MEDICAL TECHNOLOGY PRODUCTS, INC.

HAVERHILL BUSINESS PARK HAVERHILL ROAD RIVIERA BEACH, FLORIDA

ARCHITECT

ALAN STRASSLER ARCHITECTS, INC. 8895 N. MILITARY TRAIL #201-D PALM BEACH GARDENS, FL 33410 (561) 627-0336 FAX: (561) 624-0720 E-MAIL: astrassler@aol.com

CIVIL ENGINEER

SWS ENGINEERS INC.

536 JUNIPER PLACE WEELLINGTON, FL 33414 (561) 795-5579 FAX: (561) 795-5521

 $F-M\Delta H$: sween G att net

E-MAIL: swsen@att.net

LANDSCAPE ARCHITECT

MICHAEL RAWLS — LANDSCAPE ARCHITECT

694 CARNATION COURT WELLINGTON, FL. 33414 (561) 795-2396

E-MAIL: ladesign84@hotmail.com

STRUCTURAL ENGINEER

ALBERT A. GARGIULO, P.E.

324 SUNSET ROAD WEST PALM BEACH, FL. 33401 (561) 686-5554

E-MAIL: aagargiulo@aol.com

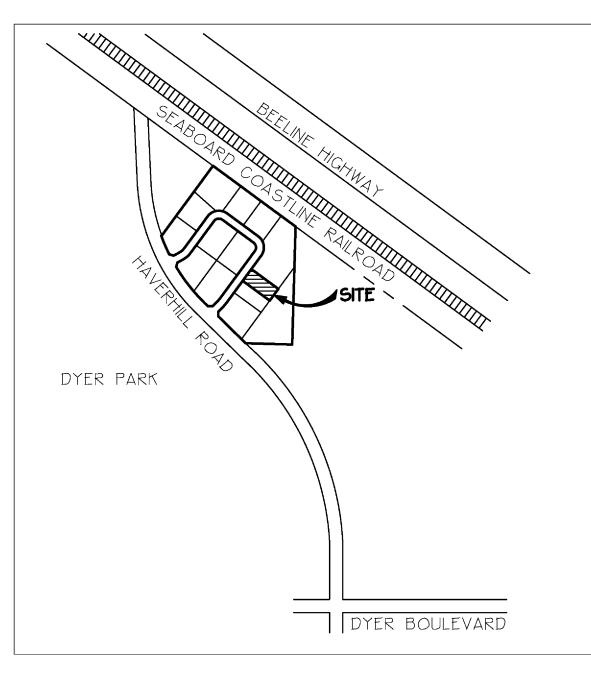
MECHANICAL/ELECTRICAL ENGINEER

CHANE, INC.

2705 PARK ST.

LAKE WORTH, FL. 33460 (561) 586-4003 FAX: (561) 586-5688

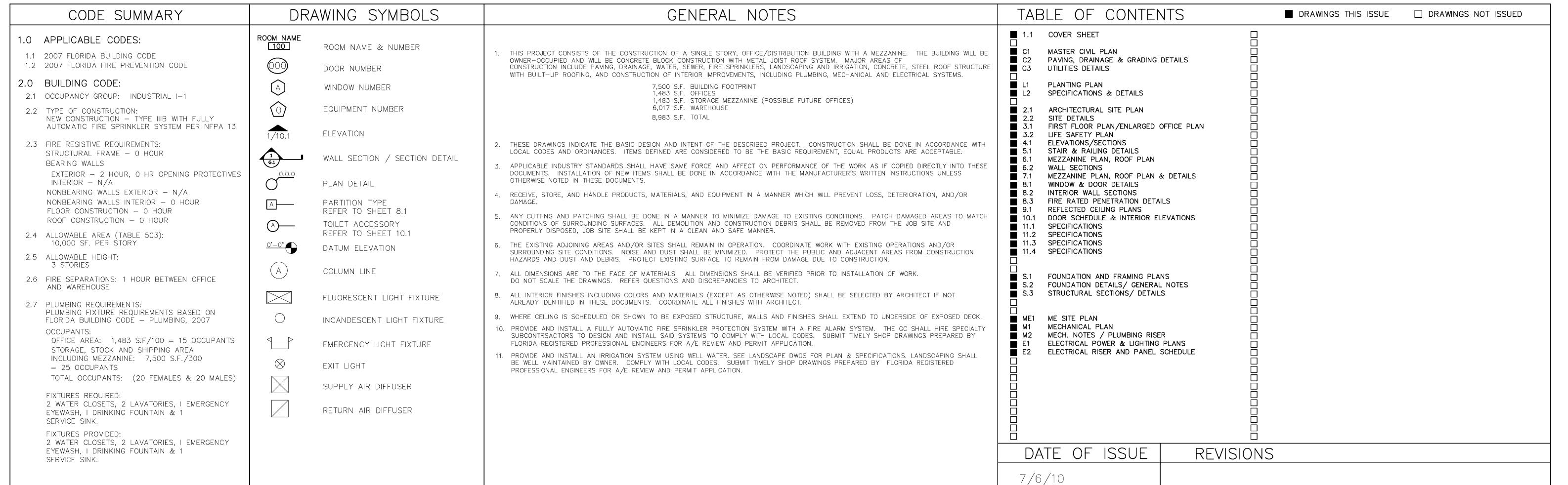
E-MAIL: chaneinc@aol.com



LOCATION MAP

N. T. S





DDUCTS

LOT #7
A BEACH , FLORIDA

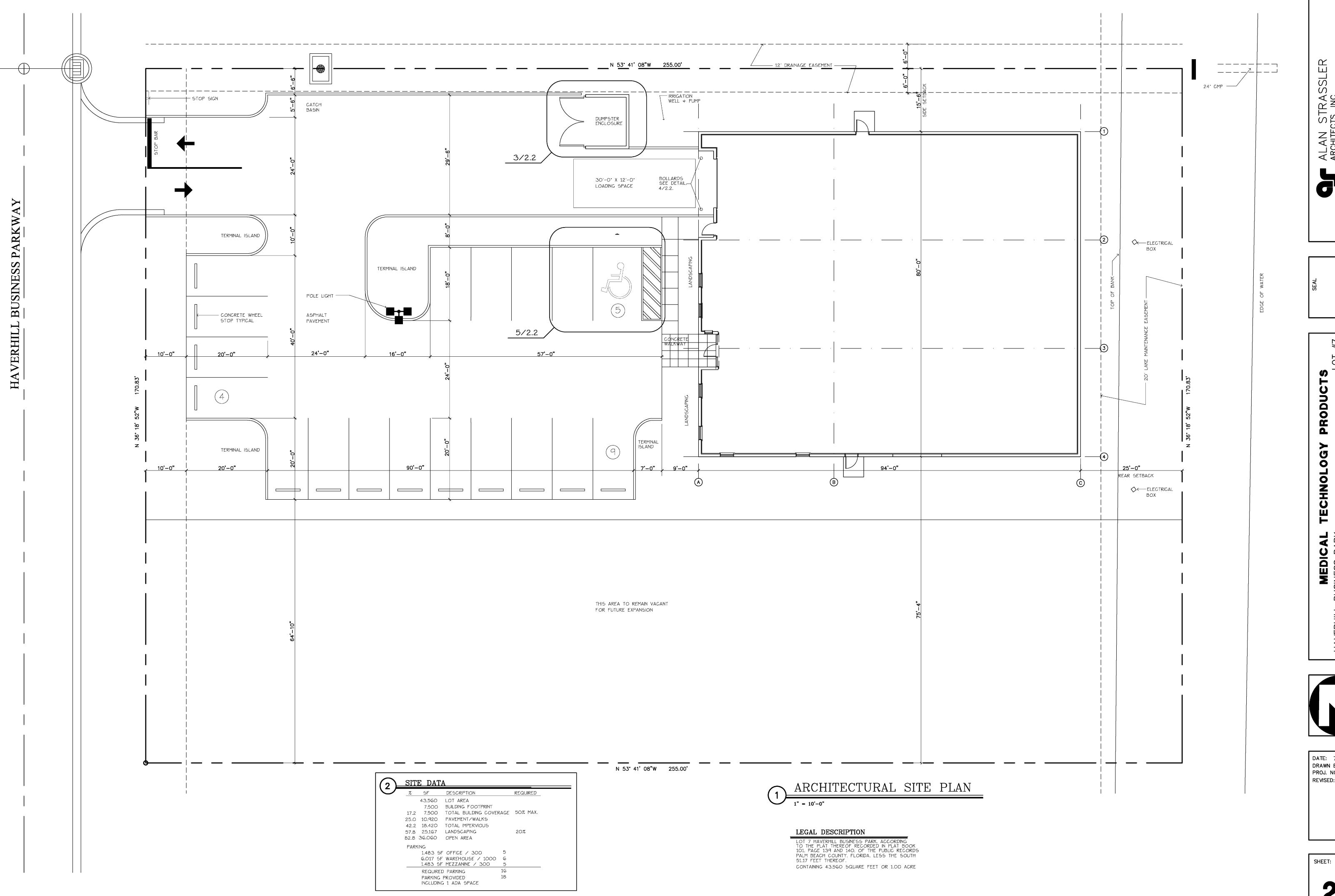
TECHNOLOGY PRODUC

MEDICAL TE Business park Road

HAVERHILL BUSI HAVERHILL ROAL

DATE: 7/6/10 DRAWN BY: AMS PROJ. NO. 926 REVISED:

SHEET:

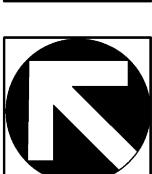




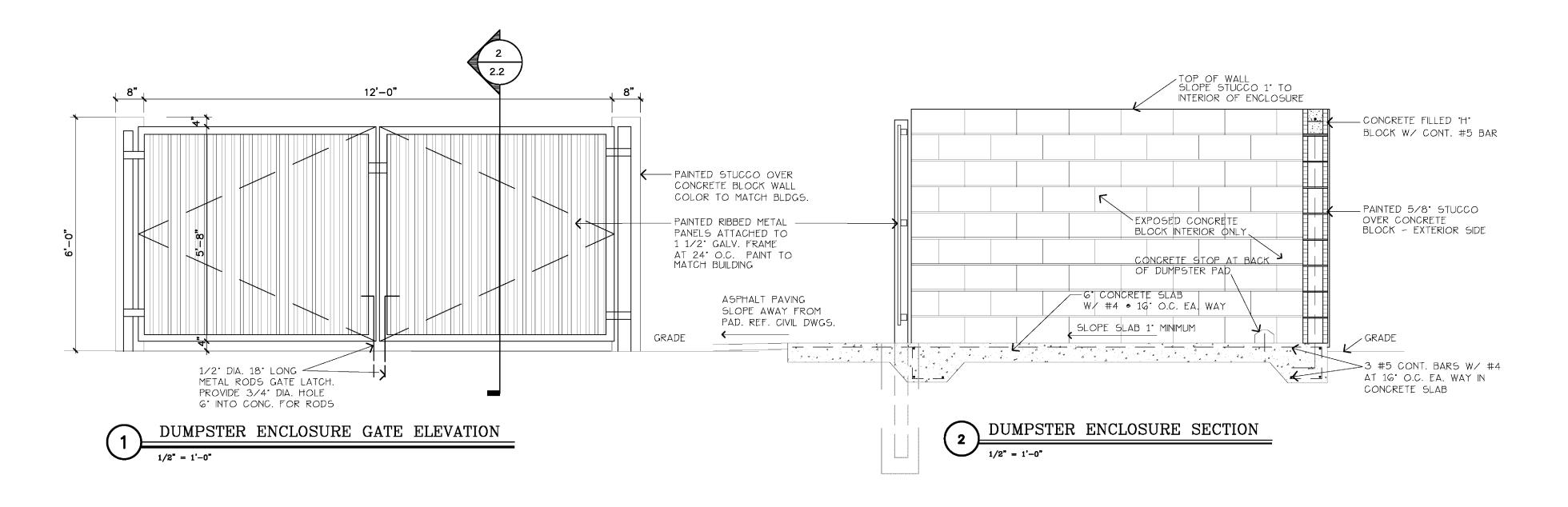
INO

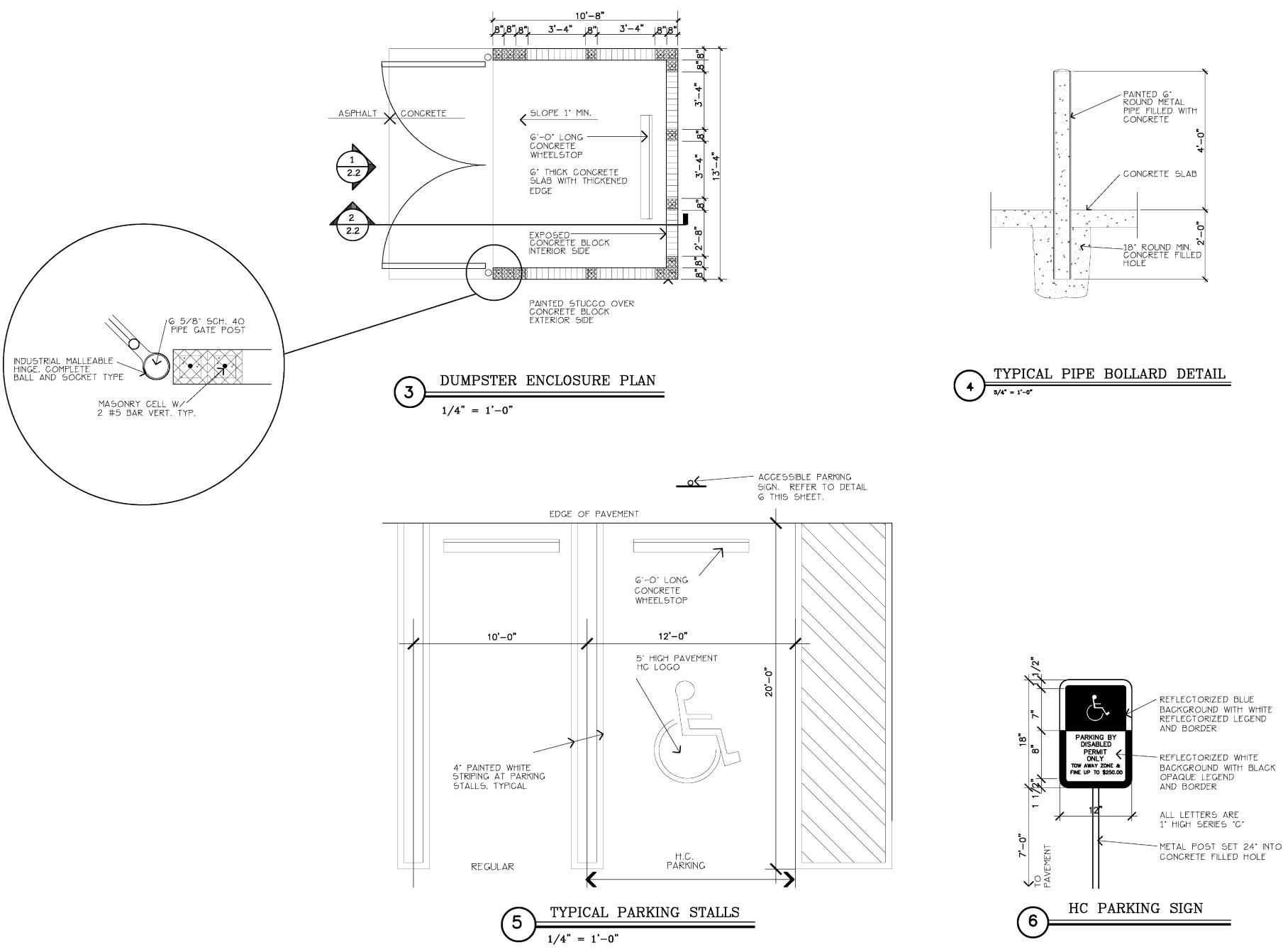
MEDICAL BUSINESS PARK ROAD

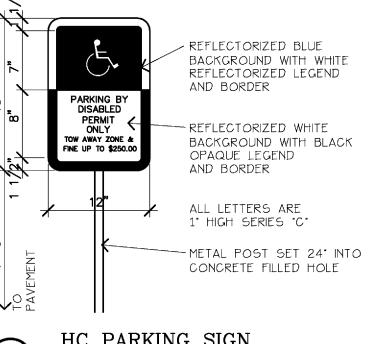
HAVERHILL I HAVERHILL I SITE PLAN



DATE: 7/6/10 DRAWN BY: AMS PROJ. NO. 926 REVISED:



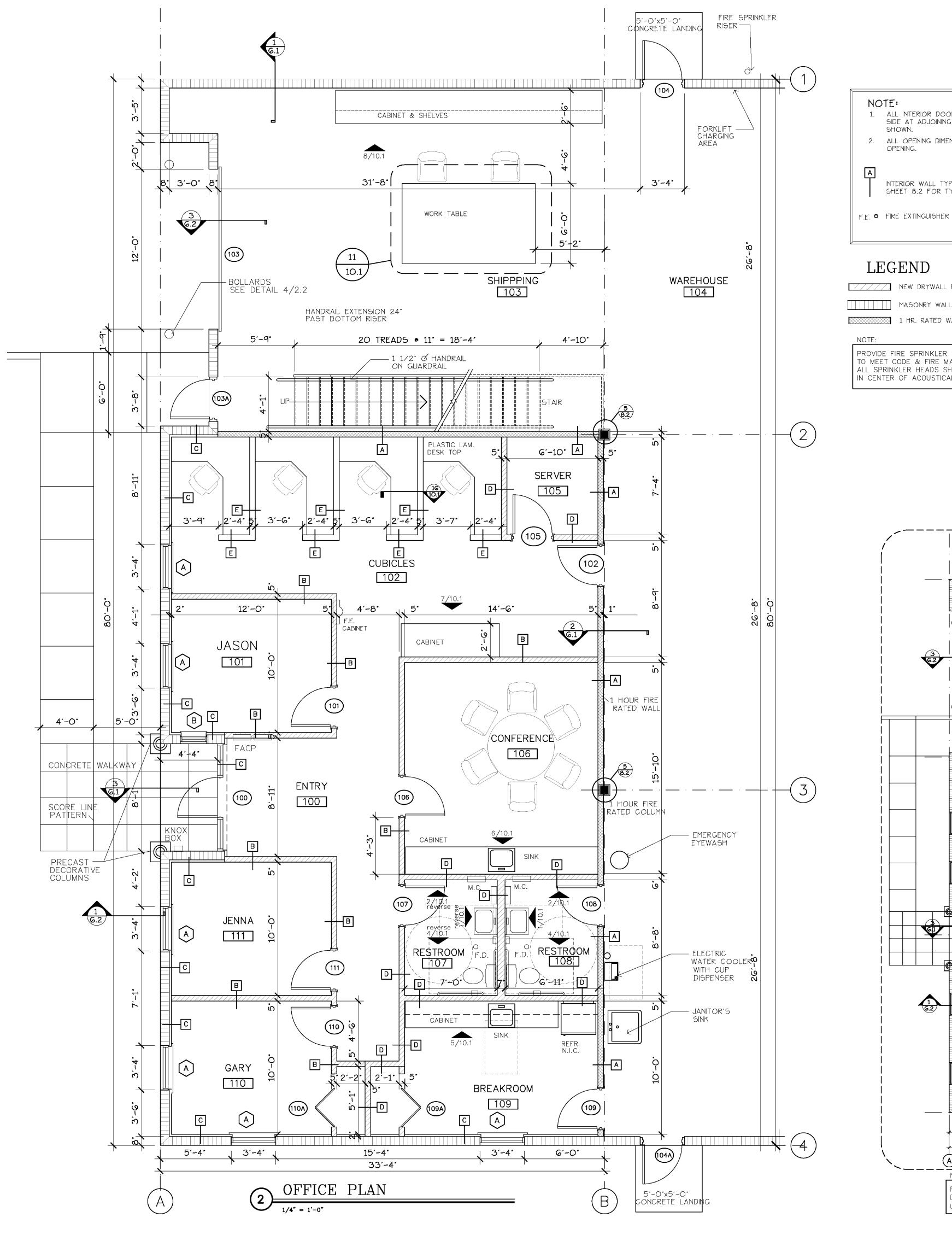


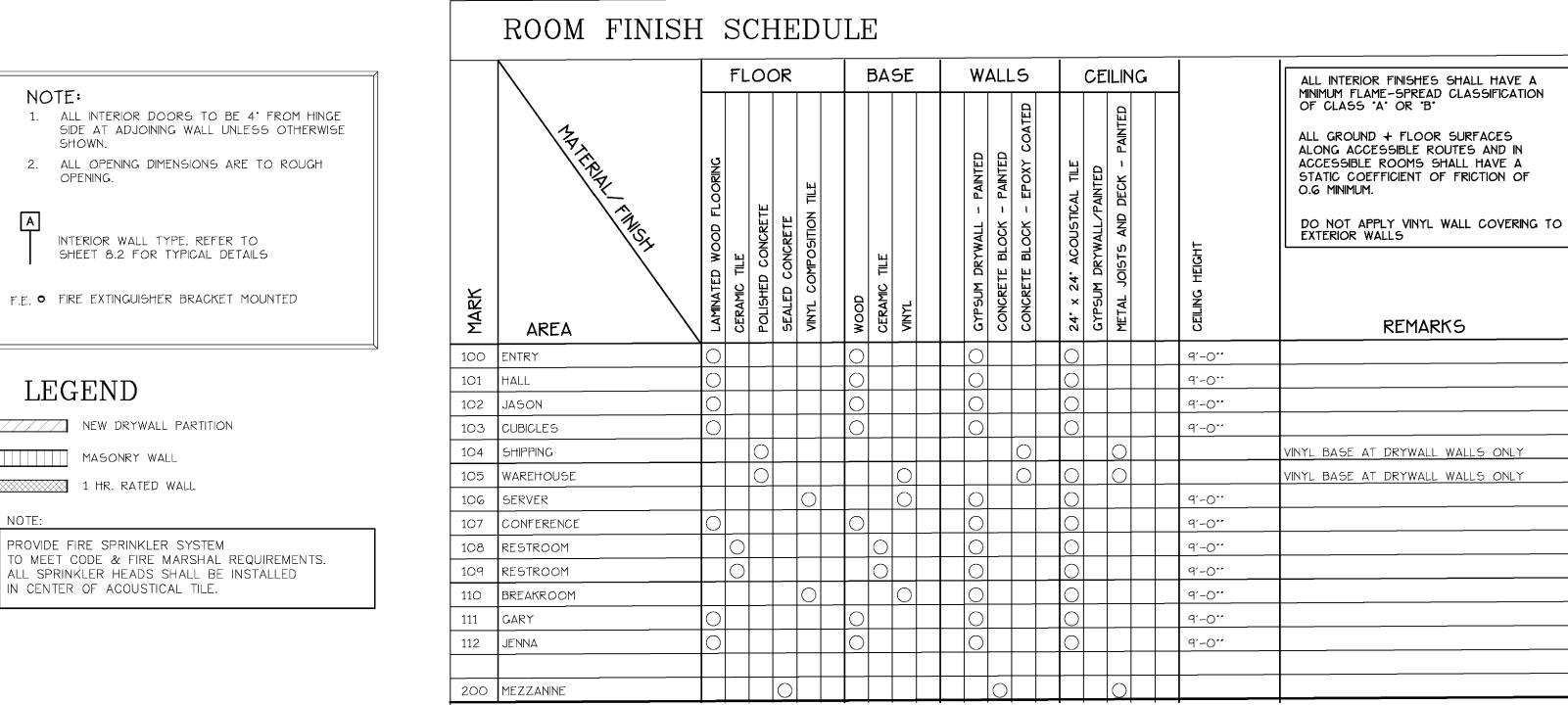


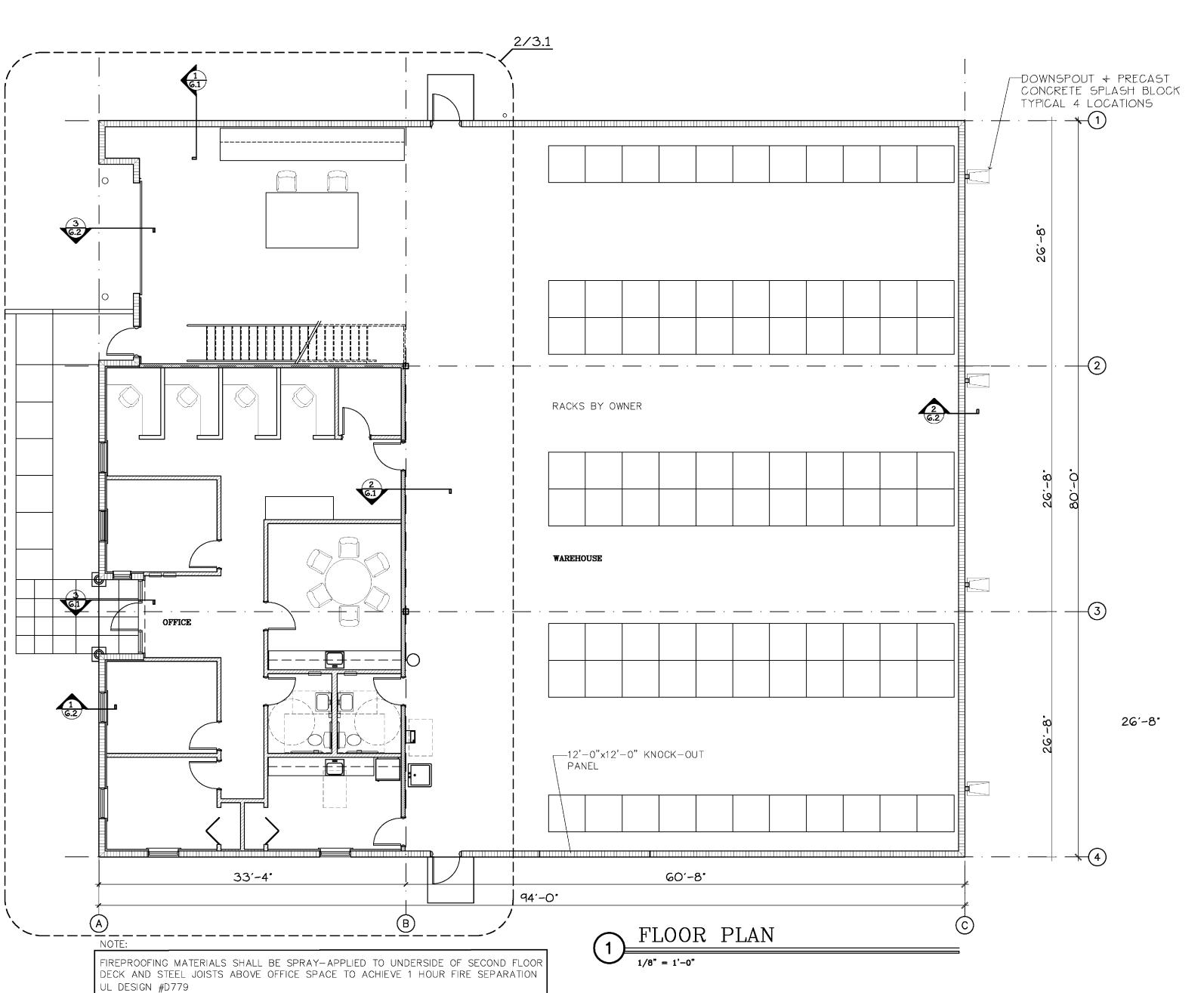
PRODUC. **909Y**

CHNOL MEDICAL JSINESS PARK JAD

DATE: 7/6/10 DRAWN BY: AMS PROJ. NO. 926 REVISED:







ALAN STRASSLER
ARCHITECTS, INC.
8895 NORTH MILITARY TRAIL, SUITE 201-D
PALM BEACH GARDENS, FLORIDA 33410
(561) 627-0336 FAX (561) 624-0720
CERTIFICATE OF AUTHORIZATION #AA26000610
ALAN M. STRASSLER #7405



SEAL

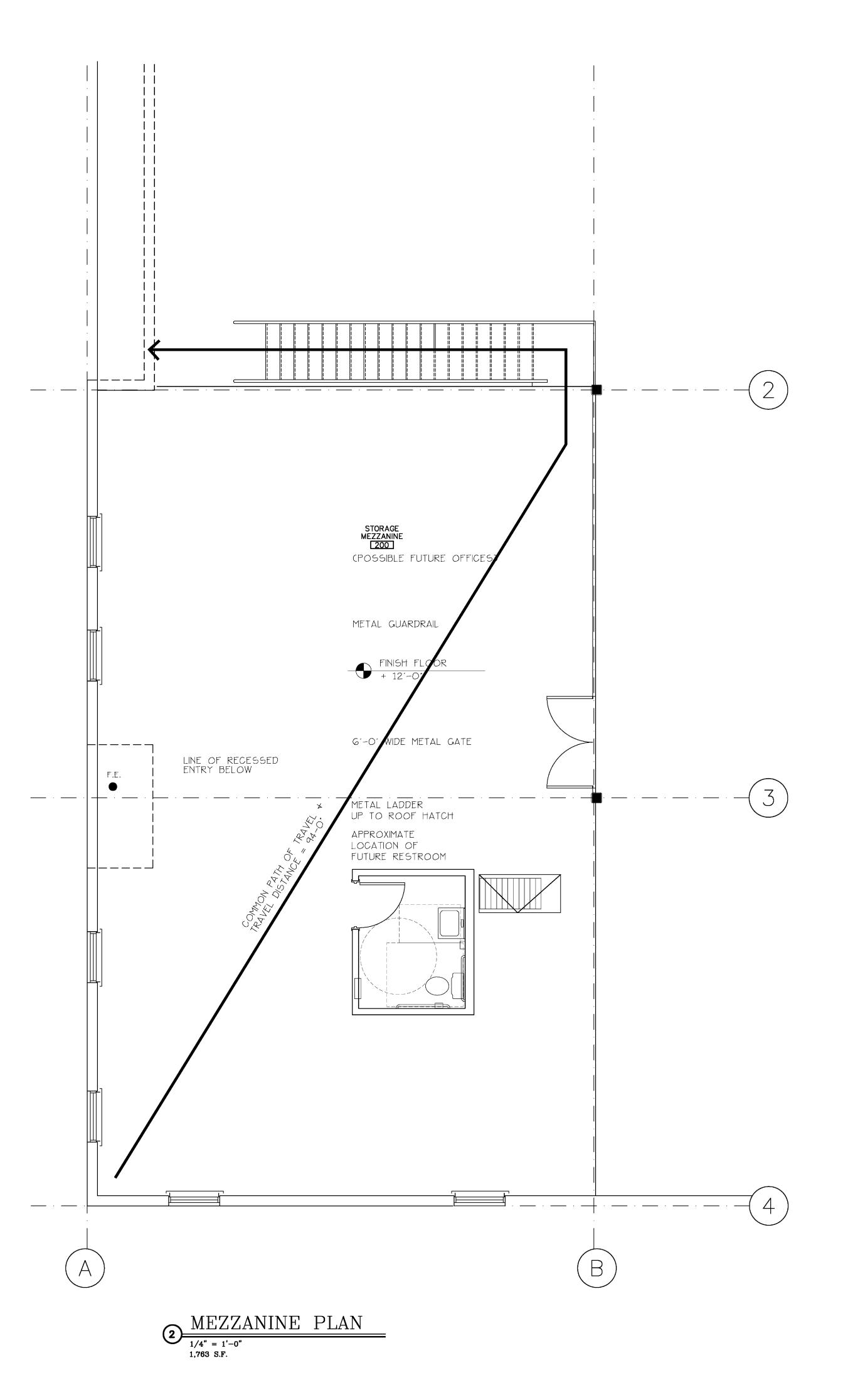
LOT #7
RIVIERA BEACH , FLORIDA

1/8"=1'-0"

MEDICAL IECHNOLORINESS PARK
RHILL ROAD

DATE: 7/6/10 DRAWN BY: AMS PROJ. NO. 926 REVISED:

SHEET:



LIFE SAFETY SUMMARY						
ITEM	REQUIRED	PROVIDED	REMARKS			
NUMBER OF EXITS	2	4				
EXIT DOOR WIDTH	32" MIN.	34.				
TRAVEL DISTANCE	300' MAX.	91'-0"				
COMMON PATH OF TRAVEL	100' MAX.	91'-0"				
DEAD END CORRIDOR	50' MAX.	15′				
EMERGENCY LIGHTING	YE5	YE5				

EGRESS REQUIREMENT: OFFICE: 1,763 S.F. /100 = 18 OCCUPANTS MEZZANINE: 1.763 S.F. /100 = 18 OCCUPANTS STORAGE: 5,659 S.F. /500 = 12 OCCUPANTS

YES

YES

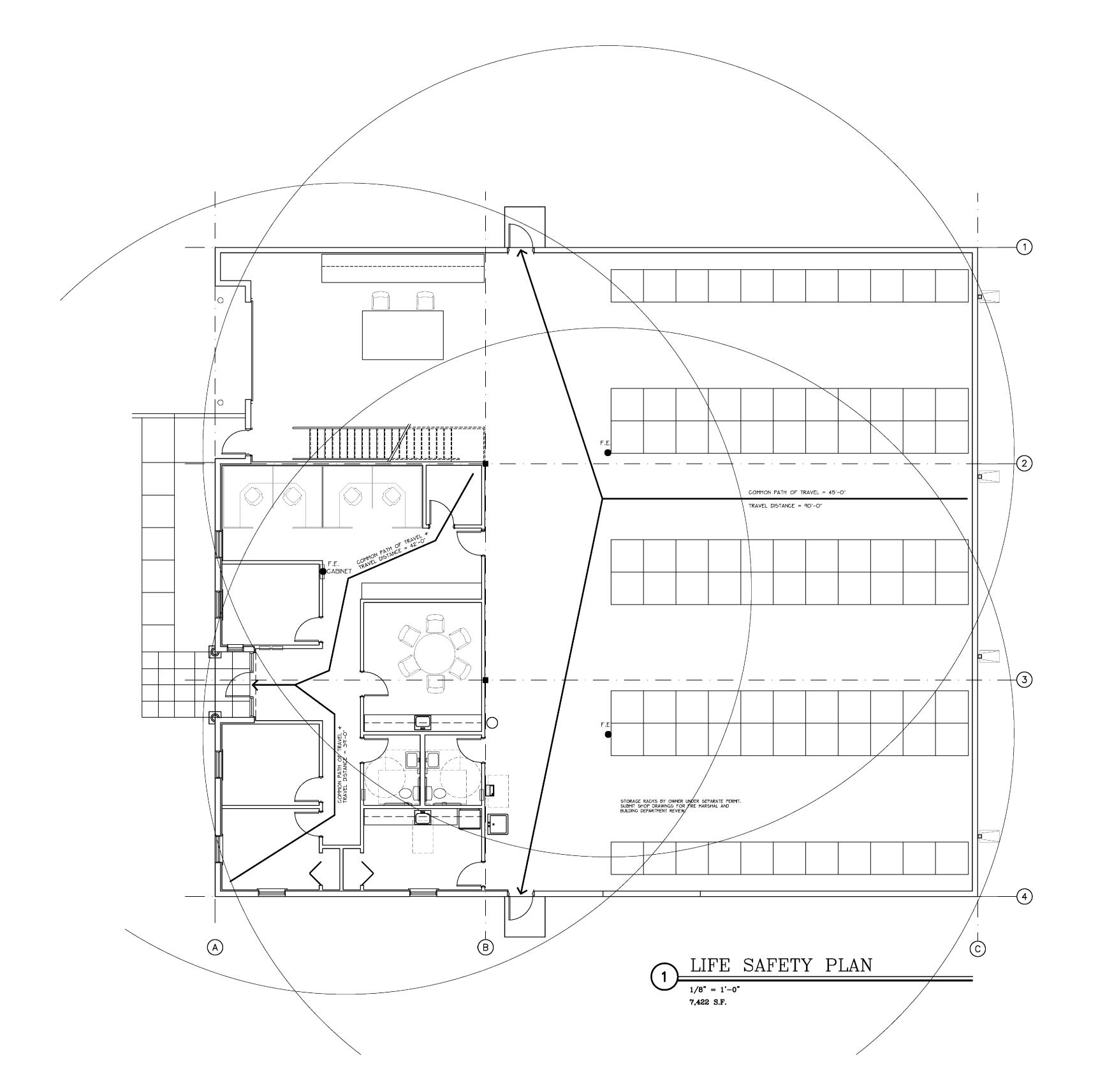
REQUIRED EGRESS WIDTH = 48 X .2 = 9.6 INCHES

SPRINKLER SYSTEM YES

FIRE ALARM SYSTEM YES

EGRESS WIDTH PROVIDED = 4 DOORS X 34' = 136 INCHES

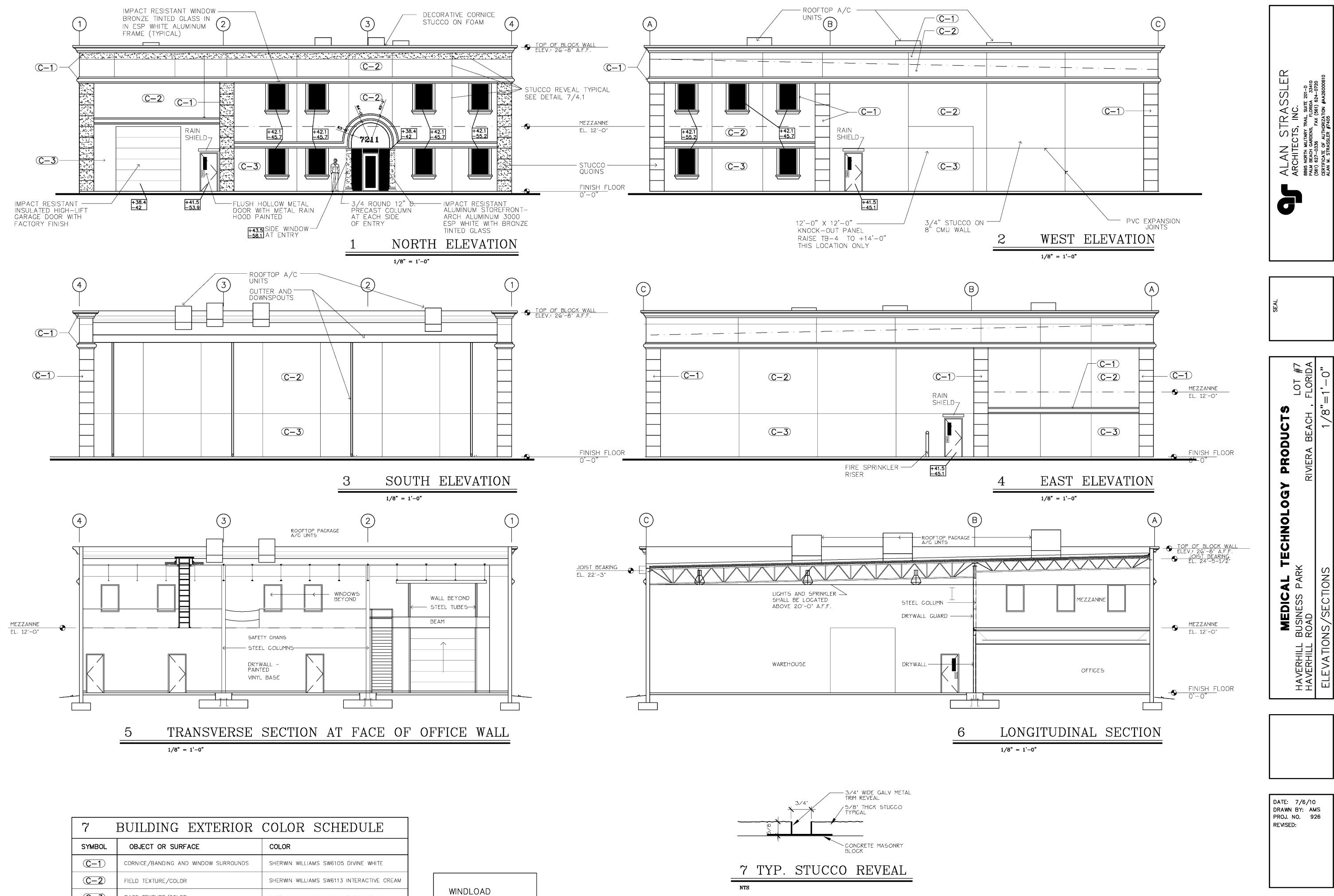
- 1) FIRE EXTINGUISHER DISTANCE RADII ARE BASED ON A MAXIMUM OF 50' TRAVEL DISTANCE TO ANY EXTINGUISHER.
- 2) ALL FIRE EXTINGUISHERS SHALL BE 2A 10BC
- MOUNT FIRE EXTINGUISHERS ON METAL RACKS IN WAREHOUSE AREAS. HANDLE OF FIRE EXTINGUISHERS TO BE AT 48" A.F.F.





