TO COMPLETE THE ENTIRE ELECTRICAL SYSTEM AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS, OR REASONABLY INFERRED TO BE NECESSARY TO FACILITATE EACH SYSTEM'S FUNCTIONING AS IMPLIED BY THE DESIGN AND THE EQUIPMENT SPECIFIED.

B. THE SPECIFICATIONS AND DRAWINGS FOR THE PROJECT ARE COMPLEMENTARY, AND PORTIONS OF THE WORK DESCRIBED IN ONE, SHALL BE PROVIDED AS IF DESCRIBED IN BOTH. IN THE EVENT OF DISCREPANCIES, NOTIFY THE ENGINEER AND REQUEST CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK INVOLVED.

C. SPECIFICATIONS DEFINE THE QUALITATIVE REQUIREMENTS FOR PRODUCTS, MATERIALS, AND WORKMANSHIP UPON WHICH THE CONTRACT IS BASED.

D. DRAWINGS ARE GRAPHIC REPRESENTATIONS OF THE WORK UPON WHICH THE CONTRACT IS BASED. THEY SHOW THE MATERIALS AND THEIR RELATIONSHIP TO ONE ANOTHER, INCLUDING SIZES, SHAPES, LOCATIONS, AND CONNECTIONS. THEY ALSO CONVEY THE SCOPE OF WORK, INDICATING THE INTENDED GENERAL ARRANGEMENT OF THE EQUIPMENT, FIXTURES, OUTLETS AND CIRCUITS WITHOUT SHOWING ALL OF THE EXACT DETAILS AS TO ELEVATIONS, OFFSETS, CONTROL LINES, AND OTHER INSTALLATION REQUIREMENTS. USE THE DRAWINGS AS A GUIDE WHEN LAYING OUT THE WORK AND TO VERIFY THAT MATERIALS AND EQUIPMENT WILL FIT INTO THE DESIGNATED SPACES, AND WHICH, WHEN INSTALLED PER MANUFACTURERS' REQUIREMENTS, WILL ENSURE A COMPLETE, COORDINATED, SATISFACTORY AND PROPERLY OPERATING SYSTEM.

1. DRAWINGS ARE SCHEMATIC IN NATURE; SHOW THE VARIOUS COMPONENTS OF THE SYSTEMS APPROXIMATELY TO SCALE AND ATTEMPT TO INDICATE HOW THEY SHALL BE INTEGRATED WITH OTHER PARTS OF THE WORK. FIGURED DIMENSIONS TAKE PRECEDENCE TO SCALED DIMENSIONS. DETERMINE EXACT LOCATIONS BY JOB MEASUREMENTS, BY CHECKING THE REQUIREMENTS OF OTHER TRADES, AND BY REVIEWING ALL CONTRACT DOCUMENTS. CORRECT ERRORS THAT COULD HAVE BEEN AVOIDED BY PROPER CHECKING AND INSPECTION, AT NO ADDITIONAL COST TO THE OWNER.

1.03 JOB CONDITIONS AND PRE-BID SITE VISIT

A. PERSONALLY INSPECT THE SITE OF THE PROPOSED WORK AND BECOME FULLY INFORMED OF CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. FAILURE TO DO SO WILL NOT BE CONSIDERED SUFFICIENT JUSTIFICATION TO REQUEST OR OBTAIN EXTRA COMPENSATION OVER AND ABOVE THE CONTRACT PRICE.

B. BE RESPONSIBLE FOR THE SAFETY OF THE WORKERS AND OTHERS ON THE CONSTRUCTION SITE.

1.04 QUALITY ASSURANCE

A. REVIEW OF SUBMITTALS FOR EQUIPMENT SUPPLIED IS MANDATORY AS A CONDITION OF ACCEPTANCE OF WORK. INSTALLATION OF EQUIPMENT PRIOR TO REVIEW SHALL BE AT CONTRACTOR'S RISK.

B. EXECUTE ALL WORK UNDER THIS DIVISION IN A THOROUGH AND PROFESSIONAL MANNER BY COMPETENT AND EXPERIENCED WORKMEN DULY TRAINED TO PERFORM THE WORK SPECIFIED.

C. INSTALL ALL WORK IN STRICT CONFORMANCE WITH ALL MANUFACTURERS' REQUIREMENTS AND RECOMMENDATIONS, UNLESS THESE DOCUMENTS EXCEED THOSE REQUIREMENTS. INSTALL ALL EQUIPMENT AND MATERIALS IN A NEAT AND PROFESSIONAL MANNER, ALIGNED, LEVELED, AND ADJUSTED FOR SATISFACTORY OPERATION, IN ACCORDANCE WITH NECA GUIDELINES.

D. UNLESS INDICATED OTHERWISE ON THE DRAWINGS, PROVIDE ALL MATERIAL AND EQUIPMENT NEW, OF THE BEST QUALITY AND DESIGN, FREE FROM DEFECTS AND IMPERFECTIONS AND WITH MARKINGS OR A NAMEPLATE IDENTIFYING THE MANUFACTURER AND PROVIDING SUFFICIENT REFERENCE TO ESTABLISH QUALITY, SIZE AND CAPACITY. PROVIDE ALL MATERIAL AND EQUIPMENT OF THE SAME TYPE FROM THE SAME MANUFACTURER WHENEVER PRACTICABLE.

E. UNLESS SPECIFIED OTHERWISE, MANUFACTURED ITEMS OF THE SAME TYPES SPECIFIED WITHIN THIS DIVISION SHALL HAVE BEEN INSTALLED AND USED, WITHOUT MODIFICATION, RENOVATION, OR REPAIR FOR NOT LESS THAN ONE YEAR PRIOR TO DATE OF BIDDING FOR THIS PROJECT.

1.05 MANUFACTURERS

A. IN OTHER ARTICLES WHERE LISTS OF MANUFACTURERS ARE INTRODUCED, THE FOLLOWING REQUIREMENTS APPLY TO PRODUCT SELECTION:

1. AVAILABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, MANUFACTURERS SPECIFIED.

2. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE MANUFACTURERS SPECIFIED

B. WHERE A LIST IS PROVIDED, MANUFACTURERS ARE LISTED ALPHABETICALLY AND NOT IN ACCORDANCE WITH ANY RANKING OR PREFERENCE.

1.06 COORDINATION

A. COORDINATE ALL WORK WITH OTHER DIVISIONS AND TRADES SO THAT VARIOUS COMPONENTS OF THE ELECTRICAL SYSTEMS ARE INSTALLED AT THE PROPER TIME, FIT THE AVAILABLE SPACE, AND ALLOW PROPER SERVICE ACCESS TO ALL EQUIPMENT. REFER TO ALL DRAWINGS, INCLUDING, BUT NOT LIMITED TO, CIVIL, ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND PLUMBING, AND TO RELEVANT EQUIPMENT SUBMITTALS AND SHOP DRAWINGS TO DETERMINE THE EXTENT OF CLEAR SPACES. MAKE ALL OFFSETS REQUIRED TO CLEAR EQUIPMENT, BEAMS AND OTHER STRUCTURAL MEMBERS, AND TO FACILITATE CONCEALING RACEWAYS IN THE MANNER ANTICIPATED IN THE DESIGN. PROVIDE MATERIALS WITH TRIM THAT WILL FIT PROPERLY THE TYPES OF CEILING, WALL, OR FLOOR FINISHES ACTUALLY INSTALLED.

1.07 REGULATORY REQUIREMENTS

A. COMPLY, AT A MINIMUM, WITH NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), NEC, OSHA, NEMA, ANSI, UL, STANDARDS, STATE AND LOCAL BUILDING CODES, AND ALL OTHER APPLICABLE CODES AND ORDINANCES FOR PERFORMANCE, WORKMANSHIP, EQUIPMENT, AND MATERIALS. ADDITIONALLY, COMPLY WITH RULES AND REGULATIONS OF PUBLIC UTILITIES AND MUNICIPAL DEPARTMENTS AFFECTED BY CONNECTION OF SERVICES.

B. WHERE CONFLICTS BETWEEN VARIOUS CODES, ORDINANCES, RULES, AND REGULATIONS EXIST, COMPLY WITH THE MOST STRINGENT. WHEREVER REQUIREMENTS OF THESE SPECIFICATIONS, DRAWINGS, OR BOTH, EXCEED THOSE OF THE ABOVE ITEMS, THE REQUIREMENTS OF THESE SPECIFICATIONS, DRAWINGS, OR BOTH, SHALL GOVERN. CODE COMPLIANCE, AT A MINIMUM, IS MANDATORY. CONSTRUE NOTHING IN THESE CONSTRUCTION DOCUMENTS AS PERMITTING WORK NOT IN COMPLIANCE, AT A MINIMUM, WITH THESE CODES.

C. BRING ALL CONFLICTS OBSERVED BETWEEN CODES, ORDINANCES, RULES, REGULATIONS, REFERENCED STANDARDS, AND THESE DOCUMENTS TO THE ENGINEER'S ATTENTION FOR FINAL RESOLUTION. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY VIOLATION OF THE LAW.

1.08 SUBSTITUTIONS

A. INCLUDE IN THE BASE BID THE PRODUCTS SPECIFICALLY NAMED IN THESE SPECIFICATIONS OR ON THE DRAWINGS. SUBMIT, IN THE FORM OF ALTERNATES, WITH BID, PRODUCTS OF ANY OTHER MANUFACTURERS FOR SIMILAR USE, PROVIDED THE DIFFERENCES IN COST, IF ANY, ARE INCLUDED FOR EACH PROPOSED ALTERNATE.

B. PRIOR TO THE BID DATE, SUBSTITUTIONS WILL NOT BE CONSIDERED UNLESS SUBMITTED TO THE ARCHITECT, FOR ENGINEER'S REVIEW, AT LEAST TEN CALENDAR DAYS PRIOR TO THE DATE FOR RECEIPT OF BIDS. INCLUDE THE NAME OF THE MATERIAL OR EQUIPMENT FOR WHICH IT IS TO BE SUBSTITUTED AND A COMPLETE DESCRIPTION OF THE PROPOSED SUBSTITUTE INCLUDING CUTSHEETS.

C. THE ENGINEER WILL HAVE THE FINAL AUTHORITY AS TO WHETHER THE LIGHT FIXTURE IS AN ACCEPTABLE REPLACEMENT TO THE SPECIFIED ITEM. THE PROPOSED SUBSTITUTION MAY ALSO BE REJECTED BY THE ARCHITECT FOR AESTHETIC REASONS IF FELT NECESSARY OR DESIRABLE. IN THE EVENT THE PROPOSED SUBSTITUTIONS HEREIN DESCRIBED ARE REJECTED, FURNISH THE SPECIFIED ITEM.

1.09 SUBMITTALS

A. THE PURPOSE OF SUBMITTALS IS TO ENSURE THAT CONTRACTOR UNDERSTANDS DESIGN REQUIREMENTS AND DEMONSTRATES UNDERSTANDING BY INDICATING AND DETAILING INTENDED MATERIALS, METHODS, AND PROPER INSTALLATION PRACTICES. IF DISCREPANCIES BETWEEN SUBMITTALS AND CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SUBMITTALS ARE REVIEWED, REQUIREMENTS OF CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE. SUBMITTALS WHICH ARE SUBMITTED, BUT WHICH ARE NOT REQUIRED BY CONTRACT DOCUMENTS, SHALL BE RETURNED NOT REVIEWED.

B. ASSEMBLE AND SUBMIT TO THE ARCHITECT, FOR ENGINEER'S REVIEW, MANUFACTURERS' PRODUCT LITERATURE FOR MATERIAL AND EQUIPMENT TO BE FURNISHED, INSTALLED, OR BOTH, UNDER THIS DIVISION, INCLUDING SHOP DRAWINGS, MANUFACTURERS' PRODUCT DATA AND PERFORMANCE SHEETS, SAMPLES, AND OTHER SUBMITTALS REQUIRED BY THIS DIVISION. PROVIDE THE NUMBER OF SUBMITTALS REQUIRED BY DIVISION 1; HOWEVER, AT A MINIMUM, SUBMIT SEVEN (7) SETS. BEFORE SUBMITTING, VERIFY THAT ALL MATERIALS AND EQUIPMENT SUBMITTED ARE MUTUALLY COMPATIBLE AND SUITABLE FOR THE INTENDED USE, FIT THE AVAILABLE SPACES, AND ALLOW AMPLE AND CODE-REQUIRED ROOM FOR ACCESS AND MAINTENANCE. SUBMITTALS SHALL CONTAIN THE FOLLOWING INFORMATION. SUBMITTALS NOT SO IDENTIFIED WILL BE RETURNED TO THE CONTRACTOR WITHOUT ACTION:

1. THE PROJECT NAME
2. THE APPLICABLE SPECIFICATION
3. THE SUBMITTAL DATE
4. THE CONTRACTOR'S STAMP, WHICH SHALL CERTIFY THAT THE STAMPED DRAWINGS HAVE BEEN CHECKED BY THE CONTRACTOR, COMPLY WITH THE DRAWINGS AND SPECIFICATIONS, AND HAVE BEEN COORDINATED WITH OTHER TRADES

C. TRANSMIT SUBMITTALS AS EARLY AS REQUIRED TO SUPPORT THE PROJECT SCHEDULE. ALLOW FOR TWO WEEKS ENGINEER REVIEW TIME, PLUS MAILING TIME, PLUS A DUPLICATION OF THIS TIME FOR RESUBMITTALS, IF REQUIRED. TRANSMIT SUBMITTALS AS SOON AS POSSIBLE AFTER NOTICE TO PROCEED AND BEFORE CONSTRUCTION STARTS. THE ENGINEER'S SUBMITTAL REVIEWS WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS IN DIMENSIONS, DETAILS, SIZE OF MEMBERS, OR QUANTITIES; OR FOR OMITTING COMPONENTS OR FITTINGS; OR FOR NOT COORDINATING ITEMS WITH ACTUAL BUILDING CONDITIONS.

1.10 RECORD DOCUMENTS

A. KEEP IN CUSTODY DURING ENTIRE PERIOD OF CONSTRUCTION, A CURRENT SET OF DOCUMENTS INDICATING CHANGES THAT HAVE BEEN MADE TO THE CONTRACT DOCUMENTS. CHANGES TO BE NOTED ON THE DOCUMENTS SHALL INCLUDE BUT SHALL NOT BE LIMITED TO, PANELBOARD, LUMINAIRE, EQUIPMENT, AND OTHER SCHEDULES; CIRCUITING; EQUIPMENT, LUMINAIRES, OR CONDUIT LOCATED MORE THAT 2 FEET (0.61 METERS) FROM WHERE SHOWN ON DRAWINGS; ELECTRICAL EQUIPMENT RATINGS; MODIFICATIONS TO SPECIFICATIONS. INCORPORATE ADDENDA, ACCEPTED ALTERNATES, CHANGE ORDERS, AND OTHER DOCUMENT REVISIONS WHICH OCCURRED AFTER THE AWARD OF THE GENERAL CONTRACT OR THE START OF CONSTRUCTION ACTIVITIES INTO THE RECORD DOCUMENTS. NOTATIONS AND CHANGES SHALL BE DONE IN A NEAT AND LEGIBLE MANNER IN ACCORDANCE WITH ARCHITECT'S INSTRUCTIONS. CHANGES SHALL BE NOTED IN RED, DELETIONS IN GREEN, AND NOTES IN BLUE.

1.12 DELIVERY, STORAGE, AND HANDLING OF MATERIALS

A. SUBMIT TO THE ARCHITECT, FOR ENGINEER'S REVIEW, COPIES EACH OF OPERATIONS AND MAINTENANCE INSTRUCTION MANUALS, APPROPRIATELY BOUND INTO MANUAL FORM INCLUDING APPROVED COPIES OF THE FOLLOWING, REVISED IF NECESSARY TO SHOW SYSTEM AND EQUIPMENT AS ACTUALLY INSTALLED. PROVIDE THE NUMBER OF SUBMITTALS REQUIRED BY DIVISION 1; HOWEVER, AT A MINIMUM, SUBMIT THREE (3) SETS, AND INCLUDE, AT A MINIMUM, THE FOLLOWING INFORMATION:

1. MANUFACTURERS' CATALOGS AND PRODUCT DATA SHEETS
2. WIRING DIAGRAMS
3. MAINTENANCE INSTRUCTIONS
4. OPERATING INSTRUCTIONS
5. PARTS LIST
6. TEST REPORTS AS DEFINED IN NETA ATS FOR THE SYSTEMS AND EQUIPMENT PROVIDED OR FURNISHED OR INSTALLED UNDER THIS CONTRACT
7. NAMES, ADDRESSES, TELEPHONE NUMBERS, AND E-MAIL ADDRESSES OF LOCAL CONTACTS FOR WARRANTEE SERVICES AND SPARE PARTS.

B. SUBMIT MANUALS PRIOR TO REQUESTING THE FINAL PUNCH LIST AND BEFORE ANY REQUESTS FOR SUBSTANTIAL COMPLETION. ALSO PROVIDE ADEQUATE VERBAL INSTRUCTIONS OF SYSTEM OPERATIONS TO OWNER'S REPRESENTATIVE AT THE COMPLETION OF, AND BEFORE FINAL ACCEPTANCE OF, THE WORK.

C. PLUG OR CAP OPEN ENDS OF CONDUITS WHILE STORED AND INSTALLED DURING CONSTRUCTION WHEN NOT IN USE TO PREVENT THE ENTRANCE OF DEBRIS INTO THE SYSTEMS.

1.14 WARRANTIES

A. WARRANT EACH SYSTEM AND EACH ELEMENT THEREOF AGAINST ALL DEFECTS DUE TO FAULTY WORKMANSHIP, DESIGN OR MATERIAL FOR A PERIOD OF 12 MONTHS FROM DATE OF SUBSTANTIAL COMPLETION, UNLESS SPECIFIC ITEMS ARE NOTED TO CARRY A LONGER WARRANTY IN THE CONSTRUCTION DOCUMENTS OR MANUFACTURER'S STANDARD WARRANTY EXCEEDS 12 MONTHS. REMEDY ALL DEFECTS, OCCURRING WITHIN THE WARRANTY PERIOD(S), AS STATED IN THE GENERAL CONDITIONS AND DIVISION.

B. ALSO WARRANT THE FOLLOWING ADDITIONAL ITEMS:

1. ALL RACEWAYS ARE FREE FROM OBSTRUCTIONS, HOLES, CRUSHING, OR BREAKS OF ANY NATURE.
2. ALL RACEWAY SEALS ARE EFFECTIVE.
3. THE ENTIRE ELECTRICAL SYSTEM IS FREE FROM ALL SHORT CIRCUITS AND UNWANTED OPEN CIRCUITS AND GROUNDS.

C. THE ABOVE WARRANTIES SHALL INCLUDE LABOR AND MATERIAL. MAKE REPAIRS OR REPLACEMENTS WITHOUT ANY ADDITIONAL COSTS TO THE OWNER.

D. AT THE TIME OF SUBSTANTIAL COMPLETION, DELIVER TO THE OWNER ALL WARRANTIES, IN WRITING AND PROPERLY EXECUTED, INCLUDING TERM LIMITS FOR WARRANTIES EXTENDING BEYOND THE ONE YEAR PERIOD, EACH WARRANTY INSTRUMENT BEING ADDRESSED TO THE OWNER AND STATING THE COMMENCEMENT DATE.

E. PERFORM THE REMEDIAL WORK PROMPTLY, UPON WRITTEN NOTICE FROM THE ENGINEER OR OWNER.

A. AT THE TIME OF SUBSTANTIAL COMPLETION, DELIVER TO THE OWNER ALL WARRANTIES, IN WRITING AND PROPERLY EXECUTED, INCLUDING TERM LIMITS FOR WARRANTIES EXTENDING BEYOND THE ONE YEAR PERIOD, EACH WARRANTY INSTRUMENT BEING ADDRESSED TO THE OWNER AND STATING THE COMMENCEMENT DATE.

PART 2 EXECUTIONS

2.01 GENERAL

A. WORKMANSHIP SHALL BE FIRST QUALITY THROUGHOUT AND SHALL BE IN COMPLETE ACCORDANCE WITH THE APPLICABLE CODES. THE APPEARANCE OF THE WORK SHALL BE OF EQUAL IMPORTANCE TO ITS OPERATION. LACK OF QUALITY WORKMANSHIP SHALL BE CONSIDERED SUFFICIENT REASON FOR REJECTION OF A SYSTEM IN PART OR IN WHOLE.

B. ALL GROUND-MOUNTED OR FLOOR-MOUNTED ELECTRICAL DISTRIBUTION EQUIPMENT, INCLUDING SWITCHBOARDS, DISTRIBUTION PANELS, MOTOR CONTROL CENTERS, TRANSFER SWITCHES, GENERATORS, AND TRANSFORMERS, SHALL BE INSTALLED AND FIRMLY ANCHORED TO A 4 INCH HIGH (10.16 CM) CONCRETE HOUSEKEEPING PAD. PAD SHALL EXTEND NO MORE THAN 2 INCHES BEYOND THE EQUIPMENT FOOTPRINT.

2.02 SUPERVISION

A. SUPERVISE WORK SO IT SHALL PROCEED IN PROPER SEQUENCE WITHOUT DELAY TO OTHER TRADES. THE SUPERINTENDENT SHALL BE ON THE PROJECT SITE FOR THE DURATION OF THE PROJECT TO ENSURE THAT CONTRACT DOCUMENTS ARE BEING FOLLOWED. A RATIO OF NOT LESS THAN 1:1 SHALL BE MAINTAINED BETWEEN JOURNEYMEN AND APPRENTICES.

B. SUBMIT RESUME OF QUALIFICATIONS AND EXPERIENCE OF THE SUPERINTENDENT FOR REVIEW BY THE ARCHITECT AND ENGINEER. SUPERINTENDENT SHALL HAVE AS A MINIMUM FIVE YEARS OF CONTINUOUS EXPERIENCE ON PROJECTS OF SIMILAR SIZE. RESUME SHALL INCLUDE A LISTING OF EXPERIENCE, PROJECTS, AND REFERENCES. SUPERINTENDENT FOR THIS PROJECT MAY NOT BE CHANGED WITHOUT APPROVAL.

2.03 PERMITS

A. SECURE AND PAY FOR ALL PERMITS REQUIRED IN CONNECTION WITH THE INSTALLATION OF THE ELECTRICAL WORK. ARRANGE WITH THE VARIOUS UTILITY COMPANIES FOR THE INSTALLATION AND CONNECTION OF ALL REQUIRED UTILITIES FOR THIS FACILITY AND PAY ALL CHARGES ASSOCIATED THEREWITH INCLUDING CONNECTION CHARGES AND INSPECTION FEES, EXCEPT WHERE THESE SERVICES OR FEES ARE DESIGNATED TO BE PROVIDED BY OTHERS

2.04 TEMPORARY ELECTRICAL SRVICE AND WIRING

A. PROVIDE 208Y/120 VOLT, THREE-PHASE, FOUR-WIRE, TEMPORARY ELECTRICAL SERVICE AND TEMPORARY LIGHTING SYSTEM TO FACILITATE CONSTRUCTION.

B. WORK FOR THE TEMPORARY POWER SHALL CONSIST OF ALL LABOR AND MATERIALS, INCLUDING, BUT NOT LIMITED TO CONDUIT, WIRING, PANELBOARDS, FUSE BLOCKS, FUSED DISCONNECTING SWITCHES, FUSES, PIGTAILS, RECEPTACLES, WOOD PANEL SWITCH SUPPORTS, AND OTHER MISCELLANEOUS MATERIALS REQUIRED TO COMPLETE THE POWER SYSTEM.

C. INSTALL ALL TEMPORARY WIRING IN ACCORDANCE WITH APPLICABLE CODES, AND MAINTAIN IN AN OSHA-APPROVED MANNER.

2.05 EXCAVATION AND BACK FILLING

A. PERFORM EXCAVATION AND BACKFILL REQUIRED FOR INSTALLATION OF UNDERGROUND WORK UNDER THIS CONTRACT. TRENCHES SHALL BE OF SUFFICIENT WIDTH. CRIB OR BRACE TRENCHES TO PREVENT CAVE-IN OR SETTLEMENT. DO NOT EXCAVATE TRENCHES CLOSE TO COLUMNS AND WALLS OF NEW BUILDING WITHOUT PRIOR CONSULTATION WITH THE ENGINEER. USE PUMPING EQUIPMENT IF REQUIRED TO KEEP TRENCHES FREE OF WATER. BACKFILL TRENCHES IN MAXIMUM 6-INCH LAYERS OF WELL TAMPED DRY EARTH IN A MANNER TO PREVENT FUTURE SETTLEMENT.

B. EXCAVATION AS HEREIN SPECIFIED SHALL BE CLASSIFIED AS COMMON EXCAVATION. COMMON EXCAVATION SHALL COMPRISE THE SATISFACTORY REMOVAL AND DISPOSITION OF MATERIAL OF WHATEVER SUBSTANCES AND OF EVERY DESCRIPTION ENCOUNTERED, INCLUDING ROCK, IF ANY, WITHIN THE LIMITS OF THE WORK AS SPECIFIED AND SHOWN ON THE DRAWINGS. EXCAVATION SHALL BE PERFORMED TO THE LINES AND GRADES INDICATED ON THE DRAWINGS. DISPOSE OF EXCAVATED MATERIALS THAT ARE CONSIDERED UNSUITABLE FOR BACKFILL, AND SURPLUS OF EXCAVATED MATERIAL, WHICH IS NOT REQUIRED FOR BACKFILL, ALL TO THE SATISFACTION OF THE ENGINEER.

2.06 CUTTING, PATCHING, OPENINGS, SLEEVES, INSERTS AND HANGERS

A. FURNISH AND INSTALL SLEEVES AND BOXES REQUIRED FOR OPENINGS IN THE STRUCTURE FOR INSTALLATION OF ELECTRICAL WORK. BE RESPONSIBLE FOR PROPER PLACEMENT OF SLEEVES AND BOXES.

B. FOLLOWING THE REQUIREMENTS IN DIVISION 1, CUT WALLS, FLOORS, CEILINGS, AND OTHER PORTIONS OF THE FACILITY AS REQUIRED TO PERFORM WORK UNDER THIS DIVISION. OBTAIN PERMISSION OF THE ENGINEER, OWNER, OR BOTH, BEFORE DOING ANY CUTTING. CUT ALL HOLES AS SMALL AS POSSIBLE. PATCH WALLS, FLOORS, AND OTHER PORTIONS OF THE FACILITY AS REQUIRED BY WORK UNDER THIS DIVISION. ALL PATCHING SHALL BE THOROUGHLY FIRST CLASS AND SHALL MATCH THE ORIGINAL MATERIAL AND CONSTRUCTION, INCLUDING FIRE RATINGS IF APPLICABLE.

2.07 COINCIDENTAL DAMAGE

A. REPAIR ALL STREETS, SIDEWALKS, DRIVES, PAVING, WALLS, FINISHES, AND OTHER FACILITIES DAMAGED IN THE COURSE OF THIS WORK. REPAIR MATERIALS SHALL MATCH EXISTING CONSTRUCTION. REPAIR MATERIALS SHALL GENERALLY MATCH EXISTING CONSTRUCTION. ALL BACKFILLING AND REPAIRING SHALL MEET ALL REQUIREMENTS OF THE OWNER, CITY AND OTHERS HAVING JURISDICTION. REPAIR WORK SHALL BE THOROUGHLY FIRST CLASS. CONFORM TO ALL REQUIREMENTS OF DIVISION 2 OF THESE SPECIFICATIONS.

2.08 PAINTING

A. SCRATCHED, CHIPPED, OR OTHERWISE MARRED ELECTRICAL EQUIPMENT SHALL BE REPAINTED TO MATCH ORIGINAL FINISH AT NO ADDITIONAL COST TO THE OWNER.

B. EQUIPMENT RECEIVED FROM MANUFACTURER WITH A PRIME COAT OF PAINT SHALL BE CLEANED, SANDED AND FURNISHED WITH A FINAL COAT OF PAINT.

C. PANELBOARDS, DISCONNECTS, AND BOXES FOR LIFE SAFETY SYSTEMS INCLUDING EMERGENCY POWER AND FIRE ALARM EQUIPMENT SHALL BE PAINTED RED.

2.09 INSTALLATION

A. INSTALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS UNLESS LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.

B. INSTALL SO THAT EQUIPMENT CAN BE EASILY SERVICED. MAINTAIN, AS A MINIMUM, CODE REQUIRED CLEARANCES.

C. PLACE OR REPLACE EQUIPMENT IDENTIFICATION IN LOCATIONS WHERE THEY CAN BE SEEN AND READ WITHOUT DIFFICULTY.

D. PERFORM WORK IN ACCORDANCE WITH GOOD COMMERCIAL PRACTICE. THE APPEARANCE OF THE FINISHED WORK SHALL BE OF EQUAL IMPORTANCE TO ITS OPERATION.

2.10 ROUGH-IN

A. COORDINATE WITHOUT DELAY ALL ROUGHING-IN WITH OTHER DIVISIONS. CONCEAL ALL RACEWAYS EXCEPT IN UNFINISHED AREAS AND WHERE OTHERWISE INDICATED ON THE DRAWINGS.

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

802 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

ELECTRICAL SPECIFICATIONS

Sheet No. E8.0

MECHANICAL SPECIFICATIONS

GENERAL

CODES, PERMITS, FEES: COMPLY WITH THE MOST RECENTLY REVISED VERSIONS OF ALL APPLICABLE LAWS, RULES, REGULATIONS, AND ORDINANCES OF FEDERAL, STATE, AND LOCAL AUTHORITIES. MODIFICATIONS REQUIRED BY THE ABOVE SAID SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. WHERE ALTERATIONS TO, AND DEVIATIONS FROM THE CONTRACT DOCUMENTS ARE REQUIRED BY SAID AUTHORITY, REPORT THE REQUIREMENTS AND SECURE APPROVAL BEFORE STARTING WORK. CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS AND PAY ALL ASSOCIATED FEES CHARGED BY THE AFOREMENTIONED AUTHORITIES.

PRECEDENCE: WHERE CONTRACT DOCUMENT REQUIREMENTS ARE IN EXCESS OF CODE REQUIREMENTS, AND ARE PERMITTED UNDER THE CODE, THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE.

VISITING THE SITE: EACH BIDDER SHALL VISIT THE SITE OF THE PROPOSED WORK AND SHALL FULLY FAMILIARIZE HIMSELF/HERSELF REGARDING THE FACILITIES. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR WORK OR MATERIAL OMITTED FROM BIDDER'S CONTRACT PROPOSAL DUE TO FAILURE TO FAMILIARIZE HIMSELF/HERSELF BY INVESTIGATION.

CLARIFICATION SHALL BE OBTAINED BEFORE SUBMITTING A PROPOSAL FOR THE WORK UNDER THIS DIVISION AS TO DISCREPANCIES OR OMISSIONS FROM THE CONTRACT DOCUMENTS, OR QUESTIONS AS TO THE INTENT THEREOF. CONSIDERATION WILL NOT BE GRANTED FOR MISUNDERSTANDING OF THE AMOUNT OF WORK TO BE PERFORMED. TENDER OF A PROPOSAL CONVEYS FULL AGREEMENT OF THE ITEMS AND CONDITIONS SPECIFIED, SHOWN ON THE DRAWINGS, AND REQUIRED BY THE NATURE OF THE PROJECT.

VERIFY ALL DIMENSIONS AT THE JOB SITE AND FROM ARCHITECTURAL PLANS.

FURNISH AND INSTALL COMPLETE MECHANICAL SYSTEMS AS INDICATED ON PLANS.

DRAWINGS:

THE DRAWINGS ARE SCHEMATIC IN NATURE AND SHOW APPROXIMATE LOCATIONS OF DUCTWORK, DIFFUSERS, AND OTHER MATERIALS AND EQUIPMENT OF THE MECHANICAL SYSTEMS EXCEPT WHERE SPECIFIED LOCATIONS ARE NOTED AND DIMENSIONED ON THE DRAWINGS. THESE ITEMS ARE SHOWN APPROXIMATELY TO SCALE IN ATTEMPT TO SHOW HOW THESE ITEMS SHOULD BE INTEGRATED WITH THE BUILDING CONSTRUCTION. LOCATE ALL THE VARIOUS ITEMS BY ON-THE-JOB MEASUREMENTS, CONFORMANCE WITH DRAWINGS, CODE REQUIREMENTS, AND IN COOPERATION WITH OTHER TRADES AND VENDORS.

PRODUCTS:

PROVIDE PRODUCTS WHICH ARE COMPATIBLE WITH OTHER PRODUCTS OF THE M.E.P. WORK AND WITH OTHER WORK REQUIRING INTERFACE WITH THE M.E.P. WORK, INCLUDING ELECTRICAL, AND PLUMBING CONNECTIONS, AND CONTROL DEVICES. FOR EXPOSED WORK, COORDINATE COLORS AND FINISHES WITH OTHER WORK. DETERMINE IN ADVANCE OF PURCHASE OF THAT EQUIPMENT AND MATERIALS PROPOSED FOR INSTALLATION WILL FIT INTO THE CONFINES INDICATED, LEAVING ADEQUATE CLEARANCE AS REQUIRED BY ALL APPLICABLE CODES, AND FOR ADJUSTMENT, REPAIR, OR REPLACEMENT. MATERIALS AND PRODUCTS OF MANUFACTURERS OTHER THAN THOSE LISTED HEREIN REQUIRE APPROVAL OF THE OWNER IN WRITING PRIOR TO SUBMITTAL OF SHOP DRAWINGS AND PRODUCT DATA.

EXECUTION:

ALL WORK SHALL BE EXECUTED IN A PROFESSIONAL MANNER, AND SHALL INCLUDE ALL LABOR AND MATERIALS REQUIRED TO PROVIDE FUNCTIONING SYSTEMS AS DESCRIBED. LOCATE OPERATING AND CONTROL EQUIPMENT PROPERLY TO PROVIDE EASY ACCESS, AND MAINTENANCE, AND ARRANGE ENTIRE M.E.P. WORK WITH ADEQUATE ACCESS FOR OPERATION AND MAINTENANCE, AND FOR PROPER CODE CLEARANCES. ADVISE ALL OTHER TRADES OF OPENINGS REQUIRED IN THEIR WORK FOR THE SUBSEQUENT INSTALLATION OF THE MECHANICAL EQUIPMENT.

PRIOR TO THE START OF ANY CUTTING OPERATIONS, VERIFY WITH OWNER'S REPRESENTATIVE AND OTHER INTERESTED PARTIES, THAT ALL AVAILABLE INFORMATION HAS BEEN PROVIDED. VERIFY LOCATIONS GIVEN. SHOULD OBSTRUCTIONS BE ENCOUNTERED, WHETHER INDICATED ON PLANS OR NOT, ALTER ROUTING OF NEW WORK, REMOVE OBSTRUCTIONS (WHERE PERMITTED), OR OTHERWISE PERFORM WHATEVER WORK IS NECESSARY TO SATISFY THE PURPOSE OF THE NEW WORK, LEAVING EXISTING SERVICES IN A SATISFACTORY AND SERVICEABLE CONDITION.

A/C EQUIPMENT:

A COMPLETE SUMMER AND WINTER AIR CONDITIONING SYSTEM SHALL BE INSTALLED AND SHALL CONSIST OF ELECTRIC, SELF CONTAINED ROOFTOP UNITS WITH ELECTRIC HEAT, DUCTWORK, DIFFUSERS, AND CONTROLS.

THE ROOFTOP UNITS SHALL BE TRANE, CARRIER, LENNOX, OR YORK.

AS A MINIMUM THE HVAC EQUIPMENT SHALL PRODUCE THE COOLING AND HEATING CAPACITIES AS SCHEDULED ON THE PLANS.

PROVIDE PACKAGED ROOFTOP UNITS WITH THE FOLLOWING ACCESSORIES:

A. SINGLE SOURCE POWER ENTRY KIT, THERMOSTAT, FRESH AIR HOOD WITH TWO POSITION (ADJUSTABLE) AUTOMATIC FRESH AIR DAMPER AND ANTI-SHORT CYCLE TIMER.
B. FULL PERIMETER INSULATED ROOF MOUNTING CURB.
C. THROWAWAY FILTERS. SIZE PER MANUFACTURERS RECOMMENDATIONS.
D. SMOKE DETECTOR IN THE SUPPLY AND RETURN AIR DUCT OF EACH UNIT.
E. LOW AMBIENT CONTROL.

A/C CONTROL SYSTEMS:

THE COOLING AND HEATING SYSTEM CONTROL THERMOSTATS SHALL BE PROGRAMMABLE JOHNSON CONTROLS T500 SERIES OR HONEYWELL T7300 WITH SUB-BASE. T'STATS SHALL BE LOCATED WHERE INDICATED ON DRAWINGS. COORDINATE FINAL LOCATION OF T'STATS WITH TENANT SO THEY DO NOT CONFLICT WITH DECOR OR FIXTURES.

MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL WIRING BETWEEN THERMOSTAT AND RTU. WIRING SHALL BE AS SPECIFIED BY THE EQUIPMENT MANUFACTURER.

PROVIDE AN IONIZATION TYPE SMOKE DETECTOR IN THE SUPPLY AND RETURN AIR DUCTS. RTU SHALL BE DE-ENERGIZED WHEN SMOKE IS DETECTED BY EITHER DETECTOR.

EXHAUST SYSTEM:

AN EXHAUST AIR SYSTEM SHALL BE INSTALLED FOR THE REST ROOMS AS INDICATED ON THE DRAWING. THE ROOF MOUNTED EXHAUST FAN SHALL BE PROVIDED WITH A BACKDRAFT DAMPER AT INTAKE. PROVIDE FULL PERIMETER ROOF MOUNTING CURB.

REFER TO ELECTRICAL DRAWINGS FOR EXHAUST FAN CONTROLS.

DUCTWORK:

ALL DUCTWORK SHALL BE GALVANIZED STEEL METAL. SHEET METAL SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SMACNA, LOCAL AND STATE CODES, AND ASHRAE SPECIFICATIONS FOR LOW VELOCITY DUCTWORK. DIMENSIONS INDICATED ON PLANS INDICATE FREE FLOW AREA.

THE FOLLOWING ARE GENERAL REQUIREMENTS:

A. MAKE DUCT SIZE CHANGES GRADUALLY, NOT EXCEEDING 15° DIVERGENCE EXCEPT AS SPECIFIED BELOW:
   1. DISCHARGE FROM AIR HANDLING UNITS AND FANS MAY DIVERGE A MAXIMUM OF 30°.
   2. DUCT SIZE DECREASES IN THE DIRECTION OF FLOW MAY CONVERGE A MAXIMUM OF 30°.
B. LEAKAGE: 5% OF SYSTEM AIR FLOW MAXIMUM.

THE FOLLOWING ARE RECTANGULAR SHEET METAL DUCTWORK REQUIREMENTS:

A. SHEET METAL SHALL BE "LOCK FORMING QUALITY" G-60 HOT DIPPED COATED GALVANIZED STEEL IN CONFORMANCE WITH ASTM A-525 AND ASTM A-527.
B. LAP METAL DUCTS IN DIRECTION OF AIR FLOW. ALL DUCT INTERIOR SURFACES SHALL BE SMOOTH, WITHOUT ANGLES, TABS OR SHEET METAL PROTRUDING INTO THE DUCTWORK. ALL SEAMS AND JOINTS SHALL BE EXTERNAL.
C. PROVIDE CROSS-BREAKING OR MECHANICAL TRAVERSE BEADING FOR ALL DUCTWORK 19-INCHES AND WIDER AND ARE 20-GAUGE OR LESS WITH MORE THAN 10 SQUARE FEET OF UNBRACED PANEL AREA UNLESS THEY ARE LINED OR ARE EXTERNALLY INSULATED.
D. AT CONTRACTOR'S OPTION, DUCTWORK MAY BE JOINED WITH EP 12/11 PREFABRICATED GALVANIZED "DUCTMATE" SECTIONS.

ALL METAL RECTANGULAR RETURN AIR AND EXPOSED RECTANGULAR SUPPLY AIR DUCTWORK SHALL BE EXTERNALLY LINED WITH 2" THICK DUCT LINER. ALL ROUND METAL SUPPLY AND RETURN AIR DUCTWORK SHALL BE INTERNALLY LINED WITH 1"2" THICK DUCT LINER. EXTERIOR WRAPPED FIBERGLASS INSULATION WITH FSK BARRIER. INSULATION SHALL BE MANUFACTURED BY OWENS-CORNING, JOHNS MANVILLE, OR AN APPROVED SUBSTITUTION.

FURNISH SPIN-IN CIRCULAR VOLUME DAMPERS, BRANCH CONNECTIONS, REGISTERS, AND DIFFUSER CONNECTIONS TO DUCTWORK AND AS INDICATED ON PLANS. TURNING VANES ARE REQUIRED AT EACH TURN IN THE DUCT.

INSULATED FLEXIBLE DUCT, SIMILAR TO THERMAFLEX MODEL M-KE, MAY BE USED FOR SINGLE DIFFUSER OR REGISTER TAPS FROM CONCEALED TRUNK DUCT SYSTEMS ONLY. LIMIT LENGTH OF ALL FLEXIBLE DUCT RUNS TO 6'-0". WHERE LONGER RUNS ARE REQUIRED, COMBINE FLEXIBLE DUCT WITH RIGID ROUND DUCT (GALVANIZED SHEET METAL). ROUTE FLEXIBLE DUCT TO AVOID SHARP BENDS OR KINKING.

CONDENSATE AND EQUIPMENT DRAIN PIPING:

SCHEDULE 40 GALVANIZED STEEL PIPE, ASTM A53, WITH GALVANIZED MALLEABLE IRON FITTINGS, ANSI B6.3, OR TYPE L HARD DRAWN COPPER. PROVIDE A 2" DEEP MINIMUM P-TRAP SEAL AT THE UNIT. SLOPE DRAIN LINE AT 1/8"/FT (MINIMUM).

INSULATE ALL CONDENSATE PIPE TO TERMINATION AT FLOOR DRAIN. USE FLEXIBLE CLOSED CELL, FOAMED PLASTIC 1/2" THICK INSULATION SIMILAR TO ARMSTRONG "ARMAFLEX" WITH "K" VALUE NOT HIGHER THAN 0.28 AT 75°F MEAN TEMPERATURE DIFFERENCE.

ROUTE CONDENSATE AS NOTED ON THE DRAWINGS.

AIR DISTRIBUTION DEVICES:

FURNISH AND INSTALL ALL AIR DISTRIBUTION DEVICES AND ASSOCIATED ACCESSORIES AS SHOWN AND SCHEDULED ON PLANS.

PROJECT COMPLETION:

AIR CONDITIONING UNITS SHALL BE BALANCED AND TESTED. BALANCE AIR QUANTITIES TO EACH SPACE WITHIN 10% OF VALUE INDICATED. BALANCE AND TEST REPORT MUST BE PRESENTED TO OWNER AS PART OF ACCEPTANCE OF SPACE.

PROVIDE A SET OF OPERATION AND MAINTENANCE MANUALS FOR ALL HVAC EQUIPMENT TO OWNER.

CHANGE FILTER MEDIA AND ADJUST REFRIGERANT CHARGE UPON COMPLETION OF CONSTRUCTION.

HVAC DEVICES

DAMPERS

- AVS — AIR VOLUME TRAVERSE STATION
- ACD — AUTOMATIC CONTROL DAMPER WITH ACCESS DOOR
- BDD — BACKDRAFT DAMPER
- FD — FIRE DAMPER AND ACCESS DOOR
- MD — MOTORIZED DAMPER
- SGD — SLIDE GATE DAMPER
- SD — SMOKE DAMPER AND ACCESS DOOR
- FSD — SMOKE/FIRE DAMPER AND ACCESS DOOR
- VD — MANUAL VOLUME DAMPER

SENSORS

- H — HUMIDITY SENSOR OR HUMIDISTAT
- RS — REMOTE TEMPEATURE SENSOR
- SD — SMOKE DETECTOR
- P — STATIC PRESSURE SENSOR
- T — TEMPERATURE SENSOR OR THERMOSTAT

LEGEND NOTES

THIS SHEET IS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS AND SHALL BE USED AS A DICTIONARY TO DEFINE ITEMS INDICATED ON DRAWINGS. NOT ALL SYMBOLS OR ABBREVIATIONS ARE NECESSARILY USED ON THIS PROJECT.

HVAC NOTES AND DESIGNATIONS

- AHU-1 — AIR HANDLING UNIT #1
- CU-1 — CONDENSING UNIT #1
- SD — SMOKE DETECTOR
- A1 12x10 350 2 TYP. — DIFFUSER CALLOUT: "A" = TYPE AIR DEVICE, "1" = MOUNTING TYPE, "12x10" = NECK SIZE, "350" = AIR VOLUME, "2 TYP." = TYPICAL QUANTITY.
- EF-1 — EXHAUST FAN #1
- FCU-1 — FAN COIL UNIT #1
- 1, 2 — NOTE DESIGNATIONS
- 1 — REVISION MARKER
- RETURN/EXHAUST AIR FLOW MARKER
- DS 1 — RISER DIAGRAM DESIGNATION
- RTU-1 — ROOF TOP UNIT #1
- 1 M-1 — SECTION DESIGNATION
- SUPPLY AIR FLOW MARKER
- SF-1 — SUPPLY FAN #1

GENERAL DUCTWORK

SINGLE LINE	DOUBLE LINE	(ROUND) SINGLE LINE	(ROUND) DOUBLE LINE	
				EXHAUST DUCT DOWN
				EXHAUST DUCT UP
				EXISTING DUCT DOWN
				EXISTING DUCT UP
				RETURN DUCT DOWN
				RETURN DUCT UP
				SUPPLY DUCT DOWN
				SUPPLY DUCT UP

HVAC AIR DIFFUSERS

- EXHAUST/RETURN AIR SIDEWALL DIFFUSER
- SUPPLY AIR SIDEWALL DIFFUSER
- STANDARD EXHAUST AIR DIFFUSER
- STANDARD RETURN AIR DIFFUSER
- STANDARD SUPPLY AIR DIFFUSERS (RECTANGULAR AND ROUND)
- EXISTING SIDEWALL DIFFUSERS (EXHAUST/RETURN AND SUPPLY)
- EXISTING STANDARD AIR DIFFUSERS (EXHAUST/RETURN/SUPPLY)
- ROOF EXHAUST FAN SHOWN ON FLOOR PLAN
- ROOF EXHAUST FAN SHOWN ON ROOF

GENERAL HVAC ABBREVIATIONS

°F	DEGREES FAHRENHEIT	ID	INSIDE DIAMETER
°C	DEGREES CELSIUS	IN	INCHES
ø	DIAMETER	INSUL	INSULATION
ACV	AUTOMATIC CONTROL VALVE	KW	KILOWATT
AD	ACCESS DOOR	KVA	KILOVOLT AMPERE
ADJ	ADJUSTABLE	L	LENGTH
ADDL	ADDITIONAL	LB	POUND
AFF	ABOVE FINISHED FLOOR	LF	LINEAR FEET
AFG	ABOVE FINISHED GRADE	LVG	LEAVING
ALT	ALTERNATE	M	ONE THOUSAND
AP	ACCESS PANEL	MAX	MAXIMUM
ARCH	ARCHITECT	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
ATC	AUTOMATIC TEMPERATURE CONTROL	MCA	MINIMUM CIRCUIT AMPS
ATCD	ATC COMPRESSOR DRYER	MCC	MOTOR CONTROL CENTER
ATCR	ATC COMPRESSOR RECEIVER	MECH	MECHANICAL
ATV	ATMOSPHERIC VENT	MEZZ	MEZZANINE
AS	AIR SEPARATOR	MFR	MANUFACTURER
AVG	AVERAGE	MIN	MINIMUM
BAS	BUILDING AUTOMATION SYSTEM	MTD	MOUNTED
BFF	BELOW FINISHED FLOOR	MU	MAKEUP WATER
BHP	BRAKE HORSEPOWER	N/A	NOT APPLICABLE
BLDG	BUILDING	NC	NORMALLY CLOSED
BLR	BOILER	NC	NOISE CRITERIA
BOD	BOTTOM OF DUCT	NIC	NOT IN CONTRACT
BOP	BOTTOM OF PIPE	NO	NORMALLY OPEN
BSMT	BASEMENT	NO.	NUMBER
BTU	BRITISH THERMAL UNIT	NOM	NOMINAL
BTUH	BRITISH THERMAL UNIT PER HOUR	NTS	NOT TO SCALE
C	CONVECTOR	OB	OCTAVE BAND
CA	COMPRESSED AIR	OC	ON CENTER
CF	CEILING FAN	OD	OUTSIDE DIAMETER
CL	CENTERLINE	ODP	OPEN DRIP PROOF
CLG	CEILING	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CO	CLEAN-OUT	OFOI	OWNER FURNISHED OWNER INSTALLED
COL	COLUMN	OV	OUTLET VELOCITY
COMP	COMPRESSOR	PCF	POUNDS PER CUBIC FOOT
CONC	CONCRETE	PD	PRESSURE DROP
CONN	CONNECTION	PH	PHASE
CONTR	CONTRACTOR	PLBG	PLUMBING
CORR	CORRIDOR	POS	PROVIDED BY OTHER SECTION(S)
CUF	CUBIC FEET	PRESS	PRESSURE
CUH	CABINET UNIT HEATER	PRIM	PRIMARY
CYL	CYLINDER	PSIA	POUNDS PER SQUARE INCH ABSOLUTE
D	DRAIN	PSID	POUNDS PER SQUARE INCH DIFFERENTIAL
DB	DRY BULB TEMPERATURE	PSIG	POUNDS PER SQUARE INCH GAUGE
DDC	DIRECT DIGITAL CONTROL	PVC	POLYVINYL CHLORIDE
DDCFP	DIRECT DIGITAL CONTROL FIELD PANEL	REP	REPRESENTATIVE
DIA	DIAMETER	RET	RETURN
DIM	DIMENSION	REQD	REQUIRED
DN	DOWN	REQS	REQUIREMENTS
DWG	DRAWING	RH	RELATIVE HUMIDITY
EA	EACH	RM	ROOM
EAT	ENTERING AIR TEMPERATURE	RPM	REVOLUTIONS PER MINUTE
EFF	EFFICIENCY	SCH	SCHEDULE
ECUH	ELECTRIC CABINET UNIT HEATER	SOV	SOLENOID OPERATED VALVE
ELEC	ELECTRICAL	SPECS	SPECIFICATIONS
ELEV	ELEVATION	SQ	SQUARE
EMER	EMERGENCY	SQFT	SQUARE FEET
ENT	ENTERING	SS	STAINLESS STEEL
EQUIP	EQUIPMENT	STD	STANDARD
EXH	EXHAUST	STDBY	STANDBY
EXP	EXPANSION	STL	STEEL
FTR	FINNED TUBE RADIATION	SUCT	SUCTION
FCV	FLOW CONTROL VALVE	SUP	SUPPLY
FG	FIBERGLASS	TA	THROW-AWAY
FLEX	FLEXIBLE	TAV	THERMOSTATIC AIR VENT
FLR	FLOOR	TEFC	TOTALLY ENCLOSED FAN COOLED
FLRDR	FLOOR DRAIN	TEL	TELEPHONE
FP	FIRE PROTECTION	TEMP	TEMPERATURE
FPM	FEET PER MINUTE	TOD	TOP OF DUCT
FT	FEET	TOP	TOP OF PIPE
FT/SEC	FEET PER SECOND	TYP	TYPICAL
FURN	FURNISHED	UH	UNIT HEATER
FVNR	FULL VOLTAGE NON-REVERSING		VENT
G	GAS	VEL	VELOCITY
GA	GAUGE	VERT	VERTICAL
GAL	GALLONS	VFD	VARIABLE FREQUENCY DRIVE
GALV	GALVANIZED	VTR	VENT THROUGH ROOF
GC	GENERAL CONTRACTOR		WIDTH
GND	GROUND	W/	WITH
GPH	GALLONS PER HOUR	W/O	WITHOUT
GPM	GALLONS PER MINUTE	WB	WET BULB TEMPERATURE
GRD	GRADE (GROUND LEVEL)	WF	WIDE FLANGE
GWB	GYPSUM WALL BOARD	WG	WATER GAUGE
HD	HEAD	WRT	WITH RESPECT TO
HP	HORSEPOWER		
HR	HOUR		
HZ	HERTZ		
HX	HEAT EXCHANGER		

1 MECHANICAL SYMBOLS & ABBREVIATIONS

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

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

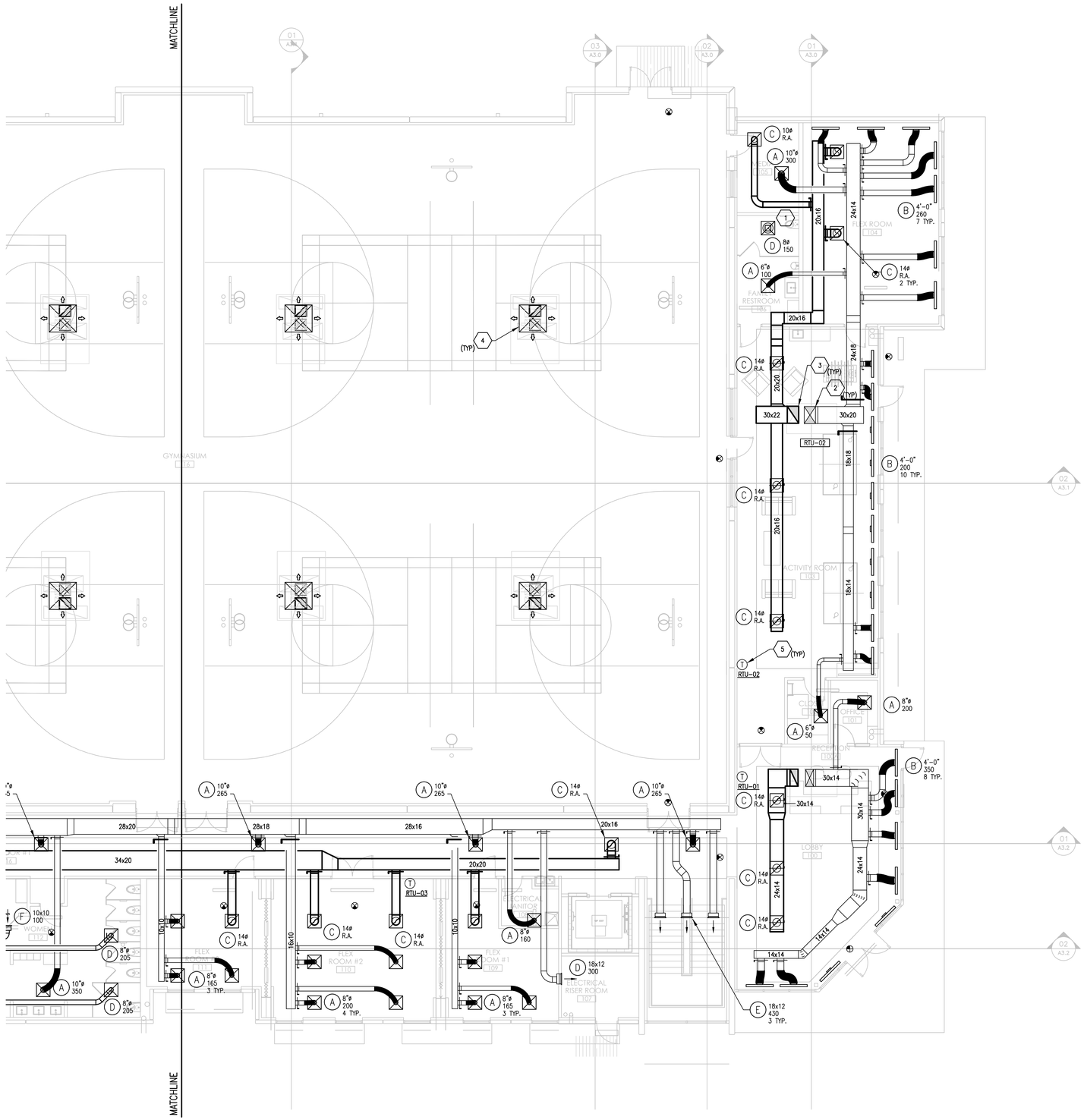
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

MECHANICAL SYMBOLS & ABBREVIATIONS

Sheet No. M1.01



4 FLOOR PLAN

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

1. COORDINATE ALL WORK WITH EACH SUB CONTRACTOR AND GENERAL CONTRACTOR AND GENERAL CONTRACTOR (STRUCTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING) PRIOR TO INSTALLATION AND CONNECTION OF EQUIPMENT.
2. PROVIDE VOLUME DAMPER AT SPIN-IN CONNECTION OF DIFFUSER OR BRANCH, INCLUDING THOSE CONNECTING TO BOTTOM OF MAIN TRUNK.
3. MAXIMUM ALLOWABLE FLEXIBLE DUCT LENGTH TO DIFFUSER IS 6'-0". COORDINATE FINAL LOCATION OF THERMOSTATS WITH OWNER/ ARCHITECT.
4. INSTALL DUCTWORK AS HIGH AS POSSIBLE.
5. ALL WORK TO MEET WITH THE 2021 INTERNATIONAL MECHANICAL CODE.
6. MECHANICAL CONTRACTOR TO VERIFY EXACT PLACEMENT OF SUPPLY & RETURN AIR DEVICES WITH REFLECTED CEILING LIGHTING LOCATIONS AND ARCHITECTURAL DRAWINGS FOR STRUCTURE TYPE.
7. DO NOT SCALE PLAN ROUGH-INS FOR ALL EQUIPMENT AND DEVICES SHALL BE BASED ON THE ARCHITECTURAL PLANS.
8. CONTRACTOR SHALL LOCATE DUCTWORK IN ATTIC/ CEILING SPACE IN ACCORDANCE WITH TRUSS, BEAM & FRAMING LOCATION. PROVIDE DUCT OFFSETS AS REQUIRED DUE TO TRUSS/BEAM/FRAMING LOCATION. ADJUST DUCT SIZE, ASPECT RATIO, TO FIT WITHIN AVAILABLE SPACE.

