Kirksey
ARCHITECTURE

6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

MHHS SW POB | DR VANN

7789 SOUTHWEST FRWY #410 HOUSTON, TEXAS 77074

PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

2005226_019.PLN | 6/24/2011 | 2:55 PM

ABBREVIATIONS

A
AB	ANCHOR BOLT
ACM	ALUMINUM COMPOSITE METAL
ACOUS	ACOUSTICAL
ADJUST	ADJUSTABLE
ADJ	ADJACENT
AD	ACCESS DOOR
AFF	ABOVE FINISH FLOOR
AGG	AGGREGATE
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
ALUM	ALUMINUM
ANG	ANGLE
ANOD	ANODIZED
APPROX	APPROXIMATELY
AP	ACCESS PANEL
ARCH	ARCHITECT/ ARCHITECTURAL
ASPH	ASPHALT
ATN	ATTENUATION/ ATTENUATING
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
A/C	AIR CONDITIONING
A/V	AUDIO VISUAL

B
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BLK	BLOCK
BM	BEAM
BOT	BOTTOM
BRG	BEARING
BRKT	BRACKET
BSMT	BASEMENT
BTW	BETWEEN
BUR	BUILT UP ROOFING
B&B	BALLED & BURLAPPED
B-B	BACK TO BACK
B.M.	BENCH MARK
B/F	BOTH FACES

C
CAB	CABINET
CB	CATCH BASIN
CCTV	CLOSED CIRCUIT TELEVISION
CEM	CEMENT
CER	CERAMIC
CFMF	COLD FORMED METAL FRAMING
CIP	CAST IN PLACE
CI PIPE	CAST IRON PIPE
CJ	CONTROL JOINT
CKBD	CHALKBOARD
CLG	CEILING
CLR	CLEAR(ANCE)
CL	CLOSET
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
COL	COLUMN
COMPRES	COMPRESSIBLE
COMP	COMPOSITION
CONC	CONCRETE
COND	CONDITION
CONF	CONFERENCE
CONST	CONSTRUCTION
CONTR	CONTRACTOR
CONT	CONTINUOUS
CORRU	CORRUGATED
CORR	CORRIDOR
CG	CORNER GUARD
CSMT	CASEMENT
CTR	CENTER
CTSK	COUNTERSUNK
CT	CERAMIC TILE
CU FT	CUBIC FOOT (FEET)
CU YD	CUBIC YARD
CW	COLD/ CHILLED WATER
C-C	CENTER TO CENTER
C.O.	CASED OPENING
C.W.	COOL WHITE
C.W.X.	COOL WHITE DELUXE

D
DBL	DOUBLE
DEFL	DEFLECTION
DF	DRINKING FOUNTAIN
DIAG	DIAGONAL
DIA	DIAMETER
DIM	DIMENSION
DISC	DISCONNECT
DISP	DISPENSER
DL	DEAD LOAD
DMPFG	DAMPPROOFING
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DTL	DETAIL
DWC	DRYWALL FURRING CHANNEL
DWG	DRAWING
D	DEEP/ DEPTH

E
EA	EACH
EFOB	EXTERIOR FACE OF BUILDING
EJ	EXPANSION JOINT
ELAS	ELASTIC (ELASTOMERIC)
ELEC	ELECTRICAL
ELEV	ELEVATOR
EL	ELEVATION
EMER	EMERGENCY
EP	EXPLOSION PROOF
EQUIP	EQUIPMENT
EQ	EQUAL
ESR	ELASTIC SHEET ROOFING
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EW	EACH WAY
EXH	EXHAUST
EXIST	EXISTING
EXPAN	EXPANSION
EXP	EXPOSED
EXT	EXTERIOR

F
FA	FIRE ALARM
FC	FIRE CODE
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FHC	FIRE HOSE CABINET
FH	FIRE HYDRANT
FIN	FINISH/FINISHED
FIXT	FIXTURE
FLRG	FLOORING
FLR	FLOOR
FLSHG	FLASHING
FLUOR	FLUORESCENT
F.P.W.	FLOOD PROTECTION WALL
FL	FLOW LINE
FM	FACTORY MUTUAL
FND	FOUNDATION
FRPF	FIREPROOF(ING)
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
FS	FULL SIZE
FTG	FOOTING
FT	FOOT (FEET)
FURN	FURNISH
FURR	FURRED/FURRING
FV	FIELD VERIFY
FVC	FIRE VALVE CABINET
FWC	FABRIC WALL COVERING

G
GALV	GALVANIZED
GAL	GALLON
GA	GAUGE
GC	GENERAL CONTRACTOR
GD	GUARD
GEN	GENERAL
GI	GALVANIZED IRON
GL	GLASS, GLAZING
GMP	GUARANTEED MAXIMUM PRICE
GR	GRADE, GRADING
GYP	GYPSUM

H
HB	HOSE BIBB
HC	HOLLOW CORE
HDCP	HANDICAPPED
HDWD	HARDWOOD
HDWR	HARDWARE
HD	HEAD
HFS	HALF FULL SIZE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HORSEPOWER
HR	HOUR
HT	HEIGHT
HVAC	HEATING/ VENTILATING/ AIR CONDITIONING
HW	HOT WATER
HYD	HYDRANT

I
ID	INSIDE DIAMETER
INCAND	INCANDESCENT
INCL	INCLUDE
INFO	INFORMATION
INSUL	INSULATION/INSULATING
INT	INTERIOR
IN	INCH
IPS	INSIDE PIPE SIZE

J
JAN	JANITOR
JST	JOIST
JT	JOINT

L
LAM	LAMINATE(D)
LAV	LAVATORY
LGTH	LENGTH
LH	LEFT HAND
LV	LEVEL
LIN	LINEAR
LL	LIVE LOAD
LT	LIGHT
LVR	LOUVER
LWT	LIGHTWEIGHT

M
m	METER
mm	MILLIMETER
MACH	MACHINE
MAINT	MAINTENANCE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MEMB	MEMBRANE
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
ML	METAL LATH
MLDG	MOULDING
MO	MASONRY OPENING
MR	MOISTURE RESISTANT
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MULL	MULLION

N
NIC	NOT IN CONTRACT
NOM	NOMINAL
NO. or #	NUMBER
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE

O
OA	OVERALL
OC	ON CENTER(S)
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED/ CONTRACTOR INSTALLED
OFF	OFFICE
OFOI	OWNER FURNISHED/ OWNER INSTALLED
OH	OVERHEAD
OP	OPERABLE PARTITION
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
O.S.	OVERFLOW SCUPPER
OSU	OHIO STATE UNIVERSITY
O/A	OUTSIDE AIR

P
PART	PARTITION
PCF	POUNDS PER CUBIC FOOT
PCP	PORTLAND CEMENT PLASTER
PCT	PORCELAIN CERAMIC TILE
PERF	PERFORATED
PLAST	PLASTER
PLAS	PLASTIC
PLBG	PLUMBING
PLWD	PLYWOOD
PNL	PANEL
POL	POLISHED
PRKG	PARKING
PR	PAIR
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PTD	PAINTED
PVC	POLYVINYL CHLORIDE
PVG	PAVING
PVMT	PAVEMENT
P.L.	PROPERTY LINE
P.LAM	PLASTIC LAMINATE
P/C	PRECAST
PFP	PREFINISHED PANEL

Q
QT	QUARRY TILE

R
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REBAR	REINFORCING BAR
RECEPT	RECEPTION
RECEP	RECEPTACLE
RECOM	RECOMMENDATION
REC	RECESSED
REG	REGULATION
REINF	REINFORCED
REQD	REQUIRED
RES	RESILIENT
RET	RETURN
REV	REVISION
RE	REFER TO
RFG	ROOFING
RH	RIGHT HAND
R	RISER
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RAD	RADIUS
R/AG	RETURN AIR GRILLE
R/A	RETURN AIR

S
SCHED	SCHEDULE
SC	SOLID CORE
SECT	SECTION
SF	SQUARE FEET
SHLV	SHELVES/SHELVING
SHTHG	SHEATHING
SHT	SHEET
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQUARE
SSTL	STAINLESS STEEL
STAB	STABILIZE(D)
STA	STATION
STC	SOUND TRANSMISSION COEFFICIENT
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURE/STRUCTURAL
SUSP	SUSPENDED
SW	SWITCH
SYN	SYNTHETIC
S/AD	SUPPLY AIR DIFFUSER

T
TCOC	TEXTURE COATING ON CONCRETE
TC	TOP OF CURB
TEL	TELEPHONE
TEMP	TEMPERED
THK	THICK(NESS)
THRES	THRESHOLD
TKBD	TACKBOARD
TOS	TOP OF STEEL
TOSS	TOP OF STRUCTURAL SLAB
TRANS	TRANSFORMER
TRZO	TERRAZZO
T	TREAD
TS	TUBE STEEL
TTC	TELEPHONE TERMINAL CABINET
TV	TELEVISION
TYP	TYPICAL

U
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UofC	UNIVERSITY OF CALIFORNIA
UR	URINAL

V
VAC	VACUUM
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VWC	VINYL WALLCOVERING

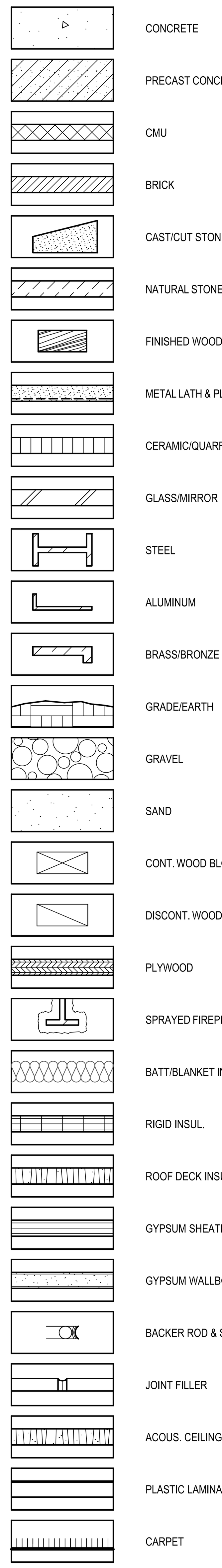
W
WC	WATER CLOSET
WDW	WINDOW
WD	WOOD
WF	WIDE FLANGE
WH	WALL HUNG
WI	WROUGHT IRON
WP	WATERPROOF/WATERPROOFING
WR	WATER RESISTANT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
W.P.	WORK POINT
W.W.	WARM WHITE
W.W.X.	WARM WHITE DELUXE
W/I	WITHIN
W/O	WITHOUT
W/	WITH

X
XFMR	TRANSFORMER

SYMBOLS
℄	CENTERLINE
@	AT
[	CHANNEL
∅	ROUND/DIAMETER
PL	PLATE
∠	ANGLE
&	AND
/	PER
□	SQUARE
±	PLUS OR MINUS

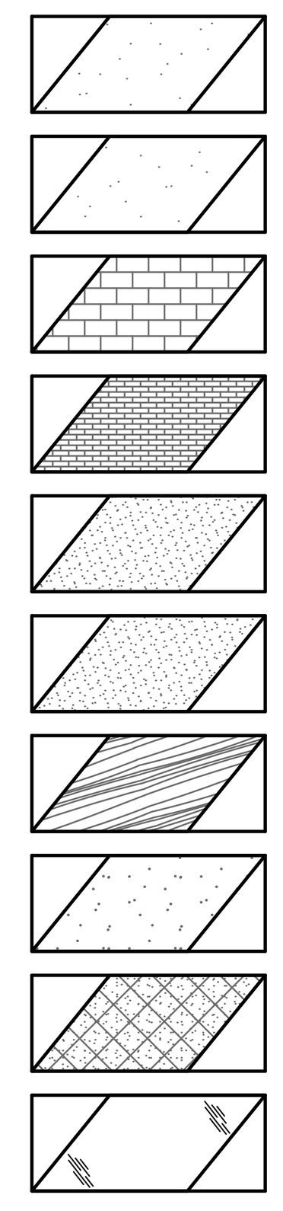
MATERIAL INDICATIONS

SECTION

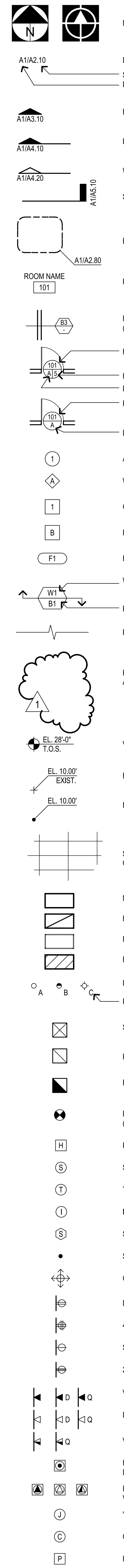


- CONCRETE
- PRECAST CONCRETE
- CMU
- BRICK
- CAST/CUT STONE
- NATURAL STONE
- FINISHED WOOD
- METAL LATH & PLASTER
- CERAMIC/QUARRY TILE
- GLASS/MIRROR
- STEEL
- ALUMINUM
- BRASS/BRONZE
- GRADE/EARTH
- GRAVEL
- SAND
- CONT. WOOD BLOCKING
- DISCONT. WOOD SHIM
- PLYWOOD
- SPRAYED FIREPROOFING
- BATT/BLANKET INSUL.
- RIGID INSUL.
- ROOF DECK INSUL.
- GYPSUM SHEATHING
- GYPSUM WALLBOARD
- BACKER ROD & SEALANT
- JOINT FILLER
- ACOUS. CEILING
- PLASTIC LAMINATE
- CARPET

ELEVATION



ARCHITECTURAL REFERENCE SYMBOLS



- NORTH ARROW
- DETAIL REFERENCE
- SHEET NUMBER
- DETAIL NUMBER
- ELEVATION (INTERIOR AND EXTERIOR)
- BUILDING SECTION
- WALL SECTION
- SECTION DETAIL
- ENLARGED DETAIL
- ROOM IDENTIFICATION
- PARTITION TYPE (RE: PARTITION SCHEDULE FOR DESCRIPTION)
- ROOM / DOOR NUMBER
- HARDWARE SET (IF REQUIRED)
- DOOR / FRAME TYPE
- ROOM / DOOR NUMBER
- DOOR ID / TYPE
- ACCESSORY / PLAN / KEYED NOTE
- WINDOW TYPE
- GLASS TYPE
- EQUIPMENT NOTE
- FLOOR FINISH NOTE
- WALL FINISH
- BASE NOTE
- BREAK LINE
- REVISION NUMBER AND AFFECTED AREA
- VERTICAL ELEVATION
- EXISTING ELEVATION
- NEW ELEVATION
- SUSPENDED ACOUSTICAL CEILING GRID
- NEW FLUOR. LIGHT FIXTURE
- RELOCATED FLUOR. LIGHT FIXTURE
- EXISTING FIXTURE TO BE REMOVED
- EXISTING FIXTURE TO REMAIN
- LIGHT FIXTURES
- FIXTURE DESIGNATION (TYPICAL - IF REQUIRED)
- S/A DIFFUSER
- R/A GRILLE
- EXHAUST
- EXIT SIGN (HATCHING INDICATES DIRECTION OF EGRESS)
- FIRE ALARM HORN
- SMOKE DETECTOR
- THERMOSTAT
- IONIZATION DETECTOR
- SPEAKER
- SPRINKLER HEADS
- CEILING GRID START POINT
- DUPLEX OUTLET
- 4 PLEX OUTLET
- SPECIAL PURPOSE OUTLET
- 220V OUTLET
- VOICE ONLY - SINGLE / DUPLEX / 4 PLEX
- DATA ONLY - SINGLE / DUPLEX / 4 PLEX
- VOICE AND DATA - DUPLEX AND 4 PLEX
- FLUSH FLOOR MTD. "J" BOX W/ DUPLEX OR 4 PLEX
- FLUSH FLOOR MTD. "J" BOX W/ VOICE AND/OR DATA
- "J" BOX FOR FURNITURE/OTHER CONNECTION
- CABLE PULL FOR FURNITURE
- POWER POLE

GENERAL NOTES

1. CONTRACT DOCUMENTS

Reference is made to these Drawings as Contract Documents, and they are to be supplemented with the AIA General Conditions of the Contract for Construction, AIA Document A201, 1997 edition, as well as the Owner Contractor Agreement. Specifications for the work are indicated on these plans and are not bound into a separate document.

2. CODE COMPLIANCE

All work undertaken must be performed in compliance with applicable codes local, state and national and in cases where conflict arise, the more stringent will govern.

3. INSPECTION OF SITE

Carefully examine the premises to determine the extent of work and the condition under which it must be done. No extra payments will be allowed for claims for additional work that should have been included in original inspection.

4. FIELD CONDITIONS

If any of the scope of work indicated in these Drawings is not constructible due to conflict with field conditions, coordination items, critical dimensions, etc., it is the Contractor's responsibility to inform the Architect for interpretation and clarification before initiating the work.

5. PERFORMANCE OF WORK

In performing Work described herein and in the structural and MEP drawings of this Work, it will be the Contractor's responsibility to repair all existing construction disturbed, relocated, damaged or altered and all new construction installed, as required to hide all evidence or work and to refinish this construction to match existing finish and appearance, unless noted otherwise.

6. BUILDING STANDARD

Refers to base building Specifications for all items identified as Building Standard. Reference is made in this work to Drawings of the Base Building; review for extent, consider each such reference a part of the work as though copied and bound herein.

7. DEFINITIONS

"Architect": Kirksey
"typical": Item so noted to be applicable in similar conditions throughout.
"align": Finished faces of materials or assemblies to be located in same plane with respect to each other as indicated.
"A.F.F.":Abbreviation for above finished floor.
"NIC": Work which is Not In Contract, i.e., not the responsibility of the Contractor other than for coordination with others.

8. RELOCATION OF MATERIAL

Relocation of any items involved in the Work is subject to the Contractor's ability to do so without permanently damaging or marring the items to be relocated. If the Contractor is unable to relocate any item as described herein, he shall substitute new material to match existing in lieu of relocating same. Contractor may also elect to use new materials to match existing in lieu of relocation of existing for his own convenience.

9 DAMAGE

The Contractor shall be responsible for the repairs of any accidental damage he or his employees inflicts upon the existing Woto remain. If, for any reason, damage to existing Work or utilities is considered to be unavoidable, submit written notification of this before signing the contract. In the absence of such notification, the Contractor assumes full responsibility for damage and the cost of satisfactory repairing or replacing the damaged Work.

10. SUBSTITUTIONS

No substitutions are to be made on any specified items without the approval of the Architect. Items which are described generically may be supplied by a number of manufacturers, but it is the contractor's responsibility to ensure that quality, appearance and function conform to design intent as shown in the drawings.

11. MATERIALS AND WORKMANSHIP

Conform to the materials and workmanship requirements as specified by the base building standards for similar modification work. Install all manufactured items, materials and equipment in strict accordance with the manufacturer's recommended specifications, except when base building specification is more stringent, it shall be complied with.

12. AS-BUILT DOCUMENTS

Contractor shall document as-built conditions when different from construction documents, and shall provide said documentation to building representative upon completion of tenant construction.

13. FLOOR LEVELING

In laying out and detailing the work to be built into an existing building interior space consideration shall be given to variations in the levelness of the floor resulting from existing construction quality. Alignment of new construction door heads and other horizontal elements shall be maintained at a constant level and shall not follow variations in the floor plane. To achieve an accurate measurement of the existing conditions employ a scanning laser. Level floors as required using cementitious leveling compound. The existing floor should be brought to within 1/4" per 10'-0" at critical areas under millwork, files, special finish materials and transitions, etc. Verify locations with Architect.

14. PARTITIONS

1. Do not scale Drawings; dimensions govern. Large scale details govern over small-scale. Partition dimensions are from face of gypsum-to-face of gypsum unless otherwise noted.
2. Walls intersect mullions at centerline unless otherwise noted. Partitions abutting curtain wall mullions shall not be attach by screws or any other mechanical fasteners.
3. All partitions are "typical" unless otherwise noted. Refer to sheet IA06.00 for partition type details.
4. Penetrations in demising partitions above finished ceiling shall be effectively sealed to prevent sound leakage.
5. Partitions extending full-height to structure above to have openings for return-air movement as required.
6. Provide bracing above ceiling height partitions when long unbraced wall lengths occur and at all door and glazed opening jambs in accordance with manufacturer's specifications.
7. Sound insulation: unless specified otherwise in the following paragraphs, either mineral wool or glass fiber insulation will be accepted. Insulation shall be either blanket or batt type in width required to fill the spaces between studs. Mineral wool: 2 inches thick for studs 3 1/2 inches or wider, 1 1/2 inches thick for studs less than 3 1/2 inches wide. USG Interiors, Inc. "Thermafiber" sound attenuation blankets or approved equal.

15. MILLWORK

1. The General contractor shall closely coordinate work of other trades with that of the millwork contractor.
2. All "installed" cabinetry shall comply with local and state codes.
3. All work shall be fabricated, assembled, finished and erected to meet current AWI Custom Grade.
4. The millwork contractor shall coordinate all millwork installations with other subcontractors and shall bear any cost associated with the reconfiguration of millwork in conflict with the other trades.
5. The millwork contractor shall submit shop drawings and samples to Architect for approval prior to beginning work.
6. Millwork shop drawings shall call out all materials and finishes. Joints, corners and edges are to be detailed in individual details. All dimensions, critical or otherwise, are to be called out on the shop drawings. Architect will not review drawings which are incomplete and show minimal detailing.
7. All millwork, special products and special assemblies are subject to submittal and shop drawing review. Shop drawings and submittals shall not be waived unless written permission is given by the Architect.
8. The millwork contractor shall field verify all dimensions and existing conditions. The Architect shall be notified immediately of any discrepancies.
9. All finished work (as far as is practical) shall be assembled and finished in the shop and delivered to the site ready to erect in place.
10. All "installed" cabinets shall be scribed to wall or ceiling without additional overlays. Millwork contractor to check job progress. Caulk all joints with walls.
11. Mitered or butted members shall be joined and secured in a manner to ensure against the joint opening.
12. The millwork contractor shall provide rubber bumper stops on all cabinet doors and drawers.
13. Where files are shown as being set into cabinet work, the millwork contractor shall set and bolt all files together.

16. FIRE EXTINGUISHERS

Provide fire extinguishers as required by city code on all sprinkled floors. Fire extinguisher to be "Larson" 10 pound type ABC.

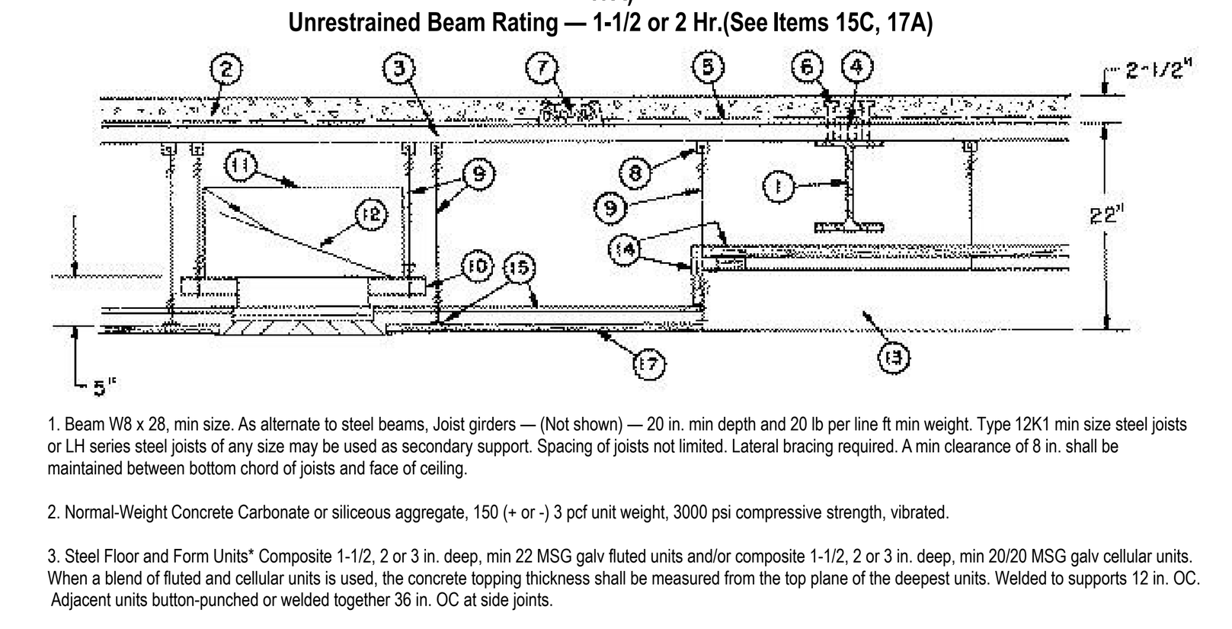
17. EQUIPMENT AND APPLIANCES

Contractor shall provide and install equipment and/or appliances specified per manufacturer's specifications unless otherwise noted. Contractor shall provide installation of tenant-furnished equipment and/or appliances unless otherwise noted.

UL D502

Design No. D502

December 15, 2000
Restrained Assembly Rating — 1-1/2 or 2 Hr.(See Items 15C, 17A)
Unrestrained Assembly Rating — 1-1/2 or 2 Hr.(See Items 15C, 17A)
Unrestrained Beam Rating — 1-1/2 or 2 Hr.(See Items 15C, 17A)



1. Beam W8 x 28, min size. As alternate to steel beams, Joist girders — (Not shown) — 20 in. min depth and 20 lb per line ft min weight. Type 12K1 min size steel joists or LH series steel joists of any size may be used as secondary support. Spacing of joists not limited. Lateral bracing required. A min clearance of 8 in. shall be maintained between bottom chord of joists and face of ceiling.

2. Normal-Weight Concrete Carbonate or siliceous aggregate, 150 (+ or -) 3 pcf unit weight, 3000 psi compressive strength, vibrated.

3. Steel Floor and Form Units* Composite 1-1/2, 2 or 3 in. deep, min 22 MSG galv fluted units and/or composite 1-1/2, 2 or 3 in. deep, min 20/20 MSG galv cellular units. When a blend of fluted and cellular units is used, the concrete topping thickness shall be measured from the top plane of the deepest units. Welded to supports 12 in. OC. Adjacent units button-punched or welded together 36 in. OC at side joints.

CONSOLIDATED SYSTEMS INC — 24 in. wide Types CFD-2, -3; 24, 30 or 36 in. wide Type CFD-1.5.
DECK WEST INC — 36 in. Type 2-DW or 3-DW.
GENS METALS INC — 24 in. wide Types LF2, LF3.
H H ROBERTSON — QL Types 24 or 36 in. wide, 2 or 3 in. 99, AKX, WKX.
MARLYN STEEL DECKS INC — Type 1.5 CF, 2.0 CF or 3.0 CF.
UNITED STEEL DECK INC — 24, 30 or 36 in. wide Types 1-1/2 in. BL, BLC; 24 in. wide Types LF2, -3, LFC2, -3; 24 in. wide Types NL, NLC.
VERCO MFG CO — 24, 30 or 36 in. wide Types B, BR; 24 or 36 in. wide Types W2, W3. The superimposed loading for Types B and BR units shall not be greater than 80 percent of their published loadings.
VULCRAFT, DIV OF NUCOR CORP — 24, 30 or 36 in. wide Types 1.5VL, 1.5VLI; 24 or 36 in. wide Type 2VLI, 3VLI, 2VLP, 3VLP. Types 1.5VLI, 2VLI, 3VLI. Units may be phos./ptd.
WALKER SYSTEMS INC — Hi-Bond Types 24 in. wide 3K1F24, 3KAF24, 3KA1F24, 3KF24, 3PA24; 30 in. wide 3K30, 3KF30, 3P30; 15, 16, 30, 31 or 32 in. wide 2V, 3V.
WHEELING CORRUGATING CO, DIV OF WHEELING-PITTSBURGH STEEL CORP — 24 in. wide, Types SB-200, -300; 24, 30 or 36 in. wide, Type SB-B16LF; 24 or 36 in. wide, Types P20LF, SB-P21LF, -P31LF; 30 in. wide, Types SB-150, -150N; 36 in. wide Type 1.5 SB; 24 or 36 in wide Types 2.0 SB, 3.0 SB. Units may be phos/ptd.

Alternate Construction — Noncomposite units of the same type listed above may be used provided allowable loading is calculated on the basis of noncomposite design.

4. Joint Cover 2 in. wide pressure-sensitive cloth tape. Where fluted and cellular floor units are installed end to end, galv steel angles shall be tack-welded to the cellular floor units in such a manner as to cover the cells.

5. Welded Wire Fabric 6x6-W1.4xW1.4.

6. Shear Connectors (Optional) — Studs, 3/4 in. diam with 1-1/4 in. diam by 1/2 in. thick head or equivalent per AISC specifications. 1/2-in. concrete cover required above top of shear connector.

7. Electrical Inserts Preset and after set electrical inserts Classified as "Outlet Boxes and Fittings Classified for Fire Resistance." * Unless specified otherwise for a particular preset electrical insert type, the spacing of the preset electrical inserts shall be not less than 24 in. O.C. along cellular steel floor units with not more than one preset electrical insert in each 4 sq ft of floor area.

H H ROBERTSON — Inserts.

Installed per accompanying installation instructions over factory-punched holes in QL-AKX or QL-WKX floor units. Inserts are used in the pre-active, active, or abandoned condition. The holes cut in the insert cover for passage of wires shall be no more than 1/8 in. larger diam than the wire. For abandonment of Tapmate inserts, see installation instructions. Abandonment requires use of KEB-PC insert cover with no holes in it (for all Tapmate inserts), or a KEB-PC2 or -PC2-A1 abandonment cover for Tapmate II-EAFN only. The Tapmate II-FN insert may use KEB-HP-1 outlet box fittings in lieu of the KEB-PC flush cover fittings.

H H ROBERTSON — Tapmate II-FN, II-EAFN; Series KEB.

(2) Walker Systems Inc. Inserts.
Installed per accompanying installation instructions over factory-punched holes in 3 in. deep K-Type cellular steel floor units. Either Type RAKM-II or FAKM-II-IP service fittings are installed with Type N-R-G Bloc IV Series preset inserts per accompanying installation instructions.

WALKER SYSTEMS INC — Type N-R-G Bloc IV Series inserts; Type RAKM-II or FAKM-II-IP service fittings.

8. Hanger Clips Min 0.045 in. thick (18 gauge) galv steel, 2 in. wide, 3-1/2 in. long, hooked at one end for attachment over male leg of steel floor units and a hole at other end, spaced as required for hanger wire attachment.

9. Hanger Wire No. 12 SWG galv steel, pigtailed in concrete through steel floor units, prior to concrete placement, or attached to hanger clips (Item No. 8). Hanger wires located 48 in. O.C. on main runners with additional hanger wires to occur at all four corners of light fixtures, at the midspan of cross tees adjacent to light fixtures, and at the cut end of cross tees longer than 23 in. which abut the walls.

10. Cold Rolled Channels Min 0.053 in. thick (16 gauge) painted cold-rolled steel channels, 1-1/2 deep with 9/16 in. flanges used for support of air ducts. Support provision for hanger wires between hanger clip locations shall be provided by two channels tied back to back with 18 SWG galv steel wire 48 in. O.C. and suspended by No. 12 SWG hanger wires spaced not over 48 in. O.C.

11. Air Duct Min 0.029 in. thick (22 gauge) galv steel. Total area of duct openings not to exceed 144 sq in. per 100 sq ft of ceiling area. Area of ind duct opening not to exceed 144 sq in. Max dimension of opening 12 in. Duct support channels located 6 in. from and on each side of duct drop and max 48 in. O.C. away from duct drop.

12. Damper Min 0.070 in. thick (14 gauge) galv steel, sized to overlap duct opening 2 in. min. Protected on both sides with 1/32 in. thick ceramic fiber paper laminated to the steel and held open with a Fusible Link (Bearing the UL Listing Mark).

13. Fixtures, Recessed Light (Bearing the UL Listing Mark). Fluorescent lamp type, steel housing, 2 by 4 ft size, provided with detachable spring-loaded trim flange or with adjustable mounting brackets. Fixtures spaced so their area does not exceed 24 sq ft per 100 sq ft of ceiling area. Wired in conformance with the National Electrical Code.
The activating components, installed per accompanying installation instructions for use with the above inserts are furnished by:

14. Fixture Protection — Gypsum Board * — 5/8 in. thick, cut from the same gypsum wallboard used in the remainder of the ceiling membrane (See Item 17). The five sided enclosure consists of a 24 by 48 in. top piece, two 4-1/2 (or wider) by 48 in. side pieces, two 6 (or wider) by 24 in. end pieces, and two 6 by 6 in. spacers to maintain a 5/8 in. clearance between the light fixture housing and the top piece. The spacers are placed on top of the fixture housing, with care taken not to locate the spacers over the light fixture ballasts. The top and side pieces are laid in place, and the end pieces are secured to the edges of the side and end pieces with 6d nails at each corner. When fixtures are installed end to end, no end pieces are used where the fixtures abut. Instead, a 6 by 24 in. piece is placed on top of and centered over the gap between the top pieces.

15. Steel Framing Members* Main runners nom 12 ft long spaced 48 in. OC. Cross tees nom 4 ft long installed perpendicular to main runners and spaced 24 in. OC. Additional cross tees located 8 in. from and on both sides of each wallboard end joint and each recessed light fixture.

CHICAGO METALLIC CORP — Types 650, 650C, 670, 670C.

15A. Alternate Steel Framing Members* (Not Shown) Main runners, cross tees, cross channels and wall angle as listed below:
a. Main Runners Nom 10 or 12 ft. long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft. OC.
b. Cross Tees Nom 4 ft. long, 1-1/2 in. wide face or 15/16 in. wide face installed at sides of light fixtures, installed perpendicular to the main runners, spaced 24 in. OC. Additional cross tees or cross channels used at 8 in. from each side of butted wallboard end joints. The cross tees or cross channels may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.
c. Cross Channels Nom 4 ft. long, installed perpendicular to main runners, spaced 24 in. OC.
d. Wall Angle or Channel Painted or galv steel angle with 1 in. legs or channel with 1 in. legs, 1-9/16 in. deep attached to walls at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum wallboard.

CGC INTERIORS, DIV OF
CGC INC — Type DGL or RX.
USG INTERIORS INC — Type DGL or RX.

15B. Steel Framing Members* (Not shown) — As an alternate to Items 15 and 15A. Main runners nom 12 ft long, spaced 48 in. OC. Ends of main runners at walls to rest on wall angle, without attachment, with 1/2 to 3/4 in. end clearance. Primary cross tees (1-1/2 in. wide across flange) or cross channels, nom 4 ft long installed perpendicular to main runners and spaced 24 in. OC. Additional primary cross tees or cross channels required at each wallboard end joint, 8 in. from and on each side of wallboard end joint and 8 in. from each side of light fixtures. Secondary cross tees (15/16 in. wide across flange), nom 4 ft long, installed at sides of light fixtures.

ARMSTRONG WORLD INDUSTRIES INC — Type DFR-8000.

15C. Steel Framing Members* (Not shown) — As an alternate to Items 15, 15A and 15B. For use with 1/2 in. thick wallboard only. Main runners nom 12 ft long, spaced 48 in. O.C. Cross channels, 4 ft. long, installed perpendicular to main runners and spaced 24 in. O.C. Additional cross channels required 8 in. from and on each side of wallboard end joints, and 8 in. from each side of light fixtures. Cross tees, 4 ft long installed perpendicular to main runners to support the 4 ft sides of light fixtures. 2 ft cross tees installed perpendicular to 4 ft cross tees to form 2 ft by 2 ft modules when ceiling air diffusers are used. J-shaped metal trim molding, installed at perimeter of light fixtures and lay-in ceiling air diffusers to cover and support the exposed wallboard edges.

CHICAGO METALLIC CORP — Type 630. When Type 630 Steel Framing Members are used, assembly and beam ratings are limited to 1-1/2 hr. when inserts (Item 7) are employed. Assembly and beam ratings are 2 hr. when inserts are omitted.

16. Wall Molding (Not shown) — Min 0.019 in. thick (26 gauge) painted or galv steel channel, 1-11/16 in. deep with 15/16 in. flanges, nailed to walls along perimeter of ceiling with 8d nails spaced 16 in. O.C.

17. Gypsum Board * — 5/8 in. thick, 4 ft wide; installed with long dimension perpendicular to cross tees with end joints centered along cross tees and with side joints centered along main runners. Wallboard fastened to each cross tee with five wallboard screws (Item 18) with one screw located at the midspan of the cross tee, one screw located 12 in. from and on each side of the cross tee midspan and one screw located 1-1/2 in. from each wallboard side joint. Except at wallboard end joints, wallboard screws shall be located on alternating sides of cross tee flange. At wallboard end joints, wallboard screws shall be located 1/2 in. from the joint. Wallboard fastened to main runners with wallboard screws, 3/8 to 1/2 in. from side joints, midway between intersections with cross tees (24 in. OC). End joints of adjacent wallboard sheets shall be staggered not less than 4 ft OC. Wallboard sheets screw-attached to flange of wall channel with wallboard screws spaced 12 in. OC.

CANADIAN GYPSUM COMPANY — Types C, IP-X2, IPC-AR, WRC.
BPB AMERICA INC
BPB CELOTEX — Type C, FRP or SF3.
CONTINENTAL GYPSUM COMPANY — Types CG3-3, CG5-5, CGTC-C.
G-P GYPSUM CORP, SUB OF
GEORGIA-PACIFIC CORP — Types 5, C.
JAMES HARDIE GYPSUM INC — Type Max"C".
LAFARGE GYPSUM, DIV OF
LAFARGE CORP — Types LGFC3, LGFC-C, LGFC-C/A.
NATIONAL GYPSUM CO — Types FSW-C, FSW-G.
PABCO GYPSUM, DIV OF
PACIFIC COAST BUILDING PRODUCTS INC — Type C.
STANDARD GYPSUM L L C — Type SGC-G.
UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, WRC.
YESO PANAMERICANO S A DE C V — Types C, IP-X2, IPC-AR, WRC.

17A. Gypsum Board* (For use with steel framing members described in Item 15C) — 1/2 in. thick, 4 ft wide. Installed with long dimension (side joints) perpendicular to the cross channels and 4 ft cross tees, and with the side joints centered along the main runners. Wallboard fastened to cross channels with 1 in. long Type S wallboard screws (Item 18) located 1/2 in. from butted end joints, with one screw located at the midspan of the cross channel, one screw located 12 in. from and on each side of the channel midspan, and one screw located 2-3/4 in. from each side joint.

AMERICAN GYPSUM CO — Type AGX-6.
CANADIAN GYPSUM COMPANY — Types C, IP-X2, IPC-AR, WRC.
CONTINENTAL GYPSUM COMPANY — Types CG3-3.
G-P GYPSUM CORP, SUB OF
GEORGIA-PACIFIC CORP — Type C.
LAFARGE GYPSUM, DIV OF
LAFARGE CORP — Types LGFC3, LGFC-C, LGFC-C/A .
NATIONAL GYPSUM CO — Type FSW-C.
UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, WRC.
YESO PANAMERICANO S A DE C V — Types C, IP-X2, IPC-AR, WRC.

For use with steel framing members described in Item 15C. Assembly and beam ratings are limited to 1-1/2 hr when inserts (Item 7) are employed. Assembly and beam ratings are 2 hr when inserts are omitted.

18. Screw, Wallboard No. 6 Phillips-type, Type S self-drilling and self-tapping, 1 in. long. Screw heads may be either exposed or covered with joint cement.

19. Alternate Finishing System (Not shown) — Wallboard joints may be either exposed or covered with paper tape and joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of the Classified gypsum wallboard.

19A. Alternate Finishing System Acoustical Material * — (Not shown) — Optional, acoustical tile may be laminated to the entire surface of the Classified gypsum wallboard.
Any Manufacturer — Any UL Classified acoustical material and adhesive with a flame spread of 25 or less (See Building Materials Directory).

Note: *Bearing the UL Classification Marking.

CODE INFORMATION

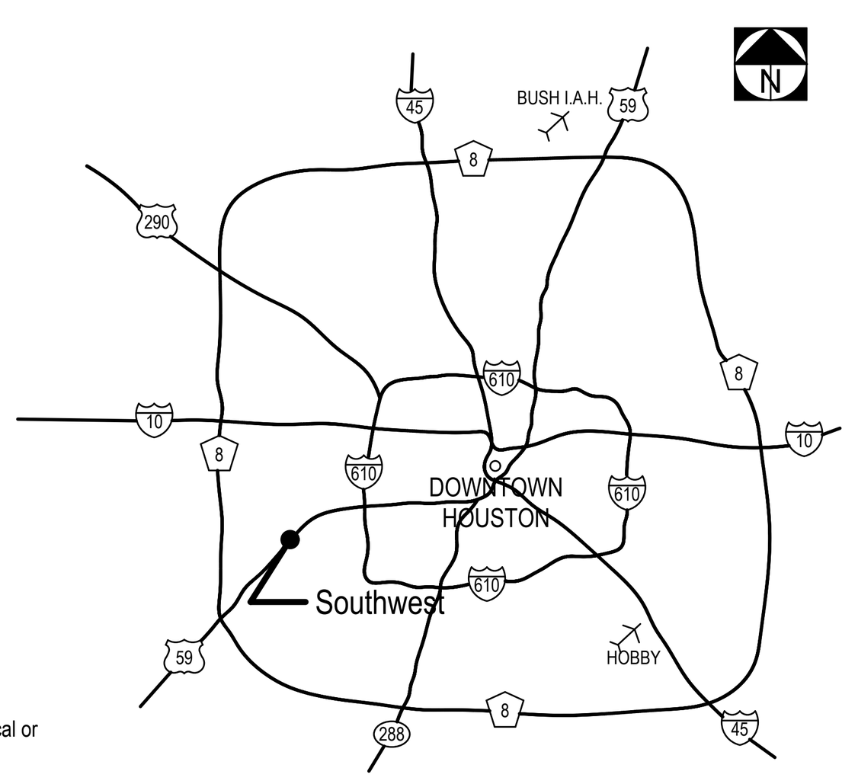
International Building Code, 2009 Edition
Americans with Disabilities Act, 1990
Texas Accessibility Standards, 1993
International Energy Conservation Code, 2008 Edition

Occupancy Types:	B
Construction Type:	IA
Occupancy Load:	14
Area:	1,378 usf
Project Scope:	New Tenant Construction
Sprinklered	Yes
Structural Frames:	2 Hour
Shaft Enclosures:	2 Hour
Floor/Ceiling:	2 Hour

COORDINATION STATEMENT

Pursuant to 22 TAC 1.103, an Architect's seal on the work of any Consultant(s) retained by the Architect attests only to the Architect's coordination of the Consultant's work with that of the Architect's and does not imply the Architect's practice of the Consultant's specialty.

