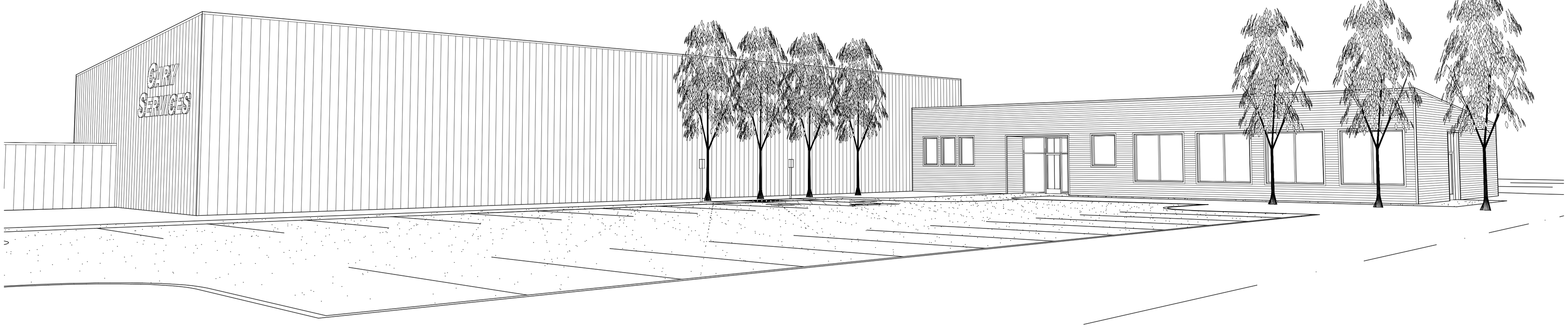


INDEX OF DRAWINGS:

ALL CONSTRUCTION SHALL COMPLY WITH:
2015 INTERNATIONAL BUILDING CODE
2015 INTERNATIONAL ENERGY CONSERVATION CODE
2015 INTERNATIONAL PLUMBING CODE
2015 INTERNATIONAL MECHANICAL CODE
2014 NATIONAL ELECTRIC CODE
2021 ABILENE FIRE CODE

REGISTERED ARCHITECT
D9765
STATE OF TEXAS
12-16-2022

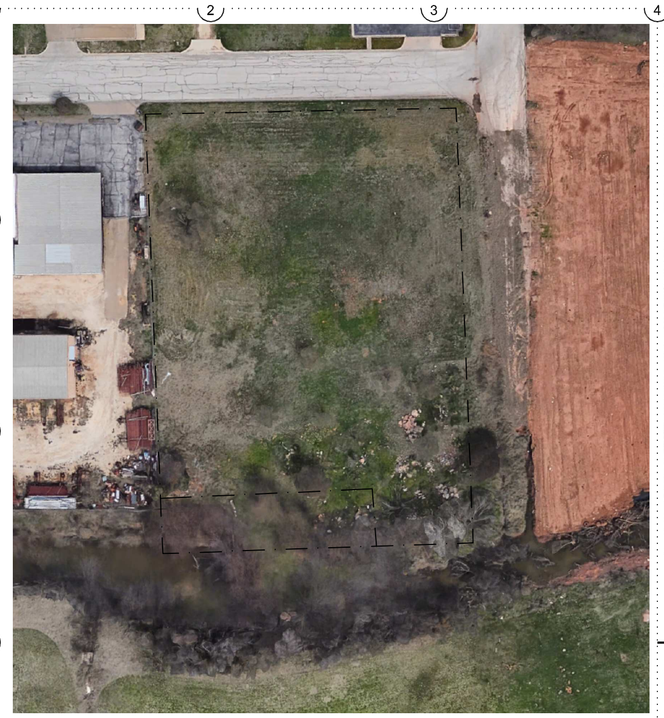
MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
325-669-2584
staff@mccathren.com
www.mccathren.com

CARY SERVICES
909 PETROLEUM DRIVE

12-16-2022

553-4-10

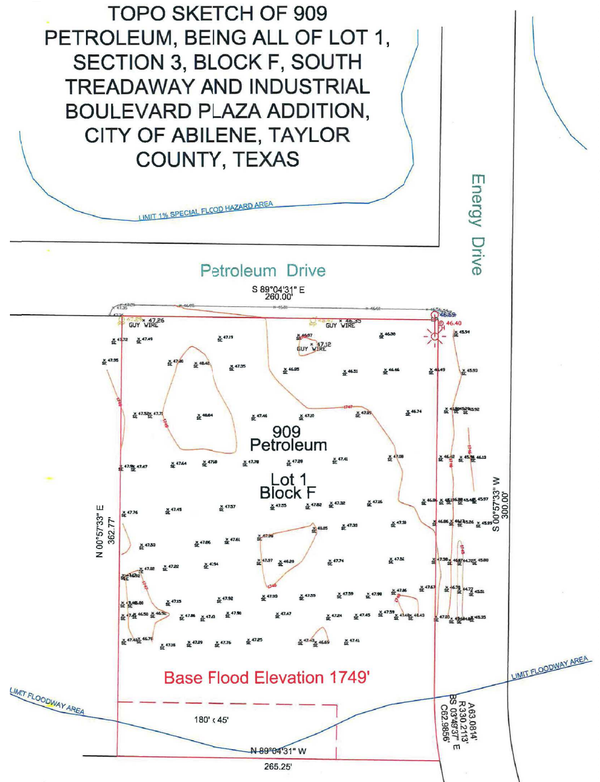
0.10



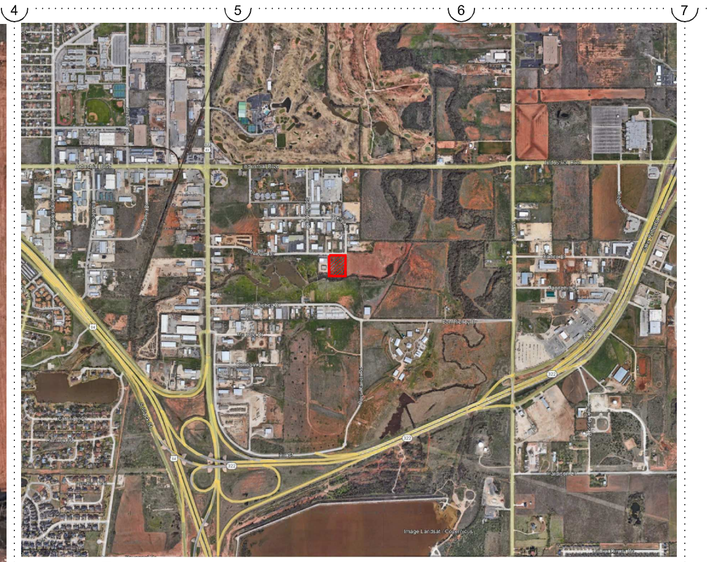
D1 AERIAL VIEW OF EXISTING SITE
NTS NORTH

F1 FEMA FLOOD PANEL
NTS NORTH

TOPO SKETCH OF 909 PETROLEUM, BEING ALL OF LOT 1, SECTION 3, BLOCK F, SOUTH TREADAWAY AND INDUSTRIAL BOULEVARD PLAZA ADDITION, CITY OF ABILENE, TAYLOR COUNTY, TEXAS



K1 TOPOGRAPHY
NTS



C4 VICINITY MAP
NTS NORTH

SITE DATA:

LEGAL DESCRIPTION:
909 PETROLEUM DRIVE, BEING ALL OF LOT 1, SECTION 3, BLOCK F, SOUTH TREADAWAY AND INDUSTRIAL BOULEVARD PLAZA ADDITION, CITY OF ABILENE, COUNTY OF TAYLOR, TEXAS.

95,089 SF = 2.18 ACRES

CURRENT ZONING - I1

BASE FLOOD ELEVATION = 1749'

FIRE HYDRANTS: GIS INDICATES HYDRANTS AT NORTH EAST CORNER OF SITE AND 230 WEST ON THE NORTH SIDE OF PETROLEUM DRIVE. NEITHER HYDRANTS ARE PRESENT.

REQUIRED LANDSCAPE AREA = 0 PER 4.2.2.5(a)(3)

ALL EXTERIOR LIGHTING (INCLUDED WALL-MOUNT FIXTURES) SHALL BE FULLY SHIELDED.

ALL DRIVEWAY APPROACHES, SIDEWALKS, AND ACCOMPANYING RAMPS LOCATED IN PUBLIC RIGHTS-OF-WAY SHALL BE PERMITTED THROUGH CITY OF ABILENES PUBLIC WORKS DEPARTMENT.

MECHANICAL EQUIPMENT (EXCLUDING ROOF-MOUNTED EQUIPMENT) SHALL BE SCREENED FROM VIEW FROM STREETS AND PARKING LOTS.

BUILDING AND SITE ARE SUBJECT TO TDLR TEXAS ACCESSIBILITY STANDARDS.

BUILDING DATA:

TOTAL AREA = 12,525 SF

MAXIMUM BUILDING HEIGHT = 22'

BUILDING USE:

OFFICE	6,141 SF
REPAIR AND MAINTENANCE	3,010 SF
MANUFACTURING (INCIDENTAL)	3,374 SF

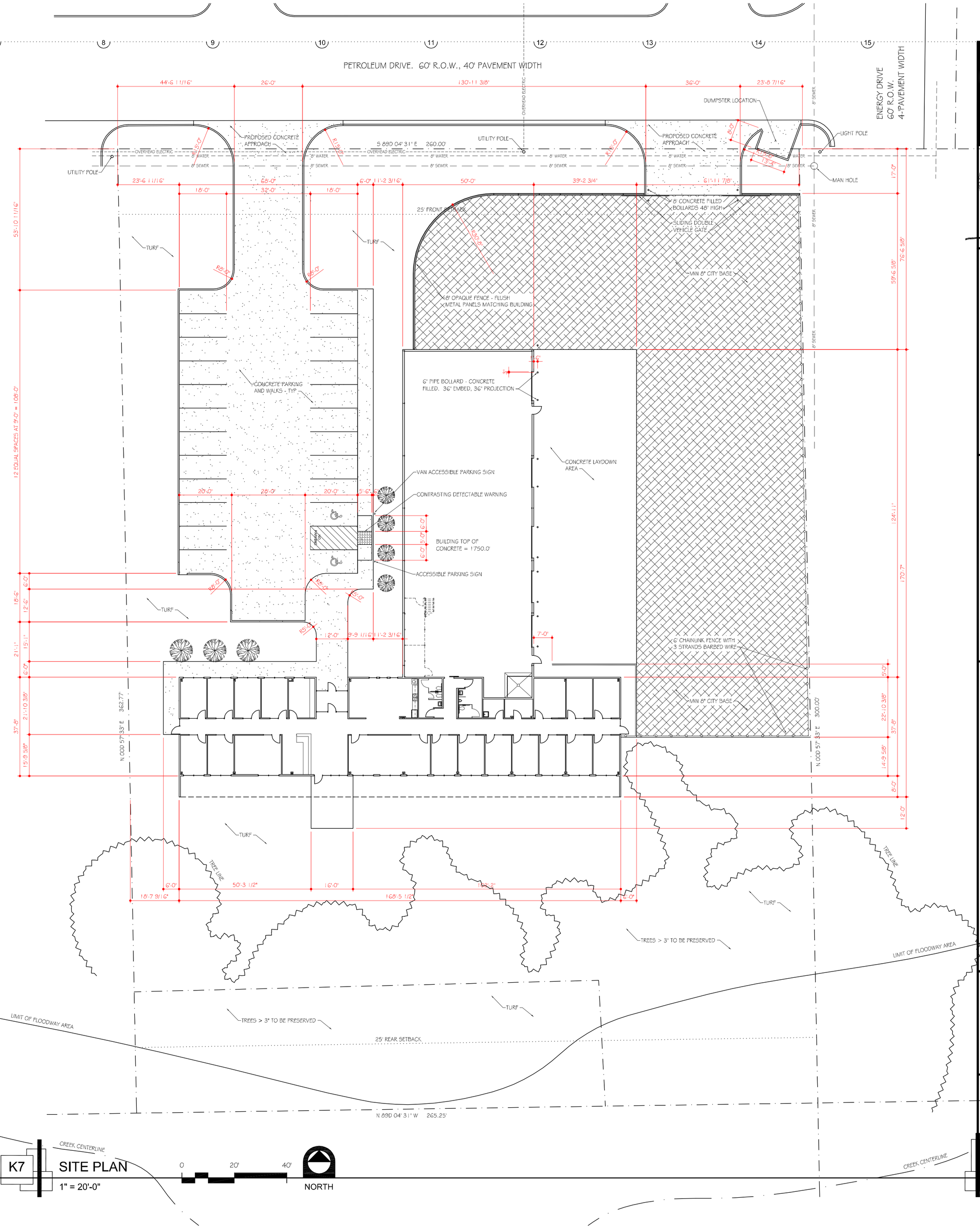
PARKING REQUIREMENT:

OFFICE - 1:500 SF	13 SPACES
REPAIR AND MAINTENANCE - 1:500 SF	7 SPACES
MANUFACTURING (INCIDENTAL) - 0	0 SPACES
TOTAL REQUIRED	20 SPACES
TOTAL PROVIDED	23 SPACES

BUILDING OCCUPANCY CLASSIFICATION: GROUP B

BUILDING CONSTRUCTION TYPE: II-B
ALLOWABLE SF = 23,000 (NS)

G4 SITE PLAN NOTES
NTS



K7 SITE PLAN
1" = 20'-0"
0 20' 40' NORTH

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene, Texas 79602
325-669-2584
staff@mccathren.com
www.mccathren.com

REGISTERED ARCHITECT
BRIAN MCCATHREN
09765
STATE OF TEXAS
12-16-2022

CARY SERVICES
909 PETROLEUM DRIVE

909 PETROLEUM, BEING ALL OF LOT 1, SECTION 3, BLOCK F, SOUTH TREADAWAY AND INDUSTRIAL BOULEVARD PLAZA ADDITION, CITY OF ABILENE, COUNTY OF TAYLOR, TEXAS

OWNER:
CARY FAMILY HOLDINGS
1244 IBERIS RD S
TUSCOLA, TEXAS 79562

12-16-2022
3-1-2023

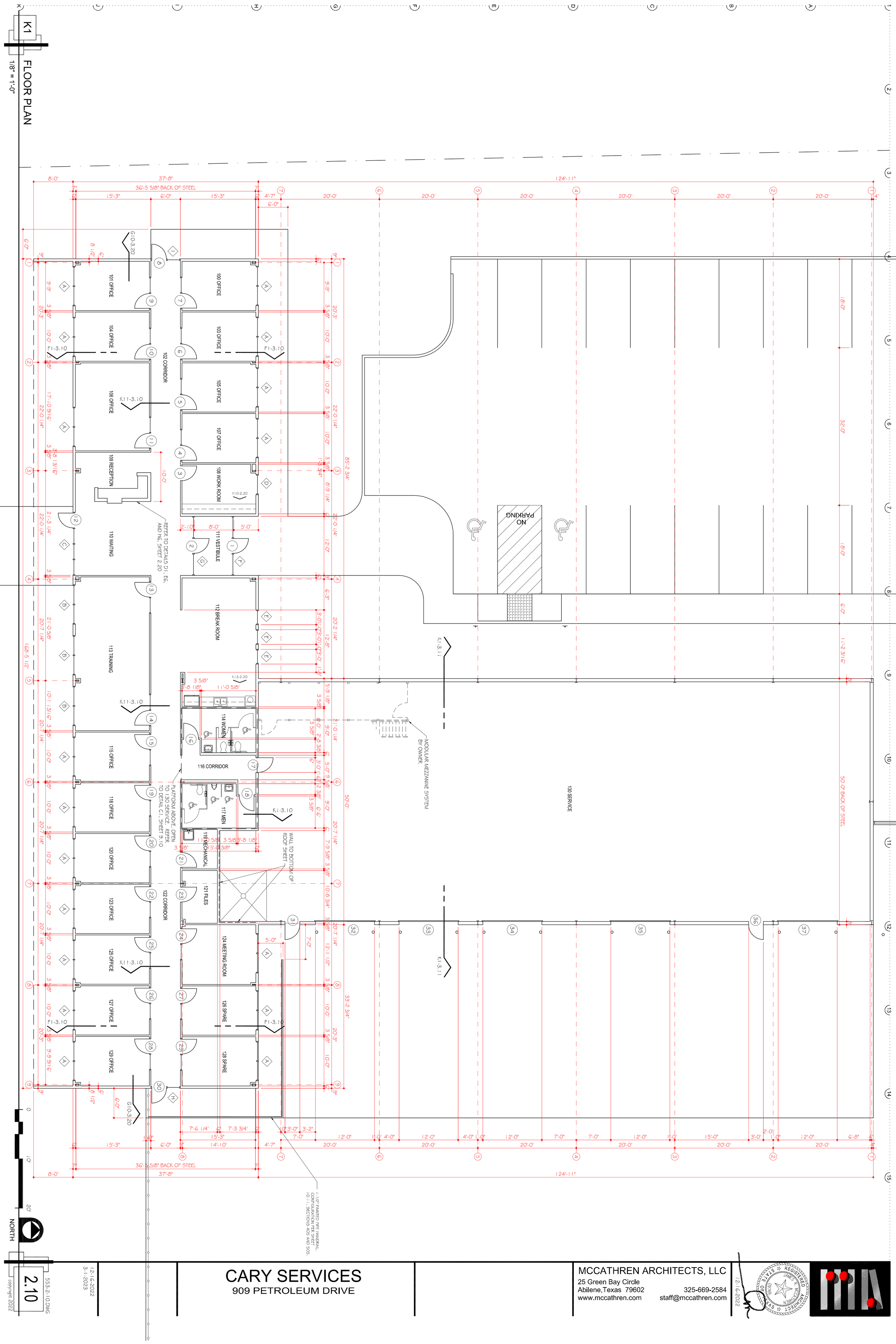
553-1-10.DWG

1.10

K1

FLOOR PLAN

1/8" = 1'-0"



2.10

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12-16-2022
3-1-2023

CARY SERVICES

909 PETROLEUM DRIVE

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25 Green Bay Circle
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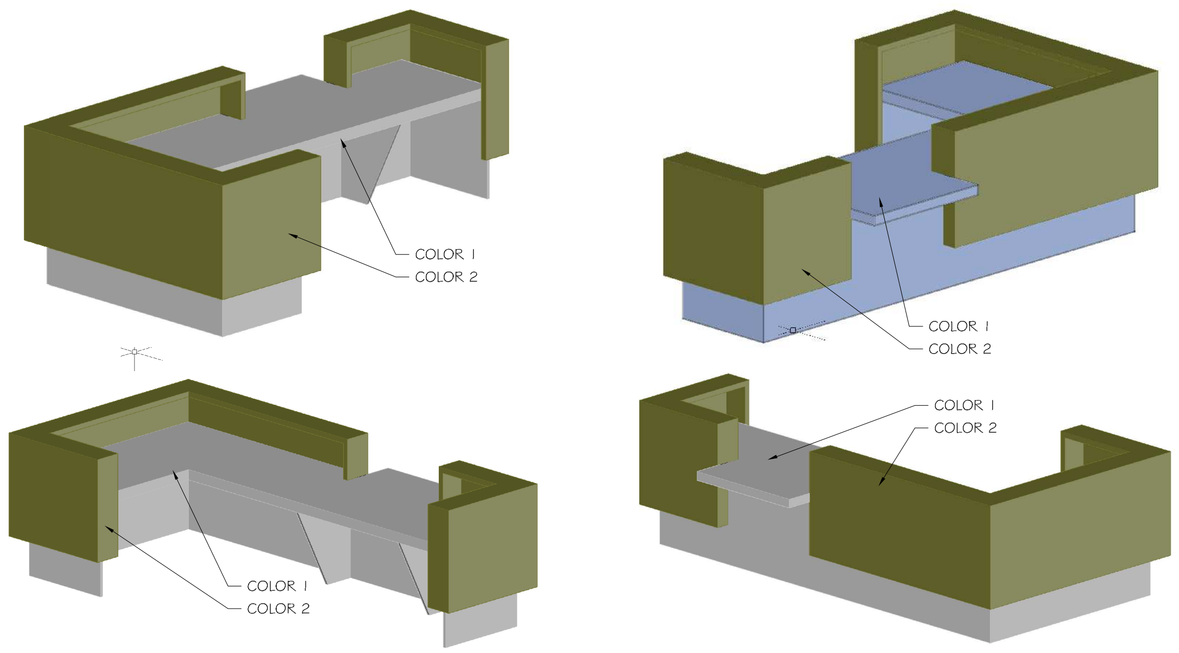
www.mccathren.com
325-669-2584
staff@mccathren.com

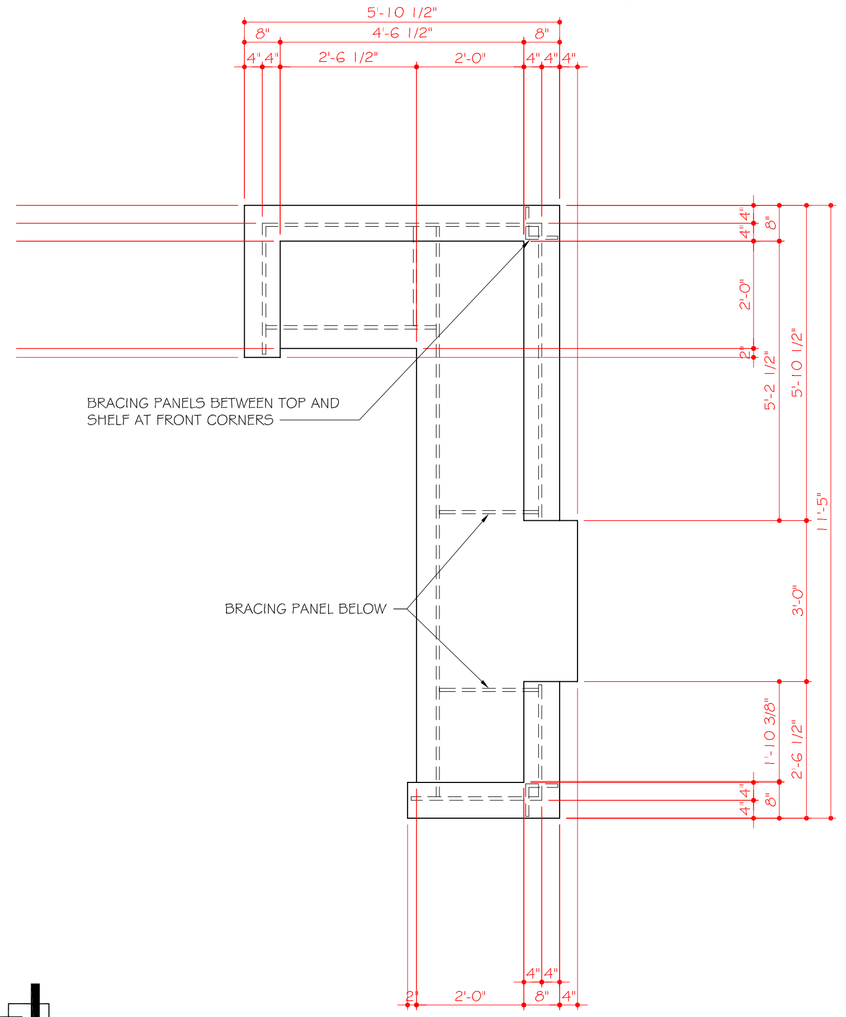
12-16-2022

REGISTERED ARCHITECT JAMES R. MCCATHREN 09766 STATE OF TEXAS



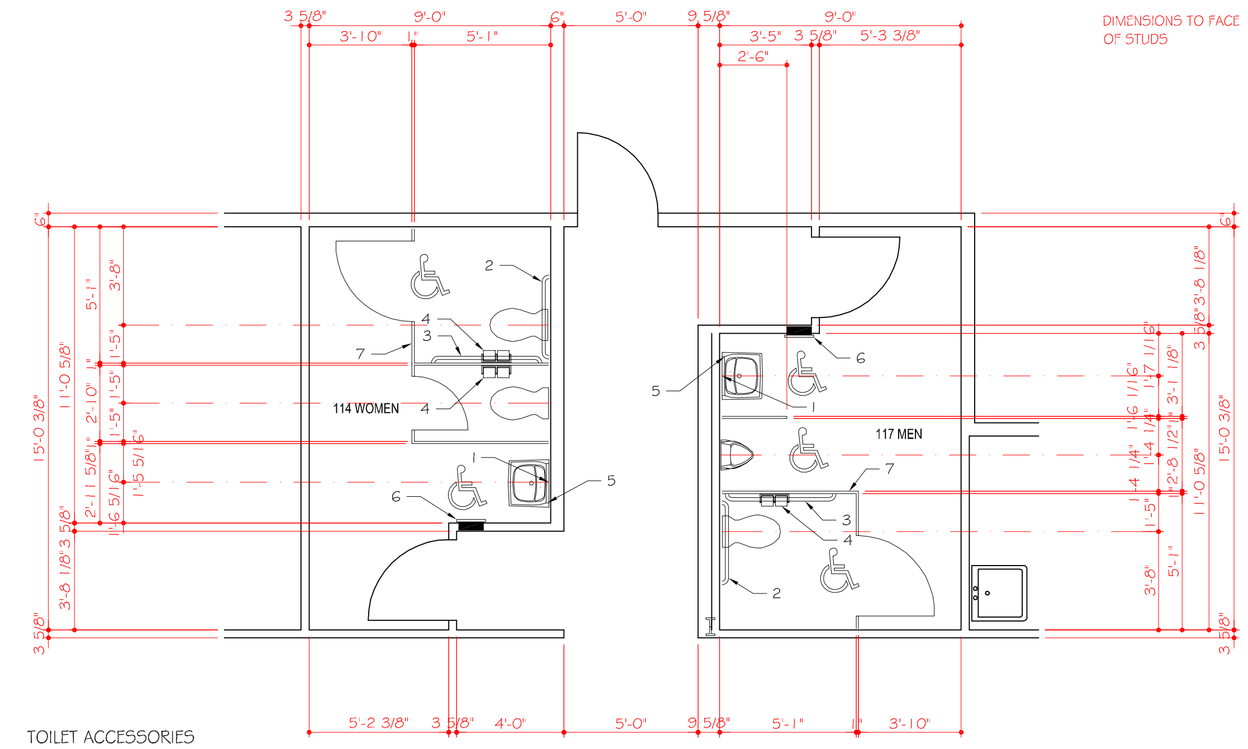
D1 RECEPTION DESK

N.T.S.



E6 RECEPTION DESK PLAN

1/2" = 1'-0"

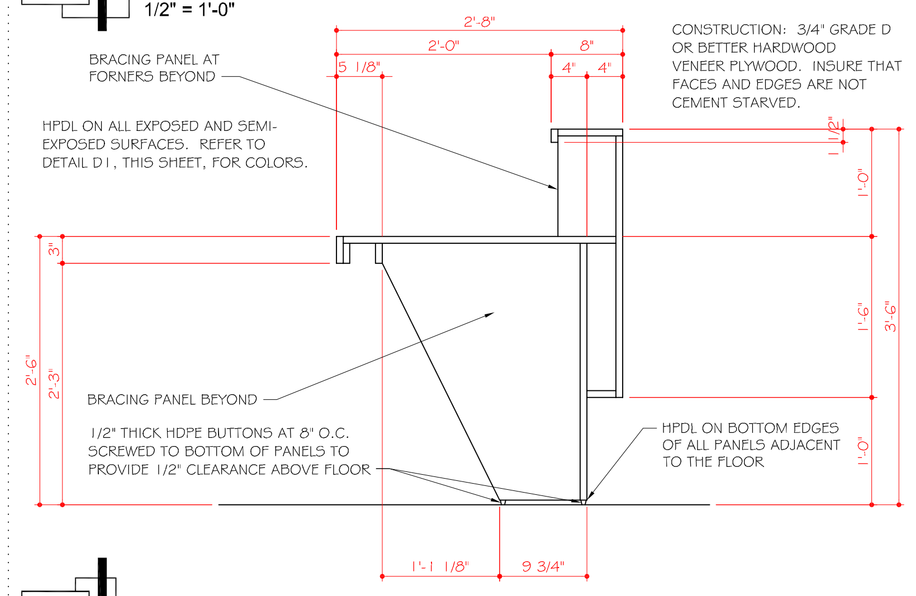


TOILET ACCESSORIES

1. BOBRICK B-165-2436 FRAMED MIRROR 24" W X 36" H.
2. BOBRICK B-6806X36 GRAB BAR 36"
3. BOBRICK B-6806X42 GRAB BAR 42"
4. TISSUE DISPENSER BY OWNER
5. SOAP DISPENSER BY OWNER
6. BOBRICK B38034 COMBINATION PAPER TOWEL DISPENSER AND WASTE RECEPTACLE
7. SCRANTON ECLIPSE® HPDE OVERHEAD BRACED TOILET PARTITIONS, 55", COLOR A5 SELECTED FROM MANUFACTURER'S STANDARD

E10 ENLARGED TOILET PLAN

1/4" = 1'-0"



CONSTRUCTION: 3/4" GRADE D OR BETTER HARDWOOD VENEER PLYWOOD. INSURE THAT FACES AND EDGES ARE NOT CEMENT STARVED.

H6 RECEPTION DESK SECTION

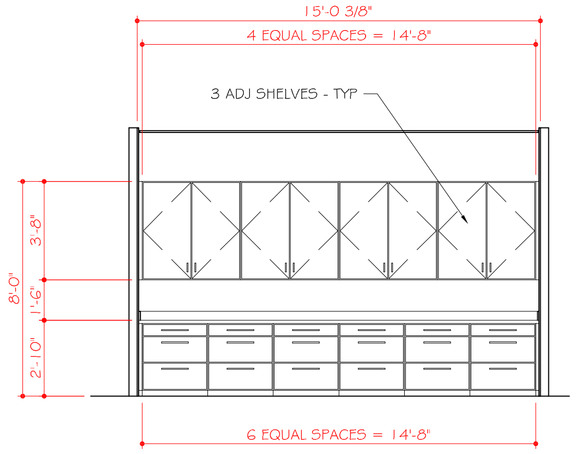
1" = 1'-0"

COUNTERTOPS:

1. HPDL TOP, EDGE, BACK SPLASH, AND SIDE SPLASHES.
2. ARCHITECTURAL WOODWORK INSTITUTE SECTION 400, PREMIUM GRADE
3. COLOR: AS SELECTED BY ARCHITECT

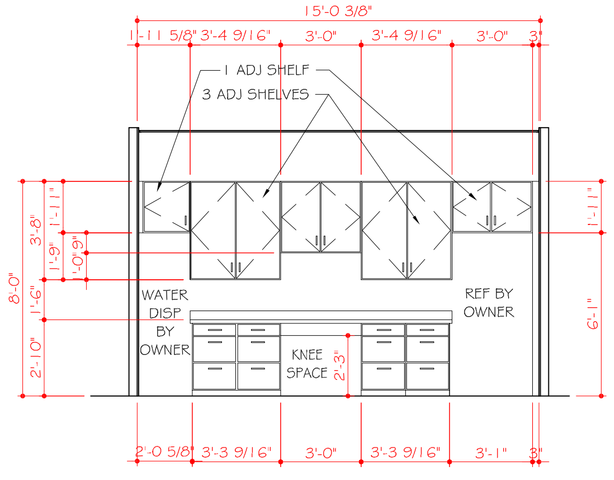
CABINETS:

1. HPDL FULL OVERLAY. FRAMELESS.
2. ARCHITECTURAL WOODWORK INSTITUTE 400G, 400B-T, PREMIUM GRADE
3. UPPER CABINET BOXES 12" DEEP. BASE CABINET BOXES 24" DEEP, U.N.O.
4. HINGES: 32MM CUP, BHMA GRADE 1, 3-WAY ADJUSTABILITY.
5. 32MM LINE BORE SHELF ADJUSTMENT.
6. DRAWER GUIDES: UNDERMOUNT, SOFT CLOSE, FULL EXTENSION. EQUAL TO BLUM TANDEM WITH BLUMOTION. BLUM LATERAL STABILIZER FOR DRAWERS OVER 30" WIDE.
7. ALL DOOR PULLS = HAFELE STEEL BAR PULL #117.97.660, 135MM, INSTALLED VERTICALLY, 2" FROM EDGES OF DOOR.
8. DRAWERS 24" WIDE AND LESS = HAFELE STEEL BAR PULL #117.97.662, 178MM, INSTALLED HORIZONTALLY IN CENTER OF DRAWER 2" BELOW TOP OF DRAWER FACE.
9. DRAWERS OVER 24" WIDE = HAFELE STEEL BAR PULL #117.97.664, 242MM, INSTALLED HORIZONTALLY IN CENTER OF DRAWER 2" BELOW TOP OF DRAWER FACE.
10. COLOR: AS SELECTED BY ARCHITECT



H10 108 WORKROOM MILLWORK

1/4" = 1'-0"



REFER TO H-10 FOR ADDITIONAL NOTES

K13 112 BREAKROOM MILLWORK

1/4" = 1'-0"

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
www.mccathren.com
325-669-2584
staff@mccathren.com

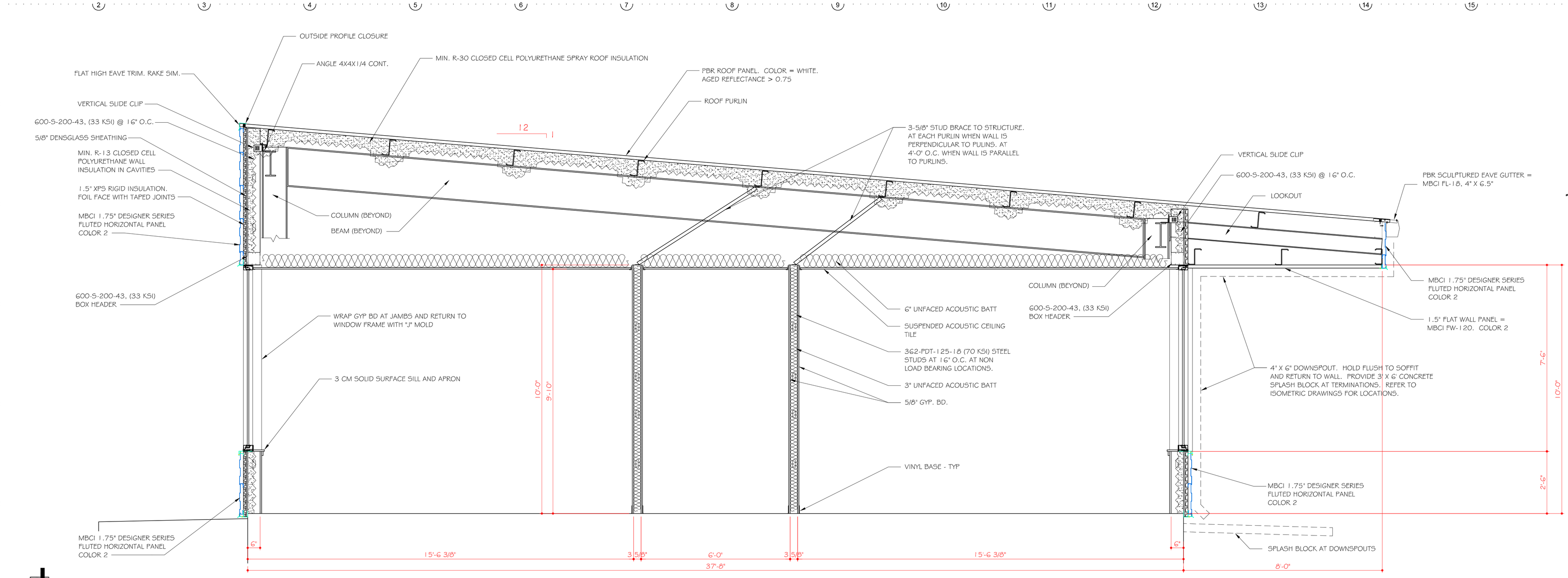
REGISTERED ARCHITECT
STATE OF TEXAS
09765
12-16-2022

CARY SERVICES
909 PETROLEUM DRIVE

12-16-2022

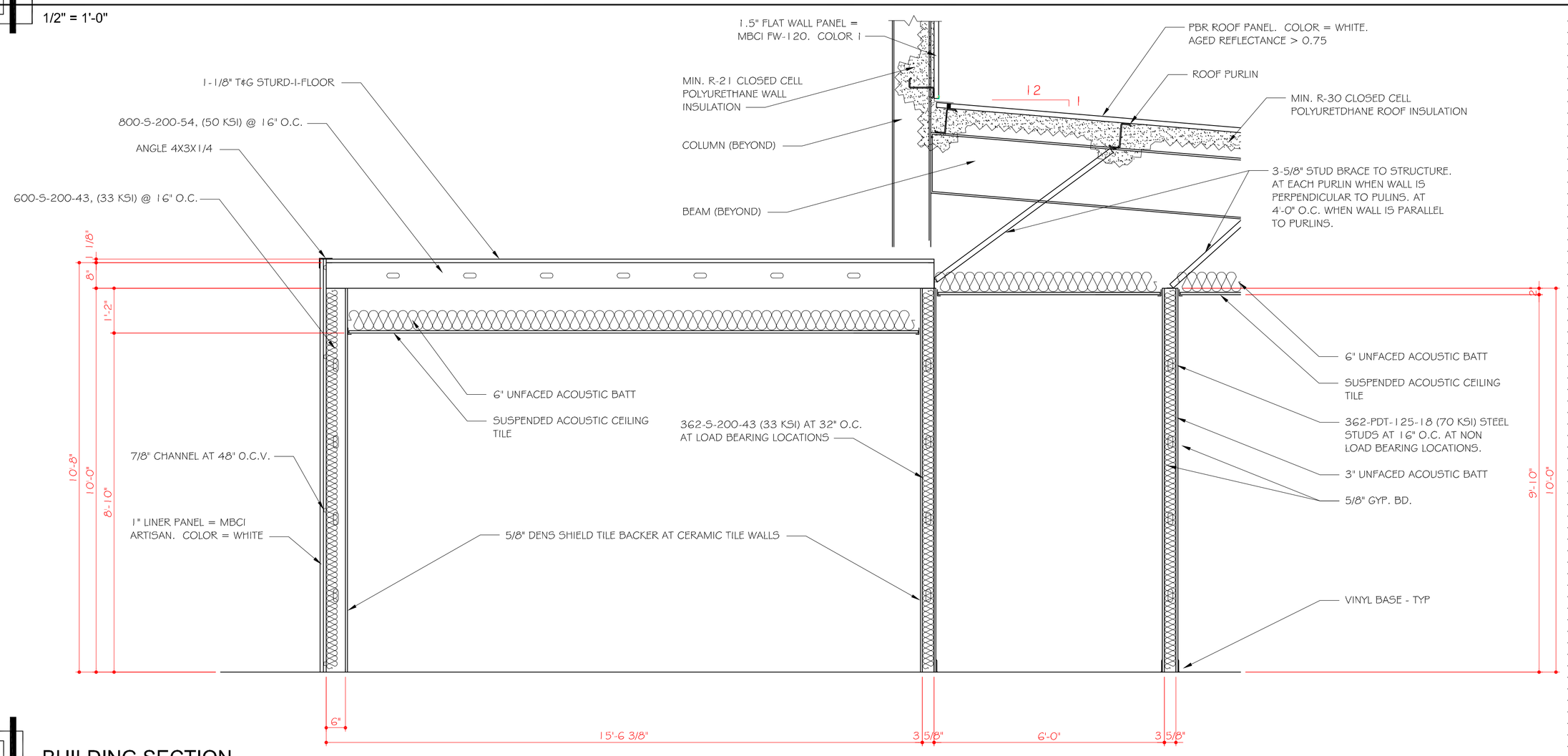
553-2-10.DWG

2.20



F1 BUILDING SECTION

1/2" = 1'-0"



K1 BUILDING SECTION

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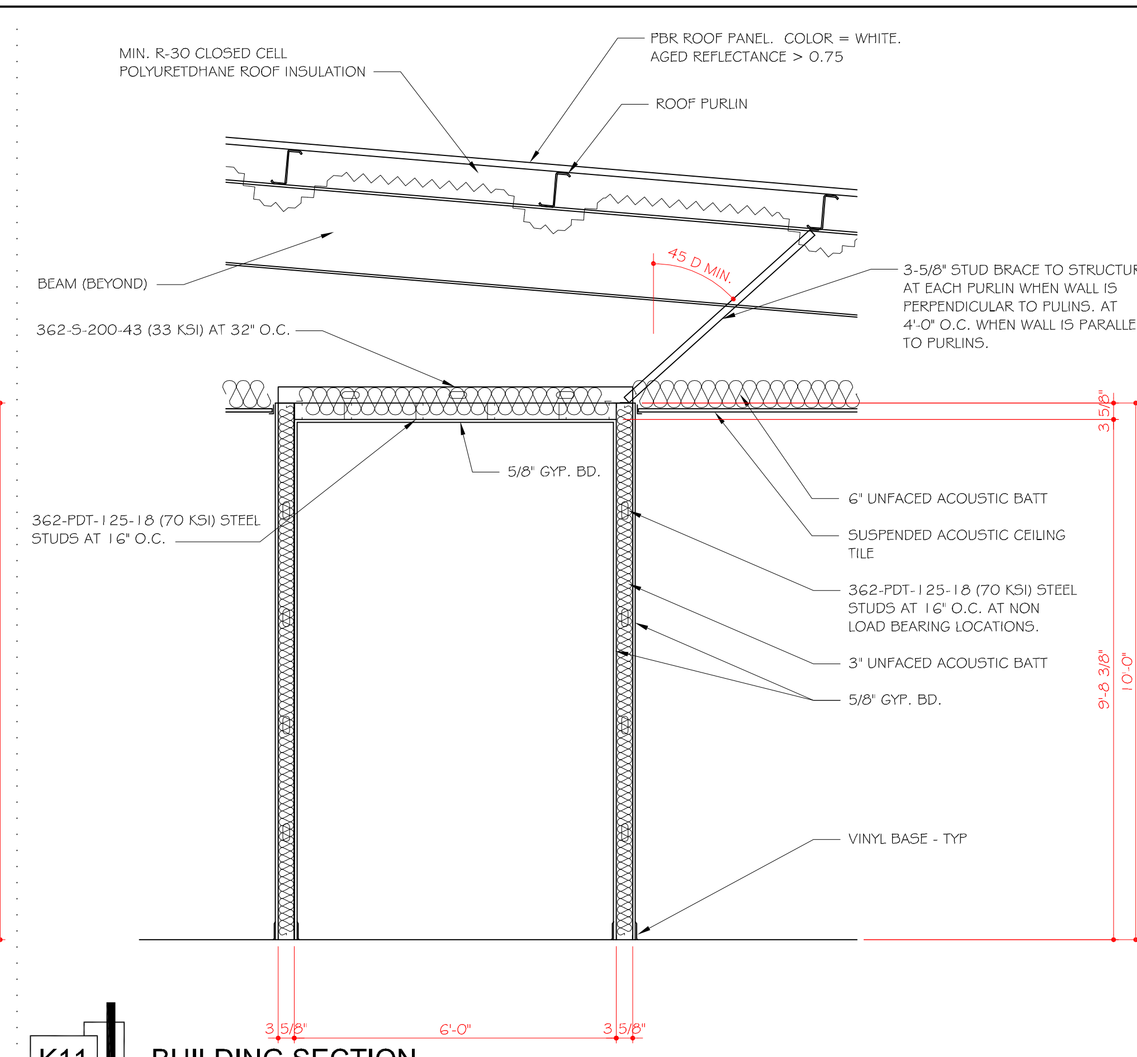


K11 BUILDING SECTION

1/2" = 1'-0"

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
www.mccathren.com
325-669-2584
staff@mccathren.com

REGISTERED ARCHITECT
STEVEN D. MCCATHREN
D9765
STATE OF TEXAS

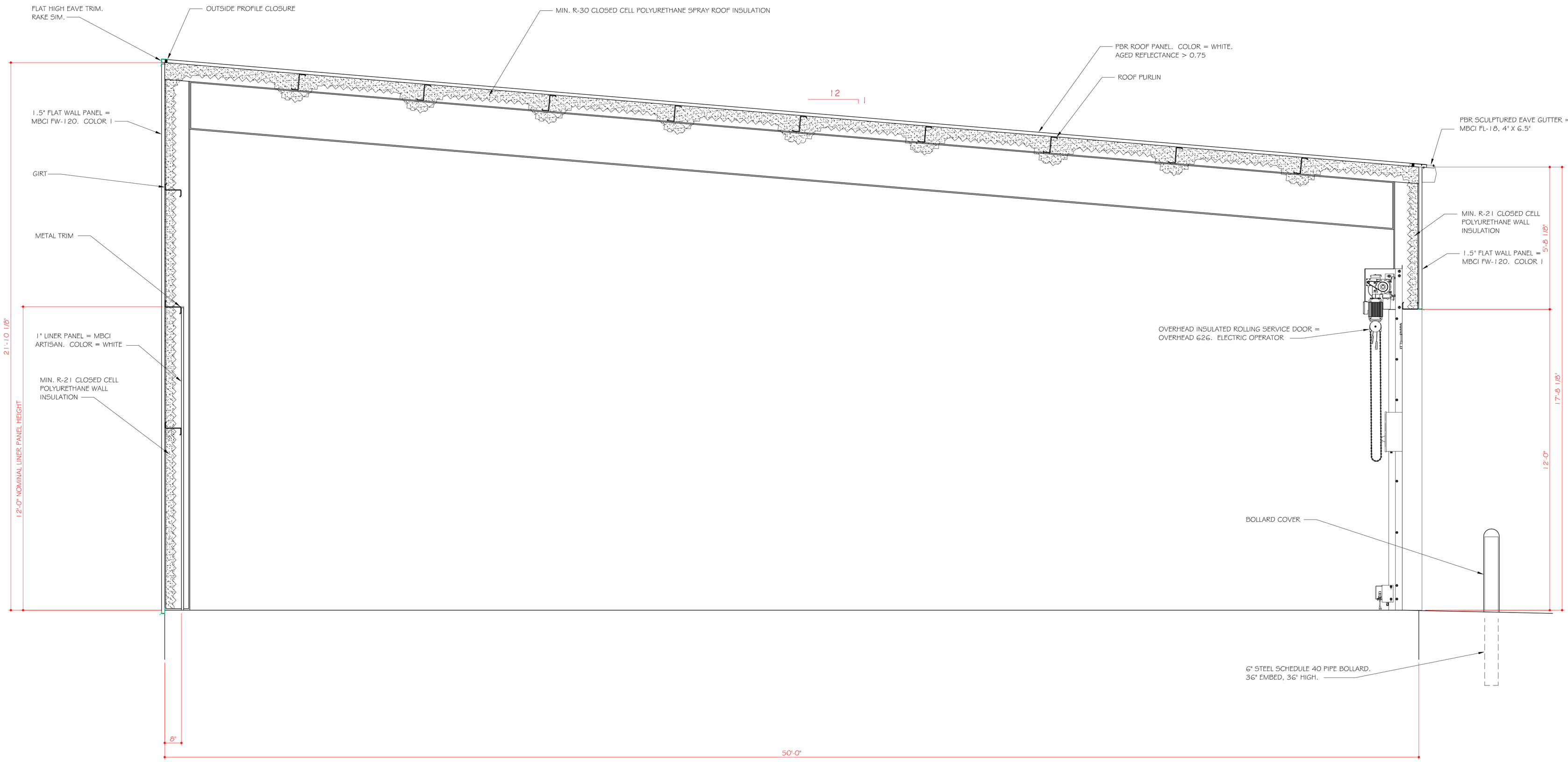
12-16-2022

CARY SERVICES
909 PETROLEUM DRIVE

12-16-2022

553-2-10.DWG

3.10



K1 BUILDING SECTION

1/2" = 1'-0"