1 GENERAL NOTES

SCALE: none

1. EXHAUST DUCT UP TO EXHAUST FAN ON ROOF. TRANSITION AS REQUIRED TO CONNECT TO ROOF CURB OPENING.
2. SUPPLY AIR DUCT UP TO RTU ON ROOF. TRANSITION DUCTWORK AS REQUIRED TO CONNECT TO ROOF CURB OPENING.
3. RETURN AIR DUCT UP TO RTU ON ROOF. TRANSITION DUCTWORK AS REQUIRED TO CONNECT TO ROOF CURB OPENING.
4. PROVIDE 48"x48" TITUS CSR-P OR EQUAL. COORDINATE FINAL MOUNTING HEIGHT WITH ARCHITECT/ OWNER. TRANSITION SUPPLY/ RETURN AIR DUCTWORK AS REQUIRED TO CONNECT TO PLENUM OPENING. CONTRACTOR SHALL PROVIDE ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION.
5. PROVIDE AND INSTALL PROGRAMMABLE THERMOSTAT. MOUNT PER ADA REQUIREMENTS. COORDINATE FINAL LOCATION WITH OWNER AND ARCHITECT. TYPICAL ALL THERMOSTATS.

2 KEYED NOTES

SCALE: none

1. PROVIDE MORGAN THERMAL CERAMICS: DUCT WRAP TYPE PYROCAT DUCTWRAP XL AND TESTED PER ASTME 2336. THIS PRODUCT SHALL MEET OR EXCEED THE REQUIREMENTS OF SECTION 507.2.3. 2006 HMC. INSULATION SHALL EXTEND FROM KITCHEN HOOD(S) TO DISCHARGE LOCATION. APPLY 2 LAYERS TO PROVIDE 2 HOUR FIRE PROTECTION TO GREASE DUCTS EXHAUSTING TYPE I HOODS PER 2006 IMC, NFPA 96, AND 2006 IAPMO UMC.
2. KITCHEN VENTILATION SYSTEMS (CLEANOUTS & OTHER OPENINGS) GREASE DUCT SYSTEMS SHALL NOT HAVE OPENINGS OTHER THAN THOSE REQUIRED FOR PROPER OPERATION AND MAINTENANCE OF THE SYSTEM. ANY PORTION OF SUCH SYSTEM HAVING SECTIONS INACCESSIBLE FROM THE DUCT ENTRY OR DISCHARGE SHALL BE PROVIDED WITH ADEQUATE CLEANOUT OPENINGS AFTER EVERY 90° TURN. CLEANOUT OPENINGS SHALL BE EQUIPPED WITH TIGHT FITTING DOORS CONSTRUCTED OF STEEL HAVING A THICKNESS NOT LESS THAN THAT REQUIRED FOR THE DUCT. DOORS SHALL BE EQUIPPED A SUBSTANTIAL METHOD OF LATCHING, SUFFICIENT TO HOLD THE DOOR TIGHTLY CLOSED. DOORS SHALL BE DESIGNED THAT THEY CAN BE OPENED WITHOUT THE USE OF A TOOL. PROVIDE 1/4" PER FOOT SLOPE TOWARDS THE HOOD. DUCT SHALL BE FABRICATED OF 16 GAUGE BLACK STEEL.
3. REFER TO KITCHEN CONSULTANT PLANS FOR THE KITCHEN HOOD(S) MODEL AND MANUFACTURER INFORMATION; WALK-IN COOLER AND FREEZE IN REGARDS TO VOLUME OF UNITS, TYPE OF REFRIGERANT, POUNDS OF THE REFRIGERANT, HORSEPOWER AND LOCATION OF THE COMPRESSOR AND VAPOR DETECTION IF REFRIGERANT EXCEEDS THE AMOUNT PER UMC SECTION 1121-2000.
4. REFER TO THE KITCHEN CONSULTANT'S PLANS/SCHEDULES FOR THE CORRECT CFM OF EXHUAST AND SUPPLY TO EACH HOOD.
5. ALL WORK TO MEET WITH THE CITY OF HOUSTON AMENDMENTS AND MECHANICAL BUILDING CODE REQUIREMENTS.
6. KITCHEN GREASE EXHAUST DUCTS SHALL BE SLOPED BACK TOWARD THE HOODS PER LOCAL CODES.

3 KITCHEN NOTES

SCALE: none

Date issued/revised

12/6/2022 ISSUED FOR PRICING

-

-

-

-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

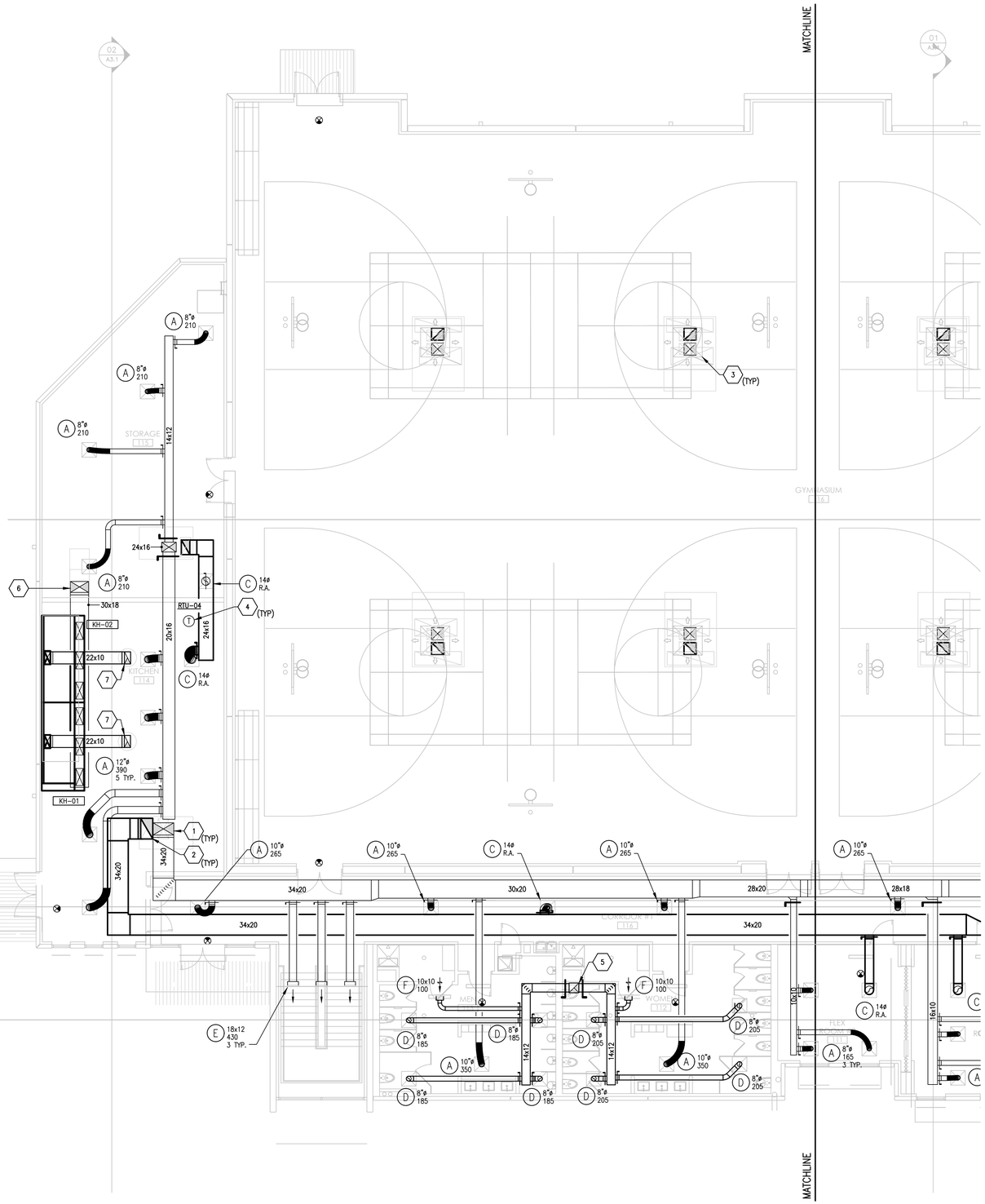
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

MECHANICAL
PARTIAL FIRST FLOOR

Sheet No. M2.01



4 FLOOR PLAN — SCALE: 1/8"=1'-0"

1. COORDINATE ALL WORK WITH EACH SUB CONTRACTOR AND GENERAL CONTRACTOR AND GENERAL CONTRACTOR (STRUCTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING) PRIOR TO INSTALLATION AND CONNECTION OF EQUIPMENT.
2. PROVIDE VOLUME DAMPER AT SPIN-IN CONNECTION OF DIFFUSER OR BRANCH, INCLUDING THOSE CONNECTING TO BOTTOM OF MAIN TRUNK.
3. MAXIMUM ALLOWABLE FLEXIBLE DUCT LENGTH TO DIFFUSER IS 6'-0". COORDINATE FINAL LOCATION OF THERMOSTATS WITH OWNER/ ARCHITECT.
4. INSTALL DUCTWORK AS HIGH AS POSSIBLE.
5. ALL WORK TO MEET WITH THE 2009 CITY OF HOUSTON CODE AMENDMENTS REQUIREMENTS.
6. MECHANICAL CONTRACTOR TO VERIFY EXACT PLACEMENT OF SUPPLY & RETURN AIR DEVICES WITH REFLECTED CEILING LIGHTING LOCATIONS AND ARCHITECTURAL DRAWINGS FOR STRUCTURE TYPE.
7. DO NOT SCALE PLAN ROUGH-INS FOR ALL EQUIPMENT AND DEVICES SHALL BE BASED ON THE ARCHITECTURAL PLANS.
8. CONTRACTOR SHALL LOCATE DUCTWORK IN ATTIC/ CEILING SPACE IN ACCORDANCE WITH TRUSS, BEAM & FRAMING LOCATION. PROVIDE DUCT OFFSETS AS REQUIRED DUE TO TRUSS/BEAM/FRAMING LOCATION. ADJUST DUCT SIZE, ASPECT RATIO, TO FIT WITHIN AVAILABLE SPACE.

1 GENERAL NOTES — SCALE: none

1. SUPPLY AIR DUCT UP TO RTU ON ROOF. TRANSITION DUCTWORK AS REQUIRED TO CONNECT TO ROOF CURB OPENING.
2. RETURN AIR DUCT UP TO RTU ON ROOF. TRANSITION DUCTWORK AS REQUIRED TO CONNECT TO ROOF CURB OPENING.
3. PROVIDE 48"x48" TITUS CSR-P OR EQUAL. COORDINATE FINAL MOUNTING HEIGHT WITH ARCHITECT/ OWNER. TRANSITION SUPPLY/ RETURN AIR DUCTWORK AS REQUIRED TO CONNECT TO PLENUM OPENING. CONTRACTOR SHALL PROVIDE ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION.
4. PROVIDE AND INSTALL PROGRAMMABLE THERMOSTAT. MOUNT PER ADA REQUIREMENTS. COORDINATE FINAL LOCATION WITH OWNER AND ARCHITECT. TYPICAL ALL THERMOSTATS.
5. EXHAUST AIR DUCTWORK UP TO FLOOR ABOVE IN CHASE. PROVIDE FIRE DAMPER IN FLOOR PENETRATION. INSTALL FIRE DAMPER PER LOCAL BUILDING CODE REQUIREMENTS. SEAL PENETRATION AS REQUIRED PER LOCAL CODE.
6. SUPPLY AIR DUCT UP TO MAKEUP AIR FAN ON ROOF. TRANSITION DUCTWORK AS REQUIRED TO CONNECT TO ROOF CURB OPENING.
7. EXHAUST AIR DUCT UP TO EXHAUST FAN ON ROOF. TRANSITION DUCTWORK AS REQUIRED TO CONNECT TO ROOF CURB OPENING.

2 KEYED NOTES — SCALE: none

1. PROVIDE MORGAN THERMAL CERAMICS: DUCT WRAP TYPE PYROCAT DUCTWRAP XL AND TESTED PER ASTME 2336. THIS PRODUCT SHALL MEET OR EXCEED THE REQUIREMENTS OF SECTION 507.2.3, 2006 HMC. INSULATION SHALL EXTEND FROM KITCHEN HOOD(S) TO DISCHARGE LOCATION. APPLY 2 LAYERS TO PROVIDE 2 HOUR FIRE PROTECTION TO GREASE DUCTS EXHAUSTING TYPE I HOODS PER 2006 IMC, NFPA 96, AND 2006 IAPMO UMC.
2. KITCHEN VENTILATION SYSTEMS (CLEANOUTS & OTHER OPENINGS) GREASE DUCT SYSTEMS SHALL NOT HAVE OPENINGS OTHER THAN THOSE REQUIRED FOR PROPER OPERATION AND MAINTENANCE OF THE SYSTEM. ANY PORTION OF SUCH SYSTEM HAVING SECTIONS INACCESSIBLE FROM THE DUCT ENTRY OR DISCHARGE SHALL BE PROVIDED WITH ADEQUATE CLEANOUT OPENINGS AFTER EVERY 90' TURN. CLEANOUT OPENINGS SHALL BE EQUIPPED WITH TIGHT FITTING DOORS CONSTRUCTED OF STEEL HAVING A THICKNESS NOT LESS THAN THAT REQUIRED FOR THE DUCT. DOORS SHALL BE EQUIPPED A SUBSTANTIAL METHOD OF LATCHING, SUFFICIENT TO HOLD THE DOOR TIGHTLY CLOSED. DOORS SHALL BE DESIGNED THAT THEY CAN BE OPENED WITHOUT THE USE OF A TOOL. PROVIDE 1/4" PER FOOT SLOPE TOWARDS THE HOOD. DUCT SHALL BE FABRICATED OF 16 GAUGE BLACK STEEL.
3. REFER TO KITCHEN CONSULTANT PLANS FOR THE KITCHEN HOOD(S) MODEL AND MANUFACTURER INFORMATION; WALK-IN COOLER AND FREEZE IN REGARDS TO VOLUME OF UNITS, TYPE OF REFRIGERANT, POUNDS OF THE REFRIGERANT, HORSEPOWER AND LOCATION OF THE COMPRESSOR AND VAPOR DETECTION IF REFRIGERANT EXCEEDS THE AMOUNT PER UMC SECTION 1121-2000.
4. REFER TO THE KITCHEN CONSULTANT'S PLANS/SCHEDULES FOR THE CORRECT CFM OF EXHUAST AND SUPPLY TO EACH HOOD.
5. ALL WORK TO MEET WITH THE CITY OF HOUSTON AMENDMENTS AND MECHANICAL BUILDING CODE REQUIREMENTS.
6. KITCHEN GREASE EXHAUST DUCTS SHALL BE SLOPED BACK TOWARD THE HOODS PER LOCAL CODES.

3 KITCHEN NOTES — SCALE: none

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

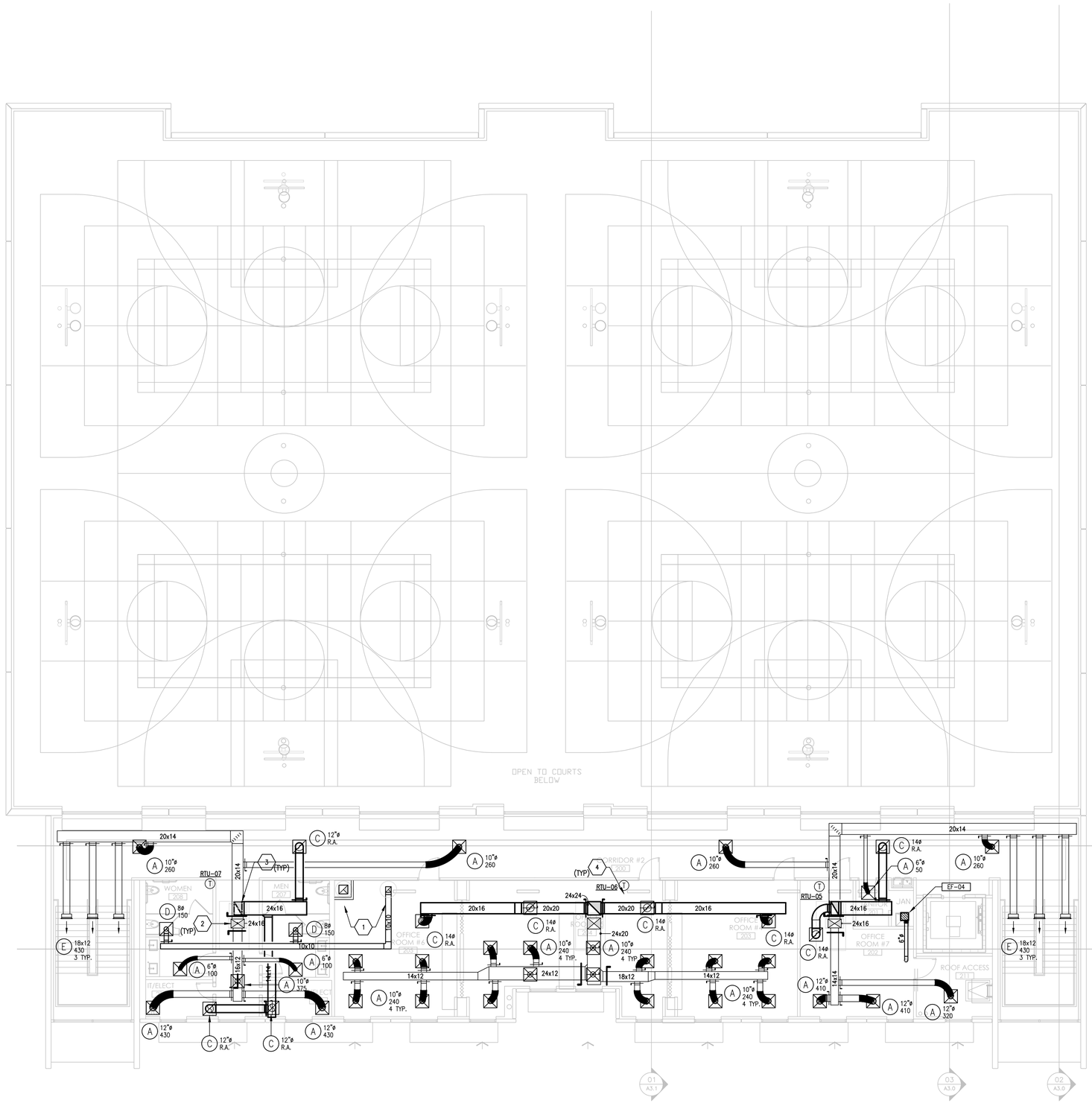
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

MECHANICAL
PARTIAL FIRST FLOOR

Sheet No. M2.02



4 FLOOR PLAN

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

1. COORDINATE ALL WORK WITH EACH SUB CONTRACTOR AND GENERAL CONTRACTOR AND GENERAL CONTRACTOR (STRUCTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING) PRIOR TO INSTALLATION AND CONNECTION OF EQUIPMENT.
2. PROVIDE VOLUME DAMPER AT SPIN-IN CONNECTION OF DIFFUSER OR BRANCH, INCLUDING THOSE CONNECTING TO BOTTOM OF MAIN TRUNK.
3. MAXIMUM ALLOWABLE FLEXIBLE DUCT LENGTH TO DIFFUSER IS 6'-0". COORDINATE FINAL LOCATION OF THERMOSTATS WITH OWNER/ ARCHITECT.
4. INSTALL DUCTWORK AS HIGH AS POSSIBLE.
5. ALL WORK TO MEET WITH THE 2009 CITY OF HOUSTON CODE AMENDMENTS REQUIREMENTS.
6. MECHANICAL CONTRACTOR TO VERIFY EXACT PLACEMENT OF SUPPLY & RETURN AIR DEVICES WITH REFLECTED CEILING LIGHTING LOCATIONS AND ARCHITECTURAL DRAWINGS FOR STRUCTURE TYPE.
7. DO NOT SCALE PLAN ROUGH-INS FOR ALL EQUIPMENT AND DEVICES SHALL BE BASED ON THE ARCHITECTURAL PLANS.
8. CONTRACTOR SHALL LOCATE DUCTWORK IN ATTIC/ CEILING SPACE IN ACCORDANCE WITH TRUSS, BEAM & FRAMING LOCATION. PROVIDE DUCT OFFSETS AS REQUIRED DUE TO TRUSS/BEAM/FRAMING LOCATION. ADJUST DUCT SIZE, ASPECT RATIO, TO FIT WITHIN AVAILABLE SPACE.

1 GENERAL NOTES

SCALE: none

1. EXHAUST DUCT UP TO EXHAUST FAN ON ROOF. TRANSITION AS REQUIRED TO CONNECT TO ROOF CURB OPENING.
2. SUPPLY AIR DUCT UP TO RTU ON ROOF. TRANSITION DUCTWORK AS REQUIRED TO CONNECT TO ROOF CURB OPENING.
3. RETURN AIR DUCT UP TO RTU ON ROOF. TRANSITION DUCTWORK AS REQUIRED TO CONNECT TO ROOF CURB OPENING.
4. PROVIDE AND INSTALL PROGRAMMABLE THERMOSTAT. MOUNT PER ADA REQUIREMENTS. COORDINATE FINAL LOCATION WITH OWNER AND ARCHITECT. TYPICAL ALL THERMOSTATS.

2 KEYED NOTES

SCALE: none

1. PROVIDE MORGAN THERMAL CERAMICS: DUCT WRAP TYPE PYROCAT DUCTWRAP XL AND TESTED PER ASTME 2336. THIS PRODUCT SHALL MEET OR EXCEED THE REQUIREMENTS OF SECTION 507.2.3. 2006 HMC. INSULATION SHALL EXTEND FROM KITCHEN HOOD(S) TO DISCHARGE LOCATION. APPLY 2 LAYERS TO PROVIDE 2 HOUR FIRE PROTECTION TO GREASE DUCTS EXHAUSTING TYPE I HOODS PER 2006 IMC, NFPA 96, AND 2006 IAPMO UMC.
2. KITCHEN VENTILATION SYSTEMS (CLEANOUTS & OTHER OPENINGS) GREASE DUCT SYSTEMS SHALL NOT HAVE OPENINGS OTHER THAN THOSE REQUIRED FOR PROPER OPERATION AND MAINTENANCE OF THE SYSTEM. ANY PORTION OF SUCH SYSTEM HAVING SECTIONS INACCESSIBLE FROM THE DUCT ENTRY OR DISCHARGE SHALL BE PROVIDED WITH ADEQUATE CLEANOUT OPENINGS AFTER EVERY 90° TURN. CLEANOUT OPENINGS SHALL BE EQUIPPED WITH TIGHT FITTING DOORS CONSTRUCTED OF STEEL HAVING A THICKNESS NOT LESS THAN THAT REQUIRED FOR THE DUCT. DOORS SHALL BE EQUIPPED A SUBSTANTIAL METHOD OF LATCHING, SUFFICIENT TO HOLD THE DOOR TIGHTLY CLOSED. DOORS SHALL BE DESIGNED THAT THEY CAN BE OPENED WITHOUT THE USE OF A TOOL. PROVIDE 1/4" PER FOOT SLOPE TOWARDS THE HOOD. DUCT SHALL BE FABRICATED OF 16 GAUGE BLACK STEEL.
3. REFER TO KITCHEN CONSULTANT PLANS FOR THE KITCHEN HOOD(S) MODEL AND MANUFACTURER INFORMATION; WALK-IN COOLER AND FREEZE IN REGARDS TO VOLUME OF UNITS, TYPE OF REFRIGERANT, POUNDS OF THE REFRIGERANT, HORSEPOWER AND LOCATION OF THE COMPRESSOR AND VAPOR DETECTION IF REFRIGERANT EXCEEDS THE AMOUNT PER UMC SECTION 1121-2000.
4. REFER TO THE KITCHEN CONSULTANT'S PLANS/SCHEDULES FOR THE CORRECT CFM OF EXHUAST AND SUPPLY TO EACH HOOD.
5. ALL WORK TO MEET WITH THE CITY OF HOUSTON AMENDMENTS AND MECHANICAL BUILDING CODE REQUIREMENTS.
6. KITCHEN GREASE EXHAUST DUCTS SHALL BE SLOPED BACK TOWARD THE HOODS PER LOCAL CODES.

3 KITCHEN NOTES

SCALE: none

Date issued/revised

12/6/2022 ISSUED FOR PRICING

-

-

-

-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

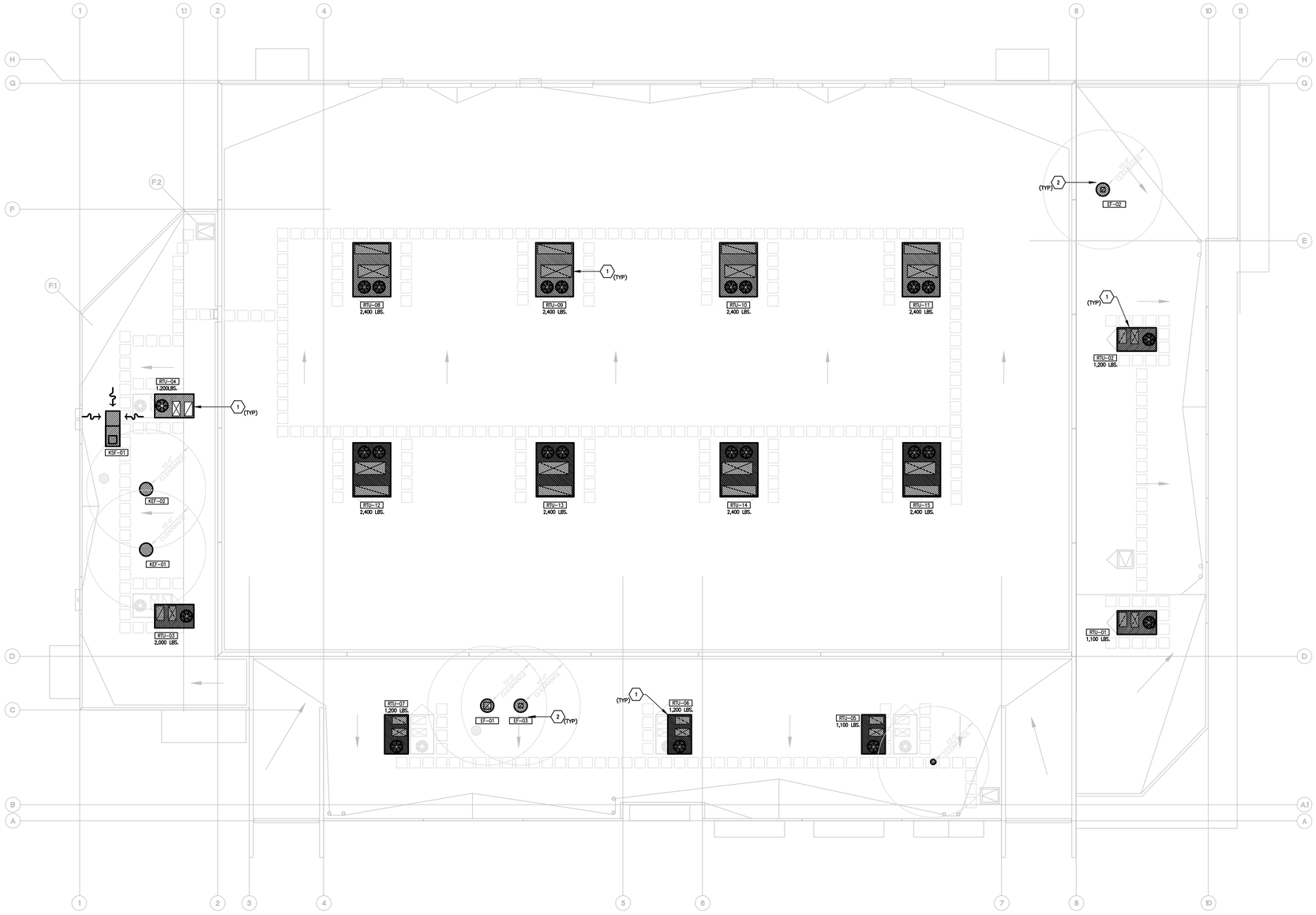
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

MECHANICAL SECOND FLOOR

Sheet No. M2.03



5 ROOF PLAN

SCALE: 3/32"=1'-0"

1. COORDINATE ALL WORK WITH EACH SUB CONTRACTOR AND GENERAL CONTRACTOR AND GENERAL CONTRACTOR (STRUCTURAL, ELECTRICAL, MECHANICAL, AND PLUMBING) PRIOR TO INSTALLATION AND CONNECTION OF EQUIPMENT.
2. PROVIDE VOLUME DAMPER AT SPIN-IN CONNECTION OF DIFFUSER OR BRANCH, INCLUDING THOSE CONNECTING TO BOTTOM OF MAIN TRUNK.
3. MAXIMUM ALLOWABLE FLEXIBLE DUCT LENGTH TO DIFFUSER IS 6'-0". COORDINATE FINAL LOCATION OF THERMOSTATS WITH OWNER/ ARCHITECT.
4. INSTALL DUCTWORK AS HIGH AS POSSIBLE.
5. ALL WORK TO MEET WITH THE 2021 INTERNATIONAL MECHANICAL CODE.
6. MECHANICAL CONTRACTOR TO VERIFY EXACT PLACEMENT OF SUPPLY & RETURN AIR DEVICES WITH REFLECTED CEILING LIGHTING LOCATIONS AND ARCHITECTURAL DRAWINGS FOR STRUCTURE TYPE.
7. DO NOT SCALE PLAN ROUGH-INS FOR ALL EQUIPMENT AND DEVICES SHALL BE BASED ON THE ARCHITECTURAL PLANS.
8. CONTRACTOR SHALL LOCATE DUCTWORK IN ATTIC/ CEILING SPACE IN ACCORDANCE WITH TRUSS, BEAM & FRAMING LOCATION. PROVIDE DUCT OFFSETS AS REQUIRED DUE TO TRUSS/BEAM/FRAMING LOCATION. ADJUST DUCT SIZE, ASPECT RATIO, TO FIT WITHIN AVAILABLE SPACE.

1 GENERAL NOTES

SCALE: none

1. ROUTE CONDENSATE DRAIN LINE TO NEAREST ROOF DRAIN. SIZE PER MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE 10'-0" CLEARANCE AS REQUIRED PER 2021 INTERNATIONAL MECHANICAL CODE.

2 KEYED NOTES

SCALE: none

Date issued/revised

12/6/2022 ISSUED FOR PRICING

-

-

-

-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

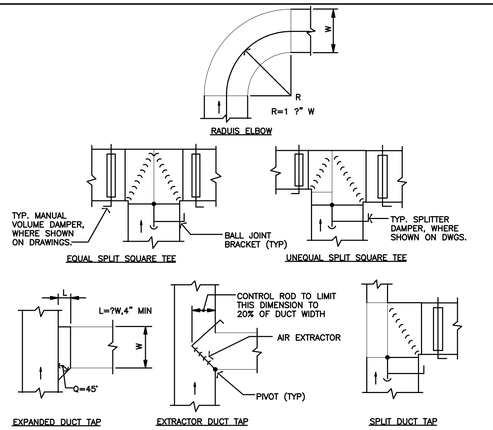
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

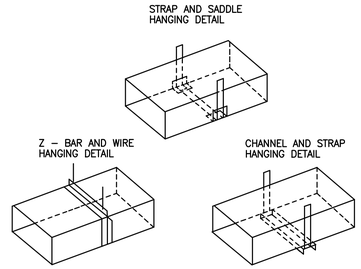
Project No. 032022
Drawn JRD
Checked

MECHANICAL ROOF PLAN

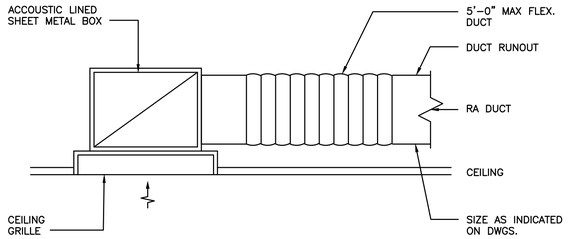
Sheet No. M2.04



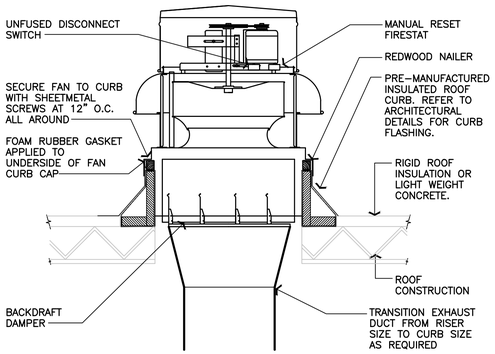
1 TYPICAL DUCT FITTINGS
NO SCALE



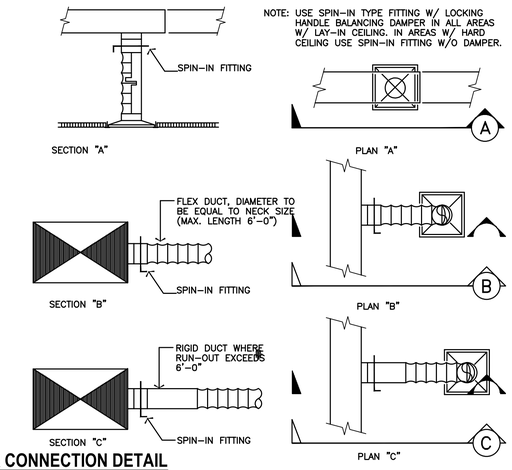
2 DUCT HANGING DETAILS
NO SCALE



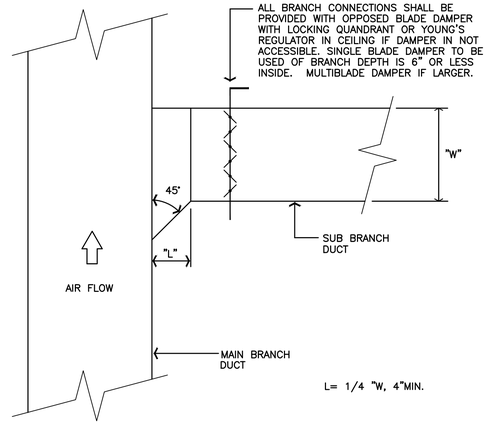
3 CEILING RETURN GRILLE DETAIL
NO SCALE



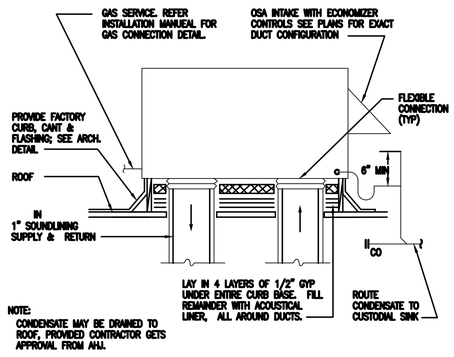
4 DOWNBLAST ROOF EXHAUST FAN
NO SCALE



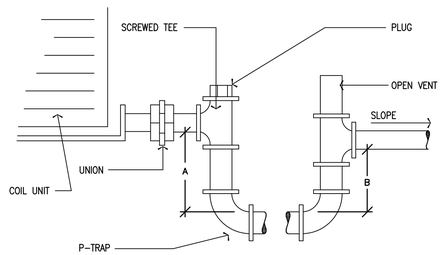
5 DIFFUSER CONNECTION DETAIL
NO SCALE



6 RECTANGULAR BRANCH DUCT
NO SCALE

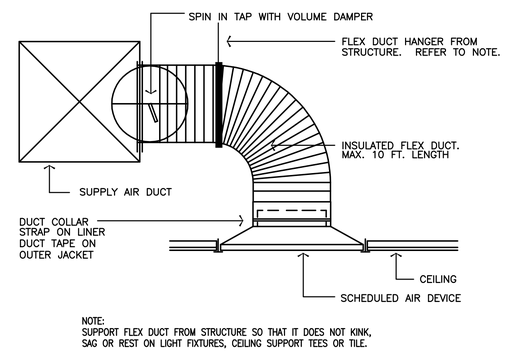


7 ROOF TOP UNIT DETAIL
NO SCALE



	A	B
DRAW THRU:	FAN TOTAL STATIC PRESSURE PLUS 1"	3"
BLOW THRU:	3"	FAN TOTAL STATIC PRESSURE PLUS 4"

8 TYPICAL CONDENSATE DRAIN PIPING
NO SCALE



9 DIFFUSER CONNECTION DETAIL
NO SCALE

1 MECHANICAL DETAILS

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

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

MECHANICAL DETAILS

Sheet No. M3.01

Thermal Ceramics

FIREMASTER
Fire Protection Products

FastWrap® XL
Commercial Kitchen Grease Duct Enclosure System
Air Ventilation Duct Enclosure System

Product Data & Installation Guide

1. Product Description

Thermal Ceramics' new FireMaster® FastWrap XL is the thinnest and lightest flexible wrap material available that passes the ASTM E 2336 test standard required by the 2006 IMC and NFPA 96 for reduced clearance enclosure materials used to provide 1 or 2 hour fire rating for kitchen exhaust ducts. FastWrap XL is also UL Classified and Labeled per ISO 6944 as an alternative to a 1 or 2 hour rated enclosure for air ventilation ducts. The FastWrap XL core blanket is manufactured using Thermal Ceramics patented Superwool® fiber, a 2000°F rated, non-combustible, alkaline-earth silicate wool with low biopersistence. FastWrap XL is the product of extensive research and development resulting in break-through improvements in fiberization technology with significant enhancements in thermal properties beneficial to fire protection applications. FastWrap XL when used in combination with an approved firestop sealant provides an effective through penetration firestop in rated floor and wall assemblies. FastWrap XL is UL Classified and is part of UL's Listing and Follow-Up Service Program to ensure the consistent quality essential to the critical nature of this life-safety application.

Product Features

- Zero clearance to combustibles at any location
- Thin and Lightweight at 1-1/2 inch thick, 6 pcf density
- Contours easily to complex duct designs
- Butt Joints on inside layer - save labor, space, and material
- Fully foil encapsulated for fast and clean installation
- Completely inorganic and non-combustible
- Contains 2000°F rated fibers for added safety margin
- Contains no low temperature mineral or glass fibers
- Wide variety of through penetration systems
- Resistant to mold growth
- Extensive Listings and detailed installation instructions
- Offered in 50 and 100 square foot rolls
- Available in 48 inch widths for less joints and installation labor

2. Applications

- Applied in 2 layers to provide 1 or 2 hour fire protection to grease ducts exhausting Type 1 hoods per 2006 IMC, NFPA 96 and 2006 IAPMO UMC
- Applied in 1 layer as an alternative to a 1 or 2 hour rated enclosure for air ventilation ducts

3. Physical Characteristics

Product	Unit	Size	Units/ Ctn.	Wt./ Ctn.
FastWrap XL	Roll	1=1/2" x 24" x 25'	1	37.5 lbs.
FastWrap XL	Roll	1=1/2" x 48" x 25'	1	75 lbs.
FastWrap XL Collar	Roll	1=1/2" x 6" x 25'	4	37.5 lbs.
Color	White blanket with silver foil encapsulation			

4. Performance Specifications

Reference Standard	Standard No.	Performance
Grease Duct Enclosure System	ASTM E2336	Pass
Section 16.1 - Non-Combustibility	ASTM E136	Pass
Section 16.2-Fire Resistance (wall)	ASTM E119	Pass
Section 16.3 - Durability Test	ASTM C518	Pass
Section 16.4 - Internal Fire Test	ASTM E2336	Pass
Section 16.5 - Fire Engulfment (duct)	ASTM E814/E119	Pass
Surface Burning Characteristics		
Flame Spread (foil/blanket)	ASTM E84	5/5
Smoke Developed (foil/blanket)	ASTM E84	5/5
Thermal Resistance (R-value @ 70°F)	ASTM C518	4.2 per inch
Mold Growth (73% -95% humidity)	ASTM D6329	Resistant
Air Ventilation Duct Enclosure	ISO 6944	Pass
Grease Duct Enclosure System	UL 1978	Pass

Laboratory Listings will be withdrawn January 1, 2009 leaving systems to be tested to NFPA 96/2006.

5. Listings/Building Code Reports

Listed Uses	Agency	Listing
Grease Duct Enclosure System (Zero Clearance) - AC101 (ASTM E2336)	UL	G18
Grease Duct Enclosure System (Zero Clearance) - ASTM E2336	ICC-ES®	ESR 2213
Through Penetration FireStop System - ASTM E814/UL 1479	UL	See Figure 2
Ventilation Duct Enclosure System - ISO 6944	UL	V19

International Code Council - Engineering Service

FireMaster FastWrap XL
Commercial Kitchen Grease Duct Enclosure System
Air Ventilation Duct Enclosure System
Through Penetration System

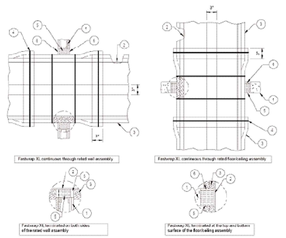
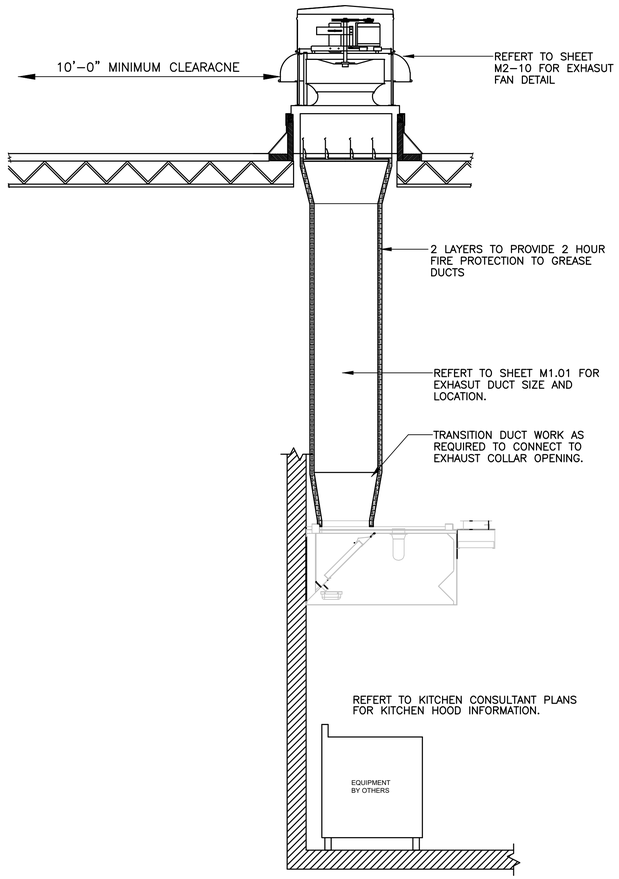


Figure 2	
1.	Rated floor/ceiling or wall assembly
2.	Duct
3.	Two layers FastWrap XL for grease duct enclosure system One layer FastWrap XL for air ventilation duct enclosure system
4.	Steel banding minimum1/2" wide by 0.015" thick or pinning
5.	FastWrap XL (packing material)
6.	Approved through penetration firestop sealant

UL Listings per E 814/UL 1479 Through Penetration	
C-AJ-1062	C-AJ-7004
C-AJ-7012	C-AJ-7014
C-AJ-7019	C-AJ-7021
C-AJ-7047	C-AJ-7095
C-AJ-7098	C-AJ-7119
F-A-1093	F-A-1094
F-A-3048	F-C-7036
F-C-7037	W-L-7099
W-L-7121	W-L-7145
W-J-7086	

Go to www.ul.com and select Certifications to find design details.

1 MECHANICAL FIRE WRAP INSTALLATION INSTRUCTIONS SCALE: 1/8"=1'-0"



2 TYPICAL KITCHEN HOOD DETAILS SCALE: 1/8"=1'-0"

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

MECHANICAL DETAILS

Sheet No. M3.01

KITCHEN HOOD SCHEDULE

HOOD MARK	HOOD LOCATION	EQUIPMENT UNDER HOOD	EQUIPMENT TYPE	HOOD TYPE	HOOD DEPTH (FT.)	HOOD LENGTH (FT.)	HOOD AREA (SQ. FT.)	EXHAUST FAN	EXHAUST COLLAR LENGTH	EXHAUST COLLAR WIDTH	CODE EXHAUST (CFM)	ACTUAL EXHAUST (CFM)	EXHAUST VELOCITY (FPM)	DIRECT MAKE-UP AIR (CFM)	MAKE-UP % OF EXHAUST	NOTES
KH-01	KITCHEN	RANGE/ OVEN/ CHARBROILER	GAS	I	4.30	11.50	49.45	KEF-01	22 IN.	9 IN.	49	2,266	1,648	1,813	80%	1,2,3,4,5
KH-02	KITCHEN	RANGE/ OVEN/ CHARBROILER	GAS	I	4.30	11.50	49.45	KEF-02	22 IN.	9 IN.	49	2,266	1,648	1,813	80%	1,2,3,4,5

NOTES:

1. ALL HOODS SHALL BE PROVIDED BY THE OWNER AND INSTALLED BY THIS CONTRACTOR..
2. CODE REQUIRED FIRE SUPPRESSION SYSTEMS FOR ALL TYPE "I" HOODS, INCLUDING GAS SHUT-OFF VALVES FOR GAS EQUIPMENT LOCATED BENEATH THE HOOD, SHALL BE FURNISHED AND INSTALLED UNDER A SEPARATE CONTRACT.
3. PROVIDE CONTROL SWITCHES WITH "ON/OFF" PILOT LIGHTS ON EACH HOOD TO CONTROL ITS RESPECTIVE EXHAUST FAN.
4. INSTALL TYPE I HOOD EXHAUST DUCT IN FIRE RATED ENCLOSURE.
5. REFER TO KITCHEN DRAWINGS FOR CONTROLS OF ON/ OFF OPERATION.

FAN SCHEDULE

DESIGNATION	EF-01	EF-02	EF-03	EF-04	KEF-01	KEF-02	KSF-01
LOCATION OF FAN	ROOF	ROOF	ROOF	JANS CLOSET	ROOF	ROOF	ROOF
FUNCTION	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	SUPPLY
TYPE	DOWNBLAST EXHAUST	DOWNBLAST EXHAUST	DOWNBLAST EXHAUST	CEILING EXHAUST	DOWNBLAST EXHAUST	DOWNBLAST EXHAUST	MAKE-UP AIR
QUANTITY	-	-	-	-	-	-	-
FAN DATA							
DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	BELT
FLOW RATE(CFM)	1,560 CFM	150 CFM	300 CFM	100 CFM	2,266 CFM	2,266 CFM	3,625 CFM
FAN S.P.("WG)	1.000" WG	0.500" WG	0.500" WG	0.500" WG	1.000" WG	1.000" WG	0.500" WG
FAN SPEED (RPM)	1,707	1,550	1,550	-	1,193	1,193	934
ELECTRICAL DATA							
INPUT POWER	0.5 HP	.25 HP	.25 HP	80 W	.64 HP	.64 HP	2.0 HP
V/PH/HZ	115/1/60	115/1/60	115/1/60	115/1/60	208/1/60	208/1/60	208/3/60
SPEED CONTROLLER	YES	YES	YES	YES	-	-	-
FACTORY DISCONNECT	YES	YES	YES	YES	-	-	-
DAMPER							
TYPE	BACKDRAFT	BACKDRAFT	BACKDRAFT	BACKDRAFT	-	-	-
LOCATION	INTAKE	INTAKE	INTAKE	INTAKE	-	-	-
OPERATION	GRAVITY	GRAVITY	GRAVITY	GRAVITY	-	-	-
MOUNTING							
METHOD	ROOF CURB	ROOF CURB	ROOF CURB	SUSPEBD	ROOF CURB	ROOF CURB	ROOF CURB
PROVIDED	WITH FAN	WITH FAN	WITH FAN	CONTRACTOR	WITH FAN	WITH FAN	WITH FAN
BASIS OF SELECTION							
MANUFACTURER	GREENHECK	GREENHECK	GREENHECK	GREENHECK	ACCUREX	ACCUREX	ACCUREX
MODEL	G	G	G	SP	XCUE-160-VG	XCUE-160-VG	XKSFB-112
NOTE REFERENCE	1,2,3	1,2,3	1,2,3	1,2,4	1,2,5	1,2,5	1,2,5
ACCESSORIES	A	A	A	B	A	A	A

A. PROVIDE FACTORY ROOF CURB
B. FACTORY SUSPENSION KIT

NOTES:

1. PROVIDE ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION.
2. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
3. INTERLOCK WITH TIME CLOCK FOR ON/ OFF OPERATION.
4. INTERLOCK WITH ROOM LIGHTS FOR ON/ OFF OPERATION.
5. FAN SHOWN ON THIS SCHEDULE IS FOR REFERENCE ONLY. FAN SHALL BE PROVIDED BY KITCHEN CONSULTANT. REFER TO KITCHEN DRAWINGS FOR DETAILS. COORDINATE CONTROLS OF ON/ OFF OPERATION WITH KITCHEN DRAWINGS.

ROOFTOP UNIT SCHEDULE

DESIGNATION	RTU-01	RTU-02	RTU-03	RTU-04	RTU-05	RTU-06	RTU-07	RTU-08 - 15
SERVES	LOBBY/ RECEPTION	FITNESS/ ACTIVITY	FLEX RM'S	KITCHEN	FLEX RM'S/ STAIRS	FLEX RM'S	STAIRS/ CORR	GYM
TYPE OF HEATING	GAS	GAS	GAS	GAS	GAS	GAS	GAS	GAS
MOUNTING	ROOF CURB	ROOF CURB	ROOF CURB	ROOF CURB	ROOF CURB	ROOF CURB	ROOF CURB	ROOF CURB
DISCHARGE	DOWN FLOW	DOWN FLOW	DOWN FLOW	DOWN FLOW	DOWN FLOW	DOWN FLOW	DOWN FLOW	DOWN FLOW
FILTER TYPE	2" THROWAWAY	2" THROWAWAY	2" THROWAWAY	2" THROWAWAY	2" THROWAWAY	2" THROWAWAY	2" THROWAWAY	2" THROWAWAY
BLOWER DATA								
FAN TYPE	FC CENTRIFUGAL	FC CENTRIFUGAL	FC CENTRIFUGAL	FC CENTRIFUGAL	FC CENTRIFUGAL	FC CENTRIFUGAL	FC CENTRIFUGAL	FC CENTRIFUGAL
FAN DRIVE	DIRECT DRIVE	DIRECT DRIVE	DIRECT DRIVE	DIRECT DRIVE	DIRECT DRIVE	DIRECT DRIVE	DIRECT DRIVE	DIRECT DRIVE
MAXIMUM AIR VOLUME	3,000 CFM	4,300 CFM	6,900 CFM	3,000 CFM	3,100 CFM	3,800 CFM	3,300 CFM	6,000 CFM
OUTSIDE AIR VOLUME	200 CFM	360 CFM	1,675 CFM	910 CFM	250 CFM	400 CFM	425 CFM	650 CFM
TOTAL EXT. S.P. (FILTER NOT INCLUDED)	0.80" wg	0.80" wg	0.80" wg	0.80" wg	0.80" wg	0.80" wg	0.80" wg	0.80" wg
FAN MOTOR HORSEPOWER	3.00 HP	3.00 HP	3.00 HP	3.00 HP	3.00 HP	3.00 HP	3.00 HP	5.00 HP
CONDENSER FAN DATA								
NUMBER OF FANS	1	1	1	1	1	1	1	2
FAN HORSEPOWER (EACH)	-	-	-	-	-	-	-	-
DX SYSTEM								
REFRIGERANT	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
NUMBER OF COMPRESSORS	-	-	-	-	-	-	-	-
COMPRESSOR TYPE	-	-	-	-	-	-	-	-
COMPRESSOR ELECTRICAL (V/PH/HZ)	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60	460/3/60
COMPRESSOR RLA / LRA (EACH)	-	-	-	-	-	-	-	-
COOLING PERFORMANCE								
ENTERING AIR DB/WB (%%DF)	76.2/ 63.1	76.2/ 63.5	80.3/ 65.7	81.8/ 66.7	75.8/ 62.8	77.8/ 64.0	78.3/ 64.4	79.1/ 64.6
TOTAL SENSIBLE HEAT	64,841 BTUH	97,297 BTUH	187,833 BTUH	80,304 BTUH	67,882 BTUH	92,865 BTUH	77,967 BTUH	151,360 BTUH
TOTAL LATENT HEAT	4,130 BTUH	15,899 BTUH	44,202 BTUH	21,231 BTUH	2,734 BTUH	17,638 BTUH	8,728 BTUH	57,890 BTUH
GRAND TOTAL HEAT	68,971 BTUH	113,196 BTUH	232,035 BTUH	101,535 BTUH	70,596 BTUH	110,503 BTUH	86,695 BTUH	209,250 BTUH
OUTDOOR AMBIENT	100%%D F	100%%D F	100%%D F	100%%D F	100%%D F	100%%D F	100%%D F	100%%D F
HEATING PERFORMANCE								
TYPE HEATING	GAS	GAS	GAS	GAS	GAS	GAS	GAS	GAS
GRAND TOTAL HEAT	25,000 BTUH	43,000 BTUH	116,000 BTUH	66,200 BTUH	24,000 BTUH	34,000 BTUH	35,000 BTUH	48,000 BTUH
MAXIMUM GAS INPUT CAPACITY	80,000 BTUH	150,000 BTUH	200,000 BTUH	150,000 BTUH	120,000 BTUH	150,000 BTUH	120,000 BTUH	200,000 BTUH
GAS FLOW RATE	80 CFH	150 CFH	200 CFH	150 CFH	120 CFH	150 CFH	120 CFH	200 CFH
TOTAL HEAT OUTPUT	65,000 BTUH	121,000 BTUH	202,000 BTUH	121,000 BTUH	97,000 BTUH	121,000 BTUH	97,200 BTUH	202,500 BTUH
GAS CONNECTION SIZE	1/2"	1/2"	3/4"	1/2"	1/2"	1/2"	1/2"	1/2"
BASIS OF SELECTION								
MANUFACTURER	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE
RTU MODEL	YSJ072	YSJ120	YSJ240	YSJ120	YSJ090	YSJ120	YSJ102	YSJ240
APPROXIMATE OPERATING WEIGHT	1,100#	1,200#	2,200#	1,200#	1,100#	1,200#	1,200#	2,400#
COOLING EER	14.6	14.6	13	14.6	14.6	14.6	14.6	13
MINIMUM CIRCUIT AMPACITY	18.0AMPS	29.0AMPS	54.0AMPS	54.0AMPS	21.0AMPS	29.0AMPS	25.0AMPS	54.0AMPS
MAXIMUM FUSE SIZE	20.0AMPS	40.0AMPS	70.0AMPS	70.0AMPS	25.0AMPS	40.0AMPS	30.0AMPS	70.0AMPS
NOMINAL TONNAGE	6.0 TONS	10.0 TONS	20.0 TONS	5.0 TONS	7.5 TONS	10.0 TONS	8.5 TONS	20.0 TONS
NOTE REFERENCE:	***1,2,3,4,5***	***1,2,3,4,5***	***1,2,3,4,5***	***1,2,3,4,5***	***1,2,3,4,5***	***1,2,3,4,5***	***1,2,3,4,5***	***1,2,3,4,5***

* **PLEASE CONTACT JOHN RAMOS WITH HUNTON TRANE @ 936-553-1270 WITH ANY INQAURIES ABOUT THE EQUIPMENT IN THIS SCHEDULE.**

NOTES:

1. PROVIDE SINGLE SOURCE POWER ENTRY KIT, MOTOR STARTERS, LOW AMBIENT CONTROL, FRESH AIR HOOD WITH MANUALLY SET MOTORIZED OUTSIDE AIR DAMPER, AND ANTI-SHORT CYCLE TIMER. (5 MIN. BETWEEN COMPRESSOR CYCLES).
2. PROVIDE 14" DOWN FLOW ROOF MOUNTING CURB.(FIELD INSTALLED)
3. IONIZATION SMOKE DETECTOR (BY DIVISION 16) LOCATED IN THE UNIT'S MAIN SUPPLY AIR DUCT. ROOFTOP UNIT SHALL BE DE-ENERGIZED WHENEVER SMOKE IS DETECTED.
4. MOTOR O.A.D.(FIELD INSTALLED)
5. LOW AMBIENT CONTROL KIT.(FIELD INSTALLED)

AIR BALANCE

PROJECT: Cedar Park Community Center **DESIGNER:** RT

SPACE	AHU-# MUF-#	OA CFM	EF #	EXH CFM	NET O.A. AVAIL. FOR PRESS.
RECEPTION/ LOBBY	RTU-01	200			200
LIBRARY	RTU-02	360			360
MEETING RM 1	RTU-03	1675			1675
MEETING RM 2	RTU-04	910			910
KITCHEN	RTU-05	250			250
LOUNGE/ STORAGE	RTU-06	400			400
GYM	RTU-07	425			425
GYM	RTU-08	650			650
GYM	RTU-09	650			650
GYM	RTU-10	650			650
GYM	RTU-11	650			650
GYM	RTU-12	650			650
GYM	RTU-13	650			650
GYM	RTU-14	650			650
GYM	RTU-15	650			650
			EF-01	1560	-1560
			EF-02	150	-150
			EF-03	300	-300
			EF-04	100	-100
			KEF-01	2266	-2266
			KEF-02	2266	-2266
	KSF-01	3626			3626
TOTALS		13,046		6,642	6,404

AIR DEVICE SCHEDULE

TYPE	***A***
MFR/ MODEL:	TITUS MODEL OMNI
MOUNTING TYPE 1:	BORDER TYPE 3 FOR LAY-IN CEILING
MOUNTING TYPE 2:	BORDER TYPE 1 FOR SURFACE MOUNTING
DESCRIPTION:	SQUARE ARCHITECTURAL CEILING SUPPLY AIR DIFFUSER STEEL CONSTRUCTION.
DIMENSIONS:	12"x12"/ 24"x24" FACE. ROUND NECK SIZE AS INDICATED ON DRAWI
ACCESSORIES:	---
FINISH:	COORDINATE WITH ARCHITECT.
REMARKS:	---
TYPE	***B***
MFR/ MODEL:	TITUS MODEL ML-39
MOUNTING TYPE 1:	BORDER TYPE 1 FOR T-BAR MOUNTING
DESCRIPTION:	SUPPLY AIR SLOT DIFFUSER, 4'-0" 2 SLOT 1" SLOT. DOUBLE DEFLECTION ALUMINUM BLADES. 0%%d DISCHARGE.
DIMENSIONS:	NECK SIZE AS INDICATED ON DRAWING.
ACCESSORIES:	MP-39 SUPPLY PLENUM
FINISH:	COORDINATE WITH ARCHITECT.
REMARKS:	---
TYPE	***C***
MFR/ MODEL:	TITUS MODEL PAR
MOUNTING TYPE 1:	BORDER TYPE 3 FOR LAY-IN CEILING
MOUNTING TYPE 2:	BORDER TYPE 1 FOR SURFACE MOUNTING
DESCRIPTION:	SQUARE PERFORATED FLUSH FACE CEILING RETURN AIR DIFFUSER STEEL CONSTRUCTION.
DIMENSIONS:	24"x24"/ 24"x48" FACE. SQUARE NECK SIZE AS INDICATED ON DRA
ACCESSORIES:	---
FINISH:	COORDINATE WITH ARCHITECT.
REMARKS:	---
TYPE	***D***
MFR/ MODEL:	TITUS MODEL PAR
MOUNTING TYPE 1:	BORDER TYPE 3 FOR LAY-IN CEILING
MOUNTING TYPE 2:	BORDER TYPE 1 FOR SURFACE MOUNTING
DESCRIPTION:	SQUARE PERFORATED FLUSH FACE CEILING EXHASUT AIR DIFFUSER STEEL CONSTRUCTION.
DIMENSIONS:	12"x12", 24"x24" FACE. SQUARE NECK SIZE AS INDICATED ON DRAV
ACCESSORIES:	---
FINISH:	COORDINATE WITH ARCHITECT.
REMARKS:	---
TYPE	***E***
MFR/ MODEL:	TITUS MODEL 300FS
MOUNTING TYPE 1:	BORDER TYPE 1 FOR SURFACE MOUNTING
DESCRIPTION:	SUPPLY AIR REGISTER WITH ALUMINUM BORDER AND DOUBLE DEFLECTION ALUMINUM BLADES @ 3/4" ON CENTER. FRONT BLADES PARALLEL TO SHORT DIMENSION.
DIMENSIONS:	NECK SIZE AS INDICATED ON DRAWING.
ACCESSORIES:	---
FINISH:	COORDINATE WITH ARCHITECT.
REMARKS:	---
TYPE	***F***
MFR/ MODEL:	TITUS MODEL 350
MOUNTING TYPE 1:	BORDER TYPE 1 FOR SURFACE MOUNTING
DESCRIPTION:	EXHAUST AIR REGISTER WITH ALUMINUM BORDER AND DOUBLE DEFLECTION ALUMINUM BLADES @ 3/4" ON CENTER. FRONT BLADES PARALLEL TO SHORT DIMENSION.
DIMENSIONS:	NECK SIZE AS INDICATED ON DRAWING.
ACCESSORIES:	---
FINISH:	COORDINATE WITH ARCHITECT.
REMARKS:	---
REMARKS:	PROVIDE ALL MOUNTING APPURTENANCES REQUIRED. COORDINA FRAME STYLE WITH EXACT CEILING AND WALL REQUIREMENTS.