MEDICAL T

DATE: 7/6/10 DRAWN BY: AMS PROJ. NO. 926 REVISED:



DESIGN PRESSURE

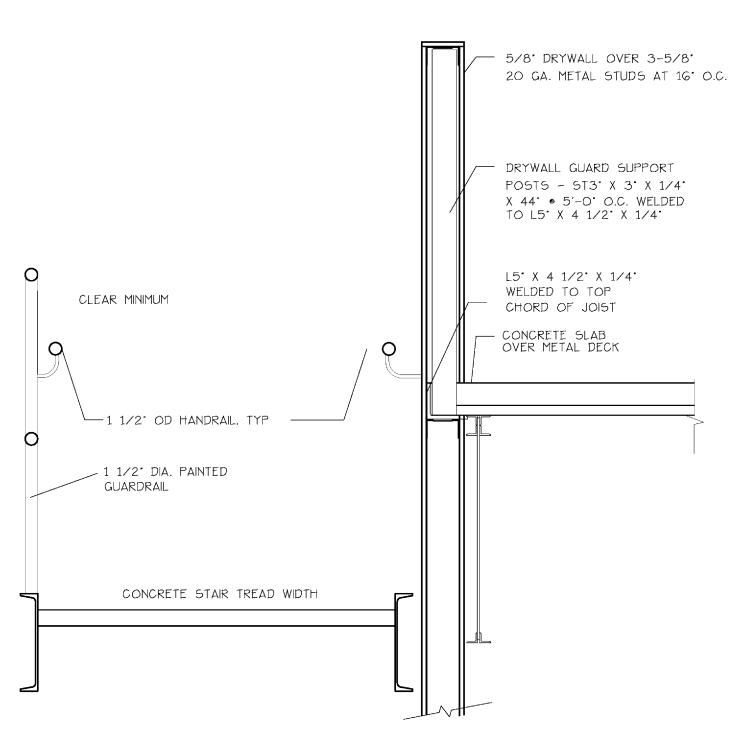
+57.2 -76.6

SHERWIN WILLIAMS SW6116 TATAMI TAN

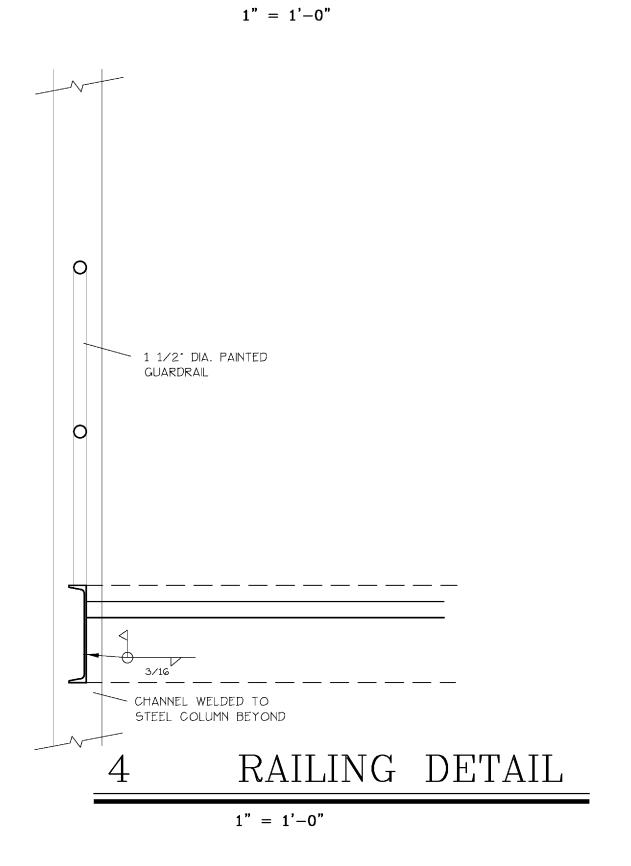
GUTTER AND DOWNSPOUTS AND METAL RAIN HOODS SHALL BE PAINTED TO MATCH ADJACENT BUILDING COLORS.

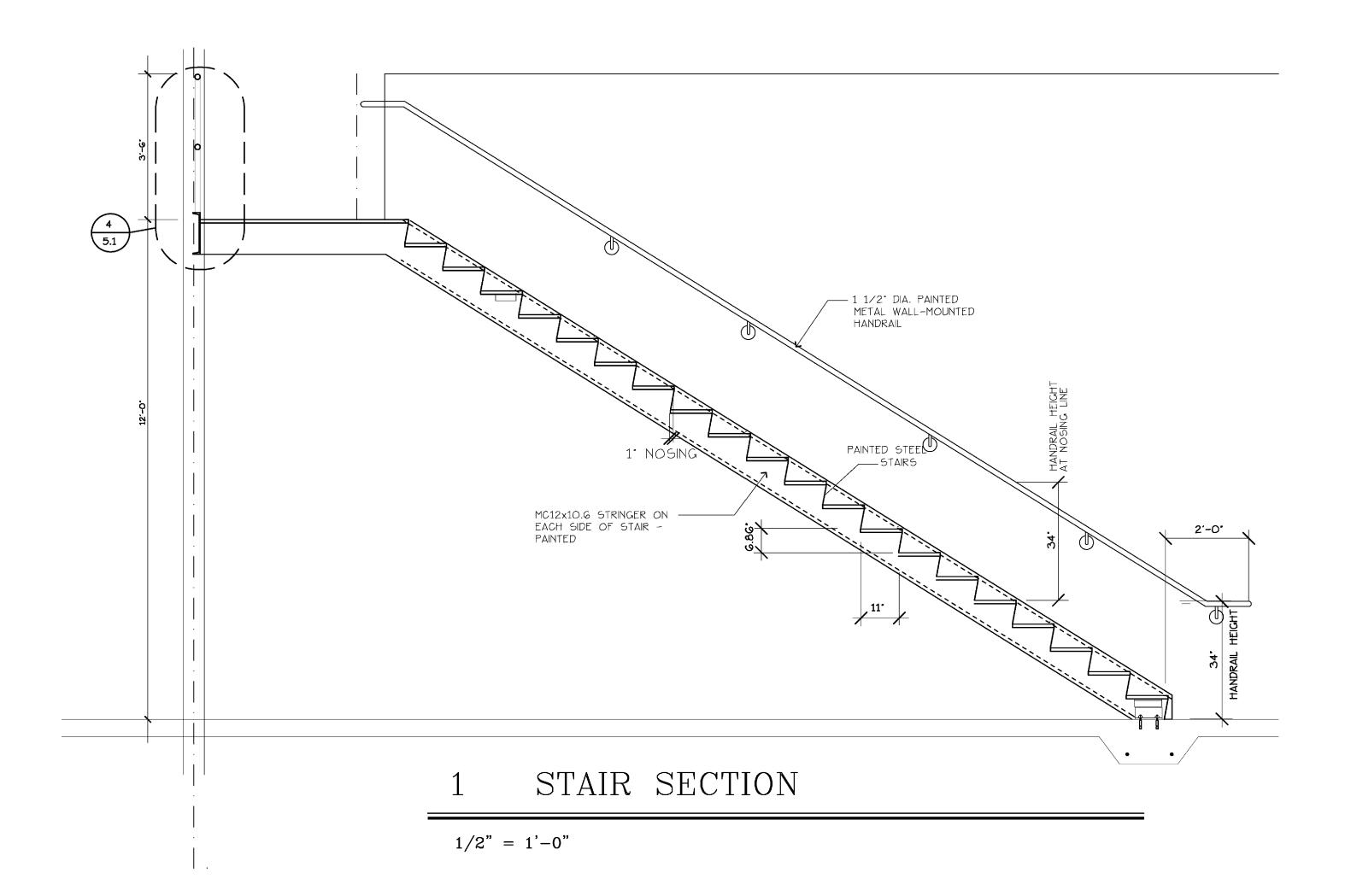
 $\overline{C-3}$

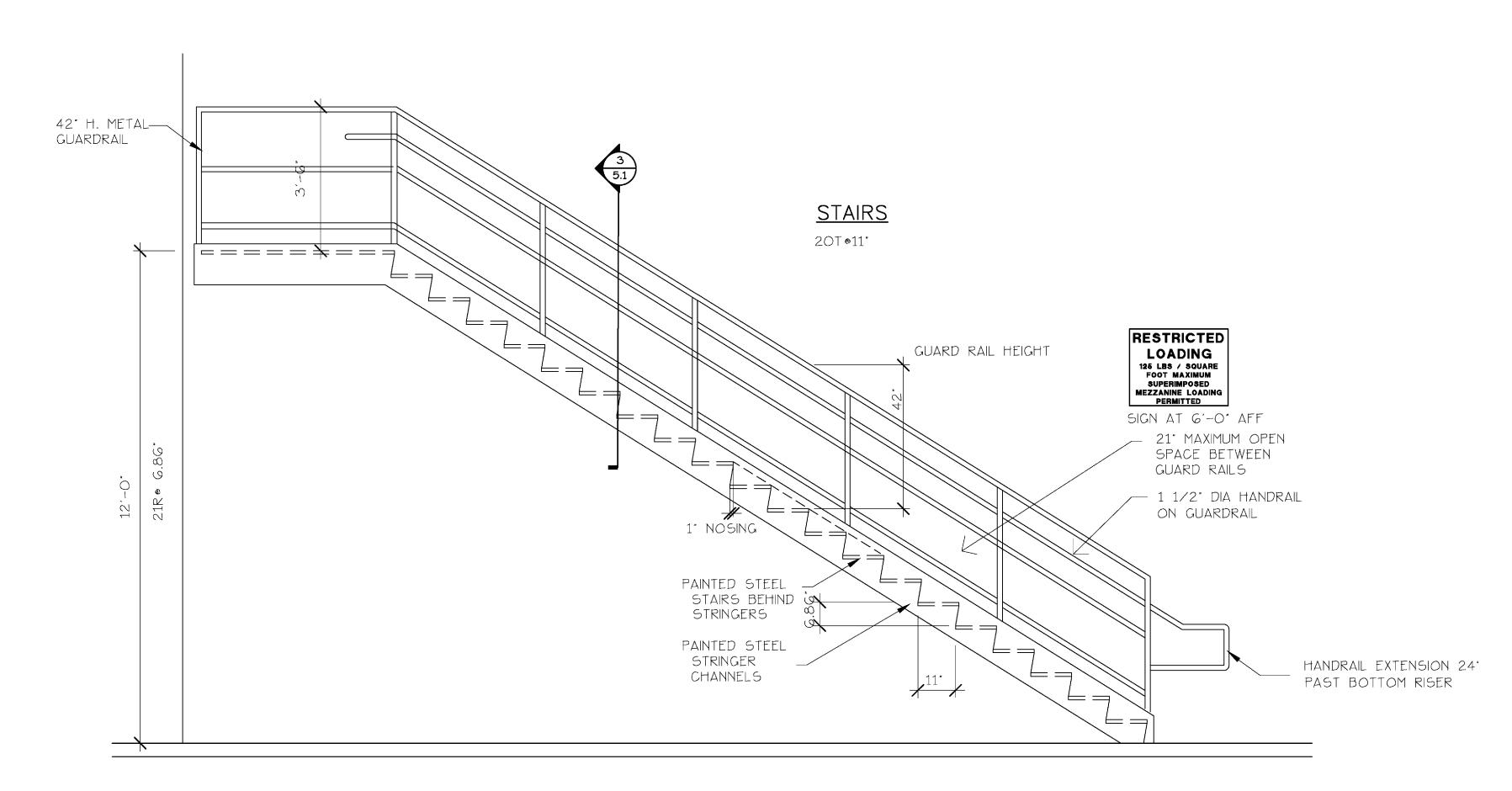
BASE TEXTURE/COLOR



3 RAILING DETAIL







2 STAIR ELEVATION/ SECTION

1/2" = 1'-0"

ALAN STRASSLER
ARCHITECTS, INC.
8895 NORTH MILITARY TRAIL, SUITE 201-D
PALM BEACH GARDENS, FLORIDA 33410
(561) 627-0336
FAX (561) 624-0730

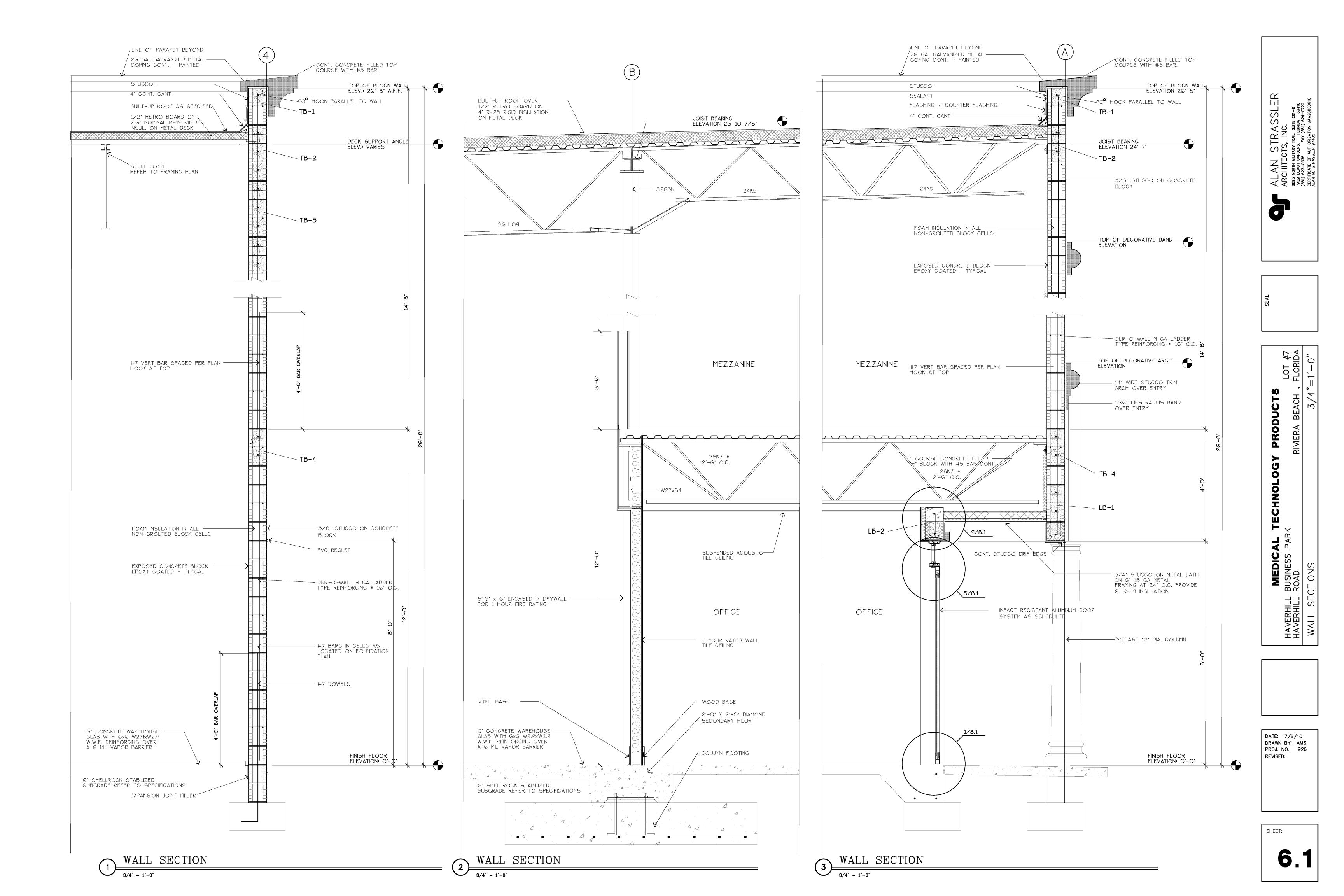


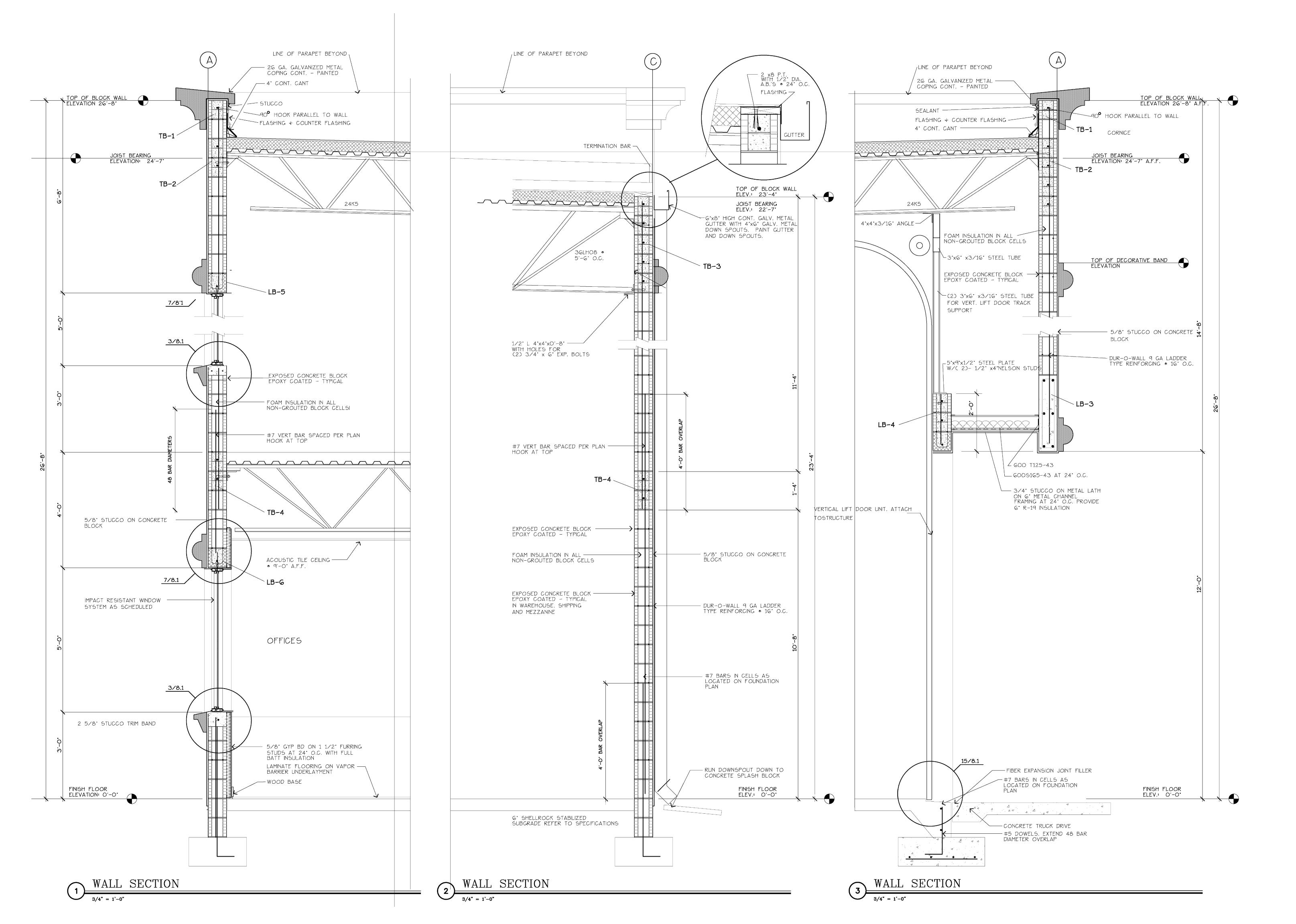
LOT #7
RIVIERA BEACH , FLORIDA

MEDICAL TECHNOLOGY
BUSINESS PARK
ROAD

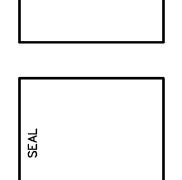
DATE: 7/6/10 DRAWN BY: AMS PROJ. NO. 926 REVISED:

SHEET:

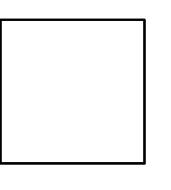




ALAN STRASSLER
ARCHITECTS, INC.
8895 NORTH MILITARY TRAIL, SUITE 201-D
PALM BEACH GARDENS, FLORIDA 33410
(561) 627-0336 FAX (561) 624-0720

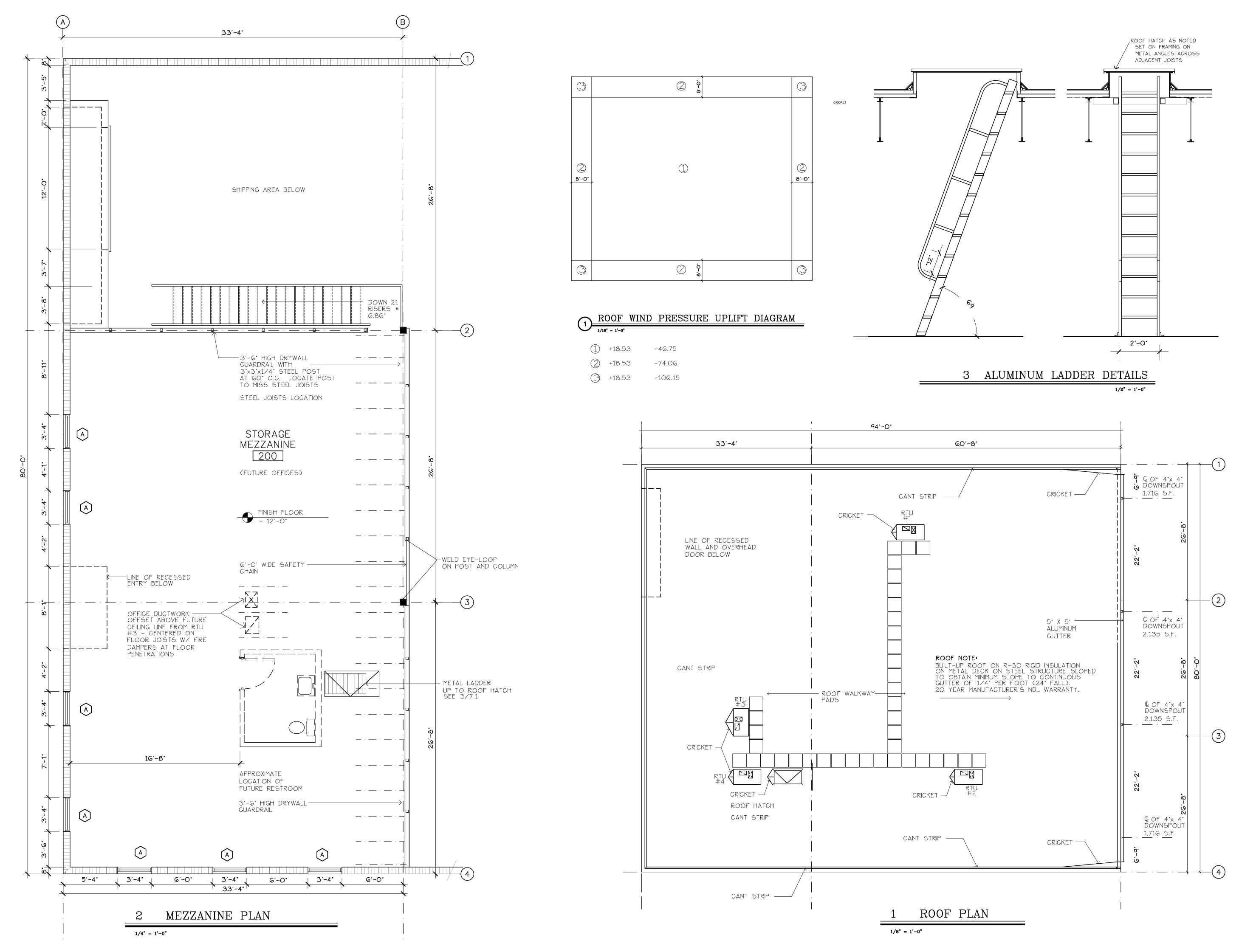


MEDICAL TECHNOLOGY PRODUCTS
BUSINESS PARK
ROAD
CTIONS
3/4"=



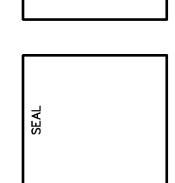
DATE: 7/6/10 DRAWN BY: AMS PROJ. NO. 926 REVISED:

SHEET: 6.2



ARCHITECTS, INC.

8895 NORTH MILITARY TRAIL, SUITE 201-D
PALM BEACH GARDENS, FLORIDA 33410
(561) 627-0336 FAX (561) 624-0720
CERTRICAR FOR JANA WEST CONTINUATION #AA26000610



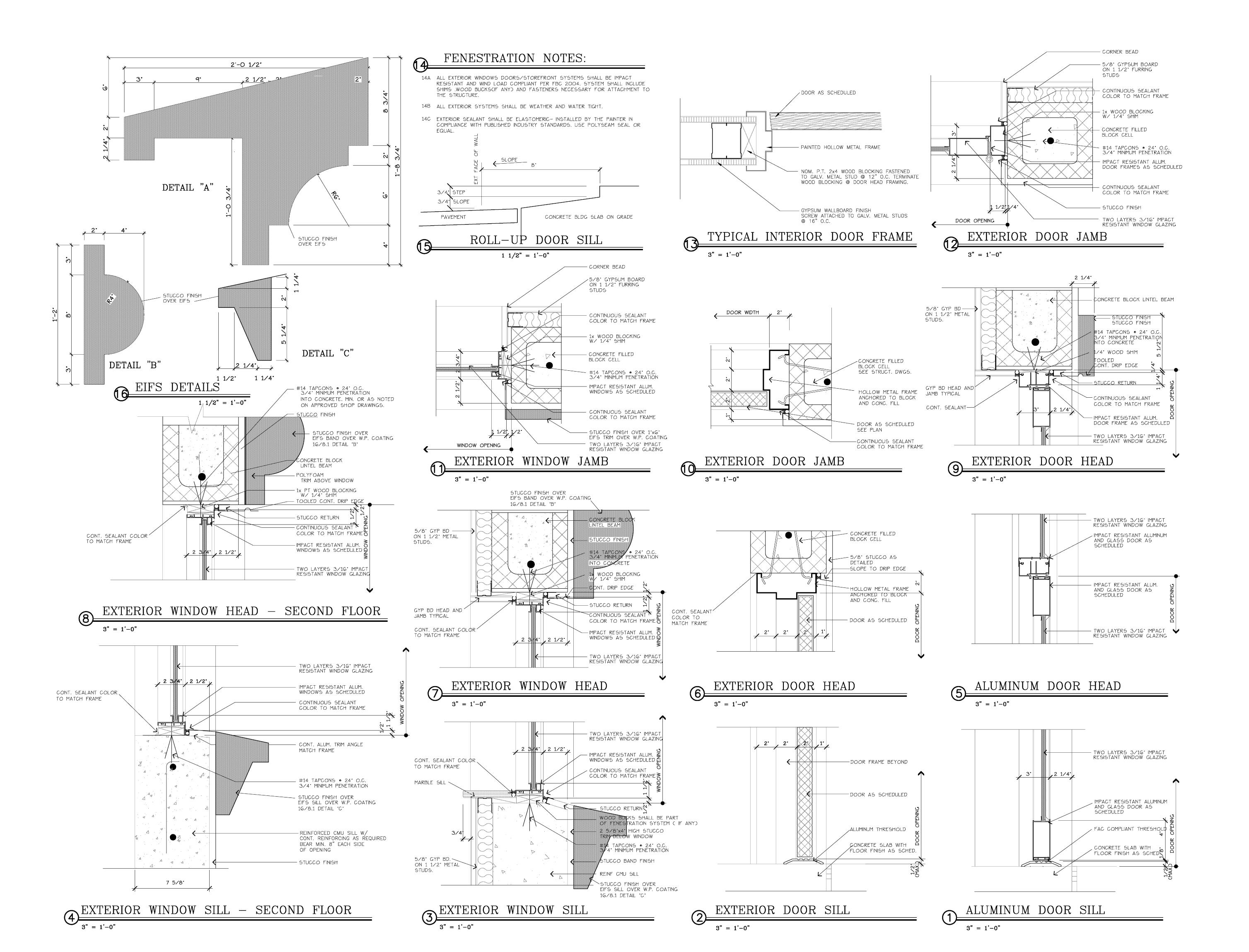
#7 8IDA 0"

RIVIERA BEACH , FLOF

MEDIC/ BUSINESS | ROAD

DATE: 7/6/10 DRAWN BY: AMS PROJ. NO. 926 REVISED:

SHEET: **7.1**



ARCHITECTS, INC.

8895 NORTH MILITARY TRAIL, SUITE 201-D
PALM BEACH GARDENS, FLORIDA 33410
(561) 627-0336 FAX (561) 624-0720
CERTIFICATE OF AUTHORIZATION #AA26000610
ALAN M. STRASSI FOR #77A05

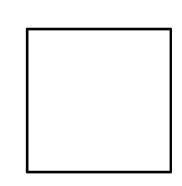
SEAL

CHNOLOGY PRODUCTS

LOT #

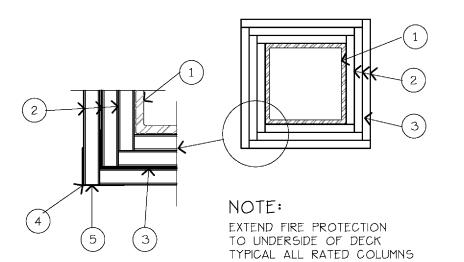
RIVIERA BEACH , FLORID

MEDICAL TECHNO ERHILL BUSINESS PARK ERHILL ROAD DOW AND DOOR DETAILS



DATE: 7/6/10 DRAWN BY: AMS PROJ. NO. 926 REVISED:

SHEET:



1. Steel Column—Min sizes of W shape and tubular steel columns in the AISC Steel Construction Manual as shown under Item 2. Wallboard, Gypsum——Any 5/8 in. thick or 1/2 in. thick wallboard bearing the Underwriters Laboratories Inc. Fire Resistance Classification Marking. Min total thicknesses of layers in inches for the various ratings and min

column sizes are as follows:

Min Column Size

Outside Flange Web Dimen- Thick- Thic sions ness ne Thick— ness (In.) Layers of Wallboard (In.) W4X13 4-1/8X4 0.345 0.280 W6X15.5 6X6 0.269 0.235 W10X49 10X10 0.558 0.340 3.82 1 1-1/2 4.56 1 1-1/2 14.4 1/2 1-1/8

Min Column Size Outside Wall lotal Thickness of
Layers of Wallboard (In.) dimensions ness (In.2) (In.) (In.) Area 4X4 0.188 2.74 8X8 0250 7.48 1-5/8 2-1/2 --

Applied in layers as shown in above illustration. Each layer held together with paper masking adhesive tape during erection to allow placement of succeeding layers. For column ratings of 2 hr or less, one layer of wallboard may be applied to the outer surface of steel cover. Boards applied vertically, without horizontal joints, attached to cover with screws located 1 in. from the

- board edge and 8 in. O.C. See Wallboard, Gypsum (CKNX) category for names of manufacturers.

 2A. Wallboard, Gypsum*-—As an alternate to Item 2,3/4 in. thick applied as described in Item 2.
- United States Gypsum Co.—Type ULTRACODE or IP—X3.

 3. Steel Covers—For seamed joints—0.024 in. min thickness (No 24 MSG) uncoated, galv, or stainless steel, for column ratings of 3 hr or less. For 4 hr ratings, only stainless steel cover to be used. Covers consist of two L—shaped sections with Snap—Lock or Pittsburgh sheet steel joints. Width to be determined on the basis of protection thickness and column size. Length of sections to provide 1/8 in. clearance per lineal foot of column length between cover and any restraint. For lapped joints—(Max ratings 2 hr)—No. 22 MSG (0.027 in. thick) uncoated or galv steel. Fasteners used at laps to be No. 8 by 1/2 in. steel sheet metal screws spaced a max of 12 in. OC. Other details to be
- the same as those stated for seamed joints as shown above. Corner Bead—For columns with outer layer of wallboard attached to outside surface of metal cover, No. 28 MSG galv steel, 1—1/2 in. legs corner beads attached to wallboard with screws spaced 12 in. O.C.
- 5. Screws--For columns with outer layer of wallboard attached to outside surface of metal cover, self-drilling Phillips bugle head, 1 in. long screws for 1/2 or 5/8 in. thick wallboard (1-1/4 in long screws for 3/4 in. thick wallboard) are used to attach wallboard to steel cover, and corner
- bead to wallboard.

 6. Sodium Silicate Solution—(Not shown, optional)——Used to adhere one layer of wallboard to inside of steel cover prior to assembly.

 7. Finishing System——(Not shown)——Joint compound applied over corner beads to a thickness of 1/16 in.
 *Bearing the UL Classification Marking.