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
www.mccathren.com
325-669-2584
staff@mccathren.com

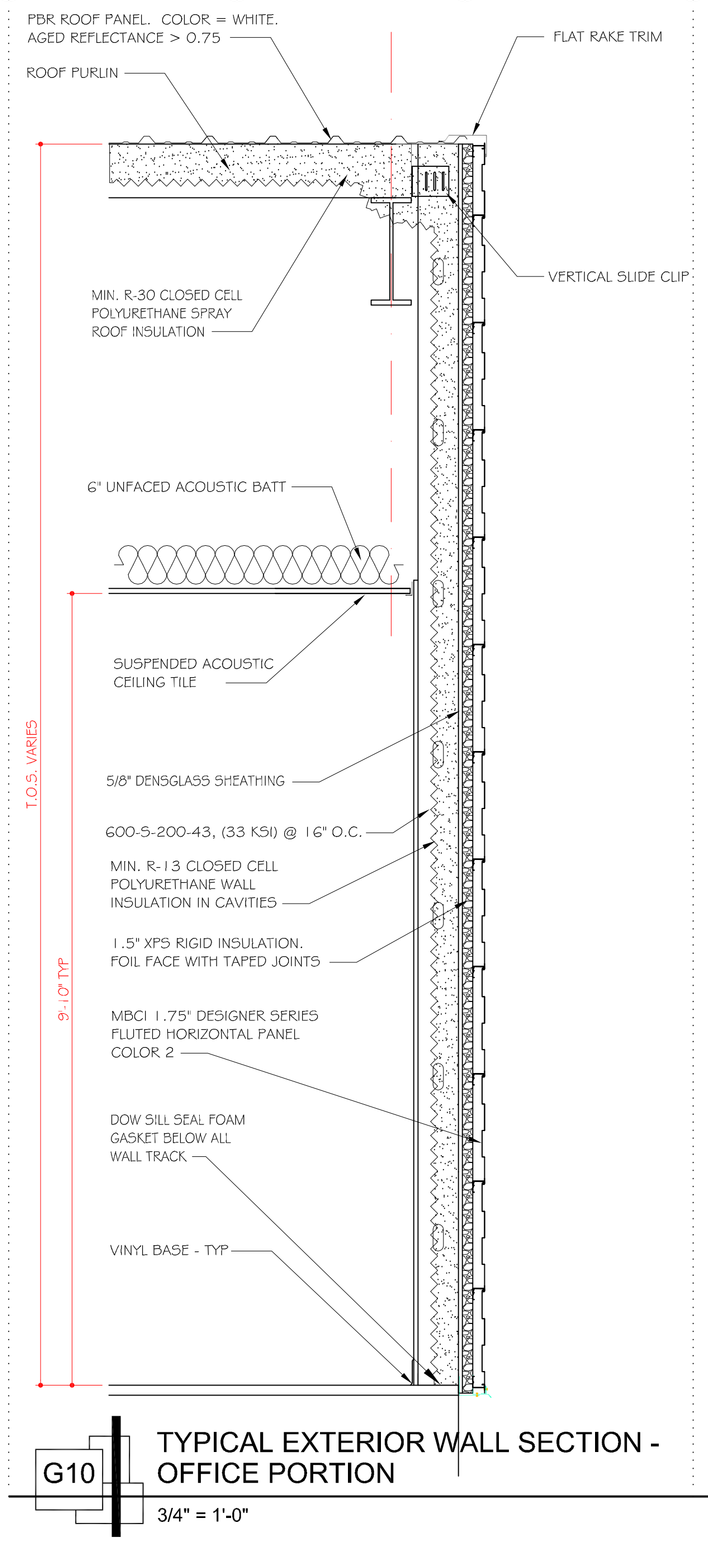
12-16-2022

CARY SERVICES
909 PETROLEUM DRIVE

12-16-2022

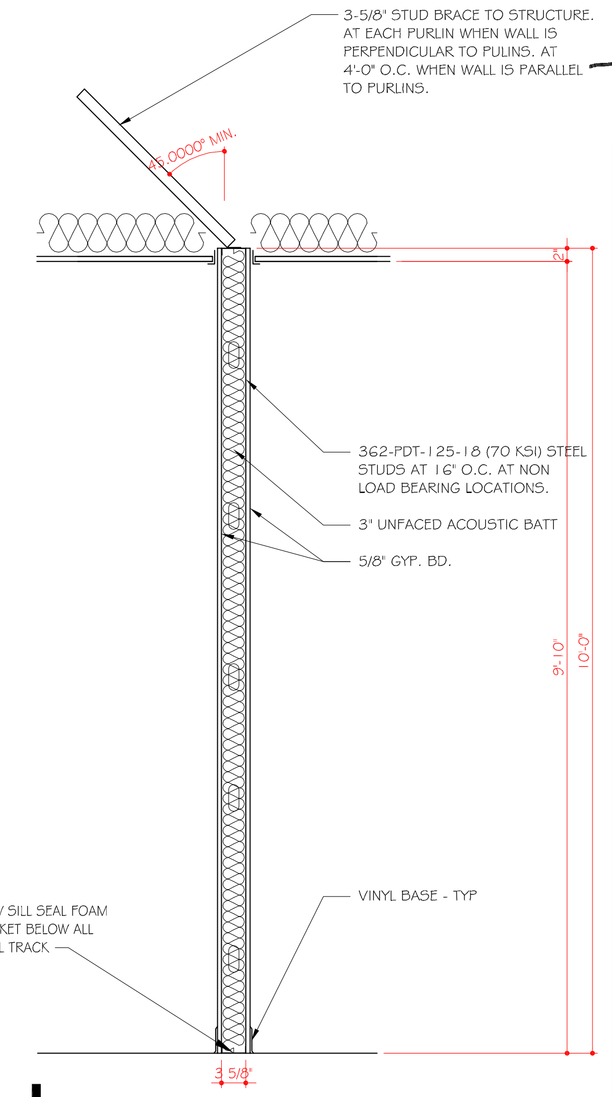
553-2-10.DWG

3.11



G10 TYPICAL EXTERIOR WALL SECTION - OFFICE PORTION

3/4" = 1'-0"



G13 TYPICAL INTERIOR WALL SECTION

3/4" = 1'-0"

MCCATHREN ARCHITECTS, LLC
4400 Buffalo Gap Road, Ste. 2650
Abilene,Texas 79606
www.mccathren.com
325-670-9100
staff@mccathren.com

REGISTERED ARCHITECT MICHAEL L. MCCATHREN 09765 STATE OF TEXAS

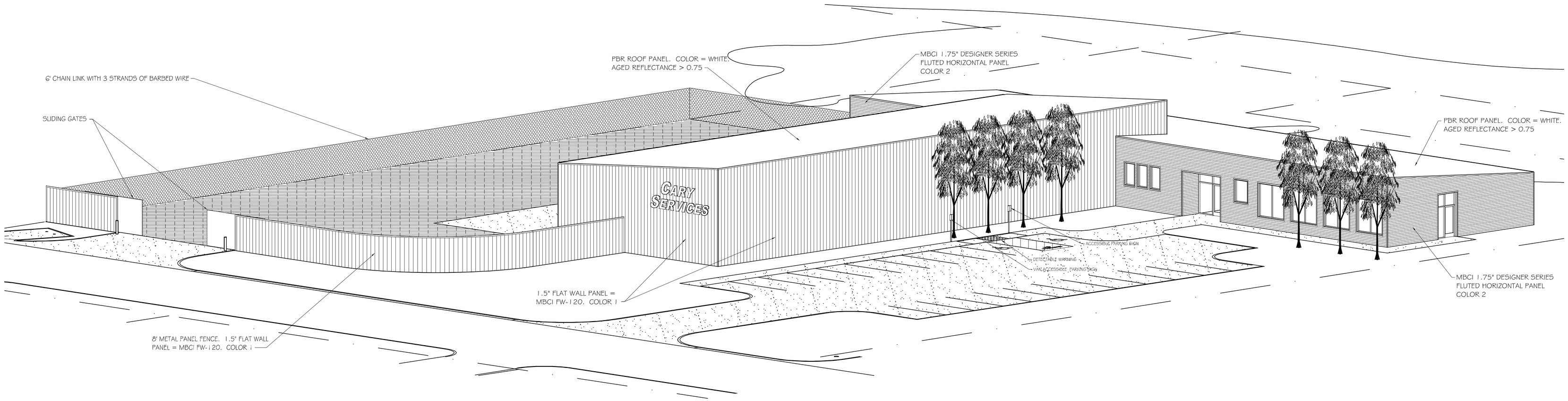
12-16-2022

CARY SERVICES
909 PETROLEUM DRIVE

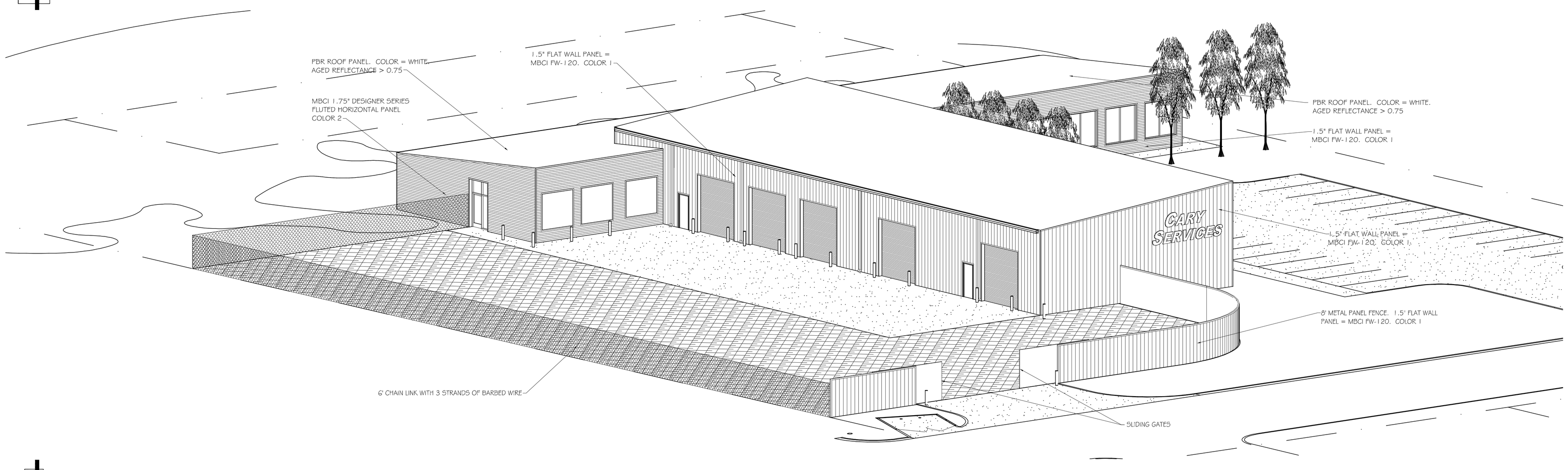
12-16-2022

553-3-20.DWG

3.20



F1 VIEW FROM NORTHWEST



K1 VIEW FROM NORTHEAST

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene, Texas 79602
325-669-2584
staff@mccathren.com
www.mccathren.com

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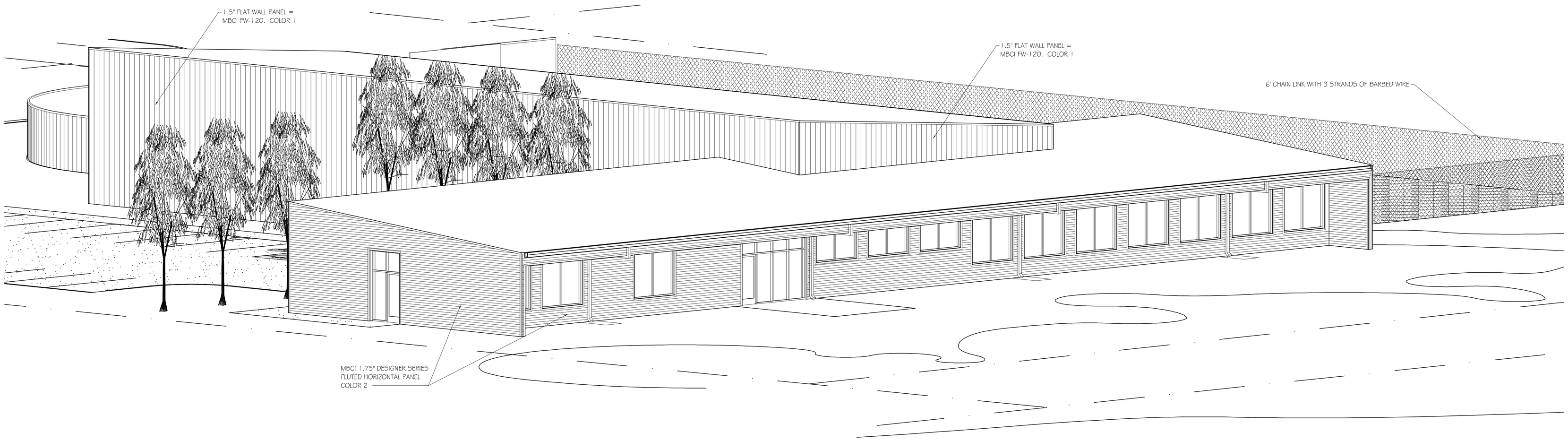
CARY SERVICES
909 PETROLEUM DRIVE

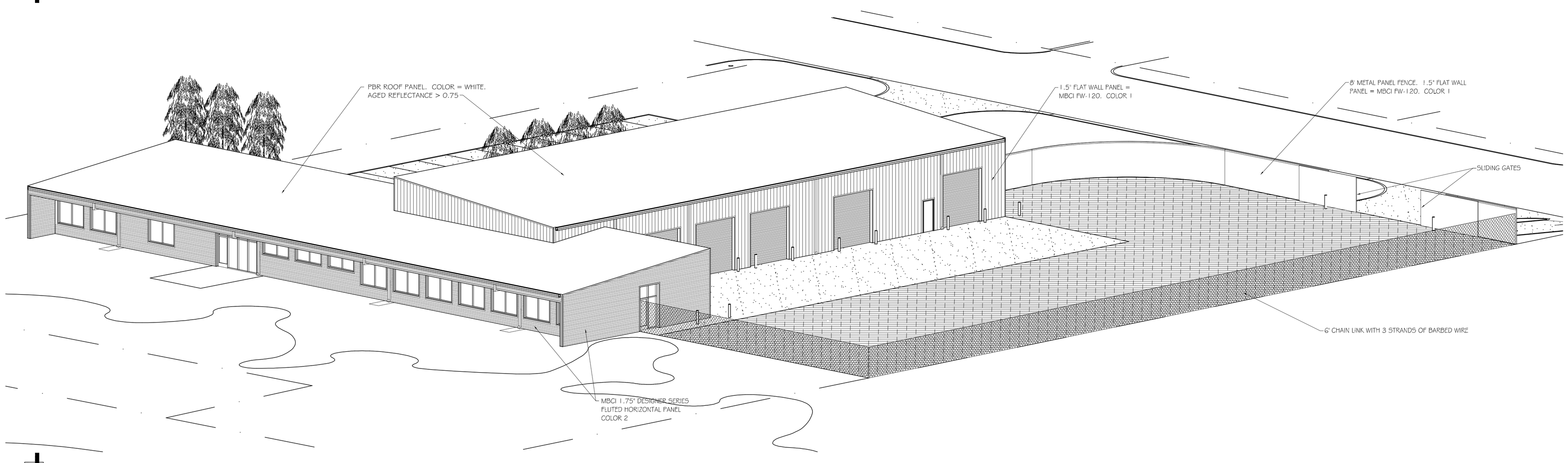
12-16-2022

553-4-10

4.10



F1 VIEW FROM SOUTHWEST



K1 VIEW FROM SOUTHEAST

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene, Texas 79602
325-669-2584
staff@mccathren.com
www.mccathren.com

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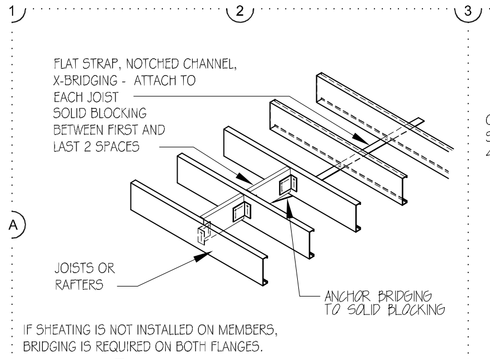
CARY SERVICES
909 PETROLEUM DRIVE

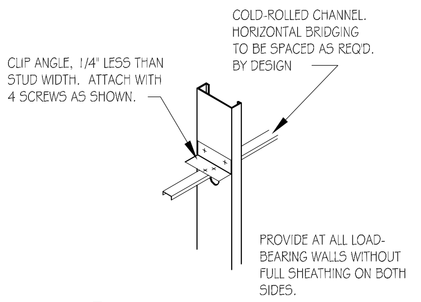
12-16-2022

553-4-11

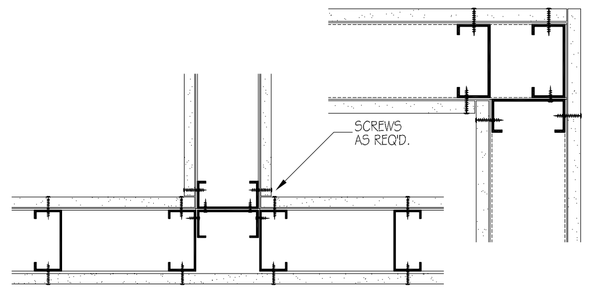
4.11



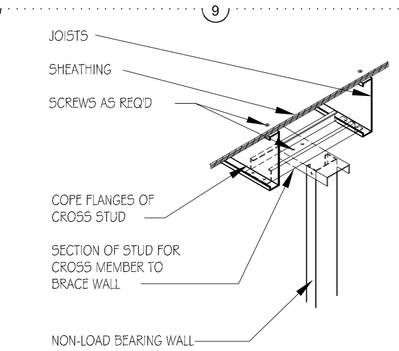
J16 JOISTS AND RAFTER BRIDGING



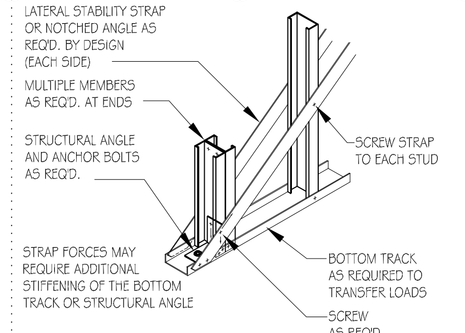
F18 WALL BRIDGING



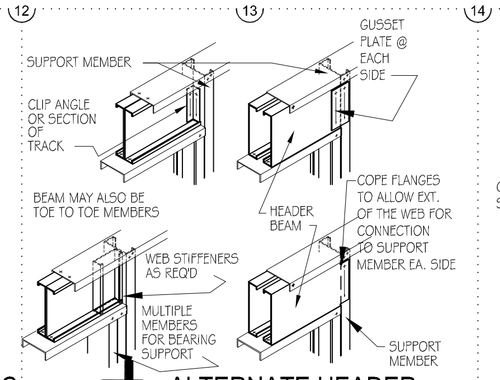
B11 CORNER AND INTERSECTION FRAMING



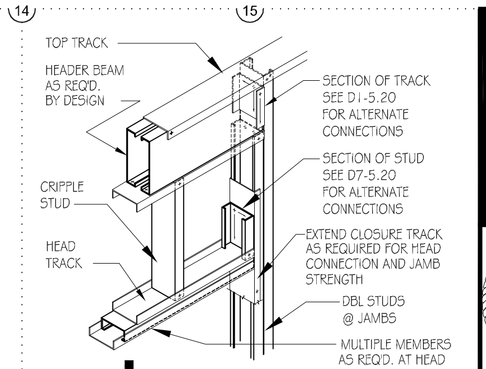
B14 NON-LOAD BEARING WALL PARALLEL TO JOISTS



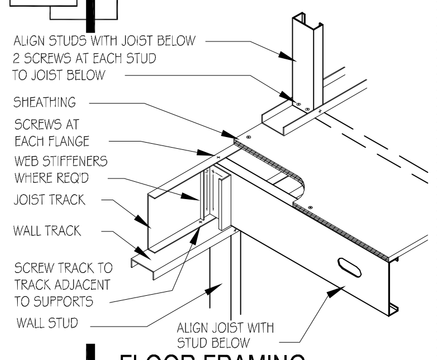
B16 DIAGONAL SHEER BRACING (ONLY WHERE INDICATED)



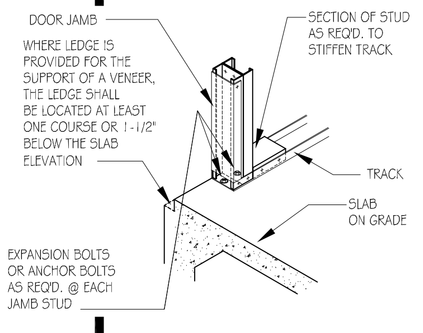
J20 ALTERNATE HEADER OR BEAM CONNECTIONS



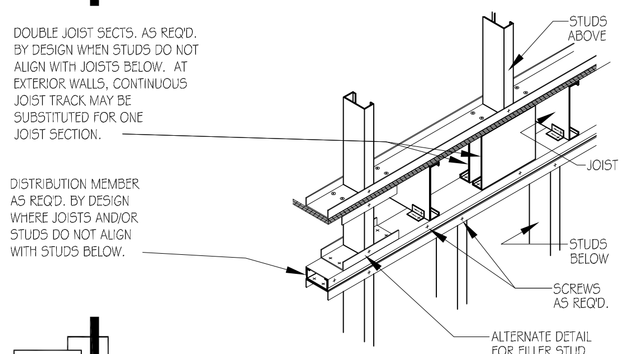
B20 LOAD BEARING HEAD & JAMB (>4'-0" SPAN)



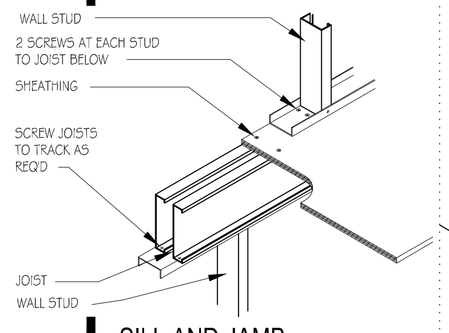
L16 FLOOR FRAMING AT EXTERIOR WALL



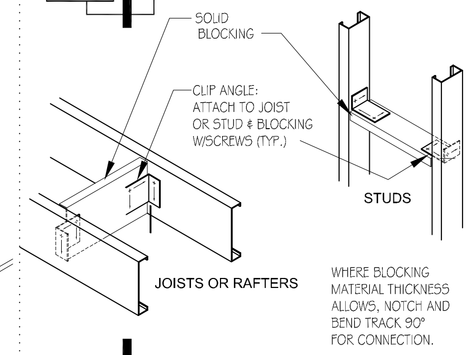
H18 JAMB AT FLOOR



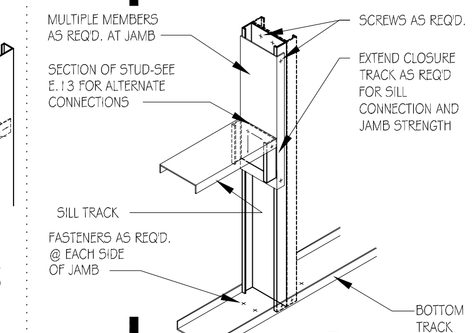
D11 TOP TRACK DISTRIBUTION MEMBER



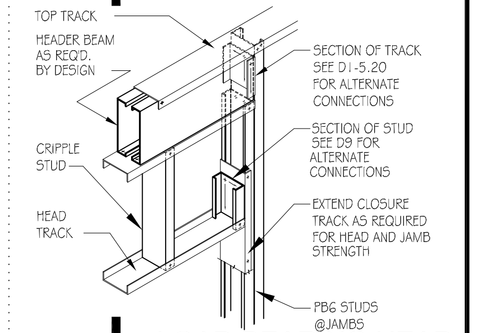
D14 SILL AND JAMB OPENING >4'-0"



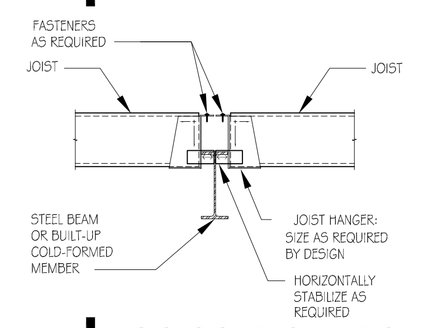
D16 SOLID BLOCKING



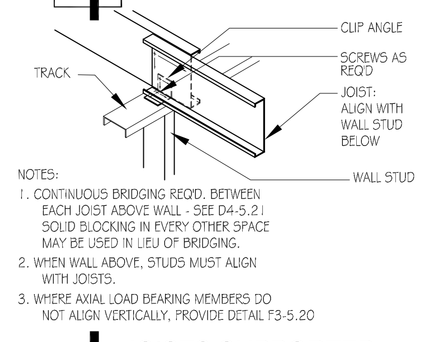
L18 SILL & JAMB OPENING < 4'-0"



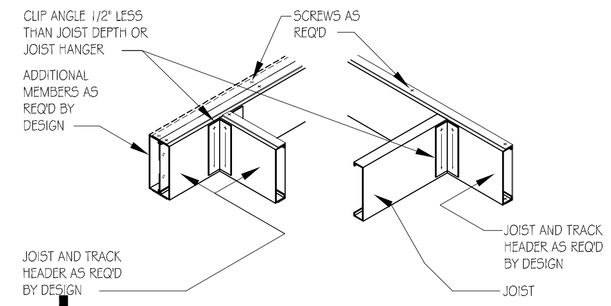
D20 LOAD BEARING HEAD & JAMB (<4'-0" SPAN)



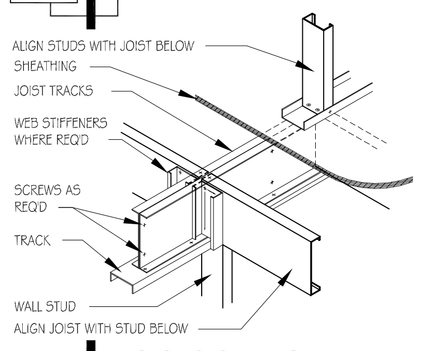
J14 JOISTS SUPPORTED ON STEEL BEAM (UPSET)



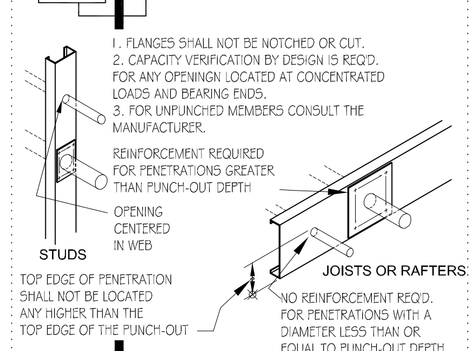
L14 JOISTS SUPPORTED ON STUDS



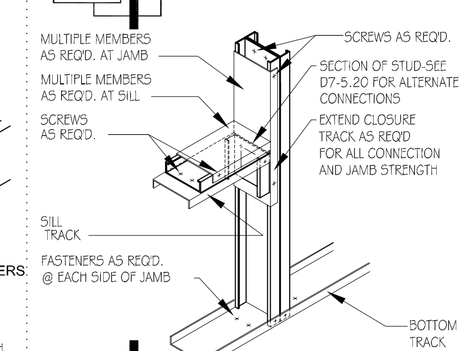
F11 JOIST HEADERS



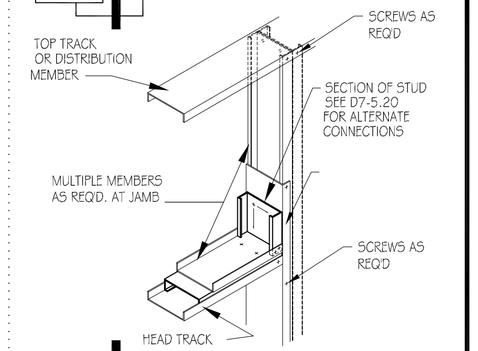
F14 JOISTS SUPPORTED ON STUDS



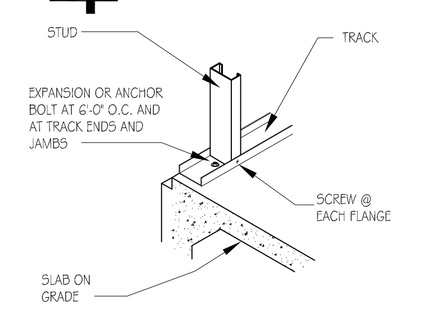
F16 PENETRATIONS



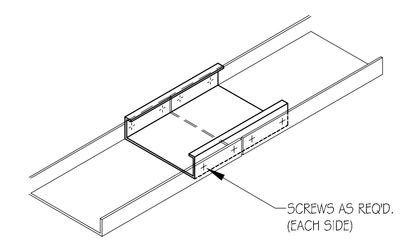
J18 SILL & JAMB OPENING > 4'-0"



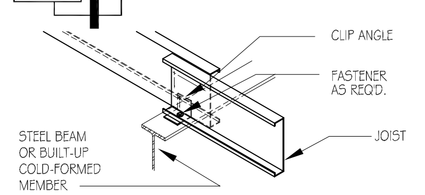
F20 NON-LOAD BEARING HEAD & JAMB (>4'-0" SPAN)



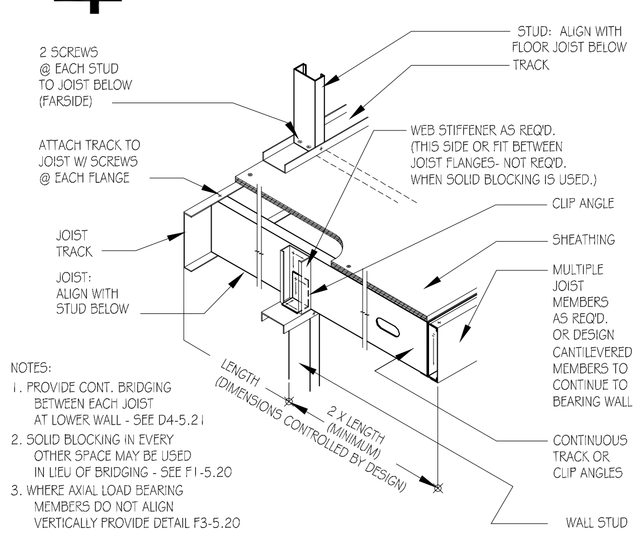
B18 TRACK ANCHORING



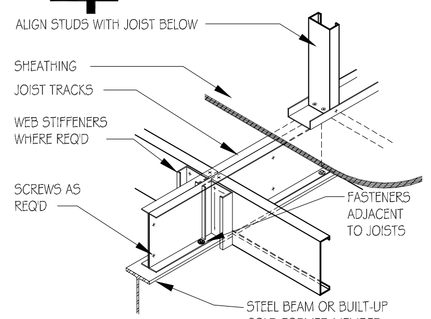
D18 TRACK SPLICE



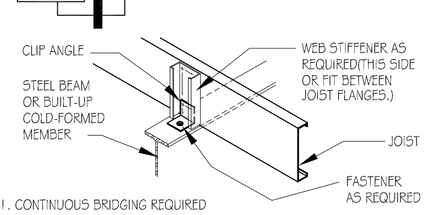
N12 FLOOR JOIST SUPPORTED BY BEAM (OVERLAPPED)



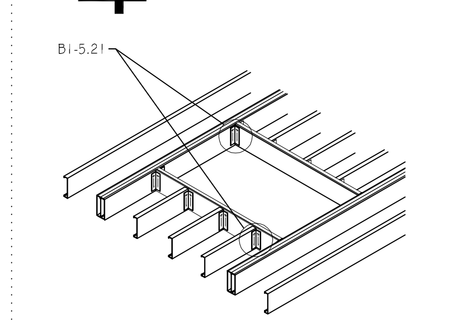
I11 FLOOR CANTILEVER



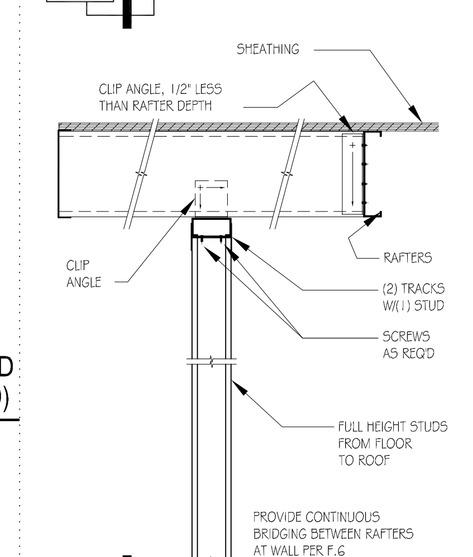
H14 JOISTS SUPPORTED ON BEAMS



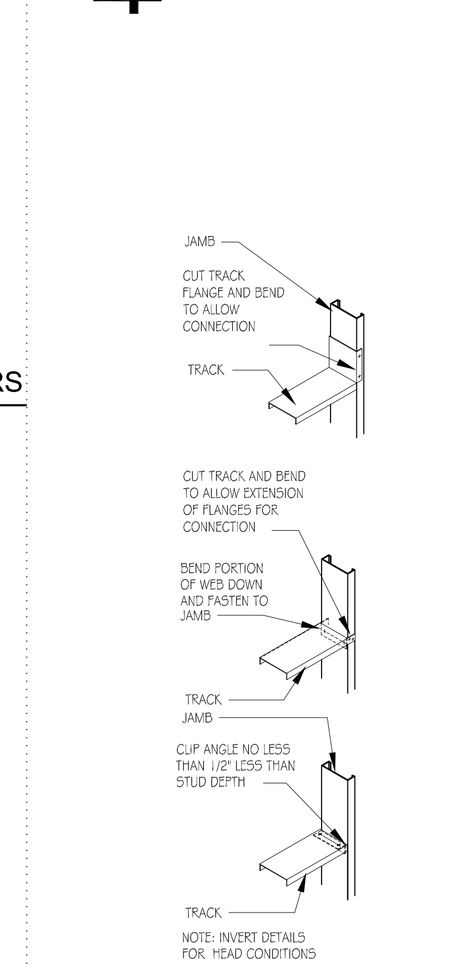
I9 FLOOR JOIST SUPPORTED BY BEAM (NOT OVERLAPPED)



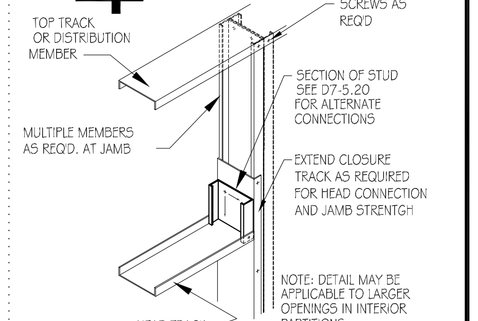
H16 OPENINGS IN JOISTS AND RAFTERS



I9 OPENINGS IN JOISTS AND RAFTERS



N20 ALTERNATE SILL WITH NO LOADING



H20 NON-LOAD BEARING HEAD & JAMB (<4'-0" SPAN)

1. SCREWS: MINIMUM #10-16. ATTACH STUDS TO TRACK WITH ONE SCREW THROUGH TRACK INTO EACH FLANGE TOP AND BOTTOM. ATTACH CLIPS AND CONNECTORS WITH 2 SCREWS THROUGH CLIP INTO EACH MEMBER WHEN SCREWS ARE NOT IN SHEAR. FOR SHEAR CONNECTIONS, USE NOT LESS THAN 4 SCREWS INTO EACH MEMBER IN SHEAR.
2. ATTACH WALL BOARD OR SHEATHING FULL HT. ON BOTH SIDES OF STUD AT 12" O. C. OR PROVIDE MECHANICAL BRACING AT 48" O.C. MAX. (STRAPS OR 1-1/2" 16 GUAGE COLD ROLLED CHANNEL).
3. USE DEEP LEG TRACK WITH ALL JOISTS AND RAFTERS.
4. ALIGN JOIST/RAFTERS WITH STUDS BELOW.
5. AT JOISTS/RAFTERS WITH DIAPHRAM SHEATHING ON ONLY 1 SIDE, PROVIDE 2" WIDE 18 GUAGE FLAT STRAPPING AT 6'-0" O.C. WITH SOLID END BLOCKING ON OPPOSITE SIDE.
6. SEAT STUDS FIRMLY AGAINST TRACK WEBS.
7. WEB PUNCHES ARE NOT ALLOWED WITHIN 10" OF MEMBER ENDS OR BEARING POINTS.
8. BRACE ALL JOISTS AND RAFTERS AT EACH END WITH TRACK OR SOLID BLOCKING
9. MINIMUM YEILD STRENGTH = 33KSI.
10. STUD SPLICES ARE NOT PERMITTED.
11. CLIP ANGLES SHALL BE NOT LESS THAN THE THICKNESS OF THE THICKEST MEMBER BEING CONNECTED

Q20 LIGHT GUAGE FRAMING NOTES

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
325-669-2584
staff@mccathren.com
www.mccathren.com

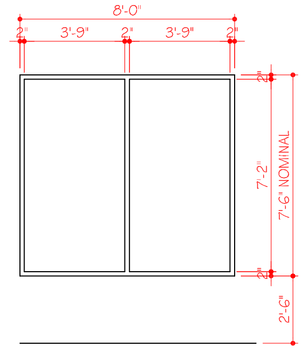
REGISTERED ARCHITECT
JOHN MCCATHREN
STATE OF TEXAS
09765
12-16-2022

CARY SERVICES
909 PETROLEUM DRIVE

12-16-2022

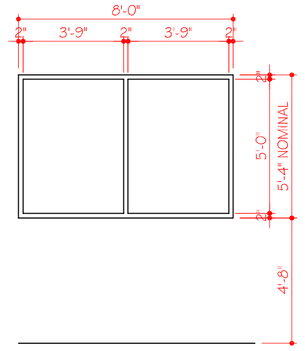
553-5-10.DWG

5.10



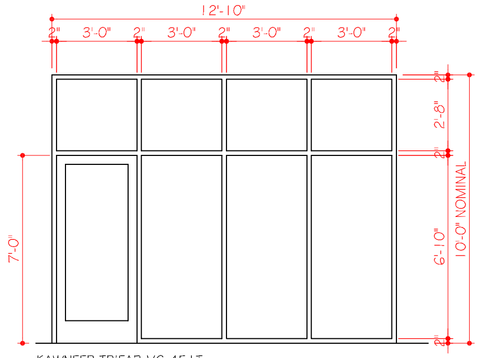
KAWNEER TRIFAB VG 451T
GLAZING: 1" INSUL., LOW-E, TINT

FRAME A



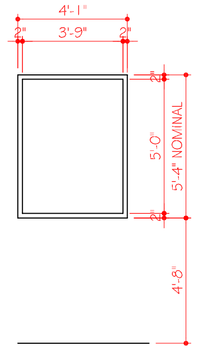
KAWNEER TRIFAB VG 451T
GLAZING: 1" INSUL., LOW-E, TINT

FRAME B



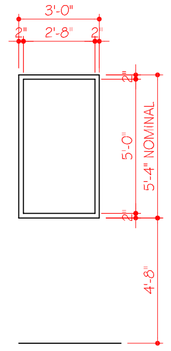
KAWNEER TRIFAB VG 451T
GLAZING: 1" INSUL., LOW-E, TINT, TEMPERED

FRAME C



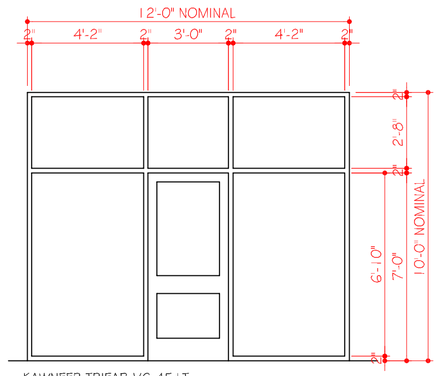
KAWNEER TRIFAB VG 451T
GLAZING: 1" INSUL., LOW-E, TINT

FRAME D



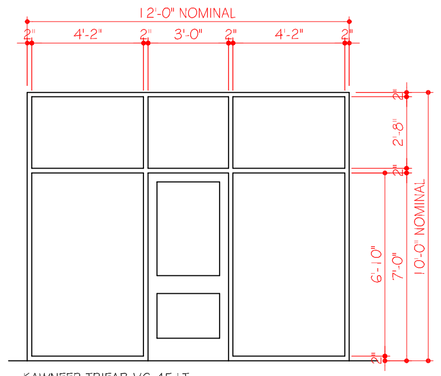
KAWNEER TRIFAB VG 451T
GLAZING: 1" INSUL., LOW-E, TINT

FRAME E



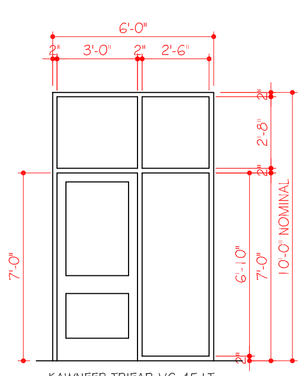
KAWNEER TRIFAB VG 451T
GLAZING: 1" INSUL., LOW-E, TINT, TEMPERED

FRAME F



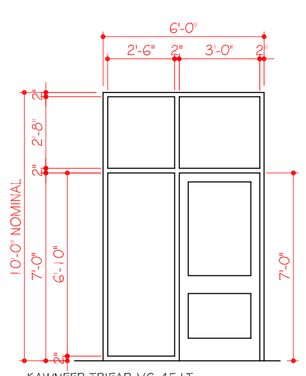
KAWNEER TRIFAB VG 451T
GLAZING: 1/4" CLEAR, TEMPERED

FRAME G



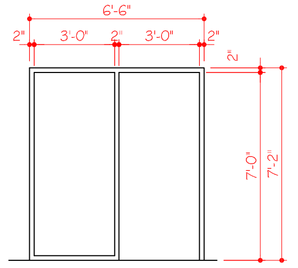
KAWNEER TRIFAB VG 451T
GLAZING: 1" INSUL., LOW-E, TINT, TEMPERED

FRAME H



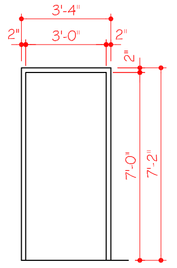
KAWNEER TRIFAB VG 451T
GLAZING: 1" INSUL., LOW-E, TINT, TEMPERED

FRAME I



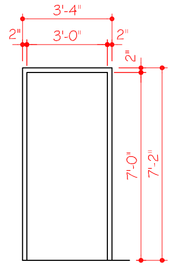
TIMELY - 4-7/8" THROAT
GLAZING: 1/4" CLEAR, TEMPERED.

FRAME J



TIMELY - 4-7/8" THROAT

FRAME K



HOLLOW METAL

FRAME L

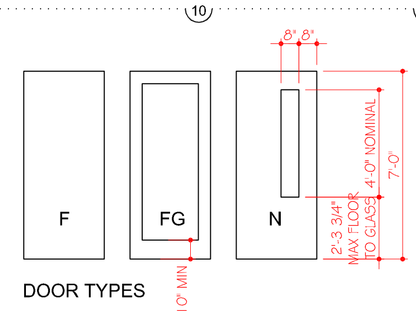
F1 FRAME TYPE SCHEDULE

1/4" = 1'-0"

STEEL DOOR FRAMES:
TIMELY STANDARD FRAME WITH TA-8 STANDARD TRIM - COLOR = BROWNTONE. TA-01 STRIKE. TA-12 PARALLEL ARM CLOSER REINFORCEMENT BRACKET WHERE CLOSERS ARE SCHEDULED. SILENCERS AT NON-RATED OPENINGS 4-1/2" X 4-1/2" TEMPLATE HINGING

HOLLOW METAL DOOR FRAMES:
16 GUAGE, WELDED, GALVANIZED AT EXTERIOR LOCATIONS.