1 MECHANICAL SCHEDULES

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

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering
JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

MECHANICAL SCHEDULES

Sheet No. M4.01

8 .

7 PIPE MATERIAL LIST

SCALE: none

ABOVE GRADE, INSIDE BUILDING

SANITARY WASTE, AND VENT PIPING SHALL BE
SCHEDULE 40 DWV POLYVINYL CHLORIDE PIPE AND FITTINGS
CONFORMING TO ASTM-2665 WITH SOLVENT WELDED JOINTS.
PVC NOT TO BE USE IN A RETURN AIR PLENUM.

DOMESTIC WATER PIPING SHALL BE
SCHEDULES 40 CPVC

BELOW GRADE INSIDE BUILDING

SANITARY WASTE, AND VENT PIPING SHALL BE
SCHEDULE 40 DWV POLYVINYL CHLORIDE PIPE AND FITTINGS
CONFORMING TO ASTM-2665 WITH SOLVENT WELDED JOINTS.

DOMESTIC WATER PIPING SHALL BE
DRAWN (HARD) COPPER WATER TUBE, TYPE "L", ASTM B88,
WITH WROUGHT COPPER FITTINGS, ANSI B16.22 AND 95-5
SOLDER JOINTS.

6 PLUMBING NOTES AND DESIGNATIONS

SCALE: none

- SECTION DESIGNATION
- IE=100.00' — INVERT ELEVATION NOTE
- 1.2 — NOTE DESIGNATIONS
- P-XX — PLUMBING FIXTURE DESIGNATION
- DS 1 — RISER DIAGRAM DESIGNATION

3 PLUMBING PIPING LEGEND

SCALE: none

- SANL — SOIL OR WASTE PIPING ABOVE GRADE (SS)
- SANL — SOIL OR WASTE PIPING BELOW GRADE (SS)
- GREASE — GREASE WASTE PIPING (GW)
- GREASE — GREASE WASTE PIPING BELOW GRADE (GW)
- GV — GREASE VENT PIPING BELOW GRADE (GV)
- STORM — STORM DRAIN PIPING (SD)
- STORM — STORM DRAIN PIPING BELOW GRADE (SD)
- CD — CONDENSATE DRAIN PIPING (CD)
- D — CONDENSATE EQUIPMENT DRAIN PIPING (D)
- VENT PIPING (V)
- COLD WATER PIPING (CW)
- HOT WATER PIPING (HW)
- HOT WATER RETURN PIPING (HWR)
- SW — SOFT WATER PIPING (SW)
- CHW — CHILLED WATER PIPNG (CHW)
- T — TRAP PRIMER LINE (T)

PLUMBING SCHEDULE

ITEM	SPECIFICATION	CONN SIZES SAN	VENT	CW	HW
HB-01	WOODFORD #24P HOSE BIBB WITH VACUUM BREAKER	--	--	1/2"	--
HB-02	WOODFORD #B-65 WALL HYDRANT, BOX AND DOOR ASSEMBLY, CHROME FINISH, AUTO DRAIN, FREEZELESS W/BUILT-IN ANTI-SPHON VACUUM BREAKER, WITH 3/4" MALE HOSE THREAD	--	--	3/4"	--
GWH-01	RHEEM #RTH-C95DVL TANKLESS GAS WATER HEATER, 199,000 BTUH, PROVIDE 120V CONTROL CIRCUIT. WALL MOUNTED PER MANUFACTURERS RECOMMENDATIONS AND CLEARANCES. COORDINATE INTAKE/VENT PIPING WITH ARCHITECTURAL.	--	--	3/4"	3/4"
EWH-01	EEMAX ACCMIX II #AM004277T TANKLESS ELECTRIC WATER HEATER, SINGLE FIXTURE, MOUNTED UNDER COUNTER, 4.1 KW, 277 VOLT. PROVIDE WITH MIXING VALVE. COORDINATE FINAL SECTION WITH ELECTRICAL CONTRACTOR.	--	--	3/8"	3/8"
EWH-02	EEMAX LAVADVANTAGE #SPEX4277T ML TANKLESS ELECTRIC WATER HEATER, SUPPLY FOR MULTIPLE FIXTURES, MOUNTED UNDER COUNTER, 4.1 KW, 277 VOLT. PROVIDE WITH MIXING VALVE. COORDINATE FINAL SECTION WITH ELECTRICAL CONTRACTOR.	--	--	3/8"	3/8"
EWH-03	EEMAX PROSIES #XTP016480 TANKLESS ELECTRIC WATER HEATER, SUPPLY FOR MOP SINK, WALL MOUNTED, 16.0 KW, 480 VOLT/1-PHASE. COORDINATE FINAL SECTION WITH ELECTRICAL CONTRACTOR.	--	--	3/4"	3/4"
ET-01	A.O. SMITH PROMAX #PMC-5 DOMESTIC WATER EXPANSION TANK. 5-GAL TANK VOLUME FIELD-ADJUSTABLE 38 PSI AIR-CHANGE. 150 PSI MAX WORKING PRESSURE. PROVIDE STRAPS/TIES TO STRUCTURE.	--	--	--	3/4"
RP-01	GRUNDFOS HOT WATER CIRCULATING PUMP. 0.5 GPM, FLOW SENSOR, 120-VOLTS.	--	--	--	3/4"
MV-01	WATTS #LFMMV HOT WATER MIXING VALVE. WATER TEMPERATURE TO BE SET AT 105 DEGREES. LEAD FREE.	--	--	3/4"	--
GT-01	PARK EQUIPMENT USA #GT-1000-TXAU GREASE TRAP, CONCRETE CONSTRUCTION, 2 COMPARTMENT, 4" INLET AND OUTLET, 3" VENT. TRAFFIC RATED COVERS. PROVIDE CONCRETE EXTENSION TO FINISH GRADE. INSTALL PER LOCAL CODE REQUIREMENTS.	4"	3"	--	--
SW-01	PARK EQUIPMENT USA #SWB-244 SAMPLE WELL, CONCRETE CONSTRUCTION, 24" DIAMETER, EQUAL INVET AND OUTLET, TOP UNIT TO BE AT FINISH GRADE.	4"	--	--	--
FD-01	ZURN #Z415-BZ1 FLOOR DRAIN. CAST IRON BODY WITH POLISHED NICKEL BRONZE STRAINER AND TRAP GUARD INSERT (PROSET SYSTEM #TG33-ZURN)	3"	2"	--	--
FS-01	ZURN #Z1910-2 FLOOR SINK. 8x8x6 CAST IRON BODY WITH ACID RESISTING ENAMEL COATING, ANTI-SPLASH DOME STRAINER. PROVIDE WITH 1/2 GRATE WITH TRAP GUARD INSERT (PROSET SYSTEM DRAIN INSERT #TG-33-IP)	3"	2"	--	--
FS-02	ZURN #Z1920-2 FLOOR SINK. 16x16x7 CAST IRON BODY WITH ACID RESISTING ENAMEL COATING, ANTI-SPLASH DOME STRAINER. PROVIDE WITH 1/2 GRATE WITH TRAP GUARD INSERT (PROSET SYSTEM DRAIN INSERT #TG-33-IP)	3"	2"	--	--
WCO	ZURN #Z-1446 WALL MOUNTED CLEANOUT WITH ROUND, SMOOTH STAINLESS STEEL ACCESS COVER.	2",3",4"	--	--	--
FCO	ZURN #Z-1400-B FLOOR CLEANOUT PLUG WITH BRONZE TOP.	2",3",4"	--	--	--
COTG	ZURN #Z-1400-K HEAVY DUTY CLEANOUT HOUSING, TO BE CENTERED IN A 18"x18" CONCRETE SLAB.	3",4"	--	--	--

PLUMBING SCHEDULE

ITEM	SPECIFICATION	CONN SIZES SAN	VENT	CW	HW
WC-01	AMERICAN STANDARD #3351.101 AFWALL MILLENNIUM WALL HUNG WATER CLOSET, WHITE, ELONGATED BOWL, ONE PIECE, 1.28 GALLON PER FLUSH, FULLY GLAZED 2-1/8" BALLPASS TRAPWAY. PROVIDE WITH SENSOR FLUSHOMETER, SLOAN #G2-8113-1.28. HEAVY DUTY ELONGATED OPEN FRONT SEAT, LESS COVER, AMERICAN STANDARD #5905.100. WATER CLOSET TO BE MOUNTED AT HANDICAP HEIGHT AND MEETING ADA REQUIREMENTS.	4"	2"	1"	--
WC-02	AMERICAN STANDARD #3351.101 AFWALL MILLENNIUM WALL HUNG WATER CLOSET, WHITE, ELONGATED BOWL, ONE PIECE, 1.28 GALLON PER FLUSH, FULLY GLAZED 2-1/8" BALLPASS TRAPWAY. PROVIDE WITH SENSOR FLUSHOMETER, SLOAN #G2-8113-1.28. HEAVY DUTY ELONGATED OPEN FRONT SEAT, LESS COVER, AMERICAN STANDARD #5905.100.	4"	2"	1"	--
UR-01	AMERICAN STANDARD #6541.132 ALLBROOK URINAL, WHITE, WALL HUNG, 1.00 GALLON PER FLUSH, SIPHON JET ACTION. INTEGRAL TRAP. EXPOSED URINAL FLUSHMETER, CHROME PLATED, VACUUM BREAKER, SPUD COUPLING FOR 3/4" TOP SPUD SLOAN FLUSHOMETER SLOAN #G2-8180-1.0. RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 4" SQUARE BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, UPPER AND LOWER BEARING PLATES WITH THREADED STUDS. WADE "W400-AM11-M21". URINAL TO BE MOUNTED AT HANDICAP HEIGHT AND MEETING ADA REQUIREMENTS.	2"	2"	3/4"	--
UR-02	AMERICAN STANDARD #6541.132 ALLBROOK URINAL, WHITE, WALL HUNG, 1.00 GALLON PER FLUSH, SIPHON JET ACTION. INTEGRAL TRAP. EXPOSED URINAL FLUSHMETER, CHROME PLATED, VACUUM BREAKER, SPUD COUPLING FOR 3/4" TOP SPUD SLOAN FLUSHOMETER SLOAN #G2-8180-1.0. RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 4" SQUARE BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, UPPER AND LOWER BEARING PLATES WITH THREADED STUDS. WADE "W400-AM11-M21".	2"	2"	3/4"	--
SH-01	FLORESTONE #40-40H SINGLE STALL SHOWER, ONE-PIECE GEL-COATED FIBERGLASS SHOWER, 42"x38"x78", S.S. CURTAIN ROD, HAND HELD SHOWER HEAD SHOWER AND HOSE, SIDLE AND GRAB BARS AND FOLDING SEAT. PRESSURE BALANCING MIXING VALVE, ADA COMPLIANT. BRASS FLOOR DRAIN WITH TRAP GUARD (PROSET SYSTEMS #TG33-ZURN). COORDINATE LOCATION OF DEVICES ADA REQUIREMENTS.	3"	2"	1/2"	1/2"
LV-01	AMERICAN STANDARD #0643.008 STUDIO DROP-IN LAVATORY, VITREOUS CHINA, FRONT OVERFLOW, 1-1/4" CHROME PLATED CAST BRASS TRAP WITH CLEAN-OUT TAILPIECE AND EXTENSION TO WALL WITH ESCUTCHEON PLATE MCGUIRE #8872. 1-1/4" CHROME PLATED CAST BRASS TRAP WITH CLEAN-OUT TAILPIECE AND EXTENSION TO WALL WITH ESCUTCHEON PLATE MCGUIRE #8872. PROVIDE SLOAN FAUCET AND SOAP COMBO #ESD-601-CP WITH 8" TRIM PLATE WITH LEFT SIDE ACCESSORY HOLE #MIX-106-A. INSULATE SUPPLY AND WASTE OF FIXTURES (HANDICAPPED) WITH TRUE BRO INC.	2"	2"	1/2"	1/2"
SK-01	ELKAY #LRAD1919. SINGLE-BOWL BAR SINK. TYPE 304 (18-8) NICKEL BEARING STAINLESS STEEL. 18 GAUGE. SELF-RIMMING AND SOUND DEADENED. 19" X 19" X 6-1/2" DEEP BOWL WITH FAUCET LEDGE (THREE-HOLE PUNCH). PROVIDE WITH STRAINER AND TAILPEICE. PROVIDE WITH FAUCET WITH WRISTBLADES CHICAGO #895-317CP. SINK AND FACUET SHALL BE MOUNTED PER ADA REQUIREMENTS AND CLEARANCES. INSULATE SUPPLY AND WASTE LINE OF FIXTURE WITH TRUE BRO INC.	2"	2"	1/2"	1/2"
MS-01	REGENCY #600SM16206 MOP SINK, 16-GAUGE TYPE 304 STAINLESS STEEL BOWL (25"x21"x12"), 6" BOWL DEPTH. WALL MOUNTED SERVICE SINK FAUCET WITH ATMOSPHERIC VACUUM BREAKER SPOUT AND PAIL HOOK (CHICAGO FAUCET #897-CP).	3"	2"	1/2"	1/2"
EDF-01	ELKAY #LZSTL8WSLK (RIGHT HAND HIGH) ELECTRICAL DRINKING FOUNTAIN WITH BOTTLE FILLING STATION, WALL MOUNTED BI-LEVEL DRINKING FOUNTAIN, LIGHT GRAY GRANITE, FRONT AND SIDE CONTROLS. ELECTRONIC BOTTLE FILLER SENSOR. PROVIDED WITH WATER FILTER. FIXTURE TO BE MOUNTED PER ADA STANDARDS.	2"	2"	1/2"	--
EDF-02	ELKAY #EZSTLVR8LC (RIGHT HAND HIGH) ELECTRICAL DRINKING FOUNTAIN, WALL MOUNTED BI-LEVEL DRINKING FOUNTAIN, LIGHT GRAY GRANITE, FRONT AND SIDE CONTROLS. FIXTURE TO BE MOUNTED PER ADA STANDARDS.	2"	2"	1/2"	--

9 PLUMBING FIXTURE SCHEDULE

SCALE: none

4 VALVES & CROSS CONNECTION DEVICES

SCALE: none

- ANGLE VALVE
- ASME TEMPERATURE & PRESSURE RELIEF VALVE
- BALANCING VALVE
- BALL VALVE
- BUTTERFLY VALVE
- FIRE DEPARTMENT VALVE AT RISER
- HORIZONTAL SWING CHECK
- HOSE BIB
- LUBRICATED PACKED PLUG STOP COCK
- MOTOR CONTROLLED VALVE
- OS+Y VALVE
- PNEUMATICALLY CONTROLLED VALVE
- PRESSURE REDUCIING VALVE
- REDUCED PRESSURE BACKFLOW PREVENTER
- SHUT-OFF VALVE
- SOLENOID VALVE
- VALVE IN RISE

5 GENERAL PIPING, FITTINGS & SYMBOLS

SCALE: none

- ACCESS PANEL FOR TRAP PRIMER
- ACCESS PANEL LOCATION SYMBOL
- BRANCH CONNECTION OUT OF BOTTOM
- BRANCH CONNECTION OUT OF SIDE
- BRANCH CONNECTION OUT OF TOP
- CAP ON END OF PIPE
- CLEANOUT (AT FLOOR) (FCO)
- CLEANOUT (ON GRADE) WITH 18" X 18" X 4" CONCRETE PAD (COTG)
- CLEANOUT (TWO-WAY) (PROVIDE CONCRETE PAD OUTSIDE 18" X 24" X 4")
- CLEANOUT (WALL OR CEILING) (CO)
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- FLOOR DRAIN/FLOOR SINK (FD) (FS)
- HUB DRAIN (HD)
- NEW CONNECTION TO EXISTING
- PIPE CONTINUATION
- PIPING DOWN
- PIPING UP -OR- PIPING UP AND DOWN
- SHOCK ABSORBER
- STRAINER
- UNION

1 PROJECT NOTES

SCALE: none

1. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE CITY BUILDING CODE AND INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION. WORK SHALL BE COMPLETE IN ALL RESPECTS AND IN ACCORDANCE WITH THE BEST ESTABLISHED AND ACCEPTED CONSTRUCTION PRACTICES.
2. THIS CONTRACTOR SHALL COORDINATE ROUTING OF PIPING IN CEILING SPACES WITH MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK AND CONDUIT. SHOULD A CONFLICT OCCUR THIS CONTRACTOR SHALL NOTIFY THE ARCHITECT/ ENGINEER PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN.
3. COORDINATE EXACT LOCATION OF PIPING, DEVICES AND EQUIPMENT WITH BUILDING ELEMENTS AND THE WORK OF OTHER TRADES.
4. IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE AND WORKABLE INSTALLATION BE PROVIDED. TO THIS END, THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TOOLS, SUPERVISION, TRANSPORTATION, WAREHOUSING AND OTHER SERVICES REQUIRED TO COMPLETE THE WORK IN AN EFFICIENT AND TIMELY MANNER.
5. CONTRACTOR SHALL PROCURE ALL REQUIRED PERMITS FROM THE LEGALLY CONSTITUTED AUTHORITIES, ARRANGE ALL INSPECTIONS AND PAY FOR ALL REQUIRED TESTING AND UTILITY CONNECTIONS.
6. CONTRACTOR SHALL FURNISH, INSTALL/ERECT AND MAINTAIN, FOR THE DURATION OF HIS OR HER WORK. ALL GUARDRAILS, LIGHTS, WARNING SIGNS, STAGING, VENTILATION, ETC. REQUIRED BY LOCAL AND STATE LAWS AND ORDINANCES, INCLUDING THE SAFETY ORDERS OF OSHA.
7. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND SHALL THOROUGHLY FAMILIARIZE HIMSELF/HERSELF WITH THE EXISTING CONDITIONS. BY THE ACT OF SUBMITTING A BID, THIS CONTRACTOR ACCEPTS THE CONDITIONS UNDER WHICH HE/SHE WILL BE REQUIRED TO WORK.
8. SUBSTITUTIONS OR DEVIATIONS FROM THE PLANS AND SPECIFICATIONS WILL ONLY BE CONSIDERED PRIOR TO THE TIME OF BIDDING AND ONLY WHEN SUBMITTED IN WRITING. THE BURDEN OF PROOF THAT THE SUBSTITUTED ITEM IS EQUAL TO THE SPECIFIED ITEM RESTS WITH THE CONTRACTOR.
9. CONTRACTOR SHALL PROTECT EXISTING BUILDINGS, STRUCTURES AND UTILITIES FROM DAMAGE. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT NO EXPENSE TO THE OWNER.
10. THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC TO EXTENT THAT ALL OFFSETS, BENDS, SPECIAL FITTING LOCATIONS ARE NOT EXACTLY LOCATED.
11. ALL INDICATED DIMENSIONS ARE APPROXIMATE AND ARE GIVEN FOR ESTIMATE PURPOSES ONLY. BEFORE PROCEEDING WITH THE WORK, CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL DIMENSIONS, SIZES, REQUIRED CLEARANCES AND SHALL ASSUME FULL RESPONSIBILITY FOR THE FITTING OF ALL EQUIPMENT AND MATERIALS HEREIN REQUIRED TO OTHER PARTS OF THE WORK AND TO THE WORK OF THE OTHER TRADES.
12. CONTRACTOR SHALL HAVE A COMPETENT SUPERINTENDENT PRESENT AT THE JOB SITE AT ALL TIMES, WITH AUTHORITY TO ACT FOR THE CONTRACTOR.
13. ALL CONTRACT PERSONNEL WILL BE RESTRICTED TO THE PARTICULAR JOB SITE OF THIS CONTRACT.
14. UNLESS NOTED OTHERWISE, ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY.
15. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
16. ANY APPARATUS, APPLIANCE DEVICE, MATERIAL, OR WORK NOT SHOWN ON DRAWINGS BUT MENTIONED IN THE SPECIFICATIONS, OR VICE VERSA, OR ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND PERFECT IN ALL RESPECTS AND READY FOR TESTING AND OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE FURNISHED, DELIVERED, AND INSTALLED BY CONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNER.
17. ALL MISCELLANEOUS IRON AND STEEL WORK REQUIRED TO PROPERLY INSTALL EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WORK INCLUDES ALL HANGERS, SUPPORTS, RACKS, BRACKETS, AND ANY WELDING REQUIRED.
18. ACCESS AND WORKING SPACE SHALL BE PROVIDED AND MAINTAINED AROUND ALL MECHANICAL, ELECTRICAL AND CONTROL EQUIPMENT TO PERMIT READY AND SAFE OPERATION, EXAMINATION AND MAINTENANCE.
19. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN A DAILY RECORD OF ALL DEVIATIONS FROM THE BID DRAWINGS. ALL DIMENSIONS AND OTHER INFORMATION NECESSARY COMPLETELY EXPLAIN, AND LOCATE ALL ELEMENTS OF THESE DEVIATIONS SHALL BE RECORDED. UPON COMPLETION OF WORK THE CONTRACTOR SHALL SUBMIT TO THE OWNERS REPRESENTATIVE, ONE ONE COMPLETE SET OF REPRODUCIBLE DRAWINGS CORRECTED TO REFLECT "AS-BUILT" CONDITIONS OF THE WORK.
20. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIAL OR RUBBISH, MAINTAIN THE WORK AREA IN A NEAT, ORDERLY MANNER, AND LEAVE THE PREMISES IN A BROOM- CLEAN CONDITION AT THE END OF EACH DAY. THE CONTRACTOR SHALL FURNISH TRASH BINS AND SHALL BE RESPONSIBLE FOR THE PROPER TRANSPORTATION AND DISPOSAL OF ALL WASTE MATERIAL.
21. ANY INTERRUPTIONS AND/ OR SHUTDOWN OF EXISTING SERVICE SHALL BE MADE ONLY WITH THE APPROVAL OF AND AT TIMES DESIGNATED BY OWNER.
22. UPON COMPLETION OF WORK THE CONTRACTOR SHALL DEMONSTRATE, TO THE OWNER'S SATISFACTION THE OPERATION OF THE INSTALLED EQUIPMENT AND SYSTEMS TO THE INTENT OF THE DESIGN.
23. ALL WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER. DURING THIS PERIOD, ANY DEFECT FOUND IN

2 PLUMBING ABBREVIATIONS

SCALE: none

AFF	ABOVE FINISHED FLOOR	LAV	LAVATORY
AFC	ABOVE FINISHED CEILING	NIC	NOT IN (SECTION 15400) CONTRACT
CONN	CONNECTION		
CONT.	CONTINUATION	NO	NORMALLY OPEN
CLG	CEILING	NC	NORMALLY CLOSED
CFH	CUBIC FEET PER HOUR	NTS	NOT TO SCALE
CONTR.	CONTRACTOR	OFCI	OWNER FURNISHED AND CONTRACTOR INSTALLED
DWG	DRAWING		
DF	DRINKING FOUNTAIN	OFI	OWNER FURNISHED AND INSTALLED
EC	ELECTRICAL CONTRACTOR (DIVISION 16)	PSI	POUNDS PER SQUARE INCH
		PC	PLUMBING CONTRACTOR (SECTION 15400)
EWC	ELECTRIC WATER COOLER		
EL	ELEVATION	S.F.	SQUARE FEET
FPC	FIRE PROTECTION CONTRACTOR (SECTION 15300)	SHWR	SHOWER
		SK	SINK
FLR	FLOOR	TOP	TOP OF PIPE ELEVATION
FFE	FINISHED FLOOR ELEVATION	TP	TRAP PRIMER
GPM	GALLONS PER MINUTE	TYP	TYPICAL
GT	GREASE TRAP	UR	URINAL
GC	GENERAL CONTRACTOR	VTR	VENT THROUGH ROOF
HVAC	HEATING VENTILATION AND AIR CONDITIONING (SECTION 15600)	W.C.	WATER COLUMN
		WTS	WATER TIGHT SLEEVE
INV	INVERT OF PIPE ELEVATION	W&V	WASTE AND VENT
JC	JANITORS SINK	WC	WATER CLOSET
KEC	KITCHEN EQUIPMENT CONTRACTOR	WS	WASTE STACK

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS, inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

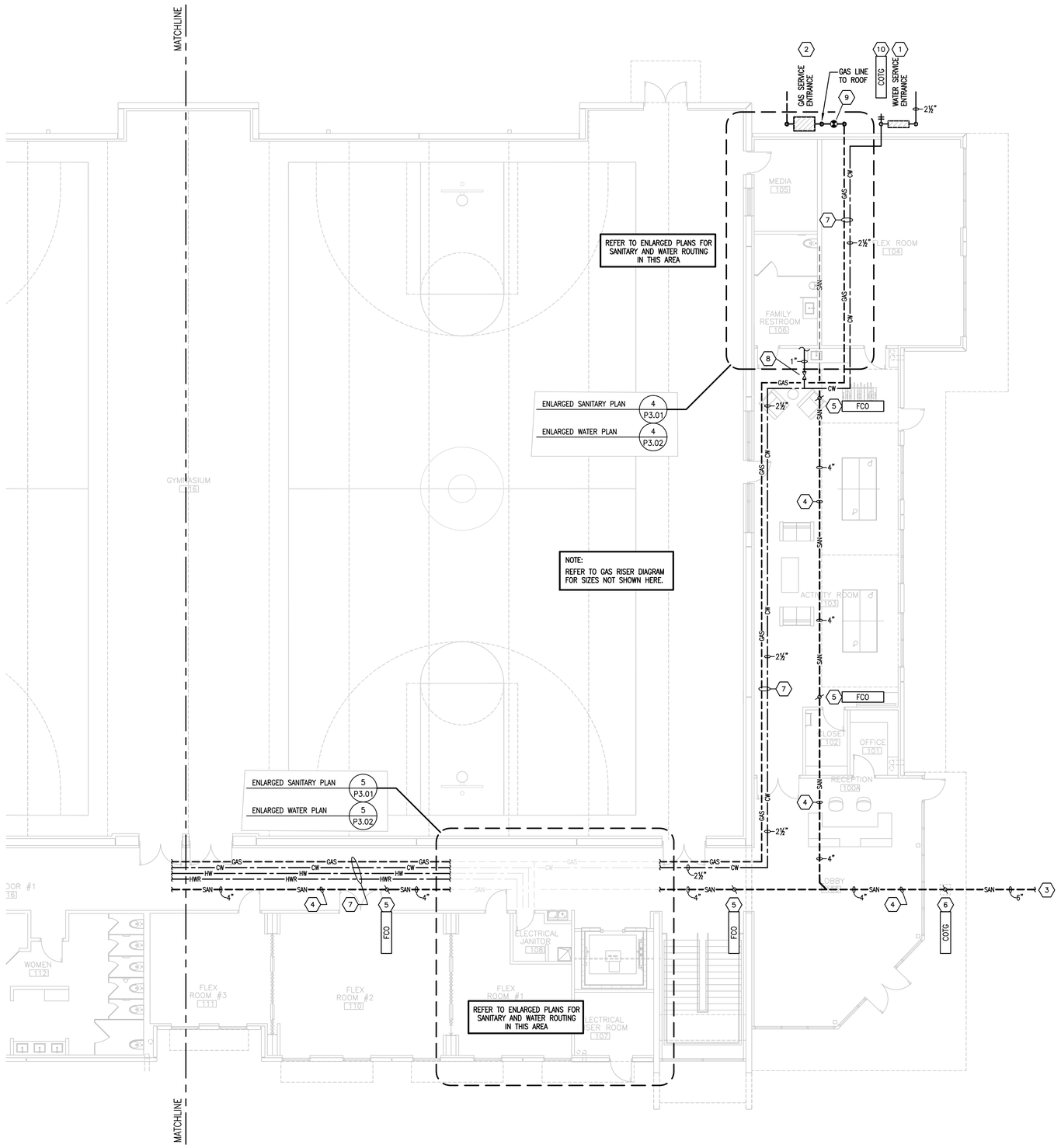
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

PLUMBING ABBREVIATION, LEGEND AND NOTES

Sheet No. P1.01



5 FLOOR PLAN SCALE: 1/8"=1'-0"

1. ALL WORK TO MEET LOCAL CITY BUILDING CODE REQUIREMENTS.
2. PLUMBING CONTRACTOR TO MEET ALL REQUIREMENTS OF THE LATEST UNIFORM PLUMBING CODE.
3. ALL MATERIALS TO BE OF COMMERCIAL QUALITY AND INSTALLATION TO BE WARRANTED BE PLUMBING CONTRACTOR.
4. ALL HANDICAP REQUIREMENTS TO MEET STATE A.D.A. AND CITY REQUIREMENTS
5. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS.
6. CONDENSATE PIPING FOR AIR HANDLERS TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
7. PLUMBING CONTRACTOR (P.C.) TO MAKE FINIAL CONNECTIONS TO OWNER SUPPLIED EQUIPMENT AND KITCHEN EQUIPMENT. VERIFY WITH KITCHEN VENDOR PRIOR TO FINIAL CONNECTION AND PLUMBING PIPING ROUGH-IN CONNECTIONS.
8. PLUMBING CONTRACTOR IS RESPONSIBLE FOR PERMITS AND INSPECTIONS, FIELD CHANGES OR MODIFICATIONS TO THIS DOCUMENT MUST COMPLY WITH LOCAL CODES.
9. ALL EQUIPMENT SHALL BE INSTALLED AS PER MANUFACTURES RECOMMENDATION.
10. PROVIDE ALL FITTINGS FOR PROPER INSTALLATION OF EQUIPMENT.

1 GENERAL NOTES

SCALE: none

1. WATER SERVICE ENTRY. REFER TO DETAIL FOR INSTALLATION. COORDINATE FINAL LOCATION WITH CIVIL DRAWINGS.
2. GAS SERVICE ENTRY. COORDINATE FINAL LOCATION WITH CIVIL DRAWINGS.
3. MAIN SANITARY FROM BUILDING. COORDINATE FINAL LOCATION AND ROUTING WITH CIVIL DRAWINGS.
4. MINIMUM SLOPE FOR SANITARY SEWER LINE TO BE 1/8" PER FOOT FOR 4" SANITARY LINES. 1/4" MIN. SLOPE PER FOOT FOR 2" & 3" LINES.
5. PROVIDE FLOOR CLEAN OUT (FCO) AS PER DETAIL.
6. PROVIDE CLEAN OUT AT GRADE (COTG) AS PER DETAIL.
7. PIPING SUSPENDED FROM STRUCTURE. REFER TO DETAIL.
8. PROVIDE SHUT-OFF VALVE IN ACCESSIBLE LOCATION. PROVIDE ACCESS PANEL AS REQUIRED. COORDINATE TYPE WITH ARCHITECTURAL.
9. PROVIDE GAS PRESSURE REGULATOR IN ACCESSIBLE LOCATION FOR LOW PRESSURE LINE INTO BUILDING. COORDINATE CLEARANCE AND MOUNTING PER LOCAL GAS COMPANY/CODE.
10. PROVIDE HOSE BIB AT SERVICE ENTRANCE

2 KEYED NOTES

SCALE: none

SAN — SANITARY PIPING	ASME TEMPERATURE & PRESSURE RELIEF VALVE
GREASE — GREASE PIPING	VACUUM BREAKER
VENT — VENT PIPING	FLOOR DRAIN
CW — COLD WATER PIPING	FLOOR SINK WITH GRATE
HW — HOT WATER PIPING	XX-01 FIXTURE TAG
HWR — HOT WATER RETURN PIPING	XX KEYNOTE TAG
GAS — GAS PIPING	(E) EXISTING
SHUT-OFF VALVE	XX / XX.XX DETAIL NUMBER / SHEET NUMBER
PIPING DOWN	
PIPING UP	
CAP ON END OF PIPE	
WALL CLEANOUT	
FLOOR CLEANOUT	
CLEANOUT AT GRADE	
VENT THRU ROOF	

3 PLUMBING SYMBOLS

ALL SYMBOLS MAY NOT BE USED

4 .

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering
JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

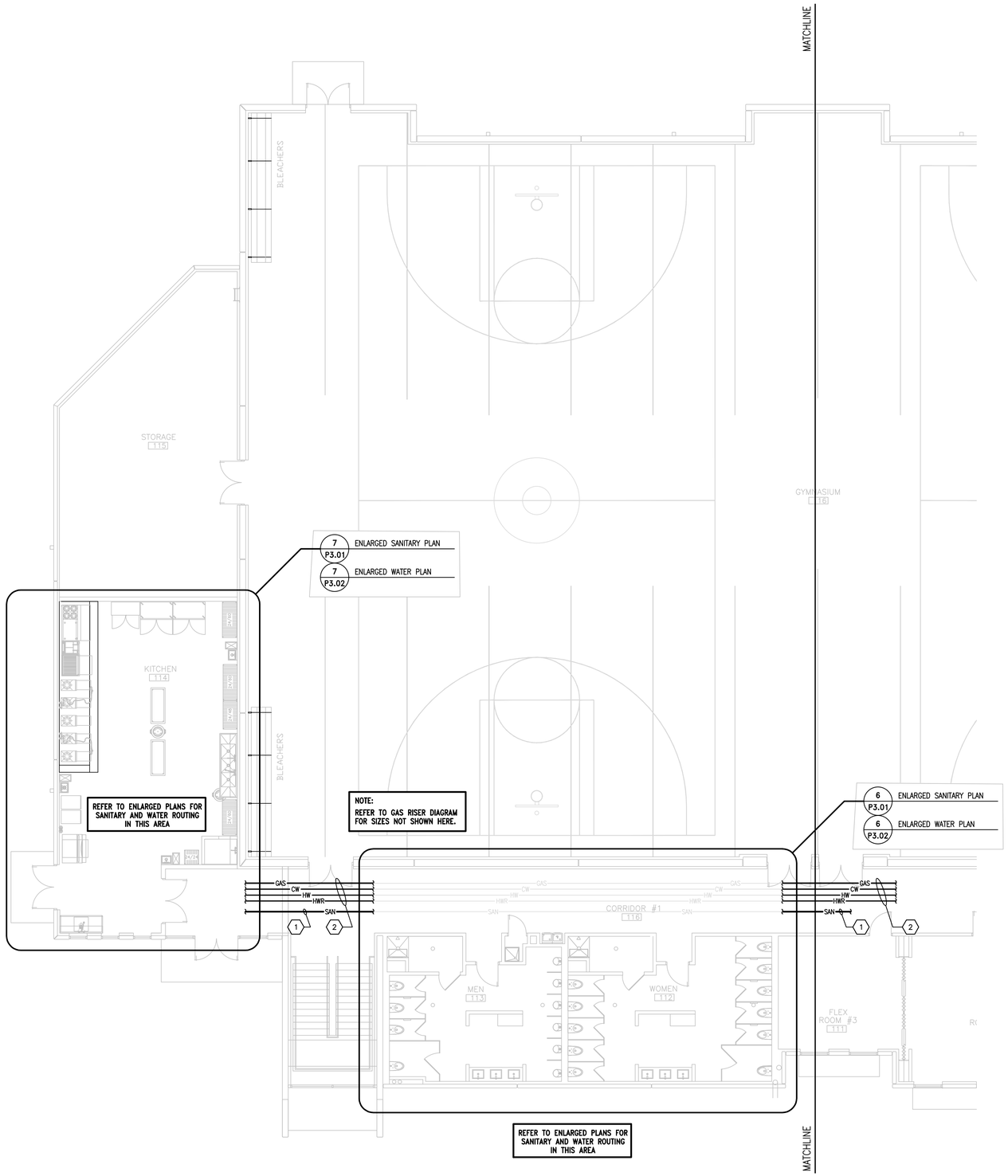
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

PLUMBING
PARTIAL FIRST FLOOR

Sheet No. P2.01



5 FLOOR PLAN SCALE: 1/8"=1'-0"

1. ALL WORK TO MEET LOCAL CITY BUILDING CODE REQUIREMENTS.
2. PLUMBING CONTRACTOR TO MEET ALL REQUIREMENTS OF THE LATEST UNIFORM PLUMBING CODE.
3. ALL MATERIALS TO BE OF COMMERCIAL QUALITY AND INSTALLATION TO BE WARRANTED BE PLUMBING CONTRACTOR.
4. ALL HANDICAP REQUIREMENTS TO MEET STATE A.D.A. AND CITY REQUIREMENTS
5. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS.
6. CONDENSATE PIPING FOR AIR HANDLERS TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
7. PLUMBING CONTRACTOR (P.C.) TO MAKE FINIAL CONNECTIONS TO OWNER SUPPLIED EQUIPMENT AND KITCHEN EQUIPMENT. VERIFY WITH KITCHEN VENDOR PRIOR TO FINIAL CONNECTION AND PLUMBING PIPING ROUGH-IN CONNECTIONS.
8. PLUMBING CONTRACTOR IS RESPONSIBLE FOR PERMITS AND INSPECTIONS, FIELD CHANGES OR MODIFICATIONS TO THIS DOCUMENT MUST COMPLY WITH LOCAL CODES.
9. ALL EQUIPMENT SHALL BE INSTALLED AS PER MANUFACTURES RECOMMENDATION.
10. PROVIDE ALL FITTINGS FOR PROPER INSTALLATION OF EQUIPMENT.

1 GENERAL NOTES SCALE: none

1 MINIMUM SLOPE FOR SANITARY SEWER LINE TO BE 1/8" PER FOOT FOR 4" SANITARY LINES. 1/4" MIN. SLOPE PER FOOT FOR 2" & 3" LINES.

2 PIPING SUSPENDED FROM STRUCTURE. REFER TO DETAIL.

2 KEYED NOTES SCALE: none

SAN — SANITARY PIPING	ASME TEMPERATURE & PRESSURE RELIEF VALVE
GREASE — GREASE PIPING	VACUUM BREAKER
VENT — VENT PIPING	FLOOR DRAIN
CW — COLD WATER PIPING	FLOOR SINK WITH GRATE
HW — HOT WATER PIPING	XX-01 FIXTURE TAG
HWR — HOT WATER RETURN PIPING	XX KEYNOTE TAG
GAS — GAS PIPING	(E) EXISTING
SHUT-OFF VALVE	XX / XX.XX DETAIL NUMBER / SHEET NUMBER
PIPING DOWN	
PIPING UP	
CAP ON END OF PIPE	
WALL CLEANOUT	
FLOOR CLEANOUT	
CLEANOUT AT GRADE	
VENT THRU ROOF	

4 PLUMBING SYMBOLS ALL SYMBOLS MAY NOT BE USED

4 .

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering
JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

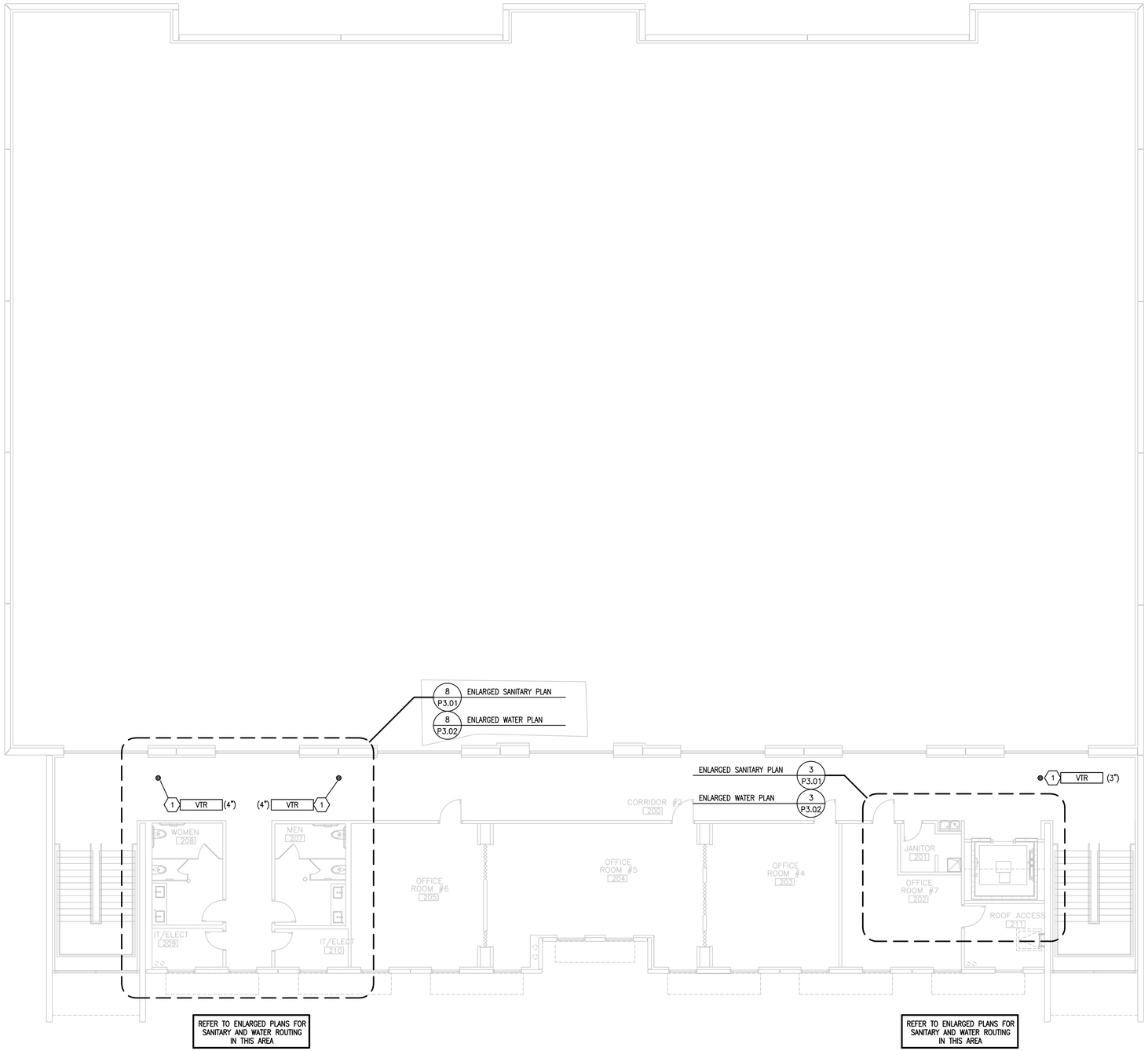
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

PLUMBING
PARTIAL FIRST FLOOR

Sheet No. P2.01



5 FLOOR PLAN SCALE: 1/8"=1'-0"

1. ALL WORK TO MEET LOCAL CITY BUILDING CODE REQUIREMENTS.
2. PLUMBING CONTRACTOR TO MEET ALL REQUIREMENTS OF THE LATEST UNIFORM PLUMBING CODE.
3. ALL MATERIALS TO BE OF COMMERCIAL QUALITY AND INSTALLATION TO BE WARRANTED BE PLUMBING CONTRACTOR.
4. ALL HANDICAP REQUIREMENTS TO MEET STATE A.D.A. AND CITY REQUIREMENTS
5. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS.
6. CONDENSATE PIPING FOR AIR HANDLERS TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
7. PLUMBING CONTRACTOR (P.C.) TO MAKE FINIAL CONNECTIONS TO OWNER SUPPLIED EQUIPMENT AND KITCHEN EQUIPMENT. VERIFY WITH KITCHEN VENDOR PRIOR TO FINIAL CONNECTION AND PLUMBING PIPING ROUGH-IN CONNECTIONS.
8. PLUMBING CONTRACTOR IS RESPONSIBLE FOR PERMITS AND INSPECTIONS, FIELD CHANGES OR MODIFICATIONS TO THIS DOCUMENT MUST COMPLY WITH LOCAL CODES.
9. ALL EQUIPMENT SHALL BE INSTALLED AS PER MANUFACTURES RECOMMENDATION.
10. PROVIDE ALL FITTINGS FOR PROPER INSTALLATION OF EQUIPMENT.

1 GENERAL NOTES SCALE: none

1 COORDINATE LOCATION OF VENT TO ROOF WITH OTHER DISCIPLINES PRIOR TO INSTALLATION.

2 KEYED NOTES SCALE: none

—SAN—	SANITARY PIPING
—GREASE—	GREASE PIPING
—VENT—	VENT PIPING
—CW—	COLD WATER PIPING
—HW—	HOT WATER PIPING
—HWR—	HOT WATER RETURN PIPING
—GAS—	GAS PIPING
	SHUT-OFF VALVE
	PIPING DOWN
	PIPING UP
	CAP ON END OF PIPE
	WALL CLEANOUT
	FLOOR CLEANOUT
	CLEANOUT AT GRADE
	VENT THRU ROOF
	ASME TEMPERATURE & PRESSURE RELIEF VALVE
	VACUUM BREAKER
	FLOOR DRAIN
	FLOOR SINK WITH GRATE
XX-01	FIXTURE TAG
XX	KEYNOTE TAG
(E)	EXISTING
XX / XX.XX	DETAIL NUMBER / SHEET NUMBER

3 PLUMBING SYMBOLS ALL SYMBOLS MAY NOT BE USED

4 XXX SCALE: none

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering
JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS, inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

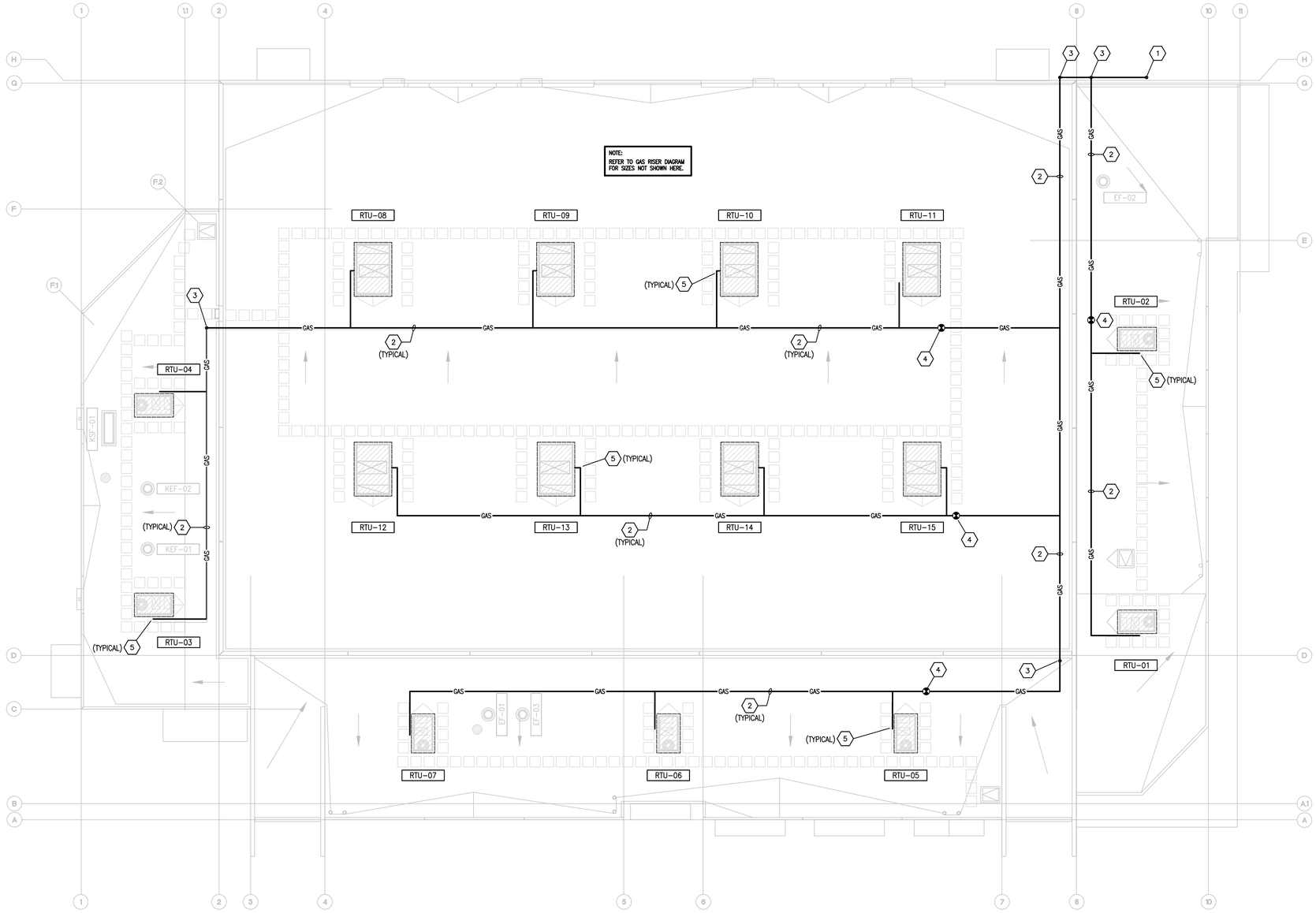
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

PLUMBING
SECOND FLOOR
SANITARY

Sheet No. P2.03



5 ROOF PLAN SCALE: 3/32"=1'-0"

1. ALL WORK TO MEET LOCAL CITY BUILDING CODE REQUIREMENTS.
2. PLUMBING CONTRACTOR TO MEET ALL REQUIREMENTS OF THE LATEST UNIFORM PLUMBING CODE.
3. ALL MATERIALS TO BE OF COMMERCIAL QUALITY AND INSTALLATION TO BE WARRANTED BE PLUMBING CONTRACTOR.
4. ALL HANDICAP REQUIREMENTS TO MEET STATE A.D.A. AND CITY REQUIREMENTS
5. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS.
6. CONDENSATE PIPING FOR AIR HANDLERS TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
7. PLUMBING CONTRACTOR (P.C.) TO MAKE FINIAL CONNECTIONS TO OWNER SUPPLIED EQUIPMENT AND KITCHEN EQUIPMENT. VERIFY WITH KITCHEN VENDOR PRIOR TO FINIAL CONNECTION AND PLUMBING PIPING ROUGH-IN CONNECTIONS.
8. PLUMBING CONTRACTOR IS RESPONSIBLE FOR PERMITS AND INSPECTIONS, FIELD CHANGES OR MODIFICATIONS TO THIS DOCUMENT MUST COMPLY WITH LOCAL CODES.
9. ALL EQUIPMENT SHALL BE INSTALLED AS PER MANUFACTURES RECOMMENDATION.
10. PROVIDE ALL FITTINGS FOR PROPER INSTALLATION OF EQUIPMENT.

1 GENERAL NOTES SCALE: none

1. GAS LINE FROM BELOW. SECURE TO WALL AS REQUIRED.
2. ROUTE GAS LINE IN ROOF. PROVIDE SUPPORT AS REQUIRED. COORDINATE MOUNTING WITH ROOF TYPE/VENDOR.
3. GAS LINE TRANSITION FROM ABOVE/BELOW
4. PROVIDE AND INSTALL GAS REGULATOR IN ACCESSIBLE LOCATION FROM CATWALK. COORDINATE CLEARANCE AND MOUNTING PER LOCAL GAS COMPANY/CODE.
5. COORDINATE GAS LOCATION AND CONNECTION WITH EQUIPMENT

2 KEYED NOTES SCALE: none

SAN	SANITARY PIPING		ASME TEMPERATURE & PRESSURE RELIEF VALVE
GREASE	GREASE PIPING		VACUUM BREAKER
VENT	VENT PIPING		FLOOR DRAIN
CW	COLD WATER PIPING		FLOOR SINK WITH GRATE
HW	HOT WATER PIPING	XX-01	FIXTURE TAG
HWR	HOT WATER RETURN PIPING	XX	KEYNOTE TAG
GAS	GAS PIPING	(E)	EXISTING
	SHUT-OFF VALVE	XX / XX.XX	DETAIL NUMBER / SHEET NUMBER
	PIPING DOWN		
	PIPING UP		
	CAP ON END OF PIPE		
	WALL CLEANOUT		
	FLOOR CLEANOUT		
	CLEANOUT AT GRADE		
	VENT THRU ROOF		

3 PLUMBING SYMBOLS ALL SYMBOLS MAY NOT BE USED

4 .