RATED COLUMN DETAIL

(2A) Stud Stud Stud Void 🤇 Void **<** CONFIGURATION A CONFIGURATION B CONFIGURATION C

1. Floor and wall assembly 1A. Max. 3 in. deep fluted steel deck with min. 3 in. depth of concrete per UL Floor-Ceiling design or min. 2-1/4 in. depth of insulating concrete per UL P900 series design for both CONFIGURATIONS A + B. Min. 4-1/2 in. thick

- NW or LW concrete for CONFIGURATION C. 1B. Min. 25 gauge galv. 1-1/4 in. deep leg steel channels. (Optional - Slotted SLP-TRK, Metal-
- Lite or Clipped Snap Track Ceiling Runner). 1C. Min. 3-5/8 in. wide steel studs cut 3/4 in. less in length than assembly height.
- 1D. One layer of gypsum wallboard capable of a 1 hr. rating or two layers of gypsum wallboard capable of a 2 hr. rating per UL U400 Series Design.
- * Studs and wallboard must have a min. 1/4 in. engagement onto legs of steel channels at the furthest point of extension of the joint.
- 2. <u>Dynamic joint</u> 2A. Max. joint width is 1 in. from bottom of the floor or roof to top of gypsum wallboard. Joint was tested to total movement of 25% (compression only).

3. <u>Firestopping</u> - FlameSafe FS 900+ Series Sealant. FlameSafe FS 1900 Series Sealant. *CONFIGURATION A* 3A. Mineral wool (4 pcf) compressed a min. 20% into fluted area and a min. 50% into joint above

Optional - Mineral wool plugs (8 pcf) cut slightly larger than shape of flute, recess 5/8 in. from wall surfaces.

the gypsum wallboard assembly, recessed a min.

5/8 in. from both wall surfaces to accommodate

CONFIGURATIONS B + C 3A. Optional - Mineral wool (4 pcf) or backer rod compressed into joint above the gypsum wallboard. recessed a min. 5/8 in. from both wall surfaces to accommodate sealant.

3B. Apply F5 900+ into joint a min. 5/8 in. deep and finish flush with wall surface (both sides). FS 1900 may be used for CONFIGURATION C.

1. This system drawing is provided to aid in the installation of the UL listed design. The user shall refer back to the UL listed design for complete required for submittal and approval purposes.

E1966) Fire Tests of Dynamic Joint Firestops. 2. System design evaluated to the UL 2079 (ASTM E1399 and components requiring UL classification.

1" = 1'-0"			

PARTITION NOTES:

2A. ALL INTERIOR PARTITIONS SHALL RESIST 5 LBS PER SF LATERAL LOAD. SEE 3/ 8.2 2B. REFER TO FLOOR PLANS FOR LOCATION OF PARTITION TYPES AND TO SCHEDULES & DETAILS FOR WALL FINISHES.

CONT. TOP RUNNER
FASTEN TO STRUCTURE

CONTINUE STUDS TO UNDERSIDE OF ROOF TRUSES OR

3 5/8' x1 5/8' x18 GA COMPRESSION BRACE ONE SIDE

22 GA TENSION BRACE BOTH SIDES FASTENED TO STRUCTURE OR TO INTERSECTING WALLS WITH CAP PLATES AT SAME ELEVATIONS

PROVIDE LATERAL BRACING AT 10'-0" oc.:

WITH 3#14 TEK SCREWS OR

3 5/8 x 18 gA CONT TRACK

— CONT. TOP RUNNER

LATERAL BRACING DETAIL

24° oc STAGGERED

ELEVATION VARIES

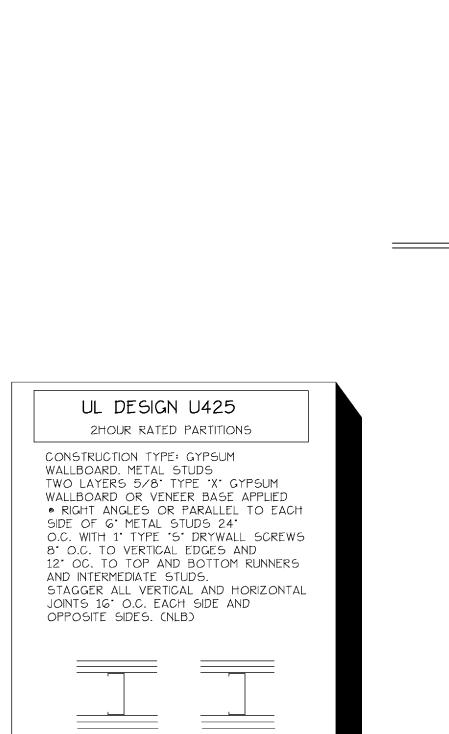
- 2C. ALL GYPSUM WALLBOARD SHALL BE 5/8" THICKNESS. FIRE RATED WALLS SHALL HAVE 5/8" FIRE CODE RATED GYPSUM BOARD.
- 2D. ALL GYPSUM WALLBOARD SHALL BE MOISTURE RESISTANT AT THE ROOM SIDE OF ALL WALLS FOR ALL TOILET ROOMS, PLUMBING WET WALLS AND WALLS ADJACENT TO PLUMBING WET WALLS, AND ALL WALLS WITH CERAMIC TILE FINISH, INCLUDING DRYWALL CEILINGS SCHEDULED FOR THESE AREAS.
- 2E. SOUND ATTENUATION BLANKETS SHALL EXTEND FULL HEIGHT AND WIDTH OF PARTITIONS.
- 2F. ALL RATED WALLS SHALL BE CONSTRUCTED FIRST. SECONDARY WALLS SHALL ABUT, NOT PENETRATE, RATED WALLS.
- 2G. SUBMITTAL INFORMATION SHALL BE PROVIDED TO SUBSTANTIATE THAT THE MATERIALS AND ASSEMBLY USED BY THE CONTRACTOR HAVE BEEN TESTED BY A RECOGNIZED TESTING AGENCY TO MEET THE FIRE RESISTANCE RATING SCHEDULED ON THESE PARTITION TYPES.
- 2H. FIRE STOPPING SHALL BE PROVIDED AT PENETRATIONS THROUGH RATED PARTITIONS.
- REVIEW PLANS AND PROVIDE BRACING IN PARTITIONS AS REQUIRED FOR CASEWORK, EQUIPMENT, ETC. IF WOOD BLOCKING IS REQUIRED PROVIDE FIRE RETARDANT TREATED WOOD BLOCKING.
- 2K. SPACING OF METAL STUDS SHALL NOT EXCEED 24" ON CENTER UNLESS SPECIFICALLY

GRACE Construction Products 3. Please refer two Reference & iCo. Respectance Directory for 62 Whittemore Ave

	02 whitemore Ave	
Firestop Assembly	Project:	Cambridge, MA 02140 Phone: 866-333-3726
Product: FlameSafe FS 900+ Series FlameSafe FS 1900 Series	Sealantnstaller: Sealant	Fax: 617-498-4419 E-mail: info@flamesafe.com
Assembly Rating: 1 + 2 HOUR	Approval:	
UL System: HWDO146	Date:	
Grace Dwg # HWDO14Gr2	Rev.# 002	
	9_317	

INTERIOR DRYWALL HEAD DETAIL

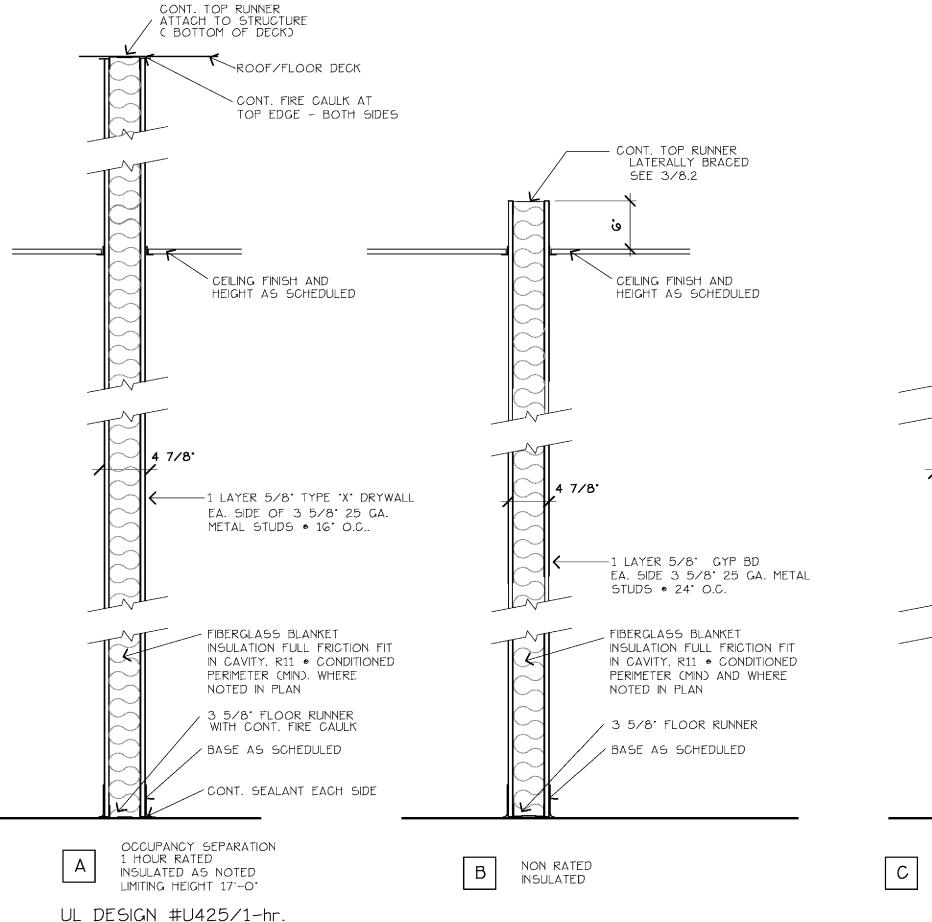
3" = 1'-0"



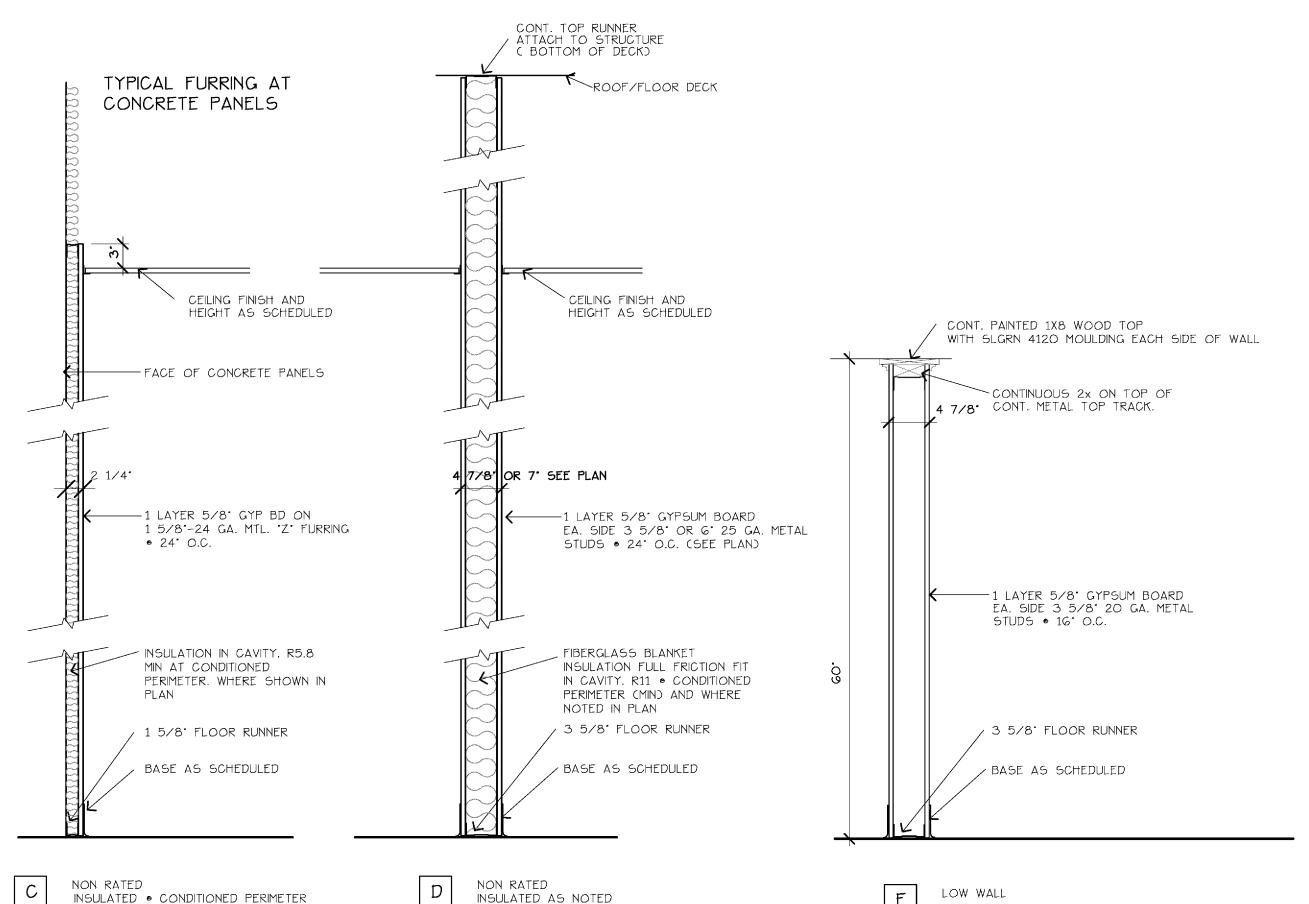
THICKNESS: 8 1/2" APPROX. WEIGHT: 6 PSF

FIRE TEST: FM WP-45, 6-19-68

OSU T-1770, 8/61 SOUND TEST: NGC 2385. 7-28-70



INTERIOR PARTITION



PROJ. NO. 926 REVISED:

S, INC.

Y TRAIL, SUITE 201-D

FAX (561) 624-0720

HORIZATION #AADSCHAN

P R ODO

0

Ш

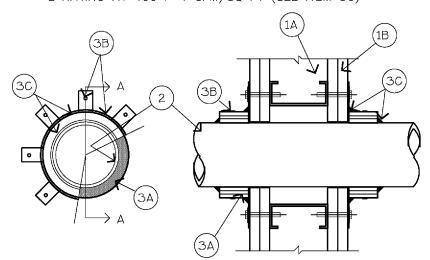
0

MEDIC. BUSINESS ROAD HAVE HAVE

DATE: 7/6/10 DRAWN BY: AMS

THROUGH-PENETRATION

FIRESTOP SYSTEM UL NO. WL-2002 (FORMERLY SYSTEM NO. 148) F RATINGS-1,1-1/2 AND 2 HR (SEE ITEM 3)
T RATINGS-3/4, 1, 1-1/2 AND 2 HR (SEE ITEM 3) L RATING AT AMBIENT-7 CFM/SQ FT (SEE ITEM 3C) L RATING AT 400 F-1 CFM/ \hat{SQ} FT (SEE ITEM 3C)



SECTION A-A

- WALL ASSEMBLY—THE 1 OR 2 HR FIRE—RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED | THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE
 RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

 A. STUDS—WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL
 STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC WITH NOM 2 BY 4 IN. LUMBER END PLATES AND CROSS BRACES. STEEL STUDS BE MIN 3-5/8 IN. WIDE BY 1-3/8 IN. DEEP CHANNELS SPACED MAX 24 IN. OC. WALLBOARD, GYPSUM*-5/8 IN. THICK, 4 FT WIDE SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING
- 2. NONMETALLIC PIPE OR CONDUIT—ONE NONMETALLIC PIPE OR CONDUIT IS CENTERED WITHIN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL. FOLLOWING TYPES AND SIZES OF NONMETALLIC PIPES OR CONDUIT MAY BE USED: A. NOM 6 IN. DIAM (OR SMALLER) SCHEDULE 40 SOLID-CORE POLYVINYL CHLORIDE B. NOM 4 IN. DIAM (OR SMALLER) SCHEDULE 40 CELLULAR CORE POLYVINYL CHLORIDE
- NOM 4 IN. DIAM (OR SMALLER) SCHEDULE 40 SOLID-CORE ACRYLONITRILE-BUTADIENE—STYRENE (ABS) PIPE.

 D. NOM 4 IN. DIAM (OR SMALLER) SCHEDULE 40 FIRE RETARDANT POLYPROPYLENE NOM 4 IN. DIAM (OR SMALLER) RIGID NONMETALLIC CONDUIT FORMED OF PVC.

 NOM 1 IN. DIAM (SMALLER) ELECTRICAL NONMETALLIC TUBING FORMED OF PVC.

 NOM 6 IN. DIAM (OR SMALLER) SCHEDULE 40 CHLORINATED POLYVINYL CHLORIDE
- SEE RIGID NONMETALLIC CONDUIT (DZKT) AND ELECTRICAL NONMETALLIC TUBING (FKHU) CATEGORIES IN UL ELECTRICAL CONSTRUCTION MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. HOURLY F AND T RATINGS FOR THE FIRESTOP SYSTEM ARE DEPENDENT UPON THE TYPE AND SIZE OF NONMETALLIC PIPE OR CONDUIT, THE PIPING SYSTEM TYPE (CLOSED SYSTEMS SUCH AS PROCESS OR SUPPLY PIPING OR VENTED SYSTEMS SUCH AS DRAIN. WASTE OR VENT PIPING) AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE.

ANNULAR PIPING FIRE F T SPACE SYSTEM RATING, RATING, IN (A) HR HR HR 1/2 TO 4 0-3/16 1-1/21-1/2 1-1/2 0-3/16 C,V

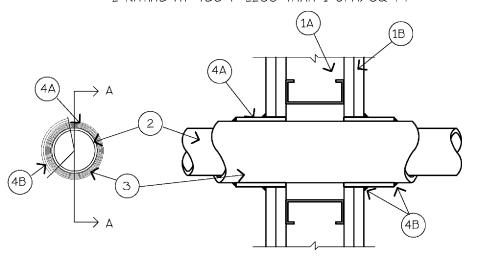
- +PIPE COVERING MATERIAL WRAP REQUIRED ON PIPE ON BOTH SIDES OF WALL. ÌHÉ DETAILS OF THE FIRÈSTOP SYSTEM SHALL BE AS FOLLOWS. A. FILL, VOID OR CAVITY MATERIALS*-WRAP STRIP-NOM 1/4 IN. THICK INTUMESCENT ELASTOMERIC MATERIAL FACED ON ONE SIDE WITH ALUMINUM FOIL, SUPPLIED IN 2 IN. WIDE STRIPS. NOM 2 IN. WIDE STRIPS TIGHTLY WRAPPED AROUND NONMETALLIC PIPE OR CONDUIT (FOIL SIDE EXPOSED) WITH THE EDGES BUTTED AGAINST THE SURFACE OF THE WALL. SUFFICIENT LAYERS OF WRAP STRIP SHALL BE INSTALLED TO LAP A MIN OF 3/16 IN. ON THE WALL SUFFACE AROUND THE ENTIRE PERIMETER OF THE CIRCULAR THROUGH OPENING. FOR NOM 1/2 IN. TO NOM 2 IN. DIAM PIPES OR CONDUITS, A MIN OF ONE LAYER OF WRAP STRIP IS NOM 2 IN. DIAM PIPES OR CONDUITS, A MIN OF ONE LAYER OF WRAP STRIP IS REQUIRED. FOR NOM 2-1/2 IN. AND NOM 3 IN. DIAM PIPES, A MIN OF TWO LAYERS OF WRAP IS REQUIRED. FOR NOM 3-1/2 IN. AND NOM 4 IN. DIAM PIPES, A MIN OF THREE LAYERS OF WRAP STRIP IS REQUIRED. FOR NOM 5 AND 6 IN. DIAM, TWO TIERS (4 IN. OVERALL LENGTH) OF THREE LAYERS OF WRAP STRIP IS REQUIRED, WITH ADJOINING WRAP STRIP LAYER EDGES BETWEEN TIERS TIGHTLY BUTTED. EACH LAYER OF WRAP STRIP TO BE INSTALLED WITH BUTTED SEAM, WITH BUTTED SEAMS IN SUCCESSIVE LAYERS STAGGERED. WRAP STRIP LAYERS TEMPORARILY HELD IN POSITION USING ALUMINUM FOIL TAPE, STEEL WIRE TIE
- MINNESOTA MINING & MFG. CO.-TYPE FS-195+ B. STEEL COLLAR MIND 2 OR 4 IN. DEEP COLLAR WITH 1-1/4 IN. WIDE BY 2 IN.
 LONG ANCHOR TABS AND MIN 3/4 IN. LONG TABS TO RETAIN WRAP STRIP LAYERS.
 COILS OF RECUT 0.016 IN. THICK (NO. 30 GAUGE) GALV SHEET STEEL AVAILABLE
 FROM WRAP STRIP MANUFACTURER. AS AN ALTERNATE, COLLAR MAY BE FIELD—
 FABRICATED FROM MIN 0.016 IN. THICK (NO. 30 GAUGE) GALV SHEET STEEL IN
 ACCORDANCE WITH INSTRUCTION SHEET SUPPLIED BY WRAP STRIP MANUFACTURER. STEEL COLLAR, WITH ANCHOR TABS BENT OUTWARD 90 DEG, WRAPPED TIGHTLY
 AROUND WRAP STRIP LAYERS WITH MIN 1 IN. OVERLAP AT THE SEAM. WITH STEEL COLLAR ANCHOR TABS PRESSED TIGHTLY AGAINST WALL SURFACE, COMPRESS COLLAR AROUND WRAP STRIP LAYERS USING A MIN 1/2 IN. WIDE BY 0.028 IN. THICK STAINLESS STEEL BAND CLAMP WITH WORM DRIVE TIGHTENING MECHANISM AT THE COLLAR MID HEIGHT. AS AN ALTERNATE TO THE STAINLESS STEEL BAND CLAMP, THE STEEL COLLAR MAY BE COMPRESSED AROUND NOM 4 IN. DIAM (OR SMALLER) NONMETALLIC PIPES USING TWO MIN 16 SWG (0.0625 IN. DIAM) STEEL WIRES SECURED WITH MULTIPLE TWISTS. SECURE COLLAR TO WALL SURFACE WITH 3/16 IN. DIAM STEEL TOGGLE BOLTS (5/8 IN. OR 1-1/4 IN. GRIP) IN CONJUNCTION WITH MIN 1-1/2 IN. DIAM STEEL WASHERS. THREE BOLTS, SYMMETRICALLY LOCATED, REQUIRED FOR 2 IN. DEEP STEEL COLLAR FOR NOM 1/2 IN. TO NOM 3 IN. DIAM PIPES. FOUR BOLTS, SYMMETRICALLY LOCATED, REQUIRED FOR 2 IN. DEEP STEEL COLLAR FOR NOM 3-1/2 AND 4 IN. DIAM PIPES. FIVE TO SEVEN BOLTS (EVERY OTHER ANCHOR TAB) REQUIRED FOR 4 IN. DEEP STEEL COLLAR FOR NOM 5 AND 6 IN. DIAM PIPES. AS A FINAL STEP, BEND RETAINER TABS 90 DEG TOWARD PIPE TO LOCK WRAP STRIP LAYERS
- C. FILL, VOID OR CAVITY MATERIALS*-CAULK OR PUTTY-GENEROUS BEAD OF CAULK
 APPLIED TO OUTER PERIMETER OR WRAP STRIP AT INTERFACE WITH WALL SURFACE AND TO PERIMETER OF PIPE OR CONDUIT AT ITS EGRESS FROM THE WRAP STRIP MINNESOTA MINING & MFG. CO.—CP 25WP+ CAULK AND MPS—2+ PUTTY (NOTE: L RATINGS APPLY ONLY WHEN TYPE CP—25 WB+ CAULK IS USED.)
 PIPE COVERING*—(NOT SHOWN)—NOM 1 IN. THICK HOLLOW CYLINDRICAL HEAVY
- DENSITY (MIN 3.5 PCF) GLASS FIBER UNITS JACKETED ON THE OUTSIDE WITH AN ALL SERVICE JACKET. WHEN REQUIRED (SEE TABLE), MIN 6 IN. LENGTH OF PIPE COVERING INSTALLED AROUND PVC PIPE AT ITS EGRESS FROM STEEL COLLAR ON BOTH SIDES OF WALL. PIPE COVERING SECURED TO PIPE WITH STEEL WIRE TIES SPACED MAX 4 IN. OC. EDGE OF PIPE COVERING ABUTTING STEEL COLLAR TO BE SEALED WITH A MIN 1.4 IN. DIAM BEAD OF CAULK (ITEM C). SEE PIPE AND EQUIPMENT COVERING—MATERIALS (BRGU) CATEGORY IN BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY PIPE COVERING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH FLAME SPREAD INDEX OF 25 OF LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS AMY BE USED.

 FIRESTOP DEVICE*-(NOT SHOWN)-AS AN ALTERNATE TO ITEMS A,B AND C FOR NOM
- 1-1/2, 2,3 OR 4 IN. DIAM NONMETALLIC PIPES, A FIRESTOP DEVICE CONSISTING
 OF A SHEET-STEEL SPLIT COLLAR LINED WITH INTUMESCENT MATERIAL AND
 PROVIDED WITH STEEL CLIPS FOR ATTACHMENT MAY BE USED. FIRESTOP DEVICE TO BE INSTALLED ON BOTH SIDES OF WALL IN ACCORDANCE WITH THE DEVICE TO BE INSTALLED ON BOTH SIDES OF WALL IN ACCORDANCE WITH THE ACCOMPANYING MINNESOTA MINING CO. & MFG.-TYPES PPD 150, PPD 220, PPD 300, PPD 400

#W2002 THROUGH PENETRATION

THROUGH-PENETRATION FIRESTOP SYSTEM UL NO. WL-5001

(FORMERLY SYSTEM NO. 147) F RATING-1 AND 2 HR (SEE ITEM 1) T RATING-3/4, 1 AND 1-1/2 HR (SEE ITEM 3) L RATING AT AMBIENT-2 CFM/SQ FT L RATING AT 400 F-LESS THAN 1 CFM/SQ FT



WALL ASSEMBLY-THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

A. STUDS-WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE AND SPACED MAX 24 IN. OC.

SECTION A-A

- WALLBOARD, GYPSUM NOM 5/8 IN. THICK, 4 FT WIDE SQUARE OR TAPERED EDGES.
 THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 14-1/2 IN FOR WOOD STUD WALLS AND 18 IN FOR STEEL STUD WALLS HE HOURLY F RATING OF THE FIRESTOP SYSTEM IS 1 HR WHEN INSTALLED IN A 1 HOUR FIRE RATED WALL AND 2 HR WHEN INSTALLED IN A 2 HR FIRE RATED WALL.
- THROUGH PENETRANTS-ONE METALLIC PIPE OR TUBING TO BE CENTERED WITHIN THE FIRESTOP SYSTEM. PIPE OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES O WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR TUBING MAY STEEL PIPE-NOM 12 IN DIA (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL
- B. COPPER TUBING-NOM 6 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER C. COPPER PIPE-NOM 6 IN. DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER
- 3. PIPE COVERING *-NOM 1 OR 2 IN THICK HOLLOW CYLINDRICAL HEAVY DENSITY (MIN. 3.5 PCF) GLASS FIBER UNITS JACKETED ON THE OUTSIDE WITH AN ALL SERVICE JACKET. LONGITUDINAL JOINTS SEALED WITH METAL FASTENERS OR FACTORY-APPLIED SELF-SEALING LAP TAPE. TRANSVERSE JOINTS SEALED WITH METAL FASTENERS OR WITH BUTT STRIP TAPE SUPPLIED WITH THE PRODUCT. WHEN NOM 1 IN THICK PIPE COVERING IS USED. THE ANNULAR SPACE BETWEEN THE PIPE COVERING AND THE CIRCULAR CUTOUT IN THE GYPSUM WALLBOARD LAYERS ON EACH SIDE OF THE WALL SHALL BE MIN 1/4 IN TO MAX 3/8 N. WHEN NOM 2 IN THICK PIPE COVERING IS USED. THE ANNULAR SPACE BETWEEN THE PIPE COVERING AND THE CIRCULAR CUTOUT IN THE GYPSUM WALLBOARD LAYERS ON EACH SIDE OF THE WALL SHALL BE MIN 1/2 IN TO MAX 3/4 IN.
 SEE-PIPE AND EQUIPMENT COVERING-MATERIALS (BRGU) CATEGORY IN BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY PIPE COVERING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A
- SMOKE DEVELOPED NDEX OF 50 OR LESS MAY BE USED. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS 3/4 HR WHEN NOM 1 IN THICK PIPE COVERING IS USED. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS 1 HR AND 1-1/2 HR WHEN NOM 2 IN THICK PIPE COVERING IS USED WITH 1 HR AND 2 HR FIRE RATED WALLS, RESPECTIVELY.

 4. FIRESTOP SYSTEM-INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE DETAILS OF THE FIRESTOP SYSTEM SHALL BE AS FOLLOWS:

 A. FILL, VOID OR CAVITY MATERIALS*-WRAP STRIP-NOM 1/4 IN. THICK INTUMESCENT
- ELASTOMERIC MATERIAL FACES ON ONE SIDE WITH ALUMINUM FOIL. SUPPLIED IN 2 IN. WIDE STRIPS. NOM 2 IN. WIDE STRIP TIGHTLY WRAPPED AROUND PIPE INSULATION (FOIL SIDE OUT) WITH SEAM BUTTED. WRAP STRIP LAYER SECURELY BOUND WITH STEEL WIRE OR ALUMINUM FOIL TAPE AND SLID INTO ANNULAR SPACE APPROX. 1-1/4 IN. SUCH THAT APPROX. 3/4 IN. OF THE WRAP STRIP WIDTH PROTRUDES FROM THE WALL SURFACE. ONE LAYER OF WRAP STRIP IS REQUIRED WHEN NOM 1 IN THICK PIPE COVERING IS USED. TWO LAYERS OF WRAP STRIP ARE REQUIRED WHEN NOM 2 IN THICK PIPE COVERING IS USED. MINNESOTA MINING + MFG. CO.-F5-195+
- FILL, VOID OR CAVITY MATERIALS -CAULK-MIN 1/4 IN. DIAM CONTINUOUS BEAD APPLIED TO THE WRAP STRIP/WALL LAYER INTERFACE AND TO THE EXPOSED EDGE OF THE WRAP STRIP LAYER APPROX. 3/4 IN. FROM THE WALL SURFACE.
 MINNESOTA MINING MFG. CO.-CP 25WP+

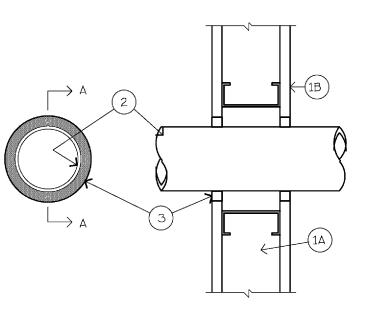
NTS

UL #W5001 THROUGH PENETRATION

THROUGH-PENETRATION FIRESTOP SYSTEM UL NO. WL-1052

F RATING-1 HR AND 2 HR L RATING AT AMBIENT-LESS THAN 1 CFM/SQ FT L RATING AT 400 F-4 CFM/SQ FT

SECTION A-A



1. WALL ASSEMBLY- THE FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEARURES: A. STUDS-WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED

WIDE AND SPACED MAX 24 IN OC. B. WALLBOARD, GYPSUM*-ONE LAYER OF 5/8 IN. THICK GYPSUM WALLBOARD. AS SPECIFIED IN THE IN-DIVIDUAL WALL AND PARTITION DESIGN. MAX. DIAM.

16 IN. OC. STEEL STUDS TO BE MIN. 2 1/2 IN.

- OF OPENING IS 12 IN. 2. THROUGH PENETRANTS-ONE METALLIC PIPE. CONDUIT OR TUBING TO BE CENTERED WITHIN THE FIRESTOP SYSTEM. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY, A NOM ANNULAR SPACE OF 3/4 IN. IS REQUIRED WITHIN THE FIRESTOP SYSTEM. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES. CONDUITS OR TUBING MAY BE USED:
- SCHEDULE 10 (OR HEAVIER) STEEL PIPE. B. CONDUIT-NOM. 4 IN. DIAM. (OR SMALLER) ELECTRICAL METALLIC TUBING OR STEEL CONDUIT C. COPPER TUBING-NOM, 4 IN. DIAM, (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.

A. STEEL PIPE-NOM, 10 IN, DIAM, (OR SMALLER)

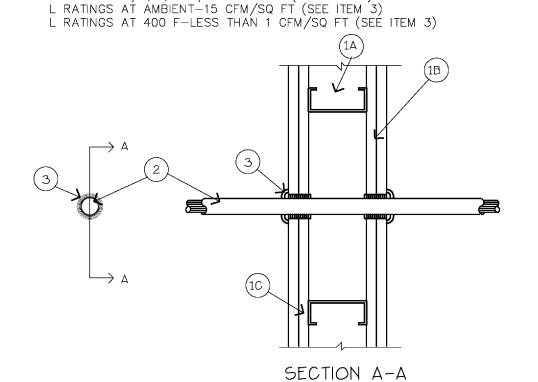
D COPPER PIPE-NOM. 4 IN. DIAM. (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE. 3. FILL, VOID OR CAVITY MATERIAL *- SEALANT-MIN . 5/8 IN THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS FLUSH WITH BOTH SURFACES OF WALL HILTI CONSTRUCTION CHEMICALS, INC.-FSGO1 SEALANT *BEARING THE UL CLASSIFICATION MARKING

NTS

UL #W1052 THROUGH PENETRATION

THROUGH-PENETRATION FIRESTOP SYSTEM UL NO. WL-3001

(FORMERLY SYSTEM NO. 149) F RATINGS-1 AND 2 HR (SEE ITEM 1) T RATINGS-3/4, 1, 1-1/2 AND 2 HR (SEE ITEM 2)



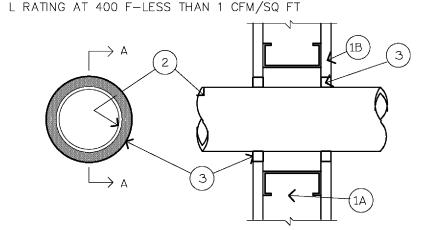
- WALL ASSEMBLY-THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF HE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES
 A. STUDS—WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. ON OC WITH NOM 2 BY 4 IN. LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE BY 1-3/8 IN. DEEP CHANNELS SPACED MAX 24 IN.
- WALLBOARD, GYPSUM*-NOM 1/2 OR 5/8 IN. THICK, 4 FT WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL OR PARTITION DESIGN. DIAM OF CIRCULAR THROUGH OPENING TO BE 3/8 IN. TO 5/8 IN. LARGER THAN OUTSIDE DIAM OF CABLE OR CABLE BUNDLE.
 FASTENERS—WHEN WOOD STUD FRAMING IS EMPLOYED GYPSUM WALLBOARD LAYERS ATTACHED TO STUDS WITH CEMENT COATED NAILS AS SPECIFIED IN THE INDIVIDUAL WALL OR PARTITION DESIGN. WHEN STEEL CHANNEL STUD FRAMING IS EMPLOYED, GYPSUM WALLBOARD ATTACHED TO STUDS WITH TYPE S SELF—DRILLING, SELF—TAPPING BUGLE—HEAD STEEL SCREWS AS SPECIFIED IN THE
- INDIVIDUAL WALL OR PARTITION DESIGN. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. CABLES—INDIVIDUAL CABLE OR MAX 1 IN. DIAM CABLE BUNDLE INSTALLED IN THROUGH OPENING WITH AN ANNULAR SPACE OF MIN 0 IN. (POINT CONTACT) TO MAX 3/4 IN. CABLE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF CABLE MAY BE USED: A. MAX 150 PAIR NO. 24 AWG COPPER CONDUCTOR TELEPHONE CABLE WITH POLYVINYL CHLORIDE (PVC) INSULATION AND JACKET MATERIALS. WHEN MAX 25 PAIR TELEPHONE CABLE IS USED, T RATING IS 2 HR. WHEN 50 TO 150 PAIR TELEPHONE CABLE IS USED IN 1 HR FIRE RATED WALL, T RATING IS 3/4 HR. WHEN 50 TO 150 PAIR TELEPHONE CABLE IS USED IN 2 HR FIRE RATED WALL, T
- B. MAX NO. 10 AWG MULTIPLE COPPER CONDUCTOR TYPE NM ("ROMEX") NONMETALLIC SHEATHED CABLE WITH PVC INSULATION AND JACKET MATERIALS. WHEN TYPE NM CABLE IS USED, MAX T RATING IS 1-1/2 HR.
- MULTIPLE FIBER OPTICAL COMMUNICATION CABLE JACKETED WITH PVC AND HAVING A MAX OUTSIDE DIAM OF 5/8 IN. WHEN FIBER OPTIC CABLE IS USED, MAX T RATING IS 2 HR.
 D. MAX 12 AWG MULTICONDUCTOR (MAX SEVEN CONDUCTORS) POWER/CONTROL CABLE
- WITH CROSS—LINKED POLYETHYLENE (XLPE) INSULATION AND XLPE OR PVC JACKET MATERIALS. WHEN MULTICONDUCTOR POWER/CONTROL CABLE IS USED, MAX T RATING IS 2 HR.