ALUMINUM FRAMES:
KAWNEER TRIFAB VG 451T. ANODIZED CLASS 1
FINISH - #40 DARK BRONZE ANODIZED
AIR INFILTRATION < 0.06 CFM/SF AT 6.24 PSF STATIC PRESSURE DIFFERENCE PER ASTM 283
NO WATER LEAKAGE AT 8 PSF PER AAMA 501
EXTERIOR GLAZING: U < 0.26, SHGC < 0.24



DOOR TYPES

ALUMINUM DOORS:
KAWNEER 350 MEDIUM STYLE ENTRANCE ANODIZED CLASS 1
FINISH - #40 DARK BRONZE ANODIZED

HPDL DOORS:
SOLID PARTICLE BOARD CORE, 1-3/4" THICK,
HPDL FACES AND EDGES.
LIFETIME WARRANTY FOR INTERIOR APPLICATIONS.
LITE FRAMES: STEEL, WELDED CORNERS, POWDERCOATED, DARK BROWN
DOOR FACES AND EDGES: WILSONART "BRAZILWOOD" 7946-38

B9 DOOR TYPE SCHEDULE

1" = 1'-0"

GROUP 1

HINGES	OFFSET PIVOTS BY KAWNEER
EXIT DEVICE	"PANELINE"
CYLINDER	SCHLAGE 6 PIN
PULL	KAWNEER C7W
CLOSER	NORTON 8301 BF-DA
FLOOR STOP	ROCKWOOD 471
WTHRSTRP	KAWNEER SEALAIR WITH EPDM SWEEP
THRESHOLD	KAWNEER ADA COMPLIANT

GROUP 2

HINGES	OFFSET PIVOTS BY KAWNEER
EXIT DEVICE	"PANELINE" DUMMY PANEL
CYLINDER	SCHLAGE 6 PIN
PULL	KAWNEER C7W
CLOSER	NORTON 8301 BF-DA
WTHRSTRP	KAWNEER SEALAIR

GROUP 3

HINGES	1-1/2 PAIR HAGAR 1279 4-1/2 X 4-1/2
LOCKSET	SCHLAGE AL50PD (STOREROOM), JUPITER
WALL STOP	ROCKWOOD 403

GROUP 4

HINGES	1-1/2 PAIR HAGAR 1279 4-1/2 X 4-1/2
LOCKSET	SCHLAGE A10S (PASSAGE), JUPITER
WALL STOP	ROCKWOOD 403

GROUP 5

HINGES	1-1/2 PAIR HAGAR 1279 4-1/2 X 4-1/2
LOCKSET	SCHLAGE AL50PD (OFFICE), JUPITER
WALL STOP	ROCKWOOD 403

GROUP 6

HINGES	1-1/2 PAIR HAGAR 1279 4-1/2 X 4-1/2
PUSH/PULL	IVES 8200 PUSH PLATE, 6" X 16". IVES 8302 PULL PLATE, 6" X 16", 10" HANDLE CENTERS
CLOSER	NORTON 8301 BF-DA
WALL STOP	ROCKWOOD 403

GROUP 7

HINGES	1-1/2 PAIR HAGAR 1279 4-1/2 X 4-1/2
EXIT DEVICE	ADAMS RITE 8700-06 (RIM)
TRIM	ADAMS RITE 3080-01
CYLINDER	SCHLAGE 6-PIN
CLOSER	NORTON 8301 BF-DA
WALL STOP	ROCKWOOD 403

GROUP 8

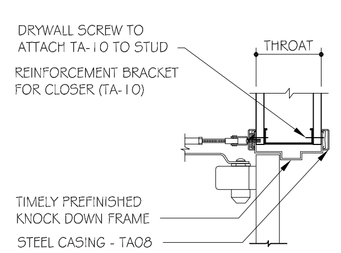
LOCKS AND ELECTRIC OPERATOR BY DOOR MANUFACTURER.

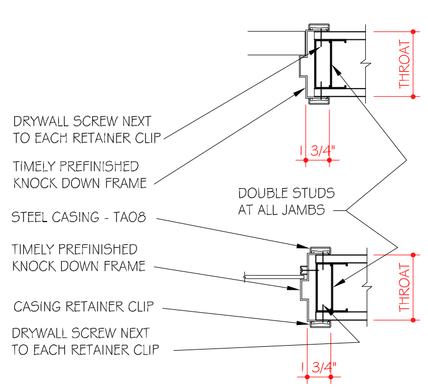
ALL HARDWARE FINISHES =
OIL RUBBED BRONZE

DOOR NO.	DOOR TYPE	DOOR SIZE	DOOR HAND	DOOR MATL.	FRAME TYPE	FRAME MATL.	THROAT	HRDWR GROUP	SAFETY GLZNG	DETAILS HEAD	DETAILS JAMB	KEY	NOTES
1	FG	30X70	RHR	ALUM	F	ALUM		1	INSUL - TEMP				
2	FG	30X70	RHR	ALUM	G	ALUM		2	1/4" TEMP.				
3	N	30X70	LH	HPDL	K	STEEL		4		K5-8.10	K5-8.10		
4	F	30X70	RH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
5	F	30X70	RH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
6	F	30X70	RH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
7	F	30X70	RH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
8	FG	30X70	RHR	ALUM	I	ALUM		1	INSUL - TEMP				
9	F	30X70	LH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
10	F	30X70	LH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
11	F	30X70	LH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
12	FG	30X70	LHR	ALUM	C	ALUM		1	INSUL - TEMP				
13	F	30X70	RH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
14	F	30X70	LH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
15	F	30X70	RH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
16	F	30X70	LH	HPDL	K	STEEL		6		K5-8.10	K5-8.10		
17	N	30X70	LH	H.M.	L	H.M.		5		K5-8.10	K5-8.10		
18	F	30X70	LH	HPDL	K	STEEL		6		K5-8.10	K5-8.10		
19	F	30X70	RH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
20	F	30X70	RH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
21	F	30X70	RH	HPDL	K	STEEL		3		K5-8.10	K5-8.10		
22	F	30X70	RH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
23	N	30X70	LH	HPDL	J	STEEL		3		K5-8.10	K5-8.10		
24	F	30X70	LH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
25	F	30X70	RH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
26	F	30X70	RH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
27	F	30X70	LH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
28	F	30X70	RH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
29	F	30X70	LH	HPDL	J	STEEL		5		K5-8.10	K5-8.10		
30	FG	30X70	RHR	ALUM	H	ALUM		1	INSUL - TEMP				
31	F	30X70		H.M.	L	H.M.		7					2
32	OH COIL	144X144		STEEL		STEEL		8					1
33	OH COIL	144X144		STEEL		STEEL		8					1
34	OH COIL	144X144		STEEL		STEEL		8					1
35	OH COIL	144X144		STEEL		STEEL		8					1
36	F	30X70		H.M.	L	H.M.		7					2
37	OH COIL	144X144		STEEL		STEEL		8					1

NOTE 1: OVERHEAD COILING SERVICE DOOR = OVERHEAD 626 STORMTITE. INSULATED, R-VALUE = 7.71, VARIABLE FREQUENCY DRIVE CONTROLLER, INTERIOR FACE OF WALL MOUNT, GALVANIZED STEEL CURTAIN, INTEGRATED BRAKE, MANUAL HAND CHAIN, WIRELESS SAFETY EDGE, PHOTOELECTRIC SAFETY SENSORS.

NOTE 2: INSULATED HOLLOW METAL DOOR. R-VALUE = 2.81





K5 TIMELY FRAMES

NTS

K9 HARDWARE SCHEDULE

N.T.S.

K11 DOOR AND FRAME SCHEDULE

N.T.S.

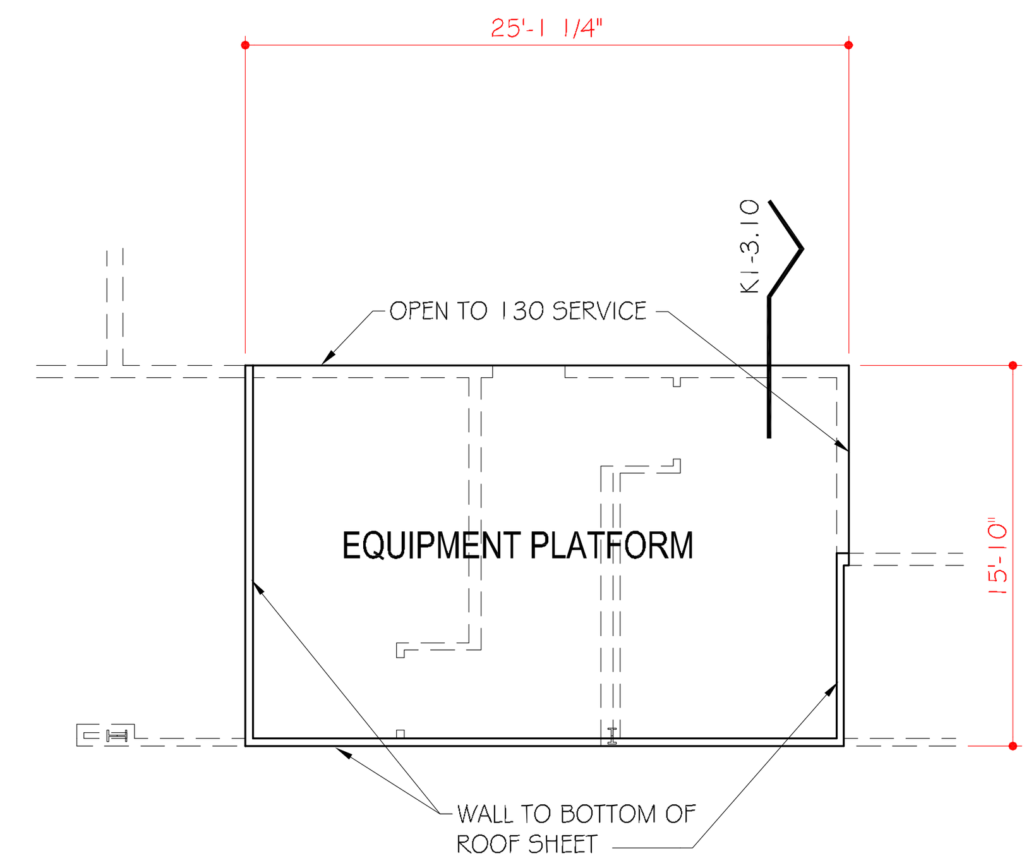
MCCATHREN ARCHITECTS, LLC
4400 Buffalo Gap Road, Ste. 2650
Abilene, Texas 79606
www.mccathren.com
325-670-9100
staff@mccathren.com

CARY SERVICES
909 PETROLEUM DRIVE

12-16-2022
12-17-2022

553-2-10.DWG

8.10



C1 EQUIPMENT PLATFORM
1/8" = 1'-0"

Room	Name	Floor: Carpet	Floor: Ceramic Tile	Floor: Vinyl Tile	Walls: Painted Gyp. Bd.	Walls: Ceramic Tile	Base: 4" Vinyl Cove	Ceiling: Susp. Acstc Tile	Ceiling: Exposed Structure	Ceiling: Painted Gyp. Bd.	Clg. Ht.	Notes
100	OFFICE			10	20		30	40			9'-10"	
101	OFFICE			10	20		30	40			9'-10"	
102	CORRIDOR			10	20		30	40		41	9'-10"	NOTE 1
103	OFFICE			10	20		30	40			9'-10"	
104	OFFICE			10	20		30	40			9'-10"	
105	OFFICE			10	20		30	40			9'-10"	
106	OFFICE			10	20		30	40			9'-10"	
107	OFFICE			10	20		30	40			9'-10"	
108	WORKROOM			10	20		30	40			9'-10"	
109	RECEPTION			10	20		30	40			9'-10"	
110	WAITING			10	20		30	40			9'-10"	
111	VESTIBULE	11			20		30	40			9'-10"	
112	BREAKROOM			10	20		30	40			9'-10"	NOTE 3
113	TRAINING			10	20		30	40			9'-10"	
114	WOMEN'S TOILET		12			21		40			8'-10"	NOTE 2
115	OFFICE			10	20		30	40			9'-10"	
116	CORRIDOR			10	20		30	40			8'-10"	

Room	Name	Floor: Carpet	Floor: Ceramic Tile	Floor: Vinyl Tile	Floor: Sealed Concrete	Walls: Painted Gyp. Bd.	Walls: Ceramic Tile	Walls: Steel Liner Panels	Base: 4" Vinyl Cove	Ceiling: Susp. Acstc Tile	Ceiling: Exposed Struct.	Ceiling: Painted Gyp. Bd.	Clg. Ht.	Notes
117	MEN'S TOILET		12				21			40			8'-10"	NOTE 2
118	OFFICE			10		20			30	40			9'-10"	
119	MECHANICAL			10		20			30	40			9'-10"	NOTES 3 AND 4
120	OFFICE			10		20			30	40			9'-10"	
121	FILES			10		20			30	40			9'-10"	
122	CORRIDOR			10		20			30	40		42	9'-10"	NOTE 1
123	OFFICE			10		20			30	40			9'-10"	
124	MEETING ROOM			10		20			30	40			9'-10"	
125	OFFICE			10		20			30	40			9'-10"	
126	OFFICE			10		20			30	40			9'-10"	
127	OFFICE			10		20			30	40			9'-10"	
128	OFFICE			10		20			30	40			9'-10"	
129	OFFICE			10		20			30	40				
130	SERVICE				○			○			○			12' NOMINAL HEIGHT

10. LVT - BASIS OF BID: MANNINGTON ADURA FLEX TILE CENTURY FLOORING, 18X18, GLUE DOWN.
11. CARPET TILE: MATSINC SUPERNOP 52 TILES, 24" X 24", "AUTUMN".
12. BASIS OF BID: FLORIDA TILE 28130/M12 SAND CASTLE MOSIAC. GROUT: CUSTOM BUILDING PRODUCTS #165 "DELOREAN GREY".

20. LIGHT ORANGE PEEL TEXTURE. COLOR = KELLY MOORE, SEMI-GLOSS, COLOR AS SELECTED BY ARCHITECT.
21. BASIS OF BID: FLORIDA TILE 28130 12X24 SAND CASTLE. VERTICAL STACK BOND. GROUT: CUSTOM BUILDING PRODUCTS #165 "DELOREAN GREY".
22.
23.

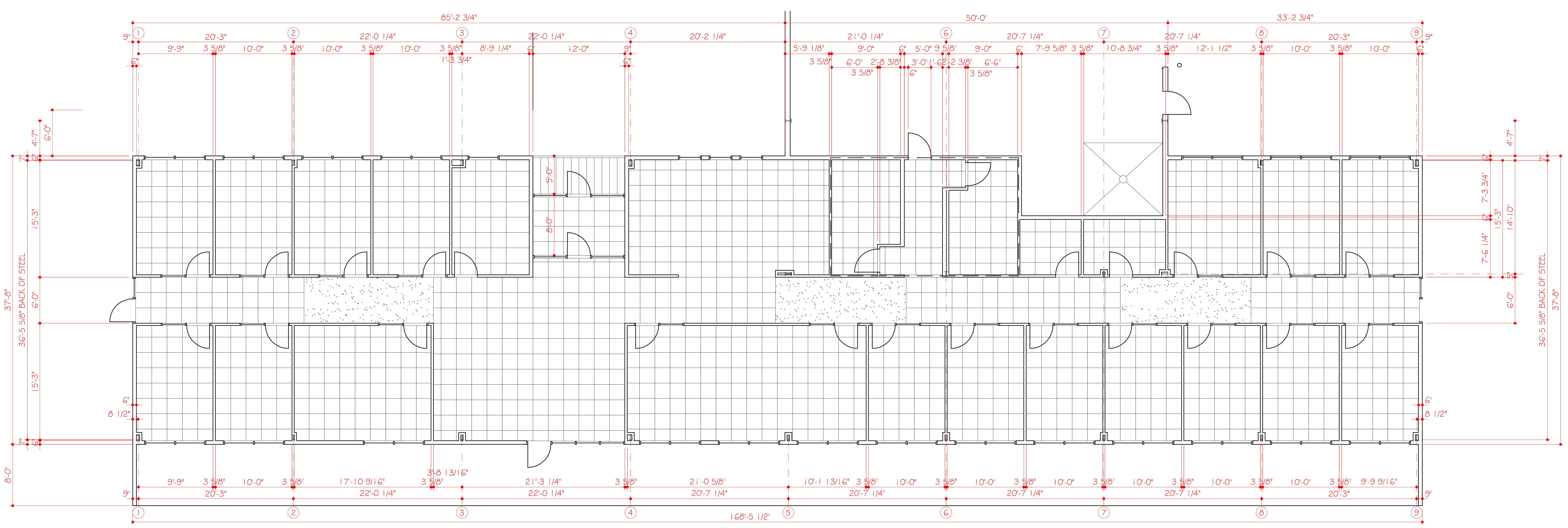
30. 4" COVE SET BASE. ROPPE. COLOR AS SELECTED BY ARCHITECT

40. USG 'SANDRIFT' 2X2 F.L. EDGE, WHITE, ON DONN CENTRICITEE GRID. ITEM #809, NRC = .70, CAC = .38. OWENS CORNING 6" UNFACED SONOBATTS.
41. COLOR = KELLY MOORE, SEMI-GLOSS, AS SELECTE BY ARCHITECT.

NOTES:

1. GYP. BD. CEILING HEIGHT = 9'-8 3/8"
2. AT CERAMIC TILE WALLS, PROVIDE 5/8" DENS SHIELD
3. AT WET WALLS, PROVIDE USG 5/8" ECO-SMART MOLD TOUGH PANELS
4. AT MOP SINK BACK AND SIDE WALLS, PROVIDE FRP PANELS TO 8'-0".

F6 ROOM FINISH SCHEDULE
N.T.S.



K3 REFLECTED CEILING PLAN
1/8" = 1'-0"

MCCATHREN ARCHITECTS, LLC
4400 Buffalo Gap Road, Ste. 2650
Abilene, Texas 79606
325-670-9100
www.mccathren.com
staff@mccathren.com

12-16-2022

CARY SERVICES
909 PETROLEUM DRIVE

12-16-2022
12-17-2022
2-6-2023
3-1-2023

553-2-10.DWG
9.10

GENERAL NOTES

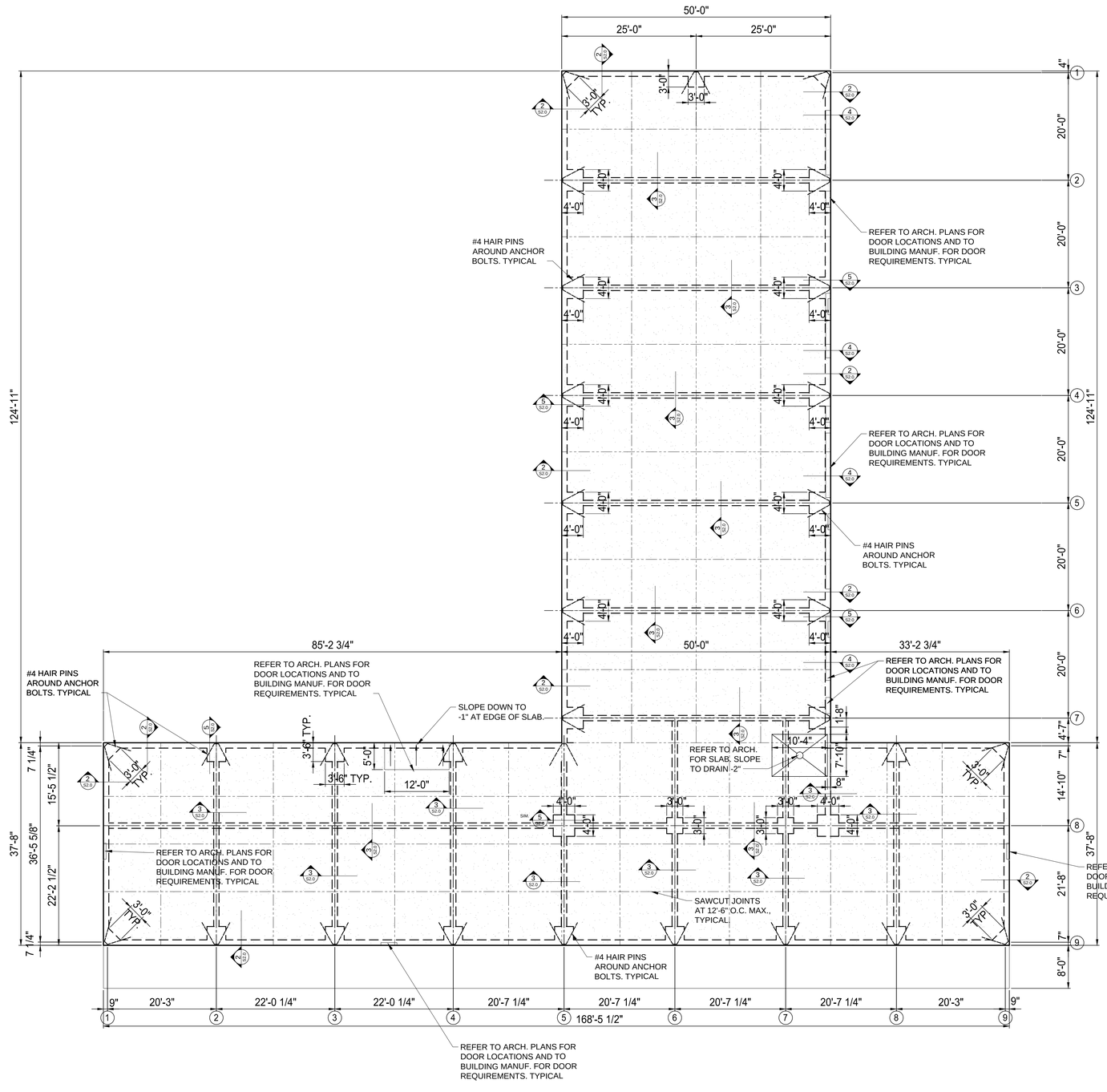
1. THIS PROJECT SHALL MEET ALL REQUIREMENTS OF THE 2021 INTERNATIONAL BUILDING CODE AND THE CITY OF ABILENE SUPPLEMENT.
2. FOUNDATION DESIGN IS BASED ON A SLAB ON GROUND FOUNDATION WITH A MOISTURE CONDITIONED SOILS WEIGHTED PI OF 12. GRADE BEAM MAXIMUM BEARING PRESSURE OF 1,500 PSF ON UNDISTURBED NATIVE SOILS EXTENDING 12" BELOW GRADE.
3. VERIFY ALL DIMENSIONS SHOWN ON THE DRAWINGS WITH THE BUILDING MANUFACTURER'S DRAWINGS AND EXISTING CONDITIONS. CONTRACTOR TO NOTIFY THE OWNERS REPRESENTATIVE OF ANY DISCREPANCIES.
4. ANCHOR BOLTS TO BE PLACE PER BUILDING MANUFACTURER'S DRAWINGS.

SITE PREPARATION

1. REMOVE ALL TREES, STUMPS, ROOTS, ROOT BALLS, BRUSH, VEGETATION AND OTHER DEBRIS. TOPSOIL SHALL BE STRIPPED TO A DEPTH OF 4 TO 6 INCHES. THE SITE LOOKS TO HAVE BEEN USED AS A DUMPING AREA FOR CONSTRUCTION DEBRIS. ANY CONSTRUCTION DEBRIS SHOULD BE EXCAVATED AND REMOVED.
2. FOLLOWING THE NECESSARY SITE CLEARING AND STRIPPING THE BUILDING PAD SITE SHOULD BE PROOF ROLLED WITH A LOADED TANDEM AXLE TRUCK TO LOCATE ANY SOFT OR UNSTABLE ARES. IF PRESENT, THESE SOFT OR LOOSE SOILS SHOULD BE REMOVED TO A STABLE SUBGRADE AND REPLACED WITH PROPERLY COMPACTED SELECT FILL MATERIAL. FOLLOWING PROOF ROLLING, THE SUBGRADE SHOULD BE SCARIFIED, MOISTURE CONDITIONED TO ABOVE OPTIMUM CONTENT, AND RECOMPACTED TO BETWEEN 95 AND 100 PERCENT STANDARD PROCTOR ASTM D 698.
3. THE BUILDING PAD SHOULD THEN BE BROUGHT TO ELEVATION USING SELECT FILL FREE OF ORGANICS AND OTHER DELETERIOUS MATERIALS WITH A MAXIMUM LIQUID LIMIT OF 30, A PLASTICITY INDEX BETWEEN 5 AND 12, AND HAVE A MAXIMUM PARTICLE SIZE OF 2 INCHES. THE SELECT FILL SHOULD ALSO MEET THE USCS CLASSIFICATION OF SC, GC OR CL. THE SELECT FILL SHOULD BE COMPACTED TO A MINIMUM OF 95 PERCENT STANDARD PROCTOR ASTM D 698 AT OR ABOVE OPTIMUM MOISTURE CONTENT. COMPACTED LIFT THICKNESS SHOULD NOT EXCEED 6 INCHES. WHERE CRUSHED LIMESTONE BASE IS USED FOR SELECT FILL THE BASE MATERIAL SHALL BE PLACED AT + OR – 2 PERCENT OF OPTIMUM MOISTURE.

FOUNDATION NOTES

1. CONCRETE BATCHING, MIXING, PLACING, HANDLING, TESTING, ETC. SHALL COMPLY WITH APPLICABLE PORTIONS OF ACI 301 – SPECIFICATIONS FOR STRUCTURAL CONCRETE AND ACI 318 - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
2. UTILITY EXCAVATIONS SHALL BE BACKFILLED WITH SELECT FILL AND COMPACTED AS SPECIFIED FOR THE BUILDING PAD.
3. CONCRETE SHALL BE OF A MIX DESIGN TO HAVE A 28-DAY COMPRESSIVE STRENGTH OF 3,500 PSI. CONCRETE DESIGN MIX SHALL BE PREPARED PER ACI-301, CEMENT SHALL BE ASTM C150 TYPE 1 OR 2, AGGREGATE SHALL BE ASTM C33, MAXIMUM SIZE OF 1 INCH AND A SLUMP BETWEEN 3 AND 5 INCHES.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.
5. LAP SPLICES SHALL BE 15" FOR #3'S, 20 INCHES FOR #4'S, 25" FOR #5'S, 30 FOR #6'S AND 35" FOR #7 BARS.
6. PLACE ALL REINFORCING ON PLASTIC OR METAL CHAIRS. BRICK OR OTHER POROUS MATERIAL IS NOT ACCEPTABLE.
7. PROVIDE #4 HAIRPIN BARS AROUND ANCHOR BOLTS. EACH LEG OF HAIRPIN SHALL BE 30" LONG.
8. INTERIOR CONCRETE SHALL BE FINISHED TO A HARD, STEEL TROWEL FINISH. EXTERIOR CONCRETE SHALL BE FINISHED WITH A NON-SLIP BROOM FINISH UNLESS NOTED OTHERWISE.
9. PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES. COVER FRESHLY FINISHED CONCRETE WITH A CURING COMPOUND PER MANUFACTURES DIRECTIONS. CURING COMPOUND SHALL BE COMPATIBLE WITH ALL FUTURE FLOOR FINISHES.
10. PROVIDE A SMOOTH RUBBED FINISH TO ALL EXPOSED TO VIEW FORMED SURFACES NOT LATER THAN 24 HOURS AFTER FORM REMOVAL.
11. SAWED JOINTS SHALL BE LOCATED AS GENERALLY SHOWN. JOINTS SHALL BE SPACED NO MORE THAN 15' ON CENTER. SAW JOINTS AS SOON AS SURFACE WILL NOT BE TORN, ABRADED OR OTHERWISE DAMAGED BY THE CUTTING ACTION, BUT NO LATER THAN 72 HOURS AFTER PACING OF THE CONCRETE. SAW CUTS SHALL BE 1/8" WIDE AND 1 1/2" DEEP.
12. FILL JOINTS WITH SIKAFLEX-1C OR OTHER APPROVED CAULKING SYSTEM.
13. COORDINATE DOOR SILL, PLUMBING AND ELECTRICAL LOCATIONS WITH ARCHITECTURAL AND OTHER DISCIPLINE DRAWINGS.



FOUNDATION PLAN

3/32" = 1 FOOT

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
www.mccathren.com
325-669-2584
staff@mccathren.com

Rosenbaum Engineering, PLLC
2326 Wyndham Ct.
Abilene, Texas 79606
325.669.2915
TBPE Registration #F-13243
Clint Rosenbaum, P.E. | clint@rosenbaumeng.com

CARY SERVICES
909 PETROLEUM DRIVE
909 PETROLEUM, BEING ALL OF LOT 1 - SECTION 3, BLOCK F, SOUTH TEXAWAY AND INDUSTRIAL BOULEVARD PLAZA ADDITION, CITY OF ABILENE, COUNTY OF TAYLOR, TEXAS

OWNER:
CARY FAMILY HOLDINGS
1244 IBERIS RD. S
TUSCOLA, TEXAS 79562

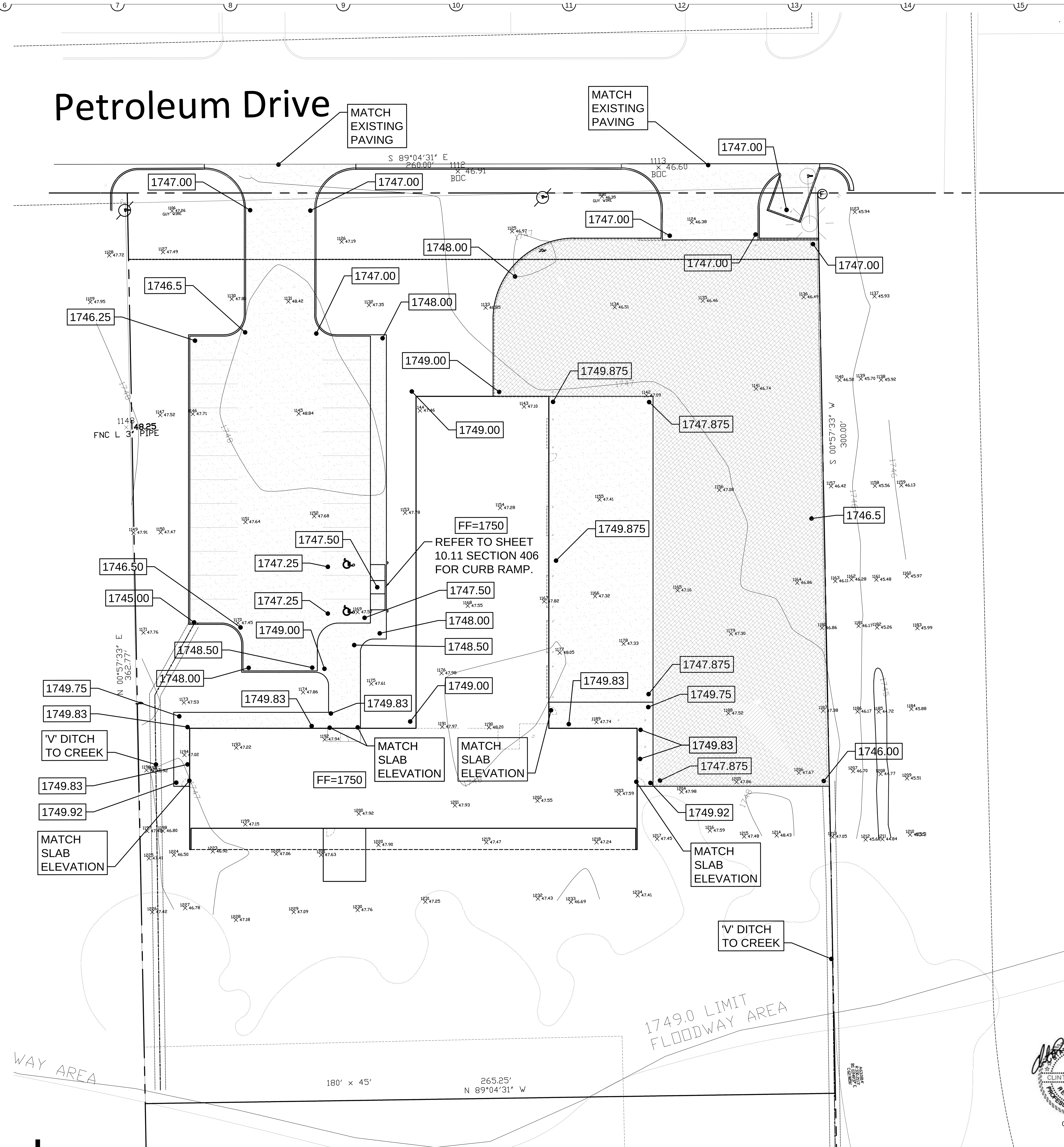
12-16-2022

STATE OF TEXAS
CLINT ROSENBAUM
6127
REGISTERED
PROFESSIONAL ENGINEER
02/22/2023

S1.0

LEGEND

1746.45	NEW SPOT ELEVATION
1130 47.80	EXISTING SPOT ELEVATION
	CONCRETE PAVEMENT
	LIMESTONE BASE



K7 GRADING PLAN

1" = 20'

SCALE:1"=20'

CLINT ROSENBAUM 61217 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS

02/22/2023

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
www.mccathren.com
325-669-2584
staff@mccathren.com

Rosenbaum Engineering, PLLC
2326 Wyndham Ct.
Abilene, Texas 79606
Clint Rosenbaum, P.E. | 325.669.2915
TBPE Registration #F-19243
clint@rosenbaumeng.com

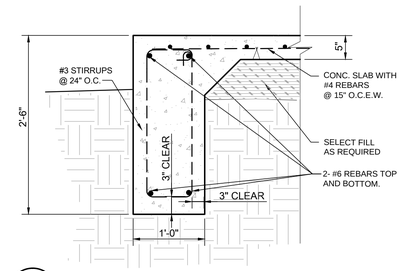
CARY SERVICES
909 PETROLEUM DRIVE

909 PETROLEUM, BEING ALL OF LOT 1, SECTION 3, BLOCK F, SOUTH TREADAWAY AND INDUSTRIAL BOULEVARD PLAZA ADDITION, CITY OF ABILENE, COUNTY OF TAYLOR, TEXAS

OWNER:
CARY FAMILY HOLDINGS
1244 IBERIS RD. S
TUSCOLA, TEXAS 79562

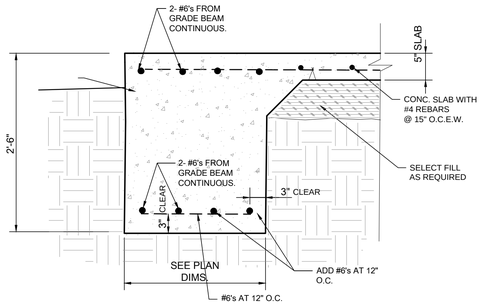
12-16-2022

1.2



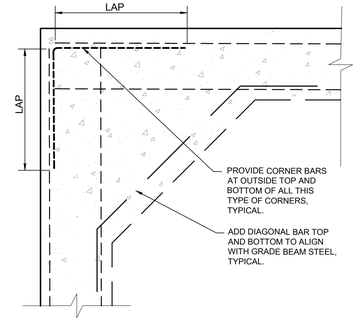
2 S2.0 SECTION

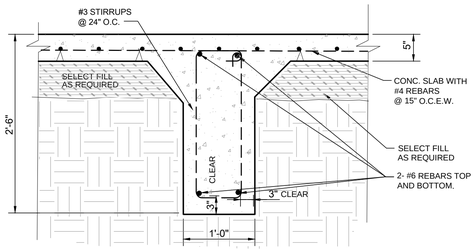
TYPICAL EXTERIOR BEAM



5 S2.0 SECTION

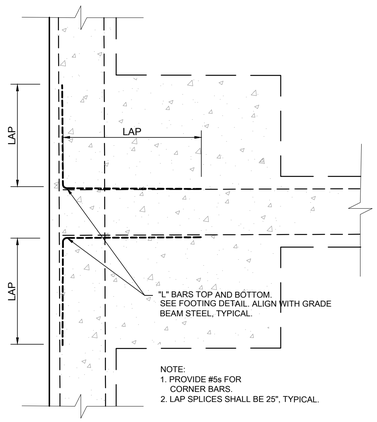
TYPICAL AT FOOTINGS

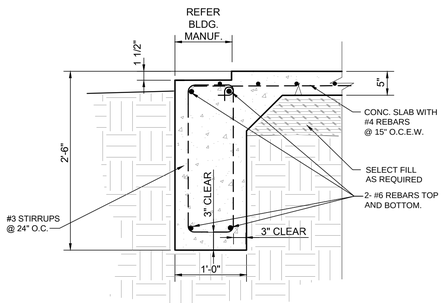




3 S2.0 SECTION

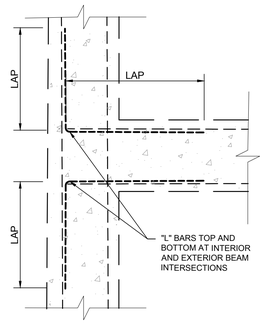
TYPICAL INTERIOR BEAM





4 S2.0 SECTION

TYPICAL AT ROLLUP DOORS, REFER TO ARCHITECTURAL



6 S2.0 DETAILS

TYPICAL AT INTERSECTIONS

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
www.mccathren.com
325-669-2584
staff@mccathren.com

Rosenbaum Engineering, PLLC
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12-16-2022

STATE OF TEXAS
CLINT ROSENBAUM
61217
REGISTERED
PROFESSIONAL ENGINEER
02/22/2023

... FOUNDATION DETAILS

S2.0

CHAPTER 3: BUILDING BLOCKS

301 General

301.1 Scope. The provisions of Chapter 3 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

302 Floor or Ground Surfaces

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

EXCEPTIONS:
1. Within animal containment areas, floor and ground surfaces shall not be required to be stable, firm, and slip resistant.
2. Areas of sport activity shall not be required to 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 (13 mm) 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.

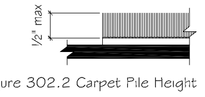


Figure 302.2 Carpet Pile Height

302.3 Openings. Openings in floor or ground surfaces shall not allow passage of a sphere more than 1/2 inch (13 mm) diameter except as allowed in 407.4.3, 409.4.3, 410.4, 810.5.3 and 810.10. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

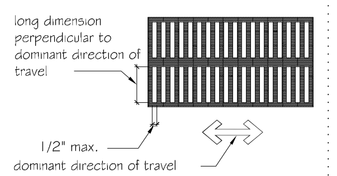


Figure 302.3 Elongated Openings in Floor or Ground Surfaces

303 Changes in Level

303.1 General. Where changes in level are permitted in floor or ground surfaces, they shall comply with 303.

EXCEPTIONS:
1. Animal containment areas shall not be required to comply with 303.
2. Areas of sport activity shall not be required to comply with 303.

303.2 Vertical. Changes in level of 1/4 inch (6.4 mm) high maximum shall be permitted to be vertical.


Figure 303.2 Vertical Change in Level

303.3 Beveled. Changes in level between 1/4 inch (6.4 mm) high minimum and 1/2 inch (13 mm) high maximum shall be beveled with a slope not steeper than 1:2.

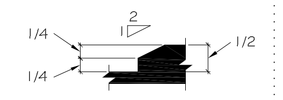


Figure 303.3 Beveled Change in Level

303.4 Ramps. Changes in level greater than 1/2 inch (13 mm) high shall be ramped, and shall comply with 405 or 406.

304 Turning Space

304.1 General. Turning space shall comply with 304.

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. 304.3.2.

304.3.1 Circular Space. The turning space shall be a space of 60 inches (1525 mm) 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 (1525 mm) square minimum with arms and base 36 inches (915 mm) wide minimum. Each arm of the T shall be clear of obstructions 12 inches (305 mm) minimum in each direction and the base shall be clear of obstructions 24 inches (610 mm) 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.

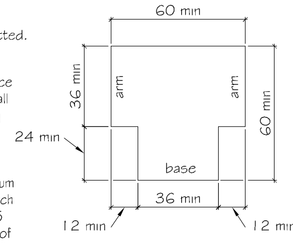


Figure 304.3.2 T-Shaped Turning Space

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

305 Clear Floor or Ground Space

305.1 General. Clear floor or ground space shall comply with 305.

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 (760 mm) minimum by 48 inches (1220 mm) minimum.

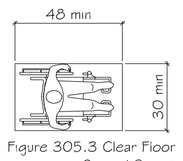


Figure 305.3 Clear Floor or Ground Space

305.4 Knee and Toe Clearance. Unless otherwise specified, clear floor or ground space shall be permitted to include knee and toe clearance complying with 306.

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

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.

305.7 Maneuvering Clearance. Where a clear floor or ground space is located in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearance shall be provided in accordance with 305.7.1 and 305.7.2.

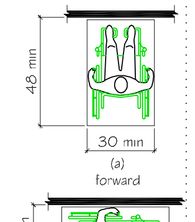


Figure 305.5 Position of Clear Floor or Ground Space

305.7.1 Parallel Approach. Alcoves shall be 60 inches (1525 mm) wide minimum where the depth exceeds 15 inches (380 mm).

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.

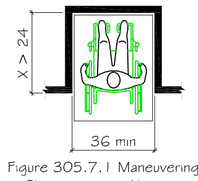


Figure 305.7.1 Maneuvering Clearance in an Alcove, Forward Approach

306.2 Toe Clearance.

306.2.1 General. Space under an element between the finish floor or ground and 9 inches (230 mm) 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 (635 mm) 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 (430 mm) minimum under the element.

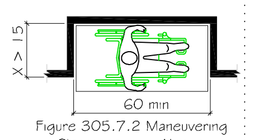


Figure 305.7.2 Maneuvering Clearance in an Alcove, Parallel Approach

306.2.4 Additional Clearance. Space extending greater than 6 inches (150 mm) beyond the available knee clearance at 9 inches (230 mm) above the finish floor or ground shall not be considered toe clearance.

306.2.5 Width. Toe clearance shall be 30 inches (760 mm) wide minimum.

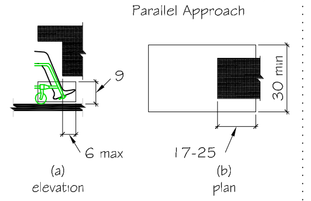


Figure 306.2 Toe Clearance

306.3 Knee Clearance.
306.3.1 General. Space under an element between 9 inches (230 mm) and 27 inches (685 mm) 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 (635 mm) maximum under an element at 9 inches (230 mm) above the finish floor or ground.

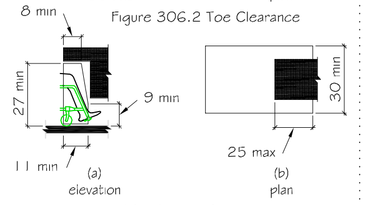


Figure 306.3 Knee Clearance

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 (280 mm) deep minimum at 9 inches (230 mm) above the finish floor or ground, and 8 inches (205 mm) deep minimum at 27 inches (685 mm) above the finish floor or ground.

306.3.4 Clearance Reduction. Between 9 inches (230 mm) and 27 inches (685 mm) above the finish floor or ground, the knee clearance shall be permitted to reduce at a rate of 1 inch (25 mm) in depth for each 6 inches (150 mm) in height.

306.3.5 Width. Knee clearance shall be 30 inches (760 mm) wide minimum.

307 Protruding Objects
307.1 General. Protruding objects shall comply with 307.

307.2 Protrusion Limits. Objects with leading edges more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the finish floor or ground shall protrude 4 inches (100 mm) maximum horizontally into the circulation path.
EXCEPTION: Handrails shall be permitted to protrude 4 1/2 inches (115 mm) maximum.

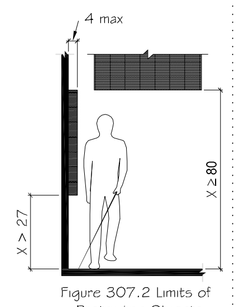


Figure 307.2 Limits of Protruding Objects

307.3 Post-Mounted Objects. Free-standing objects mounted on posts or pylons shall overhang circulation paths 12 inches (305 mm) maximum when located 27 inches (685 mm) minimum and 80 inches (2030 mm) 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 (305 mm), the lowest edge of such sign or obstruction shall be 27 inches (685 mm) maximum or 80 inches (2030 mm) 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.

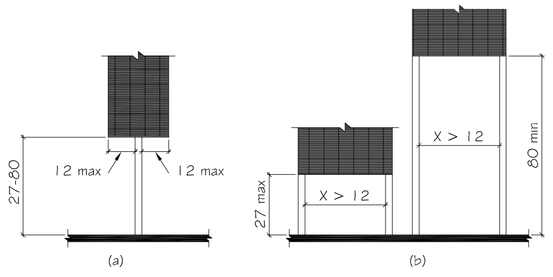


Figure 307.3 Post-Mounted Protruding Objects

307.4 Vertical Clearance. Vertical clearance shall be 80 inches (2030 mm) high minimum. Guardrails or other barriers shall be provided where the vertical clearance is less than 80 inches (2030 mm) high. The leading edge of such guardrail or barrier shall be located 27 inches (685 mm) maximum above the finish floor or ground.

EXCEPTION: Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the finish floor or ground.