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering
JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

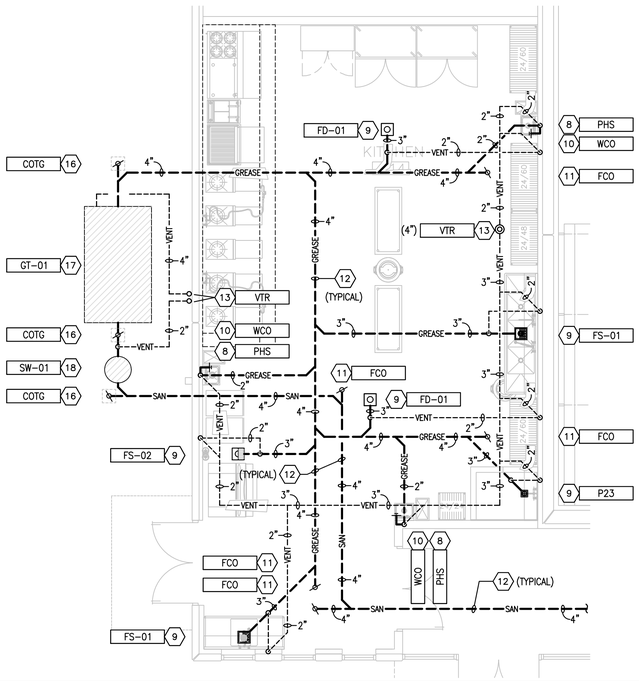
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

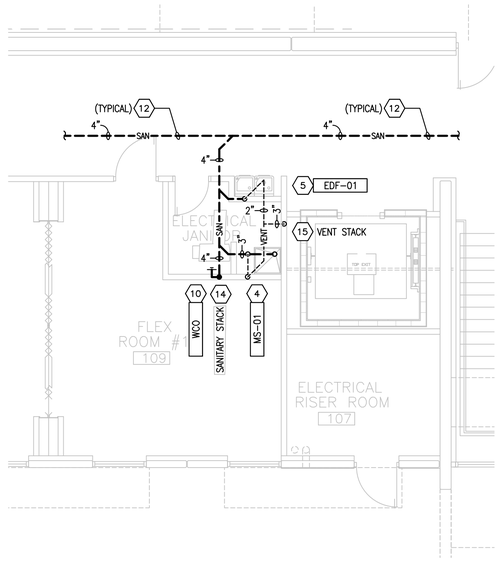
Project No. 032022
Drawn JRD
Checked

PLUMBING
ROOF PLAN

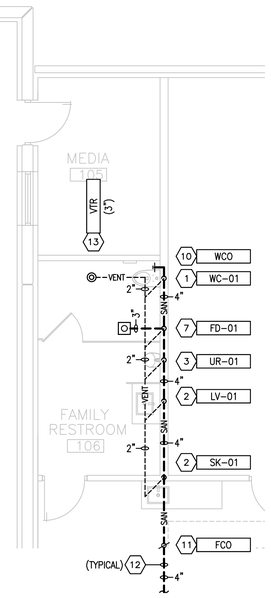
Sheet No. P2.04



7 FIRST FLOOR PLAN – KITCHEN SCALE: 3/16"=1'-0"



5 FIRST FLOOR PLAN – JANITOR SCALE: 3/16"=1'-0"



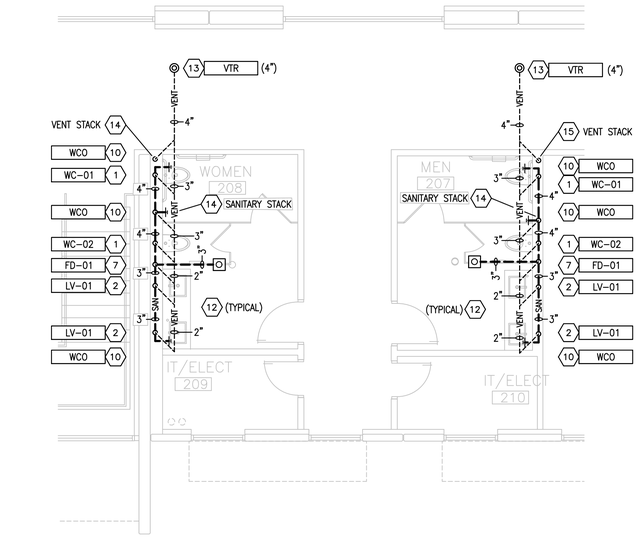
4 FIRST FLOOR PLAN – FAMILY RESTROOM SCALE: 3/16"=1'-0"

1. ALL WORK TO MEET LOCAL CITY BUILDING CODE REQUIREMENTS.
2. PLUMBING CONTRACTOR TO MEET ALL REQUIREMENTS OF THE LATEST UNIFORM PLUMBING CODE.
3. ALL MATERIALS TO BE OF COMMERCIAL QUALITY AND INSTALLATION TO BE WARRANTED BE PLUMBING CONTRACTOR.
4. ALL HANDICAP REQUIREMENTS TO MEET STATE A.D.A. AND CITY REQUIREMENTS
5. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS.
6. CONDENSATE PIPING FOR AIR HANDLERS TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
7. PLUMBING CONTRACTOR (P.C.) TO MAKE FINIAL CONNECTIONS TO OWNER SUPPLIED EQUIPMENT AND KITCHEN EQUIPMENT. VERIFY WITH KITCHEN VENDOR PRIOR TO FINIAL CONNECTION AND PLUMBING PIPING ROUGH-IN CONNECTIONS.
8. PLUMBING CONTRACTOR IS RESPONSIBLE FOR PERMITS AND INSPECTIONS, FIELD CHANGES OR MODIFICATIONS TO THIS DOCUMENT MUST COMPLY WITH LOCAL CODES.
9. ALL EQUIPMENT SHALL BE INSTALLED AS PER MANUFACTURES RECOMMENDATION.
10. PROVIDE ALL FITTINGS FOR PROPER INSTALLATION OF EQUIPMENT.

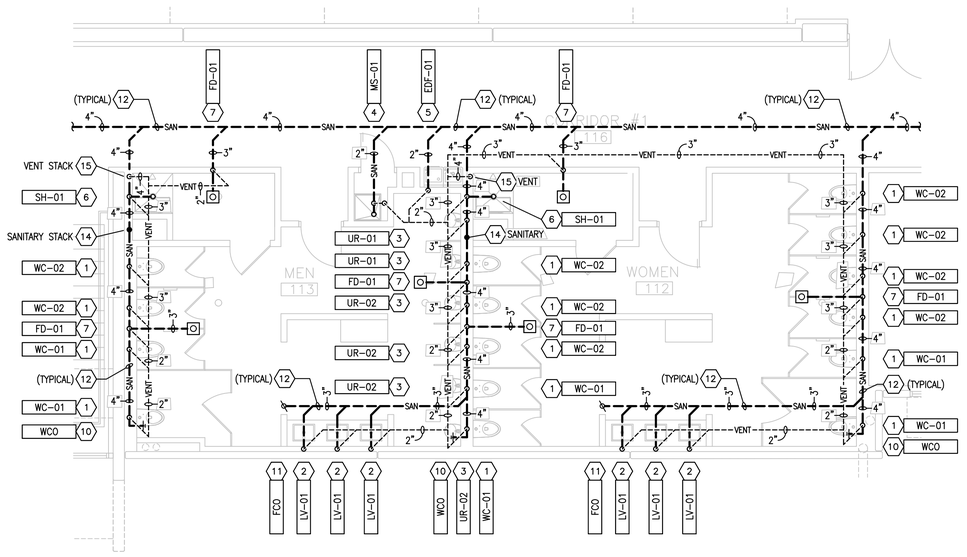
1 GENERAL NOTES SCALE: none

1. 4" SANITARY SEWER DOWN 2" VENT UP FROM WATER CLOSET. COORDINATE WALL CARRIER LOCATION AND MOUNTING WITH ARCH PLANS.
2. 2" SANITARY SEWER DOWN 2" VENT UP FROM LAV/HAND SINK.
3. 2" SANITARY SEWER DOWN 2" VENT UP FROM URINAL. COORDINATE WALL CARRIER LOCATION AND MOUNTING WITH ARCH PLANS.
4. 3" SANITARY SEWER DOWN 2" VENT UP FROM MOP SINK.
5. 2" SANITARY SEWER DOWN 2" VENT UP FROM DRINKING FOUNTAIN.
6. 3" SANITARY SEWER DOWN 2" VENT UP FROM SHOWER.
7. 3" SANITARY SEWER DOWN 2" VENT UP FROM FLOOR DRAIN/SINK. PROVIDE WITH PROSET SYSTEMS TRAP GUARD.
8. 2" SANITARY SEWER DOWN 2" VENT UP FROM HAND SINK. REFER TO KITCHEN FIXTURES TYPE AND FINAL CONNECTIONS.
9. 3" SANITARY SEWER DOWN 2" VENT UP FROM FLOOR DRAIN/SINK. PROVIDE WITH PROSET SYSTEMS TRAP GUARD. REFER TO KITCHEN DRAWINGS FOR FIXTURES TYPE AND FINAL CONNECTIONS.
10. PROVIDE WALL CLEAN OUT IN ACCESSIBLE LOCATION. REFER TO DETAIL.
11. PROVIDE FLOOR CLEAN OUT IN ACCESSIBLE LOCATION. REFER TO DETAIL.
12. MINIMUM SLOPE FOR SANITARY SEWER LINE TO BE 1/8" PER FOOT FOR 4" SANITARY LINES. 1/4" MIN. SLOPE PER FOOT FOR 2" & 3" LINES.
13. COORDINATE LOCATION OF VENT TO ROOF WITH OTHER DISCIPLINES PRIOR TO INSTALLATION.
14. SANITARY STACK TO ABOVE/FROM BELOW.
15. SANITARY VENT STACK TO ABOVE/FROM BELOW.
16. PROVIDE CLEAN OUT AT GRADE (COTG) WITH CONCRETE BLOCKING IN ACCESSIBLE LOCATION. REFER TO DETAIL FOR INSTALLATION.
17. PROVIDE GREASE TRAP PER LOCAL CODE REQUIREMENTS. COORDINATE LOCATION WITH ARCHITECTURAL SITE PLAN.
18. PROVIDE SAMPLE WELL PER LOCAL CODE REQUIREMENRTS. COORDINATE LOCATION WITH ARCHITECTURAL SITE PLAN.

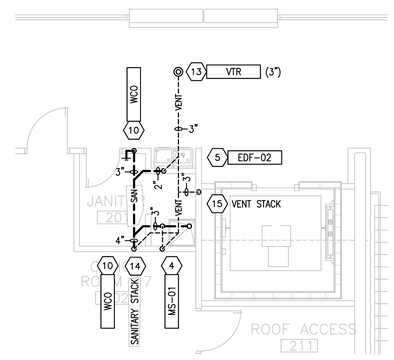
2 KEYED NOTES SCALE: none



8 SECOND FLOOR PLAN – RESTROOMS SCALE: 3/16"=1'-0"



6 FIRST FLOOR PLAN – RESTROOMS SCALE: 3/16"=1'-0"



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

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering
JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

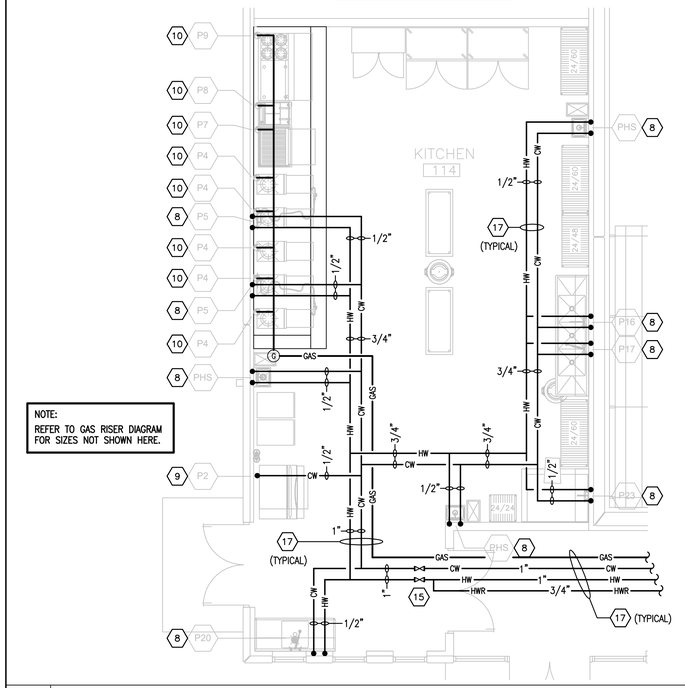
Project No. 032022
Drawn JRD
Checked

PLUMBING
ENLARGED FLOOR PLANS
SANITARY

Sheet No. P3.01

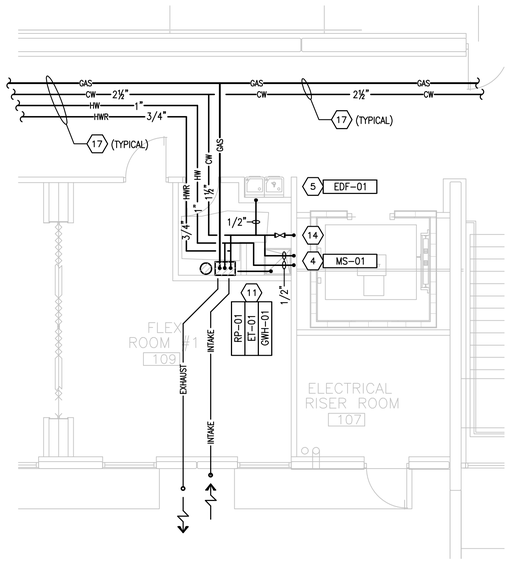
NOTE:
REFER TO KITCHEN VENDOR DRAWING FOR EQUIPMENT SPECIFICATION. LABELS SHOWN ARE FOR REFERENCE ONLY.

NOTE:
REFER TO GAS RISER DIAGRAM FOR SIZES NOT SHOWN HERE.

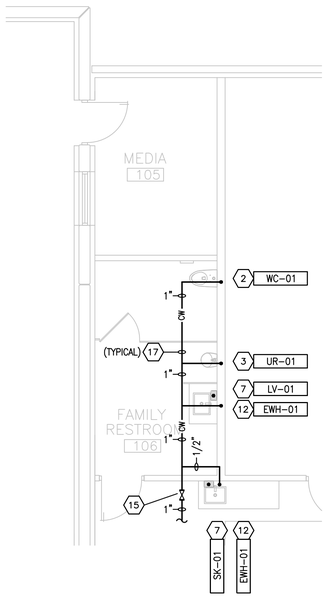


7 FIRST FLOOR PLAN – KITCHEN SCALE: 3/16"=1'-0"

NOTE:
REFER TO GAS RISER DIAGRAM FOR SIZES NOT SHOWN HERE.



5 FIRST FLOOR PLAN – JANITOR SCALE: 3/16"=1'-0"

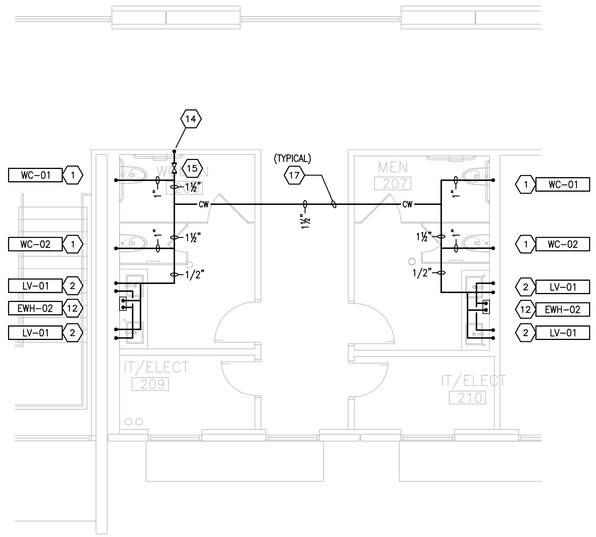


4 FIRST FLOOR PLAN – FAMILY RESTROOM SCALE: 3/16"=1'-0"

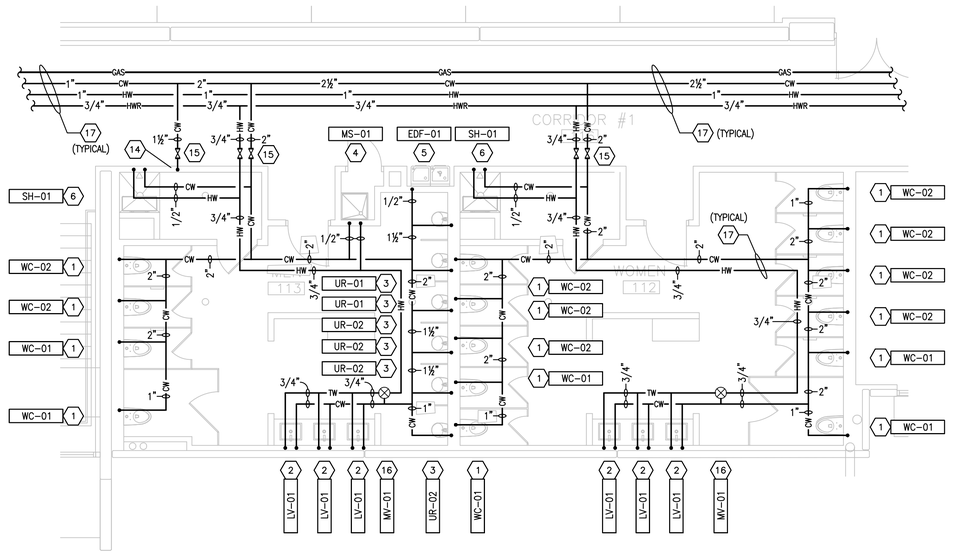
1. ALL WORK TO MEET LOCAL CITY BUILDING CODE REQUIREMENTS.
2. PLUMBING CONTRACTOR TO MEET ALL REQUIREMENTS OF THE LATEST UNIFORM PLUMBING CODE.
3. ALL MATERIALS TO BE OF COMMERCIAL QUALITY AND INSTALLATION TO BE WARRANTED BE PLUMBING CONTRACTOR.
4. ALL HANDICAP REQUIREMENTS TO MEET STATE A.D.A. AND CITY REQUIREMENTS
5. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS.
6. CONDENSATE PIPING FOR AIR HANDLERS TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
7. PLUMBING CONTRACTOR (P.C.) TO MAKE FINIAL CONNECTIONS TO OWNER SUPPLIED EQUIPMENT AND KITCHEN EQUIPMENT. VERIFY WITH KITCHEN VENDOR PRIOR TO FINIAL CONNECTION AND PLUMBING PIPING ROUGH-IN CONNECTIONS.
8. PLUMBING CONTRACTOR IS RESPONSIBLE FOR PERMITS AND INSPECTIONS, FIELD CHANGES OR MODIFICATIONS TO THIS DOCUMENT MUST COMPLY WITH LOCAL CODES.
9. ALL EQUIPMENT SHALL BE INSTALLED AS PER MANUFACTURES RECOMMENDATION.
10. PROVIDE ALL FITTINGS FOR PROPER INSTALLATION OF EQUIPMENT.

1 GENERAL NOTES SCALE: none

1. DROP 1" CW DOWN TO SERVE WATER CLOSET. PROVIDE SHUT-OFF VALVE ABOVE CEILING. TYPICAL FOR ALL TOILETS.
2. 1/2" CW & 1/2" TEMP WATER (TW) DOWN TO SERVE LAVATORY/SINKS.
3. 3/4" CW DOWN TO SERVE URINAL.
4. 1/2" CW & 1/2" HW DOWN TO MOP SINK.
5. 1/2" CW DOWN TO SERVE DRINKING FOUNTAIN.
6. 1/2" CW & 1/2" HW DOWN TO SERVE SHOWER.
7. 1/2" CW DOWN TO SERVE LAVATORY AND INSTANTANEOUS WATER HEATER. ROUTE TEMPERED WATER (TW) TO FIXTURE.
8. 1/2" CW & 1/2" HW DOWN TO SERVE HAND SINK. REFER TO KITCHEN FIXTURES TYPE AND FINAL CONNECTIONS.
9. 1/2" CW WITH BACKFLOW PREVENTER DOWN TO SERVE ICE MAKER. REFER TO KITCHEN FIXTURES TYPE AND FINAL CONNECTIONS.
10. GAS DROP TO KITCHEN EQUIPMENT. REFER TO GAS RISER FOR LINE SIZE AND TO KITCHEN VENDOR DRAWINGS FOR EQUIPMENT TYPE AND FINAL CONNECTIONS.
11. WALL MOUNTED INSTANTANEOUS GAS WATER HEATER WITH EXPANSION TANK (ET-01) AND RECIRCULATION PUMP (RP-01). PROVIDE INLET AND VENT PIPING TO EXTERIOR WALL. ROUTE FULL SIZE T&P AND DRAIN LINE TO APPROVED LOCATION. COORDINATE MOUNTING PER MANUFACTURERS RECOMMENDATIONS.
12. INSTANTANEOUS WATER HEATER MOUNTED UNDER COUNTER. PROVIDE WITH HOT WATER MIXING VALVE SET TO 105 DEG F. COORDINATE MOUNTING WITH MILLWORK.
13. WALL MOUNTED INSTANTANEOUS WATER HEATER. COORDINATE MOUNTING WITH ARCHITECTURAL.
14. COLD WATER (CW) TO ABOVE/BELOW
15. PROVIDE SHUT-OFF VALVE(S) IN ACCESSIBLE LOCATION. PROVIDE ACCESS PANEL AS REQUIRED. COORDINATE TYPE WITH ARCHITECTURAL.
16. PROVIDE MIXING VALVE IN ACCESSIBLE LOCATION. MIXING VALE SET TO 105 DEG F.
17. PIPING SUSPENDED FROM STRUCTURE. REFER TO DETAIL.

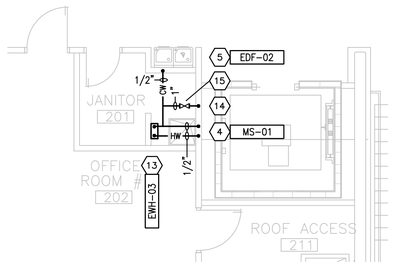


8 SECOND FLOOR PLAN – RESTROOMS SCALE: 3/16"=1'-0"



6 FIRST FLOOR PLAN – RESTROOMS SCALE: 3/16"=1'-0"

2 KEYED NOTES SCALE: none



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

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering
JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

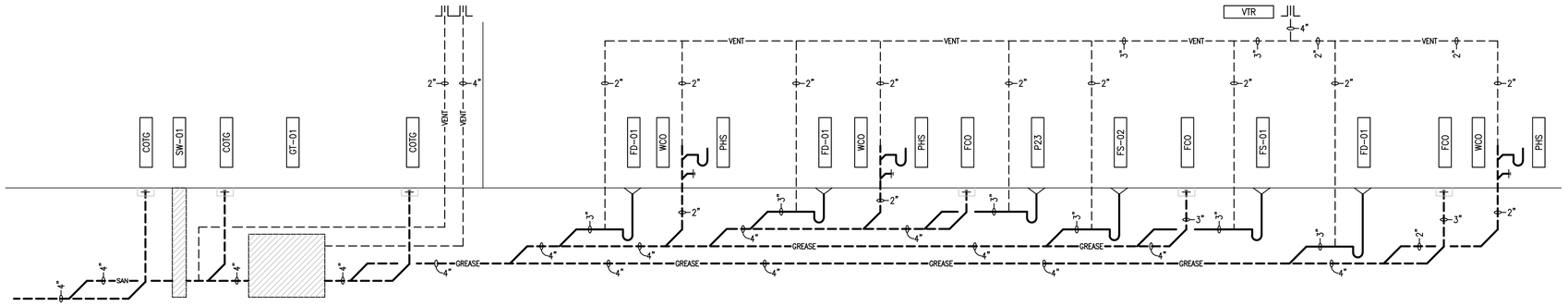
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

PLUMBING
ENLARGED FLOOR PLANS
WATER

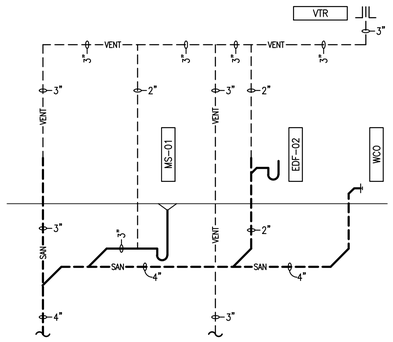
Sheet No. P3.02



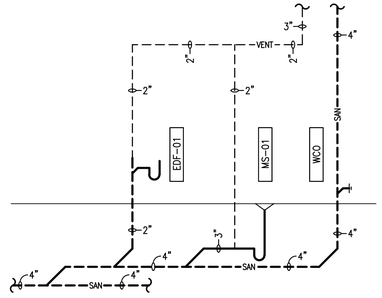
2 PLUMBING RISER DIAGRAM – GREASE SCALE: none

1. MAKE FINAL GAS CONNECTION TO EACH KITCHEN APPLIANCE USING AN AGA APPROVED FLEXIBLE CONNECTOR WITH BRAIDED STEEL SHEATH AND SMOOTH PLASTIC OUTER COVERING, "SAFE-T-LINK" BY T&S BRASS OR APPROVED EQUIVALENT.
2. ALL DRAINS, HUB DRAINS AND FLOOR SINKS ARE TO HAVE TRAP PRIMERS INSTALLED PER 2015 UPC, SECTION 1007.0.
3. ADD BACKFLOW PREVENTER RPZA FOR ALL ICE MAKERS.
4. BACK FLOW PREVENTER ASSEMBLY SHALL
   A) HAVE A FULL USC FCCC & HR APPROVAL
   B) BE FLOOR OPERATIONALLY TESTED BY A BACKFLOW TESTER REGISTERED W/WW. PLEASE DIRECT QUESTIONS TO W/WW SPECIAL SERVICES DIVISION AT 972-1060.
5. ALL PRESSURE VACUUM BREAKER, ALL DOUBLE CHECK VALVE ASSEMBLIES, ALL REDUCED PRESSURE ZONE BACKFLOW PREVENTERS SHALL BE TESTED BY A CERTIFIED TESTER UPON INSTALLATION AND A COPY OF THE TEST REPORT BE FILED WITH THE CITY OF AUSTIN.
6. LAVATORIES: 414.1 HOT WATER DELIVERED FROM PUBLIC-USE LAVATORIES SHALL BE LIMITED TO A MAXIMUM TEMPERATURE OF 120 DEGREES FEHRENHEIT. THE WATER HEATER THERMOSTAT SHALL NOT BE CONSIDERED A CONTROL FOR MEETING THIS PROVISION. SECTION 414.1, 2015 UPC.

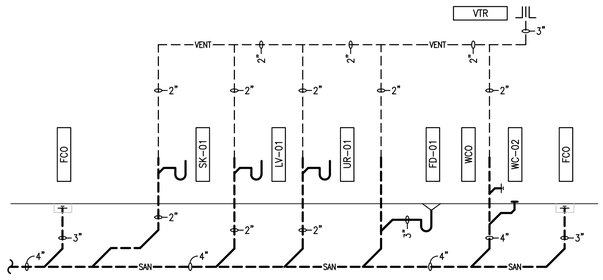
1 PLUMBING NOTES SCALE: none



6 PLUMBING RISER DIAGRAM – JANITOR (2ND FLOOR) SCALE: none



5 PLUMBING RISER DIAGRAM – JANITOR (1ST FLOOR) SCALE: none



4 PLUMBING RISER DIAGRAM – FAMILY RESTROOM SCALE: none

GREASE INTERCEPTOR SIZING CALCULATION

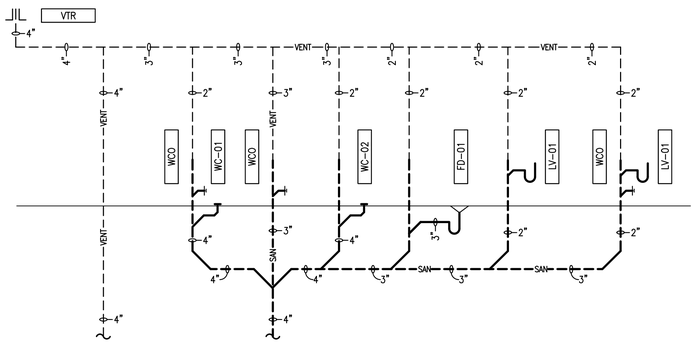
WATER SOURCE/FIXTURE	QTY.	x	DFU	=	TOTAL
HAND SINK	3	x	0	=	0
MOP SINK	1	x	3	=	3
FLOOR DRAIN	2	x	3	=	6
FLOOR SINK (CONDENSATE)	1	x	3	=	3
FLOOR SINK (WASTE)	2	x	6	=	12
			TOTAL	=	24

INTECEPTOR FLOW RATING (GPM)	TOTAL FU	x	FACTOR	=	GPM
	24	x	3	=	72

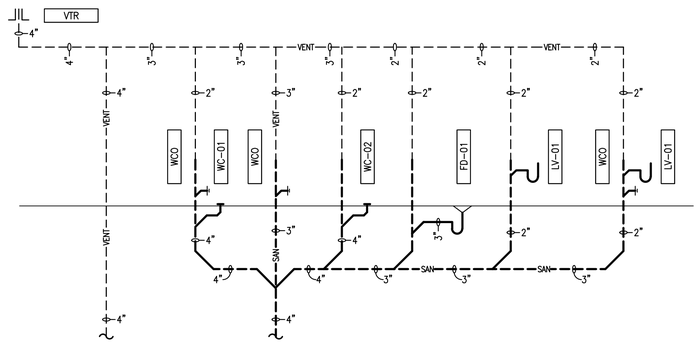
INTERCEPTOR LIQUID HOLDING CAPACITY (GAL./MIN.)	FLOW RATTING (GPM)	x	RETENTION TIME (MIN.)	=	GALLONS
	72	x	12	=	864

GREASE TRAP SIZE CONTRACTOR TO INSTALL GREASE TRAP UNIT BY AN APPROVED MANUFACTUER BY LOCAL CITY REQUIREMENTS.	GALLON (MINIMUN) 1000

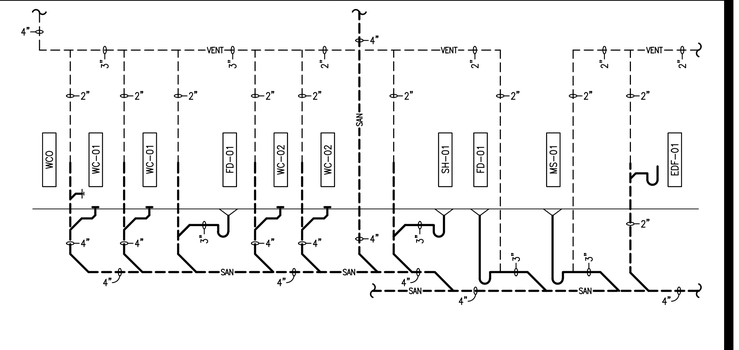
3 GRESE TRAP SIZING CALCULATION SCALE: none



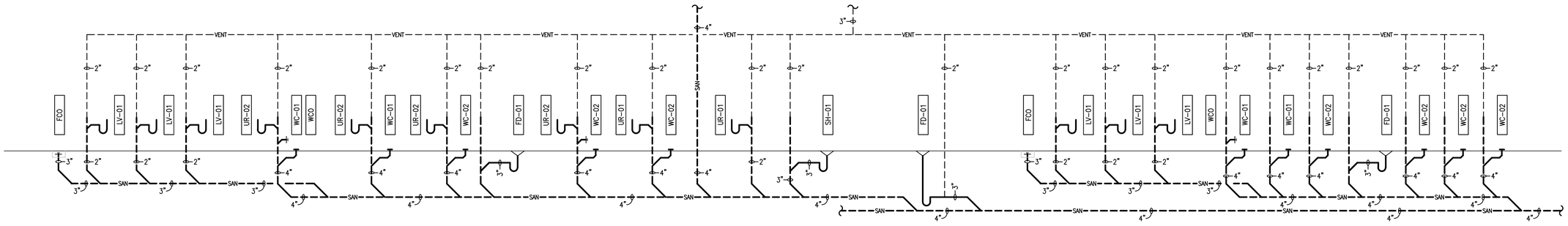
9 PLUMBING RISER DIAGRAM – WOMENS RESTROOM (2ND FLOOR) SCALE: none



8 PLUMBING RISER DIAGRAM – MENS RESTROOM (2ND FLOOR) SCALE: none



7 PLUMBING RISER DIAGRAM – RESTROOM (1ST FLOOR) SCALE: none



10 PLUMBING RISER DIAGRAM – RESTROOM (1ST FLOOR) SCALE: none

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

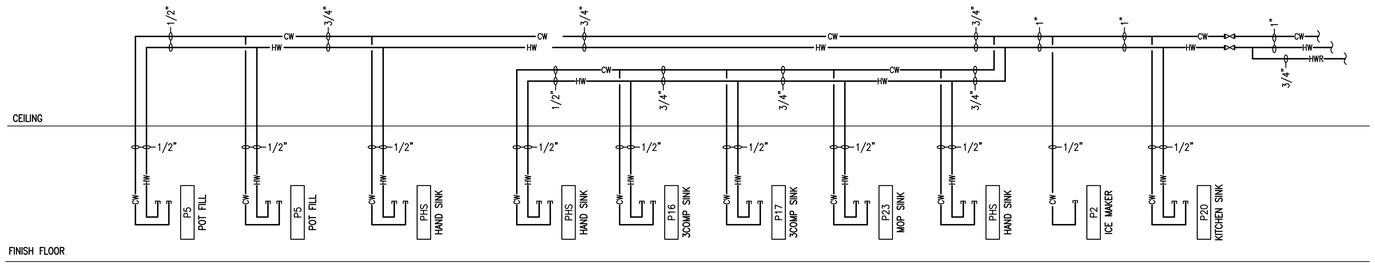
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

PLUMBING RISER DIAGRAMS SANITARY

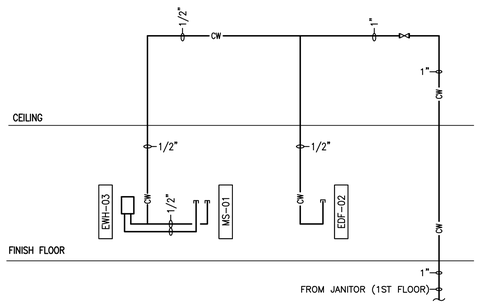
Sheet No. P4.01



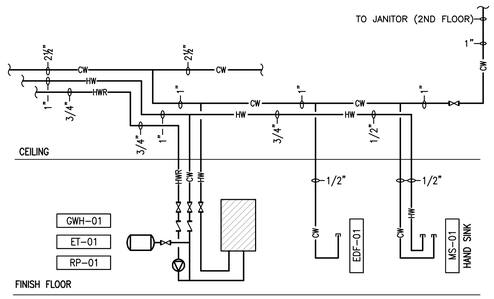
2 PLUMBING RISER DIAGRAM – KITCHEN (1ST FLOOR) SCALE: none

1. MAKE FINAL GAS CONNECTION TO EACH KITCHEN APPLIANCE USING AN AGA APPROVED FLEXIBLE CONNECTOR WITH BRAIDED STEEL SHEATH AND SMOOTH PLASTIC OUTER COVERING, "SAFE-T-LINK" BY T&S BRASS OR APPROVED EQUIVALENT.
2. ALL DRAINS, HUB DRAINS AND FLOOR SINKS ARE TO HAVE TRAP PRIMERS INSTALLED PER 2015 UPC, SECTION 1007.0.
3. ADD BACKFLOW PREVENTER RPZA FOR ALL ICE MAKERS.
4. BACK FLOW PREVENTER ASSEMBLY SHALL
   A) HAVE A FULL USC FCCC & HR APPROVAL
   B) BE FLOOR OPERATIONALLY TESTED BY A BACKFLOW TESTER REGISTERED W/WW. PLEASE DIRECT QUESTIONS TO W/WW SPECIAL SERVICES DIVISION AT 972-1060.
5. ALL PRESSURE VACUUM BREAKER, ALL DOUBLE CHECK VALVE ASSEMBLIES, ALL REDUCED PRESSURE ZONE BACKFLOW PREVENTERS SHALL BE TESTED BY A CERTIFIED TESTER UPON INSTALLATION AND A COPY OF THE TEST REPORT BE FILED WITH THE CITY OF AUSTIN.
6. LAVATORIES: 414.1 HOT WATER DELIVERED FROM PUBLIC-USE LAVATORIES SHALL BE LIMITED TO A MAXIMUM TEMPERATURE OF 120 DEGREES FEHRENHEIT. THE WATER HEATER THERMOSTAT SHALL NOT BE CONSIDERED A CONTROL FOR MEETING THIS PROVISION. SECTION 414.1, 2015 UPC.

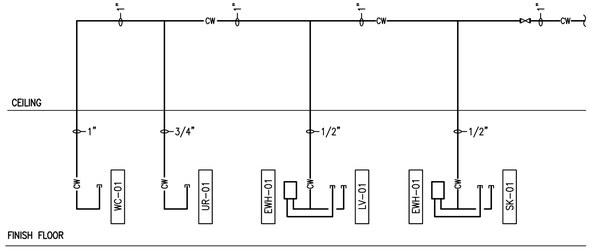
1 PLUMBING NOTES SCALE: none



6 PLUMBING RISER DIAGRAM – JANITOR (2ND FLOOR) SCALE: none

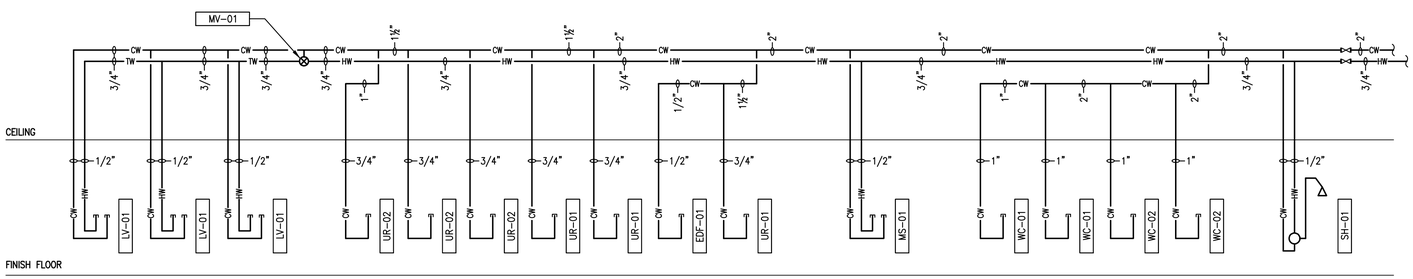


5 PLUMBING RISER DIAGRAM – JANITOR (1ST FLOOR) SCALE: none

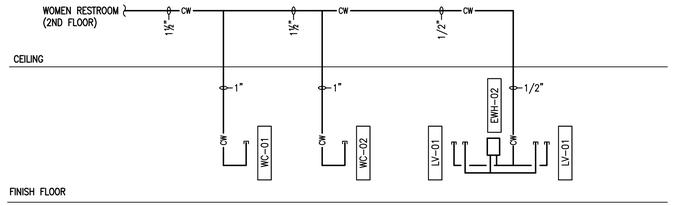


4 PLUMBING RISER DIAGRAM – FAMILY RESTROOM SCALE: none

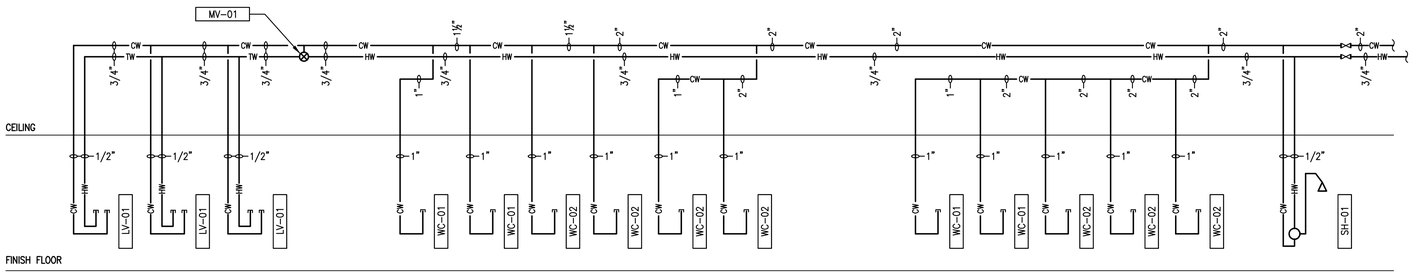
3 .



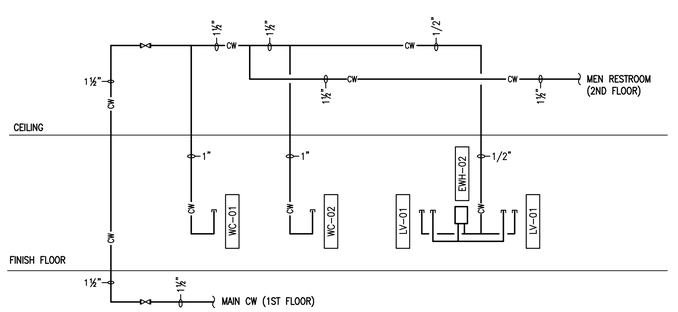
8 PLUMBING RISER DIAGRAM – MEN RESTROOM (1ST FLOOR) SCALE: none



7 PLUMBING RISER DIAGRAM – MENS RESTROOM (2ND FLOOR) SCALE: none



10 PLUMBING RISER DIAGRAM – MEN RESTROOM (1ST FLOOR) SCALE: none



9 PLUMBING RISER DIAGRAM – WOMENS RESTROOM (2ND FLOOR) SCALE: none

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering
JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS, Inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

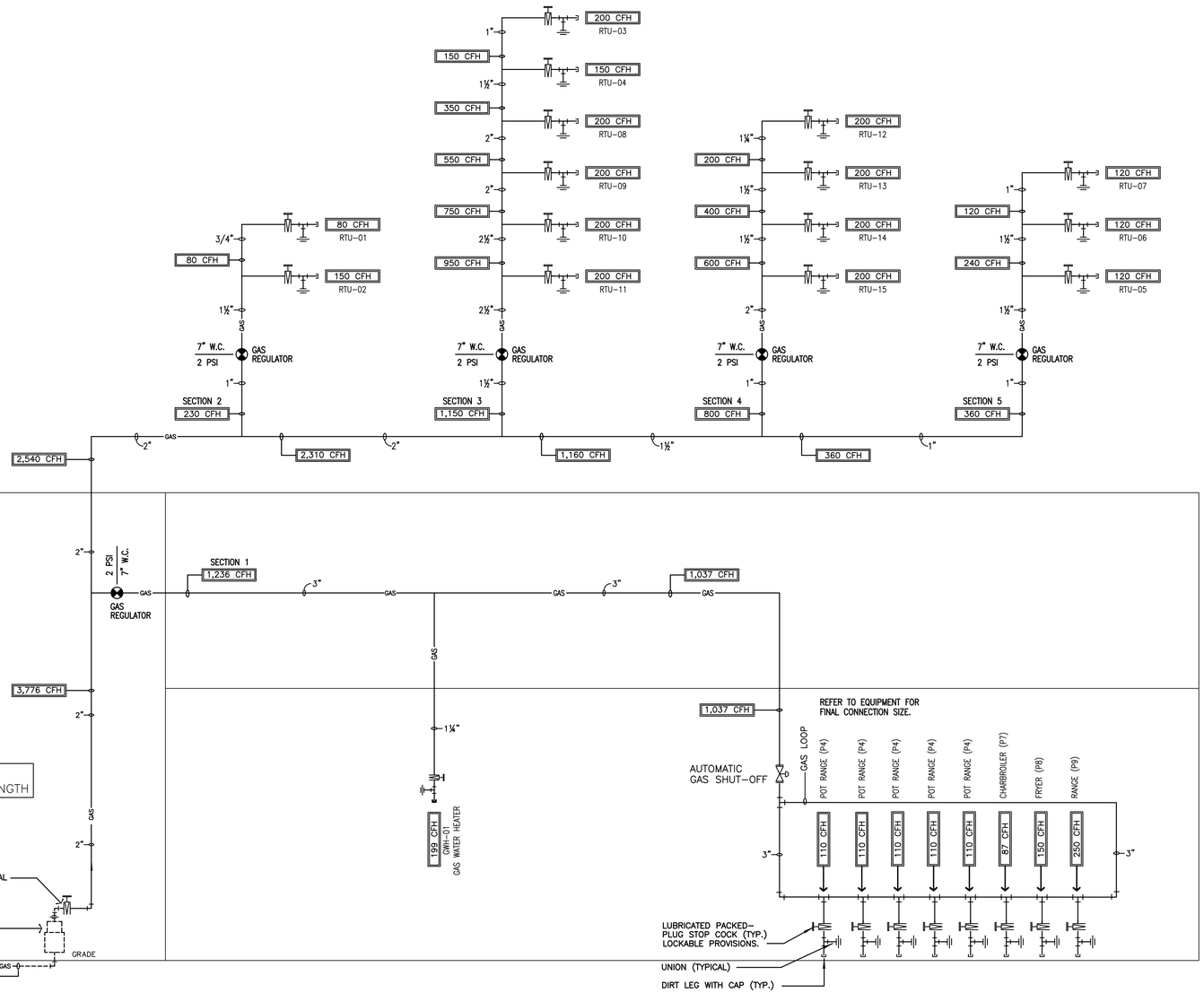
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

PLUMBING RISER DIAGRAMS
DOMESTIC WATER

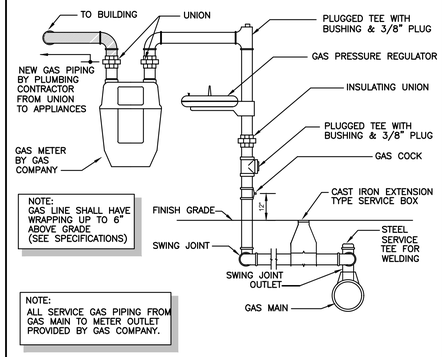
Sheet No. P4.02



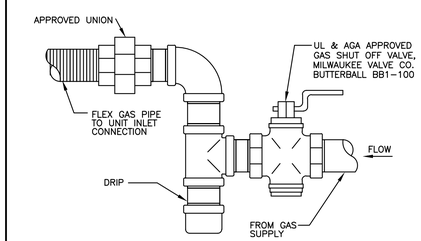
4 PLUMBING RISER DIAGRAM - GAS SCALE: none

1. MAKE FINAL GAS CONNECTION TO EACH KITCHEN APPLIANCE USING AN AGA APPROVED FLEXIBLE CONNECTOR WITH BRAIDED STEEL SHEATH AND SMOOTH PLASTIC OUTER COVERING, "SAFE-T-LINK" BY T&S BRASS OR APPROVED EQUIVALENT.
2. ALL DRAINS, HUB DRAINS AND FLOOR SINKS ARE TO HAVE TRAP PRIMERS INSTALLED PER 2015 UPC, SECTION 1007.0.
3. ADD BACKFLOW PREVENTER RPZA FOR ALL ICE MAKERS.
4. BACK FLOW PREVENTER ASSEMBLY SHALL
   A) HAVE A FULL USC FCCC & HR APPROVAL
   B) BE FLOOR OPERATIONALLY TESTED BY A BACKFLOW TESTER REGISTERED W/WW. PLEASE DIRECT QUESTIONS TO W/WW SPECIAL SERVICES DIVISION AT 972-1060.
5. ALL PRESSURE VACUUM BREAKER, ALL DOUBLE CHECK VALVE ASSEMBLIES, ALL REDUCED PRESSURE ZONE BACKFLOW PREVENTERS SHALL BE TESTED BY A CERTIFIED TESTER UPON INSTALLATION AND A COPY OF THE TEST REPORT BE FILED WITH THE CITY OF AUSTIN.
6. LAVATORIES: 414.1 HOT WATER DELIVERED FROM PUBLIC-USE LAVATORIES SHALL BE LIMITED TO A MAXIMUM TEMPERATURE OF 120 DEGREES FEHRENHEIT. THE WATER HEATER THERMOSTAT SHALL NOT BE CONSIDERED A CONTROL FOR MEETING THIS PROVISION. SECTION 414.1, 2015 UPC.

1 PLUMBING NOTES SCALE: none



2 GAS METER/LINE ENTRANCE SCALE: none



3 TYP. GAS CONNECTION SCALE: none

EQUIPMENT DEMAND CALCULATIONS

SECTION 1					SECTION 2					SECTION 3					SECTION 4					SECTION 5				
TAG	OUTLET	SIZE	BTU	CFH	TAG	OUTLET	SIZE	BTU	CFH	TAG	OUTLET	SIZE	BTU	CFH	TAG	OUTLET	SIZE	BTU	CFH	TAG	OUTLET	SIZE	BTU	CFH
GWH-01	WATER HEATER	3/4"	199,000	199	RTU-02	ROOF TOP UNIT	1/2"	150,000	150	RTU-11	ROOF TOP UNIT	1/2"	200,000	200	RTU-15	ROOF TOP UNIT	1/2"	200,000	200	RTU-05	ROOF TOP UNIT	1/2"	120,000	120
P4	POT RANGE	3/4"	110,000	110	RTU-01	ROOF TOP UNIT	1/2"	80,000	80	RTU-10	ROOF TOP UNIT	1/2"	200,000	200	RTU-14	ROOF TOP UNIT	1/2"	200,000	200	RTU-06	ROOF TOP UNIT	1/2"	120,000	120
P4	POT RANGE	3/4"	110,000	110						RTU-09	ROOF TOP UNIT	1/2"	200,000	200	RTU-13	ROOF TOP UNIT	1/2"	200,000	200	RTU-07	ROOF TOP UNIT	1/2"	120,000	120
P4	POT RANGE	3/4"	110,000	110						RTU-08	ROOF TOP UNIT	1/2"	200,000	200	RTU-12	ROOF TOP UNIT	1/2"	200,000	200					
P4	POT RANGE	3/4"	110,000	110						RTU-04	ROOF TOP UNIT	1/2"	150,000	150										
P4	POT RANGE	3/4"	110,000	110						RTU-03	ROOF TOP UNIT	3/4"	200,000	200										
P7	CHARBOILER	3/4"	87,000	87																				
P8	FRYER	3/4"	150,000	150																				
P9	RANGE	3/4"	250,000	250																				
	TOTAL		1,236,000	1236		TOTAL		230,000	230		TOTAL		1,150,000	1150		TOTAL		800,000	800		TOTAL		360,000	360

GAS PRESSURE NOTE

LOW PRESSURE GAS PIPING SYSTEM REGULATED TO 7" W.C.

GAS PRESSURE (AT METER):	2	PSI
GAS BTU LOAD:	3,776,000	BTU
TOTAL DEMAND:	3,776	CFH
MAX. DEVELOPED LENGTH:	400	LF

INSTALL AND MAINTAIN SYSTEM IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE UNIFORM PLUMBING CODE, FROM METER TO REGULATORS (3) 2 PSI PRESSURE SIZED PER TABLE 12.9 FROM 2012 UPC. FROM REGULATOR TO APPLIANCE, SIZED PER TABLE 12.8 FROM 2012 UPC.

5 PLUMBING RISER DIAGRAM - GAS SCALE: none

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering
JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

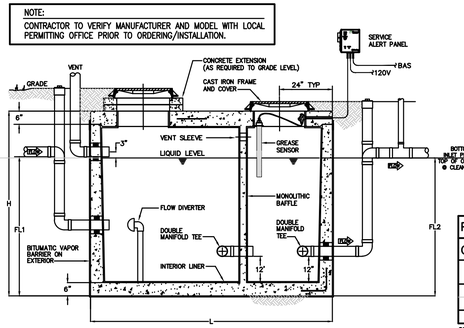
820 Old Mill Road
Cedar Park, TEXAS 78613

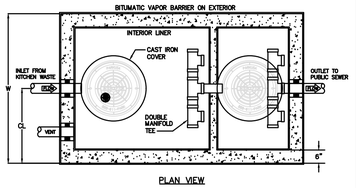
Project No. 032022
Drawn JRD
Checked

PLUMBING RISER DIAGRAMS GAS

Sheet No. P4.03

NOTE:
CONTRACTOR TO VERIFY MANUFACTURER AND MODEL WITH LOCAL PERMITTING OFFICE PRIOR TO ORDERING/INSTALLATION.

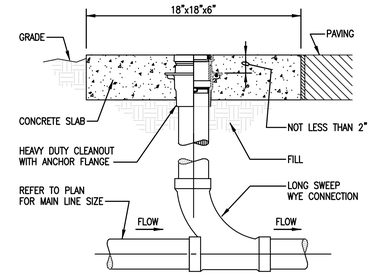




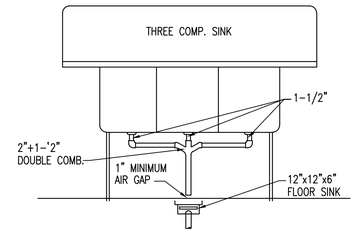
PARK USA								888.611.PARK www.parkusa.com
GREASE INTERCEPTOR SCHEDULE								
MODEL NO.	CAPACITY USGal	GREASE CAP. (LBS)	EMPTY WT (LBS)	LENGTH L	WIDTH W	HEIGHT H	INLET FL1	OUTLET FL2
GT-500-TXAU	500	1,200	7,000	7'-10"	4'-4"	4'-6"	3'-5"	3'-0"
GT-750-TXAU	750	1,700	10,000	7'-10"	4'-4"	6'-0"	4'-5"	4'-2"
GT-1000-TXAU	1,000	2,300	13,200	8'-8"	5'-0"	6'-0"	4'-9"	4'-6"

OTHER SIZES ARE AVAILABLE. CONTACT MANUFACTURER FOR MORE PRODUCT INFORMATION

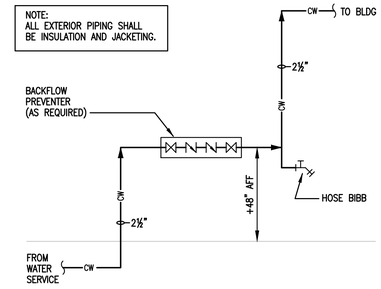
14 GRESE TRAP DETAIL SCALE: none



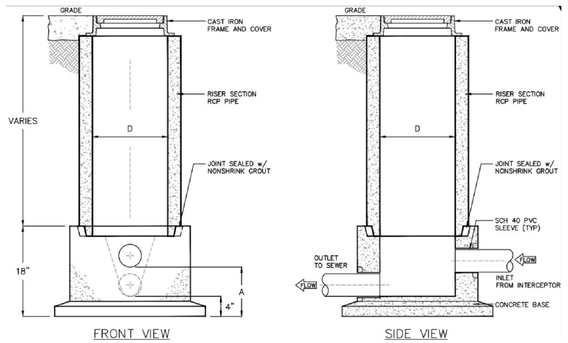
8 CLEANOUT AT GRADE DETAIL SCALE: none

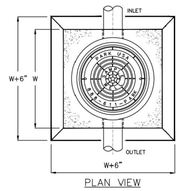


4 THREE CAMPARTMENT SINK SCALE: none



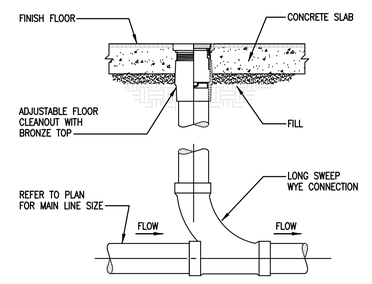
1 SERVICE ENTRY PIPING DIAGRAM SCALE: none



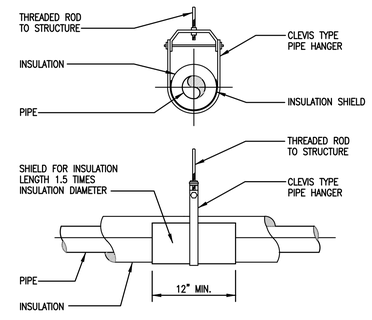


PARK USA				888.611.PARK www.parkusa.com
SAMPLE WELL				
MODEL NO.	DIAMETER "D"	IN & OUT PIPE SIZE	WIDTH "W"	"A"
SWB-154	15"	4"	24"	11"
SWB-184	18"	4"	28"	11"
SWB-244	24"	4"	34"	11"

15 SAMPLE WELL DETAIL SCALE: none

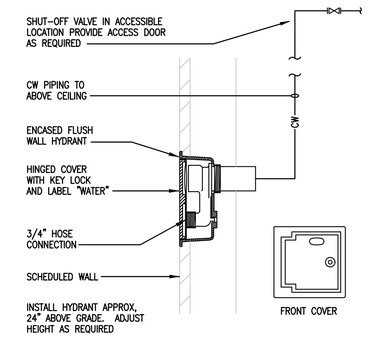


9 FLOOR CLEANOUT DETAIL SCALE: none

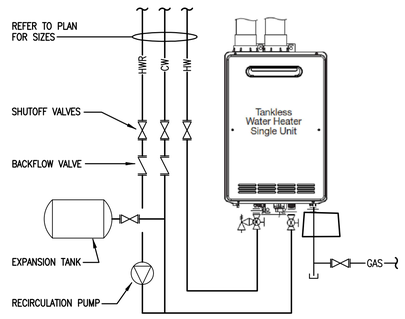


PROVIDE A SECTION OF HIGH COMPRESSION STRENGTH INSULATION AT EACH HANGER POINT. INSULATION SHALL BE HALF ROUND AND EXTEND 2" BEYOND GALVANIZED SHIELD EACH WAY

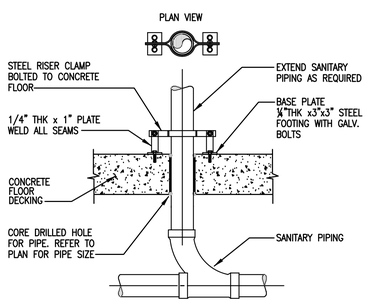
5 CW/HW PIPE SUSPENSION DETAIL SCALE: none



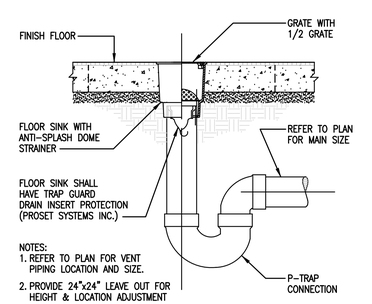
2 RECESSED HOSE BIBB DETAIL SCALE: none



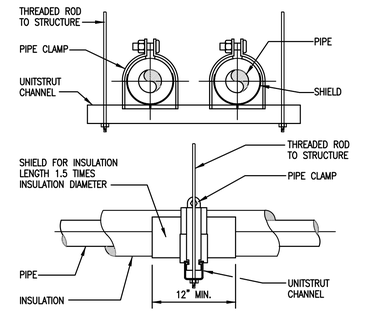
16 TANKLESS WATER HEATER DETAIL SCALE: none



12 PIPE CLAMP DETAIL SCALE: none

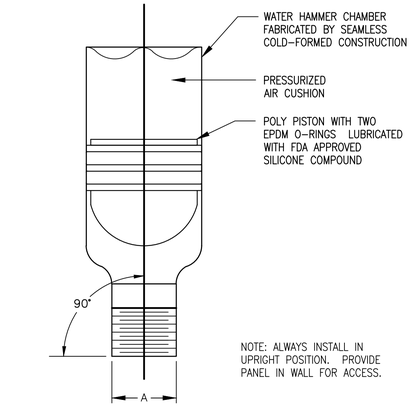


10 FLOOR SINK DETAIL SCALE: none



PROVIDE A SECTION OF HIGH COMPRESSION STRENGTH INSULATION AT EACH HANGER POINT. INSULATION SHALL BE HALF ROUND AND EXTEND 2" BEYOND GALVANIZED SHIELD EACH WAY

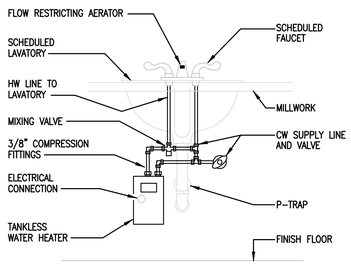
6 CW/HW PIPE SUSPENSION DETAIL SCALE: none



NOTE: ALWAYS INSTALL IN UPRIGHT POSITION. PROVIDE PANEL IN WALL FOR ACCESS.