AREA MAP



SHEET INDEX

ARCHITECTURAL

SHEET	CONTENT	ISSUE
IA0.10	Project Information	Pricing
IA0.30	TAS Information	Pricing
IA2.20	Interior Floor Plan: Dim	Pricing
IA2.30	Interior Floor Plan: Notes	Pricing
IA2.40	Reflected Ceiling Plan	Pricing
IA2.50	Power Plan	Pricing
IA2.60	Finish Plan	Pricing
IA6.00	Typical Details	Pricing
IA10.10	Millwork Elevations	Pricing
IA10.20	Millwork Details	Pricing

M/E/P CONSULTANT

MEP1.10 MEP Specifications
MEP1.20 MEP Specifications
M2.10 Mechanical Floor Plan
M3.10 Mechanical Legends, Schedule and Details
E2.10 Electrical Lighting Plan
E2.20 Electrical Power Plan
E3.10 Electrical Legends and Schedule
P2.10 Plumbing Floor Plan
P3.10 Plumbing Schedule, Legend and Details

PROJECT TEAM

ARCHITECT
Kirksey
6909 Portwest Drive
Houston, Texas 77024
Tel: 713.850.9600
Fax: 713.850.7308
Contact: Micki Washington

M/E/P ENGINEER
Wylie & Associates
6161 Savoy, Suite 700
Houston, Texas 77036
Tel: 713.781.2526
Fax: 713.781.2536
Contact: Eric Richie

BUILDING OWNER REPRESENTATIVE
CB Richard Ellis
2800 Post Oak Blvd., Suite 2300
Houston, TX 77056
Tel: 713-577-1806
Fax: 713-577-1677
Contact: Tom Moore

REGISTERED ACCESSIBILITY SPECIALIST
Accessible Design Solutions
505 North Sam Houston Pkwy East, #280
Houston, Texas 77060
telephone 281 999 3733
facsimile
Contact: Laura Rone, RAS
EABPRJ#: XXXXXXXXX

REVIEW AND APPROVAL

The following Documents have been carefully and thoroughly reviewed and approved for construction.

Tenant:

Date:

Kirksey
ARCHITECTURE

6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

ARCHITECT: MICHAEL J. PARKER
DATE: 24 JUNE 2011
NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

NO.	DATE	ISSUE
CD	24 JUN 2011	PRICING

PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE
Project Information

SHEET NUMBER
IA0.10

4.2 SPACE ALLOWANCES AND REACH RANGES

TAS SECTIONS 4.2.1 - WHEELCHAIR PASSAGE WIDTH

A. The minimum clear width for single wheelchair passage shall be 32" at a point and 36" continuously.

TAS SECTIONS 4.2.2 - WIDTH FOR WHEELCHAIR PASSING

A. The minimum clear width for two wheelchairs to pass is 60".

TAS SECTIONS 4.2.3 - WHEELCHAIR TURNING SPACE

A. The minimum space required for a standard wheelchair to make a 180-degree turn is a clear 60 inch diameter or a T-shaped space. Refer to fig. 3(b).

TAS SECTIONS 4.2.4.1 - SIZE AND APPROACH

A. Minimum clear floor space for a wheelchair and occupant shall be 30" wide x 48" long. Clear floor space shall be centered on the element it serves.

TAS SECTIONS 4.2.5 & 4.2.6 - REACH RANGES

A. Reach Ranges:

Frontal Approach:	48" max. - adults	Side Approach: 54" max. - adults
	42" max. - ages 4-11 yr.	48" max. - ages 4-11 yr.
	45" max. - ages 11-15 yr.	51" max. - ages 11-15 yr.

4.3 ACCESSIBLE ROUTE

TAS SECTIONS 4.3.2 - LOCATION

A. At least one accessible route shall be provided from public transportation stops, accessible parking and loading zones, and public streets or sidewalks to the accessible building entrance.

B. At least one accessible route shall connect accessible buildings, facilities, elements and spaces that are on the same site.

C. Accessible routes shall be located so that users are not required to wheel or walk behind parked vehicles (except the one they are in) or in traffic lanes.

TAS SECTIONS 4.3.3 - WIDTH

A. The minimum clear width of an accessible route shall be 36" except at doors.

TAS SECTIONS 4.3.4 - PASSING SPACE

A. If an accessible route is less than 60" in width, then passing spaces of at least 60"x60" shall be provided at 200' max. spacing.

TAS SECTONS 4.3.5 - HEAD ROOM

A. Accessible routes shall have 80" min. clear head room.

TAS SECTIONS 4.3.7 - SLOPE

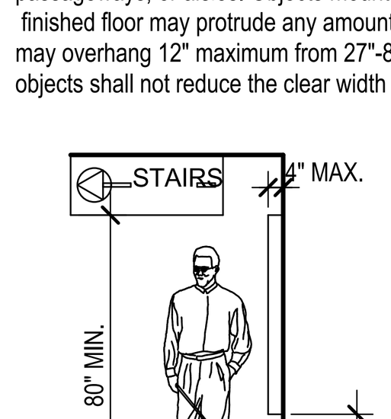
A. Running slope shall not exceed 1:20. (If slope exceeds 1:20, refer to section 4.8)

B. Cross slope shall not exceed 1:50.

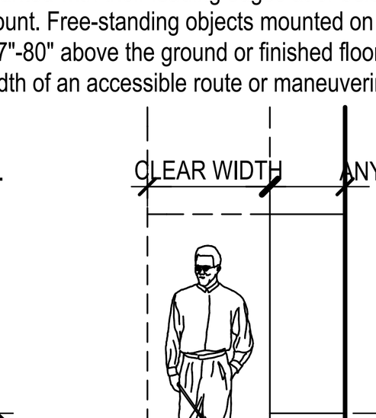
4.4 PROTRUDING OBJECTS (REF. DETAILS 5.2 & 5.3)

TAS SECTIONS 4.4.1 - GENERAL

A. Objects projecting from walls (for example, telephones) with their leading edges between 27"-80" above the finished floor shall protrude no more than 4" into walks, halls, corridors, passageways, or aisles. Objects mounted with their leading edges at or below 27" above the finished floor may protrude any amount. Free-standing objects mounted on posts or pylons may overhang 12" maximum from 27"-80" above the ground or finished floor. Protruding objects shall not reduce the clear width of an accessible route or maneuvering space.



Detail 5.2



Detail 5.3

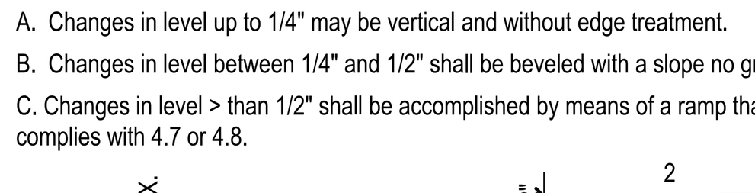
4.5 GROUND AND FLOOR SURFACES (REF. DETAIL 5.1)

TAS SECTIONS 4.5.2 - CHANGES IN LEVEL

A. Changes in level up to 1/4" may be vertical and without edge treatment.

B. Changes in level between 1/4" and 1/2" shall be beveled with a slope no greater than 1:2.

C. Changes in level > than 1/2" shall be accomplished by means of a ramp that complies with 4.7 or 4.8.



Detail 5.1

TAS SECTIONS 4.5.3 - CARPET

A. Carpet provided on a floor surface shall be securely attached; have a firm pad or backing, or no pad; and have a level loop, textured loop, level cut pile, or level cut/uncut pile texture. Maximum pile thickness shall be 1/2". Exposed edges of carpet shall be fastened to floor surfaces and have trim along the exposed edges.

TAS SECTIONS 4.5.4 - GRATINGS

A. If gratings are located in walking surfaces or along accessible routes, then they shall have spaces no greater than 1/2" wide in one direction.

B. If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

4.6 PARKING AND PASSENGER LOADING ZONES

TAS SECTIONS 4.6.3 - PARKING SPACES

A. Accessible parking shall be at least 96" wide.

B. Parking access aisles shall be 60" wide. Van accessible access aisles shall be 96" wide.

C. Surface slope of parking space & access aisles shall not exceed 1:50 in all directions.

TAS SECTIONS 4.6.4 - SIGNAGE

A. Characters and symbols on such signs shall be located 60" minimum above the ground.

B. Signage located within an accessible route shall be located 80" min. above the walking surface.

TAS SECTIONS 4.6.5 - VERTICAL CLEARANCE

A. Provide minimum vertical clearance of 114" at accessible passenger loading zones and along at least one vehicle access route from site entrances and exits.
At Van Accessible parking spaces, provide min. 98" at space and along at least one access route to such spaces from site entrance(s) and exit(s).

TAS SECTIONS 4.6.6 - PASSENGER LOADING ZONE

A. Passenger loading zones shall provide an access aisle at least 60" wide and 20 ft long adjacent and parallel to the vehicle pull-up space. If there are curbs between the access aisle and the vehicle pull-up space, then a curb ramp complying with 4.7 shall be provided. Vehicle standing spaces and access aisles shall be level with surface slopes not exceeding 1:50 in all directions.

4.7 CURB RAMPS

TAS SECTIONS 4.7.2 - SLOPE (REF. DETAIL 3.1) 1:12 (8.33%)

A. Slopes of curb ramps shall comply with 4.8.2. Transitions from ramps to walks, gutters or streets shall be flush & free of abrupt changes.

B. Maximum slopes of adjoining gutters, road surface immediately adjacent to the curb ramp, or accessible route shall not exceed 1:20 (5%).

TAS SECTIONS 4.7.3 - WIDTH (REF. DETAIL 3.1)

A. The minimum width of a curb ramp shall be 36", exclusive of flared sides.

TAS SECTIONS 4.7.5 - SIDES OF CURB RAMPS (REF. DETAIL 3.1)

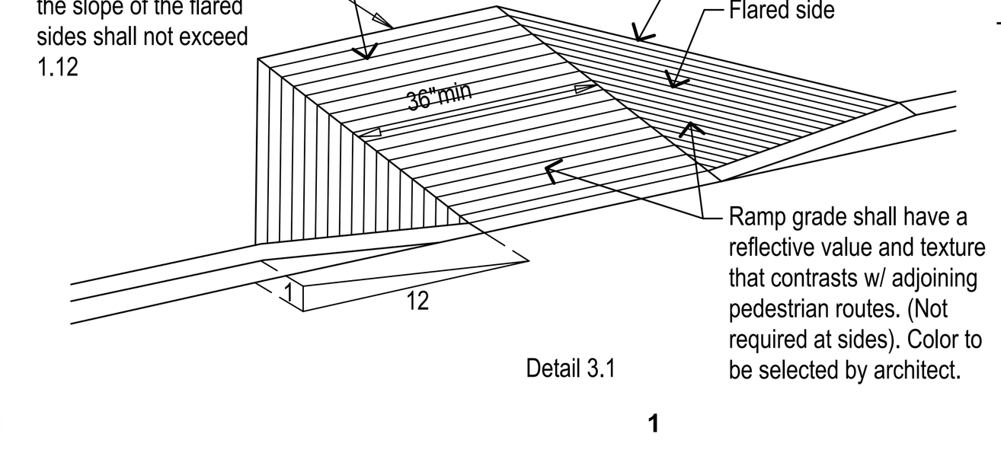
A. If a curb ramp is located where pedestrians must walk across the ramp or where it is not protected by handrails or guardrails, it shall have flared sides; the maximum slope of the flare shall be 1:10. Curb ramps with returned curbs may be used where pedestrians would not normally walk across the ramp.

TAS SECTIONS 4.7.10 - DIAGONAL CURB RAMPS

A. If diagonal curb ramps have returned curbs or other well-defined edges, such edges shall be parallel to the direction of pedestrian flow. The bottom of diagonal curb ramps shall have 48" minimum clear space. If diagonal curb ramps are provided at marked crossings, the 48" clear space shall be within the markings. If diagonal curb ramps have flared sides, they shall also have at least a 24" long segment of straight curb located on each side of the curb ramp and within the marked crossing.

TAS SECTIONS 4.7.11 - ISLANDS

A. Any raised islands in crossings shall be cut through level with the street or curb ramps at both sides and a level area at least 48" long between the curb ramps in the part of the island intersected by the crossings.



Detail 3.1

4.8 RAMPS

TAS SECTIONS 4.8.1 - GENERAL

A. Any part of an accessible route with a slope greater than 1:20 shall be considered a ramp and shall comply with 4.8.

TAS SECTIONS 4.8.2 - SLOPE AND RISE

A. The maximum slope of a ramp in new construction shall be 1:12. The maximum rise for any run shall be 30".

TAS SECTIONS 4.8.3 - CLEAR WIDTH

A. The minimum clear width of a ramp 30 ft or less in length shall be 36". Ramps more than 30 ft. in length shall have a minimum clear width of 44".

TAS SECTION 4.8.4 - LANDINGS

A. Level landings required at top and bottom of each run, with the following features:

1. Minimum Width: Equal to width of ramp.
2. Length: Minumum 60" clear.

TAS SECTION 4.8.5 - HANDRAILS

A. Top of gripping surface: Adults: 34"-38" above ramp surface.

Ages 4-11 yr: 28"-34" above ramp surface.

Ages 11-15 yr: 30-34" above ramp surface.

B. The clear space between the handrail and the wall shall be 1-1/2".

TAS SECTIONS 4.8.7 - EDGE PROTECTION

A. Ramps and landings with drop-offs shall have curbs, walls, railings, or projecting surfaces that prevent slipping off the ramp. Curbs shall be a minimum of 2" high.

4.9 STAIRS

TAS SECTIONS 4.9.2 - TREADS AND RISERS

A. All steps on a flight of stairs shall have uniform riser heights and tread widths.

1. Minimum tread depth shall be 11", measured from riser to riser. (not including nosing)
2. Open risers are not permitted.

TAS SECTION 4.9.4 - HANDRAILS

A. Non-continuous handrails shall extend 12" beyond the top riser and 12" in the direction of stair plus the width of one tread beyond the bottom riser. At the top, the extension shall be parallel to the floor. At the bottom, the handrail shall continue to slope for a distance of one tread width (11"); the remaining extension shall be horizontal.

B. Top of gripping surface: Adults: 34" - 38", measured from the stair nosing. (Ages 4-11 yr: 28" - 34" , Ages: 11-15 yr: 30" - 34")

C. Stairways shall have handrails at both sides of all stairs.

4.10 ELEVATORS

TAS SECTIONS 4.10.3 - HALL CALL BUTTONS

A. Shall be centered 42" above floor.

B. Buttons shall be raised or flush.

TAS SECTIONS 4.10.4 - HALL LANTERNS

A. A visible & audible signal shall be provided at each hoistway entrance to indicate which car is answering a call. Audible signals shall sound once for the up direction & twice for the down direction or shall have verbal annunciators that say "up" or "down". Visible signals shall have the following features:

1. Hall lantern shall be mounted with centerline at least 72" above the lobby floor.
2. Visual elements shall be at least 2-1/2" in the smallest dimension.

TAS SECTIONS 4.10.5 - RAISED AND BRAILLE CHARACTERS AT ENTRANCES

A. All elevator hoistway entrances shall have raised and Braille floor no. designations provided on both jambs. Centerline of the characters shall be 60" above the floor. Characters shall be 2" high.

TAS SECTIONS 4.10.6 - DOOR PROTECTIVE AND REOPENING DEVICE

A. Elevator doors shall open and close automatically. They shall be provided with a reopening device that will stop and reopen a car door and hoistway door automatically if the door becomes obstructed by an object or person.

TAS SECTIONS 4.10.12 - CAR CONTROLS

A. All floor buttons shall be:

1. All control buttons shall be at least 3/4" in their smallest dim. They shall be flush or raised.
2. All control buttons shall be at left and designated by Braille and by raised standard alphabet characters for letters, arabic characters for numerals. The call button for the main entry floor shall be designated by a raised star at the left of the floor designation. Floor buttons shall be provided with visual indicators to show when each call is registered. The visual indicators shall be extinguished when the call is answered.
3. Maximum 54" above floor where side approach is provided.
4. Maximum 48" where forward approach is provided.

(Children's heights:
frontal: 42" max., ages 4-11 yr., 45" max. ages 11-15 yr.
side: 48" max., ages 4-11 yr., 51" max. ages 11-15 yr.)

B. Emergency Controls:

1. Shall have centerlines 35" minimum above floor.
(Children's heights: 42" max. ages 4-11 yr., 45" max. ages 11-15 yr.)
2. Shall be grouped at bottom of panel.

TAS SECTIONS 4.10.14 - Emergency Communications

A. If provided, emergency two-way communication systems between the elevator & a point outside the hoistway shall comply with ASME A17.1-1990. The highest operable part of a two-way communication system shall be a maximum of 48 in. from the floor of the car. It shall be identified by a raised symbol and lettering complying with 4.30 and located adjacent to the device. If the system uses a handset then the length of the cord from the panel to the headset shall be at least 29 in. If the system is located in a closed compartment the compartment door hardware shall conform to 4.27 Controls and Operating Mechanisms. The emergency intercommunication system shall not require voice communication.

4.11 PLATFORM LIFTS

TAS SECTIONS 4.11.2, 4.27.3 - OTHER REQUIREMENTS CONTROLS AND OPERATING SYSTEMS

A. Heights permitted:
Controls and operating mechanisms shall be located for either a forward or side approach from any direction of travel. They shall be located 28" min. and 48" maximum above the floor. They shall be operable with one hand. There shall be at least one handrail complying with 4.26. Wheelstops and guardrails shall be provided where necessary.
(Children's heights: 28"-42" ages 4-11 yr.
28"-45" ages 11-15 yr.)

4.13 DOORS

TAS SECTION 4.13.3- GATES

A. Gates, including ticket gates, shall meet all applicable specifications of 4.13.

TAS SECTION 4.13.4 - DOUBLE - LEAF DOORWAYS

A. Doorways with two independently operated leaves shall have at least one leaf that meets the requirements in 4.13.5 and 4.13.6.

TAS SECTION 4.13.5 - CLEAR WIDTH

A. Doorways shall provide a clear opening of 32" minimum, with the door open 90 degrees.

1. Clear opening shall be measured between the face of the door and the opposite stop.
2. Openings more than 24" in depth shall provide a clear opening of 36" minimum.
Exception: Doors not requiring full user passage, such as shallow closets, shall have a clear opening of 20" minimum.

TAS SECTION 4.13.6 - MANEUVERING CLEARANCES AT DOORS

A. Provide level and clear maueuvering area at doors as follows:

Front approach pull side - 18" min. beside strike edge & 60" min. depth.
Front approach push side - 0" beside strike edge and 48" min. depth.
12" min. beside strike edge & 48" min. depth, if door has both a closer and a latch.
Hinge side approach pull side - 60" min. width; 36" min. beside strike edge.
Hinge side approach push side - 42" min. width & 54" min. depth.
48" min. width & 54" min. depth, if door has both a closer and latch.
Latch side approach pull side - 48" min. width; 24" min. beside strike edge.
54" min. width if door has closer.
Latch side approach push side - 42" min. width; 24" min. beside strike edge.
48" min. width if door has closer.

TAS SECTION 4.13.8 - THRESHOLDS AT DOORWAYS

A. Max. threshold height: 1/2" (3/4" at exterior sliding doors). Raised thresholds and floor level changes shall be beveled with a slope no greater than 1:2.

TAS SECTION 4.13.9 - DOOR HARDWARE

A. Handles, pulls, latches, locks, and other operating devices shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist to operate.

1. Lever-operated mechanisms, push-type mechanisms, and U-shaped handles are acceptable designs.
2. When sliding doors are fully open, operating hardware shall be exposed and usable from both sides.
3. Hardware required for passage shall be mounted no higher than 48" above finished floor.

TAS SECTION 4.13.10 - DOOR CLOSERS

A. If a door has a closer, then the sweep period of the closer shall be adjusted so that from an open position of 70~, the door will take at least 3 seconds to move to a point 3" from the latch, measured to the leading edge of the door.

TAS SECTION 4.13.11 - DOOR OPENING FORCE

A. The maximum force for pushing or pulling open a door shall be as follows:

1. Fire doors shall have the minimum opening force allowable by the appropriate administrative authority.
2. Other doors:
a. Exterior hinged doors: no requirement.
b. Interior hinged doors: 5.0 lbf.
c. Sliding or folding doors: 5.0 lbf.

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

4.15 DRINKING FOUNTAINS

TAS SECTION 4.15.2 - SPOUT HEIGHT (REF. DETAIL 11.1)

A. Spouts shall be no higher than 36", measured from the floor or ground surface to the spout outlet. For wheel chair bound individuals. Spouts shall be no higher the 40" for individuals with impared bending capabilities. (Children's heights: 32" max. ages 4 - 11 yr. 34" max. ages 11 - 15 yr.)

TAS SECTION 4.15.3 - SPOUT LOCATION

A. Spouts shall be located at the front of the unit and shall direct the water flow in a trajectory that is parallel or nearly parallel to the front of the unit.

1. The spout shall provide a flow of water at least 4" high.
2. If the fountain has a round or oval bowl, an accessible drinking fountain providing only a parallel approach, the spout must be positioned so the flow of water is within 3" of the front edge of the fountain.

TAS SECTION 4.15.4 - CONTROLS

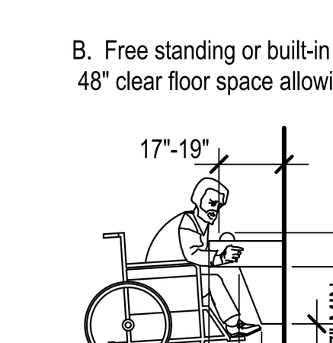
A. Unit controls shall be front mounted or side mounted near the front edge.

TAS SECTION 4.15.5 - CLEARANCES (REF. DETAIL 11.1)

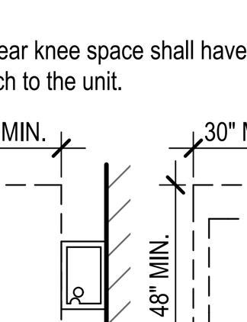
A. Wall and post mounted cantilever fountains shall have clear knee space as follows:

1. Minimum 27" high (from apron bottom to floor) minimum 30" wide, and 17" - 19" deep. (Children's knee clearance: 26", ages 4-11 yr.
27", ages 11-15 yr.)
2. A minimum 30" by 48" clear floor space allowing a forward approach to the unit shall be provided.

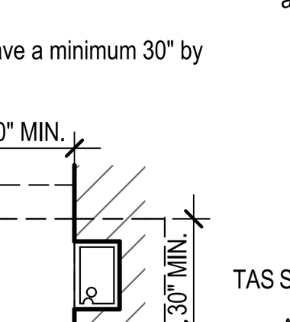
B. Free standing or built-in units not having a clear knee space shall have a minimum 30" by 48" clear floor space allowing a parallel approach to the unit.



Detail 11.1



Detail 11.2



Detail 11.3

4.16 WATER CLOSETS

TAS SECTION 4.16.2 - CLEAR FLOOR SPACE

A. Clear floor space for water closets not in stalls shall be provided as follows:
(Represents the min. clear floor space required by water closets when a lavatory is provided on the same wet wall)
Front approach - 48" min. wide x 66" min. long.
Side approach - 56" min. to front of toilet x 48" min. wide.
Both approach - 60" min. wide x 56" min. long.

B. Center of water closet to be 18" from the side wall.

TAS SECTION 4.16.3 - HEIGHT (REF. DETAIL 12.1.1)

A. The height to the top of the toilet seat shall be 17" - 19" above floor.

(Under age of 4 yrs., top of seat may be lower than 14" but not higher than 15", ages 4-11 yr., top of seat 14"-15"
ages 11-15 yr., top of seat 15"-17")

1. Seats shall not be sprung to return to a lifted position.

TAS SECTIONS 4.16.4, 4.26 - GRAB BARS (REF. DETAILS 12.1.1 AND 12.1.2)

A. For water closets not located in toilet stalls, the following grab bars shall be provided, 33" - 36" above the finish floor:
(Children's heights: ages 4-11 yr., 28"-30"
ages 11-15 yr., 30"-32")

1. Side wall: 42" long minimum, 12" from back wall.
2. Back wall: 36" long minimum, 12" minimum each side of water closet centerline, & 6" max. from side wall.
Refer to 4.26 Grab Bars for size and structural elements.

TAS SECTIONS 4.16.5, 4.27.4 - FLUSH CONTROLS (REF. DETAIL 12.1.2)

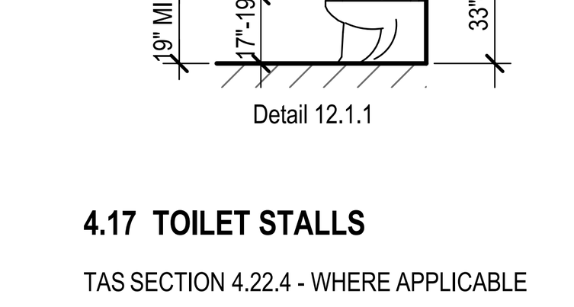
A. Controls shall be 44" maximum above the finish floor.
(Children's heights: 42" max. ages 4-11yr.
44" max. ages 11-15 yr.

1. Controls for flush valves shall be mounted on the wide side of toilet areas.
2. Controls shall be hand operated or automatic.
3. Controls shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.
4. The force required to activate controls shall be no greater than 5 lbf.

TAS SECTION 4.16.6 - DISPENSERS (REF. DETAIL 12.1.1)

A. Toilet paper dispensers shall be installed on the side wall, a minimum 19" above the floor, and a maximum 36" from the rear wall (front edge of dispenser).

1. Dispensers that control delivery or do not permit continuous paper flow shall not be used.



Detail 12.1.1

Detail 12.1.2

4.17 TOILET STALLS

TAS SECTION 4.22.4 - WHERE APPLICABLE

A. If toilet stalls are provided in a toilet room or bathroom, then at least one shall be a "standard" accessible toilet stall (for wheelchair users) complying with this section.

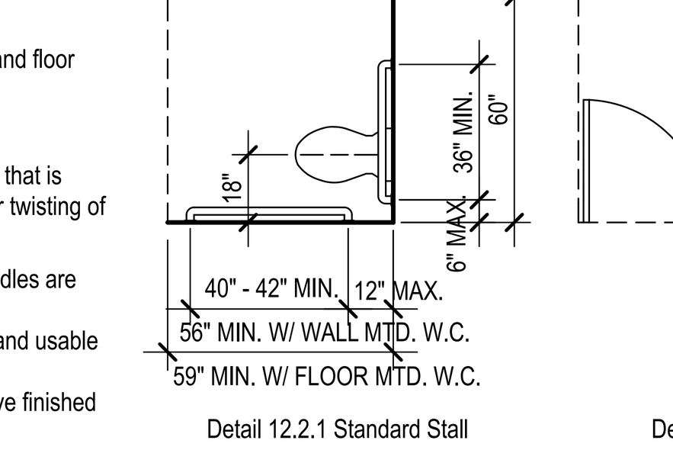
B. If 6 or more toilet stalls are provided in a toilet room or bathroom in addition to the 'standard' accessible stall required; an additional 'alternate A' accessible stall 36" wide (for ambulatory persons with disabilities) complying with this section shall be provided.

C. Alterations/Existing Conditions: In alteration work. where provision of a 'standard' accessible stall is technically infeasible, or where plumbing code requirements prevent combining existing stalls to provide space, either 'alternate' stall (A or B) complying with this section may be provided in lieu of the standard stall. (Request for varance is required for these conditions.)

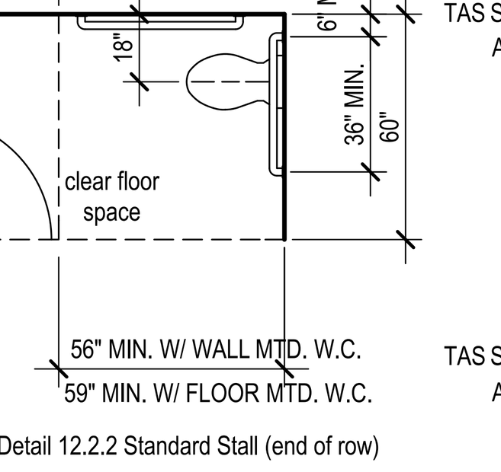
TAS SECTION 4.17.3 - SIZE AND ARRANGEMENT (REF. DETAIL 12.2.1 & 12.2.2)

A. Toilet stalls may be arranged to provide either a left or a right handed approach. Accessible toilet stalls shall have the following dimensions:

1. 'Standard' Accessible Stall
60" minimum width.
59" minimum depth, with floor mounted water closet.
56" minimum depth, with wall mounted water closet. (Ambultory)
Door: outward swinging (if door swings into stall, depth shall be increased by 36").
(Door should be diagonally opposite from water closet)
2. Accessible Stall (required when 6 stalls or more are provided.
36" minimum width.
69" minimum depth, with floor mounted water closet.
66" minimum depth with wall mounted water closet.
Door: outward swinging.
3. 'Alternate B' Accessible Stall (permitted in lieu of standard stall only in certain alterations)
48" minimum width.
54" minimum depth.
Door : outward swinging.



Detail 12.2.1 Standard Stall



Detail 12.2.2 Standard Stall (end of row)

TAS SECTION 4.17.4 - TOE CLEARANCES

A. In 'Standard' accessible stalls, the front partition and at least one side partition shall provide a toe clearance of at least 9" above the floor.

B. If the depth of the stall is greater than 60", the toe clearance is not required.

TAS SECTION 4.17.5 - DOORS

A. Toilet stall doors, including hardware, shall comply with
ELEMENT 10: DOORS

B. If toilet stall approach is from the latch side of the stall door, clearance between the door side of the stall and any obstruction shall be 42" minimum. (This is an exception from typical door maneuvering clearances) Other approaches 48" min., at end of row stall 36" min. approach is required.

TAS SECTION 4.17.6 - GRAB BARS (REF. DETAILS 12.1.1, 12.1.2, 12.2.1 AND 12.2.2)

A. Grab Bars mounted 33" - 36" above the floor, for adults and 28" - 30" above the floor for children ages 4 - 11 years of age, shall be provided as follows:

1. 'Standard' Accessible Stall: One 40" side wall grab bar (on side wall) and one rear wall grab bar. Far end shall be 52" min. from rear wall & 12" from back wall.
2. At Ambulatory stall grab bars at both sides of stall are required.
3. Side Wall Grab Bar: Minimum length as indicated, mounted 12" maximum off rear wall.
4. Rear Wall Grab Bar: Minimum length 36", 12" minimum each side of water closet centerline, 6" max. from side wall.
Refer to 4.26 Grab Bars for size and structural requirements.

4.18 URINALS

TAS SECTION 4.18.2 - HEIGHT (REF. DETAIL 12.3.1)

A. Urinals shall be stall-type or wallhung with a tapered, elongated rim at 17" maximum above the finished floor. The rim shall extend a minimum of 14" from the wall.
(Children's rim height: 14" max. AFF - ages 4-11 yr.
16" max. AFF - ages 11-15 yr.)

TAS SECTION 4.18.3 - CLEAR FLOOR SPACE (REF. DETAIL 12.3.2)

A. A clear floor space 30" wide by 48" deep minimum shall be provided in front of urinal to allow frontal approach.

1. This space shall adjoin or overlap an accessible route.

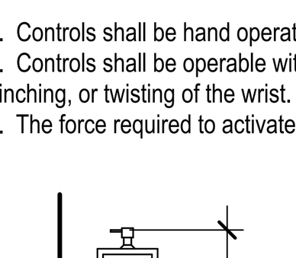
2. Urinal shield that do not extend beyond the front edge of the urinal rim may be provided with 29" clearence between them.

3. Urinals installed in alcoves deeper than 24" require a maneuvering area of at least 36" minimum wide with centerline 15" from side wall.

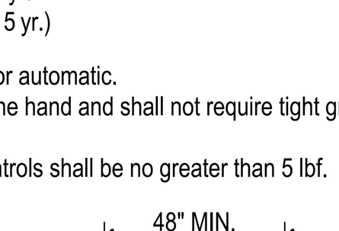
TAS SECTION 4.18.4 - FLUSH CONTROLS (REF. DETAIL 12.3.1)

A. Controls shall be 44" maximum above the finished floor.
(Children's height: 42" max., ages 4-11 yr.
44" max., ages 11-15 yr.)

1. Controls shall be hand operated or automatic.
2. Controls shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.
3. The force required to activate controls shall be no greater than 5 lbf.



Detail 12.3.1
(See note above for children's height)



Detail 12.3.2

4.19 LAVATORIES & MIRRORS

TAS SECTION 4.19.2 - HEIGHT & CLEARANCES (REF. DETAIL 12.5.1 & 12.5.2)

A. Lavatories shall be mounted with the rim or counter surface no higher than 34" above the finished floor.
(Children's height: 30" max., ages 4-11 yr.
32" max., ages 11-15 yr.)

1. Lavatories shall extend 17" minimum from the wall.

2. Clearance of 29" minimum shall be provided from the finished floor to bottom of apron.
(Children's height: 26" min., ages 4-11 yr., 27" min., ages 11-15 yr.)

TAS SECTION 4.19.4 - EXPOSED PIPES AND SURFACES

A. Hot water and drain pipes under lavatories shall be insulated or otherwise configured to protect against contact.

B. There shall be no sharp or abrasive surfaces under lavatories.

TAS SECTIONS 4.19.5, 4.27.4 - FAUCETS

(Children's faucets- to faucets from front edge:
18" max., ages 4-11 yr., 20" max., ages 11-15 yr.)

A. Controls shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.

B. The force required to activate controls shall be no greater than 5 lbf.

C. Lever-operated, push-type, and electronically controlled mechanisms are examples of acceptable designs.

D. If self-closing valves are used the faucet shall remain open for at least 10 seconds.

TAS SECTION 4.19.6 - MIRRORS (REF. DETAIL 12.5.1)

A. Mirrors shall be mounted with the bottom edge of the reflecting surface 40" maximum above the finished floor.
(Children's height: 34" max., ages 4-11 yr.
37" max., ages 11-15 yr.)

B. Mirrors intended to be used by both ambulatory people & wheelchair users, such as in a single occupancy toilet room or any toilet room having only one mirror, must be at least 74" high at their top most edge.

4.20 BATHTUBS

TAS SECTION 4.20.2 - FLOOR SPACE

A. Clear floor space shall be provided in front of bathtubs as follows:

30" wide x 60" long beside the bathtub for side approach
48" wide x 60" long beside the bathtub for front approach
with seat at head of tub - 30" wide x 75" long beside tub

TAS SECTION 4.20.3 - SEAT

(Children's top of seat height: 14"-15", ages 4-11 yr.
15"-16", ages 11-15 yr.)

A. An in-tub seat or a seat at the head end of the tub shall be provided. Seats shall be mounted securely and shall not slip during use.

TAS SECTIONS 4.20.4 - GRAB BARS

A. Heights permitted:
(Children's heights: 28"-30", ages 4-11 yr.
30"-32", ages 11-15 yr.)

Adult heights:

1. With in Tub Seat:
Control wall: 24" long minimum, from outside wall, 33-36" above floor.
Back wall: 2 bars, 24" long minimum, 12" maximum from footend, 24" maximum from head end; one 33-36" above floor, one 9" above the tub.
Head wall: 12" minimum, from outside wall, 33-36" above floor.

2. With Seat at Head of Tub:
Control wall: 24" long minimum, from outside wall, 33-36" above floor.
Back wall: 2 bars, 48" long minimum, 12" maximum from foot end, 15" maximum from head end; one 33-36" above floor, one 9" above the tub.
Head wall: none.

TAS SECTION 4.20.6 - SHOWER UNIT

A. A shower spray unit with a hose at least 60" long shall be provided.
(Children's hand shower head mounting height:
42" max., ages 4-11 yr., 45" max., ages 11-15 yr.)

B. The mounting device for the hand held shower head shall comply with 4.25 forward reach.

4.21 SHOWER STALLS

TAS SECTION 4.21.2 - SIZE AND CLEARANCES (REF. Details 12.4.1-12.4.4)

A. Shower stalls shall be either 36"x36" clear inside dimension or 30" min. x 60" min. clear inside dimension.

TAS SECTIONS 4.21.3 - SEAT

A. Seat is required in 36"x 36" stalls, and shall have the following features:

1. Shall be 17"-19" above bathroom floor.
(Children's height: 14"-15" AFF, ages 4-11 yr.
15"-16" AFF, ages 11-15 yr.)
2. Shall extend the full depth of the stall.
3. Shall be located on the wall opposite control wall.
4. Maximum space between wall and seat edge shall be 1-1/2".
5. Shall project 16" maximum into stall width, except at the rear 15" maximum of the stall, where the seat may project 23".

TAS SECTIONS 4.21.4 - GRAB BARS

A. Grab bars shall be mounted 33-36" above floor.
(Children's height: 28"-30" AFF, ages 4-11 yr.
30"-32" AFF, ages 11-15 yr.)

TAS SECTIONS 4.21.5 - CONTROLS

A. All shower controls shall be located 38" minimum and 48" maximum above the floor.

B. In shower stalls 36" x 36", all controls, faucets, & shower units shall be mounted on the side wall opposite the seat.

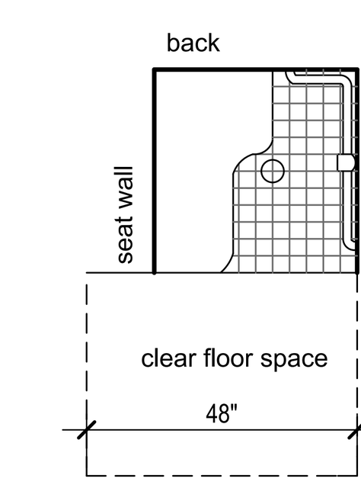
TAS SECTION 4.21.6 - SHOWER UNIT

A. A shower spray unit with a hose at least 60" long that can be used both as a fixed shower head and as a hand held shower shall be provided. The mounting device shall comply with the requirements for Forward Reach.

(Children's hand shower head mounting:
frontal: 42" max., ages 4-11 yr., 45" max. ages 11-15 yr.
side: 48" max., ages 4-11 yr., 51" max. ages 11-15 yr.)

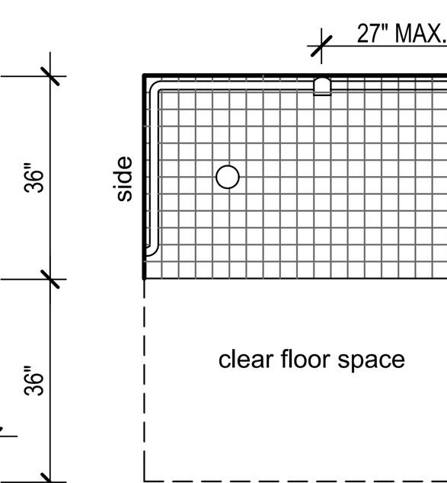
TAS SECTIONS 4.21.7 - CURBS

A. If provided, curbs on transfer showers shall be no higher than 1/2" roll-in showers shall not have curbs.



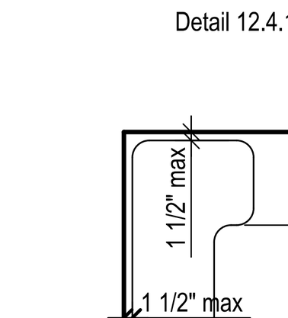
36" x 36" SHOWER STALL

Detail 12.4.1



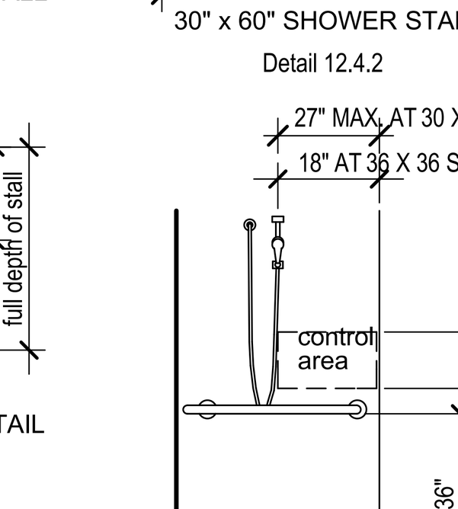
30" x 60" SHOWER STALL

Detail 12.4.2



SHOWER SEAT DETAIL

Detail 12.4.3



note: at 30 x 60 stall, shower head & control area may be on back (long) wall as shown or on either side wall

Detail 12.4.4

4.22 TOILET ROOMS

TAS SECTIONS 4.22.2 - DOORS

A. All doors to accessible toilet rooms shall comply with 4.13. Doors shall not swing into clear floor space required for any fixture. Clear floor turning space may overlap door swings.

TAS SECTIONS 4.22.3 - CLEAR FLOOR SPACE

A. The accessible fixtures and controls required in 4.22.4, 4.22.5, 4.22.6, 4.22.7 shall be on an accessible route. An unobstructed turning space complying with 4.2.3 shall be provided within an accessible toilet room. The clear floor space at fixtures and controls, the accessible route, and the turning space may overlap, however; the only turning space provided shall not be located within a stall.

TAS SECTIONS 4.22.4 - WATER CLOSETS

A. If toilet stalls are provided, then at least one shall be a standard toilet stall complying with 4.17; where 6 or more stalls are provided in addition to the stall complying with 4.17.3, at least one stall 36" wide with an outward swinging, self-closing door and parallel grab bars shall be provided. Water closets in such stalls shall comply with 4.16.

TAS SECTIONS 4.22.5 - URINALS

A. If urinals are provided, then at least one shall comply with 4.18.

TAS SECTIONS 4.22.6 - LAVATORIES AND MIRRORS

A. If lavatories and mirrors are provided, then at least one of each shall comply with 4.19. Accessible lavatories and mirrors shall not be located within toilet stalls unless other accessible lavatories and mirrors are provided in the toilet room.

TAS SECTIONS 4.22.7 - CONTROLS AND DISPENSERS

A. If controls, dispencers, receptacles, or other equipment are provided, then at least one of each shall be on an accessible route and shall comply with 4.27 - (Controls & Operating Mechanisms).

4.23 - BATHROOMS, BATHING FACILITIES, SHOWER ROOMS

TAS SECTION 4.23.8 - BATHING AND SHOWER FACILITIES

A. If tubs and showers are provided, then at least one accessible tub that complies with 4.20 or at least one accessible shower that complies with 4.21 shall be provided.

4.24 - SINKS

TAS SECTION 4.24.2 - HEIGHT (REF. DETAIL 12.5.1)

A. Sinks shall be mounted with the rim or counter surface no higher than 34" above the finished floor. (Children's height: 30" max., ages 4-11 yr.
32" max., ages 11-15 yr.)

TAS SECTIONS 4.24.3 - KNEE CLEARANCE (REF. DETAIL 12.5.1)

A. Knee clearance of 27" high minimum, 30" wide minimum, and 19" deep minimum shall be provided underneath sinks. (Children's height: 26" max., ages 4-11 yr.
28" max., ages 11-15 yr.)

TAS SECTION 4.24.4 - DEPTH

A. Each sink shall be a maximum of 6-1/2" deep.

TAS SECTION 4.24.6 - EXPOSED PIPES AND SURFACES

A. Hot water and drain pipes under sinks shall be insulated or otherwise configured to protext against contact.

B. There shall be no sharp or abrasive surfaces under sinks.

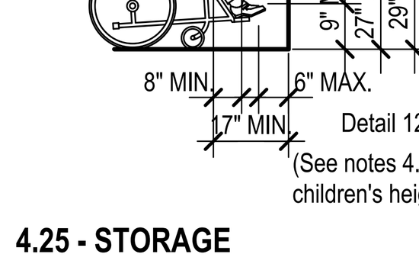
TAS SECTIONS 4.24.7, 4.27.4 - FAUCETS

A. Controls shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.

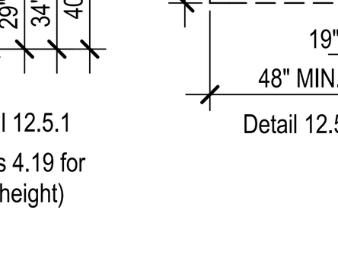
B. The force required to activate controls shall be no greater than 5 lbf.