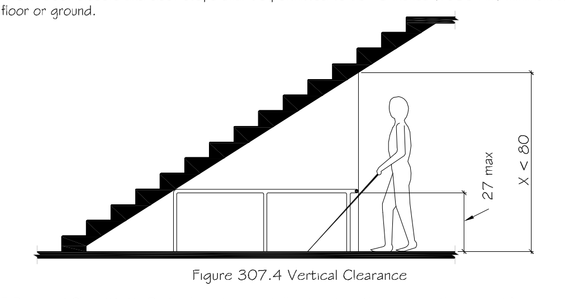


Figure 307.4 Vertical Clearance

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

308 Reach Ranges
308.1 General. Reach ranges shall comply with 308.

Children's Reach Ranges

Forward or Side Reach	High (maximum)	Low (minimum)
Ages 3 and 4	36 in (915 mm)	20 in (510 mm)
Ages 5 through 8	40 in (1015 mm)	18 in (455 mm)
Ages 9 through 12	44 in (1120 mm)	16 in (405 mm)

308.2 Forward Reach.
308.2.1 Unobstructed. Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) 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 (1220 mm) maximum where the reach depth is 20 inches (510 mm) maximum. Where the reach depth exceeds 20 inches (510 mm), the high forward reach shall be 44 inches (1120 mm) maximum and the reach depth shall be 25 inches (635 mm) maximum.

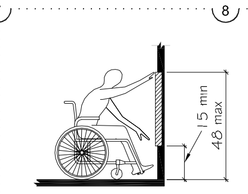


Figure 308.2.1 Obstructed Forward Reach

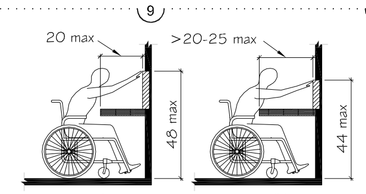


Figure 308.2.2 Obstructed High Forward Reach

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 (1220 mm) maximum and the low side reach shall be 15 inches (380 mm) minimum above the finish floor or ground.

EXCEPTIONS:
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 (255 mm) maximum.
2. Operable parts of fuel dispensers shall be permitted to be 54 inches (1370 mm) maximum measured from the surface of the vehicular way where fuel dispensers are installed on existing curbs.

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 (865 mm) maximum and the depth of the obstruction shall be 24 inches (610 mm) maximum. The high side reach shall be 48 inches (1220 mm) maximum for a reach depth of 10 inches (255 mm) maximum. Where the reach depth exceeds 10 inches (255 mm), the high side reach shall be 46 inches (1170 mm) maximum for a reach depth of 24 inches (610 mm) maximum.

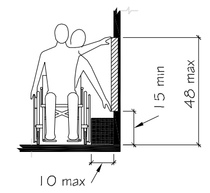


Figure 308.3.1 Unobstructed Side Reach

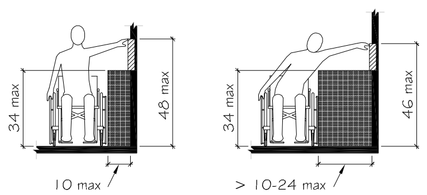


Figure 308.3.2 Obstructed High Side Reach

308.3.2 EXCEPTIONS:
1. The top of washing machines and clothes dryers shall be permitted to be 36 inches (915 mm) maximum above the finish floor.
2. Operable parts of fuel dispensers shall be permitted to be 54 inches (1370 mm) maximum measured from the surface of the vehicular way where fuel dispensers are installed on existing curbs.

309 Operable Parts
309.1 General. Operable parts shall comply with 309.

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 (22.2 N) maximum.

CHAPTER 4: ACCESSIBLE ROUTES

401 General

401.1 Scope. The provisions of Chapter 4 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

402 Accessible Routes
402.1 General. Accessible routes shall comply with 402.

402.2 Components. Accessible routes shall consist of one or more of the following components: walking surfaces with a running slope not steeper than 1:20, doorways, ramps, curb ramps excluding the flared sides, elevators, and platform lifts. All components of an accessible route shall comply with the applicable requirements of Chapter 4.

Advisory 402.2 Components. Walking surfaces must have running slopes not steeper than 1:20. Other components of accessible routes, such as ramps (405) and curb ramps (406), are permitted to be more steeply sloped.

403 Walking Surfaces
403.1 General. Walking surfaces that are a part of an accessible route shall comply with 403.

403.2 Floor or Ground Surface. Floor or ground surfaces shall comply with 302.
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.

403.5 Clearances. Walking surfaces shall provide clearances complying with 403.5.
EXCEPTION: Within employee work areas, clearances on common use circulation paths shall be permitted to be decreased by work area equipment provided that the decrease is essential to the function of the work being performed.

403.5.1 Clear Width. Except as provided in 403.5.2 and 403.5.3, the clear width of walking surfaces shall be 36 inches (915 mm) minimum.
EXCEPTION: The clear width shall be permitted to be reduced to 32 inches (815 mm) minimum for a length of 24 inches (610 mm) maximum provided that reduced width segments are separated by segments that are 48 inches (1220 mm) long minimum and 36 inches (915 mm) wide minimum.

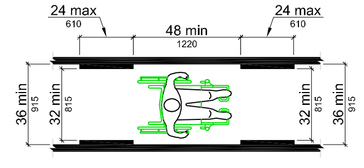
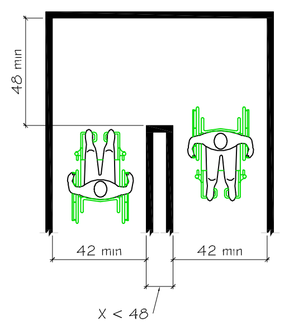


Figure 403.5.1 Clear Width of an Accessible Route

403.5.2 Clear Width at Turn. Where the accessible route makes a 180 degree turn around an element which is less than 48 inches (1220 mm) wide, clear width shall be 42 inches (1065 mm) minimum approaching the turn, 48 inches (1220 mm) minimum at the turn and 42 inches (1065 mm) minimum leaving the turn.
EXCEPTION: Where the clear width at the turn is 60 inches (1525 mm) minimum compliance with 403.5.2 shall not be required.



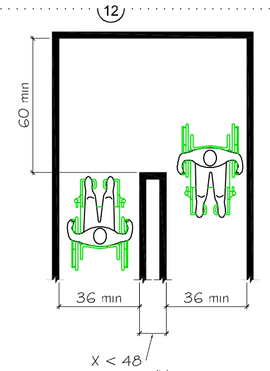


Figure 403.5.2 Clear Width at Turn

403.5.3 Passing Spaces. An accessible route with a clear width less than 60 inches (1525 mm) shall provide passing spaces at intervals of 200 feet (61 m) maximum. Passing spaces shall be either: a space 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum; or, an intersection of two walking surfaces providing a T-shaped space complying with 304.3.2 where the base and arms of the T-shaped space extend 48 inches (1220 mm) minimum beyond the intersection.

403.6 Handrails. Where handrails are provided along walking surfaces with running slopes not steeper than 1:20 they shall comply with 505.

404 Doors, Doorways, and Gates
404.1 General. Doors, doorways, and gates that are part of an accessible route shall comply with 404.
EXCEPTION: Doors, doorways, and gates designed to be operated only by security personnel shall not be required to comply with 404.2.7, 404.2.8, 404.2.9, 404.3.2 and 404.3.4 through 404.3.7.

404.2 Manual Doors, Doorways, and Manual Gates. Manual doors and doorways and manual gates intended for user passage shall comply with 404.2.

404.2.1 Revolving Doors, Gates, and Turnstiles. Revolving doors, revolving gates, and turnstiles shall not be part of an accessible route.

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.

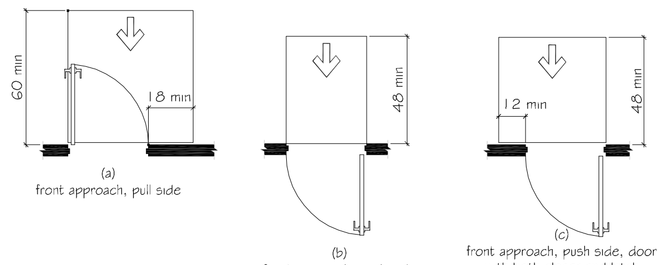
404.2.3 Clear Width. Door openings shall provide a clear width of 32 inches (815 mm) minimum. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Openings more than 24 inches (610 mm) deep shall provide a clear opening of 36 inches (915 mm) minimum. There shall be no projections into the required clear opening width lower than 34 inches (865 mm) above the finish floor or ground. Projections into the clear opening width between 34 inches (865 mm) and 80 inches (2030 mm) above the finish floor or ground shall not exceed 4 inches (100 mm).
EXCEPTIONS:
1. In alterations, a projection of 5/8 inch (16 mm) 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 (1980 mm) minimum above the finish floor or ground.

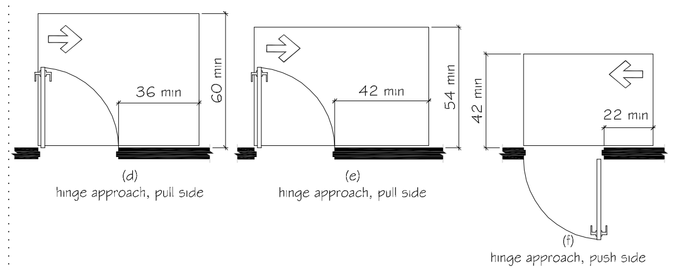
Figure 404.2.3 Clear Width of Doorways

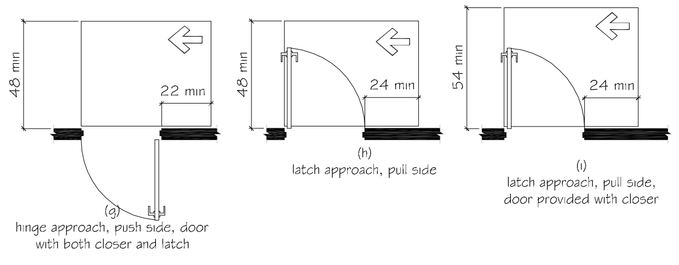
404.2.4 Maneuvering Clearances. Minimum maneuvering clearances at doors and gates shall comply with 404.2.4. Maneuvering clearances shall extend the full width of the doorway and the required latch side or hinge side clearance.

EXCEPTION: Entry doors to hospital patient rooms shall not be required to provide the clearance beyond the latch side of the door.

404.2.4.1 Swinging Doors and Gates. Swinging doors and gates shall have maneuvering clearances complying with Table 404.2.4.1. (as illustrated on Figures 404.2.4.1)







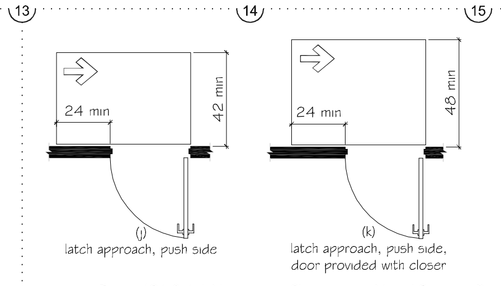
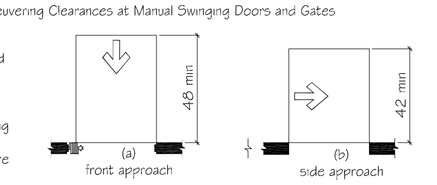


Figure 404.2.4.1 Maneuvering Clearances at Manual Swinging Doors and Gates

404.2.4.2 Doorways without Doors or Gates, Sliding Doors, and Folding Doors. Doorways less than 36 inches (915 mm) wide without doors or gates, sliding doors, or folding doors shall have maneuvering clearances complying with Table 404.2.4.2. (as illustrated on Figure 404.2.4.2)



404.2.4.3 Recessed Doors and Gates. Maneuvering clearances for forward approach shall be provided when any obstruction within 18 inches (455 mm) of the latch side of a doorway projects more than 8 inches (205 mm) beyond the face of the door, measured perpendicular to the face of the door or gate.

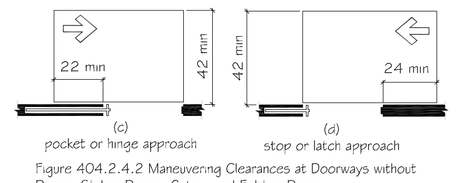


Figure 404.2.4.2 Maneuvering Clearances at Doorways without Doors, Sliding Doors, Gates, and Folding Doors

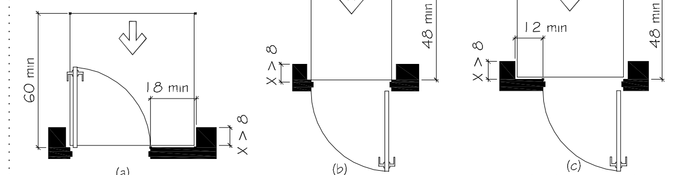


Figure 404.2.4.3 Maneuvering Clearances at Recessed Doors and Gates

404.2.4.4 Floor or Ground Surface. Floor or ground surface within required maneuvering clearances shall comply with 302. Changes in level are not permitted.
EXCEPTIONS:
1. Slopes not steeper than 1:48 shall be permitted.
2. Changes in level at thresholds complying with 404.2.5 shall be permitted.

404.2.5 Thresholds. Thresholds, if provided at doorways, shall be 1/2 inch (13 mm) high maximum. Raised thresholds and changes in level at doorways shall comply with 302 and 303.
EXCEPTION: Existing or altered thresholds 3/4 inch (19 mm) 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.

404.2.6 Doors in Series and Gates in Series. The distance between two hinged or pivoted doors in series and gates in series shall be 48 inches (1220 mm) minimum plus the width of doors or gates swinging into the space.

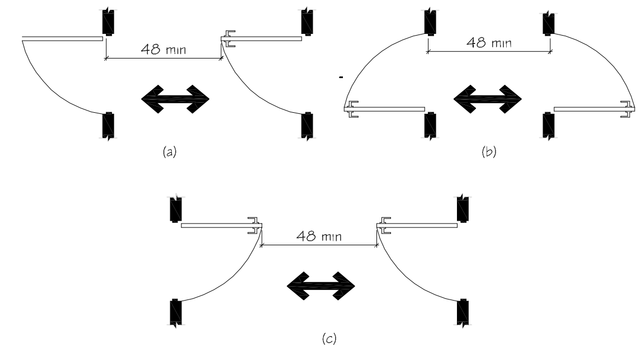


Figure 404.2.6 Doors in Series and Gates in Series

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 (865 mm) minimum and 48 inches (1220 mm) 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 (1370 mm) 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 Closing Speed. Door and gate closing speed shall comply with 404.2.8.

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 (22.2 N) maximum.
2. Sliding or folding doors: 5 pounds (22.2 N) 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.

404.2.10 Door and Gate Surfaces. Swinging door and gate surfaces within 10 inches (255 mm) of the finish floor or ground measured vertically shall have a smooth surface on the push side extending the full width of the door or gate. Parts creating horizontal or vertical joints in these surfaces shall be within 1/16 inch (1.6 mm) of the same plane as the other. Cavities created by added kick plates shall be capped.

EXCEPTIONS:
1. Sliding doors shall not be required to comply with 404.2.10.
2. Tempered glass doors without stiles and having a bottom rail or shoe with the top leading edge tapered at 60 degrees minimum from the horizontal shall not be required to meet the 10 inch (255 mm) bottom smooth surface height requirement.

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3. Doors and gates that do not extend to within 10 inches (255 mm) of the finish floor or ground shall not be required to comply with 404.2.10.
4. Existing doors and gates without smooth surfaces within 10 inches (255 mm) of the finish floor or ground shall not be required to provide smooth surfaces complying with 404.2.10 provided that if added kick plates are installed, cavities created by such kick plates are capped

404.2.11 Vision Lights. Doors, gates, and side lights adjacent to doors or gates, containing one or more glazing panels that permit viewing through the panels shall have the bottom of at least one glazed panel located 43 inches (1090 mm) maximum above the finish floor.
EXCEPTION: Vision lights with the lowest part more than 66 inches (1675 mm) from the finish floor or ground shall not be required to comply with 404.2.11.

404.3 Automatic and Power-Assisted Doors and Gates. Automatic doors and automatic gates shall comply with 404.3. Full-powered automatic doors shall comply with ANSI/BHMA A156.10 (incorporated by reference, see "Referenced Standards" in Chapter 1). Low-energy and power-assisted doors shall comply with ANSI/BHMA A156.19 (1997 or 2002 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1).

404.3.1 Clear Width. Doorways shall provide a clear opening of 32 inches (815 mm) minimum in power-on and power-off mode. The minimum clear width for automatic door systems in a doorway shall be based on the clear opening provided by all leaves in the open position.

404.3.2 Maneuvering Clearance. Clearances at power-assisted doors and gates shall comply with 404.2.4. Clearances at automatic doors and gates without standby power and serving an accessible means of egress shall comply with 404.2.4.

EXCEPTION: Where automatic doors and gates remain open in the power-off condition, compliance with 404.2.4 shall not be required.

404.3.3 Thresholds. Thresholds and changes in level at doorways shall comply with 404.2.5.

404.3.4 Doors in Series and Gates in Series. Doors in series and gates in series shall comply with 404.2.6.

404.3.5 Controls. Manually operated controls shall comply with 309. The clear floor space adjacent to the control shall be located beyond the arc of the door swing.

404.3.6 Break Out Opening. Where doors and gates without standby power are a part of a means of egress, the clear break out opening at swinging or sliding doors and gates shall be 32 inches (815 mm) minimum when operated in emergency mode.
EXCEPTION: Where manual swinging doors and gates comply with 404.2 and serve the same means of egress compliance with 404.3.6 shall not be required.

404.3.7 Revolving Doors, Revolving Gates, and Turnstiles. Revolving doors, revolving gates, and turnstiles shall not be part of an accessible route.

405 Ramps
405.1 General. Ramps on accessible routes shall comply with 405.
EXCEPTION: In assembly areas, aisle ramps adjacent to seating and not serving elements required to be on an accessible route shall not be required to comply with 405.

405.2 Slope. Ramp runs shall have a running slope not steeper than 1:12.
EXCEPTION: In existing sites, buildings, and facilities, ramps shall be permitted to have running slopes steeper than 1:12 complying with Table 405.2 where such slopes are necessary due to space limitations.

Table 405.2 Maximum Ramp Slope and Rise for Existing Sites, Buildings, and Facilities	
Slope	Maximum Rise
Steeper than 1:10 but not steeper than 1:8	3 inches (75 mm)
Steeper than 1:12 but not steeper than 1:10	6 inches (150 mm)

(A slope steeper than 1:8 is prohibited.)

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

405.4 Floor or Ground Surfaces. Floor or ground surfaces of ramp runs shall comply with 302. Changes in level other than the running slope and cross slope are not permitted on ramp runs.

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 (915 mm) minimum.
EXCEPTION: Within employee work areas, the required clear width of ramps that are a part of common use circulation paths shall be permitted to be decreased by work area equipment provided that the decrease is essential to the function of the work being performed.

405.6 Rise. The rise for any ramp run shall be 30 inches (760 mm) maximum.

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

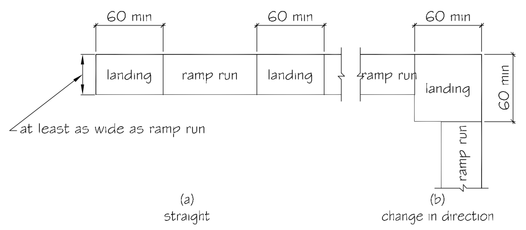

Figure 405.7 Ramp Landings

405.7.1 Slope. Landings shall comply with 302. Changes in level are not permitted.
EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

405.7.2 Width. The landing clear width shall be at least as wide as the widest ramp run leading to the landing.

405.7.3 Length. The landing clear length shall be 60 inches (1525 mm) long minimum.

405.7.4 Change in Direction. Ramps that change direction between runs at landings shall have a clear landing 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum.

405.7.5 Doorways. Where doorways are located adjacent to a ramp landing, maneuvering clearances required by 404.2.4 and 404.3.2 shall be permitted to overlap the required landing area.

405.8 Handrails. Ramp runs with a rise greater than 6 inches (150 mm) shall have handrails complying with 505.

EXCEPTION: Within employee work areas, handrails shall not be required where ramps that are part of common use circulation paths are designed to permit the installation of handrails complying with 505. Ramps not subject to the exception to 405.5 shall be designed to maintain a 36 inch (915 mm) minimum clear width when handrails are installed.

405.9 Edge Protection. Edge protection complying with 405.9.1 or 405.9.2 shall be provided on each side of ramp runs and at each side of ramp landings.

EXCEPTION:
1. Edge protection shall not be required on ramps that are not required to have handrails and have sides complying with 406.3.
2. Edge protection shall not be required on the sides of ramp landings serving an adjoining ramp run or stairway.
3. Edge protection shall not be required on the sides of ramp landings having a vertical drop-off of 1/2 inch (13 mm) maximum within 10 inches (255 mm) horizontally of the minimum landing area specified in 405.7.

405.9.1 Extended Floor or Ground Surface. The floor or ground surface of the ramp run or landing shall extend 12 inches (305 mm) minimum beyond the inside face of a handrail complying with 505.

405.9.2 Curb or Barrier. A curb or barrier shall be provided that prevents the passage of a 4 inch (100 mm) diameter sphere, where any portion of the sphere is within 4 inches (100 mm) of the finish floor or ground surface.

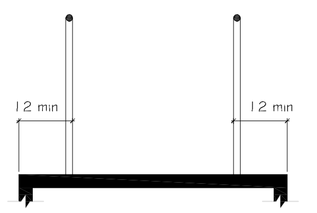

Figure 405.9.1 Extended Floor or Ground Surface Edge Protection

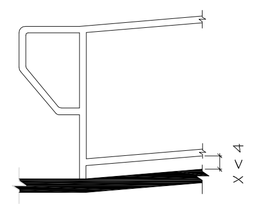

Figure 405.9.2 Curb or Barrier Edge Protection

405.10 Wet Conditions. Landings subject to wet conditions shall be designed to prevent the accumulation of water.

406 Curb Ramps

406.1 General. Curb ramps on accessible routes shall comply with 406, 405.2 through 405.5, and 405.10.

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.

406.3 Sides of Curb Ramps. Where provided, curb ramp flares shall not be steeper than 1:10.

406.4 Landings. Landings shall be provided at the tops of curb ramps. The landing clear length shall be 36 inches (915 mm) minimum. The landing clear width shall be at least as wide as the curb ramp, excluding flared sides, leading to the landing.
EXCEPTION: In alterations, where there is no landing at the top of curb ramps, curb ramp flares shall be provided and shall not be steeper than 1:12.

406.5 Location. Curb ramps and the flared sides of curb ramps shall be located so that they do not project into vehicular traffic lanes, parking spaces, or parking access aisles. Curb ramps at marked crossings shall be wholly contained within the markings, excluding any flared sides.

406.6 Diagonal Curb Ramps. Diagonal or corner type curb ramps with returned curbs or other well-defined edges shall have the edges parallel to the direction of pedestrian flow. The bottom of diagonal curb ramps shall have a clear space 48 inches (1220 mm) minimum outside active traffic lanes of the roadway.

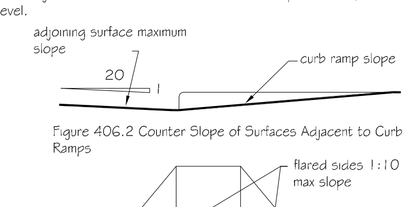

Figure 406.2 Counter Slope of Surfaces Adjacent to Curb Ramps

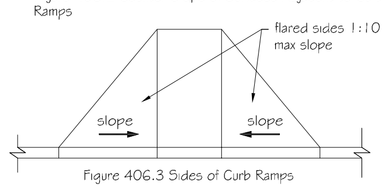

Figure 406.3 Sides of Curb Ramps

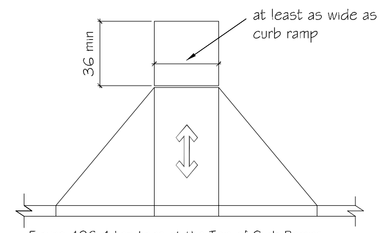

Figure 406.4 Landings at the Top of Curb Ramps

Diagonal curb ramps provided at marked crossings shall provide the 48 inches (1220 mm) minimum clear space within the markings. Diagonal curb ramps with flared sides shall have a segment of curb 24 inches (610 mm) long minimum located on each side of the curb ramp and within the marked crossing.

406.7 Islands. Raised islands in crossings shall be cut through level with the street or have curb ramps at both sides. Each curb ramp shall have a level area 48 inches (1220 mm) long minimum by 36 inches (915 mm) wide minimum at the top of the curb ramp in the part of the island intersected by the crossings. Each 48 inch (1220 mm) minimum by 36 inch (915 mm) minimum area shall be oriented so that the 48 inch (1220 mm) minimum length is in the direction of the running slope of the curb ramp it serves. The 48 inch (1220 mm) minimum by 36 inch (915 mm) minimum areas and the accessible route shall be permitted to overlap.

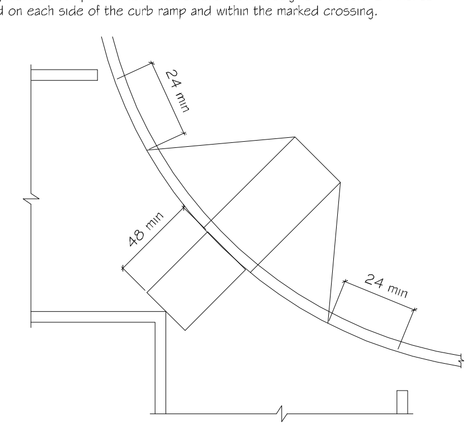

Figure 406.6 Diagonal or Corner Type Curb Ramps

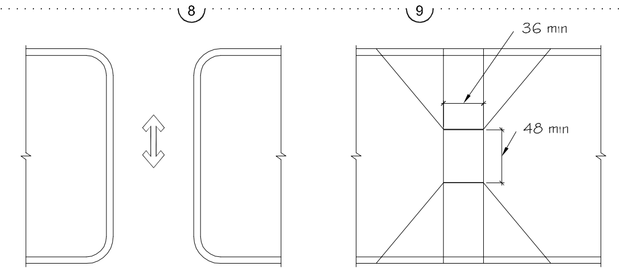

Figure 406.7 Islands in Crossings

CHAPTER 5: GENERAL SITE AND BUILDING ELEMENTS

501 General
501.1 Scope. The provisions of Chapter 5 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

502 Parking Spaces

502.1 General. Car and van parking spaces shall comply with 502. Where parking spaces are marked with lines, width measurements of parking spaces and access aisles shall be made from the centerline of the markings.
EXCEPTION: Where parking spaces or access aisles are not adjacent to another parking space or access aisle, measurements shall be permitted to include the full width of the line defining the parking space or access aisle.

502.2 Vehicle Spaces. Car parking spaces shall be 96 inches (2440 mm) wide minimum and van parking spaces shall be 132 inches (3350 mm) 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 (2440 mm) wide minimum where the access aisle is 96 inches (2440 mm) wide minimum.

502.3 Access Aisle. Access aisles serving parking spaces shall comply with 502.3. Access aisles shall adjoin an accessible route. Two parking spaces shall be permitted to share a common access aisle.

502.3.1 Width. Access aisles serving car and van parking spaces shall be 60 inches (1525 mm) wide minimum.

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

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

502.3.4 Location. Access aisles shall not overlap the vehicular way. Access aisles shall be permitted to be placed on either side of the parking space except for angled van parking spaces which shall have access aisles located on the passenger side of the parking spaces.

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 (2490 mm) 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 (1525 mm) minimum above the finish floor or ground surface measured to the bottom of the sign.

502.7 Relationship to Accessible Routes. Parking spaces and access aisles shall be designed so that cars and vans, when parked, cannot obstruct the required clear width of adjacent accessible routes.

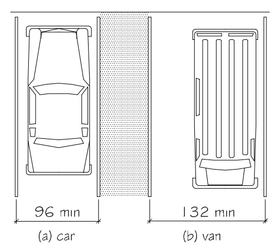

Figure 502.2 Vehicle Parking Spaces

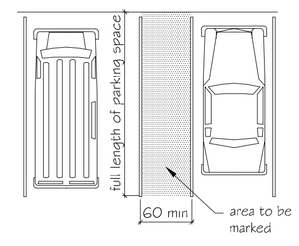

Figure 502.3 Parking Space Access Aisle

503 Passenger Loading Zones
503.1 General. Passenger loading zones shall comply with 503.

503.2 Vehicle Pull-Up Space. Passenger loading zones shall provide a vehicular pull-up space 96 inches (2440 mm) wide minimum and 20 feet (6100 mm) long minimum.

503.3 Access Aisle. Passenger loading zones shall provide access aisles complying with 503 adjacent to the vehicle pull-up space. Access aisles shall adjoin an accessible route and shall not overlap the vehicular way.
503.3.1 Width. Access aisles serving vehicle pull-up spaces shall be 60 inches (1525 mm) 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.

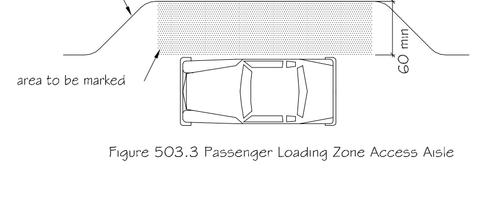

Figure 503.3 Passenger Loading Zone Access Aisle

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 (2895 mm) minimum.

504 Stairways
504.1 General. Stairs shall comply with 504.

504.2 Treads and Risers. All steps on a flight of stairs shall have uniform riser heights and uniform tread depths. Risers shall be 4 inches (100 mm) high minimum and 7 inches (180 mm) high maximum. Treads shall be 11 inches (280 mm) deep minimum.

504.3 Open Risers. Open risers are not permitted.

504.4 Tread Surface. Stair treads shall comply with 302. Changes in level are not permitted.
EXCEPTION: Treads shall be permitted to have a slope not steeper than 1:48.

504.5 Nosings. The radius of curvature at the leading edge of the tread shall be 1/2 inch (13 mm) maximum. Nosings that project beyond risers shall have the underside of the leading edge curved or beveled. Risers shall be permitted to slope under the tread at an angle of 30 degrees maximum from vertical. The permitted projection of the nosing shall extend 1 1/2 inches (38 mm) maximum over the tread below.

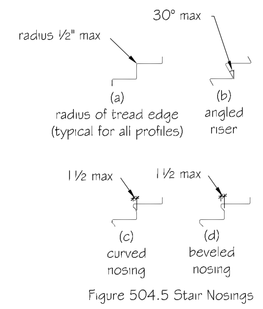

Figure 504.5 Stair Nosings

504.6 Handrails. Stairs shall have handrails complying with 505.

504.7 Wet Conditions. Stair treads and landings subject to wet conditions shall be designed to prevent the accumulation of water.

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 with 505.

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.

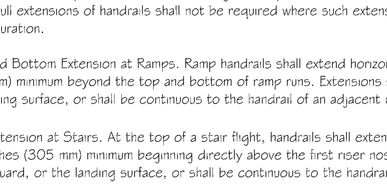

Figure 505.4 Handrail Height

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

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 (38 mm) 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 (3.2 mm) for each 1/2 inch (13 mm) of additional handrail perimeter dimension that exceeds 4 inches (100 mm).

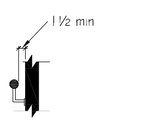

Figure 505.5 Handrail Clearance

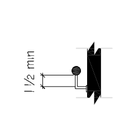

Figure 505.6 Horizontal Projections Below Gripping Surface

505.7 Cross Section. Handrail gripping surfaces shall have a cross section complying with 505.7.1 or 505.7.2.

505.7.1 Circular Cross Section. Handrail gripping surfaces with a circular cross section shall have an outside diameter of 1 1/4 inches (32 mm) minimum and 2 inches (51 mm) 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 (100 mm) minimum and 6 1/4 inches (160 mm) maximum, and a cross-section dimension of 2 1/4 inches (57 mm) maximum.

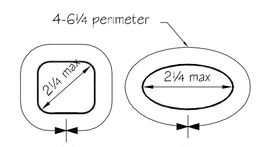

Figure 505.7.2 Handrail Non-Circular Cross Section

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 (305 mm) 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.

505.10.2 Top Extension at Stairs. At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches (305 mm) 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.

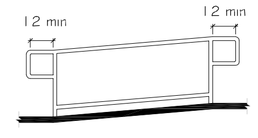

Figure 505.10.1 Top and Bottom Handrail Extension at Ramps

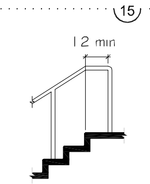

Figure 505.10.2 Top Handrail Extension at Stairs

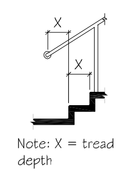

Figure 505.10.3 Bottom Handrail Extension at Stairs

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.

CHAPTER 6: PLUMBING ELEMENTS AND FACILITES

601 General
601.1 Scope. The provisions of Chapter 6 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

602 Drinking Fountains
602.1 General. Drinking fountains shall comply with 307 and 602.

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 (760 mm) maximum above the finish floor or ground and is 3 1/2 inches (90 mm) 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 (915 mm) maximum above the finish floor or ground.

602.5 Spout Location. The spout shall be located 15 inches (380 mm) minimum from the vertical support and 5 inches (125 mm) maximum from the front edge of the unit, including bumpers.

602.6 Water Flow. The spout shall provide a flow of water 4 inches (100 mm) high minimum and shall be located 5 inches (125 mm) maximum from the front of the unit. The angle of the water stream shall be measured horizontally relative to the front face of the unit. Where spouts are located less than 3 inches (75 mm) of the front of the unit, the angle of the water stream shall be 30 degrees maximum. Where spouts are located between 3 inches (75 mm) and 5 inches (125 mm) maximum from the front of the unit, the angle of the water stream shall be 15 degrees maximum

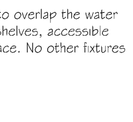

Figure 602.5 Drinking Fountain Spout Location

602.7 Drinking Fountains for Standing Persons. Spout outlets of drinking fountains for standing persons shall be 38 inches (965 mm) minimum and 43 inches (1090 mm) maximum above the finish floor or ground.

603 Toilet and Bathing Rooms
603.1 General. Toilet and bathing rooms shall comply with 603.

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 (1015 mm) 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 (890 mm) maximum above the finish 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 (1015 mm) minimum and 48 inches (1220 mm) maximum above the finish floor.

604 Water Closets and Toilet Compartments

604.1 General. Water closets and toilet compartments shall comply with 604.2 through 604.8.
EXCEPTION: Water closets and toilet compartments for children's use shall be permitted to comply with 604.9.

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 (405 mm) minimum to 18 inches (455 mm) maximum from the side wall or partition, except that the water closet shall be 17 inches (430 mm) minimum and 19 inches (485 mm) 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.

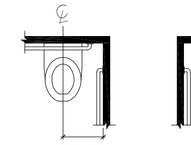

Figure 604.2 Water Closet Location

604.3 Clearance. Clearances around water closets and in toilet compartments shall comply with 604.3.

604.3.1 Size. Clearance around a water closet shall be 60 inches (1525 mm) minimum measured perpendicular from the side wall and 56 inches (1420 mm) 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.

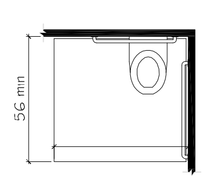

Figure 604.3.1 Size of Clearance at Water Closets

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
325-669-2584
staff@mccathren.com
www.mccathren.com

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CARY SERVICES
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K1 ACCESSIBILITY STANDARDS APPLICABLE TO ALL TRADES.
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553-10-10
10.11

604.4 Seats. The seat height of a water closet above the finish floor shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum measured to the top of the seat. Seats shall not be sprung to return to a lifted position.

EXCEPTIONS:
1. A water closet in a toilet room for a single occupant accessed only through a private office and not for common use or public use shall not be required to comply with 604.4.

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.
EXCEPTIONS:
1. Grab bars shall not be required to be installed in a toilet room for a single occupant accessed only through a private office and not for common use or public use provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with 604.5.

3. In detention or correction facilities, grab bars shall not be required to be installed in housing or holding cells that are specially designed without protrusions for purposes of suicide prevention.

604.5.1 Side Wall. The side wall grab bar shall be 42 inches (1065 mm) long minimum, located 12 inches (305 mm) maximum from the rear wall and extending 54 inches (1370 mm) minimum from the rear wall.

604.5.2 Rear Wall. The rear wall grab bar shall be 36 inches (915 mm) long minimum and extend from the centerline of the water closet 12 inches (305 mm) minimum on one side and 24 inches (610 mm) minimum on the other side.
EXCEPTIONS:
1. The rear grab bar shall be permitted to be 24 inches (610 mm) long minimum, centered on the water closet,

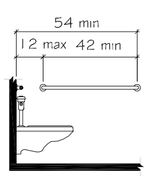


Figure 604.5.1 Side Wall Grab Bar at Water Closets

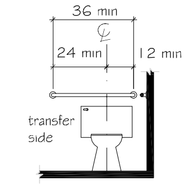


Figure 604.5.2 Rear Wall Grab Bar at Water Closets

where wall space does not permit a length of 36 inches (915 mm) 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 complying with 604.8.2.

604.7 Dispensers. Toilet paper dispensers shall comply with 309.4 and shall be 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 15 inches (380 mm) minimum and 48 inches (1220 mm) 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.

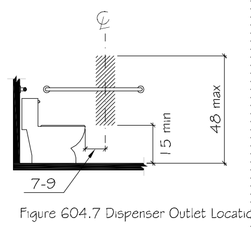
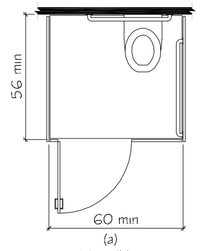


Figure 604.7 Dispenser Outlet Location

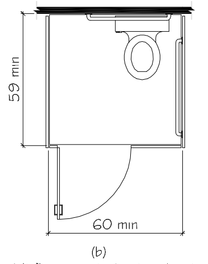
604.8 Toilet Compartments. Wheelchair accessible toilet compartments shall meet the requirements of 604.8.1 and 604.8.3. Compartments containing more than one plumbing fixture shall comply with 603. Ambulatory accessible compartments shall comply with 604.8.2 and 604.8.3.

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 (1525 mm) wide minimum measured perpendicular to the side wall, and 56 inches (1420 mm) deep minimum for wall hung water closets and 59 inches (1500 mm) deep minimum for floor mounted water closets measured perpendicular to the rear wall. Wheelchair accessible compartments for children's use shall be 60 inches (1525 mm) wide minimum measured perpendicular to the side wall, and 59 inches (1500 mm) deep minimum for wall hung and floor mounted water closets measured perpendicular to the rear wall.



(a)
adult wall hung water closet



(b)
adult floor mounted water closet and children's water closet

Figure 604.8.1.1 Size of Wheelchair Accessible Toilet Compartment

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 (1065 mm) 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 (100 mm) 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 (100 mm) 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.

604.8.1.3 Approach. Compartments shall be arranged for left-hand or right-hand approach to the water closet.

604.8.1.4 Toe Clearance. The front partition and at least one side partition shall provide a toe clearance of 9 inches (230 mm) minimum above the finish floor and 6 inches (150 mm) 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 (305 mm) minimum above the finish floor.
EXCEPTION: Toe clearance at the front partition is not required in a compartment greater than 62 inches (1575 mm) deep with a wall-hung water closet or 65 inches (1650 mm) deep with a floor-mounted water closet. Toe clearance at the side partition is not required in a compartment greater than 66 inches (1675 mm) wide. Toe clearance at the front partition is not required in a compartment for children's use that is greater than 65 inches (1650 mm) deep.

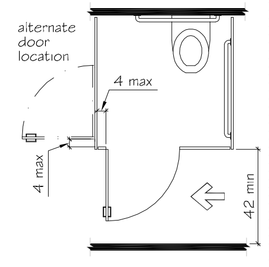


Figure 604.8.1.2 Wheelchair Accessible Toilet Compartment Doors

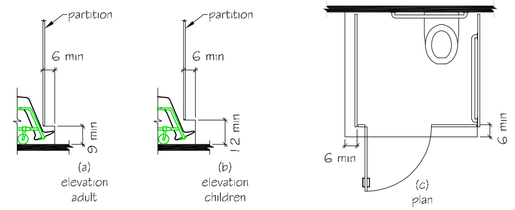


Figure 604.8.1.4 Wheelchair Accessible Toilet Compartment Toe Clearance

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.

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 (1015 mm) minimum and 48 inches (1220 mm) maximum above the finish floor.

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

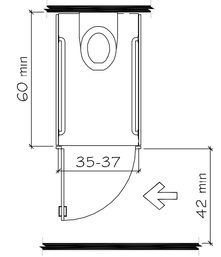


Figure 604.8.2 Ambulatory Accessible Toilet Compartment

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"	12" to 15"	15" to 18"
Toilet Seat Height	11" to 12"	12" to 15"	15" to 17"
Grab Bar Height	18" to 20"	20" to 25"	25" to 27"
Dispenser Height	14"	14" to 17"	17" to 19"

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 (305 mm) minimum and 18 inches (455 mm) maximum from the side wall or partition, except that the water closet shall be 17 inches (430 mm) minimum and 19 inches (485 mm) 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 (280 mm) minimum and 17 inches (430 mm) 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 (915 mm) 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 (180 mm) minimum and 9 inches (230 mm) maximum in front of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 14 inches (355 mm) minimum and 19 inches (485 mm) maximum above the finish floor. There shall be a clearance of 1 1/2 inches (38 mm) minimum below the grab bar. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow.

604.9.7 Toilet Compartments. Toilet compartments shall comply with 604.8.

605 Urinals

605.1 General. Urinals shall comply with 605.

605.2 Height and Depth. Urinals shall be the stall-type or the wall-hung type with the rim 17 inches (430 mm) maximum above the finish floor or ground. Urinals shall be 13 1/2 inches (345 mm) deep minimum measured from the outer face of the urinal rim to the back of the fixture.

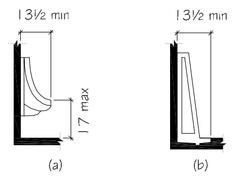


Figure 605.2 Height and Depth of Urinals

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
606.1 General. Lavatories and sinks shall comply with 606.

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. Residential requirements not included.
4. A knee clearance of 24 inches (610 mm) 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 (785 mm) 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 slip 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 (865 mm) maximum above the finish floor or ground.
EXCEPTIONS:
1. A lavatory in a toilet 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 comply with 606.3.

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

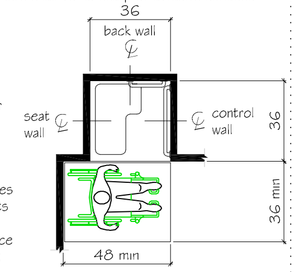
606.5 Exposed Pipes and Surfaces. Water supply and drain pipes under lavatories and sinks shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under lavatories and sinks.

608 Shower Compartments

608.1 General. Shower compartments shall comply with 608.

608.2 Size and Clearances for Shower Compartments. Shower compartments shall have sizes and clearances complying with 608.2.

608.2.1 Transfer Type Shower Compartments. Transfer type shower compartments shall be 36 inches (915 mm) by 36 inches (915 mm) clear inside dimensions measured at the center points of opposing sides and shall have a 36 inch (915 mm) wide minimum entry on the face of the shower compartment. Clearance of 36 inches (915 mm) wide minimum by 48 inches (1220 mm) long minimum measured from the control wall shall be provided.

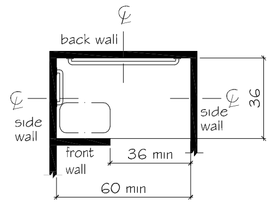


Note: inside finished dimensions measured at the center points of opposing sides
Figure 608.2.1 Transfer Type Shower Compartment Size and Clearance

608.2.2 Standard Roll-In Type Shower Compartments. Standard roll-in type shower compartments shall be 30 inches (760 mm) wide minimum by 60 inches (1525 mm) deep minimum clear inside dimensions measured at center points of opposing sides and shall have a 60 inches (1525 mm) wide minimum entry on the face of the shower compartment.

608.2.2.1 Clearance. A 30 inch (760 mm) wide minimum by 60 inch (1525 mm) long minimum clearance shall be provided adjacent to the open face of the shower compartment.
EXCEPTION: A lavatory complying with 606 shall be permitted on one 30 inch (760 mm) wide minimum side of the clearance provided that it is not on the side of the clearance adjacent to the controls or, where provided, not on the side of the clearance adjacent to the shower seat.

608.2.3 Alternate Roll-In Type Shower Compartments. Alternate roll-in type shower compartments shall be 36 inches (915 mm) wide and 60 inches (1525 mm) deep minimum clear inside dimensions measured at center points of opposing sides. A 36 inch (915 mm) wide minimum entry shall be provided at one end of the long side of the compartment.



Note: inside finished dimensions measured at the center points of opposing sides
Figure 608.2.3 Alternate Roll-In Type Shower Compartment Size and Clearance

608.3 Grab Bars. Grab bars shall comply with 609 and shall be provided in accordance with 608.3. Where multiple grab bars are used, required horizontal grab bars shall be installed at the same height above the finish floor.
EXCEPTIONS:
1. Grab bars shall not be required to be installed in a shower located in a bathing facility for a single occupant accessed only through a private office, and not for common use or public use provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with 608.3.

608.3.1 Transfer Type Shower Compartments. In transfer type compartments, grab bars shall be provided across the control wall and back wall to a point 18 inches (455 mm) from the control wall.

608.3.2 Standard Roll-In Type Shower Compartments. Where a seat is provided in standard roll-in type shower compartments, grab bars shall be provided on the back wall and the side wall opposite the seat. Grab bars shall not be provided above the seat. Where a seat is not provided in standard roll-in type shower compartments, grab bars shall be provided on three walls. Grab bars shall be installed 6 inches (150 mm) maximum from adjacent walls.

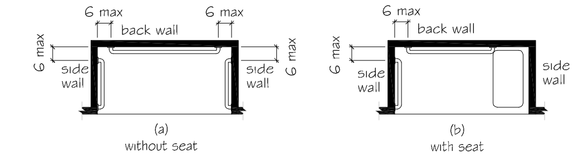


Figure 608.3.2 Grab Bars for Standard Roll-In Type Showers

608.3.3 Alternate Roll-In Type Shower Compartments. In alternate roll-in type shower compartments, grab bars shall be provided on the back wall and the side wall farthest from the compartment entry. Grab bars shall not be provided above the seat. Grab bars shall be installed 6 inches (150 mm) maximum from adjacent walls.