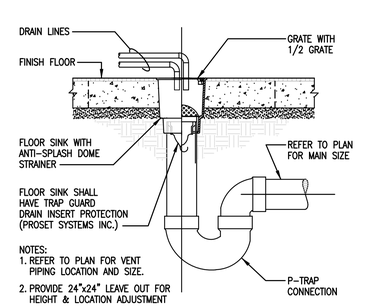
WATER HAMMER ARRESTOR SCHEDULE					
TAG	SOUIX CHIEF NO.	FIXTURE UNIT RATING	DIMENSIONS – FOR THREADED CONN.		
			OVERALL HEIGHT	CHAMBER WIDTH	CONN. SIZE
SA-AA	AA	1-4	3-3/8"	7/8"	1/2"
SA-A	A	4-11	8-1/4"	1-3/8"	1/2"
SA-B	B	12-32	8-3/4"	1-3/8"	3/4"
SA-C	C	33-60	11"	1-3/8"	1"
SA-D	D	61-113	10-1/8"	2-1/8"	1"
SA-E	E	114-154	12-5/8"	2-1/8"	1"
SA-F	F	155-330	15-1/8"	2-1/8"	1"

3 WATER HAMMER ARRESTOR DETAIL SCALE: none

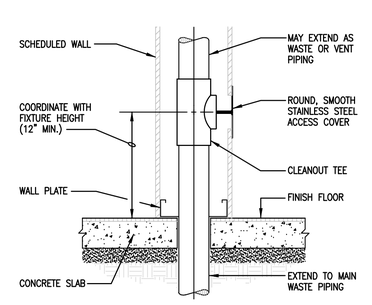


NOTE: REFER TO PLUMBING FIXTURE SCHEDULE FOR SCHEDULED FIXTURES AND ACCESSORIES.

13 TANKLESS WATER HEATER DETAIL SCALE: none



11 FLOOR SINK W/DRAIN LINE DETAIL SCALE: none



7 WALL CLEANOUT DETAIL SCALE: none

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering

JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF JAVAID R. DHUKA, P.E. 99731 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES

OSBORN & VANE ARCHITECTS, Inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

PLUMBING DETAILS

Sheet No. P5.01

PART 1 GENERAL INSTRUCTIONS

PART 1

1.01 SPARE PARTS

A. FURNISH TO OWNER, WITH RECEIPT, THE SPARE PARTS TO INCLUDE FAUCET WASHERS AND O-RINGS, FLUSHOMETER REPAIR KITS AND WATER CLOSET TANK REPAIR KITS FOR THE FIXTURES FURNISHED FOR THIS PROJECT.

1.02 CUTTING AND PATCHING

A. OBTAIN PERMISSION FROM THE ARCHITECT BEFORE CUTTING WALLS, FLOORS, CEILINGS, ETC. AS REQUIRED BY THE PROJECT. DO NOT DISTURB STRUCTURAL MEMBERS WITHOUT PRIOR APPROVAL FROM THE ARCHITECT. CUT HOLES AS SMALL AS POSSIBLE. GENERAL CONTRACTOR SHALL PATCH WALLS, FLOORS, ETC. AS REQUIRED BY WORK UNDER THIS SECTION. PATCHING SHALL MATCH ORIGINAL MATERIAL AND CONSTRUCTION. REPAIR AND REFINISH AREAS DISTURBED BY WORK TO THE CONDITION OF ADJOINING SURFACES IN A MANNER SATISFACTORY TO THE ARCHITECT.

1.03 EXTERIOR UTILITY CONNECTIONS

B. SELECT SECTION BELOW FOR JOBS WHERE CIVIL ENGINEER DESIGNS ALL UTILITIES WITHIN 5'-0" FROM BUILDINGS. TERMINATE DOMESTIC WATER, STORM, AND SEWER LINES AT A POINT APPROXIMATELY FIVE FEET FROM THE BUILDING WALL, OR AS SHOWN ON THE DRAWINGS. MAKE CONNECTION TO THE VARIOUS SERVICES PROVIDED BY OTHERS AND COORDINATE CONNECTION REQUIREMENTS WITH CIVIL ENGINEER. VERIFY THAT INSTALLATION WILL TIE INTO THE VARIOUS SERVICES PROVIDED BY OTHERS AT THE INDICATED INVERT ELEVATION POINT PRIOR TO INSTALLATION. IF THE INSTALLATION WILL NOT TIE INTO THE INDICATED INVERT ELEVATION POINT WHILE MAINTAINING PROPER FALL, NOTIFY ARCHITECT AND CIVIL ENGINEER SO THAT AN ALTERNATIVE MAY BE DETERMINED.

1.04 SYSTEM TESTING AND ADJUSTING

A. UPON COMPLETION OF EACH PHASE OF THE INSTALLATION, TEST EACH SYSTEM IN CONFORMANCE WITH LOCAL CODE REQUIREMENTS AND AS NOTED BELOW. FURNISH LABOR AND EQUIPMENT REQUIRED TO TEST PLUMBING WORK INSTALLED UNDER THIS CONTRACT, AND ASSUME COSTS INVOLVED IN MAKING THE TESTS, AND REPAIRING AND/OR REPLACING DAMAGE RESULTING THEREFROM.

B. NOTIFY THE ARCHITECT AND THE AUTHORITY HAVING JURISDICTION, THREE (3) WORKING DAYS PRIOR TO MAKING PLUMBING SYSTEM TESTS. LEAVE CONCEALED WORK UNCOVERED UNTIL THE REQUIRED TESTS HAVE BEEN COMPLETED, BUT IF NECESSARY DUE TO CONSTRUCTION PROCEDURE, TESTS ON PORTIONS OF THE WORK MAY BE MADE, AND WHEN SATISFACTORY, THE WORK MAY BE CONCEALED. TEST PIPING BEFORE INSULATION IS INSTALLED, AND BEFORE BACKFILL. PIPES, JOINTS, FLANGES, VALVE STEMS, ETC., SHALL BE LEAK TIGHT. REPAIR OR REPLACE SYSTEM DEFECTS WITH NEW MATERIALS. CAULKING OF DEFECTIVE JOINTS, CRACKS OR HOLES WILL NOT BE PERMITTED. REPEAT TESTS AFTER DEFECTS HAVE BEEN ELIMINATED. MAKE TESTS IN THE PRESENCE OF THE ADMINISTRATIVE AUTHORITY AND/OR THE OWNER'S AUTHORIZED REPRESENTATIVE.

C. UPON COMPLETION OF THE SYSTEMS INSTALLATION, AND PRIOR TO ACCEPTANCE BY THE ARCHITECT AND ENGINEER, MAKE GENERAL OPERATING TESTS TO DEMONSTRATE THAT EQUIPMENT AND SYSTEMS ARE IN PROPER WORKING ORDER, AND ARE FUNCTIONING IN CONFORMANCE WITH THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. AS A PART OF THESE TESTS, OPEN EVERY WATER OUTLET TO ENSURE COMPLETE SYSTEM FLUSHING, REMOVE AND CLEAN FAUCET AERATORS, CLEAN STRAINERS, LIGHT PILOT LIGHTS, AND OPERATE EVERY PIECE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT TO DEMONSTRATE PROPER FUNCTIONING.

1.05 WARRANTIES

A. THE WORK TO BE PERFORMED UNDER THIS CONTRACT SHALL INCLUDE THE FURNISHING, INSTALLATION, AND CONNECTION OF PLUMBING SYSTEMS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS. BY SIGNING THE CONTRACT, THE CONTRACTOR ACKNOWLEDGES THAT HE HAS ACQUAINTED HIMSELF WITH THE SITE AND THE EXISTING CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, AND THE DRAWINGS AND SPECIFICATIONS PERTAINING THERETO, AND HE INDICATES THAT HE WILL COMPLY WITH THE REQUIREMENTS AND INTENT OF PERTINENT DOCUMENTS IN THE PERFORMANCE OF THE WORK.

B. WARRANT THAT THE PLUMBING INSTALLED UNDER THIS CONTRACT IS FREE OF DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF JOB ACCEPTANCE BY THE OWNER. THIS SHALL INCLUDE A WARRANTY OF FREE CIRCULATION OF LIQUIDS THROUGHOUT THE SYSTEM AS INTENDED WITHOUT LEAKS, EXCESSIVE NOISE, OR WATER HAMMER.

C. IF DEFECTS OCCUR DURING THE ONE YEAR WARRANTY PERIOD, REPAIR OR REPLACE SUCH DEFECTS AT NO EXPENSE TO THE OWNER, AND TO THE SATISFACTION OF THE OWNER, ARCHITECT AND ENGINEER.

PART 2 PLUMBING PIPING

2.01 PIPING MATERIALS

A. MATERIALS SPECIFIED OR NOTED ON THE DRAWINGS ARE SUBJECT TO THE APPROVAL OF LOCAL CODE AUTHORITIES. VERIFY APPROVAL BEFORE INSTALLING ANY MATERIAL OR JOINING METHOD.

B. DOMESTIC WATER (COLD AND HOT): DOMESTIC WATER PIPING INSTALLED ABOVE THE FLOOR SLAB INSIDE THE BUILDING SHALL BE TYPE "L" HARD TEMPER COPPER TUBE WITH WROUGHT COPPER FITTINGS AND SOLDERED CONNECTIONS MADE UP WITH 95/5 SOLDER. BRAZED MECHANICALLY FORMED TEE CONNECTIONS (T-DRILL) MAY BE USED IN COPPER LINES WHERE APPROVED BY CODE; CONNECTION SHALL BE MADE WITH BRAZED SILVER SOLDER (SILFOS) JOINTS IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS.

C. FITTINGS FOR 1" AND SMALLER AND "DWV" COPPER WITH WROUGHT COPPER DRAINAGE PATTERN FITTINGS FOR 1-1/4" AND LARGER HARD TEMPER COPPER TUBE AND SOLDERED CONNECTIONS MADE WITH 95/5 SOLDER.
   - USE PVC FOR BELOW FLOOR SUMP PUMP DISCHARGE AND GALVANIZED STEEL ABOVE FLOOR.

2.02 PIPING AND EQUIPMENT INSULATION

A. DOMESTIC COLD WATER, HOT WATER, INDIRECT AND CONDENSATE DRAIN PIPE (WITHIN BUILDING) 1" ONE-PIECE FIBERGLASS COVERING WITH FIRE-RESISTANT JACKET WITH SELF-SEALING LAP TO PROVIDE A CONTINUOUS VAPOR BARRIER BY CERTAINTEED, OWENS-CORNING OR ARMSTRONG. FOR PIPING AT HANGERS PROVIDE 8" LONG SECTIONS OF HIGH DENSITY, HIGH TEMPERATURE CALCIUM SILICATE BY JOHNS-MANVILLE, FIBERGLASS BY KNAUF, OR 8" LONG STYROFOAM BILLETS BY DOW. INSULATION SHALL BE CONTINUOUS ALONG THE PIPE SURFACE, EXCEPT AT VALVES, UNIONS, AND WHERE PIPING IS EXPOSED AT FIXTURES. PROVIDE 1" FIBERGLASS INSULATION ON VENT PIPING WITHIN SIX FEET OF VENT THROUGH THE ROOF. PROVIDE FIBERGLASS INSULATION ON DOMESTIC COLD AND HOT WATER PIPES INSTALLED IN WALLS AND CHASES. ROOF DRAIN BODIES: 2" ONE-PIECE FIBERGLASS COVERING WITH FIRE-RESISTANT JACKET WITH SELF-SEALING LAP TO PROVIDE A CONTINUOUS VAPOR BARRIER, BY CERTAINTEED, OWENS-CORNING OR ARMSTRONG. PROVIDE INSULATION PROTECTION SHIELD AT EACH HANGER FOR INSULATED PIPING.

B. COVER FITTINGS WITH ZESTON, KNAUF, OR EQUAL ONE-PIECE PVC PREMOLDED INSULATING COVERS. FITTING COVERS, JACKETS AND ADHESIVES SHALL NOT EXCEED FLAME SPREAD RATING OF 25 AND SMOKE DEVELOPMENT RATING OF 50 PER ASTM E84. AT ALL ELBOWS AND TEES, FILL VOIDS BETWEEN COVERS AND PIPING WITH FIBERGLASS INSULATION AND TAPE JOINTS. INSTALL PIPE INSULATION IN COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS. WHERE PREMOLDED INSULATING FITTINGS ARE NOT APPROVED BY LOCAL AUTHORITIES, MITER INSULATION AT FITTINGS.

C. INSULATE WATER HEATERS, STORAGE TANKS, HOT WATER PUMPS, ETC. THAT ARE NOT FACTORY INSULATED.

2.03 PIPING JOINTS

A. COPPER TUBING: JOINTS IN HARD TEMPER TUBING SHALL BE SOLDERED JOINTS USING LEAD-FREE 95/5 SOLDER EXCEPT WHERE TUBING IS INSTALLED BELOW GRADE OR BELOW THE BASE SLAB, IN WHICH CASE JOINTS SHALL BE SOLDERED WITH SILVER SOLDER (SILFOS). JOINTS IN SOFT TEMPER COPPER TUBING SHALL BE OF THE FLARED TYPE INSTALLED IN COMPLIANCE WITH THE FITTING MANUFACTURER'S RECOMMENDATIONS.

B. THREADED STEEL PIPE: THREADED JOINTS SHALL BE FULL AND CLEAN, CUT WITH NOT MORE THAN THREE (3) THREADS EXPOSED BEYOND THE FITTINGS. MAKE JOINTS TIGHT WITH GRAPHITE BASE PIPE JOINT COMPOUND AND PAINT EXPOSED THREADS OF FERROUS PIPE WITH ACID-RESISTING PAINT AFTER PIPING HAS BEEN TESTED AND PROVEN TIGHT. NO CAULKING, LAMP-WICK OR OTHER MATERIAL WILL BE PERMITTED FOR CORRECTION OF DEFECTIVE JOINTS.

C. WELDED STEEL PIPE: WELDED JOINTS SHALL BE OF THE BUTT WELDED SINGLE "VEE" TYPE. BEVEL PIPE AT A 45 DEGREE ANGLE TO WITHIN 1/16" OF THE INSIDE WALL, AND BUILD UP THE WELD TO ONE FOURTH GREATER DEPTH THAN THE PIPE WALL THICKNESS. WELDING SHALL BE EITHER ELECTRIC OR OXY-ACETYLENE, PERFORMED IN CONFORMANCE WITH THE ASME CODE FOR PRESSURE PIPE WELDING, AND ONLY BY EXPERIENCED CERTIFIED WELDERS.

D. PVC PIPE: CLEAN JOINTS FREE FROM DEBRIS AND MOISTURE. APPLY PVC PRIMER MEETING ASTM F656 TO EACH JOINT. APPLY SOLVENT CEMENT MEETING ASTM D2564 AND MAKE JOINT WHILE WET AND IN ACCORDANCE WITH ASTM D2855.

E. PIPE ADAPTERS: MAKE CONNECTION OF NEW WASTE PIPE TO NEW OR EXISTING DISSIMILAR WASTE PIPE USING ADAPTER COUPLINGS. PROVIDE FERNCO, PROFLEX 3000 SERIES OR MISSION FLEXSEAL MR56 SERIES WITH NEOPRENE ADAPTER GASKET WITH STAINLESS STEEL SHIELD AND HOSE CLAMPS FOR CONNECTING DISSIMILAR PIPES ABOVE GRADE. PROVIDE FERNCO, 1056 SERIES OR MISSION SEWER COUPLINGS WITH NEOPRENE ADAPTER GASKET AND HOSE CLAMPS FOR CONNECTING DISSIMILAR PIPES BELOW GRADE AND COAT STAINLESS STEEL BANDS WITH MASTIC.

2.04 PIPING INSTALLATION

A. GENERAL: CLEAN PIPE THOROUGHLY PRIOR TO INSTALLATION. REAM ENDS OF PIPE TO REMOVE BURRS. CUT PIPE ACCURATELY TO MEASUREMENTS TAKEN ON THE JOB. INSTALL WITH ADEQUATE CLEARANCE FOR INSTALLATION OF COVERINGS WHERE REQUIRED. PIPE SHALL NOT BE SPRUNG OR BENT. NEATLY ALIGN PIPE, CONNECT IT SECURELY, AND SUPPORT IT FROM THE BUILDING STRUCTURE WITH HANGERS AS SPECIFIED BELOW. PROVIDE CHROME-PLATED ESCUTCHEONS ON PIPES PASSING THROUGH CEILINGS, FLOORS OR WALLS OF FINISHED SPACES. RUN PIPES FREELY THROUGH FLOOR AND WALL PENETRATIONS USING PIPE SLEEVES. DO NOT GROUT IN PLACE UNLESS REQUIRED FOR STRUCTURAL FIRE INTEGRITY. INSTALL PIPE CONCEALED IN FINISHED SPACES WHEREVER POSSIBLE. USE A DIELECTRIC UNION WHERE FERROUS AND COPPER PIPE CONNECT. DIELECTRIC UNION SHALL HAVE A ZINC-PLATED STEEL BODY, A THREADED NYLON INSERT, AND INSULATING PRESSURE GASKET. NO FERROUS METAL-TO-COPPER CONNECTION MADE WITHOUT INSULATING UNIONS WILL BE ALLOWED.

B. HANGER & SUPPORTS: PIPE HANGERS SHALL BE AS DESCRIBED IN THE SPECIFICATIONS BY B-LINE OR EQUAL BY ANVIL, MICHIGAN, TRUSCON, OR UNISTRUT. CONNECT HANGERS TO THE STRUCTURE WITH SIDE BEAM CONNECTORS AND ALL THREAD HANGER RODS. PROVIDE ENGINEERED SUPPORT STRUTS BETWEEN JOISTS AND OTHER STRUCTURAL MEMBERS AS REQUIRED TO PROVIDE A RIGID HANGING INSTALLATION. DO NOT HANG PIPES FROM OTHER PIPES, CONDUIT OR DUCTWORK. PROVIDE HANGER RODS AND SPACE HANGERS AT INTERVALS AS SPECIFIED IN "HANGER SPACING". PROVIDE SUPPORT WITHIN 1' OF EACH ELBOW AND TEE. PROVIDE SUPPORTS WITHIN 1' OF EACH EQUIPMENT CONNECTION. PROVIDE TWO NUTS ON THREADED SUPPORTS TO SECURELY FASTEN THE SUPPORT. INSTALL HANGER TYPES OR SUPPORTS FOR VARIOUS PIPING AS FOLLOWS:

C. COPPER TUBE: ADJUSTABLE BAND HANGERS FOR BARE COPPER TUBE 3" AND SMALLER SHALL BE B-LINE #B3170 CT COPPER PLATED ADJUSTABLE BAND SWIVEL RING TYPE. ADJUSTABLE BAND HANGERS FOR INSULATED COPPER TUBE AND 3" SMALLER SHALL BE B-LINE #B3170 NF ADJUSTABLE BAND SWIVEL RING TYPE. CLEVIS HANGERS FOR INSULATED COPPER TUBE 4" AND LARGER SHALL BE B-LINE #B3100 GALVANIZED STEEL CLEVIS TYPE. SUPPORT EXPOSED COPPER TUBE 2" AND SMALLER TO WALLS OR IN CHASES WITH B-LINE #B3198RCT COPPER COATED EXTENSION SPLIT RING PIPE CLAMPS, 3/8" THREADED ROD AND B-LINE #B3199CT CEILING FLANGES. SUPPORT COPPER TUBE IN CHASES AND WALLS AT PLUMBING FIXTURES WITH PLASTIC OR COPPER BRACKETS SECURED TO STRUCTURE AND U-BOLTS SIZED TO BARE ON THE PIPE. RISER CLAMPS TO SUPPORT VERTICAL COPPER TUBE SHALL BE B-LINE #B3373CT COPPER COATED STEEL, CUT INSULATION, SEAL VAPOR BARRIER, AND ATTACH TO BARE TUBE.

D. STEEL PIPE: ADJUSTABLE BAND HANGERS FOR 2" AND SMALLER SHALL BE B-LINE #B3170 NF ADJUSTABLE BAND SWIVEL RING TYPE. CLEVIS HANGERS FOR 2-1/2" AND LARGER SHALL BE B-LINE #B3100 GALVANIZED STEEL CLEVIS TYPE. RISER CLAMPS TO SUPPORT VERTICAL PIPE SHALL BE B-LINE #B3373 GALVANIZED STEEL.

E. CAST IRON PIPE: ADJUSTABLE BAND HANGERS FOR 2" AND SMALLER. CLEVIS HANGERS FOR 3" AND LARGER SHALL BE B-LINE #B3100 GALVANIZED STEEL CLEVIS TYPE. RISER CLAMPS TO SUPPORT VERTICAL PIPE SHALL BE B-LINE #B3373 GALVANIZED STEEL.

F. PVC PIPE: ADJUSTABLE BAND HANGERS FOR 3" AND SMALLER. CLEVIS HANGERS FOR 4" AND LARGER SHALL BE B-LINE #B3100 GALVANIZED STEEL CLEVIS TYPE. RISER CLAMPS TO SUPPORT VERTICAL PIPE SHALL BE B-LINE #B3373 GALVANIZED STEEL.

G. INSULATION PROTECTION SHIELDS: B-LINE #B3151 OF 18 GAUGE GALVANIZED SHEET METAL. SHIELD SHALL COVER HALF OF THE CIRCUMFERENCE OF THE PIPE AND SHALL BE OF LENGTH INDICATED BY MANUFACTURER FOR PIPE SIZE AND THICKNESS OF INSULATION.

H. HANGER SPACING, ROD SIZES & CONNECTORS: CONNECT RODS TO STEEL BEAMS OR JOISTS WITH B-LINE #B3031 OR #B3033BEAM CLAMPS AS REQUIRED. CONNECT RODS TO CONCRETE WITH B-LINE #3014 MALLEABLE IRON SINGLE TYPE INSERTS WITH MALLEABLE IRON NUT. CONNECT RODS IN WOOD CONSTRUCTION WITH B-LINE #B3058 SIDE BEAM CONNECTORS. HANG AND SUPPORT PIPING WITH SPACING AND ROD SIZES AS FOLLOWS:

I. COPPER TUBE: 1-1/2" AND SMALLER - EVERY 6' WITH 3/8"HANGER RODS; 2" - EVERY 10' WITH 3/8"HANGER RODS; 2-1/2" AND 3" - EVERY 10' WITH ½" HANGER RODS, 4" - EVERY 10' WITH 5/8" HANGER RODS. SUPPORT VERTICAL COPPER TUBE EVERY 10'.

J. STEEL PIPE: 1" AND SMALLER - EVERY 8' WITH 3/8" HANGER RODS; 1-1/4" TO 2" - EVERY 10' WITH 3/8" HANGER RODS; 2-1/2" AND 3" - EVERY 10' WITH ½" HANGER RODS, 4" - EVERY 10' WITH 5/8" HANGER RODS. SUPPORT VERTICAL STEEL PIPE EVERY 10'.

K. CAST IRON PIPE: EVERY 10' AND WITHIN 1' OF EACH JOINT. 2" AND SMALLER WITH 3/8" HANGER RODS; 3" WITH 1/2" HANGER RODS; 4" WITH 5/8" HANGER RODS; 6" WITH 3/4" HANGER RODS; 8" AND LARGER WITH 7/8" HANGER RODS. SUPPORT VERTICAL CAST IRON PIPE EVERY 15'.

L. PVC PIPE: SUPPORT ALL PIPES SIZES EVERY 4'. 1-1/2" AND SMALLER WITH 3/8" HANGER RODS; 2" WITH 1/2"HANGER RODS; 2-1/2" AND 3" WITH 1/2" HANGER RODS, 4" AND LARGER WITH 5/8" HANGER RODS. SUPPORT VERTICAL PVC PIPE EVERY 4'.

M. PLUMBING VENT: CONNECT PLUMBING VENT PIPES TO FIXTURE DRAIN PIPES AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY THE INSTALLATION PRACTICES ADOPTED AND ENFORCED BY LOCAL CODES OFFICIAL, AND EXTEND VENT PIPES FULL SIZE THROUGH THE ROOF LINE. GRADE PIPE TO A UNIFORM SLOPE SO AS TO DRAIN BACK BY GRAVITY TO THE DRAINAGE PIPING SYSTEM. VENTS PASSING THROUGH THE ROOF SHALL BE MINIMUM 3" SIZE EXCEPT IN TROPICAL CLIMATES, PER LOCAL CODES. TURN FLASHING DOWN INTO STACKS AT LEAST 2", AND EXTEND FLASHING 24" IN ALL DIRECTIONS FROM THE PIPE AT THE ROOF LINE. APPLY WHITE LEAD PIPE DOPE ON MALE STEEL PIPE THREADS. VENT LINES SHALL BE AIR AND WATER TIGHT. VENT FLOOR DRAINS INDIVIDUALLY OR CONNECT THEM TO A HORIZONTALLY VENTED LINE AS SHOWN ON THE DRAWINGS.

N. PROVIDE WARNING TAPE FOR PROJECTS WHERE THE WATER SERVICE LINES CONNECTED TO THE UTILITIES.

O. DOMESTIC WATER: ARRANGE COLD, HOT, AND HOT WATER RECIRCULATION PIPING TO DRAIN AT THE LOWEST POINT IN EACH SYSTEM. INSTALL AT LEAST ONE PIPE UNION ADJACENT TO ALL SHUTOFF VALVES, AT CONNECTION POINTS OF EACH PIECE OF EQUIPMENT, AND ELSEWHERE IN THE SYSTEM WHERE REQUIRED TO ALLOW PROPER MAINTENANCE. PROVIDE UNIONS OF THE GROUND JOINT TYPE. MAKE ALLOWANCE FOR EXPANSION AND CONTRACTION WHERE REQUIRED BY THE INSTALLATION. WHERE WATER PIPING OCCURS IN EXTERIOR WALLS, HOLD PIPE AS CLOSE AS POSSIBLE TO THE INTERIOR FACE OF WALL AND INSTALL INSULATION BATT OR OTHER INSULATION (MINIMUM R8) BETWEEN PIPING AND THE EXTERIOR WALL FACE.

2.05 PIPING SANITIZATION

A. SANITIZE THE ENTIRE DOMESTIC WATER PIPING SYSTEM (COLD, HOT, AND HOT WATER RETURN) WITH A SOLUTION CONTAINING NOT LESS THAN 50 PPM AVAILABLE CHLORINE. KEEP SOLUTION IN THE SYSTEM FOR A MINIMUM OF 24 HOURS, WITH EACH VALVE BEING OPERATED SEVERAL TIMES DURING THE PERIOD. AFTER COMPLETION, FLUSH SYSTEM WITH CITY WATER UNTIL CHLORINE RESIDUAL IS LOWERED TO INCOMING CITY WATER LEVEL.

2.06 PIPING TESTING

A. TEST THE DRAINAGE AND VENT SYSTEM BY PLUGGING OPENINGS WITH TEST PLUGS, EXCEPT THOSE AT THE TOP OF THE STACKS. FILL THE SYSTEM WITH WATER; TEST RESULTS WILL BE SATISFACTORY IF THE WATER LEVEL REMAINS STATIONARY FOR NOT LESS THAN ONE (1) HOUR. SUBJECT THE DRAINAGE AND VENT SYSTEM TO A PRESSURE OF AT LEAST TEN (10) FEET OF WATER. IF LEAKS DEVELOP, REPAIR THEM AND REPEAT THE TEST.

B. TEST THE DOMESTIC WATER SYSTEM BY FILLING IT WITH WATER AND THEN ISOLATING THE SYSTEM FROM ITS SOURCE. KEEP THE SYSTEM CLOSED FOR A PERIOD OF TWENTY-FOUR HOURS, WITH NO FIXTURE BEING USED. THE PRESSURE DIFFERENTIAL FOR THIS TEST PERIOD SHALL NOT EXCEED 10 PSIG. TEST WATER PIPING TO A 125 PSI HYDROSTATIC PRESSURE.

2.07 AIR ADMITTANCE VALVES

A. PROVIDE AIR ADMITTANCE VALVES WHERE INDICATED ON THE DRAWINGS. AIR ADMITTANCE VALVES SHALL MEET ASSE 1050 OR 1051 WHERE APPLICABLE BY STUDOR OR EQUAL, BY OATEY, PROSET OR RECTORSEAL. INSTALL PER CODE AND MANUFACTURER REQUIREMENTS.

PART 3 PLUMBING SPECIALTIES

3.01 AIR CHAMBERS, WATER HAMMER ARRESTORS, AND TRAPS

O. PROVIDE AIR CHAMBERS, FULL SIZE OF THE SUPPLY PIPE AND MINIMUM 18" LONG OR PER LOCAL AUTHORITIES REQUIREMENTS, AT SUPPLY PIPES TERMINATING AT FIXTURES TO PREVENT WATER HAMMER. PROVIDE WATER HAMMER ARRESTORS AT VALVES OR BATTERIES OF FIXTURES AS INDICATED ON THE DRAWINGS TO PREVENT WATER HAMMER. ARRESTORS SHALL BE JOSAM, SMITH, PRECISION PLUMBING PRODUCTS, SIOUX CHIEF, WADE, WATTS, OR ZURN, STAINLESS STEEL BELLOWS TYPE, OR O-RING SEALED AND LUBRICATED ACETAL PISTON. INSTALL WATER HAMMER ARRESTORS PER THE PLUMBING AND DRAINAGE INSTITUTE PDI WH-201 INSTALLATION INSTRUCTIONS. INSTALLATION OF ARRESTORS AT BATTERIES OF FIXTURES PRECLUDES THE REQUIREMENT FOR INDIVIDUAL AIR CHAMBERS AT EACH BATTERY FIXTURE.

P. PROVIDE WATER-SEAL TRAPS ON FLOOR DRAINS, FIXTURES AND EQUIPMENT WITH DRAIN CONNECTIONS, INCLUDING TRAPS NOT FURNISHED IN COMBINATION WITH FIXTURES AND EQUIPMENT. PLACE TRAP AS CLOSE TO THE FIXTURE OR DRAIN AS POSSIBLE. EXPOSED TRAPS IN FINISHED SPACES SHALL BE CHROME-PLATED BRASS.

Q. PROVIDE CONVENTIONAL "P" TYPE TRAPS, WATER-SEALED SELF-CLEANING DESIGN. FULL "S" TRAPS OR TRAP STANDARDS SHALL BE USED ONLY WHERE SPECIFICALLY CALLED FOR ON THE DRAWINGS OR ELSEWHERE IN THIS SPECIFICATION. TRAP WATER SEALS SHALL NOT BE LESS THAN 2", AND DEEP SEAL TRAPS SHALL BE PROVIDED WHERE SPECIFIED OR INDICATED. EACH TRAP NOT INTEGRAL WITH THE FIXTURE OR FLOOR DRAIN OR INSTALLED BELOW THE BASE SLAB SHALL BE PROVIDED WITH AN ACCESSIBLE CLEANOUT OF ADEQUATE SIZE. PROVIDE TRAP PRIMERS WHERE REQUIRED BY CODE AND WHERE INDICATED ON THE DRAWINGS.

3.02 CLEANOUTS, FLOOR DRAINS AND ROOF DRAINS

SPECIFY PLASTIC FLOOR DRAIN MANUFACTURERS IF PLASTIC FLOOR DRAINS ARE USED, IF NOT DELETE OPTION. CONSIDER LOCK SPEC FOR SIOUX CHIEF OR SPECIFY EQUALS.

A. CLEANOUTS, FLOOR DRAINS AND ROOF DRAINS SHALL BE BY ONE MANUFACTURER IF POSSIBLE. ACCEPTABLE MANUFACTURERS ARE JOSAM, SMITH, WADE, WATTS, AND ZURN. PROVIDE LONG SWEEP FITTINGS FOR CLEANOUT EXTENSIONS; SHORT SWEEPS AT START OF RUNS OR CHANGE IN DIRECTION AND COMBINATION WYE AND EIGHT BEND FITTINGS IN HORIZONTAL RUNS. INSTALL CLEANOUTS WITH A MINIMUM OF 18" CLEAR ALL AROUND, CONSULT LOCAL CODES FOR OTHER REQUIREMENTS, FOR EASY SYSTEM MAINTENANCE. INSTALL PLUG WITH TEFLON JOINT COMPOUND.

B. FLOOR DRAINS: SHALL BE AS SCHEDULED ON THE DRAWINGS.

C. FLOOR CLEANOUTS: SHALL BE AS SCHEDULED ON THE DRAWINGS. INSTALL CLEANOUTS AT POINTS AS NOTED ON THE DRAWINGS, AT THE BUILDING EXIT; AT A MINIMUM OF EVERY 50 FEET IN HORIZONTAL SOIL AND WASTE LINES; AND AT TURNS OF PIPE GREATER THAN 45 DEGREES CLEANOUTS SHALL BE FULL SIZE OF THE PIPE UP TO 4", AND 4" SIZE FOR PIPES LARGER THAN 4". DETERMINE THE TYPE OF FLOOR COVERING TO BE USED AT EACH FLOOR CLEANOUT LOCATION AND PROVIDE TOP WITH VARIATIONS SUITABLE FOR FLOOR COVERING (CARPET MARKERS, RECESSED FOR TILE AND SCORIATED FOR UNFINISHED FLOOR). ROUGH-IN AND INSTALL EACH FLOOR CLEANOUT FLUSH WITH THE FINISHED FLOOR CONSTRUCTION.

D. EXTERIOR CLEANOUTS: SHALL BE AS SCHEDULED ON THE DRAWINGS. INSTALL CLEANOUTS AT POINTS AS NOTED ON THE DRAWINGS, AT THE BUILDING EXIT; AT A MINIMUM OF EVERY 100 FEET IN HORIZONTAL SOIL, WASTE AND STORM SERVICE LINES. EMBED EACH EXTERIOR CLEANOUT IN AN 18" X 18" X 8" BLOCK OF CONCRETE, FLUSH WITH FINISHED GRADE.

E. WALL CLEANOUTS: SHALL BE AS SCHEDULED ON THE DRAWINGS. INSTALL WALL CLEANOUTS AT POINTS AS NOTED ON THE DRAWINGS; AT THE FOOT OF EACH SOIL, WASTE OR INTERIOR DOWNSPOUT STACK; AT HORIZONTAL SOIL AND WASTE BRANCHES LONGER THAN FIVE FEET NOT SERVED BY A FLOOR CLEANOUT; CONSULT LOCAL CODES FOR INSTALLATION AT SPECIFIC FIXTURE TYPES. INSTALL WALL CLEANOUTS ABOVE THE FLOOD RIM OF THE FIXTURE SERVED WITHIN FOUR FEET OF THE FLOOR AND INSTALL EXTENSIONS FROM THE CLEANOUT TEE TO THE WALL TO LOCATE THE PLUG WITHIN 2" OF THE WALL WHERE REQUIRED. INSTALL CLEANOUTS ON URINALS AND SINKS WHERE REQUIRED BY CODE.

F. ROOF DRAINS: SHALL BE AS SCHEDULED ON THE DRAWINGS. PROVIDE WITH ROOF SUMP RECEIVER, EXTENSION, SECONDARY FLASHING CLAMPS AND UNDERDECK CLAMP AS REQUIRED; PROVIDE EXPANSION JOINTS WHERE REQUIRED. PROVIDE OVERFLOW ROOF DRAINS WHERE INDICATED ON THE DRAWINGS WITH INLET FLOW LINE 2" ABOVE THE PRIMARY ROOF DRAIN INLET.

3.03 VALVES, STRAINERS, HOSE BIBBS, AND UNIONS

A. PLUMBING SYSTEM VALVES SHALL BE CRANE COMPANY OR NIBCO OF MODELS HEREIN SPECIFIED, OR APPROVED EQUAL BY HAMMOND, WALWORTH, STOCKHAM OR MUELLER VALVES. VALVES SHALL BE OF THE BEST QUALITY, DESIGNED FOR 125 PSI STEAM WORKING PRESSURE. INSTALL VALVES ON THE HOT AND COLD WATER LINES AT THE WATER HEATER CONNECTIONS AND OTHER ITEMS OF EQUIPMENT, AT BRANCHES FROM MAINS SERVING GROUPS OF FIXTURES, AND AT OTHER PLACES INDICATED OR REQUIRED BY THE INSTALLATION TO ALLOW EASE OF FUTURE MAINTENANCE.

B. GATE VALVES: CLASS 125, SIZE 2-1/2" AND SMALLER SHALL BE CRANE #1701 OR NIBCO T113, NON-RISING STEM, SCREWED BRASS BODY AND PARTS, WITH WEDGE DISC. GATE VALVES 3" AND LARGER SHALL BE CRANE #465-1/2 OR NIBCO #617-0, O.S. & Y., IRON BODY FLANGED WEDGE GATE WITH BRASS SEATS AND STEM.

C. BALL VALVES (MAY BE USED IN LIEU OF GATE VALVES UP TO 2"): 2" AND SMALLER, NIBCO #T580; TWO PIECE BRONZE BODY, WITH SCREWED ENDS, CHROME PLATED BRONZE BALL WITH CONVENTIONAL PORT, 400 PSI, BLOW-OUT PROOF STEM.

D. GLOBE VALVES: GLOBE VALVES SHALL BE CLASS 125. GLOBE VALVES 2-1/2" AND SMALLER SHALL BE CRANE #1310 OR NIBCO #T-211, SCREWED BRASS BODY AND BRASS DISC. GLOBE VALVES 3" AND LARGER SHALL BE CRANE #351 IRON BODY FLANGED VALVE WITH BRASS TRIM.

E. CHECK VALVES: CHECK VALVES SHALL BE CLASS 125. CHECK VALVES FOR INSTALLATION IN HORIZONTAL PIPE RUNS SHALL BE OF THE "SWING DISC" DESIGN. HORIZONTAL CHECK VALVES 2-1/2" AND SMALLER SHALL BE CRANE #137 OR NIBCO #T-413 WITH SCREWED BRONZE BODY AND BRONZE DISC. HORIZONTAL CHECK VALVES 3" AND LARGER SHALL BE CRANE #373 OR NIBCO F-918 IRON BODY FLANGED VALVE WITH BRASS TRIM. CHECK VALVES FOR INSTALLATION IN VERTICAL PIPE RUNS SHALL BE OF THE "VERTICAL LIFT" DESIGN. VERTICAL CHECK VALVES 2-1/2" AND SMALLER SHALL BE CRANE #29 OR NIBCO #T-480 WITH SCREWED BRONZE BODY AND BRONZE DISC. VERTICAL CHECK VALVES 3" AND LARGER SHALL BE CENTER GUIDED.

3.04 WATER SERVICE ENTRANCE: PRESSURE REDUCING VALVE AND BACKFLOW PREVENTER

A. PROVIDE A BACKFLOW PREVENTER (BFP) OF TYPE REQUIRED BY LOCAL CODE, AND A PRESSURE REDUCING VALVE (PRV) IF REQUIRED BY EXCESSIVE WATER PRESSURE, ON THE DOMESTIC WATER SERVICE IMMEDIATELY DOWNSTREAM FROM THE POINT OF WATER SERVICE ENTRY.

- DOUBLE CHECK VALVE (DCV) SHALL BE AS SPECIFIED ON THE DRAWINGS, WATTS OR EQUIVALENT BY FEBCO, CONBRACO, OR WILKINS. 2" AND SMALLER SHALL BE BRONZE BODY WITH STAINLESS STEEL TRIM, BRONZE BALL VALVE SHUT-OFFS ON INLET AND OUTLET, AND BRONZE STRAINER WITH STAINLESS STEEL SCREEN AND CLEANOUT. FOR 2-1/2" AND LARGER PROVIDE IRON BODY WITH FUSED EPOXY COATING, RESILIENT WEDGE AWWA C509 IRON GATE VALVES ON INLET AND OUTLET, IRON STRAINER WITH FUSED EPOXY COATING, ALL FLANGE CONNECTED. UNIT SHALL BE SUITABLE FOR 175 PSI WORKING PRESSURE.

- REDUCE PRESSURE ZONE ASSEMBLY (RPZ) SHALL BE AS SPECIFIED ON THE DRAWINGS, WATTS OR EQUIVALENT BY FEBCO, CONBRACO, OR WILKINS. FOR 2" AND SMALLER PROVIDE BRONZE BODY WITH STAINLESS STEEL TRIM, BRONZE BALL VALVE SHUT-OFFS ON INLET AND OUTLET, AND BRONZE STRAINER WITH STAINLESS STEEL SCREEN AND CLEANOUT. FOR 2-1/2" AND LARGER PROVIDE IRON BODY WITH FUSED EPOXY COATING RESILIENT WEDGE AWWA C509 IRON GATE VALVES ON INLET AND OUTLET, IRON STRAINER WITH FUSED EPOXY COATING, ALL FLANGE CONNECTED, BRONZE TRIM, EPDM ELASTOMERS AND STAINLESS STEEL SPRING. UNIT SHALL BE RATED FOR 175 PSI WORKING PRESSURE. PROVIDE AIR GAP FITTING ON INTERMEDIATE VENT AND PIPE IT TO DISCHARGE OVER NEARBY FLOOR DRAIN.

3.05 SYSTEM ACCESSORIES

A. THERMOMETERS SHALL BE AMERICAN 3" BI-METAL DIAL TYPE WITH SEPARABLE SOCKET, AND SHALL BE INSTALLED WHERE INDICATED OR REQUIRED.

B. PRESSURE GAUGES SHALL BE ASHCROFT 3" DIAL TYPE WITH SHUT-OFF COCK, AND SHALL BE INSTALLED WHERE INDICATED OR REQUIRED.

C. TRAP PRIMERS SHALL BE AS SPECIFIED ON THE DRAWINGS, PRECISION PLUMBING PRODUCTS "PRIME RITE" OR EQUAL BY MIFAB OR SIOUX CHIEF WITH BRASS BODY AND INTEGRAL VACUUM BREAKER. PROVIDE DISTRIBUTION BOX WHERE MORE THAN ONE TRAP IS INDICATED TO BE PRIMED ON THE DRAWINGS. PROVIDE ACCESS PANEL WHERE REQUIRED.

D. ICE MAKER CONNECTION BOXES SHALL BE AS SPECIFIED ON THE DRAWINGS, GUY GRAY #BIM875 OR APPROVED EQUAL, WITH 20 GAUGE STEEL BODY BODY, WALL FLANGE AND WATER CONNECTION.

PART 4 PLUMBING FIXTURES AND EQUIPMENT

4.01 PLUMBING FIXTURES

A. FURNISH AND INSTALL COMMERCIAL GRADE PLUMBING FIXTURES, SEE THE DRAWINGS FOR QUANTITIES AND DESCRIPTIONS. PROVIDE CHINA FIXTURES AS SCHEDULED BY AMERICAN-STANDARD OR APPROVED EQUAL BY CRANE, ELJER, KOHLER, TOTO-KIKI OR ZURN. PROVIDE STAINLESS STEEL SINKS AS SCHEDULED BY ELKAY OR EQUAL BY JUST. PROVIDE ELECTRIC WATER COOLERS AS SCHEDULED BY ELKAY OR APPROVED EQUAL BY ACORN / AQUA, HALSEY TAYLOR OR HAWS. PROVIDE MOP SINKS AS SCHEDULED BY STERN-WILLIAMS OR EQUAL BY ACORN ENGINEERING CO., FIAT OR FLORESTONE. PROVIDE SHOWER ENCLOSURES BY LASCO OR APPROVED EQUAL BY AQUA GLASS, BEST BATH, FIAT, KOHLER OR SWAN. PROVIDE FIXTURES OF SAME MANUFACTURER WHERE POSSIBLE.

B. FIXTURES SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN SHALL BE FURNISHED AND INSTALLED, SET FIRM AND TRUE, CONNECTED TO REQUIRED PIPING SERVICES, THOROUGHLY CLEANED, LEFT CLEAN AND READY FOR USE. EXPOSED FITTINGS AND PIPING AT THE FIXTURES SHALL BE CHROME-PLATED, AND WATER SUPPLY PIPING SHALL BE VALVED AT EACH FIXTURE.

C. VITREOUS CHINA FIXTURES SHALL BE OF THE BEST GRADE VITREOUS WARE, WITHOUT PIT HOLES OR BLEMISHES, AND THE OUTLINES SHALL BE GENERALLY TRUE. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY PIECES WHICH, IN HIS OPINION, ARE FAULTY. FIXTURES SET AGAINST WALLS SHALL HAVE GROUND BACKS AND SHALL BE CAULKED WITH SILICONE SEALANT OF A MATCHING COLOR.

4.02 PLUMBING FIXTURE TRIM

A. FIXTURE TRIM SHALL HAVE THE MANUFACTURER'S NAME STAMPED CLEARLY AND VISIBLY ON EACH ITEM.

B. PROVIDE FAUCETS AS SCHEDULED ON DRAWINGS.

C. FIXTURE P-TRAPS SHALL BE 17 GAUGE BRASS BODY WITH CLEANOUT, 17 GAUGE SEAMLESS TUBULAR WALL BEND WITH CAST BRASS SLIP NUT, SHALLOW STEEL FLANGE, ALL CHROME PLATED: BY MCGUIRE, BRASS CRAFT, DEARBORN BRASS, EBC; PROFLO OR ZURN.

D. LAVATORY, SINK AND WATER CLOSET SUPPLIES SHALL BE SOLID BRASS ANGLE OR STRAIGHT TYPE WITH FULL TURN BRASS STEM, WHEEL HANDLE OR LOOSE KEY TYPES AS NOTED ON DRAWINGS, SHALLOW STEEL FLANGE, 3/8" COPPER RISER FLANGE, ALL CHROME PLATED, FINAL CONNECTION AS REQUIRED: BY MCGUIRE, BRASS CRAFT, EBC OR ZURN.

E. LAVATORY DRAINS SHALL BE GRID TYPE CHROME PLATED 17 GAUGE BRASS OPEN GRID WITH 1-1/4" X 6" LONG SEAMLESS BRASS TAILPIECE AND BRASS LOCKNUT WITH HEAVY RUBBER BASIN WASHER AND FIBER FRICTION WASHER, BY MCGUIRE, BRASS CRAFT, DEARBORN BRASS; EBC , PROFLO, WATTS BRASS AND TUBULAR OR ZURN.

F. SINK DRAINS SHALL BE BASKET TYPE WITH CHROME PLATED FORGED BRASS BASKET STRAINER AND STRAINER BODY WITH 1-1/2" X 4" LONG SEAMLESS BRASS TAILPIECE AND CAST BRASS LOCK AND COUPLING NUTS BY MCGUIRE, BRASS CRAFT, DEARBORN BRASS, EBC, PROFLO, WATTS BRASS AND TUBULAR OR ZURN.

G. PROVIDE HANDICAP INSULATION KITS FOR LAVATORIES AND SINKS ON EXPOSED WATER AND WASTE PIPES AND FITTINGS, INCLUDING OFFSET DRAIN AND CONTINUOUS WASTE COVERS WHERE REQUIRED: BY BROCAR, MCGUIRE, PLUMBEREX "PRO-2000", TRAP-WRAP OR TRU-BRO.

I. PROVIDE SMITH, JOSAM, WADE, WATTS, OR ZURN CHAIR CARRIERS FOR MOUNTING WALL MOUNTED WATER CLOSETS AND LAVATORIES AS DESCRIBED ON THE DRAWINGS. SECURELY FASTEN CARRIERS TO FLOOR AND TEST PER MANUFACTURER'S RECOMMENDATIONS PRIOR TO INSTALLATION OF PARTITIONS.

4.03 WATER HEATER

USE THIS PARAGRAPH FOR ELECTRICAL STORAGE TYPE WITH TANKS 119 GALLONS AND SMALLER, TANKS LARGER THAN 120 REQUIRE ASME STAMP WITH APPROPRIATE PRESSURE RATING.

A. WATER HEATER SHALL BE BY A.O.SMITH, BRADFORD-WHITE, LOCHINVAR, STATE, RHEEM OR RUUD WITH CAPACITY AS SCHEDULED ON THE DRAWINGS. UNIT SHALL BE ELECTRIC GLASSLINED TANK TYPE COMPLETE WITH STEEL JACKET, FIBERGLASS INSULATION, MAGNESIUM ANODE, INTEGRAL THERMOSTATS AND CONTROLS, AND TEMPERATURE & PRESSURE RELIEF VALVE. WATER HEATER SHALL BE UL LISTED AND MEET ASHRAE 90.1B STANDARDS FOR THERMAL EFFICIENCY AND STANDBY HEAT LOSS.

B. EXPANSION TANK: EXPANSION TANK SHALL BE AMTROL "THERM-X-TROL" AS SCHEDULED ON THE DRAWINGS OR EQUAL BY ARMSTRONG, BELL & GOSSETT, TACO, OR WATTS. UNIT SHALL BE CONSTRUCTED OF WELDED CARBON STEEL LISTED FOR 150 PSIG WORKING PRESSURE, WITH A FDA APPROVED BUTYL RUBBER DIAPHRAGM, TAPS FOR PRESSURE GAGE, AIR CHARGING FITTING, AND DRAIN FITTING. SUPPORT AS DETAILED ON THE DRAWINGS. CHARGE TANK WITH TO A PRESSURE EQUAL TO THE STATIC WATER PRESSURE.

4.04 EQUIPMENT FURNISHED BY OTHERS

A. FURNISH AND INSTALL ROUGHED-IN WASTES, VENTS AND WATER SERVICES. PROVIDE FINAL CONNECTION TO KITCHEN EQUIPMENT, FURNISHED BY OTHERS, IN LOCATIONS AS INDICATED ON THE DRAWINGS. PROVIDE ACCESSORY ITEMS THAT ARE REQUIRED BUT NOT FURNISHED WITH THE EQUIPMENT, INCLUDING TRAPS, STOP VALVES, PRV'S, INDIRECT DRAIN FROM EQUIPMENT TO FLOOR DRAINS, AND ACCESSORY ITEMS INDICATED OR REQUIRED FOR THE PROPER OPERATION OF THE COMPLETE SYSTEM AT THE TERMINATION OF THE WORK.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECT ROUGH-IN DIMENSIONS, AND SHALL VERIFY REQUIREMENTS WITH THE ARCHITECT AND/OR EQUIPMENT SUPPLIER PRIOR TO SERVICE INSTALLATIONS.

