

November 10, 2022

Carmel High School Greyhound Activity Center PEMB Package E. Smoky Row Rd Carmel, IN 46033

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications and the Drawings dated October, 14, 2022, by Fanning Howey. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Pages ADD. 1-1 attached Fanning Howey Addendum No. 1 dated November 9, 2022, consisting of two (2) pages, Revised Drawing Sheets: S0.01, S3.01, A1.01, A3.01, A4.01, A5.01, and A6.01.

A. <u>SPECIFICATION SECTION 01 12 00 - MULTIPLE CONTRACT SUMMARY</u>

1. Paragraph 3.03A Bid Category No. 1 – Metal Buildings

Add the following Clarifications:

- Liner panel and associated support for the liner panel to be included by Bid Cat No. 1 – Metal Buildings contractor.
- 8. Areas where the exterior wall is metal studs and masonry cavity wall constructed by others the liner panel by, Bid Cat No. 1 Metal Buildings, will be installed on that framing.
- 9. Translucent panels to be provided in the final buildout package and are not to be included by the Bid Cat No. 1 Metal Buildings contractor.
- 10. Structural framing for openings shall be included by Bid Cat No. 1 Metal Buildings contractor.

ADDENDUM NO.1

Carmel High School – Greyhound Activity Center PEMB Package

Project No. 222063.00

Carmel Clay Schools Carmel, Indiana

Index of Contents

Addendum No. 1, 2 items, 1 page Revised Drawing Sheets: S0.01, S3.01, A1.01, A3.01, A4.01, A5.01, and A6.01

Date: November 9, 2022

FANNING/HOWEY ASSOCIATES, INC. ARCHITECTS/ENGINEERS/CONSULTANTS

TO: ALL BIDDERS OF RECORD

ADDENDUM NO. 1 to Drawings and Project Manual, dated October 14, 2022 for Carmel High School -Greyhound Activity Center – PEMB Package for Carmel Clay Schools, 5201 East Main Street, Carmel, Indiana 46033; as prepared by Fanning/Howey Associates, Inc., Indianapolis, Indiana.

This Addendum shall hereby be and become a part of the Contract Documents the same as if originally bound thereto.

The following clarifications, amendments, additions, revisions, changes, and modifications change the original Contract Documents only in the amount and to the extent hereinafter specified in this Addendum.

Each bidder shall acknowledge receipt of this Addendum in his proposal or bid.

NOTE: Bidders are responsible for becoming familiar with every item of this Addendum. (This includes miscellaneous items at the very end of this Addendum.)

RE: ALL BIDDERS

ITEM NO. 1. PROJECT MANUAL, SECTION 13 34 19 - METAL BUILDING SYSTEMS

- Α. Add 2.3, B., 5., e., as follows:
 - "e. Polycarbonate Panel Assembly: Vertical Deflection of 1/120 of the span.
- Β. Replace 2.11, A., as follows:
 - "A. Tapered-Rib-Profile, Exposed-Fastener Metal Wall Panels: Formed with raised, trapezoidal major ribs and flat pan between major ribs; designed to be field assembled by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps. 1.
 - Material: Aluminum-zinc alloy-coated steel sheet, 26 gauge thick.
 - Exterior Finish: 2-Coat Fluoropolymer. a.
 - Color: As selected by A/E from manufacturer's full range. b.
 - 2. Major-Rib Spacing: 12 inches o.c.
 - Panel Coverage: 36 inches. 3.
 - Panel Height: 1.25 inches. 4.
 - Basis of Design: Long Span III by American Buildings" 5.
- C. Add 2.11, B., 5., as follows:
 - "5. Contractor's option: Exterior wall panel can be utilized in lieu of manufacturer's standard liner panel."

ITEM NO. 2. **REVISED DRAWING SHEETS**

Α. Drawing Sheets: S0.01, S3.01, A1.01, A3.01, A4.01, A5.01, and A6.01 have been revised, dated 11/9/22, and are included with and hereby made a part of this Addendum. These Drawings supersede the original documents.

END OF ADDENDUM







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WORK.