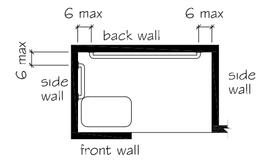


Figure 608.3.3 Grab Bars for Alternate Roll-In Type Showers

608.4 Seats. A folding or non-folding seat shall be provided in transfer type shower compartments. A folding seat shall be provided in roll-in type showers required in transient lodging guest rooms with mobility features complying with 806.2. Seats shall comply with 610.

608.5 Controls. Controls, faucets, and shower spray units shall comply with 309.4.

608.5.1 Transfer Type Shower Compartments. In transfer type shower compartments, the controls, faucets, and shower spray unit shall be installed on the side wall opposite the seat 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor and shall be located on the control wall 15 inches (380 mm) maximum from the centerline of the seat toward the shower opening.

608.5.2 Standard Roll-In Type Shower Compartments. In standard roll-in type shower compartments, the controls, faucets, and shower spray unit shall be located above the grab bar, but no higher than 48 inches (1220 mm) above the shower floor. Where a seat is provided, the controls, faucets, and shower spray unit shall be located 27 inches (685 mm) maximum from the seat wall.

608.5.3 Alternate Roll-In Type Shower Compartments. In alternate roll-in type shower compartments, the controls, faucets, and shower spray unit shall be located above the grab bar, but no higher than 48 inches (1220 mm) above the shower floor. Where a seat is provided, the controls, faucets, and shower spray unit shall be located on the side wall adjacent to the seat 27 inches (685 mm) maximum from the side wall behind the seat or shall be located on the back wall opposite the seat 15 inches (380 mm) maximum, left or right, of the centerline of the seat. Where a seat is not provided, the controls, faucets, and shower spray unit shall be installed on the side wall farthest from the compartment entry.

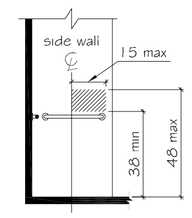


Figure 608.5.1 Transfer Type Shower Compartment Control Location

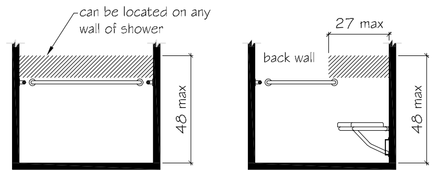


Figure 608.5.2 Standard Roll-In Type Shower Compartment Control Location

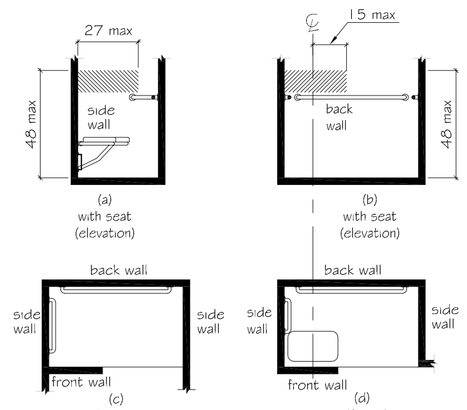


Figure 608.5.3 Alternate Roll-In Type Shower Compartment Control Location

608.6 Shower Spray Unit and Water. A shower spray unit with a hose 59 inches long minimum that can be used both as a fixed-position shower head and as a hand-held shower shall be provided. The shower spray unit shall have an on/off control with a non-positive shut-off. If an adjustable-height shower head on a vertical bar is used, the bar shall be installed so as not to obstruct the use of grab bars. Shower spray units shall deliver water that is 120°F (49°C) maximum.

EXCEPTION: A fixed shower head located at 48 inches (1220 mm) maximum above the shower finish floor shall be permitted instead of a hand-held spray unit in facilities that are not medical care facilities, long-term care facilities, transient lodging guest rooms, or residential dwelling units.

608.7 Thresholds. Thresholds in roll-in type shower compartments shall be 1/2 inch (13 mm) high maximum in accordance with 303. In transfer type shower compartments, thresholds 1/2 inch (13 mm) high maximum shall be beveled, rounded, or vertical.
EXCEPTION: A threshold 2 inches (51 mm) high maximum shall be permitted in transfer type shower compartments in existing facilities where provision of a 1/2 inch (13 mm) high threshold would disturb the structural reinforcement of the floor slab.

608.8 Shower Enclosures. Enclosures for shower compartments shall not obstruct controls, faucets, and shower spray units or obstruct transfer from wheelchairs onto shower seats.

609 Grab Bars
609.1 General. Grab bars in toilet facilities and bathing facilities shall comply with 609.

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 (32 mm) minimum and 2 inches (51 mm) maximum.

609.2.2 Non-Circular Cross Section. Grab bars with non-circular cross sections shall have a cross-section dimension of 2 inches (51 mm) maximum and a perimeter dimension of 4 inches (100 mm) minimum and 4.8 inches (120 mm) maximum.

609.3 Spacing. The space between the wall and the grab bar shall be 1 1/2 inches (38 mm). The space between the grab bar and projecting objects below and at the ends shall be 1 1/2 inches (38 mm) minimum. The space between the grab bar and projecting objects above shall be 12 inches (305 mm) minimum.

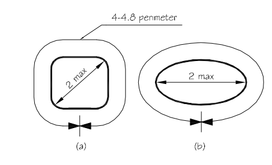


Figure 609.2.2 Grab Bar Non-Circular Cross Section

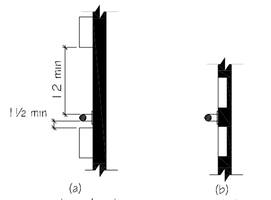


Figure 609.3 Spacing of Grab Bars

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 (38 mm) minimum.

609.4 Position of Grab Bars. Grab bars shall be installed in a horizontal position, 33 inches (840 mm) minimum and 36 inches (915 mm) 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 (455 mm) minimum and 27 inches (685 mm) maximum above the finish floor measured to the top of the gripping surface. The height of the lower grab bar on the back wall of a bathtub shall comply with 607.4.1.1 or 607.4.2.1.

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 (1112 N) is applied at any point on the grab bar, fastener, mounting device, or supporting structure.

610 Seats

610.3 Shower Compartment Seats. Where a seat is provided in a standard roll-in shower compartment, it shall be a folding type, shall be installed on the side wall adjacent to the controls, and shall extend from the back wall to a point within 3 inches (75 mm) of the compartment entry. Where a seat is provided in an alternate roll-in type shower compartment, it shall be a folding type, shall be installed on the front wall opposite the back wall, and shall extend from the adjacent side wall to a point within 3 inches (75 mm) of the compartment entry. In transfer-type showers, the seat shall extend from the back wall to a point within 3 inches (75 mm) of the compartment entry. The top of the seat shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum above the bathroom finish floor. Seats shall comply with 610.3.1 or 610.3.2.

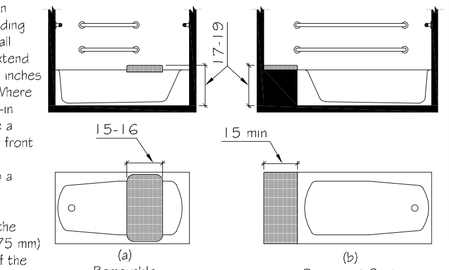


Figure 610.2 Bathtub Seats

610.3.1 Rectangular Seats. The rear edge of a rectangular seat shall be 2 1/2 inches (64 mm) maximum and the front edge 15 inches (380 mm) minimum and 16 inches (405 mm) maximum from the seat wall. The side edge of the seat shall be 1 1/2 inches (38 mm) maximum from the adjacent wall.

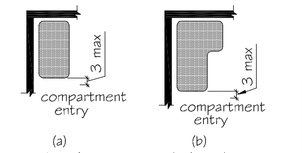


Figure 610.3 Extent of Seat

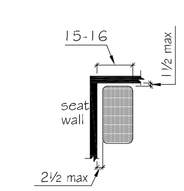


Figure 610.3.1 Rectangular Shower Seat

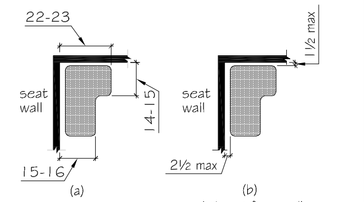


Figure 610.3.2 L-Shaped Shower Seat

610.3.2 L-Shaped Seats. The rear edge of an L-shaped seat shall be 2 1/2 inches (64 mm) maximum and the front edge 15 inches (380 mm) minimum and 16 inches (405 mm) maximum from the seat wall. The rear edge of the "L" portion of the seat shall be 1 1/2 inches (38 mm) maximum from the wall and the front edge shall be 14 inches (355 mm) minimum and 15 inches (380 mm) maximum from the wall. The end of the "L" shall be 22 inches (560 mm) minimum and 23 inches maximum (585 mm) from the main seat wall.

610.4 Structural Strength. Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 pounds (1112 N) is applied at any point on the seat, fastener, mounting device, or supporting structure.

611 Washing Machines and Clothes Dryers

611.1 General. Washing machines and clothes dryers shall comply with 611.

611.2 Clear Floor Space. A clear floor or ground space complying with 305 positioned for parallel approach shall be provided. The clear floor or ground space shall be centered on the appliance.

611.3 Operable Parts. Operable parts, including doors, lint screens, and detergent and bleach compartments shall comply with 309.

611.4 Height. Top loading machines shall have the door to the laundry compartment located 36 inches (915 mm) maximum above the finish floor. Front loading machines shall have the bottom of the opening to the laundry compartment located 15 inches (380 mm) minimum and 36 inches (915 mm) maximum above the finish floor.

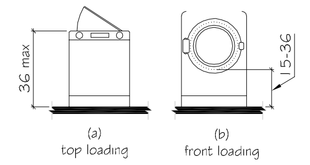


Figure 611.4 Height of Laundry Compartment Opening

CHAPTER 7: COMMUNICATION ELEMENTS AND FEATURES

701 General

701.1 Scope. The provisions of Chapter 7 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

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) (incorporated by reference, see "Referenced Standards" in Chapter 1), 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).

EXCEPTION: Fire alarm systems in medical care facilities shall be permitted to be provided in accordance with industry practice.

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.

703.2.1 Depth. Raised characters shall be 1/32 inch (0.8 mm) 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 (16 mm) minimum and 2 inches (51 mm) 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 (13 mm) minimum.

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
325-669-2584
staff@mccathren.com
www.mccathren.com

REGISTERED ARCHITECT
JOHN D. MCCATHREN
D9765
STATE OF TEXAS

12-16-2022

CARY SERVICES
909 PETROLEUM DRIVE

12-16-2022

K1 ACCESSIBILITY STANDARDS APPLICABLE TO ALL TRADES.
N.T.S.

553-10-10
10.12

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

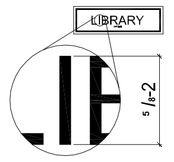


Figure 703.2.5 Height of Raised Characters

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 (3.2 mm) 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 (1.6 mm) minimum and 4 times the raised character stroke width maximum at the base of the cross sections, and 1/8 inch (3.2 mm) 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 (9.5 mm) 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 to 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	0.090 (2.3 mm) to 0.100 (2.5 mm) measured center to center
Distance between corresponding dots in adjacent cells	0.241 (6.1 mm) to 0.300 (7.6 mm)measured center to center
Dot height	0.025 (0.6 mm) to 0.037 (0.9 mm)
Distance between corresponding dotsfrom one cell directly below	0.395 (10 mm) to 0.400 (10.2 mm)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 (9.5 mm) minimum from any other tactile characters and 3/8 inch (9.5 mm) minimum from raised borders and decorative elements.

EXCEPTION: Braille provided on elevator car controls shall be separated 3/16 inch (4.8 mm) minimum and shall be located either directly below or adjacent to the corresponding raised characters or symbols.

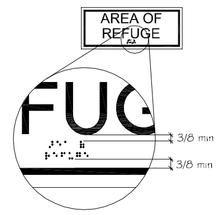


Figure 703.3.2 Position of Braille

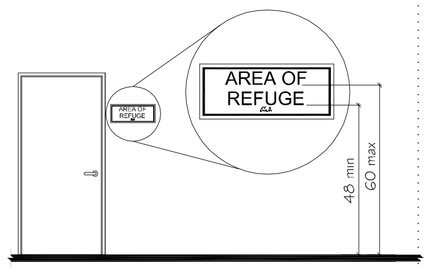


Figure 703.4.1 Height of Tactile Characters Above Finish Floor or Ground

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 (1220 mm) minimum above the finish floor or ground surface, measured from the baseline of the lowest tactile character and 60 inches (1525 mm) maximum above the finish floor or ground surface, measured from the baseline of the highest tactile character.

EXCEPTION: Tactile characters for elevator car controls shall not be required to comply with 703.4.1.

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

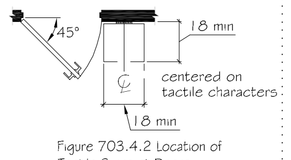


Figure 703.4.2 Location of Tactile Signs at Doors

adjacent wall. Signs containing tactile characters shall be located so that a clear floor space of 18 inches (455 mm) minimum by 18 inches (455 mm) 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.

703.5 Visual Characters. Visual characters shall comply with 703.5.
EXCEPTION: Where visual characters comply with 703.2 and are accompanied by braille complying with 703.3, they shall not be required to comply with 703.5.2 through 703.5.9.

703.5.1 Finish and Contrast. Characters and their background shall have a non-glare finish. Characters shall contrast with their background with either light characters on a dark background or dark characters on a light background.

703.5.2 Case. Characters shall be uppercase or lowercase or a combination of both.

703.5.3 Style. Characters shall be conventional in form. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

703.5.4 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".

703.5.5 Character Height. Minimum character height shall comply with Table 703.5.5. Viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign. Character height shall be based on the uppercase letter "I".

Table 703.5.5 Visual Character Height

Height to Finish Floor or Ground From Baseline of Character	Horizontal Viewing Distance	Minimum Character Height
40 inches to less than or equal to 70 inches	less than 72 inches	5/8 inch
	72 inches and greater	5/8 inch, plus 1/8 inch per foot of viewing distance above 72 inches
Greater than 70 inches to less than or equal to 120 inches	less than 180 inches	2 inch
	180 inches and greater	2 inches, plus 1/8 inch per foot of viewing distance above 180 inches
Greater than 120 inches	less than 20 feet	3 inch
	21 feet and greater	3 inches, plus 1/8 inch per foot of viewing distance above 21 feet

703.5.6 Height From Finish Floor or Ground. Visual characters shall be 40 inches (1015 mm) minimum above the finish floor or ground.

EXCEPTION: Visual characters indicating elevator car controls shall not be required to comply with 703.5.6.

703.5.7 Stroke Thickness. Stroke thickness of the uppercase letter "I" shall be 10 percent minimum and 30 percent maximum of the height of the character.

703.5.8 Character Spacing. Character spacing shall be measured between the two closest points of adjacent characters, excluding word spaces. Spacing between individual characters shall be 10 percent minimum and 35 percent maximum of character height.

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

703.6 Pictograms. Pictograms shall comply with 703.6.

703.6.1 Pictogram Field. Pictograms shall have a field height of 6 inches (150 mm) minimum. Characters and braille shall not be located in the 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.

703.6.3 Text Descriptors. Pictograms shall have text descriptors

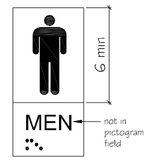


Figure 703.6.1 Pictogram Field

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

Figure 703.7.2.3 Volume Control Telephone

Figure 703.7.2.4 International Symbol of Access for Hearing Loss

705 Detectable Warnings

705.1 General. Detectable warnings shall consist of a surface of truncated domes and shall comply with 705.

705.1.1 Dome Size. Truncated domes in a detectable warning surface shall have a base diameter of 0.9 inch (23 mm) minimum and 1.4 inches (36 mm) maximum, a top diameter of 50 percent of the base diameter minimum to 65 percent of the base diameter maximum, and a height of 0.2 inch (5.1 mm).

705.1.2 Dome Spacing. Truncated domes in a detectable warning surface shall have a center-to-center spacing of 1.6 inches (41 mm) minimum and 2.4 inches (61 mm) maximum, and a base-to-base spacing of 0.65 inch (17 mm) minimum, measured between the most adjacent domes on a square grid.

705.1.3 Contrast. Detectable warning surfaces shall contrast visually with adjacent walking surfaces either light-on-dark, or dark-on-light.

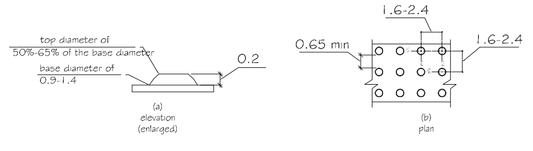


Figure 705.1 Size and Spacing of Truncated Domes

705.2 Platform Edges. Detectable warning surfaces at platform boarding edges shall be 24 inches (610 mm) wide and shall extend the full length of the public use areas of the platform.

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
325-669-2584
staff@mccathren.com
www.mccathren.com

REGISTERED ARCHITECT
D. MC. MCCATHREN
D9765
STATE OF TEXAS

12-16-2022

CARY SERVICES
909 PETROLEUM DRIVE

12-16-2022

K1 ACCESSIBILITY STANDARDS APPLICABLE TO ALL TRADES.
N.T.S.

553-10-10
10.13

CAUTION:

CONTRACTOR IS TO CONTACT ONE-CALL BOARD OF TEXAS TEXAS 811 OR (1-800-545-6005) UTILITY LOCATING SERVICES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION ACTIVITIES. THE ENGINEER IS NOT RESPONSIBLE FOR KNOWING ALL EXISTING UTILITIES IN THE PROJECT AREA NOR FOR DEPICTING THE EXACT LOCATIONS OF UTILITIES ON THESE DRAWINGS.

NATURAL GAS SERVICE

NATURAL GAS SERVICE AND METER BY ATMOS ENERGY. GAS PRESSURE AT BUILDING TO BE 4 OZ. PRESSURE WITH A DEMAND OF 275 CFH. GAS METER IS CURRENTLY SHOWN AT BUILDING. IF GAS METER IS TO BE LOCATED AT PROPERTY LINE, INSTALL 2-INCH POLY TO DELIVER 2 PSI TO BUILDING. PROVIDE DAYLIGHT WITH SHUTOFF VALVE AND PRESSURE REGULATOR TO REDUCE FROM 2 PSI TO 4 OZ. BUILDING PRESSURE. VERIFY EXACT REQUIREMENTS WITH:

ATMOS ENERGY
GREGORY PARKER
325-690-7549 WORK
325-280-0644 CELL
e-mail: Gregory.Parker@atmosenergy.com

ELECTRICAL SERVICE RESPONSIBILITIES

ELECTRIC UTILITY CONTACT PERSON IS:

AEP TEXAS
KYLE CASEY
325-269-9016 WORK
e-mail: krcasey@AEP.COM

AEP TEXAS:

1. INSTALL 500 KVA 277/480V., 3-PHASE, UTILITY PAD-MOUNT TRANSFORMER.
2. INSTALL 25 KVA 120/240V., 1-PHASE, UTILITY PAD-MOUNT TRANSFORMER.
3. INSTALL 12470 KV 3-PHASE UNDERGROUND CONDUCTORS FROM UTILITY POLE TO 500 KVA UTILITY TRANSFORMER.
4. INSTALL 7200 KV 1-PHASE UNDERGROUND CONDUCTORS FROM 500 KVA UTILITY TRANSFORMER TO 25 KVA UTILITY TRANSFORMER.
5. INSTALL 120V., 1-PHASE CONDUCTORS FROM UTILITY POLE TO EXISTING CITY STREET LIGHT.
6. PROVIDE AEP TEXAS EASEMENT FOR EXECUTION.

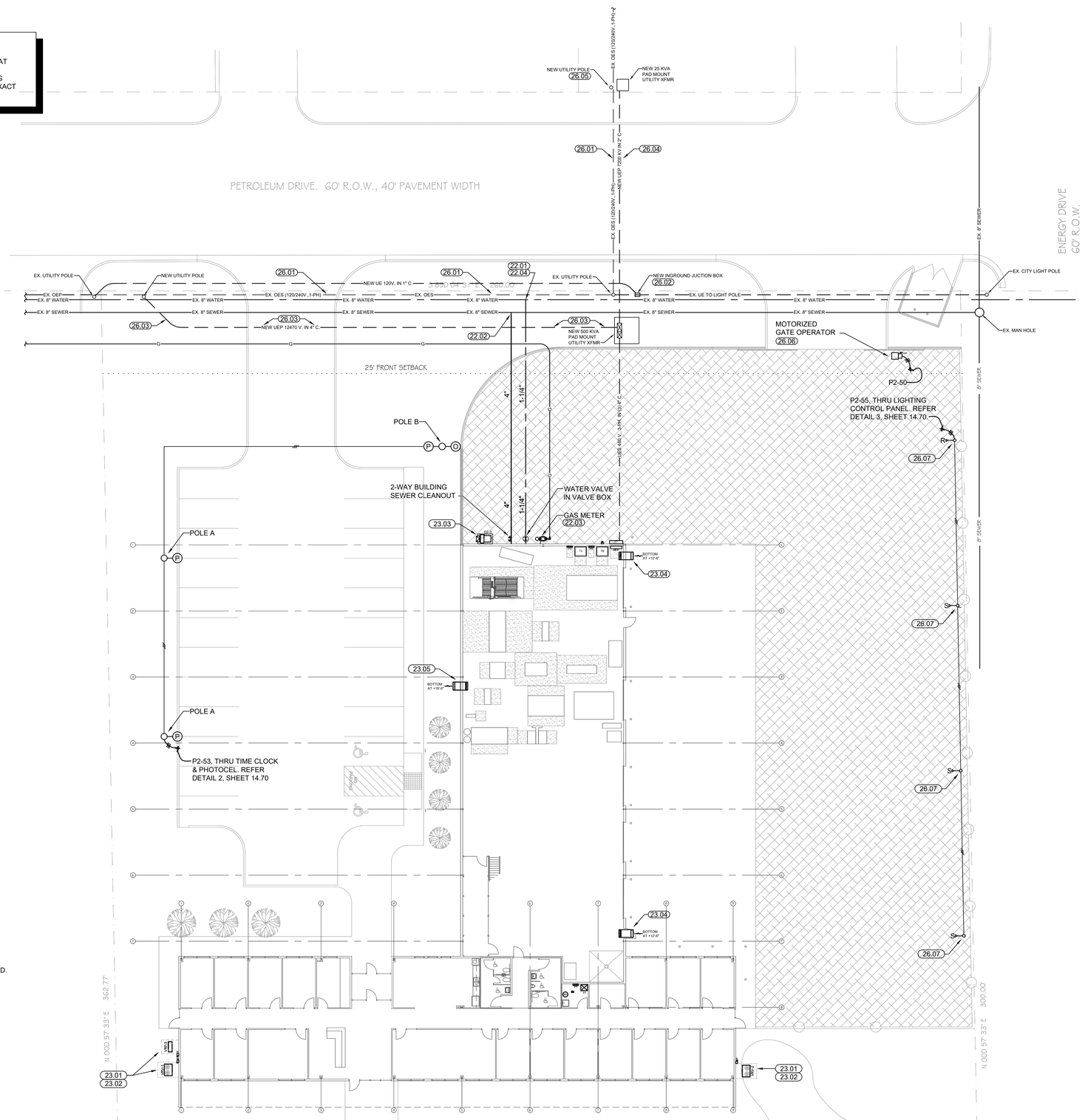
CUSTOMER:

1. POUR AEP TEXAS TRANSFORMER PAD(S). CALL AEP TEXAS TO GET ACCURATE TRANSFORMER THROAT MEASUREMENTS PRIOR TO POUR.
2. OPEN / CLOSE AEP TEXAS DITCHLINE WITH 48" OF COVER.
3. BORE UNDER STREET AND INSTALL 2" CONDUIT FROM 500 KVA UTILITY TRANSFORMER TO 25 KVA UTILITY TRANSFORMER.
4. INSTALL (1) 4" SCHEDULE 40 ELECTRICAL GRADE CONDUIT FROM UTILITY POLE (INSTALL LONG SWEEP ELS AND 10'-0" CONDUIT RISER UP POLE) TO 500 KVA UTILITY TRANSFORMER. INSTALL RED MARKING TAPE ONE FOOT ABOVE CONDUIT SYSTEM. INSTALL PULL STRING.
5. INSTALL (3) 4" SCHEDULE 40 ELECTRICAL GRADE CONDUIT FROM 500 KVA UTILITY TRANSFORMER TO 48"x48" CT CABINET. INSTALL RED MARKING TAPE ONE FOOT ABOVE CONDUIT SYSTEM. INSTALL PULL STRING.
6. INSTALL (1) 2" SCHEDULE 40 ELECTRICAL GRADE CONDUIT FROM 500 KVA UTILITY TRANSFORMER TO 25 KVA UTILITY TRANSFORMER.
7. INSTALL (1) 1" SCHEDULE 40 ELECTRICAL GRADE CONDUIT FROM UTILITY POLE TO INGROUND PULLBOX. INSTALL RED MARKING TAPE ONE FOOT ABOVE CONDUIT SYSTEM. INSTALL PULL STRING.
8. PROVIDE & INSTALL 48"x48" CT CABINET AND BILLING METER CAN.
9. EXECUTE AEP TEXAS UTILITY EASEMENT IN THE PRESENCE OF NOTARY AND RETURN ORIGINAL TO AEP TEXAS.

TELECOMMUNICATION SERVICE

EXISTING OVERHEAD TELECOMMUNICATIONS CABLING REQUIRES RELOCATION TO UNDERGROUND AS IT IS INSTALLED ON "AEP" UTILITY POLES THAT WILL BE REMOVED. ALL WORK AND REQUIREMENTS MUST BE COORDINATED WITH THE TELECOMMUNICATION SERVICE PROVIDER.

VEXUS
325-788-6000 WORK



GENERAL NOTES:

1. REFER COMPLETE SET OF CONTRACT DRAWINGS AND SPECIFICATIONS.
2. CITY OF ABILENE, TEXAS BUILDING CODES:

   2012 INTERNATIONAL BUILDING CODE,
   2012 INTERNATIONAL ENERGY CONSERVATION CODE,
   2012 INTERNATIONAL FUEL GAS CODE,
   2012 INTERNATIONAL MECHANICAL CODE,
   2012 INTERNATIONAL PLUMBING CODE,
   2017 NATIONAL ELECTRIC CODE,
   2012 TEXAS ACCESSIBILITY CODE (TAS).
3. TOTAL BUILDING DRAINAGE FIXTURE UNITS (DFU) PER TABLE 709.1 OF THE 2021 INTERNATIONAL PLUMBING CODE IS 20 DFU.
4. TOTAL BUILDING WATER SUPPLY FIXTURE UNITS (WSFU) PER TABLE E103.3(2) OF THE 2021 INTERNATIONAL PLUMBING CODE IS 28.4 WSFU.
5. TOTAL BUILDING NATURAL GAS DEMAND IS 275 CFH.

DIVISION 22 - PLUMBING

22.01 CONNECT NEW BUILDING WATER LINE TO EXISTING CITY OF ABILENE WATER MAIN. COORDINATE CONNECTION WITH CITY OF ABILENE WATER DEPARTMENT. VERIFY EXACT LOCATION OF WATER MAIN AND PROVIDE NEW METER. PLUMBING CONTRACTOR SHALL PAY ANY AND ALL CHARGES AS INCURRED BY THE CITY FOR THE NEW WATER CONNECTION. WATER DEMAND FOR THE NEW BUILDING IS 28.4. REFER PLUMBING PLAN, SHEET 13.10.

22.02 CONNECT NEW BUILDING SEWER LINE TO EXISTING CITY OF ABILENE SEWER MAIN. COORDINATE CONNECTION WITH CITY OF ABILENE SEWER DEPARTMENT. VERIFY EXACT LOCATION AND DEPTH OF SEWER MAIN. PLUMBING CONTRACTOR SHALL PAY ANY AND ALL CHARGES AS INCURRED BY THE CITY FOR THE NEW SEWER CONNECTION. SEWER LOAD FOR THE NEW BUILDING IS 20 DFU. REFER PLUMBING PLAN, SHEET 13.10.

22.03 NATURAL GAS BUILDING ENTRY, METER AND REGULATOR WITH BUILDING STOP VALVE AND REGULATOR THAT WILL ACCOMMODATE A TOTAL BUILDING GAS LOAD OF 275 CFH. REGULATOR SHALL REDUCE FROM UTILITY DELIVERY PRESSURE TO 4 OUNCE. COORDINATE EXACT REQUIREMENTS AND METER LOCATION WITH LOCAL GAS UTILITY COMPANY. GAS PIPING INSIDE THE BUILDING TO APPLIANCES IS BASED UPON A 4 OUNCE DELIVERY PRESSURE AND A TOTAL RUN FROM BUILDING ENTRY OF 125'. REFER PLUMBING PLAN SHEET 13.10. COORDINATE METER INSTALLATION WITH LOCAL GAS UTILITY COMPANY.

22.04 CONNECT NEW BUILDING LAWN IRRIGATION LINE TO EXISTING CITY OF ABILENE WATER MAIN. COORDINATE CONNECTION WITH CITY OF ABILENE WATER DEPARTMENT. VERIFY EXACT LOCATION OF WATER MAIN AND PROVIDE NEW METER. IRRIGATION CONTRACTOR COORDINATE SIZE OF METER AND SHALL PAY ANY AND ALL CHARGES AS INCURRED BY THE CITY FOR THE NEW LAWN IRRIGATION CONNECTION. LAWN IRRIGATION CONNECTION SHALL COMPLY WITH ARTICLE 608 OF THE UPC FOR BACKFLOW PROTECTION.

DIVISION 23 - HVAC

23.01 PROVIDE CONCRETE EQUIPMENT PAD, 6-INCHES BEYOND FOOTPRINT OF EQUIPMENT FURNISHED.

23.02 INSTALL REFRIGERANT PIPING IN ACCORDANCE WITH REQUIREMENTS SPECIFIC TO EQUIPMENT MANUFACTURER'S INSTALLATION GUIDELINES AND BEST PRACTICES. PROVIDE ALUMINUM JACKETING ON ALL EXTERIOR REFRIGERANT PIPING.

23.03 EXHAUST FAN EF-3 TO BE DUCTED TO PLASMA CUTTING TABLE. EF-3 IS TO BE LOCATED IN ADJACENT EQUIPMENT BUILDING. AND DUCTED TO 45 DEGREE SIDEWALL EXHAUST WEATHERHOOD. COORDINATE EXACT REQUIREMENTS WITH OWNER AT JOBSITE.

23.04 45 DEGREE WEATHER HOOD INTAKE. BOTTOM MOUNTED AT 12'-6" ABOVE FINISHED FLOOR.

23.05 45 DEGREE WEATHER HOOD EXHAUST. BOTTOM MOUNTED AT 16'-0" ABOVE FINISHED FLOOR.

DIVISION 26 - ELECTRICAL

26.01 EXISTING OVERHEAD ELECTRICAL AND COMMUNICATION LINES TO BE REMOVED.

26.02 PROVIDE INGROUND JUNCTION / PULL BOX TO INTERCEPT EXISTING UNDERGROUND ELECTRICAL POWERING EXISTING CITY STREET LIGHT. INSTALL UNDERGROUND 1-INCH CONDUIT BACK TO EXISTING UTILITY POLE.

26.03 NEW UNDERGROUND ELECTRICAL PRIMARY 12470V TO 500 KVA UTILITY PAD MOUNT TRANSFORMER. COORDINATE EXACT REQUIREMENTS WITH ELECTRIC UTILITY COMPANY.

26.04 NEW UNDERGROUND ELECTRICAL PRIMARY 7200V TO 75 KVA UTILITY PAD MOUNT TRANSFORMER. COORDINATE EXACT REQUIREMENTS WITH ELECTRIC UTILITY COMPANY.

26.05 NEW UTILITY POLE TO TRANSITION FROM PAD MOUNT UTILITY TRANSFORMER AND INTERCEPT EXISTING 120/240V., 1-PHASE OVERHEAD POWER LINE.

26.06 MOTOR GATE OPERATOR(S). COORDINATE EXACT REQUIREMENTS / QUANTITY WITH OWNER AND EQUIPMENT FURNISHED AT JOBSITE.

26.07 30'-0" PG&E APPROVED, CLASS 5 WOODEN LIGHT POLE TO BE BURIED 6'-0".

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene, Texas 79602
www.mccathren.com
325-669-2584
staff@mccathren.com

RICHARD S. BRYAN
107179
LICENSED PROFESSIONAL ENGINEER
03-29-2023

Bryan Parks & Associates, Inc.
TEXAS REGISTERED ENGINEERING FIRM # F-13562
BUFFALO GAP ROAD
SUITE 1800
ABILENE, TEXAS 79606
PH (325) 232-6035
FX (325) 225-7551 4400

CARY SERVICES
909 PETROLEUM DRIVE
ABILENE, TEXAS

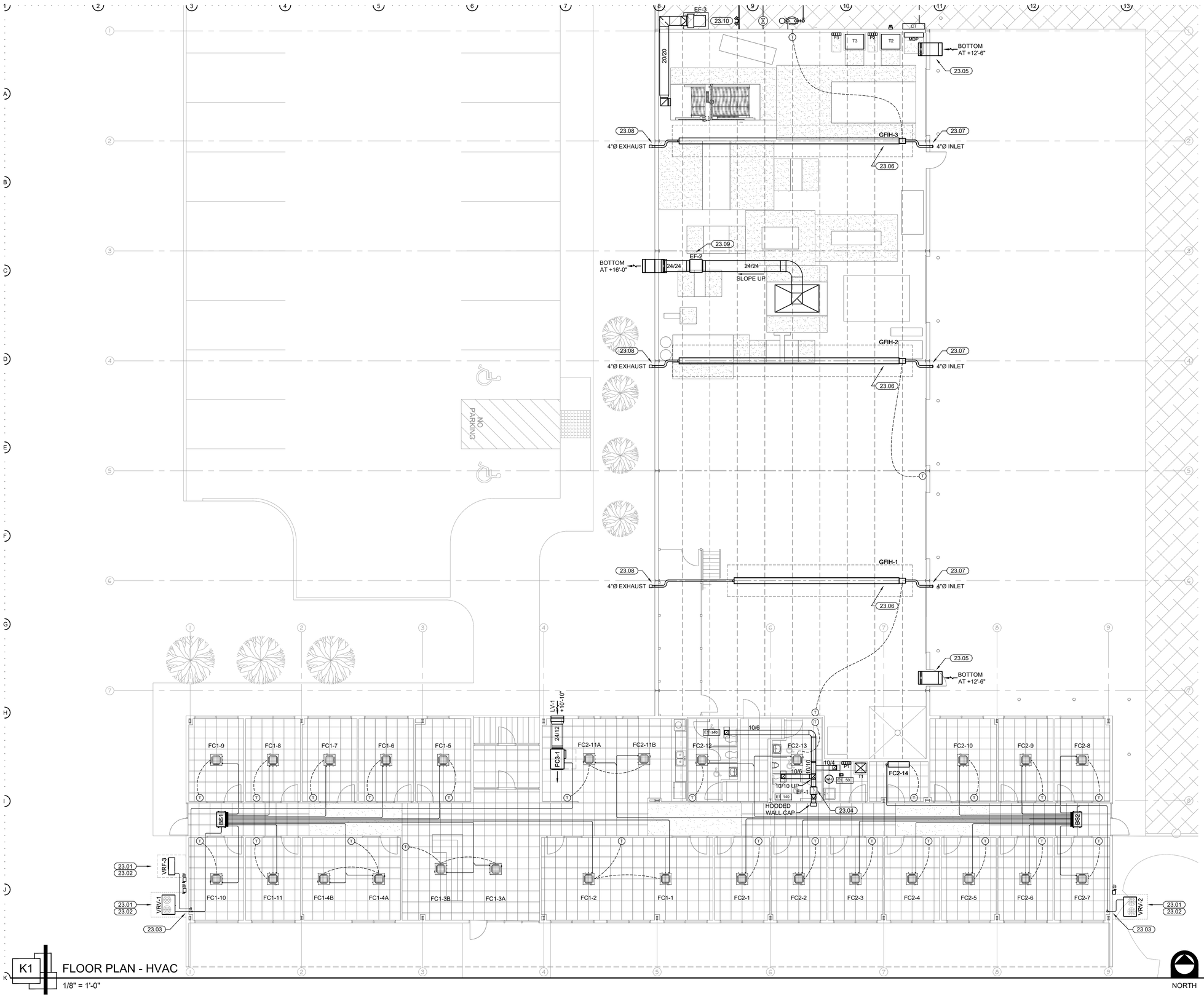
03-29-2023

K1 SITE UTILITIES PLAN
1/16" = 1'-0"

NORTH

553-11-10.DWG
11.10

7:46 pm Tuesday, Mar 28 2023



GENERAL NOTES:

1. REFER COMPLETE SET OF CONTRACT DRAWINGS AND SPECIFICATIONS.
2. CITY OF ABILENE, TEXAS BUILDING CODES:

   2012 INTERNATIONAL BUILDING CODE,
   2012 INTERNATIONAL ENERGY CONSERVATION CODE,
   2012 INTERNATIONAL FUEL GAS CODE,
   2012 INTERNATIONAL MECHANICAL CODE,
   2012 INTERNATIONAL PLUMBING CODE,
   2017 NATIONAL ELECTRIC CODE,
   2012 TEXAS ACCESSIBILITY CODE (TAS).
3. REFER M12.20 SERIES FOR EQUIPMENT SCHEDULES.
4. REFER M12.30 SERIES FOR GENERAL NOTES, LEGENDS, AND DETAILS.

DIVISION 23 - HVAC

(23.01) PROVIDE CONCRETE EQUIPMENT PAD 6-INCHES BEYOND FOOTPRINT OF EQUIPMENT FURNISHED.

(23.02) INSTALL REFRIGERANT PIPING IN ACCORDANCE WITH REQUIREMENTS SPECIFIC TO EQUIPMENT MANUFACTURER'S INSTALLATION GUIDELINES AND BEST PRACTICES.

(23.03) COORDINATE INSTALLATION OF REFRIGERANT PIPING WITH WALL FRAMING SO THAT REFRIGERANT PIPING IS LOCATED IN A WALL CHASE / FURR-OUT.

(23.04) EXHAUST FAN, EF-1, LOCATED IN STORAGE AREA ABOVE AND SERVES BOTH WOMEN'S AND MEN'S RESTROOMS. EXHAUST FAN SHALL BE INTERLOCKED WITH LIGHTS. REFER DETAIL 1, WIRING DIAGRAM, SHEET 14.70.

(23.05) SIDEWALL WEATHERHOOD EQUAL TO "GREENHECK" MODEL WTHD WITH 45 DEGREE TURN DOWN AND WIRE MESH BIRDSCREEN. PROVIDE ALL MOUNTING HARDWARE AND WALL SLEEVE FOR MOUNTING 28x28" INTAKE BACKDRAFT DAMPER EQUAL TO "GREENHECK" MODEL WD40 (OPEN BY AIR PRESSURE DIFFERENTIAL AND CLOSED BY SPRINGS).

(23.06) GAS FIRED INFRARED HEATER TO BE MOUNTED AT 15'-0" ABOVE FLOOR SUPPORTED FROM STRUCTURE ABOVE. PROVIDE ALL REQUIRED HARDWARE, BRACKETS, CHAINS / CABLES. REFER TO EQUIPMENT SCHEDULE FOR REQUIRED MINIMUM CLEARANCES TO COMBUSTIBLES.

(23.07) PROVIDE WITH SIDEWALL COMBUSTION AIR KIT. FOLLOW MANUFACTURER'S INSTALLATION REQUIREMENTS.

(23.08) PROVIDE WITH SIDEWALL FLUE VENT CAP. FLUE VENT OUTLET SHALL NOT BE LESS THAN 1 FOOT ABOVE ANY DOOR OR WINDOW. FOLLOW MANUFACTURER'S INSTALLATION REQUIREMENTS.

(23.09) EXHAUST FAN EF-2 FOR DUCT INSULATION GLUE STATION / HOOD BY OWNER. COORDINATE SWITCHING REQUIREMENTS WITH OWNER.

(23.10) EXHAUST FAN EF-3 TO BE DUCTED TO PLASMA CUTTING TABLE. EF-3 IS TO BE LOCATED IN ADJACENT EQUIPMENT BUILDING. AND DUCTED TO 45 DEGREE SIDEWALL EXHAUST WEATHERHOOD. COORDINATE EXACT REQUIREMENTS WITH OWNER AT JOBSITE.

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
325-669-2584
staff@mccathren.com
www.mccathren.com

RICHARD S. BRYAN
107179
LICENSED PROFESSIONAL ENGINEER
03-29-2023

Bryan Parks & Associates, Inc.
TEXAS REGISTERED ENGINEERING FIRM # F-13562
BUFFALO GAP ROAD
SUITE 1800
ABILENE, TEXAS 79606
PH (325) 232-6035
FX (325) 232-7551 4400

CARY SERVICES
909 PETROLEUM DRIVE
ABILENE, TEXAS

03-29-2023

K1 FLOOR PLAN - HVAC
1/8" = 1'-0"

NORTH

553-12-10.DWG
12.10

VARIABLE REFRIGERANT VOLUME (HEAT RECOVERY) EQUIPMENT SCHEDULE

OUTDOOR UNIT TAG	BRANCH SELECTOR TAG	INDOOR UNIT TAG	DESCRIPTION	OUTDOOR UNIT				INDOOR UNIT							ELECTRICAL						WEIGHT	MFG.	MODEL		NOTES
				NOMINAL TONS	CONNECTION RATIO	COOLING @ 105°F BTU/h	HEATING @ 32°F BTU/h	AIRFLOW H-M-L / CFM	COOLING				HEATING		VOLTS	PH	HZ	RLA	MCA	MOP	LBS.		OUTDOOR UNIT	INDOOR UNIT	
									DB / WB /°F	EVAP °F	TOTAL BTU/h	SENSIBLE BTU/h	DB °F	BTU/h											
VRV-1	-	-	OUTDOOR HEAT RECOVERY	10	135.4	110,987.0	110,907.0	-	-	-	-	-	-	-	460	3	60	12.8	21.1	25	727	DAIKIN	REYQ120XAYDB	-	1,2,3,4,5
		FC1-1	2x2 CASSETTE 4-WAY	-	-	-	-	511 / 441 / 353	75 / 63	42.8	15,467	11,298	68.0	20,814	208	1	60	-	0.6	15	41.9	DAIKIN	-	FXZQ18TBVJU	6
		FC1-2	2x2 CASSETTE 4-WAY	-	-	-	-	511 / 441 / 353	75 / 63	42.8	15,467	11,298	68.0	20,814	208	1	60	-	0.6	15	41.9	DAIKIN	-	FXZQ18TBVJU	6
		FC1-3A	2x2 CASSETTE 4-WAY	-	-	-	-	511 / 441 / 353	75 / 63	42.8	15,467	11,298	68.0	20,814	208	1	60	-	0.6	15	41.9	DAIKIN	-	FXZQ18TBVJU	6
		FC1-3B	2x2 CASSETTE 4-WAY	-	-	-	-	511 / 441 / 353	75 / 63	42.8	15,467	11,298	68.0	20,814	208	1	60	-	0.6	15	41.9	DAIKIN	-	FXZQ18TBVJU	6
		FC1-4A	2x2 CASSETTE 4-WAY	-	-	-	-	307 / 264 / 229	75 / 63	42.8	6,596	5,133	68.0	8,872	208	1	60	-	0.3	15	35.3	DAIKIN	-	FXZQ07TBVJU	6
		FC1-4B	2x2 CASSETTE 4-WAY	-	-	-	-	307 / 264 / 229	75 / 63	42.8	6,596	5,133	68.0	8,872	208	1	60	-	0.3	15	35.3	DAIKIN	-	FXZQ07TBVJU	6
	BS1	FC1-5	2x2 CASSETTE 4-WAY	-	-	-	-	307 / 264 / 229	75 / 63	42.8	6,596	5,133	68.0	8,872	208	1	60	-	0.3	15	35.3	DAIKIN	-	FXZQ07TBVJU	6
		FC1-6	2x2 CASSETTE 4-WAY	-	-	-	-	317 / 282 / 229	75 / 63	42.8	8,188	5,824	68.0	10,919	208	1	60	-	0.3	15	35.3	DAIKIN	-	FXZQ09TBVJU	6
		FC1-7	2x2 CASSETTE 4-WAY	-	-	-	-	317 / 282 / 229	75 / 63	42.8	8,188	5,824	68.0	10,919	208	1	60	-	0.3	15	35.3	DAIKIN	-	FXZQ09TBVJU	6
		FC1-8	2x2 CASSETTE 4-WAY	-	-	-	-	317 / 282 / 229	75 / 63	42.8	8,188	5,824	68.0	10,919	208	1	60	-	0.3	15	35.3	DAIKIN	-	FXZQ09TBVJU	6
		FC1-9	2x2 CASSETTE 4-WAY	-	-	-	-	317 / 282 / 229	75 / 63	42.8	8,188	5,824	68.0	10,919	208	1	60	-	0.3	15	35.3	DAIKIN	-	FXZQ09TBVJU	6
		FC1-10	2x2 CASSETTE 4-WAY	-	-	-	-	405 / 335 / 282	75 / 63	42.8	13,079	9,333	68.0	17,743	208	1	60	-	0.4	15	36.4	DAIKIN	-	FXZQ15TBVJU	6
		FC1-11	2x2 CASSETTE 4-WAY	-	-	-	-	405 / 335 / 282	75 / 63	42.8	13,079	9,333	68.0	17,743	208	1	60	-	0.4	15	36.4	DAIKIN	-	FXZQ15TBVJU	6

NOTES:

1) REFRIGERANT LINES SHALL BE SIZED AS REQUIRED BY EQUIPMENT MANUFACTURER.
2) ALL INSULATION EXPOSED TO SUN LIGHT SHALL HAVE ALUMINUM JACKETING SECURED WITH 1/2" STAINLESS BANDS 9" O.C.
3) PROVIDE ALL PIPING, CONNECTORS, Y-BRANCH, BRANCH SELECTOR UNITS, CONTROLS, HEAT RECOVERY UNITS, ETC. AS REQUIRED FOR A COMPLETE OPERATING SYSTEM.
4) PROVIDE WITH SAFETY DEVICES: HIGH PRESSURE SWITCH, FAN DRIVER OVERLOAD PROTECTOR, OVERCURRENT FUSE, INVERTER OVERLOAD PROTECTOR, AND LEAK DETECTION DEVICE.
5) PROVIDE THREE-PHASE VOLTAGE MONITOR EQUAL TO ICM CONTROLS MODEL ICM455.
6) FOUR-WAY 2'x2' CEILING CASSETTE, WITH STANDARD WHITE DECORATION PANEL, RESIN NET FILTER, WIRED NAVIGATION REMOTE CONTROLLER, (GROUP PER DRAWINGS), ELECTRONIC EXPANSION VALVE, INTEGRAL CONDENSATE LIFT PUMP AND CHECK VALVE, 15A MOCP.