Date issued/revised
12/6/2022 ISSUED FOR PRICING
-
-
-
-

M/E/P/ ENGINEER:
JRD Engineering
JRD ENGINEERING
REGISTRATION NUMBER F-10429
5711 MISTY BRIAR COURT
SUGAR LAND, TEXAS 77479
TEL: (713) 367-3132
FAX: (281) 712-1886

THIS DOCUMENT IS RELEASED
FOR THE PURPOSE OF REVIEW
UNDER THE AUTHORITY OF
JAVAID R. DHUKA, P.E. 99731
IT IS NOT TO BE USED FOR
CONSTRUCTION OR
PERMIT PURPOSES

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

UNITY RECREATION
CENTER

820 Old Mill Road
Cedar Park, TEXAS 78613

Project No. 032022
Drawn JRD
Checked

PLUMBING
SPECIFICATIONS

Sheet No. P6.01

TREE LIST:		
6004	ELM	10", 9", & 8"
6005	ELM	13"
6006	ELM	15"
6007	POST OAK	9"
6008	POST OAK	21" & 12"
6009	POST OAK	17"
6010	POST OAK	16"
6011	POST OAK	12" & 9"
6012	POST OAK	21"
6013	POST OAK	17" & 13"
6014	POST OAK	18"
6016	POST OAK	21"
6024	POST OAK	23" & 21"

33.5" TOTAL MITIGATION = 9 4" SHUMARD OAK

14 TOTAL EXISTING TREES ON SITE FROM PREFERRED PLANT LIST
3 BEING REMOVED FOR A TOTAL OF 79% BEING RETAINED

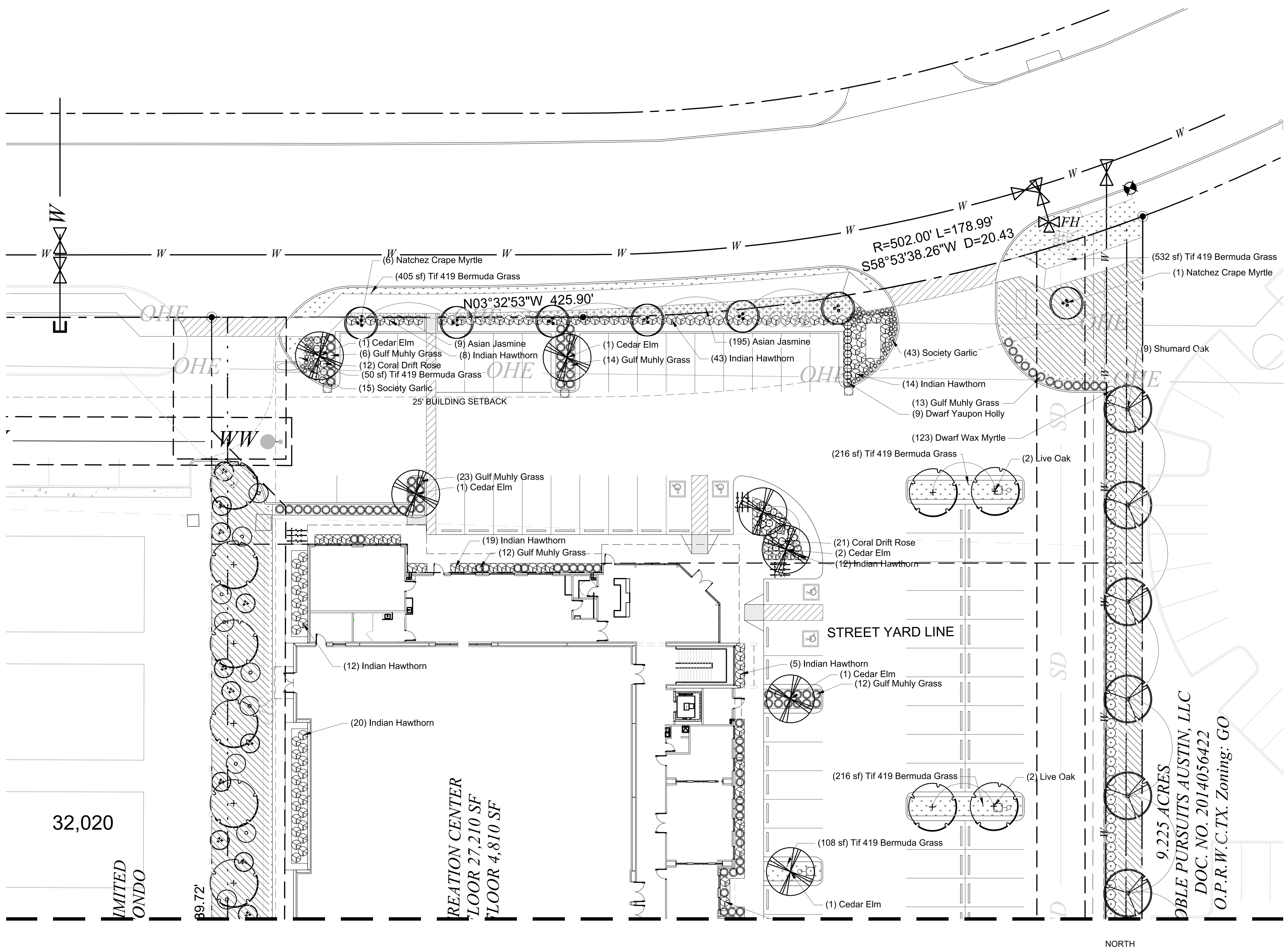
CITY TABULATION
LANDSCAPE AREA: STREET YARD AREA = 24,019F
LANDSCAPE AREA REQUIRED= 4,804SF 20%
LANDSCAPE AREA PROVIDED= 5,112 21.3%

BUFFER YARDS:
WEST PROPERTY LINE 440'
440 / 30 = 15 4" CANOPY, 45 15 GAL ORNAMENTAL TREES REQUIRED
15 - 4" LIVE OAK
22 - 15 GAL YAUPON TREE PROVIDED
23 - 15 GAL MOUNTAIN LAUREL

SOUTH PROPERTY LINE 291'
291 / 30 = 10 4" CANOPY, 30 15 GAL ORNAMENTAL TREES REQUIRED
10 - 4" LIVE OAK
15- 15 GAL YAUPON TREE PROVIDED
15 - 15 GAL MOUNTAIN LAUREL

GENERAL LANDSCAPE NOTES:

1. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING LANDSCAPE UNTIL FINAL ACCEPTANCE OF ALL WORK ON JOB SITE. CONTRACTOR SHALL MAINTAIN CONDITIONS OF LAWN, BEDS AND PLANT MATERIAL THROUGHOUT CONSTRUCTION UNTIL FINAL ACCEPTANCE.
2. WORK SCHEDULING: CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING WITH LANDSCAPE ARCHITECT BEFORE PROCEEDING WITH ANY LANDSCAPING OR IRRIGATION WORK.IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
3. CONTRACTOR SHALL APPLY FOR AND PROCURE ALL REQUIRED PERMITS PRIOR TO COMMENCING WORK.
4. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. CONTACT ALL UTILITY COMPANIES MINIMUM 48 HOURS PRIOR TO ANY WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR BECOMING FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES, STRUCTURES, ETC. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE OF THESE UTILITIES.
5. CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN FORESEEN IN THE DESIGN. SUCH CONDITIONS SHALL BE BROUGHT UP TO THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY NECESSARY CHANGES DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
6. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER SUBCONTRACTORS ON THE JOBSITE AS REQUIRED TO COMPLETE CONSTRUCTION.
7. CONTRACTOR TO PROVIDE SAMPLES OF EACH SHRUB AND GROUNDCOVER SPECIES OR NURSERY SOURCE FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. ALL PLANTS ARE TO BE SPECIMEN QUALITY, FULL POT AND HEAD, SYMMETRICAL FOLIAGE AND BRANCHING STRUCTURE. SHRUBS SHALL BE FULL TO GROUND. PLANT MATERIAL OF THE SAME SPECIES SHALL BE OBTAINED FROM THE SAME SOURCE. MATERIAL SHALL BE SHIPPED DIRECTLY FROM NURSERY AND NOT FROM CONTRACTOR'S HOLDING YARD AFTER AN EXTENDED PERIOD. THERE SHALL BE NO SUBSTITUTIONS WITHOUT WRITTEN CONSENT. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY AND ALL PLANT MATERIAL THAT DOES NOT MEET SATISFACTORY EXPECTATIONS OF LANDSCAPE ARCHITECT.
8. ALL LANDSCAPE DEVIATIONS, INCLUDING SPECIES SUBSTITUTION, NOT APPROVED ON THIS PLAN MUST BE APPROVED BY THE CITY THROUGH PLAN SUBMITTAL.
9. FOR OUTDOOR CONDENSERS, UTILITY HUTS, AND OTHER BUILDING SERVICE EQUIPMENT, SUCH EQUIPMENT SHALL BE COMPLETELY SCREENED FROM VIEW ON ALL SIDES USING A VEGETATIVE SCREEN WITH AT LEAST TWO (2) VARIETIES OF PLANT MATERIAL FROM THE PREFERRED PLANT LIST THAT, AT MATURITY, IS AT LEAST THE HEIGHT OF THE EQUIPMENT TO BE SCREENED.
10. DO NOT EXCEED 4" MAXIMUM CUT OR FILL WITHIN THE 1/2 CRZ OF ANY PRESERVED TREE.
11. ALL TREES OVERHANGING A DRIVE AISLE, FIRE LANE OR LOADING ZONE SHALL BE LIMBED UP 13.5'. ALL TREES OVERHANGING A PEDESTRIAN WALK WAY OR SIDEWALK SHALL BE LIMBED UP 8'.ALL TREES OVERHANGING A DRIVE AISLE, FIRE LANE OR LOADING ZONE SHALL BE LIMBED UP 13.5'. ALL TREES OVERHANGING A PEDESTRIAN WALK WAY OR SIDEWALK SHALL BE LIMBED UP 8'.



NORTH
1 LANDSCAPE PLAN
SCALE: 1" = 20'-0"

THESE PLANS ARE IN FULL COMPLIANCE WITH THE LANDSCAPE AND TREE ORDINANCE OF THE CITY OF CEDAR PARK, TEXAS. REF. SECTION 14.07.006(A)(2)(U).

Date issued/revised

08 AUGUST 2022	FOR SITE PERMIT
22 AUGUST 2022	SITE REVIEW COMMENTS
16 SEP 2022	COMMENTS
6 DEC 2022	COMMENTS
15 DEC 2022	FOR PRICING

CMB
LANDSCAPE ARCHITECTURE
18135 FM 362
Navasota, TX 77868
832-428-1209

OSBORN & VANE ARCHITECTS inc
www.ovarc.com
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

REGISTERED LANDSCAPE ARCHITECT
CHARLES M. BRYAN
2247
STATE OF TEXAS
12-15-22

UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

Project No.	22037
Drawn	JD
Checked	BS

LANDSCAPE PLAN

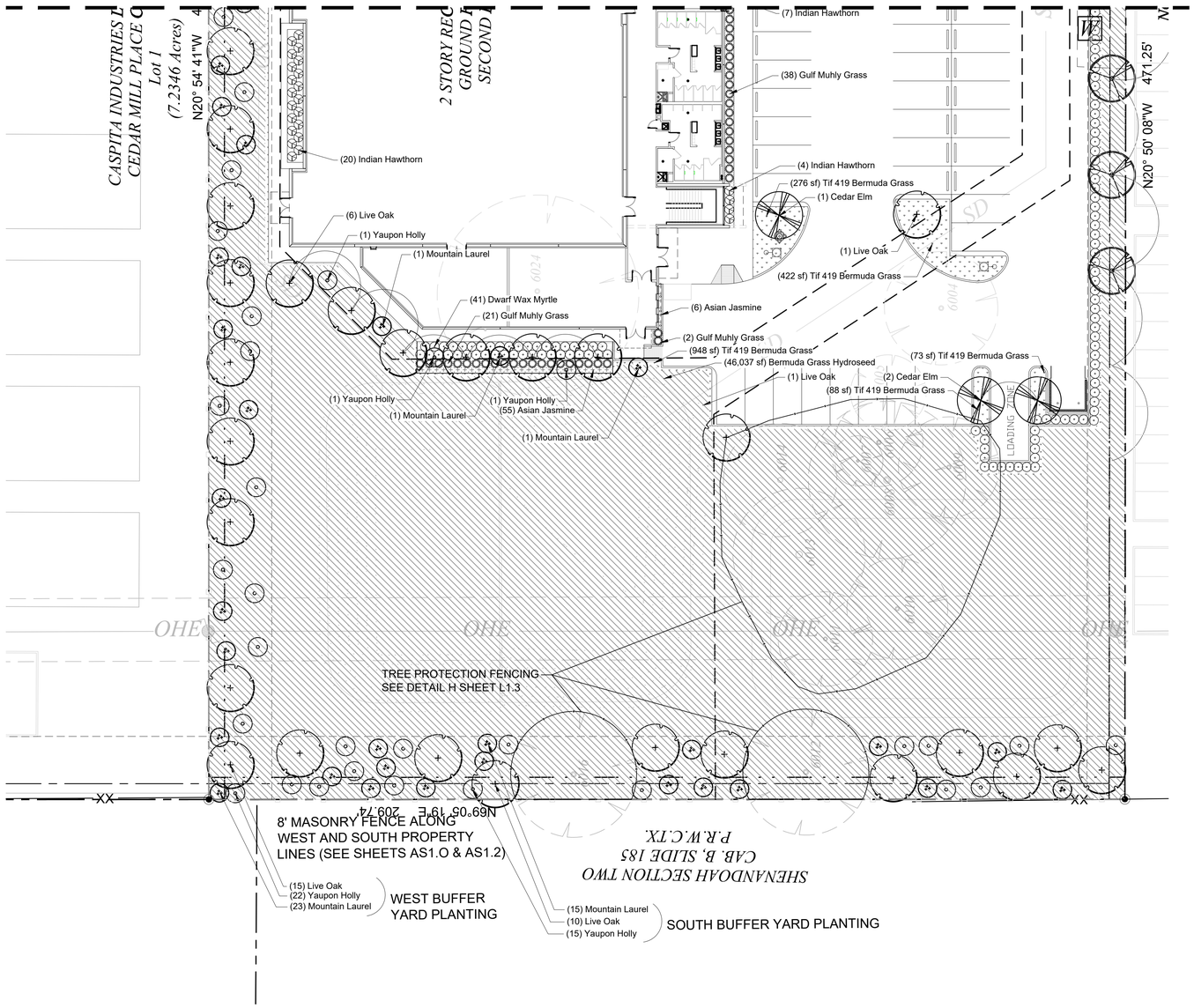
Sheet No. L1.1 2022-25-SD

PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME	SIZE
	40	Ilex vomitoria Yaupon Holly	15 gal.
	7	Lagerstroemia indica 'Natchez' Natchez Crape Myrtle	45 gal.
	9	Quercus shumardii Shumard Oak	4" Cal.
	37	Quercus virginiana Live Oak	4" Cal.
	41	Sophora secundiflora Mountain Laurel	15 gal.
	10	Ulmus crassifolia Cedar Elm	2" Cal.

SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE
	9	Ilex vomitoria 'Nana' Dwarf Yaupon Holly	5 gal.
	141	Muhlenbergia capillaris 'Gulf Coast' Gulf Muhly Grass	5 gal.
	164	Myrica pusilla Dwarf Wax Myrtle	5 gal.
	164	Raphiolepis indica 'Clara' Indian Hawthorn	5 gal.
	33	Rosa x 'Meidrifora' TM Coral Drift Rose	5 gal.
	58	Tulbaghia violacea Society Garlic	5 gal.

GROUND COVERS	QTY	BOTANICAL / COMMON NAME	SIZE	SPACING
	46,037 sf	Cynodon dactylon Bermuda Grass Hydroseed	seed	
	3,334 sf	Cynodon dactylon 'Tif 419' Tif 419 Bermuda Grass	SF	
	265	Trachelospermum asiaticum Asian Jasmine	1 gal.	18" o.c.



Date issued/revised

08 AUGUST 2022	FOR SITE PERMIT
22 AUGUST 2022	SITE REVIEW COMMENTS
16 SEP 2022	COMMENTS
6 DEC 2022	COMMENTS
15 DEC 2022	FOR PRICING

CMB
LANDSCAPE
ARCHITECTURE
18135 FM 362
Navasota, TX 77868
832-428-1209

OSBORN & VANE ARCHITECTS inc
www.ovarc.com
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

REGISTERED LANDSCAPE ARCHITECT
CHARLES M. BRAUEN
2247
STATE OF TEXAS
12-15-22

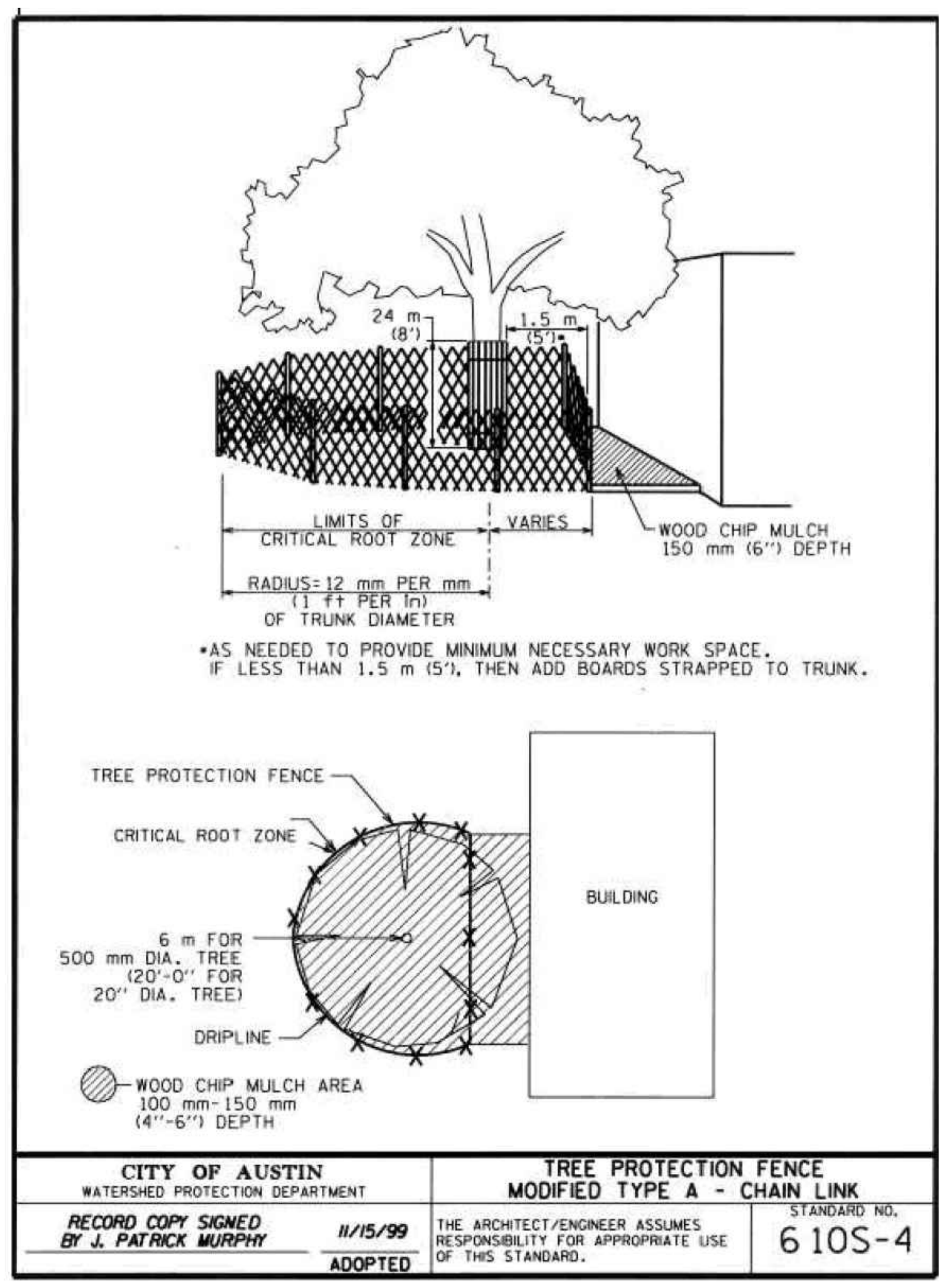
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

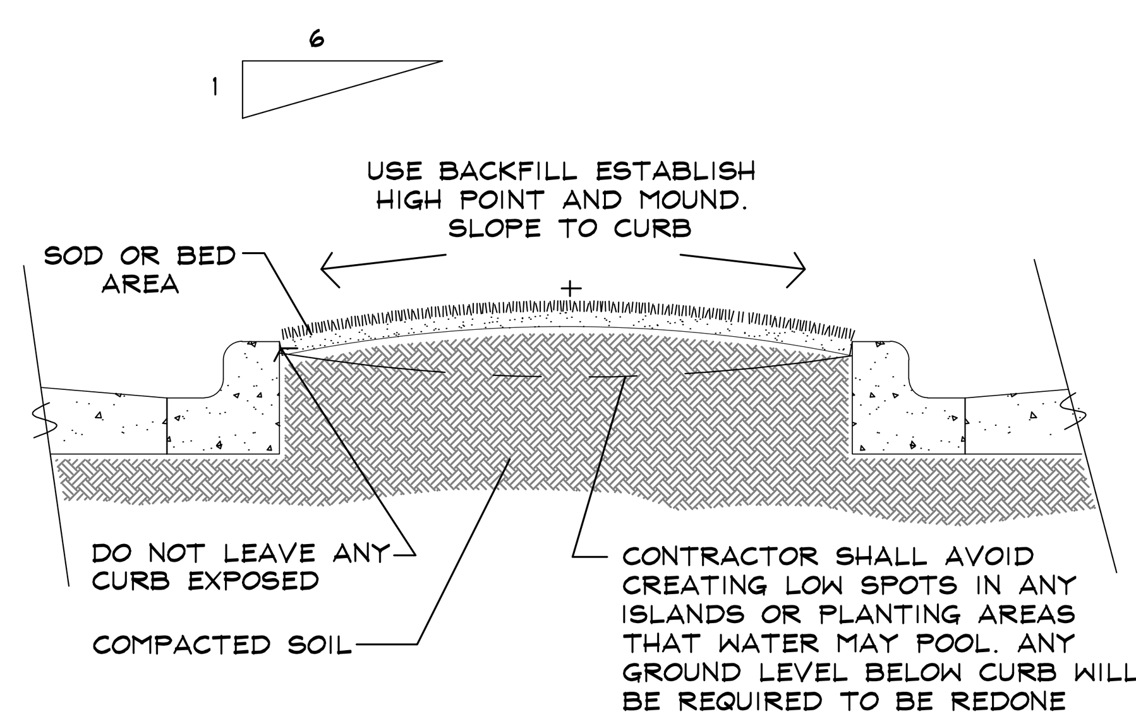
Project No.	22037
Drawn	JD
Checked	BS

LANDSCAPE PLAN

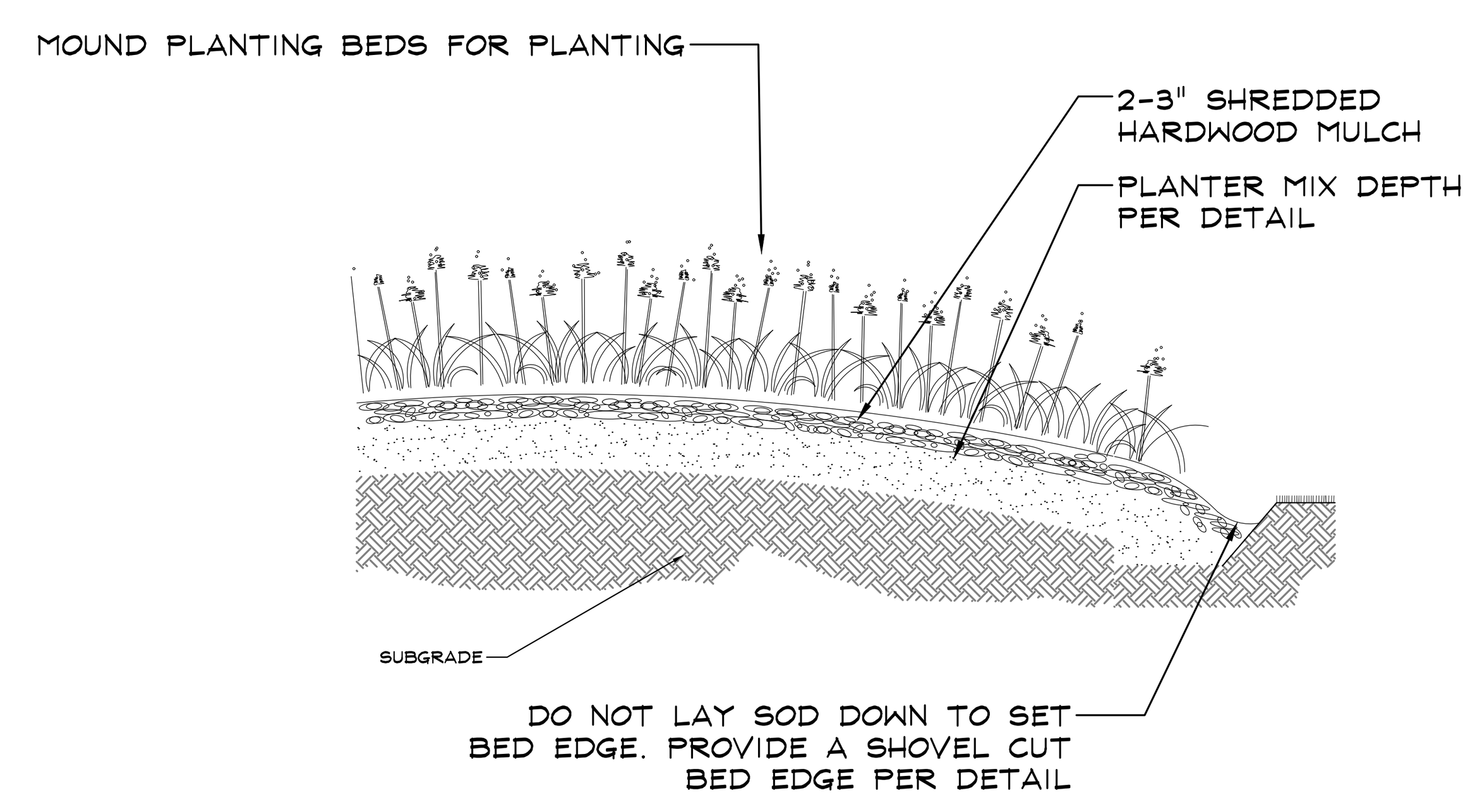
Sheet No. L1.2 2022-25-SD

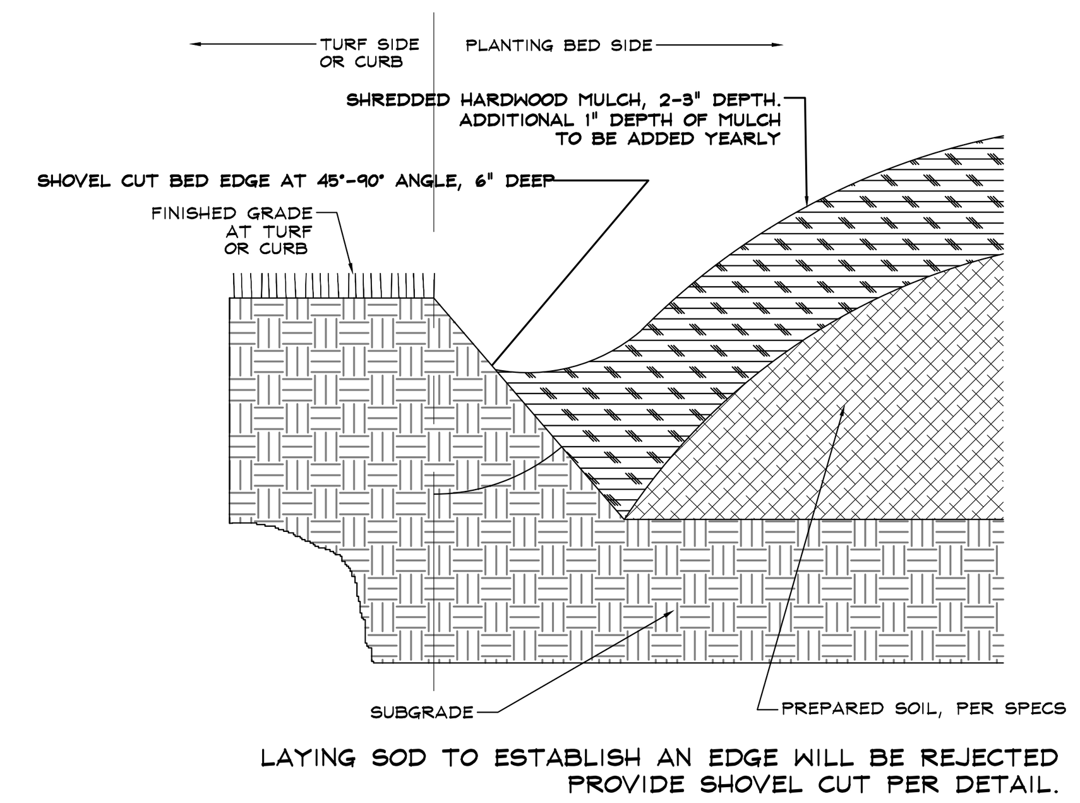


(H) - TREE PROTECTION FENCING
SCALE: NTS

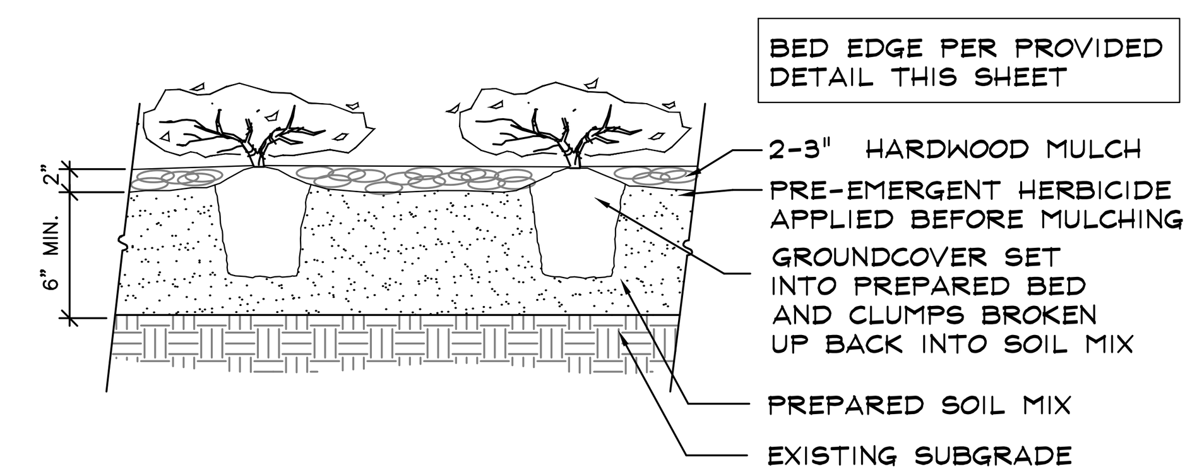


(G) - ISLAND PLANTING PREP
SCALE: NTS

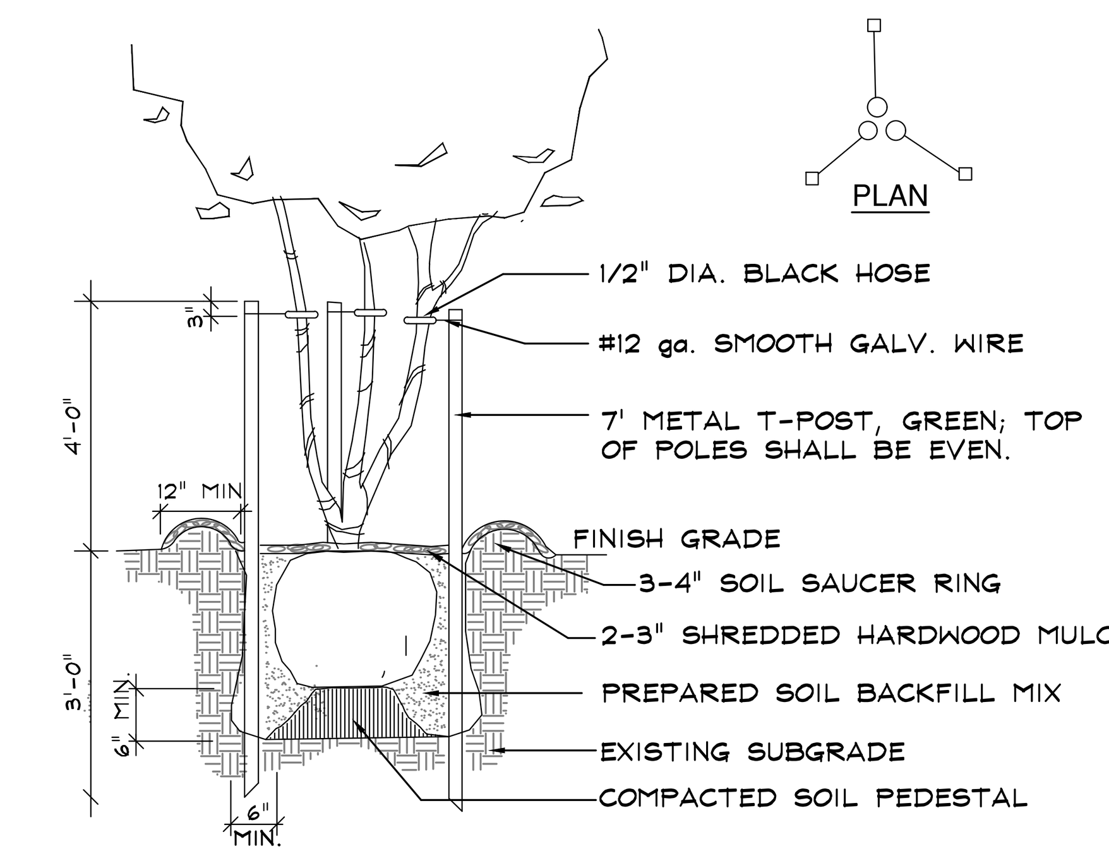




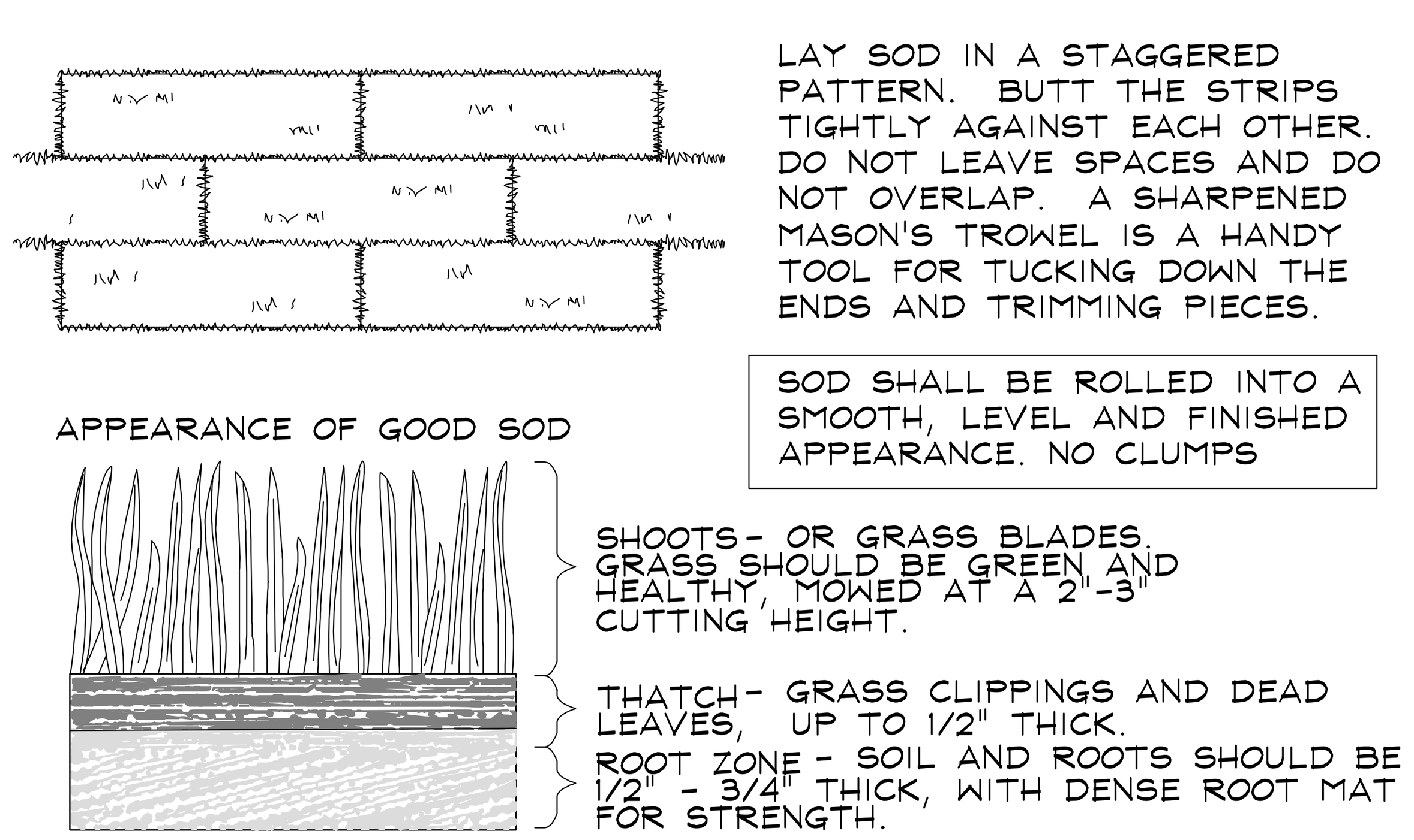
(F) - SHOVEL CUT BED EDGE
SCALE: NTS



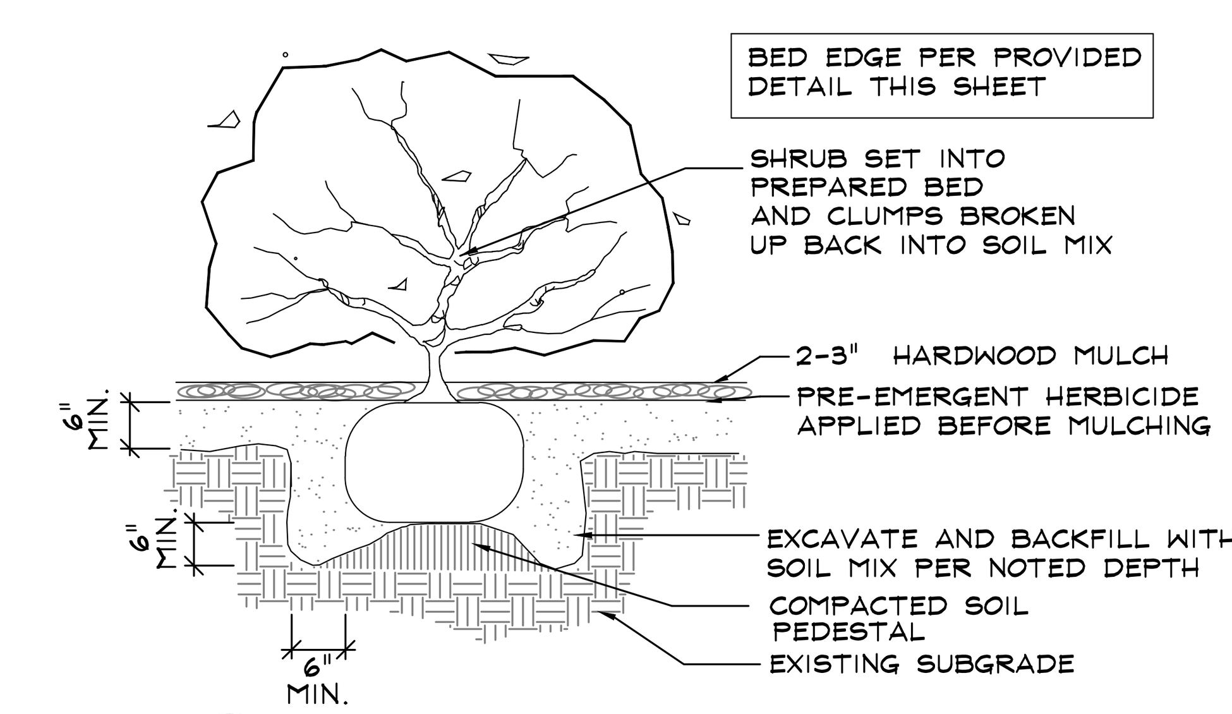
(D) - GROUNDCOVER PLANTING
SCALE: NTS



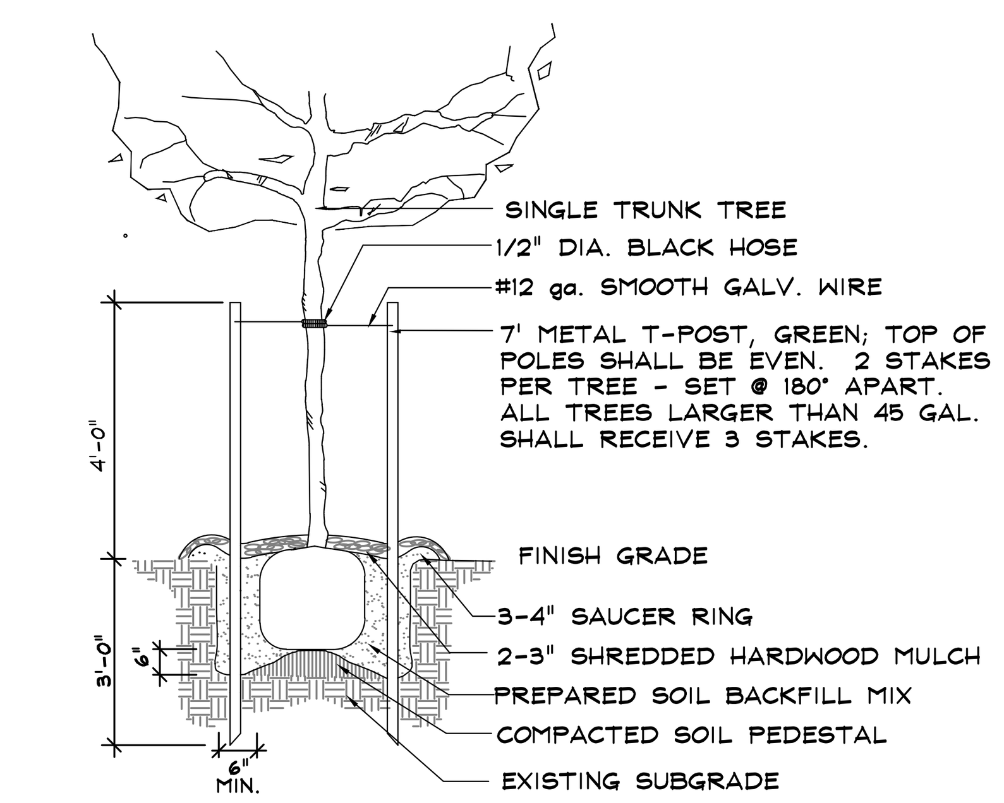
(B) - MULTI-STEM TREE PLANTING
SCALE: NTS



(E) - SOD PLANTING
SCALE: NTS



(C) - SHRUB PLANTING
SCALE: NTS



(A) - TREE PLANTING
SCALE: NTS

Date issued/revised

08 AUGUST 2022	FOR SITE PERMIT
22 AUGUST 2022	SITE REVIEW COMMENTS
16 SEP 2022	COMMENTS
6 DEC 2022	COMMENTS
15 DEC 2022	FOR PRICING

CMB
LANDSCAPE ARCHITECTURE
18135 FM 362
Navasota, TX 77868
832-428-1209

OSBORN & VANE ARCHITECTS inc
www.ovarc.com
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

REGISTERED LANDSCAPE ARCHITECT CHARLES M. BRYANT 2247 STATE OF TEXAS
12-15-22

UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

Project No.	22037
Drawn	JD
Checked	BS

LANDSCAPE DETAILS

Sheet No. L1.3 2022-25-SD

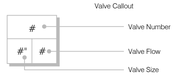
IRRIGATION SCHEDULE

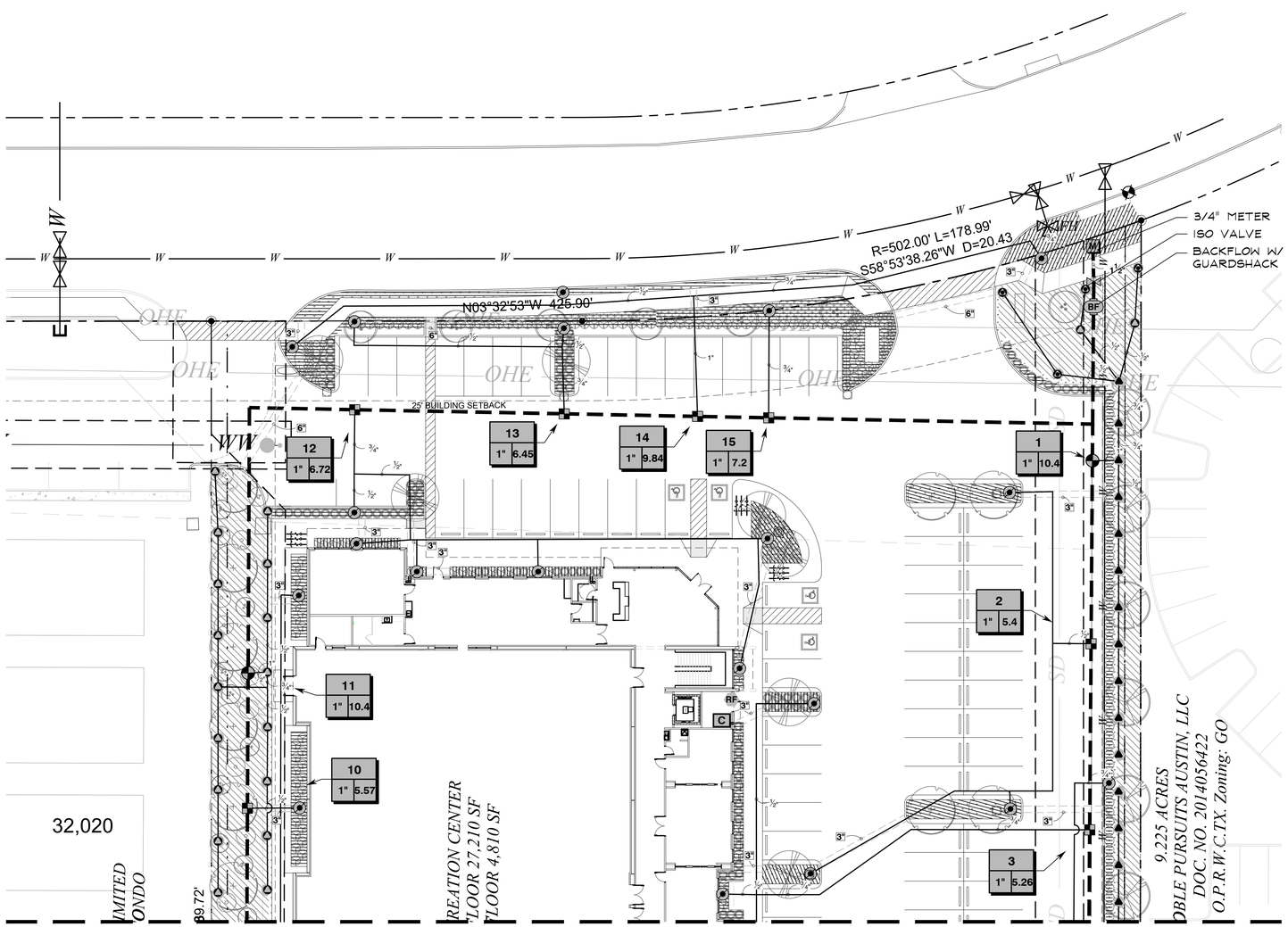
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
LST SST RST	Hunter MP Strip PROS-04-PRS30-CV Turf Rotator, 4" pop-up with factory installed check valve, pressure regulated to 30 psi, MP Rotator nozzle on PRS30 body. LST=Ivory left strip, SST=Brown side strip, RST=Copper right strip.	4	30
1000	Hunter MP1000 PROS-04-PRS30-CV Turf Rotator, 4" pop-up with check valve, pressure regulated to 30 psi, MP Rotator nozzle on PRS30 body. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc.	36	30
2000	Hunter MP2000 PROS-04-PRS30-CV Turf Rotator, 4" pop-up with factory installed check valve, pressure regulated to 30 psi, MP Rotator nozzle on PRS30 body. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc.	34	30
3000	Hunter MP3000 PROS-04-PRS30-CV Turf Rotator, 4" pop-up with factory installed check valve, pressure regulated to 30 psi, MP Rotator nozzle on PRS30 body. B=Blue adj arc 90-210, Y=Yellow adj arc 210-270, A=Gray 360 arc.	8	30
3500	Hunter MP3500 PROS-04-PRS30-CV Turf Rotator, 4" Pop-up with factory installed check valve, pressure regulated to 30 psi, MP Rotator nozzle on PRS30 body. LB=light brown adjustable arc, 90-210.	5	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird XCZ-100-PRF 1" Medium Flow Drip Control Kit, 1" DV valve, 1" pressure regulating filter, 40psi pressure regulator. 3 GPM-15 GPM.	9
	Pipe Transition Point in Drip Box Pipe transition point from PVC lateral to drip tubing with riser in 6" (150mm) drip box.	26
	Area to Receive Dripline Rain Bird XFD-06-12 XFD On-Surface Pressure Compensating Landscape Dripline. 0.6 GPH emitters at 12" O.C. Dripline laterals spaced at 12" apart, with emitters offset for triangular pattern. UV Resistant. Specify XF insert fittings.	6,021 l.f.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PEB 1" 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration.	6
	Shut Off Valve TUBV - sch 80 in in valve box Size per mainline	1
BF	Febco 765 1-1/2" Pressure Vacuum Breaker, brass with ball valve SOV. Install 12" above highest downstream outlet and the highest point in the downstream piping.	1
C	Hunter IC-1200-PL Modular Controller, 12 stations, Outdoor Model, Plastic Cabinet. Commercial Use. With one ICM-600 module included.	1
RF	Rain Bird WR2-RFS Wireless Rain/Freeze Sensor.	1
M	Water Meter 3/4"	1
	Irrigation Lateral Line: PVC Class 200 SDR 21 1/2"	2,504 l.f.
	Irrigation Lateral Line: PVC Class 200 SDR 21 3/4"	481.3 l.f.
	Irrigation Lateral Line: PVC Class 200 SDR 21 1"	52.0 l.f.
	Irrigation Mainline: PVC Schedule 40 1 1/2"	1,203 l.f.
	Pipe Sleeve: PVC Class 200 SDR 21 3"	280.7 l.f.
	Pipe Sleeve: PVC Class 200 SDR 21 6"	72.5 l.f.

Valve Callout





CRITICAL ANALYSIS

Generated:	2022-12-06 13:46
P.O.C. NUMBER: 01	
Water Source Information:	
FLOW AVAILABLE	
Water Meter Size:	3/4"
Flow Available	22.5 GPM
PRESSURE AVAILABLE	
Static Pressure at POC:	60 PSI
Elevation Change:	5.00 ft
Service Line Size:	3"
Length of Service Line:	20 ft
Pressure Available:	58 PSI
DESIGN ANALYSIS	
Maximum Station Flow:	10.39 GPM
Flow Available at POC:	22.5 GPM
Residual Flow Available:	12.11 GPM
Design Pressure:	30 PSI
Friction Loss:	2.33 PSI
Fittings Loss:	0.23 PSI
Elevation Loss:	0 PSI
Loss through Valve:	8.36 PSI
Pressure Req. at Critical Station:	40.9 PSI
Loss for Fittings:	0.05 PSI
Loss for Main Line:	0.46 PSI
Loss for POC to Valve Elevation:	0 PSI
Loss for Backflow:	2.5 PSI
Loss for Water Meter:	1.55 PSI
Critical Station Pressure at POC:	45.5 PSI
Pressure Available:	58 PSI
Residual Pressure Available:	12.5 PSI

NORTH

1 LANDSCAPE PLAN
SCALE: 1" = 20'-0"

VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	WIRE	DESIGN PSI	FRICTION LOSS	VALVE LOSS	PSI	PSI @ POC	PRECIP
1	Rain Bird PEB	1"	Turf Rotary	10.37	17	230.3	30	1.32	1.84	33.2	37.6	0.32 in/h
2	Rain Bird XCZ-100-PRF	1"	Area for Dripline	5.4	539.0 l.f.	287.7	30	2.4	4.45	36.9	40.2	0.96 in/h
3	Rain Bird XCZ-100-PRF	1"	Area for Dripline	5.26	525.7 l.f.	346.0	30	2.12	4.33	36.4	39.8	0.97 in/h
4	Rain Bird XCZ-100-PRF	1"	Area for Dripline	8.25	824.5 l.f.	432.2	30	2.97	6.96	39.9	44.0	0.97 in/h
5	Rain Bird PEB	1"	Turf Rotary	9.18	20	438.2	30	4.91	1.78	36.7	41.1	0.23 in/h
6	Rain Bird PEB	1"	Turf Rotary	3.89	15	491.1	30	2.14	1.59	33.7	36.9	0.33 in/h
7	Rain Bird PEB	1"	Turf Rotary	9.68	6	643.8	30	3.84	1.79	35.6	40.4	0.19 in/h
8	Rain Bird XCZ-100-PRF	1"	Area for Dripline	5.55	555.3 l.f.	678.2	30	4.69	4.58	39.3	42.7	0.96 in/h
9	Rain Bird PEB	1"	Turf Rotary	10.04	12	505.7	30	1.51	1.8	33.3	38.2	0.26 in/h
10	Rain Bird XCZ-100-PRF	1"	Area for Dripline	5.57	556.6 l.f.	383.3	30	1.46	4.6	36.1	39.5	0.96 in/h
11	Rain Bird PEB	1"	Turf Rotary	10.39	17	340.9	30	1.85	1.84	33.7	38.8	0.36 in/h
12	Rain Bird XCZ-100-PRF	1"	Area for Dripline	6.72	670.6 l.f.	224.8	30	4.48	5.61	40.1	43.8	0.97 in/h
13	Rain Bird XCZ-100-PRF	1"	Area for Dripline	6.45	645.1 l.f.	159.1	30	1.46	5.38	36.8	40.4	0.96 in/h
14	Rain Bird XCZ-100-PRF	1"	Area for Dripline	9.84	984.5 l.f.	117.4	30	2.56	8.36	40.9	45.5	0.96 in/h
15	Rain Bird XCZ-100-PRF	1"	Area for Dripline	7.2	720.0 l.f.	117.4	30	0.96	6.04	37.0	40.7	0.96 in/h
	Common Wire					1,203						

Date issued/revised

08 AUGUST 2022	FOR SITE PERMIT
22 AUGUST 2022	SITE REVIEW COMMENTS
16 SEP 2022	COMMENTS
6 DEC 2022	COMMENTS
15 DEC 2022	FOR PRICING

CMB
LANDSCAPE ARCHITECTURE
18135 FM 362
Navasota, TX 77868
832-428-1209

OSBORN & VANE ARCHITECTS inc
www.ovarc.com
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

REGISTERED LANDSCAPE ARCHITECT
JAMES M. BRITTEN
2247
STATE OF TEXAS
12-15-22

UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

Project No.	22037
Drawn	JD
Checked	BS

IRRIGATION PLAN

Sheet No. L2.1 2022-25-SD

NOTES:

1. Irrigation system shall be installed by a Licensed Irrigator. Irrigator shall provide an as–built locating mainline and valves with installed calculations after construction. This plan is to be used as a reference and for bidding purposes only.

2. Except as otherwise noted, the contractor shall procure permits and licenses, pay charges and fees and give notices necessary and incidental to the due lawful prosecution of the work. The contractor shall make arrangements and pay costs for installation of irrigation water meters at the approximate locations. Verify with Owner's Representative for the addresses for each.

3. The contractor shall follow the applicable City/County Department of Public Works specifications for installation of water meter and hot tapping.

4. The contractor shall notify pertinent utility companies 48 hours prior to construction for current utility locations. Extreme care shall be exercised in excavating and working near existing utilities. Contractor shall verify the location and condition of utilities and be responsible for damage to utilities.

5. The contractor shall at all times protect his work from damage and theft, and replace all damaged or stolen parts until the work is accepted in writing by owner.

6. The contractor shall not willfully install the sprinkler system as shown on the drawings when it is obvious in the field that obstructions, grade differences or differences in the area's dimensions exist that might not have been in the design. Such obstructions or differences shall be brought to the attention of the Landscape Architect. In the event this notification is not performed, the irrigation contractor shall assume full responsibility for any revisions necessary.

7. The contractor shall clearly mark exposed excavations and materials and equipment. Cover or barricade trenches when contractor is not on site.

8. For purposed of clarity, some irrigation lines and valves may be shown outside of property, easements, or in paved areas. Locate all lines and valves in planting area unless otherwise noted.

9. Adjust arc of irrigation heads for even coverage. Head layout should be as per plans.

10. Avoid existing or future location of tree balls when laying pipe.

11. The contractor shall stake controller and PVB locations for approval by Landscape Architect or owner's representative prior to their installation.

12. Patch and repair any and all damage done to existing plant material and grading during installation of this work.

13. Contractor shall provide original and 2 copies of Pressure Vacuum Breaker certification to the Owner at completion of project along with as–built drawings.

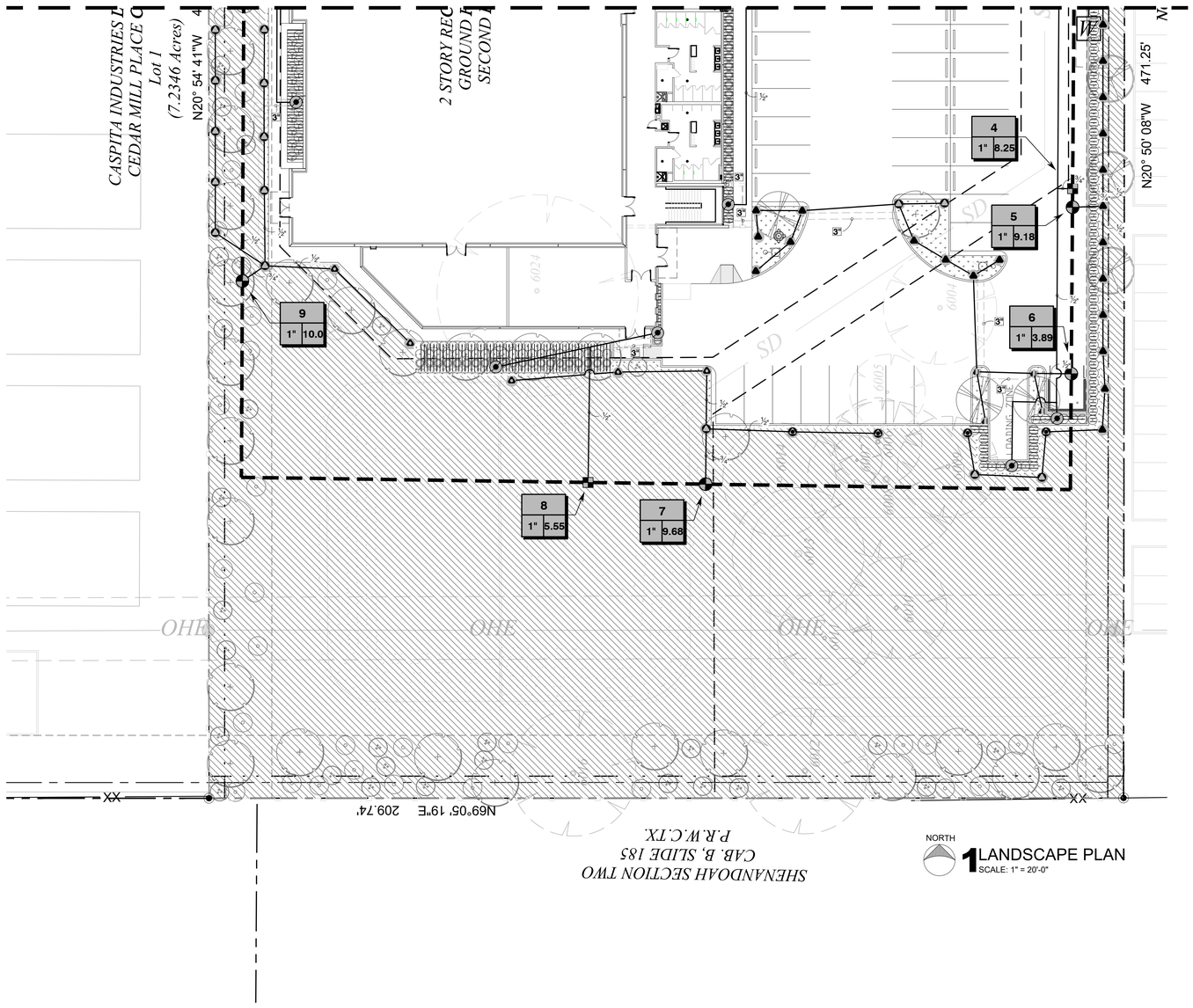
14. Irrigation cycles shall be set to take place prior to sunrise and not to interfere with business unless otherwise instructed by the Owner, except during visits of grounds maintenance personnel during such visits the irrigation system may be operated as desired by those personnel.