	DOORS				FRA	ME			
DOOR NUMBER	DOOR SIZE (WxH)	DOOR TYPE	FRAME MATERIAL	FRAME ELEVATION	JAMB DEPTH	HEAD	DETAILS JAMB	SILL	FIR
100A	3' - 0" x 7' - 2"	F FRP		AL1	0' - 4 1/2"				<u>\</u>
100B	$10^{\circ} - 0^{\circ} \times 14^{\circ} - 0^{\circ}$			- 	0' - 2" \ 0' - 1/2"	8/Ab.01		6/A6.01	
1000	3' - 0" x 7' - 2"	F FRP			0' - 4 1/2"				
100D	3' - 0" x 7' - 2"	F FRP			0' - 4 1/2"				-
100E	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				
100G	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				
100H	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				
1001	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				
100J	3' - 0" x 7' - 2"	F FRP	HM	HM1	0' - 4 1/2"				_
101A	PR 2" - 10 3/4" x 6" - 10 3/4"	FGAL2	AL		0' - 4 1/2"				
101B	PR 2' - 10 3/4" x 6' - 10 3/4"	FGAL2	AL		0' - 4 1/2"				
101C	2' - 10 5/32" x 5' - 4 3/4"	FGAL2	AL	SEE PLAN	0' - 4 1/2"				
101D	PR 2' - 10 3/4" x 6' - 10 3/4"	FGAL2	AL		0' - 4 1/2"				
101E	2' - 10 3/4" x 6' - 10 3/4"	FGAL2	AL	SEE PLAN	0' - 4 1/2"				
101F	2' - 10 3/4" x 6' - 10 3/4"	FGAL2	AL	SEE PLAN	0' - 4 1/2"				
101G	PR 2' - 10 3/4" x 6' - 10 3/4"	FGAL2	AL		0' - 4 1/2"				
102A	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				
102B	3' - 0" x 7' - 2"	F WD	HM	HM1	0' - 4 1/2"				
103A	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				
103B	3' - 0" x 7' - 2"	FWD	HM	HM1	0' - 4 1/2"				-
104A 104P	3 - 0 ' X 7' - 2" 3' - 0" x 7' - 2"			ALT HM1	0 - 4 1/2"				-
104C	10' - 0" x 14' - 0"	OHCD	STI	-	0' - 2"				\vdash
104D	10' - 0" x 14' - 0"	OHCD	STL	-	0' - 2"				┢
104E	3' - 0" x 7' - 2"	F WD	HM	HM1	0' - 4 1/2"				
104F	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				
104G	10' - 0" x 14' - 0"	OHCD	STL	-	0' - 2"	8/A6.01	7/A6.01	6/A6.01	
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106A	3' - 0" x 7' - 2"	FWD	HM	HM1	0' - 4 1/2"				+
108A	3' - 0" x 7' - 2"	FWD	HM	HM1	0' - 4 1/2"				
109A	3' - 0" x 7' - 2"	F WD	HM	HM1	0' - 4 1/2"				
110A	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				
110B	3' - 0" x 7' - 2"	F WD	HM	HM1	0' - 4 1/2"	•			
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DOOR	DUORS	DOOR	FRAME	FRAME			DETAILS		FIRE
NUMBER	DOOR SIZE (WxH)	TYPE	MATERIAL	ELEVATION	DEPTH	HEAD	JAMB	SILL	IN
100A	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				
100B	10' - 0" x 14' - 0"	OHCD	STL	-	0' - 2"	8/A6.01	7/A6.01	6/A6.01	
100C	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				
100D	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				<u>Z1</u>
100E	3' - 0" x 7' - 2" 3' 0" x 7' - 2"		AL	AL1	0' - 4 1/2"				
100G	3' - 0" x 7' - 2"	F FRP		AL1	0' - 4 1/2"				
100H	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				
1001	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				
100J	3' - 0" x 7' - 2"	F FRP	HM	HM1	0' - 4 1/2"				
101A	PR 2' - 10 3/4" x 6' - 10 3/4"	FGAL2			0' - 4 1/2"				
1018	PR 2 - 10 3/4" X 6 - 10 3/4"	FGALZ	AL		0 - 4 1/2				
	2 - 10 5/32 X 5 - 4 3/4"	FGAL2		SEE PLAN	0 - 4 1/2				<u> </u>
1010	10 3/4"	FGAL2			0 - 4 1/2				
101E	2 - 10 3/4 × 6 - 10 3/4"	FGAL2			$0 - 4 \frac{1}{2}$				
	2 - 10 3/4 X 6 - 10 3/4"	FGAL2	AL	SEE PLAN	0 - 4 1/2"				
101G	10 3/4" X 6 - 10 3/4"		AL	ΔΙ 1	0 - 4 1/2"				
102A	3' - 0" x 7' - 2"	FWD	HM	HM1	0'-4 1/2"				-
103A	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				
103B	3' - 0" x 7' - 2"	F WD	HM	HM1	0' - 4 1/2"				
104A	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				<u> </u>
104B	3' - 0" x /' - 2"		HM	HM1	0' - 4 1/2"				
104D	10' - 0" x 14' - 0"	OHCD	STL	-	0' - 2"				-
104E	3' - 0" x 7' - 2"	F WD	HM	HM1	0' - 4 1/2"				
104F	3' - 0" x 7' - 2"	F FRP	AL	AL1	0' - 4 1/2"				<u>}</u>
104G	10' - 0" x 14' - 0"	OHCD	STL	-	0' - 2"	8/A6.01	7/A6.01	6/A6.01	4
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106A	3' - 0" x 7' - 2"	FWD	HM	HM1	0' - 4 1/2"				
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101D	3/4" PR 2' - 10 3/4" x 6' - 10 3/4"	FGAL2	AL		0' - 4 1/2"				
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104A 104R	3' - 0" x 7' - 2"	FWD	HM	HM1	0'-4 1/2"				
104C	10' - 0" x 14' - 0"	OHCD	STL	-	0' - 2"				
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	IGN DATA:	MAT	ERIALS:
1.	CODES AND STANDARDS: (ALL WORK SHALL CONFORM WITH THE FOLLOWING BUILDING CODES	1.	CONCRETE:
	AND STANDARDS)		PORTLAND CEMENT (GRAY)ASTM C150 TYPI
	A.) GENERAL DESIGN: INTERNATIONAL BUILDING CODE, 2012 EDITION (IBC), IN ACCORDANCE WITH INDIANA 2014 BUILDING CODE WITH AMENDMENTS.		WATERCLEAN AND P COARSE AGGREGATE CRUSHED STONE, OR GRAVEL INDOT SIZE #8, AS
	B.) DESIGN LOADS: ASCE'S " MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES"		FINE AGGREGATE ON CONTROL OF CALL, ON CONTROL OF CALLO OF C
	(ASCE/SEI 7-10).		
	C.) REINFORCED CONCRETE DESIGN: ACI'S "BUILDING CODE REQUIREMENTS FOR STRUCTURAL		HIGH RANGE WATER REDUCING ADMIXTURE ASTM C494, TYPE
		2.	REINFORCING STEEL:
