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## ISSUE FOR PROPOSAL

02/27/2023



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**ARCHITECT** PBK ARCHITECTS 11 GREENWAY PLAZA, #2200 HOUSTON, TX 77046 T 713-965-0608

**CIVIL ENGINEER DIG ENGINEERS** 11 GREENWAY PLAZA #1520 HOUSTON, TX 77046 T 713-940-3238

LANDSCAPE ARCHITECT **GREENSCAPE** 5030 BRYAN RD ROSENBERG, TX 77469 T 281-341-9975

STRUCTURAL ENGINEER 11 GREENWAY PLAZA #1520

MEP ENGINEER

WATERPROOFING CONSULTANT **BEAM PROFESSIONALS** 11 GREENWAY PLAZA, #2200 HOUSTON, TX 77046 T 713-940-3201

FOOD SERVICE CONSULTANT FOODSERVICE DESIGN PROFESSIONALS

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AS101

AS102

AS103

A-101

A-101E

A-101F

A-101H

A-102

A-102E

A-201

	GENERAL
G-000	COVER SHEET
G-001	SHEET INDEX
G-002	GENERAL PROJECT INFORMATION
G-010	1ST LEVEL - LIFE SAFETY EGRESS PLAN
G-020	ACCESSIBILITY GUIDELINES
G-030	FIRE RATED ASSEMBLIES
G-041	1ST FLOOR GRAPHICS & SIGNAGE PLAN - COMPOSITE
G-042	2ND FLOOR GRAPHICS & SIGNAGE PLAN - COMPOSITE
G-051	SIGNAGE GRAPHIC STANDARDS
G-052	SIGNAGE GRAPHIC STANDARDS

CIVIL NOTES, INDEX, AND LEGEND C 001 C 002A SURVEY (FOR INFORMATION ONLY) C 002B SURVEY (FOR INFORMATION ONLY) C 002C SURVEY (FOR INFORMATION ONLY) C 002D SURVEY (FOR INFORMATION ONLY) C 003 DEMOLITION PLAN C 101 C 102 DIMENSIONAL CONTROL PLAN C 103 FIRE APPARATUS SAFETY PLAN C 201 UTILITY PLAN C 202 DRAINAGE PLAN C 203 DRAINAGE AREA MAP C 204 DRAINAGE CALCULATIONS C 301 PAVING PLAN C 302 GRADING PLAN

EROSION CONTROL PLAN

C 501 DETAILS C 502 DETAILS C 503 **DETAILS** 

C 401

L-102 LANDSCAPE LAYOUT L-201 IRRIGATION LAYOUT L-202 IRRIGATION LAYOUT

LANDSCAPE LAYOUT

STRUCTURAL S-000 3D VIEW & SHEET INDEX S-010 **GENERAL NOTES** S-011 **GENERAL NOTES** GENERAL SUBGRADE NOTES AND TYP DETAILS S-012 S-101 COMPOSITE FOUNDATION PLAN S-101A FOUNDATION PLAN - AREA A S-101B FOUNDATION PLAN - AREA B S-101C FOUNDATION PLAN - AREA C S-101D FOUNDATION PLAN - AREA D S-101E FOUNDATION PLAN - AREA E S-101F FOUNDATION PLAN - AREA F S-101G FOUNDATION PLAN - AREA G FOUNDATION PLAN - AREA H COMPOSITE LOW ROOF FRAMING PLAN

LANDSCAPE

S-101H S-102 MEZZANINE/ LOW ROOF FRAMING PLAN - AREA A S-102A S-102B LOW ROOF FRAMING PLAN - AREA B S-102C LOW ROOF FRAMING PLAN - AREA C LOW ROOF FRAMING PLAN - AREA D S-102D S-102E MEZZANINE/ LOW ROOF FRAMING PLAN - AREA E S-102F LOW ROOF FRAMING PLAN - AREA F S-102G LOW ROOF FRAMING PLAN - AREA G S-102H LOW ROOF FRAMING PLAN - AREA H S-103 COMPOSITE HIGH ROOF FRAMING PLAN S-103A HIGH ROOF FRAMING PLAN - AREA A S-103B HIGH ROOF FRAMING PLAN - AREA B HIGH ROOF FRAMING PLAN - AREA C

S-103C S-103E HIGH ROOF FRAMING PLAN - AREA E S-104 CLERESTORY ROOF AND MISC FRAMING PLANS S-300 GENERAL CONCRETE AND STL REINF NOTES AND TYP DETAILS S-301 GENERAL SLAB-ON-GRADE NOTES AND TYP DETAILS S-302 GENERAL GRADE BEAM NOTES AND TYP DETAILS S-303 GENERAL FOUNDATION NOTES AND TYP DETAILS S-304

GENERAL FOUNDATION NOTES AND TYP DETAILS S-310 FOUNDATION DETAILS S-311 FOUNDATION DETAILS S-312 FOUNDATION DETAILS (CMU) S-313 FOUNDATION DETAILS (CMU) S-320 SITE ITEMS FOUNDATION SECTIONS AND DETAILS S-321 TYPICAL MARQUEE SIGN PLANS & DETAILS S-400 GENERAL CMU NOTES AND TYP DETAILS S-401 GENERAL CMU NOTES AND TYP DETAILS

MISC CMU DETAILS

S-402

S-600

S-601

S-610

S-700

S-403 MISC CMU DETAILS S-500 GENERAL STEEL NOTES AND TYP DETAILS S-501 GENERAL STEEL NOTES AND TYP DETAILS S-502 GENERAL STEEL NOTES AND TYP DETAILS S-503 GENERAL STEEL CONNECTION NOTES AND TYP DETAILS S-504 GENERAL COMPOSITE STEEL NOTES AND TYP DETAILS S-505 GENERAL COMPOSITE STEEL NOTES AND TYP DETAILS S-506 GENERAL STEEL NOTES AND TYP DETAILS

S-507 GENERAL STEEL NOTES AND TYP DETAILS S-508 GENERAL STEEL NOTES AND TYP DETAILS S-510 COMPOSITE FRAMING DETAILS S-520 ROOF FRAMING DETAILS S-521 ROOF FRAMING DETAILS ROOF FRAMING DETAILS S-522

TYPICAL WIND BRACING ELEVATIONS

TYPICAL WIND BRACING ELEVATIONS

TYPICAL WIND BRACING DETAILS

TYPICAL LADDER DETAILS

DRAWING INDEX

ARCHITECTURAL ARCHITECTURAL SITE M-101A ARCHITECTURAL SITE PLAN M-101B M-101C ARCHITECTURAL ENLARGED SITE PLANS SITE DETAILS M-101D M-101E ARCHITECTURAL M-101F 1ST FLOOR PLAN - COMPOSITE M-101G A-101A1 1ST FLOOR SCHEDULES - AREA A M-101H M-102E A-101A 1ST FLOOR PLAN - AREA A A-101B1 1ST FLOOR SCHEDULES - AREA B M-301 M-401 A-101B 1ST FLOOR PLAN - AREA B A-101C1 1ST FLOOR SCHEDULES - AREA C M-402 M-403 A-101C 1ST FLOOR PLAN - AREA C M-404 A-101D1 1ST FLOOR SCHEDULES - AREA D A-101D 1ST FLOOR PLAN AREA D M-501 A-101E1 1ST FLOOR SCHEDULES - AREA E M-502 M-503 1ST FLOOR PLAN AREA E A-101F1 1ST FLOOR SCHEDULES - AREA F M-601 M-602 1ST FLOOR PLAN AREA F A-101G1 1ST FLOOR SCHEDULES - AREA G M-603 1ST FLOOR PLAN AREA G M-604 A-101G A-101H1 1ST FLOOR SCHEDULES - AREA H 1ST FLOOR PLAN AREA H 2ND FLOOR PLAN - COMPOSITE A-102E1 2ND FLOOR SCHEDULES - AREA E ES-001 2ND FLOOR PLAN - AREA E ES-002 1ST FLOOR CEILING PLAN - COMPOSITE EP-101A 1ST FLOOR CEILING PLAN - AREA A EP-101B

A-201A A-201B 1ST FLOOR CEILING PLAN - AREA B A-201C 1ST FLOOR CEILING PLAN - AREA C 1ST FLOOR CEILING PLAN - AREA D 1ST FLOOR CEILING PLAN - AREA E A-201E A-201F 1ST FLOOR CEILING PLAN - AREA F 1ST FLOOR CEILING PLAN - AREA G A-201G A-201H 1ST FLOOR CEILING PLAN - AREA H A-202 2ND FLOOR CEILING PLAN - COMPOSITE A-202A 2ND FLOOR CEILING PLAN - AREA A **ENLARGED RCP & CEILING DETAILS** A-203 A-301 **ROOF PLAN** A-302 ROOF PLAN - WIND ZONES A-322 ROOF DETAILS (MOD BIT) A-323 ROOF DETAILS (METAL) BUILDING ENVELOPE DETAILS (NEW) ENLARGED FLOOR PLANS ENLARGED FLOOR PLANS ENLARGED GYM STRIPING PLAN

A-324 A-401 A-402 A-403 ENLARGED STAIR/ RAMP PLANS + SECTION DETAILS COMPOSITE EXTERIOR ELEVATIONS A-501 A-502 **ENLARGED EXTERIOR ELEVATIONS** A-503 INTERIOR ELEVATIONS A-504 INTERIOR ELEVATIONS A-505 INTERIOR ELEVATIONS A-506 INTERIOR ELEVATIONS

A-601 BUILDING SECTIONS A-602 BUILDING SECTIONS A-603 **BUILDING SECTIONS** A-604 **BUILDING SECTIONS** WALL SECTIONS WALL SECTIONS A-606 A-607 WALL SECTIONS A-608 WALL SECTIONS A-609 WALL SECTIONS

A-701 EXTERIOR PLAN DETAILS A-702 EXTERIOR PLAN DETAILS EXTERIOR PLAN DETAILS A-703 **INTERIOR & EXTERIOR PLAN DETAILS** A-704 A-705 INTERIOR PLAN DETAILS A-801A PARTITION TYPES PARTITION TYPES

PARTITION TYPES A-801C DOOR, WINDOW, PANEL & FRAME TYPES A-811 A-821 DOOR FRAME DETAILS A-822 WINDOW FRAME DETAILS A-840 CASEWORK ELEVATIONS A-841 CASEWORK ELEVATIONS CASEWORK ELEVATIONS A-842 A-843

CASEWORK DETAILS INTERIOR FINISHES FINISH SCHEDULES

AF101F

AF101G

AF100 AF101 1ST FLOOR FINISH PLAN - COMPOSITE FIRST FLOOR FINISH PLAN AREA "A" AF101A AF101B FIRST FLOOR FINISH PLAN AREA "B" AF101C FIRST FLOOR FINISH PLAN AREA "C" AF101D FIRST FLOOR FINISH PLAN AREA "D" AF101E FIRST FLOOR FINISH PLAN AREA "E"

FIRST FLOOR FINISH PLAN AREA "F"

FIRST FLOOR FINISH PLAN AREA "G"

FIRST FLOOR FINISH PLAN AREA "H"

**MECHANICAL** MECHANICAL FLOOR PLAN - FIRST FLOOR - AREA A MECHANICAL FLOOR PLAN - FIRST FLOOR - AREA B MECHANICAL FLOOR PLAN - FIRST FLOOR - AREA C MECHANICAL FLOOR PLAN - FIRST FLOOR - AREA D MECHANICAL FLOOR PLAN - FIRST FLOOR - AREA E MECHANICAL FLOOR PLAN - FIRST FLOOR - AREA F MECHANICAL FLOOR PLAN - FIRST FLOOR - AREA G MECHANICAL FLOOR PLAN - FIRST FLOOR - AREA H MECHANICAL FLOOR PLAN - SECOND FLOOR - AREA E MECHANICAL ROOF PLAN MECHANICAL CENTRAL PLAN PIPING DIAGRAMS MECHANICAL CHILLED WATER PIPING DIAGRAMS MECHANICAL HEATING WATER PIPING DIAGRAMS MECHANICAL HEATING WATER PIPING DIAGRAMS MECHANICAL SCHEDULES MECHANICAL SCHEDULES MECHANICAL SCHEDULES