 E. MAX FOUR CONDUCTOR WITH GROUND NO. 2 AWG (OR SMALLER) ALUMINUM SER
- CABLES WITH POLYVINYL CHLORIDE INSULATION AND JACKET MATERIALS. FILL, VOID OR CAVITY MATERIALS*-CAULK OR PUTTY-CAULK OR PUTTY FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN CABLE AND GYPSUM WALLBOARD ON BOTH SIDES OF WALL AND WITH A MIN 1/4 IN. DIAM BEAD OF CAULK OR PUTTY APPLIED TO PERIMETER OF CABLE(S) AT ITS EGRESS FROM EACH SIDE OF THE WALL. MINNESOTA MINING MFG. CO.—MPS—2+ PUTTY, CP 25WB+ CAULK. (NOTE: L RATINGS APPLY ONLY WHEN TYPE CP 25WB+ CAULK IS USED.) *BEARING THE UL CLASSIFICATION

#W3001 THROUGH PENETRATION

THROUGH-PENETRATION

FIRESTOP SYSTEM UL NO. WL-1001 F RATINGS-1,2,3, AND 4 HR (SEE ITEMS 2 AND 3) T RATINGS-0,1,2,3, AND 4 HR (SEE ITEM 3) L RATING AT AMBIENT-LESS THAN 1 CFM/SQ FT



SECTION A-A

- 1. WALL ASSEMBLY-THE 1,2,3, OR 4 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL PARTITION DEIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES: A. STUDS-WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS ((MAX 2 H FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC WITH NOM 2 BY 4 IN. LUMBER END PLATES AND 4 IN. LUMBER SPACED 16 IN. UC WITH NUM 2 BY 4 IN. LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE BY 1-3/8 IN DEEP CHANNELS SPACED MAX 24 IN. OC.

 B. WALLBOARD, GYPSUM*-NOM 1/2 OR 5/8 IN. THICK, 4 FT. WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE
- DIRECTORY. MAX 12 IN. DIAM OF OPENING IS 13-1/2 IN.

 2. PIPE OR CONDUIT-NOM 12 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOM 12 IN. DIAM (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) CAST IRON SOIL PIPE, NOM 12 IN. DIAM (OR SMALLER) CLASS 50 (OR HEAVIER) DUCTILE IRON PRESSURE PIPE, NOM 6 IN. DIAM (OR SMALLER) STEEL CONDUIT, NOM 4 IN. DIAM (OR SMALLER) STEEL CONDUIT, NOM 5 IN. DIAM (OR SMALLER) STEEL CONDUIT. SMALLER) STEEL ELECTRICAL METALLIC TUBING, NOM 6 IN. DIAM (OR SMALLER) TYPE

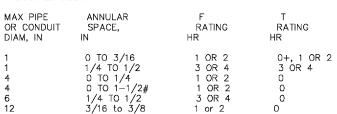
 L OR (OR HEAVER) COPPER TUBING OR NOM 1 IN. DIAM (OR SMALLER) TYPE

 CONDUIT. WHEN COPPER PIPE IS USED, MAX F RATING OF FIRESTOP SYSTEM (ITEM 3)

 IS 2 H. STEEL PIPES OR CONDUITS LARGER THAN NOM 4 IN. DIAM MAY ONLY BE USED

 IN WALLS CONSTRUCTED USING STEEL CHANNEL STUDS. A MAX OF ONE PIPE OR CONDUIT

 IS PERMITTED IN THE FIRESTOP SYSTEM. PIPE OF CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL
- FILL, VOID OR CAVITY MATERIAL*-CAULK-CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN 1/4 IN. DIAM BEAD OF CAULK APPLIED TO PERIMETER OF PIPE OR CONDUIT AT ITS EGRESS FOR THE WALL. CAULK INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS TABULATED BELOW:



NTS

+WHEN COPPER PIPE IS USED, T RATING IS 0 H. #0 TO 1-1/2 IN. ANNULAR SPACE APPLIES ONLY WHEN TYPE CP-25 WB+ CAULK IS USED AND ONLY WHEN THE MIN THICKNESS OF THE GYPSUM WALLBOARDS IS 5/8 IN. FOR 1 HR RATED WALLS AND 1-1/4 IN. FOR 2 HR RATED WALLS. MINNESOTA MINING & MFG. CO.-CP 25WP+ *BEARING THE UL CLASSIFICATION MARKING

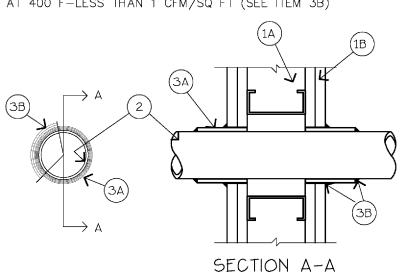
#W1001 THROUGH PENETRATION

THROUGH-PENETRATION

FIRESTOP SYSTEM UL NO. WL-2003

F RATINGS-1 AND 2 HR (SEE ITEM 3) T RATINGS-1 AND 2 HR (SEE ITEM 3)

L RATING AT AMBIENT-7 CFM/SQ FT (SEE ITEM 3B) L RATING AT 400 F-LESS THAN 1 CFM/SQ FT (SEÉ ITEM 3B)



- WALL ASSEMBLY-THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE
- INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

 A. STUDS—WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN OC WITH NOM 2 BY 4 IN. LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE BY 1-3/8 IN. DEEP CHANNELS SPACED MAX 24 IN. OC.

 B. WALLBOARD, GYPSUM*-5/8 IN. THICK, 4 FT WIDE SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPFNING IS 3-1/8 IN
- U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 3-1/8 IN.

 THROUGH PENETRANTS-ONE NONMETALLIC PIPE OR CONDUIT TO BE CENTERED IN THE THROUGH OPENING. THE ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND PERIPHERY OF OPENING SHALL BE MIN 1/4 IN. AND MAX 3/8 IN. PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE FLOOR-CEILING ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF NONMETALLIC PIPES OR CONDUITS MAY BE USED:

 A. POLYVINYL CHLORIDE (PVC) PIPE-NOM 2 IN. DIAM (OR SMALLER) SCHEDULE 40 SOLID CORE PVC PIPE FOR USE INCLOSED (PROCESS OR SUPPLY) OR VENTED OPENIN MASTE OF VENTY DIDING SYSTEM
- (DRAIN, WASTE OR VENT) PIPING SYSTEM.
 RIGID NONMETALLIC CONDUIT++-4 IN. DIAM (OR SMALLER) (SCHEDULE 40 OR 80)
- PVC CONDUIT INSTALLED IN ACCORDANCE WITH ARTICLE 347 OF THE NATIONAL
- ELECTRIC CODE (NFPA NO. 70).

 CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE-NOM 2 IN. DIAM (OR SMALLER)

 SDR17 CPVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN,
 WASTE OR VENT) PIPING SYSTEMS.
- D. CELLULAR CORE POLYVINYL CHLORIDE (ccPVC) PIPE—NOM 2 IN. DIAM (OR SMALLER) SCHEDULE 40 CELLULAR CORE PVC PIPE FOR USE INCLOSED (PROCESS
- OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEM.

 ACRYLONITRILE BUTADIENE STYRENE (ABS) PIPE—NOM 2 IN. DIAM (OR SMALLER)

 SCHEDULE 40 SOLID CORE ABS PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY)

 OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.

 CELLULAR CORE ACRYLONITRILE BUTADIENE STYRENE (ccABS) PIPE—NOM 2 IN.

 DIAM (OR SMALLER) SCHEDILLE AD COLLULAR CORE ABS DIRE FOR USE IN CLOSED.
- DIAM (OR SMALLER) SCHEDULE 40 CELLULAR CORE ABS PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) SCHEDULE 40 CELLULAR CORE ABS PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.

 3. FIRESTOP SYSTEM—INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F AND T RATINGS FOR THE FIRESTOP SYSTEM ARE EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY I WHICH IT IS INSTALLED. THE DETAILS OF THE
- FIRESTOP SYSTEM SHALL BE AS FOLLOWS.

 A. FILL, VOID OR CAVITY MATERIALS*-WRAP STRIP-NOM 1/4 IN. THICK INTUMESCENT ELASTOMERIC MATERIAL FACED ON ONE SIDE WITH ALUMINUM FOIL, SUPPLIED IN 2 IN. WIDE STRIPS. NOM 2 IN. WIDE STRIP TIGHTLY WRAPPED AROUND NONMETALLIC PIPE (FOIL SIDE OUT) WITH SEAM BUTTED. WRAP STRIP LAYER SECURELY BOUND WITH STEEL WIRE OR ALUMINUM FOIL TAPE AND SLID INTO
- ANNULAR SPACE APPROX. 1-1/4 IN. SUCH THAT APPROX. 3/4 IN. OF THE WRAP STRIP PROTRUDES FROM THE WALL SURFACE. MINNESOTA MINING & MFG, CO.-FS-B. FILL, VOID OR CAVITY MATERIALS*-CAULK OR PUTTY-MIN 5/8 IN. THICKNESS OF CAULK OR PUTTY APPLIED INTO ANNULAR SPACE BETWEEN WRAP STRIP AND PERIPHERY OF OPENING. A NOM 1/4 IN. DIAM BEAD OF CAULK OR PUTTY TO BE APPLIED TO THE WRAP STRIP/WALL INTERFACE AND TO THE EXPOSED EDGE OF THE
- WRAP STRIP LAYERS APPROX. 3/4 IN. FROM THE WALL SURFACE.
 MINNESOTA MINING & MFG CO.—CP 25WP+ CAULK OR MPS—2+ PUTTY. (NOTE: RATINGS APPLY ONLY WHEN TYPE CP-25 WB+ CAULK IS USED.)

 FOIL TAPE-(NOT SHOWN)-NOM 4 IN. WIDE, 3 MIL THICK ALUMINUM TAPE WRAPPED AROUND PIPE PRIOR TO THE INSTALLATION OF THE WRAP STRIP (ITEM 3A). MIN OF ONE WRAP, FLUSH WITH BOTH SIDES OF WALL AND PROCEEDING OUTWARD. TAPE

UL CLASSIFICATION MARKING.

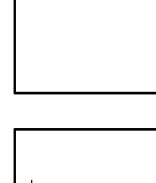
UL #W2003 THROUGH PENETRATION

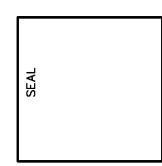
S NOT REQUIRED FOR PIPES SHOWN IN ITEMS 2A, 2B, AND 2C. *BEARING THE

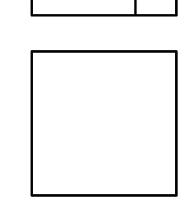
NTS

SSL TRASS.
INC.
FLORIDA
FLORIDA
FAX (561) 624
ORIZATION #AA ARCHITECT
B895 NORTH MILITAL
PALM BEACH GARDE
(561) 627-0336
CERTIFICATE OF AU

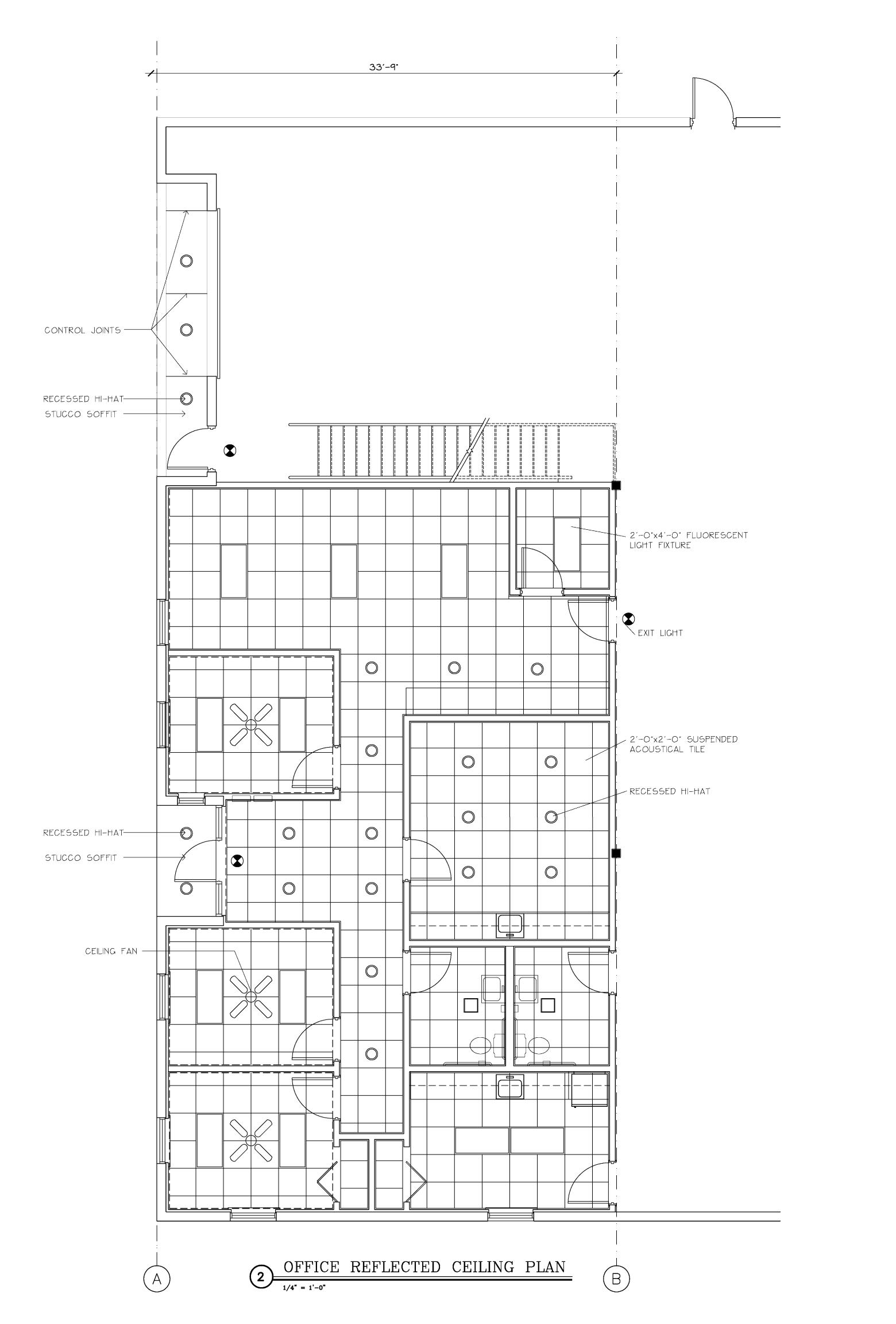


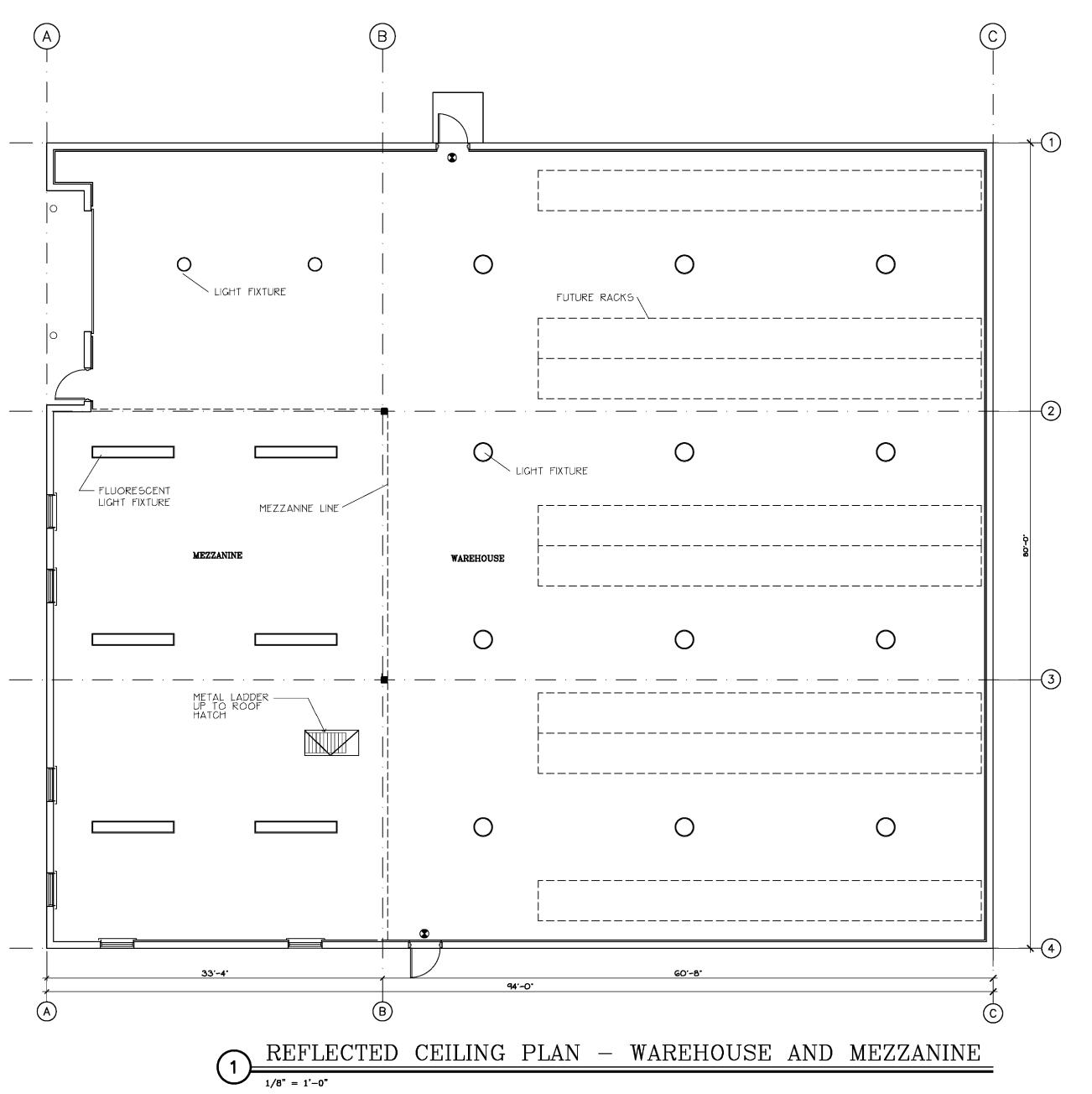






DATE: 7/6/10 DRAWN BY: AMS PROJ. NO. 926 **REVISED:**





ALAN STRASSLER
ARCHITECTS, INC.

8895 NORTH MILITARY TRAIL, SUITE 201-D
PALM BEACH GARDENS, FLORIDA 33410
(561) 627-0336 FAX (561) 624-0720
CERTIFICATE OF AUTHORIZATION #AA26000610
ALAN M. STRASSLER #7405

15.15 15.15

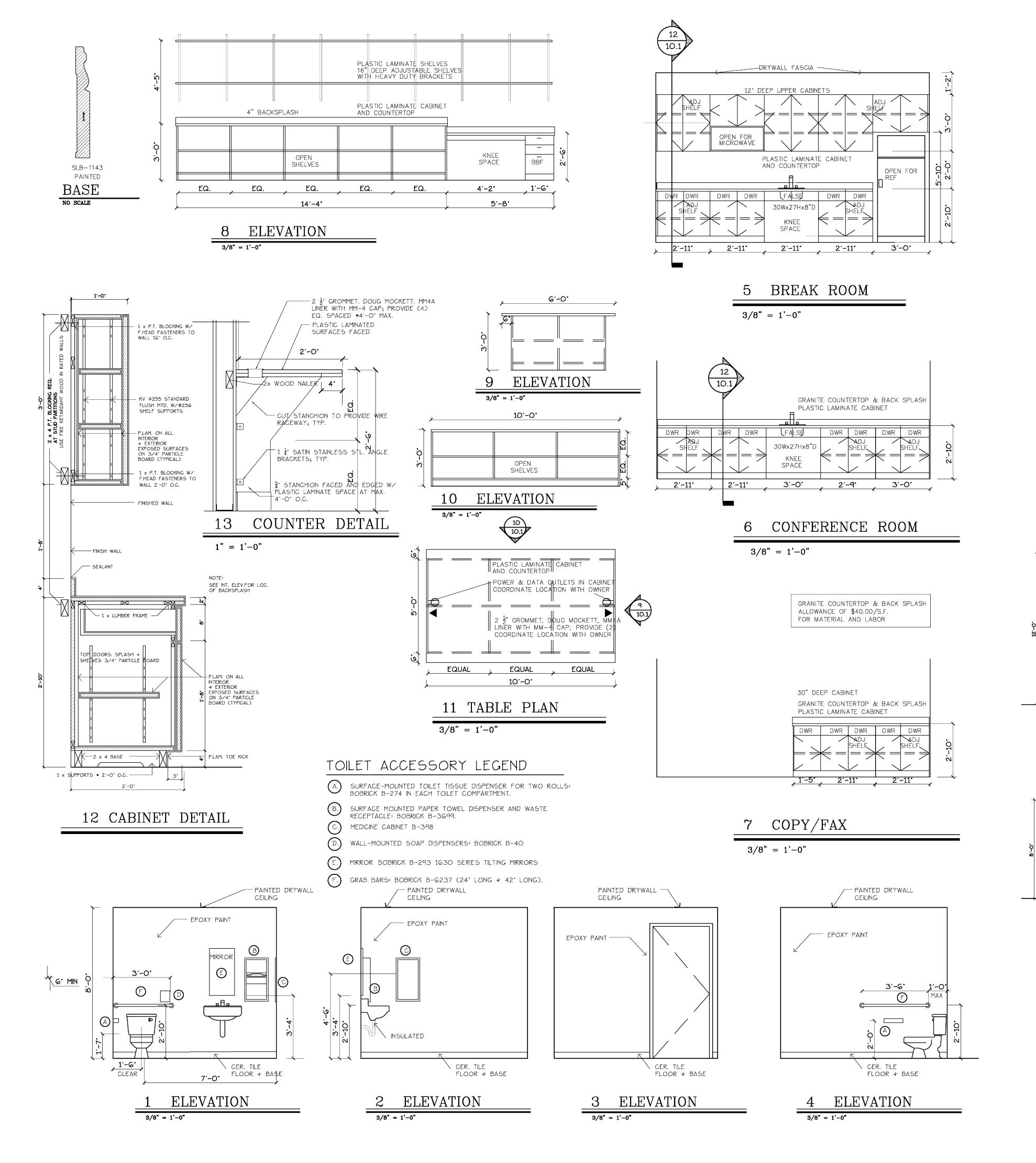
LOT #7
A BEACH , FLORIDA

ECHNOLOGY PRODUCIS
RIVIERA BEACH

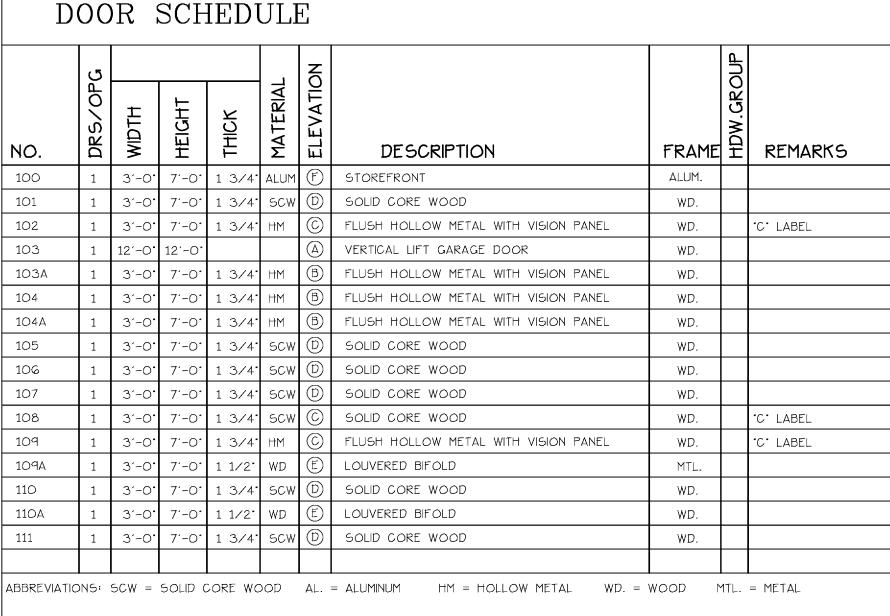
VERHILL BUSINESS PARK
VERHILL ROAD
FELFOTED CFILING PLANS

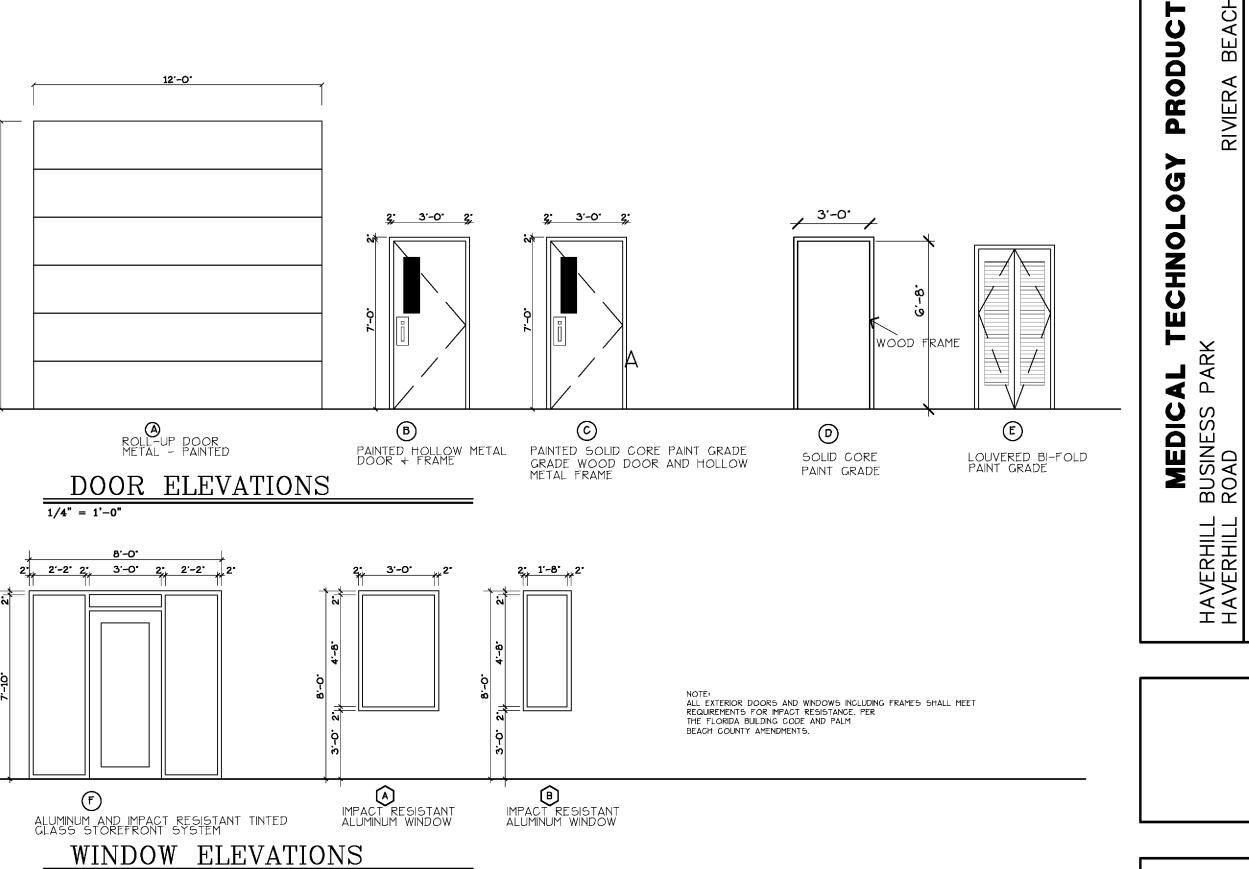
DATE: 7/6/10 DRAWN BY: AMS PROJ. NO. 926 REVISED:

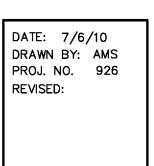
SHEET:



	ی					Z			J	
NO.	DRS/OP(НТСІМ	HEIGHT	THICK	MATERIAL	ELEVATION	DESCRIPTION	FRAME	HDW.GROUP	REMARKS
100	1	3′-0 *	7'-0"	1 3/4	ALUM	F	STOREFRONT	ALUM.		
101	1	3′-0 *	7'-0"	1 3/4"	SCW	Ð	SOLID CORE WOOD	WD.		
102	1	3′-0 *	7'-0"	1 3/4"	$\pm\Sigma$	\odot	FLUSH HOLLOW METAL WITH VISION PANEL	WD.		"C" LABEL
103	1	12´-O '	12'-0"			\triangle	VERTICAL LIFT GARAGE DOOR	WD.		
103A	1	3′-0 *	7'-0"	1 3/4"	$\pm\Sigma$	B	FLUSH HOLLOW METAL WITH VISION PANEL	WD.		
104	1	3′-0 *	7'-0"	1 3/4"	Σ	B	FLUSH HOLLOW METAL WITH VISION PANEL	WD.		
104A	1	3′-0 *	7'-0"	1 3/4"	$\pm\Sigma$	B	FLUSH HOLLOW METAL WITH VISION PANEL	WD.		
105	1	3′-0 *	7'-0"	1 3/4"	SCW	Ð	SOLID CORE WOOD	WD.		
106	1	3′-0 *	7'-0"	1 3/4"	SCW	Ð	SOLID CORE WOOD	WD.		
107	1	3′-0 *	7'-0"	1 3/4"	SCW	\bigcirc	SOLID CORE WOOD	WD.		
108	1	3′-0 *	7'-0"	1 3/4"	SCW	\odot	SOLID CORE WOOD	WD.		"C" LABEL
109	1	3′-0 *	7'-0"	1 3/4"	$\pm\Sigma$	\bigcirc	FLUSH HOLLOW METAL WITH VISION PANEL	WD.		"C" LABEL
1094	1	3′-0 *	7'-0"	1 1/2	WD	E	LOUVERED BIFOLD	MTL.		
110	1	3′-0 *	7'-0"	1 3/4	SCW	(1)	SOLID CORE WOOD	WD.		
110A	1	3′-0 *	7'-0"	1 1/2*	WD	Œ	LOUVERED BIFOLD	WD.		
111	1	3′-0*	7'-0"	1 3/4	SCW	(D)	SOLID CORE WOOD	WD.		







00 00 00 CONTRACTING REQUIREMENTS

00 21 13 INSTRUCTIONS TO BIDDERS

- 1. CONTRACTOR AND ANY OF HIS SUBCONTRACTORS AS HE DEEMS NECESSARY SHALL VISIT THE PROJECT SITE TO INSPECT AND BECOME FAMILIAR WITH EXISTING CONDITIONS AND BUILDING STANDARDS PRIOR TO SUBMITTING A BID OR EXECUTING A CONSTRUCTION CONTRACT.
- 2. CONTRACTOR AND ALL SUBCONTRACTORS SHALL BE RESPONSIBLE FOR A WORKING KNOWLEDGE OF THIS ENTIRE SET OF DOCUMENTS AND SHALL CHECK AND VERIFY ALL DIMENSIONS, EXISTING CONDITIONS, AND BUILDING STANDARDS EITHER SHOWN ON THE DRAWINGS OR WHICH MAY AFFECT THE WORK SHOWN ON THE DRAWINGS AND NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO PROCEEDING WITH THE WORK. DIMENSIONAL ERRORS SHALL BE REFERRED TO ARCHITECT FOR REVIEW. ANY WORK BEGUN PRIOR TO RESOLUTION OF DIMENSIONAL ERRORS SHALL BE CORRECTED AT CONTRACTOR'S EXPENSE.
- 3. CONTRACTOR SHALL IMMEDIATELY NOTIFY ARCHITECT OF ANY CHANGES OR DEVIATIONS TO THE DRAWINGS THAT ARE PROPOSED OR REQUIRED DURING BIDDING OR CONSTRUCTION OF THE PROJECT. ALSO, CONTRACTOR SHALL MAINTAIN A SEPARATE SET OF PRINTS ON THE PROJECT SITE THAT SHALL BE MARKED WITH ALL CHANGES AND PRESENTED TO OWNER AT THE END OF THE PROJECT AS "AS-BUILT" DRAWINGS OF THE WORK.
- 4. BID PRICE SHALL BE BASED ON DRAWINGS AND SPECIFICATIONS, IF SUBSTITUTIONS ARE SUBMITTED, ALTERNATE BID PRICE SHALL BE INCLUDED WITH SUBSTITUTIONS LISTED.
- 5. NO BID MAY BE WITHDRAWN FOR A PERIOD OF 30 DAYS FOLLOWING THE TIME FIXED FOR THE OPENING OF BIDS. THE OWNER AND THE ARCHITECT RESERVE THE RIGHT TO WAIVE ANY MINOR INFORMALTIES IN THE BIDS AND THE RIGHT TO REJECT ANY AND ALL OF THE BIDS.

00 52 00 FORM OF AGREEMENT

1. FORM OF CONTRACT SHALL BE AIA DOCUMENT A-101, LATEST EDITION, STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR, WHERE THE BASIS OF PAYMENT IS A STIPULATED SUM.

00 72 00 GENERAL CONDITIONS

- 1. THE AIA GENERAL CONDITIONS, AIA DOCUMENT A-201, LATEST EDITION, SHALL BE CONSIDERED AN INCLUSIVE PART OF THESE SPECIFICATIONS AND DRAWINGS. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL BE GOVERNED BY ALL APPLICABLE SECTIONS OF THESE DOCUMENTS WITH REFERENCE TO THEIR RESPECTIVE AREAS OF WORK. GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO ADVISE HIS SUBCONTRACTORS AND SUPPLIERS OF THESE REQUIREMENTS.
- 2. THE CONTRACTOR SHALL SUBMIT A DETAILED LIST OF ALL SUBCONTRACTORS FOR THIS PROJECT INCLUDING COMPANY NAME, MAILING ADDRESS, CONTACT PERSON, TELEPHONE, FAX, AND CELLULAR TELEPHONE NUMBERS WITH THE CONTRACT. LIST SHALL BE UPDATED AND KEPT FULLY CURRENT BY
- 3. DRAWINGS ARE THE PROPERTY OF THE ARCHITECT AND OWNER AND SHALL NOT BE USED BY THE CONTRACTOR FOR OTHER PROJECTS.

00 73 16 INSURANCE

- 1. CONTRACTOR AND SUBCONTRACTORS SHALL PROVIDE CONTRACTOR LIABILITY INSURANCE IN THE FOLLOWING MINIMUM AMOUNTS:
- INJURY TO ONE PERSON. ..\$ 1,000,000.00 INJURY TO MORE THAN ONE PERSON......\$ 2,000,000.00
-80 PER CENT OF PROJECT VALUE PROPERTY DAMAGE...
- 2. WORK SHALL NOT BEGIN UNTIL CERTIFICATES OF INSURANCE HAVE BEEN FILED WITH THE OWNER.
- 3. CONTRACTOR SHALL INCLUDE ON ALL HIS INSURANCE THE OWNER AND ARCHITECT AS "ADDITIONAL INSURED", AND SAID INSURANCE FORM SHALL REFLECT THIS ADDITION.
- 4. FOR ONE DOLLAR (\$1.00) AND OTHER GOOD AND VALUABLE CONSIDERATIONS, RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED BY THE CONTRACTOR, SAID CONTRACTOR DOES AGREE TO INDEMNIFY AND CO-INSURE THE OWNER AND ARCHITECT, IN ACCORDANCE WITH AIA DOCUMENT A-201 WHICH IS PART OF THESE SPECIFICATIONS.
- 5. PERFORMANCE AND PAYMENT BONDS ARE NOT REQUIRED.
- 6. BUILDER'S RISK INSURANCE SHALL BE PAID FOR BY THE OWNER.