C. Lever-operated, push-type, and electronically controlled mechanisms are examples of acceptable designs.

D. If self-closing valves are used the faucet shall remain open for at least 10 seconds.



Detail 12.5.1
(See notes 4.19 for children's height)



Detail 12.5.2

4.25 - STORAGE

TAS SECTION 4.25.1 - DEPTH (REF. DETAIL 14.1)

A. Storage areas may be 30" in depth or less. If more than 30" in depth then area must allow 60" diameter of clear floor space for turning.

TAS SECTION 4.25.2 - CLEAR FLOOR SPACE: (REF. DETAIL 14.2)

TAS SECTION 4.25.3 - HEIGHT (REF. DETAIL 14.3 AND 14.4)

A. Where a forward reach is required, accessible storage spaces shall be 48" max. and 15" min. above the floor. If the forward reach is over an obstruction (with knee space equal to or greater than reach distance) 20"-25" deep, the maximum height shall be 44"; if the obstruction is less than 20", maximum height shall be 48".

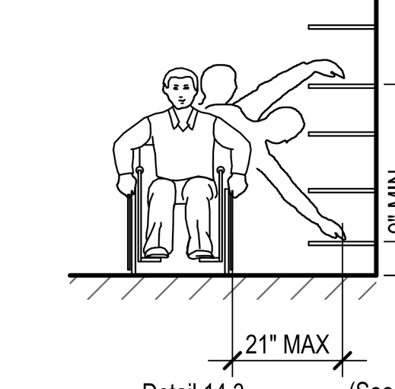
B. Where a side reach is provided, accessible storage spaces shall be 54" max. and 9" min. above the floor. Maximum height shall be 46" for side reach over an obstruction 34" max. high and 24" max. deep.

C. Clothes rods or shelves shall be a maximum 54" above floor where a side reach is required.

D. Where the distance from the wheelchair to the clothes rod or shelf exceeds 10" (as at closets with inaccessible doors) the following criteria shall be met:

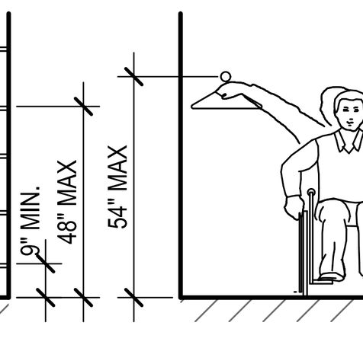
1. Shelves: Reach: 21" maximum; height: 48" maximum, 9" minimum.
2. Clothes rods: reach 21" maximum; height: 48" maximum.

(Children's reach:
frontal approach:42" max. AFF., ages 4-11 yr.
45" max. AFF., ages 11-15 yr.
side approach, distance from wheelchair: 0"-10" ---48" max. AFF, ages 4-11 yr.
51" max. AFF, ages 11-15 yr.
10"-21" --- 42" max. AFF, ages 4-11 yr.
45" max. AFF, ages 11-15 yr.)



Detail 14.3

(See notes above for children's height)

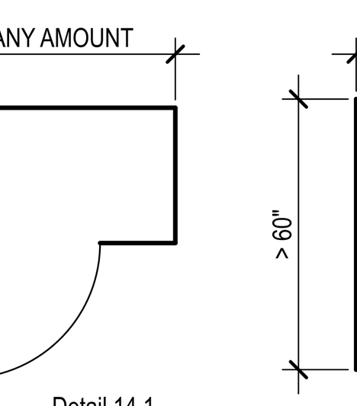


Detail 14.4

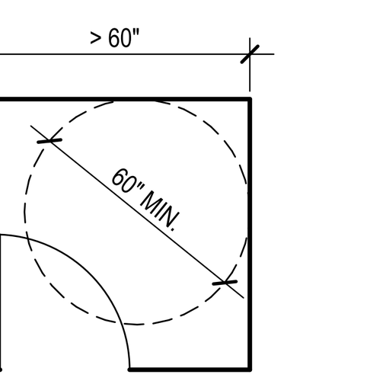
TAS SECTIONS 4.25.4, 4.27.4 - HARDWARE

A. Hardware for accessible storage facilities shall be operable with one hand and shall not require tight grasping, pinching, or tisting of the wrist.

B. The force required to activate the hardware shall be no greater than 5 lbf.



Detail 14.1



Detail 14.2

4.26 - GRAB BARS

TAS SECTION 4.26.2 - SIZE AND SPACING

A. Diameter or width of gripping surface shall be 1-1/4" to 1-1/2", or the shape shall provide an equivalent gripping surface.

1. The space between grab bars and adjacent walls shall be 1-1/2"

TAS SECTION 4.26.3 - STRUCTURAL STRENGTH

A. Grab bars and mounting devices shall meet the following requirements:

1. Bending stress induced by maximum bending moment from application of 250 lbf shall be less than allowable stress for material used.

2. Shear stress induced by application of 250 lbf shall be less than allowable shear stress for material used. If connection between grab bar and mounting bracket is considered to be fully restrained, then direct and torsional shear stresses shall be totaled for the combined shear stress, which shall not exceed the allowable shear stress.

3. Shear force induced in a fastener or mounting device from application of 250 lbf shall be less than allowable lateral load of either the fastener or mounting device or the supporting structure, whichever is the smaller allowable load.

4. Tensile force induced in a fastener by a direct tension force of 250 lbf plus the maximum moment from the application of 250 lbf shall be less than the allowable withdrawal load between the fastener and the supporting structure.

5. Grab bars shall not rotate within their fittings.

TAS SECTION 4.26.4 - ELIMINATING HAZARDS

A. Grab bars and adjacent wall surfaces shall be free of sharp or abrasive surfaces.

B. Edges shall have a radius of 1/8" minimum.

4.27 - CONTROLS AND OPERATING MECHANISMS

TAS SECTION 4.27.2 - CLEAR FLOOR SPACE

A. Clear floor space complying with 4.2.4 that allows a forward or a parallel approach by a person using a wheelchair shall be provided at controls, dispensers, receptacles, & other operable equipment. Controls and operating mechanisms located in alcoves deeper than 24" require additional maneuvering area. All controls & operating mechanisms shall be aligned with centerline of fixture.

TAS SECTION 4.27.3 - HEIGHT (REF. DETAIL 16.3)

A. Front approach - 48" max. to 15" min.
B. Side approach - 54" max. to 9" min., except per below.
C. Electrical & communication system recepticals shall be mounted no less than 15" above the floor.

(Children's heights: frontal: 42" max. AFF, ages 4-11 yr.
45" max. AFF, ages 11-15 yr.
side: 48" max. AFF, ages 4-11 yr.
51" max. AFF, ages 11-15 yr.)

4.28 - ALARMS

TAS SECTION 4.28.1 - GENERAL

A. When required, visual alarms shall be provided in each of the following areas, as a minimum: restrooms and any other general usage areas (e.g., meeting rooms), hallways, lobbies, and any other area for common use.

TAS SECTION 4.28.2 - AUDIBLE ALARMS

A. If provided, audible alarms shall produce a sound that exceeds the prevailing equivalent sound level in the room or space by at least 15 dba or exceeds any maximum sound level with a duration of 60 seconds by 5 dba, whichever is louder.

B. Sound levels for alarm signals shall not exceed 120 dba.

TAS SECTION 4.28.3 - VISUAL ALARMS

A. Visual alarm signal appliances shall be integrated into the building or facility alarm system. If single station audible alarms are provided then single station visual alarm signals shall be provided.

Visual Alarm appliances shall have the following features:

1. The lamp shall be a xenon strobe type or equilavent.

2. The color shall be clear or nominal white (i.e. unfiltered or clear filtered white light).

3. The maximum pulse duration shall be two-tenths of one second with a maximum duty cycle of 40%. (The pulse duration is defined as the time interval between initial and final points of 10% of max signal)

4. The intensity shall be a minimum of 75 candela.

5. The flash rate shall be a minimum of 1 Hz and a maximum of 3 Hz.

6. The appliance shall be placed 80" above the highest floor level within the space or 6" below the ceiling, whichever is lower.

7. In general, no place in any room or space shall be more than 50' from the signal (measured in a horizontal plane).

a. In large rooms and spaces exceeding 100' across, without obstructions 6' above the finished floor, such as auditoriums, devices may be place around the perimeter, spaced a maximum 100' apart, in lieu of suspending appliances from the ceiling.

8. No place in common corridors or hallways shall be more than 50' from the signal.

4.30 - SIGNAGE

TAS SECTIONS 4.1.2(7), 4.1.3(16)(a) - WHERE APPLICABLE

A. Signs which designate permament rooms and spaces shall comply with the requirements listed below for:

1. Raised and Braille Characters, and Pictograms
2. Finish and Contrast
3. Mounting Location and Height

TAS SECTIONS 4.1.2(7), 4.1.3(16)(b) - WHERE APPLICABLE

A. Signs which provide direction to, or information about, functional spaces of the building shall comply with the requirements listed below for:

1. Character Proportion
2. Character Height
3. Finish and Contrast

Exception: Building directories, menus, and all other signs which are temporary are not required to comply.

TAS SECTION 4.1.2(7) - WHERE APPLICABLE

A. Element and spaces of accessible facilities which shall be identified by the International Symbol of Accessibility are:

1. Parking spaces designated as reserved for persons with disabilities.

2. Accessible passenger loading zones.

3. Accessible entrances when not all are accessible (inaccessible entrances shall have directional signage to indicate route to nearest accessible entrance).

4. Accessible toilet and bathing facilities when not all are accessible.

TAS SECTION 4.30.2 - CHARACTER PROPORTION (REF. DETAIL 16.2)

A. Letters and numbers on signs shall have a width-to-height ratio between 3:5 and 1:1, and a stroke-width-to-height ratio between 1:5 and 1:10.

TAS SECTION 4.30.3 - OVERHEAD SIGNS

A. Characters and numbers on overhead signs shall be sized according to the viewing distance from which they are to be read.

1. For signs higher than 80" above the finished floor, character size shall be 3" minimum.
2. The minimum height is measured using an upper case X.
3. Lower case letters are permitted.

TAS SECTION 4.30.4 - RAISED AND BRAILLE CHARCTERS AND PICTOGRAMS

A. Letter and numerals shall be raised 1/32", upper case, sans serif and shall be accompanied by grade 2 Braille.

1. Raised character height: 5/8" minimum, 2" high maximum.

2. Pictograms shall be accompanied by the equivalent verbal description placed directly below the pictogram.

3. The border dimension of the pictogram shall be 6" minimum.

TAS SECTION 4.30.5 - FINISH AND CONTRAST

A. The character and background of the signs shall be eggshell, matte, or other non-glare finish. Charcters and symbols shall contrast with their background (either light characters on a dark background or dark characters on a light background).

TAS SECTION 4.30.6 - MOUNTING LOCATION AND HEIGHT (REF. DETAIL 16.3)

A. Where permanent identification is provided for rooms and spaces, signs shall be installed on the wall adjacent to the latch side of the door.

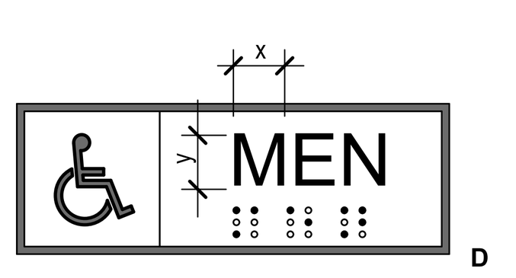
B. Where there is no wall space to the latch side of the door, including at double-leaf doors, signs shall be placed on the nearest adjacent wall.

C. Mounting height shall be 60" above the finished floor to the centerline of the sign.

D. Mounting location for such signage shall be so that a person may approach within 3" of signage without encountering protruding objects or standing within the swing of a door.

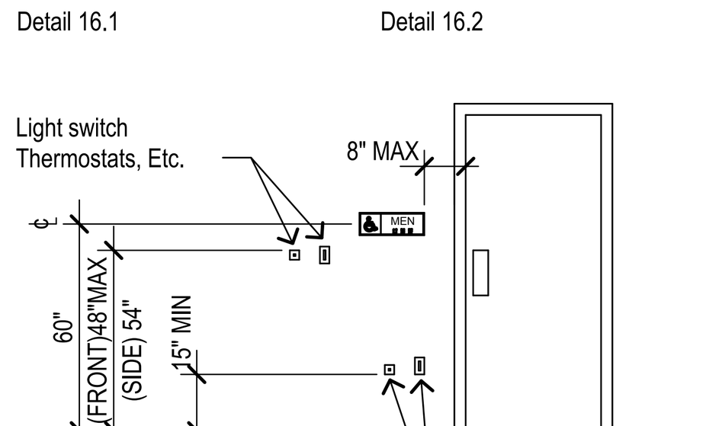
International Symbol of Accessibilty

Detail 16.1



Letter & numbers on signs shall have a width to height ratio of between 3:5 & 1:1 and a stroke - width to height ratio between 1:5 & 1:10. Letters and numbers shall be raised 1/32", upper case, sans serif or simple serif type and shall be accompanied with grade 2 Braille, rasied characters shall be at least 5/8" high, but no higher than 2".

Detail 16.2



Detail 16.3

4.31 - PUBLIC TELEPHONES

TAS SECTION 4.1.3(17)(a) - WHERE APPLICABLE

A. If public pay telephones, public closed circuit telephones, or other public telephones if provided, then they shall comply with this section in the quantities below:

1. If one or more single unit of a type of public telephone is provided on a floor, then at least one of those phones shall comply with this section.

2. If one bank (defined as two or more adjacent public telephones, often installed as a unit) of a type of telephone is provided on a floor, then at least one of the telephones at the bank shall comply with this section.

3. If two or more banks of a type of public telephone are provided on a floor, then at least one telephone per bank shall comply with this section. The accessible unit may be installed as a single unit in proximity (either visible or with signage) to the bank. At least one public telephone per floor shall meet the requirements for a forward reach telephone.

Additional public telephones may be installed at any height.

Unless otherwise specified, accessible telephones may be either forward or side reach telephones.

TAS SECTION 4.1.3(17)(b) - WHERE APPLICABLE

A. All telephones required to be accessible shall be equipped with a volume control.

B. In addition, 25%, but never less than one, of all other public telephones provided shall be equipped with a volume control and shall be dispersed all type of telephones, including closed ciruit telephones, throughout the building or facility.

C. Signage displaying the International Symbol of Access for Hearing Loss shall be provided at each telephone equipped with a volume control.

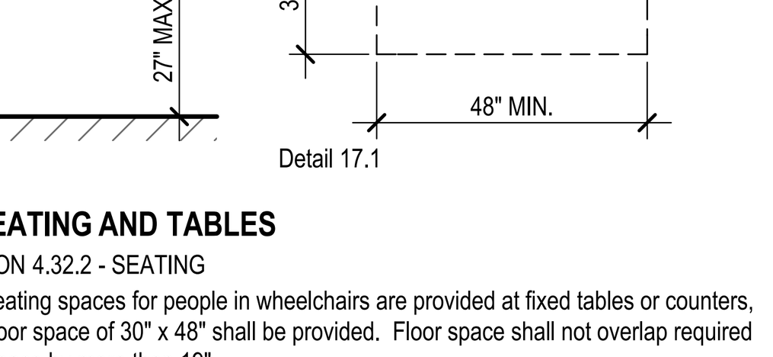
TAS SECTION 51.3 - MOUNTING HEIGHT (REF. DETAIL 17.1)

A. The highest operable part of the telephone shall be 48" maximum above the floor where a forward reach is required, and 54" maximum where a side reach is required.

B. If the forward reach is over an obstruction (with knee space equal to or greater than reach distance) 20"-25" deep the maximum height shall be 44"; if the obstruction is less than 20", maximum height shall be 48".

C. Maximum height shall be 46" for side reach over an obstruction 34" maximum high and 24" maximum deep.

(Children's heights: highest operable part:
frontal: 42" max., ages 4-11 yr.
45" max., ages 11-15 yr.
side: 48" max., ages 4-11 yr.
51" max., ages 11-15 yr.)



Detail 17.1

4.32 - SEATING AND TABLES

TAS SECTION 4.32.2 - SEATING

A. If seating spaces for people in wheelchairs are provided at fixed tables or counters, clear floor space of 30" x 48" shall be provided. Floor space shall not overlap required knee space by more than 19".

TAS SECTION 4.32.3 - KNEE SPACE

B. If seating for people in wheelchairs is provided at fixed tables or counters, knee space at least 27" high, 30" wide and 19" deep shall be provided.

(Children's knee space: 26" min., ages 4-11 yr.
27" min., ages 11-15 yr.)

TAS SECTION 4.32.4 - HEIGHT OF TABLES OR COUNTER

C. The tops of accessible tables and counters shall be 28" minimum, and 34" maximum, above the finished floor.

(Children's heights: 28"-30", ages 4-11 yr.
28"-32", ages 11-15 yr.)

4.34 - AUTOMATIC TELLER MACHINES

TAS SECTIONS 4.34.2 - CLEAR FLOOR SPACE

A. Floor space shall comply with 4.2.4 to allow a forward, parallel approach or both.

TAS SECTIONS 4.34.3 - REACH RANGES

A. Forward approach only: controls within forward approach specified in 4.2.5.

B. Parallel approach: controls within unobstructed reach range from clear floor space at protrusion of teller machine surround per table as follows:

Reach Dp.	Max. Ht.	Reach Dp.	Max. Ht.	Reach Dp.	Max. Ht.
(inches)	(inches)	(inches)	(inches)	(inches)	(inches)
10 or less	54	15	51	20	48 1/2
11	53 1/2	16	50 1/2	21	47 1/2
12	53	17	50	22	47
13	52 1/2	18	49 1/2	23	46 1/2
14	51 1/2	19	49	24	46

Note : above does not apply to drive up machines.

4.35 - DRESSING AND FITTING ROOMS

TAS SECTIONS 4.35.4 - BENCH

A. Every accessible dressing room shall have a 24"x 48" bench fixed to the wall along the longer dimension. The bench shall be mounted 17" to 19" above the finish floor.

(Children's heights: 14"-15", ages 4-11 yr.
15"-17", ages 11-15 yr.)

TAS SECTIONS 4.35.5 - MIRROR

A. A full-length mirror, measuring at least 18" wide by 54" high, shall be mounted in a position affording a view to a person on the bench as well as to a person in a standing position.

Kirksey
ARCHITECTURE

6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

ARCHITECT: MICHAEL J. PARKER
DATE: 24 JUNE 2011

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

NO.	DATE	ISSUE
CD	24 JUN 2011	PRICING

PROJECT NAME

MHHS SW POB
DR VANN

PROJECT ADDRESS

7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE

TAS Information

SHEET NUMBER

IA0.30

LEGEND

New door, partition and/or element.

New low partition. RE: Interior Elevations for heights

Existing Partition (Core Area)

Partition type

GENERAL NOTES

A. Refer to Project Information Sheet for legend of Reference Symbols and other graphic indicators/symbols.

B. All construction to comply with ADA, TAS and city life safest regulations. Refer to IA0.30 for TAS standards.

C. Refer to IA6.00 for details and building standards.

D. All work shall be erected in accordance with the construction documents and maintain standard installation / construction practices of the trade and manufacturer's recommendations for that particular item.

E. Dimensions are to face of finish material, unless noted otherwise. Dimensions to exterior walls are to finished face of sill wall. Clear dimensions shall not vary and are measured at the floor line.

F. All new partitions are to be perpendicular or parallel with core or exterior window wall elements, unless noted otherwise. Center partitions on columns or mullions, unless noted otherwise.

G. New construction that meets existing conditions (at core) in the same plan shall be flush without a visible joint, unless noted otherwise.

H. General Contractor to apply one layer of 5/8" thick, type "X" gypsum board to all core walls, perimeter walls and columns to match typical partition. New partitions to align with this drywall surface, where applicable.

I. No new materials containing asbestos shall be used or installed. Provide letter of certification, along with material data sheets upon completion of project.

J. If structural columns are dimensioned, furr-out existing column as necessary to achieve dimensions.

K. All new walls are to be "Type F2", unless noted otherwise; refer to partition details.

PLAN NOTES

1. Install fire cabinet/ extinguisher as required. JL industries model #1015

BUILDING SPECIFIC NOTES

AA. Not Used.

Kirksey ARCHITECTURE

6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

ARCHITECT: MICHAEL J. PARKER
DATE: 24 JUNE 2011
NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

NO.	DATE	ISSUE
CD	24 JUN 2011	PRICING

PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE
Interior Floor Plan: Dim

SHEET NUMBER
IA2.20

LEGEND

New door / partition

Hardware type

Door type

Existing door / partition to remain.

A5/IA10.10 Elevation reference

GENERAL NOTES

A. Refer to Project Information Sheet for legend of Reference Symbols and other graphic indicators/symbols.

B. All work shall be erected in accordance with the construction documents and maintain standard installation / construction practices of the trade and manufacturer's recommendations for that particular item.

C. All construction to comply with ADA, TAS and city life safety regulations. Refer to IA0.30 for TAS standards.

D. Refer to IA6.00 for details and building standards.

E. All woodwork, blocking, and mounting boards shall be fire retardant treated for use in non-combustible construction.

F. Where the design requires level floor conditions (e.g. under filing cabinets, millwork) General Contractor to level floors as required. Notify Architect if there is an abrupt change in elevation greater than 1/4".

G. General Contractor to verify all core drills in field to avoid any existing structural elements (beams, pipes, mechanical units, and the like). Notify architect of any discrepancies prior to proceeding.

PLAN NOTES

1. Install adjustable shelves per D5//IA10.10 in this room.
2. Install a 4' x 8' fire-treated plywood mounting board for Tenant's telephone/network equipment. Verify board size with Tenant. Paint to match adjacent partition. Provide blocking within partition as required.
3. Patch corridor finishes as required to match adjacent existing
4. Install corner guard (Koroseal, G100-Series,2" vinyl over continuous aluminum retainer, color: TBD) from top of flooring base to ceiling.
5. ~~Install aluminum end cap to match door frames from floor to ceiling at this location.~~

BUILDING SPECIFIC NOTES

AA. Mini-Blinds are included in building shell contract.

Kirksey ARCHITECTURE

6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

ARCHITECT: MICHAEL J. PARKER
DATE: 24 JUNE 2011
NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

NO.	DATE	ISSUE
CD	24 JUN 2011	PRICING

PROJECT NAME
MHHS SW POB
DR VANN

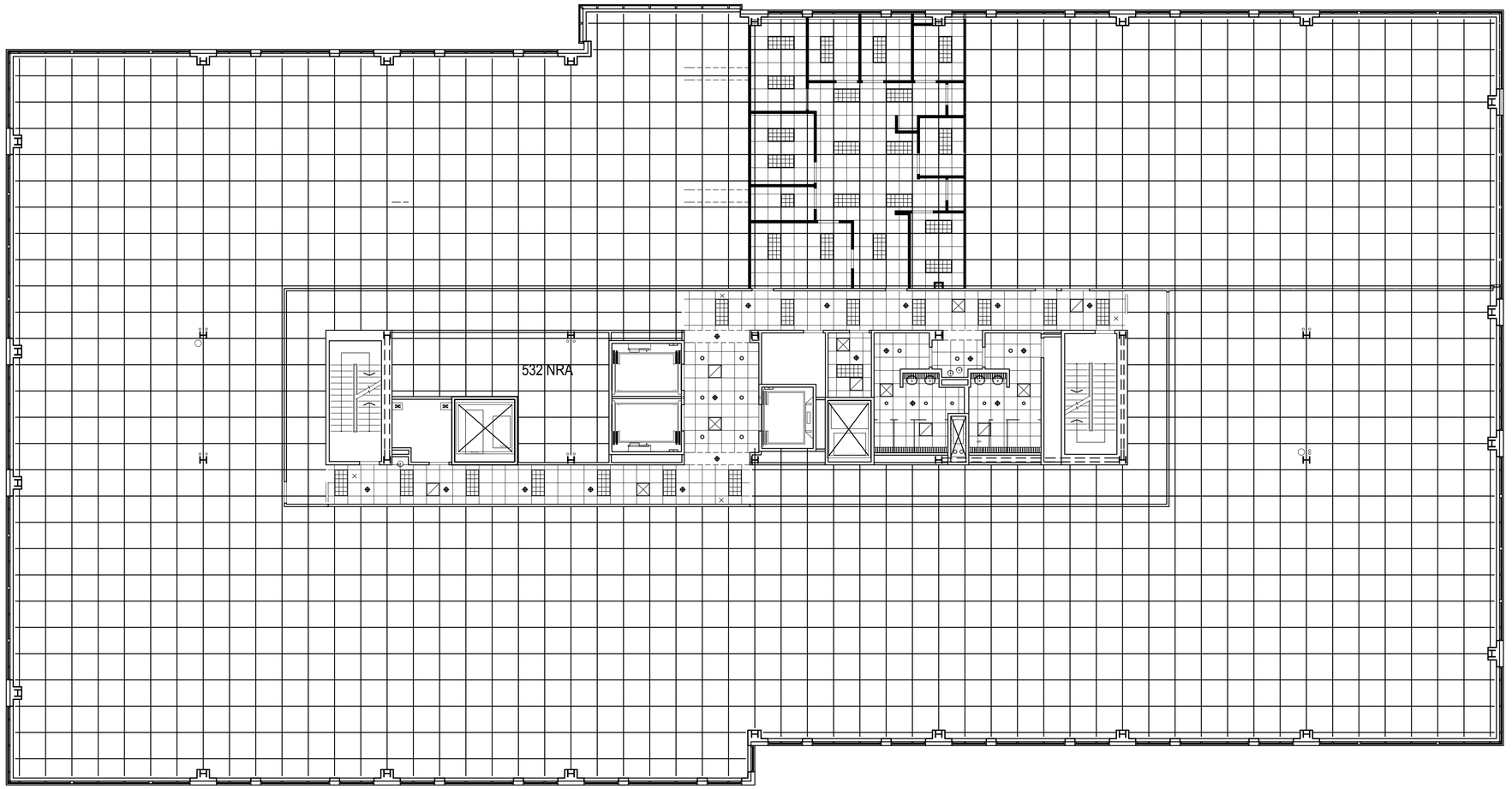
PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE
Interior Floor Plan: Notes

SHEET NUMBER
IA2.30



LEGEND

New 2x4 florescent fixture

New 2x2 florescent fixture

New recessed fixture

Main Tee Location

Existing 4' x 4' Ceiling Grid

New 2' x 2' building standard ceiling grid to be installed with new building standard ceiling tiles.

Existing lighting in building core & lobby.

BUILDING SPECIFIC NOTES

AA. 4'x4' grid has been installed per shell package.

BB. (1) VAV box installed per 2,500 SF per shell package.

CC. Main trunk installed per shell package (except on 1st & 2nd floors).

DD. (1) sprinkler head per 225 SF installed per shell package.

EE. Re-circulating water loop installed per shell package.

Dimensions from core, corridor side:

North: 16'-0"±, South: 15'-0"±, East: 32'-0"±, West: 23'-0"±

Refer to MEP drawings.

GENERAL NOTES

A. Refer to Project Information Sheet for legend of Reference Symbols and other graphic indicators/symbols.

B. All new construction to adhere to ADA, TAS and city life safety regulations.

C. Refer to IA6.00 for details and building standards.

D. Reflected ceiling plan is for lighting location and architectural notes only. Refer to Engineer's electrical lighting plan for switching, circuiting and specifications.

E. Refer to Engineering plans for fire alarms, ADA visual strobes, smoke detectors and exit sign locations. Complete life safety systems installation and Texas Accessibility Standards (TAS) requirements to be coordinated by General Contractor. Contact Architect for approval of locations of devices installed in gypsum drywall ceilings and/or "premium" or "upgraded" spaces.

F. Refer to mechanical plan for supply registers and return air grille locations, unless noted otherwise.

G. Any discrepancies between the architectural reflected ceiling plan, Engineer's electrical lighting plan and mechanical plan to be brought to Architect's attention.

H. New structural elements or equipment (i.e. HVAC units, ductwork, plumbing, electrical) shall be located so as not to interfere with any other portion of new construction as shown. If a conflict occurs, notify architect immediately.

I. Do not cut main tees. Notify architect if a conflict exists with main tees and light fixtures.

J. All fluorescent lamps shall be a consistent color and shall match building standard, unless specified otherwise.

K. Verify location (by engineer) of all switch plates, thermostats and miscellaneous devices with the architect/building management prior to proceeding with installation.

L. All rooms with 250 SF or less shall have an occupancy sensor or dual switching. Provide pricing for each option.

M. All spaces with a 250 SF or greater shall be switched on a master switch in addition to the room's switch.

N. All private offices and conference rooms shall be individually switched, unless noted otherwise. Refer to MEP for switching.

O. New light switches shall be ganged if more than one is noted.

P. General contractor shall provide submittals and shop drawings to architect for written approval on all equipment, fixtures, lighting devices and specialty items provided by the General Contractor prior to ordering.

Q. Typical ceiling height to be 9'-0" throughout, unless noted otherwise. Contractor to verify that adequate clearance is maintained for scheduled lighting, sprinkler system, ductwork, required bracing and/or other items. Notify Architect of conflicts.

R. Provide and install remaining 2x2 grid to match building standard.

S. Center all down lights and wall washers in ceiling tile, unless otherwise noted or dimensioned on plan.

T. Strobes and light switches to be installed aligned vertically. Re: MEP. If situation does not allow, notify architect immediately. Strobe and light switches shall be installed 6" from door frame, refer to MEP.

PLAN NOTES

1. Not used

Kirksey ARCHITECTURE

6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

ARCHITECT: MICHAEL J. PARKER
DATE: 24 JUNE 2011

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

NO.	DATE	ISSUE
CD	24 JUN 2011	PRICING

PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE
Reflected Ceiling Plan

SHEET NUMBER
IA2.40

2005226_019.PLN | 6/24/2011 | 2:55 PM

LEGEND

- New Duplex receptacle
- New Quadraplex receptacle
- New Telephone/ data receptacle

EQUIPMENT LEGEND

1	Copier, dedicated
2	Fax machine
3	Laser printer, dedicated
4	File server, dedicated
5	Refrigerator without ice maker, dedicated
6	Coffee maker without water line
7	Microwave
8	Phone equipment, dedicated
9	Personal computer
10	X-ray machine, dedicated
11	wall mounted TV w/ cable feed, dedicated

GENERAL NOTES

A. Refer to Project Information Sheet for legend of Reference Symbols and other graphic indicators/symbols.

B. All new construction to adhere to ADA, TAS and city life safety regulations. Contractor shall comply with all applicable federal, state and local codes.

C. Refer to IA6.00 for details and building standards.

D. This plan is for location of outlets, furnishings, equipment and related architectural notes. Refer to Engineers' electrical plan for circuiting. Notify Architect if any discrepancies exist between architectural plans, engineering plans and existing conditions.

E. General Contractor to provide empty outlet box and pull string to ceiling plenum above at all communications, thermostat, security and misc. control outlets as shown on this plan, engineered drawings, mechanical drawings and other plans & drawings as provided by other vendors and consultants. Where these locations occur in insulated partitions, Contractor to provide conduit and pull string to ceiling plenum. Cabling provided by others.

F. Contractor shall comply with all applicable federal, state and local codes.

G. All outlets shall be mounted at 18" A.F.F. to centerline, unless noted otherwise.

H. New outlets located behind millwork shall be located at 44" A.F.F., unless otherwise noted. If any discrepancies exist, notify Architect immediately. All standard height outlets at millwork shall coordinate with knee spaces.

I. All electrical, communications and miscellaneous outlets shall be mounted plumb, secure and tight to the wall and at the same height, unless noted otherwise.

J. Outlets dimensioned are to centerline of fixture or group of fixtures. Architectural dimensions take precedence over Engineer's drawing for all fixture locations.

K. Electrical outlets and telephone/data receptacles shall not be placed back to back. Offset at least one stud and seal for sound as required.

L. All electrical, communications and other outlet cover plates shall be consistent in color and match building standard.

M. General Contractor to verify all core drills in field to avoid any existing structural elements (beams, pipes, mechanical units and the like). Notify Architect of any discrepancies prior to proceeding.

N. Electrical subcontractor shall provide a rated assembly to match adjacent conditions at all new wall and floor penetrations as required.

O. All offices to have a personal computer, U.N.O. PC outlets to be designated with gray receptacles.

P. Coordinate with tenant which pieces of equipment will be provided and installed by tenant and/ or contractor.

PLAN NOTES

1. Install a 4' x 8' fire-treated plywood mounting board for Tenant's telephone/network equipment. Verify board size with Tenant. Paint to match adjacent partition. Provide blocking within partition as required.
2. Install grommets at counters for power below, as indicated.

Kirksey ARCHITECTURE
6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

ARCHITECT: MICHAEL J. PARKER
DATE: 24 JUNE 2011
NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

NO.	DATE	ISSUE
CD	24 JUN 2011	PRICING

PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE
Power Plan

SHEET NUMBER
IA2.50

FINISH LEGEND

FLOORING

CPT-1: Patcraft: Get Moving Z6401-0078 Gallop

VCT-1: 12"x12"x1/8" Armstrong, Standard Excelon: 51809 Desert Beige

B-1: Roppe- 4" Wall Base, 110 Brown. Straight @ Carpet, Cove @ VCT

WALLS

PT-1: ICI, Eggshell Finish, Alencon Lace 20YY 60/104 Order #A1794

PT-2: ICI. Eggshell Finish, Classic Ivory 21YY 57/178 Order #A1803

PLASTIC LAMINATES

PL-1: (countertop & its edges): Wilsonart Laminates, D50-60 Khaki Brown

PL-2: (base & upper cabinets): Formica 7284-58 Figured Annigre matte finish

PL-3: (Tenant Office/ Entry Doors) Formica 7284-58 Figured Annigre matte finish

SOLID SURFACE (TRANSACTION COUNTERS)

SSF-1: Avonite Surfaces, Foundations, Fargo F1-9138

SSF-1: (Alternate): Avonite , Studio Collection, Tusk K3-8340 Gloss

GENERAL NOTES

A. Floor areas to be prepared for finish materials in accordance with the manufacturer's requirements. Responsibilities include flash patching to level and smooth floor to 1" in 20'-0", non-cumulative. Concrete floors shall be free of irregularities in the surface and must exhibit neutrality relative to acidity and alkalinity. Provide concrete sealent as necessary to meet manufacturer's requirements.

B. All surfaces which are to receive finishes are to be clean, true and free from irregularities.

C. Provide three (3) submittals of each finish to Architect/ Building Management for approval prior to ordering.

D. No substitutions of grade, quality, or manufacturer shall be allowed without written approval from the Architect or Management.

E. Carpet shall lay in same direction unless shown otherwise. Carpet to receive a minimum of seams with no cross-joints. Avoid seaming near doors and corners. Contractor shall provide two copies of seaming submittals to Architect for approval prior to placing order. Carpet shall be trimmed evenly and neatly for a tight fit at walls, projections, trim strips or reveals. Final installation shall be free from ripples and punctures and per manufacturer's and industry standards. Architect shall make final determination.

F. Transition between floor finishes is to occur at the centerline of door or cased opening, unless otherwise noted. Float floor as required so top of finishes are flush. Provide and Install rubber trim strips at transition between carpet and resilient tile. Color to match base.

G. All VCT to be cleaned and waxed prior to final punch list.

H. Refer to manufacturer's instructions for temperature of surfaces to be painted and surrounding air.

I. All areas to be cleaned and vacuumed prior to punch list.

J. All floors to be CPT-1, unless noted otherwise.

K. All base to be B-1, unless noted otherwise.

L. All floors in Toilets, Exam Rooms and Break Room to be VCT-1.

M. All walls to be P-1 (except toilet wet walls - VWC-1). Two coats rolled Sherman Williams eggshell latex acrylic. All walls to receive primer.

N. Refer to IA6.00 for details and building standards.

PLAN NOTES

1 Not Used.

Kirksey ARCHITECTURE

6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

ARCHITECT: MICHAEL J. PARKER
DATE: 24 JUNE 2011
NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

NO.	DATE	ISSUE
CD	24 JUN 2011	PRICING

PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

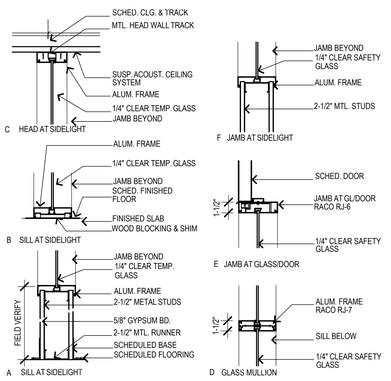
PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

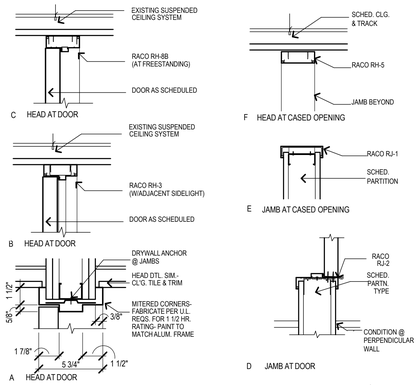
SHEET TITLE
Finish Plan

SHEET NUMBER
IA2.60

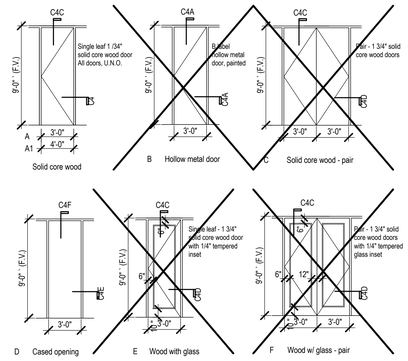
2005226_019.PLN | 6/24/2011 | 2:55 PM



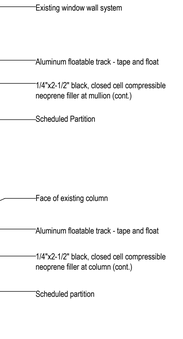
Glazing Detail
Scale: 1 1/2"= 1'-0" **D2**



Door Head And Jamb Detail
Scale: 1 1/2"= 1'-0" **D3**



Door Types
Scale: 1 1/2"= 1'-0" **D4**



Parition @ Column/ Mullion
Scale: 1 1/2"= 1'-0" **D5**

TYPE #1 - SINGLE LOCKSET
TYPE #1A - SINGLE LOCKSET W/ CLOSER

1 1/2 PR.	BUTTS
1 EA.	LOCKSET - ADA LEVER HARDWARE
1 EA	FLOOR STOP

TYPE #2 - SINGLE LATCHSET
TYPE #2A - SINGLE LATCHSET W/ CLOSER

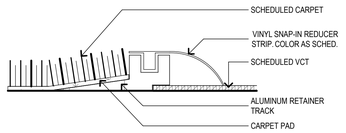
1 1/2 PR.	BUTTS
1 EA.	LATCHSET - ADA LEVER HARDWARE
1 EA	FLOOR STOP

TYPE #3 - PRIVACY SET
TYPE #3A - PRIVACY SET W/ CLOSER

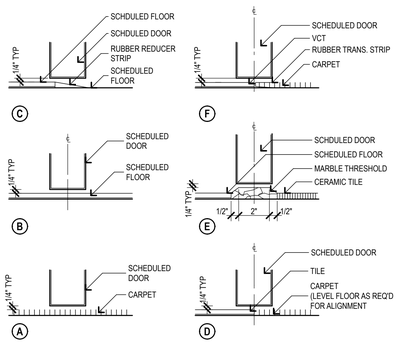
1 1/2 PR.	BUTTS
1 EA.	PRIVACY LEVER LOCKSET
2 EA	HINGE STOP
4 EA	SILENCERS

REFER TO PLAN FOR HARDWARE REQUIREMENTS, HARDWARE LISTED IS TO SHOW INTENDED FUNCTION. ALL HARDWARE MATCH BUILDING STANDARD.

Door Hardware Sets
Scale: 1 1/2"= 1'-0" **C2**



Floor Transition @ Carpet To V.C.T.
Scale: 1 1/2"= 1'-0" **B2**



Door Threshold Details
Scale: 3"= 1'-0" **A1**

PARTITION:
9'-0" partition with floatable head track, 2 ½" 25-gauge metal studs at 24" O.C. (16" at wall-hung equipment), 2" acoustical insulation, with one layer of 5/8" thick drywall each side, taped and floated. Sound attenuation compressible foam at perimeter mullions/columns and at all walls. Continuous 2" sound attenuation insulation extended 4'-0" on both sides of partition above ceiling.

DOOR:
3' x 9' Solid core, P.Lam. clad door. laminate: Formica 7284-58 Figured Annigre matte Finish.

Manufacturer: Eggers, Weyerhaeuser or approved equal.

DOOR FRAME:
Raco or approved equal, Clear Anodized Aluminum Frame

DOOR HARDWARE:
LOCKSET: Sargent LNB 8255 lockset, brushed chrome.
LATCHSET: Sargent LNB 8215 lockset, brushed chrome.
HINGES: Hagar BB1279, brushed chrome.
FLOORSTOP: Trimco 1211
SILENCER: Trimco 1229A
CLOSER: Norton 8501

FINISHES:
PAINT: Two coats rolled Sherman Williams flat latex acrylic in scheme-specific, standard colors, all walls to receive primer.
LAMINATE: Wilsonart in scheme-specific, standard colors, all walls to receive primer.
VCT (Vinyl composition tile): 12"x12"x1/8" Mannington, Essentials or Designer Essentials in scheme-specific, standard colors.
CARPET: J&J Commercial, Satisfaction (4126), solution dyed and with ActionBac in scheme-specific, standard colors.
UPGRADE CARPET: J&J Commercial, In the Loop (4420), solution dyed and with ActionBac in scheme-specific, standard colors.
UPGRADE SOLID CARPET: J&J Commercial, Colours.Com (3820) or Assurance II in scheme-specific, standard colors.
BASE: Allstate, 4" coved rubber base, 43
SOLID SURFACE: Avonite

CEILING GRID / TILE:
TILE: Match Existing
GRID: Match Existing

LIGHTING:
2'x4' lay in, three lamp system, 3" deep, 18 cell parabolic louver: #2PM3NGB 332 18LD 277GEB 10 with Qsram Sylvania Quicktronic Prostart T8 #49945 ballast.
Alternate Option 1: Lightolier: #DPS2G18LS332277HI
Alternate Option 2: Paralux: #2EP3GX-332S361-277V-TEB81-U

EXIT SIGN:
Lithonia, universal mount, white housing with red letters, Precise LED, LRP W 1 RMR 120/277 FL [1]
Alternate Option 1: Lightolier: #EX1RXXXMN
Alternate Option 2: Sure Lites #ELX7170WHRM

ELECTRICAL OUTLETS:
Leviton, 5362 straight blade receptacles, 20A/125V, white

ELECTRICAL SWITCHES:
Leviton, 20 AMP, 120/277v AC Quiet Switches, 1221-2, white

HVAC GRILLES:
SLOT: Titus Nova N-1-D and N-4-D Series, Price Co. Model TBDV675, or Metal*Aire Series CAAD91D.
SUPPLY & RETURN: Titus Omni or Nailor UNI

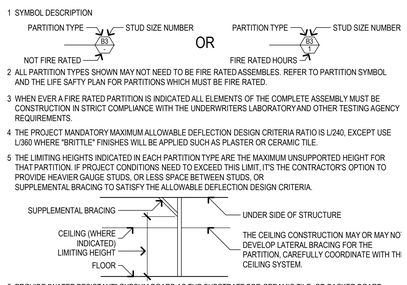
SPRINKLER HEADS:
Semi-recessed head w/ white covers. Preferred sub: Northstar

LIFE SAFETY:
Siemens is the required provider for Fire Alarm/Life Safety Systems.