15. Do not program controllers operating on the same water meter to water during the same time period so as to prevent over–draft of water meters. Do not switch controller to "off" at any time, except as required for testing and for maintenance operations.

16. Complete sprinkler system servicing shall be performed as required to maintain sprinklers in correct operating condition including all required labor. Check shall include visual "inspection" of all accessible components of the irrigation system including but not limited to controllers, remote control valves, quick couplers, and heads.

17. Adjust the sprinklers to avoid damage to windows, building and sign walls also adjust heads to keep water off the street. Make repairs and alterations to the sprinkling system and water lines. All sprinkler repairs such as cleaning of heads or breaks caused by the Contractor shall be the Contractor's responsibility.

18. The contractor, in the end, shall install a fully functional irrigation system with full coverage. The purpose of this plan is for bidding reference and a guide. However, any changes shall be brought to the attention of the Landscape Architect. In the event this notification is not performed, the irrigation contractor shall assume full responsibility for any revisions necessary.



Date issued/revised

08 AUGUST 2022	FOR SITE PERMIT
22 AUGUST 2022	SITE REVIEW COMMENTS
16 SEP 2022	COMMENTS
6 DEC 2022	COMMENTS
15 DEC 2022	FOR PRICING

CMB
LANDSCAPE ARCHITECTURE
18135 FM 362
Navasota, TX 77868
832-428-1209

OSBORN & VANE ARCHITECTS inc
www.ovarc.com
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

REGISTERED LANDSCAPE ARCHITECT
CHARLES M. BRAGDEN
2247
STATE OF TEXAS
12-15-22

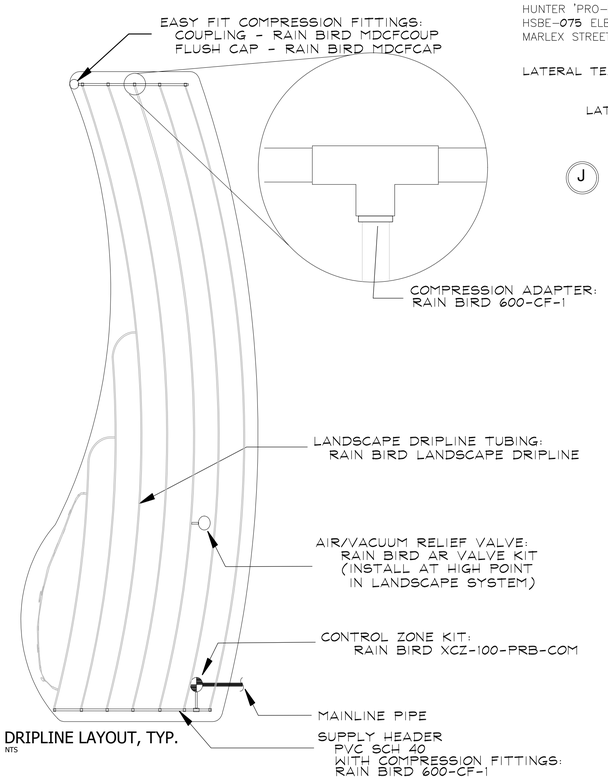
UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

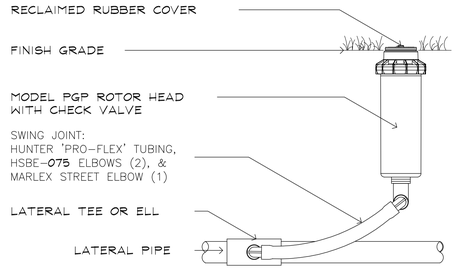
Project No.	22037
Drawn	JD
Checked	BS

IRRIGATION PLAN

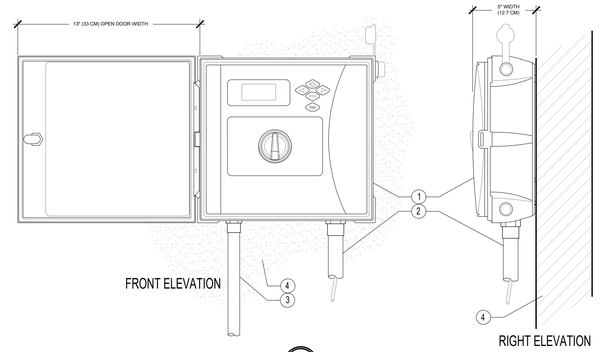
Sheet No. L2.2 2022-25-SD



C – DRIPLINE LAYOUT, TYP.
NTS



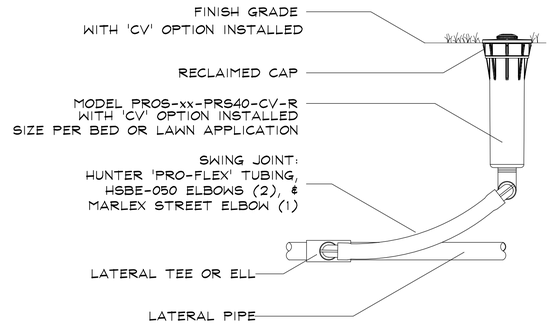
J – POP-UP ROTOR / HUNTER PGP
NTS



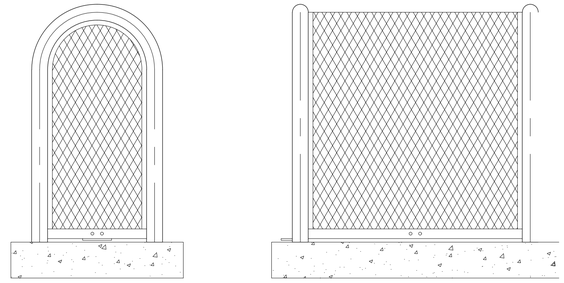
1. IRRIGATION CONTROLLER
HUNTER ICC2-PL
(SIZE PER ZONES)
2. IRRIGATION CONTROL WIRE IN CONDUIT
SIZE AND TYPE PER LOCAL CODES
3. ELECTRICAL SUPPLY CONDUIT
CONNECT TO POWER SOURCE,
J-BOX INSIDE CONTROLLER
4. ADJACENT SURFACE TO MOUNT
CONTROLLER PER PLAN

NOTE
MOUNT CONTROLLER LCD SCREEN AT EYE LEVEL, CONTROLLER SHALL BE HARD-WIRED TO GROUNDED 110 VAC POWER SOURCE

C – IRRIGATION CONTROLLER HUNTER ICC-PL

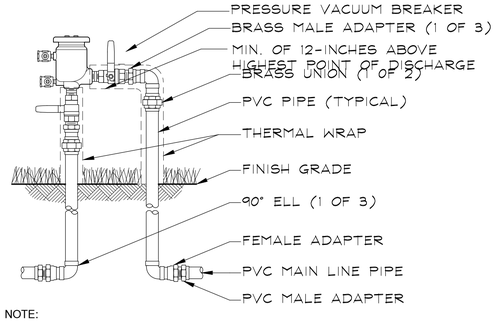


G – HUNTER POP-UP SPRAY /W MP ROTATOR
NTS



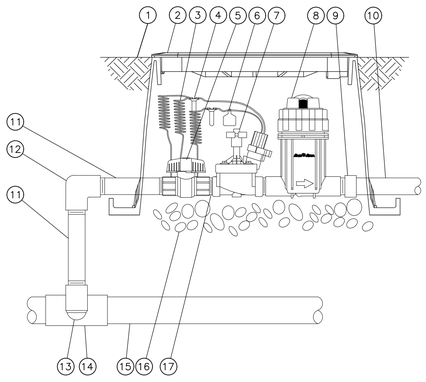
STANDARD GUARDSHACK™ ENCLOSURES
INSTALL PER GUARDSHACK GUIDELINES AND SPECIFICATIONS

B – BACKFLOW ENCLOSURE
NTS



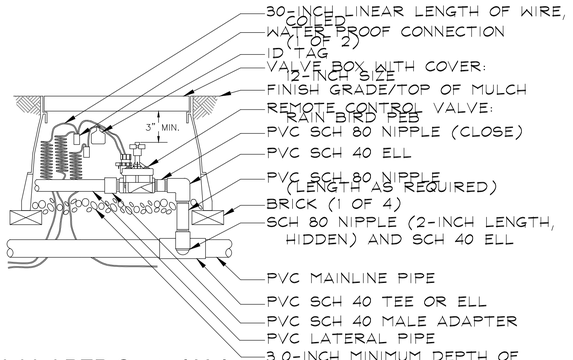
NOTE:
1. INSTALL BACK FLOW PREVENTER AS REQUIRED BY LOCAL CODES AND HEALTH DEPARTMENT. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION. DOUBLE CHECK VALVE ASSEMBLY MAY BE REQUIRED

A – FEBCO #765 PVB (PRESSURE VACUUM BREAKER)
NTS



1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER:
RAIN BIRD VB-STD
3. 30-INCH LINEAR LENGTH OF WIRE, COILED
4. WATERPROOF CONNECTION:
RAIN BIRD DB SERIES
5. 1-INCH BALL VALVE (INCLUDED IN XCZ-PRB-100-COM KIT)
6. ID TAG
7. REMOTE CONTROL VALVE:
RAIN BIRD PESB (INCLUDED IN XCZ-PRB-100-COM KIT)
8. PRESSURE REGULATING QUICK CHECK BASKET FILTER:
RAIN BIRD PRB-QKCHK-100
(INCLUDED IN XCZ-PRB-100-COM KIT)
9. PVC SCH 40 FEMALE ADAPTOR
10. LATERAL PIPE
11. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
12. PVC SCH 40 ELL
13. PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
14. PVC SCH 40 TEE OR ELL
15. MAINLINE PIPE
16. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
17. PVC SCH 80 NIPPLE, CLOSE (INCLUDED IN XCZ-PRB-100-COM KIT)

B – XCZ-PRB-100-COM 1" COMMERCIAL
NTS



Rainbird PEB Control Valve

A – IRRIGATION CONTROL VALVE
NTS

Date issued/revised

08 AUGUST 2022	FOR SITE PERMIT
22 AUGUST 2022	SITE REVIEW COMMENTS
16 SEP 2022	COMMENTS
6 DEC 2022	COMMENTS
15 DEC 2022	FOR PRICING

CMB
LANDSCAPE ARCHITECTURE
18135 FM 362
Navasota, TX 77868
832-428-1209

OSBORN & VANE ARCHITECTS inc
www.ovarc.com
2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

REGISTERED LANDSCAPE ARCHITECT
CHARLES M. BRAUN
2247
STATE OF TEXAS
12-15-22

UNITY RECREATION CENTER

820 Old Mill Road
Cedar Park, Texas 78613

Project No.	22037
Drawn	JD
Checked	BS

IRRIGATION DETAILS

Sheet No. L2.3 2022-25-SD

FOODSERVICE ABBREVIATIONS - SECTION 114000

ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
AMP	AMPERE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
BLDG	BUILDING
BTU	BRITISH THERMAL UNIT
C&P	CORD AND PLUG
CBT	CABINET
CFM	CUBIC FEET PER MINUTE
CL	CENTER LINE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONN	CONNECTION
CU FT	CUBIC FEET
CW	COLD WATER
DC	DROP CORD
DFA	DOWN FROM ABOVE
DIAM	DIAMETER
DIM.	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DN	DOWN
DR	DUPLEX RECEPTACLE
DTL	DETAIL
DWG	DRAWING
DWR	DRAWER
EA	EACH
EC	ELECTRICAL CONTRACTOR
EL	ELEVATION
ELEC	ELECTRICAL
EQ	EQUAL
EQPM	EQUIPMENT
ETR	EXISTING TO REMAIN
EX	EXISTING
EXH	EXHAUST
EXT	EXTERIOR
FD	FLOOR DRAIN
FEC	FIRE EXTINGUISHER CABINET
FF	FINISHED FLOOR
FIN.	FINISH(ED)
FLR	FLOOR
FLSHG	FLASHING
FLUR	FLUORESCENT
FRZ	FREEZER
FT	FOOT
FURN	FURNITURE
G	GAS
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERUPTER
GPM	GALLONS PER MINUTE
HGT	HEIGHT
HP	HORSEPOWER
HVAC	HEATING, VENTILATING, AIR CONDITIONING
HW	HOT WATER
ID	INSIDE DIAMETER
IN.	INCH
INCL	INCLUDE
INST	INSTALL(ATION)
INSUL	INSULATE(ION)
INT	INTERIOR
IW	INDIRECT WASTE
JAN	JANITOR
JB	JUNCTION BOX
JBH	JUNCTION BOX - CEILING/HORIZONTAL MOUNTED
JBW	JUNCTION BOX - WALL MOUNTED
JC	JANITOR'S CLOSET
KEC	KITCHEN EQUIPMENT CONTRACTOR
KTN	KITCHEN
KW	KILOWATT HOUR
LAM	LAMINATE
LBS	POUNDS
LKR	LOCKER
LT	LIGHT
LVR	LOUVER
MAX	MAXIMUM
MBTUH	1000 BTU/HOUR
MECH	MECHANICAL
MIN	MINIMUM
MISC	MISCELLANEOUS
MTD	MOUNTED
MTL	METAL
MUL	MULLION
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO.	NUMBER
NS	NO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFC	OFFICE
OH.	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
OPP H	OPPOSITE HAND
PC	PLUMBING CONTRACTOR
PERF	PERFORATE(D)
PH	PHASE
PLAM	PLASTIC LAMINATE
PLUMB	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
PREP	PREPARATION
PSI	POUNDS PER SQUARE INCH
QT	QUARRY TILE
QTY	QUANTITY
QUAD	QUAD RECEPTACLE
RAD	RADIUS
RCP	REFLECTED CEILING PLAN
RECP	RECEPTACLE
REFG	REFRIGERATOR
REQD	REQUIRED
RET	RETURN
RI	ROUGH-IN
RM	ROOM
RO	ROUGH OPENING
SAN	SANITARY
SCH	SCHEDULE
SHLVG	SHELVING
SHT	SHEET
SP	SPECIAL RECEPTACLE
SPEC	SPECIFICATION
SQ	SQUARE
SR	SINGLE RECEPTACLE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STOR	STORAGE
STP	STATIC PRESSURE
SUP	SUPPLY
TEL	TELEPHONE
TV	TELEVISION
TYP	TYPICAL
UDS	UTILITY DISTRIBUTION SYSTEM
UNFIN	UNIFINISHED
UNK	UNKNOWN
VAC	VACUUM
VERT	VERTICAL
W/	WITH
W/O	WITHOUT
WH	WATER HEATER
WL	WALL
WP	WEATHER PROOF
WT	WEIGHT

WALK-IN REFRIGERATION GENERAL REQUIREMENTS

1. GENERAL CONTRACTOR AND/OR SUBDIVISIONS SHALL PROVIDE SMOOTH FLOOR LEVEL WITHIN PLUS OR MINUS 1/8" FOR INSTALLATION OF 4" WIDE WALK-IN WALL SCREED, FOR COOLER SECTION, BY KEC (SECTION 114000). GENERAL CONTRACTOR AND/OR SUBDIVISIONS SHALL EXTEND FINISH FLOOR W/ COVED BASE INSIDE WALK-IN COMPARTMENT FOR SMOOTH TRANSITION TO THE EXTERIOR.
2. REFRIGERATION CONTRACTOR UNDER KEC (SECTION 114000) SHALL CONNECT DRAIN(S) WITH REFRIGERATION GRADE HARD COPPER USING 1" STANDOFFS. "P" TRAP DRAIN OUTSIDE WALK-IN COMPARTMENT(S). PROVIDE AND INSTALL SLEEVES THRU WALK-IN AND BUILDING WALLS FOR DRAIN LINE(S). FOAM & CAULK AROUND SLEEVES AND DRAIN LINES. WRAP WITH DRAIN LINE HEATER AND INSULATION WHERE SUBJECT TO FREEZING TEMPERATURES.
3. BUILDING FLOOR UNDER WALK-IN MUST BE LEVEL WITHIN PLUS OR MINUS 1/8".
4. GENERAL CONTRACTOR AND/OR SUBDIVISIONS SHALL FURNISH AND INSTALL ROOF PAD FOR KEC (SECTION 114000) FURNISHED REFRIGERATION RACK. MATERIAL/FLASHING AND REQUIRED ROOF PENETRATIONS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND/OR ROOFING CONTRACTOR.
5. REFRIGERATION CONTRACTOR UNDER KEC (SECTION 114000) SHALL FURNISH REFRIGERATION PIPING AND INSTALL CONDENSERS, CONDENSING UNITS, AND EVAPORATOR COILS. REFRIGERATION CONTRACTOR TO CHARGE, START-UP, RUN, AND CHECK FOR PROPER OPERATING TEMPERATURES.
6. ALL WALL/ROOF PENETRATIONS TO BE SPECIFIED AND PERFORMED BY OTHERS.
7. WALK-IN PITS (IF SPECIFIED) TO BE CLARIFIED AND CONFIRMED BETWEEN ARCHITECT/MEP AND FACTORY DRAWINGS - APPROVAL SIGNATURES REQUIRED.

VENTILATION GENERAL REQUIREMENTS

1. HVAC/MECHANICAL CONTRACTOR (DIVISION 23) SHALL INSTALL KEC (SECTION 114000) FURNISHED HOODS, EXHAUST/SUPPLY FAN(S), AND CURBS. FURNISH AND INSTALL DUCTWORK UPSTREAM FROM EXHAUST HOOD COLLARS.
2. GC (DIVISION 7) SHALL FLASH-IN ALL ROOF CURBS FOR EXHAUST/SUPPLY FAN(S).
3. ALL EXHAUST AND SUPPLY AIR SYSTEMS FOR EXHAUST HOODS TO BE TESTED AND BALANCED BY THE HVAC/MECHANICAL CONTRACTOR (DIVISION 23).
4. FIRE SUPPRESSION SYSTEM FOR EXHAUST HOODS SHALL BE FURNISHED AND INSTALLED BY KEC (SECTION 114000) UNLESS OTHERWISE NOTED IN KEC QUOTE.
5. GAS SHUTOFF VALVE SIZE TO BE DETERMINED BY MEP ENGINEER OR GC / PLUMBING CONTRACTOR.
6. HAND-HELD K-CLASS FIRE EXTINGUISHER TO BE PROVIDED BY OTHERS UNLESS OTHERWISE NOTED IN KEC QUOTE.

PLUMBING GENERAL REQUIREMENTS (DIVISION 22)

1. FOODSERVICE DRAWINGS INDICATE PLUMBING ROUGH-IN/CONNECTIONS POINTS FOR EQUIPMENT SPECIFIED UNDER THE KITCHEN EQUIPMENT (SECTION 114000) CONTRACT. ADDITIONAL PLUMBING REQUIREMENTS ARE NOT INDICATED ON FOODSERVICE DRAWINGS.
2. ROUGH-INS, PIPING, AND FINAL CONNECTIONS TO ALL FOODSERVICE EQUIPMENT SHALL BE COMPLETED BY PLUMBING CONTRACTOR (DIVISION 22).
3. FLOOR DRAINS ARE INDICATED FOR KITCHEN EQUIPMENT. ADDITIONAL DRAINS MAY BE REQUIRED UNDER DIVISION 22.
4. PLUMBING CONTRACTOR (DIVISION 22) SHALL SUPPORT ALL SUPPLY AND DRAIN LINES TIGHT AGAINST UNDERSIDE OF EQUIPMENT TO ALLOW SPACE FOR CLEANING.
5. ALL DIMENSIONS ARE SHOWN FROM FINISHED FLOORS, FINISHED WALLS, AND/OR COLUMN CENTERLINES TO CENTER OF ROUGH-IN.
6. KEC (SECTION 114000) SHALL FURNISH ALL FAUCETS, BASKET WASTES, TWIST/LEVER WASTES, GAS HOSES, AND VACUUM BREAKER/SAFETY REGULATORS AS SPECIFIED. PLUMBING CONTRACTOR (DIVISION 22) SHALL INSTALL ALL FAUCETS, BASKET WASTES, TWIST/LEVER WASTES, GAS HOSES, AND VACUUM BREAKER/SAFETY REGULATORS WITH THE NECESSARY COMPONENTS AND SUPPLY NIPPLES TO MAKE FINAL CONNECTIONS; INCLUDING THE INSTALLATION OF COMPONENTS NOT SHOWN OR SHIPPED LOOSE.
7. ALL PLUMBING LINES TO BE CONCEALED WITHIN WALLS, CEILINGS, AND FLOORS WHERE POSSIBLE.
8. WHEN REQUIRED, FOODSERVICE EQUIPMENT DRAIN(S) ARE TO BE PIPED TO THE GREASE TRAP/INCEPTOR PROVIDED BY THE PLUMBING CONTRACTOR (DIVISION 22) AS DIRECTED BY LOCAL PLUMBING CODE.
9. GENERAL WATER PRESSURE IN KITCHEN AREA IS NOT TO EXCEED 50PSI. THE DIVISION 22 CONTRACTOR SHALL FURNISH AND INSTALL PRESSURE REDUCING VALVES, FLOW CONTROLS, BACK FLOW PREVENTION, RPZ (REDUCED PRESSURE ZONE) VALVES, WATER HAMMER ARRESTOR, GATE VALVES, FOR WATER CONNECTIONS AS REQUIRED PER LOCAL CODES.

PLUMBING NOTES (DIVISION 22)

1. INSTALL KEC (SECTION 114000) FURNISHED FAUCET(S).
2. INSTALL KEC (SECTION 114000) FURNISHED TWIST WASTE/LEVER(S).
3. INSTALL KEC (SECTION 114000) FURNISHED HAND SINKS (WALL MOUNT STYLE) IN LOCATION SHOWN WITH THE MOUNTING HEIGHT TO BE A.D.A. COMPLIANT. PROVIDE AND INSTALL ALL NECESSARY HARDWARE FOR FINAL CONNECTION.
4. INSTALL KEC (SECTION 114000) FURNISHED QUICK DISCONNECT(S) & RESTRAINING DEVICE(S) PER MANUFACTURER'S RECOMMENDATIONS.
5. INSTALL KEC (SECTION 114000) FURNISHED FLOOR TROUGH(S). REFER TO DETAIL ##/QF###.
6. EXTEND AND/OR CONNECT DRAIN(S).
7. MANIFOLD DRAINS TO SINGLE CONNECTION.
8. FURNISH AND INSTALL BALL VALVE IN DRAIN LINE. VALVE TO BE IN EASILY ACCESSIBLE LOCATION.
9. INSTALL KEC (SECTION 114000) FURNISHED WATER FILTER. PIPING FROM FILTER OUTLET TO POINTS OF USE SHALL BE CONCEALED WITHIN WALLS AND CEILINGS. EXTEND DRAIN(S) TO FLOOR SINK/FLOOR DRAIN.
10. INSTALL KEC (SECTION 114000) FURNISHED SOLENOID VALVE(S), VACUUM BREAKER(S), FLOW CONTROL(S), PRESSURE REGULATOR(S), AND WATER INLET(S).
11. CONNECT MIN. 110°F HOT WATER SUPPLY (70" RISE) BOOSTER HEATER, THEN INTERPIPE TO DISHWASHER INLET. INSTALL TEMPERATURE/PRESSURE GAUGE(S) AND PRESSURE REGULATOR. CONNECT BOOSTER HEATER DRAIN(S) IN HARD COPPER TO FLOOR SINK/FLOOR DRAIN.
12. INSTALL KEC (SECTION 114000) FURNISHED DRAIN LINE TEMPERING KIT PER MANUFACTURER'S RECOMMENDATIONS.
13. CONNECT DRAIN(S) WITH REFRIGERATION GRADE HARD COPPER USING 1" STANDOFFS. "P" TRAP DRAIN OUTSIDE WALK-IN COMPARTMENT(S). PROVIDE AND INSTALL SLEEVES THRU WALK-IN AND BUILDING WALLS FOR DRAIN LINE(S). FOAM & CAULK AROUND SLEEVES AND DRAIN LINES. WRAP WITH DRAIN LINE HEATER AND INSULATION WHERE SUBJECT TO FREEZING TEMPERATURES.
14. INSTALL KEC (SECTION 114000) FURNISHED HOSE REEL, MIXING VALVE, CHROME FITTINGS, VACUUM BREAKER, AND CONTROL VALVE. REFER TO DETAIL ##/QF###.
15. INSTALL KEC (SECTION 114000) FURNISHED FIRE SUPPRESSION SYSTEM GAS SHUT OFF VALVE. MUST BE ACCESSIBLE AND NOT CONCEALED IN WALL OR CEILING.
16. PROVIDE GRAY WATER AND SLURRY PIPING TO AND FROM (SECTION 114000) FURNISHED PULPER, TROUGH, AND WATER EXTRACTOR. INSTALL KEC (SECTION 114000) FURNISHED TROUGH INLET NOZZLES AND PROVIDE SHUT OFF VALVE AT EACH NOZZLE.
17. VERIFY UTILITIES FOR EXISTING & NIC EQUIPMENT.
18. INSTALL KEC (SECTION 114000) FURNISHED WATER FILETER AND RUN TO ICE MAKER.
19. INSTALL KEC (SECTION 114000) FURNISHED WATER FILETER AND RUN TO COFFEE MAKER.

ELECTRICAL GENRAL REQUIREMENTS (DIVISION 26)

1. FOODSERVICE DRAWINGS INDICATE ELECTRICAL ROUGH-IN/CONNECTIONS POINTS FOR EQUIPMENT SPECIFIED UNDER THE KITCHEN EQUIPMENT (SECTION 114000) OF THE CONTRACT. ADDITIONAL ELECTRICAL REQUIREMENTS ARE NOT INDICATED ON FOODSERVICE DRAWINGS.
2. ROUGH-INS, INTERWIRING, AND FINAL CONNECTIONS TO ALL FOODSERVICE EQUIPMENT SHALL BE COMPLETED BY ELECTRICAL CONTRACTOR (DIVISION 26).
3. PROVIDE DEDICATED CIRCUITS FOR FOODSERVICE EQUIPMENT AS REQUIRED.
4. ALL DIMENSIONS ARE SHOWN FROM FINISHED FLOORS, FINISHED WALLS, AND/OR COLUMN CENTERLINES TO CENTER OF ROUGH-IN.
5. ELECTRICAL CONTRACTOR (DIVISION 26) SHALL FURNISH AND INSTALL ALL NECESSARY COMPONENTS TO MAKE FINAL CONNECTIONS; INCLUDING THE INSTALLATION OF COMPONENTS NOT SHOWN OR SHIPPED LOOSE.
6. ALL ELECTRICAL CONDUIT TO BE CONCEALED WITHIN WALLS, CEILINGS, AND FLOORS WHERE POSSIBLE.
7. ELECTRICAL CONTRACTOR (DIVISION 26) TO PROVIDE GFCI RECEPTACLES WHERE REQUIRED.

ELECTRICAL NOTES (DIVISION 26)

1. FURNISH AND INSTALL CORD AND PLUG SET(S).
2. INSTALL KEC (SECTION 114000) FURNISHED CORD AND PLUG SET(S).
3. FURNISH AND INSTALL DEVICE & COVER IN KEC (SECTION 114000) FURNISHED JUNCTION BOX.
4. CONNECT TO JUNCTION BOX, DEVICE, & COVER FURNISHED BY KEC (SECTION 114000).
5. CONNECT WITH LIQUID TIGHT CONDUIT FROM JUNCTION BOX TO EQUIPMENT/DEVICES.
6. CONNECT WITH LIQUID TIGHT CONDUIT THRU CONTROL TO EQUIPMENT.
7. CONNECT THRU DISPOSER CONTROL TO SOLENOID VALVE AND MOTOR.
8. FURNISH AND INSTALL WIRING TO KEC (SECTION 114000) FURNISHED REMOTE CONTROL SWITCHES.
9. FURNISH AND INSTALL SWITCH. CONNECT TO LIGHTS FURNISHED AND INSTALLED BY KEC (SECTION 114000).
10. CONNECT POWER SUPPLY TO KEC (SECTION 114000) FURNISHED LOAD CENTER. COUNTER SHALL BE PREWIRED AND SHIPPED IN SECTIONS. CONNECT BETWEEN SECTIONS.
11. CONNECT TO KEC (SECTION 114000) FURNISHED JUNCTION BOX ABOVE WALK-IN DOOR. LIGHT FIXTURE LOCATED ADJACENT/ABOVE DOOR IS PREWIRED TO FACTORY MOUNTED LIGHT SWITCH. MOUNT ADDITIONAL SECTION 114000 FURNISHED LIGHTS WHERE INDICATED AND CONNECT TO SWITCH. ALL CONDUIT SHALL BE EXPOSED ON TOP OF THE WALK-IN. NO EXPOSED CONDUIT WILL BE ALLOWED INSIDE THE WALK-IN.
12. FOAM & SEAL INSIDE AND OUTSIDE OF CONDUIT PENETRATIONS THRU WALK-IN.
13. CONNECT KEC (SECTION 114000) FURNISHED TEMPERATURE ALARM SYSTEM. COORDINATE WITH BUILDING SYSTEMS.
14. CONNECT TO ELECTRICAL CONTRACTOR (DIVISION 26) FURNISHED FUSED DISCONNECT AT CONDENSING UNIT.
15. INSTALL KEC (SECTION 114000) FURNISHED DEFROST TIMER. CONNECT THRU TIMER TO EVAPORATOR COIL.
16. CONNECT FROM KEC (SECTION 114000) FURNISHED CONDENSING UNIT, THRU DEFROST TIMER, TO EVAPORATOR COIL.
17. PROVIDE NEMA RECEPTACLE WITH WEATHER COVER BEHIND FREEZER EVAPORATOR COIL FOR DRAIN LINE HEATER.
18. CONNECT EXHAUST FAN THRU FAN CONTROL CONTACTS IN DISHWASHER.
19. CONNECT TABLE LIMIT SWITCH TO DRY CONTACT ON KEC (SECTION 11400) FURNISHED DISHMACHINE.
20. CONNECT DRAIN WATER TEMPERING DEVICE PER MANUFACTURER'S RECOMMENDATIONS.
21. CONNECT THRU KEC (SECTION 114000) FURNISHED LIGHT SWITCH MOUNTED IN FACE OF HOOD OR HOOD CONTROL CABINET TO LIGHT FIXTURES IN HOOD(S). INTERWIRE LIGHT FIXTURES BETWEEN HOOD SECTONS AS REQUIRED.
22. CONNECT THRU KEC (SECTION 114000) FURNISHED FAN CONTROL SWITCH MOUNTED IN FACE OF HOOD OR HOOD CONTROL CABINET TO EXHAUST FAN(S)/MAKE-UP AIR UNIT(S). INTERWIRE THRU MOTOR STARTER(S)/VARIABLE FREQUENCY DRIVE(S) AND OVERLOAD PROTECTION DEVICE(S) AS REQUIRED. INSTALL AND/OR INTERWIRE THE KEC (SECTION 114000) FURNISHED HOOD HEAT SENSOR(S) AND SMOKE SENSORS AS REQUIRED.
23. CONNECT 120 VOLT FROM KEC (SECTION 114000) FURNISHED MICROSWITCH IN FIRE SUPPRESSION SYSTEM CONTROL PANEL TO SHUNT TRIP BREAKER(S) FOR SHUT DOWN OF POWER TO ALL ELECTRICAL DEVICES UNDER HOOD(S) AND 18" OUTSIDE PERIMETER OF HOOD(S). CONNECT FROM MICROSWITCH TO DIVISION 26 FURNISHED RELAY(S) OR SWITCHES FOR SHUT DOWN/CONTROL OF HOOD LIGHTS, MAKE-UP AIR FAN, AND FIRE ALARM SYSTEM.
24. CONNECT 120 VOLT FROM KEC (SECTION 114000) FURNISHED MICROSWITCH IN FIRE SUPPRESSION SYSTEM CONTROL PANEL THRU MANUAL RESET RELAY TO ELECTRIC GAS VALVE.
25. PROVIDE CONCEALED CONDUIT AND RECESSED OCTAGONAL JUNCTION BOX IN WALL AT 42"-48" AFF FOR REMOTE MANUAL PULL STATION(S). COORDINATE LOCATION(S) WITH FIRE SUPPRESSION SYSTEM CONTRACTOR AND AUTHORITIES HAVING JURISDICTION PRIOR TO ROUGH-IN. REFER TO QF700.
26. VERIFY AND PROVIDE UTILITIES FOR EXISTING/NIC EQUIPMENT PRIOR TO ROUGH-IN.
27. INSTALL 3/4" EMPTY CONDUIT AND JUNCTION BOX FOR DATA CONNECTION. VERIFY EXACT REQUIREMENTS AND TERMINATION POINTS PRIOR TO ROUGH-IN.

ELECTRICAL

SYMBOLS AND ABBREVIATIONS

- SINGLE CONVENIENCE OUTLET (SCO)
- DUPLEX CONVENIENCE OUTLET (DCO)
- JUNCTION BOX (JB)
- HEATING ELEMENT OR POWER
- FLOOR RECEPTACLE AS NOTED
- SPECIAL OUTLET AS NOTED
- MOTOR OUTLET
- SOLENOID OR CONTROL CIRCUIT
- PHONE JACK LOCATION
- CIRCUIT (QUAD I.G.)
- LIGHT INDICATION
- CONDUIT AS NOTED
- PANELBOARD
- DISCONNECT SWITCH

EL	ELEVATION ABOVE FINISHED FLOOR
A	AMPERES
V	VOLTS
W	WATTS
Ø	PHASE
AFF	ABOVE FINISHED FLOOR
BTC	BRANCH TO CONNECTION POINT AND CONNECT TO EQUIPMENT
BTF	BRANCH TO FIXTURE, FURNISH AND INSTALL RECEPTACLE
DFA	DOWN FROM ABOVE
SU	STUB UP ABOVE FINISH FLOOR
HP	HORSE POWER
KW	KILOWATTS
Sw	SWITCH AS NOTED
Sp	SWITCH AND PILOT LIGHT

PLUMBING

SYMBOLS AND ABBREVIATIONS

- COLD WATER (CW)
- HOT WATER (HW)
- GAS SUPPLY (G)
- GAS CONNECTION
- STEAM SUPPLY (SS)
- INDIRECT DRAIN (ID)
- DIRECT DRAIN (DD)
- HUB DRAIN (HD)
- FLOOR DRAIN (FD)
- FUNNEL FLOOR DRAIN (FFD)
- FLOOR SINK (FS)
- FLOOR TROUGH (FT)

EVC	EXHAUST VENT CONNECTION
SVC	SUPPLY VENT CONNECTION
FR	DIRECT CONN. FLUE RISER
AFF	ABOVE FINISHED FLOOR
ACH	ABOVE COUNTER HEIGHT
BTC	BRANCH TO CONNECTION
DFA	DOWN FROM ABOVE
SU	STUB UP

DEFINITION OF TERMS

FURNISH: SUPPLY AND DELIVER TO APPROPRIATE CONTRACTOR FOR INSTALLATION.

INSTALL: FURNISH TO PROJECT SITE INCLUDING UNLODAING, UNPACKING, ASSEMBLY, ERECTING, PLACING, ANCHORING, PROTECTING, CLEANING AND SIMILAR OPERATIONS; READY FOR FINAL UTILITY CONNECTIONS BY APPROPRIATE CONTRACTOR.

PROVIDE: FURNISH AND INSTALL COMPLETE, READY FOR INTENDED USE.

WALL BLOCKING SCHEDULE (DIVISION 6)

WB-1	FROM 32" AFF TO 48" AFF
WB-2	FROM 48" AFF TO 72" AFF
WB-3	FROM 48" AFF TO 78" AFF
WB-4	FROM 48" AFF TO 108" AFF
WB-5	FROM 72" AFF TO 96" AFF
WB-6	FROM 72" AFF TO 102" AFF
WB-7	FROM 60" AFF TO 90" AFF

NOTE: ALL WALL BLOCKING TO BE 5/8" PLYWOOD MINIMUM OR 18GA METAL WHERE REQUIRED.

GENERAL CONTRACTOR REQUIREMENTS (DIVISIONS 3, 6, 7 & 9)

1. THE GENERAL CONTRACTOR AND/OR SUBDIVISIONS SHALL FURNISH AND INSTALL WALL BLOCKING WHERE WALLS REQUIRE REINFORCEMENT. LENGTHS OF WALL BLOCKING ARE NOMINAL: ALWAYS EXTEND TO THE NEXT STUD IN EACH DIRECTION.
2. GENERAL CONTRACTOR AND/OR SUBDIVISIONS TO PROVIDE REINFORCEMENT ABOVE FINISHED CEILING FOR HANGING OF SECTION 114000 FURNISHED EQUIPMENT. COORDINATE EXACT SIZE AND REQUIREMENTS WITH SECTION 114000.
3. GENERAL CONTRACTOR AND/OR SUBDIVISIONS SHALL FURNISH ANY AND ALL FIRE-RESISTANT RATED SHAFTS (IF REQUIRED) FOR EXHAUST HOOD DUCTS IN ACCORDANCE WITH ALL BUILDING CODES.

GENERAL FOODSERVICE AND HEALTH CODE REQUIREMENTS

1. ALL FOODSERVICE EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE CURRENT EDITION OF CODES, RULES AND REGULATIONS OF THE GOVERNING HEALTH DEPARTMENT AUTHORITIES AND BE MANUFACTURED IN STRICT COMPLIANCE WITH AND, IF APPLICABLE, BEAR THE SEAL OF UL, NEMA, ASME, NSF, ETL, AGA, OSHA AND NFPA.
2. CEILING AND WALL SURFACES ADJACENT TO OR ABOVE ANY FOOD PREPARATION AREA, INCLUDING KITCHEN, DISHWASHING AND SERVING AREAS, ETC., SHALL BE SMOOTH, EASILY CLEANABLE AND LIGHT IN COLOR. ANY MATERIALS NOT CLEARLY CONSISTENT WITH THIS REQUIREMENT SHOULD BE SUBMITTED TO THE LOCAL HEALTH JURISDICTION FOR PRIOR APPROVAL OF USE. LAY IN CEILING TILE MUST BE NON-POROUS AND NON-FISSURED PANELS ONLY. A CORROSION RESISTANT SUSPENSION SYSTEM IS RECOMMENDED.
3. CONSTRUCT PARTITION WALLS BETWEEN KITCHEN AREAS AND PUBLIC AREAS FOR MAXIMUM SOUND CONTROL IF APPLICABLE.
4. FLOORS IN FOOD PREPARATION, FOOD STORAGE, UTENSIL WASHING AND JANITORIAL AREAS SHALL MEET HEALTH DEPARTMENT REQUIREMENTS AND SHALL HAVE COVED BASE.
5. THERE SHALL BE A MINIMUM 50 FOOT-CANDLES OF LIGHT ON ALL WORKING SURFACES AND EQUIPMENT IN FOOD PREPARATION AND UTENSIL WASHING AREAS; INCLUDING WORK SURFACES OF EQUIPMENT LOCATED UNDER EXHAUST HOODS. WALK-IN COOLER/FREEZERS AND DRY STORAGE ROOMS TO HAVE A MINIMUM OF 20 FOOT CANDLE POWER.
6. LAMP GUARDS OR SLEEVES, SOLID PLASTIC LENSES OR APPROVED COATED BULBS SHALL BE USED ON ALL LIGHTING IN EQUIPMENT OR OVER FOOD CONTACT AREAS.
7. BACKSPLASHES WHEN SEALED ON EQUIPMENT SHALL BE SEALED TO WALLS WITH SILICONE SEALANT IN A NEAT WORKMANLIKE MANNER. SEALANT MUST BE APPROVED BY THE NATIONAL SANITATION FOUNDATION (NSF).
8. SPACE BETWEEN ALL EQUIPMENT AND WALL, CEILING, FLOORS AND ADJOINING UNITS NOT PORTABLE AND HAVING ENCLOSED BODIES SHALL BE COMPLETELY SEALED AGAINST ENTRANCE OF FOOD PARTICLES OR VERMIN BY MEANS OF SILICONE SEALANT OR TRIM STRIPS.
9. EQUIPMENT PLACED ON TABLES AND COUNTERS SHALL BE READILY MOVABLE, COMPLETELY SEALED TO WORK SURFACE, OR MOUNTED ON LEGS NO LESS THAN 4 INCHES IN HEIGHT IF EQUIPMENT WEIGHS MORE THAN 75 POUNDS.
10. ALL FLOOR MOUNTED EQUIPMENT SHALL BE INSTALLED ON EITHER A MINIMUM OF 6 INCH HIGH STAINLESS STEEL LEGS WITH ADJUSTABLE SANITARY FEET, MOUNTED ON CASTERS, OR RESTING ON 6 INCH HIGH RAISED CURBS.
11. DISHWASHERS OR CHEMICAL SANITIZING MACHINE SHALL BE DESIGNED WITH A HIGH TEMPERATURE FINAL RINSE OF 180°F AND WASH CYCLE TEMPERATURES OF 160°F.
12. ALL REFRIGERATION EQUIPMENT SHALL HAVE THERMOMETERS WHICH ARE EASILY READABLE, IN PROPER WORKING CONDITION, AND ACCURATE WITHIN A RANGE OF PLUS OR MINUS 2°.
13. VACUUM BREAKERS, WHEN REQUIRED, SHALL BE A MINIMUM OF 6 INCHES ABOVE THE FLOOD LEVEL RIM WITH NO SHUT OFF DEVICES BEYOND THE DISCHARGE OF THE VACUUM BREAKER.
14. HANDWASHING FACILITIES ARE REQUIRED FOR FOOD PREPARATION, COOKING, SERVING AND UTENSIL WASHING AREAS AND WILL BE SHOWN ON THE FOODSERVICE EQUIPMENT PLANS.
15. NEW EXHAUST HOODS SHALL BE CONSTRUCTED TO MEET THE LOCAL BUILDING CODES AND MEET THE FOLLOWING STANDARDS: NSF, UL AND NFPA-96. NEW HOODS ARE TO BEAR UL CLASSIFIED LABEL WITHOUT DAMPERS IN EXHAUST VENT COLLARS. HOODS SHALL BE DESIGNED WITH A MINIMUM OF 6 INCH OVERHANG AT ALL EXPOSED COOKING AREAS.
16. THE EXHAUST HOODS AND EXHAUST DUCT SYSTEMS SHALL BE PROVIDED WITH AN AUTOMATIC FIRE EXTINGUISHING SYSTEM. THE FIRE SUPPRESSION SYSTEM SHALL BE ENGINEERED, SIZED AND INSTALLED IN ACCORDANCE WITH UL 300, NFPA AND BUILDING CODES.

BEVERAGE SYSTEM GENERAL REQUIREMENTS

1. ALL CONDUIT BENDS ARE TO BE SMOOTH WIDE SWEEPS - SPECIFIC DIMENSION AND RADIUS TO BE SPECIFIED OR DETERMINED BY OTHERS.
2. PVC CONDUIT IS TO BE WATER TIGHT.
3. LIMIT 3 BENDS PER CONDUIT RUN.
4. PROVIDE PULL-BOX FOR OVERHEAD CONDUIT RUNS EVERY 3 BENDS OR 75' - 0".
5. CONDUITS TO BE CAPPED DURING CONSTRUCTION.

1 FS0 FOODSERVICE GENERAL NOTES
SCALE 1/4" = 1'

ISSUE DATE
8/31/22

SCALE
1/4" = 1'0"

UNITY COMMUNITY CENTER

CEDAR PARK, TX

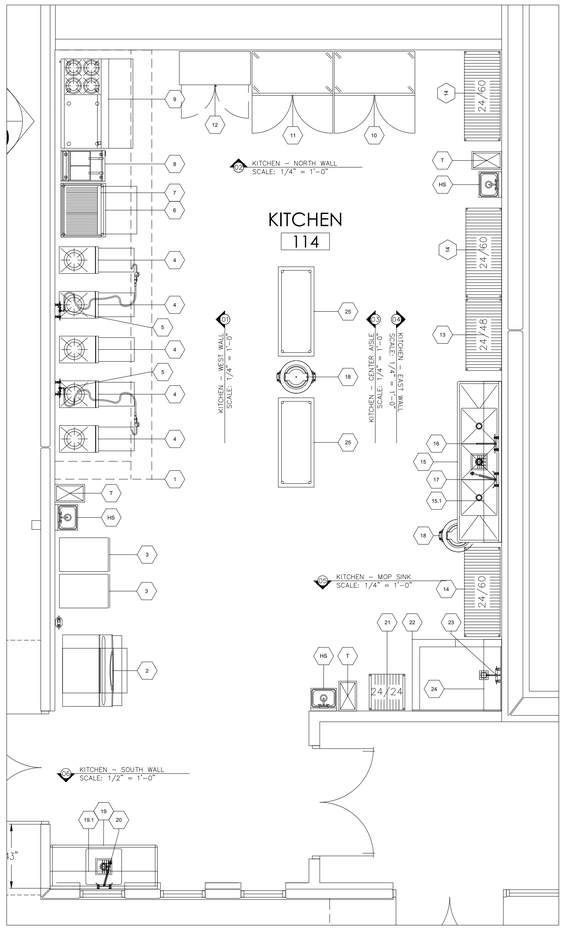
ACE MART
RESTAURANT SUPPLY
6700 GULF FWY, HOUSTON TX 77087 (713) 645-1200 WWW.ACEMART.COM

REVISIONS

CHECKED BY

DRAWN BY
E.C.

SHEET NUMBER
FS1.0



1
FS1.0
Equipment Plan
SCALE 1/4" – 1'

EQUIPMENT SCHEDULE

NO.	Q#	CATEGORY	MFR	MODEL	REMARKS
1	1	EXHAUST HOOD	ACCUREX	HOOD	-
2	1	ICE MAKER, CUBE-STYLE	MANITOWOC	IRT0900A	-
3	2	CABINET, COOK / HOLD / OVEN	CRES COR	1000CHSS2DE	-
4	5	STOCK POT RANGE, 1 TWO-RING BURNER	VULCAN	VSP100	-
4.1	5	BLUE HOSE GAS CONNECTOR KIT	DORMONT	1675KIT2S48	-
5	2	FAUCET, KETTLE / POT FILLER	T&S BRASS	B-0610-JJ	-
6	1	EQUIPMENT STAND	JOHN BOOS	EES8-3036-X	-
7	1	CHARBROILER, GAS, COUNTERTOP	VULCAN	VCRB36	-
7.1	1	BLUE HOSE GAS CONNECTOR KIT	DORMONT	1675KIT2S48	-
8	1	GAS FLOOR FRYER	VULCAN	LG500	-
8.1	1	BLUE HOSE GAS CONNECTOR KIT	DORMONT	1675KIT2S48	-
9	-	RANGE, 60", 4 BURNERS, 36" GRIDDLE	ROYAL RANGE OF CALIFORNIA	RDR-4G36	-
10	1	REACH-IN FREEZER	TRUE MFG. - GENERAL FOODSERVICE	TS-49F-HC	-
11	1	REACH-IN REFRIGERATOR	TRUE MFG. - GENERAL FOODSERVICE	T-49-HC	-
12	1	STORAGE CABINET	JOHN BOOS	TCH-224884-X	-
13	1	WIRE SHELVING UNIT	METRO	EZ2448BR-4	-
14	3	WIRE SHELVING UNIT	METRO	EZ2460BR-4	-
15	1	THREE (3) COMPARTMENT SINK	ADVANCE TABCO	FS-3-2424-18RL	-
15.1	1	OVERSHELF	JOHN BOOS	BHS12108PR	-
16	1	WALL / SPLASH MOUNT FAUCET	KROWNE	14-812L	-
17	1	PRE-RINSE FAUCET ASSEMBLY, WITH ADD ON FAUCET	KROWNE	17-109WL	-
18	2	COMMERCIAL WASTE CONTAINER	RUBBERMAID	FG263200GRAY	-
19	1	ONE (1) COMPARTMENT SINK	JOHN BOOS	E1S8-24-14T24-X	-
19.1	1	OVERSHELF	JOHN BOOS	BHS1272PR-X	-
20	1	PRE-RINSE FAUCET ASSEMBLY, WITH ADD ON FAUCET	KROWNE	17-109WL	-
21	1	WIRE SHELVING UNIT	METRO	SE-242474K4-S-4	-
22	1	MOP SINK	OWN	-	-
23	1	SERVICE FAUCET	KROWNE	16-127	-
24	1	SHELVING, WALL MOUNTED	ADVANCE TABCO	WS-12-48	-
25	2	WORK TABLE, 60", STAINLESS STEEL TOP	JOHN BOOS	ST4-2460SSK	-
HS	3	HAND SINK	ADVANCE TABCO	7-PS-EC-X	-
T	3	TRASH CAN	RUBBERMAID	RUB3540GRAY	-

ARCHITECT / MEP TO VERIFY ALL UTILITIES. NOT INTENDED FOR PERMITTING OR CONSTRUCTION

ISSUE DATE
8/31/22

SCALE
1/4"=1'0"

UNITY COMMUNITY CENTER

CEDAR PARK, TX

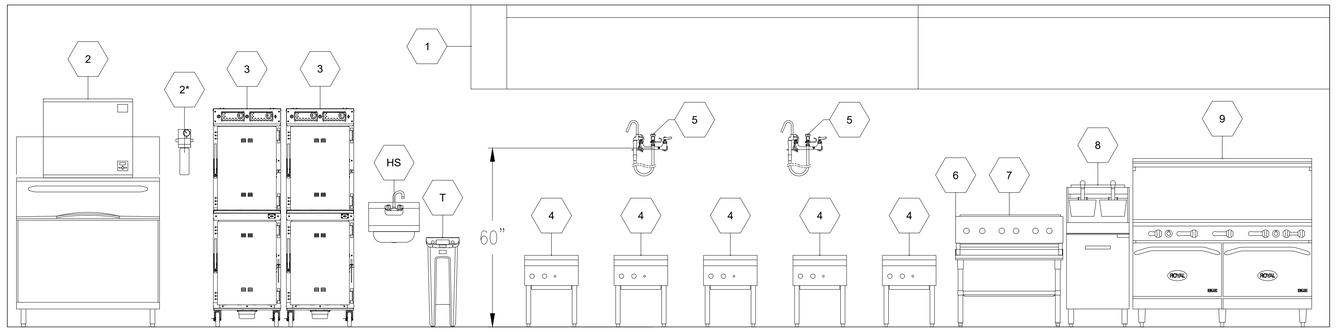
ACE MART
RESTAURANT SUPPLY
6700 GULF FWY, HOUSTON TX 77087 (713) 645-1200 WWW.ACEMART.COM

REVISIONS

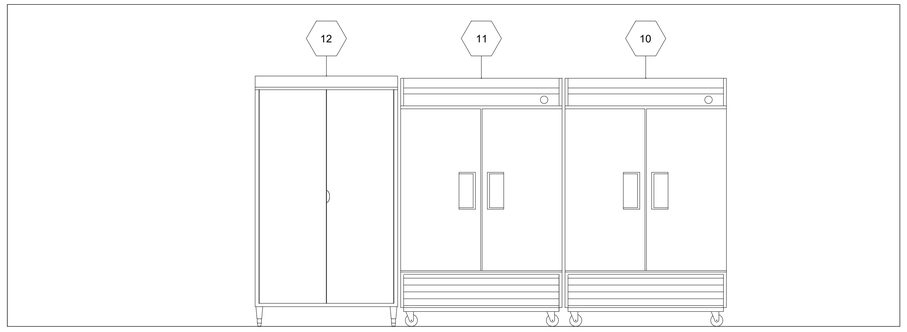
CHECKED BY

DRAWN BY
E.C.

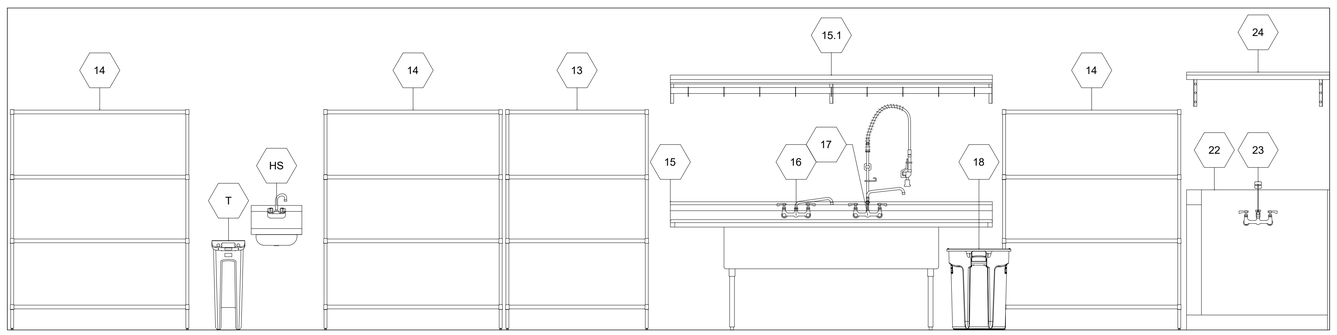
SHEET NUMBER
FS2.0



01 KITCHEN – WEST WALL
SCALE: 1/2" = 1'-0"



02 KITCHEN – NORTH WALL
SCALE: 1/2" = 1'-0"



03 KITCHEN – EAST WALL
SCALE: 1/2" = 1'-0"

ARCHITECT / MEP TO VERIFY ALL UTILITIES. NOT INTENDED FOR PERMITTING OR CONSTRUCTION

UNITY COMMUNITY CENTER

CEDAR PARK, TX

ACE MART
RESTAURANT SUPPLY
6700 GULF FWY, HOUSTON TX 77087 (713) 645-1200 WWW.ACEMART.COM

ISSUE DATE
8/31/22

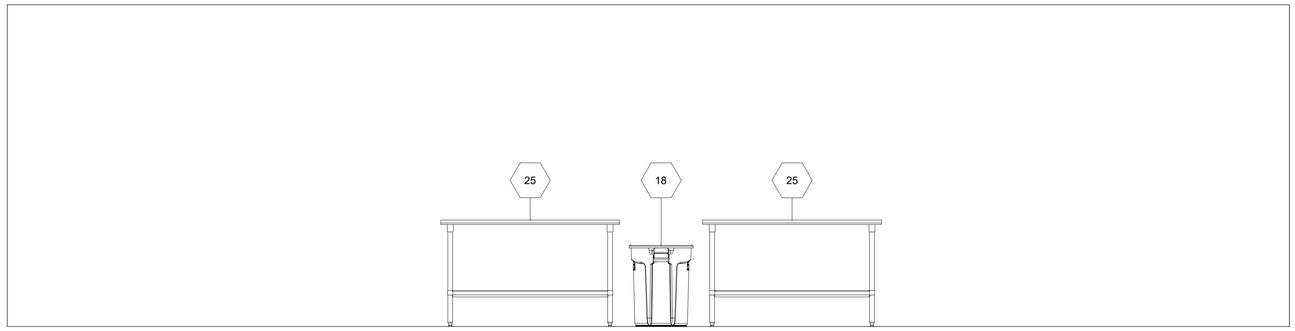
SCALE
1/2" = 1'0"

REVISIONS

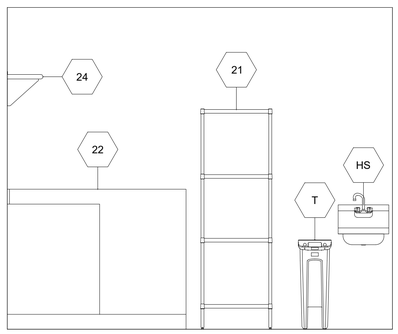
CHECKED BY

DRAWN BY
E.C.