01 00 00 GENERAL REQUIREMENTS

01 11 00 SUMMARY OF WORK

- 1. THIS PROJECT CONSISTS OF THE CONSTRUCTION OF A SINGLE STORY, OFFICE/DISTRIBUTION BUILDING WITH A MEZZANINE. THE BUILDING WILL BE OWNER-OCCUPIED AND WILL HAVE LOAD-BEARING CONCRETE BLOCK EXTERIOR WALLS WITH A PAINTED STUCCO FINISH. THE ROOF STRUCTURE WILL BE METAL JOISTS AND DECK. MAJOR AREAS OF CONSTRUCTION INCLUDE PAVING, DRAINAGE, WATER, SEWER, FIRE SPRINKLERS, LANDSCAPING AND IRRIGATION, BUILT-UP ROOFING AND ROOF INSULATION, AND CONSTRUCTION OF INTERIOR IMPROVEMENTS, INCLUDING PLUMBING, MECHANICAL AND ELECTRICAL SYSTEMS.
- 2. CONTRACTOR SHALL PAY FOR BUILDING PERMIT, FIRE PLAN REVIEW AND UTILITY CONNECTION FEE.
- 3. SUBCONTRACTORS SHALL PAY ALL PERMIT FEES FOR THEIR RESPECTIVE TRADES.
- 4. CONTRACTOR SHALL PAY FOR ALL SALES TAX, PAYROLL TAXES AND WORKERS COMPENSATION DURING PERIOD OF CONSTRUCTION.
- 5. DIVISIONS OF THE WORK FOR SUBCONTRACTING PURPOSES SHALL BE AS PER GENERAL CONTRACTOR'S DIRECTIONS.
- 6. IT SHALL BE THE RESPONSIBILITY OF ALL SUBCONTRACTORS TO HAVE EXAMINED AND REVIEWED THE COMPLETE SET OF WORKING DRAWINGS AND SPECIFICATIONS AND TO PROVIDE ALL LABOR AND MATERIAL FOR THEIR RESPECTIVE AREA OF WORK FOR A COMPLETE AND FINISHED INSTALLATION IN COMPLIANCE WITH THE INTENT OF THE DRAWINGS AND SPECIFICATIONS WHETHER IT IS INDICATED OR NOT. ALL WORK WHETHER INDICATED OR NOT, SHALL BE IN COMPLIANCE WITH ALL BUILDING CODES AND ORDINANCES WHICH ARE APPLICABLE TO THE PROJECT.
- 7. CONTRACTOR SHALL PAY FOR ALL SOILS AND CONCRETE TESTING SERVICES. SUCH SERVICES SHALL BE INCLUDED AS SEPARATE LINE ITEMS ON THE BID FORM.

01 20 00 ALTERNATES

- 1. TO PROVIDE ADDITIONAL INFORMATION TO THE OWNER ON ALTERNATE MATERIALS THE FOLLOWING ALTERNATE BID PRICE SHALL BE LISTED ON THE BID FORM:
- A. EXTERIOR PAINTING: STATE THE AMOUNT TO BE ADDED TO THE BID PRICE IF TEX COTE COOLWALL IS USED FOR THE EXTERIOR STUCCO IN LIEU OF THE PAINT SPECIFIED. REFER TO SECTION

01 29 00 PAYMENT PROCEDURES

1. APPLICATION FOR PAYMENT SHALL BE SUBMITTED MONTHLY, IN QUADRUPLICATE, ON AIA DOCUMENT G-702 TO THE OWNER. AFTER THE FIRST PAYMENT, EACH SUCCEEDING PAYMENT SHALL BE ACCOMPANIED BY COMPLETED WAIVERS OF LIEN. PAYMENT WILL NOT BE MADE WITHOUT COMPLETED WAIVERS OF LIEN.

01 30 00 ADMINISTRATIVE REQUIREMENTS

01 31 00 PROJECT MANAGEMENT AND CORDINATION

09 80 00 DECORATIVE PROTECTIVE COATING SYSTEM.

- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF THE VARIOUS TRADES IN ORDER TO PREVENT CONFLICTS BETWEEN THEIR WORK OR WITH THE EXISTING CONDITIONS. SUBCONTRACTORS SHALL COOPERATE WITH EACH OTHER AND WITH THE GENERAL CONTRACTOR TO PROVIDE MATERIALS AND LABOR THAT ARE NECESSARY IN EACH OTHER'S WORK AT THE PROPER TIMES SO THAT THE CONSTRUCTION SCHEDULE IS MAINTAINED. MATERIALS SHALL BE INSTALLED WITHOUT CREATING CONFLICTS BETWEEN THE WORK OF THE VARIOUS TRADES.
- 2. WHEN A DETAIL, DIMENSION OR REFERENCE IS INDICATED AS "TYPICAL" IT APPLIES TO ALL SIMILAR SITUATIONS, WHETHER INDICATED OR NOT. SECTIONS OR DETAILS (UNLESS OTHERWISE NOTED) APPLY TO ALL SIMILAR SITUATIONS.
- 3. TYPICAL DIMENSIONS (UNLESS OTHERWISE NOTED) ARE TAKEN FROM THE FACE OF CONCRETE BLOCK OR METAL STUDS. DO NOT SCALE DRAWINGS! VERIFY DIMENSIONS IN FIELD AND NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION.

01 33 00 SUBMITTAL PROCEDURES

1. ALL SHOP DRAWINGS AND PRODUCT SUBMITTALS CALLED FOR IN THE DRAWINGS AND SPECIFICATIONS OR AS REQUIRED TO EXECUTE THE WORK PROPERLY SHALL BE SUBMITTED PROMPTLY. UP TO TWO WEEKS SHALL BE ALLOWED FOR APPROVAL AND RETURN OF SHOP DRAWINGS FROM ARCHITECT.

01 41 00 REGULATORY REQUIREMENTS

- 1. ALL WORK SHALL BE PERFORMED IN COMPLETE ACCORDANCE WITH THE 2007 EDITION OF THE FLORIDA BUILDING CODE WITH LATEST AMENDMENTS, AND OTHER CODES, REGULATIONS, STATUTES AND ORDINANCES THAT ARE APPLICABLE. CONTRACTOR SHALL EXERCISE ALL DUE DILIGENCE IN MAINTAINING A SAFE WORKING ENVIRONMENT AND SHALL ABIDE BY ALL OSHA REGULATIONS.
- 2. TOLERANCES SHALL BE IN COMPLIANCE WITH CUSTOMARY INDUSTRY PRACTICE AND PUBLISHED STANDARDS.

01 50 00 TEMPORARY FACILITIES AND CONTROLS

- 1. CONTRACTOR SHALL ARRANGE AND PAY FOR THE FOLLOWING UTILITIES FOR HIS USE:
 - WATER (POTABLE AND NON-POTABLE) POWER
- TOILET D. METERING
- E. TELEPHONE

01 74 00 CLEANING AND WASTE MANAGEMENT

- 1. CLEANING: DURING CONSTRUCTION THE CONTRACTOR SHALL:
 - A. OVERSEE CLEANING AND ENSURE THAT GROUNDS ARE MAINTAINED FREE FROM ACCUMULATIONS OF WASTE MATERIALS AND RUBBISH.
 - B. REMOVE WASTE MATERIALS, RUBBISH, AND DEBRIS FROM THE SITE AND LEGALLY DISPOSE OF AT PUBLIC OR PRIVATE DUMPING AREAS OFF THE PROJECT SITE.
 - C. BROOM CLEAN INTERIOR AREA ON AN AS NEEDED BASIS UNTIL BUILDING IS READY FOR ACCEPTANCE OR OCCUPANCY.
- 2. SPECIAL CLEANING: BESIDES THE GENERAL BROOM CLEANING, CONTRACTOR SHALL DO THE FOLLOWING SPECIAL CLEANING AT COMPLETION OF WORK (FOR ALL TRADES), USING ONLY CLEANING MATERIAL RECOMMENDED BY MANUFACTURER OF SURFACE TO BE CLEANED AND ONLY ON SURFACES RECOMMENDED BY CLEANING MATERIAL MANUFACTURER:
 - A. CLEAN ALL HARDWARE AND FIXTURES FOR ALL TRADES INCLUDING REMOVAL OF ALL STAINS, DUST, PAINT, ETC., UPON COMPLETION.

01 77 00 CLOSEOUT PROCEDURES

- 1. MANUALS FOR OPERATING MACHINERY AND EQUIPMENT SHALL BE DELIVERED TO THE OWNER UPON COMPLETION OF THE PROJECT.
- 2. GUARANTY AND WARRANTY: THE CONTRACTOR SHALL WARRANTY AND/OR GUARANTY ALL MATERIALS AND WORKMANSHIP AND MOVABLE OR ADJUSTABLE WORK SHALL REMAIN IN PERFECT WORKING CONDITION, INCLUDING BUT NOT LIMITED TO: HARDWARE, DOORS, FIXTURES AND ALL OTHER EQUIPMENT FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. AT THE END OF THE WORK THE CONTRACTOR SHALL FURNISH THE OWNER WITH ALL WRITTEN EQUIPMENT/FIXTURE GUARANTIES AND/OR WARRANTIES FURNISHED BY THE MANUFACTURER FOR ALL EQUIPMENT/FIXTURES WHETHER OR NOT SUCH GUARANTY IS REQUESTED IN THE PLANS AND SPECIFICATIONS. COPIES OF PURCHASE ORDERS OR INVOICES SHALL BE FURNISHED FOR GUARANTY OR WARRANTY PURPOSES UPON THE REQUEST OF THE
- 3. AS-BUILT DRAWINGS: DURING CONSTRUCTION, THE CONTRACTOR SHALL MARK ALL CHANGES ON A SET OF "AS-BUILT" PRINTS AS THE WORK PROGRESSES. ACCURATELY DIMENSIONED LOCATIONS AND ELEVATIONS MUST BE RECORDED FOR ALL UNDERGROUND UTILITIES. UPON COMPLETION OF THE WORK AND PRIOR TO THE REQUEST FOR FINAL PAYMENT, THE CONTRACTOR MUST DELIVER TO THE OWNER THE COMPLETED SET OF "AS-BUILT" PRINTS.

02 00 00 EXISTING CONDITIONS (FOR SITEWORK REFER TO CIVIL ENGINEERING AND LANDSCAPING DRAWINGS)

02 32 00 SUBSURFACE INVESTIGATION

1. SOIL BORINGS HAVE BEEN TAKEN ON THIS SITE FOR PURPOSES OF DESIGN OF SUBSURFACE CONDITIONS. THESE BORINGS ARE NOT INTENDED AS REPRESENTATIONS OR WARRANTS OF CONTINUITY OF SUCH CONDITIONS BETWEEN SOIL BORINGS. IT IS EXPRESSLY UNDERSTOOD THAT OWNER WILL NOT BE RESPONSIBLE FOR INTERPRETATIONS OR CONCLUSIONS DRAWN THEREFROM BY THE CONTRACTOR. THE GOETECHNICAL REPORT, DATED 24 JUNE 2010, PREPARED GY ALLTERRA ENGINEERING & TESTING IS MADE AVAILABLE FOR THE CONVENIENCE OF THE CONTRACTOR. ADDITIONAL TEST BORINGS AND OTHER EXPLORATORY OPERATIONS MAY BE MADE BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.

SECTION 02 34 00 SOIL STABILIZATION

- 1. SITE PREPARATION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS IN THE SOILS REPORT. THE TOP 6" OF THE SUB-GRADE BELOW THE SLAB SHALL BE STABILIZED BY PLACING A LIFT OF WELL-COMPACTED, WELL-GRADED SHELL ROCK OVER IN-SITU SOIL TO SUPPORT THE SLAB.
- 2. A REPRESENTATIVE OF THE SOIL TESTING AND INSPECTION LABORATORY SHALL BE PRESENT DURING ALL PROOF ROLLING OPERATIONS.

32 00 00 EXTERIOR IMPROVEMENTS

31 31 16 TERMITE CONTROL

- 1. SCOPE OF WORK: TERMITE TREAT ALL SOIL BENEATH ALL CONCRETE SLAB AREAS WITHIN THE INSIDE FACE OF THE EXTERIOR MASONRY FOUNDATION WALL AND EXTEND TREATMENT TO 5 FEET BEYOND THE EXTERIOR FACE OF THE MASONRY. TREATMENT SHALL ALSO INCLUDE THE AREA BELOW FOOTINGS FOR THE NEW PORTE COCHERE AND ENTRY CANOPY AND SHALL EXTEND 5 FEET BEYOND THE OUTSIDE FACE OF THE FOOTINGS IN ALL DIRECTIONS.
- 2. GUARANTEE: FURNISH 5 YEAR RENEWABLE CERTIFICATION THAT APPLICATION WAS MADE IN ACCORDANCE WITH MANUFACTURER'S RSPECIFICATIONS.
- 3. APPLICATION: IMMEDIATELY PRIOR TO VAPOR BARRIER PLACEMENT, APPLY TREATMENT IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.

UTILITY SERVICES (REFER TO CIVIL ENGINEERING DRAWINGS)

PAVING (REFER TO CIVIL ENGINEERING DRAWINGS)

IRRIGATION SYSTEM (REFER TO LANDSCAPE DRAWINGS)

PLANTING (REFER TO LANDSCAPE DRAWINGS)

DIVISIONS 3, 4, 5 & 6 CONCRETE, MASONRY, STEEL AND ROUGH CARPENTRY - REFER TO STRUCTURAL DRAWINGS IN ADDITION TO ITEMS LISTED BELOW

03 00 00 CONCRETE

03 30 00 CAST-IN-PLACE CONCRETE

1. UNLESS OTHERWISE NOTED ON THE DRAWINGS CONCRETE SHALL BE INSTALLED AS DESCRIBED BELOW:

LOCATION	THICKNESS	REINFORCEMENT	FINISH
CURBS	6 INCH	2 — #6 CONT.	TROWEL
SIDEWALKS	4 INCH	6 X 6/W1.4 X W/1.4	BROOM
EXTERIOR SLABS	5 INCH	6 X 6/W2.1 X W/2.1	BROOM

- 2. VAPOR BARRIER: 1 LAYER OF 6 MIL POLYETHYLENE SHEET UNDER ALL INTERIOR CONCRETE SLABS.
- 3. INTERIOR SLABS TOLERANCE: CLASS "A" (1/8 INCH CHANGE IN LEVEL IN 10 FEET AS DETERMINED BY A 10 FOOT STRAIGHT EDGE ANYWHERE ON THE SLAB).
- 4. SLAB CONTROL JOINTS: 1 INCH DEEP SAWCUTS; EVERY OTHER WIRE OF THE MESH REINFORCING SHALL BE CUT AT ALL CONTROL JOINTS.
- 5. EXPANSION JOINTS: 1/2 INCH THICK FULL DEPTH AT ALL WALLS WHERE CONCRETE IS POURED AGAINST CONCRETE BLOCK.
- 6. FLOOR HARDENER: DAY-CHEM SURE HARD (J-17) COMBINATION HARDENER SEALER AS MANUFACTURED BY DAYTON SUPERIOR CORPORATION OR APPROVED EQUAL.
- A. INSTALLATION: IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTRUCTIONS.

B. WARRANTY: MANUFACTURER'S STANDARD TEN YEAR GUARANTEE.

- 03 35 19 POLISHED CONCRETE 1. SCOPE OF WORK: FURNISH ALL LABOR AND MATERIALS TO POLISH THE CONCRETE WAREHOUSE SLAB. POLISHING SHALL CONSIST A FOUR PASSES OF POLISHING MACHINE.
- A. SURFACE CUT: PRESERVE TOP SURFACE CREAM (DO NOT EXPOSE AGGREGATE).
- B. SHEEN LEVEL: MEDIUM (FINAL 800 GRIT). C. PERIMETER EDGE WORK: (GRIND POLISH).
- D. POLISHED SURFACE SHALL BE FINISHED WITH VARNISH.

04 00 00 MASONRY 04 20 00 UNIT MASONRY - REFER ALSO TO STRUCTURAL DRAWINGS

1. SCOPE OF WORK: FURNISH AND INSTALL ALL REINFORCED GCONCRETE MASONRY. ALL CONCRETE CONCRETE MASONRY IN WAREHOUSE AND MEZZANINE IS TO BE EXPOSED. DAMAGED BLOCK SHALL NOT BE USED. JOINTS SHALL BE TOOLED SMOOTH READY TO RECEIVE AN EPOXY COATING IN WAREHOUSE, SHIPPING AND MEZZANINE.

05 00 00 METALS

05 51 00 METAL STAIRS AND RAILS

- 1. SCOPE OF WORK: FURNISH AND INSTALL STEEL STAIR, RAILINGS AND GUARDRAILS AS DETAILED ON THE
- 2. SUBMITTALS: SUBMIT 6 COPIES OF SHOP DRAWINGS SHOWING STAIR AND RAILINGS INCLUDING ALL MATERIALS, FASTENINGS AND OTHER RELATED DETAILS.
- 3. WARRANTY: CONTRACTOR'S ONE YEAR WARRANTY AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP.
- 4. INSTALLATION: IN ACCORDANCE WITH STANDARD INDUSTRY PRACTICE AND THE APPROVED SHOP

05 51 33 FIXED ALUMINUM LADDER

- 1. SCOPE OF WORK: FURNISH AND INSTALL ALUMINUM INCLINED SHIPS LADDER TO ROOF HATCH. INSTALLATION SHALL INCLUDE RAILS AND SAFETY POST. LADDER SHALL BE AS MANUFACTURED BY PRECISION LADDERS, LLC.
- 2. SUBMITTALS
- A. 6 COPIES OF SHOP DRAWINGS SHOWING LADDER, RAILS, SAFETY POST, FASTENINGS AND ALL OTHER COMPONENTS REQUIRED FOR A COMPLETE INSTALLATION. SHOW RELATIONSHIP TO ROOF HATCH AND FASTENING AT ROOF HATCH.
- B. WARRANTY: CONTRACTOR'S ONE YEAR WARRANTY AGAINST DEFECTIVE MATERIAL AND WORKMANSHIP.
- 3. DELIVERY, STORAGE AND HANDLING
- A. EXAMINE LADDER WHEN IT ARRIVES ON SITE. NOTIFY THE CARRIER AND MANUFACTURER OF ANY
- B. STORE LADDER INSIDE BUILDING. DO NOT STORE OUTSIDE.

4. MATERIALS

- A. STRINGERS: 2-1/2" X 1-1/16" X 1/8" 6005-T5 MILL FINISH ALUMINUM CHANNEL WITH 1/8" MOLDED POLYURETHANE SAFETY CAP AT TOP.
- B. TREADS: 2-1/4 X 3/4" X 1/4" 6005-T5 EXTRUDED MIL FINISH ALUMINUM WITH SAFETY SERRATIONS.
- C. FLOOR BRACKETS: 1/2" X 2" X 3".

A. LADDER SHALL BE COMPLETELY FABRICATED AND READY FOR INSTALLATION BEFORE SHIPMENT TO

A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

06 00 00 WOOD, PLASTICS, AND COMPOSITES

06 10 00 ROUGH CARPENTRY

- 1. SCOPE OF WORK: FURNISH AND INSTALL ALL WOOD BLOCKING INDICATED ON THE DRAWINGS.
- 2. REFER TO STRUCTURAL SPECIFICATIONS FOR LUMBER REQUIREMENTS.
- 3. INSTALL WOOD BLOCKING AT ALL BUILT IN ACCESSORIES
- 4. ALL WOOD BLOCKING IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED.

06 60 00 - CABINETS AND COUNTERS

- 1. SCOPE OF WORK: FURNISH AND INSTALL ALL CABINETS, PLASTIC LAMINATE COUNTERTOPS, STONE COUNTERTOPS AND THERMAFOIL DOOR AND DRAWER FRONTS.
- 2. SUBMITTALS: SUBMIT 6 COPIES OF SHOP DRAWINGS SHOWING EACH CABINET AND TRIM TYPE AND INDICATING ALL MATERIALS AND FASTENINGS. SUBMIT MANUFACTURER'S STANDARD PLASTIC LAMINATE COLOR CHARTS.
- A. DOOR AND DRAWER FRONTS: LAS OLAS STYLE MEDIUM DENSITY FIBERBOARD WITH DIXIE SYCAMORE VINYL WRAPPING AS MANUFACTURED BY DOORMARK INC. FRONTS SHALL HAVE INTEGRAL FINGER

3/4 INCH EXTERIOR PLYWOOD WITH EXTERIOR GLUE

FULLY WATERPROOF AS RECOMMENDED BY LAMINATE

3/4 INCH 45 LB. DENSITY PARTICLE BOARD

- B. PLASTIC LAMINATE/MELAMINE: PLASTIC LAMINATE SHALL BE FORMICA, WILSONART OR COMPARABLE PRODUCT BY OTHER MANUFACTURERS.
 - VERTICAL SURFACES: 1/32 INCH THICK (COLOR AND PATTERN TO BE SELECTED) COUNTERTOP SURFACE: DRAWER INTERIORS:
- CARINETS ADHESIVES:
- MANUFACTURER. C. HARDWARE: KNAPE AND VOGT #1429
 - DRAWER SLIDES: CABINET DOOR HINGES:

COUNTERTOP:

- STANLEY #1501, CONCEALED, SELF-CLOSING H.B. IVES #327A92 AND #325A92 MAGNETIC CATCHES:
- H.B. IVES #37-B26 WIRE PULLS: POLISHED CHROME HARDWARE FINISH:
- 4. COUNTERTOP FINISH: PLASTIC LAMINATE SHALL BE SELECTED FROM MANUFACTURER'S STANDARD CHIPS. FOR STONE COUNTERTOPS REFER TO CABINET PLANS AND ELEVATIONS AND SECTION 12 36 40 OF THESE SPECIFICATIONS. 5. EXECUTION:
- A. CABINETS AND COUNTERTOPS SHALL BE ERECTED STRAIGHT, PLUMB AND FASTENED RIGIDLY TO BACKING FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- B. ALL EVIDENCE OF DRILLING, CUTTING, AND FITTING SHALL BE CONCEALED IN FINISHED WORK.
- BACKING FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS. C. CAREFULLY ADJUST HARDWARE AND LEAVE ALL DOORS AND DRAWERS IN PERFECT WORKING

ORDER. FINISHED SURFACES SHALL BE CLEANED AND LEFT FREE OF IMPERFECTIONS.

07 00 00 THERMAL & MOISTURE PROTECTION

07 21 00 THERMAL INSULATION

RECOMMENDATIONS.

- 1. SCOPE OF WORK: FURNISH AND INSTALL ALL THERMAL WALL INSULATION.
- 2. SUBMITTALS: SUBMIT 6 COPIES OF MANUFACTURER'S DETAIL SHEETS SHOWING EACH TYPE OF INSULATION REQUIRED. FURNISH INFORMATION CONCERNING METHODS OF INSTALLATION, AND

RELATIONSHIP TO ALL ADJACENT CONSTRUCTION. MATERIALS

- A. RIGID WALL INSULATION: 2 INCH THICK STYROFOAM SQUARE EDGE INSULATION (R-VALUE 10.0) AS MANUFACTURED BY DOW BUILDING SOLUTIONS OR COMPARABLE PRODUCT BY OTHER
- B. BATT WALL INSULATION: 3-1/2 INCH THICK FIBERGLASS BATT INSULATION (R-VALUE 10.0) AS MANUFACTURED BY DOW BUILDING SOLUTIONS OR COMPARABLE PRODUCT BY OTHER MANUFACTURERS.

4. INSPECTION

- A. EXAMINE SUBSTRATES AND CONDITIONS UNDER WHICH INSULATION WORK IS TO BE PERFORMED.
- B. DO NOT PROCEED WITH INSTALLATION OF INSULATION UNTIL UNSATISFACTORY CONDITIONS HAVE
- BEEN CORRECTED. C. CLEAN SUBSTRATES OF SUBSTANCES HARMFUL TO INSULATION.

5. INSTALLATION

- A. COMPLY WITH MANUFACTURER'S INSTRUCTIONS FOR PARTICULAR CONDITIONS OF INSTALLATION. B. APPLY RIGID BOARD DIRECTLY TO CONCRETE MASONRY WALL BETWEEN 2 INCH METAL "Z" FURRING IN WITH NO VOIDS BEHIND OUTLETS OR PIPING IN ACCORDANCE WITH MANUFACTURER'S
- C. INSTALL BATTS TO FILL ENTIRE STUD CAVITY. INSULATION SHALL BE CAREFULLY CUT TO FIT AROUND OUTLETS, JUNCTION BOXES AND OTHER IRREGULARITIES.

07 21 40 FOAMED-IN-PLACE MASONRY WALL INSULATION

TO RESEMBLE EXISTING SURFACE.

MATERIALS, FASTENINGS AND OTHER RELATED DETAILS.

1. SCOPE OF WORK: INSTALL FOAMED-IN-PLACE MASONRY WALL INSULATION IN ALL MASONRY WALLS..

2. MATERIALS: COREFFILL 500 AS MANUFACTURED BY TAILORED CHEMICAL PRODUCTS, HICKORY, NC

- COME FROM THE MANUFACTURER PRE-MIXED TO ENSURE CONSISTENCY. A ONE-YEAR PRODUCT AND INSTALLATION WARRANTY SHALL BE ISSUED BY BOTH THE MANUFACTURER AND THE INSTALLER.
- A. INSULATION SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND MUST
- B. FILL ALL OPEN CELLS AND VOIDS IN ALL HOLLOW CONCRETE MASONRY WALLS. THE FOAM INSULATION SHALL BE PRESSURE INJECTED THROUGH A SERIES OF 5/8" TO 7/8" HOLES DRILLED INTO EVERY VERTICAL COLUMN OF BLOCK CELLS (EVERY 8" ON CENTER) BEGINNING AT AN APPROXIMATE HEIGHT OF FOUR FEET FROM FINISHED FLOOR LEVEL. THIS PROCEDURE SHALL BE REPEATED AT AN APPROXIMATE HEIGHT OF 4'-0" ABOVE THE FIRST HORIZONTAL ROW OF HOLES (OR AS NEEDED) UNTIL THE VOID IS COMPLETELY FILLED. PATCH HOLES WITH MORTAR AND SCORE

SECTION 07720 - ROOF HATCH

- 1. SCOPE OF WORK: FURNISH AND INSTALL MODEL NUMBER NB-HZ, 2'-6" WIDE X 5'-4" LONG, SINGLE LEAF ROOF HATCH AS MANUFACTURED BY THE BILCO COMPANY. HATCH LENGTH DENOTES THE HINGED SIDE. HATCH SHALL BE PRE-ASSEMBLED FROM THE MANUFACTURER.
- 2. WIND LOAD RESISTANCE: ENTIRE INSTALLATION SHALL RESIST WIND LOADING OF 140 MILES PER HOUR, 3 SECOND GUST.

SUBMITTALS

- A. MANUFACTURER'S PRODUCT DATA FOR ALL ITEMS IN THIS SPECIFICATION. B. 6 COPIES OF SHOP DRAWINGS SHOWING PROFILES, ACCESSORIES, LOCATION AND DIMENSIONS. C. MIAMI-DADE COUNTY NOTICE OF ACCEPTANCE 10-0013.01 HIGH VELOCITY HURRICANE ZONE, LARGE AND SMALL MISSILE IMPACT.
- D. WARRANTY: PRIOR TO PROJECT CLOSEOUT, SUBMIT MANUFACTURER'S STANDARD WARRANTY STATING THAT MATERIALS SHALL BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF 5 YEARS FROM THE DATE OF PURCHASE. SHOULD A PART FAIL TO FUNCTION IN NORMAL USE DURING THIS PERIOD, MANUFACTURER SHALL FURNISH A NEW PART AT NO

- A. COVER: 11 GAUGE ALUMINUM WITH A 3 INCH BEADED FLANGE WITH FORMED REINFORCING MEMBERS. COVER SHALL HAVE A HEAVY EXTRUDED EPDM RUBBER GASKET THAT IS BONDED TO THE COVER INTERIOR TO ASSURE A CONTINUOUS SEAL WHEN COMPRESSED TO THE TOP SURFACE OF THE CURB. COVER SHALL BE INSULATED WITH 1 INCH THICK FIBERGLASS, FULLY COVERED AND PROTECTED BY AN 18 GAUGE ALUMINUM LINER.
- FLANGE WITH 7/16 INCH HOLES PROVIDED FOR SECURING TO THE ROOF DECK. THE CURB SHALL BE EQUIPPED WITH AN INTEGRAL METAL CAP FLASHING OF THE SAME GAUGE AND MATERIALS AS THE CURB, FULLY WELDED AT THE CORNERS, THAT FEATURES THE BIL—CLIP FLASHING SYSTEM, INCLUDING STAMPED TABS, 6 INCHES ON CENTER, TO BE BENT INWARD TO HOLD SINGLE PLY ROOFING MEMBRANE IN PLACE. OUTSIDE OF CURB SHALL BE INSULATED WITH 1" THICK HIGH-DENSITY FIBERBOARD. C. LIFTING MECHANISMS: COMPRESSION SPRING OPERATORS ENCLOSED IN TELESCOPIC TUBES

B. CURB: 12 INCHES HIGH, 11 GAUGE ALUMINUM. CURB SHALL BE FORMED WITH A 3-1/2 INCH

TO PROVIDE SMOOTH, EASY, AND CONTROLLED COVER OPERATION THROUGHOUT THE ENTIRE

ACCUMULATION OF MOISTURE, GRIT, AND DEBRIS INSIDE THE LOWER TUBE ASSEMBLY. THE

ARC OF OPENING AND CLOSING. THE UPPER TUBE SHALL BE THE OUTER TUBE TO PREVENT

- LOWER TUBE SHALL INTERLOCK WITH A FLANGED SUPPORT SHOE WELDED TO THE CURB ASSEMBLY.
- 1) HINGES: HEAVY DUTY PINTLE HINGES
- 2) COVER SHALL BE EQUIPPED WITH AN ENCLOSED TWO POINT SRPING LATCH WITH INTERIOR AND EXTERIOR TURN HANDLES.
- 3) HATCH SHALL BE EQUIPPED INTERIOR AND EXTERIOR PADLOCK HASPS. 4) LATCH STRIKE SHALL A STAMPED COMPONENT BOLTED TO THE CURB ASSEMBLY.
- 5) COVER SHALL AUTOMATICALLY LOCK IN THE OPEN POSITION WITH A RIGID HOLD OPEN ARM EQUIPPED WITH A 1" DIAMETER RED VINYL GRIP HANDLE TO PERMIT EASY RELEASE
- ALL OTHER HARDWARE BE ZINC PLATED AND CHROMATE SEALED. SPRINGS SHALL HAVE AN ELECTROCOATED ACRYLIC FINISH FOR CORROSION RESISTANCE. 7) COVER HARDWARE SHALL BE BOLTED INTO HEAVY GAUGE CHANNEL REINFFORCING

6) COMPRESSION SPRING TUBES SHALL BE AN ANTI-CORROSIVE COMPOSITE MATERIAL AND

WELDED TO THE UNDERSIDE OF THE COVER AND CONCEALED WITHIN THE INSULATION

E. FINISH: FACTORY FINISH SHALL BE MILL FINISH ALUMINUM.

- A. VERIFY THAT ROOF HATCH INSTALLATION WILL NOT DISRUPT OTHER TRADES. VERIFY THAT THE SUBSTRATE IS DRY, CLEAN, AND FREE OF FOREIGN MATTER. REPORT AND CORRECT
- DEFECTS PRIOR TO ANY INSTALLATION. B. CHECK AS-BUILT CONDITIONS AND VERIFY THE MANUFACTURER'S ROOF HATCH DETAILS FOR ACCURACY TO FIT THE APPLICATION PRIOR TO FABRICATION. INSTALL IN ACCORDANCE WITH
- MANUFACTURER'S INSTALLATION INSTRUCTIONS. C. FASTENERS SHALL BE CONSISTENT WITH THE ROOF REQUIREMENTS AND REQUIREMENTS OF

07 50 00 MEMBRANE ROOFING

THE NOTICE OF ACCEPTANCE.

- 1. SCOPE OF WORK: FURNISH AND INSTALL ALL MEMBRANE ROOFING, ROOF INSULATIO, CRICKET, FLASHING, AND ALL COMPONENTS NECESSARY FOR A COMPLETE ROOF INSTALLATION. SYSTEM SHALL BE A THREE PLY HOT ASPHALT APPLIED ROOFING SYSTEM WITH SVS SMOOTH SURFACED BASE PLY AND SBS MINERAL SURFACED MODIFIED BITUMEN CAP SHEET. SYSTEM SHALL PROVIDE A MINIMUM AVERAGE THERMAL
- RESISTANCE (R-VALUE) OF 26.8. SPECIFICATION SHALL BE JOHNS MANVILLE 3FID.
- 2. APPROVALS AND RATINGS A. MEMBRANE SYSTEM SHALL BE UL CLASS A RATING.

B. SUBMIT TWO SAMPLES OF ROOFING MATERIALS TO BE USED.

B. GUARANTEE: 15 YEAR NO DOLLAR LIMIT MANUFACTURER'S WARRANTY.

- SUBSTITUTION A. WHEN A PARTICULAR MAKE OR TRADE NAME IS SPECIFIED, IT SHALL INDICATE THE STANDARD REQUIRED. BIDDERS PROPOSING SUSSTITUTIONS SHALL SUBMIT THE FOLLOWING TEN DAYS PRIOR TO BID DATE TO THE ARCHITECT:
 - 1) WRITTEN APPLICATION EXPLAINING WHY SUBSTITUTION SHOULD BE CONSIDERED.

2) MANUFACTURER'S LITERATURE AND SAMPLES OF REQUESTED SUBSTITUTION.

5. QUALITY ASSURANCE

A. SUBMIT PRODUCT DATA INDICATING MEMBRANE, BITUMEN AND BASE FLASHING MATERIALS.

C. SUBMIT MANUFACTURER'S CERTIFICATION THAT PRODUCTS ARE PHSICALLY AND CHEMICALLY COMPATIBLE WITH EACH OTHER AND MEET LISTED ASTM OR FEDERAL SPECIFICATION.

A. APPLICATOR: SUB CONTRACTING THE ROOFING PORTION OF THIS BID IS NOT PERMITTED UNLESS THE ROOFING SUB CONTRACTOR IS ALSO A AN APPROVED APPLICATOR QUALIFIED TO SUPPLY THE MANUFACTURER'S GUARANTEE SPECIFIED.

- B. APPLICATOR: COMPANY SPECIALIZING IN APPLYING BITUMINOUS ROOFING, WITH MINIMUM OF FIVE YEARS DOCUMENTED EXPERIENCE AND APPROVED BY MATERIALS MANUFACTURER.
- C. WORK OF THIS SECTION SHALL CONFORM TO MANUFACTURER'S INSTRUCTIONS AND NRCA ROOFING AND WATERPROOFING MANUAL.

 \mathcal{O}

DATE: 7/6/10 DRAWN BY: AMS

REVISED:

PROJ. NO. 926

6. REGULATORY REQUIREMENTS

A. FIRE HAZARD CLASSIFICATION: UL CLASS A.

B. FLORIDA BUILDING CODE PRODUCT APPROVAL

7. PRE-INSTALLATION CONFERENCE

A. CONVENE A PRE-INSTALLATION CONFERENCE ONE WEEK PRIOR TO COMMENCEING WORK. B. REVIEW INSTALLATION PROCEDURES AND COORDINATION REQUIRED WITH RELATED WORK.

8. DELIVERY, STORAGE AND HANDLING

- A. STORE AND PROTECT PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- B. DELIVER PROCUCTS IN MANUFACTURER'S ORIGINAL CONTAINERS, DRY, UNDAMAGE, WITH SEALS AND
- C. STORE PRODUCTS IN WEATHER-PROTECTED ENVIRONMENT, CLEAR OF GROUND AND MOISTURE. D. STAND ROLL MATERIALS ON END.

9. ENVIRONMENTAL REQUIREMENT

- A. DO NOT APPLY ROOFING IN INCLEMENT WEATHER.
- B. DO NOT APPLY ROOFING TO DAMP DECK SURFACE.

10. SEQUENCING AND SCHEDULING

A. COORDINATE THE WORK OF INSTALLING ASSOCIATED METAL FLASHING AS THE WORK OF THIS SECTION PROCEEDS.

A. ROOFING CONTRACTOR SHALL PROVIDE THREE—YEAR WORKMANSHIP WARRANTY.

B. MANUFACTURER'S GUARANTEE: PROVIDE A MANUFACTURER'S GUARANTEE COVERING BOTH MATERIALS AND WORKMANSHIP. ROOF GUARANTEE SHALL BE FOR A PERIOD OF 15 YEARS AND SHALL BE AN NDL GUARANTEE AND HAVE A NO DOLLAR LIMIT PENAL SUM AND SHALL INCLUDE ALL VERTICAL WALL FLASHING.