PLUMBING:
TOILET :American Standard "Cadet"2168.100 floor roughed, elongated, vitreous china bowl, 1.5 gpf, close coupled flush tank with side lever, pressure assisted, siphon jet flush action. Lever shall be positioned on wide side of stall.
TOILET SEAT: White, solid plastic, elongated, open front, with heavy duty hinges but less cover. Set shall be Church #9500-C or Olsonite #95.
SINK (CABINET-MOUNTED): Elkay LRAD-1720, single compartment, ADA compliant, stainless steel sink, 17" x 20" x 6-1/2" deep, 18 gauge type 302 stainless steel, self-rimming.
SINK (WALL-HUNG): American Standard "Lucerne" #0356.015, ADA compliant, vitreous china, front overflow, concealed arm wall carrier.
FAUCET: Chicago Faucets, 786-GN2FC, ASA compliant, gooseneck spout with wrist-blade handles

SECURITY SYSTEM:
Johnson Controls is the required provider for security systems.

Building Standards
Scale: 1 1/2"= 1'-0" **A3**



Transaction Counter
Scale: 3"= 1'-0" **C3**

1 SYMBOL DESCRIPTION

2 ALL PARTITION TYPES SHOWN MAY NOT NEED TO BE FIRE RATED ASSEMBLES. REFER TO PARTITION SYMBOL AND THE LIFE SAFTY PLAN FOR PARTITIONS WHICH MUST BE FIRE RATED.

3 WHEN EVER A FIRE RATED PARTITION IS INDICATED ALL ELEMENTS OF THE COMPLETE ASSEMBLY MUST BE CONSTRUCTION IN STRICT COMPLIANCE WITH THE UNDERWRITERS LABORATORY AND OTHER TESTING AGENCY REQUIREMENTS.

4 THE PROJECT MANDATORY MAXIMUM ALLOWABLE DEFLECTION DESIGN CRITERIA RATIO IS L/240, EXCEPT USE L/360 WHERE "BRITTLE" FINISHES WILL BE APPLIED SUCH AS PLASTER OR CERAMIC TILE.

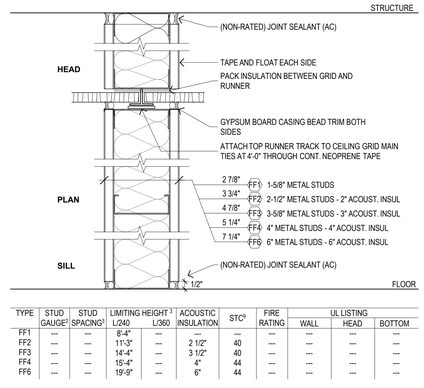
5 THE LIMITING HEIGHTS INDICATED IN EACH PARTITION TYPE ARE THE MAXIMUM UNSUPPORTED HEIGHT FOR THAT PARTITION. IF PROJECT CONDITIONS NEED TO EXCEED THIS LIMIT, IT'S THE CONTRACTOR'S OPTION TO PROVIDE HEAVIER GAUGE STUDS, OR LESS SPACE BETWEEN STUDS, OR SUPPLEMENTAL BRACING TO SATISFY THE ALLOWABLE DEFLECTION DESIGN CRITERIA.

6 PROVIDE "WATER RESISTANT" GYPSUM BOARD AS THE SUBSTRATE FOR CERAMIC TILE, OR BACKER BOARD SUBSTRATE FOR CERAMIC TILE IN WET CONDITIONS. IF THE BACKER BOARD IS BEING SUBSTITUTED FOR ONE OF THE GYPSUM BOARD LAYERS IT MUST HAVE APPROVED FIRE RATING CERTIFICATION.

7 THE STC RATINGS LISTED ARE TO SERVE AS A GENERAL INDICATOR FOR THE ACOUSTICAL PERFORMANCE OF THAT PARTITION, HOWEVER, SPECIFIC PROJECT CONDITIONS MAY NOT NECESSARILY YIELD THE LABORATORY TESTED RESULTS.

8 ALL PARTITION TYPES INDICATED ON THIS DRAWING MAY NOT NECESSARILY BE USED ON THIS SPECIFIC PHASE OF THE PROJECT.

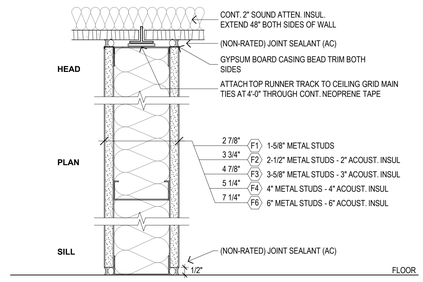
Building Standards
Scale: 3"= 1'-0" **A3**



TYPE	STUD GAUGE[2]	STUD SPACING[3]	LIMITING HEIGHT [1] L/240	L/360	ACOUSTIC INSULATION	STC[5]	FIRE RATING	UL LISTING WALL	HEAD	BOTTOM
FF1	---	---	8'-4"	---	---	---	---	---	---	---
FF2	---	---	11'-3"	---	2 1/2"	40	---	---	---	---
FF3	---	---	14'-4"	---	3 1/2"	40	---	---	---	---
FF4	---	---	15'-4"	---	4"	44	---	---	---	---
FF6	---	---	19'-9"	---	6"	44	---	---	---	---

SCALE: 3" = 1'-0"

PARTITION TYPE **FF**



TYPE	STUD GAUGE[2]	STUD SPACING[3]	LIMITING HEIGHT [1] L/240	L/360	ACOUSTIC INSULATION	STC[5]	FIRE RATING	UL LISTING WALL	HEAD	BOTTOM
F1	---	---	8'-4"	---	---	---	---	---	---	---
F2	---	---	11'-3"	---	2 1/2"	40	---	---	---	---
F3	---	---	14'-4"	---	3 1/2"	40	---	---	---	---
F4	---	---	15'-4"	---	4"	44	---	---	---	---
F6	---	---	19'-9"	---	6"	44	---	---	---	---

SCALE: 3" = 1'-0"

PARTITION TYPE **F**

Kirksey ARCHITECTURE
6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

ARCHITECT: MICHAEL J. PARKER
DATE: 24 JUNE 2011
NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

NO.	DATE	ISSUE
CD	24 JUN 2011	PRICING

PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

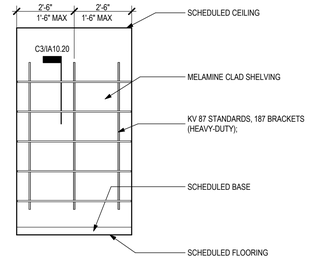
KEY PLAN

SHEET TITLE
Typical Details

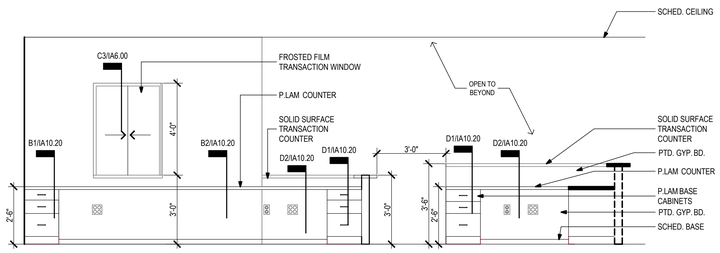
SHEET NUMBER
IA6.00

2005226_019.PLN | 6/24/2011 | 2:55 PM

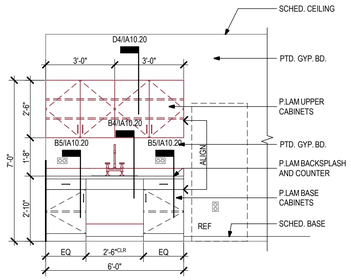
1 2 3 4 5



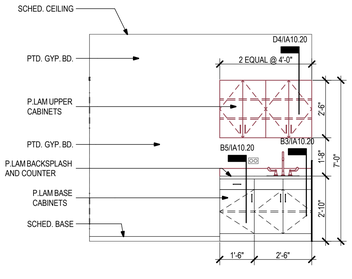
Adjustable Shelving D5
Scale: 3/8"= 1'-0"



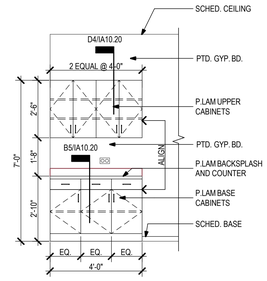
Admin/ Nurse Station A2
Scale: 3/8" = 1'-0"



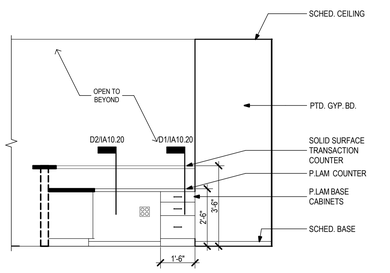
Break Room A3
Scale: 3/8" = 1'-0"



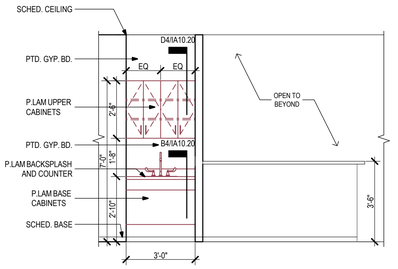
Casting Room A4
Scale: 3/8" = 1'-0"



Typical Exam Room A5
Scale: 3/8" = 1'-0"



Nurse Station B4
Scale: 3/8" = 1'-0"



Nurse Station B5
Scale: 3/8" = 1'-0"

Kirksey
ARCHITECTURE

6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

ARCHITECT: MICHAEL J. PARKER
DATE: 24 JUNE 2011
NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

NO.	DATE	ISSUE
CD	24 JUN 2011	PRICING

PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

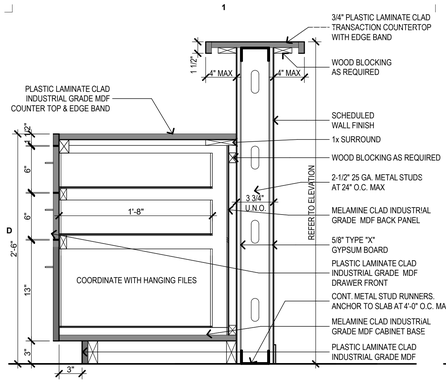
PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE
Millwork Elevations

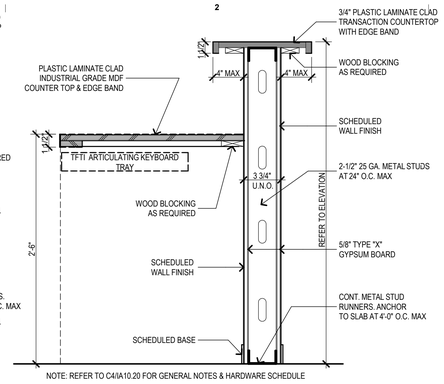
SHEET NUMBER
IA10.10

2005226_019.PLN | 6/24/2011 | 2:55 PM



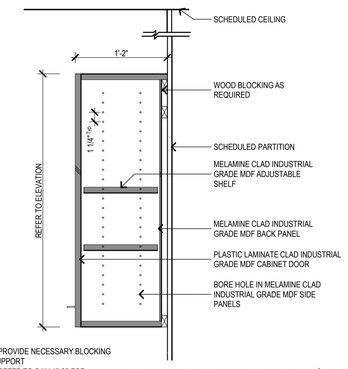
NOTE: REFER TO C4/IA10.20 FOR GENERAL NOTES & HARDWARE SCHEDULE

Base Cabinets @ Reception Scale: 1 1/2"= 1'-0" **D1**



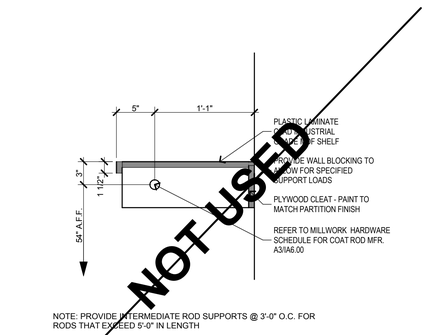
NOTE: REFER TO C4/IA10.20 FOR GENERAL NOTES & HARDWARE SCHEDULE

Worksurface @ Reception Scale: 1 1/2"= 1'-0" **D2**



NOTE: PROVIDE NECESSARY BLOCKING FOR SUPPORT
NOTE: REFER TO C4/IA10.20 FOR GENERAL NOTES & HARDWARE SCHEDULE

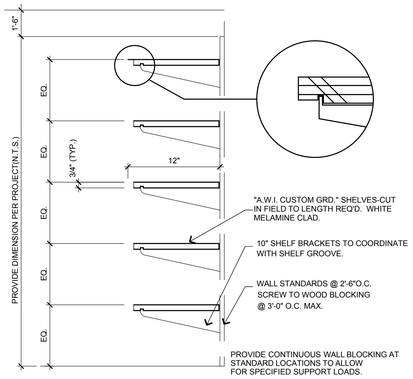
Upper Cabinet (Typical) Scale: 1 1/2"= 1'-0" **D4**



NOTE: PROVIDE INTERMEDIATE ROD SUPPORTS @ 3'-0" O.C. FOR RODS THAT EXCEED 5'-0" IN LENGTH

NOTE: REFER TO C4/IA10.20 FOR GENERAL NOTES & HARDWARE SCHEDULE

Coat Rod And Shelf Scale: 1 1/2"= 1'-0" **C2**



Wall Mounted Shelving Scale: 1 1/2"= 1'-0" **C3**

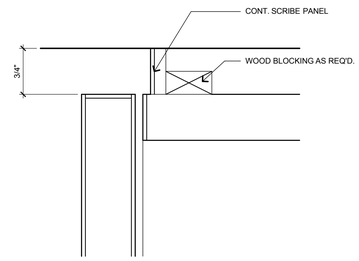
GENERAL NOTES

1. ALL EXTERIOR SURFACES TO BE CLAD WITH PLASTIC LAMINATE.
2. ALL SEMI-EXPOSED SURFACES TO BE WHITE MELAMINE.
3. SUBSTRATE MATERIAL TO BE INDUSTRIAL GRADE MDF, EXCEPT IN WET AREAS.
4. ALL BASE CABINETS AT WET AREAS SHALL BE MARINE GRADE PLYWOOD.
5. PERFORM ALL WORK IN ACCORDANCE WITH A.W.I. CUSTOM STANDARDS.

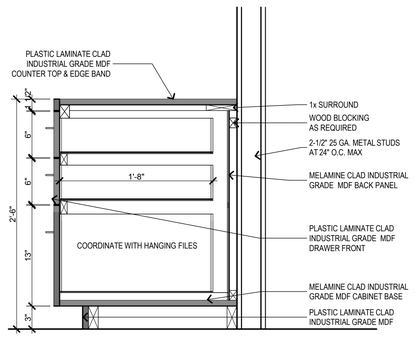
MILLWORK HARDWARE SCHEDULE

part	manufacturer	model no.	finish	description
PULLS	STANLEY	SH4483.5-3	CHROME	3 1/2" WIRE PULL
HINGES	BLUM	B75M558	NICKEL	CLIP 125◦ SERIES, FULL OVERLAY
	BLUM	B75M568	NICKEL	CLIP 125◦ SERIES, HALF OVERLAY
	BLUM	B74M565	NICKEL	CLIP 125◦ SERIES, INSET W/ 9MM MOUNTING PLATE
CATCH	IVES	IV2BR	CHROME	ELBOW CATCH
LOCK	HAFELE	235.08.054 MODEL SERIES	NICKEL	MILLWORK KEYED DOOR LOCK
LATCH	FERUM	FE944BN	CHROME	ROLLER TOUCH LATCH
SHELF SUPPORT	HAFELE	282.04.711	NICKEL	5MM STEEL SHELF SUPPORT PIN
DRAWER SLIDE	ACCURIDE	CB-3832-20"	BLACK ZINC	FULL EXTENSION DRAWER SLIDE, 100 LBS. CAPACITY
COAT ROD	HAFELE	#801.13.202	CHROME	OVAL WARDROBE ROD, WELDED
	HAFELE	#801.33.213	CHROME	OVAL ROD SUPPORT
GROMMET	DOUG MOCKETT	EDP SERIES	BLACK	2 1/2"I HOLE, SUBMIT SAMPLE
SHELF STANDARD	KV	85	WHITE	DOUBLE SLOTTED

Millwork Notes And Hardware Scale: 1 1/2"= 1'-0" **C4**

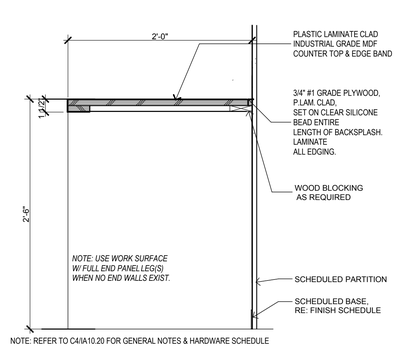


Scribe Detail @ Millwork Scale: 1 1/2"= 1'-0" **C5**



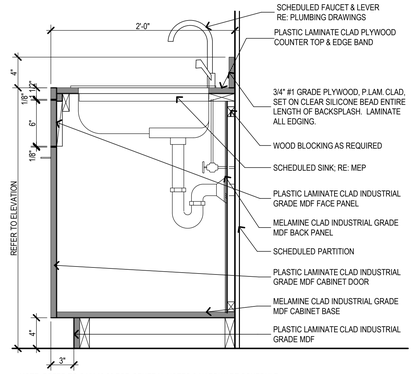
NOTE: REFER TO C4/IA10.20 FOR GENERAL NOTES & HARDWARE SCHEDULE

Three Drawer Base Scale: 1 1/2"= 1'-0" **B1**



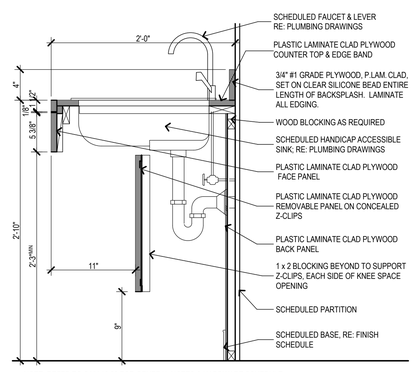
NOTE: REFER TO C4/IA10.20 FOR GENERAL NOTES & HARDWARE SCHEDULE

Worksurface Scale: 1 1/2"= 1'-0" **B2**



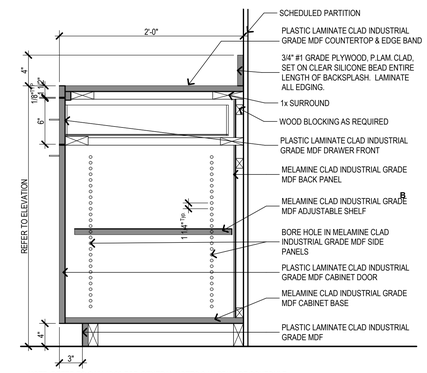
NOTE: REFER TO C4/IA10.20 FOR GENERAL NOTES & HARDWARE SCHEDULE

Sink Cabinet Scale: 1 1/2"= 1'-0" **B3**



NOTE: REFER TO C4/IA10.20 FOR GENERAL NOTES & HARDWARE SCHEDULE

Accessible Sink Cabinet Scale: 1 1/2"= 1'-0" **B4**



NOTE: REFER TO C4/IA10.20 FOR GENERAL NOTES & HARDWARE SCHEDULE

Single Drawer Base Cabinets Scale: 1 1/2"= 1'-0" **B5**

Kirksey ARCHITECTURE

6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

ARCHITECT: MICHAEL J. PARKER
DATE: 24 JUNE 2011
NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

NO.	DATE	ISSUE
CD	24 JUN 2011	PRICING

PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE
Millwork Details

SHEET NUMBER
IA10.20

GENERAL MEP NOTES:

BEFORE SUBMITTING A BID, IT WILL BE NECESSARY FOR EACH CONTRACTOR WHOSE WORK IS INVOLVED TO VISIT THE SITE AND ASCERTAIN FOR HIMSELF THE CONDITIONS TO BE MET IN INSTALLING THE WORK AND MAKE PROVISIONS FOR THE CONDITIONS IN HIS FINAL PRICE. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR THE OMISSION OR FAULTY INSTALLATION OF ANY WORK COVERED BY THE CONTRACT DOCUMENTS.

THIS CONTRACTOR SHALL SECURE ALL PERMITS, LICENSES AND INSPECTIONS REQUIRED FOR HIS WORK, AND SHALL PAY ALL FEES IN CONNECTION WITH SUCH PERMITS, LICENSES AND INSPECTIONS.

WORK SHALL COMPLY WITH THE MOST RECENT VERSION OF ALL APPLICABLE LAWS, RULES, REGULATIONS AND ORDINANCES OF ALL FEDERAL, STATE AND LOCAL AUTHORITIES. IN THE EVENT OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND THE LOCAL ENFORCING AUTHORITY, THE LATTER SHALL RULE. ANY MODIFICATION RESULTING THEREFROM SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR ARCHITECT/ENGINEER. THE CONTRACTOR SHALL REPORT ANY SUCH MODIFICATIONS TO THE ARCHITECT/ENGINEER AND SECURE HIS APPROVAL BEFORE PROCEEDING. SHOULD THE REQUIREMENTS OF THE CONTRACT DOCUMENTS EXCEED THE REQUIREMENTS OF THE CODES, THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE PROVIDED THEY ARE NOT IN CONFLICT WITH THOSE CODES.

ALL ITEMS OF EQUIPMENT AND ALL MATERIALS FOR WHICH, APPROVAL STANDARDS HAVE BEEN ESTABLISHED BY UNDERWRITERS' LABORATORIES, INC. (UL), FACTORY MUTUAL (FM), AMERICAN STANDARD CODES, ASME, AGA, AMCA, ASA, ANSI, ASHRAE, AND ARI SHALL BE SO APPROVED AND SHALL BEAR APPROVAL LABELS.

PENETRATIONS THROUGH FLOORS OR FIRE-RATED CONSTRUCTION SHALL BE FIRESAFED TO COMPLY WITH ASTM E-814 (UL 1479), AND THE CITY OF HOUSTON.

IN THE EVENT OF A CONFLICT BETWEEN DRAWINGS AND MASTER PLAN SPEC, THE GREATER AMOUNT OF WORK SHALL BE PRICED. BRING THE CONFLICT TO THE ATTENTION OF THE ENGINEER AND REQUEST DIRECTION.

THE WORK OF THIS SECTION SHALL INCLUDE, BUT NOT BE LIMITED TO:

A. A COMPLETE DOMESTIC HOT AND COLD WATER DISTRIBUTION SYSTEM.
B. A COMPLETE SANITARY SOIL WASTE AND VENT SYSTEM.
C. MISCELLANEOUS PLUMBING EQUIPMENT AND SPECIALTIES REQUIRED FOR A COMPLETE PLUMBING SYSTEM AS SPECIFIED AND AS INDICATED ON DRAWINGS.

DRAWINGS ARE DIAGRAMMATIC; CONFIRM DIMENSIONS AND LOCATIONS IN THE FIELD, ADVISE OF MAJOR DISCREPANCIES.

GUARANTEE LABOR AND MATERIALS FOR ONE YEAR.

WORK BELOW FLOOR OR OVER CORRIDORS SHALL BE PERFORMED AT THE OWNER'S CONVENIENCE AND MAY BE REQUIRED TO BE DONE DURING EVENINGS AND WEEKENDS.

DEMOLITION DAMAGE TO EXISTING MATERIALS/EQUIPMENT WILL BE REPAIRED AT NO ADDITIONAL COST TO OWNER. RE-SUPPORT ANY REMAINING PIPING OR DEVICES THAT WERE SUPPORTED BY WALLS BEING REMOVED.

CONTRACTOR SHALL OBTAIN A COPY OF THE BASE BUILDING SPECIFICATIONS. ALL WORK SHALL COMPLY WITH BASE BUILDING SPECIFICATIONS.

DEMOLITION

ALL EXISTING TENANT MEP ELEMENTS, WITHIN THE PROJECT AREA NOT SHOWN ON THESE DRAWINGS TO BE REUSED, SHALL BE REMOVED. ELECTRICAL CONDUCTORS AND CONDUIT SHALL BE REMOVED BACK TO THEIR SOURCE. PIPING AND DUCTWORK SHALL BE REMOVED BACK TO THE NEAREST ACTIVE SECTION WHICH SHALL BE PATCHED/CAPPED AND REINSULATED. ALL ABANDONED DUCTS, PIPING AND CONDUIT SHALL BE REMOVED. MEP ELEMENTS WHICH PASS THROUGH THE PROJECT AREA TO SERVE ADJACENT AREAS SHALL REMAIN IN SERVICE UNLESS NOTED OTHERWISE.

MECHANICAL SPECIFICATIONS:

DUCTWORK INSULATION

ALL DUCTWORK INSULATION SHALL HAVE A COMPOSITE (INSULATION, JACKET, OR FACING, AND ADHESIVE USED TO ADHERE THE FACING OR JACKET TO THE INSULATION) FIRE AND SMOKE HAZARD RATING AS TESTED BY PROCEDURE ASTM, E84, NFPA 225 AND UL 723, NOT EXCEEDING:

FLAME SPREAD	25
SMOKE DEVELOPED	50

ALL DUCTWORK AND SHEETMETAL DESIGNED TO SERVE THE FOLLOWING AREAS SHALL BE EXTERNALLY INSULATED:

A. INTERIOR AND PERIMETER SUPPLY DUCTWORK.
B. UNTREATED SUPPLY OUTSIDE AIR SYSTEMS.
C. ALL RIGID ROUND AND FLEXIBLE SUPPLY DUCTWORK NOT FACTORY INSULATED.
D. ALL OTHER SYSTEMS SPECIFICALLY INDICATED ON THE DRAWINGS.

ALL DUCTWORK AND SHEET METAL DESIGNED TO SERVE THE FOLLOWING AREAS SHALL BE INTERNALLY LINED:

ALL SUPPLY OR RETURN DUCTWORK NOT REQUIRED TO BE EXTERNALLY INSULATED.

EXTERNAL DUCTWRAP INSULATION

EXTERNAL DUCTWRAP INSULATION SHALL BE FLEXIBLE FIBER GLASS BLANKET, SCHULLER R-SERIES 2" THICK MICROLITE FSK, OWENS-CORNING TYPE ED100 2" THICK OR CERTAINTEED TYPE 100 DUCT WRAP 1 POUND FSK.

INSULATION SHALL HAVE A THERMAL CONDUCTIVITY OF 0.27 AT 75° MEAN TEMPERATURE AND A 250° F TEMPERATURE RATING.

INSULATION SHALL BE FURNISHED WITH A FACTORY APPLIED FOIL-SCRIM-KRAFT FACING CONSISTING OF 0.35 MIL ALUMINUM FOIL REINFORCED WITH GLASS YARN MESH AND LAMINATED TO 40 POUND CHEMICALLY TREATED AND FIRE RESISTANT.

INTERNAL DUCT LINER

INTERNAL DUCT LINER INSULATION SHALL BE 2 POUND DENSITY SCHULLER LINA-COUSTIC OR OWENS-CORNING AEROFLEX FIBERGLASS OR CERTAINTEED ULTRALITE. SUPPLY, RETURN AND EXHAUST AIR DUCT LINER EXCEPT FOR MAIN SUPPLY RISER SHALL BE 1" THICK. THE LINER SHALL MEET THE LIFE SAFETY STANDARDS AS ESTABLISHED BY NFPA 90A.

INTERNAL DUCT LINER AIR STREAM SURFACE SHALL BE FINISHED WITH A FACTORY-APPLIED THERMOSETTING ACRYLIC POLYMER COATING. COATING SHALL RESIST POTENTIAL DUST INCURSION INTO THE MATERIAL SUBSTRATE, AND SHALL CONTAIN AN IMMOBILIZED EPA-APPROVED ANTI-MICROBIAL AGENT TO FURTHER INHIBIT POTENTIAL MICROBIAL GROWTH. RESULTS OF MOLD, FUNGI, AND BACTERIAL TESTING OF UL181, ASTM C 1071, ASTM G-21, AND G-22 SHALL SHOW NO GROWTH. THE COATING SHALL BE RESISTANT TO FIBER SHED AND DAMAGE DURING CLEANING OPERATIONS. NO FIBER LOSS SHALL BE DETECTED UNDER AN ELECTRON MICROSCOPE ANALYSIS OF ISOKINETIC AIR SAMPLING AT MAXIMUM RATED VELOCITY, USING UL181 TEST DUCT CONFIGURATION.

THE DUCT LINER SHALL HAVE A CONDUCTANCE FACTOR NOT EXCEEDING 0.26 (1") AT 75° F MEAN TEMPERATURE.

INSTALLATION OF DUCTWORK INSULATION

DUCTWORK EXTERNAL INSULATION SHALL BE CUT SLIGHTLY LONGER THAN CIRCUMFERENCE OF DUCT TO INSURE FULL THICKNESS AT CORNER.

ALL INSULATION SHALL BE APPLIED WITH EDGES TIGHTLY STITCHED WITH STAPLES ON 3" CENTERS.

THE INSULATION SHALL BE ADDITIONALLY SECURED TO THE BOTTOM OF ALL SQUARE DUCTS 24" OR WIDER BY MEANS OF WELDED PINS AND SPEED CLIPS ON 12" CENTERS.

THE VAPOR BARRIER FACING SHALL BE THOROUGHLY SEALED AT JOINTS, CUTS, TEARS AND WHERE THE PINS HAVE PIERCED THROUGH THE VAPOR BARRIER WITH 3" PRESSURE SENSITIVE ALUMINUM FOIL VAPOR BARRIER TAPE.

DUCTWORK INTERNAL LINER SHALL BE APPLIED WITH 100% COVERAGE OF CHILDERS CP-88, FOSTER 81-10, OR MEI 22-22 (SHOP APPLICATION), CHILDERS CP-80, FOSTER 85-20, OR MEI 22-25 (FIELD APPLICATION).

THE LINER SHALL BE ADDITIONALLY SECURED WITH MECHANICAL FASTENERS ON MAXIMUM 15" CENTERS ON DUCTS 20" OR MORE WIDE OR DEEP. FASTENERS SHALL START WITHIN 2" OF THE LEADING EDGE OF EACH SECTION AND WITHIN 3" OF THE LEADING EDGE OF ALL TRANSVERSE JOINTS WITHIN THE DUCT SECTION.

ALL EXPOSED EDGES AND THE LEADING EDGE OF ALL CROSS JOINTS OF THE LINER SHALL BE HEAVILY COATED WITH CHILDER CP-50 AVH2 OR APPROVED EQUAL FIRE RESISTANT MASTIC.

THE DUCT LINER SHALL BE CUT TO ASSURE SNUG CLOSING CORNER JOINTS. THE COATING OF THE LINER SHALL FACE THE AIR STREAM, TRANSVERSE JOINTS SHALL BE NEATLY BUTTED, AND ANY DAMAGED AREAS SHALL BE HEAVILY COATED WITH CHILDERS CP-50 AVH2 OR AS APPROVED EQUAL FIRE RESISTANT MASTIC OR REPLACED.

MASTIC SHALL CONTAIN AN IMMOBILIZED EPA-APPROVED ANTI-MICROBIAL AGENT TO INHIBIT POTENTIAL MICROBIAL GROWTH. ANTI-MICROBIAL AGENT SHALL BE INTERFACE RESEARCH CORPORATION "INTERSEPT" OR APPROVED EQUAL.

ALL LINER INSTALLATION SHALL BE IN ACCORDANCE WITH SMACNA "DUCT LINER APPLICATION STANDARD 2ND EDITION".

DUCTWORK AND SHEETMETAL

DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH CONSTRUCTION REQUIREMENTS SPECIFIED IN THE 1985 SMACNA EDITION FOR "LOW PRESSURE DUCT CONSTRUCTION STANDARDS".

DUCTWORK LEAKAGE IN EXCESS OF 5% WILL NOT BE ACCEPTABLE.

THE INTERIOR SURFACE OF ALL DUCTWORK SHALL BE SMOOTH WITH NO SHEETMETAL OR OTHER PARTS PROJECTING INTO THE AIR STREAM. ALL SEAMS AND JOINTS SHALL BE EXTERNAL. THE INSIDE OF ALL DUCTWORK SHALL BE THOROUGHLY CLEANED AND ALL FANS OPERATED TO REMOVE ANY DEBRIS PRIOR TO CONNECTION OF AIR DISTRIBUTION DEVICES.

ALL DUCTWORK DIMENSIONS ON THE DRAWINGS ARE CLEAR INSIDE DIMENSIONS.

INSTALL ALL DUCTWORK TIGHT TO STRUCTURE UNLESS OTHERWISE NOTED. THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES PRIOR TO THE CONSTRUCTION OR INSTALLATION OF DUCTWORK.

ALL TRANSVERSE JOINTS SHALL BE SEALED WITH A WATER BASE ADHESIVE SEALER DESIGNED FOR USE IN MEDIUM VELOCITY DUCT SYSTEMS. SEALER SHALL BE EFFECTIVE AGAINST BOTH NEGATIVE AND POSITIVE PRESSURE LOSSES. SEALER SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS. APPLY UN-THINNED WITH BRUSH, TROWEL OR CAULKING GUN AS PER THE MANUFACTURER'S RECOMMENDATIONS AND ALLOW TO DRY FOR A MINIMUM OF 48 HOURS BEFORE AIR IS APPLIED TO THE SYSTEM. SEALER SHALL BE BENJAMIN FOSTER 3219 OR AN APPROVED EQUAL.

ALL ROUND TAKE-OFFS SHALL BE MADE WITH A DAMPER EXTRACTOR SPIN-IN COLLAR. SPIN-INS SHALL BE INSTALLED WITH THEIR DAMPER AXIS PARALLEL TO AIR FLOW. DAMPER SHALL BE MIN. 26GA. BLADE WITH 3/8" SQUARE SHAFT, NYLON BEARINGS AND DURO-DYNE LOCKING QUADRANT WITH ELEVATED PLATFORM TO ALLOW REGULATOR TO CLEAR INSULATION.

CROSS-BREAK OR TRANSVERSE BEAD ALL FLAT SURFACES OF RECTANGULAR DUCTWORK WHICH ARE MORE THAN 12" WIDE. TRANSVERSE BEADING SHALL BE ON 12" CENTERS AND SHALL BE MINIMUM OF 1/8" DEEP AT THE CENTER OF THE BEAD AND 3/8" WIDE AT THE BASE OF THE BEAD. DO NOT CROSS-BREAK NEGATIVE PRESSURE DUCTWORK.

ALL LONGITUDINAL SEAMS SHALL BE "PITTSBURGH LOCK" OR BUTTON PUNCH SNAP LOCK AT CORNER SEAMS AND GROOVED (ACME) SEAM OR SEAM WELDED IN SIDES BETWEEN CORNERS.

ALL TRANSVERSE JOINTS AND INTERMEDIATE REINFORCEMENT SHALL BE AS SHOWN IN SMACNA TABLES 1-4, 1-5 & 1-6 AND FIGURE 1-4, WITH DRIVE SLIP CONNECTIONS (REINFORCED OR UNREINFORCED AS REQUIRED) ON THE SHORT SIDES AND HEMMED "S" SLIP CONNECTIONS (REINFORCED OR UNREINFORCED AS REQUIRED) ON THE LONG SIDES. AT THE CONTRACTOR'S OPINION, TRANSVERSE JOINTS MAY BE TRANSVERSE DUCT FLANGE JOINTS OR DUCTMATE EP12/11 PREFABRICATED GALVANIZED "DUCTMATE" SECTIONS. THE PROPOSED GASKET MATERIAL, FLANGE, CORNER PIECE AND DUCTMATE DETAILS SHALL BE SUBMITTED FOR REVIEW.

ALL DUCTWORK SUPPORTS SHALL BE PER TABLE 4-1 OF THE SMACNA MANUAL WITH ALL SUPPORTS DIRECTLY ANCHORED TO THE BUILDING STRUCTURE. SUPPORTS SHALL BE ON MAXIMUM 8'- 0" CENTERS WITH ADDITIONAL SUPPORTS AS REQUIRED TO PREVENT SAGGING.

FLEXIBLE DUCT FABRIC CONNECTIONS SHALL BE INSTALLED ON THE INLET AND OUTLET CONNECTIONS TO ALL POWERED AIR MOVING EQUIPMENT WHICH IS NOT CONNECTED WITH FLEXIBLE DUCT. A MINIMUM OF 1" OF SLACK SHALL BE ALLOWED IN ALL FLEXIBLE CONNECTIONS TO INSURE VIBRATION ISOLATION. FLEXIBLE FABRIC SHALL BE A MINIMUM OF 3 INCHES WIDE WITH "GRIP-LOC" SEAM TO 24 GAUGE GALVANIZED METAL SIDE CONNECTORS A MINIMUM OF 3 INCHES WIDE EACH. FLEXIBLE CONNECTION ARE TO FABRICATED WITH ELGEN "ZIPPERLOCK" #ZLN-4 NEOPRENE COATED 30 OZ. FIBERGLASS WITH 24 GAUGE GALVANIZED IRON SIDE CONNECTORS, OR DURO DYNE EXCELON "METAL-FAB" VINYL COATED 22 OZ. NYLON WITH 24 GAUGE GALVANIZED IRON SIDE CONNECTORS OR "APPROVED EQUAL".

INSTALL MANUAL SPLITTER DAMPERS IN BRANCH TAKE-OFFS WHERE SHOWN. SPLITTER DAMPERS SHALL BE MINIMUM 16 GAUGE GALVANIZED SHEET METAL AND SHALL BE 3/4 OF THE WIDTH OF THE SMALLEST TAKE-OFF BUT NO LESS THAN 6" LONG. DAMPERS SHALL HAVE 1/8" OF CLEARANCE TO THE DUCT IN WHICH THEY ARE INSTALLED. SPLITTER DAMPERS SHALL BE CONTROLLED BY ONE OR MORE CONTROL RODS IN ACCORDANCE WITH THE SMACNA MANUAL. WHERE SPLITTERS ARE IN CONCEALED INACCESSIBLE LOCATIONS, SUBMIT PROPOSED CONTROL ROD DETAILS FOR APPROVAL.

DUCTWORK TRANSITIONS AND OFFSETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FIG. 2-9 OF THE SMACNA MANUAL.

BRANCH TAPS SHALL BE 45° ENTRY EXPANDED TAPS UNLESS SHOWN OTHERWISE AND SHALL BE IN ACCORDANCE WITH FIG. 2-8 OF THE SMACNA MANUAL. TAPS TO TERMINAL UNITS MAY BE FLEXMASTER STO SIDE TAKEOFF FITTINGS.

TURNING VANES SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS AND IN ALL ABRUPT ELBOWS AND BENDS GREATER THAN 45°. FOR DUCTS LESS THE 12" IN HEIGHT, SINGLE VANE BLADES MAY BE INSTALLED. FOR DUCTS 12" IN HEIGHT, SINGLE VANE BLADES MAY BE INSTALLED. FOR DUCTS 12" HIGH AND ABOVE, DOUBLE AIRFOIL BLADES SHALL BE USED. TURNING VANES SHALL BE CONSTRUCTED IN ACCORDANCE WITH FIGURES 2-3 AND 2-4 OF THE SMACNA MANUAL.

RADIUS ELBOWS SHALL BE USED WHERE SHOWN ON THE DRAWINGS AND MAY BE USED FOR ALL 45° AND 90° ELBOWS IF THEY FIT IN THE AVAILABLE SPACE, AND ELBOWS 12" AND SMALLER. RADIUS ELBOWS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FIGURE 2-2 OF THE SMACNA MANUAL.

DUCTWORK WHICH IS EXPOSED TO WEATHER SHALL HAVE SOLDERED JOINTS AND SEAMS AND SHALL BE PAINTED WITH A SUITABLE EPOXY COATING.

RIGID ROUND, LOW PRESSURE, LOW VELOCITY DUCTWORK MATERIAL, GAUGE AND TRANSVERSE JOINTS SHALL BE IN ACCORDANCE WITH SMACNA STANDARDS, EXCEPT THAT DRAW BAND TRANSVERSE JOINTS WILL NOT BE ACCEPTABLE AND SNAP-LOCK OR OTHER LONGITUDINAL SEAMS WILL NOT BE ACCEPTABLE.

FLEXIBLE DUCTWORK

FLEXIBLE DUCT SHALL BE USED FOR CONNECTIONS TO AIR DISTRIBUTION DEVICES WHERE SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN. MAXIMUM LENGTH SHALL BE 8'-0" FOR AIR DISTRIBUTION DEVICE CONNECTIONS. WHERE LONGER RUNS ARE REQUIRED, PROVIDE RIGID DUCTWORK.

INSULATED FLEXIBLE DUCT SHALL BE A FACTORY FABRICATED ASSEMBLY CONSISTING OF A GALVANIZED STEEL OR SPIRAL ALUMINUM HELIX. STAINLESS INNER LINER SHALL BE A SMOOTH, AIRTIGHT POLYMER FILM. INSULATION SHALL BE FIBERGLASS WITH A MAXIMUM THERMAL CONDUCTANCE OF .23 BTU/HR/SF/°F. THE ASSEMBLY SHALL BE SHEATHED IN A REINFORCED METALIZED VAPOR BARRIER OUTER JACKET WITH PERMEANCE NOT EXCEEDING 0.17 PERMS/SF AT 1" PRESSURE. MINIMUM R-VALUE = 6 HR/SF/°F/BTU

THE FLEXIBLE DUCT ASSEMBLY SHALL BE SUITABLE FOR A MINIMUM OF 6" W.C. WORKING PRESSURE AND SHALL BE LISTED CLASS I BY THE UNDERWRITERS LABORATORY AT A FLAME SPREAD OF NOT OVER 25 AND A SMOKE DEVELOPED RATE OF NOT OVER 50. DUCTS SHALL ALSO COMPLY WITH NFPA STANDARD 90A.

FLEXIBLE DUCTS SHALL BE SUPPORTED IN SUCH A MANNER TO PREVENT SAGS AND KINKS. BENDS IN ANY LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 90° FOR AIR DISTRIBUTION DEVICE CONNECTIONS.

ALL JOINTS AND CONNECTIONS SHALL BE MADE WITH 1/2" WIDE STAINLESS STEEL DUCT CLAMPS OR 100% NYLON SELF-LOCKING CLAMPS MANUFACTURED BY PANDUIT CORPORATION OR AN APPROVED EQUAL. EXTEND INSULATION AND OUTER JACKET OVER THE SECURED CLAMP AND TAPE DOWN TO THE SLEEVE/COLLAR TO MAINTAIN VAPOR BARRIER INTEGRITY.