	D.) STRUCTURAL MASONRY: THE MASONRY SOCIETY'S "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (TMS 402-11/ACI 530-11/ASCE 5-11) AND THE MASONRY SOCIETY'S		STIRRUPS, TIES, AND MAIN REINFORCING BARS ASTM A615, GRADE 60, Fy
	SPECIFICATION FOR MASONRY STRUCTURES" (TMS 602-11/ACI 530.1-1 ASCE 6-11).		
	E.) STRUCTURAL STEEL DESIGN: AISC'S "STEEL CONSTRUCTION MANUAL, 14TH EDITION."	5.	
	F.) COLD FORMED METAL FRAMING: AISI'S "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" (AISI S100-12).		PROVIDE NORMAL WEIGHT UNITS BELOW GRADE AND LIGHTWEIGHT UNITS ABOVE
$\sim$	$\sim$	2	COMPRESSIVE STRENGTH OF NOT LESS THAN 2800 PSI. (Fm = 2000 PSI FOR TYPE 'S'
	SOIL INFORMATION:		
	ALLOWABLE NET BEARING PRESSURE, COLUMN FOOTING2,000 PSF		PROPORTIONS SHALL CONFORM WITH MORTAR PROPORTION REQUIREMENTS OF
	UNIT WEIGHT OF SOIL		
	ACTIVE LATERAL EARTH PRESSURE COEFFICIENTKa = 0.33		STANDARD LADDER TYPE REINFORCEMENT (#9 SIDE RODS AND #9 CROSS RODS)
	AT REST LATERAL EARTH PRESSURE COEFFICIENTKo = 0.55		
	COEFFICIENT OF FRICTION AT BOTTOM OF FOOTING		BOND BEAMS SHALL BE FILLED WITH CONCRETE GROUT MEETING THE FOLLOWING
			REQUIREMENTS: (ASTM C476) MINIMUM 2500 PSI 28-DAY COMPRESSIVE STRENGTH.
~	SOILS REPORT NO. 22IN0636, PREPARED BY ALT & WITZIG, DATED 10-26-22.	SPE	CIAL NOTES:
_	REACTIONS FOR FOUNDATION DESIGN TO BE PROVIDED BY PRE-ENGINEERED METAL BUILDING	1.	WHERE DISCREPANCY MAY OCCUR BETWEEN THE DRAWINGS AND A GENERAL NOTE OR TYPIC
•	DESIGNER.		DETAIL THE DRAWINGS SHALL PREVAIL.
	RISK CATEGORY (IBC TABLE 1604.5)CATEGORY III	2.	THE CONTRACTOR SHALL VERIFY RESPONSIBILITY FOR CONTRACTING TESTING AND INSPECT SERVICES AS DEFINED IN THESE NOTES.
		3.	STRUCTURAL DOCUMENTS SHALL BE USED WITH OTHER CONSTRUCTION DOCUMENTS. INCLU
•		0.	ARCHITECTURAL, M.E.P., AND SITE DOCUMENTS. COORDINATE WITH THESE DOCUMENTS, ALL
	COLLATERAL 5 PSF		THE ATTENTION OF THE ARCHITECT / ENGINEER.
	EQUIPMENT SEE ARCHITECTURAL DRAWINGS	4.	THE CONTRACTOR SHALL BE RESPONSIBLE FOR LIMITING CONSTRUCTION LOADS SUCH THAT
	SNOW LOADS 22 PSF		LOADS DO NOT EXCEED THE DESIGN LIVE LOADS NOTED ABOVE. THE CONTRACTOR SHALL PR TEMPORARY SHORING AS REQUIRED DURING CONSTRUCTION TO SUPPORT CONSTRUCTION L
	LIVE LOADS MECHANICAL & STORAGE 125 PSE		UNTIL SUCH TIME THAT THE STRUCTURE IS ABLE TO SUPPORT THE DESIGN LIVE LOADS NOTE
	ASSEMBLY & PUBLIC AREAS 100 PSF	<u> </u>	ORDINATE WITH OTHER TRADES:
	WIND LOADS: (IBC SECTION 1609 AND ASCE 7)	1.	THE GENERAL CONTRACTOR SHALL COORDINATE AND CHECK ALL DIMENSIONS RELATING TO
			ARCHITECTURAL FINISHES, MECHANICAL OPENINGS, EQUIPMENT, ETC. THE ARCHITECT / ENGI
	NOMINAL DESIGN WIND SPEED (ASD)93 MPH		UNDER QUESTION.
	EXPOSUREC	2.	PROVIDE SUPPORT FRAMING FOR ALL MECHANICAL UNITS HANGING FROM THE STEEL FRAMIN
	INTERNAL PRESSURE COEFFICIENT, GCPI:+/- 0.18		(INCLUDING ANY NOT SHOWN ON THE STRUCTURAL DRAWINGS) AS INDICATED ON THE TYPICA DETAILS.
	COMPONENTS AND CLADDING LOADS TO BE CALCULATED BY METAL BUILDING ENGINEER USING	3.	THE MECHANICAL CONTRACTOR SHALL NOTIFY THE ARCHITECT / ENGINEER OF ANY PIPING OI
	APPROPRIATE TRIBUTARY AREAS AND COEFFICIENTS FOR EACH COMPONENT.		MECHANICAL UNIT SUPPORTED BY THE STRUCTURE PER THE FOLLOWING:
•	SEISMIC LOADS: FOR PRIMARY SYSTEMS (IBC SECTION 1613 AND ASCE 7)		A.) ANY UNIT WHOSE ACTUAL WEIGHT IS GREATER THAN THE WEIGHT SHOWN ON THE PLANS.
	IMPORTANCE FACTOR (DETERMINED FROM RISK CATEGORY)1.25		B.) ANY UNIT NOT SHOWN ON THE STRUCTURAL PLANS WHOSE WEIGHT IS GREATER THAN 300 LBS
	SITE CLASSD	4	
	SHORT PERIOD, S _{DS} 0.156	4.	STEEL FRAMING ARE CAPABLE OF SPANNING THE DISTANCE BETWEEN THE SUPPORT FRAMIN
	1-SECOND PERIOD, S _{D1} 0.130		PROVIDED FOR BY THE STRUCTURAL DRAWINGS. THE MECHANICAL CONTRACTOR SHALL NOT THE METAL BUILDING DESIGNER WHO WILL ADD AND/OR MODIFY SUPPORT FRAMING AS NEED
	SEISMIC DESIGN CATEGORYB	5.	PROVIDE SUPPORT FRAMING FOR ALL MECHANICAL OPENINGS THROUGH ROOF AND WALL AR
	DESIGN SPECTRAL RESPONSE COEFFICIENTS, SS0.146 DESIGN SPECTRAL RESPONSE COEFFICIENTS, S10.081		IN METAL BUILDING (INCLUDING ANY NOT SHOWN ON THE STRUCTURAL DRAWINGS). SEE MET
		0	
•	DEFLECTION CRITERIA (IBC TABLE 1604.3)	6.	JOIST, BEAM OR COLUMN UNLESS IT IS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVE
	ROOF FRAMING - SNOW LOADS WITHOUT CEILING L / 180		THE ARCHITECT / ENGINEER IN WRITING.
	ROOF FRAMING - SNOW LOADS - NONPLASTER CEILINGSL / 240	7.	MECHANICAL OPENINGS THROUGH CONCRETE SLABS AND WALLS LARGER THAN 8" IN DIAMET NOT SHOWN ON THE STRUCTURAL DRAWINGS. MUST BE APPROVED BY THE ARCHITECT / ENG
	WALL GIRTS SUPPORTING GLASS		ALL OPENINGS 8" IN DIAMETER OR LESS SHALL HAVE AT LEAST 1'-0" CLEAR BETWEEN THE OPE
	ALL OTHER WALL GIRTSL / 180	0	
	ROOF FRAMING - DEAD AND SNOW LOAD WITHOUT CEILINGSL / 120	8.	STEEL DECK.
	METAL ROOF PANELSL / 180	9.	DO NOT INSTALL ELECTRICAL CONDUIT IN SLAB-ON-GRADE UNLESS APPROVED BY THE
			ENGINEER.
	METAL WALL PANELS L / 180		