12. SHEET MATERIALS:

- A. PLY FELT/BASE PLY
- 1) GLASPLY IV ASTM 2178 TYPE IV OR PERMA PLY ASTM D 4601 TYPE II BASE SHEET
- B. SBS MODIFIED BITUMEN BASE SHEET
- 1) DYNABASE 90 MILS, 60 LBS. PER SQUARE, ASTM 6163 CONSISTING OF A FIBERGLASS MAT COVERED ON BOTH SIDES WITH SBS MODIFIED ASPHALT.
- C. MINERAL SURFACED SBS CAP SHEET

1) DYNAGLASS FR, 160 MILS, 106 LBS. PER SQUARE, ASTM 6163 SBS MODIFIED ASPHALT ROLL ROOFING INCORPORATING A LAYER OF FIBERGLASS MAT COVERED ON BOTH SIDES WITH AN SBS MODIFIED ASPHALT AND SURFACED WITH MINERAL GRANULES.

D. SBS FLASHING SHEET

- 1) DYNAFLEX, 158 MILS, 102 LBS. PER SQUARE, AN SBS MODIFIED ROLL ROOFING INCORPORATING A LAYER OF FIBER GLAS SCRIM SANDWICHED BETWEEN TWO POLYESTER MATS, COVERED ON BOTH SIDES BY SBS MODIFIED ASPHALT SURFACED WITH MINERAL GRANULES, AS MANUFACTURED BY JOHNS MANVILLE.
- E. THE FLASHING PRODUCT MUST BE SPECIFICALLY MANUFACTURED AND DESIGNATED FOR FLASHING. THE FLASHING PRODUCT MAY NOT BE A FIELD SHEET.

13. BITUMINOUS MATERIALS

A. ASPHALT BITUMEN: ASTM D 312, TYPE IV OR TYPE III. B. INDUSTRIAL ROOF CEMENT: ASTM D 4586, TYPE II, CUTBACK ASPHALT TYPE.

- 14. INSULATION MATERIALS A. INSULATION: E'NRG'Y 3, ASTM C 1289-02 TYPE II POLYISOCYANURATE RIGID BORAD, 2 INCH
 - THICK, "R" FACTOR OF 12.5, SQUARE EDGES, SUPPLIED BY JOHNS MANVILLE. INSULATION - PROTECTION BOARD: 1/2" RETRO-FIT BOARD, HIGH DENSITY HOMOGENEOUS PANEL COMPOSED OF EXPANDED PERLITE BLENDED WITH SELECTED BINDERS AND FIBERS, "R" FACTOR OF 1.32, SUPPLIED BY JOHNS MANVILLE.

A. PERLITE CANT AND TAPERED EDGE STRIPS: FESCANT PLUS PERLITE BOARD, FLAME RESISTANT. PREFORMED TO 45 DEGREE ANGLE SUPPLIED BY JOHNS MANVILLE; TAPERED FESCO ENGE STRIP.

16. ACCESSORIES

A. ROOFING NAILS: GALVANIZED OR NON-FERROUS TYPE, LENGTH AS REQUIRED TO SUIT APPLICATION. B. JOHNS MANVILLE ULTREAST ASAPS FOR INSUSLATION.

17. EXAMINATION

- A. VERIFY THAT SURFACES AND SITE CONDITIONS ARE READY TO RECEIVE WORK.
- B. VERIFY THAT DECK IS SUPPORTED AND SECURED, DRY, CLEAN AND SMOOTH, FREE OF DEPRESSIONS. IRREGULARITIES, OR PROJECTIONS, PROPERLY SLOPED TO DRAIN.
- C. VERIFY THAT ROOF OPENINGS, CURBS, PIPES, SLEEVES, DUCTS, AND VENTS THROUGH ROOF ARE
- SOLIDLY SET IN PLACE. D. START OF WORK MEANS INSTALLER ACCEPTS EXISTING SUBSTRATE.

18. PROTECTION

A. PROTECT BUILDING SURFACES AGAINST DAMAGE FROM ROOFING WORK.

19. INSULATION APPLICATION

- A. MECHANICALLY FASTEN BOTH LAYERS OF 2 INCH INSULATION IN ACCORDANCE WITH FLORIDA BUILDING CODE REQUIREMENTS WITH SECOND LAYER OF INSULATION WITH JOINTS STAGGERED FROM
- B. INSTALL INSULATION BOARDS WITH EDGES IN MODERATE CONTACT, WITHOUT FORCING. CUT INSULATION TO FIT NEATLY TO PERIMETER MASONRY AND AROUND PENETRATIONS THROUGH ROOF.
- C. INSTALL 1/2" JOHNS MANVILLE COVER BOARD IN A SOLID MOPPING OF HOT ASPHALT.
- D. APPLY NO MORE INSULATION THAN CAN BE SEALED WITH MEMBRANE IN SAME DAY.

20. MEMBRANE APPLICATION

- A. INSTALL FIRST PLY OF GLASPLY IV OR BASE SHEET PERMAPLY 28 STARTING AT THE LOW EDGE OF THE ROOF. APPLY A FULL 36 INCH WIDE SHEET, GLASPLY 1V, SET IN HOT ASPHALT. FOLLOWING SHEETS SHALL BE APPLIED FULL WIDTH OVERLAPPING THE PRECEDING FELT BY 3 INCHES SO THAT AT LEAST ONE PLY COVERS THE INSULATION IN ALL LOCATIONS.
- B. STARTING AT THE LOW EDGE OF THE ROOF, APPLY A FULL 36 INCH WIDE SMOOTH SURFACED SBS BASE SHEET, DYNABASE, SET IN HOT ASPHALT OVER THE BASE SHEET. FOLLOWING BASE SHEETS SHALL BE APPLIED FULL WIDTH OVERLAPPING THE PRECEDING FELT BY 3 INCHES SO THAT AT LEAST ONE PLY COVERS THE INSULATION IN ALL LOCATIONS. INSTALL EACH SBS PLY SO THAT IT SHALL BE FIRMLY AND UNIFORMLY SET, WITHOUT VOIDS, INTO THE HOT ASPHALT WITHIN 25 DEGREES F OF THE EVT APPLIED JUST BETORE THE FELT AT A NOMINAL UNIFORM RATE OF 23 LBS. PER SQUARE OVER THE ENTIRE SURFACE.
- C. EQUIVISCOUS TEMPERATURE AT POINT OF APPLICATION: NO MORE THAN 25 DEGREES F FROM BITUMEN RATING INDICATED ON BITUMEN CONTAINER LABEL.
- D. APPLY DYNAGLAS FR OVER DYNABASE. STARTING AT THE LOW EDGE OF THE ROOF, APPLY ONE FULL WIDTH SHEET OF THE GRANULE SURFACED MODIFIED BITUMEN BEING SURE TO MAINTAIN 4 INCH SIDE AND END LAPS OVER PRECEDING SHEETS. THE SHEET MUST BE FIRMLY AND UNIFORMLY SET, WITHOUT VOIDS INTO THE HOT ASPHALT.
- E. THE BITUMEN TEMPERATURE SHALL BE AT A MINIMUM OF 400 DEGREES OR AT THE EVT, WHICHEVER IS HIGHER, WHEN THE SHEETS ARE SET INTO IT. THIS HIGHER TEMPERATURE MAXIMIZES THE BONDING OF THE MODIFIED BITUMEN SHEETS.
- F. APPLY FELTS SMOOTH, FREE FROM AIR POCKETS, WRINKLES, FISHMOUTHS, LAP JOINTS, OR TEARS.
- G. EXTEND PLIES OF MEMBRANE FELTS UP CANT STRIPS.
- H. END LAPS SHALL BE STAGGERED A MINIMUM OF 3'-0" APART..
- I. BROADCAST GRANULES INTO THE HOT ASPHALT AT EDGES OF SBS CAP SHEET AFTER CAP HAS BEEN APPLIED IN ORDER TO MAINTAIN A NEAT APPEARANCE.

21. FLASHING AND ACCESSORIES

- A. INSTALL GRANULAR SURFACED OR ALUMINUM SURFACED SBS FLEXIBLE BASE FLASHINGS, DYNAFLEX TO SEAL MEMBRANE TO VERTICAL ELEMENTS. FLASHING SPECIFICATIONS SHALL BE AS LISTED IN THE CURRENT JOHNS MANVILLE COMMERCIAL ROOFING BINDER.
- 22. FIELD QUALITY CONTROL
- A. FIELD INSPECTION WILL BE PERFORMED BY THE MANUFACTURER.
- B. CORRECT IDENTIFIED DEFECTS OR IRREGULARITIES.

23. MANUFACTURER'S FIELD SERVICES

- A. PROVIDE MANUFACTURER'S FIELD SERVICES.
- B. REQUIRE PERIODIC SITE ATTENDANCE OF ROOFING AND INSULATION MANUFACTURERS TECHNICAL SALES REPRESENTATIVE DURING INSTALLATION OF THE WORK.

- A. REMOVE BITUMINOUS MARKINGS FROM FINISHED SURFACES.
- B. IN AREAS WHERE FINISHED SURFACES ARE SOILED BY ASPHALT OR ANY OTHER SOILING CAUSED BY WORK OF THIS SECTION, CONSULT MANUFACTURER OF SURFACES FOR CLEANING ADVICE AND CONFORM TO THEIR WRITTEN INSTRUCTIONS.
- C. REPAIR OR REPLACE DEFACED OR DISFIGURED FINISHES CAUSED BY WORK OF THIS SECTION.

07 84 00 FIRESTOPPING 07 61 00 METAL FLASHING

- 1. SCOPE OF WORK: FURNISH AND INSTALL ONLY THOSE FIRE AND SMOKE PENETRATION SEALS FOR OPENINGS IN FLOOR AND WALLS THAT ARE IN ACCORDANCE WITH ASTM E-814, E-119 AND/OR
- 2. RELATED WORK: COORDINATE WORK OF THIS SECTION WITH THE INSTALLATION OF NEW CHILLED WATER, ELECTRICAL, AND FIRE SPRINKLER SYSTEMS SERVING THE NEW ADDITION.

- A. APPLICATOR QUALIFICATIONS: TWO YEARS EXPERIENCE INSTALLING UL CLASSIFIED FIRESTOPPING
- B. PERFORMANCE: MATERIALS SHALL HAVE BEEN TESTED TO PROVIDE FIRE RATING EQUAL OR SURPASSING THAT REQUIRED IN INDUSTRY CLASSIFIED ASSEMBLIES.

- A. SHOP DRAWINGS: SUBMIT 6 COPIES OF SHOP DRAWINGS, OR MANUFACTURER'S DETAIL SHEETS SHOWING EACH CONDITION THAT REQUIRES A PENETRATION SEAL. THESE DETAILS MUST BE IN ACCORDANCE WITH THE PROPOSED APPROVED SYSTEM. DETAILS MUST INCLUDE MATERIALS TO BE USED, ANCHORAGE, METHODS OF INSTALLATION, AND RELATIONSHIP TO ALL ADJACENT
- B. MANUFACTURER'S DATA: SUBMIT COPIES OF ALL MANUFACTURER'S SPECIFICATION DATA, RECOMMENDATIONS, AND INSTALLATION INSTRUCTIONS FOR EACH TYPE OF MATERIAL REQUIRED.
- C. TEST REPORTS: FURNISH REPORTS FROM INDEPENDENT CERTIFIED LABORATORY INDICATING FLAME SPREAD AND SMOKE CONTRIBUTION TESTED IN ACCORDANCE WITH ASTM E 84 (UL 723).
- 5. DELIVERY, STORAGE AND HANDLING
 - A. DELIVER MATERIALS UNDAMAGED IN MANUFACTURER'S CLEARLY LABELLED, UNOPENED CONTAINERS, IDENTIFIED WITH BRAND, TYPE AND GRADE.
 - B. COORDINATE DELIVERY AND SCHEDULED INSTALLATION DATE TO ALLOW MINIMUM STORAGE TIME AT
 - C. STORE MATERIALS IN CLEAN, DRY, VENTILATED LOCATION. PROTECT FROM SOILING, ABUSE AND MOISTURE. FOLLOW MANUFACTURER'S INSTRUCTIONS.
- PROJECT CONDITIONS: EXISTING CONDITIONS: INSTALLER SHALL VERIFY THAT EXISTING CONDITIONS AND SUBSTRATE ARE ACCEPTABLE FOR THE PROPOSED APPLICATION BEFORE STARTING WORK. UNSATISFACTORY CONDITIONS MUST BE CORRECTED BEFORE PROCEEDING WITH INSTALLATION

- A. PROVIDE MATERIALS CLASSIFIED BY QUALIFIED THIRD PARTY TEST FACILITY TO PROVIDE FIRE BARRIER AT LEAST EQUAL TO TIME RATING OF CONSTRUCTION BEING PENETRATED OR SEALED.
- B. PROVIDE ASBESTOS FREE MATERIALS THAT COMPLY WITH APPLICABLE CODES AND HAVE BEEN TESTED IN ACCORDANCE WITH ASTM E-814 (UL1479), ASTM E84 (UL 723), ASTM E 119 (UL 263).
- 8. ACCEPTABLE MANUFACTURERS: PRODUCTS SHALL MEET THE REQUIREMENTS OF ASTM E814 (UL1479). ASTM E84 (UL723) AND ASTM E119 (UL263). PRODUCTS OF TREMCO, INC. CLEVELAND, OHIO 1-800-321-7906 HAVE BEEN SPECIFIED TO SET A QUALITY STANDARD. EQUAL PRODUCTS OF OTHER MANUFACTURERS MAY BE SUBMITTED FOR APPROVAL.

9. INSTALLATION:

- A. ALL SURFACES IN CONTACT WITH PENETRATION SEAL MATERIALS MUST BE FREE OF DIRT, DUST, GREASE, OIL, LOOSE MATERIALS, RUST OR OTHER SUBSTANCES THAT MAY AFFECT THE PROPER ADHESION OF THE FIRESTOPPING MATERIALS.
- B. SURFACES TO WHICH PENETRATION SEAL MATERIALS ARE APPLIED MUST MEET OR EXCEED INDUSTRY CLASSIFIED REQUIREMENTS, AND BE ACCEPTABLE TO THE MATERIAL MANUFACTURER.
- C. INSTALL PENETRATION SEAL MATERIALS AS OUTLINED IN THE UL FIRE RESISTANCE DIRECTORY, PUBLISHED REQUIREMENTS OF FACTORY MUTUAL, OR PRINTED APPLICATION INSTRUCTIONS OF THE MATERIALS MANUFACTURER.
- D. ANY OPENINGS IN FLOOR OR WALL NOT DESCRIBED IN THE UL DIRECTORY, OR OUTLINED IN THE MANUFACTURER'S DATA SHEETS MUST BE SEALED IN A MANNER THAT MEETS OR EXCEEDS CODE REQUIREMENTS FOR THAT CONSTRUCTION.
- 10. FIELD QUALITY CONTROL: ALL PENETRATION SEALED AREAS SHOULD BE EXAMINED BY AN APPOINTED CODE OFFICIAL AND THE GENERAL CONTRACTOR TO ENSURE PROPER INSTALLATION. ALL SEALED AREAS SHOULD REMAIN ACCESSIBLE UNTIL INSPECTION BY APPLICABLE AUTHORITIES.
- 11. ADJUSTING AND CLEANUP: REMOVE EQUIPMENT, MATERIALS AND DEBRIS, LEAVING AREA IN UNDAMAGED, CLEAN CONDITION.
- 12. SYSTEMS AND APPLICATION SCHEDULE:
 - A. SYSTEM TYPES: USE SYSTEM LISTED BELOW THAT BEST MATCHES THE WALL AND FLOOR CONSTRUCTION.
 - 1) SINGLE METAL PIPE OR CONDUIT PENETRATIONS: UL DESIGNATIONS: C-AJ-1028, C-AJ-1029, C-AJ-1064, C-AJ-1065, W-J-1011, C-AJ-1113, C-AJ-1144, C-AJ-1145, W-L-1051, W-L-1019, F-A-1005 TREMCO PRODUCTS: FYRE-SHIELD, FYRE-SIL, TREMSTOP, FYRE-SIL S/L.
 - 2) MULTIPLE METAL PIPE OR CONDUIT PENETRATIONS: UL DESIGNATIONS: C-AJ-1047, W-L-1020, W-J-1012 TREMCO PRODUCTS: FYRE-SHIELD, FYRE-SIL
 - 3) INSULATED METAL PIPE PENETRATIONS: UL DESIGNATIONS: C-AJ-5043, C-AJ-5023, F-A-5003, C-BJ-5005 TREMCO PRODUCTS: TREMSTOP, FYRE-SIL, FYRE-SHIELD, FYRE-SIL S/L
 - 4) PLASTIC PIPE OR CONDUIT PENETRATIONS: UL DESIGNATIONS: C-AJ-2061, C-AJ-2059, W-L-2049, W-L-2050, C-AJ-2060 TREMCO PRODUCTS: FYRE-SIL, TREMSTOP, TREMSTOP, TREMSTOP D, TREMSTOP M,
 - 5) CABLE PENETRATIONS: UL DESIGNATIONS: W-L-3043, W-L-3050, C-AJ-3068, W-L-3044, C-AJ-3022, C-AJ-3036, W-L-3017, W-L-3018, W- J-3009 TREMCO PRODUCTS: TREMSTOP PS, TREMSTOP WBM, FYRE-SHIELD, FYRE-SIL
 - 6) CABLE TRAY PENETRATIONS: UL DESIGNATIONS: C-AJ-4018, W-J-4005, C-AJ-4007 TREMCO PRODUCTS: TREMSTOP M, TREMSTOP YP, TREMSTOPS, FYRE-SHIELD
 - UL DESIGNATIONS: C-AJ-4018, W-J-4005, C-AJ-4007 TREMCO PRODUCTS: TREMSTOP M, TREMSTOP FP, TREMSTOP PS, FYRE-SHIELD

- 8. BLANK OPENINGS:
- UL DESIGNATIONS: C-AJ-0026, C-AJ-0011 TREMCO PRODUCTS: FYRE-SHIELD, FYRE-SIL, THC-900, DYMONIC, DYMERIC, FYRE-SIL S/L
- 9. FIRE RATED JOINTS;
- UL DESIGNATIONS: U900A, U900B, U900C WARNOCK HERSEY DESIGNATIONS: PSV-0472, PSV-0473, PSV-0474, PSV-0475, PSV-0449, PSV-0450, PSV-0451
 TREMCO PRODUCTS: DYMERIC, CERBLANKET-FS, FYRE-SIL, DYMONIC, THC-900, FYRE-SHIELD, FYRE-SIL S/L

07 92 00 JOINT SEALANTS

- SCOPE OF WORK: FURNISH AND INSTALL ALL SEALANTS AROUND WINDOW FRAMES AND AT ALL OTHER INTERSECTIONS OF DISSIMILAR MATERIALS.
- SUBMITTALS: SUBMIT 6 COPIES OF ALL MANUFACTURER'S SPECIFICATION DATA, RECOMMENDATIONS, AND INSTALLATION INSTRUCTIONS FOR EACH TYPE OF SEALANT PROPOSED.

- A. SEALANT: EQUAL TO SONOLASTIC SL1 (VERTICAL USE) AND SONOLASTIC NP2 (HORIZONTAL USE) AS MANUFACTURED BY SONNEBORN DIVISION OF REXNORD CHEMICAL PRODUCTS.
- B. BACKUP MATERIAL: EQUAL TO SONNEBORN SONOFORM POLYETHYLENE CLOSED CELL COMPRESSIBLE FOAM BACKER-ROD, 30 PER CENT WIDER THAN JOINT TO WHICH IT IS BEING
- APPLIED (POLYSTYRENE NOT ALLOWED). C. PRIMERS: NON-STAINING AS RECOMMENDED BY MANUFACTURER.

08 00 00 OPENINGS

08 11 00 METAL DOORS AND FRAMES

- 1. SCOPE OF WORK: FURNISH AND INSTALL ALL METAL DOORS AND FRAMES AS MANUFACTURED BY CECO DOOR PRODUCTS OR APPROVED EQUAL.
- 2. SUBMITTALS: SUBMIT 6 COPIES OF SHOP DRAWINGS OF EACH DOOR AND FRAME TYPE INDICATING ALL MATERIALS AND FINISHES. DRAWINGS SHALL INDICATE COMPLIANCE OF EXTERIOR DOORS AND FRAMES WITH WIND LOADING AND IMPACT RESISTANCE REQUIREMENTS OF THE FLORIDA BUILDING CODE 2007 AND SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA.

MATERIALS

- A. DOORS: $3'-0" \times 7'-0" \times 1-3/4"$ FLUSH TYPE, INSULATED HOLLOW METAL WITHOUT FACE JOINTS OR SEAMS. STEEL FACES AND TRIM SHALL BE 18 GAUGE. DOORS SHALL BE PROPERLY REINFORCED FOR ALL HARDWARE
- B. CORES: POLYURETHANE FOAM IN ALL EXTERIOR DOORS AND IN ALL DOORS INDICATED TO BE INSULATED ON THE DRAWINGS. ALL OTHER METAL DOORS SHALL HAVE HONEYCOMB CORES.
- C. FRAMES: 16 GAUGE, ONE PIECE WELDED ASSEMBLY WITH MITERED, REINFORCED CORNERS. JOINTS SHALL BE GROUND SMOOTH. FRAMES SHALL HAVE 9 GAUGE STEEL HINGE REINFORCEMENT PLATES AND SHALL BE PROPERLY REINFORCED FOR ALL OTHER HARDWARE.
- D. PROVIDE 3 STEEL ANCHORS PER JAMB OF A TYPE APPROPRIATE FOR CONCRETE CONSTRUCTION, ONE WELDED-ON FLOOR ANCHOR AT EACH JAMB AND THREE FACTORY INSTALLED RUBBER BUMPERS ON STRIKE JAMB.
- E. PROVIDE 16 GAUGE GALVANIZED METAL DRIP STRIP AT HEAD OF ALL FLUSH HOLLOW METAL DOORS LEADING TO EXTERIOR.
- G. VIEW WINDOWS SHALL BE 5 INCH X 20 INCH WIRE GLASS.

F. EXTERIOR DOORS SHALL BE FULLY WEATHERSTRIPPED.

08 14 00 WOOD DOORS

1. SCOPE OF WORK: FURNISH AND INSTALL ALL DOORS WITH WOOD-VENEER FACES AND FACTORY

- 2. SUBMITTALS
- A. PRODUCT DATA: FOR EACH TYPE OF DOOR, INCLUDE FACTORY-FINISHING SPECIFICATIONS. B. SHOP DRAWINGS: SUBMIT 6 COPIES OF SHOP DRAWINGS INDICATING LOCATION, SIZE, ELEVATION AND HAND OF EACH DOOR, CONSTRUCTION DETAILS, LOCATION AND EXTENT OF HARDWARE BLOCKING, MORTISES, HOLES, AND CUTOUTS, REQUIREMENTS FOR VENEER MATCHING, FACTORY
- FINISHINGS, FIRE RATINGS AND OTHER PERTINENT DATA. C. SAMPLES: FOR EACH MATERIAL AND FINISH.

QUALITY ASSURANCE A. QUALITY STANDARD: COMPLY WITH AWI'S "ARCHITECTURAL WOODWORK QUALITY STANDARDS

ILLUSTRATED".

- WARRANTY A. SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE DOORS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED
 - WARRANTY PERIOD.
 - 1. FAILURES INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: a) WARPING (BOW, CUP, OR TWIST) MORE THAN 1/4 INCH IN A 42 INCH X 84 INCH SECTION. b) TELEGRAPHING OF CORE CONSTRUCTION IN FACE VENEERS EXCEEDING 0.01 INCH IN A
 - 3 INCH SPAN.
 - WARRANTY SHALL ALSO INCLUDE INSTALLATION AND FINISHING THAT MAY BE REQUIRED DUE TO REPAIR OR REPLACEMENT OF DEFECTIVE DOORS.

3. WARRANTY PERIOD FOR SOLID-CORE INTERIOR DOORS: LIFE OF INSTALLATION.

FOLLOWING:

- MANUFACTURERS A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO THE
 - 1) ALGOMA HARDWOODS, INC.
 - AMPCO, INC. MOHAWK FLUSH DOORS, INC.

- 6. DOOR CONSTRUCTION A. INTERIOR VENEER-FACED SOLID-CORE DOORS (PAINT GRADE):
 - 1) CORE: EITHER GLUED BLOCK OR STRUCTURAL COMPOSITE LUMBER.
 - 2) CONSTRUCTION: FIVE PLIES WITH STILES AND FAILS BONDED TO CORE, THEN ENTIRE UNIT ABRASIVE PLANED BEFORE VENEERING.
 - 3) CONSTRUCTION: SEVEN PLIES, EITHER BONDED OR NONBONDED CONSTRUCTION.
- B. BLOCKING: FOR MINERAL AND HOLLOW-CORE DOORS, PROVIDE BLOCKING AS NEEDED TO ELIMINATE THROUGH-BOLTING HARDWARE. FOR MINERAL-CORE DOORS USE COMPOSITE BLOCKING WITH IMPROVED SCREW-HOLDING CAPABILITY.
- PROVIDE DOORS WITH EITHER GLUED-BLOCK OR STRUCTURAL COMPOSITE LUMBER CORES INSTEAD OF PARTICLEBOARD CORES AT LOCATIONS WHERE EXIT DEVICES ARE INDICATED. D. WOOD-VENEERED BEADS FOR LIGHT OPENINGS IN FIRE DOORS: MANUFACTURER'S STANDARD WOOD-

VENEERED NON-COMBUSTIBLE BEADS MATCHING VENEER SPECIES OF DOOR FACES AND APPROVED

A. FABRICATE DOORS IN SIZES INDICATED FOR PROJECT-SITE FITTING.

FOR USE IN DOORS OF FIRE RATING INDICATED ..

- B. FACTORY FIT DOORS TO SUIT FRAME-OPENING SIZES INCICATED. COMPLY WITH CLEARANCE REQUIREMENTS OF REFERENCED QUALITY STANDARD FOR FITTING. COMPLY WITH REQUIREMENTS IN NFPA 80 FOR FIRE-RATED DOORS.
- C. FACTORY MACHINE DOORS FOR HARDWARE THAT IS NOT SURFACE APPLIED.
- D. OPENINGS: CUT AND TRIM OPENINGS THROUGH DOORS TO COMPLY WITH APPLICABLE REQUIREMENTS OF REFERENCED QUALITY STANDARD FOR FITTING. COMPLY WITH REQUIREMENTS IN NFPA 80 FOR FIRE-RATED DOORS.

8. FACTORY FINISHING

- A. ALL DOORS SHALL RECEIVE A TRANSPARENT FINISH AT THE FACTORY
- B. GRADE PREMIUM.
- C. FINISH: CLEAR URETHANE.
- D. EFFECT OPEN-GRAIN FINISH. E. SHEEN: GLOSS.

9. INSTALLATION

- A. INSTALL DOORS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, REFERENCED QUALITY STANDARD, AND AS INDICATED.
- 1) INSTALL FIRE-RATED DOORS IN CORRESPONDING FIRE-RATED FRAMES ACCORDING TO NFOA 80.
- B. FACTORY-FITTED DOORS: ALIGN IN FRAMES FOR UNIFORM CLEARANCE AT EACH EDGE C. FACTORY—FINISHED DOORS: RESTORE FINISH BEFORE INSTALLATION IF FITTING OR MACHINING IS

REQUIRED AT PROJECT SITE.

08 36 13 SECTIONAL DOOR

SCOPE OF WORK: FURNISH AND INSTALL INSULATED VERTICAL LIFT STEEL SECTIONAL HIGH-LIFT DOOR EQUAL TO MODEL NUMBER 724 AS MANUFACTURED BY J.B. GARAGE DOORS, INC. PROVIDE DOOR AS ONE COMPLETE UNIT INCLUDING SECTIONS, BRACKETS, TRACKS, COUNTER-BALANCE MECHANISM AND HARDWARE TO SUIT THE OPENINGS AND HEADROOM AVAILABLE. INTERIOR AND EXTERIOR FACES SHALL

- A. SUBMIT 6 COPIES OF SHOP DRAWINGS OF DOOR INDICATING ALL MATERIALS AND FASTENINGS. DRAWINGS SHALL INDICATE COMPLIANCE WITH WIND LOADING REQUIREMENTS AND SHALL BE SIGNED BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA.
- B. SUBMIT 6 COPIES OF MIAMI-DADE COUNTY NOTICE OF ACCEPTANCE NO. 09-0212.10 FOR HIGH-LIFT DOORS AND 6 COPIES OF MIAMI-DADE COUNTY NOTICE OF ACCEPTANCE NO. 06-0503.01 FOR HIGH-LIFT DOOR.
- C. SUBMIT 6 COPIES OF RAL STANDARD COLOR CHART OF POWDER COAT FINISHES.

3. WARRANTY: MANUFACTURER'S STANDARD FIVE YEAR WARRANTY AGAINST RUST THROUGH.

- 4. MATERIALS AND CONSTRUCTION A. SECTIONS SHALL BE 2 1/8" THICK 20 OR 24 GAUGE, COMMERCIAL QUALITY GALVANIZED STEEL. SHEETS SHALL HAVE 2" DEEP CORRUGATIONS ON 6" CENTERS. MEETING RAILS SHALL PROVIDE SHIPLAP WEATHER TIGHT JOINT. END STILES SHALL BE 18 GAUGE GALVANIZED STEEL. CENTER STILES SHALL BE 20 GAUGE GALVANIZED STEEL. ALL STILES SHALL BE ENGINEERED FOR EASY HARDWARE ATTACHMENT THROUGH PREPUNCHED HOLES. 20 GAUGE TOP AND BOTTOM MEETING RAILS SHALL BE PROVIDED FOR ADDED STRUCTURAL SUPPORT. EXTERIOR AND INTERIOR FACING PANELS SHALL BE 24 GAUGE FLUSH GALVANIZED STEEL. BOTTOM SECTION SHALL HAVE A VINYL BULB
- ASTRAGAL FOR WEATHERSEALING. B. INSULATION: PANELS SHALL BE FULLY INSULATED WITH EXPANDED POLYSTYRENE HAVING A DENSITY OF 1.07 POUNDS PER CUBIC FOOT. INSULATION SHALL BE AS MANUFACTURED BY DYPLAST
- C. WEATHERSTRIPPING: DOORS SHALL BE FULLY WEATHERSTRIPPED AROUND THE PERIMETER AND BETWEEN INDIVIDUAL PANELS.
- D. FINISH: EXTERIOR PANELS OF DOOR SHALL BE PREFINSHED WITH A POWDER COAT FINISH OVER A PRIMER ON A PHOSPHATE COATING CONSISTING OF ONE FULL MIL THICKNESS. COLOR SHALL BE SELECTED BY THE DESIGN BUILDER FROM CHART OF STANDARD RAL POWDER COAT FINISHES. INTERIOR PANELS SHALL BE PREFINISHED WITH A 3 COAT PROCESS OF BAKED ON POLYESTER TOP COAT OVER AN EPOXY PRIMER ON A PHOSPHATE COATING CONSISTING OF 1/2 MIL THICKNESS.
- COLOR SHALL BE MANUFACTURER'S STANDARD WHITE. E. HARDWARE: ALL HINGES AND BRACKETS SHALL BE MANUFACTURED OF HOT DIPPED GALVANIZED STEEL, 14 GAUGE MINIMUM. ROLLERS SHALL BE FULL FLOATING BALL BEARING IN CASE HARDENED STEEL RACES MOUNTED TO FIT THE SLOPE OF THE TRACK.
- F. TRACKS: VERTICAL HIGH LIFT TRACKS SHALL BE A MINIMUM OF 16 GAUGE GALVANIZED STEEL TAPERED AND MOUNTED FOR WEDGE TYPE CLOSING, HORIZONTAL TRACKS SHALL BE MINIMUM 14 GAUGE GALVANIZED STEEL REINFORCED WITH MINIMUM 13 GAUGE GALVANIZED ANGLES AS REQUIRED. TRACKS SHALL BE THREE INCH.
- ON A STEEL SHAFT. CABLE DRUMS SHALL BE CAST ALUMINUM CONNECTED TO DOOR WITH GALVANIZED AIRCRAFT QUALITY CABLE WITH A MINIMUM 7 TO 1 SAFETY FACTOR.
- H. LOCKING: INSIDE SPRING LOADED SLIDE BOLT LOCK ON END STILE SHALL ENGAGE SLOT IN TRACK.

G. SPRING COUNTERBALANCE: DOOR ASSEMBLY SHALL BE OPERATED BY A TORSION SPRING

- I. WIND LOADING: COMPLY WITH THE WIND LOAD REQUIREMENTS OF THE FLORIDA BUILDING CODE 2007 AND WITH THE WIND LOAD REQUIREMENTS SHOWN ON THE DRAWINGS.
- J. OPERATION: ALL DOORS SHALL BE CHAIN HOIST OPERATED WITH A 3:1 RATIO. K. PUSHERS: PUSHERS SHALL BE INSTALLED AT HIGH-LIFT DOORS.
- K. HIGH CYCLE SPRING: 50,000 CYCLE.

ACCORDANCE WITH FINAL SHOP DRAWINGS AND MANUFACTURER'S PUBLISHED INSTRUCTIONS.

08 41 13 ALUMINUM FRAMED ENTRANCES AND STOREFRONTS

SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.

THRESHOLD #1042.

ACCEPTANCE (NOA) NUMBER 05-0829.08.

- SCOPE OF WORK: FURNISH ALL NECESSARY MATERIALS, LABOR, AND EQUIPMENT FOR THE COMPLETE INSTALLATION OF EXTERIOR AND INTERIOR ALUMINUM STOREFRONT FRAMING SYSTEM AND DOORS AS
- SUMMARY A. SECTION INCLUDES ALUMINUM STOREFRONT SYSTEMS.
 - 1) EXTERIOR FRAMING AND DOORS: ARCH ALUMINUM IMPACT WALL 3000 DOORS AND FRAMING (INSIDE GLAZED) COMPLETE WITH ALL DOOR HARDWARE. FINISH/COLOR: POWDER COAT/WHITE.
 - 2) EXTERIOR GLASS: 9/16" HEAT STRENGTHENED LAMINATED, MEDIUM GRAY TINT.
 - 3) GLAZING: DOW CORNING 995 STRUCTURAL SILICONE ADHESIVE 4) HARDWARE
 - 202F, 202I, 2020 AND 202Q. b. CLOSERS: LCN 4040XP WITH SCUSH/SHCUSH ARM FUNCTION. FINISH: SRI PRIMER WITH WHITE POWDER COAT FINISH TO MATCH DOORS.

a. EXIT DEVICES: JACKSON 2086 - REQUIRED ON DOORS 101, 102A, 102I, 102Q, 202A,

WEATHERING FRAME #WE47A, TOP RAIL WEATHERING DOOR #W68, ASTRAGAL #H355,

BOTTOM RAIL WEATHER STRIP #345AV, BOTTOM RAIL DOOR BOTTOM #W209V AND BUMPER

c. BALANCE OF HARDWARE: HINGES, LOCKSETS, BOLTS, ETC. PER TEST. d. WATER TEST COMPONENTS: EACH DOOR SHALL HAVE THE FOLLOWING: TOP RAIL

- SYSTEM DESCRIPTION: A. PERFORMANCE REQUIREMENTS: ALUMINUM STOREFRONT SYSTEM SHALL COMPLY WITH PERFORMANCE REQUIREMENTS INDICATED, AS DEMONSTRATED BY TESTING MANUFACTURER'S ASSEMBLIES WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE 2004 AND MIAMI-DADE COUNTY NOTICE OF
 - 1) AIR INFILTRATION: COMPLETED STOREFRONT SYSTEMS SHALL HAVE 0.02 CFM MAXIMUM ALLOWABLE INFILTRATION WHEN TESTED IN ACCORDANCE WITH ASTM E 283 AT DIFFERENTIAL STATIC PRESSURE OF 6.24 PSF (50 MPH).

2) WATER INFILTRATION: NO UNCONTROLLED WATER OTHER THAN CONDENSATION ON INDOOR

FACE OF ANY COMPONENT WHEN TESTED IN ACCORDANCE WITH ASTM E 331 AT TEST

- PRESSURE DIFFERENTIAL OF 10 PSF. WATER TEST TO BE PERFORMED IMMEDIATELY AFTER DESIGN PRESSURE TEST. 3) WIND LOADS: COMPLETED STOREFRONT SYSTEMS SHALL WITHSTAND WIND VELOCITY OF 140
- MILES PER HOUR, 3 SECOND GUST. REFER TO ELEVATION DRAWINGS FOR WIND PRESSURES. 4) DEFLECTION: MAXIMUM ALLOWABLE DEFLECTION IN ANY MEMBER WHEN TESTED IN ACCORDANCE WITH ASTM E 330 WITH ALLOWABLE STRESS IN ACCORDANCE WITH AA SPECIFICATIONS FOR ALUMINUM STRUCTURES. DEFLECTION FOR LOAD CARRYING MEMBERS NOT TO EXCEED L/180.
- 5) THERMAL MOVEMENT: PROVIDE FOR THERMAL MOVEMENT CAUSED BY 180 DEGREES F. (82.2 DEGREES C.) SURFACE STRUCTURE WITHOUT CAUSING BUCKLING STRESSES ON GLASS, JOINT SEAL FAILURE, UNDUE STRESS ON STRUCTURAL ELEMENTS, DAMAGING LOADS ON FASTENERS, REDUCTION OF PERFORMANCE OR OTHER DETRIMENTAL EFFECTS.