IF IT COMPLIES WITH THESE SPECIFICATIONS, FLEXIBLE DUCTWORK OF THE FOLLOWING TYPES WILL BE ACCEPTABLE:

FLEXMASTER TYPE 8M, THERMAFLEX M-KE OR APPROVED EQUAL.

CONTROLS

PROVIDE ALL TEMPERATURE CONTROLS MODIFICATIONS REQUIRED FOR A COMPLETE AND FUNCTIONING CONTROLS SYSTEM. ALL CONTROLS SHALL MATCH BUILDING STANDARD.

TENANT HVAC GRILLES

TEE-BAR SLOT AIR DEVICES – TYPE A: DEVICES SHALL BE HIGH INDUCTION, SIDE INLET SLOT DIFFUSERS WITH LENGTH AND NECK SIZE AS SHOWN ON THE DRAWINGS. THE DIFFUSERS SHALL HAVE AN AERODYNAMICALLY DESIGNED, EXTRUDED ALUMINUM, VENTURI SHAPED AIR OUTLET DESIGNED TO DIRECT SUPPLY AIR FROM THE THE DIFFUSER HORIZONTALLY ACROSS THE CEILING AND TO PROVIDE MAXIMUM ASPIRATION AND ENTRAINMENT OF ROOM AIR. THE SUPPLY AIR SHALL MAINTAIN A CEILING PATTERN WITH VARYING VOLUMES OF AIR TO MINIMUM FLOW. THE DIFFUSER SHALL HAVE A MAXIMUM HEIGHT OF 9" AND SHALL BE COMPLETELY SUPPORTED BY TWO CEILING TEE'S ON NOMINAL 2-3/4" CENTERS. THE DIFFUSER SHALL BE CONSTRUCTED OF MINIMUM 24 GAUGE NON-RUSTING STEEL AND ALL SURFACES EXPOSED TO VIEW BELOW THE CEILING SHALL BE PAINTED FLAT BLACK. TITUS NOVA N-1-D AND N-4 SERIES, PRICE CO. MODEL TBD675, OR METAL*AIRE SERIES HPD.

PANEL FACE SUPPLY AIR DEVICE – TYPE B: PANEL FACE SUPPLY AIR DEVICES SHALL BE ALUMINUM AND/OR STEEL CONSTRUCTION WITH AN ALUMINUM FACE AND ALUMINUM OR STEEL PANS. FRAMES SHALL HAVE MITER JOINT CORNERS AND STEEL FRAMES SHALL BE ONE-PIECE INTEGRAL WITH THE BACK PAN. AIR DEVICES SHALL HAVE 4-WAY DIFFUSION PATTERN UNLESS NOTED OTHERWISE ON THE DRAWINGS. TITUS OMNI OR NAILOR UNI.

PANEL FACE RETURN/EXHAUST AIR DEVICE – TYPE C: PANEL FACE EXHAUST/RETURN AIR DEVICES SHALL BE ALUMINUM AND/OR STEEL CONSTRUCTION WITH AN ALUMINUM FACE AND ALUMINUM OR STEEL PANS. FRAMES SHALL HAVE MITER JOINT CORNERS AND STEEL FRAMES SHALL BE ONE-PIECE INTEGRAL WITH THE BACK PAN. AIR DEVICES SHALL HAVE 4-WAY DIFFUSION PATTERN UNLESS NOTED OTHERWISE ON THE DRAWINGS. TITUS OMNI OR NAILOR UNI.

PLUMBING SPECIFICATIONS:

DOMESTIC WATER PIPING.

ALL BRANCH WATER PIPING INSIDE THE BUILDING SHALL BE TYPE "L" COPPER TUBING (ASTM B-88) WITH WROUGHT COPPER FITTINGS (ANSI B16.22). CLEAN AND DEBURR THE INSIDE OF ALL FITTINGS CAREFULLY BEFORE JOINING WITH 95/5 TIN/ANTIMONY SOLDER. NO ACIDS SHALL BE USED TO CLEAN EITHER PIPE OR FITTINGS OR AS A FLUX IN SWEATING JOINTS. THE USE OF DRILLED-T CONNECTIONS IS NOT PERMITTED.

PROVIDE COPPER PIPE AIR CHAMBERS MANUFACTURED BY SIOUX CHIEF MFG. CO. AT EACH FIXTURE SUPPLY.

THE MINIMUM SIZE OF WATER PIPING ON THE PROJECT SHALL BE 1/2" INCLUDING FIXTURE RISER, UNLESS OTHERWISE INDICATED. FINAL FIXTURE CONNECTION SIZES SHALL BE AS SPECIFIED OR SHOWN ON THE DRAWINGS.

EACH FIXTURE, DEVICE OR CONNECTION TO EQUIPMENT SHALL HAVE A STOP VALVE TO ISOLATE THAT FIXTURE WITHOUT SHUTTING DOWN ANY OTHER PORTION OF THE SYSTEM.

ALL COPPER WATER PIPING SHALL BE COMPLETELY ISOLATED FROM METAL HANGERS, METAL STUDS OR ANY OTHER ELECTRICALLY CONDUCTIVE BUILDING COMPONENTS. PROVIDE DIELECTRIC UNION AT ALL CONNECTIONS BETWEEN COPPER AND GALVANIZED PIPE.

DOMESTIC WATER PIPING SHALL BE HYDROSTATICALLY TESTED AT 1.5 TIMES SYSTEM DESIGN PRESSURE.

THERMAL INSULATION FOR DOMESTIC HOT WATER PIPING

ALL HOT WATER PIPE, VALVES AND FITTINGS SHALL BE INSULATED WITH GLASS FIBER PIPE INSULATION WITH K FACTOR OF 0.23 BTU/INCH PER DEG. F PER HOUR AT 75 DEG. F. MEAN. INSULATION MATERIAL SHALL BE SCHULLER "MICRO-LOK APT", OWENS-CORNING ASJ/SSL, OR CERTAINTEED SNAP-ON GLASS FIBER PIPE INSULATION WITH FACTORY APPLIED WHITE VAPOR BARRIER. THE INSULATION MATERIAL THICKNESS SHALL BE AS FOLLOWS:

INSULATION THICKNESS SHALL BE 1" FOR PIPING 1" AND ABOVE.

AT ALL CLEVIS HANGERS, INSTALL INSULATION OVER HANGER AND PROVIDE A VAPOR BARRIER COVER.

FITTINGS, FLANGES AND VALVE BODIES SHALL BE INSULATED WITH PREFORMED RIGID GLASS FIBER INSULATION AND ONE PIECE MANVILLE ZESTON 25/50, PROTO #1, FULLER-SEALFAS OR FOSTER SMOKESAFE PREFORMED COVERS. INSULATION SHALL BE VAPOR SEALED WITH 1-1/2" WIDE 10 MIL PVC TAPE ON ALL JOINTS AND ONE COAT OF CHILDERS CP30, FOSTER 30-35 OR INSUL-COUSTIC 110 OVER THE ENTIRE SURFACE.

LONGITUDINAL LAPS AND 3"WIDE BUTT STRIPS OF THE VAPOR BARRIER JACKET SHALL BE ADHERED WITH FOSTER 85-75 FIRE RESISTANT VAPOR BARRIER ADHESIVE. AT THE CONTRACTOR'S OPTION, ADHESIVE SYSTEMS UTILIZING FACTORY APPLIED ADHESIVE STRIPS ON STRAIGHT RUNS OF INSULATION, SUCH AS OWENS-CORNING SSL II, WILL BE ACCEPTABLE PROVIDED THE BALANCE OF THE SPECIFICATION IS STRICTLY FOLLOWED.

PROVIDE AN ISOLATING VAPOR STOP BETWEEN PIPE INSULATION JACKET AND THE PIPE AT BUTT JOINTS OF INSULATION AT FITTINGS, FLANGES, VALVES, HANGERS AND AT 21 FOOT INTERVALS ON CONTINUOUS RUNS USING CHILDERS CP-35 OR FOSTER 30-80.

BALL VALVES

BALL VALVES SHALL BE WATTS MODEL B-6000 BRONZE, SHALL HAVE BOTTOM LOADED PRESSURE RETAINING BLOW-OUT PROOF STEMS, ADJUSTABLE PACKING NUT, GLASS REINFORCED DURAFILL OR VIRGIN PTFE SEATS AND BALL. VALVE SHALL BE PRESSURE RATED AT 600 PSI WOG 1/4" TO 2" AND 400 PSI WOG 2-1/2" AND 3". VALVES SHALL BE MANUFACTURED AND ASSEMBLED IN THE U.S.A.

UNIONS

UNIONS IN COPPER OR BRASS LINES SHALL BE BRASS, THREADED PATTERN UNIONS.

DIELECTRIC UNIONS SHALL BE USED AT ALL JUNCTURES OF DISSIMILAR METALS AND SHALL BE VIEWABLE AND ACCESSIBLE.

SANITARY SOIL WASTE AND VENT PIPING

ABOVE GROUND INSIDE BUILDING VERTICAL AND HORIZONTAL WASTE AND VENT STACKS, FIXTURE AND VENT MANIFOLDS SHALL BE "NO-HUB" CAST IRON SOIL PIPE AND FITTINGS (CISPI301) ASSEMBLED WITH 304 STAINLESS STEEL NO-HUB COUPLINGS ASSEMBLIES, WITH NEOPRENE GASKET MEETING ASTM C-564.

PROVIDE AND INSTALL ALL CLEANOUTS INDICATED AND AS REQUIRED BY LOCAL CODES.

THE WASTE AND VENT SYSTEM SHALL BE TESTED AS REQUIRED BY THE PLUMBING CODES HAVING JURISDICTION.

PLUMBING PIPING HANGER SPACING

MAXIMUM SPACING BETWEEN PIPING HANGERS SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE:

SIZE OF PIPING:	DISTANCE BETWEEN SUPPORTS:	
	COPPER	CAST IRON
1/2"	5'	–
3/4"	6'	–
1"	7'	–
1-1/4"	8'	–
1-1/2"	9'	5'
2"	10'	5'

SUPPORTS SHALL BE ARRANGED SO AS TO BE NEAR THE WEAKEST POINT OF THE SPAN SUCH AS JOINTS, TURNS AND AT THE BASE OF ALL VERTICAL TO HORIZONTAL OFFSETS AND AT ALL WASTE TRAPS.

ALL PIPING SHALL BE RIGIDLY INSTALLED IN ALL CHASES OR WALLS. TEST FOR RIGIDITY SHALL BE THAT THE PIPING IS VIRTUALLY IMMOVABLE BY HAND, SHORT OF DEFORMING THE PIPING.

IN NO CASE SHALL ANY PIPING DEPEND ON BLOCKS, BRICKS, STONE, WOOD SLEEPERS OR TIE WIRES FOR ITS FINAL SUPPORT.

SUPPORT SYSTEM SHALL BE AS MANUFACTURED BY "HOLDRITE" OR AN APPROVED EQUAL.

PLUMBING FIXTURE SCHEDULE

SINK (SK-1) ADA COMPLIANT:

FIXTURE: ELKAY LRAD2521, SINGLE COMPARTMENT, STAINLESS STEEL SINK, 25"L X 21-1/4"W X 6-1/2" DEEP, 18 GAUGE TYPE 304 STAINLESS STEEL, SELF-RIMMING. COORDINATE SINK DIMENSIONS WITH CASEWORK CONTRACTOR.

TRIM: POLISHED CHROME-PLATED FAUCET SET, 8" CENTERS, CHICAGO NO. 786-E3 DECK MOUNTED FAUCET WITH GN2B GOOSE NECK SPOUT, 1.6 GPM FLOW CONTROL, PLAIN OUTLET, COLOR CODED INDEXED 4" WRIST BLADE HANDLES. PROVIDE ELKAY NO. LK-35 CRUMB CUP STRAINER AND TAILPIECE AND MCGUIRE NO. 8912 P-TRAP W/ DEEP SET ESCUTCHEON AND SET SCREW.

SUPPLY: CHICAGO NO. 1006 WITH AQUA-FLO BRAIDED STAINLESS STEEL SUPPLY HOSE (NO EXCEPTIONS). HOSE LENGTH SHALL BE AS REQUIRED TO CONNECT FIXTURE AND SUPPLY VALVE WITHOUT SPLICES.

SINK (SK-2) ADA COMPLIANT:

FIXTURE: ELKAY LRAD-1720, SINGLE COMPARTMENT, STAINLESS STEEL SINK, 17" X 20" X 6-1/2" DEEP, 18 GAUGE TYPE 304 STAINLESS STEEL, SELF-RIMMING.

TRIM: POLISHED CHROME-PLATED FAUCET SET, 8" CENTERS, CHICAGO NO. 786-E3 DECK MOUNTED FAUCET WITH GN2A RIGID GOOSENECK SPOUT, 2.2 GPM FLOW CONTROL, E3 AERATOR, COLOR CODED INDEXED 4" WRIST BLADE HANDLES. PROVIDE ELKAY NO. LK-35 CRUMB CUP STRAINER AND TAILPIECE AND MCGUIRE NO. 8912 P-TRAP W/ DEEP SET ESCUTCHEON AND SET SCREW.

SUPPLY: CHICAGO NO. 1006 WITH AQUA-FLO BRAIDED STAINLESS STEEL SUPPLY HOSE (NO EXCEPTIONS). HOSE LENGTH SHALL BE AS REQUIRED TO CONNECT FIXTURE AND SUPPLY VALVE WITHOUT SPLICES.

CLEANOUTS

(WCO) WALL CLEANOUT: JAY R. SMITH 4422 CAST IRON FERRULE WITH LEAD SEAL, CAST IRON PLUG AND ROUND STAINLESS STEEL COVER PLATE WITH CENTER SECURING SCREW.

SUBMITTALS

CONTRACTOR SHALL PROVIDE THE ENGINEER WITH PRODUCT DATA AND SHOP DRAWINGS FOR ALL MATERIALS & EQUIPMENT SPECIFIED HEREIN. THE CONTRACTOR SHALL SUBMIT A MINIMUM OF FIVE (5) COPIES OF SHOP DRAWINGS AND PRODUCT DATA. THREE OF THESE WILL BE RETURNED FOR THE CONTRACTOR'S FILE AND FOR OPERATION AND MAINTENANCE MANUALS. SUBMITTAL DATA SHALL INCLUDE:

1. COVER SHEET WITH NAMES AND ADDRESSES OF PROJECT, ARCHITECT MEP ENGINEER, GENERAL CONTRACTOR & SUB-CONTRACTOR.
2. DRAWING REFERENCE NUMBER, PRODUCT NAME AND/OR DESCRIPTION.
3. INDEX OF ALL DATA IN SUBMITTAL.
4. DIMENSIONAL DATA AND SKETCHES SHOWING THAT SUBMITTED EQUIPMENT WILL FIT INTO SPACE AVAILABLE AND WILL HAVE REQUIRED CODE AND MAINTENANCE CLEARANCES.
5. IDENTIFICATION OF EACH ITEM MATCHING THAT INDICATED ON THE DRAWINGS.
6. SUFFICIENT PERFORMANCE DATA, CAPACITY, SOUND DATA, DIAGRAMMATIC DATA AND DESCRIPTIVE INFORMATION TO SHOW ITS COMPLIANCES WITH THE CONTRACT DOCUMENTS. OPTIONS OR SPECIAL REQUIREMENTS SHALL BE CLEARLY INDICATED. APPLICABLE INFORMATION SHALL BE CLEARLY INDICATED AND NON-APPLICABLE DATA SHALL BE CROSSED OFF.
7. MATERIALS AND EQUIPMENT PURCHASED OR INSTALLED WITHOUT A "NO EXCEPTIONS TAKEN" SHOP DRAWING REVIEW SHALL BE AT THE RISK OF THE CONTRACTOR. THE COST OF REMOVAL AND REPLACEMENTOF SUCH MATERIALS WHICH IS JUDGED UN-SATISFACTORY BY THE ENGINEER FOR ANY REASON SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

FIRE SPRINKLER NOTE:

BEFORE SHUTTING OFF A SECTION OF THE FIRE SERVICE SYSTEM TO MAKE SPRINKLER SYSTEM CONNECTION, NOTIFY THE FIRE DEPARTMENT, PLAN THE WORK CAREFULLY, AND ASSEMBLE ALL MATERIALS TO ENABLE COMPLETION IN THE SHORTEST POSSIBLE TIME. WORK STARTED ON CONNECTIONS SHOULD BE RUSHED TO COMPLETION WITHOUT INTERRUPTION, AND PROTECTION RESTORED AS PROMPTLY AS POSSIBLE. DURING THE IMPAIRMENT ,PROVIDE EMERGENCY HOSE LINES, ADDITIONAL FIRE PAILS AND EXTINGUISHERS, AND MAINTAIN WATCH SERVICE IN THE AREAS AFFECTED.

WHEN CHANGES INVOLVE SHUTTING OFF WATER FROM ANY CONSIDERABLE NUMBER OF SPRINKLERS FOR MORE THAN A FEW HOURS, TEMPORARY WATER SUPPLY CONNECTIONS SHOULD BE MADE TO SPRINKLER SYSTEMS SO THAT REASONABLE PROTECTION CAN BE MAINTAINED. IN ADDING TO OLD SYSTEMS OR REVAMPING THEM, PROTECTION SHOULD BE RESTORED EACH NIGHT SO FAR AS POSSIBLE. THE FIRE DEPARTMENT SHALL BE NOTIFIED AS TO CONDITIONS.

Kirksey
ARCHITECTURE

6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

WYLIE
CONSULTING
ENGINEERS
6161 Savoy, Suite 700 Houston, Texas 77036 713.781.2526
wylieassociates.com Wylie Project No. 11098.00
Wylie Consulting Engineers Firm Registration No. 1869

NO.	DATE	ISSUE
01	22 JUNE 2011	PRICING, PERMIT & CONSTR.

PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE
MEP Specifications

SHEET NUMBER
MEP1.10

ELECTRICAL SPECIFICATIONS:

CONDUIT

ALL CONDUITS SHALL BE CONCEALED IN PIPE CHASES, WALLS, FURRED SPACED, OR ABOVE THE CEILING OF THE BUILDING UNLESS OTHERWISE INDICATED. CONDUIT SHALL NOT BE EMBEDDED IN ANY STRUCTURAL SLAB OR STRUCTURAL MEMBER UNLESS APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.

CONDUIT MAY BE RUN EXPOSED IN MECHANICAL ROOMS, DUCT AND PIPING CHASES, BUT ONLY WHERE NECESSARY. ALL EXPOSED CONDUIT SHALL BE RUN IN THE NEATEST, MOST INCONSPICUOUS MANNER, AND PARALLEL OR PERPENDICULAR TO THE BUILDING LINES.

ALL CONDUIT AND SURFACE RACEWAYS SHALL BE ADEQUATELY AND PROPERLY SUPPORTED FROM THE BUILDING STRUCTURE BY MEANS RECOMMENDED BY THE MANUFACTURER, OR BY THE USE OF HANGER RODS OR CLAMPS.

ALL CONDUITS THROUGHOUT THE BUILDING SHALL BE SUPPORTED 8 FEET ON CENTERS HORIZONTALLY AND SUPPORTED 6 FEET ON CENTERS VERTICALLY.

VERTICAL CONDUITS SHALL BE SUPPORTED FROM FLOOR LINES WITH RISER CLAMPS SIZED TO FIT THE CONDUIT AND TO ADEQUATELY ALLOW FOR CONTRACTION. AT THE BASES OF CONDUIT. WHERE REQUIRED FOR PROPER SUPPORT, PROVIDE ANCHOR BASE FITTINGS OR OTHER APPROVED SUPPORTS.

CONDUIT SHALL NOT BE SUPPORTED FROM DUCTWORK, PIPING, OR EQUIPMENT.

THE LOAD AND SPACING ON EACH HANGER AND/OR INSERT SHALL NOT EXCEED THE SAFE ALLOWABLE LOAD FOR ANY COMPONENT OF THE SUPPORT SYSTEM, INCLUDING THE CONCRETE WHICH HOLDS THE INSERTS. REINFORCEMENT AT INSERTS SHALL BE PROVIDED AS REQUIRED TO DEVELOP THE STRENGTH REQUIRED.

ALL CONDUITS NOT EMBEDDED IN CONCRETE OR MASONRY SHALL BE SECURELY AND INDEPENDENTLY SUPPORTED SO THAT NO STRAIN WILL BE TRANSMITTED TO OUTLET BOX AND PULL BOX SUPPORTS, ETC. SUPPORTS SHALL BE RIGID ENOUGH TO PREVENT DISTORTION OF CONDUITS DURING WIRE PULLING.

ALL ELECTRICAL CONDUCTORS SHALL BE INSTALLED IN CONDUIT, OR SURFACE METAL RACEWAYS. IN ADDITION, EMPTY CONDUIT OR SURFACE METAL RACEWAYS SHALL BE INSTALLED FOR THE TELEPHONE SYSTEM, AND FOR OTHER SYSTEMS AS INDICATED ON THE DRAWINGS.

RIGID STEEL CONDUIT SHALL BE USED WHERE CONDUIT IS UNDERGROUND, IN A CONCRETE SLAB WITH A VAPOR BARRIER, EXPOSED TO THE WEATHER, IN DAMP OR OTHER WET LOCATIONS, WHERE EXPOSED TO VIEW, WHERE SUBJECT TO PHYSICAL DAMAGE, OR IN SIZES GREATER THAN 4" IN DIAMETER.

CONDUIT SHALL BE JOINED WITH THREADED COUPLINGS AND SHALL BE SECURED IN CABINETS, OUTLETS, ETC., WITH DOUBLE LOCKNUTS AND SHALL BE PROVIDED WITH INSULATED BUSHINGS AS MANUFACTURED BY MIDWEST, STEEL CITY, OR EFCOR. COUPLINGS, ETC., SHALL BE THREADED.

RIGID STEEL CONDUIT SHALL BE HOT-DIPPED GALVANIZED INSIDE AND OUT. FULL LENGTHS OF PIPE SHALL HAVE GALVANIZED OR ZINC-COATED THREADS ON BOTH ENDS.

RIGID STEEL CONDUIT SHALL BE PITTSBURGH STANDARD, REPUBLIC, ALLIED, TRIANGLE, ROME, SPANG, WESTERN, WHEATLAND, WESTERN TUBE AND CONDUIT, OR YOUNGSTOWN HOT-DIPPED GALVANIZED INSIDE AND OUT, NATIONAL "SHERADUCT", WALKER "DUALCOTE", OR GENERAL ELECTRIC (J&L) "WHITE" ZINC METALLIZED INSIDE AND OUT, OR APPROVED EQUAL.

EMT MAY BE USED INDOORS WHERE CONCEALED OR EXPOSED ABOVE GRADE, EXCEPT WHERE RIGID STEEL CONDUIT IS REQUIRED. ELECTRICAL METALLIC TUBING SHALL BE MADE OF THIN-WALL STEEL TUBING SHALL BE MADE OF THIN-WALL STEEL TUBING UP TO 4" CONDUIT SIZE, AND SHALL BE GALVANIZED INSIDE AND OUTSIDE.

EMT SHALL BE JOINED WITH STEEL SET SCREW TYPE COUPLINGS AND CONDUITS SHALL BE SECURED WITH STEEL SET SCREW TYPE CONNECTORS AT PANELS, JUNCTION BOXES, OUTLETS, ETC. EMT WHICH IS CAST IN CONCRETE SHALL BE JOINED USING CONCRETE-TIGHT COMPRESSION FITTINGS. DIE-CAST TYPE CONNECTORS ARE NOT ACCEPTABLE.

IF IT COMPLIES WITH THESE SPECIFICATIONS, CONDUIT MANUFACTURED BY ONE OF THE FOLLOWING WILL BE ACCEPTABLE: ALLIED, ROME, PITTSBURGH, WHEATLAND.

IF IT COMPLIES WITH THESE SPECIFICATIONS, CONNECTORS MANUFACTURED BY ONE OF THE FOLLOWING WILL BE ACCEPTABLE: MIDWEST, STEEL CITY, EFCOR, OR T & B.

FLEXIBLE METAL CONDUIT

FLEXIBLE METAL CONDUIT SHALL BE HOT-DIPPED GALVANIZED STEEL STRIP, SPIRALLY WOUND AND INTERLOCKED, AND SHALL BE PROVIDED WITH INSULATED ANTI-SHORT BUSHINGS AT ALL TERMINATIONS.

FLEXIBLE METAL CONDUIT SHALL BE SECURED WITH GALVANIZED OR SHERADIZED CONNECTORS SUITABLE FOR CONNECTION TO THE ASSOCIATED BOXES AND CONDUITS. DIE CAST CONNECTORS ARE NOT ACCEPTABLE.

FLEXIBLE METAL CONDUIT MAY BE USED INDOORS AT ANY HEIGHT, IN LENGTHS NOT TO EXCEED 48 INCHES, TO EXTEND CONDUIT CONNECTIONS TO MOTORS, TRANSFORMERS, BUSWAY SWITCHES, AIR DISTRIBUTION TERMINAL UNITS, CONTROL EQUIPMENT AND DEVICES, PERMANENTLY CONNECTED EQUIPMENT OR APPLIANCES, OR FOR EQUIPMENT AND DEVICES REQUIRING ADJUSTMENT AND/OR REMOVAL FOR MAINTENANCE. FLEXIBLE METAL CONDUIT SHALL NOT BE USED FOR CONNECTIONS IN ELEVATOR MACHINE ROOMS. LIQUID-TIGHT FLEXIBLE CONDUIT SHALL BE USED IN ALL OF THE ABOVE AREAS WHERE FLEXIBLE METAL CONDUIT IS NOT PERMITTED, A "GREEN" INSULATED COPPER GROUNDING CONDUCTOR SHALL BE INSTALLED WITH THE CIRCUIT CONDUCTORS AND SIZED IN ACCORDANCE WITH TABLE 250-95 OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.

FLEXIBLE METAL CONDUIT (MINIMUM 3/8" DIAMETER) MAY BE USED FOR FIXTURE-TAILS, FOR CONNECTION OF INDIVIDUAL LIGHTING FIXTURES TO THEIR ASSOCIATED LIGHTING SYSTEM JUNCTION BOXES LENGTHS NOT TO EXCEED 6 FEET, AND PROVIDED THE CIRCUIT CONDUCTORS CONTAINED THEREIN ARE PROTECTED BY OVERCURRENT DEVICES RATED AT 20 AMPERES OR LESS. A "GREEN" INSULATED COPPER GROUNDING CONDUCTOR SHALL BE INSTALLED WITH THE CIRCUIT CONDUCTORS AND SIZED IN ACCORDANCE WITH TABLE 250-95 OF THE LATEST EDITION OF THE NATION ELECTRICAL CODE.

CONTINUITY OF THE EQUIPMENT GROUND ACROSS FLEXIBLE METAL CONDUIT CONNECTIONS SHALL BE MAINTAINED FOR ALL SYSTEMS THAT ARE OVER 150 VOLTS TO GROUND. THE CONTINUITY SHALL BE MAINTAINED BY INSTALLING A BARE COPPER BONDING CONDUCTOR SIZED IN ACCORDANCE WITH TABLE 250-95 OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE. THE BARE COPPER BONDING CONDUCTOR SHALL BE INSTALLED OUTSIDE THE FLEXIBLE AND SHALL BE CONNECTED ON ONE END OF THE FLEXIBLE CONDUIT BY A SUITABLE BINDING POST AN SIMILARLY CONNECTED ON THE OPPOSITE END WITH ANOTHER SUITABLE BINDING POST.

IF IT COMPLIES WITH THESE SPECIFICAITONS, CONDUIT MANUFACTURED BY ONE OF THE FOLLOWING WILL BE ACCEPTABLE: AMERICAN FLEXIBLE CONDUIT COMPANY, ANACONDA, CERRO, OR ELECTRIFLEX.

IF IT COMPLIES WITH THESE SPECIFICATIONS, CONNECTORS MANUFACTURED BY ONE OF THE FOLLOWING WILL BE ACCEPTABLE:

MIDWEST, APPLETON OR EFCOR.

TYPE "AC" ARMORED CABLE

ARMORED CABLE TYPE "AC" USED FOR CONNECTION OF FIXTURE-TAILS, SWITCH LEGS AND RECEPTACLES SHALL BE HOSPITAL GRADE 3-WIRE TYPE WITH 2- # 12 "THWN" SOLID COPPER INSULATED PHASE CONDUCTORS, AND INSULATED #12 GROUNDING CONDUCTOR. IF ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, TYPE "AC" CABLE MAY BE USED IN WALL PARTITIONS IN FINISHED AREAS ONLY.

ARMORED CABLE SHALL BE PROVIDED WITH INSULATED ANTI-SHORT BUSHINGS AT ALL TERMINATIONS. ARMORED CABLE CONNECTORS SHALL BE STEEL GALVANIZED OR SHERADIZED, SUITABLE FOR CONNECTION TO ASSOCIATED BOXES. DIE CAST CONNECTORS ARE NOT ACCEPTABLE.

IF IT COMPLIES WITH THE SPECIFICATIONS, ARMORED CABLE MANUFACTURED BY ONE OF THE FOLLOWING WILL BE ACCEPTABLE: AMERICAN FLEXIBLE CONDUIT, BRAND-REX, OR CABLEC.

IF IT COMPLIES WITH THE SPECIFICATIONS, CONNECTORS MANUFACTURED BY ONE OF THE FOLLOWING WILL BE ACCEPTABLE: STEEL CITY, THOMAS & BETTS, OR MIDWEST.

CONDUIT INSTALLATION

METAL CONDUIT SHALL BE OF AMPLE SIZE TO PERMIT THE EASY INSERTION OR WITHDRAWAL OF CONDUCTORS WITHOUT ABRASION. ALL JOINTS SHALL BE CUT SQUARE, REAMED SMOOTH AND DRAWN UP TIGHT. NO NON-FLEXIBLE METAL CONDUIT SHALL BE SMALLER THAN 1/2".

SO FAR AS PRACTICABLE, ALL EXPOSED METAL CONDUIT SHALL RUN WITHOUT TRAPS. WHERE TRAPS OR DIPS ARE UNAVOIDABLE, A JUNCTION OR PULL BOX SHALL BE PLACED AT EACH LOW POINT.

EACH ENTIRE METAL CONDUIT SYSTEM SHALL BE INSTALLED COMPLETE BEFORE ANY CONDUCTORS ARE DRAWN IN. TO GUARD AGAINST OBSTRUCTIONS AND OMISSIONS, EACH RUN OF CONDUIT SHALL BE FINISHED BEFORE PLASTERING IS INSTALLED. ALL METAL CONDUIT SHALL BE SWABBED AFTER PLASTER IS FINISHED AND DRY.

AS SOON AS CONDUIT HAS BEEN PERMANENTLY INSTALLED IN PLACE, CONDUIT SHALL BE CAPPED OR PLUGGED WITH STANDARD ACCESSORIES.

METAL CONDUIT FOR TELEPHONE, SIGNAL, COMMUNICATION, AND TEMPERATURE CONTROL SYSTEMS SHALL BE PROVIDED WITH PULL BOXES OF APPROVED SIZES AT INTERVALS NOT EXCEEDING 70 FEET IN LENGTH OR AFTER TWO RIGHT ANGLE BENDS. BOXES SHALL BE SIZED IN ACCORDANCE WITH THE PERCENT FILL REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, AND AS INDICATED ON THE DRAWINGS.

ALL EMPTY CONDUIT SYSTEM SHALL HAVE A 1/8" BRAIDED POLYPROPYLENE ROPE OR #14 GALVANIZED STEEL PULL WIRE INSTALLED. AT LEAST 12" OF PROPERLY SECURED ROPE OR WIRE SHALL BE FOLDED BACK INTO EACH END OF THE EMPTY CONDUITS.

WHERE PERMITTED BY THE LOCAL AUTHORITY – ARMORED CABLE MAY BE USED INDOORS WHERE CONCEALED ABOVE GRADE, FOR FIXTURE-TAILS OF INDIVIDUAL LIGHTING FIXTURES IN SUSPENDED ACCESSIBLE TYPE CEILINGS. THESE FIXTURE-TAILS SHALL IN LENGTHS NOT TO EXCEED 6 FEET FOR CONNECTION TO THEIR ASSOCIATED LIGHTING JUNCTION BOXES. THE POINT OF CONNECTION OF THE ARMORED CABLE TO THE INDIVIDUAL LIGHTING FIXTURES SHALL NOT BE MORE THAN 3" FROM THE FIXTURE BALLASTS.

FLEXIBLE METAL CONDUIT, LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ARMORED CABLE SHALL BE SECURED NO LESS THE EVERY 54" AND WITHIN 12" OF A JUNCTION BOX. IT IS NOT ACCEPTABLE TO LAY CABLES ON CEILING, DUCTWORK, ETC.

WHERE PERMITTED BY THE LOCAL AUTHORITY – ARMORED CABLE MAY BE USED INDOORS FOR INDIVIDUAL DROPS TO OUTLETS AND SWITCHES, WHERE CONCEALED IN WALLS AND PARTITIONS – PROVIDED THE FOLLOWING CONDITIONS ARE MET:

A. THE BRANCH CIRCUIT HOMERUN WIRING IS INSTALLED IN THE ACCESSIBLE CEILING PLENUM USING METAL CONDUIT.
B. JUNCTION BOXES ARE LOCATED IN THE ACCESSIBLE CEILING PLENUM ADJACENT TO THE ASSOCIATED WALLS OR PARTITIONS IN WHICH OUTLETS OR SWITCH LEGS ARE INSTALLED.
C. LENGTH OF ARMORED CABLE DROP IS NOT GREATER THAN 12'-0" FROM JUNCTION BOXES TO WIRING DEVICES WITHIN WALL.

ARMORED CABLE SHALL NOT BE USED FOR HOMERUN WIRING. HOMERUNS SHALL BE HARD PIPED WITH METAL CONDUIT.

OUTLET BOXES

IN GENERAL, UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS OR THE ELECTRICAL DRAWINGS, MOUNTING HEIGHTS SHALL BE AS FOLLOWS: (HEIGHTS SHOWN ARE ABOVE FINISHED FLOOR TO CENTER LINE OF OUTLET)

WALL SWITCHES	42 INCHES
RECEPTACLE, TELEPHONE AND DATA	18 INCHES
CLOCK OUTLETS	90 INCHES
RECEPTACLES (MOUNTED ABOVE A COUNTER)	42 INCHES
FIRE ALARM PULL STATIONS	42 INCHES
FIRE ALARM SYSTEM AUDIO/VISUAL STROBES	80 INCHES
FIRE ALARM SYSTEM VISUAL STROBES	80 INCHES
WALL MOUNTED TELEPHONE	42 INCHES

A. IN STANDARD PARTITIONS, WHERE 1/2" AND 3/4" CONDUITS ARE EMPLOYED: 4" SQUARE BY 2-1/8" DEEP BOXES WITH 1-GANG OR 2-GANG PLASTER COVERS SHALL BE USED, NO. 4SD-SPL.
B. IN THIN PARTITIONS MEASURING 3-1/2" OR LESS: 4" SQUARE BY 1-1/2" DEEP BOXES WITH 1-GANG OR 2-GANG PLASTER COVERS SHALL BE USED, NO. 4S-SPL.
C. IN STANDARD PARTITIONS, WHERE CONDUITS OF A SIZE GREATER THAN 3/4" ARE EMPLOYED: 4" SQUARE BY 2-1/8" DEEP BOXES WITH 1-GANG OR 2-GANG PLASTER COVERS SHALL BE USED, NO. 4SJD SERIES..

ALL METAL OUTLETS AND JUNCTION BOXES, EXCEPT WHERE OTHERWISE SPECIFIED, SHALL BE OF ONE PIECE CONSTRUCTION, AND SHALL BE PROTECTED AGAINST CORROSION BY AN APPROPRIATE SHERADIZING PROCESS.

ALL JUNCTION BOXES SHALL BE PROVIDED WITH COVERS OF THE SAME MANUFACTURER AS THE BOXES. THE TYPE OF COVER SELECTED SHALL MEET THE CONDITIONS IMPOSED IN EVERY CASE. ALL SUCH BOXES SHALL BE LEFT IN A NEAT, CLEAN AND WORKMANLIKE MANNER.

THE OUTLET BOXES SHALL BE LOCATED WHEREBY NO TWO (2) OUTLET BOXES ARE INSTALLED CLOSER THAN 24" ON CENTER, AND SECURELY ATTACHED TO THE PARTITION STUDS, WITH AT LEAST ONE (1) PARTITION STUD SEPARATING THE OUTLET BOXES. IT IS NOT ACCEPTABLE TO SECURE OUTLET BOXES ONLY TO DRYWALL PARTION.

OUTLET, SWITCH AND JUNCTION BOXES FOR VARIOUS USES SHALL BE AS MANUFACTURED BY APPLETON OR AN APPROVED EQUAL.

CONDUCTORS

ALL CONDUCTORS FURNISHED AND INSTALLED SHALL COMPLY WITH THE REQUIREMENTS AND LATEST REVISIONS OF THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL ELECTRICAL SAFETY CODE (NESC), STANDARDS OF THE UNDERWRITER'S LABORATORIES (UL), NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA), INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE).

ALL FEEDER AND BRANCH CIRCUIT CONDUCTORS SHALL BE SOFT DRAWN, ANNELAED COPPER, HAVING A CONDUCTIVITY OF NOT LESS THAN 98% OF THAT OF PURE COPPER, AND MEETING BEFORE STRANDING, THE REQUIREMENTS OF ASTM B-3, "STANDARD SPECIFICATIONS FOR SOFT OR ANNEALED COPPER WIRE FOR ELECTRICAL PURPOSES", LATEST EDITION.

UNLESS OTHERWISE SPECIFIED OR NOTES, ALL CONDUCTORS NO. 10 AND SMALLER SHALL BE SOLID COPPER THWN WITH AN INSULATING OUTER JACKET SUITABLE FOR CONDUCTOR TEMPERATURES OF 75°C, EXCEPT FOR NEC CLASS 1, 2, 3, CONDUCTORS WHICH MAYBE STRANDED IF TERMINATED AS REQUIRED HEREIN.

UNLESS OTHERWISE SPECIFIED OR NOTED, ALL CONDUCTORS NO. 8 AND LARGER SHALL BE THWN/THHN, 600 VOLT, STRANDED WITH A THERMOPLASTIC INSULATING COMPOUND AND AN OUTER JACKET (THWN/THHN ONLY) SUITABLE FOR CONDUCTOR TEMPERATURES OF 75°C. OR 90°C., INCLUSIVE. STRANDED WIRE SHALL BE TERMINATED AS SPECIFIED HEREIN.

IN THE CEILING AREAS OF EQUIPMENT ROOMS WHERE THE TEMPERATURE MAY EXCEED 102°F. UNDER OPERATING CONDITIONS, HIGHER TEMPERATURE INSULATION SHALL BE USED ON CONDUCTORS. ACCEPTABLE TYPES ARE RHH, THHN, AND XHHW.

IF IT COMPLIES WITH THESE SPECIFICATIONS, THE FOLLOWING CONDUCTOR MANUFACTURERS WILL BE ACCEPTABLE: AMERICAN, BRAND REX, CAROL, CABLEC, ESSEX, GENERAL ELECTRIC, ITT, PENN UNION, PIRELLI, TRIANGLE, OKONITE, SOUTHWIRE.

IF IT COMPLIES WITH THESE SPECIFICATIONS, CABLE LUGS AND TERMINATION FITTINGS MANUFACTURED BY ONE OF THE FOLLOWING WILL BE ACCEPTABLE: BLACKBURN, BURNDY, IDEAL, ILSCO, KEARNEY, MAC, THOMAS & BETTS, SQUARE D, AMP.

NO SPLICES OR TAPS SHALL BE MADE IN ANY CONDUCTOR EXCEPT IN OUTLET BOXES, JUNCTION BOXES, SPLICE BOXES, OR OTHER DEVICES AND EQUIPMENT IN EXPOSED AND ACCESSIBLE LOCATIONS APPROVED FOR THE PURPOSE BY THE LATEST EDITION OF THE NEC.

ALL NO. 10 AWG AND SMALLER SOLID CONDUCTORS SHALL BE SPLICED WITH PRE-INSULATED SPRING CONNECTORS. ALL NO. 10 AWG AND SMALLER STRANDED CONDUCTORS FOR NEC CLASS 1, 2, 3 WIRING SHALL BE TERMINATED WITH AMP 'PIDG' UL LISTED PREMIUM GRADE INSULATED FORK CONNECTORS, OR APPROVED EQUAL, AND SHALL BE SPLICES IN A JUNCTION BOX WITH AMP "PLASTIC-GRIP" UL LISTED STANDARD GRADE INSULATED BUTT SPLICES, OR APPROVED EQUAL.

ALL NO. 8 AWG AND LARGER COPPER CONDUCTORS SHALL BE CONNECTED WITH HIGH CONDUCTIVITY, WROUGHT COPPER, COLOR-KEYED COMPRESSION CONNECTORS. COMPRESSION CONNECTORS FOR ALL FEEDERS SHALL BE THOMAS & BETTS SERIES 54200, OR EQUAL, TWO-HOLE CONNECTORS.

ALL NO. 8 AWG AND LARGER COPPER CONDUCTORS WHICH ARE TO BE SPLICED OR TAPPED IN WIREWAYS, GUTTERS, OR JUNCTION BOXES SHALL BE SLICED OR TAPPED USING HYDRAULICALLY APPLIED, HIGH CONDUCTIVITY COMPRESSION CONNECTOR, T & B 54700, AND 3-M ELECTRICAL TAPE OR MANUFACTURED CONNECTOR COVERS APPROVED FOR THE PURPOSE.

GROUNDING

THE ELECTRICAL DISTRIBUTION SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE (NEC), AS SHOWN AND SPECIFIED, AND RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT PRODUCTS SERVE THE INTENDED FUNCTIONS.

WIRING DEVICES

DUPLEX RECEPTACLES WIRED TO "NORMAL" POWER CIRCUITS SHALL BE FLUSH, NEMA 5-20R, 20A, 125V, 3 WIRE, INTEGRAL ONE-PIECE AUTOMATIC GROUNDING BACKSTRAP, STYLE "WHITE" LEVITON #5362-W, OR APPROVED EQUAL, WITH MATCHING "WHITE" NYLON COVER PLATE.

GROUND FAULT CIRCUIT INTERRUPTION (GFI) DUPLEX RECEPTACLES WIRED TO "NORMAL" POWER CIRCUITS SHALL BE FLUSH, NEMA 5-20R, 20A, 125V, 2 POLE, 3 WIRE, DUPLEX, "WHITE" WITH NOMINAL SENSITIVITY TO EARTH LEAKAGE OF 4-6 MILLIAMPERES, AND FEED THROUGH CAPABILITIES. THE RECEPTACLES SHALL BE LEVITON #8899-W, OR APPROVED EQUAL, WITH MATCHING "WHITE" NYLON COVER PLATE.

PROVIDE TAMPER RESISTANT RECEPTACLES IN WAITING ROOMS, AND WHERE INDICATED ON PLANS. TAMPER RESISTANT RECEPTACLES SHALL BE LEVITON #16262-SGW WITH INTEGRAL, ONE PIECE, AUTOMATIC GROUNDING BACKSTRAP.