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GENERAL NOTES

- __ASTM C150 TYPE I OR III ___CLEAN AND POTABLE ED STONE, OR GRAVEL INDOT SIZE #8, ASTM C33 _____ SAND, INDOT SIZE #23, ASTM C33
- ___ASTM C260 __ASTM C494, TYPE F OR G
- _____ ASTM A615, GRADE 60, Fy = 60 KSI __ASTM A1064
- A C90, NOMINAL FACE DIMENSIONS 8" x 16". RADE AND LIGHTWEIGHT UNITS ABOVE GRADE, ICRETE MASONRY UNITS WITH A NET AREA IAN 2800 PSI. (Fm = 2000 PSI FOR TYPE 'S'
- ORMING WITH ASTM C270. MORTAR TAR PROPORTION REQUIREMENTS OF
- L BE PLACED EVERY OTHER COURSE. USE (#9 SIDE RODS AND #9 CROSS RODS)
- RES (WHERE SPECIFIED ON DRAWINGS) AND RETE GROUT MEETING THE FOLLOWING 0 PSI 28-DAY COMPRESSIVE STRENGTH.
- RAWINGS AND A GENERAL NOTE OR TYPICAL
- OR CONTRACTING TESTING AND INSPECTION

### HER CONSTRUCTION DOCUMENTS, INCLUDING RDINATE WITH THESE DOCUMENTS, ALL FLOOR ETC. ANY DISCREPANCY SHALL BE BROUGHT TO

- TING CONSTRUCTION LOADS SUCH THAT THESE TED ABOVE. THE CONTRACTOR SHALL PROVIDE RUCTION TO SUPPORT CONSTRUCTION LOADS SUPPORT THE DESIGN LIVE LOADS NOTED.
- D CHECK ALL DIMENSIONS RELATING TO EQUIPMENT, ETC. THE ARCHITECT / ENGINEER
- JNITS HANGING FROM THE STEEL FRAMING RAWINGS) AS INDICATED ON THE TYPICAL
- ARCHITECT / ENGINEER OF ANY PIPING OR PER THE FOLLOWING: TER THAN THE WEIGHT SHOWN
- L PLANS WHOSE WEIGHT IS GREATER
- ALL MECHANICAL UNITS SUPPORTED BY THE TANCE BETWEEN THE SUPPORT FRAMING E MECHANICAL CONTRACTOR SHALL NOTIFY OR MODIFY SUPPORT FRAMING AS NEEDED. PENINGS THROUGH ROOF AND WALL AREAS THE STRUCTURAL DRAWINGS). SEE METAL
- EVES SET, OR HOLES CUT OR DRILLED IN ANY E STRUCTURAL DRAWINGS OR APPROVED BY
- S AND WALLS LARGER THAN 8" IN DIAMETER. BE APPROVED BY THE ARCHITECT / ENGINEER. AT LEAST 1'-0" CLEAR BETWEEN THE OPENINGS
- HTING, OR OTHER LOADS DIRECTLY FROM
- RADE UNLESS APPROVED BY THE

