DESIGN CRITERIA NOTES:

1. THE FOLLOWING CODES AND STANDARDS, INCLUDING ALL SPECIFICATIONS REFERENCED WITHIN, SHALL APPLY TO THE DESIGN, CONSTRUCTION, QUALITY CONTROL AND SAFETY OF ALL WORK PERFORMED ON THE PROJECT. USE THE LATEST EDITIONS UNLESS NOTED OTHERWISE.

   INTERNATIONAL BUILDING CODE, 2018 EDITION
   ASCE 7-16 - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
   AISC 360-16 – SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
   AISC 303-16 – CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES
   ACI 318-14 – BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND MASONRY
   TMS 402/602-16 – SPECIFICATION OF MASONRY STRUCTURES

2. DESIGN LOADS ARE AS LISTED BELOW.

   LIVE LOADS:
   (UNIFORMLY DISTRIBUTED LIVE LOADS IN PSF)

   SCHOOLS:

CLASSROOMS	40 PSF
OFFICES	50 PSF
STAIRS, PUBLIC AREAS	100 PSF
MECHANICAL ROOMS	150 PSF
ROOF	20 PSF

   SUPERIMPOSED DEAD LOADS:

MECHANICAL, ELECTRICAL AND CEILING	10 PSF
FINISHES WHERE SHOWN ON ARCHITECTURAL	AS REQUIRED

   SNOW LOADS:
   GROUND SNOW LOAD Pg = 30 PSF
   FLAT ROOF SNOW LOAD = 25 PSF + DRIFT
   EXPOSURE FACTOR Ce = 1.0
   IMPORTANCE FACTOR = 1.1
   THERMAL FACTOR Ct = 1.0

   SEISMIC LOADS:
   RISK CATEGORY = III
   IMPORTANCE FACTOR = 1.25
   MAPPED SPECTRAL RESPONSE ACCELERATIONS:
   Ss = 17.7%g
   S1 = 4.7%g
   SPECTRAL RESPONSE COEFFICIENTS:
   SDS = 18.9%g
   SD1 = 7.5%g
   SITE CLASS = D
   SEISMIC DESIGN CATEGORY = B
   DESIGN BASE SHEAR = 0.079W k
   SEISMIC RESPONSE COEFFICIENT, Cs = 0.079
   RESPONSE MODIFICATION FACTOR, R = 3
   ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE

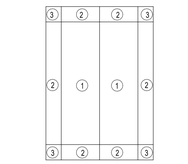
   WIND LOADS:
   BASIC WIND SPEED, V (ULT) = 120 MPH
   RISK CATEGORY = III
   WIND EXPOSURE = C
   APPLICABLE INTERNAL PRESSURE COEFFICIENT +/- 0.18
   WIND PRESSURES FOR COMPONENTS AND CLADDING
   (LOCATIONS PER ASCE 7)

COMPONENT AND CLADDING (ULT) WIND PRESSURE (psf)

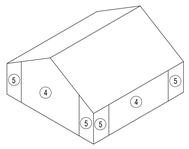
WALL PRESSURE

ZONE 1609.6.2 (2)	Effective Wind Area (SF)	ROOF mph NEG.	ROOF mph POS.
1	10	-62	16
	20	-57	16
	50	-52	16
	100	-48	16
2	10	-81	16
	20	-76	16
	50	-69	16
	100	-64	16
3	10	-81	16
	20	-76	16
	50	-69	16
	100	-64	16

ZONE 1609.6.2 (2)	Effective Wind Area (SF)	WALL mph NEG.	WALL mph POS.
4	10	-38	35
	20	-37	34
	50	-35	32
	100	-33	30
5	10	-47	35
	20	-44	34
	50	-40	32
	100	-37	30



ROOF - EFFECTIVE WIND AREA



WALL - EFFECTIVE WIND AREA

SUBMITTAL AND SHOP DRAWING REQUIREMENT NOTES:

1. THE CONTRACTOR SHALL SUBMIT FOR REVIEW BY THE ARCHITECT AND THE ENGINEER ALL INFORMATION REQUIRED BY THE CONTRACT DOCUMENTS INCLUDING THE SPECIFICATIONS.