RECEPTACLES FOR WALL CLOCKS SHALL BE RECESSED, NEMA 5-15R, 15A, 125V, 3 WIRE, AUTOMATIC GROUNDING, "IVORY", LEVITON #628-I, OR APPROVED EQUAL, WITH MATCHING 302 STAINLESS STEEL WALL PLATE.

ALL LOCALLY SWITCHED NORMAL POWER LIGHTING CIRCUITS SHALL BE SUPPLIED WITH 20A, 120/277 VOLT, SPECIFICATION GRADE, AC QUIET, FED-SPEC RATED 50,000 CYCLES, DECORATOR STYLE "WHITE" TOGGLE TYPE SWITCHES, INTEGRAL ONE-PIECE AUTOMATIC GROUNDING BACKSTRAP AND MATCHING "WHITE" NYLON COVER PLATES, AS FOLLOW:

1. SINGLE POLE SWITCHES SHALL BE LEVITON #1221-2W.
2. DOUBLE POLE SWITCHES SHALL BE LEVITON #1222-2W.
3. THREE-WAY SWITCHES SHALL BE LEVITON #1223-2W.
4. FOUR-WAY SWITCHES SHALL BE LEVITON #1224-2W.

DEVICE PLATES FOR CONCEALED WORK FOR SINGLE AND MULTI-GANG SWITCHES AND RECEPTACLES SHALL BE "WHITE" NYLON TO MATCH THE DEVICE INDICATED, UNLESS SPECIFIED OTHERWISE. MULTI-GANG INSTALLATIONS SHALL BE PROVIDED WITH A COMMON COVER PLATE.

IN EXISTING ROOMS WHERE NEW OR ADDITIONAL WALL SWITCHES OR RECEPTACLES ARE BEING ADDED, THE COLOR OF THE DEVICE AND COVER PLATE SHALL MATCH THE EXISTING DEVICE AND COVER PLATES WITHIN THE SPACE.

WHERE WALL BOX INCANDESCENT DIMMER SWITCHES ARE INDICATED OR SPECIFIED, THEY SHALL BE 125 VOLT, SOLID-STATE, SPECIFICATION GRADE WITH COVER PLATE TO MATCH ADJACENT WIRING DEVICES, AS FOLLOWS:

1. 800W SINGLE POLE, LUTRON #NT-800.
2. 1000W SINGLE POLE, LUTRON # NT-1000.
3. 1500W SINGLE POLE, LUTRON # NT-1500.
4. 1500W SINGLE POLE, LOW VOLTAGE, LUTRON #NTLV-1500.

PANELBOARDS

PANELBOARDS SHALL BE GENERAL ELECTRIC TYPE AE OR AQ UNLESS OTHERWISE INDICATED.

TRANSFORMERS

TRANSFORMERS SHALL BE GENERAL ELECTRIC TYPE QL, RATED FOR 150 DEGREE CELSIUS TEMPERATURE RISE. TRANSFORMERS SHALL BE PROVIDED WITH RUBBER VIBRATION ISOLATION PADS.

DISCONNECT SWITCHES

FUSED AND NON-FUSED DISCONNECT SWITCHES SHALL BE GENERAL ELECTRIC TYPE THD WITH REJECTION TYPE FUSE CLIPS.

MOTOR CONTROLLERS

MOTOR CONTROLLERS SHALL BE GENERAL ELECTRIC CR300 SERIES AS REQUIRED TO OPERATE THE MOTOR LOAD. PROVIDE 120 VOLT CONTROL TRANSFORMER, GREEN RUNNING PILOT LIGHT, AND TWO AUXILIARY CONTACTS (N.O., N.C.).

HVAC CONTROL WIRING MAY BE RUN IN CONDUIT OR PLENUM RATED CABLE IF INDEPENDENTLY SUPPORTED FROM STRUCTURE. IT IS NOT ACCEPTABLE TO LAY CONDUCTOR ON TOP OF CEILING.

LIGHT FIXTURES

FURNISH AND INSTALL FLUORESCENT LIGHTING FIXTURES OF THE TYPES SCHEDULED ON THE DRAWINGS. FIXTURE MANUFACTURES SHALL BE AS SCHEDULED ON THE DRAWINGS. FIXTURES SHALL BE FURNISHED WITH ALL REQUIRED ACCESSORIES AND TRIM AS REQUIRED FOR A COMPLETE INSTALLATION IN THE CEILING TYPE SHOWN ON THE ARCHITECTURAL DRAWINGS.

FLUORESCENT FIXTURES SHALL BE COMPLETE WITH LAMPS OF THE TYPES, COLOR, WATTAGE, AND SIZE INDICATED ON THE LIGHTING FIXTURE SCHEDULE. LAMPS SHALL BE MANUFACTURED BY GENERAL ELECTRIC, PHILLIPS, OR SYLVANIA. INITIAL LUMEN OUTPUT SHALL BE 2900 LUMENS MINIMUN FOR F0032T8 LAMPS AND 3150 LUMENS MINIMUM FOR F400T12 LAMPS.

FLUORESCENT FIXTURES INDICATED TO BE PROVIDED WITH ELECTRONIC BALLASTS SHALL BE COMPLETE WITH PARALLEL WIRED, CLASS "P" COMPLYING WITH NEMA AND FCC LIMITS GOVERNING EMI AND RFI.

ELECTRONIC BALLASTS SHALL COMPLY WITH ANSI STANDARDS FOR HARMONIC DISTORTION AND SURGE PROTECTION. BALLAST CASE OPERATING TEMPERATURE SHALL NOT EXCEED 60°C. ELECTRONIC BALLASTS SHALL BE CAPABLE OF STARTING AT TEMPERTURES OF 0°F OR HIGHER. INPUT WATTS SHALL NOT EXCEED 62 WATTS FOR 2-LAMP BALLAST, AND 42 WATTS FOR A 1-LAMP BALLAST WITH FO32T8 LAMPS. POWER FACTOR SHALL NOT BE LESS THAN .95. ELECTRONIC BALLASTS SHALL BE OF U.S. MANUFACTURE AND CARRY A 3-YEAR WARRANTY WITH UP TO $10 REPLACEMENT LABOR ALLOWANCE. BALLASTS MANUFACTURED BY MAGNETEK TRIAD, ADVANCE, VALMONT, MOTOROLA, AND UNIVERSAL WILL BE ACCEPTABLE IF THEY COMPLY WITH THESE SPECIFICATION.

DEMOLITION:

ALL EXISTING TENANT MEP ELEMENTS, WITHIN THE PROJECT AREA NOT SHOWN ON THESE DRAWINGS TO BE REUSED, SHALL BE REMOVED. ELECTRICAL CONDUCTORS AND CONDUIT SHALL BE REMOVED BACK TO THEIR SOURCE. PIPING AND DUCT-WORK SHALL BE REMOVED BACK TO THE NEAREST ACTIVE SECTION WHICH SHALL BE PATCHED/CAPPED AND REINSULATED. ALL ABANDONED DUCTS, PIPING AND CONDUIT SHALL BE REMOVED. MEP ELEMENTS WHICH PASS THROUGH THE PROJECT AREA TO SERVE ADJACENT AREAS SHALL REMAIN IN SERVICE UNLESS NOTED OTHERWISE.

Kirksey
ARCHITECTURE

6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

WYLIE
CONSULTING ENGINEERS

6161 Savoy, Suite 700 Houston, Texas 77036 713.781.2526
wylieassociates.com Wylie Project No. 11098.00
Wylie Consulting Engineers Firm Registration No. 1869

STATE OF TEXAS
ERIC JAMES RICHIE
102354
LICENSED
PROFESSIONAL ENGINEER

NO.	DATE	ISSUE
01	22 JUNE 2011	PRICING, PERMIT & CONSTR.

PROJECT NAME
MHHS SW POB
DR VANN

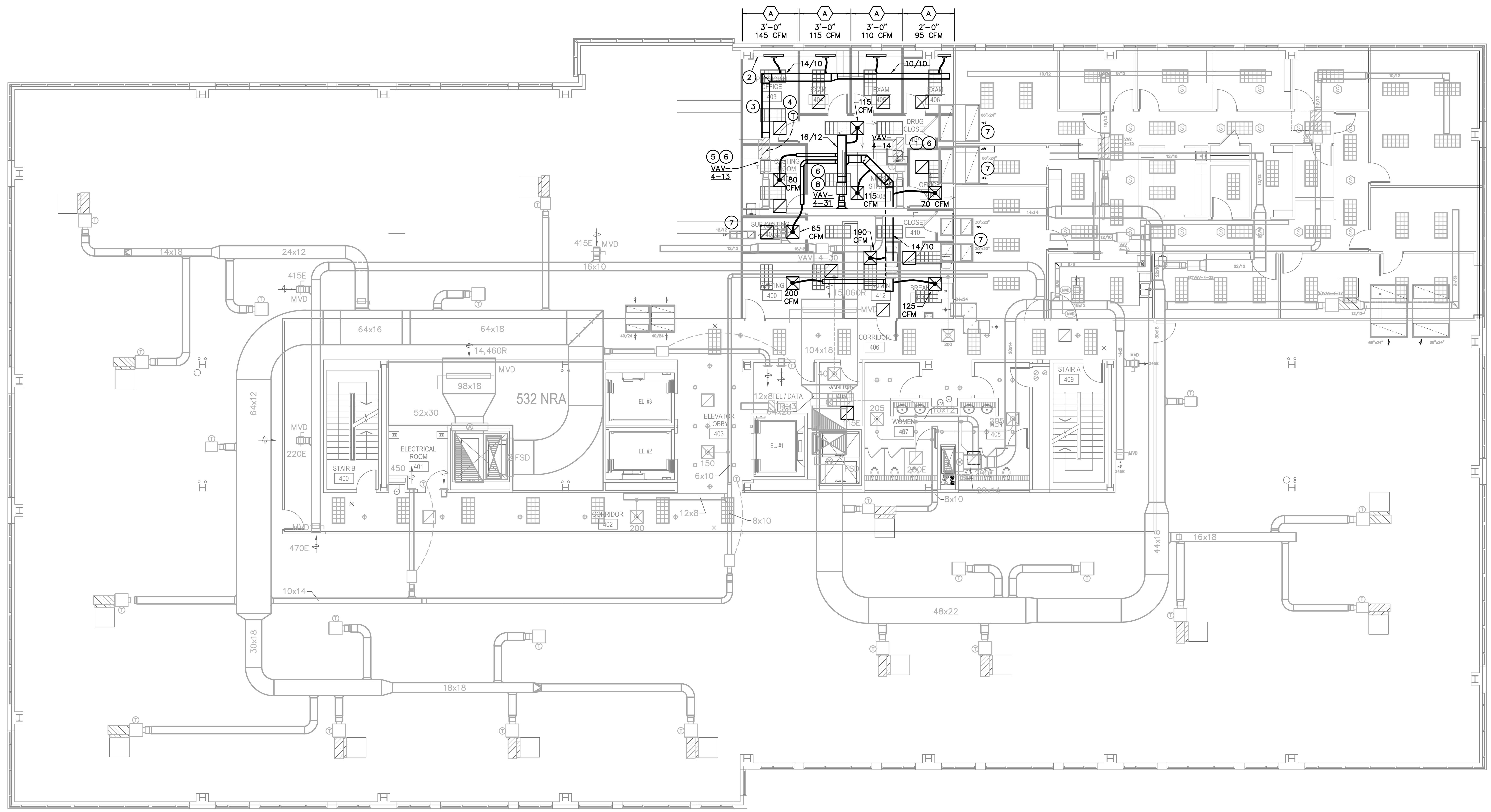
PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE
MEP Specifications

SHEET NUMBER
MEP1.20



SCHEDULE OF VARIABLE AIR VOLUME DEVICES

TERMINAL TYPE	AIR QUANTITY MINIMUM (CFM)	AIR QUANTITY MAXIMUM (CFM) @0.25" W.G.	MINIMUM INLET DIAMETER (IN)	MAXIMUM DEPTH (IN)	MANUFACTURER/ BASIS FOR DESIGN	REMARKS/ NOTES
A	75	225	5	--	MATCH EXISTING	
B	230	400	6	--	MATCH EXISTING	
C	405	650	8	--	MATCH EXISTING	
D	655	1100	10	--	MATCH EXISTING	
E	1105	1600	12	--	MATCH EXISTING	
F	1605	2100	16	--	MATCH EXISTING	

NOTES:

1. REFER TO SCHEDULE TITLED "VARIABLE VOLUME DEVICE ALLOCATION TABLE" FOR SIZE AND ADDITIONAL INFORMATION.

DIFFUSER SCHEDULE / LEGEND

DIFFUSER DESIGNATION	DESCRIPTION
A	**SLOT DIFFUSER:** STEEL SLOT SUPPLY DIFFUSER. LENGTH AS NOTED ON PLANS. 3/4" SUPPLY SLOT. (50 CFM PER LINEAL FOOT MAX.) (NOTE #1)
B	**PANEL FACE SUPPLY AIR DEVICE:** PANEL FACE CEILING SUPPLY DEVICE 12"x12" OR 24"x24"FACE AREA. AIR PATTERN SHALL BE 4-WAY THROW UNLESS OTHERWISE NOTED ON DRAWINGS. REFER TO ARCHITECTURAL DRAWING FOR CEILING TYPE & CONSTRUCTION DETAILS. FLEX SUPPLYING DIFFUSER TO BE SAME AS NECK SIZE. (NOTE #1,2,3)
C	**PANEL FACE RETURN AIR DEVICE:** PANEL FACE CEILING EXHAUST/RETURN DEVICE 12"x12" OR 24"x24" FACE AREA. REFER TO ARCHITECTURAL DRAWING FOR CEILING TYPE & CONSTRUCTION DETAILS. FLEX SUPPLYING DIFFUSER TO BE SAME AS NECK SIZE. (NOTE #1,2,3)

NOTE:

1. REFER TO SPECIFICATION SHEET FOR DEVICE DESCRIPTION.
2. ALL DEVICES SHALL HAVE WHITE BAKED ENAMEL EXTERIOR FINISH AND FLAT BLACK INTERIOR FINISH EXCEPT TYPE "A", WHICH SHALL HAVE FLAT BLACK FINISH ON ALL SURFACES EXPOSED TO VIEW. PROVIDE SUBMITTALS ON ALL AIR DISTRIBUTION DEVICES TO BE FURNISHED.
3. FOR 3-WAY, 2-WAY AND 1-WAY THROW PROVIDE OPTIONAL BLOW CLIPS MODEL "BP".

VARIABLE VOLUME DEVICE ALLOCATION TABLE

UNIT DESIGNATION VAV- (5)	TERMINAL TYPE (1)	MINIMUM SET CFM (2) (8)	MAXIMUM SET CFM (3) (9)	HEATING COIL DATA: HEATING CAPACITY (BTUH)	HEATING COIL DATA: ELECTRICAL INPUT (KW)	HEATING COIL DATA: STEPS	UNIT ELECTRICAL POWER (V/PH)
4-13	(E)	465	465	(4)	(4)	(4)	(4)
4-14	(E)	(6)	(6)	(7)	(7)	(7)	(7)
4-31	(N) D	555	960	10,240	3.0	1	277/1

NOTES:

1. EQUIPMENT DESIGNATED WITH "(E)" IS EXISTING EQUIPMENT. MODIFY AND RELOCATE AS INDICATED ON PLAN.
2. FOR EXISTING UNITS THIS AIR QUANTITY IS TO BE USED BY THE CONTRACTOR TO RESET THE MINIMUM SUPPLY AIR VOLUME IN THE FIELD. FOR NEW UNITS THIS AIR QUANTITY IS TO BE USED BY THE MANUFACTURER TO PRESET THE MINIMUM SUPPLY AIR VOLUME.
3. FOR EXISTING UNITS THIS AIR QUANTITY IS TO BE USED BY THE CONTRACTOR TO RESET THE MAXIMUM SUPPLY AIR VOLUME IN THE FIELD. FOR NEW UNITS THIS AIR QUANTITY IS TO BE USED BY THE MANUFACTURER TO PRESET THE MAXIMUM SUPPLY AIR VOLUME.
4. EXISTING HEATER TO REMAIN AS IS.
5. EQUIPMENT NUMBER SHOWN IS FOR REFERENCE ON THESE PLANS ONLY; LABEL BOX IN ACCORDANCE WITH BASE BUILDING FIELD NUMBERING SCHEME, AND PROVIDE BOX LABEL NUMBER TO ENGINEER.
6. NOT IN USE; SEE KEYED NOTE 1 THIS SHEET.
7. DISCONNECT EXISTING HEATER AND LEAVE IN PLACE FOR FUTURE.
8. FOR NEW UNITS THIS AIR QUANTITY IS TO BE USED BY THE MANUFACTURER TO PRESET THE MINIMUM SUPPLY AIR VOLUME.
9. FOR NEW UNITS THIS AIR QUANTITY IS TO BE USED BY THE MANUFACTURER TO PRESET THE MAXIMUM SUPPLY AIR VOLUME.

SCHEDULE OF NECK SIZES

CFM RANGE	SQUARE NECK SIZE	ROUND NECK SIZE
0 - 125	6 X 6	6"ø
130 - 220	8 X 8	8"ø
225 - 345	10 X 10	10"ø
350 - 500	12 X 12	12"ø
505 - 750	15 X 15	14"ø
755 - 850	16 X 16	15"ø

MECHANICAL KEYED NOTES:

1. EXISTING BOX SHALL BE MARKED "NOT IN USE" AND SHALL REMAIN FOR FUTURE USE. ADJUST PRIMARY AIR DAMPER ACCORDING TO BUILDING ENGINEERING INSTRUCTIONS. REPROGRAM BUILDING AUTOMATION SYSTEM TO INDICATE STATUS ON BUILDING ENGINEER'S GRAPHICAL INTERFACE. COORDINATE WITH ELECTRICAL TO DISCONNECT POWER SOURCE. CAP AND SEAL BOX OPENING AIR TIGHT.
2. ARCHITECTURAL SLOT SHOWN FOR COORDINATION ONLY. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND CONSTRUCTION. BLANK OFF UNUSED PORTION OF SLOT WITH FLAT BLACK SHEET METAL PLATE.
3. NEW SECONDARY SUPPLY DUCTWORK. EXTERNALLY INSULATE SECONDARY SUPPLY AIR DUCT PER SPECIFICATIONS.
4. LOCATE THERMOSTAT ON WALL. COORDINATE FINAL LOCATION WITH ARCHITECT/TENANT PRIOR TO INSTALLATION.
5. RELOCATE EXISTING VAV BOX AS NECESSARY TO COORDINATE WITH NEW WALLS AND MAINTAIN REQUIRED CLEARANCES AND SUFFICIENT SPACE FOR ACCESS TO CONTROL PANEL. REBALANCE TO AIR QUANTITIES INDICATED. REFER TO DETAILS.
6. EQUIPMENT NUMBER SHOWN IS FOR REFERENCE ON THESE PLANS ONLY; LABEL BOX IN ACCORDANCE WITH BASE BUILDING FIELD NUMBERING SCHEME, AND PROVIDE BOX LABEL NUMBER TO ENGINEER.
7. EXISTING RETURN AIR BOOT TO REMAIN. RELOCATE AS REQUIRED TO ACCOMMODATE NEW INSTALLATIONS.
8. NEW VAV BOX TO MATCH EXISTING. REFER TO SCHEDULE. PROVIDE NEW TAP TO EXISTING DUCT. REFER TO DETAILS.

MECHANICAL GENERAL NOTES:

1. CONTRACTOR SHALL OBTAIN A COPY OF MEMORIAL HERMANN SOUTHWEST P.O.B. IV BUILDING SPECIFICATIONS AND STANDARDS FROM BUILDING MANAGER, PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. DRAWINGS ARE SCHEMATIC IN NATURE; VERIFY DIMENSIONS AND EQUIPMENT LOCATIONS IN THE FIELD.
3. ALL EXTERIOR LINEAR SLOT DIFFUSERS SHALL BE TYPE "A" UNLESS NOTED OTHERWISE.
4. ALL SUPPLY AIR GRILLES SHALL BE TYPE "B" UNLESS NOTED OTHERWISE.
5. ALL RETURN/EXHAUST AIR GRILLES SHALL BE TYPE "C" UNLESS NOTED OTHERWISE.
6. ALL 12"x12" GRILLES SHALL BE CENTERED IN ARCHITECTURAL CEILING TILES.
7. EXISTING BASE BUILDING EQUIPMENT, DUCTWORK, PIPING, ETC., IS SHOWN SCREENED. ALL NEW EQUIPMENT, DUCTWORK, PIPING, ETC., IS SHOWN AS SOLID LINES.
8. PROVIDE EXTERNAL DUCT LINER ON ALL NEW SUPPLY AND RETURN AIR DUCTWORK.
9. FLEXIBLE DUCTWORK LENGTHS SHALL NOT EXCEED 8'-0". USE INSULATED RIGID ROUND DUCTWORK WHERE REQUIRED. SIZE ALL NEW FLEXIBLE DUCTWORK CONNECTIONS TO AIR DEVICES SHOWN ON THE DRAWING ACCORDING TO THE NECK SIZE SCHEDULE.
10. COORDINATE DUCTWORK WITH NEW DOWNLIGHTS. USE LOW CLEARANCE DIFFUSERS WHERE REQUIRED DUE TO LOW DUCT CLEARANCE. COORDINATE WITH ARCHITECT WHERE DOWNLIGHTS CANNOT BE ACCOMMODATED.
11. CONTRACTOR SHALL VERIFY EXACT LOCATION AND CONFIGURATION OF EXISTING INSTALLATIONS. CONTRACTOR SHALL COMPLY WITH MEMORIAL HERMANN SOUTHWEST P.O.B. IV BUILDING STANDARDS AND SPECIFICATIONS.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING WORKING CLEARANCES OF EXISTING AND NEW EQUIPMENT FREE OF PIPING, CONDUIT, DUCTS AND OTHER OBSTRUCTIONS. REFER TO BASE BUILDING DETAILS.
13. UPON COMPLETION OF THE INSTALLATION OF THE AIR SYSTEM COMPONENTS, THE SUPPLY, RETURN, EXHAUST AND OUTSIDE AIR VOLUME FOR EACH AIR HANDLING UNIT, SUPPLY FAN, VARIABLE AIR VOLUME BOX, EXHAUST FAN, AND THE SUPPLY, EXHAUST OR RETURN AIR VOLUME FOR EACH AIR DISTRIBUTION DEVICE SHALL BE ADJUSTED TO WITHIN 5% OF DESIGN AIR FLOW. AN INDEPENDENT, NEBB CERTIFIED AIR BALANCE CONTRACTOR SHALL PERFORM THE AIR BALANCE AND SHALL SUBMIT A REPORT TO THE ENGINEER, INDICATING AIR QUANTITIES AT ALL AIR HANDLING EQUIPMENT AND AIR DISTRIBUTION DEVICES, FAN SPEEDS AND MEASURED MOTOR AMPERAGE. THE REPORT SHALL SHOW DESIGN QUANTITIES AND MEASURED QUANTITIES.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATING MECHANICAL SYSTEMS THAT CONFLICT WITH NEW ARCHITECTURAL FEATURES, INCLUDING WALLS, DEMISING WALLS, LIGHT FIXTURES, ETC. ALSO, RELOCATE EXISTING SYSTEMS AS NECESSARY TO MAINTAIN RECOMMENDED CLEARANCES.

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

N

Kirksey ARCHITECTURE

6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

WYLIE CONSULTING ENGINEERS

6161 Savoy, Suite 700 Houston, Texas 77036 713.781.2526
wylieassociates.com Wylie Project No. 11098.00
Wylie Consulting Engineers Firm Registration No. 1869

STATE OF TEXAS — ERIC JAMES RICHIE — 102354 — LICENSED PROFESSIONAL ENGINEER

NO.	DATE	ISSUE
01	22 JUNE 2011	PRICING, PERMIT & CONSTR.

PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE
Mechanical
Floor Plan

SHEET NUMBER
M2.10

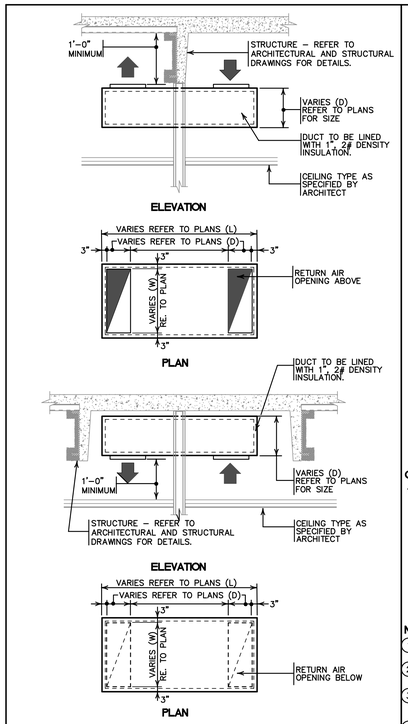
LEGEND OF MECHANICAL SYMBOLS

SYMBOL	DESCRIPTION (AIR SIDE)	SYMBOL	DESCRIPTION (WATER SIDE)
	SUPPLY DUCT UP	—CHWS—	CHILLED WATER SUPPLY
	SUPPLY DUCT DOWN	—CHWR—	CHILLED WATER RETURN
	RETURN OR EXHAUST DUCT UP	—SCHWS—	SECONDARY CHILLED WATER SUPPLY
	RETURN OR EXHAUST DUCT DOWN	—SCHWR—	SECONDARY CHILLED WATER RETURN
	SQUARE TO ROUND TRANSITION	—CWS—	CONDENSER WATER SUPPLY
	AIR EXTRACTOR WITHOUT ADJUSTABLE OPERATOR	—CWR—	CONDENSER WATER RETURN
	SCOOP TYPE SPLITTER DAMPER	—HWS —	HEATING HOT WATER SUPPLY
	SQUARE ELBOW WITH TURNING VANES.	—HWR —	HEATING HOT WATER RETURN
	RADIUS ELBOW WITHOUT TURNING VANES.	HTHWS	HIGH TEMPERATURE HEATING HOT WATER SUPPLY
	RADIUS ELBOW WITH TURNING VANES.	HTHWR	HIGH TEMPERATURE HEATING HOT WATER RETURN
	SPLITTER DAMPER	—S—	STEAM SUPPLY
	SUPPLY SIDEWALL REGISTER	—5#S—	5 PSIG STEAM SUPPLY
	RETURN OR EXHAUST SIDEWALL REGISTER	—50#S—	50 PSIG STEAM SUPPLY
MVD	MANUAL VOLUME DAMPER	—250#S—	250 PSIG STEAM SUPPLY
AD	AUTOMATIC DAMPER	—HCR—	HIGH PRESSURE CONDENSATE RETURN
AFD	AUTOMATIC FIRE/SMOKE DAMPER W/ ACCESS DOOR	—PCR—	PUMPED STEAM CONDENSATE RETURN
FD/B	FIRE DAMPER TYPE "B" WITH ACCESS DOOR	—CR—	STEAM CONDENSATE RETURN
FD/C	FIRE DAMPER TYPE "C" WITH ACCESS DOOR	—D—	DRAIN LINE
BDD	BACK DRAFT DAMPER		DIRECTION OF FLOW
TS	ELECTRONIC TEMPERATURE SENSOR		PIPE RISING
T	THERMOSTAT		PIPE TURNING DOWN
FS	FIRESTAT		VALVE ON RISER
H	HUMIDISTAT		CONCENTRIC REDUCER
SD	SMOKE DETECTOR		ECCENTRIC REDUCER
P	PRESSURE SENSOR	FS	FLOW SWITCH
	ELECTRIC DUCT HEATER WITH ACCESS DOOR		PITCH PIPE DOWN IN DIRECTION OF ARROW
HR	HEATING HOT WATER COIL WITH ACCESS DOOR		THERMOMETER AND WELL
	FLEXIBLE CONNECTION		THERMOMETER WELL
XX	FAN POWERED TERMINAL UNIT DESIGNATION.		PRESSURE/TEMPERATURE TEST PLUG
CHW / 1	CHILLED WATER RISER		PRESSURE GAGE WITH GAGE COCK
CW / 1	CONDENSER WATER RISER		GAGE COCK
HW / 1	HEATING HOT WATER RISER		PIPE ANCHOR
CR / 1	CONDENSATE RETURN RISER		UNION
TE / 1	TOILET EXHAUST RISER		AUTOMATIC AIR VENT
SE / 1	SMOKE EXHAUST RISER		"Y" TYPE STRAINER
KE / 1	KITCHEN EXHAUST RISER	F.D.	FLOOR DRAIN. REFER TO PLUMBING DRAWINGS
SA / 1	SUPPLY AIR RISER		STOP VALVE
RA / 1	RETURN AIR RISER		BASKET TYPE STRAINER
FCU	FAN COIL UNIT		STRAIGHT THROUGH CONTROL VALVE
FPTU	FAN POWERED TERMINAL UNIT		3-WAY CONTROL VALVE
PRV	PRESSURE RELIEF VALVE		SWING CHECK VALVE
TRV	TEMPERATURE RELIEF VALVE		FLOWMETER, ORIFICE
N.I.C.	NOT IN CONTRACT		BUTTERFLY VALVE
E.S.	EQUAL SPLIT		BALL VALVE
O.A.	OUTSIDE AIR		FLOWMETER, VENTURI
R.A.	RETURN AIR		PRESSURE RELIEF VALVE
S.A.	SUPPLY AIR	PRV	PRESSURE REDUCING STATION
C.F.M.	CUBIC FEET PER MINUTE	T / B	INVERTED BUCKET TRAP
E.A.	EXHAUST AIR	T / T	"F" AND "T" TRAP
T.E.	TOILET EXHAUST	T	TEMPERATURE SENSOR
P.R.V.	PRESSURE REDUCING VALVE	FM	FLOW METER
N.O.	NORMALLY OPEN	P	PRESSURE SENSOR
N.C.	NORMALLY CLOSED	DP	DIFFERENTIAL PRESSURE SENSOR
AHU	AIR HANDLING UNIT		NEW POINT OF CONNECTION

NOTES:

1. ALL SYMBOLS MAY NOT BE USED ON THIS DRAWINGS.

SYMBOL	DESCRIPTION
	NEW DUCTWORK
	EXISTING DUCTWORK TO REMAIN IN PLACE.
	EXISTING DUCTWORK RELOCATED.
	EXISTING DUCTWORK TO BE REMOVED
	EXISTING DUCTWORK WITH EXISTING SPIN-IN CONNECTION, FLEXIBLE DUCT AND TROFFER DIFFUSER. (TROFFER DIFFUSER TO REMAIN IN PLACE.)
	EXISTING DUCTWORK WITH NEW SPIN-IN CONNECTION, NEW FLEXIBLE DUCT AND NEW TROFFER DIFFUSER. (MAXIMUM FLEXIBLE DUCT LENGTH TO BE 8'-0")
	EXISTING DUCTWORK WITH EXISTING SPIN-IN CONNECTION, NEW FLEXIBLE DUCT AND NEW TROFFER DIFFUSER. (MAXIMUM FLEXIBLE DUCT LENGTH TO BE 8'-0")
	EXISTING DUCTWORK WITH EXISTING SPIN-IN CONNECTION, EXISTING FLEXIBLE DUCT AND EXISTING SLOT DIFFUSER.
RELOCATE	EXISTING DUCT WORK WITH EXISTING SPIN-IN CONNECTION, NEW FLEXIBLE DUCT AND EXISTING SLOT DIFFUSER. RELOCATE EXISTING SLOT DIFFUSER IF CONFLICT EXISTS BETWEEN EXISTING SLOT DIFFUSER AND NEW PARTITION LAYOUT. (MAXIMUM FLEXIBLE DUCT LENGTH TO BE 8'-0")
	EXISTING DUCTWORK WITH NEW SPIN-IN CONNECTION, NEW FLEXIBLE DUCT AND NEW SLOT DIFFUSER.
	EXISTING SLOT DIFFUSER SHOWN DASHED & SCREENED TO BE REMOVED (RETURN TO OWNER'S STOCK) ALL EXISTING SPIN-IN CONNECTIONS NOT USED SHALL BE REMOVED AND DUCTWORK SHALL BE PATCHED WITH SHEETMETAL, SEALED AND RE-INSULATED TO MATCH EXISTING.
	EXISTING DUCTWORK WITH NEW SPIN-IN CONNECTION, NEW FLEXIBLE DUCT AND NEW SUPPLY AIR DEVICE. (MAXIMUM FLEXIBLE DUCT LENGTH TO BE 8'-0")
	EXISTING DUCTWORK WITH EXISTING SPIN-IN CONNECTION, NEW FLEXIBLE DUCT & NEW SUPPLY AIR DEVICE. (MAXIMUM FLEXIBLE DUCT LENGTH TO TO BE 8'-0")
RELOCATE	EXISTING DUCT WORK W/ EXISTING SPIN-IN CONNECTION, NEW FLEXIBLE DUCT AND EXISTING SUPPLY AIR DEVICE. ALL SUPPLY AIR DEVICES ARE SHOWN AS NEW DEVICE. EXISTING DEVICES MAY BE REUSED WHERE AVAILABLE. (REFER TO MECHANICAL GENERAL NOTES FOR ADDITIONAL INFORMATION.) (MAXIMUM FLEXIBLE DUCT LENGTH TO BE 8'-0".)
	NEW SUPPLY AIR DEVICE (REFER TO SPECIFICATION OR PLAN NOTES FOR SUPPLY AIR DEVICE TYPE.)
	NEW RETURN/EXHAUST AIR DEVCE (REFER TO SPECIFICATION OR PLAN NOTES FOR RETURN/EXHAUST AIR DEVICE TYPE.)
	EXISTING SUPPLY AIR DEVICE
	EXISTING RETURN/EXHAUST AIR DEVICE
	SQUARE TO ROUND TAP. (PROVIDE SQUARE TO ROUND TAP WHERE FLEXIBLE DUCT SIZE EXCEEDS DIMENSION OF RECTANGULAR DUCT. (SEE DETAIL)
	AIR DEVICE WITH INSULATED SHEETMETAL PLENUM FOR LOW CLEARANCE INSTALLATION. TYPICAL FOR SUPPLY AND RETURN/EXHAUST AIR DEVICES. (SEE DETAIL)



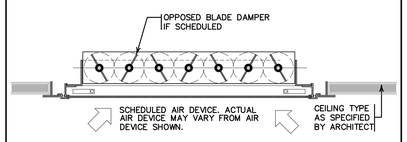
NOTES:

1. INTERNALLY LINED RETURN AIR DUCT SECTION (LINED W/ 1", 2# DENSITY INSULATION) THROUGH PARTITION ABOVE CEILING. PLENUM AND OPENING SHALL BE OF THE INDICATED SIZE. OPENINGS ON EACH SIDE OF PARTITION SHALL BE PROVIDED IN TOP OR BOTTOM OF PLENUM AS SHOWN. END SHALL BE CAPPED, LINED AND SEALED. REFER TO PLANS FOR RETURN AIR BOOT SIZE AND OPENING LOCATION.

#M-DET015

08 RETURN AIR BOOT DETAIL

SCALE: NONE



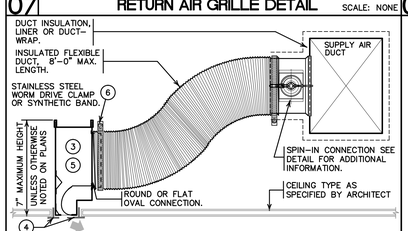
NOTES:

1. RETURN/EXHAUST AIR GRILLE SHALL BE INSTALLED SUCH THAT THE FACE OF THE GRILLE IS FLUSH WITH CEILING.
2. REFER TO DIFFUSER SCHEDULE FOR ADDITIONAL INFORMATION.
3. REFER TO ARCHITECTURAL DRAWING FOR CEILING TYPE AND CONSTRUCTION DETAILS.

#M-DET049

07 RETURN AIR GRILLE DETAIL

SCALE: NONE



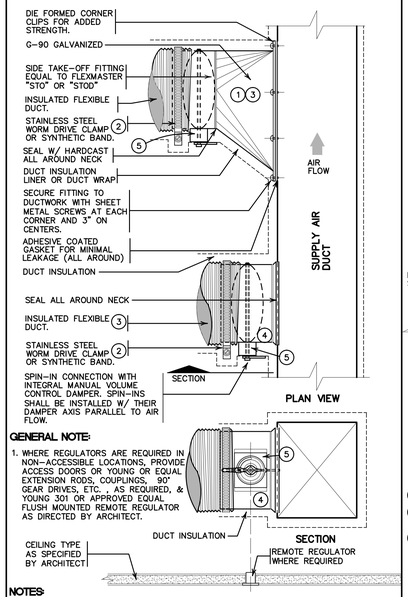
NOTES:

1. ALL EXPOSED SURFACES ARE TO BE PAINTED FLAT BLACK.
2. SUPPORT FLEXIBLE DUCT FROM STRUCTURE AS SPECIFIED. DUCT SHALL NOT KINK, SAG OR REST ON LIGHT FIXTURES, CEILING SUPPORT TEES OR TILE.
3. FOR UNCONDITIONED CEILING PLENUMS, INSULATE ENTIRE BACK OF SLOT DIFFUSER WITH 2" DUCT WRAP AND SEAL WITH VAPOR BARRIER TAPE.
4. CEILING "TEE" BY OTHERS.
5. SLOT DIFFUSER (SUPPY ONLY) REFER TO DIFFUSER SCHEDULE FOR ADDITIONAL INFORMATION.
6. EXTEND INSULATION AND OUTER JACKET OVER THE SECURE CLAMP/BAND AND TAPE DOWN TO SLEEVE/COLLAR TO MAINTAIN VAPOR BARRIER INTEGRITY. (TYPICAL)

#M-DET010

06 SLOT DIFFUSER (SD) DETAIL

SCALE: NONE



GENERAL NOTE:

1. WHERE REGULATORS ARE REQUIRED IN NON-ACCESSIBLE LOCATIONS, PROVIDE ACCESS DOORS OR YOUNG OR EQUAL EXTENSION RODS, COUPLINGS, 90° GEAR DRIVES, ETC., AS REQUIRED, & YOUNG 301 OR APPROVED EQUAL FLUSH MOUNTED REMOTE REGULATOR AS DIRECTED BY ARCHITECT.

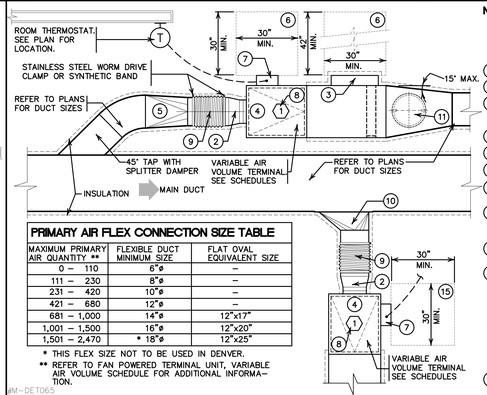
NOTES:

1. PROVIDE SQUARE TO ROUND TAP WHERE FLEXIBLE DUCT SIZE EXCEEDS DIMENSION OF RECTANGULAR DUCT.
2. EXTEND INSULATION AND OUTER JACKET OVER THE SECURE CLAMP/BAND AND TAPE DOWN TO SLEEVE/COLLAR TO MAINTAIN VAPOR BARRIER INTEGRITY. (TYPICAL)
3. PROVIDE DAMPER IF TAP SERVES AN AIR DISTRIBUTION DEVICE. NO DAMPER IS REQUIRED IF TAP SERVES A VARIABLE AIR VOLUME TERMINAL (VAV) OR FAN POWERED TERMINAL UNIT (FPTU).
4. RIGID ROUND DAMPERS SHALL BE "FLEXMASTER" SLBO RAISED PLATFORM.
5. FILL RAISED PLATFORM WITH LOOSE FIBERGLASS INSULATION.

#M-DET038

05 ROUND TAP DETAIL

SCALE: NONE



PRIMARY AIR FLEX CONNECTION SIZE TABLE

MAXIMUM PRIMARY AIR QUANTITY **	FLEXIBLE DUCT MINIMUM SIZE	FLAT OVAL EQUIVALENT SIZE
0 – 110	6"ø	–
111 – 230	8"ø	–
231 – 420	10"ø	–
421 – 680	12"ø	–
681 – 1,000	14"ø	12"x17"
1,001 – 1,500	16"ø	12"x20"
1,501 – 2,470	* 18"ø	12"x25"

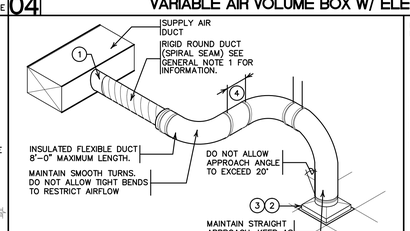
* THIS FLEX SIZE NOT TO BE USED IN DENVER.

** REFER TO FAN POWERED TERMINAL UNIT, VARIABLE AIR VOLUME SCHEDULE FOR ADDITIONAL INFORMATION.

#M-DET065

04 VARIABLE AIR VOLUME BOX W/ ELECTRIC HEATING COIL INSTALLATION DETAIL

SCALE: NONE



GENERAL NOTES:

1. RIGID ROUND DUCT WITH LONGITUDINAL SEAM NOT TO BE USED.

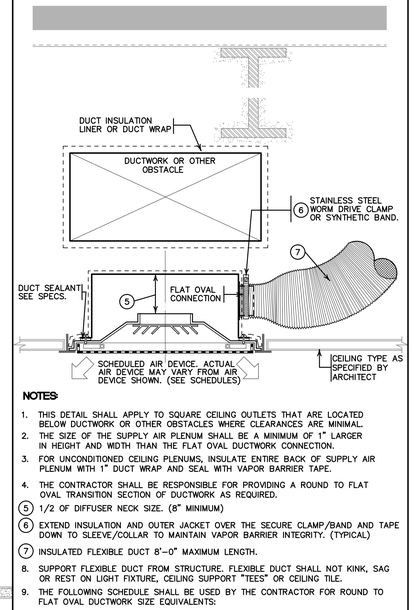
KEYED NOTES:

1. REFER TO ROUND TAP DETAIL FOR ADDITIONAL INFORMATION.
2. REFER TO CEILING DIFFUSER INSTALLATION DETAIL FOR ADDITIONAL INFORMATION.
3. REFER TO CEILING DIFFUSER SIZING SCHEDULE FOR DIFFUSER TYPE, AIR QUANTITY AND SUPPLY CONNECTION SIZE.
4. 5'-0" MAXIMUM DISTANCE PER DUCT SUPPORT. MAXIMUM SAG 1/2" PER FOOT OF SUPPORT SPACING. STRAP FLEXIBLE DUCT TO STRUCTURE FOR SUPPORT. KEEP AS HIGH AS POSSIBLE TO MAXIMIZE STRAIGHT APPROACH.

#M-DET084

03 FLEXIBLE DUCT APPROACH TO DIFFUSER

N.T.S.