- FOUNDATIONS AND EARTHWORK:
- PREPARE ALL AREAS OF THE SITE SUPPORTING STRUCTURE BY REMOVING ALL TOP SOIL, EXISTING FILL, ORGANIC MATERIAL, OR FROZEN WET, SOFT, LOOSE OR OTHERWISE UNSUITABLE MATERIALS.
- PROOF ROLL THE EXPOSED SUB-GRADE BELOW DRIVES. WALLS, AND BUILDING FLOOR SLABS WITH A LOADED DUMP TRUCK TO DETERMINE IF ANY POCKETS OF SOFT, UNSUITABLE MATERIAL EXIST BENEATH THE EXPOSED SUB-GRADE. REMOVE ANY UNSUITABLE MATERIAL ENCOUNTERED AND REPLACE WITH PROPERLY COMPACTED GRANULAR FILL MATERIAL. COMPACT SUB-GRADE TO 95% MODIFIED MAXIMUM DRY DENSITY (ASTM D1557).
- COMPACT ALL FILL MATERIALS BENEATH SLAB-ON-GRADE, SIDEWALKS, AND PAVEMENT, OR OVER FOOTINGS TO 95% MODIFIED MAXIMUM DRY DENSITY (ASTM D1557). INCREASE THE COMPACTION REQUIREMENTS FOR ENGINEERED FILL SUPPORTING FOOTINGS TO 97% MODIFIED MAXIMUM DRY DENSITY (ASTM D1557) COMPACT ALL BACKFILL NOT SUPPORTING SLAB. PAVEMENT OR FOOTING TO 90% MODIFIED MAXIMUM DRY DENSITY (ASTM D1557). PLACEMENT, COMPACTION, AND MATERIAL USED FOR FILL SHALL BE APPROVED AND OVERSEEN BY THE TESTING AGENCY.
- 4. COMPACTION FOR ALL FOOTINGS, SLABS AND PAVEMENTS CAN ALTERNATELY BE ALLOWED TO MEET 98% STANDARD PROCTOR MAXIMUM DRY DENSITY IF SUBSTANTIATED BY THE PROJECT SOIL REPORT PROVIDED.
- 5. PLACE ALL FILL MATERIALS IN LAYERS NOT EXCEEDING 6" IN LOOSE THICKNESS AND NOT MORE THAN 4" IN LOOSE THICKNESS FOR MATERIAL COMPACTED BY HAND OPERATED TAMPERS. MECHANICALLY COMPACT EACH LAYER TO AT LEAST THE REQUIRED MINIMUM DRY DENSITY. FIELD DENSITY TESTS WILL BE PERFORMED ON EACH LIFT AS REQUIRED TO ENSURE ADEQUATE MOISTURE LEVELS AND COMPACTION ARE ACHIEVED. PLACEMENT, COMPACTION, AND MATERIAL USED FOR FILL SHALL BE APPROVED AND OVERSEEN BY THE TESTING AGENCY.
- 6. FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED MATERIAL. IF UNSUITABLE MATERIAL IS ENCOUNTERED, RE-ESTABLISH THE BEARING ELEVATION OF THE FOOTING BY LOCALIZED UNDER-CUTTING AND FILLING WITH SUITABLE ENGINEERED FILL OR CONCRETE AS RECOMMENDED BY THE TESTING AGENCY.
- 7. A TESTING AGENCY SHALL VERIFY THAT THE SOIL BEARING CAPACITY IS ACCEPTABLE AT EACH COLUMN FOOTING AND AT 8'-0" INTERVALS ALONG WALL FOOTINGS AT THE INDICATED BEARING FI EVATIONS.
- 8. PLACE FOOTINGS THE SAME DAY EXCAVATIONS ARE OPENED. IF THIS IS NOT POSSIBLE, ADEQUATELY PROTECT THE EXPOSED MATERIAL IN THE BASES OF THE FOOTING EXCAVATIONS FROM ANY DETRIMENTAL CHANGE IN CONDITION SUCH AS FROM DISTURBANCE, RAIN, OR FREEZING. SURFACE RUNOFF SHALL NOT BE ALLOWED TO ENTER EXCAVATIONS.
- 9. PLACE ALL FOOTINGS IN WOOD FORMS (UNLESS SPECIFIC APPROVAL IS RECEIVED FROM THE ENGINEER OF RECORD).
- 10. CENTER ALL COLUMN AND WALL FOOTINGS UNDER THE COLUMN OR WALL ABOVE UNLESS OTHERWISE INDICATED.
- 11. TOP AND BOTTOM SUPPORTING SLABS FOR ALL CONCRETE WALLS RETAINING EARTH MUST BE PLACED AND HAVE REACHED 75% OF THEIR REQUIRED 28-DAY COMPRESSIVE STRENGTH BEFORE BACKFILLING OPERATIONS BEGIN.
- 12. ALL CONCRETE WALLS RETAINING EARTH MUST HAVE REACHED 75% OF THE REQUIRED 28-DAY COMPRESSIVE STRENGTH BEFORE BACKFILLING OPERATIONS BEGIN.
- 13. ALL BACKFILL PLACED AGAINST CONCRETE WALLS SHALL BE DRAINAGE FILL MATERIAL
- 14. PLACE SLAB-ON-GRADE ON 6" OF PROPERLY COMPACTED, DRAINAGE FILL MATERIAL.
- 15. ENGINEERED FILL SHALL BE CLEAN, WELL GRADED AND FREE DRAINING IN ITS COMPACTED STATE. THE MATERIAL SHALL BE APPROVED BY THE TESTING AGENCY. IN LIEU OF TESTING AGENCY RECOMMENDATIONS, PROVIDE ONE OF THE FOLLOWING MATERIALS FOR ENGINEERED FILL: A.) CLASS 'A' CONCRETE.
- B.) WELL GRADED MIXTURE OF GRAVEL OR CRUSHED STONE AND NATURAL OR CRUSHED SAND, ASTM D2940, WITH 100% PASSING 1 1/2" SIEVE AND NOT MORE THAN 10% PASSING A NO.200 SIEVE. 16. DRAINAGE FILL SHALL BE COARSE GRADED CRUSHED STONE OR PIT RUN GRAVEL. MATERIAL MUST
- HAVE 100% PASSING A 1" SIEVE AND A MAXIMUM OF 5% PASSING THE NO.8 SIEVE (INDOT #8 COARSE AGGREGATE). 17. IF CONSTRUCTION OCCURS DURING THE COOLER, WETTER MONTHS, IT SHOULD BE ANTICIPATED THAT
- A COMBINATION OF SOIL AND SEASONAL WEATHER CONDITIONS WILL BE PRESENT DURING CONSTRUCTION THAT WILL RESULT IN SUB-GRADE THAT IS EXCESSIVELY WET. SOFT OR YIELDING THIS CONDITION MAY BE MITIGATED BY SCARIFYING AND DRYING, OR USING CHEMICAL STABILIZATION (WITH A SUITABLE LIME BY-PRODUCT).
- A.) THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING WHETHER OR NOT TO EMPLOY SOIL STABILIZATION MEASURES, AND IF SO, FOR DETERMINING WHICH MEASURES ARE MOST APPROPRIATE FOR THIS PROJECT.
- B.) THE COST OF ANY STABILIZATION MEASURES IS THE RESPONSIBILITY OF THE CONTRACTOR. 18. POSITIVE DRAINAGE OF SURFACE WATER, INCLUDING NEW BUILDING DOWNSPOUT DISCHARGE SHALL BE MAINTAINED AWAY FROM STRUCTURE FOUNDATIONS TO AVOID WETTING AND WEAKENING OF FOUNDATION SOILS BOTH DURING CONSTRUCTION AND AFTER CONSTRUCTION IS COMPLETE. THE
- CONTRACTOR IS RESPONSIBLE FOR THE IMPLEMENTATION OF ANY APPROPRIATE DEWATERING NFFDFD.
- 19. COORDINATE WITH THE PROJECT MANUAL FOR INSTALLATION OF ALL REQUIRED SLEEVES, INSERTS, ETC.
- 20. ALL PIPES BURIED IN THE SOIL THAT CROSS FOOTINGS/FOUNDATIONS SHALL PASS THROUGH THE FOUNDATION WALL OR BELOW FOOTING (NOT THROUGH FOOTING). WHERE PIPE ELEVATION CONFLICTS WITH FOOTING, STEP FOOTING DOWN AT 1:2 SLOPE EACH SIDE OF PIPE.

## CONCRETE:

- 1. ALL CONCRETE MATERIALS AND THE MIXING, HANDLING, PLACING AND CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH THE CURRENT BUILDING CODE REQUIREMENTS AND ACI 301, 305, 306, AND 318.
- 2. DO NOT PLACE DURING RAIN, SLEET OR SNOW WITHOUT ADEQUATE PROTECTION.
- 3. SUBMIT A MIX DESIGN FOR EACH CLASS OF CONCRETE SPECIFIED. 4. PROVIDE ADEQUATE TESTING AND REPORTS FOR ALL CLASSES OF CONCRETE FROM AN APPROVED
- TESTING LABORATORY.
- 5. PROVIDE 3/4" CHAMFERS ON ALL EXPOSED CORNERS OF CONCRETE EXCEPT THOSE ABUTTING MASONRY.
- 6. ALL CONCRETE EXPOSED TO WEATHER, PERMANENT OR TEMPORARY, SHALL BE AIR ENTRAINED EXCEPT SLABS WITH A TROWEL FINISH.
- 7. THE INDEPENDENT TESTING LABORATORY SHALL VERIFY AND REPORT THE PLACEMENT OF REINFORCING STEEL IN ALL CONCRETE STRUCTURES TO INCLUDE BAR SIZE AND GRADE,

MEASURED LAP, SPACING, AND CONCRETE COVER.

## REINFORCING STEEL:

- (ACI 318) UNLESS OTHERWISE INDICATED.
- SUCH ACCESSORIES SHALL HAVE TURNED UP LEGS.
- OF STANDARD PRACTICE".
- BE SUPPORTED POSITIVELY.
- 6. CONCRETE REINFORCING SHALI
  - A.) CONCRETE PLACED A B.) CONCRETE PLACED IN 1.) #5 BARS AND
  - 2.) #6 BARS AND C.) CONCRETE NOT EXPO
    - 1.) SLABS, WALL a.) #11 BARS AND SMALLER _____
    - b.) #1 2.) BEAMS, COL
- WITH LAP SPLICES AS INDICATED.
- FOOTING STEPS WITH 6" MAXIMUM BOTTOM COVER.

# CLASS 'B' TENSION LAP SPLICE SCHEDULE BAR SIZE #3 BAR #4 BAR

#5 BAR
#6 BAR
#7 BAR
#8 BAR
#9 BAR
#10 BAR

- NOTES:
- . PROVIDE SCHEDULED LAP LENGTH UNLESS OTHERWISE NOTED ON DRAWINGS.
- 2. ALL LAPS ARE FOR 4000 PSI CONCRETE OR STRONGER INCREASE LAPS BY 15% FOR
- 3000 PSI CONCRETE. INCREASE LAPS BY 30% FOR HORIZONTAL LAP
- CONCRETE PLACED BELOW THE LAPPED BARS.
- 4. INCREASE LAPS BY 50% FOR EPOXY COATED BARS.
- 5. INCREASE LAPS BY 33% FOR LIGHTWEIGHT CONCRETE

- 90° HOOKS AT SPANDREL CONDITIONS.
- IN ANY DIRECTION.

1. ALL REINFORCING STEEL BENDS, HOOKS, LAP SPLICES AND MINIMUM CONCRETE COVER SHALL CONFORM TO ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL REINFORCED CONCRETE"

2. SLAB BOLSTERS, HIGH CHAIRS, BEAM BOLSTERS, AND ALL OTHER ACCESSORIES IN CONTACT WITH THE FORMS FOR EXPOSED CONCRETE, BOTH INTERIOR AND EXTERIOR, SHALL BE PLASTIC TIPPED.

3. ALL DETAILS OF REINFORCING STEEL FABRICATION AND PLACEMENT SHALL CONFORM TO ACI "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" (ACI 315) AND "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" (ACI 315R) UNLESS OTHERWISE INDICATED. ALL REINFORCING STEEL SHALL BE SUPPORTED AND SECURED AGAINST DISPLACEMENT IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE'S "MANUAL

4. THE SHOP DRAWINGS FOR REINFORCING STEEL INCLUDE 1/4" SCALE ELEVATIONS OF ALL CONCRETE WALLS AND BEAMS AS APPLICABLE AND ALL SECTIONS REQUIRED TO MAKE CLEAR THE LOCATION OF THE REINFORCING STEEL. SHOW SLAB BAR SUPPORTS ON SHOP DRAWINGS. USE ONLY #5 BARS WITH INDIVIDUAL HIGH CHAIRS FOR SUPPORT OF THE TOP SLAB BARS. ANCHOR ALL TOP BARS BY STANDARD EMBEDMENT OR 90° HOOK UNLESS OTHERWISE DETAILED. OVERHANGING TAILS SHALL

5. ALL CONCRETE REINFORCEMENT MATERIALS SHALL BE NEW, FREE FROM RUST AND ANY SUBSTANCE THAT WOULD PREVENT BONDING OF THE CONCRETE TO THE STEEL.

L HAVE THE FOLLOWING MINIMUM PROTECTION (U.O.N.):	
GAINST AND PERMANENTLY EXPOSED TO EARTH	3"
I FORMS BUT EXPOSED TO EARTH OR WEATHER	
D SMALLER	1 1/2"
D LARGER	2"
SED TO WEATHER OR IN CONTACT WITH GROUND	
LS AND JOISTS	

14 AND #18 BARS	1 1/	2
.UMNS PRIMARY REINFORCEMENT TIES, STIRRUPS, SPIRALS	1 1/	2

7. SET DOWELS, COLUMNS OR PIER MAIN BARS, AND ANCHOR RODS WITH WOOD POSITIONING TEMPLATES AT TOP OF FOOTING AND BRACE AGAINST DISPLACEMENT.

8. PROVIDE FOOTING DOWELS FOR ALL VERTICAL WALL REINFORCEMENT. DOWELS SHALL BE THE SAME SIZE AND SPACING AS THE VERTICAL WALL REINFORCEMENT UNLESS OTHERWISE NOTED,

9. POSITION DOWELS FOR VERTICAL WALL REINFORCEMENT IN COLUMN FOOTINGS AND WALL

10. PROVIDE CLASS 'B' TENSION LAP SPLICES FOR ALL REINFORCEMENT UNLESS OTHERWISE NOTED.

LAP LENGTH	
19"	
25"	
31"	
37"	
54"	
62"	
70"	
79"	

# SPLICES WITH MORE THAN 1'-0" OF FRESH

## 6. INCREASE LAPS BY 50% WHERE CLEAR SPACING

BETWEEN BARS IS LESS THAN (2)-BAR DIAMETERS OR CLEAR COVER IS LESS THAN (1)-BAR DIAMETER.

11. SPREAD REINFORCING STEEL AROUND SMALL OPENINGS AND SLEEVES IN SLABS AND WALLS WHERE POSSIBLE AND WHERE BAR SPACING WILL NOT EXCEED 1.5 TIMES THE NORMAL SPACING. DISCONTINUE BARS AT OPENINGS WHERE NECESSARY AND PROVIDE AN AREA OF REINFORCEMENT EQUAL TO THE INTERRUPTED REINFORCEMENT, IN FULL LENGTH BARS, DISTRIBUTING ONE-HALF EACH SIDE OF THE OPENING. WHERE TEMPERATURE REINFORCING IS INTERRUPTED, ADD (2),#5 BARS X OPENING DIMENSION + 4'-0" IN THE BOTTOM ON EACH SIDE OF THE OPENING. PROVIDE (2)-#5 DIAGONAL BARS x 4'-0" IN BOTH FACES AT EACH CORNER OF OPENINGS LARGER THAN 12"

12. PROVIDE #4 TOP BARS AT 12" SPACING IN SOLID SLABS OVER SUPPORTS UNLESS OTHERWISE SIMILARLY REINFORCED. EXTEND THESE BARS 2'-0" BEYOND EACH SUPPORT FACE, PROVIDING STRUCTURAL MASONRY:

- 1. MASONRY CONSTRUCTION SHALL BE IN ACCORDANCE WITH CHAPTER 21 OF THE 2012 EDITION OF THE INTERNATIONAL BUILDING CODE AND TMS 402 AND 602.
- 2. GROUT PROPORTIONS SHALL CONFORM TO ASTM C476. PLACEMENT OF GROUT SHALL CONFORM TO TABLE 7 OF THE CURRENT EDITION OF ACI 530.1 "SPECIFICATION FOR MASONRY STRUCTURES".
- 3. GROUT CMU CORES 2 COURSES BELOW BEARING OF ALL SCHEDULED STEEL LINTELS AS INDICATED IN THE STEEL LINTEL SCHEDULE AND 'L' SERIES CMU LINTELS AS SHOWN IN THE CMU LINTEL SCHEDULE. GROUT CMU CORES FULL HEIGHT BELOW BEARING OF SPECIAL LINTELS (SL-1, ETC.) AS INDICATED IN THE SPECIAL LINTEL SCHEDULE AND ALL 'ML' AND 'HL' SERIES CMU LINTELS AS SHOWN ON THE CMU LINTEL SCHEDULE.
- 4. MASONRY WALLS SHOWN ON ARCHITECTURAL DRAWINGS BUT NOT ON STRUCTURAL MASONRY PLAN SHALL HAVE HORIZONTAL JOINT REINFORCING AS REQUIRED BY THE PROJECT MANUAL.
- 5. UNLESS OTHERWISE NOTED, CENTER ALL VERTICAL REINFORCING IN CMU CORE AND HOLD IN POSITION WITH CAGING DEVICES. SEE TYPICAL DETAILS AND PROJECT MANUAL.
- 6. THE MINIMUM LENGTH OF LAP FOR REINFORCING IN MASONRY WALLS 8" OR WIDER AND A MAXIMUM OF (1)-BAR IN A CELL SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED: BAR SIZE LAP LENGTH
  - 12" 16"
  - 22" (28" FOR (2)-BARS PER CELL)
  - 42" FOR 8" CMU AND 32" FOR 10" OR WIDER (51" FOR (2)-BARS PER CELL) 60" FOR 8" CMU AND 45" FOR 10" OR WIDER (70" FOR (2)-BARS PER CELL)
- IN LIEU OF LAP SPLICES, PROVIDE TYPE 2 MECHANICAL SPLICES PER 21.2.6.1 OF ACI 318.
- 7. ALL BOND BEAMS SHALL BE CONTINUOUS AND SHALL BE FILLED WITH GROUT AND REINFORCED AS FOLLOWS, UNLESS OTHERWISE NOTED:

OLLOWS, UNLESS	UTHERWISE
BOND BEAM	REINFORCIN
6" CMU	(1)-#4 BAR
3" CMU	(2)-#5 BARS
10" CMU	(2)-#6 BARS
12" CMU	(2)-#7 BARS
14" CMU	(2)-#7 BARS

REINFORCING SHALL BE CONTINUOUS, EXCEPT AT VERTICAL CONTROL JOINTS UNLESS OTHERWISE NOTED. PROVIDE 3/4" DIAMETER x 1'-0" LONG SMOOTH GREASED DOWELS (ONE WRAP PER REBAR) ACROSS CONTROL JOINTS. PROVIDE DOWELS AT CORNERS TO MAINTAIN CONTINUOUS REINFORCING. SEE TYPICAL DETAILS.

- 8. GROUT SHALL BE PLACED IN THE VERTICAL CORES OF THE MASONRY UNITS UTILIZING THE LOW LIFT GROUTING METHOD SET FORTH IN NCMA-TEK 23A.
  - A.) GROUT SHALL COMPLY WITH ASTM C476 (MORTAR OR CONCRETE SHALL NOT BE USED TO FILL CMU CORES). SEE PROJECT MANUAL. B.) WEBS ADJACENT TO CORES TO BE GROUTED SHALL BE MORTARED. MORTAR SHALL BE STRUCK FLUSH WITH THE INSIDE FACE OF CORES TO BE GROUTED. CORES TO BE GROUTED SHALL BE CLEANED OF ALL MORTAR DROPPINGS AND OTHER DEBRIS PRIOR
  - TO GROUTING. C.) THE MAXIMUM HEIGHT OF A GROUT LIFT SHALL BE 4'-0".
  - D.) STOP GROUT POURS 1 1/2" BELOW THE UPPERMOST PORTION OF THE CAVITY BEING FILLED TO PROVIDE A KEY FOR THE NEXT LIFT OR POUR.
  - E.) CONSOLIDATE GROUT BY VIBRATING WITH A MECHANICAL VIBRATOR EACH LIFT. COMPLETELY RECONSOLIDATE GROUT APPROXIMATELY 20 MINUTES AFTER GROUT
  - IS INSTALLED F.) ALL REINFORCING STEEL SHALL BE IN PLACE AND INSPECTED BEFORE GROUTING AND THERE SHALL BE CONTINUOUS INSPECTION DURING THE GROUTING OPERATION. G.) PLACING REINFORCING AFTER GROUTING IS NOT PERMITTED.
- 9. IN EXTERIOR WALLS PLACE ONE REINFORCING BAR (SAME SIZE AS IN ADJACENT WALL) IN GROUTED CORE EXTENDING FULL HEIGHT OF WALL FOR ALL WINDOW AND DOOR OPENINGS UP TO 8'-0" WIDE. FOR OPENINGS 8'-0" TO 16'-0" WIDE PLACE TWO REINFORCING BARS IN TWO GROUTED CORES EACH SIDE OF OPENING.
- 10. ALL MASONRY WALLS (INTERIOR AND EXTERIOR) SHALL BE ANCHORED TO STEEL COLUMNS AND BEAMS WHICH DIRECTLY ABUT THE ENDS OR SIDES OF THE WALL. MASONRY WALLS SHALL ALSO BE ANCHORED TO STEEL LINTELS. SEE PROJECT MANUAL.
- 11. PROVIDE ONE VERTICAL REINFORCING BAR (SAME SIZE AS ADJACENT WALL) FULL HEIGHT OF THE WALL AT CORNERS, INTERSECTIONS, WALL ENDS, BEAM BEARINGS, JAMBS, AND EACH SIDE OF CONTROL JOINTS IN ALL INTERIOR AND EXTERIOR WALLS ON FOUNDATIONS UNLESS OTHERWISE NOTED.
- 12. SUBMIT SHOP DRAWINGS DETAILING ALL REINFORCING STEEL IN REINFORCED MASONRY CONSTRUCTION INCLUDING DETAILS OF ALL BENT BARS, VERTICAL REINFORCING AND HORIZONTAL BOND BEAM REINFORCING. INCLUDE PLANS AND ELEVATIONS AS REQUIRED TO CLEARLY SHOW ALL REINFORCING, INCLUDING BOND BEAMS, MASONRY LINTELS, AND ALL VERTICAL BARS.
- 13. ALL HORIZONTAL JOINT REINFORCING SHALL BE CONTINUOUS THROUGH ALL CORNERS AND INTERSECTIONS, EXCEPT AT CONTROL JOINTS. USE PREFORMED CORNER AND INTERSECTION SECTIONS FURNISHED BY JOINT REINFORCING SUPPLIER. 14. SEE PROJECT MANUAL FOR MANDATORY INSPECTION REQUIREMENTS FOR MASONRY CONSTRUCTION.
- 15. ALL LOOSE LINTELS AND CONTINUOUS RELIEF ANGLES SHALL BE HOT-DIP GALVANIZED AND PROVIDE 8" MINIMUM BEARING.

![](_page_11_Picture_130.jpeg)

![](_page_12_Figure_0.jpeg)

![](_page_12_Figure_3.jpeg)

![](_page_12_Figure_4.jpeg)