VARIABLE REFRIGERANT VOLUME (HEAT RECOVERY) EQUIPMENT SCHEDULE

OUTDOOR UNIT TAG	BRANCH SELECTOR TAG	INDOOR UNIT TAG	DESCRIPTION	OUTDOOR UNIT				INDOOR UNIT							ELECTRICAL						WEIGHT	MFG.	MODEL		NOTES
				NOMINAL TONS	CONNECTION RATIO	COOLING @ 105°F BTU/h	HEATING @ 32°F BTU/h	AIRFLOW H / M / L CFM	COOLING				HEATING		VOLTS	PH	HZ	RLA	MCA	MOP	LBS.		OUTDOOR UNIT	INDOOR UNIT	
									DB / WB /°F	EVAP °F	TOTAL BTU/h	SENSIBLE BTU/h	DB °F	BTU/h											
VRV-2	124.4	-	OUTDOOR HEAT RECOVERY	12		125,916	138,696	-	-	-	-	-	-	-	460	3	60	19.3	27.9	40	793	DAIKIN	REYQ144XAYDB	-	1,2,3,4,5
		FC2-1	2x2 CASSETTE 4-WAY	-	-	-	-	405 / 335 / 282	75 / 63	42.8	13,079	9,333	68.0	17,743	208	1	60	-	0.4	15	36.4	DAIKIN	-	FXZQ15TBVJU	6
		FC2-2	2x2 CASSETTE 4-WAY	-	-	-	-	404 / 335 / 282	75 / 63	42.8	13,079	9,333	68.0	17,743	208	1	60	-	0.4	15	36.4	DAIKIN	-	FXZQ15TBVJU	6
		FC2-3	2x2 CASSETTE 4-WAY	-	-	-	-	404 / 335 / 282	75 / 63	42.8	13,079	9,333	68.0	17,743	208	1	60	-	0.4	15	36.4	DAIKIN	-	FXZQ15TBVJU	6
		FC2-4	2x2 CASSETTE 4-WAY	-	-	-	-	404 / 335 / 282	75 / 63	42.8	13,079	9,333	68.0	17,743	208	1	60	-	0.4	15	3.64	DAIKIN	-	FXZQ15TBVJU	6
		FC2-5	2x2 CASSETTE 4-WAY	-	-	-	-	404 / 335 / 282	75 / 63	42.8	13,079	9,333	68.0	17,743	208	1	60	-	0.4	15	36.4	DAIKIN	-	FXZQ15TBVJU	6
		FC2-6	2x2 CASSETTE 4-WAY	-	-	-	-	404 / 335 / 282	75 / 63	42.8	13,079	9,333	68.0	17,743	208	1	60	-	0.4	15	36.4	DAIKIN	-	FXZQ15TBVJU	6
		FC2-7	2x2 CASSETTE 4-WAY	-	-	-	-	404 / 335 / 282	75 / 63	42.8	13,079	9,333	68.0	17,743	208	1	60	-	0.4	15	36.4	DAIKIN	-	FXZQ15TBVJU	6
	BS2	FC2-8	2x2 CASSETTE 4-WAY	-	-	-	-	317 / 282 / 229	75 / 63	42.8	8,188	5,824	68.0	10,919	208	1	60	-	0.3	15	36.3	DAIKIN	-	FXZQ09TBVJU	6
		FC2-9	2x2 CASSETTE 4-WAY	-	-	-	-	317 / 282 / 229	75 / 63	42.8	8,188	5,824	68.0	10,919	208	1	60	-	0.3	15	36.3	DAIKIN	-	FXZQ09TBVJU	6
		FC2-10	2x2 CASSETTE 4-WAY	-	-	-	-	353 / 300 / 247	75 / 63	42.8	10,463	7,037	68.0	13,990	208	1	60	-	0.4	15	36.4	DAIKIN	-	FXZQ12TBVJU	6
		FC2-11A	2x2 CASSETTE 4-WAY	-	-	-	-	353 / 300 / 247	75 / 63	42.8	10,463	7,037	68.0	13,990	208	1	60	-	0.4	15	36.4	DAIKIN	-	FXZQ12TBVJU	6
		FC2-11B	2x2 CASSETTE 4-WAY	-	-	-	-	353 / 300 / 247	75 / 63	42.8	10,463	7,037	68.0	13,990	208	1	60	-	0.4	15	36.4	DAIKIN	-	FXZQ12TBVJU	6
		FC2-12	2x2 CASSETTE 4-WAY	-	-	-	-	300 / 247 / 229	75 / 63	42.8	5,004	4,265	68.0	6,824	208	1	60	-	0.3	15	35.3	DAIKIN	-	FXZQ05TBVJU	6
		FC2-13	2x2 CASSETTE 4-WAY	-	-	-	-	300 / 247 / 229	75 / 63	42.8	5,004	4,265	68.0	6,824	208	1	60	-	0.3	15	35.3	DAIKIN	-	FXZQ05TBVJU	6
		FC2-14	WALL MOUNT	-	-	-	-	260 / - / 160	75 / 63	42.8	6,433	5,441	-	-	208	1	60	-	0.3	15	26.5	DAIKIN	-	FXAQ07PVJU	7,8

NOTES:

1) REFRIGERANT LINES SHALL BE SIZED AS REQUIRED BY EQUIPMENT MANUFACTURER.
2) ALL INSULATION EXPOSED TO SUN LIGHT SHALL HAVE ALUMINUM JACKETING SECURED WITH 1/2" STAINLESS BANDS 9" O.C.
3) PROVIDE ALL PIPING, CONNECTORS, Y-BRANCH, BRANCH SELECTOR UNITS, CONTROLS, HEAT RECOVERY UNITS, ETC. AS REQUIRED FOR A COMPLETE OPERATING SYSTEM.
4) PROVIDE WITH SAFETY DEVICES: HIGH PRESSURE SWITCH, FAN DRIVER OVERLOAD PROTECTOR, OVERCURRENT FUSE, INVERTER OVERLOAD PROTECTOR, AND LEAK DETECTION DEVICE.
5) PROVIDE THREE-PHASE VOLTAGE MONITOR EQUAL TO ICM CONTROLS MODEL ICM455.
6) FOUR-WAY 2'x2' CEILING CASSETTE, WITH STANDARD WHITE DECORATION PANEL, RESIN NET FILTER, WIRED NAVIGATION REMOTE CONTROLLER, (GROUP PER DRAWINGS), ELECTRONIC EXPANSION VALVE, INTEGRAL CONDENSATE LIFT PUMP AND CHECK VALVE, 15A MOCP.
7) WALL MOUNT TYPE, WITH RESIN NET FILTER, WIRED NAVIGATION REMOTE CONTROLLER, ELECTRONIC EXPANSION VALVE, 15 MOCP.
8) PROVIDE CONDENSATE PUMP EQUAL TO "ASPEN" MINI WHITE.

VRV BRANCH SELECTOR UNIT SCHEDULE

OUTDOOR UNIT TAG	HR BOX TAG	DESCRIPTION	MAX UNIT CAPACITY SUM OF PORTS BTUH	MAX PORT CAPACITY EACH PORT BTUH	NUMBER OF INDOOR UNIT PORTS	REFRIGERANT	SYSTEM			PORT		ELECTRICAL							WEIGHT	MFG.	MODEL	NOTES
							LIQUID LINE (INCHES, OD)	SUCTION LINE (INCHES, OD)	HP/LP GAS (INCHES, OD)	LIQUID LINE (INCHES, OD)	VAPOR LINE (INCHES, OD)	VOLTS	PH	HZ	RLA	MCA	MOP	LBS			
VRV-1	BS1	HEAT RECOVERY UNIT	290,000	54,000	12	R-410A	5/8	1-1/8	1-1/8	1/4	1/2	208	1	60	-	1.2	15	106	DAIKIN	BS12Q54TVJ	1,2,3
VRV-2	BS2	HEAT RECOVERY UNIT	290,000	54,000	12	R-410A	5/8	1-1/8	1-1/8	1/4	1/2	208	1	60	-	1.2	15	106	DAIKIN	BS12Q54TVJ	1,2,3

NOTES:

1) ALLOWS CONNECTED INDOOR UNITS TO BE IN COOLING OR HEATING MODE SIMULTANEOUSLY.
2) SOUND ABSORBING THERMAL INSULATION: URETHANE FOAM , POLYETHYLENE FOAM.
3) EQUIPPED WITH CONTROLS, ACCESS PANELS, ELECTRONIC EXPANSION VALVES (HP/LP GAS, SUCTION), FILTERS, CONNECTION PORTS.

VARIABLE REFRIGERANT VOLUME (HEAT PUMP) EQUIPMENT SCHEDULE

OUTDOOR UNIT TAG	BRANCH SELECTOR TAG	INDOOR UNIT TAG	DESCRIPTION	OUTDOOR UNIT			INDOOR UNIT							ELECTRICAL						WEIGHT	MFG.	MODEL		NOTES
				NOMINAL TONS	COOLING @ 105°F BTU/h	HEATING @ 32°F BTU/h	AIRFLOW H / M / L CFM	COOLING				HEATING		VOLTS	PH	HZ	RLA	MCA	MOP	LBS.		OUTDOOR UNIT	INDOOR UNIT	
								DB / WB /°F	EVAP °F	TOTAL BTU/h	SENSIBLE BTU/h	DB °F	BTU/h											
VRV-3	-	-	OUTDOOR HEAT PUMP	5	48,000	50,637	-	-	-	-	-	-	-	208	3	60	23.2	29.1	35	225	DAIKIN	RXTQ60TAVJUA	-	1,2,3,4
	N/A	FC3-1	OUTSIDE AIR PROCESSING UNIT	-	-	-	635	101/ 71	42.8	48,000	-	15.0	30,000	208	1	60	-	2.1	15	190	DAIKIN	-	FXMQ48MFVJU	5

NOTES:

1) REFRIGERANT LINES SHALL BE SIZED AS REQUIRED BY EQUIPMENT MANUFACTURER.
2) ALL INSULATION EXPOSED TO SUN LIGHT SHALL HAVE ALUMINUM JACKETING SECURED WITH 1/2" STAINLESS BANDS 9" O.C.
3) PROVIDE ALL PIPING, CONNECTORS, CONTROLS, UNITS, ETC. AS REQUIRED FOR A COMPLETE OPERATING SYSTEM.
4) PROVIDE WITH SAFETY DEVICES: HIGH PRESSURE SWITCH, FAN DRIVER OVERLOAD PROTECTOR, OVERCURRENT FUSE, INVERTER OVERLOAD PROTECTOR, FUSIBLE PLUG.
5) DUCTED OUTSIDE AIR PROCESSING UNIT, WITH DISCHARGE AIR TEMPERATURE CONTROL, MERV 13 FILTERS.

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
www.mccathren.com
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staff@mccathren.com

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Bryan Parks & Associates, Inc.
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PH:(325) 232-6035
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12.20

K1 HVAC SCHEDULES
NO SCALE

GAS FIRED INFRARED HEATER SCHEDULE

TAG	FUEL TYPE	BODY LENGTH FT	HEATING CAPACITY MBH	MINIMUM CLEARANCE TO COMBUSTIBLES ENDS INCHES	SIDES INCHES	CEILING INCHES	BELOW INCHES	HEATING STAGES	MIN. GAS PRESSURE IN. W.C.	MAX. GAS PRESSURE IN. W.C.	ELECTRICAL VOLTS	PH	HZ	FLA	WEIGHT LBS	MANUFACTURER	MODEL	NOTES
GFIH-1	NATURAL GAS	40	100	15	28	6	70	1	5.0	14.0	115	1	60	1.8	130	SPACE-RAY	PTS75-40N5	1,2,3,4,5
GFIH-2	NATURAL GAS	40	100	15	28	6	70	1	5.0	14.0	115	1	60	1.8	130	SPACE-RAY	PTS75-40N5	1,2,3,4,5
GFIH-3	NATURAL GAS	30	75	15	22	6	60	1	5.0	14.0	115	1	60	1.8	130	SPACE-RAY	PTS75-30N5	1,2,3,4,5

NOTES:
1) PROVIDE WITH SINGLE STAGE GAS VALVE - SINGLE STAGE INPUT.
2) PROVIDE WITH CHAIN MOUNTING KIT.
3) PROVIDE WITH 4-INCH SIDEWALL VENT PACKAGE.
4) PROVIDE WITH PROGRAMMABLE DIGITAL THERMOSTAT EQUAL TO "SPACE-RAY" MODEL SETBACK 3000.
5) PROVIDE WITH 4-INCH O.D. WALL INLET CAP, WITH BIRD SCREEN.

FAN SCHEDULE

TAG	FAN CFM	ESP IN WC	DRIVE	SPEED CONTROL	RPM	Db	FAN HP/(W)	VOLTS	PHASE	HZ	FLA	WEIGHT LBS	MFG	MODEL	NOTES
EF-1	330	0.50	DIRECT	EC 0-10V	1,618	< 50	1/10	120	1	60	1.38	57	GREENHECK	SQ-90-VG	1,2,3,4
EF-2	4000	0.35	BELT	-	1,088	< 65	1	460	3	60	2.1	182	GREENHECK	BSQ-180	1,2,5,6,7,8
EF-3	3500	5.00	BELT	-	2,382	<75	5	460	3	60	9.5	435	GREENHECK	USF-16	1,2,5,6,8,9

NOTES:
1) PROVIDE BASIS OF DESIGN MANUFACTURER AND MODEL, OR APPROVED EQUAL WITH PERFORMANCE, COMPONENTS AND TRIM OPTIONS WHICH EXCEED OR ARE EQUAL TO BASIS OF DESIGN.
2) PROVIDE NEMA 1 TOGGLE SWITCH WITH THERMAL OVERLOADS.
3) PROVIDE EC MOTOR WITH SPEED DIAL ON FAN.
4) PROVIDE 10x10 (OR 10" DIAMETER) HOODED WALL CAP WITH BACKDRAFT DAMPER AND BIRDSCREEN.
5) PROVIDE MOTOR COVER AND BEARINGS WITH GREASE FITTINGS.
6) PROVIDE FOUR (4) SPRING HANGING 1-INCH ISOLATORS AND BRACKETS.
7) PROVIDE WD-330-PB-24x24, GRAVITY OPERATED DAMPER.
8) PROVIDE FAN WITH PERMATECTOR COATING, CONCRETE GRAY-RAL 7023.
9) PROVIDE WELDED SCROLL HOUSING, BACKWARD INCLINED WHEEL, INLET AND OUTLET SLIP FIT CONNECTIONS.
10)

AIR DEVICE SCHEDULE

TAG	SERVICE	NECK SIZE	MODULE	MAX. AIRFLOW CFM	MOUNTING	TYPE	MATERIAL	MFG	MODEL	NOTES
E1	EXHAUST	8x8	24x12	250	LAY-IN	1/2x1/2x1/2 EGGCRATE	ALUMINUM	NAILOR	51EC	1,2,4

NOTES:
1) PROVIDE STANDARD WHITE FINISH.
2) SHALL HAVE ALL ALUMINUM CONSTRUCTION.
3) PROVIDE WITH TRANSITIONS WHERE REQUIRED.

INSULATION REQUIREMENTS: DUCTWORK

SUPPLY, RETURN, AND OUTSIDE AIR DUCT LOCATION	TYPE	PRODUCT	ENERGY CODE REQUIRED OVERALL R VALUE FT SQ, °F HR/BTU	THICKNESS IN.	REQUIRED K VALUE BTU*IN/(HR*FT^{2}* °F)	VAPOR BARRIER	ANTIMICROBIAL COATING	NOTES
RETURN PLENUM ACOUSTICAL DUCT LINER	INTERNAL CLOSED CELL ELASTOMERIC	ARMACELL LLC AP COILFLEX	4	1	0.25	YES	YES	1,2,3,4,5,9,10,11,12
SUPPLY & RETURN DUCT EXPOSED TO WEATHER	INTERNAL CLOSED CELL ELASTOMERIC	ARMACELL LLC AP COILFLEX	8	2.25	0.28	YES	YES	1,2,3,4,6,9,10,11,12
SUPPLY & RETURN DUCT IN UNCONDITIONED SPACE	EXTERNAL FSK FACED DUCT WRAP	JOHNS MANVILLE MICROLITE EQ TYPE 100	6	2	0.25	YES	YES	7,8,9,10,11,12

NOTES:
1) INTERNAL ACOUSTICAL DUCT LINER SHALL BE EQUAL TO ARMACELL LLC AP COILFLEX.
2) INTERNAL ACOUSTICAL DUCT LINER SHALL HAVE A SOUND ABSORBENT INTERNAL COATING RATED FOR THE AIR VELOCITY WITHIN DUCTWORK.
3) INTERNAL ACOUSTICAL DUCT LINER SHALL HAVE AN EPA REGISTERED ANTIMICROBIAL AGENT APPLIED TO THE LINER BY THE MANUFACTURER IN ACCORDANCE WITH ALL APPLICABLE ASTM AND UL STANDARDS.
4) PROVIDE METAL NOSING AT ALL TRANSITIONS FROM UNLINED TO LINED DUCT.
5) DUCTS TO RECEIVE ACOUSTICAL DUCT LINER SHALL ALSO BE EXTERIOR INSULATED TO ACHIEVE OVERALL R-VALUE.
6) DUCT EXPOSED TO WEATHER SHALL BE MADE WEATHERPROOF / WATERTIGHT.
7) ALL EXTERNAL DUCT WRAP SHALL HAVE A REINFORCED FOIL JACKET AND VAPOR BARRIER.
8) ALL SEAMS IN EXTERNAL DUCT INSULATION SHALL BE PROPERLY FASTENED PER MANUFACTURER'S RECOMMENDATIONS, AND TAPED TO SEAL VAPOR BARRIER.
9) ALL DUCT INSULATION SHALL MEET APPLICABLE INTERNATIONAL MECHANICAL, INTERNATIONAL BUILDING, UL, AND ASTM STANDARDS FOR SMOKE GENERATION AND FLAME SPREAD.
10) INSTALL ALL INSULATION PER MANUFACTURER'S RECOMMENDATIONS PROPERLY SECURED WITH MECHANICAL FASTENERS AND/OR ADHESIVES.
11) CONTRACTOR SHALL ENSURE THAT INSTALLED INSULATION IS NOT COMPRESSED BEYOND MANUFACTURER'S SPECIFICATION.
12) INSTALL ALL INSULATION PER MANUFACTURER'S RECOMMENDATIONS.

INSULATION REQUIREMENTS: REFRIGERANT PIPING

PIPING	TYPE	THICKNESS IN.	REQUIRED K VALUE BTU*IN/(HR*FT^{2}* °F)	NOTES
REFRIGERANT PIPING 1.5" AND SMALLER	ARMAFLEX ULTRA	1	0.27	1,2,3,4,5,6,7,8
REFRIGERANT PIPING LARGER THAN 1.5"	ARMAFLEX ULTRA	1.5	0.27	1,2,3,4,5,6,7,8

NOTES:
1) ALL JOINTS SHALL BE PROPERLY JOINED WITH ADHESIVE PER MANUFACTURER'S RECOMMENDATION.
2) ALL INSULATION EXPOSED TO SUN LIGHT SHALL HAVE ALUMINUM JACKETING SECURED WITH 1/2" STAINLESS BANDS 9" O.C.
3) ALL PIPING EXPOSED TO VIEW WITHIN BUILDING SHALL BE PAINTED TO MATCH SURROUNDING FINISHES.
4) ALL SUCTION AND HOT GAS BYPASS LINES ARE REQUIRED TO BE INSULATED.
5) INSULATION SHALL BE CONTINUOUS FOR THE ENTIRE PIPE RUN, EXCEPT AS REQUIRED TO SUPPORT VERTICAL PIPES.
6) CONTRACTOR SHALL INSTALL SHEET METAL SLEEVES AT ALL SUPPORT TO PREVENT CRUSHING OF INSULATION.
7) ALL HORIZONTAL RUNS OF PIPING SHALL BE SUPPORTED ON TRAPEZE SUPPORTS OR ANGLE BRACES SUPPORTING PIPE FROM UNDERNEATH.
8) ALL REQUIRED VERTICAL SUPPORT INSULATION SHALL BE FITTED TIGHT TO SUPPORT, AND A TEMPERATURE AND VIBRATION ISOLATOR SHALL BE INSTALLED BETWEEN PIPE AND SUPPORT.

INSULATION REQUIREMENTS: CONDENSATE PIPING

PIPING	TYPE	THICKNESS IN.	REQUIRED K VALUE BTU*IN/(HR*FT^{2}* °F)	NOTES
CONDENSATE LINES WITHIN BUILDING	JOHNS MANVILLE MICRO-LOK FIBER GLASS	1	0.23	1,2,4,5,6,7
CONDENSATE LINES OUTSIDE BUILDING	NONE REQUIRED			3

NOTES:
1) ALL JOINTS SHALL BE PROPERLY JOINED WITH ADHESIVE PER MANUFACTURER'S RECOMMENDATION.
2) ALL PIPING EXPOSED TO VIEW WITHIN BUILDING SHALL BE PAINTED TO MATCH SURROUNDING FINISHES.
3) CONTRACTOR SHALL INSURE ALL EXTERNAL CONDENSATE LINES ARE PROPERLY SLOPED TO PREVENT DAMAGE DUE TO FREEZING.
4) INSULATION SHALL BE CONTINUOUS FOR THE ENTIRE PIPE RUN, EXCEPT AS REQUIRED TO SUPPORT VERTICAL PIPES.
5) CONTRACTOR SHALL INSTALL SHEET METAL SLEEVES AT ALL SUPPORT TO PREVENT CRUSHING OF INSULATION.
6) ALL HORIZONTAL RUNS OF PIPING SHALL BE SUPPORTED ON TRAPEZE SUPPORTS OR ANGLE BRACES SUPPORTING PIPE FROM UNDERNEATH.
7) ALL REQUIRED VERTICAL SUPPORT INSULATION SHALL BE FITTED TIGHT TO SUPPORT, AND A TEMPERATURE AND VIBRATION ISOLATOR SHALL BE INSTALLED BETWEEN PIPE AND SUPPORT.

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
325-669-2584
staff@mccathren.com
www.mccathren.com

RICHARD S. BRYAN
107179
LICENSED PROFESSIONAL ENGINEER
03-29-2023

Bryan Parks & Associates, Inc.
TEXAS REGISTERED ENGINEERING FIRM # F-13562
BUFFALO GAP ROAD
SUITE 1800
ABILENE, TEXAS 79606
PH (325) 232-6035
FX (325) 232-7551 4400

CARY SERVICES
909 PETROLEUM DRIVE
ABILENE, TEXAS

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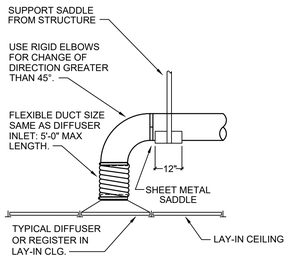
MECHANICAL SYMBOLS

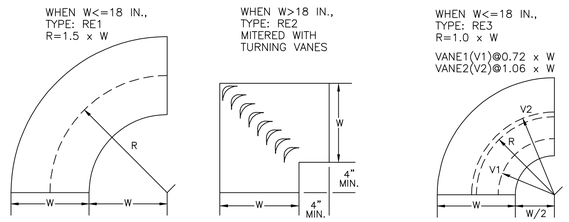
DOUBLE LINE	DESCRIPTION	SINGLE LINE
20/16	DUCT CLEAR INSIDE DIMENSIONS - FIRST NUMBER IS VISIBLE DIMENSION	20x16
	MITERED ELBOW W/ TURNING VANES	
R	RADIUS ELBOW W/ VANE(S) [1.5=R/D STANDARD]	
	SUPPLY DUCT SECTION, POSITIVE PRESSURE	
	RETURN DUCT SECTION, NEGATIVE PRESSURE	
	EXHAUST DUCT SECTION, NEGATIVE PRESSURE	
	SUPPLY DUCT & AIRFLOW UP(LEFT), POSITIVE PRESSURE SUPPLY DUCT & AIRFLOW DOWN (RIGHT), POSITIVE PRESSURE	
	SUPPLY DUCT & AIRFLOW UP(LEFT), NEGATIVE PRESSURE SUPPLY DUCT & AIRFLOW DOWN (RIGHT), NEGATIVE PRESSURE	
	DUCT & AIRFLOW UP(LEFT), NEGATIVE PRESSURE DUCT & AIRFLOW DOWN (RIGHT), NEGATIVE PRESSURE	
R	CHANGE OF ELEVATION = RISE (R), DROP (D)	R
	FLEXIBLE CONNECTOR	
	FLEXIBLE DUCT	
FD	FIRE DAMPER (FD), SMOKE DAMPER (SD), FIRE/SMOKE DAMPER (FSD)	FSD
(TYPE)	MANUAL VOLUME DAMPER (NO LABEL) OPPOSED BLADED DAMPER (OBD) PARALLEL BLADE DAMPER (PBD)	(TYPE
M	MOTORIZED DAMPER OR ZONE CONTROL DAMPER	M
	BRANCH TAP W/ 45° ENTRY	
20/10 10/10	TRANSITION	20/10 10/10
	EXISTING DUCTWORK	
	EXISTING DUCTWORK SHOWN CROSSHATCHED TO BE DEMOLISHED	
	SUPPLY AIR DEVICE - CEILING	
	RETURN AIR DEVICE - CEILING	
	EXHAUST AIR DEVICE - CEILING	
	SUPPLY AIR DEVICE - SIDEWALL	
	RETURN / EXHAUST AIR DEVICE - SIDEWALL	
XXCFM SIZE	REGISTER TAG BALANCED AIRFLOW REQUIRED AT REGISTER REQUIRED AT REGISTER	
T	THERMOSTAT	
T	TEMPERATURE SENSOR	
H	HUMIDISTAT	
H	HUMIDITY SENSOR	
CO	CARBON MONOXIDE SENSOR	
	CONNECT TO EXISTING	



NOTE:
THE USE OF FLEXIBLE AIR DUCT CONNECTORS ARE NOT PERMITTED ABOVE GYPSUM BOARD CEILINGS, SECURITY CEILINGS, OR ANY PLACE WHERE FLEXIBLE CONNECTORS ARE NOT ACCESSIBLE FOR INSPECTION AND/OR REPAIR.

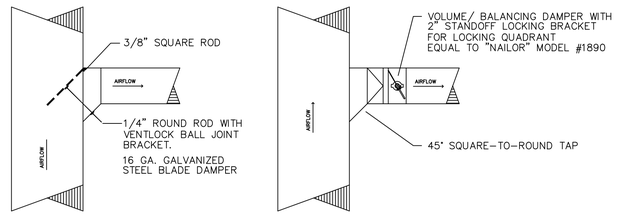
1 FLEXIBLE AIR DUCT CONNECTOR DETAIL

SCALE: NO SCALE



2 DUCT 90° ELBOW DETAILS

NTS



RECTANGULAR TO RECTANGULAR

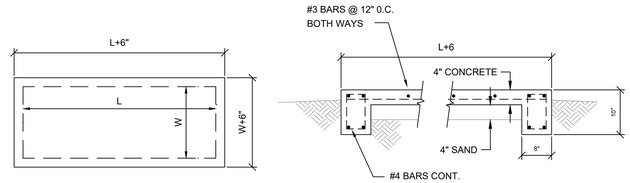
RECTANGULAR TO ROUND

3 DUCT TAP DETAILS

NTS

GENERAL MECHANICAL NOTES:

1. MECHANICAL EQUIPMENT AND MATERIALS FOR THE PROJECT SHALL BE NEW AND SHALL BE APPROVED, IDENTIFIED, LABELED, AND LISTED FOR USE BY A TESTING LABORATORY RECOGNIZED BY THE BUILDING OFFICIAL. LISTED OR LABELED EQUIPMENT SHALL BE INSTALLED AND USED IN ACCORDANCE WITH INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING.
2. DUCT SIZES SHOWN ARE CLEAR AIR STREAM DIMENSIONS, ADJUST SIZES TO ACCOMMODATE INSULATION (AS SPECIFIED).
3. DUCTWORK SHALL BE EXTERIOR INSULATED UNLESS OTHERWISE NOTED.
4. PROVIDE A FLEXIBLE CONNECTION AT THE INTAKE AND DISCHARGE OF ALL MOTOR DRIVEN EQUIPMENT.
5. FLEXIBLE DUCTWORK SHALL HAVE A MAXIMUM LENGTH OF 5'-0".
6. PROVIDE FIRE DAMPERS, FIRE/SMOKE DAMPERS, AND FIRE STOP AS REQUIRED BY CODE AUTHORITIES FOR DUCT PENETRATIONS THROUGH FIRE RATED WALLS, CEILINGS, AND SMOKE COMPARTMENTS. REFER ARCHITECTURAL DRAWINGS.
7. LOCATE MECHANICAL EQUIPMENT FOR UNOBSTRUCTED ACCESS TO ALL UNIT ACCESS PANELS, CONTROLS, AND VALVES.
8. CONTRACTOR SHALL PROVIDE AND INSTALL CONDENSATE LINES PER INTERNATIONAL MECHANICAL CODE.
9. PROVIDE BALANCING DAMPERS, SPLITTER DAMPERS, OR AIR EXTRACTORS WITH LOCKING HANDLES IN ALL BRANCH DUCTS AND ALL TAKEOFFS.
10. CONSTRUCT ALL DUCTWORK IN ACCORDANCE WITH S.M.A.C.N.A. STANDARDS.
11. MECHANICAL EQUIPMENT SUPPORTS, AIR DUCTS, OR FITTINGS NOT SHOWN ON PLAN BUT IMPLIED FOR PROPER INSTALLATION, OPERATION OF SYSTEMS, OR CODE COMPLIANCE SHALL BE CONSIDERED AS PART OF THE MECHANICAL CONTRACTOR'S RESPONSIBILITY. MECHANICAL CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL ELECTRICAL EQUIPMENT REQUIRED FOR THE PROPER OPERATION OF THE MECHANICAL EQUIPMENT IS PROVIDED AND PROPERLY CONNECTED BY THE ELECTRICAL CONTRACTOR.



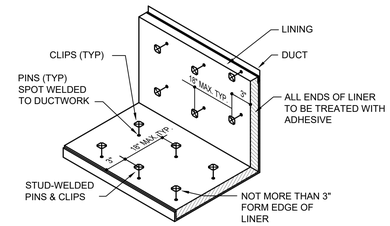
PLAN VIEW

SECTION

1. L IS OVERALL LENGTH OF EQUIPMENT.
2. WIDTH OF FOUNDATION SHALL BE OVERALL WIDTH OF EQUIPMENT + 1'-0". CONCRETE SHALL BE 2800 PSI AT 28 DAYS.
3. HORIZONTAL SURFACES SHALL BE TAMPED AND SCREEDED TO A TRUE SURFACE (NO ALL LOW SPOTS) AND STEEL TROWLED TO A HARD SLATELIKE SURFACE . THE PAD SHALL NOT BE MARKED OFF OR SCORED BUT SHALL BE ONE CONTINUOUS SURFACE.
4. ALL VERTICAL EDGES SHALL HAVE A RUBBED FINISH.
5. CHAMFER ALL EDGES 1".
6. COVER ALL CONCRETE WITH NO LESS THAN 1-1/2" OF CONCRETE

4 EQUIPMENT PAD DETAILS

NTS



NOTES:

1. ALL DUCT SIZES INDICATED ARE INSIDE DIMENSIONS AND DUCT SHALL BE OVERSIZED ACCORDINGLY TO ALLOW FOR DUCT LINER WHEN USED.
2. TIGHTLY BUTT ALL EDGES AND APPLY ADHESIVE TO PREVENT EROSION.

5 ACOUSTICAL DUCT TREATMENT DETAIL

NTS

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
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RICHARD S. BRYAN
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PH:(325) 232-6035
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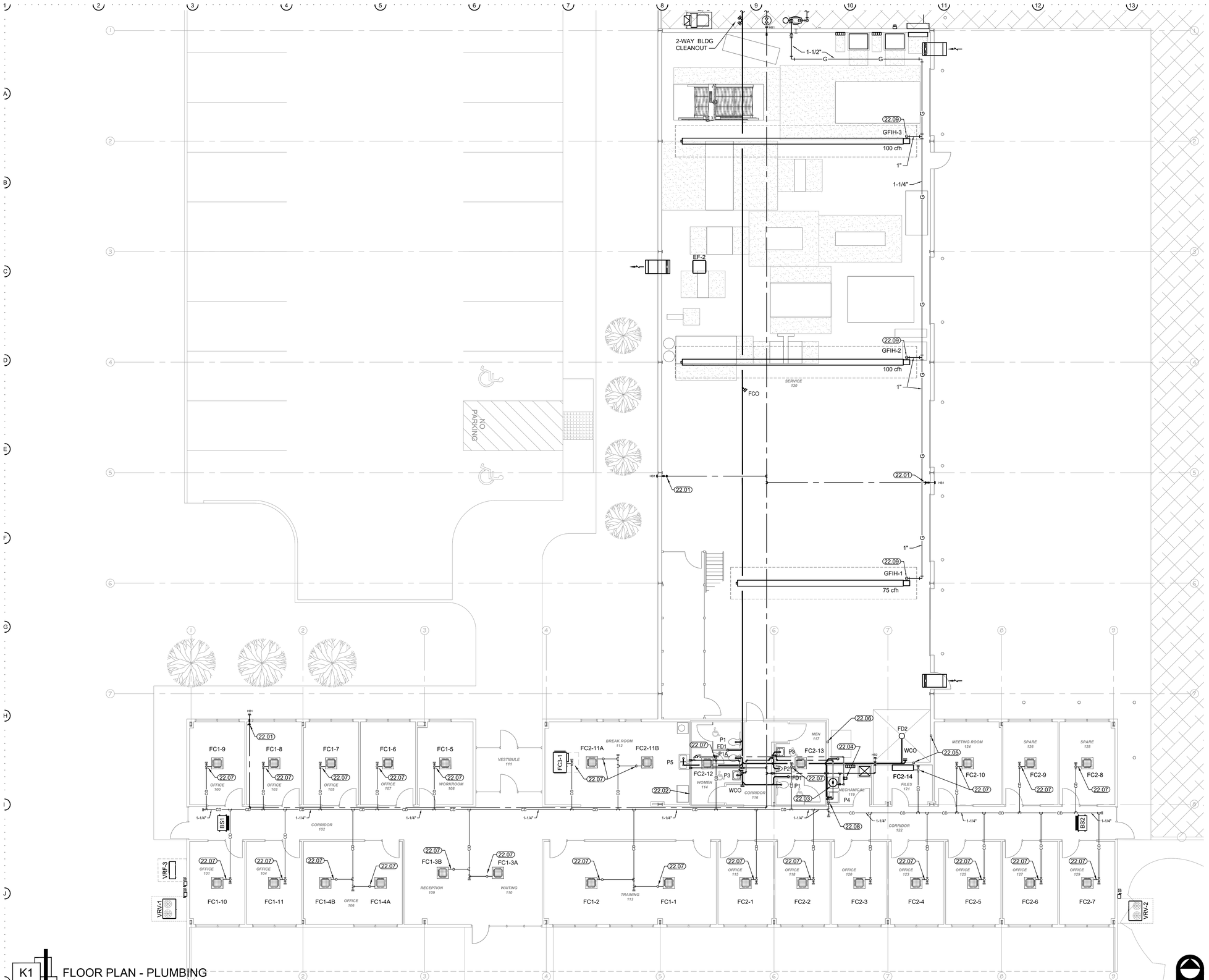
12.30



GENERAL NOTES:

1. REFERENCE COMPLETE SET OF OF CONSTRUCTION DOCUMENTS: ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL TO DETERMINE ENTIRE SCOPE OF WORK AND COORDINATION REQUIREMENTS WITH OTHER TRADES.
2. ALL PLUMBING WORK SHALL BE IN STRICT ACCORDANCE WITH THE 2021 INTERNATIONAL PLUMBING CODE (IPC) AND ANY AND ALL AMENDMENTS AS ADOPTED BY THE CITY OF ABILENE, TEXAS.
3. ALL NATURAL GAS PIPING SHALL BE IN STRICT ACCORDANCE WITH THE 2021 INTERNATIONAL FUEL GAS CODE (IFGC) AND ANY AND ALL AMENDMENTS AS ADOPTED BY THE CITY OF ABILENE, TEXAS.
4. ALL PLUMBING WORK SHALL BE IN STRICT COMPLIANCE WITH THE TEXAS ACCESSIBILITY CODE (TAS).
5. TOTAL BUILDING DRAINAGE FIXTURE UNITS (DFU) PER TABLE 709.1 OF THE 2021 INTERNATIONAL PLUMBING CODE IS 20 DFU.
6. TOTAL BUILDING WATER SUPPLY FIXTURE UNITS (WSFU) PER TABLE E103.3(2) OF THE 2021 INTERNATIONAL PLUMBING CODE IS 28.4 WSFU.
7. TOTAL BUILDING NATURAL GAS DEMAND IS 275 CFH.

DIVISION 22 - PLUMBING

(22.01) LINE SIZE ISOLATION BALL VALVE FOR SERVICE.

(22.02) PROVIDE AND INSTALL AN ICE MAKER BOX WITH HAMMER ARRESTER EQUAL TO "PLUMBEST" #805-925 FOR REFRIGERATOR ICE MAKER. PROVIDE AND EXTEND A 1/4" COPPER WATER LINE FROM ICE MAKER VALVE BOX AND MAKE FINAL CONNECTIONS TO REFRIGERATOR ICE MAKER. VERIFY EXACT SIZE, REQUIREMENTS, ETC. WITH REFRIGERATOR FURNISHED AT JOBSITE.

(22.03) ELECTRIC WATER HEATER P6 AS SCHEDULED SET ON A HOLDRITE #30-SWP-WM WALL MOUNTED WATER HEATER PLATFORM. REFER TO DETAIL 6 ON SHEET 13.31 FOR WATER HEATER PIPING DETAIL. EXTEND DISCHARGE AND PAN DRAIN PIPING TO SERVICE SINK, P4.

(22.04) HOT WATER CIRCULATOR PUMP EQUAL TO "GRUNDFOS" # UP10-16 PM BS/LC, PUMP IS RATED FOR 3/4 GPM AND 3.9' HEAD. PUMP IS 115 VOLT OPERATION AND 5-8.5 WATTS POWER INPUT.

(22.05) PROVIDE AND INSTALL A DUAL VALVE RECESSED BOX WITH HAMMER ARRESTERS FOR CONNECTION TO TWO ICE MAKER AT ONCE. VALVE BOX SHALL BE "SIOUX CHIEF" 696 SERIES OXBOX AND ONLY THE WATER VALVE BOX WILL BE USED. CONNECT COLD WATER PIPING TO EACH OF THE TWO ARRESTER VALVES.

(22.06) PROVIDE AND INSTALL AN ICE MAKER BOX WITH HAMMER ARRESTER EQUAL TO "SIOUX CHIEF" 696 SERIES OXBOX FOR A SINGLE ICE MAKER. VERIFY REQUIREMENTS WITH ICE MAKER FURNISHED AT JOBSITE.

(22.07) FULL SIZE CONDENSATE PIPING FROM AC EQUIPMENT AS SHOWN. PROVIDE ALL REQUIRED FITTINGS, ADAPTORS, ETC. VERIFY EXACT CONDENSATE PIPING CONNECTION SIZE AND REQUIREMENTS WITH UNIT FURNISHED.

(22.08) TURN 1-1/4" CONDENSATE PIPING DOWN AND EXTEND ALONG WALL TO DISCHARGE INTO SERVICE SINK.

(22.09) DROP DOWN AND EXTEND GAS LINE TO INFRARED HEATER AND CONNECT TO SAME. VERIFY EXACT CONNECTION REQUIREMENTS AT JOBSITE WITH INFRARED HEATER FURNISHED.

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
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www.mccathren.com
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PH (325) 232-6035
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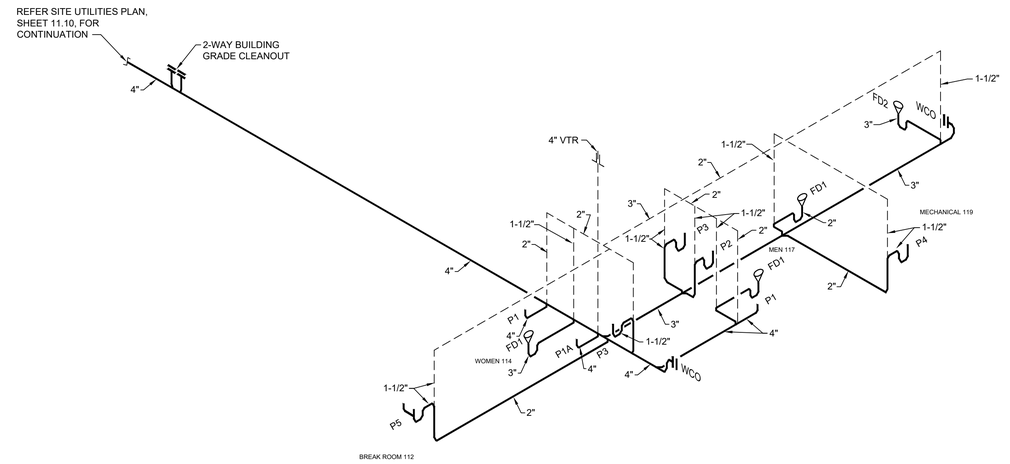
K1 FLOOR PLAN - PLUMBING
1/8" = 1'-0"

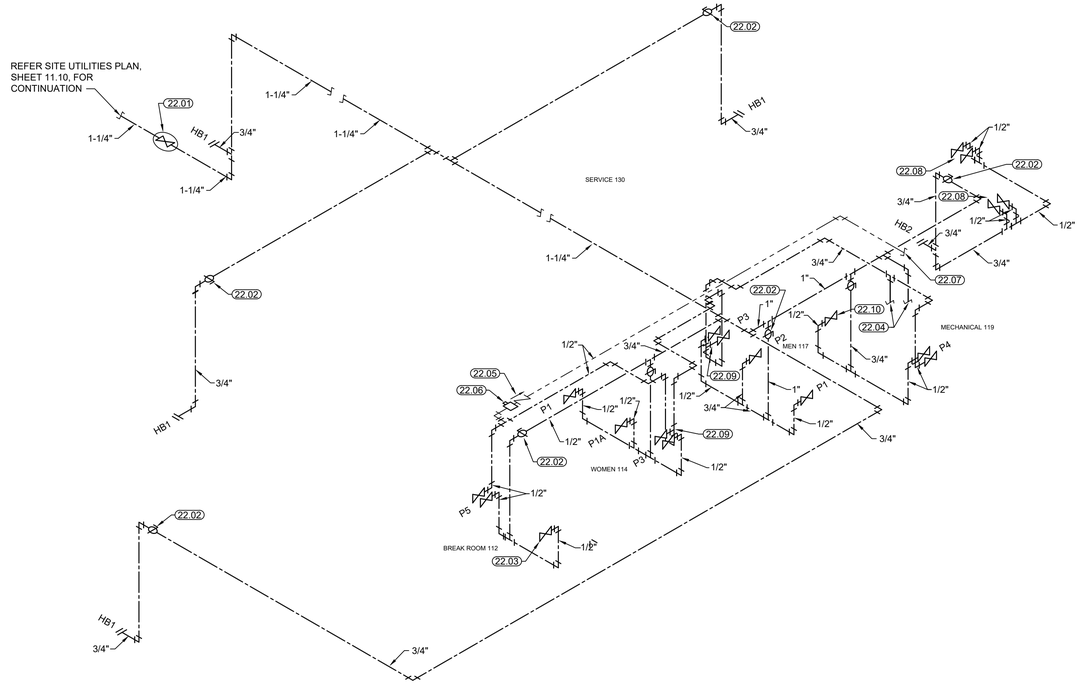
NORTH

553-13-10.DWG
13.10



SEWER PIPING SCHEMATIC

NO SCALE



HOT AND COLD WATER PIPING SCHEMATIC

NO SCALE

PLUMBING SCHEMATICS

K1

NO SCALE

GENERAL NOTES:

1. REFERENCE COMPLETE SET OF OF CONSTRUCTION DOCUMENTS: ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL TO DETERMINE ENTIRE SCOPE OF WORK AND COORDINATION REQUIREMENTS WITH OTHER TRADES.
2. ALL PLUMBING WORK SHALL BE IN STRICT ACCORDANCE WITH THE 2021 INTERNATIONAL PLUMBING CODE (IPC) AND ANY AND ALL AMENDMENTS AS ADOPTED BY THE CITY OF ABILENE, TEXAS.
3. ALL PLUMBING WORK SHALL BE IN STRICT COMPLIANCE WITH THE TEXAS ACCESSIBILITY CODE (TAS).
4. TOTAL BUILDING DRAINAGE FIXTURE UNITS (DFU) PER TABLE 709.1 OF THE 2021 INTERNATIONAL PLUMBING CODE IS 20 DFU.
5. TOTAL BUILDING WATER SUPPLY FIXTURE UNITS (WSFU) PER TABLE E103.3(2) OF THE 2021 INTERNATIONAL PLUMBING CODE IS 28.4 WSFU.