NOTES:

1. THIS DETAIL SHALL APPLY TO SQUARE CEILING OUTLETS THAT ARE LOCATED BELOW DUCTWORK OR OTHER OBSTACLES WHERE CLEARANCES ARE MINIMAL.
2. THE SIZE OF THE SUPPLY AIR PLENUM SHALL BE A MINIMUM OF 1" LARGER IN HEIGHT AND WIDTH THAN THE FLAT OVAL DUCTWORK CONNECTION.
3. FOR UNCONDITIONED CEILING PLENUMS, INSULATE ENTIRE BACK OF SUPPLY AIR PLENUM WITH 1" DUCT WRAP AND SEAL WITH VAPOR BARRIER TAPE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A ROUND TO FLAT OVAL TRANSITION SECTION OF DUCTWORK AS REQUIRED.
5. 1/2 OF DIFFUSER NECK SIZE. (8" MINIMUM)
6. EXTEND INSULATION AND OUTER JACKET OVER THE SECURE CLAMP/BAND AND TAPE DOWN TO SLEEVE/COLLAR TO MAINTAIN VAPOR BARRIER INTEGRITY. (TYPICAL)
7. INSULATED FLEXIBLE DUCT 8'-0" MAXIMUM LENGTH.
8. SUPPORT FLEXIBLE DUCT FROM STRUCTURE. FLEXIBLE DUCT SHALL NOT KINK, SAG OR REST ON LIGHT FIXTURE, CEILING SUPPORT "TEES" OR CEILING TILE.
9. THE FOLLOWING SCHEDULE SHALL BE USED BY THE CONTRACTOR FOR ROUND TO FLAT OVAL DUCTWORK SIZE EQUIVALENTS:

ROUND FLEXIBLE DUCT SIZE (IN.)	FLAT OVAL REQUIRED SIZE (IN.)
6"ø	4"x7"
8"ø	4"x10", 6"x9"
10"ø	6"x12", 8"x11"
12"ø	6"x15", 8"x14", 10"x13"
14"ø	8"x17", 10"x16", 12"x16"

#M-DET028

02 SQUARE CEILING OUTLET INSTALLATION

SCALE: NONE

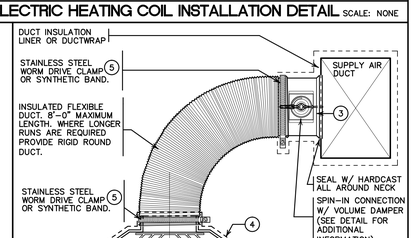
NOTES:

1. REFER TO FLOOR PLANS FOR DUCT CONFIGURATION FOR EACH INDIVIDUAL VARIABLE AIR VOLUME TERMINAL UNIT. REFER TO SCHEDULES FOR HOT WATER HEATING COILS AND TO SPECIFICATIONS FOR UNIT INSTALLATION REQUIREMENTS.
2. CONCENTRIC INLET REDUCER BY VAV TERMINAL MANUFACTURER.
3. ELECTRIC HEATING COIL, REFER TO SCHEDULES.
4. BOTTOM ACCESS DOOR. CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING WORKING CLEARANCES FREE OF PIPING, CONDUIT, DUCTS AND OTHER OBSTRUCTIONS.
5. MAINTAIN MINIMUM STRAIGHT DISTANCE.
6. SERVICE CLEARANCE TO BE PER N.E.C. FOR UNITS 150 VOLTS OR GREATER.
7. UNIT CONTROL JUNCTION BOX.
8. VARIABLE AIR VOLUME TERMINAL DESIGNATION & ZONE NUMBER. REFER TO SCHEDULES.
9. INSULATED FLEXIBLE DUCT. 4'-0" MAXIMUM LENGTH WHERE LONGER RUNS ARE REQUIRED PROVIDE RIGID ROUND OR RECTANGULAR DUCT. SEE PLANS FOR ADDITIONAL INFORMATION.
10. SIDE TAKE-OFF FITTING WITHOUT VOLUME DAMPER EQUAL TO FLEXMASTER "STO" (SEE DETAIL).
11. 12"ø FLEXMASTER "INSPECTORS SERIES" SPIN-IN ACCESS DOOR. FLEXMASTER "STO"
12. SUPPORT BOX WITH DUCT STRAPS AT ALL FOUR CORNERS. COORDINATE LOCATION WITH BOTTOM ACCESS PANEL.
13. SUPPORT FLEXIBLE DUCT FROM STRUCTURE AS SPECIFIED. DUCT SHALL NOT KINK, SAG OR REST ON LIGHT FIXTURES, CEILING SUPPORT "TEES" OR TILES.
14. CONFIGURATION SHOWN IS SCHEMATIC AND DOES NOT NECESSARILY REPRESENT THE SPECIFIC UNIT.
15. CONTROL PANEL SERVICE CLEARANCES.

#M-DET048

01 CEILING DIFFUSER INSTALLATION DETAIL

SCALE: NONE



NOTES:

1. CEILING DIFFUSER SHALL BE INSTALLED SUCH THAT THE FACE OF DIFFUSER IS FLUSH WITH CEILING.
2. SUPPORT FLEXIBLE DUCT FROM STRUCTURE. FLEXIBLE DUCT SHALL NOT KINK, SAG OR REST ON LIGHT FIXTURE, CEILING SUPPORT "TEES" OR CEILING TILE.
3. PROVIDE SQUARE TO ROUND TAP WHERE FLEXIBLE DUCT SIZE EXCEEDS DIMENSION OF RECTANGULAR DUCT. (SEE DET. FOR ADDITIONAL INFORMATION.
4. FOR UNCONDITIONED CEILING PLENUMS, INSULATE ENTIRE BACK OF CEILING DIFFUSER WITH 2" DUCT WRAP AND SEAL WITH VAPOR BARRIER TAPE.
5. EXTEND INSULATION AND OUTER JACKET OVER THE SECURE CLAMP/BAND AND TAPE DOWN TO SLEEVE/COLLAR TO MAINTAIN VAPOR BARRIER INTEGRITY. (TYPICAL)

#M-DET038

Kirksey ARCHITECTURE

6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

WYLIE CONSULTING ENGINEERS
6161 Savoy, Suite 700 Houston, Texas 77036 713.781.2526
wylieassociates.com Wylie Project No. 11098.00
Wylie Consulting Engineers Firm Registration No. 1869

STATE OF TEXAS — 102354 — LICENSED PROFESSIONAL ENGINEER

NO.	DATE	ISSUE
01	22 JUNE 2011	PRICING, PERMIT & CONSTR.

PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE
Mechanical
Schedules & Details

SHEET NUMBER
M3.10

LIGHTING GENERAL NOTES:

1. MEP1.10 AND 1.20 SPECIFICATIONS SHALL APPLY TO ALL WORK SHOWN ON THIS DRAWING UNLESS OTHERWISE INDICATED.
2. VERIFY EXACT LOCATION OF ALL LIGHTING FIXTURES WITH THE ARCHITECT PRIOR TO ROUGH-IN.
3. ALL GANGED SWITCHES SHALL HAVE GANGED BARRIERS AND A COMMON COVER PLATE. SWITCHES SHALL BE GANGED WHERE POSSIBLE.
4. EXIT LIGHTS SHALL BE CONNECTED TO FLOOR EMERGENCY LIGHTING CIRCUIT WITH 2#10, 1/2"C.
5. PLACE VISUAL STROBE DEVICES ABOVE LIGHT SWITCH WHEN POSSIBLE.
6. ALL WORK SHALL COMPLY WITH BUILDING MANAGEMENT'S CONTRACTOR RULES AND REGULATIONS.
7. ALL 2X4 FIXTURES ARE TYPE 'A' UNLESS OTHERWISE NOTED.

LIGHTING KEYED NOTES:

1. PROVIDE SENTRY LLC SENTRY SWITCH MODEL SS 20277 AT THIS LOCATION ON EXISTING MOTORIZED CIRCUIT BREAKER 4HNA-21. PROGRAM BUILDING AUTOMATION SYSTEM TO "PULSE" CIRCUIT AS DIRECTED BY BULDING ENGINEER.
2. ALL CIRCUITS FROM PANEL '4HNA' HAVE BEEN PRERUN TO J-BOXES SECURED TO OVERHEAD DECK AND LOCATED WITHIN THE CONFINES OF THE SUITE(S). CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF THESE J-BOXES PRIOR TO BID.
3. THE CENTER LAMPS OF DESIGNATED FIXTURES SHALL BE USED FOR EMERGENCY EGRESS LIGHTING. ALL EMERGENCY EGRESS LIGHTING SHALL REMAIN UNSWITCHED. PROVIDE ADDITIONAL BALLAST AS REQUIRED.
4. CONNECT ALL EMERGENCY EGRESS FIXTURES AND EXIT SIGNS TO THE EXISTING LOAD TRANSFER DEVICE IN ELECTRICAL ROOM. DEVICE IS CONNECTED TO THE EXISTING LIFE-SAFETY PANEL 1HLSA.
5. VERIFY THAT CIRCUITS 4HNA-13,15 ARE CONNECTED TO BUILDING LIGHTING CONTROL SYSTEM.
6. PROVIDE AND INSTALL WALL MOUNTED WATT STOPPER DW-100 DUAL TECHNOLOGY OCCUPANCY SENSOR. PROVIDE GROUND CONNECTED TO OCCUPANCY SENSOR. CONTROL ALL LIGHT FIXTURES LOCATED IN THIS AREA AS INDICATED. INSTALL SENSOR IN LOCATION WHERE DOOR AND FURNITURE WILL NOT CONFLICT WITH PROPER OPERATION OF SENSOR.

2008 COH ENERGY CODE NOTE:

LIGHTING ON THIS FLOOR IS CONNECTED TO A BUILDING AUTOMATION SYSTEM. PROVIDING AUTOMATIC LIGHTING SHUTOFF IN COMPLIANCE WITH SECTION 9.4.1.1 OF THE 2008 CITY OF HOUSTON ENERGY CODE.

FIRE ALARM NOTE:

IN ACCORDANCE WITH THE CITY OF HOUSTON CODE UPDATE NEWSLETTER DATED 04-20-2009: FIRE ALARM DESIGN PLANS SHALL BE SUBMITTED TO THE CITY OF HOUSTON FOR APPROVAL PRIOR TO INSTALLATION AND THE INSTALLATION MUST BE APPROVED BEFORE THE CERTIFICATE OF OCCUPANCY MAY BE ISSUED. SEE SHEET E2.20 FOR MORE INFORMATION.

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER & CATALOG NUMBER	MOUNTING	LAMPS NO./TYPE	VOLTS	REMARKS
A	LITHONIA #2PM-3N-G-H-232-18-MVOLT-LD-GEB10IS	RECESSED	(2) 32W/T8	277	2'X4' FLOURESCENT PARABOLIC TROFFER WITH ELECTRONIC BALLAST. 10% THD.
B	LITHONIA #2PM-3N-G-H-2U31-9-LD-GEB10	RECESSED	(2) 31W/T8-U	277	2'X2' FLUORESCENT PARABOLIC TROFFER WITH ELECTRONIC BALLAST. 10% THD.
X	LITHONIA #LRP-W-*-RMR-*-120/277	CEILING	LED	120/277	RED ON MIRRORED FACE. NUMBER OF FACES AND DIRECTIONAL CHEVRON SHALL BE AS INDICATED ON PLANS.

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

Kirksey
ARCHITECTURE
6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

WYLIE
CONSULTING
ENGINEERS
6161 Savoy, Suite 700 Houston, Texas 77036 713.781.2526
wylieassociates.com Wylie Project No. 11098.00
Wylie Consulting Engineers Firm Registration No. 1869

NO.	DATE	ISSUE
01	22 JUNE 2011	PRICING, PERMIT & CONSTR.

PROJECT NAME
MHHS SW POB
DR VANN

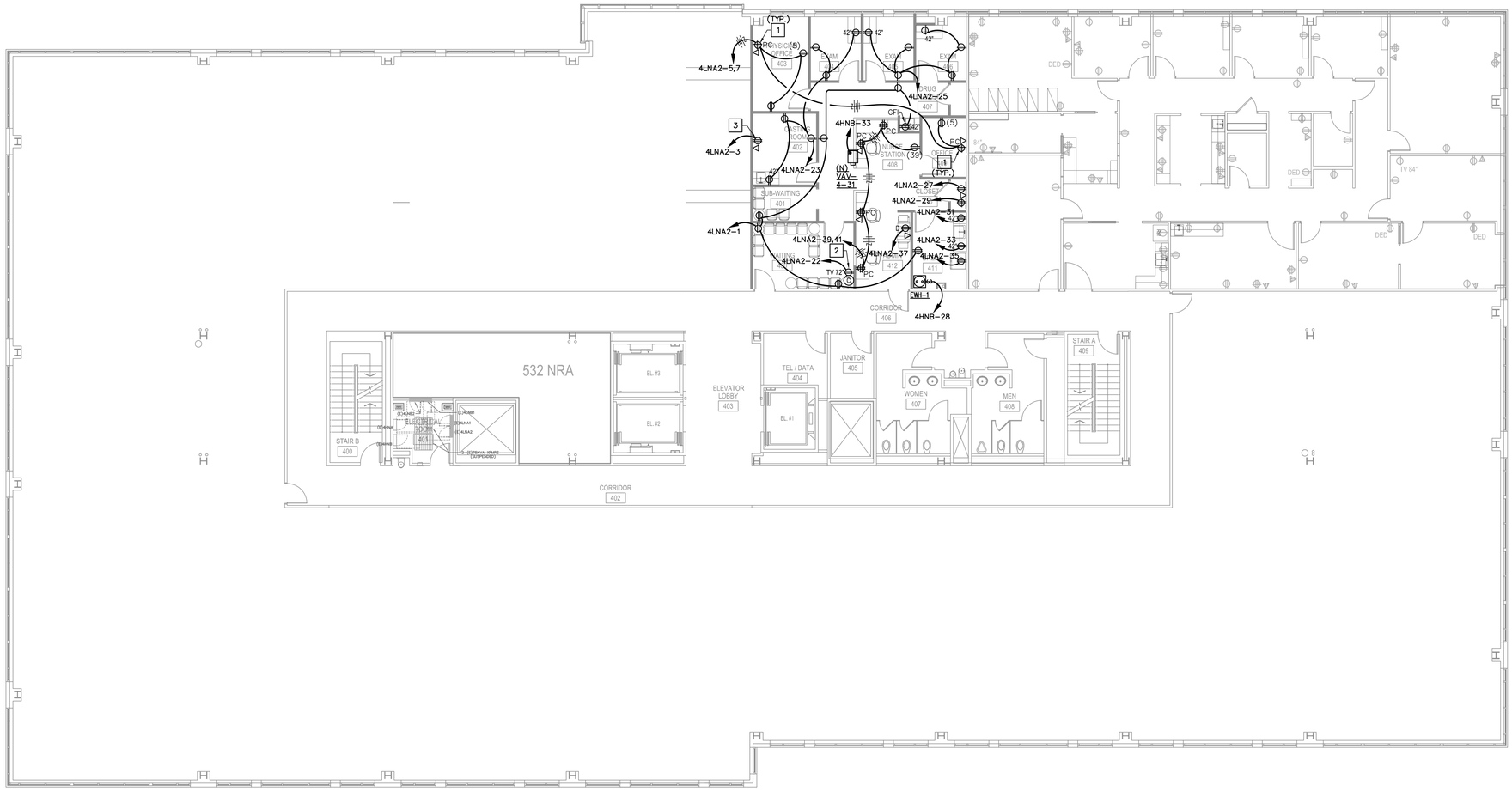
PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE
Electrical
Lighting Plan

SHEET NUMBER
E2.10



POWER GENERAL NOTES:

1. MEP-1.10 AND 1.20 SPECIFICATIONS SHALL APPLY TO ALL WORK ON THIS DRAWING, UNLESS OTHERWISE NOTED.
2. REFER TO ARCHITECT/TENANT FOR EXACT HEIGHT AND LOCATION OF ALL FLOOR AND WALL OUTLETS. REFER TO ARCHITECT FOR VERTICAL OR HORIZONTAL INSTALLATION OF ALL RECEPTACLES.
3. DATA/TELEPHONE CABLE IN RETURN AIR PLENUM SHALL BE PLENUM RATED OR INSTALLED IN CONDUIT. ALL DATA/TELEPHONE OUTLETS SHALL BE PROVIDED WITH PULL STRINGS.
4. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL EXISTING EQUIPMENT PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO IDENTIFY ALL EXISTING CIRCUIT CONNECTIONS AND LOADS PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL LOCATE ALL ELECTRICAL & TELEPHONE OUTLETS WITHIN THE LIMITS OF THE TENANT FURNITURE PLAN PROVIDED BY THE ARCHITECT. CONTRACTOR SHALL MARK INTENDED LOCATION OF ALL OUTLETS PRIOR TO INSTALLATION, THEN SHALL NOTIFY ARCHITECT AND TENANT FOR APPROVAL BEFORE PROCEEDING.
6. CONTRACTOR SHALL PROVIDE NEW CIRCUIT DIRECTORY CARD AT PANELS. CIRCUITS SHALL BE LABELED TO CORRESPOND TO THE CIRCUITS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL CONNECT CIRCUITS AS REQUIRED TO COMPLY WITH THIS DRAWING. DO NOT LABEL EXISTING CIRCUITS AS AS "EXISTING".
7. CONDUCTORS SHALL BE #12 AWG SOLID COPPER (THWN) IN 1/2" CONDUIT UNLESS OTHERWISE INDICATED.
8. PC OUTLETS SHALL BE GREY WITH 4 PER CIRCUIT MAXIMUM. PRINTER/FAX OUTLETS SHALL BE BROWN WITH 2 PER CIRCUIT MAXIMUM. DEDICATED OUTLETS SHALL BE ORANGE WITH 1 PER CIRCUIT MAXIMUM.
9. DEMOLISH ALL UNUSED ELECTRICAL EQUIPMENT, RECEPTACLES, JUNCTION BOXES, CONDUCTORS, CONDUIT, AND VOICE/DATA CABLE BACK TO ITS SOURCE.
10. ELECTRICAL CONTRACTOR SHALL PROVIDE CIRCUIT TRACING TO ENSURE THAT EXISTING CIRCUITS INDICATED ARE ACTUAL CIRCUITS CURRENTLY BEING USED. THE CIRCUIT TRACING SHALL BE PERFORMED BEFORE START OF CONSTRUCTION AND SHALL BE COORDINATED WITH BUILDING MANAGEMENT.
11. ALL WORK SHALL COMPLY WITH BUILDING MANAGEMENT'S CONTRACTOR RULES AND REGULATIONS.

POWER KEYED NOTES:

1. CONNECT DUPLEX RECEPTACLE TO PC CIRCUIT AND THE SECOND DUPLEX RECEPTACLE TO GENERAL PURPOSE CIRCUIT. PROVIDE GREY FACE FOR PC RECEPTACLE.
2. FOR TV: PROVIDE SINGLE GANG PLASTER RING AND PULLSTRING THROUGH BUSHED OPENING IN TOP PLATE TO ACCESSIBLE CEILING.
3. COORDINATE EXACT POWER AND VOLTAGE REQUIREMENTS FOR X-RAY MACHINE WITH EQUIPMENT VENDOR PRIOR TO INSTALLATION.

Kirksey ARCHITECTURE

6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

WYLIE CONSULTING ENGINEERS
6161 Savoy, Suite 700 Houston, Texas 77036 713.781.2526
wylieassociates.com Wylie Project No. 11098.00
Wylie Consulting Engineers Firm Registration No. 1869

STATE OF TEXAS — 102354 — LICENSED PROFESSIONAL ENGINEER

NO.	DATE	ISSUE
01	22 JUNE 2011	PRICING, PERMIT & CONSTR.

PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE
Electrical
Power Plan

SHEET NUMBER
E2.20

LEGEND OF ELECTRICAL SYMBOLS

SYMBOL	DESCRIPTION
	SHADED DEVICE/CIRCUITING INDICATES EXISTING TO REMAIN.
	BOLD DEVICE/CIRCUITING INDICATES NEW DEVICE/CIRCUITING OR RELOCATED DEVICE.
#1/2	CONDUIT RUN CONCEALED IN WALLS OR ABOVE CEILING. ARROW INDICATES HOMERUN TO PANEL. CONDUCTOR DESIGNATIONS ARE AS FOLLOWS: LONG HATCH INDICATES NEUTRAL, SHORT HATCH INDICATES PHASE, "/" INDICATES INSULATED OR ISOLATED GROUND, "/" INDICATES SWITCHLEG, AND NO HATCHES INDICATES TWO CONDUCTORS.
#1/2	PARTIAL HOME RUN. SAME AS ABOVE.
#1/2	CONDUIT RUN CONCEALED IN FLOOR SLAB, BELOW FLOOR SLAB OR BELOW GRADE. WIRING SAME AS ABOVE.
	HATCHED LINES INDICATES FIXTURE CONNECTION ON EMERGENCY / NIGHT LIGHT CIRCUIT.
A	2'x4' FLUORESCENT FIXTURE. LETTER INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.
A	2'x2' FLUORESCENT FIXTURE. LETTER INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.
A	UNDERCABINET FIXTURE. LETTER INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.
A	DOWNLIGHT FIXTURE. LETTER INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.
A	WALL WASHER FIXTURE. LETTER INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.
	EXIT LIGHT. PROVIDE ARROWS AS INDICATED ON DRAWINGS.
	DUPLEX RECEPTACLE OUTLET; 20 AMP, 125V., 3 WIRE, GROUNDED TYPE.
	QUADRAPLEX RECEPTACLE OUTLET GANGED WITH A COMMON WALL PLATE; (2)–20 AMP, 125V, 3 WIRE, GROUNDED TYPE.
	DUPLEX RECEPTACLE OUTLET LOCATED ABOVE SPLASH ABOVE COUNTER; 20 AMP, 125V, 3 WIRE GROUNDED TYPE. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT HEIGHT.
GFI	DUPLEX RECEPTACLE OUTLET WITH GROUND FAULT INTERRUPTER; 20 AMP, 125V., 3 WIRE GROUNDED TYPE.
	FLUSH MOUNTED FLOOR OUTLET W/ RECEPTACLE (S) AND OR DATA AND, OR TELEPHONE.
	TELEPHONE OUTLET.
	COMBINATION TELEPHONE / DATA OUTLET.
	DATA OUTLET
TTB	TELEPHONE TERMINAL BOARD, 4'x8'x3/4" PLYWOOD.
$	SINGLE POLE, SINGLE–THROW SWITCH; 20 AMP, 120/277V.
3$	3–WAY SWITCH: 20 AMP, 120/277V.
$	DIMMER SWITCH. LUTRON NOVA–T SERIES, 1500W U.N.O.
$OC	OCCUPANCY SENSOR; 120/277VAC
J	JUNCTION BOX MOUNTED ABOVE ACCESSIBLE CEILING.
J	JUNCTION BOX
	DISCONNECT IN A NEMA 1 ENCLOSURE, UNLESS OTHERWISE SPECIFIED. REFER TO DRAWINGS FOR AMPERAGE, PHASES, & FUSE SIZE. (IF REQUIRED)
M	SINGLE PHASE MOTOR .
M	MOTOR STARTER / DISCONNECT IN A NEMA 1 ENCLOSURE, UNLESS OTHERWISE SPECIFIED. REFER TO DRAWINGS FOR AMPERAGE, PHASES, FUSE SIZE (IF REQUIRED), AND SIZE.
	TRANSFORMER – REFER TO DRAWINGS FOR VOLTAGE AND AMPERAGE.
	SURFACE PANELBOARD W/ NEC CLEARANCES; 120/208 VOLT.
	SURFACE PANELBOARD W/ NEC CLEARANCES; 277/480 VOLT.
	RECESS PANELBOARD W/ NEC CLEARANCES; 120/208 VOLT.
	RECESS PANELBOARD W/ NEC CLEARANCES; 277/480 VOLT.

NOTES:
1. ALL SYMBOLS MAY NOT BE USED ON THIS DRAWINGS.
2. REFER TO SPECIFICATIONS FOR MOUNTING HEIGHTS

PANELBOARD: **4HNA (EXISTING)** — MOUNTING: SURFACE
LOCATION: ELECTRICAL RM — ENCLOSURE: NEMA 1
480 / 277 VOLT (L–L / L–N) — 3 PH 4 W 100% NEUTRAL
225 AMP MAIN LUGS ONLY WITH COPPER EQUIPMENT GROUND BAR
NO MAIN BREAKER

WIRE SIZE*	KVA	LOAD DESCRIPTION	AMP / PH	CKT	PHASE A	PHASE B	PHASE C	CKT	AMP / PH	LOAD DESCRIPTION	KVA	WIRE SIZE*
	1.20	LTG (4TH FLOOR CORRIDOR)	20 / 1	1	X			2		SPACE		
	0.10	LTG (CON–4 COIL)		3		X		4		SPACE		
	0.18	LTG (4TH FLOOR WOMEN'S)	20 / 1	5			X	6		SPACE		
	0.14	LTG (4TH FLOOR MEN'S)	20 / 1	7	X			8		SPACE		
	1.92	TENANT LIGHTING	20 / 1	9		X		10		SPACE		
	1.92	TENANT LIGHTING	20 / 1	11			X	12		SPACE		
	2.94	**LTG – DR. SOTO/DR. VANN**	20 / 1	13	X			14		SPACE		
	2.88	LTG – DR. SOTO	20 / 1	15		X		16		SPACE		
	1.92	TENANT LIGHTING	20 / 1	17			X	18		SPACE		
	1.92	TENANT LIGHTING	20 / 1	19	X			20		SPACE		
	2.43	LTG – DR. RICARDO	20 / 1	21		X		22		SPACE		
	1.92	TENANT LIGHTING	20 / 1	23			X	24		SPACE		
		SPARE	20 / 1	25	X			26		SPACE		
		SPARE	20 / 1	27		X		28		SPACE		
		SPARE	20 / 1	29			X	30		SPACE		
		SPARE	20 / 1	31	X			32		SPACE		
		SPARE	20 / 1	33		X		34		SPACE		
		SPARE	20 / 1	35			X	36		SPACE		
		SPARE	20 / 1	37	X			38		SPACE		
		SPARE	20 / 1	39		X		40		SPACE		
		SPARE	20 / 1	41			X	42		SPACE		

* ALL BRANCH CIRCUITS ARE 2#12, #12G THWN–2 CU, 1/2"C MINIMUM UNLESS OTHERWISE NOTED

LIGHTING (KVA)	RCPT (KVA)	MOTORS (KVA)	FIXED ELEC HTG (KVA)	KITCHEN EQUIP(KVA)	OTHER EQUIP (KVA)	PHASE	CONNECTED LOAD (KVA)	DESIGN LOAD KVA	DESIGN LOAD AMPS
6.20	0.00	0.00	0.00	0.00	0.00	A	6.20	7.75	28
7.33	0.00	0.00	0.00	0.00	0.00	B	7.33	9.16	33
5.94	0.00	0.00	0.00	0.00	0.00	C	5.94	7.43	27
19.47	0.00	0.00	0.00	0.00	0.00	TOTAL	19.47	24.34	29
125%	+	100% (125%OF LARGEST MOTOR)	100%	100%	100%	DESIGN FACTORS (+ = FIRST 10KVA @ 100%, BAL @ 50% PROP.)			

NOTES:

PANELBOARD: **4LNA1 (EXISTING)** — MOUNTING: SURFACE
LOCATION: ELECTRICAL RM — ENCLOSURE: NEMA 1
208 / 120 VOLT (L–L / L–N) — 3 PH 4 W 100% NEUTRAL
AMP PANEL — WITH COPPER EQUIPMENT GROUND BAR
250 AMP MAIN BREAKER

WIRE SIZE*	KVA	LOAD DESCRIPTION	AMP / PH	CKT	PHASE A	PHASE B	PHASE C	CKT	AMP / PH	LOAD DESCRIPTION	KVA	WIRE SIZE*
	1.08	RECEPTS (4TH FL CORR)	20 / 1	1	X			2	20 / 1	FIRE SMOKE DAMPERS	0.20	
	0.18	RECEPT (4TH FL JAN RM)	20 / 1	3		X		4	20 / 1	PC RECEPTACLES – DR. SOTO *	0.80	
	0.36	RECEPTS (4TH FL WOMEN, MEN)	20 / 1	5			X	6	20 / 1	GP RECEPTACLES – DR. SOTO *	0.72	
	0.30	RECEPT TF–4 (4TH FL TELCOM)	20 / 1	7	X			8	20 / 1	PC RECEPTACLES – DR. SOTO *	0.40	
	0.50	EDF (4TH FL)	20 / 1	9		X		10	20 / 1	FAX/ GP – DR. SOTO *	0.78	
	0.18	HAND DRYER (4TH FL WOMEN'S)	20 / 1	11			X	12	20 / 1	TELEPHONE EQUIP. – DR. SOTO *	1.00	
	0.18	HAND DRYER (4TH FL MEN'S)	20 / 1	13	X			14	20 / 1	SERVER – DR. SOTO *	1.00	
	0.50	EDF (4TH FL)	20 / 1	15		X		16	20 / 1	GP RECEPTACLES – DR. SOTO *	0.90	
	0.25	ELECTRIC STRIKE	20 / 1	17			X	18	20 / 1	REFRIGERATOR – DR. SOTO *	0.80	
	0.60	PC RECEPTACLES – DR. SOTO	20 / 1	19	X			20	20 / 1	MICROWAVE – DR. SOTO *	1.00	
	1.44	GP RECEPTACLES – DR. SOTO	20 / 1	21		X		22	20 / 1	BREAKROOM – DR. SOTO *	0.60	
	0.60	FAX – DR. SOTO	20 / 1	23			X	24	20 / 1	COFFEE – DR. SOTO *	1.20	
	1.20	COPIER – DR. SOTO	20 / 1	25	X			26	20 / 1	EXAM RECEPTACLES – DR. SOTO *	0.60	
	0.90	EXAM RECEPTACLES – DR. SOTO	20 / 1	27		X		28	20 / 1	EXAM RECEPTACLES – DR. SOTO *	0.80	
	0.72	EXAM RECEPTACLES – DR. SOTO	20 / 1	29			X	30	20 / 1	NUCLEAR CAMERA – DR. SOTO *	1.92	
	0.40	PC RECEPTACLES – DR. SOTO	20 / 1	31	X			32	20 / 1	EXAM RECEPTACLES – DR. SOTO *	0.54	
	1.26	GP RECEPTACLES – DR. SOTO	20 / 1	33		X		34	20 / 1	EQUIPMENT – DR. SOTO *	1.00	
	0.60	TV – DR. SOTO	20 / 1	35			X	36	20 / 2	TREADMILL – DR. SOTO *	1.00	
	1.30	WATER COOLER – DR. SOTO	20 / 1	37	X			38	–		1.00	
	0.80	REFRIGERATOR – DR. SOTO	20 / 1	39		X		40	20 / 1	SPACE		
	0.90	GP RECEPTACLES – DR. SOTO	20 / 1	41			X	42	20 / 1	SPACE		

* ALL BRANCH CIRCUITS ARE 2#12, #12G THWN–2 CU, 1/2"C MINIMUM UNLESS OTHERWISE NOTED

LIGHTING (KVA)	RCPT (KVA)	MOTORS (KVA)	FIXED ELEC HTG (KVA)	KITCHEN EQUIP(KVA)	OTHER EQUIP (KVA)	PHASE	CONNECTED LOAD (KVA)	DESIGN LOAD KVA	DESIGN LOAD AMPS
0.00	3.92	0.00	0.00	0.00	3.58	A	7.50	7.73	64
0.00	6.28	0.00	0.00	1.40	2.78	B	10.46	7.95	66
0.00	2.70	0.00	0.00	2.00	5.55	C	10.25	8.68	72
0.00	12.90	0.00	0.00	5.70	11.91	TOTAL	30.51	24.36	68
125%	+	100% (125%OF LARGEST MOTOR)	100%	65%	100%	DESIGN FACTORS (+ = FIRST 10KVA @ 100%, BAL @ 50% PROP.)			

NOTES:

IMMEDIATELY DOWNSTREAM ELECTRICAL EQUIPMENT CONNECTED LOADS (KVA):

							LOAD DESCRIPTION:	DESIGN LOAD:	
0.00	15.26	0.00	0.00	2.30	10.50	–	PANEL "4LNA2"	25.19	70
						–		0.00	0
						–		0.00	0
						–		0.00	0
0.00	28.16	0.00	0.00	12.40	22.41		TOTAL DESIGN LOAD:	49.55	138

(E) 75KVA TRANSFORMER LVL 4	
PANEL NAME	LOAD
PANEL 4LNA1	24.36
PANEL 4LNA2	25.19
TOTAL	49.55
CAPACITY	75 kVA

TOTAL ELECTRICAL LOAD ADDED IN THE SCOPE OF THIS PROJECT IS 26.97 AMPS AT 480V 3Ø, AND IS THEREFORE WITHIN THE 200 AMP STIPULATION SET BY "ONE STOP" PERMITTING PROCEDURES.

PANELBOARD: **4HNB (EXISTING)** — MOUNTING: SURFACE
LOCATION: ELECTRICAL RM — ENCLOSURE: NEMA 1
480 / 277 VOLT (L–L / L–N) — 3 PH 4 W 100% NEUTRAL
400 AMP MAIN LUGS ONLY WITH COPPER EQUIPMENT GROUND BAR
NO MAIN BREAKER

WIRE SIZE*	KVA	LOAD DESCRIPTION	AMP / PH	CKT	PHASE A	PHASE B	PHASE C	CKT	AMP / PH	LOAD DESCRIPTION	KVA	WIRE SIZE*
	6.00	VAV E–HTG: 4–2 & 4–3	30 / 3	1	X			2	30 / 1	VAV E–HTG: 4–1	5.60	
	6.00		–	3		X		4	30 / 1	VAV E–HTG: 4–11	5.60	
	6.00		–	5			X	6	30 / 1	VAV E–HTG: 4–10	5.60	
	6.00	VAV E–HTG: 4–4 & 4–5	30 / 3	7	X			8	30 / 1	VAV E–HTG: 4–13	5.60	
	6.00		–	9		X		10	30 / 1	VAV E–HTG: 4–14	5.60	
	6.00		–	11			X	12	30 / 1	VAV E–HTG: 4–15	5.60	
	3.00	VAV E–HTG: 4–6 & 4–7	20 / 3	13	X			14	30 / 1	VAV E–HTG: 4–16	5.60	
	3.00		–	15		X		16	30 / 1	VAV E–HTG: 4–17	5.60	
	3.00		–	17			X	18		SPARE		
	5.60	VAV E–HTG: 4–9	30 / 1	19	X			20	30 / 1	VAV E–HTG: 4–18	4.50	
	5.60	VAV E–HTG: 4–8	30 / 1	21		X		22	20 / 3	VAV E–HTG: 4–12	3.00	
	5.60	VAV E–HTG: 4–7	30 / 1	23			X	24	–		3.00	
	1.00	VAV–4–33 – DR. SOTO	20 / 1	25	X			26	–		3.00	
	3.00	EWH–1 – DR. SOTO	20 / 1	27		X		28	**20 / 1**	**VAV E–HTG: 4–33 ***	**3.00**	
	3.00	EWH–1 – DR. RICARDO	20 / 1	29			X	30		SPACE		
	3.00	**EWH–1 – DR. VANN ***	**20 / 1**	31	X			32		SPACE		
		SPACE		33		X		34		SPACE		
		SPACE		35			X	36		SPACE		
		SPACE		37	X			38		SPACE		
		SPACE		39		X		40		SPACE		
		SPACE		41			X	42		SPACE		

* ALL BRANCH CIRCUITS ARE 2#12, #12G THWN–2 CU, 1/2"C MINIMUM UNLESS OTHERWISE NOTED

LIGHTING (KVA)	RCPT (KVA)	MOTORS (KVA)	FIXED ELEC HTG (KVA)	KITCHEN EQUIP(KVA)	OTHER EQUIP (KVA)	PHASE	CONNECTED LOAD (KVA)	DESIGN LOAD KVA	DESIGN LOAD AMPS
0.00	0.00	48.90	48.90	0.00	0.00	A	48.90	48.90	177
0.00	0.00	0.00	46.40	0.00	0.00	B	46.40	46.40	168
0.00	0.00	0.00	37.80	0.00	0.00	C	37.80	37.80	136
0.00	0.00	0.00	####	0.00	0.00	TOTAL	133.10	133.10	160
125%	+	100% (125%OF LARGEST MOTOR)	100%	100%	100%	DESIGN FACTORS (+ = FIRST 10KVA @ 100%, BAL @ 50% PROP.)			

NOTES:
* PROVIDE CIRCUIT BREAKER SIZE SHOWN

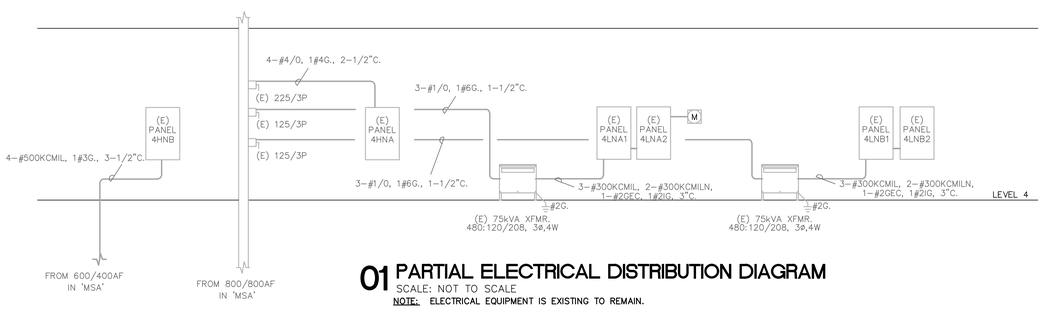
PANELBOARD: **4LNA2 (EXISTING)** — MOUNTING: SURFACE
LOCATION: ELECTRICAL RM — ENCLOSURE: NEMA 1
208 / 120 VOLT (L–L / L–N) — 3 PH 4 W 100% NEUTRAL
225 AMP MAIN LUGS ONLY — WITH COPPER EQUIPMENT GROUND BAR
NO MAIN BREAKER

WIRE SIZE*	KVA	LOAD DESCRIPTION	AMP / PH	CKT	PHASE A	PHASE B	PHASE C	CKT	AMP / PH	LOAD DESCRIPTION	KVA	WIRE SIZE*
	1.26	**GP CIRCUIT – DR. VANN ***	**20 / 1**	1	X			2	20 / 1	EXAM RM. RECEPS – RICARDO	1.62	
	1.20	**X–RAY MACHINE – DR. VANN ***	**20 / 1**	3		X		4	20 / 1	SERVER – RICARDO	0.50	
	0.90	**GP CIRCUIT – DR. VANN ***	**20 / 1**	5			X	6	20 / 1	VIEWBOX – RICARDO	0.75	
	0.40	**PC CIRCUIT – DR. VANN ***	**20 / 1**	7	X			8	20 / 1	EXAM RM. RECEPS – RICARDO	1.62	
	1.20	REFRIG. – RICARDO	20 / 1	9		X		10	20 / 1	VIEWBOX – RICARDO	0.75	
	0.60	PC CIRCUIT– RICARDO	20 / 1	11			X	12	20 / 1	PC CIRCUIT– RICARDO	0.40	
	1.44	RECEPS – RICARDO	20 / 1	13	X			14	20 / 1	RECEPS – RICARDO	1.44	
	0.36	TTB – RICARDO	20 / 1	15		X		16	20 / 1	MICROWAVE – RICARDO	1.10	
	1.40	COPIER – RICARDO	20 / 1	17			X	18	20 / 1	COFFEE MAKER – RICARDO	1.30	
	0.80	PC CIRCUIT– RICARDO	20 / 1	19	X			20	20 / 1	FAX – RICARDO	1.10	
	1.26	RECEPS – RICARDO	20 / 1	21		X		22	20 / 1	**TV CIRCUIT – DR. VANN**	**0.50**	
	1.08	**GP CIRCUIT–EXAM RMS – DR. VANN ***	**20 / 1**	23			X	24		SPACE		
	1.08	**GP CIRCUIT–EXAM RMS – DR. VANN ***	**20 / 1**	25	X			26		SPACE		
	1.20	**FILE SERVER – DR. VANN ***	**20 / 1**	27		X		28		SPACE		
	1.20	**PHONE EQUIP. – DR VANN ***	**20 / 1**	29			X	30		SPACE		
	1.30	**COFFEEMAKER – DR. VANN ***	**20 / 1**	31	X			32		SPACE		
	1.00	**MICROWAVE – DR. VANN ***	**20 / 1**	33		X		34		SPACE		
	0.80	**REFRIGERATOR – DR VANN ***	**20 / 1**	35			X	36		SPACE		
	1.20	**COPIER – DR. VANN ***	**20 / 1**	37	X			38		SPACE		
	0.90	**GP CIRCUIT – DR. VANN ***	**20 / 1**	39		X		40		SPACE		
	0.80	**PC CIRCUIT – DR. VANN ***	**20 / 1**	41			X	42		SPACE		

* ALL BRANCH CIRCUITS ARE 2#12, #12G THWN–2 CU, 1/2"C MINIMUM UNLESS OTHERWISE NOTED

LIGHTING (KVA)	RCPT (KVA)	MOTORS (KVA)	FIXED ELEC HTG (KVA)	KITCHEN EQUIP(KVA)	OTHER EQUIP (KVA)	PHASE	CONNECTED LOAD (KVA)	DESIGN LOAD KVA	DESIGN LOAD AMPS
0.00	9.26	0.00	0.00	1.30	2.70	A	13.26	11.21	93
0.00	3.02	0.00	0.00	3.30	3.65	B	9.97	8.29	69
0.00	2.98	0.00	0.00	2.10	4.15	C	9.23	7.98	67
0.00	15.26	0.00	0.00	6.70	10.50	TOTAL	32.46	27.49	76
125%	+	100% (125%OF LARGEST MOTOR)	100%	65%	100%	DESIGN FACTORS (+ = FIRST 10KVA @ 100%, BAL @ 50% PROP.)			

NOTES:
* PROVIDE CIRCUIT BREAKER SIZE SHOWN



01 PARTIAL ELECTRICAL DISTRIBUTION DIAGRAM
SCALE: NOT TO SCALE
NOTE: ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN.

Kirksey ARCHITECTURE
6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

WYLIE CONSULTING ENGINEERS
6161 Savoy, Suite 700 Houston, Texas 77036 713.781.2526
wyllieassociates.com Wylie Project No. 11098.00
Wylie Consulting Engineers Firm Registration No. 1869

STATE OF TEXAS 102354 LICENSED PROFESSIONAL ENGINEER

NO.	DATE	ISSUE
01	22 JUNE 2011	PRICING, PERMIT & CONSTR.