MECHANICAL DETAILS MECHANICAL DETAILS MECHANICAL DETAILS MECHANICAL DETAILS **ELECTRICAL** ELECTRICAL SITE PLAN NORTH ELECTRICAL SITE PLAN SOUTH POWER PLAN - FIRST FLOOR - AREA A POWER PLAN - FIRST FLOOR - AREA B POWER PLAN - FIRST FLOOR - AREA C EP-101C EP-101D POWER PLAN - FIRST FLOOR - AREA D EP-101E POWER PLAN - FIRST FLOOR - AREA E EP-101F POWER PLAN - FIRST FLOOR - AREA F EP-101G POWER PLAN - FIRST FLOOR - AREA G EP-101H POWER PLAN - FIRST FLOOR - AREA H E-102A ELECTRICAL FLOOR PLAN - SECOND FLOOR - AREA A - MEZZANINE E-102E ELECTRICAL FLOOR PLAN - SECOND FLOOR - AREA E - MEZZANINE EL-201A LIGHTING PLAN - FIRST FLOOR - AREA A EL-201B LIGHTING PLAN - FIRST FLOOR - AREA B EL-201C LIGHTING PLAN - FIRST FLOOR - AREA C EL-201D LIGHTING PLAN - FIRST FLOOR - AREA D EL-201E LIGHTING PLAN - FIRST FLOOR - AREA E EL-201F LIGHTING PLAN - FIRST FLOOR - AREA F EL-201G LIGHTING PLAN - FIRST FLOOR - AREA G EL-201H LIGHTING PLAN - FIRST FLOOR - AREA H EL-202A LIGHTING PLAN - SECOND FLOOR - AREA A - MEZZANINE EL-202E LIGHTING PLAN - SECOND FLOOR - AREA E - MEZZANINE E-301 ELECTRICAL ROOF PLAN E-401 ENLARGED ELECTRICAL PLANS - KITCHEN E-501 ELECTRICAL ONE-LINE AND RISER DIAGRAMS E-502 ELECTRICAL ONE-LINE AND RISER DIAGRAMS E-503 ELECTRICAL ONE-LINE AND RISER DIAGRAMS E-601 ELECTRICAL DETAILS AND FIXTURE SCHEDULE E-602 ELECTRICAL DETAILS, SYMBOL LEGEND AND GENERAL NOTES E-603 ELECTRICAL LIGHTING CONTROL DETAILS

PLUMBING

PS-101 PLUMBING SITE PLAN PU-101A PLUMBING UNDERFLOOR PLAN - AREA A PU-101B PLUMBING UNDERFLOOR PLAN - AREA B PU-101C PLUMBING UNDERFLOOR PLAN - AREA C PU-101D PLUMBING UNDERFLOOR PLAN - AREA D PU-101E PLUMBING UNDERFLOOR PLAN - AREA E PU-101F PLUMBING UNDERFLOOR PLAN - AREA F PU-101G PLUMBING UNDERFLOOR PLAN - AREA G PU-101H PLUMBING UNDERFLOOR PLAN - AREA H P-101A PLUMBING FLOOR PLAN - FIRST FLOOR - AREA A P-101B PLUMBING FLOOR PLAN - FIRST FLOOR - AREA B P-101C PLUMBING FLOOR PLAN - FIRST FLOOR - AREA C P-101D PLUMBING FLOOR PLAN - FIRST FLOOR - AREA D P-101E PLUMBING FLOOR PLAN - FIRST FLOOR - AREA E P-101F PLUMBING FLOOR PLAN - FIRST FLOOR - AREA F P-101G PLUMBING FLOOR PLAN - FIRST FLOOR - AREA G P-101H PLUMBING FLOOR PLAN - FIRST FLOOR - AREA H P-103 PLUMBING FLOOR PLAN - SECOND FLOOR - AREA A - MEZZANINE P-301 PLUMBING ROOF PLAN P-401 PLUMBING ENLARGED PLAN P-501 PLUMBING SCHEDULE

ELECTRICAL LIGHTING CONTROL DETAILS

ELECTRICAL PANEL SCHEDULE

E-604

E-701

E-702

E-703

E-704

P-601

P-602

TN-203

TN-204

TN-301

TN-401

TN-402

P-701 PLUMBING RISERS P-702 PLUMBING RISERS TECHNOLOGY TECHNOLOGY SYMBOLS AND LEGENDS TS-101 TECHNOLOGY SITE PLAN TF-101 FIRE ALARM OVERALL FIRST LEVEL FLOOR PLAN TF-101A FIRE ALARM FLOOR PLAN - FIRST FLOOR - AREA A TF-101B FIRE ALARM FLOOR PLAN - FIRST FLOOR - AREA B TF-101C FIRE ALARM FLOOR PLAN - FIRST FLOOR - AREA C TF-101D FIRE ALARM FLOOR PLAN - FIRST FLOOR - AREA D TF-101E TF-101F

PLUMBING DETAILS

PLUMBING DETAILS

FIRE ALARM FLOOR PLAN - FIRST FLOOR - AREA E FIRE ALARM FLOOR PLAN - FIRST FLOOR - AREA F TF-101G FIRE ALARM FLOOR PLAN - FIRST FLOOR - AREA G TF-101H FIRE ALARM FLOOR PLAN - FIRST FLOOR - AREA H TF-102E FIRE ALARM FLOOR PLAN - SECOND FLOOR - AREA E - MEZZANINE TN-101 TECHNOLOGY OVERALL FIRST LEVEL FLOOR PLAN TN-101A NETWORK FLOOR PLAN - FIRST FLOOR - AREA A TN-101B NETWORK FLOOR PLAN - FIRST FLOOR - AREA B TN-101C NETWORK FLOOR PLAN - FIRST FLOOR - AREA C TN-101D NETWORK FLOOR PLAN - FIRST FLOOR - AREA D TN-101E NETWORK FLOOR PLAN - FIRST FLOOR - AREA E TN-101F NETWORK FLOOR PLAN - FIRST FLOOR - AREA F TN-101G NETWORK FLOOR PLAN - FIRST FLOOR - AREA G TN-101H NETWORK FLOOR PLAN - FIRST FLOOR - AREA H TN-102E TECHNOLOGY FLOOR PLAN - AREA E - MEZZANINE TN-201 ENLARGED MDF/IDF PLANS MDF/IDF RISER DIAGRAMS TN-202

> TOPCAT AND CAFETERIA SYSTEMS DETAILS GYMNASIUM LOCAL SOUND SYSTEM DETAILS

ENLARGED DIAGRAMS

ENLARGED DIAGRAMS

TECHNOLOGY MDF/IDF RISER DETAILS

FOOD SERVICE

COLLABORATION AREAS TOPCAT SPEAKER SYSTEM DETAILS

FS EQUIPMENT PLAN FS FACILITY MODEL **FS EQUIPMENT MODEL** FS SPECIAL CONDITIONS PLAN FS PLUMBING PLAN FS ELECTRICAL PLAN K1.5 FS EXHAUST HOODS FS CONDENSING UNITS FS WALK-INS FS SERVING COUNTERS K1.10 **FS ELEVATIONS** K1.11 FS SECTIONS & DETAILS K1.12 **FS DETAILS** 

11 Greenway Plaza, 22nd Floor

713-965-0608 P

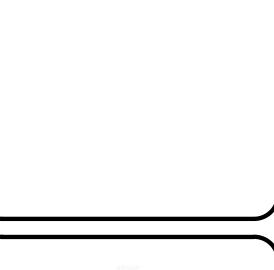
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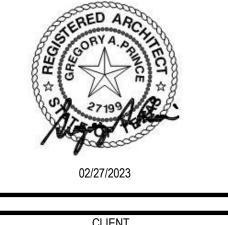
TX Firm: BR 1608

DIG ENGINEERS

FOOD SERVICE FOODSERVICE DESIGN PROFESSIONAL

Houston, TX 77046





TOMBALL ISD PROJECT NUMBER 220137 DRAWING HISTORY Description Date **ISSUE FOR PROPOSAL BUILDING NUMBER** 

SHEET INDEX

**GENERAL NOTES** ABBREVIATIONS AND LEGEND KEYS REFER TO SCHEDULES AND LEGENDS FOR ADDITIONAL ABBREVIATIONS A. THE CONSTRUCTION DOCUMENTS ARE TO INCLUDE AIA DOCUMENT A201 "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION". CLIENT SHALL BE DESIGNATED AS "THE OWNER", PBK SHALL BE REFER TO OTHER DISCIPLINES FOR ADDITIONAL ABBREVIATIONS DESIGNATED AS "THE ARCHITECT". FACILITY SHALL BE DESIGNATED AS "THE LANDLORD". THE CONTRACT DOCUMENT SHALL ALSO INCLUDE THE AGREEMENT. PERFORMANCE AND PAYMENT BONDS. GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, THE SPECIFICATIONS, THE DRAWINGS ADDENDUM, AND CONTRACT MODIFICATIONS, BUILDING RULES AND REGULATIONS & ANY OTHER DOCUMENTS **EQUIP** SYM REQUIRED BY THE OWNER. miscellaneous symmetrical ABV ETR existing to remain B. THE GENERAL CONTRACTOR SHALL BE BOTH LICENSED AND BONDED IN STATE OF PROJECT LOCATION AND SHALL PROVIDE DOCUMENTS UPON REQUEST. masonry opening ACOUS acoustical each way C. THE WORK SHALL BE DONE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF ALL APPLICABLE SAFETY AND BUILDING CODES, AND AS APPROVED BY THE AUTHORITY HAVING JURISDICTION. THE MTD mounted GENERAL CONTRACTOR IS RESPONSIBLE FOR SECURING AND PAYING FOR ALL PERMITS REQUIRED FOR THE WORK AND FOR THE SCHEDULING OF ALL REQUIRED INSPECTIONS DURING THE COURSE OF THE ACT EXP. JT. expansion joint tread acoustical ceiling tile metal EXST T&G area drain existing tongue & groove D. THE GENERAL CONTRACTOR SHALL REVIEW AND VERIFY EXISTING CONDITIONS AS PROVIDED IN THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ALL DISCREPANCIES, ADJ adjustable telephone ERRORS, INCONSISTENCIES OR AMBIGUITIES PRIOR TO PROCEEDING WITH THE WORK. AFF above finished floo TER north E. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR, AND PROVIDE PROTECTION OF, ANY EXISTING FINISHES, MATERIALS, AND EQUIPMENT TO REMAIN. THE GENERAL CONTRACTOR SHALL REPAIR OR ALT F.O. THK alternate face of not in contract thick REPLACE ANY DAMAGED FINISHES, MATERIALS, AND EQUIPMENT AS A RESULT OF THE WORK. ALL EXISTING FINISHES TO REMAIN SHALL BE CLEANED AT THE COMPLETION OF CONSTRUCTION. THE GENERAL ALUM fire alarm THR aluminum number threshold CONTRACTOR SHALL PHOTOGRAPH AND DOCUMENT ALL EXISTING DAMAGES, AND PROVIDE TO THE ARCHITECT, PRIOR TO PROCEEDING WITH THE WORK. APPROX approximate fire annunciuator panel NOM nominal top of F. ALL MATERIALS AND SYSTEMS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL CONSTRUCTION SHALL BE OF INDUSTRY STANDARD OR BETTER. THE ARCHITECT SHALL BE FINAL JUDGE OF ARCH architect floor drain NTS not to scale TYP G. ONLY NEW MATERIALS AND EQUIPMENT OF RECENT MANUFACTURE, OF STANDARD QUALITY AND FREE FROM DEFECTS, WILL BE PERMITTED IN THE WORK, UNLESS OTHERWISE NOTED. REJECTED fire extinguisher MATERIALS AND EQUIPMENT SHALL BE REMOVED IMMEDIATELY FROM THE WORK AND REPLACED WITH MATERIALS AND EQUIPMENT OF THE QUALITY SPECIFIED. FAILURE TO REMOVE REJECTED MATERIALS fire extinguisher cabinet AND EQUIPMENT SHALL NOT RELIEVE THE GENERAL CONTRACTOR FROM THE RESPONSIBILITY FOR QUALITY OF MATERIAL AND EQUIPMENT USED NOR FROM ANY OTHER OBLIGATION IMPOSED BY THE B.O. O.P. bottom of finish group overflow pipe UC undercut BALC UNFIN balcony fire hydrant OA overall unfinished IN THE EVENT OF CONFLICT BETWEEN DATA SHOWN ON DRAWINGS AND DATA PROVIDED IN THE SPECIFICATION, THE SPECIFICATION SHALL GOVERN. DETAIL DRAWINGS TAKE PRECEDENT OVER DRAWINGS UNO fire hose cabinet on center unless noted otherwise OF LARGER SCOPE. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE ARCHITECT OF ANY DISCREPANCIES, PRIOR TO PROCEEDING WITH THE WORK. IN CASE OF AN INCONSISTENCY BET UON outside diamete unless otherwise noted BETWEEN DRAWINGS AND SPECIFICATIONS OR WITHIN EITHER DOCUMENT, NOT CLARIFIED BY ADDENDUM, THE MORE SPECIFIC PROVISION SHALL TAKE PRECEDENCE. BLDG FLR UTIL DO NOT SCALE DRAWINGS. STATED & WRITTEN DIMENSIONS GOVERN. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL BE RESPONSIBLE FOR THEIR ACCURACY. NO BLKG FLUOR fluorescent blocking opposite hand EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED BECAUSE OF DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND THOSE INDICATED ON THE DRAWINGS, UNLESS THEY CONTRIBUTE TO A CHANGE IN BLW THE SCOPE OF THE WORK. ANY DIFFERENCE FOUND SHALL BE SUBMITTED TO THE ARCHITECT FOR COORDINATION PRIOR TO ORDERING, MANUFACTURING, OR PROCEEDING WITH THE WORK. HORIZONTAL foot or feet OPG below DIMENSIONS INDICATED ARE TO/FROM FACE OF FINISH, UNLESS NOTED OTHERWISE. VERTICAL DIMENSIONS ARE FROM TOP OF FLOOR SLAB EXCEPT WHERE NOTED TO BE ABOVE FINISHED FLOOR (AFF). FUR OPP VCT opposite vinyl compostion tile DIMENSIONS ARE NOT ADJUSTABLE WITHOUT APPROVAL OF ARCHITECT UNLESS NOTED +/-. BOT **VERT** bottom vertical . THE GENERAL CONTRACTOR SHALL VERIFY THAT NO CONFLICTS EXIST BETWEEN THE LOCATIONS OF EXISTING AND PROPOSED NEW MECHANICAL, ELECTRICAL, PLUMBING, DATA, AND SPRINKLER BRKT verify in field bracket EQUIPMENT (INCLUDING BUT NOT LIMITED TO STRUCTURAL MEMBERS, PIPING, DUCT WORK, CONDUIT AND SPRINKLERS) AND THAT CLEARANCES FOR INSTALLATION AND MAINTENANCE OF EQUIPMENT ARE PART BULKHD bulkhead VTR gallon vent termination pipe PROVIDED. ELEMENTS IN CONFLICT SHALL BE DOCUMENTED AND PROVIDED TO THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK. BUR built up roof GALV PERM VWC vinyl wall covering galvanized perimeter K. THE GENERAL CONTRACTOR SHALL PROVIDE THE ARCHITECT WITH SHOP DRAWINGS FOR REVIEW AND APPROVAL, FOR ALL, BUT NOT LIMITED TO, THE FOLLOWING: SHOP-FABRICATED MILLWORK, CARPET grab bar paint grade LAYOUT, FLOORING, LIGHT FIXTURES, DOORS, MISC. STEEL, METAL FABRICATION, GLASS/GLAZING, SPRINKLER LAYOUTS, HARDWARE. SHOP DRAWINGS SHALL BE SUBMITTED IN THE FORM OF 3 SETS OF general contractor PLAM plastic laminate PRINTS. SHOP DRAWINGS SHALL NOT BE REPRODUCTIONS OF CONTRACT DOCUMENTS. MATERIAL SUBMITTALS (3 SAMPLES) SHALL BE PROVIDED FOR WOOD, FASTENERS, ACRYLIC, CARPET, TILE, BASE, PAINT. LAMINATE AND ANY OTHER MATERIALS INDICATED IN THE SHOP DRAWING. PLAS C.G. corner guard .. THE GENERAL CONTRACTOR SHALL PROVIDE THE ARCHITECT WITH MANUFACTURER'S CUT SHEETS AND SPECIFICATIONS FOR ALL EQUIPMENT INCLUDING BUT NOT LIMITED TO: LIGHT FIXTURES, PLUMBING CAB cabinet GND PLYWD with ground EQUIPMENT, ELECTRICAL EQUIPMENT, FANS, SUPPLEMENTARY HEATING AND COOLING ELEMENTS, ALL HARDWARE AND SECURITY EQUIPMENT. gypsum board CALK caulking GWB PR W/O without pair M. THE GENERAL CONTRACTOR SHALL NOT PROCEED WITH WORK FOR WHICH HE EXPECTS ADDITIONAL COMPENSATION BEYOND THE CONTRACT AMOUNT WITHOUT WRITTEN AUTHORIZATION FROM THE CEM GYP PT paint WC cement gypsum waterclose ARCHITECT AND OWNER. FAILURE TO OBTAIN SUCH AUTHORIZATION SHALL INVALIDATE A CLAIM FOR EXTRA COMPENSATION. THE CONTRACTOR SHALL NOT PROCEED WITH WORK WHICH, IF COMPLETED IN CER PTD WIN ceramic STRICT CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS, WILL RESULT IN ADDITIONAL WORK BEYOND THE SCOPE OF THE CONTRACT WITHOUT WRITTEN AUTHORIZATION FROM THE ARCHITECT AND control ioin waterproof OWNER. ANY FIELD CONDITIONS THAT SIGNIFICANTLY VARY FROM THE CONTRACT DOCUMENTS OR WILL RESULT IN ADDITIONAL WORK, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO CLG H.W.H. hot water heater wetstack CLOS closet handicapped WSCT wainscot N. THE GENERAL CONTRACTOR SHALL INCLUDE ALL X-RAY AND CORE DRILL COSTS. THE GENERAL CONTRACTOR SHALL REVIEW AND COORDINATE THE SIZE AND LOCATION OF ALL SLAB OPENINGS WITH ALL CLR RAD RELATED DISCIPLINES. THE GENERAL CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS OF CORE DRILLING AND SLAB OPENINGS TO ARCHITECT AND STRUCTURAL ENGINEER OF RECORD FOR REVIEW clear HDWD radius weight hardwood CO HDWR RCP reflected ceiling pla O. PATCH, REPAIR, AND INSTALL ALL FIREPROOFING AS REQUIRED BY CODE. FIREPROOF ALL NEW PENETRATIONS AS REQUIRED FOR APPROVAL BY THE AUTHORITY HAVING JURISDICTION. COL hollow metal roof drain column P. WHERE BUILDING SEISMIC JOINTS ARE LOCATED, THE GENERAL CONTRACTOR SHALL PROVIDE APPLICABLE CODE AND INDUSTRY BEST PRACTICES FOR ROUTING OF ALL PIPING, DUCTS, CONDUITS AND CONC HORIZ horizontal refer concrete CONT continous refrigerator Q. THE GENERAL CONTRACTOR SHALL CONTINUOUSLY CHECK ARCHITECTURAL AND STRUCTURAL CLEARANCES FOR ACCESSIBILITY OF EQUIPMENT AND MECHANICAL AND ELECTRICAL SYSTEMS. NO CPT carpet height REINF reinforced ALLOWANCES OF ANY KIND WILL BE MADE FOR THE GENERAL CONTRACTOR'S NEGLIGENCE TO FORESEE MEANS OF INSTALLING EQUIPMENT INTO POSITION. REQD ceramic tile required R. THE FINISHED WORK SHALL BE FIRM, WELL-ANCHORED, IN TRUE ALIGNMENT, PLUMB, LEVEL, WITH SMOOTH, CLEAN, UNIFORM, APPEARANCE WITHOUT WAVES, DISTORTIONS, HOLES, MARKS, CRACKS, STAINS, CTR RESIL center OR DISCOLORATION. JOINTING SHALL BE CLOSE FITTING, NEAT AND WELL SCRIBED. THE FINISHED WORK SHALL HAVE NO EXPOSED UNSIGHTLY ANCHORS OR FASTENERS AND SHALL NOT PRESENT RM room inner diameter HAZARDOUS, UNSAFE CORNERS. ALL WORK SHALL HAVE THE PROVISION FOR EXPANSION, CONTRACTION AND SHRINKAGE AS NECESSARY TO PREVENT CRACKS, BUCKLING, AND WARPING DUE TO INCAN TEMPERATURE AND HUMIDITY CONDITIONS. DBL double INSUL insulation S. ATTACHMENTS, CONNECTIONS OR FASTENERS OF ANY NATURE ARE TO PROPERLY AND PERMANENTLY BE SECURED IN CONFORMANCE WITH INDUSTRY BEST PRACTICES. THE DRAWINGS HIGHLIGHT DET SPECIAL CONDITIONS ONLY AND BY NO MEANS ILLUSTRATE EVERY CONNECTION. THE CONTRACTOR IS RESPONSIBLE FOR IMPROVING CONNECTION ACCORDINGLY. detail interior RO rough opening T. GENERAL CONTRACTOR SHALL WAIVE "COMMON PRACTICE" AND "COMMON USAGE" AS CONSTRUCTION CRITERIA WHEREVER DETAILS AND CONTRACT DOCUMENTS OF GOVERNING CODES, ORDINANCES, DIA RTU root top unit (mech) ETC. REQUIRE QUANTITY OR BETTER QUALITY THAN COMMON PRACTICE OR COMMON USAGE WOULD REQUIRE. DIM dimension south U. THE GENERAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SUBMITTALS AND SHALL ORDER AND SCHEDULE DELIVERY OF MATERIALS TO AVOID DELAYS IN CONSTRUCTION. IF AN ITEM IS FOUND TO BE SAFB sound attenunation fiber bat UNAVAILABLE OR TO HAVE A LONG LEAD TIME, THE GENERAL CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY WITH A PROPOSED ALTERNATIVE. ioist SC scupper V. THE GENERAL CONTRACTOR SHALL NOTIFY THE OWNER, THE LANDLORD, AND THE ARCHITECT IN WRITING OF ANY DEFICIENCIES IN BASE BUILDING WORK PRIOR TO THE COMMENCEMENT OF THE WORK. DS SCHED schedule down spout ANY UNREPORTED DEFICIENCIES WILL BECOME THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO CORRECT. DW SEAL dishwasher W. THE GENERAL CONTRACTOR SHALL EXERCISE INDUSTRY BEST PRACTICES FOR CARE AND CAUTION DURING THE CONSTRUCTION OF THE WORK, AND SHALL SCHEDULE WORK TO MINIMIZE DISTURBANCES TO DWG SECT OCCUPANTS, ADJACENT SPACES AND/OR STRUCTURES, PROPERTY, PUBLIC THOROUGHFARES, ETC. THE GENERAL CONTRACTOR SHALL TAKE PRECAUTIONS AND BE RESPONSIBLE FOR THE SAFETY OF ALL square fo BUILDING OCCUPANTS DURING CONSTRUCTION PROCEDURES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COSTS INCURRED. X. ALL DEBRIS SHALL BE REMOVED FROM THE SITE ON A DAILY BASIS. OR AS DIRECTED BY THE AUTHORITY HAVING JURISDICTION. UPON COMPLETION OF THE WORK, REMOVE ALL DEBRIS FROM THE BUILDING CREATED BY THE WORK PROVIDED UNDER THIS CONTRACT AND LEAVE ALL AREAS CLEAN. TRASH IS NOT PERMITTED TO BE BURNED ON SITE. LB(S) pounds similar Y. ALL ABANDONED AND MISCELLANEOUS NAILS, HANGERS, STAPLES, WIRES, CONDUITS AND DEBRIS SHALL BE REMOVED FROM EXPOSED AREAS OF THE FLOORS, WALLS, AND CEILINGS. REMOVE ALL SPEC LDG landing specification ABANDONED PIPE SLEEVES IN FLOOR SLABS. PATCH EXISTING SLAB AS REQUIRED TO MAINTAIN UL FIRE RATING OF FLOOR SLAB WHERE PIPES AND CONDUITS HAVE BEEN REMOVED. EIFS exterior insulation & finish system Z. SLAB PENETRATIONS SHALL BE SEALED AS REQUIRED TO MAINTAIN FIRE RATING, USING MATERIALS AND METHODS APPROVED BY THE AUTHORITY HAVING JURISDICTION. EXPANSION MATERIAL SHALL BE APPROVED BY THE ARCHITECT. ELEV elevation ZA. THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY ACCESS PANELS WHICH MAY BE REQUIRED PRIOR TO PROCEEDING WITH THE WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR **EMER** emergency COORDINATING ALL TRADES. REQUIRED ACCESS PANELS SHALL BE INCLUDED IN THE CONTRACTOR'S SCOPE OF WORK. STOR enclosure ZB. CONTRACTOR SHALL PROVIDE THE TEAM WITH A CONSTRUCTION SCHEDULE SHOWING THE PROPOSED PHASING. LONG LEAD ITEMS THAT WILL AFFECT THE SUBSTANTIAL COMPLETION DATE SHALL BE EOS STRUCT structural edge of slab BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY equal manufacturer minimum **VICINITY MAP** PROJECT GRAPHIC REFERENCES **CONSTRUCTION TYPE SYMBOLS** ACT-1 - CEILING TYPE 8'-0" **CEILING HEIGHT** EXISTING CONSTRUCTION TO REMAIN PLAN NORTH **NORTH ARROW**  EXISTING CONSTRUCTION TO BE — EXISTING CONS

DEMOLISHED **COLUMN LINE** TRUE NORTH NORTH ARROW **NEW NON-RATED** REFERENCE CONSTRUCTION **WORKING POINT** LEVEL POINT **EXISTING/NEW** MATERIAL INDICATIONS **DATUM POINT COLUMN LINE SPOT ELEVATION** REFERENCE CONCRETE TOP OF FRAMING/STEEL FIRE RATING TYPE **-DETAIL NUMBER CORE STRUCTURAL WIDTH TYPE** SHEET NUMBER **COMPOSITION TYPE** I / A101 CALLOUT CONC. MASONRY UNITS **PARTITION TYPE TAG** REFERENCE (CMU) (RE: PARTITION SCHEDULE) -REFERENCE RIGID INSULATION BLDG AREA -LEVEL **DOOR SEQUENCE** BATT INSULATION (RE: DOOR SCHEDULE) EXTERIOR REFERENCE ACOUSTICAL TILE / North/ **ELEVATION NUMBER** FABRIC PANEL -ROOM NAME GYPSUM BOARD (RE: ROOM FINISH SCHEDULE) -ROOM SEQUENCE PLASTER ON METAL LATH –LEVEL –BLDG AREA PROJECT GRAPHIC REFERENCES REFERENCE -ELEVATION NUMBER FINISH WOOD -SHEET NUMBER SHEET CONTINUOUS WOOD NUMBER REFERENCE MATCHLINE MATCHLINE **BLOCKING / SHIM BUILDING SECTION** A-201A1 SEE ?//A?01 VIEW REFERENCE REFERENCE PLYWOOD **DETAIL NUMBER** 

- FLIP SHEET (Schedules)

**BUILDING AREA** 

**SUBDISCIPLINE** 0

D DEMO

S SITE

I INTERIOR

F FURNITURE

Q EQUIPMENT

L LIFE SAFETY

GENERAL

CA SPORTS CIVIL

SA SPORTS ARCH

STRUCTURAL

LANDSCAPE

DEMOLITION

MECHANICAL

ELECTRICAL

PLUMBING TECHNOLOG\

FS FOOD SERVICE

AV ACOUSTICAL

TH THEATRICAL

ARCHITECTURA

LEVEL REFERENCE

**SHEET SERIES TYPE** 

GENERAL

CEILING

ENLARGED PLANS

BLDG DETAILS

MISCELLANEOUS

PLANS: (Site, Floor, Finish, Graphics)

ELEVATIONS (Exterior & Interior)

DIAGRAMS/COMPILED SCHEDULES:

Door & Panel/Frame Types, Window Types)

(Partition Types, Casework/Millwork,

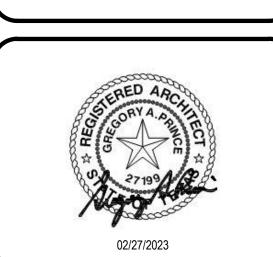
SECTIONS: (Bldg & Wall)

PROJECT SUMMARY

THIS PROJECT CONSISTS OF A NEW 121,180 SF ELEMENTARY SCHOOL WITH ACADEMIC INSTRUCTION AREAS, A RESOURCE CENTER, ART AND FINE ARTS CLASSROOMS, GYMNASIUM, CAFETERIA WITH A PLATFORM, AND ADMINISTRATIVE OFFICES.

SITE IMPROVEMENTS INCLUDE FACULTY AND VISITOR PARKING AREAS TOTALING 186 SPACES; DROP-OFF AREAS FOR BUSES, AUTOMOBILES, SPECIAL EDUCATION, DAY-CARE VEHICLES

11 Greenway Plaza, 22nd Floor Houston, TX 77046 713-965-0608 P 713-961-4571 F TX Firm: BR 1608 DIG ENGINEERS FOOD SERVICE FOODSERVICE DESIGN PROFESSIONAL



TOMBALL ISD PROJECT NUMBER 220137 DRAWING HISTORY Description **ISSUE FOR PROPOSAL BUILDING NUMBER GENERAL PROJECT** 

**INFORMATION** 

→ FFE1

**CW1** 

\_\_\_\_C01

 $\overline{\hspace{1cm}}$   $W1\rangle$ 

——— AB-1

FF&E TAG

STOREFRONT TAG

WINDOW & LOUVER TAG

CASEWORK TYPE (AWI SERIES)

**KEYNOTE TAG** 

**REVISION TAG** 

-FINISH MATERIAL

SIZE (WxD)

-SHEET NUMBER

-REFERENCE

**WALL SECTION** 

-DETAIL NUMBER

-SHEET NUMBER

REFERENCE

**ABOVE LINE** 

**BEYOND LINE** 

**BREAK LINE** 

€ — – — CENTER LINE, & SYMBOL

EARTH

STEEL

ALUMINUM

STONE

GRAVEL

\_\_\_\_\_\_ SEALANT

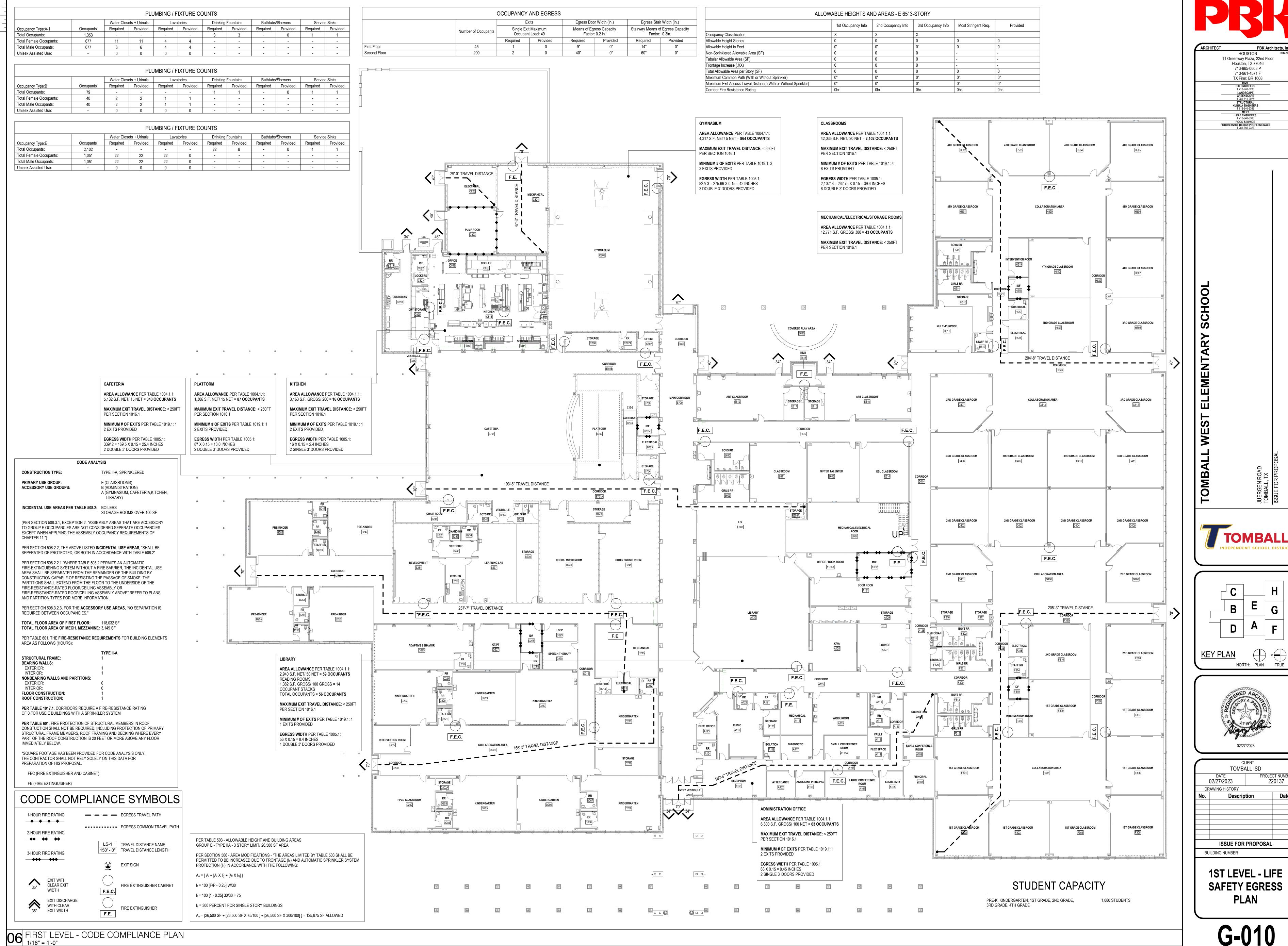
ROD STOCK & SEALANT

/ SAND / MORTAR

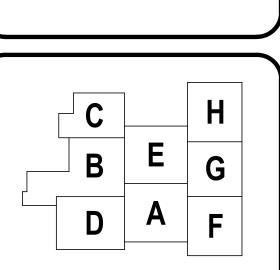
CAST STONE / SPRAY ON INSULATION

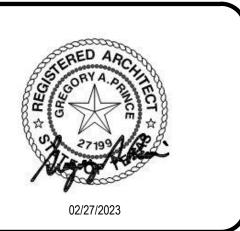
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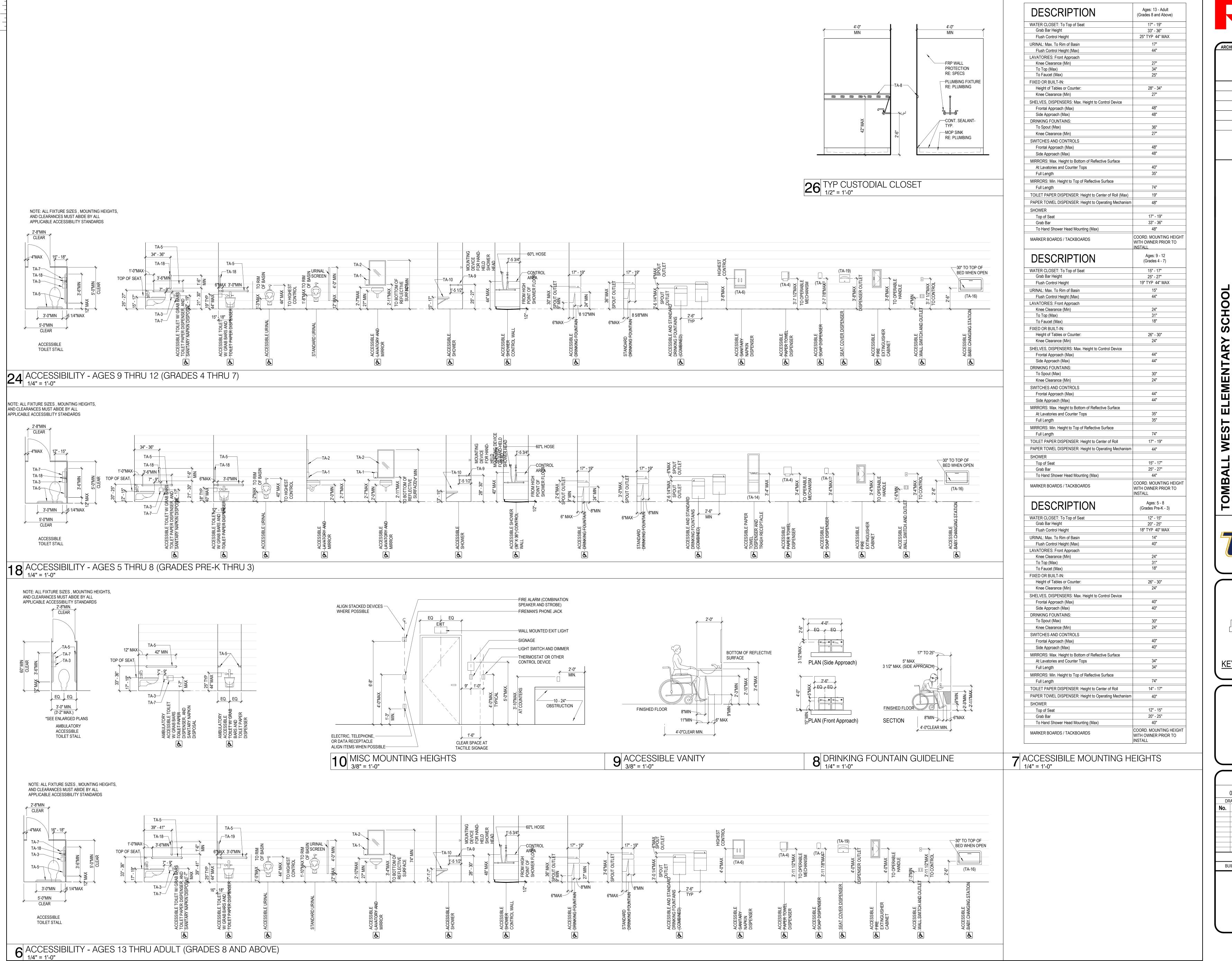
11 Greenway Plaza, 22nd Floor





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No.	Descript	tion	Date	
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BU	ILDING NUMBER			
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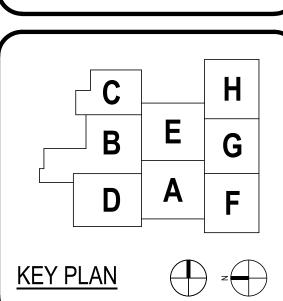
SAFETY EGRESS



RBK

ALL WEST ELEMENTARY SCHOOL

TOMBALL INDEPENDENT SCHOOL DISTRICT





NORTH: PLAN TRUE

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	TOMBA	ALL ISD	
02	DATE 2/27/2023	PRO	JECT NUMBER 220137
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No.	Descrip	tion	Date
	ISSUE FOR	PROPOSA	<b>A</b> L
BUILI	DING NUMBER		

ACCESSIBILITY GUIDELINES

G-020

Design No. X771

1. Steel Pipe or Tube Column—Steel circular pipe with diameter (OD) ranging from a minimum of 3 in. to a maximum of 32 in. with a minimum wall thickness of 3/16 in. Steel square or rectangular tube with outside wall dimensions ranging from a minimum 3 in. to a maximum of 32 in. and a minimum wall thickness of 3/16 in. The A/P ratio of the steel pipe or tube (see Item 2) shall range from 0.18

2. Spray-Applied Fire Resistive Materials\*—Applied by mixing with water and spraying in one or more coats to steel surfaces which must be clean and free of dirt, loose scale and oil. Min avg and ind density of 15/14 pcf respectively. For method of density determination, see Design Information Section, preceding these designs. The hourly rating of the structural member is dependent upon the ratio of A/P and the thickness of Spray-Applied Fire Resistive Materials, where A is the cross sectional area of the pipe or tube and P is the heated

The A/P ratio of a circular pipe is determined by:

d is the outer diameter of the pipe (in.)

t is the wall thickness of the pipe (in.) The A/P ratio of a rectangular or square tube is determined by:

a is the outer width of the tube (in.) b is the outer length of the tube (in.) t is the wall thickness of the tube (in. The thickness of Spray-Applied Fire Resistive Materials for ratings of 3/4, 1, 1-1/2, 2, 3 and 4 h of a steel pipe or tube can be determined by the equation:

R - 0.20

R is the hourly rating (hrs). h is the thickness of Spray-Applied Fire Resistive Materials, minimum

1/4 in., maximum 3-7/8 in.

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Construction Products Div. W. R. Grace & Co. of Canada Ltd.—Types MK-4, MK-5. Grace Construction Products—Types MK-4, MK-5, MK-6/HY, MK-6s Grace Korea Inc.—Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6s. Pyrok Inc.—Type LD. Southwest Vermiculite Co., Inc.—Types 4, 5, 5EF, 5GP, 5MD, 8EF,

8GP, 8MD, 9EF, 9GP, 9MD. **Vermiculite Prods. Inc.**—Types MK-4, MK-5. \*Bearing the UL Classification Marking

2 HR WALL CONSTRUCTION

TYP. CMU EXCEEDS REQUIREMENT

**UL DESIGN NO. U905** 

norizontal Section

Design No. U905

Bearing Wall Rating-2 HR.

Nonbearing Wall Rating-2 HR

Concrete Blocks\*—Various designs. Classification D-2 (2 hr).
 See Concrete Blocks category for list of eligible manufacturers.

hydrated lime (by cement volume). Vertical joints staggered.

insulation add 2 hr to classification.

\*Bearing the UL Classification Marking

sheathing attached to concrete blocks (Item 1).

Celotex Corp. — Type Thermax

Mortar—Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less

than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part

Portland cement (proportioned by volume) and not more than 50 percent

fication if used. Where combustible members are framed in wall, plaster

or stucco must be applied on the face opposite framing to achieve a max.

4. Loose Masonry Fill-If all core spaces are filled with loose dry expanded

slag, expanded clay or shale (Rotary Kiln Process), water repellant

vermiculite masonry fill insulation, or silicone treated pertite loose fill

Foamed Plastic\*—(Optional-Not Shown)—1-1/2 in. thick max, 4 ft wide

3. Portland Cement Stucco or Gypsum Plaster-Add 1/2 hr to classi-

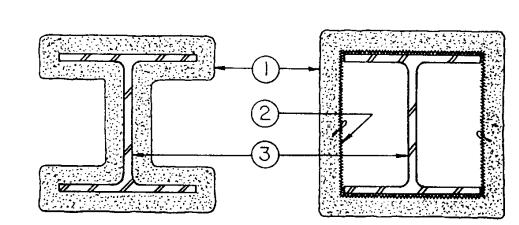
Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).

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#### **UL DESIGN NO. X772**

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Design No. X772 Ratings—1, 1-1/2, 2, 3 and 4 h.



1. Spray-Applied Fire Resistive Materials\*—Applied by mixing with water and spraying in more than one coat to the thicknesses shown below, to steel surfaces which are clean and free of dirt, loose scale, and oil. Min avg and min ind density of 15/14 pcf respectively. For method of density determination, see Design Information Section, Sprayed Material. The thickness of Spray-Applied Fire Resistive Materials to be applied to all surfaces of the column (Item 1) required for rating periods of 1 h, 1-1/2 h, 2 h, 3 h, 4 h may be determined by the equation:

1.05 (W/D) + 0.61

W = Weight of steel column in lbs per foot

h = Spray-Applied Fire Resistive Materials thickness in the range 0.25-3.875 in. R = Fire resistance rating in hours (1 - 4 h)D = Heated perimeter of steel column in inches

W/D = 0.33 to 6.62As an alternate to the equation, the minimum thickness of Spray-Applied Fire Resistive Materials required for various fire resistance ratings of contour sprayed or boxed columns may be determined from the table below:

Column Size 0.33 1-1/8 2-1/2 W6x16 13/16 1-11/16 2-1/2 3-5/16 1-3/8 1-3/16 2-11/16 W10x49 0.83 1-1/8 11/16 1-11/16 7/8 2-1/2 W14x228 2.49 5/16 9/16 7/8 5/16 The thicknesses contained in the table below are applicable when the Spray-Applied Fire Resistive Materials applied to columns' flange tips are reduced to one-half that shown in the table below: Column Size 0.33 1-1/8 1-5/8 2-1/16 2-15/16 3-13/16 1-5/16 1-3/4 2-9/16 2-1/4 2-1/16 1-1/2 2-15/16 13/16 1-3/16 1-3/8 W10x49 1-1/16 2-3/4 11/16 1-3/16 5/16 9/16

5/16

Construction Products Div., W. R. Grace & Co. of Canada Ltd.—Types MK-4 or MK-5. Grace Construction Products—Types MK-4, MK-5, MK-6/HY, MK-6s, Grace Korea Inc.—Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6s.

Pyrok Inc.—Type LD. Southwest Vermiculite Co., Inc.—Types 4, 5, 5EF, 5GP, 5MD, 8EF, 8GP, 8MD, 9EF, 9GP, 9MD. Vermiculite Products, Inc.—Type MK-4 or MK-5

2. Metal Lath—(Optional for contour application)—3.4 lb/sq yd galvanized or painted expanded steel lath. Lath shall be lapped 1 in, and tied together with No. 18 SWG galvanized steel; wire spaced vertically 6 in.

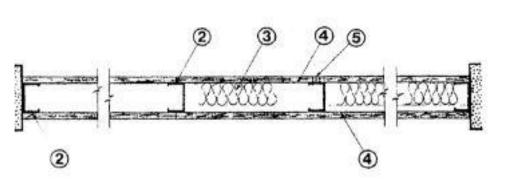
3. Steel Column—Wide flange steel column, min sizes as shown in the tables below. \*Bearing the UL Classification Marking

#### **2 HR WALL CONSTRUCTION** TYP. CMU EXCEEDS REQUIREMENT **UL DESIGN NO. U465**

Nonbearing Wall Rating—1 HR.

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Design No. U465



 Floor and Ceiling Runners—(not shown)—Channel shaped runners, 3-5/8 in. wide (min), 1-1/4 in. legs, formed from No. 25 MSG (min) galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max. 2. Steel Studs-Channel shaped, 3-5/8 in. wide (min), 1-1/4 in. legs, 3/8 in. folded back returns, formed from No. 25 MSG (min) galv steel spaced

3. Batts and Blankets\*—(Optional)—Mineral wool or glass fiber batts partially or completely filling stud cavity.

See Batts and Blankets (BZJZ) category for names of Classified companies. 4. Wallboard, Gypsum\*-5/8 in. thick, 4 ft wide, attached to steel studs and floor and ceiling track with 1 in. long, Type S self-tapping steel screws spaced 8 in. OC. along edges of board and 12 in. OC in the field of the board. Joints oriented vertically and staggered on opposite sides of the assembly. When attached to item 6 (furring channels), wallboard is screw attached to furring channels with 1 in. long, type S steel screws spaced 12 in. OC.

American Gypsum Co.-Type AG-C. Boral Gypsum Inc.—Type BG-C. Canadian Gypsum Company-Types AR, C, IP-X2, SCX, SHX, WRC

Continental Gypsum Company-Types CG-C, CG5-5, CG6-6, CG9-9, G-P Gypsum Corp.—Types 5, 9, C, GPFS6. Lafarge Gypsum, A Div. of Lafarge Corp.—Types LGFC6, LGFC-C.

National Gypsum Co., Charlotte, NC-Types FSK-G, FSW-G. National Gypsum Co., Riyadh, Saudi Arabia-Type FR or WR. Pabco Gypsum Co.—Type PG-C. Republic Gypsum Co.-Type RG-C. Standard Gypsum Corp.—Type SG-C.

Temple-Inland Forest Products Corp. - Type TG-C. United States Gypsum Co .- Type AR, C, IP-X2, SCX, SHX, WRC or Yeso Panamericano SA de CV-Type AR, C, IP-X2, SCX, SHX, WRC

Westroc Inc.-Type Westroc Fireboard. 4A. Wallboard, Gypsum\*—(As an alternate to Item 4)—Nom 3/4 in. thick, 4 ft wide, installed as described in Item 4 with screw length increased to

Canadian Gypsum Company-Type AR. United States Gypsum Co.-Type AR.

Yeso Panamericano SA de CV-Type AR. 4B. Wallboard, Gypsum\*-(As an alternate to Items 4 and 4A) -5/8 in. thick installed as described in Item 4. Joint covering (Item 5) not

Canadian Gypsum Company---Type WSX. United States Gypsum Co.-Type WSX. Yeso Panamericano SA de CV-Type WSX.

5. Joint Tape and Compound-Vinyl, dry or premixed joint compound, applied in two coats to joints and screw heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nominal 3/32 in, thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced.

6. Furring Channel-(Optional-Not Shown)-Resilient 25 MSG galv steel furring channels spaced vertically max 24 in. OC, flange portion attached to each intersecting stud with 1/2 in. long type S-12 panhead steel \*Bearing the UL Classification Marking

#### 1 HOUR ROOF/CEILING ASSEMBLY **UL DESIGN NO. P921**

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(UI) ONLINE CERTIFICATIONS DIRECTORY

Design No. P921 BXUV.P921 Fire-resistance Ratings - ANSI/UL 263

Page Bottom

Design/System/Construction/Assembly Usage Disclaimer

• Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of Certified products, equipment, system, devices, and materials.

• Authorities Having Jurisdiction should be consulted before construction. • Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance v applicable requirements. The published information cannot always address every construction nuance encountered in the field.

• When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for ear product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alterr Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada See General Information for Fire-resistance Ratings - ANSI/UL 263

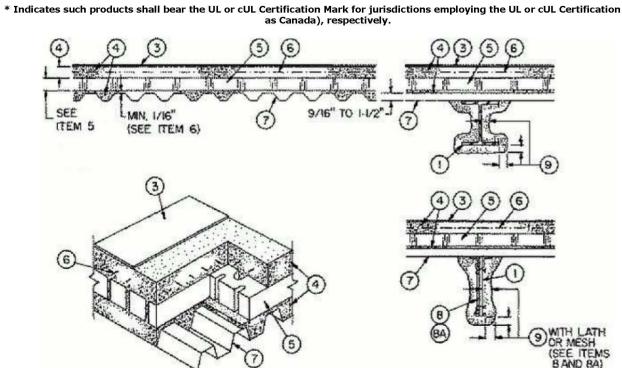
December 29, 2016

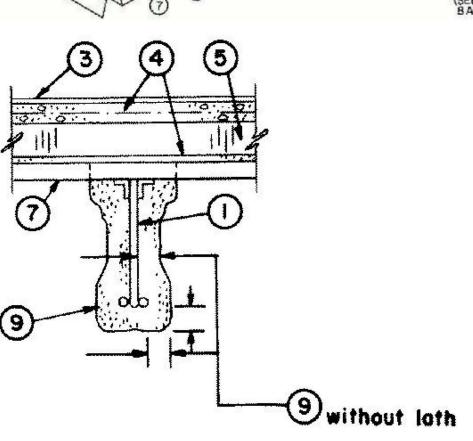
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada Design No. P921

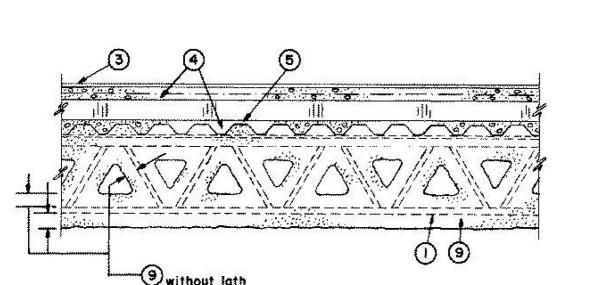
> Restrained Assembly Rating - 1, 1-1/2 or 2 Hr (See Items 4, 6, 7 and 9) Unrestrained Assembly Rating — 0 Hr (See Item 7)

Unrestrained Beam Rating - 1, 1-1/2 or 2 Hr (See Items 4, 6, 7 and 9)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress De Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used Guide <u>BXUV</u> or <u>BXUV7</u>







1. **Supports** — W6X16 or W8X10 beam. As alternate to steel beams, Joist girders — (Not shown) — 20 in. min depth and 13 lb/lin ft min weight. 1A. **Steel Joists** — 12K5 or heavier steel joist may be used as secondary support. 2. **Bridging Angles** — (Not shown) — 1-1/4 by 1-1/4 by 1/8 in. thick angles for use with steel joists. Angles welded to top and bottom chords of the joists.

3. Roof Covering\* — Consisting of hot mopped or cold application materials compatible with insulation(s) described herein which provide Class A, B or C coverings. See Roofing Materials and Systems Directory-Roof Covering Materials

3A. In lieu of Item 3, roof covering consisting of single-ply Roofing Membrane\* — that is either ballasted,

adhered or mechanically attached as permitted under the respective manufacturer's Classification. See Fire Resistance Directory — Roofing Membranes (CHCI). 4. Vermiculite Concrete — 6 cu ft of Vermiculite Aggregate\* to 94 lb of Portland cement and 0.11 lb of air entraining agent mixed with approx 25 gal of water. Min compressive strength shall be 125 psi when tested in accordance with ASTM C495. Min thickness above foamed plastic is 2 in. Min thickness between top of steel deck and bottom of foamed plastic shall be 1/16 in. when wire mesh (Item 6) is used and 1/8 in. when the wire mesh is not used. When foamed plastic (Items No. 5 through 5C) is not used the topping thickness of Vermiculite Concrete over the crests of steel deck shall be a min of 2-3/16 in. for the 1 and 1-1/2 h ratings and 2-3/8 in. for the 2 h rating. The max vermiculite concrete thickness shall be determined by job site conditions

MANDOVAL LTD MANDOVAL VERMICULITE PRODUCTS INC

PALMETTO VERMICULITE CO

SIPLAST INC THE STRONG CO INC

VERMICULITE PRODUCTS INC

4A. As an alternate to Item 4, Cellular Concrete— Roof Topping Mixture\* — Foam concentrate mixed with water and Portland cement per manufacturer's specifications. Cast dry density and 28-day compressive strength of min 190 psi as determined in accordance with ASTM C495. Min thickness above foamed plastic is 2 in. Min thickness between the to of steel deck and the bottom of foamed plastic shall be 1/8 in. When foamed plastic is not used, the min thickness of Roof Topping Mixture\* above the top of the steel deck shall be 2-3/4 in. **AERIX INDUSTRIES** — Cast dry density 37 (+ or -) 3.0 pcf.

CELCORE INC — Type Celcore with cast dry density of 31 (+ or - 3.0) pcf or Type Celcore MF with cast dry density of 29

**CONCRECEL INTERNATIONAL INC** — Cast dry density 38 (+ or -) 3.0 pcf.

ELASTIZELL CORP OF AMERICA — Type II. Mix #1 of cast dry density 39 (+ or -) 3.0 pcf, Mix #2 of cast dry density 40 (+ or -) 3.0 pcf, Mix #3 of cast dry density 47 (+ or -) 3.0 pcf

LITE-CRETE INC — Cast dry density of 29 (+ or -) 3.0 pcf.

**SIPLAST INC** — Mix #2. Cast dry density of 36 (+ or -) 3.0 pcf.

4B. As an alternate to Item 4 — Perlite Concrete — Mix consists of 6 cu ft of Perlite Aggregate\* to 94 lb of Portland cement and 1-1/2 pints of air-entraining agent. Thickness of perlite concrete topping to be 2 in. min from the top plane o the foamed plastic. Min thickness between the top of steel deck and the bottom of the foamed plastic shall be 1/8 in. See Perlite Aggregate (CFFX) category in Fire Resistance Directory for names of Classified

4C. **As an alternate to Item 4** — Cellular Concrete — Roof Topping Mixture\* — Foam Concentrate mixed with water, Portland Cement and UL Classified Vermiculite Aggregate per manufacturer's application instructions. Cast dry density of 33 (+ or -) 3.0 pcf and 28-day compressive strength of min 250 psi as determined in accordance with ASTM C495-86. A 1/8 in. min slurry coat shall be employed below the foamed plastic (Item 5). The cellular concrete topping thickness above the foamed plastic, shall be 2 in. min. When foamed plastic is not used, the min thickness of Roof-Topping Mixture above the top of the steel deck, shall be 2-3/4 in. AERIX INDUSTRIES - Mix #3

VERMICULITE PRODUCTS IN

4D. As an alternate to Item 4 — Cellular Concrete — Roof Topping Mixture\* — Foam concentrate mixed with water and Portland cement per manufacturer's specifications. Cast dry density and 28-day compressive strength of min 190 psi as determined in accordance with ASTM C495. Min thickness above foamed plastic is 2 in. Min thickness between the top of steel deck and the bottom of foamed plastic shall be 1/8 in. When foamed plastic is not used, the min thickness of Roof Topping Mixture\* above the top of the steel deck shall be 2-3/4 in. CELCORE INC — Type Celcore with cast dry density of 31 (+ or - 3.0) pcf or Type Celcore MF with cast dry density of 29

5. Foamed Plastic\* - (Optional) - Foamed plastic insulation boards with holes and/or slots. Nom size 24 by 48 in. SIPLAST INC

5A. Foamed Plastic\* — Nom 24 by 48 in., 48 by 48 in., 24 by 96 in. or 48 by 96 in. by max 14 in. thick polystyrene foamed plastic insulation boards with holes symmetrically placed having a max density of 2.0 pcf. For use only with cellular concrete roof topping mixture STARRFOAM MFG INC

5B. Foamed Plastic\* — (Optional) — Nom 24 x 48 by max 8 in. thick polystyrene foamed plastic insulation boards

having a density of 2.5 pcf max. Each insulation board shall contain six nom 3 in. diam holes oriented in two rows of three holes each, with the holes spaced 12 in. OC transversely and 16 in. OC longitudinally. See Foamed Plastic\* (BRYX) category in the Building Materials Directory or Foamed Plastic\* (CCVW) category in Fire Resistance Directory for list of Classified Companies.

5C. Foamed Plastic\* — (Optional — For Use With Items 4A and 4D) — Nominal 24 by 48 by max 14 in. thick expanded polystyrene foamed plastic insulation boards having a max. density of  $2.5 \pm 0.1$  pcf encapsulated within cellular concrete topping. Each insulation board shall contain eight min 2 in, diameter holes oriented in two rows of four holes each with the holes spaced 12 in. OC transversely and 12 in. OC longitudinally or six min 3 in. diameter holes oriented in two rows of three holes each with the holes spaced 12 in. OC transversely and 16 in. OC longitudinally See Foamed Plastic\* (BRYX) category in the Building Materials Directory or Foamed Plastic\*

(CCVW) category in Fire Resistance Directory for list of Classified Companies. 6. Wire Mesh — No. 19 SWG galv steel wire twisted to form 2 in. hexagons. In addition, straight No. 16 SWG galv steel wire woven into mesh and spaced 3 in. apart for stiffness. Mesh installed without attachment perpendicular to supports and overlapped 6 in. at the sides. As an alternate, 4 by 8 in., No. 12/14 SWG or 2 by 2 in., No. 14/14 SWG welded wire fabric may be used. The wire mesh may be omitted for the 1 and 1-1/2 h ratings. Thickness of vermiculite concrete between the top of the roof deck and the bottom of the foamed plastic insulation shall be 1/8 in. min when wire mesh is

6A. Fiber Reinforcement\* — (Optional, not for use to achieve 2 hr ratings) — For use only with Roof-Topping Mixtures\* manufactured by Cellular Concrete LLC. In lieu of Wire Mesh (Item 6), Fiber Reinforcement may be added to roof topping mixtures (Items 4A or 4C). See Fiber Reinforcement (CBXQ) Category for rate that fibers are added to roof topping FORTA CORP — Types Econo-Mono, Mighty-Mono, Stucco-Bond, Econo-Net, Cast-Master, Super-Net, Ultra-Net.

7. Steel Roof Deck — (Unclassified) — Noncomposite design, vented or nonvented units, 9/16 in., 15/16 in., 1-5/16 in., 1-1/2 or 2 in. deep galv units, nom 24 to 36 in. wide. When vented or nonvented 9/16 in. deep galv units are used, the Restrained Assembly and Beam Ratings shall not exceed 1-1/2 h. Welded to supports with 3/8 in. puddle welds through weld washers spaced 15 in. OC. Adjacent units overlapped one corrugation. Max support spacing 8 ft OC unless

otherwise noted for specific Classified units and their recommended loadings. Steel thickness to be No. 24 MSG min when supports are spaced not more than 8 ft OC, No. 26 MSG min when supports are spaced not more than 6 ft OC, and No. 28 MSG, 9/16 in. deep steel deck may be used when supports are spaced 4 ft. OC. Roof deck units to be loaded not more than 75 percent of their max allowable bending stress. For clear spans not more than 7 ft., 8-3/8 in. the **Unrestrained Assembly Rating is equal to the Restrained Assembly Rating**. Or, **Classified Steel Floor and Form Units\*** conforming to the same installation, steel thickness, loading requirements and **Restrained Assembly Rating** as ASC STEEL DECK, DIV OF ASC PROFILES L L C — Types CP32, C1.4-32, B-36, BN-36, BN-35-1/4, DGB-36, CP-32 Ventform, 2WH-36 and 2WHS-36. Two or three 10 ft 0 in. continuous spans may be used for Type B-36, BN-36, BN-35-1/4, DGB-36, 2WH-36, or 2WHS-36 units, and 12 ft 0 in. simple or continuous spans may be used for Type N units

provided that the total loading on these spans is based on the allowable steel stress and the deflection limitation criteria

**CANAM STEEL CORP** — Types P-3606, P-3615, or P-3012.

using the steel (noncomposite) section properties of these units.

CANAM STEEL CORP — Types B, UFX, UFXV, UFX-36, UFXV-36. Types NI and NS deck may be used on simple or deflection criteria of this deck.

DECK WEST INC - 36 in. wide Type B-DW, BA-DW or 3-DW. The Type 3-DW units made from 22 ga or heavier steel may be used for a maximum 10 ft., 0 in. spans, provided that the total loading on these spans is based on the allowable steel stresses and the deflection limitation criteria using the steel (noncomposite) section properties of these units.

**EPIC METALS CORP** — Type Metricform, ER2R, ER3.5, ECA, ECA3.5.

**GOODER HENRICHSEN CO.** — Type B. KAM INDUSTRIES LTD, DBA CORDECK — Type QL-3 or Sec. 3 with or without up-punched integral hanger tabs, and 3 in. QL-99. The 3 in. deep Type QL-99 units made from 22 ga or heavier steel may be used for max 10 ft, 0 in. spans,

using the steel (noncomposite) section properties of these units. MARLYN STEEL DECKS INC — Types B, BV, EF, EVF, F, HF, HVF, N, NV, SF, SVF, Type Marcore.

provided the total loading on these spans is based on the allowable steel stresses and the deflection limitation criteria

MORIN CORP - 24, 30 or 36 in. wide, Types LXR-B; 30 in. wide, Types LXR-B-N-30 and LXR-B-N-30-I; 35 in. wide,

NEW MILLENNIUM BUILDING SYSTEMS L L C — Consoliform and Comvent Types EHD, HD, S, SD. -Media-Dek Type 1 (vented and nonvented) and Media-Dek Type 2, Type R. Type N 3 in. deep made from 22MSG or heavier steel.

NEW MILLENNIUM BUILDING SYSTEMS L L C — Types B, BI, N, F, 0.6FD, 1.0FD, 1.5FD, 0.6FDV, 1.0FDV, BV. Units may be phos/painted or galvanized

**ROOF DECK INC** — Vented or Nonvented Types EHD Multi-Rib, HD Multi-Rib, S Multi-Rib.

**VALLEY JOIST** — Types F, B, BI, VS, B vented.

VERCO DECKING INC - A NUCOR CO — Deck types PLB, HSB, PLN3, HSN3, PLN, N, Shallow or Deep VERCOR™, Deep VERCOR VENTLOK, System 80; FORMLOK™ deck types PLB, B, PLN3, N3, PLN, N, PLW2, W2. Units may be galvanized, phos./ptd., or mill finish. Deck may be vented or non-vented. Two or three 10 ft 0 in. continuous spans may be used for he following units under the following conditions: (A) For Types PLB, PLB FORMLOK™, B, B FORMLOK™, PLW2 FORMLOK™ and W2 FORMLOK™ units the total loading on these spans shall be based on the allowable steel stress or the deflection limitation criteria using the steel (non-composite) section properties of these units. (B) For System 80 the min gauge of units is 18 MSG and use is limited to three continuous spans.

Deck types PLN, N may be used on simple or continuous 12 ft 0 in. spans with the total loading on these spans limited by the allowable bending stress and/or the deflection limitation criteria VULCRAFT, DIV OF NUCOR CORP — Types 0.6C, 0.6CPR, 0.6CPR, 0.6CSV, 1.0C, 1.0CSV, 1.3C, 1.3CSV, 1.5C, 2C, 3C, 1.5B, 1.5BI, 1.5PLB, 1.5F, 3N, 3NI, 3.0PLN. Type 1.5B units made from 21MSG or heavier steel may be used on simple or

continuous 10 ft 0 in. spans with the total load on these spans limited by the allowable bending stress and/or the deflection criteria of this deck. Type 3N made from 22MSG or heavier steel may be used on simple or continuous 12 ft 0 in. spans with the total load on these spans limited by the allowable bending stress and/or the deflection criteria of this deck; Types B High Strength, BW High Strength, Nonvented Types BW, 2.0D, 3.5D.

B. Metal Lath — (Not Shown) — (Required on both sides of joists with Z-146, Z-146T, Z146PC, Z-156, Z-156T and Z-156PC, otherwise optional () — Metal lath is used to facilitate the spray application of Spray-Applied Fire Resistive Materials on steel bar joists and trusses. The diamond mesh, 3/8 in. expanded steel lath, 1.7 to 3.4 lb per sq yd, is secured to one side of each steel joist with No. 18 SWG galv steel wire at joist web and bottom chord members, spaced L5 in. OC max. When used, the metal lath is to be fully covered with Spray-Applied Fire Resistive Materials with no min 8A. Non-Metallic Fabric Mesh - (Optional) - As an alternate to metal lath, glass fiber fabric mesh, weighing

approximately 2.5 oz per sq yd, polypropylene fabric mesh, weighing approximately 1.25 oz per sq yd or equivalent, is used to facilitate the spray application. The mesh is secured to one side of each joist web member. The method of attaching the mesh must be sufficient to hold the mesh and the spray-applied Spray-Applied Fire Resistive Materials material in place during application until it has cured. An acceptable method to attach the mesh is by embedding the nesh in minimum 1/4 in. long beads of hot melted glue. The beads of glue shall be spaced a maximum of 12 in. OC along the top chord of the bar joist. Another method to secure the mesh is by 1-1/4 in. long by 1/2 in. wide hairpin clips formed from No. 18 SWG or heavier steel wire.

final thickness shown below to joist or beam surfaces which are clean, free of dirt, loose scale and oil. A 1-3/4 in. thickness of Spray-Applied Fire Resistive Materials shall be applied to the bridging bars. Min avg and min ind density of 15/14 pcf respectively. Min avg and min ind density of 19/18 pcf respectively for Type 7GP and 7HD. For method of lensity determination refer to Design Information Section.

9. Spray-Applied Fire Resistive Materials\* — Applied by mixing with water and spraying in more than one coat to the

		Thkns In.			
Restrained Assembly		Min Thkns on Beam		Min Thkns on Joist (No. Lath)	Min Thkns on Joist (with Lath)
Rating Hr	Beam Rating Hr	W6x16 W8x10			
1	1	1	1-3/8	1-1/2+	1-1/2+
1-1/2	1-1/2	1-1/4	1-3/4	2-1/4	1-3/4
2	1-1/2	1-3/8	1-7/8	2-1/4	1-3/4
2	2	1-5/8	2-1/4	2-7/16	1-7/8

ARABIAN VERMICULITE INDUSTRIES — Types MK-6/CBF, MK-6/ED, MK-/HY, MK-6s, Sonophone 1.

GCP APPLIED TECHNOLOGIES INC — Types MK-6/HY, MK-6S, RG, Monokote Acoustic 1.

GCP KOREA INC — Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6S, Monokote Acoustic 1

PYROK INC - Type LD

SOUTHWEST FIREPROOFING PRODUCTS CO — Types 4, 5, 5EF, 5GP, 5MD, 7GP, 7HD, 8EF, 8GP, 8MD, 9EF, 9GP,

+ For 1 Hr ratings, the min joist size shall be 14J7.

9A. Spray-Applied Fire Resistive Materials\* — (Not Shown) — In lieu of Item 9 the following Spray-Applied Fire Resistive Materials may be applied by mixing with water and spraying in multiple coats to final thicknesses shown below. Min avg and min ind density 19/18 pcf respectively for Types 7GP, 105. Min avg and min ind density of 22/19 pcf espectively for Types Z-106, Z-106/G, Z-106/HY. For method of density determination, refer to Design Information

Restrained Assembly	Unrestrained Beam	Min Thkns on Beam in	
Rating Hr	Rating Hr	W6x16	W8×10
1	Ĭ,	1-1/16	1-1/2
1-1/2	1-1/2	1-3/8	1-15/16
2	1-1/2	1-1/2	2-1/16
2	2	1-13/16	2-9/16

**ARABIAN VERMICULITE INDUSTRIES** — Types Sonophone 5, Z-106, Z-106/G, Z-106/HY.

GCP APPLIED TECHNOLOGIES INC — Types 105, Monokote Acoustic 5, KM-601, Z-106, Z-106/G, Z-106/HY.

GCP KOREA INC — Types Monokote Acoustic 5, Z-106, Z-106/G, Z-106/HY.

SOUTHWEST FIREPROOFING PRODUCTS CO — Type 7GP.

BB. **Spray-Applied Fire Resistive Materials\* —** (Not Shown) — In lieu of Item 9 or 9A the following Spray-Applied Fire esistive Materials may be applied by mixing with water and spraying in multiple coats to final thicknesses shown below Min avg and min ind density 40/36 pcf respectively. Min avg and min ind density of 40/36 pcf respectively for Types Z-146, Z-146PC and Z-146T cementitious mixture. Min avg and min ind density of 50/45 pcf respectively for Types Z-156, Z-15<u>6T and Z-156PC. For method of density determination, refer to Design Information Section, Spraye</u>d Material.

Destrained Assembly	Havestoniand Beaus	Min Thkns on Beam in	
Restrained Assembly Rating Hr	Unrestrained Beam Rating Hr	W6x16	W8×10
1	1,	1-1/16	1-1/2
1-1/2	1-1/2	1-3/8	1-15/16
2	1-1/2	1-1/2	2-1/16
2	2	1-13/16	2-9/16

ARABIAN VERMICULITE INDUSTRIES — Type Z-146

GCP APPLIED TECHNOLOGIES INC — Types Z-146, Z-146T, Z146PC, Z-156, Z-156T and Z-156PC

GCP KOREA INC — Type Z-146

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification

Last Updated on 2016-12-29

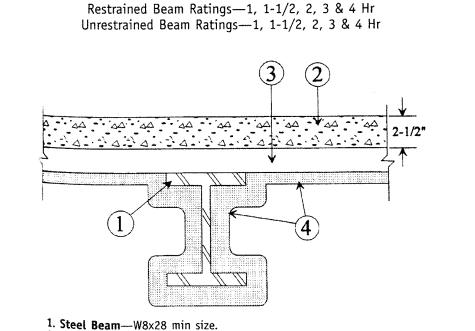
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Design No. N779



2. Normal Weight or Lightweight Concrete—Compressive strength, 3000 psi. For normal weight concrete either carbonate or siliceous aggregate may be used. Unit weight 148 pcf. For lightweight concrete, unit weight 3. Welded Wire Fabric—(Optional)—6x6-10/10 SWG.

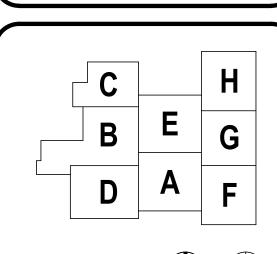
4. Steel Floor and Form Units\*—Min 1/2 in. to 1-5/16 in. deep corrugated or 1-1/2 to 3 in. deep fluted type, welded to beam. 5. Spray-Applied Fire Resistive Materials\*—Applied by mixing with water and spraying in more than one coat to beam and in one coat to steel deck to final thicknesses shown below. Steel surfaces must be clean and free of dirt, loose scale, and oil. Min avg and min ind density of 15/14 pcf. respectively. For method of density determination, refer to Design Crest areas above the beam shall be filled with Spray-Applied Fire Resistive Materials. Normal Weight Concrete Restrained Unrestrained Restrained Unrestrained Min Tkns In. Min Tkns In. Min Tkns In. Beam Deck Beam Deck Beam Deck 
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 <th Grace Construction Products—Types MK-6/HY, MK-6s, RG, Sonotex

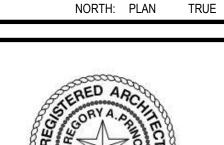
\*Bearing the UL Classification Marking

Grace Korea Inc.—Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6s,

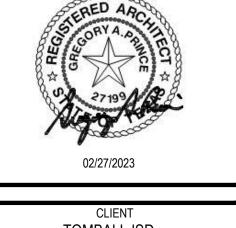
11 Greenway Plaza, 22nd Floor Houston, TX 77046 713-965-0608 P 713-961-4571 F TX Firm: BR 1608 DIG ENGINEERS FOOD SERVICE FOODSERVICE DESIGN PROFESSIONAL







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TOMBALL ISD PROJECT NUMBER 02/27/2023 220137 DRAWING HISTORY Date Description **ISSUE FOR PROPOSAL** BUILDING NUMBER

**ASSEMBLIES** 

FIRE RATED

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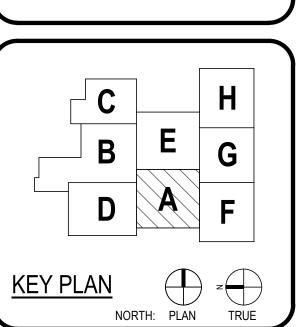
06 1ST FLOOR PLAN SIGNAGE PLAN 1/16" = 1'-0"

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Author



ARCHITECT	PBK Arch
ı	HOUSTON
	11 Greenway Plaza, 22nd Flooi
	Houston, TX 77046
	713-965-0608 P
	713-961-4571 F
	TX Firm: BR 1608
	CIVIL DIG ENGINEERS T 713-940-3238
	LANDSCAPE GREENSCAPE T 281-341-9975
	STRUCTURAL KUBULA ENGINEERS T 713-940-3343
	MEPT LEAF ENGINEERS T 713-940-3300
	FOOD SERVICE FOODSERVICE DESIGN PROFESSIONALS T 281-350-2323





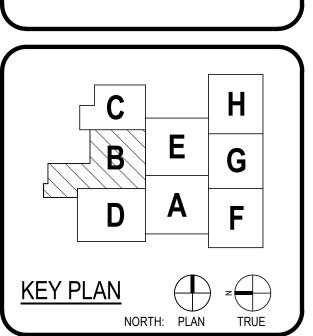
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No.	Descrip	tion	Date	
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**GRAPHICS & SIGNAGE PLAN -**COMPOSITE



**NEST ELEMENTARY SCHOOL** 

JUERGE TOMBALL ISSUE F





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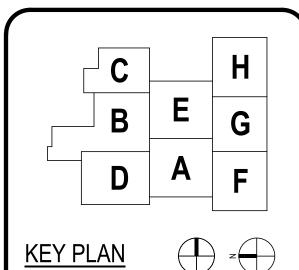
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NTARY SCHOOL

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TOMBALL INDEPENDENT SCHOOL DISTRICT





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G-051

\*\*\*DISTRICT TO VERIFY

TOMBALL WEST ELEMENTARY SCHOOL TOMBALL INDEPENDENT SCHOOL DISTRICT 2022 - 2023 **BOARD OF TRUSTEES** Mr. Lee McLeod President Mr. John E. McStravick Vice President Mr. Justin Unser Secretary Mr. Mark Lewandowski Dr. Michael Pratt Mrs. Tina Salem Mr. Matt Schiel **ADMINISTRATION** Dr. Martha Salazar Zamora Superintendent Chief of Staff Dr. Amy Schindewolf Dr. Michael Webb Chief Academic Officer Dr. Steven Gutierrez Chief Operating Officer Chief Financial Officer Mr. Jim Ross Assistant Superintendent of Secondary Schools Dr. Mindy Muñoz Assistant Superintendent of Elementary Schools Dr. George Flores Dr. Lee Wright Assistant Superintendent of Strategic Innovation Mr. Mark White Assistant Superintendent of Accountability Mr. Zach Boles Assistant Superintendent of Finance ARCHITECT CONSTRUCTION MANAGER To Be Determined

1'-6 3/4"

15-3/4" X 18-3/4" X 3/4" THICK CAST BRONZE

HELVETICA TEXT LEATHERETTE TEXTURE #513 BORDER CONCEALED TYPE "P" STUD MOUNT AL-300 BLACK PRINTED BACKGROUND, SATIN FACES.

TYPES, IN QUANTITIES NOTED BELOW. CONFIRM ACTUAL TEXT TO BE USED AND LOCATION WITH ARCHITECT. ADD'L QTY. PLAQUE TYPE COORD. SPECIFIC TYPE W/ ARCHITECT (35) THIRTY-FIVE "D" AND "E" EXTERIOR LETTERING 9" HIGH DARK BRONZE EXTERIOR CAST ALUMINUM LETTERS, PROJECTING 1/2". ALL TEXT TO BE TIMES ROMAN BOLD. 9" @ FRONT ENTRY (29) TWENTY-NINE LETTERS 8" @ SIDE (6) SIX NUMBERS **INTERIOR LETTERING** 8" HIGH DARK BRONZE INTERIOR CAST ALUMINUM LETTERS, PROJECTING 1/2". ALL TEXT TO BE TIMES ROMAN BOLD. @ LIBRARY (7) SEVEN LETTERS @ CAFETERIA

(9) NINE LETTERS

PROVIDE BACKUP PLATES @ ALL SIGNAGE

INSTALLED ON GLASS

PROVIDE ADDITIONAL FOR THE FOLLOWING PLAQUE

PURSUANT TO SECTION 30.06, PENAL CODE (TRESPASS BY LICENSE HOLDER WITH A CONCEALED HANDGUN), A PERSON LICENCED UNDER SUBCHAPTER H, CHAPTER 411, GOVERNMENT CODE (CONCEALED HANDGUN LAW), MAY NOT ENTER THIS PROPERTY WITH A CONCEALED HANDGUN.

CONFORME A LA SECCION 30.06 DEL CODIGO PENAL (TRASPASAR PORTANDO ARMAS DE FUEGO) PERSONAS CON LICENCIA BAJO DEL SUB-CAPITULO H, CAPITULO 411, CODIGO DE GOBIERNO (LEY DE PORTAR ARMAS), NO DEBEN ENTRAR A ESTA PROPIEDAD PORTANDO UN ARMA DE FUEGO.

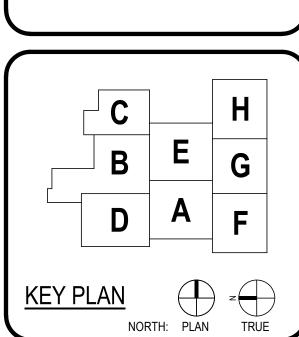
PURSUANT TO SECTION 30.07, PENAL CODE (TRESPASS BY LICENSE HOLDER WITH AN OPENLY CARRIED HANDGUN), A PERSON LICENCED UNDER SUBCHAPTER H, CHAPTER 411, GOVERNMENT CODE (HANDGUN LICENSING LAW), MAY NOT ENTER THIS PROPERTY WITH A HANDGUN THAT IS CARRIED OPENLY.

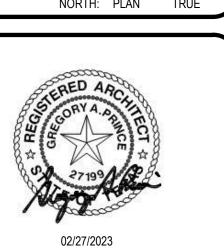
CONFORME A LA SECCION 30.07 DEL CODIGO PENAL (TRASPASAR PORTANDO ARMAS DE FUEGO AL AIRE LIBRE CON LICENCIA) PERSONAS CON LICENSIA BAJO DEL SUB-CAPITULO H, CAPITULO 411, CODIGO DE GOBIERNO (LEY DE PORTAR ARMAS), NO DEBEN ENTRAR A ESTA PROPIEDAD PORTANDO UN ARMA DE FUEGO AL AIRE LIBRE.

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	713-965-0608 P	
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	STRUCTURAL	_
	KUBULA ENGINEERS T 713-940-3343	
	MEPT	_
	<b>LEAF ENGINEERS</b> T 713-940-3300	
	FOOD SERVICE	_
	FOODSERVICE DESIGN PROFESSIONAL T 281-350-2323	S

**TOMBALL** 





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C	DATE 02/27/2023		CT NUMBER 20137
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SIGNAGE GRAPHIC **STANDARDS** 

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