DIVISION 22 - PLUMBING

22.01 LINE SIZE BUILDING CUTOFF VALVE IN VALVE BOX WITH CAST IRON COVER. COVER SHALL HAVE THE WORD "WATER" CAST IN THE TOP.

22.02 LINE SIZE ISOLATION BALL VALVE FOR SERVICE. TYPICAL WHERE SHOWN.

22.03 PROVIDE AND INSTALL AN ICE MAKER BOX WITH HAMMER ARRESTER EQUAL TO "PLUMBEST" #B05-925 FOR REFRIGERATOR ICE MAKER. PROVIDE AND EXTEND A 1/4" COPPER WATER LINE FROM ICE MAKER VALVE BOX AND MAKE FINAL CONNECTIONS TO REFRIGERATOR ICE MAKER. VERIFY EXACT SIZE, REQUIREMENTS, ETC. WITH REFRIGERATOR FURNISHED AT JOBSITE.

22.04 3/4" TO ELECTRIC WATER HEATER P6 AS SCHEDULED SET ON A HOLDRITE #30-SHWP-WM WALL MOUNTED WATER HEATER PLATFORM/DRAIN PAN. REFER TO DETAIL 6 ON SHEET 3.31 FOR WATER HEATER PIPING DETAIL.

22.05 LINE SIZE CHECK VALVE.

22.06 LINE SIZE BALANCE VALVE SET AT 3/4 GPM.

22.07 1/2" HOT WATER RETURN PIPING TO CIRCULATOR PUMP IN MECHANICAL 119. REFER TO DETAIL 3 ON SHEET 13.31.

22.08 PROVIDE AND INSTALL AN ICE MAKER BOX WITH HAMMER ARRESTER EQUAL TO "SIOUX CHIEF" 696 SERIES OXBOX FOR A SINGLE ICE MAKER. VERIFY REQUIREMENTS WITH ICE MAKER FURNISHED AT JOBSITE.

22.09 PROVIDE A 1/2" LINE FOR THE HOT WATER FOR THE LAVATORY. THE PUBLIC LAVATORY MAXIMUM ALLOWABLE PIPING LENGTH FROM THE NEAREST SOURCE OF HEATED WATER SHALL BE LESS THAN 2' FOR A 1/2" PIPE SIZE IN COMPLIANCE WITH ARTICLE C404.5.1 OF THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE.

22.10 PROVIDE AND INSTALL A DUAL VALVE RECESSED BOX WITH HAMMER ARRESTERS FOR CONNECTION TO TWO ICE MAKER AT ONCE. VALVE BOX SHALL BE "SIOUX CHIEF" 696 SERIES OXBOX AND ONLY THE WATER VALVE BOX WILL BE USED. CONNECT COLD WATER PIPING TO EACH OF THE TWO ARRESTER VALVES.

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13.20

PLUMBING FIXTURE SCHEDULE

TAG	FIXTURE TYPE	MANUFACTURER	MODEL NUMBER	TRAP	WASTE	VENT	CW	HW	DESCRIPTION TRIM AND NOTES
P1	TANK TYPE WATER CLOSET (TAS) ADULT HEIGHT	KOHLER	K-3999	4"	4"	2"	1/2"	-	KOHLER "HIGHLINE COMFORT HEIGHT", WHITE VITREOUS CHINA, TWO PIECE TANK TYPE ELONGATED BOWEL, 1.28 GALLON PER FLUSH, 16-1/2" BOWL HEIGHT. COORDINATE WITH SUPPLIER AND PROVIDE TANK WITH RIGHT OR LEFT HAND FLUSH LEVER AS REQUIRED AND WHITE OPEN FRONT PLASTIC SEAT. 12" ROUGH-IN. VERIFY RIGHT OR LEFT HAND FLUSH LEVER WITH DRAWINGS TO BE LOCATED ON WIDE SIDE OF TOILET PER TAS.
P1A	TANK TYPE WATER CLOSET	KOHLER	K-25087	4"	4"	2"	1/2"		KOHLER "KINGSINGTON" WHITE VITREOUS CHINA TWO PIECE TANK ELONGATED BOWL, 1.28 GALLON PER FLUSH, 14-1/2" BOWL HEIGHT. COORDINATE WITH SUPPLIER AND PROVIDE TANK WITH RIGHT OR LEFT HAND FLUSH LEVER AS REQUIRED AND WHITE OPEN FRONT PLASTIC SEAT. 12" ROUGH-IN. VERIFY RIGHT OR LEFT HAND FLUSH LEVER WITH DRAWINGS TO BE LOCATED ON WIDE SIDE OF TOILET PER TAS.
P2	WALL MOUNTED URINAL (TAS) HEIGHT	KOHLER	K-4991-ET	2"	2"	1-1/2"	3/4"		KOHLER "BARDON" WHITE VITREOUS CHINA, 0.125 GALLON PER FLUSH WASHOUT URINAL WITH 3/4" TOP SPUD AND CONCEALED FLOOR MOUNTED WALL HANGER. PROVIDE SLOAN ROYAL 186-0.125 POLISHED CHROME FINISH FLUSH VALVE WITH 0.125 GALLON PER FLUSH. MOUNT AT HEIGHT AS PER ARCHITECTURAL DRAWINGS.
P3	WALL MOUNTED LAVATORY STANDARD AND (TAS)	KOHLER	K-2005	1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	KOHLER "KINGSTON" WHITE VITREOUS CHINA, 20-1/4"X18-1/8" WALL MOUNT SINK WITH 4" CENTER FAUCET HOLES AND FLOOR MOUNTED WALL CARRIER.. PROVIDE KOHLER "TRITON BOWE" K-400T20-4ANA, 0.5 GPM FLOW RATE AT 60 PSI CHROME PLATED FAUCET FOR 4" CENTERS AND WITH WRISTBLADE HANDLES. PROVIDE THERMOSTATIC MIXING VALVE FOR LAVATORY AS PER NOTE 5 BELOW. PROVIDE PIPE INSULATION KIT PER NOTE 4 FOR TAS LAVATORIES.
P4	SERVICE SINK	ZURN	MS2620-DF1	1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	WHITE 26"X22-3/8"X14" DEEP SINGLE COMPARTMENT MULTI-PURPOSE SINK WITH FLOOR MOUNTED SELF-LEVELING LEGS COMPLETE WITH CHROME PLATED 4" CENTERSET DECK FAUCET WITH SWING SPOUT AND ANGLED END. PROVIDE ZURN #ZR-367-PC-1-1/4" SEMI-CAST P-TRAP WITH CLEANOUT.
P5	TWO COMPARTMENT COUNTER MOUNTED SINK (TAS)	ELKAY	LRAD332265	1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	18 GAUGE STAINLESS STEEL, SELF RIMMING, 33"x22"x6-1/2" TWO COMPARTMENT SINK WITH CHROME PLATED STRAINER, CRUMB CUPS, TAILPIECE, STOPS, RISERS, AND CENTERED REAR DRAINS. TRUEBRO GUARD KIT WHERE REQUIRED. PROVIDE KOHLER MODEL K-560 BELLERA PULLDOWN FAUCET IN POLISHED CHROME FINISH.
P6	ELECTRIC 10 GALLON WATER HEATER	A.O. SMITH	DEL-10				3/4"	3/4"	WATER HEATER SHALL BE EQUAL TO A.O. SMITH "DURA-POWER" MODEL. HEATER SHALL HAVE DUAL 3,000 WATT ELEMENTS WITH NON SIMULTANEOUS OPERATION. WATER HEATER SHALL BE 10 GALLON CAPACITY AND RATED FOR 150 PSI OPERATION AND EQUIPPED WITH HIGH DENSITY ANODE ROD. HEATER SHALL MEET THE STANDBY LOSS REQUIREMENTS OF THE U.S. DEPARTMENT OF ENERGY AND CURRENT EDITION OF ASHRAE/IES 90.1. HEATER SHALL BE FOR 208 VOLT, SINGLE PHASE OPERATION AND HAVE A RECOVERY RATE OF 12 GALLONS PER HOUR AT A RISE OF 100° F. PROVIDE 3/4" ASME PRESSURE RELIEF VALVE PIPIED FULL SIZE AS SHOWN ON THE DRAWINGS.
FD1	FLOOR DRAIN	JOSAM	3000-A SERIES	-	-	-	-	-	CAST IRON BODY FLOOR DRAIN WITH CHROME PLATED NIKALOY SUPER-FLO STRAINER. AT PLUMBING CONTRACTORS OPTION, PROVIDE TRAP PRIMER OR TRAP GUARD AT ALL FLOOR DRAINS NOT USED AS A SHOWER DRAIN. SIZE SHALL BE AS NOTED ON THE DRAWINGS.
FD2	FLOOR DRAIN	JOSAM	3220-SD						12" ROUND TOP COATED CAST IRON BODY FLOOR DRAIN, SHALLOW TWO-PIECE BODY WITH DOUBLE DRAINAGE FLANGE WITH SATIN FINISH NIKALOY TOP. AT PLUMBING CONTRACTORS OPTION, PROVIDE TRAP PRIMER OR TRAP GUARD. SIZE SHALL BE AS NOTED ON THE DRAWINGS.
HB1	NON FREEZE WALL HYDRANT	WOODFORD	B65				3/4"		BOX MOUNTED AUTOMATIC DRAINAGE, BACKFLOW PROTECTED, FREEZELESS WALL HYDRANT WITH LOOSE KEY AND "WATER" STAMPED ON THE DOOR. COORDINATE WITH WALL THICKNESS AND EXTERIOR FINISH AS SELECTED BY ARCHITECT.
HB2	WALL HYDRANT	WOODFORD	MODEL 24P				3/4"		WALL FAUCET FOR NON-FREEZING AREAS WITH ANTI-SIPHON VACUUM BREAKER. ASSE STANDARD 1011 APPROVED. 3/4" HOSE CONNECTION.

NOTES:

1) PLUMBING CONTRACTOR SHALL INSTALL ALL PLUMBING FIXTURES AND ACCESSORIES FOR COMPLIANCE WITH AMERICAN DISABILITY ACT (ADA) OR TEXAS ACCESSIBILITY STANDARDS (TAS).
2) PLUMBING CONTRACTOR SHALL REFERENCE AND COORDINATE ROUGH-IN DIMENSIONS WITH GENERAL CONTRACTOR BEFORE PURCHASING AND/OR INSTALLING ANY FIXTURES AND ACCESSORIES AND BEFORE PROCEEDING WITH CONSTRUCTION.
3) PLUMBING CONTRACTOR SHALL INSTALL FLUSH CONTROL LEVERS/HANDLES ON WIDE SIDE OF TANK FOR ALL WATER CLOSETS TO COMPLY WITH ADA OR TAS STANDARDS.
4) PLUMBING CONTRACTOR SHALL INSTALL TRUEBRO PIPE (SUPPLY AND DRAIN) COVERS FOR ALL SINKS AND LAVATORIES (IF REMOVABLE PROTECTIVE PANEL IS NOT PROVIDED) TO ENSURE ADA AND TAS COMPLIANCE.
5) POINT OF USE THERMOSTATIC MIXING VALVE SHALL BE BRADLEY NAVIGATOR MODEL S59-4000 SERIES

GENERAL PLUMBING NOTES:

1. ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH STATE LAWS, REGULATIONS, STANDARDS, AND LOCAL AUTHORITIES HAVING LAWFUL JURISDICTION THAT GOVERN WORK OF THIS NATURE INCLUDING BUT NOT LIMITED TO: THE NATIONAL ELECTRIC CODE, INTERNATIONAL FIRE CODES, TERMS AND CONDITIONS OF SERVICES OF THE ELECTRICAL UTILITY, AND ETC. NONE OF THE TERMS OR PROVISIONS OF THE CONSTRUCTION DOCUMENTS OR SPECIFICATIONS SHALL BE CONSTRUED AS WAVING ANY OF THE RULES, REGULATIONS, OR STANDARDS OF THESE AUTHORITIES.
2. CONTRACTOR SHALL THOROUGHLY ACQUAINT HIMSELF WITH DETAILS OF THE COMPLETE SET OF DRAWINGS AND SPECIFICATIONS WHICH FORM A PART OF THE CONTRACT DOCUMENTS. NO ALLOWANCE WILL BE MADE BECAUSE OF THE CONTRACTOR'S UNFAMILIARITY WITH ANY PORTION OF THE COMPLETE SET OF CONSTRUCTION DOCUMENTS WHICH INCLUDE BUT NOT LIMITED TO ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS.
3. PRIOR TO BIDDING, THE CONTRACTOR SHALL VISIT THE SITE TO VERIFY EXISTING CONDITIONS AND FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS, HAZARDS, AND LOCAL REQUIREMENTS INVOLVED. SUBMISSION OF BIDS SHALL BE DEEMED EVIDENCE OF SUCH VISIT.
4. PRIOR TO BIDDING, THE CONTRACTOR SHALL REVIEW THE COMPLETE SET OF CONSTRUCTION DOCUMENTS. SHOULD THE CONTRACTOR NOTE DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS, GOVERNING CODES, SITE CONDITIONS, OR MANUFACTURER'S DIRECTIONS, HE SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING FOR INTERPRETATIONS AND CLARIFICATIONS. NO ALLOWANCES WILL BE MADE FOR WORK PERFORMED OUT OF COMPLIANCE AND SUCH DEFICIENCIES THAT REQUIRE CORRECTION.
5. IT IS THE INTENT THAT THE FOREGOING WORK SHALL BE COMPLETE IN EVERY RESPECT. ALL ITEMS OF LABOR, MATERIAL, OR EQUIPMENT NOT SPECIFICALLY STATED IN DETAIL BY THE SPECIFICATIONS OR DRAWINGS, BUT INCIDENTAL TO OR NECESSARY FOR THE COMPLETE INSTALLATION AND PROPER OPERATION OF ALL PHASES OF WORK DESCRIBED HEREIN, SHALL BE PROVIDED.
6. WHERE THE TERM "PROVIDE" IS USED. IT SHALL MEAN "FURNISH & INSTALL". THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL THE OTHER TRADES PRIOR TO FABRICATION, PURCHASE, AND/OR INSTALLATION OF ALL WORK.
7. ALL MODEL NUMBERS INDICATED ARE PROVIDED TO ESTABLISH THE QUALITY LEVEL AND FEATURES REQUIRED. LISTED MANUFACTURERS AND OTHER PRIOR APPROVED EQUALS MAY BE SUBSTITUTED WHEN PROVIDED WITH EQUAL FEATURES, EITHER STANDARD OR AS ACCESSORIES.
8. THE CONTRACTOR SHALL SECURE ALL PERMITS OR APPLICATIONS AND PAY ANY AND ALL FEES AS REQUIRED.
9. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOBSITE BEFORE COMMENCING ANY PHASE OF THE WORK. ADJUSTMENTS FOR FIT AND COORDINATION SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
10. ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER. CLEAN THE JOB SITE DAILY AND REMOVE FROM THE PREMISES ANY DIRT AND DEBRIS CAUSED BY THE WORK INCLUDED IN THIS CONTRACT.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFE KEEPING OF HIS OWN PROPERTY ON THE JOB SITE. OWNER ASSUMES NO RESPONSIBILITY FOR PROTECTION OF PROPERTY AGAINST FIRE, THEFT, AND ENVIRONMENTAL CONDITIONS.
12. THE CONTRACTOR SHALL COORDINATE WITH THE OTHER TRADES TO ENSURE THAT EACH TRADE SHALL HAVE SUFFICIENT SPACE TO INSTALL THEIR EQUIPMENT (DUCTWORK, PIPING, ELECTRICAL, ETC.) ALONG WITH THE PLUMBING WORK.
13. ALL PLUMBING EQUIPMENT AND MATERIALS FOR THE PROJECT SHALL BE NEW AND SHALL BE APPROVED, IDENTIFIED, LABELED, AND LISTED FOR USE BY A TESTING LABORATORY RECOGNIZED BY THE BUILDING OFFICIAL. LISTED OR LABELED EQUIPMENT SHALL BE INSTALLED AND USED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING.
14. PLUMBING CONTRACTOR IS TO PROVIDE FIRE STOP AS REQUIRED BY CODE AUTHORITIES FOR PIPE PENETRATIONS THROUGH FIRE RATED FLOORS, WALLS, AND CEILINGS. REFER ARCHITECTURAL DRAWINGS.
15. PROVIDE CLEAN OUTS IN SANITARY AND STORM DRAINAGE SYSTEMS AT ENDS OF RUNS, AT CHANGES IN DIRECTION NEAR THE BASE OF STACKS, EVERY 75 FEET IN HORIZONTAL RUNS AND ELSEWHERE AS INDICATED.
16. ALL SANITARY SEWER PIPING UNDER SLAB SHALL BE 2" OR LARGER.
17. INSTALL PIPING SO THAT VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.
18. PROVIDE ACCESS DOORS IN INACCESSIBLE FINISHES FOR ALL VALVES, TRAP PRIMERS, ETC. THAT REQUIRE PERIODIC ADJUSTMENTS OR MAINTENANCE.
19. WHERE DOMESTIC COLD AND HOT WATER PIPING DROPS INTO A PIPE CHASE, THE SIZE SHOW FOR THE PIPE DROPS SHALL EXTEND TO THE LAST FIXTURE.
20. PROVIDE ALL PLUMBING FIXTURES WITH ACCESSIBLE STOPS.
21. T&P RELIEF VALVE TO BE TERMINATED PER CODE REQUIREMENTS.
22. INSTALL CODE APPROVED WATER HAMMER ARRESTORS WHERE QUICK CLOSING VALVES ARE UTILIZED.
23. ALL JOINTS AND CONNECTIONS SHALL BE MADE ABOVE FLOOR LINE.
24. ALL LAVATORY AND SINK WASTE AND TRAPS SHALL BE 17 GAUGE BRASS. DEARBORN BRASS OR EQUAL.
25. PLUMBING CONTRACTOR AND GENERAL CONTRACTOR SHALL COORDINATE VENT LOCATION WITH BUILDING ROOF FRESH AIR INLETS TO MAINTAIN REQUIRED CLEARANCES.
26. INSTALL TRAP PRIMERS ON ALL FLOOR DRAINS AND OSD DRAINS.
27. FLUSH HANDLES ON ADA/TAS ACCESSIBLE WATER CLOSET SHALL BE MOUNTED ON THE WIDE SIDE OF STALL.
28. PROVIDE INSULATION AND HEAT TRACE FOR ABOVE GRADE PIPING SUBJECT TO FREEZING.
29. ALL PIPING, VENTS, DUCTS, ECT. EXTENDING THROUGH WALLS AND ROOFS SHALL BE FLASHED AND COUNTERFLASHED IN A WATERPROOF MANNER. SEAL ALL PENETRATIONS OF THE FLOOR/CEILING ASSEMBLY AND RATED WALLS WITH A SEALANT MATERIAL APPROVED BY LOCAL CODE.
30. UNIONS AND/OR FLANGES SHALL BE INSTALLED AT EACH PIECE OF EQUIPMENT, IN BYPASSES, AND IN LONG PIPING RUNS (100 FT OR MORE) TO PERMIT DISASSEMBLY FOR ALTERATIONS AND REPAIRS.
31. ALL CONNECTIONS MADE OF DISSIMILAR METALS SHALL UTILIZE CODE APPROVED DIELECTRIC UNIONS.
32. PROVIDE MAINTENANCE AND/OR OTHER CLEARANCES AT EACH PIECE OF EQUIPMENT AS REQUIRED OR RECOMMENDED BY THE EQUIPMENT MANUFACTURER. COORDINATE WITH GENERAL CONTRACTOR TO PROVIDE ANY ADDITIONAL SPACE REQUIRED FOR SUBMITTED EQUIPMENT.

PLUMBING SYMBOLS AND LINE TYPES

SINGLE LINES INDICATE NEW
DOUBLE LINES INDICATE EXISTING

- COLD WATER
- HOT WATER
- HOT WATER RETURN
- SS — SANITARY SEWER (UTILITY)
- SANITARY SEWER
- SEWER VENT
- CD — CONDENSATE
- G — NATURAL GAS
- TEE TURNS UP
- ELL TURNS UP
- TEE TURNS DOWN
- ELL TURNS DOWN
- UNION
- FLANGED CONNECTION / BLIND FLANGE
- PIPE CAP
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- FLOW ARROW
- BALL VALVE
- GATE VALVE
- CHECK VALVE
- BALANCE VALVE
- HOSE BIBB
- CLEANOUT (FLOOR, WALL, OR GRADE)
- VTR — VENT THRU ROOF
- FD — FLOOR DRAIN

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
325-669-2584
staff@mccathren.com
www.mccathren.com

RICHARD S. BRYAN
107179
LICENSED PROFESSIONAL ENGINEER
03-29-2023

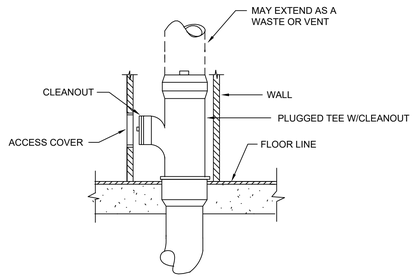
Bryan Parks & Associates, Inc.
TEXAS REGISTERED ENGINEERING FIRM F-13562
BUFFALO GAP ROAD
SUITE 1800
ABILENE, TEXAS 79606
PH (325) 232-6035
FX (325) 232-7551 4400

CARY SERVICES
909 PETROLEUM DRIVE
ABILENE, TEXAS

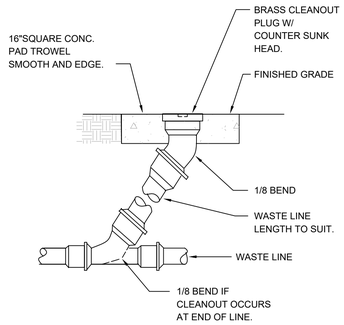
03-29-2023

K1 PLUMBING SCHEDULES, NOTES, AND LEGEND
NO SCALE

553-13-30.DWG
13.30



1 WALL CLEANOUT DETAIL
NTS



2 GRADE CLEANOUT DETAIL
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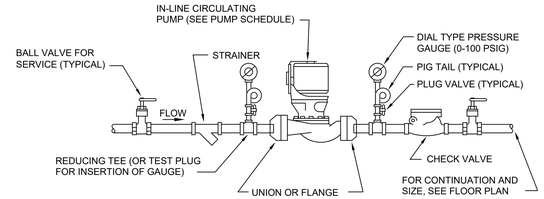
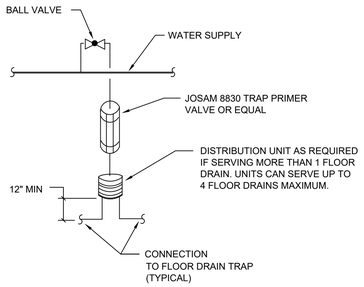


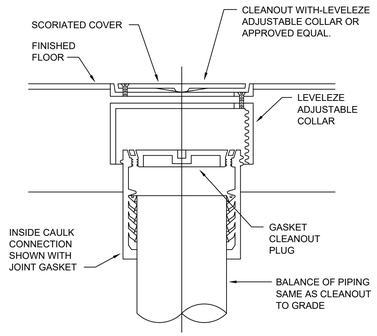
3 IN-LINE CIRCULATING PUMP DETAIL
NTS



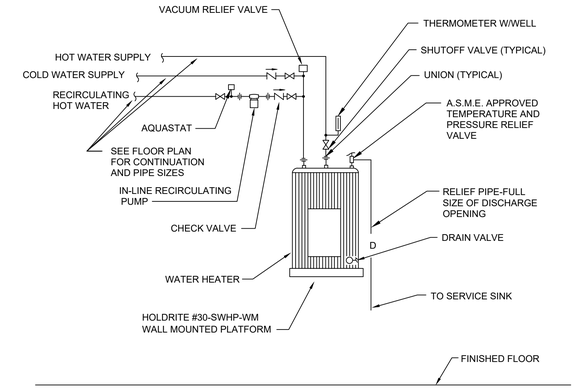
NOTE:

1. TRAP GUARDS MAY BE USED IN LIEU OF TRAP PRIMERS AT CONTRACTORS OPTION

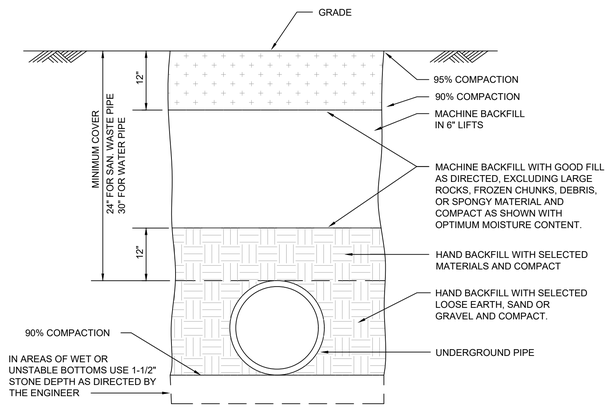
4 TYPICAL TRAP PRIMER DETAIL
NTS



5 FLOOR CLEANOUT DETAIL
NTS



6 WATER HEATER PIPING DETAIL
NTS



NOTES:

1. PROVIDE TRACER WIRE ON ALL BURIED NON METALLIC PIPE.
2. PROVIDE WARNING TAPE 12" BELOW GRADE ABOVE EACH BURIED PIPE.

7 PIPE TRENCH DETAIL
NTS

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
www.mccathren.com
325-669-2584
staff@mccathren.com

RICHARD S. BRYAN
107179
LICENSED
PROFESSIONAL ENGINEER
03-29-2023

Bryan Parks & Associates, Inc.
BUFFALO GAP ROAD
SUITE 1800
ABILENE, TEXAS 79606
PH (325) 232-6035
FX (325) 232-7551 4400
TEXAS REGISTERED ENGINEERING FIRM # F-13562

CARY SERVICES
909 PETROLEUM DRIVE
ABILENE, TEXAS

03-29-2023

K1 PLUMBING DETAILS
NO SCALE

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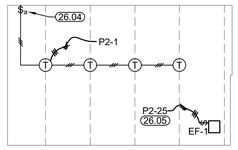
13.31

9:11 pm Tuesday, Mar 29 2023



C1 FLOOR PLAN - EQUIPMENT PLATFORM LIGHTING & POWER

1/8" = 1'-0"

K1 FLOOR PLAN - LIGHTING

1/8" = 1'-0"

GENERAL NOTES:

1. REFERENCE COMPLETE SET OF CONSTRUCTION DOCUMENTS: ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL TO DETERMINE ENTIRE SCOPE OF WORK AND COORDINATION REQUIREMENTS WITH OTHER TRADES.
2. ALL ELECTRICAL WORK SHALL BE IN COMPLIANCE WITH THE 2014 NATIONAL ELECTRIC CODE, LOCAL AMENDMENTS, AND GOVERNING LOCAL AUTHORITY.
3. ALL WORK SHALL BE IN COMPLIANCE WITH THE 2012 INTERNATIONAL ENERGY CONSERVATION CODE (IECC), LOCAL AMENDMENTS, AND GOVERNING LOCAL AUTHORITY.
4. REFER COMPLETE SET OF CONTRACT DOCUMENTS: MECHANICAL, PLUMBING, & ELECTRICAL.
5. REFER SHEET E14.10 LIGHTING PLAN.
6. REFER SHEET E14.20 POWER PLAN.
7. REFER SHEET E14.30 HVAC POWER PLAN.
8. REFER SHEET E14.40 FOR ELECTRICAL ONE-LINE AND SCHEDULES.
9. REFER SHEET E14.50 FOR ELECTRICAL SCHEDULES.
10. REFER SHEET E14.60 FOR ELECTRICAL LEGEND NOTES DETAILS.
11. REFER SHEET E14.70 FOR ELECTRICAL DETAILS

DIVISION 26 - ELECTRICAL

26.01 EXTEND (2) #10'S, (1) #10 GRND. IN 1/2" CONDUIT FROM EXIT LIGHT TO EXIT LIGHT BREAKER LOCATED IN PANEL "P1-1".

26.02 EXTEND (2) #10'S, (1) #10 GRND. IN 1/2" CONDUIT FROM EXIT LIGHT TO EXIT LIGHT BREAKER LOCATED IN PANEL "P2-7".

26.03 DAYLIGHT HARVESTING PHOTOCELL (DS) SHALL CONTROL A SINGLE ZONE AND PROVIDE AUTOMATIC DIMMING CONTROL.

26.04 COORDINATE LIGHT SWITCH LOCATION AT JOB SITE.

26.05 EXHAUST FAN, EF-1, LOCATED IN STORAGE AREA ABOVE AND SERVES BOTH WOMEN'S AND MEN'S RESTROOMS. EXHAUST FAN SHALL BE INTERLOCKED WITH LIGHTS. REFER DETAIL 1, WIRING DIAGRAM, SHEET 14.70.

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene, Texas 79602
www.mccathren.com
325-669-2584
staff@mccathren.com

RICHARD S. BRYAN
107179
LICENSED PROFESSIONAL ENGINEER
03-29-2023

Bryan Parks & Associates, Inc.
TEXAS REGISTERED ENGINEERING FIRM # F-13562
BUFFALO GAP ROAD
SUITE 1800
ABILENE, TEXAS 79606
PH (325) 232-6035
FX (325) 225-7551 4400

CARY SERVICES
909 PETROLEUM DRIVE
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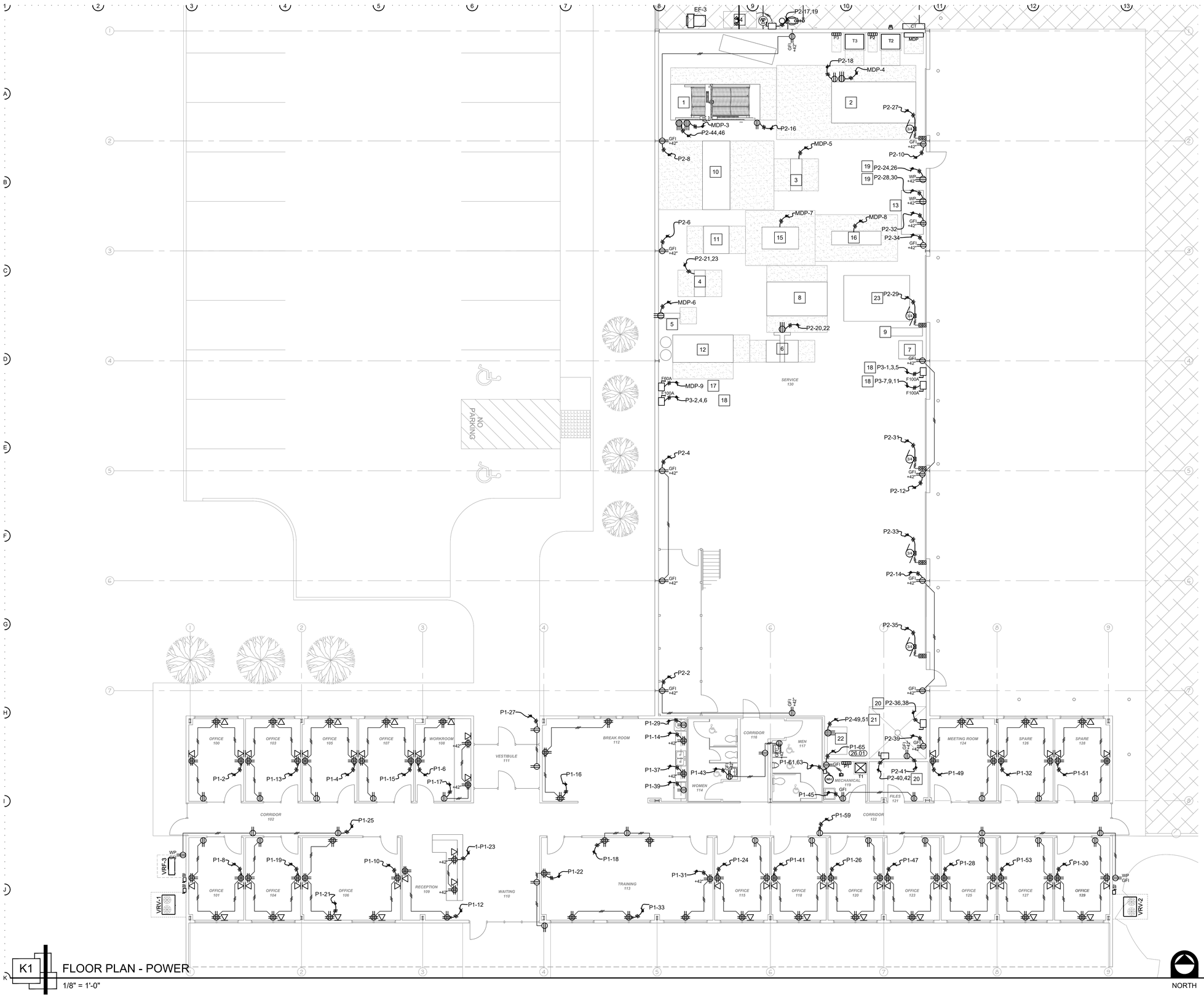

GENERAL NOTES:

1. REFERENCE COMPLETE SET OF CONSTRUCTION DOCUMENTS: ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL TO DETERMINE ENTIRE SCOPE OF WORK AND COORDINATION REQUIREMENTS WITH OTHER TRADES.
2. ALL ELECTRICAL WORK SHALL BE IN COMPLIANCE WITH THE 2014 NATIONAL ELECTRIC CODE, LOCAL AMENDMENTS, AND GOVERNING LOCAL AUTHORITY.
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4. REFER COMPLETE SET OF CONTRACT DOCUMENTS: MECHANICAL, PLUMBING, & ELECTRICAL.
5. REFER SHEET E14.10 LIGHTING PLAN.
6. REFER SHEET E14.20 POWER PLAN.
7. REFER SHEET E14.30 HVAC POWER PLAN.
8. REFER SHEET E14.40 FOR ELECTRICAL ONE-LINE AND SCHEDULES.
9. REFER SHEET E14.50 FOR ELECTRICAL SCHEDULES.
10. REFER SHEET E14.60 FOR ELECTRICAL LEGEND NOTES & DETAILS.
11. REFER SHEET E14.70 FOR ELECTRICAL DETAILS.
12. HOME RUN CIRCUITS MORE THAN 75 FEET FROM PANEL SHALL BE SIZED AS REQUIRED TO LIMIT VOLTAGE DROP TO 2% MINIMUM.
13. COORDINATE ELECTRICAL TERMINATIONS WITH OWNER FURNISHED EQUIPMENT. PROVIDE CORDS, PLUGS, RESTRAINTS, ETC.
14. COORDINATE EXACT EQUIPMENT LOCATIONS WITH OWNER FURNISHED EQUIPMENT BLDG.

DIVISION 26 - ELECTRICAL

(26.01) RECEPTACLE FOR CIRCULATOR PLUMP. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH PLUMBING CONTRACTOR AT JOBSITE.

EQUIPMENT:

1	PLASMA TABLE: 16'X7' 460V, 3PH, 30 AMP.
2	COIL LINE AND AUTO FOLD: 15'-4"X7'-6" 415V, 3PH., 35 AMPS
3	DUCT FORMER PITSBUAG, MALE S/D: 5'-10"X2'-1" 480V, 3PH., 15 AMPS
4	LOCK FORMEIL: 4'-10"X-2'-0" 240V, 1PH., 30 AMPS
5	SPOT WELD: 2'-11"X11", 440V, 1PH., 82 AMPS
6	PIN SPOTTER: 75"X70", 240V, 1PH., 30 AMPS
7	DRIVE CLEAT FOLDER: 52"X40" AIR
8	INSULATION TABLE: 52"X40"
9	SLIP ROLLER: 69"X18"
10	LG DUCT BREAK / BENDER: 150"X60"
11	SMALL DUCT BENDER: 5'-0"X4'-8"
12	SPRAY BOOTH / CUTTING TABLE: 11'X5'
13	METAL WELDING TABLE: 8'X4'
14	AIR COMPRESSOR: 5'-6"X2'-0"
15	TDF BREAKER: 80'X48', 460V 3PH. 15 AMPS
16	TDF FORMER: 30"X9'-0", 460V 3PH. 15AMPS
17	480V 3PH. 60 AMP BREAKER, FOR TRAINING
18	208V 3PH. 100 AMP BREAKER, FOR TRAINING
19	208V 1PH. 60 AMP BREAKER, FOR WELDER
20	208V 1PH. 30 AMP BREAKER, FOR ICE MACHINE REPAIR
21	208V 1PH. 30 AMP BREAKER, FOR ICE MACHINE
22	ICE MACHINE: 5'-0"X3'-7" 208V, 1PH, 30 AMP.
23	STAGING AREA FOR DUCT: 8'-4"X12'-0"

K1 FLOOR PLAN - POWER
1/8" = 1'-0"

NORTH

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
www.mccathren.com
325-669-2584
staff@mccathren.com

RICHARD S. BRYAN
107179
LICENSED PROFESSIONAL ENGINEER
03-29-2023

Bryan Parks & Associates, Inc.
BUFFALO GAP ROAD
SUITE 1800
ABILENE, TEXAS 79606
PH:(325) 232-6035
FX:(325) 232-7001 4400
TEXAS REGISTERED ENGINEERING FIRM # F-13562

CARY SERVICES
909 PETROLEUM DRIVE
ABILENE, TEXAS

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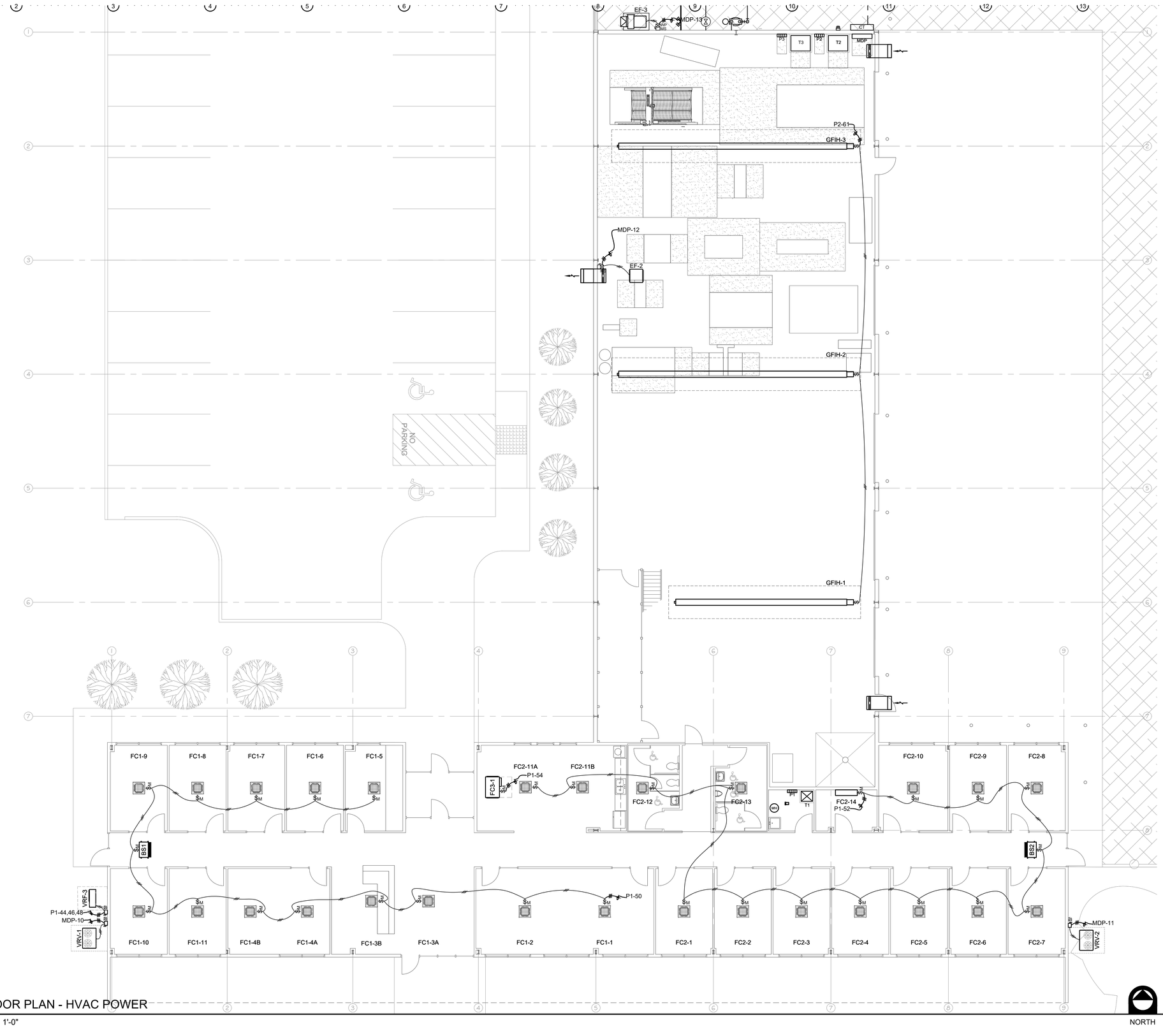

GENERAL NOTES:

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4. REFER COMPLETE SET OF CONTRACT DOCUMENTS: MECHANICAL, PLUMBING, & ELECTRICAL.
5. REFER SHEET E14.10 LIGHTING PLAN.
6. REFER SHEET E14.20 POWER PLAN.
7. REFER SHEET E14.30 HVAC POWER PLAN.
8. REFER SHEET E14.40 FOR ELECTRICAL ONE-LINE AND SCHEDULES.
9. REFER SHEET E14.50 FOR ELECTRICAL SCHEDULES.
10. REFER SHEET E14.60 FOR ELECTRICAL DETAILS.

DIVISION 26 - ELECTRICAL

(26.01) NOTE

K1 FLOOR PLAN - HVAC POWER

1/8" = 1'-0"

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BUFFALO GAP ROAD
SUITE 1800
ABILENE, TEXAS 79606
PH (325) 232-6035
FX (325) 232-7551 4400
TEXAS REGISTERED ENGINEERING FIRM # F-13562

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909 PETROLEUM DRIVE
ABILENE, TEXAS

03-29-2023

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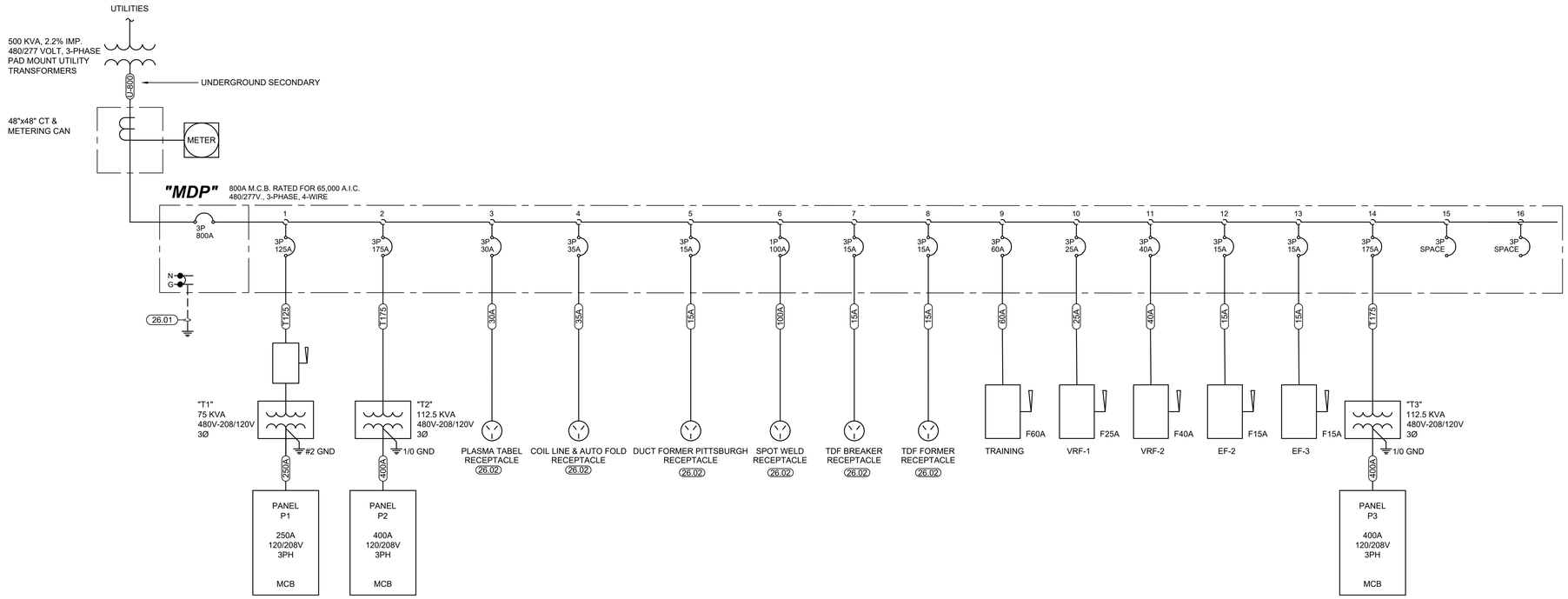

ELECTRICAL FEEDER SCHEDULE	
AMP	**SIZE DESCRIPTION**
U-800	(4) 600 KCMIL IN EACH OF TWO PARALLEL 4"C (PROVIDE SPARE 4" C.)
T125	(3) #2, (1) #6 GND., IN 2" C.
T175	(3) 2/0, (1) #6 GND., IN 2-1/2" C.
15	(3) #12 AWG, (1) #12 GND., IN 1/2" C.
25	(3) #10 AWG, (1) #10 GND., IN 3/4" C.
30	(3) #10 AWG, (1) #10 GND., IN 3/4" C.
35	(3) #8 AWG, (1) #10 GND., IN 3/4" C.
40	(3) #8 AWG, (1) #10 GND., IN 3/4" C.
60	(3) #6, (1) #10 GND., IN 1" C.
100	(3) #3, (1) #8 GND., IN 1-1/4" C.
250	(4) 250 KCMIL, (1) #4 GND., IN 2-1/2" C.
400	(4) 600 KCMIL, (1) #3 GND., IN 3-1/2" C.