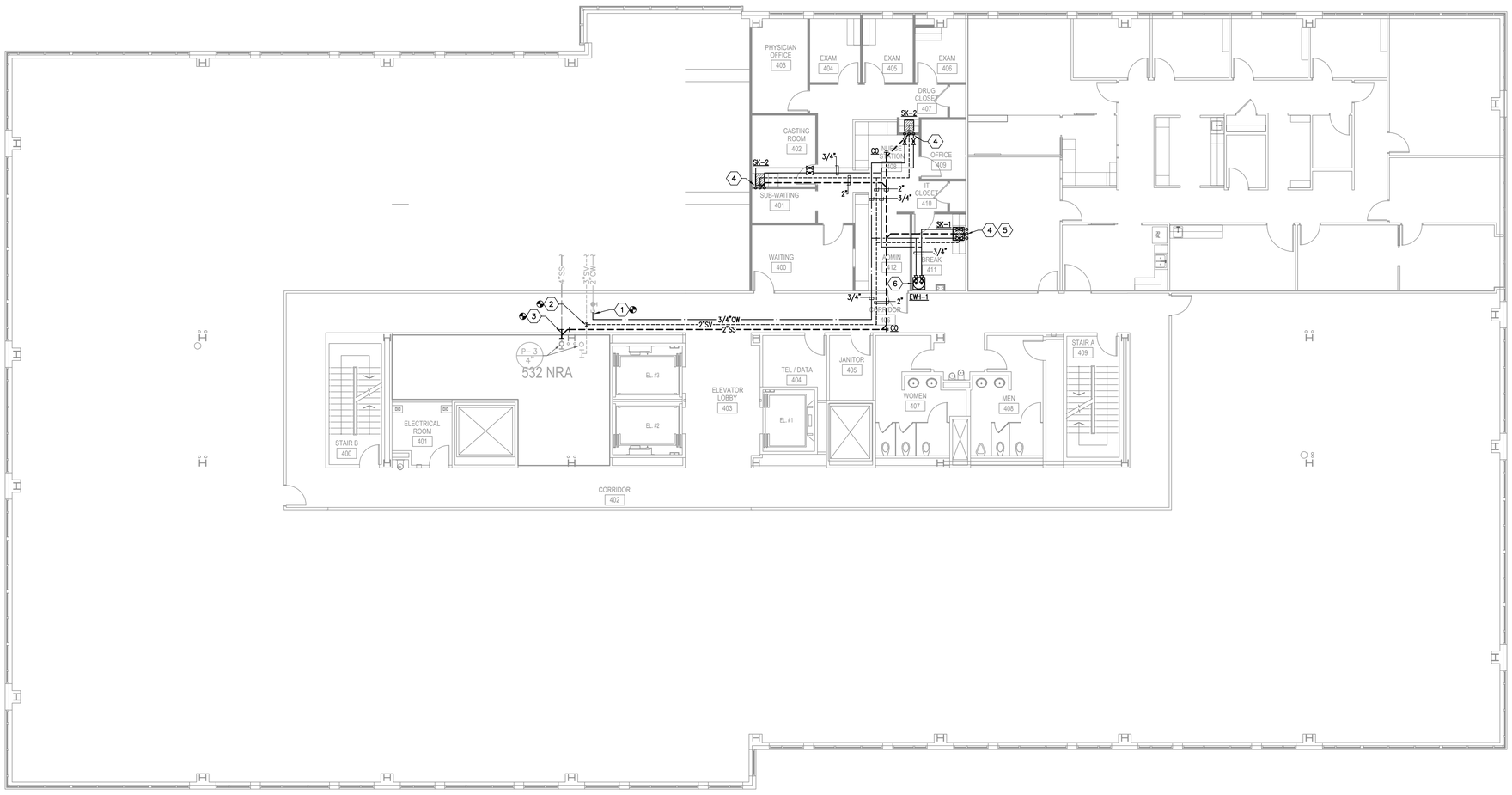
PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019
KEY PLAN

SHEET TITLE
Electrical
Schedules & Details

SHEET NUMBER
E3.10



PLUMBING KEYED NOTES:

1. EXTEND AND CONNECT NEW 3/4"CW TO EXISTING CW SERVICE ABOVE CEILING OF THIS FLOOR, FURNISH AND INSTALL COMPLETE WITH LINE SIZE MAIN SHUT-OFF VALVES READILY ACCESSIBLE. VERIFY SIZE AND LOCATION.
2. CONNECT NEW 2" SANITARY VENT TO EXISTING SERVICE ABOVE CEILING OF THIS FLOOR. VERIFY SIZE AND LOCATION.
3. CONNECT NEW 2" SANITARY WASTE TO EXISTING SERVICE ABOVE CEILING OF FLOOR BELOW. VERIFY SIZE AND LOCATION.
4. 2" SANITARY WASTE DOWN, 2"VENT UP, 3/4" HOT AND COLD TO SERVE FIXTURE(S).
5. INDIRECT WASTE FUNNEL DRAIN UNDER SINK TO SERVE WATER HEATER DRAIN LINES; REFER TO DETAIL 04/P3.10.
6. 3/4"CW/HW TO SERVE SUSPENDED WATER HEATER, REFER TO DETAIL 01/P3.10 FOR ADDITIONAL INFORMATION. WATER HEATER SHALL BE INSTALLED READILY ACCESSIBLE. DO NOT INSTALL WATER HEATER ABOVE LIGHT FIXTURE(S), FIELD COORDINATE.

PLUMBING GENERAL NOTES:

1. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE BUILDING AND INSPECTION REGULATIONS OF ALL OFFICIALS HAVING JURISDICTION.
2. WHERE NEW PIPING IS SHOWN TO CONNECT TO EXISTING. CONTRACTOR SHALL VERIFY THAT EXISTING PIPING IS THE SAME SIZE OR LARGER THAN THE NEW PIPING BEING CONNECTED.
3. CONTRACTOR SHALL COORDINATE ALL WORK OCCURRING BELOW FLOOR IN CEILING WITH BUILDING MANAGEMENT. WORK ABOVE CEILING SHALL OCCUR SO AS TO FIT BUILDING MANAGEMENT / TENANT OPERATIONAL SCHEDULE.
4. PRIOR TO CORING SLAB FOR PIPING PENETRATIONS, CONTRACTOR SHALL VERIFY LOCATIONS WITH OWNER/ARCHITECT.
5. THIS CONTRACTOR SHALL COORDINATE ROUTING OF PIPING IN CEILING SPACES ABOVE AND BELOW FLOOR WITH MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK, VAV BOXES, AND CONDUIT. SHOULD A CONFLICT OCCUR, NOTIFY THE ARCHITECT PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN. MINIMUM CLEARANCE BETWEEN BUILDING PIPING AND THE BOTTOM AND SIDES OF VAV BOXES SHALL BE TWO AND ONE-HALF TIMES THE INDIVIDUAL DIMENSIONS OF EACH VAV BOX.
6. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS OF WATER CLOSETS, LAVATORIES, AND FIXTURE SPECIFICATIONS.
7. BASE BUILDING SPECIFICATIONS AND STANDARDS SHALL APPLY TO ALL WORK ON THIS DRAWING UNLESS OTHERWISE NOTED. CONTRACTOR SHALL OBTAIN A COPY OF SPECIFICATIONS AND STANDARDS PRIOR TO BIDDING.

FIRE PROTECTION NOTES:

1. MODIFY THE EXISTING AUTOMATIC FIRE SPRINKLER PROTECTION SYSTEM THROUGHOUT THIS AREA THAT IS PRESENTLY SPRINKLERED. RELOCATE OR ADD SPRINKLER HEADS AS REQUIRED. NEW SPRINKLER HEADS TO MATCH EXISTING. ADD SPRINKLER HEADS THROUGHOUT REMODELED AREA.
2. SYSTEM DESIGN, INSTALLATION AND MATERIALS SHALL BE IN ACCORDANCE WITH NFPA 13, FACTORY MUTUAL AND ALL AUTHORITIES HAVING JURISDICTION.
3. SYSTEM(S) SHALL BE HYDRAULICALLY CALCULATED UTILIZING DESIGN DENSITIES AND REMOTE AREA AS RECOMMENDED BY FACTORY MUTUAL.
4. ALL MATERIALS AND EQUIPMENT SHALL BE UL LISTED AND FM APPROVED.
5. SPRINKLER SHOP DRAWINGS AND HYDRAULIC CALCULATIONS PREPARED BY A LICENSED SPRINKLER CONTRACTOR SHALL BE SUBMITTED TO THE CITY OF HOUSTON, FACTORY MUTUAL AND ARCHITECT FOR REVIEW AND APPROVAL.
6. COORDINATE SPRINKLER PIPING WITH NEW INSTALLATION OF DUCTWORK, CEILINGS AND LIGHT FIXTURES, REMOVE AND REPLACE EXISTING PIPING AS REQUIRED FOR COORDINATION WITH OTHER TRADES, EXISTING STRUCTURE AND NEW CEILINGS.
7. VISIT JOBSITE PRIOR TO SUBMISSION OF BID TO DETERMINE ALL EXISTING CONDITIONS AND HOW THEY WILL RELATE WITH THE NEW CONSTRUCTION.

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

Kirksey ARCHITECTURE
6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

WYLIE CONSULTING ENGINEERS
6161 Savoy, Suite 700 Houston, Texas 77036 713.781.2526
wylieassociates.com Wylie Project No. 11098.00
Wylie Consulting Engineers Firm Registration No. 1869

STATE OF TEXAS — 102354 — LICENSED PROFESSIONAL ENGINEER

NO.	DATE	ISSUE
01	22 JUNE 2011	PRICING, PERMIT & CONSTR.

PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE
Plumbing
Floor Plan

SHEET NUMBER
P2.10

ELECTRIC WATER HEATER SCHEDULE

MARK	LOCATION	STORAGE GALLONS	RECOVERY GPH AT 80° F. RISE	ELECTRICAL				MANUFACTURER AND MODEL
				KW	VOLTS	Hz.	PH	
EWH-1	break (411)	20	15	3	277	60	1	A.O. SMITH DET-20

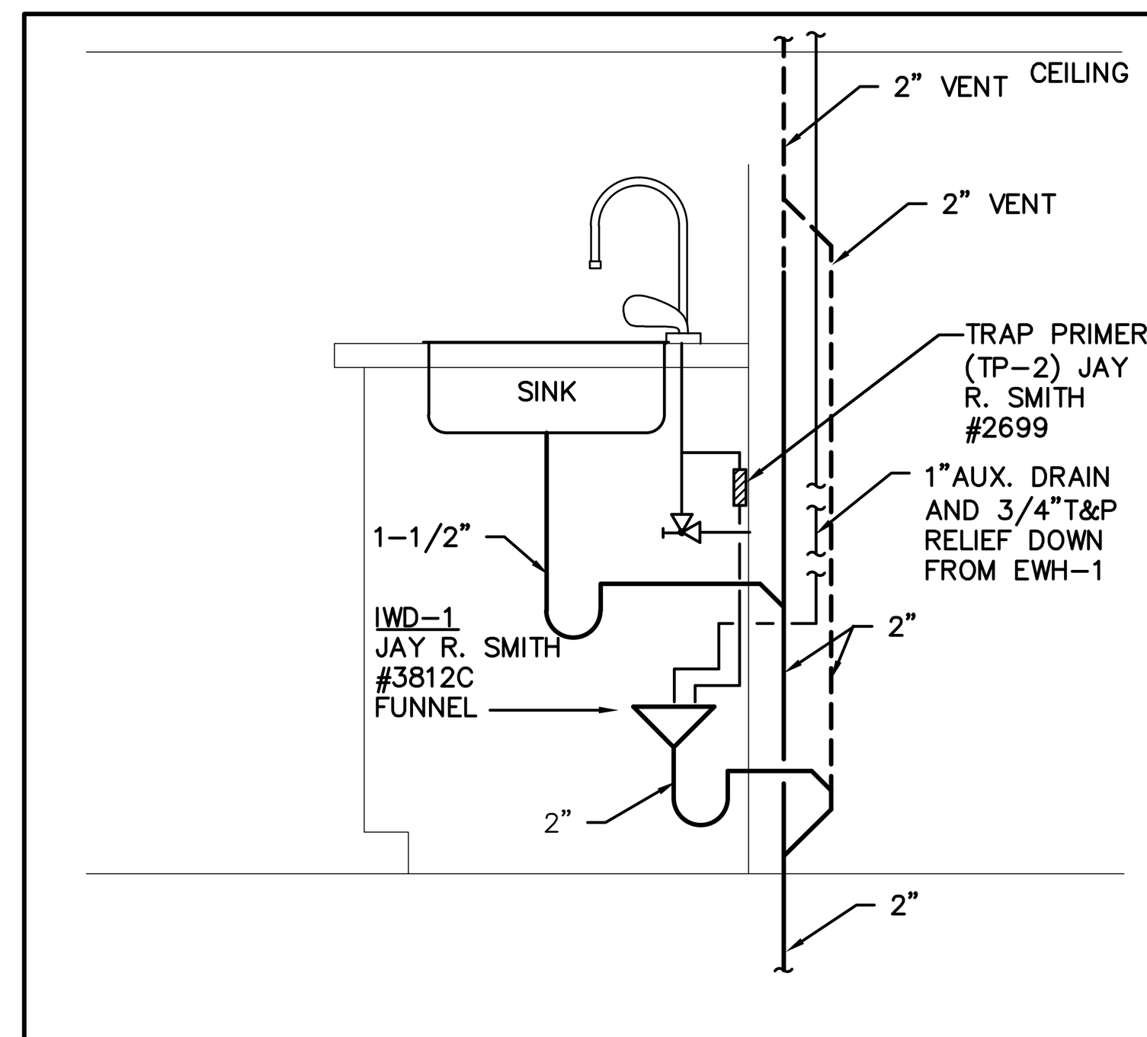
FIXTURE CONNECTION SCHEDULE

SYMBOL	DESCRIPTION	CONNECTION SIZE			
		WASTE	VENT	C.W.	H.W.
SK-1	SINK: COUNTER MOUNTED, SINGLE COMPARTMENT. ADA.	2"	2"	3/4"	3/4"
SK-2	SINK: COUNTER MOUNTED, SINGLE COMPARTMENT. ADA.	2"	2"	3/4"	3/4"

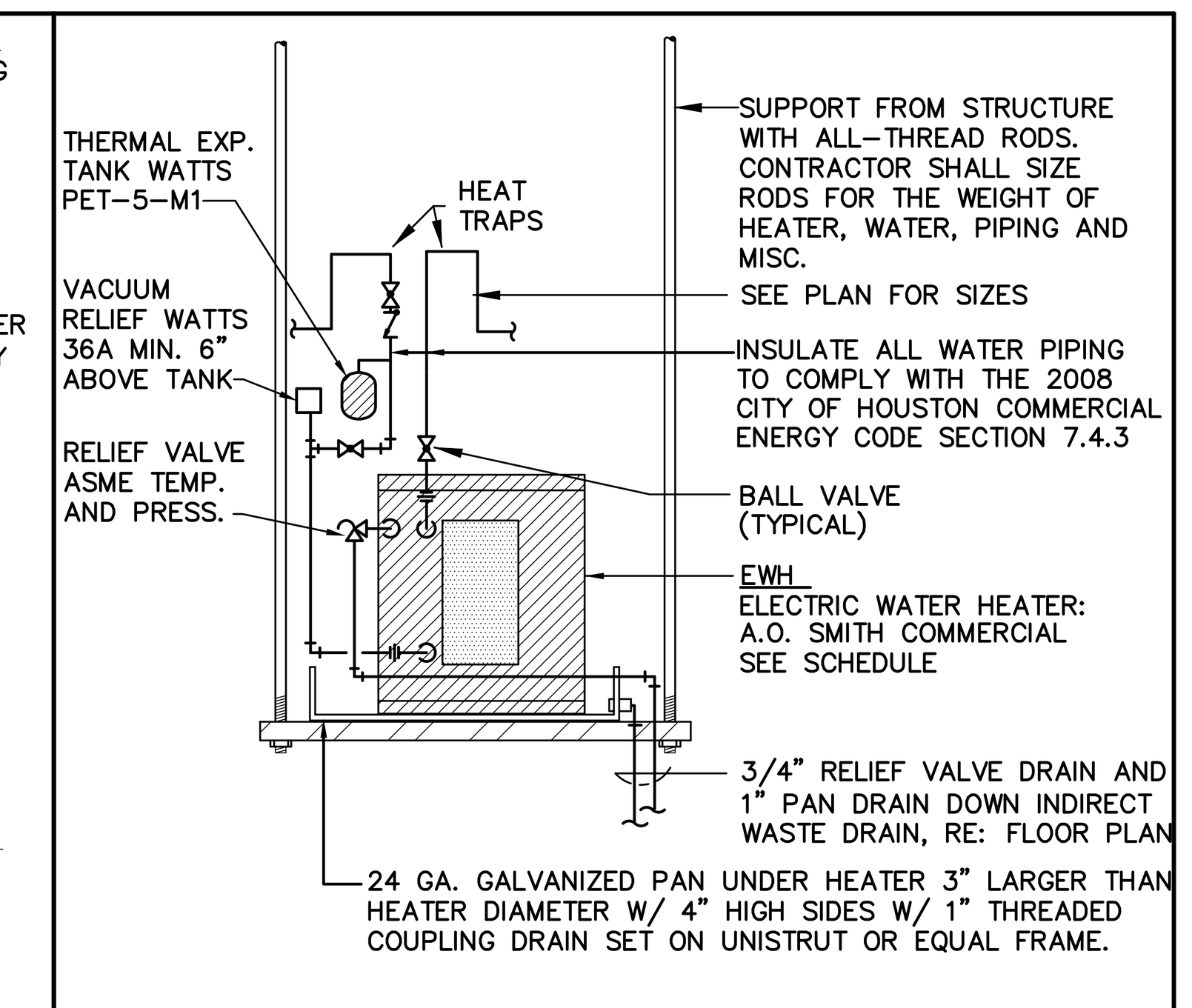
PLUMBING PIPING LEGEND

NOTES: 1. ALL SYMBOLS MAY NOT BE USED ON THESE DRAWINGS.

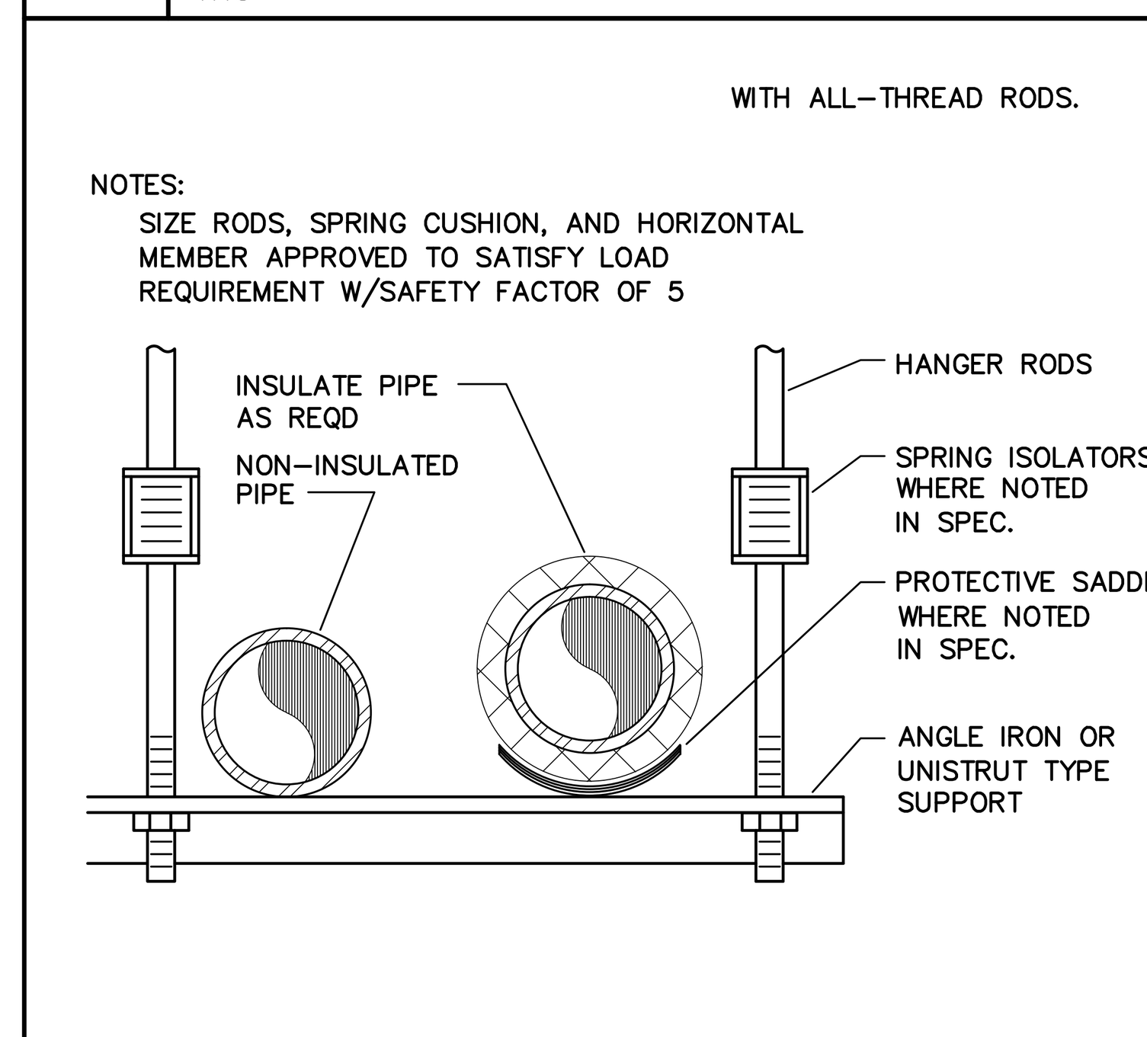
SYMBOL	ABV.	DESCRIPTION
	CW	COLD WATER
	HW	HOT WATER
	HWR	HOT WATER RETURN
F	F	FIRE LINE
G	G	NATURAL GAS PIPING
DS	DS	DRY SPRINKLER LINE
SP	SP	SPRINKLER LINE
SS	SS	SANITARY SEWER ABOVE SLAB
SS	SS	SANITARY SEWER BELOW SLAB
SV	SV	SANITARY VENT
		DIRECTION OF FLOW
		DIRECTION OF SLOPE DOWN
		DROP IN PIPE
		RISE IN PIPE
		GATE VALVE
		BALL VALVE
		CHECK VALVE
		FLOOR DRAIN
		FLOOR SINK
CO	CO	END OF LINE CLEANOUT
FCO	FCO	FLOOR CLEANOUT
WCO	WCO	WALL CLEANOUT
		CAP
(E)		NEW CONNECTION TO EXISTING
(A)	(A)	ITEM NOTED TO BE ABANDONED
(D)	(D)	ITEM NOTED TO BE DEMOLISHED
(E)	(E)	EXISTING ITEM
(N)	(N)	NEW ITEM
(R)	(R)	ITEM NOTED TO RELOCATED
A.F.F.	A.F.F.	ABOVE FINISHED FLOOR
F.F.	F.F.	FINISHED FLOOR
F.L.	F.L.	FLOW LINE



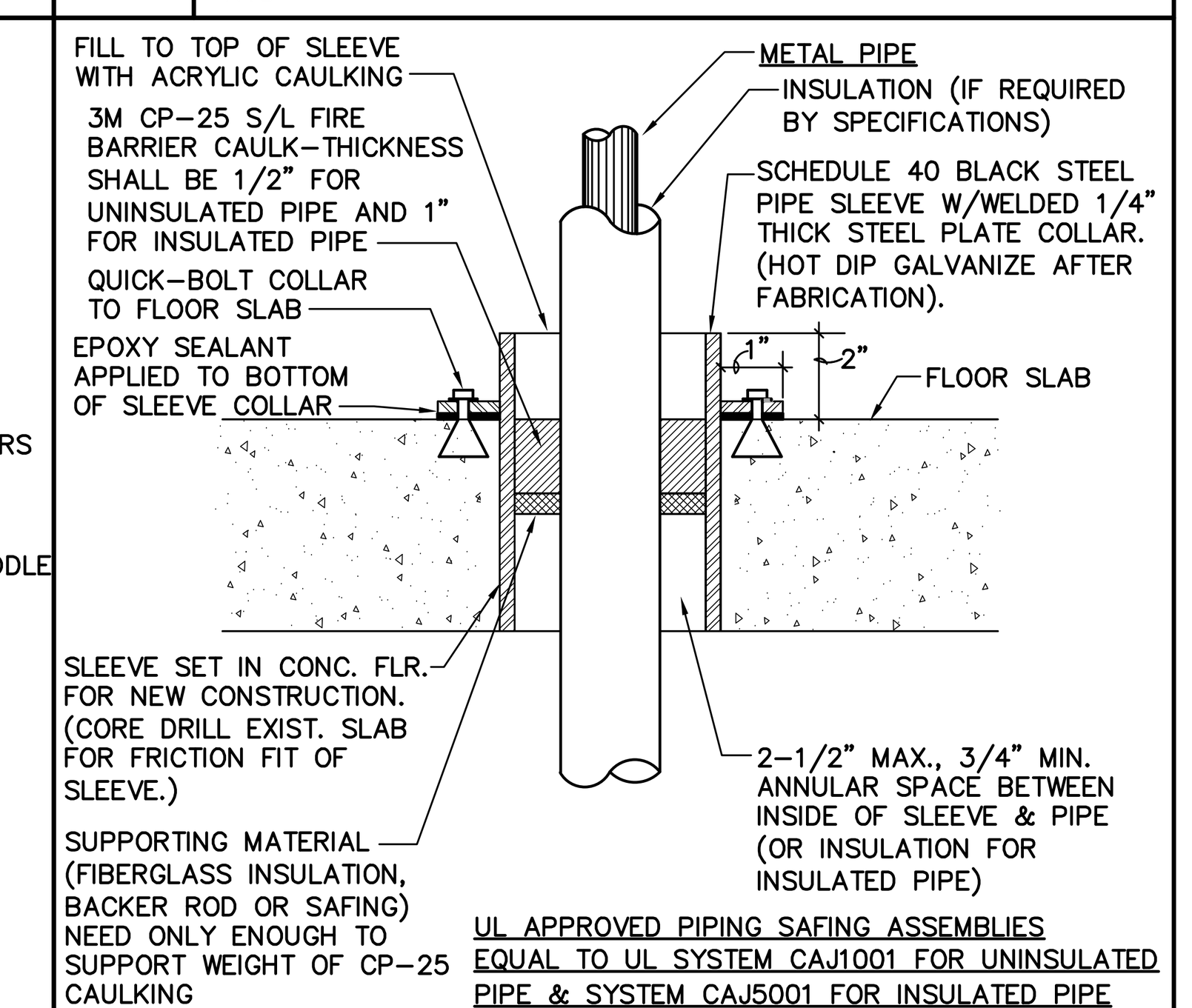
04 INDIRECT WASTE RECEPTOR
NTS



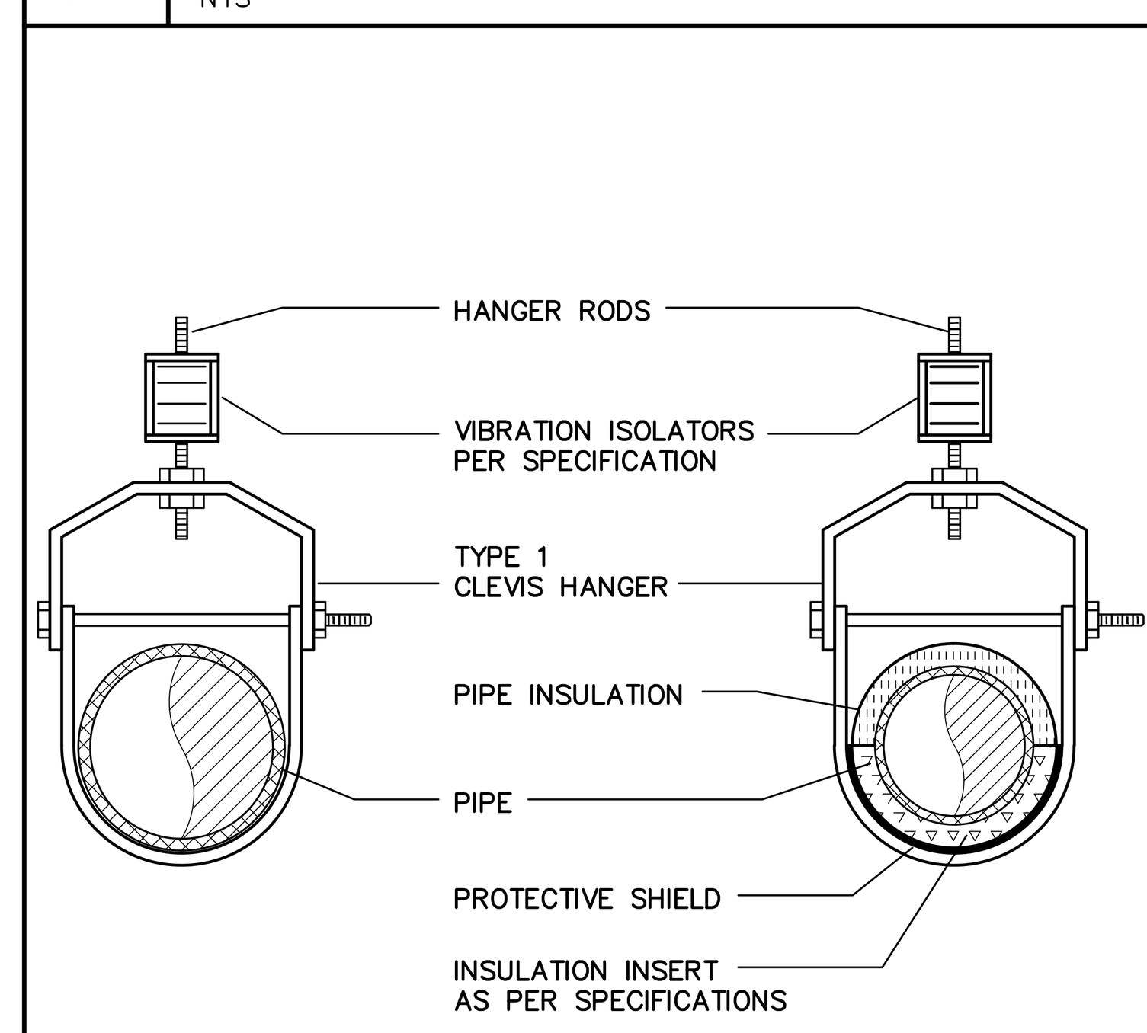
01 SUSPENDED WATER HEATER
NTS



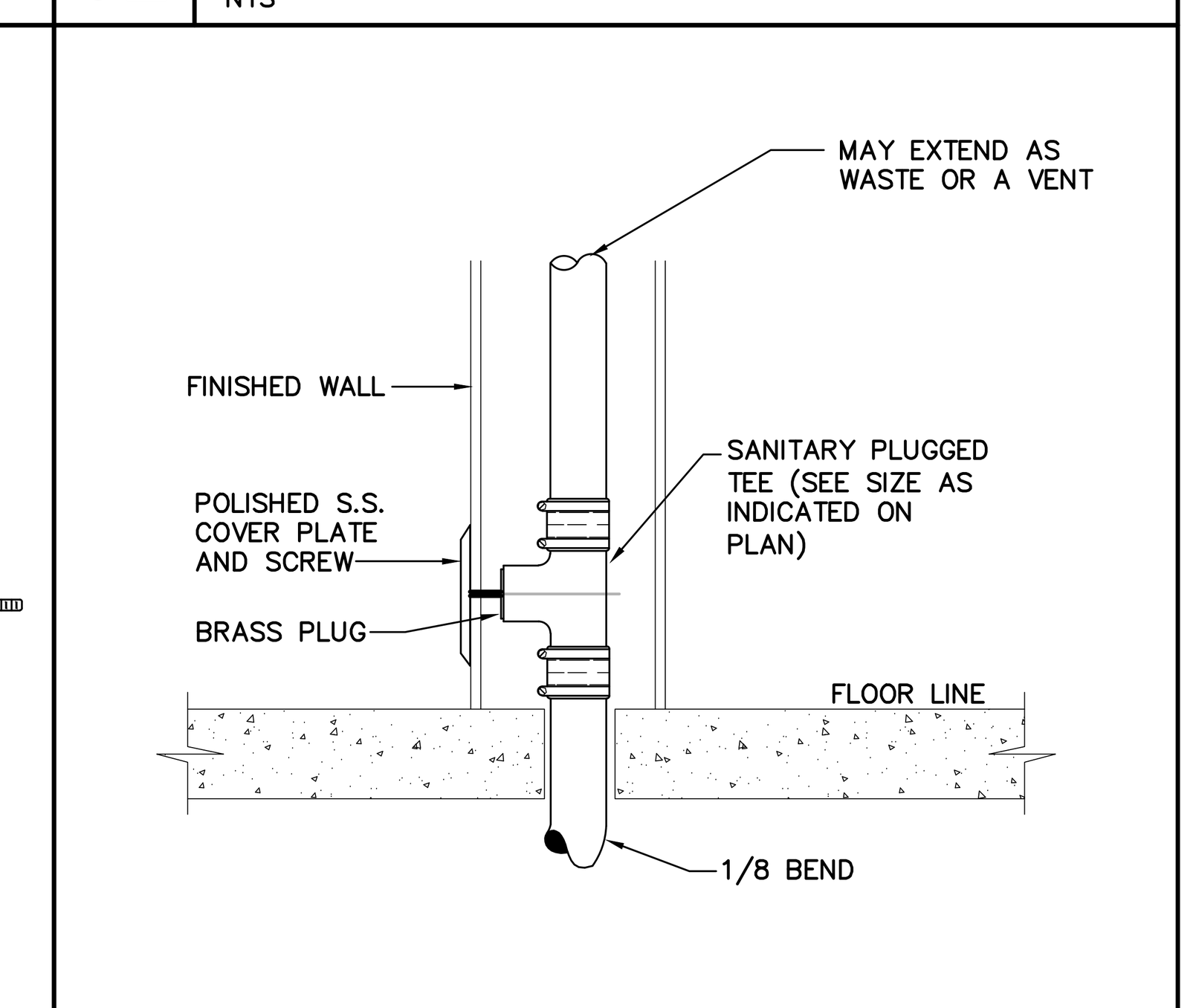
05 PIPE SUPPORT - TRAPEZE TYPE
NTS



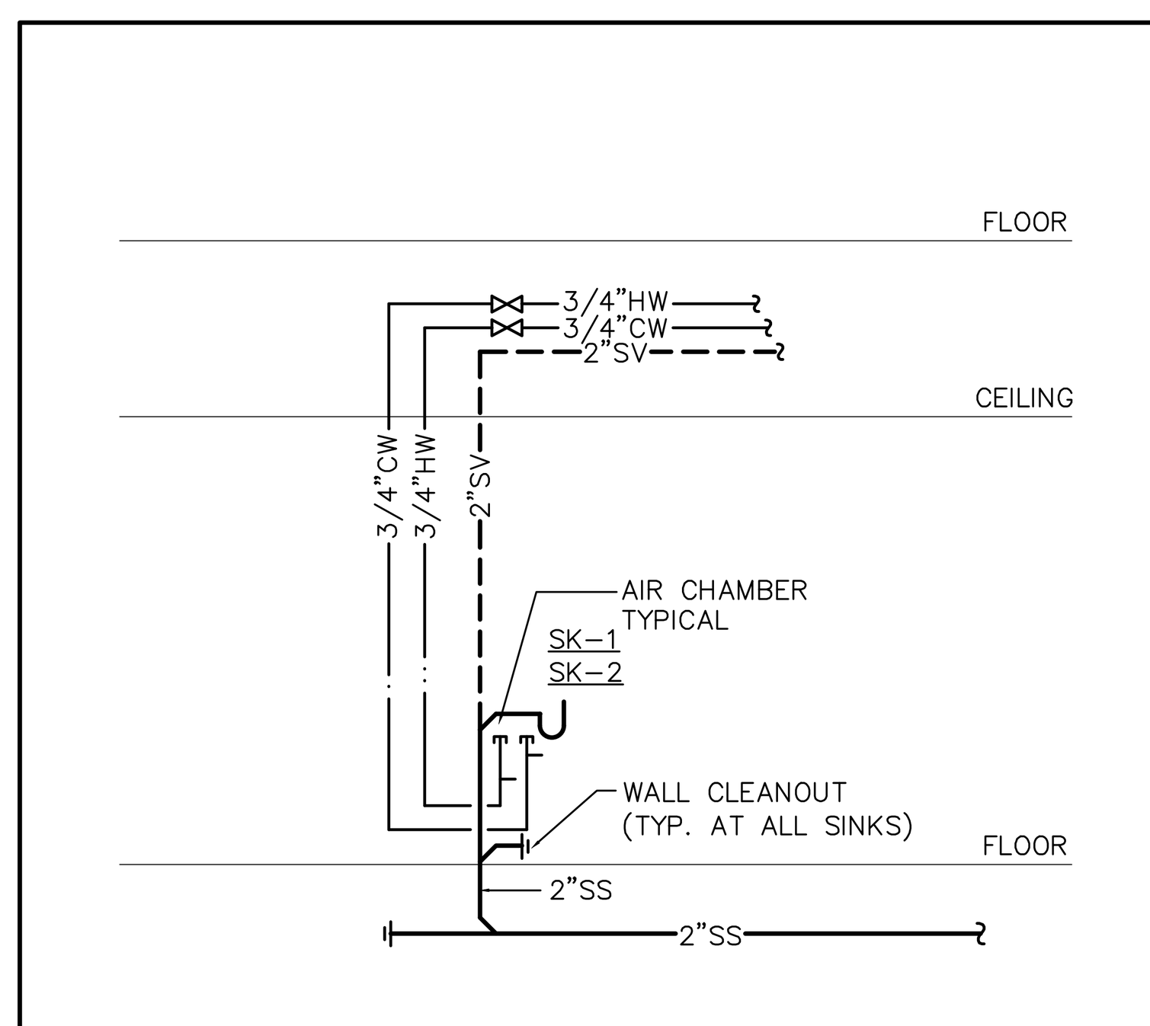
02 FLOOR SLEEVE DETAIL
NTS



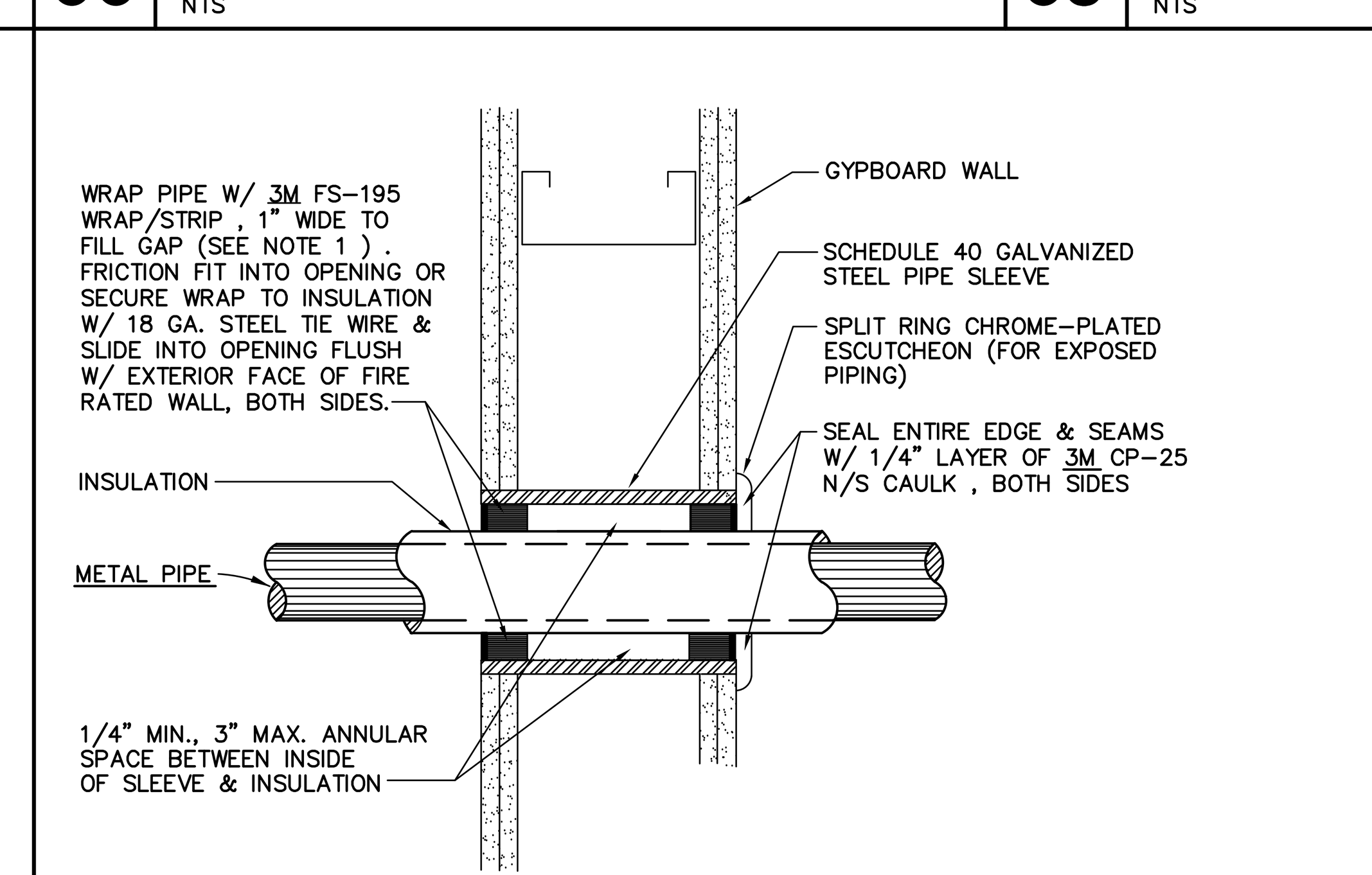
06 SINGLE PIPE CLEVIS HANGER
NTS



03 WALL CLEANOUT DETAIL
NTS



08 TYPICAL SINK PLUMBING RISER DIAGRAM
NTS



DESIGN BASED ON PENETRATION FIRESTOP THRU 1-2 HOUR FIRE-RATED GYP. BOARD WALL, UL CLASSIFICATION SYSTEM WL1001

NOTE 1
IF ANNULAR SPACE IS LESS THAN 1/2" & INSULATION THICKNESS IS 1" OR LESS, USE ONE WRAP OF 1" WIDE FS-195 AS SHOWN . 2" WIDE STRIPS MUST BE USED IF EITHER OF THE FOLLOWING CONDITIONS EXIST:
A. ANNULAR SPACE EXCEEDS 1".
B. PIPE INSULATION THICKER THAN 1".
SPACE BETWEEN & INSIDE SURFACE OF SLEEVE MUST ACCOMODATE AT LEAST 1 WRAP OF FS-195 PER INCH OF INSUL. . ANY REMAINING ANNULAR SPACE SHALL BE FILLED W/ ADDITIONAL FS-195 WRAPS UNTIL ANNULAR SPACE IS LESS THAN 1/4". FILL REMAINING SPACE W/ 3M CP-25 N/S CAULK .

07 WALL SLEEVE (METAL PIPE AND INSULATION)
NTS

Kirksey ARCHITECTURE
6909 Portwest Drive
Houston Texas 77024
713 850 9600
kirksey.com

PROJECT TEAM

WYLIE CONSULTING ENGINEERS
6161 Savoy, Suite 700 Houston, Texas 77036 713.781.2526
wylieassociates.com Wylie Project No. 11098.00
Wylie Consulting Engineers Firm Registration No. 1869

NO.	DATE	ISSUE
01	22 JUNE 2011	PRICING, PERMIT & CONSTR.

PROJECT NAME
MHHS SW POB
DR VANN

PROJECT ADDRESS
7789 SOUTHWEST FRWY #410
HOUSTON, TEXAS 77074

PROJECT NO.
KIRKSEY PROJECT NO. 2005226-019

KEY PLAN

SHEET TITLE
Plumbing
Schedules & Details

SHEET NUMBER
P3.10