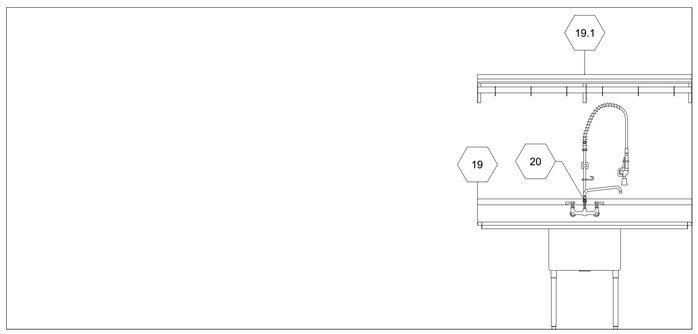
SHEET NUMBER
FS2.2



04 CENTER AISLE
SCALE: 1/2" = 1'-0"



05 KITCHEN – MOP SINK
SCALE: 1/2" = 1'-0"



06 KITCHEN – SOUTH WALL
SCALE: 1/2" = 1'-0"

ARCHITECT / MEP TO VERIFY ALL UTILITIES. NOT INTENDED FOR PERMITTING OR CONSTRUCTION

ISSUE DATE
8/31/22

SCALE
1/2" = 1'0"

UNITY COMMUNITY CENTER

CEDAR PARK, TX

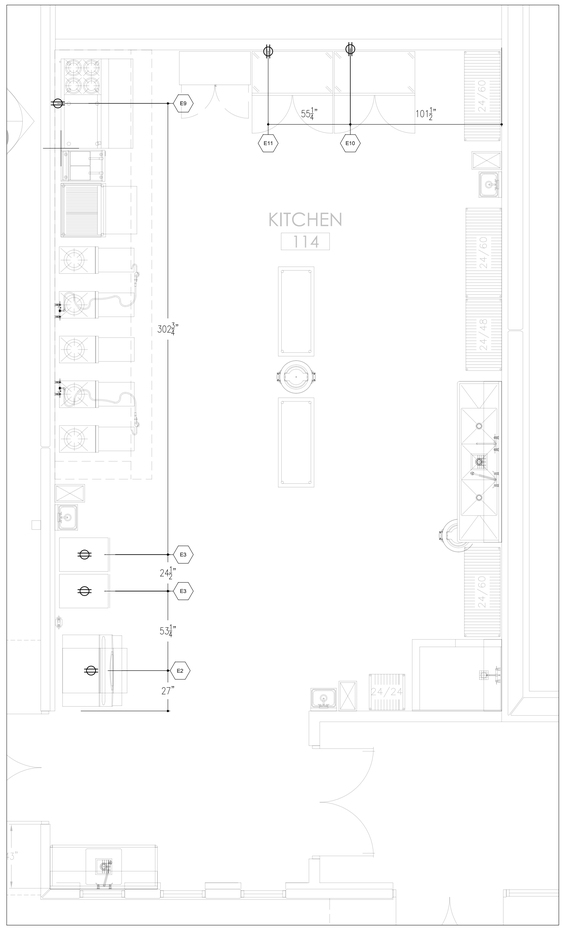
ACE MART
RESTAURANT SUPPLY
6700 GULF FWY, HOUSTON TX 77087 (713) 645-1200 WWW.ACEMART.COM

REVISIONS

CHECKED BY

DRAWN BY
E.C.

SHEET NUMBER
FS2.3



ELECTRICAL

SYMBOLS AND ABBREVIATIONS

- ⏀ ..... SINGLE CONVENIENCE OUTLET (SCO)
- ⏁ ..... DUPLEX CONVENIENCE OUTLET (DCO)
- ⓙ ..... JUNCTION BOX (JB)
- ◐ ..... HEATING ELEMENT OR POWER
- ⊙ ..... FLOOR RECEPTACLE AS NOTED
- ◭ ..... SPECIAL OUTLET AS NOTED
- ◇ ..... MOTOR OUTLET
- Ⓢ ..... SOLENOID OR CONTROL CIRCUIT
- ▸ ..... PHONE JACK LOCATION
- ⇉ ..... CIRCUIT (QUAD I.G.)
- ⊕ ..... LIGHT INDICATION
- Ⓒ ..... CONDUIT AS NOTED
- ▰ ..... PANELBOARD
- ▭ ..... DISCONNECT SWITCH

- EL .....ELEVATION ABOVE FINISHED FLOOR
- A .....AMPERES
- V .....VOLTS
- W .....WATTS
- Ø .....PHASE
- AFF .....ABOVE FINISHED FLOOR
- BTC .....BRANCH TO CONNECTION POINT AND CONNECT TO EQUIPMENT
- BTF .....BRANCH TO FIXTURE, FURNISH AND INSTALL RECEPTACLE
- DFA .....DOWN FROM ABOVE
- SU .....STUB UP ABOVE FINISH FLOOR
- HP .....HORSE POWER
- KW .....KILOWATTS
- Sw .....SWITCH AS NOTED
- Sp .....SWITCH AND PILOT LIGHT

ELECTRICAL SCHEDULE

NO.	Q#	UNIT	MFR	CATEGORY	VOLT	PH	AMPS	CYCLE	HP	KW	CONN TYPE	NEMA	ELEC CONN HGT	REMARKS
2	1	EA	MANITOWOC	ICE MAKER, CUBE-STYLE	208-230	1	9.5	60	-	2.0	DIRECT	-	60"	-
3	2	EA	CRES COR	CABINET, COOK / HOLD / OVEN	208-240	1	30.0	60	-	6.0	CORD & PLUG	6-30P	72"	-
10	1	EA	TRUE MFG. - GENERAL FOODSERVICE	REACH-IN FREEZER	115	1	9.6	60	1	1.0	CORD & PLUG	5-15P	18"	-
11	1	EA	TRUE MFG. - GENERAL FOODSERVICE	REACH-IN REFRIGERATOR	115	1	5.4	60	1/2	1.0	CORD & PLUG	5-15P	18"	-

1 / FS1.0 Electrical Rough-in
SCALE 1/4" = 1'

ARCHITECT / MEP TO VERIFY ALL UTILITIES. NOT INTENDED FOR PERMITTING OR CONSTRUCTION

ISSUE DATE 8/31/22

SCALE 1/4"=1'0"

UNITY COMMUNITY CENTER

CEDAR PARK, TX

ACE MART RESTAURANT SUPPLY

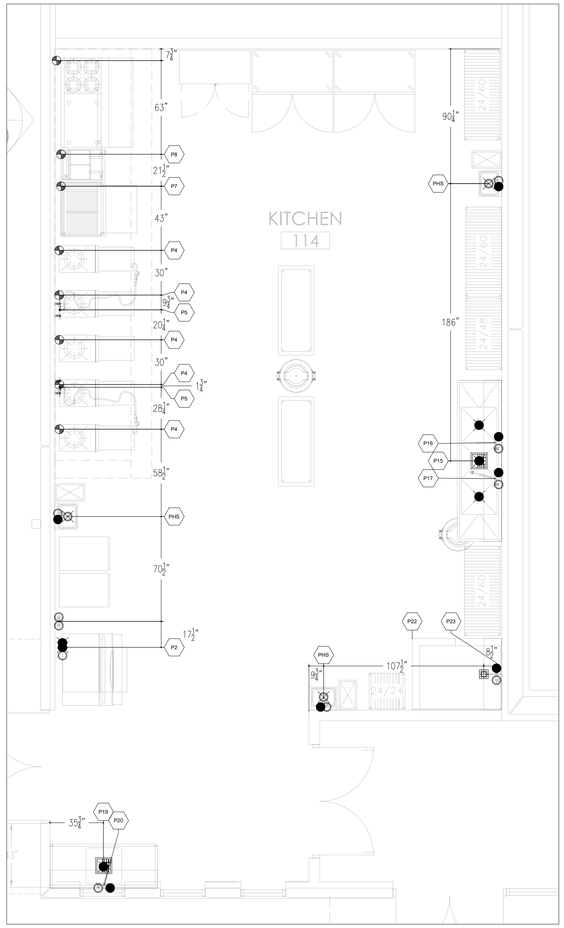
6700 GULF FWY, HOUSTON TX 77087 (713) 645-1200 WWW.ACEMART.COM

REVISIONS

CHECKED BY

DRAWN BY E.C.

SHEET NUMBER FS3.0



1 FS1.0 Plumbing Rough-In
SCALE 1/4" = 1'

PLUMBING

SYMBOLS AND ABBREVIATIONS

- ..... COLD WATER (CW)
- ..... HOT WATER (HW)
- ..... GAS SUPPLY (G)
- ..... GAS CONNECTION
- ..... STEAM SUPPLY (SS)
- ..... INDIRECT DRAIN (ID)
- ..... DIRECT DRAIN (DD)
- ..... HUB DRAIN (HD)
- ..... FLOOR DRAIN (FD)
- ..... FUNNEL FLOOR DRAIN (FFD)
- ..... FLOOR SINK (FS)
- ..... FLOOR TROUGH (FT)
- .....EXHAUST VENT CONNECTION (EVC)
- .....SUPPLY VENT CONNECTION (SVC)
- .....DIRECT CONN. FLUE RISER (FR)

AFF .....ABOVE FINISHED FLOOR
ACH.....ABOVE COUNTER HEIGHT
BTC .....BRANCH TO CONNECTION
DFA .....DOWN FROM ABOVE
SU .....STUB UP

PLUMBING ROUGH-IN NOTES:

A. ALL PLUMBING OUTLETS AND REQUIREMENTS SHOWN ARE FOR FIXTURES AND EQUIPMENT SPECIFIED AND FURNISHED BY THE KITCHEN EQUIPMENT CONTRACTOR, UNLESS OTHERWISE NOTED. FOR ANY ADDITIONAL BUILDING PLUMBING REQUIREMENTS, SEE OTHER MECHANICAL PLANS. ALL DIMENSIONS GIVEN ARE FROM FINISHED WALLS OR COLUMN CENTERLINES, ELEVATIONS GIVEN ARE FROM FINISHED FLOOR.

B. PLUMBER TO CONNECT ALL WATER LINES, GAS LINES, WASTE LINES, ETC. CONNECT INDIRECT WASTE FROM EQUIPMENT (DISH MACHINE, POT SINK, ICE MACHINE, ETC.) TO THE NEAREST MOST ACCESSIBLE FLOOR OR HUB DRAIN. DO NOT RUN WASTES SO AS TO INTERFERE WITH OPERATION OF BUSINESS OR FUNCTION OF EQUIPMENT EQUIPMENT TO WALLS OR FLOOR AS REQUIRED BY ARCHITECT OR CODE.

C. PLUMBER TO BRANCH TO CONNECTION WHERE REQUIRED AND TO FULLY CONNECT ALL EQUIPMENT AND RUN CONDESATE LINES FROM UNITS TO DRAINS AND THESE LINES TO BE THE SAME SIZE AS IS STUBED OUT OF THE FIXTURE. FOR SPECIFIC TYPE OF CONNECTION AND LOCATIONS REFER TO THE EQUIPMENT BROCHURES AND DRAWINGS.

D. PLUMBER TO PROVIDE SHUT-OFF VAVLES ON ALL WATER AND GAS LINES. ALL VALVES CUT-OFFS, TRAPS, HYDROSTATIC SHOCK ELIMINATORS, PRESSURE REGULATORS AND MATERIAL NECESSARY TO CONNECT ALL LINES, UNLESS OTHERWISE SPECIFIED ON THE ITEM SPECIFICATIONS.

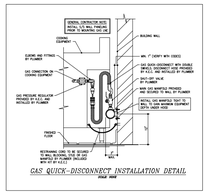
E. PLUMBING CONTRACTOR IS TO PROVIDE ALL PLUMBING COMPONENTS NECESSARY TO PROVIDE SERVICE TO LOCATIONS AND EQUIPMENT AS SHOWN ON THIS SHEET, UNLESS OTHERWISE NOTED. PLUMBING CONTRACTOR IS ALSO RESPONSIBLE FOR MAKING FINAL CONNECTIONS TO EQUIPMENT AND FITTINGS SUPPLIED AND SUPPLIED AND SET IN PLACE BY FSEC.

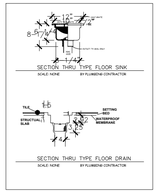
F. THE KITCHEN CONTRACTOR IS TO PROVIDE ALL FAUCETS, AND DRAIN OUTLET FITTINGS IN FIXTURES AND SPECIALTY ITEMS AS OUTLINED IN THE ITEM AND GENERAL PRODUCT SPECIFICATIONS. PLUMBING CONTRACTOR IS TO INSTALL.

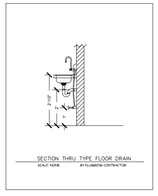
G. OMISSIONS OR ERRORS IN SCEDULE DO NOT RELIEVE PLUMBING CONTRACTOR FROM COMPLETE AND CORRECT FINAL CONNECTION RESPONSIBILITY. HIS REVIEW OF EQUIPMENT BROCHURE BOOK AND DRAWINGS, WILL ASSURE CORRECTNESS OF HIS WORK.

H. FAILURE TO COMPLY WITH THESE NOTES COULD VOID OR CANCEL MANUFACTURES WARRANTIES. DO NOT FAIL TO COMPLY WITH THESE NOTES IN THE AREAS THAT THEY APPLY TO. IF THERE IS DOUBT AS TO THE PROPER INTERPRETATION OR ACTION THAT IS INTENDED, CONTACT THE ARCHITECT OR OWNERS REPRESENTITIVE IMMEDIATELY. VERIFY WITH ARCHITECT OR OWNERS REPRESENTITIVE, FINAL EQUIPMENT REQUIREMENTS BEFORE ORDERING MATERIAL, REVISIONS IN EQUIPMENT, OR PERFORMANCE REQUIREMENTS MAY AFFECT THE PLUMBERS WORK.

I. ALL WORK RELATING TO THE INSTALLATION AND HOOKUP OF THE SPECIFIED EQUIPMENT IS TO BE PERFORMED IN FULL ACCORDANCE WITH APPLICABLE CITY, COUNTY, LOCAL, STATE AND FEDERAL CODES AND ALL OTHER GOVERNMENTAL REGULATORY REQUIREMENTS.







PLUMBING SCHEDULE

NO.	Q#	UNIT	CATEGORY	COLD WATER (IN)	COLD WATER CON HGT	HOT WATER (IN)	HOT WATER CONN HGT	FILTERED WATER SIZE	FILTERED WATER CON HGT	INDIRECT WASTE SIZE	DIRECT WASTE SIZE	DIRECT WASTE CON HGT	GAS SIZE(IN)	GAS CON HGT	GAS MBTU	PLUMBING REMARKS
2	1	EA	ICE MAKER, CUBE-STYLE	3/8"	-	-	-	-	-	1/2"	-	-	-	-	-	ICE MAKER DRAIN
-	1	EA	-	-	-	-	-	-	-	1/2"	-	-	-	-	-	AUXILIARY DRAIN
-	1	EA	ICE BIN FOR ICE MACHINES	-	-	-	-	-	-	3/4"	-	-	-	-	-	-
4	5	EA	STOCK POT RANGE, 1 TWO-RING BURNER	-	-	-	-	-	-	-	-	-	3/4"	12"	110.0	-
5	2	EA	FAUCET, KETTLE / POT FILLER	1/2"	-	1/2"	-	-	-	-	-	-	-	-	-	-
7	1	EA	CHARBROILER, GAS, COUNTERTOP	-	-	-	-	-	-	-	-	-	3/4"	-	87	-
8	1	EA	GAS FLOOR FRYER	-	-	-	-	-	-	-	-	-	3/4"	-	150.0	-
9	1	EA	RANGE, 60", 4 BURNERS, 36" GRIDDLE	-	-	-	-	-	-	-	-	-	3/4"	-	250.0	-
15	1	EA	THREE (3) COMPARTMENT SINK	-	-	-	-	-	-	(3) 1-1/2"	-	-	-	-	-	(2) SETS OF 1/2" FAUCET HOLES, 8" OC
16	1	EA	WALL / SPLASH MOUNT FAUCET	1/2"	-	1/2"	-	-	-	-	-	-	-	-	-	-
17	1	EA	PRE-RINSE FAUCET ASSEMBLY, WITH ADD ON FAUCET	1/2"	-	1/2"	-	-	-	-	-	-	-	-	-	-
19	1	EA	ONE (1) COMPARTMENT SINK	-	-	-	-	-	-	-	-	-	-	-	-	(1) SET OF 1-1/8" FAUCET HOLES, 8" CENTERS, 3-1/2" DRAIN OPENING
20	1	EA	PRE-RINSE FAUCET ASSEMBLY, WITH ADD ON FAUCET	1/2"	-	1/2"	-	-	-	-	-	-	-	-	-	-
23	1	EA	SERVICE FAUCET	1/2"	-	1/2"	-	-	-	-	-	-	-	-	-	-

ISSUE DATE
8/31/22

SCALE
1/4"=1'0"

UNITY COMMUNITY CENTER

CEDAR PARK, TX

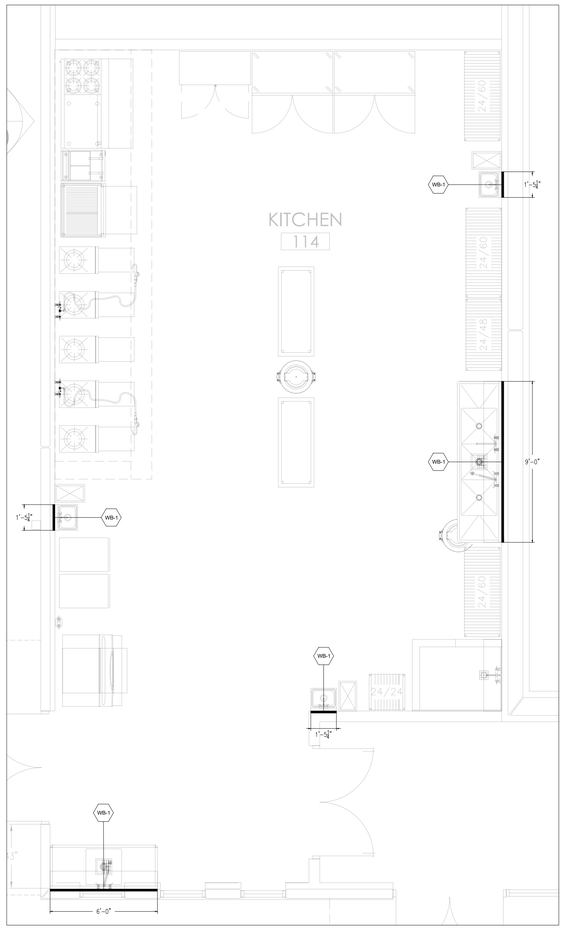
ACE MART
RESTAURANT SUPPLY
6700 GULF FWY, HOUSTON TX 77087 (713) 645-1200 WWW.ACEMART.COM

REVISIONS

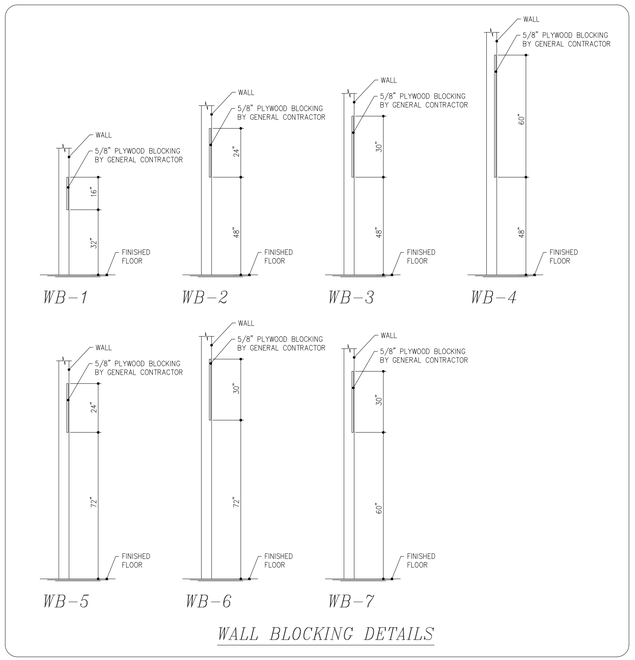
CHECKED BY

DRAWN BY
E.C.

SHEET NUMBER
FS4.0



1 FS1.0 FLOORPLAN
SCALE 1/4" – 1'



WALL BLOCKING DETAILS

ARCHITECT / MEP TO VERIFY ALL UTILITIES. NOT INTENDED FOR PERMITTING OR CONSTRUCTION

ISSUE DATE
8/31/22

SCALE
1/4"=1'0"

UNITY COMMUNITY CENTER

CEDAR PARK, TX

ACE MART
RESTAURANT SUPPLY
6700 GULF FWY, HOUSTON TX 77087 (713) 645-1200 WWW.ACEMART.COM

REVISIONS

CHECKED BY

DRAWN BY
E.C.

SHEET NUMBER
FS5.0

HOOD INFORMATION

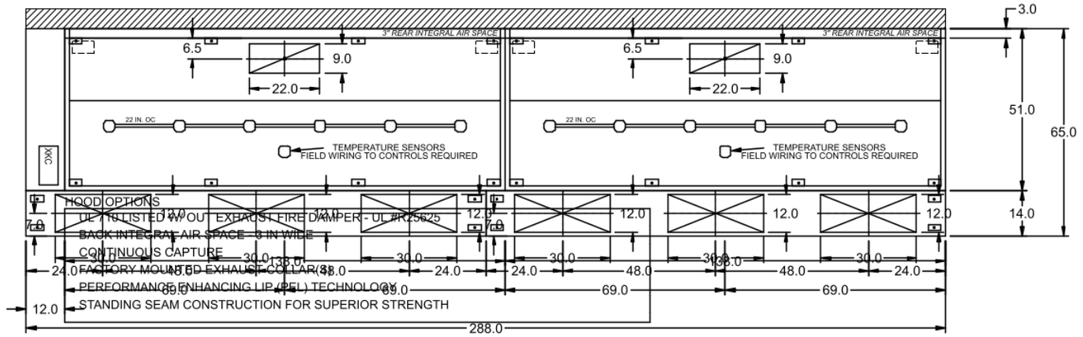
HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.)			HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST						SUPPLY		TOTAL WEIGHT LBS.	SECTION LOCATION
			LENGTH	WIDTH	HEIGHT			TOTAL CFM	COLLAR(S)					MUA CFM	AC CFM		
									WIDTH	LENGTH	DIA.	CFM	S.P.				
1	HOOD	XBEW-138-S	138	51	24	430 SS WHERE EXPOSED	HEAVY	2266	9	22		2266	0.428	3626		320.739	LEFT
2	HOOD	XBEW-138-S	138	51	24	430 SS WHERE EXPOSED	HEAVY	2266	9	22		2266	0.428			320.739	RIGHT

HOOD INFORMATION

HOOD NO.	MARK	LIGHTING DETAILS			GREASE FILTRATION DETAILS				UTILITY CABINET(S)				
		FIXTURE TYPE BULB / LAMP INFO	QTY	FOOT CANDLES	TYPE / MODEL MATERIAL	QTY	SIZE (IN.)		LOCATION	FIRE SYSTEM		CONTROLS	
							L	H		TYPE	SIZE	MODEL	INTERFACE
1	HOOD	INCANDESCENT (GLOBE) 100W A19 (BULBS NOT INCL.)	6	49.8	BAFFLE STAINLESS STEEL	6	16	20	LEFT			XKC	
						2	20						
2	HOOD	INCANDESCENT (GLOBE) 100W A19 (BULBS NOT INCL.)	6	49.8	BAFFLE STAINLESS STEEL	6	16	20					
						2	20						

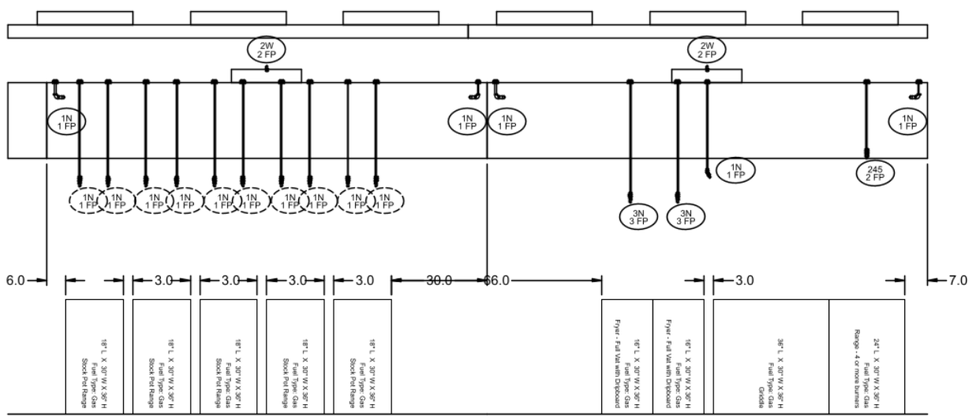
SUPPLY PLENUM INFORMATION

HOOD NO.	MARK	POS.	TYPE	SIZE (IN.)			INSULATED	DAMPER(S)	LED LIGHT(S)		TOTAL CFM	COLLARS								
				L	W	H			SUPPLIED	QTY		TYPE	MOUNTING	QTY	W	L	DIA.	CFM	S.P.	VEL.
1	HOOD	FRONT	ASP	144	14	4	NO	YES	NO		1813	MUA	FACTORY	3	12	30		604	0.1	242
1	HOOD	FRONT	ASP	144	14	4	NO	YES	NO		1813	MUA	FACTORY	3	12	30		604	0.1	242



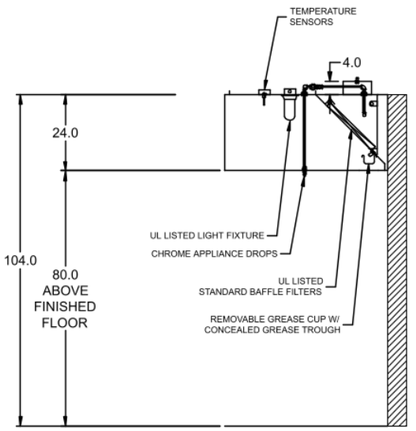
MARK: Hood - SECTION 1
PLAN VIEW

MARK: Hood - SECTION 2
PLAN VIEW



MARK: Hood - SECTION 1
ELEVATION VIEW

MARK: Hood - SECTION 2
ELEVATION VIEW



MARK: Hood (LAST HOOD IN ROW)
SECTION VIEW

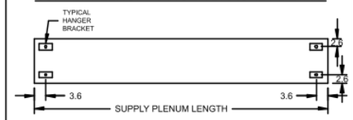
HOOD HANGING HEIGHT FOR FIRE SYSTEMS

VERIFICATION OF HOOD HANGING HEIGHT ABOVE FINISHED FLOOR (A.F.F.) IS REQUIRED FOR CORRECT PLACEMENT OF FIRE SYSTEM NOZZLES.

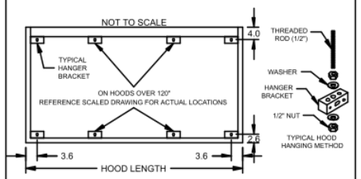
☐ RECOMMENDED HANGING HEIGHT = 80" FROM FINISHED FLOOR TO LOWER FRONT EDGE OF HOOD.

☐ OTHER HANGING HEIGHT = _____" FROM FINISHED FLOOR TO LOWER EDGE OF HOOD.

SUPPLY PLENUM HANGER BRACKET DETAIL



HOOD HANGER BRACKET DETAIL



PROJECT
8/18/2022

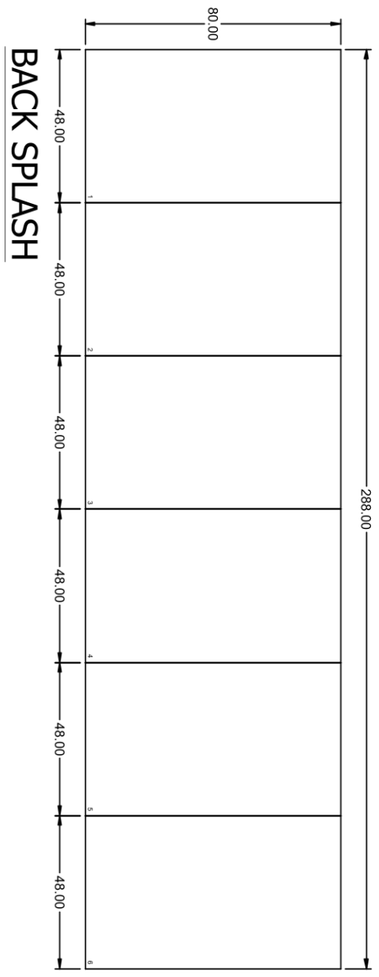
UTILITY COMMUNITY CENTER

MARK

HOOD

ACCUREX GREATER HOUSTON
GABE CASTANEDA
GABE.CASTANEDA@ACCUREX.COM
(512)934-0699

ACCUREX



FS6.1

ACCUREX

ACCUREX GREATER HOUSTON
Gabe Castaneda
gabe.castaneda@accurex.com
(512)934-0699

PROJECT
8/18/2022

Utility Community Center

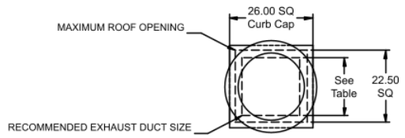
MARK

Hood - SPLASH PANEL LAYOUT

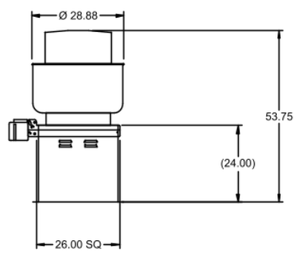
Direct Drive Upblast Centrifugal Roof Exhaust Fan

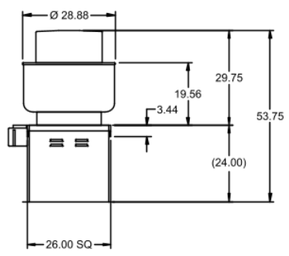
MARK INFORMATION		FAN INFORMATION						MOTOR INFORMATION				
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS
1	KEF-1	XCUE-160-VG	2,266	1	1,193	0.64	97	1	208/60/1	TN	1300	1

KEF-1 : SELECTED OPTIONS AND ACCESSORIES
One piece fully welded windband
Tapered bushing wheel hub
Breather tube outlet area min. 4.4 sq. in. (sizes 99-480), 2.0 sq. in. (sizes 60-95)
Min. windband material thickness: 0.051" aluminum (060-240), 0.064" aluminum (240HP, 240XP), 0.080" aluminum (sizes 300-480)
Larger Curb Cap Size - 26 Square
UL/cUL 762 Listed - "Power Ventilators for Rest. Exh. Appliances"
Switch, NEMA-3R, Toggle, Shipped with Unit
Hinge, Factory Installed
Hinge Latch (PN: 879145), Factory Installed
High Temp Curb Seal Rated for Continuous Duty at 1500 F (Factory Attached)
Grease Trap (PN 475538)



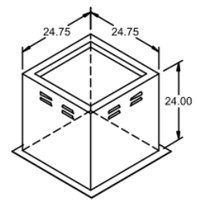
DUCT TYPE	SIZE
STANDARD	18 SQ
FIRE-WRAPPED	12 SQ





DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB.
CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE.

OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.



UTILITY COMMUNITY CENTER

PROJECT 8/18/2022

MARK

KEF-1

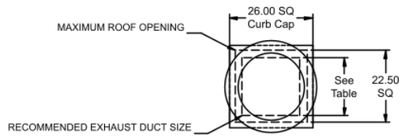
ACCUREX GREATER HOUSTON
GABE CASTANEDA
GABE.CASTANEDA@ACCUREX.COM
(512)934-0699

ACCUREX

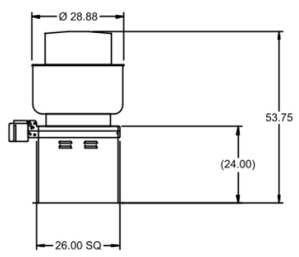
Direct Drive Upblast Centrifugal Roof Exhaust Fan

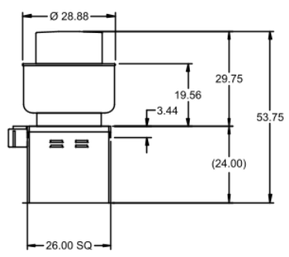
MARK INFORMATION		FAN INFORMATION						MOTOR INFORMATION				
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS
1	KEF-2	XCUE-160-VG	2,266	1	1,193	0.64	97	1	208/60/1	TN	1300	1

KEF-2 : SELECTED OPTIONS AND ACCESSORIES
One piece fully welded windband
Tapered bushing wheel hub
Breather tube outlet area min. 4.4 sq. in. (sizes 99-480), 2.0 sq. in. (sizes 60-95)
Min. windband material thickness: 0.051" aluminum (060-240), 0.064" aluminum (240HP, 240XP), 0.080" aluminum (sizes 300-480)
Larger Curb Cap Size - 26 Square
UL/cUL 762 Listed - "Power Ventilators for Rest. Exh. Appliances"
Switch, NEMA-3R, Toggle, Shipped with Unit
Hinge, Factory Installed
Hinge Latch (PN: 879145), Factory Installed
High Temp Curb Seal Rated for Continuous Duty at 1500 F (Factory Attached)
Grease Trap (PN 475538)



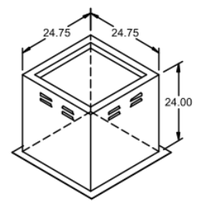
DUCT TYPE	SIZE
STANDARD	18 SQ
FIRE-WRAPPED	12 SQ





DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB.
CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE.

OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.



PROJECT
8/18/2022

UTILITY COMMUNITY CENTER

MARK

KEF-2

ACCUREX GREATER HOUSTON
GABE CASTANEDA
GABE.CASTANEDA@ACCUREX.COM
(512)934-0699

ACCUREX

EQUIPMENT SCHEDULE

Non-Tempered Make-Up Air Unit **Mark: KSF**

Qty	Accurex Model	Volume	External SP	Total SP	FRPM	Operating Power	Weight
1	XKSFB-112-H15-01	3,625 CFM	0.5 in. wg	1.01 in. wg	934	1.61 hp	288 lb

Motor Information

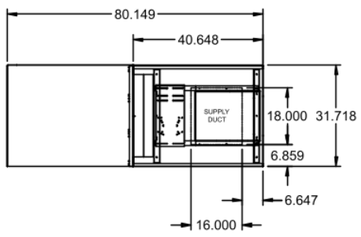
Size	V/C/P	Enclosure	Motor with Shaft Grounding	Motor RPM	Windings	MCA	MOP
2 hp	208/60/1	ODP	No	1725	1	16.5	25

Outlet Sound Power By Octave Band								LwA	dBA	Sones
62.5	125	250	500	1000	2000	4000	8000			
89.4	*83.8*	*75.8*	*76*	*73.1*	*71.1*	*68.4*	*60.8*	*79.1*	*68.1*	*16.1*

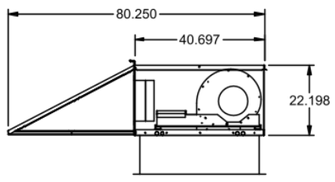
- LwA - A weighted sound power level based on ANSI S1.4
- dBA - A weighted sound pressure level base on 11.1 dB attenuation per octabe band at 5.0 ft.
- Noise Criteria (NC) based on an average attenuation of 11.5 dB per octabe band at 5.0 ft.

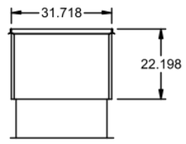
OPTIONS AND ACCESSORIES

Air Flow Arrangement: Outdoor Air Only
Weatherhood: Aluminum Mesh, 16x20x1 - (4)
Damper: Inlet
Outdoor Air Intake Position: End
Discharge Position: Bottom
Coating: Galvanized
Insulation: None
Access Side: Right-Hand
Inlet Damper Control: Gravity
Unit Warranty: 18 Months (std.)



PLAN VIEW





ELEVATION VIEW

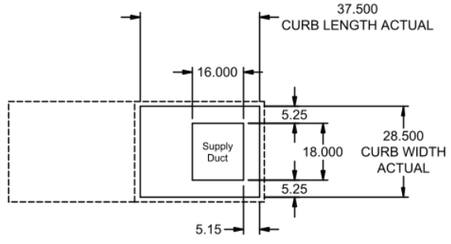
END VIEW

NOTE: Roof Opening Requirements:

Minimum Roof Opening: The minimum roof opening size is the illustrated duct diameter plus 0.25 in. on all sides.
For example: If the duct size is 14 x 14 in. square, the minimum roof opening size is 14.5 x 14.5 in. square.

Maximum Roof Opening: There must be a minimum perimeter of 1.75 in. between the roof opening and the roof curb.
For example: If the roof curb is 75 x 30 in. square, the maximum roof opening is 71.5 x 26.5 in. inches square.

NOTE: The weatherhood and filter sections of the make-up air unit are not supported by the curb.
This is by design, in order to help alleviate water infiltration issues.



FOOTPRINT

PROJECT 8/18/2022

UTILITY COMMUNITY CENTER

MARK

KSF

ACCUREX GREATER HOUSTON
GABE CASTANEDA
GABE.CASTANEDA@ACCUREX.COM
(512)934-0699

ACCUREX

FIRE SYSTEM INFORMATION

MARK	MODEL	LOCATION	FLOW POINTS		SUPPLY LINE	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
			HOODS	PCU			
FSS	ANSUL R-102 WET CHEMICAL	REMOTE MOUNTED	27 UTILIZED 33 AVAILABLE		CONTINUOUS	FUSIBLE LINK	HOOD SECTION 1
							HOOD SECTION 2

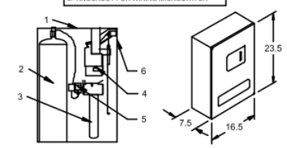
FIRE SYSTEM OPTIONS AND ACCESSORIES

FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)
CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED
METAL BLOW-OFF CAPS - INCLUDED
GAS VALVE - INCLUDED - ELECTRICAL SHUTOFF VALVE, 2", 110V, 60HZ - PART# ELECTRICSHUTOFFVALVE200
HOOD SUPPRESSION TANK - INCLUDED - 9 GAL. - [(3) 3.0 TANK(S)]
REMOTE PULL STATION - STANDARD - FIELD INSTALLATION AT SINGLE POINT OF EGRESS

ANSUL R102 (WET CHEMICAL) FIRE PROTECTION SYSTEM - MODEL FSSC

CONTROL PANEL

1. STAINLESS STEEL ENCLOSURE
2. AGENT STORAGE TANK
3. EXPELLENT GAS CARTRIDGE
4. ANSUL AUTOMAN RELEASE
5. REGULATOR
6. KNOCKOUT FOR WIRING MICROSWITCH



NOT TO SCALE

NOTES:

WET CHEMICAL FIRE PROTECTION SYSTEM TO BE ANSUL R-102, DESIGNED IN COMPLIANCE WITH UL 300 REQUIREMENTS.
-VERIFICATION OF ALL COOKING EQUIPMENT MAKE, MODEL AND LOCATION REQUIRED FOR ALL FIRE PROTECTION SYSTEMS.
-ALL FIRE SYSTEM PIPING IS STANDARDLY TO THE RIGHT END OF THE HOOD UNLESS A WALL IS LOCATED ON THE RIGHT END.
-ANSUL AUTOMAN RELEASE TO BE LOCATED WITHIN 60" OF HOOD.

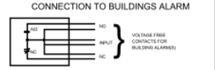
THE BASIC FIRE SYSTEM WILL INCLUDE THE FOLLOWING:
-GAS SHUT-OFF VALVE, IF REQUIRED, TO BE SUPPLIED BY MANUFACTURER (UP TO 2" DIAMETER AS STANDARD), AND INSTALLED BY A LICENSED PLUMBER.
-MICRO SWITCH TO BE SUPPLIED BY MANUFACTURER FOR CONNECTION TO, BUT NOT LIMITED TO, BUILDING ALARM SYSTEM(S), EXHAUST AND SUPPLY FANS AND ELECTRICAL POWER SHUT DOWN. FIELD WIRING AND CONNECTIONS TO BE PERFORMED BY A LICENSED ELECTRICIAN.

THE BASIC FIRE SYSTEM DOES NOT INCLUDE THE FOLLOWING:
-FULL DUMP TEST OTHER THAN WHT IS SPECIFIED PER THE INSTALLATION MANUAL, OR TO SATISFY A STATE OR LOCAL CODE. PERMIT AND TESTING FEES ARE NOT INCLUDED UNLESS NOTED UNDER THE EQUIPMENT SCHEDULE FOR THE FIRE SYSTEM.
-MORE THEN TWO TRIPS TO THE JOBSITE OR SPECIAL TRANSPORTATION, OR OVERNIGHT LODGING REQUIREMENTS IN REMOTE AREAS. NORMAL TRAVEL DISTANCE IS FIRST 50 MI. (80.5 KM) FROM OFFICE.
- SPECIAL CLASSES OR ADDITIONAL LABOR FOR ACCESS TO SECURITY SENSITIVE AREAS.
-INSTALLATION OF GAS SHUT-OFF VALVE.
-SPECIAL DRAWINGS REQUIRED TO SATISFY STATE OR LOCAL CODE. PLAN EXAMINATION FEES, PE OR FS APPROVAL STAMP.
-UNION LABOR, GOVERNMENT LABOR, OR PREVAILING WAGES REQUIRED FOR FINAL FIELD HOOK-UP.
-ANY AND ALL ELECTRICAL COMPONENTS/CONNECTIONS REQUIRED TO SHUT DOWN FANS, SHUT OFF DEVICE FOR ELECTRIC COOKING EQUIPMENT (SHUNT TRIP BREAKER), OR ACTIVATE AN ALARM SYSTEM, ETC.
-ANY DISMANTLING OR REASSEMBLY REQUIRED TO GAIN ACCESS TO THE FIRE SUPPRESSION PIPING LOCATED ON THE TOP OF THE HOOD.
-ROUGH-IN HIDDEN CONDUIT FOR REMOTE PULL STATION OR GAS VALVE (FLUSH MOUNTED PULL STATION).
-INSTALLATION OF MORE THAN (1) REMOTE PULL STATIONS OR DISTANCES GREATER THAN 20 FT (6.1M.)
-PARTS OR LABOR REQUIRED TO CORRECT PIPING DUE TO COOKING EQUIPMENT CHANGES OR DEVIATION FROM PLANS. OR ANY CHARGES FOR MISSING OR ADDITIONAL PARTS OTHER THEN THOSE INDICATED ON THE FIRE SUPPRESSION DETAIL.

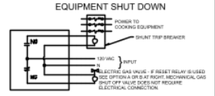
WIRING DIAGRAMS W/DPDT MICRO SWITCH

DPDT SWITCHES PROVIDED BY MANUFACTURER MAY BE WIRED PER TYPICAL EXAMPLES SHOWN. VERIFY WITH LOCAL CODES AND EQUIPMENT SUPPLIED AS THE CONNECTION NEEDED FOR YOUR INSTALLATION.

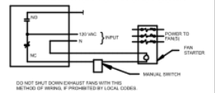
CONNECTION TO BUILDINGS ALARM



CONNECTION TO COOKING EQUIPMENT SHUT DOWN



CONNECTION TO FAN SHUT DOWN



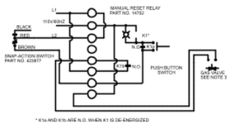
DO NOT SHUT DOWN EXHAUST FANS WITH THIS METHOD OF WIRING. IF PROHIBITED BY LOCAL CODES.

WIRING DIAGRAM(S)

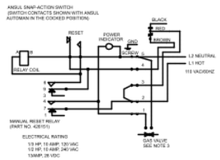
ELECTRICAL SHUT OFF

AND CONNECTION TO COOKING EQUIPMENT SHUT DOWN

OPTION A
RELAY PART #14702



OPTION B
RELAY PART #426151



NOTES:
1. ———— DENOTES FIELD INSTALLATION.
2. - - - - DENOTES FACTORY INSTALLATION.
3. DO NOT USE BLACK WIRE ON SNAP-ACTION SWITCH IN NORMAL INSTALLATION. BLACK WIRE TO BE USED ONLY FOR EXTRANEOUS ALARM, LIGHT CIRCUITS, ETC.

4. GAS VALVES: "UL LISTED ELECTRICALLY-OPERATED SAFETY VALVE FOR NATURAL, OR LP GAS AS NEEDED OF APPROPRIATE PRESSURE AND TEMPERATURE RATING, 110V/60 HZ" OR ANSUL GAS VALVES, PART NUMBERS 13707, 13708, 13709, 13710 AND 17643.

UTILITY COMMUNITY CENTER

PROJECT 8/18/2022

MARK

FSS

ACCUREX GREATER HOUSTON
GABE CASTANEDA
GABE.CASTANEDA@ACCUREX.COM
(512)934-0699

ACCUREX

CONTROL INFORMATION

MARK	ELECTRICAL CONTROL PACKAGE		USER INTERFACE	
	MODEL	LOCATION	TYPE	LOCATION
CONTROLS	XKC-CV-S-21-2-1-0	LEFT CABINET ON HOOD	FULL COLOR TOUCHSCREEN	SHIP LOOSE

FANS CONTROLLED

FAN #	TYPE	FAN	FAN MARK	ZONE	CFM	MOTOR HP	MOTOR VOLT	CYCLE	MOTOR PHASE	MOTOR STARTER IN PANEL	VFD IN PANEL
1	EXHAUST	E1	KEF-1	1	2266	1	208	60	1	NO	NO
2	EXHAUST	E2	KEF-2	1	2266	1	208	60	1	NO	NO
3	SUPPLY	S1	KSF	1	3625	2	208	60	1	YES	NO

CONTROL FEATURES

- HOOD LIGHT CONTROL
- TEMP SENSORS (FACTORY INSTALLED) - QTY. 2
- DRY FIRE CONTACTS - QTY. 1
- LIGHTS OFF DURING FIRE
- EXHAUST MAX DURING FIRE
- SUPPLY OFF DURING FIRE

ACCUREX

DOC NUMBER: ---- REV: ----

CAUTION
UNIT MUST BE GROUNDED IN ACCORDANCE WITH N.E.C. POWER MUST BE OFF WHILE SERVICING.

ATTENTION
L'APPAREIL DOIT ÊTRE MIS À LA TERRE CONFORMÉMENT AU CODE C.E. L'ALIMENTATION DOIT ÊTRE COUPÉE DURANT L'ENTRETIEN.

COMMERCIAL APPLIANCE OUTLET CENTER
ELECTRICAL RATINGS: 110-240V,1PHASE, 50 -60HZ,15A
43BM BASE FILE #E200616, ML FILE #E313951

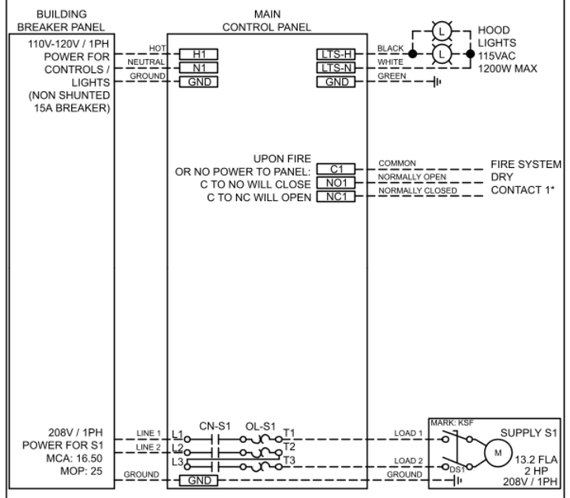
THESE DRAWINGS SHALL NOT BE REMOVED FROM THIS EQUIPMENT. USE COPPER CONDUCTORS RATED TO 90°C UNLESS SPECIFIED. TORQUE CONTROL & GROUND BLOCKS TO 8 LBS. IN. TORQUE POWER LUGS/SCREWS TO COMPONENT RATINGS LISTED. TORQUE CONTROL BOARD SCREW TERMINALS TO 3.5 LBS. IN. FIELD CONTROL WIRING RESISTANCE SHOULD NOT EXCEED 0.75 OHM. SEE IOM FOR ADDITIONAL INFORMATION, OR CALL FACTORY AT 1-800-371-6858.

PRG VERSION: V4
FIELD WIRED (CÂBLÉ LOCALEMENT)
FACTORY WIRED (CÂBLÉ À L'USINE)

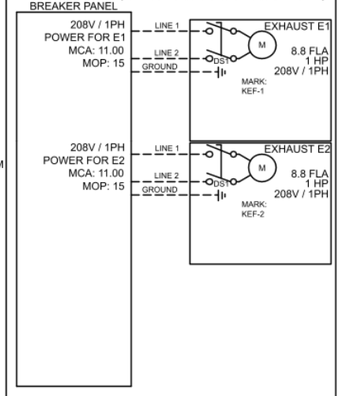
NE PAS RETIRER CES DESSINS DE CET ÉQUIPEMENT. SAUF INDICATION CONTRAIRE, UTILISER DES CONDUCTEURS EN CUIVRE CLASSÉS 90 °C. SERRER LES BORNES DE COMMANDE ET DE MISE À LA TERRE À 8 LB-PO. SERRER LES COSSES/VIS D'ALIMENTATION AUX COUPLES INDIQUÉS POUR LE COMPOSANT. SERRER LES BORNES À VIS DE LA CARTE DE COMMANDE À 3,5 LB-PO. LA RÉSISTANCE DU CÂBLAGE DE COMMANDE LOCAL NE DOIT PAS DÉPASSER 0,75 OHM. POUR PLUS D'INFORMATION, CONSULTER LE MANUEL OU APPELER 1-800-371-6858

WIRING DIAGRAM CODE: WDC#
JOB NAME: UTILITY COMMUNITY CENTER
MODEL: XKC-CV-S-21-2-1-0
SERIAL NUMBER: WDSN#
MARK: CONTROLS

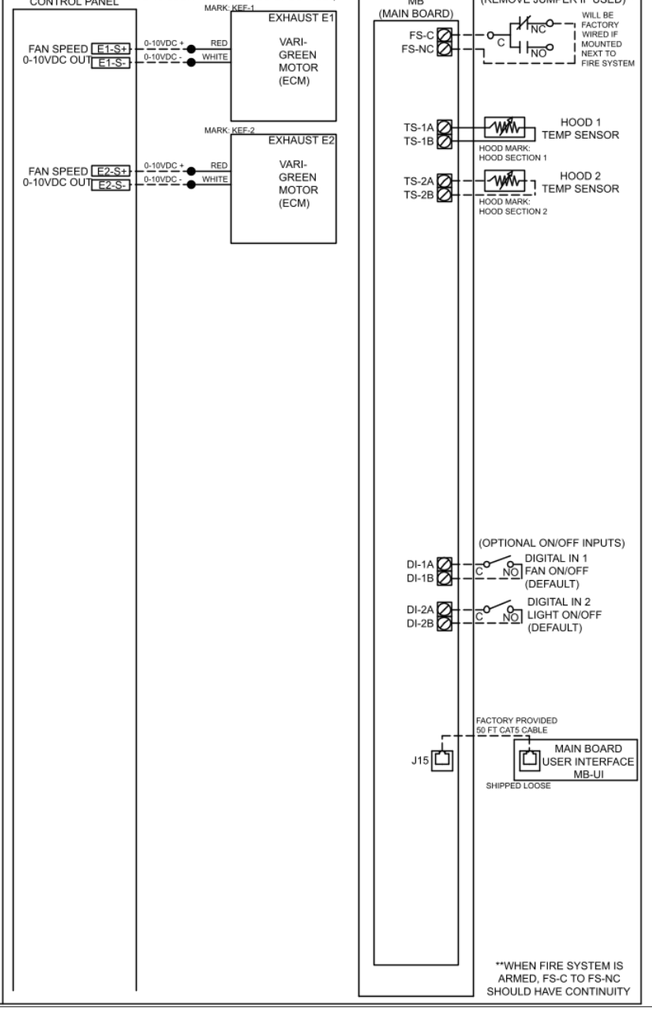
POWER WIRING FOR KITCHEN CONTROLS
(WIRING TO BE DONE BY ELECTRICIAN)



POWER WIRING FROM BREAKER PANEL DIRECT TO FANS
(WIRING TO BE DONE BY ELECTRICIAN)

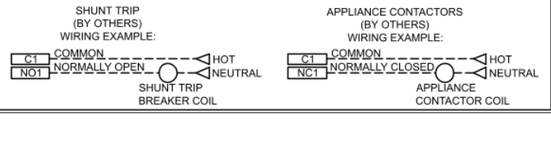


CONTROL WIRING FOR KITCHEN CONTROLS
(WIRING TO BE DONE BY ELECTRICIAN, IF NO CONTROLS CONTRACTOR. USE 18-22GA WIRE UNLESS SPECIFIED.)



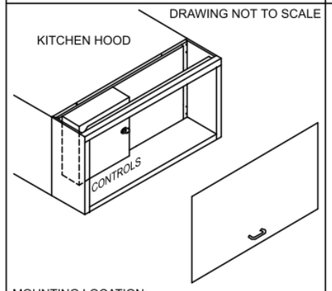
**WHEN FIRE SYSTEM IS ARMED, FS-C TO FS-NC SHOULD HAVE CONTINUITY

*FIRE SYSTEM DRY CONTACT WIRING EXAMPLES



CABINET DETAILS

DRAWING NOT TO SCALE



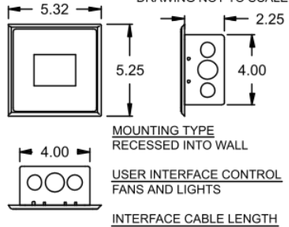
MOUNTING LOCATION:
UTILITY CABINET ON HOOD
(INNER CONTROL BOX: 12 X 20 X 6)

NOTES:
1) WHEN CONTROLS ARE MOUNTED IN HOOD-MOUNTED OR WALL-MOUNTED UTILITY CABINET, FOR HOOD OR WALL CABINET DIMENSIONS SEE HOOD SUBMITTAL.

2) MINIMUM OF 36" OF CLEARANCE RECOMMENDED IN FRONT OF CONTROL CABINET

USER INTERFACE DETAILS

DRAWING NOT TO SCALE



MOUNTING TYPE
RECESSED INTO WALL

USER INTERFACE CONTROL
FANS AND LIGHTS

INTERFACE CABLE LENGTH
50FT (FACTORY PROVIDED)

ZONE CONFIGURATION

ZONE #	ZONE	ROOM TEMP
1	Z1	PRESET

WIRING DIAGRAM CODE: WDC#
JOB NAME: UTILITY COMMUNITY CENTER
MODEL: XKC-CV-S-21-2-1-0
SERIAL NUMBER: WDSN#
MARK: CONTROLS
DOC NUMBER: ---- REV: ----

HOOD CONFIGURATION

HOOD #	HOOD	HOOD MARK	ZONE	EXHAUST	SUPPLY	MB-TEMP SENSORS	HCB
1	H1	HOOD SECTION 1	Z1	E1	S1	TS1	NO
2	H2	HOOD SECTION 2	Z1	E2	S1	TS2	NO

DEFAULT SETTINGS / PARAMÈTRES PAR DÉFAUT

FACTORY SETTINGS
TYPE: CV
CONFIGURATION: STANDARD
ZONES: 1
HOODS: 2
SUMPS: 0
EXHAUST FANS: 2
SUPPLY FANS: 1
MB ROOM SENSOR: NO
MB TEMP SENSORS: 2
HIGH TEMP FAULT: NO
FREEZE PROTECTION: YES
GAS RESET: NO
FAN PROVING: NO
BMS: NONE

ZONE SETTINGS
SEE ZONE CONFIGURATION IN TABLE ON LEFT

HOOD SETTINGS
SEE HOOD CONFIGURATION IN TABLE ON LEFT

EXHAUST FAN SETTINGS
SEE FAN CONFIGURATION IN TABLE ON LEFT

SUPPLY FAN SETTINGS
SEE FAN CONFIGURATION IN TABLE ON LEFT

SENSOR SETTINGS
SEE HOOD CONFIGURATION IN TABLE ON LEFT

USER INTERFACE SETTINGS (MB)
FAN & LIGHT BUTTONS: SHOW BOTH (SEPERATE)

USER INTERFACE SETTINGS (HCB)
NA

GENERAL SETTINGS
TIME ZONE: CENTRAL DAYLIGHT (DEFAULT)

FIRE/FAULT SETTINGS
EXHAUST DURING FIRE: MAX
SUPPLY DURING FIRE: OFF
LIGHTS DURING FIRE: OFF

BMS SETTINGS
NA

PRG VERSION: V4

FAN CONFIGURATION

FAN #	TYPE	FAN	FAN MARK	ZONE	MIN CFM	MAX CFM	MODBUS VFD	VFD ADDRESS	MIN FREQ.	MAX FREQ.	MIN VDC	MAX VDC
1	EXHAUST	E1	KEF-1	Z1	-	2266	NO	-	-	-	-	10.0
2	EXHAUST	E2	KEF-2	Z1	-	2266	NO	-	-	-	-	10.0
3	SUPPLY	S1	KSF	Z1	-	3625	NO	-	-	-	-	10.0

UTILITY COMMUNITY CENTER

PROJECT 8/18/2022

MARK

CONTROLS

ACCUREX GREATER HOUSTON
GABE CASTANEDA
GABE.CASTANEDA@ACCUREX.COM
(512)934-0699

ACCUREX