 \mathcal{O} - AI (CHIT

COUNTERBALANCE MECHANISM, WITH A HELICALLY WOUND, OIL TEMPERED TORSION SPRING MOUNTED

S

DATE: 7/6/10 DRAWN BY: AMS PROJ. NO. 926

REVISED:

- A. SHOP DRAWINGS: SUBMIT 6 COPIES OF SHOP DRAWINGS SHOWING LAYOUT, PROFILES, AND PRODUCT COMPONENTS INCLUDING ANCHORAGE, ACCESSORIES, FINISH COLORS AND TEXTURES. SUBMIT MIAMI DADE COUNTY NOTICES OF ACCEPTANCE FOR DOORS AND FRAMING.
- B. SAMPLES: SUBMIT VERIFICATION SAMPLES FOR COLORS ON ACTUAL ALUMINUM SUBSTRATES INDICATING FULL COLOR RANGE EXPECTED IN INSTALLED SYSTEM.
- C. QUALITY ASSURANCE/CONTROL SUBMITTALS
 - 1) TEST REPORTS: SUBMIT CERTIFIED TEST REPORTS SHOWING COMPLIANCE WITH SPECIFIED PERFORMANCE CHARACTERISTICS AND PHYSICAL PROPERTIES.
 - 2) INSTALLER QUALIFICATION DATA: SUBMIT INSTALLER QUALIFICATION DATA.

D. CLOSE-OUT SUBMITTALS:

- 1) WARRANTY: SUBMIT WARRANTY DOCUMENTS SPECIFIED HEREIN.
- 2) PROJECT RECORD DOCUMENTS SUBMIT PROJECT RECORD DOCUMENTS FOR INSTALLED MATERIALS IN ACCORDANCE WITH DIVISION 1, PROJECT CLOSE-OUT (PROJECT RECORD DOCUMENTS SECTION).

08 71 00 DOOR HARDWARE

- 1. SCOPE OF WORK: FURNISH AND INSTALL ALL FINISH HARDWARE SETS SHOWN ON THE DRAWINGS AND IN THE FINISH HARDWARE SCHEDULE BELOW.
- 2. DEFINITION: "FINISH HARDWARE" INCLUDES ITEMS KNOWN COMMERCIALLY AS BUILDERS HARDWARE WHICH ARE REQUIRED FOR SWING DOORS, EXCEPT FOR SPECIAL TYPES OF UNIQUE AND NON-MATCHING HARDWARE SPECIFIED IN THE SAME SECTION AS THE DOOR AND DOOR FRAME. TYPES OF ITEMS IN THIS SECTION INCLUDE (BUT ARE NOT NECESSARILY LIMITED TO):

PUSH/PULL UNITS LOCK CYLINDERS AND KEYS OVERHEAD HOLDERS LOCK AND LATCH SETS MISCELLANEOUS DOOR CONTROL DEVICES BOLTS MAGNETIC HOLD-OPEN DEVICES EXIT DEVICES

QUALITY ASSURANCE:

MANUFACTURER: OBTAIN EACH KIND OF HARDWARE (LATCH AND LOCK SETS, HINGES, CLOSERS, ETC.) FROM ONLY ONE MANUFACTURER, ALTHOUGH SEVERAL MAY BE INDICATED AS OFFERING PRODUCTS COMPLYING WITH REQUIREMENTS.

PROTECTION PLATES

- B. SUPPLIER: A RECOGNIZED BUILDERS HARDWARE SUPPLIER AS CERTIFIED BY THE DOOR AND HARDWARE INSTITUTE WHO IS, OR EMPLOYS AN EXPERIENCED ARCHITECTURAL HARDWARE CONSULTANT, WHO IS AVAILABLE AT REASONABLE TIMES DURING THE COURSE OF THE WORK, FOR CONSULTATION ABOUT THE PROJECT'S HARDWARE REQUIREMENTS, WITH OWNER, ARCHITECT AND CONTRACTOR
- C. FIRE-RATED OPENINGS: PROVIDE HARDWARE FOR FIRE-RATED OPENINGS IN COMPLIANCE WITH NFPA STANDARD NO. 80. PROVIDE ONLY HARDWARE WHICH HAS BEEN TESTED AND LISTED BY UL FOR TYPES AND SIZES OF DOORS REQUIRED AND COMPLIES WITH REQUIREMENTS OF DOOR AND DOOR FRAME LABELS.
- D. HANDICAPPED HARDWARE: PROVIDE HARDWARE WITH TACTILE WARNING TO COMPLY WITH ADA AND ANSI STANDARDS WHERE REQUIRED.

- A. PRODUCT DATA: SUBMIT MANUFACTURERS TECHNICAL INFORMATION FOR EACH ITEM OF HARDWARE. INCLUDE WHATEVER INFORMATION MAY BE NECESSARY TO SHOW COMPLIANCE WITH WITH REQUIREMENTS, AND INCLUDE INSTRUCTIONS FOR INSTALLATION AND FOR MAINTENANCE OF OPERATING PARTS AND FINISH.
- HARDWARE SCHEDULE: SUBMIT FINAL HARDWARE SCHEDULE IN THE MANNER INDICATED BELOW. HARDWARE SCHEDULES ARE INTENDED FOR COORDINATION OF WORK.
- C. FINAL HARDWARE SCHEDULE CONTENT: BASED ON HARDWARE INDICATED, ORGANIZE HARDWARE SCHEDULE INTO "HARDWARE SETS" INDICATING COMPLETE DESIGNATIONS OF EVERY ITEM REQUIRED FOR EACH DOOR OR OPENING. INCLUDE THE FOLLOWING:
 - 1) TYPE, STYLE, FUNCTION, SIZE AND FINISH OF EACH HARDWARE ITEM.
- NAME AND MANUFACTURER OF EACH ITEM. FASTENINGS AND OTHER PERTINENT INFORMATION
- 4) LOCATION OF HARDWARE SET CROSS-REFERENCED TO INDICATIONS ON DRAWINGS, BOTH ON FLOOR PLANS AND DOOR AND FRAME SCHEDULE.
- 5) EXPLANATION OF ALL ABBREVIATIONS, SYMBOLS, CODES, ETC. CONTAINED IN SCHEDULE
- MOUNTING LOCATIONS FOR HARDWARE DOOR AND FRAME SIZES AND MATERIALS.
- D. SUBMITTAL SEQUENCE: SUBMIT SCHEDULE AT EARLIEST POSSIBLE DATE PARTICULARLY WHERE ACCEPTANCE OF HARDWARE SCHEDULE MUST PRECEDE FABRICATION OF OTHER WORK (E.G. HOLLOW METAL FRAMES) WHICH IS CRITICAL IN THE PROJECT CONSTRUCTION SCHEDULE. INCLUDE WITH SCHEDULE THE PRODUCT DATA, SAMPLES, SHOP DRAWINGS OF OTHER WORK AFFECTED BY BUILDERS HARDWARE, AND OTHER INFORMATION ESSENTIAL TO THE COORDINATED REVIEW OF
- KEYING SCHEDULE: SUBMIT SEPARATE DETAILED SCHEDULE INDICATING CLEARLY HOW THE OWNER'S FINAL INSTRUCTIONS ON KEYING OF LOCKS HAS BEEN FULFILLED. REVIEW KEYING SCHEDULE WITH OWNER'S REPRESENTATIVE.

PRODUCT HANDLING

HARDWARE SCHEDULE.

- A. PACKAGING OF HARDWARE ON A SET BY SET BASIS, IS THE RESPONSIBILITY OF THE SUPPLIER. AS MATERIAL IS RECEIVED BY THE HARDWARE SUPPLIER FROM THE VARIOUS MANUFACTURERS. SORT AND REPACKAGE IN CONTAINERS MARKED WITH THE HARDWARE SET NUMBER. TWO OR MORE IDENTICAL SETS MAY BE PACKED IN THE SAME CONTAINER.
- B. INVENTORY HARDWARE JOINTLY WITH REPRESENTATIVES OF THE HARDWARE SUPPLIER AND THE HARDWARE INSTALLER UNTIL EACH IS SATISFIED THAT THE COUNT IS CORRECT.
- C. PROVIDE SECURE LOCK-UP FOR HARDWARE DELIVERED TO THE PROJECT, BUT NOT YET INSTALLED SO THAT COMPLETION OF THE WORK WILL NOT BE DELAY BY THE LOSS OF HARDWARE ITEMS THAT ARE NOT IMMEDIATELY REPLACEABLE, PRIOR TO INSTALLATION.
- D. TEMPLATES: FURNISH HARDWARE TEMPLATES TO EACH FABRICATOR OF DOORS, FRAMES AND OTHER WORK TO BE FACTORY-PREPARED FOR THE INSTALLATION OF HARDWARE. UPON REQUEST, CHECK THE SHOP DRAWINGS OF SUCH OTHER WORK, TO CONFIRM THAT ADEQUATE PROVISIONS ARE MADE FOR THE PROPER INSTALLATION OF HARDWARE

6. SCHEDULE HARDWARE

- REQUIREMENTS FOR DESIGN, GRADE, FUNCTION, SIZE AND OTHER DISTINCTIVE QUALITIES OF EACH TYPE OF BUILDERS HARDWARE IS INDICATED IN THE HARDWARE SCHEDULE IN THE DRAWINGS. PRODUCTS ARE INDENTIFIED BY USING HARDWARE DESIGNATION NUMBERS OF THE FOLLOWING:
- B. MANUFACTURER'S PRODUCT DESIGNATIONS: ONE OR MORE MANUFACTURERS ARE LISTED FOR EACH HARDWARE TYPE REQUIRED. PROVIDE EITHER THE PRODUCT DESIGNATED, OR. WHERE MORE THAN ONE MANUFACTURER IS LISTED, THE COMPARABLE PRODUCT OF ONE OF THE OTHER MANUFACTURERS WHICH COMPLY WITH REQUIREMENTS INCLUDING THOSE SPECIFIED ELSEWHERE IN IN THIS SECTION.

7. MATERIALS AND FABRICATIONS:

- A. HAND OF DOOR: THE DRAWINGS SHOW THE DIRECTION OF SLIDE, SWING OR HAND OF EACH DOOR LEAF. FURNISH EACH ITEM OF HARDWARE FOR PROPER INSTALLATION AND OPERATION OF THE DOOR MOVEMENT AS SHOWN.
- B. FASTENERS: MANUFACTURE HARDWARE TO CONFORM TO PUBLISHED TEMPLATES, GENERALLY PREPARED FOR MACHINE SCREW INSTALLATION. DO NOT PROVIDE HARDWARE WHICH HAS BEEN PREPARED FOR SELF-TAPPING SHEET METAL SCREWS, EXCEPT AS SPECIFICALLY INDICATED.
- C. FURNISH SCREWS FOR INSTALLATION WITH EACH HARDWARE ITEM. PROVIDE PHILLIPS FLATHEAD SCREWS EXCEPT AS OTHERWISE INDICATED. FINISH EXPOSED (EXPOSED UNDER ANY CONDITION) SCREWS TO MATCH THE HARDWARE FINISH OR, IF EXPOSED IN SURFACES OF OTHER WORK, TO MATCH THE FINISH OF SUCH OTHER WORK AS CLOSELY AS POSSIBLE, INCLUDING "PREPARED FOR FOR PAINT" IN SURFACES TO RECEIVE PAINTED FINISH.
- D. PROVIDE CONCEALED FASTENERS FOR HARDWARE UNITS WHICH ARE EXPOSED WHEN THE DOOR IS CLOSED. EXCEPT TO THE EXTENT NO STANDARD UNITS OF TYPE SPECIFIED ARE AVAILABLE WITH CONCEALED FASTENERS. DO NOT USE THROUGH BOLTS FOR INSTALLATION WHERE THE BOLT HEAD OR THE NUT OF THE OPPOSITE FACE IS EXPOSED IN OTHER WORK, EXCEPT WHERE IT IS NOT FEASIBLE TO ADEQUATELY REINFORCE THE WORK.
- E. TOOLS FOR MAINTENANCE: FURNISH A COMPLETE SET OF SPECIALIZED TOOLS AS NEEDED FOR OWNER'S CONTINUED ADJUSTMENT. MAINTENANCE. AND REMOVAL AND REPLACEMENT OF BUILDER'S HARDWARE.

8. HINGES, BUTTS AND PIVOTS:

- A. TEMPLATES: EXCEPT FOR HINGES AND PIVOTS TO BE INSTALLED ENTIRELY (BOTH LEAVES) INTO WOOD DOORS AND FRAMES, PROVIDE ONLY TEMPLATE-PRODUCED UNITS.
- B. SCREWS: FURNISH PHILLIPS FLATHEAD ALL PURPOSE OR MACHINE SCREWS FOR INSTALLATION OF UNITS, EXCEPT FURNISH PHILLIPS FLATHEAD ALL PURPOSE OR WOOD SCREWS FOR INSTALLATION OF UNITS INTO WOOD. FINISH SCREW HEADS TO MATCH SURFACE OF HINGES OR
- C. HINGE PINS: EXCEPT AS OTHERWISE INDICATED, PROVIDE HINGE PINS AS FOLLOWS:

STEEL HINGES: STEEL PINS. NON-FERROUS HINGES: STAINLESS STEEL PINS. EXTERIOR DOORS: NON-REMOVABLE PINS. OUT-SWING CORRIDOR DOORS: NON-REMOVABLE PINS. INTERIOR DOORS: NON-RISING PINS. TIPS: FLAT BUTTON AND MATCHING PLUG, FINISHED TO MATCH LEAVES.

NUMBER OF HINGES: PROVIDE NUMBER OF HINGES INDICATED BUT NOT LESS THAN 3 HINGES DOOR LEAF FOR DOORS 90" OR LESS IN HEIGHT AND ONE

ADDITIONAL HINGE FOR EACH 30" OF ADDITIONAL HEIGHT.

- 9. LOCK CYLINDERS AND KEYING: A. GENERAL: SUPPLIER SHALL MEET WITH OWNER TO FINALIZE KEYING REQUIREMENTS AND OBTAIN
 - B. EXISTING SYSTEM: GRANDMASTERKEY THE LOCKS TO THE OWNER'S EXISTING SYSTEM, WITH A NEW MASTERKEY FOR THE PROJECT, IF REQUIRED.
 - REVIEW THE KEYING SYSTEM WITH THE OWNER AND PROVIDE THE TYPE REQUIRED (MASTER, GRANDMASTER OR GREAT-GRANDMASTER), EITHER NEW OR INTEGRATED WITH OWNER'S EXISTING
 - EQUIP LOCKS ON EXTERIOR DOORS WITH MANUFACTURERS SPECIAL 6-PIN TUMBLER CYLINDER, WITH CONSTRUCTION MASTER KEY FEATURE, WHICH PERMITS VOIDING OF CONSTRUCTION KEYS
- WITHOUT CYLINDER REMOVAL. E. METALS: CONSTRUCT LOCK CYLINDER PARTS FROM BRASS/BRONZE, STAINLESS STEEL OR NICKEL
- F. COMPLY WITH OWNER'S INSTRUCTIONS FOR MASTERKEYING AND, EXCEPT AS OTHERWISE INDICATED, PROVIDE INDIVIDUAL CHANGE KEY FOR EACH LOCK WHICH IS NOT DESIGNATED TO BE KEYED ALIKE WITH A GROUP OF RELATED LOCKS.
- G. KEY MATERIAL: PROVIDE KEYS OF NICKEL SILVER ONLY. KEY QUANTITY: FURNISH 3 CHANGE KEYS FOR EACH LOCK; 5 MASTER KEYS FOR EACH MASTER SYSTEM, AND 5 GRANDMASTER KEYS FOR EACH GRANDMASTER SYSTEM. DELIVER KEYS TO REPRESENTATIVE AND OBTAIN RECEIPT.

10. LOCKS, LATCHES AND BOLTS

- A. STRIKES: PROVIDE MANUFACTURER'S STANDARD WROUGHT BOX STRIKE FOR EACH LATCH OR LOCK BOLT, WITH CURVED LIP EXTENDED TO PROTECT FRAME, FINISHED TO MATCH HARDWARE SET.
- B. PROVIDE DUST-PROOF STRIKES FOR FOOT BOLTS, EXCEPT WHERE SPECIAL THRESHOLD CONSTRUCTION PROVIDES NON-RECESSED STRIKE FOR BOLT.
- C. PROVIDE 1 INCH MINIMUM THROW ON LATCH AND DEADLOCK BOLTS.
- E. FLUSH BOLT HEADS: MINIMUM OF 1" DIAMETER RODS OF BRASS, BRONZE OR STAINLESS STEEL, WITH MINIMUM 12 INCH LONG ROD.
- F. EXIT DEVICE DOGGING: EXCEPT ON FIRE-RATED DOORS, WHEREVER CLOSERS ARE PROVIDED ON DOORS EQUIPPED WITH EXIT DEVICES, EQUIP THE UNIT WITH KEYED DOGGING DEVICE TO HOLD THE PUSH BAR DOWN AND THE LATCH BOLT IN THE OPEN POSITION.

11. PUSH/PULL UNITS

A. EXPOSED FASTENERS: PROVIDE MANUFACTURER'S STANDARD EXPOSED FASTENERS FOR INSTALLATION; THROUGH BOLTED FOR MATCHED PAIRS, BUT NOT FOR SINGLE UNITS.

12. CLOSERS AND DOOR CONTROL DEVICES

A. SIZE OF UNITS: EXCEPT AS OTHERWISE SPECIFICALLY INDICATED, COMPLY WITH THE MANUFACTURER'S RECOMMENDATIONS FOR SIZE OF DOOR CONTROL UNIT, DEPENDING UPON SIZE OF DOOR, EXPOSURE TO WEATHER AND ANTICIPATED FREQUENCY OF USE.

13. MISCELLANEOUS COMPONENTS

- A. FASTENERS: PROVIDE MANUFACTURER'S STANDARD EXPOSED FASTENERS FOR DOOR TRIM UNITS KICK PLATES, EDGE TRIM AND SIMILAR UNITS): EITHER MACHINE SCREWS OR SELF-TAPPING
- B. FABRICATE PROTECTION PLATES (ARMOR, KICK OR MOP) ON STOP NOT MORE THAN 1-1/2 INCH SMALLER THAN THE DOOR WIDTH, X THE HEIGHT 3" SMALLER INDICATED.
- C. PLASTIC PLATES: PLASTIC LAMINATE (POLYESTER) 1/8" THICK.
- D. WEATHERSTRIP AND THRESHOLDS: EXTRUDED ALUMINUM, SIZE AND PROFILES INDICATED.

14. HARDWARE FINISHES

- A. PROVIDE MATCHING FINISHED FOR HARDWARE UNITS AT EACH DOOR OR OPENING, TO THE GREATEST EXTENT POSSIBLE, AND EXCEPT AS OTHERWISE INDICATED, REDUCE DIFFERENCES IN COLOR AND TEXTURES AS MUCH AS COMMERCIALLY POSSIBLE WHERE THE BASE METAL OR METAL FORMING PROCESS IS DIFFERENT FOR INDIVIDUAL UNITS OF HARDWARE EXPOSED AT THE SAME DOOR OR OPENING. IN GENERAL, MATCH ITEMS TO THE MANUFACTURER'S STANDARD FINISH FOR THE LATCH AND LOCK SET (OR PUSH-PULL UNITS IF NOT LATCH-LOCK SETS) FOR COLOR AND TEXTURE.
- B. THE DESIGNATIONS USED IN SCHEDULES AND ELSEWHERE TO INDICATE HARDWARE FINISHES ARE THE INDUSTRY-RECOGNIZED STANDARD COMMERCIAL FINISHES, EXCEPT AS OTHERWISE NOTED.
- C. GENERAL HARDWARE FINISH: US 613 OIL RUBBED BRONZE.

15. HARDWARE COMPONENT MANUFACTURERS

A. EXCEPT WHERE NOTED — PROVIDE ONLY THE FOLLOWING MANUFACTURERS LISTED:

HAGER/STANLEY FLAT GOODS: ROCKWOOD/HAGER CLOSERS: EXIT DEVICES: YALE/VON DUPRIN LEN/RIXSON LOCKSETS/LATCHSETS: YALE/SCHLAGE

16. INSTALLATION

- A. MOUNT HARDWARE UNITS AT HEIGHTS INDICATED IN "RECOMMENDED LOCATION FOR BUILDERS HARDWARE FOR STANDARD STEEL DOORS AND FRAMES" BY THE DOOR AND HARDWARE INSTITUTE, EXCEPT AS SPECIFICALLY INDICATED OR REQUIRED TO COMPLY WITH GOVERNING REGULATIONS AND EXCEPT AS MAY BE OTHERWISE DIRECTED BY ARCHITECT.
- B. INSTALL EACH HARDWARE ITEM IN COMPLIANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS EXCEPT AS MAY BE OTHERWISE DIRECTED BY ARCHITECT. WHEREVER CUTTING AND FITTING IS REQUIRED TO INSTALL HARDWARE ONTO OR INTO SURFACES WHICH ARE LATER TO BE PAINTED OR FINISHED IN ANOTHER WAY, COORDINATE REMOVAL, STORAGE AND REINSTALLATION OR APPLICATION OF SURFACE PROTECTION WITH FINISHING WORK SPECIFIED IN THE DIVISION 9 SECTIONS. DO NOT INSTALL SURFACE-MOUNTED ITEMS UNTIL FINISHES HAVE BEEN COMPLETED ON
- C. SET UNITS LEVEL, PLUM AND TRUE TO LINE AND LOCATION. ADJUST AND REINFORCE THE ATTACHMENT SUBSTRATE AS NECESSARY FOR PROPER INSTALLATION AND OPERATION.
- D. DRILL AND COUNTERSINK UNITS WHICH ARE NOT FACTORY-PREPARED FOR ANCHORAGE FASTENERS. SPACE FASTENERS AND ANCHORS IN ACCORDANCE WITH INDUSTRY STANDARDS.

17. ADJUST AND CLEAN:

- A. ADJUST AND CHECK EACH OPERATING ITEMS OF HARDWARE AND EACH DOOR, TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS WHICH CANNOT BE ADJUSTED TO OPERATE FREELY AND SMOOTHLY AS INTENDED FOR THE APPLICATION MADE.
- B. FINAL ADJUSTMENT: WHEREVER HARDWARE INSTALLATION IS MADE MORE THAN ONE MONTH PRIOR TO ACCEPTANCE OR OCCUPANCY OF A SPACE OR AREA, RETURN TO THE WORK DURING THE WEEK PRIOR TO ACCEPTANCE OR OCCUPANCY, AND MAKE FINAL CHECK AND ADJUSTMENT OF ALL HARDWARE ITEMS IN SUCH SPACE OR AREA. CLEAN OPERATING ITEMS AS NECESSARY TO RESTORE PROPER FUNCTION AND FINISH OF HARDWARE AND DOORS. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING, VENTILATING AND AIRCONDITIONING EQUIPMENT.

- C. INSTRUCT OWNER'S PERSONNEL IN PROPER ADJUSTMENT AND MAINTENANCE OF HARDWARE AND HARDWARE FINISHES DURING THE FINAL ADJUSTMENT OF HARDWARE.
- D. CONTINUED MAINTENANCE SERVICE: APPROXIMATELY SIX MONTHS AFTER THE ACCEPTANCE OF HARDWARE IN EACH AREA, THE INSTALLER, ACCOMPANIED BY THE REPRESENTATIVE OF THE LATCH AND LOCK MANUFACTURER, SHALL RETURN TO THE PROJECT AND RE-ADJUST EVERY ITEM OF HARDWARE TO RESTORE PROPER FUNCTION TO DOORS AND HARDWARE. CONSULT WITH AND INSTRUCT OWNER'S PERSONNEL IN RECOMMENDED ADDITIONS TO THE MAINTENANCE PROCEDURES.

18. HARDWARE SCHEDULE:

2 EA

1 EA

1 EA

A. SET 1: DOOR 100, STOREFRONT HARDWARE BY DOOR MANUFACTURER

DEAD BOLT

SILENCERS

KICK PLATE

FLOOR STOP

B. SET 2: DOORS 103A, 104 AND 104A: EACH TO HAVE: 1.5 PR BB1279 4.5 X 4.5 X 26D 1461 X SNB X AL 1 EA 1 EA AL53PD X 626 ENTRANCE LOCK 1 EA 409 X 26D STOP 2 EA SILENCERS GJ64 X GY 1 EA WEATHERSTRIPPING 896NA X LAR 1 EA THRESHOLD 896NA X LAR 1 EA DRIP CAP 16AD X LAR 1 EA

C. SET 3: DOORS 101, 105, 106, 110 AND 111: EACH TO HAVE: 1.5 PR BB1279 4.5 X 4.5 X 626 1 EA ENTRANCE/OFFICE LOCK AL50PD X 626 1 EA STOPS 409 X 613

GJ64 X GY

409 X 26D

.050 10 X 2" LDW X 613

D. SET 4: DOOR 109 TO HAVE: 1.5 PR HINGES BB1279 4.5 X 4.5 X 26D 1 EA CLOSERS 1461 X SNB X AL .050 8 X 16 X 626 1 EA PUSH PLATE 1 EA PULL PLATE 110 X TB 613

1 EA FLOOR STOP 409 X 26D 3 EA SILENCERS GJ64 X GY E. SET 5: DOOR 102 TO HAVE: 1.5 PR BB1279 4.5 X 4.5 X 626 1461 X SNB X AL 1 EA CLOSER 1 EA ENTRANCE/OFFICE LOCK AL53PD X 626

3 EA SILENCERS GJ64 X GY 1 EA KICK PLATE .050 10 X 2" LDW X 613 F. SET 6: DOOR 107 TO HAVE: BB1279 4.5 X 4.5 X 26D

BATH PRIVACY LOCK A4OS X 626 1 EA 1461 X SNB X AL 1 EA CLOSER 1 EA STOPS 409 X 26D 2 EA SILENCERS GJ64 X GY

G. SET 7: DOORS 109A, 110A BIFOLD HARDWARE BY DOOR MANUFACTURER

09 00 00 FINISHES

09 20 00 PLASTER AND GYPSUM BOARD 1. SCOPE OF WORK: FURNISH AND INSTALL ALL DRYWALL PARTITIONS.

2. MATERIALS

- A. GYPSUM WALLBOARD: TAPERED EDGE, 5/8 INCH THICK IN COMPLIANCE WITH ASTM C-36.
- WALLBOARD CEILINGS IN TOILET ROOMS SHALL BE MOISTURE RESISTANT. B. CEMENT BOARD: 1/2 INCH THICK DUROCK AS MANUFACTURED BY USG IN ALL INTERIOR RESTROOM AND KITCHEN PARTITIONS.
- C. JOINT TAPE AND COMPOUND: STANDARD OF WALLBOARD MANUFACTURER.
- D. TRIM AND EDGING: 24 GAUGE GALVANIZED STEEL.
- E. TAPE AND COMPOUND: AS RECOMMENDED BY MANUFACTURER.
- F. ALL FRAMING SHALL BE SECURELY BRACED TO UNDERSIDE OF ROOF STRUCTURE OR SHALL BE DIAGONAL BRACED ABOVE CEILINGS.
- G. ALL DRYWALL SHALL EXTEND A MINIMUM OF 6 INCHES ABOVE CEILING LEVEL.
- H. FINISH OF ALL DRYWALL SURFACES SHALL BE SMOOTH, READY FOR PAINTING.
- C. INSTALLATION: IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTRUCTIONS AND STANDARDS.

09 30 00 TILING

- 1. SCOPE OF WORK: FURNISH AND INSTALL ALL CERAMIC TILE FLOORS AND BASES IN RESTROOMS.
- 2. SUBMITTALS: SUBMIT 6 COPIES OF MANUFACTURER'S TECHNICAL DATA INDICATING ALL MATERIALS AND FINISHES ALONG WITH 4 TILE AND GROUT SAMPLES OF EACH TYPE PROPOSED.

- A. PORCELAIN FLOOR TILE: ILVA ECOLANDS SERIES.
- B. PORCELAIN BASE: ILVA ECOLANDS SERIES.
- C. GROUT: LATICRETE, EPOXY COLOR TO BE SELECTED D. THRESHOLDS: GRANITE - WIDTH OF DOORWAY X 7/8 INCHES HIGH SLOPED TO 1/2 INCH HIGH
- AT INTERSECTION OF CONCRETE FLOOR. INSTALL THRESHOLDS AT ENTRY DOORS TO TOILET ROOMS.
- E. ADHESIVES: AS RECOMMENDED BY MANUFACTURER. F. INSTALLATION METHOD: INSTALL IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTRUCTIONS.

09 51 00 ACOUSTICAL CEILINGS

- 1. SCOPE OF WORK: FURNISH AND INSTALL ALL SUSPENDED ACOUSTICAL CEILINGS INCLUDING ALL LABOR, MATERIALS, EQUIPMENT AND ACCESSORIES REQUIRED FOR A COMPLETE CEILING INSTALLATION.
- 2. SUBMITTALS: SUBMIT 6 COPIES OF MANUFACTURER'S LITERATURE PROVIDING COMPLETE ACOUSTICAL CEILING AND SUSPENSION INFORMATION INDICATING ALL MATERIALS, ACCESSORIES, AND FASTENINGS. SUBMIT TWO 6 INCH X 6 INCH SAMPLES OF EACH TYPE OF CEILING BOARD AND TWO - ONE FOOT LONG SAMPLES OF EXPOSED WALL MOLDING, MAIN RUNNER AND FOUR FOOT CROSS TEE.
- UNITS AND GRID COMPONENTS SHALL BE PRODUCED BY A SINGLE MANUFACTURER. MATERIALS SUPPLIED BY MORE THAN ONE MANUFACTURER WILL NOT BE ACCEPTED. 4. ENVIRONMENTAL REQUIREMENTS: THE BUILDING SHALL BE ENCLOSED. THE AIR CONDITIONING SYSTEM

SHALL BE OPERATING WITH ALL FILTERS IN PLACE AND THE PROPER TEMPERATURE AND HUMIDITY

CONDITIONS SHALL BE STABILIZED BEFORE, DURING, AND FOLLOWING INSTALLATION UNTIL OCCUPANCY.

3. QUALITY ASSURANCE: TO ENSURE PROPER INTERFACE AND COLOR MATCH, ALL ACOUSTICAL PANEL

- 5. EXTRA MATERIALS PROVIDE EXTRA ACOUSTICAL CEILING SYSTEM MATERIALS IN UNOPENED, CLEARLY MARKED CARTONS EQUIVALENT TO 1% TO 2% OF THE TOTAL QUANTITY OF INSTALLED ACOUSTICAL PANEL MATERIAL AND 12 PIECES EACH OF FOUR FOOT LONG TEES AND TWO FOOT LONG TEES.
- 6. DELIVERY, STORAGE AND HANDLING:
 - A. PRIOR TO THEIR INSTALLATION, ALLOW ACOUSTICAL PANEL UNITS TO REACH ROOM TEMPERATURE AND HAVE A STABILIZED MOISTURE CONTENT WITHIN THE MANUFACTURER'S RECOMMENDED
- B. DELIVER MATERIALS IN MANUFACTURER'S UNOPENED PACKAGES, SUITABLY STORE TO PROTECT AGAINST EXPOSURE TO MOISTURE, SUNLIGHT, SURFACE CONTAMINATION AND OTHER UNACCEPTABLE
- C. HANDLE COMPONENTS TO PREVENT PANEL EDGE DAMAGE OR ANY OTHER DAMAGE TO COMPONENTS.
- 7. MATERIALS: PRODUCTS LISTED ARE THOSE OF ARMSTRONG WORLD INDUSTRIES, INC. COMPARABLE PRODDUCTS OF OTHER MANUFACTURERS MAY BE SUBMITTED FOR APPROVAL.
- A. ACOUSTICAL CEILING BOARD: ARMSTRONG CIRRUS TEGULAR FINE TEXTURE SQUARE LAY-IN, NUMBER 538, 24 INCH X 24 INCH 7/8 INCH. COMPARABLE PRODUCTS BY OTHER MANUFACTURERS MAY BE SUBMITTED FOR APPROVAL.
- B. SUSPENSION SYSTEM: ARMSTRONG PRELUDE 15/16 INCH EXPOSED TEE SYSTEM. GRID SHALL BE COLD-ROLLED STEEL, ELECTRO-GALVANIZED COATED AND PREPAINTED AND SHALL SUPPORT THE CEILING ASSEMBLY WITH A MAXIMUM DEFLECTION OF 1/360 OF THE SPAN. COLOR: WHITE ENAMEL.
- C. HANGER WIRE: 12 GAUGE MINIMUM, GALVANIZED, SOFT ANNEALED, MILD STEEL WIRE, SPACED AT 48 INCHES ON CENTER MAXIMUM IN EACH DIRECTION. WHERE WIRES CANNOT BE DIRECTLY FASTENED TO STRUCTURE OR INTERMEDIATE FRAMING MEMBERS, PROVIDE ATTACHMENT DEVICES DESIGNED FOR THE TYPE OF CONSTRUCTION USED IN THE WORK THAT WILL CARRY A CAPACITY OF NOT LESS THAN 5 TIMES THE DESIGN LOADS INVOLVED.
- 8. INSTALLATION: ALL ACOUSTICAL MATERIALS AND SUSPENSION SYSTEMS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS AND CURRENT RECOMMENDATIONS AND IN COMPLIANCE WITH ASTM C636.
- A. DEFLECTION OF ANY GRID COMPONENTS SHALL NOT EXCEED 1/360 OF THE SPAN.
- B. SUSPEND MAIN BEAMS WITH HANGER WIRES SPACED 4'-0" ON CENTER ALONG THE LENGTH OF THE BEAM. HANGER WIRES SHALL BE PLUMB AND STRAIGHT. WHERE WIRES CANNOT BE DIRECTLY FASTENED TO STRUCTURE OR INTERMEDIATE FRAMING MEMBERS, PROVIDE ATTACHMENT DEVICES DESIGNED FOR THE TYPE OF CONSTRUCTION USED IN THE WORK.
- INSTALL WALL MOLDINGS AT INTERSECTION OF SUSPENDED CEILING AND ALL VERTICAL SURFACES. MITER CORNERS WHERE WALL MOLDINGS INTERSECT, OR INSTALL CORNER CAPS.
- D. INSTALL BEAM END RETAINING CLIPS EVERY FOUR FEET ALONG THE WALL MOLD (ANGLE TYPE ONLY) AND WHERE NEEDED TO SECURE GRID SYSTEM.
- 9. FINAL CLEANING: CLEAN ACOUSTICAL CEILINGS, INCLUDING TRIM, EDGE MOLDINGS, AND SUSPENSION MEMBERS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. REMOVE AND REPLACE DAMAGED COMPONENTS WHICH CANNOT BE SUCCESSFULLY RESTORED.

09 29 00 LATH AND STUCCO

- 1. SCOPE OF WORK: FURNISH AND INSTALL STUCCO ON BUILDING CONCRETE MASONRY BLOCK, DUMPSTER ENCLOSURE AND SOFFITS AT ENTRANCES, AND AS NOTED.
- 2. SUBMITTALS: SUBMIT 6 COPIES OF MANUFACTURER'S TECHNICAL DATA INDICATING ALL MATERIALS AND ACCESSORIES.
- MATERIALS
- A. PORTLAND CEMENT: TYPE 1.

REVEALS AS LOCATED ON SHEET 4.1.

INSTALLATION METHODS.

CONSIDERATION FOR EXPANSION CONTROL

- B. STUCCO MIX: 4 PARTS SAND TO 1 PART PORTLAND CEMENT.
- C. GYPSUM PLASTER: FOR USE WITH LIGHTWEIGHT AGGREGATES.
- D. HYDRATED LIME: ASTM C-6. E. BASE COAT AGGREGATE: PERLITE OR VERMICULITE WEIGHING A MAXIMUM OF 10 PSF.
- G. WATER: POTABLE QUALITY.
- H. BONDING AGENT: LARSEN PRODUCTS CORP., PLASTER-WELD, POLYWELD, WATER-BASED RESINOUS EMULSION CONTAINING FUGITIVE DYE.