GENERAL NOTES:

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DIVISION 26 - ELECTRICAL

(26.01) GROUND IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRIC CODE.

(26.02) COORDINATE ELECTRICAL TERMINATIONS WITH OWNER FURNISHED EQUIPMENT. PROVIDE CORDS, PLUGS, RESTRAINTS, ETC.

PANELBOARD "MDP" — **LOCATION:** SERVICE 130

VOLTAGE (L-L):	480	PHASE A:	BROWN	BUS SIZE:	800
VOLTAGE (L-N):	277	PHASE B:	YELLOW	MAINS TYPE:	MCB
PHASE:	3	PHASE C:	PURPLE	MAINS RATING:	800
WIRE:	4	NEUTRAL	WHITE	NEMA RATING:	1
A.I.C. RATING (AMPS):	65k AIC	GROUND	GREEN	MOUNTING:	SURFACE

CKT #	DESCRIPTION	LOAD TYPE	BREAKER FRAME	BREAKER SIZE	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	CONDUCTOR & CONDUIT
1	TRANSFORMER T1-75 KVA (PANEL P1)		HJ	125	21,320	20,543	16,975	REFER ELECTRICAL ONE-LINE
2	TRANSFORMER T2-112.5 KVA (PANEL P2)		JJ	175	25,945	24,311	29,368	REFER ELECTRICAL ONE-LINE
3	PLASMA TABLE	MISC	HJ	30	6,648	6,648	6,648	REFER ELECTRICAL ONE-LINE
4	COIL LINE AND AUTO FOLD	MISC	HJ	35	7,756	7,756	7,756	REFER ELECTRICAL ONE-LINE
5	DUCT FORMER PITTSBURGH	MISC	HJ	15	3,324	3,324	3,324	REFER ELECTRICAL ONE-LINE
6	SPOT WELD	MISC	HJ	100	22,714	22,714	-	REFER ELECTRICAL ONE-LINE
7	TDF BREAKER	MISC	HJ	15	3,324	3,324	3,324	REFER ELECTRICAL ONE-LINE
8	TDF FORMER	MISC	HJ	15	3,324	3,324	3,324	REFER ELECTRICAL ONE-LINE
9	CIRCUIT FOR TRANING	MISC	HJ	60	13,296	13,296	13,296	REFER ELECTRICAL ONE-LINE
10	VRF-1	H	HJ	25	5,845	5,845	5,845	REFER ELECTRICAL ONE-LINE
11	VRF-2	H	HJ	40	7,728	7,728	7,728	REFER ELECTRICAL ONE-LINE
12	EF-2	H	HJ	15	582	582	582	REFER ELECTRICAL ONE-LINE
13	EF-3	H	HJ	15	2,632	2,632	2,632	REFER ELECTRICAL ONE-LINE
14	TRANSFORMER T3-112.5 KVA (PANEL P3)		JJ	175	28,800	28,800	28,800	REFER ELECTRICAL ONE-LINE
15	SPACE ONLY		-	-	-	-	-	
16	SPACE ONLY		-	-	-	-	-	
			TOTAL LOAD (VA):		153,236	150,826	129,601	
			TOTAL LOAD (AMPS):		553	544	468	

	LOAD TYPE	NEC	CONNECTED VA	DEMAND FACTOR	EST. DEMAND
L	LIGHTING	220.14	10980	1.25	13725
R	RECEPTACLE	220.44	39540	NEC	24770
M	MOTOR	220.50	15961	1	15961
SP	SMOKE PURGE	220.50	0	1	0
FP	FIRE PUMP	220.50	0	1	0
E	ELEVATOR	220.50	0	1	0
K	KITCHEN	220.56	0	1	0
H	HVAC	220.60	63485	1	63485
EH	ELECTRIC HEAT	220.51	6000	1	6000
MISC	MISCELLANEOUS	-	297698	1	297698
	CONNECTED (VA):		433663	DEMAND (VA):	421638
	CONNECTED (AMPS):		522	DEMAND (AMPS):	507

NOTES:
1) SERVICE RATED.
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PANEL NAME: P1 — **LOCATION:** MECH 119

VOLTAGE (L-L):	208	PHASE A:	BLACK	BUS SIZE:	400
VOLTAGE (L-N):	120	PHASE B:	RED	MAINS TYPE:	MCB
PHASE:	3	PHASE C:	BLUE	MAINS RATING:	250
WIRE:	4	NEUTRAL	WHITE	NEMA RATING:	1
A.I.C. RATING (AMPS):	22k AIC	GROUND	GREEN	MOUNTING:	SURFACE

CKT #	DESCRIPTION	LOAD TYPE	BREAKER AMPS	BREAKER POLES	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	DESCRIPTION	LOAD TYPE	BREAKER AMPS	BREAKER POLES	CKT #
1	EXIT SIGNS	L	15	1	78	1,260		RECEPTACLES	R	20	1	2
3	LIGHTS	L	20	1		922	1,260	RECEPTACLES	R	20	1	4
5	LIGHTS	L	20	1			821	720	RECEPTACLES	R	20	1	6
7	LIGHTS	L	20	1	950	1,260			RECEPTACLES	R	20	1	8
9	LIGHTS	L	20	1		1,045	720		RECEPTACLES	R	20	1	10
11	EAST POLE LIGHTS	L	20	1			221	720	RECEPTACLES	R	20	1	12
13	RECEPTACLES	R	20	1	1,260	1,200			RECEPTACLES	R	20	1	14
15	RECEPTACLES	R	20	1			1,260	1,080	RECEPTACLES	R	20	1	16
17	RECEPTACLES	R	20	1			900	900	RECEPTACLES	R	20	1	18
19	RECEPTACLES	R	20	1	1,260	-			SPARE		20	1	20
21	RECEPTACLES	R	20	1		1,080	720		RECEPTACLES	R	20	1	22
23	RECEPTACLES	R	20	1			720	1,260	RECEPTACLES	R	20	1	24
25	RECEPTACLES	R	20	1	540	1,260			RECEPTACLES	R	20	1	26
27	RECEPTACLES	R	20	1		360	1,260		RECEPTACLES	R	20	1	28
29	RECEPTACLES	R	20	1			1,200	1,260	RECEPTACLES	R	20	1	30
31	RECEPTACLES	R	20	1	720	1,260			RECEPTACLES	R	20	1	32
33	RECEPTACLES	R	20	1		720	-		SPARE		20	1	34
35	SPARE		20	1			-	-	SPARE		20	1	36
37	RECEPTACLES	R	20	1	1,200	-			SPARE		20	1	38
39	RECEPTACLES	R	20	1		1,200	-		SPARE		20	1	40
41	RECEPTACLES	R	20	1			1,260	-	SPARE		20	1	42
43	RECEPTACLES	R	20	1	540	3,492			VRV-3	H	35	3	44
45	RECEPTACLES	R	20	1		360	3,492		*	H	-	-	46
47	RECEPTACLES	R	20	1			1,260	3,492	*	H	-	-	48
49	RECEPTACLES	R	20	1	1,260	780			BS1, FC1-1 THRU FC1-11	H	15	1	50
51	RECEPTACLES	R	20	1		1,260	804		BS2, FC2-1 THRU FC2-14	H	15	1	52
53	RECEPTACLES	R	20	1			1,260	252	FC3-1	H	15	1	54
55	SPARE		20	1	-	-			SPACE ONLY		-	-	56
57	SPARE		20	1		-	-		SPACE ONLY		-	-	58
59	RECEPTACLES	R	20	1			720	-	SPACE ONLY		-	-	60
61	WATER HEATER	EH	35	2	3,000	-			SPACE ONLY		-	-	62
63	*	EH	-	-		3,000	-		SPACE ONLY		-	-	64
65	HOT WATER CIRCULATOR PUMP	M	15	1			9	-	SPACE ONLY		-	-	66
67	SPACE ONLY		-	-	-	-			SPACE ONLY		-	-	68
69	SPACE ONLY		-	-		-	-		SPACE ONLY		-	-	70
71	SPACE ONLY		-	-			-	-	SPACE ONLY		-	-	72
73	SPACE ONLY		-	-	-	-			SPACE ONLY		-	-	74
75	SPACE ONLY		-	-			-	-	SPACE ONLY		-	-	76
77	SPACE ONLY		-	-			-	-	SPACE ONLY		-	-	78
79	SPACE ONLY		-	-	-	-			SPACE ONLY		-	-	80
81	SPACE ONLY		-	-		-	-		SPACE ONLY		-	-	82
83	SPACE ONLY		-	-			-	-	SPACE ONLY		-	-	84
		TOTAL LOAD (VA):			21,320	20,543	16,975						
		TOTAL LOAD (AMPS):			178	171	141						

	LOAD TYPE	NEC	CONNECTED VA	DEMAND FACTOR	EST. DEMAND
L	LIGHTING	220.14	4037	1.25	5046
R	RECEPTACLE	220.44	36480	1	36480
M	MOTOR	220.50	9	1	9
SP	SMOKE PURGE	220.50	0	1	0
FP	FIRE PUMP	220.50	0	1	0
E	ELEVATOR	220.50	0	1	0
K	KITCHEN	220.56	0	1	0
H	HVAC	220.60	12312	1	12312
EH	ELECTRIC HEAT	220.51	6000	1	6000
MISC.	MISCELLANEOUS	-	0	1	0
	CONNECTED (VA):		58837	DEMAND (VA):	59846
	CONNECTED (AMPS):		163	DEMAND (AMPS):	166

NOTES:
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DRY TYPE TRANSFORMER SCHEDULE

TRANSFORMER DESIGNATION	KVA RATING	PRIMARY VOLTS	PRIMARY AMPS	PRIMARY PHASE	SECONDARY VOLTS	SECONDARY AMPS	SECONDARY PHASE	LOCATION, MOUNTING
T1	75	480	90	3	208Y/120	180	3	119, PAD MOUNTED
T2	112.5	480	135	3	208Y/120	312	3	130, PAD MOUNTED
T3	112.5	480	135	3	208Y/120	312	3	130, PAD MOUNTED

NOTES:
1. PROVIDE ONLY COPPER WINDINGS FOR ALL TRANSFORMERS.

K1 ELECTRICAL RISER DIAGRAM AND SCHEDULES
NO SCALE

MCCATHREN ARCHITECTS, LLC
325-669-2584
25 Green Bay Circle
Abilene,Texas 79602
staff@mccathren.com
www.mccathren.com

RICHARD S. BRYAN
107179
LICENSED PROFESSIONAL ENGINEER
03-29-2023

Bryan Parks & Associates, Inc.
BUFFALO GAP ROAD
SUITE 1800
ABILENE, TEXAS 79606
PH (325) 232-6035
FX (325) 226-7551 4400
TEXAS REGISTERED ENGINEERING FIRM # F-13562

CARY SERVICES
909 PETROLEUM DRIVE
ABILENE, TEXAS

03-29-2023

553-14-30.DWG
14.40

PANEL NAME: P2 — LOCATION: SERVICE 130

VOLTAGE (L-L): 208
VOLTAGE (L-N): 120
PHASE: 3
WIRE: 4
A.I.C. RATING (AMPS): 22k AIC

PHASE A: BLACK
PHASE B: RED
PHASE C: BLUE
NEUTRAL: WHITE
GROUND: GREEN

BUS SIZE: 400
MAINS TYPE: MCB
MAINS RATING: 400
NEMA RATING: 1
MOUNTING: SURFACE

CKT #	DESCRIPTION	LOAD TYPE	BREAKER AMPS	BREAKER POLES	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	DESCRIPTION	LOAD TYPE	BREAKER AMPS	BREAKER POLES	CKT #
1	LIGHTS	L	20	1	1,199	360		RECEPTACLES	R	20	1	2
3	LIGHTS	L	20	1		982	360	RECEPTACLES	R	20	1	4
5	LIGHTS	L	20	1			982	360	RECEPTACLES	R	20	1	6
7	EXIT & EMERGENCY	L	15	1	142	360			RECEPTACLES	R	20	1	8
9	OUTSIDE LIGHTS SERVICE BUILDING	L	20	1		710	180		RECEPTACLES	R	20	1	10
11	OUTSIDE LIGHTS OFFICE BUILDING	L	20	1			830	360	RECEPTACLES	R	20	1	12
13	OUTSIDE LIGHTS OFFICE BUILDING	L	20	1	647	360			RECEPTACLES	R	20	1	14
15	C1 CONTATOR	L	20	1		500	15		RECEPTACLE PLASMA TABLE	MISC.	20	1	16
17	AIR COMPRESSOR	M	60	2			3,008	15	COIL LINE AND AUTO FOLD:	MISC.	20	1	18
19	*	M	-	-	3,008	2,880			PIN SPOTTER	MISC.	30	2	20
21	LOCK FORMEIL	MISC.	30	2			2,880	2,880	*	MISC.	-	-	22
23	*	MISC.	-	-				2,880	5,760	RECEPTACLE - WELDER	MISC.	60	2	24
25	EF-1	H	15	1	166	5,760			*	MISC.	-	-	26
27	GARAGE DOOR	M	25	1			1,656	5,760	RECEPTACLE - WELDER	MISC.	60	2	28
29	GARAGE DOOR	M	25	1				1,656	5,760	*	MISC.	-	-	30
31	GARAGE DOOR	M	25	1	1,656	160			RECEPTACLE	R	20	1	32
33	GARAGE DOOR	M	25	1			1,656	180	RECEPTACLE	R	20	1	34
35	GARAGE DOOR	M	25	1				1,656	2,880	RECEPTACLE THRU DISCONNECT FOR ICE MACHINE REPAIR	MISC.	30	2	36
37	RECEPTACLE	R	20	1	180	2,880			*	MISC.	-	-	38
39	RECEPTACLE	R	20	1			180	2,880		RECEPTACLE THRU DISCONNECT FOR ICE MACHINE REPAIR	MISC.	30	2	40
41	INTELLIGENT LIGHTING CONTROL CAVINET	L	20	1				120	2,880	*	MISC.	-	-	42
43	SPARE		20	1	-	492				PLASMA TABLE	MISC.	20	2	44
45	SPARE		20	1			-	492		*	MISC.	-	-	46
47	SPARE		20	1					-	SPARE		20	1	48
49	RECEPTACLE FOR ICE MACHINE	MISC.	30	2	2,880	1,656				GATE OPERATOR (3/4 HP)	M	25	1	50
51	*	MISC.	-	-			2,880	-		SPACE ONLY		-	-	52
53	EAST POLE LIGHTS	L	20	1					221	-	SPACE ONLY		-	-	54
55	WEST POLE LIGHTS	L	20	1	490	-					SPACE ONLY		-	-	56
57	CONTACTOR C2	L	20	1			120	-			SPACE ONLY		-	-	58
59	SPARE		-	-					-	-	SPARE		-	-	60
61	GFIH-1, GFIH-2, GFIH-3	H	20	1	648	-					SPARE		-	-	62
63	SPARE		20	1			-	-			SPARE		-	-	64
65	SPARE		20	1					-	-	SPARE		-	--	66
67	SPACE ONLY		-	-	-	-					SPACE ONLY		-	-	68
69	SPACE ONLY		-	-			-	-			SPACE ONLY		-	-	70
71	SPACE ONLY		-	-					-	-	SPACE ONLY		-	-	72
73	SPACE ONLY		-	-	-	-					SPACE ONLY		-	-	74
75	SPACE ONLY		-	-			-	-			SPACE ONLY		-	-	76
77	SPACE ONLY		-	-					-	-	SPACE ONLY		-	-	78
79	SPACE ONLY		-	-	-	-					SPACE ONLY		-	-	80
81	SPACE ONLY		-	-			-	-			SPACE ONLY		-	-	82
83	SPACE ONLY		-	-					-	-	SPACE ONLY		-	-	84
		TOTAL LOAD (VA):			25,945		24,311		29,368						
		TOTAL LOAD (AMPS):			216		203		245						

	LOAD TYPE	NEC	CONNECTED VA	DEMAND FACTOR	EST. DEMAND
L	LIGHTING	220.14	6944	1.25	8680
R	RECEPTACLE	220.44	3060	1	3060
M	MOTOR	220.50	15952	1	15952
SP	SMOKE PURGE	220.50	0	1	0
FP	FIRE PUMP	220.50	0	1	0
E	ELEVATOR	220.50	0	1	0
K	KITCHEN	220.56	0	1	0
H	HVAC	220.60	814	1	814
EH	ELECTRIC HEAT	220.51	0	1	0
MISC.	MISCELLANEOUS	-	52854	1	52854
	CONNECTED (VA):		79624	DEMAND (VA):	81360
	CONNECTED (AMPS):		221	DEMAND (AMPS):	226

NOTES:
1) 2) 3) 4) 5) 6) 7) 8) 9) 10) 11) 12)

PANEL NAME: P3 — LOCATION: SERVICE 130

VOLTAGE (L-L): 208
VOLTAGE (L-N): 120
PHASE: 3
WIRE: 4
A.I.C. RATING (AMPS): 22k AIC

PHASE A: BLACK
PHASE B: RED
PHASE C: BLUE
NEUTRAL: WHITE
GROUND: GREEN

BUS SIZE: 400
MAINS TYPE: MCB
MAINS RATING: 400
NEMA RATING: 1
MOUNTING: SURFACE

CKT #	DESCRIPTION	LOAD TYPE	BREAKER AMPS	BREAKER POLES	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	DESCRIPTION	LOAD TYPE	BREAKER AMPS	BREAKER POLES	CKT #
1	CIRCUIT FOR TRAINING	MISC.	100	3	9,600	9,600		CIRCUIT FOR TRAINING	MISC.	100	3	2
3	*	MISC.	-	-			9,600	9,600	*	MISC.	-	-	4
5	*	MISC.	-	-				9,600	9,600	*	MISC.	-	-	6
7	CIRCUIT FOR TRAINING	MISC.	100	3	9,600	-			SPACE ONLY		-	-	8
9	*	MISC.	-	-			9,600	-		SPACE ONLY		-	-	10
11	*	MISC.	-	-					9,600	-	SPACE ONLY		-	-	12
13	SPACE ONLY		-	-	-	-					SPACE ONLY		-	-	14
15	SPACE ONLY		-	-			-	-			SPACE ONLY		-	-	16
17	SPACE ONLY		-	-					-	-	SPACE ONLY		-	-	18
19	SPACE ONLY		-	-	-	-					SPACE ONLY		-	-	20
21	SPACE ONLY		-	-			-	-			SPACE ONLY		-	-	22
23	SPACE ONLY		-	-					-	-	SPACE ONLY		-	-	24
25	SPACE ONLY		-	-	-	-					SPACE ONLY		-	-	26
27	SPACE ONLY		-	-			-	-			SPACE ONLY		-	-	28
29	SPACE ONLY		-	-					-	-	SPACE ONLY		-	-	30
31	SPACE ONLY		-	-	-	-					SPACE ONLY		-	-	32
33	SPACE ONLY		-	-			-	-			SPACE ONLY		-	-	34
35	SPACE ONLY		-	-					-	-	SPACE ONLY		-	-	36
37	SPACE ONLY		-	-	-	-					SPACE ONLY		-	-	38
39	SPACE ONLY		-	-			-	-			SPACE ONLY		-	-	40
41	SPACE ONLY		-	-					-	-	SPACE ONLY		-	-	42
		TOTAL LOAD (VA):			28,800		28,800		28,800						
		TOTAL LOAD (AMPS):			240		240		240						

	LOAD TYPE	NEC	CONNECTED VA	DEMAND FACTOR	EST. DEMAND
L	LIGHTING	220.14	0	1.25	0
R	RECEPTACLE	220.44	0	1	0
M	MOTOR	220.50	0	1	0
SP	SMOKE PURGE	220.50	0	1	0
FP	FIRE PUMP	220.50	0	1	0
E	ELEVATOR	220.50	0	1	0
K	KITCHEN	220.56	0	1	0
H	HVAC	220.60	0	1	0
EH	ELECTRIC HEAT	220.51	0	1	0
MISC.	MISCELLANEOUS	-	86400	1	86400
	CONNECTED (VA):		86400	DEMAND (VA):	86400
	CONNECTED (AMPS):		240	DEMAND (AMPS):	240

NOTES:
1) 2) 3) 4) 5) 6) 7) 8) 9) 10) 11) 12)

LIGHTING FIXTURE SCHEDULE

MARK	MANUFACTURER	MODEL	LAMP(S)	DESCRIPTION	VOLTAGE	INPUT WATTS	NOTES
A	METALUX	24FP6435C	LED: 80 CRI, 3500 KELVIN, 6091 LUMENS	2'x4' EDGE LIT PANEL	120	60.3	1
B	METALUX	24FP3835HE	LED: 80 CRI, 3500 KELVIN, 3849 LUMENS	2'x4' EDGE LIT PANEL	120	28.5	1
C	METALUX	22FP4235C	LED: 80 CRI, 3500 KELVIN, 4330 LUMENS	2'x2' EDGE LIT PANEL	120	38.3	1
C-EM	METALUX	22FP4235C-EL14W	LED: 80 CRI, 3500 KELVIN, 4330 LUMENS	2'x2' EDGE LIT PANEL	120	38.3	1,2
D	METALUX	22FP3235C	LED: 80 CRI, 3500 KELVIN, 3307 LUMENS	2'x2' EDGE LIT PANEL	120	29.2	1
D-EM	METALUX	22FP3235C-EL14W	LED: 80 CRI, 3500 KELVIN, 3307 LUMENS	2'x2' EDGE LIT PANEL	120	29.2	1,2
EXIT	DUAL LITE	EVEURWEI-2C	SUPPLIED WITH FIXTURE	LED EMERGENCY LUMINAIRE	120	2	3
E1	DUAL LITE	HCXURW-03LRC12	SUPPLIED WITH FIXTURE	LED EMERGENCY LUMINAIRE	120	10 /23	3
E2	DUAL LITE	EVHC-12-06L	SUPPLIED WITH FIXTURE	HIGH LUMEN LED EMERGENCY LIGHT	120	12	2
E3	DUAL LITE	PGRZ	SUPPLIED WITH FIXTURE	HIGH PERFORMANCE LED REMOTE	6VDC	12	4
F	METALUX	22FP2135C	LED: 80 CRI, 3500 KELVIN, 2205 LUMENS	2'x2' EDGE LIT PANEL	120	20.7	1
G	HALO COMMERCIAL	HC620D010-HM60525835-61WDW	LED: 80 CRI, 3500 KELVIN, 2359 LUMENS	6-INCH LED DOWNLIGHT	120	20	1
H	NEO-RAY	S122DR-H675D835-X4F0-XX-UDD-F-W	LED: 80 CRI, 3500 KELVIN, 2700 LUMENS	3"X4' DIRECT RECESSED	120	25.6	1
J	METALUX	UHB-24-UNV-L840-CD-U	LED: 80 CRI, 4000 KELVIN, 26600 LUMENS	ROUND HIGH BAY	120	197	
K	METALUX	UHB-18-UNV-L840-CD-U	LED: 80 CRI, 4000 KELVIN, 19607 LUMENS	ROUND HIGH BAY	120	147	
L	LUMARK	XTOR6BRL-W	LED: 70 CRI, 4000 KELVIN, 6133 LUMENS	WALL/SURFACE INVERTED SITE LIGHT	120	58	
M	LUMARK AP	WPMLED15B	LED: 80 CRI, 4000 KELVIN, 7100 LUMENS	WALL PACK B-SERIES	120	60	
N	PORTFOLIO	LD6C50D010 EU6C45609040 6LBWH	LED: 90 CRI, 4000 KELVIN, 5000 LUMENS	6" DOWNLIGHT	120	58.4	
N-EM	PORTFOLIO	LD6C50D010EM14 EU6C45609040 6LBWHE	LED: 90 CRI, 4000 KELVIN, 5000 LUMENS	6" DOWNLIGHT	120	58.4	
O	MCGRAW-EDISON	GALN-SA3C-740-U-T4FT	LED: 70 CRI, 4000 KELVIN, 21725 LUMENS	AREA / SITE LUMINAIRE	120	166	
P	MCGRAW-EDISON	GALN-SA2C-740-U-T4W	LED: 70 CRI, 4000 KELVIN, 14149 LUMENS	AREA / SITE LUMINAIRE	120	108	
R	LUMARK	CTKRV2B	LED: 70 CRI, 4000 KELVIN, 9741.7 LUMENS	AREA / SITE LUMINAIRE	120	70.6	
S	LUMARK	CTKRV2B	LED: 70 CRI, 4000 KELVIN, 7110.6 LUMENS	AREA / SITE LUMINAIRE	120	50	
T	METALUX	4SWLED-20SL-LN-UNV-L835-CD1-U	LED: 80 CRI, 3500 KELVIN, 2450.7 LUMENS	SURFACE AND WALL	120	17.6	
POLE A	COOPER LIGHTING SOLUTIONS	RTS6A20S-N1XV-TMP4	-	20' LIGHT POLE WITH SINGLE ARM	-	-	5
POLE B	COOPER LIGHTING SOLUTIONS	RTS6A20S-N2XV-TMP4	-	20' LIGHT POLE WITH ARMS AT 180°	-	-	5

NOTES:
1) ALL LAMPS SHALL BE 3500 DEGREE KELVIN UNLESS OTHERWISE NOTED.
2) FIXTURES AS NOTED ON LIGHTING PLAN SHALL BE EQUIPPED WITH EMERGENCY BATTERY PACK ALLOWING FIXTURE TO OPERATE UPON LOSS OF NORMAL POWER FOR A MINIMUM OF 90 MINUTES.
3) LAMPS IN EXIT LIGHT SHALL BE WIRED FOR 2-CIRCUIT OPERATION. FIXTURE SHALL BE COMPLETE WITH SELF-CONTAINED EMERGENCY POWER CAPABLE OF MAINTAINING FIXTURE OPERATION FOR A MINIMUM OF 90 MINUTES UPON LOSS OF NORMAL POWER.
4) REMOTE EGRESS LIGHT HEAD TO BE POWERED FROM EXIT SIGN, REFER TO SCHEDULED EXIT LIGHT.
5) COORDINATE FINISH WITH ARCHITECT

LIGHTING CONTROL POINTS LIST

ROOM NO.	ROOM NAME	WALL SWITCH	ZONE(S)	WALL SWITCH FUNCTION: ON/OFF	WALL SWITCH FUNCTION: DIMMING 0-10V.	WALL SWITCH FUNCTION: OCCUPANCY / VACANCY	SENSOR LOCATION & TYPE: WALL / CEILING	SENSOR LOCATION & TYPE: OCCUPANCY / VACANCY	TECHNOLOGY: PIR	TECHNOLOGY: DUAL TECH
100	OFFICE	SWITCH	a	X	X	-	CEILING	VACANCY	X	-
101	OFFICE	SWITCH	b	X	X	-	CEILING	VACANCY	X	-
102	CORRIDOR	SWITCH	c	X	-	-	CEILING	OCCUPANCY	X	-
103	OFFICE	SWITCH	d	X	X	-	CEILING	VACANCY	X	-
104	OFFICE	SWITCH	e	X	X	-	CEILING	VACANCY	X	-
105	OFFICE	SWITCH	f	X	X	-	CEILING	VACANCY	X	-
106	OFFICE	SWITCH	g	X	X	-	CEILING	VACANCY	X	-
107	OFFICE	SWITCH	h	X	X	-	CEILING	VACANCY	X	-
108	WORKROOM	SWITCH	j	X	X	-	CEILING	VACANCY	X	-
109	RECEPTION	SWITCH	k	X	X	-	CEILING	OCCUPANCY	X	-
110	WAITING	SWITCH	c	X	-	-	CEILING	OCCUPANCY	X	-
111	VESTIBULE	SWITCH	c	X	-	-	CEILING	OCCUPANCY	X	-
112	BREAK ROOM	SWITCH	l	X	X	-	CEILING	OCCUPANCY	X	-
113	TRAINING	SWITCH	m	X	X	-	CEILING	VACANCY	X	-
114	WOMEN	SWITCH	n	X	-	-	CEILING	OCCUPANCY	-	X
115	OFFICE	SWITCH	o	X	X	-	CEILING	VACANCY	X	-
116	CORRIDOR	SWITCH	c	X	-	-	CEILING	OCCUPANCY	X	-
117	MEN	SWITCH	p	X	-	-	CEILING	OCCUPANCY	-	X
118	OFFICE	SWITCH	q	X	X	-	CEILING	VACANCY	X	-
119	MECHANICAL	SWITCH	r	X	-	-	WALL	OCCUPANCY	X	-
120	OFFICE	SWITCH	s	X	X	-	CEILING	VACANCY	X	-
121	FILES	SWITCH	t	X	-	OCCUPANCY	-	-	Z	-
122	CORRIDOR	SWITCH	c	X	-	-	CEILING	OCCUPANCY	X	-
123	OFFICE	SWITCH	u	X	X	-	CEILING	VACANCY	X	-
124	MEETING ROOM	SWITCH	v	X	X	-	CEILING	VACANCY	X	-
125	OFFICE	SWITCH	w	X	X	-	CEILING	VACANCY	X	-
126	SPARE	SWITCH	x	X	-	-	CEILING	VACANCY	X	-
127	OFFICE	SWITCH	y	X	X	-	CEILING	VACANCY	X	-
128	SPARE	SWITCH	z	X	-	-	CEILING	VACANCY	X	-
129	OFFICE	SWITCH	a	X	X	-	CEILING	VACANCY	X	-
130	SERVICE	SWITCH	b	X	-	-	-	-	-	-
130	SERVICE	SWITCHES	c	X	-	-	-	-	-	-
130	SERVICE	SWITCHES	d	X	-	-	-	-	-	-
130	SERVICE	SWITCHES	e	X	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

MCCATHREN ARCHITECTS, LLC
25 Green Bay Circle
Abilene,Texas 79602
325-669-2584
staff@mccathren.com
www.mccathren.com

RICHARD S. BRYAN
107179
LICENSED PROFESSIONAL ENGINEER
03-29-2023

Bryan Parks & Associates, Inc.
BUFFALO GAP ROAD
SUITE 1800
ABILENE, TEXAS 79606
PH:(325) 232-6035
FX:(325) 225-7551 4400
TEXAS REGISTERED ENGINEERING FIRM # F-13562

CARY SERVICES
909 PETROLEUM DRIVE
ABILENE, TEXAS

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K1 ELECTRICAL SCHEDULES & DETAILS
NO SCALE

553-14-50.DWG
14.50

ELECTRICAL LEGEND

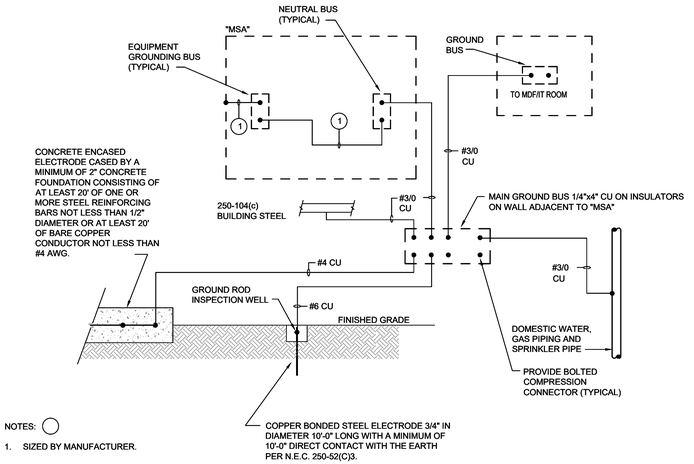
AFF	ABOVE FINISHED FLOOR
AFI	ARC FAULT INTERRUPT
GFI	GROUND FAULT INTERRUPT
IG	ISOLATED GROUND
TR	TAMPER RESISTANT
WP	WEATHERPROOF
	DUPLEX RECEPTACLE
	QUADRUPLEX RECEPTACLE
	240 VOLT RECEPTACLE
	FLOORBOX WITH DUPLEX RECEPTACLE
	FLOORBOX WITH QUADRUPLEX RECEPTACLE
J	JUNCTION BOX
M	METER
F-#	DISCONNECT SWITCH ("F" INDICATES FUSED, # INDICATES FUSE SIZE)
	HOMERUN TO PANEL (ARROWHEAD EQUAL NUMBER OF CIRCUITS, HASHMARKS INDICATE CONDUCTORS)
	MOTOR
F WP	FUSED DISCONNECT ("F" INDICATES FUSED, "WP" INDICATES WEATHERPROOF)
	PANELBOARD (FLUSH MOUNTED)
	PANELBOARD (SURFACE MOUNTED)
	HASHMARKS INDICATE CONDUCTORS
$a	SWITCH ("a" INDICATES SWITCHING)
3$	3-WAY SWITCH
4$	4-WAY SWITCH
F$	FAN SPEED CONTROL SWITCH
K$	KEYED SWITCH
D$	DIMMER SWITCH
O$	OCCUPANCY SIEMENS SWITCH
P$	PILOT LIGHTED SWITCH
T$	TIMED SWITCH
P	PHOTO CELL
OS	OCCUPANCY SENSOR
	TELEPHONE JACKS (TWO JACK OUTLETS IN SINGLE FACEPLATE)
	TELEPHONE JACKS (TWO JACK OUTLETS IN FLOORBOX)
	TELEPHONE & DATA JACKS (ONE EACH IN SINGLE FACEPLATE)
	DATA JACKS (TWO JACK OUTLETS IN SINGLE FACEPLATE)
	CLOCK
C	CALL STATION
S	SPEAKER
M	MICROPHONE JACK
TV	TELEVISION

GENERAL ELECTRICAL NOTES:

1. ELECTRIC EQUIPMENT AND MATERIALS FOR THE PROJECT SHALL BE NEW AND SHALL BE APPROVED, IDENTIFIED, LABELED, AND LISTED FOR USE BY A TESTING LABORATORY RECOGNIZED BY THE BUILDING OFFICIAL. LISTED OR LABELED EQUIPMENT SHALL BE INSTALLED AND USED IN ACCORDANCE WITH INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GROUNDING SYSTEMS, AS REQUIRED, IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.
3. CONDUITS SHALL BE AS STRAIGHT AS POSSIBLE AND PARALLEL OR PERPENDICULAR TO BUILDING LINES.
4. CONDUITS SHALL BE ROUTED CONCEALED WITHIN WALLS AND/OR ABOVE CEILING.
5. SEAL ALL WALL, ROOF, AND FLOOR PENETRATIONS WITH UL LISTED FIRE SEALANT.
6. PROVIDE UNISTRUT MOUNTING FOR ALL INDICATED ELECTRICAL DEVICES, PANELBOARDS, AND ENCLOSURES (EXCEPT WHERE STRUCTURE IS AVAILABLE.)
7. DEVICES SHALL NOT BE MOUNTED HIGHER THAN 48" ABOVE FLOOR.
8. PROVIDE CONCRETE HOUSEKEEPING PADS FOR ALL TRANSFORMERS, UNLESS NOTED OTHERWISE.
9. HOME RUN CIRCUITS MORE THAN 75 FEET FROM PANEL SHALL BE SIZED AS REQUIRED TO LIMIT VOLTAGE DROP TO 2% MINIMUM.
10. IF MORE THAN THREE PHASE CONDUCTORS ARE INSTALLED IN A SINGLE RACEWAY, THE CONDUCTORS SHALL BE DERATED IN ACCORDANCE WITH NEC. INCREASE WIRE SIZE SO THAT RESULTING AMPACITY AFTER DERATING FACTOR IS APPLIED IS EQUAL TO OR GREATER THAN AMPACITY OF CONDUCTOR SPECIFIED.
11. ALL BREAKERS SHALL HAVE POSITIVE HANDLE INDICATION TO SHOW WHEN A BREAKER HAS TRIPPED AUTOMATICALLY. ALL BREAKERS SHALL BE DISTINCTLY MARKED ON FACE OF BREAKER GIVING CAPACITY OF BREAKER TRIP. MULTI-POLE BREAKERS SHALL BE 2-POLE OR 3-POLE. HANDLE TIES ARE NOT PERMITTED.
12. PROVIDE NEC SIZED GROUND CONDUCTOR FOR ALL RECEPTACLES, LIGHTING, AND ELECTRICAL BRANCH CIRCUITS.
13. CONTRACTOR SHALL PROVIDE BRANCH CIRCUIT, CIRCUIT BREAKER, DISCONNECT, AND ELECTRICAL CONNECTION FOR EQUIPMENT PROVIDED BY OTHER DIVISIONS / TRADES.
23. ELECTRICAL CONTRACTOR SHALL PERFORM CALCULATIONS AND PROVIDE PROPER ARC FLASH WARNING LABELING OF EQUIPMENT PER ARTICLE 110 OF THE NEC AND NFPA 70E UPON FINAL CONDUIT ROUTING AND LENGTHS HAVE BEEN DETERMINED.

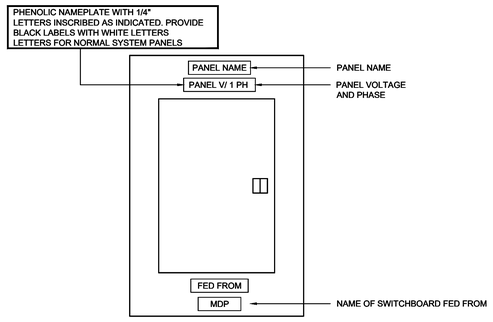
WIRE SIZE CHART	
DEVICE SERVED BY	**NUMBER AND SIZE OF CONDUCTORS AND CONDUIT**
20 AMP, 1 POLE	2#12'S, 1#12 GRND., 1/2" CONDUIT
20 AMP, 2 POLE	2#12'S, 1#12 GRND., 1/2" CONDUIT
20 AMP, 3 POLE	3#12'S, 1#12 GRND., 3/4" CONDUIT
30 AMP, 2 POLE	2#10'S, 1#10 GRND., 3/4" CONDUIT
30 AMP, 3 POLE	3#10'S, 1#10 GRND., 3/4" CONDUIT
40 AMP, 2 POLE	2#8'S, 1#10 GRND., 3/4" CONDUIT
40 AMP, 3 POLE	3#8'S, 1#10 GRND., 3/4" CONDUIT
50 AMP, 2 POLE	2#6'S, 1#10 GRND., 3/4" CONDUIT
50 AMP, 3 POLE	3#6'S, 1#10 GRND., 1" CONDUIT
60 AMP, 2 POLE	2#4'S, 1#10 GRND., 3/4" CONDUIT
60 AMP, 3 POLE	3#4'S, 1#10 GRND., 1" CONDUIT
70 AMP, 2 POLE	2#4'S, 1#8 GRND., 1" CONDUIT
70 AMP, 3 POLE	3#4'S, 1#8 GRND., 1" CONDUIT
80 AMP, 2 POLE	2#3'S, 1#8 GRND., 1" CONDUIT
80 AMP, 3 POLE	3#3'S, 1#8 GRND., 1-1/4" CONDUIT
100 AMP, 2 POLE	2#1'S, 1#6 GRND., 1-1/4" CONDUIT
100 AMP, 3 POLE	3#1'S, 1#6 GRND., 1-1/2" CONDUIT

NOTES:
1) HOME RUN CIRCUITS GREATER THAN 75 FEET FROM PANEL SHALL BE SIZED AS REQUIRED TO LIMIT VOLTAGE DROP TO 2% MAXIMUM.



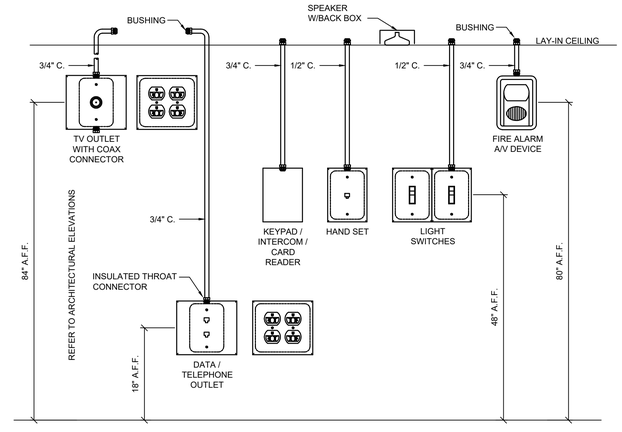
1 GROUNDING ELECTRODE SYSTEM DETAIL

SCALE: NO SCALE



2 ELECTRICAL PANEL IDENTIFICATION

SCALE: NO SCALE



NOTE:

COORDINATE EXACT LOCATION OF ALL DEVICES WITH ARCHITECT PRIOR TO ROUGH-IN.

3 MOUNTING HEIGHTS OF DEVICES IN GYPSUM BOARD WALLS

SCALE: NO SCALE

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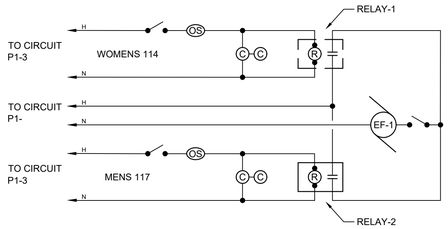
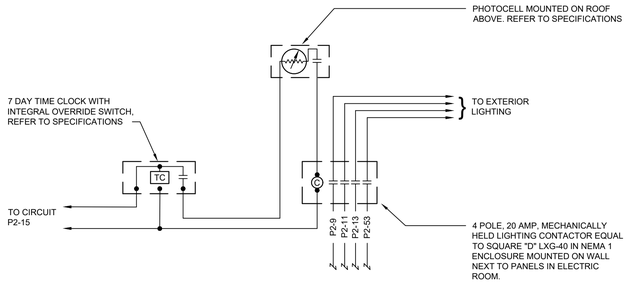


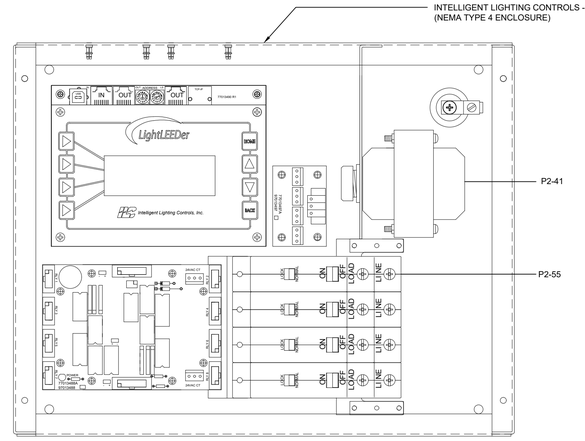
1 WOMEN'S & MEN'S RESTROOM LIGHTS / EXHAUST FAN EF-1

SCALE: NO SCALE



2 CONTACTOR (C1) LIGHTING WITH TIMECLOCK & PHOTOCELL

SCALE: NO SCALE

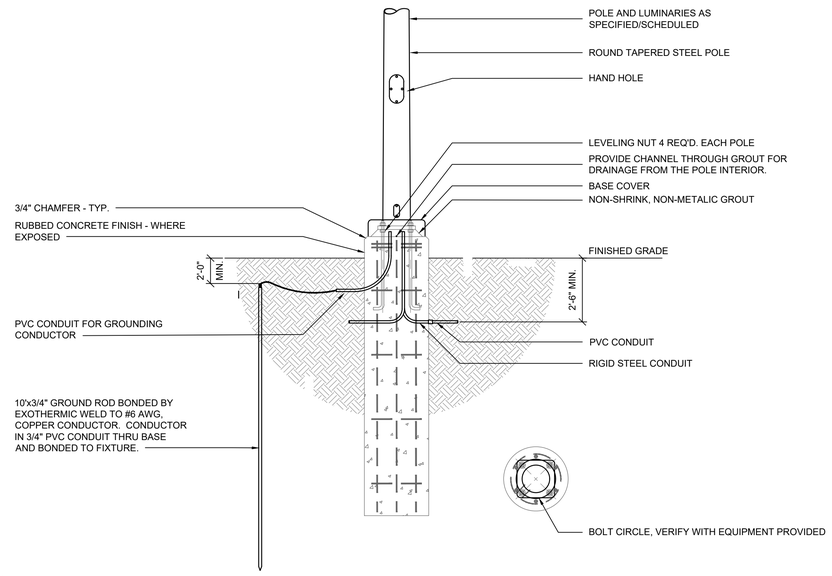


NOTES:

1. PROVIDE INTELLIGENT LIGHTING CONTROL EQUAL TO "INTELLIGENT LIGHTING CONTNROLS" MODEL LL-04 IN NEMA 4 ENCLOSURE.
2. PROVIDE WET LOCATION TOUCH BUTTON SWITCH MODEL WTB-27MM-1, MOUNTED IN FACE OF NEMA 4 ENCLOSURE.
3. PROGRAM CONTROLLER TO ENERGIZE LIGHTS FOR 1-HOUR WHEN TOUCH BUTTON IS PRESSED.
4. PROVIDE "OPTIONAL" SWITCH INPUT FROM MOTORIZED GATE OPERATOR KEYPAD. COORDINATE EXACT REQUIREMENTS WITH GATE OPERATOR FURNISHED TO JOBSITE.
5. PROGRAM CONTROLLER TO ENERGIZE LIGHTS FOR 1-HOUR WHEN GATE OPERATOR IS ACTIVATED FROM KEYPAD.

3 INTELLIGENT LIGHTING CONTROL CABINET

SCALE: NO SCALE



4 LIGHT POLE DETAIL

SCALE: NO SCALE

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