2. SHOP DRAWINGS SHALL BE PREPARED, SUBMITTED AND REVIEWED PRIOR TO PROCEEDING WITH FABRICATION AND/ OR INSTALLATION OF THE ASSOCIATED WORK. REVIEW PERIOD SHALL BE A MINIMUM OF TWO (2) WEEKS.

3. THE CONTRACTOR SHALL SUBMIT FOR REVIEW, DRAWINGS AND CALCULATIONS FOR ALL PERFORMANCE ASSEMBLIES IDENTIFIED IN THE GENERAL NOTES AND LISTED BELOW. THE DESIGN OF THESE ASSEMBLIES IS THE RESPONSIBILITY OF THE CONTRACTOR'S ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION. ALL SUBMITTALS SHALL BEAR CONTRACTOR'S ENGINEER'S SEAL AND SIGNATURE. REVIEW SHALL BE FOR GENERAL CONFORMANCE WITH THE PROJECT REQUIREMENTS AS INDICATED ON THE DRAWINGS AND IN GENERAL NOTES.

   A. NON-LOAD BEARING STUD WALL AND CURTAIN WALL SYSTEMS AND RELATED CONNECTIONS:
      a. DESIGN SHALL TAKE INTO ACCOUNT ALL VERTICAL AND LATERAL LOADS REQUIRED BY APPLICABLE BUILDING CODES. BACK UP SYSTEM AND STUD WALLS SHALL BE DESIGNED FOR A MAXIMUM DEFLECTION OF 1/600 OF THE SPAN, OR 3/8", WHICHEVER IS LESS, AT THE APPLICABLE DESIGN WIND LOAD. CURTAIN WALLS SHALL BE DESIGNED FOR A MAXIMUM DEFLECTION AS INDICATED BY AAMA REQUIREMENTS UNLESS OTHERWISE NOTED IN SPECIFICATIONS.
   B. METAL STAIRS AND METAL RAILINGS:
      a. DESIGNS SHALL TAKE INTO ACCOUNT ALL VERTICAL AND LATERAL LOADS REQUIRED BY APPLICABLE BUILDING CODES. WHEREAS HEADERS OR OTHER TYPES OF STRUCTURAL MEMBERS HAVE BEEN DESIGNATED BY THE ENGINEER OF RECORD TO SUPPORT THE STAIRS, THE CONNECTIONS FROM THE STAIRS SHALL BE DESIGNED FROM SO THAT NO ECCENTRIC OR TORSIONAL FORCES ARE INDUCED IN THESE STRUCTURAL MEMBERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING HARDWARE AS REQUIRED BY THE STAIR DESIGN.

4. REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR RE-SUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.

5. SHOP DRAWINGS SHALL BE SUBMITTED ELECTRONICALLY.

6. SHOP DRAWINGS SUBMITTED FOR REVIEW SHALL BEAR THE CONTRACTOR'S STAMP OF APPROVAL WHICH SHALL CONSTITUTE CERTIFICATION THAT THE CONTRACTOR HAS VERIFIED ALL CONSTRUCTION CRITERIA, DIMENSIONS, MATERIALS, AND SIMILAR DATA HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION, AND COMPLIANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR'S REVIEW INCLUDES BUT IS NOT LIMITED TO VERIFICATION AND COORDINATION OF ACTUAL FIELD CONDITIONS, INCLUDING DIMENSIONS AND ELEVATIONS, AS WELL AS ACTUAL DIMENSIONS FOR SUPPORTS, ANCHORAGES, AND OPENINGS FOR THE ACTUAL EQUIPMENT PURCHASED.

7. THE SHOP DRAWINGS SHALL INCLUDE DIMENSIONED FLOOR AND FLOOR EDGES, OPENINGS AND SLEEVES AT ALL FLOORS REQUIRED FOR ALL TRADES.

STEEL NOTES:

A. STRUCTURAL STEEL

1. STRUCTURAL STEEL CONSTRUCTION HAS BEEN DESIGNED IN ACCORDANCE WITH A.I.S.C. 360, "STEEL CONSTRUCTION MANUAL."

2. STRUCTURAL STEEL SHAPES, PLATES, ETC., SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS, U.N.O.

FLOOR/ROOF BEAMS AND GIRDERS	ASTM A992-50
COLUMNS, WEB DOUBLER PLATES	ASTM A992-50
CHANNELS, TEES, ANGLES, BARS, PLATES,	ASTM A36
STEEL TUBING (HSS SECTIONS) (Fy = 46 KSI)	ASTM A500-GR. B
STEEL PIPE TYPE "E" OR "S"	ASTM A501 OR A53
ANCHOR BOLTS	ASTM F1554 GR. 36

3. CONNECTION BOLTS SHALL CONFORM TO ASTM A325. USE BEARING TYPE BOLTS WITH THREAD ALLOWED ACROSS THE SHEAR PLANE (TYPE N) AT TYPICAL BEAM SHEAR CONNECTIONS, U.N.O. USE TYPE "SC" BOLTS WITH EITHER DIRECT TENSION INDICATOR OR LOAD INDICATOR WASHERS AT ALL BOLTED SLIP CRITICAL CONNECTIONS.

4. STEEL BEAM CONNECTIONS NOT DETAILED ON THE DRAWINGS SHALL BE DESIGNED BY THE STRUCTURAL STEEL FABRICATOR. BEAM CONNECTIONS SHALL DEVELOP THE END REACTIONS GIVEN ON THE DRAWINGS. WHERE END REACTIONS ARE NOT SPECIFIED, THE BEAM CONNECTION SHALL DEVELOP 50% OF THE BEAMS WEB ALLOWABLE SHEAR CAPACITY. A MINIMUM CONNECTION CAPACITY OF 12 KIPS (ULTIMATE) SHALL BE PROVIDED FOR ALL BEAMS, UNLESS NOTED OTHERWISE BY SPECIFIED REACTION. THE STRUCTURAL STEEL FABRICATOR SHALL PROVIDE CERTIFICATION BY A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF THE PROJECT, THAT THE CONNECTION DESIGN IS IN ACCORDANCE WITH ALL APPLICABLE CODES AND SPECIFICATIONS.

5. FOR ALL HIGH STRENGTH BOLTS, HARDENED WASHERS SHALL BE PROVIDED.

6. GALVANIZING OF STEEL MEMBERS SHALL CONFORM TO ASTM A123. GALVANIZE ALL STEEL PERMANENTLY EXPOSED TO WEATHER.

7. ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH A RUST INHIBITIVE PRIMER. DO NOT PRIME STEEL WHICH SHALL HAVE SPRAY-ON FIREPROOFING APPLIED. STEEL WHICH IS TO BE FIREPROOFED IS INDICATED ON THE ARCHITECTURAL DRAWINGS. ALL EXPOSED STEEL AND LINTELS IN EXTERIOR WALLS SHALL BE HOT-DIP GALVANIZED.

8. HEADED STUDS AND DEFORMED BAR ANCHORS USED IN FABRICATION OF EMBEDDED ASSEMBLIES SHALL BE WELDED TO THOSE ASSEMBLIES USING A FULL FUSION PROCESS.

9. STEEL BEAMS SHALL BE ERECTED WITH NATURAL CAMBER UP.

10. ANCHOR BOLTS HAVE NOT BEEN DESIGNED FOR ANY SPECIFIC ERECTION FORCES. THE ERECTOR IS RESPONSIBLE FOR ANY AND ALL GUYING AND BRACING REQUIRED TO ERECT THE BUILDING.

11. OPEN WEB STEEL JOISTS AND BRIDGING SHALL CONFORM TO THE STANDARDS OF THE STEEL JOIST INSTITUTE. BRIDGING SHALL BE WELDED TO STEEL BEAMS AND ANCHORED TO MASONRY OR CONCRETE WALLS AT THE ENDS, U.N.O. JOISTS SHALL BE WELDED TO STEEL SUPPORTS PER SJI SPECIFICATIONS. JOISTS SUPPORTED BY A COLUMN SHALL BE WELDED TO THE COLUMN WITH 1/8"X2" LONG FILLET WELDS EACH SIDE UNLESS NOTED OTHERWISE. JOISTS SUPPORTED ON STEEL BEAMS, GIRDERS, OR BEARING PLATES SHALL HAVE THE JOIST SEAT DESIGNED TO TRANSFER THE LOAD TO THE SUPPORT CENTERLINE UNLESS NOTED OTHERWISE ON PLAN.

12. THE RESPONSIBILITY FOR ANY TEMPORARY SHORING OR BRACING DURING THE CONSTRUCTION PHASE BEFORE COMPLETION OF CONNECTION AND POURING OF FLOOR SLAB IS ADDRESSED IN THE SPECIFICATIONS AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

13. IF NOT SHOWN ON DRAWINGS, SUPPORT OF METAL DECK AROUND COLUMN CLOSURE, SCREED PLATES AROUND THE OPENINGS AND EDGE SLAB SHALL BE PROVIDED BY THE CONTRACTOR.

14. DURING CONSTRUCTION, THE ERECTED STRUCTURAL STEEL SHALL NOT PROCEED HIGHER THAN THE CONCRETE CORE CONSTRUCTION. THE CONTRACTOR SHALL MAKE SAFE PROVISIONS FOR STABILIZING THE STEEL STRUCTURE BOTH HORIZONTALLY AND VERTICALLY. THE STABILITY OF THE FRAME DURING ERECTION IS THE CONTRACTOR'S RESPONSIBILITY.

15. STRUCTURAL STEEL MEMBERS SHALL NOT BE SPLICED OR HAVE PENETRATIONS UNLESS INDICATED ON THE STRUCTURAL CONTRACT DOCUMENTS OR AS REVIEWED BY THE STRUCTURAL ENGINEER.

16. ALL TUBE STEEL SHALL BE SEAL WELDED. ADEQUATE DRAINAGE HOLES SHALL BE DRILLED TO ELIMINATE WATER TRAPS. THE PREFERRED HOLE DIAMETER, 1/2 INCH, SHALL BE SHOW ON SHOP DRAWINGS AND SUBJECT TO THE APPROVAL OF THE ARCHITECT.

B. WELDING

1. WELDED CONSTRUCTION SHALL CONFORM TO THE AMERICAN WELDING SOCIETY "STRUCTURAL WELDING CODE" D1.1; AWS D1.3-SHEET STEEL, AND AWS D1.4 "REINFORCING STEEL WELDING CODE".

2. ELECTRODES FOR FIELD AND SHOP WELDS OF STRUCTURAL STEEL SHALL BE E70XX, U.N.O.

3. ELECTRODES FOR WELDING OF REINFORCING STEEL SHALL BE E80XX.

4. ELECTRODES FOR WELDING OF SHEET STEEL SHALL CONFORM TO AWS D1.3.

5. WHEN WELDS ARE NOT CALLED-OUT ON DRAWINGS, THEY ARE MINIMUM SIZE CONTINUOUS FILLET WELDS IN ACCORDANCE WITH AWS D1.1. FILLET WELDS NOT SPECIFIED AS TO LENGTH SHALL BE CONTINUOUS.

6. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL GROOVE WELDS SHALL BE FULL PENETRATION.

7. ONLY LOW HYDROGEN ELECTRODES SHALL BE USED ON REINFORCING STEEL AND ASTM A992 STEEL.

8. PROVIDE FILLET WELDS AT ALL CONTACT JOINTS BETWEEN STEEL MEMBERS SUFFICIENT TO DEVELOP THE ALLOWABLE TENSILE STRENGTH OF THE SMALLER MEMBER AT THE JOINT UNLESS DETAILED OTHERWISE ON THE DRAWINGS.

MISCELLANEOUS NOTES:

1. THE DETAILS DESIGNATED AS "TYPICAL DETAILS" APPLY GENERALLY TO THE DRAWINGS IN AREAS WHERE CONDITIONS ARE SIMILAR TO THOSE DESCRIBED IN THE DETAILS, UNLESS NOTED OTHERWISE.

2. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS, AND DETAILS. DO NOT SCALE THE DRAWINGS.

3. THE STRUCTURAL DRAWINGS ARE PART OF THE CONTRACT DOCUMENTS AND DO NOT BY THEMSELVES PROVIDE ALL THE INFORMATION REQUIRED TO PROPERLY COMPLETE THE PROJECT STRUCTURE. THE GENERAL CONTRACTOR SHALL CONSULT THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND COORDINATE THE INFORMATION CONTAINED IN THESE DRAWINGS WITH THE STRUCTURAL DRAWINGS TO PROPERLY CONSTRUCT THE PROJECT. PRINCIPAL OPENINGS, CURBS, AND SLAB DEPRESSIONS ARE SHOWN ON THE DRAWINGS. SEE ARCHITECTURAL, MECHL, ELEC'L, AND PLUMBING DRAWINGS FOR SLEEVES, CURBS, INSERTS, OTHER OPENINGS, AND SLAB DEPRESSIONS NOT SHOWN. THE CONTRACTOR SHALL PROVIDE FOR ALL OPENINGS, CURBS, AND SLAB DEPRESSIONS WHETHER SHOWN ON STRUCTURAL DRAWINGS OR NOT. SIZE AND LOCATION OF OPENINGS SHALL BE VERIFIED WITH THE MECHANICAL CONTRACTOR. ANY DEVIATION FROM OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER FOR APPROVAL PRIOR TO PROCEEDING WITH ANY WORK.

4. THE CONTRACTOR SHALL COMPARE THE STRUCTURAL DRAWINGS WITH THE ARCH'L, MECH'L, ELEC'L, PLUMBING, AND CIVIL DRAWINGS TO CONFIRM ALL REQUIREMENTS OF THE WORK. REPORT ANY CONFLICT/DISCREPANCY BETWEEN THE DISCIPLINES TO THE ARCHITECT PRIOR TO FABRICATING OR INSTALLING STRUCTURAL ELEMENTS. BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK, THE CONTRACTOR SHALL VERIFY ALL MEASUREMENTS TO PROPERLY SIZE OR FIT THE WORK. NO EXTRA CHARGE OR COMPENSATION WILL BE ALLOWED BY THE OWNER RESULTING FROM THE CONTRACTOR'S FAILURE TO COMPLY WITH THIS REQUIREMENT.

5. THE HORIZONTAL AND VERTICAL DIMENSIONS OF EXISTING STRUCTURES SHALL BE VERIFIED BEFORE WORK IS BEGUN. ANY VARIATION BETWEEN DIMENSIONS SHOWN AND EXISTING DIMENSIONS SHALL BE REPORTED TO THE ARCHITECT.

6. THE CONTRACTOR SHALL INSURE THAT CONSTRUCTION LOADS DO NOT EXCEED THE DESIGN LIVE LOADS INDICATED ON THE STRUCTURAL DRAWINGS AND THAT THESE LOADS ARE NOT PUT ON THE STRUCTURAL MEMBERS PRIOR TO THE TIME THAT THE CONCRETE REACHES THE FULL DESIGN STRENGTH AND ALL FRAMING MEMBERS AND THEIR CONNECTIONS ARE IN PLACE.

7. ALL STRUCTURES HAVE BEEN DESIGNED TO RESIST THE DESIGN LOADS LISTED ONLY AS COMPLETED STRUCTURES. THE GENERAL CONTRACTOR SHALL FULLY BRACE AND OTHERWISE PROTECT WORK IN PROGRESS UNTIL THE STRUCTURES ARE COMPLETED. THE GENERAL CONTRACTOR SHALL ALSO INSURE THAT ITS OPERATIONS AND PROCEDURES PROVIDE NO LOADING GREATER THAN THE DESIGN LOADS LISTED ON ANY MEMBER.

8. ALL DETAILS, SECTIONS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE UNLESS OTHERWISE SHOWN.

DEMOLITION NOTES:

1. REMOVAL AS DESCRIBED HEREIN SHALL BE ACCOMPLISHED WITHOUT STORING ON THE FLOOR EXCESSIVE QUANTITIES OF ANY MATERIALS, RUBBISH, DIRT, DEBRIS, OR WASTE OF ANY SORT RESULTING FROM THE REMOVAL OPERATIONS ON THE FLOOR.

2. ALL DEBRIS SHALL BE REMOVED FROM THE CONSTRUCTION SITE DAILY.

3. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO MAINTAIN FREE PROTECTED ACCESS OF ALL TENANTS, SERVICE PERSONNEL AND THE PUBLIC THROUGH THE AREAS INVOLVED.

4. THE CONTRACTOR SHALL REMOVE ALL PIPE SLEEVES PROJECTING THROUGH SLAB; PATCH ALL PENETRATIONS, HOLES, ETC.

5. ALL PIPES AND CONDUITS IN WALLS THAT ARE TO BE DEMOLISHED ARE TO BE REMOVED AND/ OR RELOCATED AS REQUIRED.

6. CONTRACTOR SHALL REVIEW WITH ARCHITECTS/ ENGINEER ANY AND ALL ITEMS OF DEMOLITION NOT IMPLIED OR SPECIFIED ON DRAWINGS OR SPECIFICATIONS AND TO INCLUDE SUCH COSTS IN BID UNLESS OTHERWISE ADVISED.

7. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND SERVICES AND PERFORM ALL OPERATIONS REQUIRED FOR COMPLETE INTERIOR DEMOLITION AND RELATED WORK AS DESCRIBED AND SPECIFIED HEREIN, AND AS MAY BE REASONABLY IMPLIED AS NECESSARY TO COMPLETE WORK IN ALL RESPECTS.

8. JOBSITE INSPECTION MUST BE CONDUCTED TO EXAMINE EXISTING CONDITIONS, TO DETERMINE NATURE AND SCOPE OF WORK OR ANY DIFFICULTIES THAT MIGHT ARISE AT TIME OF WORK. IN ADDITION, EXAMINE ALL WORK THAT IS INTENDED TO REMAIN AS PART OF THE COMPLETED PROJECT AND REPORT ALL UNSATISFACTORY CONDITIONS TO ARCHITECT/ ENGINEER PRIOR TO COMMENCEMENT OF WORK. EXERCISE EXTREME CARE DURING DEMOLITION SO AS NOT TO DAMAGE CONSTRUCTION AND OTHER STRUCTURES THAT ARE INTENDED TO REMAIN. ANYTHING DAMAGED AT WORK IS TO BE REPAIRED AND/ OR REPLACED TO MATCH EXISTING CONSTRUCTION AT CONTRACTORS EXPENSE.

9. REFER TO DRAWINGS FOR EXISTING ITEMS/ SYSTEMS TO REMAIN.

10. CONTRACTOR TO PROVIDE DUST BARRIER FOR PROTECTION OF EXISTING AREAS TO REMAIN AS REQUIRED.

11. WHEN DEMOLITION TAKES PLACE, SHOULD ANY WORK AFFECT THE INTEGRITY OF THE STRUCTURE, WORK MUST STOP IMMEDIATELY, AND ARCHITECT/ ENGINEER NOTIFIED. UNDER NO CIRCUMSTANCES SHALL REINFORCING OF ANY KIND BE DAMAGED, CUT OR BROKEN.

12. THE GENERAL CONTRACTOR SHALL PROVIDE SUFFICIENT FRAMING FOR ALL WALL OPENINGS FOR DUCTWORK, RETURN AIR OPENINGS, ACCESS PANELS AND GRILLE OPENINGS ABOVE AND BELOW HUNG CEILINGS. THESE ARE TO BE COORDINATED WITH H.V.A.C. ENGINEERING DRAWINGS AND THE GENERAL CONTRACTOR'S SHOP DRAWINGS AND THE GENERAL CONTRACTOR'S MECHANICAL CONTRACTOR'S SHOP DRAWINGS. ALL SPACES SHALL BE PROPERLY SEALED FOR SOUNDPROOFING AND VIBRATION.

13. PRIOR TO DEMOLITION OF LOAD BEARING MEMBERS, SUPPORTED MEMBERS SHALL BE SHORED.

CONCRETE MASONRY UNITS NOTES:

1. ALL CONCRETE MASONRY WALLS AND COLUMNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENT FOR MASONRY STRUCTURES" (ACI 530/ASCE 5/TSM 402) AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1/ASCE 6/TSM 602)/ LATEST EDITIONS.

2. ALL MASONRY UNITS SHALL BE ASTM C90, TYPE 1 MEDIUM WEIGHT WITH MINIMUM COMPRESSIVE STRENGTH OF 1,900 PSI AT 28 DAYS ON THE NET AREA OF INDIVIDUAL UNITS. ALL CMU SHALL BE ERECTED IN RUNNING BOND, ON FULL MORTAR BEDS, UNLESS OTHERWISE NOTED.

3. CMU MORTAR SHALL BE PORTLAND CEMENT-LIME CONFORMING TO ASTM C270. USE TYPE "M" FOR MASONRY BELOW GRADE AND USE TYPE "M" OR "S" FOR ALL INTERIOR AND EXTERIOR WALLS ABOVE GRADE.

4. CMU GROUT, POURED OR PUMPED, SHALL MEET ASTM C476, AND HAVE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI.

5. PROVIDE HOT DIPPED GALVANIZED LADDER TYPE HORIZONTAL JOINT REINFORCEMENT (9 GA.) AT 16" ON CENTER VERTICAL IN ALL MASONRY WALLS WITH PREFABRICATED "T" AND CORNER PIECES. LAP SPLICED 6" MIN. PROVIDE AN ADDITIONAL ROW ABOVE AND BELOW OPENINGS AND EXTEND 2'-0" BEYOND JAMBS. STOP HORIZONTAL REINFORCING EACH SIDE OF CONTROL AND EXPANSION JOINTS. HORIZONTAL JOINT REINFORCING SHALL MEET ASTM A82.

6. SEE STRUCTURAL DRAWINGS FOR REINFORCING OF LOADBEARING CMU WALLS. ALL CMU WALLS 8" OR WIDER SHALL HAVE THE FOLLOWING MINIMUM REINFORCING UNLESS NOTED OTHERWISE: INTERIOR WALLS -#4 AT 72" O.C.; EXTERIOR WALLS - #5 AT 48" O.C.

7. IN ADDITION TO REINFORCING STEEL NOTED ON PLANS, SCHEDULES, AND SECTIONS, PROVIDE VERTICAL BARS (#4 MIN. U.N.O.) WITHIN 8" OF EACH SIDE OF WALL CONTROL JOINTS, WITHIN 8" OF THE ENDS OF WALLS, WITHIN 16" OF EACH SIDE OF OPENINGS, AND AT ALL CORNERS. DOWELS TO MATCH VERTICAL REINF. WHERE CMU BEARS ON EXISTING SLAB, PROVIDE DOWEL TO EXISTING SLAB WITH ADHESIVE ANCHOR SYSTEM PER TYP. DETAILS (3" MIN. EMBED.).

8. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NON-LOAD BEARING CMU WALLS. BRACING SHALL BE PROVIDED AT THE TOP OF CMU WALLS TO RESIST 5 PSF OF LATERAL PRESSURE AND TO ALLOW FOR VERTICAL DEFLECTION OF THE STRUCTURE ABOVE.

9. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF MASONRY CONTROL JOINTS. IF NOT INDICATED ON THE DRAWINGS, CONCRETE MASONRY SHALL HAVE VERTICAL CONTROL JOINTS WITH A MAXIMUM SPACING OF 24'-0" O.C. AT EXTERIOR WALLS BUT NOT LESS THAN 8" FROM BEARING PLATES.

10. CONTROL JOINTS SHALL ALSO BE LOCATED AT ABRUPT CHANGES IN WALL HEIGHT, CHANGES IN WALL THICKNESS, WALL CORNERS, INTERSECTIONS OF WALLS WITH COLUMNS, PIERS AND PILASTERS, AND NO CLOSER THAN 2'-0" TO EDGE OF ANY WALL OPENING. REINFORCING BARS IN BOND BEAMS AT ROOF AND FLOOR ELEVATIONS SHALL BE CONTINUOUS ACROSS CONTROL JOINTS. WHERE DISCREPANCIES EXIST BETWEEN THE ARCH'L DRAWINGS AND CONTROL JOINT SPACING REQUIREMENTS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER TO RESOLVE THE DISCREPANCY.

11. SPECIAL INSPECTION IS NOT REQUIRED FOR CMU LOADBEARING WALLS.

12. ALL CORES THAT CONTAIN VERTICAL REINFORCING SHALL BE FILLED SOLID WITH GROUT. ALL CMU PIERS SHALL BE COMPLETELY FILLED WITH GROUT. FILLING CORES WITH MORTAR AS WORK PROGRESSES IS NOT ACCEPTABLE.

13. ALL CMU THAT HAS ONE OR MORE FACES BELOW GRADE SHALL BE GROUTED SOLID.

14. THE MINIMUM SPLICE LENGTH FOR ALL VERTICAL BARS IS 48 BAR DIAMETERS UNLESS OTHERWISE NOTED. LAP SPLICES SHALL OCCUR DIRECTLY ABOVE FOOTINGS AND SLABS. NO SPLICES ARE ALLOWED AT MID-HEIGHT OF WALL.

15. REINFORCING BAR POSITIONERS SHALL BE USED TO HOLD BARS IN THE PROPER LOCATION. POSITIONERS SHALL BE PLACED AT A MAXIMUM VERTICAL SPACING OF 48" O.C.

16. ALL UNITS SHALL BE CONTINUOUSLY PROTECTED FROM EXPOSURE TO RAIN OR OTHER SOURCES OF WATER FROM TIME OF CASTING TO FINAL PLACEMENT OF THE WALL. ALL CONCRETE MASONRY UNITS SHALL BE DRY, FEEL FROM SOIL, ICE, AND FROST WHEN LAID IN THE WALL.

17. LAY NO MASONRY WHEN THE TEMPERATURE OF OUTSIDE AIR IS BELOW 40 DEGREES FAHRENHEIT, UNLESS SUITABLE MEANS ARE PROVIDED TO HEAT MATERIALS, PROTECT WORK FROM COLD AND FROST, AND ENSURE THAT THE MORTAR WILL HARDEN WITHOUT FREEZING. COMPLY WITH THE COLD WEATHER REQUIREMENTS CONTAINED IN ACI 530.1.

18. ALL BEAMS SUPPORTING MASONRY, INCLUDING STEEL, PRECAST, AND MASONRY LINTELS ARE TO BEAR ON 8" MIN. AND ON 3 COURSES GROUTED SOLID, MINIMUM.

19. UNLESS NOTED OTHERWISE, PROVIDE ANCHORAGE OF MASONRY WALLS TO THE STRUCTURE IN THE FOLLOWING MANNER:
   a. AT STEEL BEAMS – ADJUSTABLE MASONRY ANCHORS AT 16"
   b. AT STEEL COLUMNS – ADJUSTABLE MASONRY ANCHORS AT 16"
   c. AT CONCRETE ELEMENTS – DOVETAIL ANCHORS AT 16"

20. SPACE MASONRY VENEER ANCHORS AT A MAXIMUM OF 32" HORIZONTALLY AND 18" VERTICALLY. PROVIDE ADDITIONAL ANCHORS AROUND OPENINGS LARGER THAN 16" IN EITHER DIMENSION. SPACE ANCHORS AROUND PERIMETER OF OPENING AT A MAXIMUM OF 32" O.C. PLACE ANCHORS WITHIN 12" OF OPENINGS.

21. ALL LOOSE ANGLE LINTELS SHALL HAVE A MINIMUM BEARING OF 6" ON MASONRY. WHERE LOOSE ANGLES ARE EXPOSED TO WEATHER, ANGLES SHALL BE GALVANIZED. LOOSE LINTELS SHALL BE PROVIDED AT OPENINGS 12" WIDE OR LARGER. UNLESS NOTED OTHERWISE, WIDTH OF LINTEL SHALL BE 1/2" LESS THAN WIDTH OF MASONRY BEING SUPPORTED (5/16" THICKNESS).

22. INSTALL FLASHING AS REQUIRED BY THE ARCH'L DRAWINGS.

GC NOTE:

PROVIDE ADDITIONAL STRUCTURAL STEEL AS NOTED BELOW IN THE BASE BID. INCLUDE COST OF STEEL, DETAILING, FABRICATION, ERECTION, AND ALL OTHER COSTS NECESSARY TO PROVIDE STRUCTURAL STEEL SHOP DRAWING REVIEW. UNUSED STEEL SHALL BE CREDITED TO THE OWNER.

1. FOR SUPPORT OF MECHANICAL UNITS:
   (2) - W12X26 X 20'-0" LONG
   (2) - C10X15.3 X 20'-0" LONG

2. FOR FRAMING AROUND ROOF OPENINGS AND LOUVERS:
   (10) - L4X4X3/8 X 6'-0" LONG
   (20) - L4X4X5/16 X 5'-0" LONG
   (25) - L4X4X1/4 X 5'-0" LONG

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Phone: 610.779.3220 Fax: 610.779.9022
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GENERAL NOTES

RENOVATIONS TO THE COCALICO MIDDLE SCHOOL
COCALICO SCHOOL DISTRICT
SOUTH 4TH STREET, DENVER BOROUGH, LANCASTER COUNTY PA

All DIMENSIONS and EXISTING CONDITIONS shall be CHECKED and VERIFIED by the CONTRACTOR at the SITE.

JOB NO.: 23001.00
DRAWN BY: CJW
DATE: 04.12.24

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