F. PLASTER SAND FLAT FINISH AGGREGATE: SILICA SAND PASSING 30 MESH SCREEN.

- I. CASING BEAD: USG #66, SQUARE EDGE. REVEAL FRY 3412AL OR EQUAL
- BUILDERS INCORPORATED INTO ALL STUCCO. 4. INSTALLATION: STUCCO WORK SHALL COMPLY WITH THE MATERIALS HANDLING AND WORKSMANSHIP PROVISIONS OF "AMERICAN SPECIFICATIONS FOR PORTLAND CEMENT STUCCO" ANSI 42.2. THICKNESS SHALL BE 5/8 INCH MINIMUM. FINISH AND TEXTURES SHALL MATCH ADJACENT BUILDINGS. INSTALL

J. WATER REPELLANT: EQUAL TO ONICRON MORTAR PROOFING AS MANUFACTURED BY MASTER

09 62 70 LAMINATE FLOORING

- 1. SCOPE OF WORK: FURNISH ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED FOR A COMPLETE
- LAMINATE FLOORING INSTALLATION. A. 6 COPIES OF SHOP DRAWINGS SHOWING INSTALLATION DETAILS INCLUDING LOCATION AND LAYOUT OF EACH
- TYPE OF FLOORING AND ACCESSORY. INCLUDE LAYOUT DATA FOR EACH LOCATION WITH CONSIDERATION FOR EXPANSION CONTROL B. PRODUCT DATA: MANUFACTURER'S DATA SHEETS ON EACH PRODUCT TO BE USED INCLUDING:
- 1) PREPARATION INSTRUCTIONS AND RECOMMENDATIONS.
- STORAGE AND HANDLING REQUIREMENTS AND RECOMMENDATIONS.

THIS SECTION WITH MINIMUM TEN YEARS DOCUMENTED EXPERIENCE.

- C. SELECTION SAMPLES: FOR EACH FINISH PRODUCT SPECIFIED, TWO COMPLETE SETS OF COLOR CHIPS REPRESENTATING MANUFACTURER'S FULL RANGE OF AVAILABLE COLORS AND PATTERNS.
- D. VERIFICATION SAMPLES: FOR EACH FINISH PRODUCT SPECIFIED, TWO SAMPLES, MINIMIM SIZE 6" X 6", REPRESENTATING ACTUAL PRODUCT, COLOR, AND PATTERNS.
- E. MANUFACTURER'S CERTIFICATES: CERTIFY PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.
- F. CLOSEOUT SUBMITTALS: PROVIDE MANUFACTURER'S MAINTENANCE INSTRUCTIONS THAT INCLUDE RECOMMENDATIONS FOR PERIODIC CLEANING AND MAINTENANCE. QUALITY ASSURANCE

A. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING PRODUCTS SPECIFIED IN

- B. INSTALLER QUALIFICATIONS: INSTALLER EXPERIENCED IN INSTALLATION OR APPLICATION SYSTEMS SIMILAR IN COMPLEXITY TO THOSE REQUIRED FOR THIS PROJECT, INCLUDING SPECIFIC REQUIREMENTS
- C. MOCK-UP: PROVIDE A MOCK-UP FOR EVALUATION OF SURFACE PREPARATION TECHNIQUES, APPLICATION WORKMANSHIP AND REQUIREMENTS FOR EXPANSION CONTROL. 1) FINISH AN AREA FIVE FEET X FIVE FEET, INCLUDING TYPICAL FIELD AND EDGE CONDITIONS.
- 2) LOCATE IN AREA DESIGNATED BY OWNER. 3) DO NOT PROCEED WITH REMAINING WORK UNTIL WORKMANSHIP, COLOR AND SHEEN ARE APPROVED BY OWNER.
- 4) MAINTAIN MOCK-UP AS A STANDARD OF QUALITY FOR THE WORK OF THIS SECTION.
- 4. DELIVERY, STORAGE AND HANDLING A. STORE PRODUCTS IN MANUFACTURER'S UNOPENED PACKAGING UNTIL READY FOR INSTALLATION.

B. PROTECT MATERIALS FROM EXPOSURE TO MOISTURE. DO NOT DELIVER UNTIL WET WORK IS COMPLETE AND

- C. STORE MATERIALS IN A FLAT, DRY, WARM, VENTILATED AND WEATHERTIGHT LOCATION.
- D. PROTECT FLOORING MATERIALS FROM DAMAGE.

 $\overline{\mathcal{O}}$ S S_{Σ}





C) a

DATE: 7/6/10 DRAWN BY: AMS PROJ. NO. 926

REVISED:

- A. ENSURE THAT FLOOR LAYOUTS AND OTHER INFORMATION REQUIRED FOR INSTALLATION OF PRODUCTS OF THIS SECTION ARE FURNISHSED TO AFFECTED TRADES IN TIME TO PREVENT INTERRUPTION OF
- B. ENSURE THAT PRODUCTS OF THIS SECTION ARE SUPPLIED TO AFFECTED TRADES IN TIME TO PREVENT INTERRUPTION OF CONSTRUCTION PROGRESS.

6. PROJECT CONDITIONS

- A. MAINTAIN ENVIRONMENTAL CONDITIONS (TEMPERATURE, HUMIDITY AND VENTILATION) WITHIN LIMITS RECOMMENDED BY MANUFACTURER FOR OPTIMUM RESULTS. DO NOT INSTALL PRODUCTS UNDER ENVIRONMENTAL CONDITIONS OUTSIDE MANUFACTURER'S ABSOLUTE LIMITS.
- B. SPACES MUST BE ENCLOSED AND DRY WITH NORMAL DESIGN HUMIDITY LEVELS AND TEMPERATURES BETWEEN 65 AND 85 DEGREES F FOR A MINIMUM OF 48 HOURS BEFORE, DURING, AND 48 HOURS AFTER INSTALLATION OF FINISHED FLOORING. AFTER INSTALLATION, MAINTAIN DESIGN HUMIDITY AND TEMPERATURE LEVELS.
- C. DO NOT INSTALL THIS PRODUCT WHERE HUMIDITY IS ROUTINELY LESS THAN 30 PER CENT OR GREATER THAN 90 PER CENT.

A. PROVIDE MANUFACTURER'S STANDARD NON-PRORATED 15 YEAR COMMERCIAL WARRANTY FOR WEAR THROUGH, STAIN AND FADE.

8. EXTRA MATERIALS

- A. DELIVER EXTRA MATERIALS FOR OWNER'S USE IN MAINTENANCE AS FOLLOWS:
- 1) DECORATIVE LAMINATE: AN AMOUNT EQUAL TO 1 PERCENT OF QUANTITY INSTALLED FOR EACH PATTERN AND COLOR INSTALLED.
- 2) ALUMINUM END MOLDING AND T-MOLDING: TWO FULL LENGTHS OF EACH TYPE SPECIFIED.

- A. PERGO L.L.C., COMMERCIAL DIVISION, RALEIGH, NC.
- RECOMMENDED BY MANUFACTURER FOR OPTIMUM RESULTS. DO NOT INSTALL PRODUCTS UNDER ENVIRONMENTAL CONDITIONS OUTSIDE MANUFACTURER'S ABSOLUTE LIMITS.
- B. WRITTEN REQUESTS FOR SUBSTITUTION MADE TWO WEEKS BEFORE BID DATE WILL BE CONSIDERED.

- A. DECORATIVE LAMINATE FLOORING: PERGO COMMERCIAL PRO COMPOSITE PANEL CONSISTING OF A LAMINATE SURFACE AND A LAMINATE BALANCING BACKER PRESSED TO HIGH DENSITY FIBERBOARDI (HDF) CORE WITH MOISTURE RESISTANT ADHESIVE.
- 1) 8 INCH WDE PLANKS; COLOR AS SELECTED BY OWNER FROM MANUFACTURER'S STANDARD COLORS. B. CUSHION:

1.8 MM TO 2.1MM THICKNESS.

-ERCENT VIRGIN RESIN POLYETHYLENE ROLL

D. MOLDING AND TRIM

- 1) EXPANSION (T-MOLDING): PERGO PRO T-MOLDING, 2.4 INCHES WIDE X 92.5 INCHES LONG WITH ALUMINUM CORE AND COORDINATING LAMINATED WRAPPED SURFACE. PROVIDE FOR USE IN DOORWAYS OR THRESHOLDS TO JOIN TWO AREAS OF LIKE HEIGHT FLOORING.
- 2) TRANSITION (REDUCER MOLDING): PERGO PRO REDUCER STRIP 3 INCHES WIDE X 92.5 INCHES LONG WITH ALUMINUM CORE AND COORDINATIONG LAMINATED WRAPPED SURFACE. PROVIDE FOR USE IN JOINING LAMINATE FLOORING TO OTHER FLOORING MATERIALS OF VARYING HEIGHTS.

- 1) FLOORING SPACERS: MAINTAIN SPACING ETWEEN FLOORING AND WALLS OR OTHER PERIMETER VERTICAL SURFACES.
- 2) SILICONE SEALANT: USE 100 PERCENT SILICONE SEALANT TO SEAL GAPS AROUND METAL DOOR FRAMES AND FLOORING EDGES AND IN AREAS WHERE MOISTURE MAY BE PRESENT.

- A. DO NOT BEGIN INSTALLATION UNTIL SUBSTRATES HAVE BEEN PROPERLY PREPARED. B. VERIFY THAT SURFACES TO RECEIVE LAMINATE FLOORING ARE SMOOTH, FLAT AND SOUND
- C. VERIFY THAT CONCRETE SLAB IS DRY ACCORDING TO ASTM F 1869 WITH MAXIMUM MOISTURE EMISSION RATE OF 5 LBS. PER 1,000 S.F. PER 24 HOURS. THE USE OF A TRAMEX MOISTURE METER OR OTHER ACCEPTABLE METHOD IS RECOMMENDED FOR VERIFYING MOISTURE READINGS.
- D. VERIFY THAT LAMINATE FLOORING HAS BEEN ACCLIMATED TO AMBIENT TEMPERATURES, AND ACCLIMATION AND AMBIENT TEMPERATURES ARE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- E. NOTIFY ARCHITECT OF UNSATISFACTORY SLAB CONDITIONS. DO NOT PROCEED WITH INSTALLATION UNTIL SUCH CONDITIONS HAVE BEEN CORRECTED BY THE GENERAL CONTRACTOR.

11. PREPARATION

- A CLEAN SURFACES THOROUGHLY PRIOR TO INSTALLATION
- B. CONCRETE SLAB: GRIND HIGH SPOTS AND FILL LOW SPOTS TO PROVIDE A MAXIMUM 3/16 INCH DEVIATION IN ANY DIRECTION WHEN CHECKED WITH A 10 FOOT STRAIGHT EDGE.
- C. IF A LEVELING COMPOUND IS USED TO LEVEL THE CONCRETE SLAB, MATERIAL MUST BE FULLY CURED AND DRY AS REQUIRED FOR CONCRETE PRIOR TO STARTING INSTALLATION. THE USE OF A TRAMEX MOISTURE METER OR OTHER ACCEPTABLE METHOD IS REQUIRED FOR VERIFYING MOISTURE READINGS.
- D. PREPARE CONCRETE SURFACE USING THE METHODS RECOMMENDED BY THE MANUFACTURER FOR ACHEIVING THE BEST RESULT UNDER THE PROJECT CONDITIONS.
- E. ALLOW UNOPENED CARTONS OF PLANKS TO REMAIN IN THE ROOM WHERE THEY ARE TO BE INSTALLED AT LEAST 96 HOURS PRIOR TO INSTALLATION.

12. UNDERLAYMENT INSTALLATION

- A. INSTALL PERGO SILENT STEP IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. BUTT THE PERGO SILENT STEP EDGES TOGETHER, BUT DO NOT OVERLAP.
- B. INSTALL PERGO MOISTUREBLOC BAPOR BARRIEER OVER CONCRETE SLAB WITH AN 8 INCH OVERLAP AT ALL CONNECTING EDGES.

13. LAMINATE INSTALLATION

- A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- B. INSTALL FLOORING PLANKS PARALLEL TO THE LONG DIRECTION OF THE ROOM. VERIFY STRIP FLOORING DIRECTION WITH OWNER BEFORE STARTING INSTALLATION.
- C. INSTALL FLOORING SYMMETRICALLY ABOUT ROOM CENTERLINE. LAY PLANKS FROM LEFT TO RIGHT.
- D. STAGGER END JOINT LOCATIONS A MINIMUM OF 12 INCHES.
- E. FIT FLOORING NEATLY TO VERTICAL INTERRUPTIONS. FOLLOW SHAPE OF INTERRUPTING ITEM WHEN JOINT
- WILL REMAIN EXPOSED AND MAINTAIN 1/4 INCH EXPANSION SPACE. F. INSTALL DIVIDER STRIPS WHERE FLOORING TERMINATES AT CENTERLINE OF DOORS AND ADJACENT TO
- OTHER MATERIALS OR UNFINISHED FLOOR AREAS. G. EXPANSION SPACE: PROVIDE EXPANSION SPACE AT WALLS AND OTHER VERTICAL INTERRUPTIONS AND TERMINATIONS OF FLOORING OF NOT LESS THAN 1/4 INCH. IN LARGER AREAS A 1/2 INCH

EXPANSION SPACE IS REQUIRED.

1) DO NOT UNDERCUT METAL DOOR FRAMES. CUT FLOOR PANELS TO FIT AROUND FRAMES. PROVIDE 3/16 INCH EXPANSION SPACE AND FILL WITH COLOR-MATCHED PERIMETER SEALANT.

- INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 2) ADHERE MOLDING WITH CONSTRUCTION MASTIC AND/OR MECHANICAL FASTENERS WHEN JOINING ANOTHER FLOORING MATERIAL.
- 3) ADHERE TRANSITION AND END CAP TO SUBFLOOR WITH CONSTRUCTION MASTIC AND/OR MECHANICAL FASTENERS.
- EXPANSION MOLDING: BOND TRIM TO SUBFLOOR. CONNECT LENGTHS OF EXPANSION

A. PROTECT INSTALLED PRODUCTS UNTIL COMPLETION OF PROJECT.

TOGETHER. DO NOT INSTALL OVER PADDING.

B. TOUCH-UP, REPAIR OR REPLACE DAMAGED PRODUCTS BEFORE SUBSTANTIAL COMPLETION.

09 65 19 RESILIENT FLOORING

- 1. SCOPE OF WORK: FURNISH ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED FOR A COMPLETE RESILIENT FLOORING INSTALLATION INCLUDING VINYL MOLDINGS, ADHESIVE, TILE AND BASE.
- 2. SUBMITTALS: SUBMIT 2 SAMPLES OF EACH TYPE OF TILE SPECIFIED AND EACH TYPE OF ACCESSORY WITH 6 COPIES OF MANUFACTURER'S TECHNICAL DATA FOR EACH ITEM.

- A. RESILIENT TILE SHALL BE 12 INC X 12 INCH X 1/8 INCH STANDARD EXCELON IMPERIAL VINYL COMPOSITION TILE AS MANUFACTURED BY ARMSTRONG WORLD INDUSTRIES. COLORS SHALL BE SELECTED FROM MANUFACTURER'S STANDARD COLORS. REFER TO FINISH SCHEDULE FOR LOCATIONS.
- B. COVE BASE SHALL BE 4 INCH HIGH VINYL, 1/8 INCH GAUGE, WITH PREFORMED CORNERS AS MANUFACTURED BY MERCER. COLOR SHALL BE SELECTED FROM MANUFACTURER'S STANDARD COLORS. REFER TO FINISH SCHEDULE FOR LOCATIONS.
- C. ADHESIVES: AS RECOMMENDED BY MANUFACTURER.
- 4. PREPARATION: CHECK CONDITION OF SUB-FLOOR, AND REPORT DEFECTS, IF ANY. WHEN DEFECTS HAVE BEEN CORRECTED, SWEEP FLOOR AND REMOVE GREASE OR OTHER DIRT BEFORE PROCEEDING.
- 5. INSTALLATION: INSTALLATION SHALL BE BY SKILLED MECHANICS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURERS OF THE MATERIALS USED AND WITH THE HIGHEST DEGREE OF WORKMANSHIP. LAY TILES TO ENSURE GOOD CONTACT WITH CLOSE EVEN JOINTS. ALL FINISHED SURFACES SHALL BE IN TRUE PLANE AND SMOOTH. LAYOUT SHALL BE SQUARE WITH AXIS OF ROOMS AND EXACTELY AT RIGHT ANGLES. LAY OUT SPACES SO THAT OPPOSITE CORNERS OF ROOMS HAVE EDGE TILES THE SAME SIZE AND NONE LESS THAN 1/2 TILE. ALL TILES NOT SEATED IN LEVEL PLANE SHALL HAVE HEAT APPLIED AND SHALL BE ROLLED TO THE PROPER LEVEL.
- 6. CLEAN UP: REMOVE ALL FOREIGN MATTER FROM TILE. WAX WITH 2 COATS OF LOW GLOSS ANTI-SLIP MATERIAL. POLISH EACH COAT THOROUGHLY.
- 7. PROVIDE OWNER WITH 1 BOX OF EACH TILE COLOR.

09 80 00 DECORATIVE PROTECTIVE COATING SYSTEM (ADDITIVE ALTERNATE BID TO EXTERIOR PAINTING)

- 1. SCOPE OF WORK: FURNISH AND APPLY COOLWALL HEAT REFLECTIVE WATER BASED EXTERIOR COATING SYSTEM AS MANUFACTURED BY TEXTURED COATINGS OF AMERICA, INC. OVER ALL EXTERIOR STUCCO EXCEPT DUMPSTER ENCLOSURE.
- 2. SUBMITTALS: SUBMIT 6 COPIES OF MANUFACTURER'S LITERATURE INDICATING ALL MATERIALS AND FINISHES. IN THE FIELD, PROVIDE A SAMPLE SECTION OF WALL SHOWING PROPOSED TEXTURES AND COLORS FOR APPROVAL.

MATERIALS

- A. PRIMER: COOLWALL CLASSIC PRIMER.
- B. COATING APPLICATION RATE: TWO COATS AT 350 450 SQUARE FEET PER GALLON. C. COLORS: MATCH COLORS SHOWN ON THE ELEVATION DRAWINGS.
- D. APPLICATION: APPLY IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTUUCTIONS USING
- COMMERCIAL GRADE AIRLESS TIP SPRAYER. SIZE .017 TO .019.

E. WARRANTY: MANUFACTURER'S LIMITED COMMERCIAL WARRANTY.

- 1. SCOPE OF WORK: PROVIDE LABOR, MATERIALS AND EQUIPMENT FOR PROPER EXECUTION OF THIS WORK WHICH INCLUDES BUT IS NOT LIMITED TO SURFACE PREPARATION AND FIELD APPLICATION OF COATINGS ON ALL EXTERIOR STUCCO, HOLLOW METAL DOORS, FRAMES, DUMPSTER ENCLOSURE GATES AND SUPPORTS AND STEEL PIPE BOLLARDS, AND ALL INTERIOR DRYWALL, WOOD DOORS, DOOR FRAMES, HANDRAILS AND AND METAL JOISTS, COLUMNS AND DECK.
- 2. MATERIALS: PAINTS: PRODUCTS OF THE SHERWIN-WILLIAMS COMPANY OR APPROVED COMPARABLE PRODUCTS BY OTHER MANUFACTURERS.
- 3. COLOR SCHEDULE: FOR EXTERIOR WALL COLORS REFER TO THE BUILDING ELEVATIONS. INTERIOR COLORS SHALL BE SELECTED BY OWNER.
- 4. SUBMITTALS: SUBMIT 6 COPIES OF MANUFACTURER'S PRODUCT DATA ON ALL FINISHING PRODUCTS, INCLUDING VOC CONTENT. SUBMIT PAINTING SCHEDULE PRIOR TO PREPARATION OF SURFACES TO BE

5 DELIVERY STORAGE AND HANDLING

- A. DELIVER PRODUCTS TO SITE IN SEALED AND LABELED CONTAINERS; INSPECT TO VERIFY ACCEPTABILITY B. CONTAINER LABEL: INCLUDE MANUFACTURER'S NAME, TYPE OF PAINT, BRAND NAME, LOT NUMBER, BRAND CODE, COVERAGE, SURFACE PREPARATION, DRYING TIME, CLEANUP REQUIREMENTS, COLOR DESIGNATION, AND INSTRUCTIONS FOR MIXING AND REDUCING.
- C. PAINT MATERIALS: STORE AT MINIMUM AMBIENT TEMPERATURE OF 45 DEGREES F AND A MAXIMUM IF 90 DEGREES F, IN VENTILATED AREA, AND AS REQUIRED BY THE MANUFACTURER'S INSTRUCTIONS.

- A. DO NOT APPLY MATERIALS WHEN SURFACE AND AMBIANT TEMPERATURES ARE OUTSIDE THE TEMPERATURE RANGES REQUIRED BY THE PAINT PRODUCT MANUFACTURER.
- B. FOLLOW MANUFACTURER'S RECOMMENDED PROCEDURES FOR PRODUCING BEST RESULTS, INCLUDING. TESTING OF SUBSTRATES, MOISTURE IN SUBSTRATES, AND HUMIDITY AND TEMPERATURE LIMITATIONS.
- C. MAXIMUM APPLICATION TEMPERATURES FOR LATEX PAINTS: 45 DEGREES F FOR INTERIOR, 50
- DEGREES F FOR EXTERIOR, UNLESS REQUIRED OTHERWISE BY MANUFACTURER'S INSTRUCTIONS.
- D. PROVIDE LIGHTING LEVEL OF 60 FT. CANDLES MEASURED MID-HEIGHT AT SUBSTRATE SURFACE.

7. PAINTS AND COATINGS - GENERAL

- A. ALL PAINT SHALL BE MANUFACTURER'S TOP OF LINE PRODUCT.
- B. PAINTS AND COATINGS: READY MIXED, UNLESS INTENDED TO BE A FIELD-CATALYZED COATING. TESTING OF SUBSTRATES, MOISTURE IN SUBSTRATES, AND HUMIDITY AND TEMPERATURE LIMITATIONS.
- 1) PROVIDE PAINTS AND COATINGS OF A SOFT PASTE CONSISTENCY, CAPABLE OF BEING READILY AND UNIFORMLY DISPERSED TO A HOMOGENEOUS COATING, WITH GOOD FLOW AND BRUSHING PROPERTIES, AND CAPABLE OF DRYING OR CURING FREE OF STREAKS OR SAGS.
- 2) SUPPLY EACH COATING MATERIAL IN QUANTITY REQUIRED TO COMPLETE ENTIRE PROJECT'S WORK FROM A SINGLE PRODUCTION RUN.
- 3) DO NOT REDUCE, THIN, OR DILUTE COATINGS OR ADD MATERIALS TO COATINGS UNLESS SUCH PROCEDURE IS SPECIFICALLY DESCRIBED IN MANUFACTURER'S PRODUCT INSTRUCTIONS.
- C. PRIMERS: WHERE THE MANUFACTURER OFFERS OPTIONS ON PRIMERS FOR A PARTICULAR SUBSTRATE, USE PRIMER CATEGORIZED AS "BEST" BY THE MANUFACTURER.
- D. VOLATILE ORGANIC COMPOUND (VOC) CONTENT: 1) PROVIDE COATINGS THAT COMPLY WITH THE MOST STRINGENT REQUIREMENTS SPECIFIED IN THE
 - a. 40 CFR 59, SUBPART D-NATIONAL VOLATILE ORGANIC COMPOUND EMISSION STANDARDS FOR ARCHITECTURAL COATINGS.
 - 2) DETERMINATION OF VOC CONTENT: TESTING AND CALCULATION IN ACCORDANCE WITH 40 CFR 59 SUBPART D (EPA METHOD 24), EXCLUSIVE OF COLORANTS ADDED TO A TINT BASE AND WATER ADDED AT PROJECT SITE; OR OTHER METHOD ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.

8. EXAMINATION

- A. VERIFY THAT SURFACES ARE READY TO RECEIVE WORK AS INSTRUCTED BY THE PRODUCT
- B. EXAMINE SURFACES SCHEDULED TO BE FINISHED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY CONDITION THAT MAY POTENTIALLY AFFECT PROPER APPLICATION.
- C. TEST SHOP APPLIED PRIMER FOR COMPATIBILTY WITH SUBSEQUENT COVER MATERIALS.
- D. MEASURE MOISTURE CONTENT OF SURFACES USING AN ELECTRONIC MOISTURE METER. DO NOT APPLY FINISHES UNLESS MOISTURE CONTENT OF SURFACES ARE BELOW THE FOLLOWING MAXIMUMS:
- 1) GYPSUM WALLBOARD: 12%: 2) STUCCO: 12%:
- 3) INTERIOR WOOD: 15%, MEASURED IN ACCORDANCE WITH ASTM D2016.:

10. APPLICATION

- A. APPLY PRODUCTS IN ACCORDANCE WITH MANUFACURER'S INSTRUCTIONS.
- B. DO NOT APPLY FINISHES TO SURFACES THAT ARE NOT DRY. ALLOW APPLIED COATS TO DRY BEFORE NEXT COAT IS APPLIED.
- C. APPLY EACH COAT TO UNIFORM APPEARANCE.
- D. SAND WOOD AND METAL SURFACES LIGHTLY BETWEEN COATS TO ACHIEVE REQUIRED FINISH.
- E. REINSTALL COVER PLATES, HARDWARE, LIGHT FIXTURE TRIM, ESCUTCHEONS, AND FITTINGS REMOVED PRIOR TO PAINTING.

- A. COLLECT WASTE MATERIAL THAT COULD CONSTITUTE A FIRE HAZARD, PLACE IN CLOSED METAL CONTAINERS, AND REMOVE DAILY FROM SITE.
- 12. SCHEDULE SURFACES TO BE FINISHED
- A. DO NOT PAINT OR FINISH THE FOLLOWING ITEMS:
- 1) ITEMS FULLY FACTORY-FINISHED UNLESS SPECIFICALLY NOTED.
- 2) EQUIPMENT SERIAL NUMBER AND CAPACITY LABELS.
- 3) FIRE SPRINKLER PIPING, PLUMBING, MECHANICAL AND ELECTRICAL SYSTEMS. B. PAINT THE SURFACES DESCRIBED BELOW UNDER SCHEDULE - PAINT SYSTEMS.

13. SCHEDULE - PAINT SYSTEMS

- A. EXTERIOR
- 1) METAL (GALVANIZED)
- 1st COAT: S-W PROCRYL UNIVERSAL PRIMER, WHITE, B66-310 SERIES (2-4 MILS DRY)
- 2nd COAT: S-W DURATION EXTERIOR LATEX GLOSS COATING, K34 SERIES 3rd COAT: S-W DURATION EXTERIOR LATEX GLOSS COATING, K34 SERIES (4 MILS WET, 1.6 MILS DRY PER COAT)
- 2) METAL (MISCELLANEOUS IRON, HOLLOW METAL DOORS, DOOR FRAMES, STAIRS, RAILINGS AND
 - 1st COAT: S-W PROCRYL UNIVERSAL PRIMER, WHITE, B66-310 SERIES (2-4 MILS DRY) 2nd COAT: S-W DURATION EXTERIOR LATEX GLOSS COATING, K34 SERIES 3rd COAT: S-W DURATION EXTERIOR LATEX GLOSS COATING, K34 SERIES

(4 MILS WET, 1.6 MILS DRY PER COAT)

3) STUCCO

- 1st COAT: S-W LOXON EXTERIOR ACRYLIC MASONRY PRIMER, A24W300 (8 MILS WET, 3.2 MILS DRY)
- 2nd COAT: S-W DURATION EXTERIOR LATEX FLAT COATING, K32 SERIES (4 MILS WET, 1.4 MILS DRY) 3rd COAT: S-W DURATION EXTERIOR LATEX FLAT COATING, K32 SERIES

(4 MILS WET, 1.4 MILS DRY)

- 1) METAL, GALVANIZED (MISCELLANEOUS METAL, METAL ROOF DECK)
 - 1st COAT: S-W ALL SURFACE ENAMEL PRIMER, A41W210 (10 MILS WET, 5 MILS DRY) 2nd COAT: S-W PROMAR 200 LATEX SEMI-GLOSS, B31W200 SERIES
- 3rd COAT: S-W PROMAR 200 LATEX SEMI-GLOSS, B31W200 SERIES (4 MILS WET, 1.7 MILS DRY PER COAT)
- 2) METAL (MISCELLANEOUS IRON, HOLLOW METAL DOORS AND FRAMES AND STAIR RAILINGS)
- 1st COAT: S-W ALL SURFACE ENAMEL PRIMER, A41W210 (10 MILS WET, 5 MILS DRY)
- 2nd COAT: S-W PROMAR 200 LATEX SEMI-GLOSS, B31W2200 SERIES 3rd COAT: S-W PROMAR 200 LATEX SEMI-GLOSS, B31W2200 SERIES
- (4 MILS WET, 1.5 MILS DRY PER COAT) 3) METAL, SHOP PRIMED - (STEEL BAR JOISTS, JOIST GIRDERS AND COLUMNS) 1st COAT: S-W PROMAR 200 LATEX SEMI-GLOSS, B31W2200 SERIES

2nd COAT: S-W PROMAR 200 LATEX SEMI-GLOSS, B31W2200 SERIES

- (4 MILS WET, 1.5 MILS DRY PER COAT) 4) GYPSUM DRYWALL - (EG-SHEL FINISH - WALLS)
- 1st COAT: S-W HARMONY LOW ODOR INTERIOR LATEX PRIMER, B11 SERIES (4 MILS WET, 1.3 MILS DRY) 2nd COAT: S-W HARMONY LOW ODOR INTERIOR LATEX EG-SHEL, BO9 SERIES

3rd COAT: S-W HARMONY LOW ODOR INTERIOR LATEX EG-SHEL, BO9 SERIES

- (4 MILS WET, 1.6 MILS DRY PER COAT) 5) GYPSUM DRYWALL - (EPOXY SYSTEM, WATER BASE - REST ROOM WALLS)
- (4 MILS WET, 1.3 MILS DRY) 2nd COAT: S-W WATERBASED CATALYZED EPOXY, B70 SERIES / B60V25 3rd COAT: S-W WATERBASED CATALYZED EPOXY, B70 SERIES / B60V25 (2.5 - 3 MILS DRY PER COAT)
- 6) CONCRETE MASONRY UNITS (EPOXY SYSTEM, WATER BASE, NON-WET AREA -

1st COAT: S-W HARMONY LOW ODOR INTERIOR LATEX PRIMER, B11 SERIES

- WAREHOUSE AND MEZZANINE WALLS)
- 1st COAT: S-W PREPRITE BLOCK FILLER, B25W25 (16 MILS WET, 8 MILS DRY) 2nd COAT: S-W WATERBASED CATALYZED EPOXY, B70 SERIES / B60V25

3rd COAT: S-W WATERBASED CATALYZED EPOXY, B70 SERIES / B60V25 (2.5 - 3 MILS DRY PER COAT)

6) WOOD DOORS - (EG-SHEL FINISH)

(4 MILS WET, 1.6 MILS DRY PER COAT)

1st COAT: S-W HARMONY LOW ODOR INTERIOR LATEX PRIMER, B11W900 (4 MILS WET, 1.3 MILS DRY) 2nd COAT: S-W HARMONY LOW ODOR INTERIOR LATEX EG-SHEL, B9 SERIES 3rd COAT: S-W HARMONY LOW ODOR INTERIOR LATEX EG-SHEL, B9 SERIES

10 00 00 - SPECIALTIES

- 1. SCOPE OF WORK: FURNISH AND INSTALL ADA SIGNAGE FOR INTERIOR DOORS AND BUILDING ADDRESS NUMBERS
- 7211 CENTERED OVER MAIN ENTRANCE DOOR. REFER TO BUILDING ELEVATIONS FOR LOCATION. 2. SUBMITTALS: SUBMIT MANUFACTURER'S TECHNICAL DATA AND INSTALLATION FOR EACH TYPE OF SIGN REQUIRED. SUBMIT SHOP DRAWING LISTING SIGN SIZE, LETTER AND NUMBER FORM AND HEIGHTS, COLOR, SPECIFIED AND METHOD OF ATTACHMENT. INTERIOR SIGNAGE SHALL CONSIST OF ROOM NUMBER AND ROOM

FUNCTION TO MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT - 1990 AND ANSI A117.1.

- A. INTERIOR ADA SIGNAGE: SIGNS SHALL BE DESIGN ADA-3 SIZE 8-1/8 INCHES X 6 INCHES WITH A 3-1/2 INCH ACCESSIBILITY SYMBOL AND THE WRITTEN DESCRIPTION PLACED DIRECTLY BELOW FOLLOWED BY GRADE
- B. BUILDING ADDRESS NUMBERS: 12 INCH HIGH HELVETICA CAST ALUMINUM, NATURAL SATIN FINISH. 4. INSTALLATION: SIGNAGE AND NUMBERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTRUCTIONS AND APPROVED SHOP DRAWINGS. ADDRESS LETTERS SHALL BE MOUNTED WITH STUDS SET IN ADHESIVE CEMENT. STUDS SHALL HAVE STAINLESS STEEL JAMB NUTS INSERTED BETWEEN THE LETTER AND THE SURFACE OF THE BUILDING.

- 1. SCOPE OF WORK: FURNISH AND INSTALL TOILET ROOM ACCESSORIES IN EACH TOILET ROOM REFER TO DRAWINGS FOR LOCATIONS AND QUANTITIES OF EACH TYPE OF ACCESSORY. BOBRICK, INC. HAS BEEN USED AS THE BASIS OF DESIGN. COMPARABLE PRODUCTS BY OTHER MANUFACTURERS MAY BE SUBMITTED
- FOR APPROVAL 2. SUBMITTALS: SUBMIT 6 COPIES OF MANUFACTURER'S TECHNICAL DATA FOR EACH TYPE OF ACCESSORY

SHOWING DETAILS, ROUGH OPENING REQUIREMENTS FOR RECESSED ITEMS, FINISHES, DIMENSIONS AND

- 3. MATERIALS: ALL ACCESSORIES SHALL BE CONSTRUCTED OF TYPE 304 SATIN FINISH STAINLESS STEEL UNLESS
- 4. PRODUCTS: REFER TO DRAWINGS FOR PRODUCTS LIST.

- A. INSTALL ACCESSORIES IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.
- B. INSTALL ACCESSORIES PLUMB AND TRUE WITH HORIZONTAL LINES LEVEL. CONCEAL EVIDENCE OF
- C. CLEANING: AFTER INSTALLATION, CLEAN ACCESSORIES IN MANNER NOT TO DAMAGE FINISH.

- 1. SCOPE OF WORK: FURNISH AND INSTALL ALL BRACKET MOUNTED FIRE EXTINGUISHERS, FIRE EXTINGUISHER
- 2. MATERIALS: AS MANUFACTURERED BY LARSEN'S MANUFACTURING COMPANY OR APPROVED EQUAL
- A. EXTINGUISHERS: 2A-10BC.
- 3. LOCATIONS: INSTALL ONE EXTINGUISHER IN FULLY RECESSED CABINET IN THE OFFICE AREA, TWO BRACKET MOUNTED EXTINGUISHERS IN THE WAREHOUSE AND ONE BRACKET MOUNTED EXTINGUISHER ON THE MEZZANNINE.

- 1. SCOPE OF WORK: FURNISH AND INSTALL GANITE COUNTERTOPS IN CONFERENCE ROOM AND BREAKROOM. TOPS SHALL BE CUT OUT AND FINISHED FOR THE INSTALLATION OF UNDERMOUNTED SINKS AND SHALL INCLUDE
- A. SUBMIT 6 COPIES OF SHOP DRAWINGS INDICATING COUNTERTOP LAYOUT AND CONSTRUCTION INCLUDING ALL FASTENING AND SUPPORTING METHODS.

DIVISION 16 - ELECTRICAL 16050 - ELECTRICAL - (REFER TO ELECTRICAL DRAWINGS)

15700 - AIR CONDITIONING - (REFER TO AIR CONDITIONING DRAWINGS)

10 28 00 TOILET ACCESSORIES

- ANCHORAGE AND FASTENING METHODS.
- NOTED OTHERWISE IN THESE SPECIFICATIONS.

- - DRILLING AND FITTING IN ADJACENT SURFACES.

10 44 00 FIRE PROTECTION SPECIALTIES

- CABINETS, AND FIRE EXTINGUISHERS MOUNTED IN CABINETS.
- B. CABINETS: GEMINI SERIES FS-G2409-R5, SEMI-RECESSED, WITH FULL TEMPERED CLEAR GLASS DOOR,
- BLACK VERTICAL LETTERS AND WHITE BAKED ENAMEL TRIM. C. BRACKETS: B-2.
- 4. INSTALLATION: IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTRUCTIONS.

12 36 40 STONE COUNTERTOPS (ALLOW \$40.00 / SQUARE FOOT FOR MATERIAL AND INSTALLATION)

- A 1-1/2 INCH BULLNOSE.
- B. SUBMIT 2 GRANITE SAMPLES FOR APPROVAL. SAMPLES SHALL BE 6 INCH X 6 INCH.

3. MATERIALS: GRANITE SHALL BE SELECTED BY OWNER.

15400 - PLUMBING - (REFER TO PLUMBING DRAWINGS)

 \triangleleft

 $\simeq \leq$

DATE: 7/6/10

DRAWN BY: AMS

PROJ. NO. 926

REVISED: