

# TTCX B17 CHILD DAY-CARE CENTER

GENSLER

ISSUED FOR 100% CONSTRUCTION DOCUMENTS

DATE: 06/20/2022

777 Old Saw Mill River Road  
Mount Pleasant, NY 10591

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**Building #17**  
Campus Expansion Child  
Day-care Center

777 Old Saw Mill River Road  
Mount Pleasant, NY 10591

Project No. B17-DAYCARE

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Landscape Architect

Langan

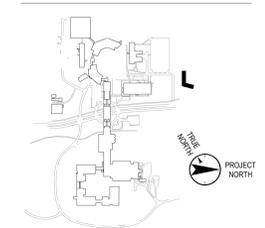
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## STRUCTURAL DRAWING LIST

SHEET LIST	
SHEET NO	SHEET NAME
S-001	GENERAL NOTES I
S-002	GENERAL NOTES II
S-003	LOADING DIAGRAMS
S-004	GENERAL LAP SPLICE SCHEDULES
S-100	GROUND FLOOR PLAN
S-101	ROOF PLAN
S-150	PART PLANS
S-200	TYPICAL FOOTING DETAILS
S-201	TYPICAL SLAB ON GRADE DETAILS
S-202	TYPICAL FOUNDATION WALL DETAILS
S-210	FOUNDATION SECTIONS AND DETAILS
S-300	SHEAR WALL LOADS AND DETAILS
S-301	SHEAR WALL DETAILS
S-500	TYPICAL COLUMN BASE DETAILS
S-501	TYPICAL BEAM DETAILS
S-502	TYPICAL SUPERSTRUCTURE DETAILS
S-503	TYPICAL JOIST DETAILS
S-510	TYPICAL STEEL BEAM SHEAR CONNECTIONS 3/4" DIAMETER BOLTS
S-511	TYPICAL STEEL BEAM SHEAR CONNECTIONS 3/4" DIAMETER BOLTS
S-512	TYPICAL STEEL BEAM SHEAR CONNECTIONS 3/4" DIAMETER BOLTS
S-520	SCREEN WALL SECTIONS AND DETAILS
S-600	LGMF BEARING WALL DETAILS
S-601	LGMF BEARING WALL DETAILS II
S-602	LGMF BEARING WALL DETAILS III

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
ADDL	ADDITIONAL	LL	LIVE LOAD
ADJ	ADJACENT	LLH	LONG LEG HORIZONTAL
ALT	ALTERNATE	LLV	LONG LEG VERTICAL
APPRX	APPROXIMATE	LONG	LONGITUDINAL
ARCH	ARCHITECT OR ARCHITECTURAL	LP	LOW POINT
B/	BOTTOM OF	LW	LIGHTWEIGHT
B/B	BACK TO BACK	LWC	LIGHTWEIGHT CONCRETE
BAL	BALANCE	M	MOMENT
BLDG	BUILDING	MATL	MATERIAL
BLK	BLOCK	MAX	MAXIMUM
BLKG	BLOCKING	MC	MOMENT CONNECTION(S)
BM	BEAM	MECH	MECHANICAL
BOT	BOTTOM	MEP	MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION
BRDG	BRIDGING	MEZZ	MEZZANINE
BRG	BEARING	MFR	MANUFACTURER
BTWN	BETWEEN	MID	MIDDLE
C	COMPRESSION	MIN	MINIMUM
C/C	CENTER TO CENTER	MISC	MISCELLANEOUS
CIP	CAST-IN-PLACE	NIC	NOT IN CONTRACT
CJP	COMPLETE JOINT PENETRATION	NO	NUMBER
CL	CENTER LINE	NOM	NOMINAL
CLR	CLEAR OR CLEARANCE	NS	NEAR SIDE
CMU	CONCRETE MASONRY UNIT	NTS	NOT TO SCALE
COL	COLUMN	NW	NORMAL WEIGHT
COMP	COMPRESSION	NWC	NORMALWEIGHT CONCRETE
CONC	CONCRETE	OC	ON CENTER
CONN	CONNECTION(S)	OD	OUTSIDE DIAMETER
CONST	CONSTRUCTION	OF	OUTSIDE FACE
CONT	CONTINUOUS	OH	OPPOSITE HAND
db	REINFORCING BAR DIAMETER	OPNG(S)	OPENING(S)
DBL	DOUBLE	OPP	OPPOSITE
DCW	DEMAND CRITICAL WELD	OSL	OUTSTANDING LEG
DEG	DEGREE(S)	PC	PIECE
DET	DETAIL	PCY	POUNDS PER CUBIC YARD
DIA	DIAMETER	PERP	PERPENDICULAR
DIAG	DIAGONAL	PG	PLATE GIRDER
DIM(S)	DIMENSION(S)	PJP	PARTIAL JOINT PENETRATION
DL	DEAD LOAD	PL	PLATE
DWG(S)	DRAWING(S)	PRC	PRECAST
DWL	DOWEL(S)	PRLL	PARALLEL
EA	EACH	PSF	POUNDS PER SQUARE FOOT
ECC	ECCENTRICITY	PSI	POUNDS PER SQUARE INCH
EE	EACH END	PT	POINT OR POST-TENSION(ED) OR (ING)
EF	EACH FACE	RAD	RADIUS
EL	ELEVATION	REF	REFERENCE
ELEC	ELECTRICAL	REINF	REINFORCE(D) (ING) OR (MENT)
ENGR	ENGINEER	REQD	REQUIRED
EOD	EDGE OF DECK	S&T	SHRINKAGE AND TEMPERATURE
EOS	EDGE OF SLAB	SCHED	SCHEDULE(D)
EQ	EQUAL	SDL	SUPERIMPOSED DEAD LOAD
EQUIP	EQUIPMENT	SECT	SECTION
EW	EACH WAY	SER	STRUCTURAL ENGINEER OF RECORD
EXP	EXPANSION	SF	SQUARE FOOT (FEET)
EXST	EXISTING	SFRS	SEISMIC FORCE RESISTING SYSTEM
EXT	EXTERIOR	SHT	SHEET
F/F	FACE TO FACE	SIM	SIMILAR
FIN	FINISH(ED)	SOG	SLAB ON GRADE
FLR	FLOOR	SP	SPACE
FND	FOUNDATION	SPEC(S)	SPECIFICATION(S)
FP	FIRE-PROOF(ING)	STD	STANDARD
FS	FAR SIDE	STL	STEEL
FTG	FOOTING	STR	STRUCTURE
GA	GAGE, GAUGE	STRCTL	STRUCTURAL
GALV	GALVANIZED	SYM	SYMMETRICAL
GB	GRADE BEAM	T	TENSION
GEN	GENERAL	T&B	TOP AND BOTTOM
GR	GRADE	TJ	TOP JOINT
HK	HOOK	TEMP	TEMPERATURE OR TEMPORARY
HORIZ	HORIZONTAL	TEN	TENSION
HP	HIGH POINT	THK	THICK OR THICKNESS
HT	HEIGHT	TYP	TYPICAL
ID	INSIDE DIAMETER	UON	UNLESS OTHERWISE NOTED
IF	INSIDE FACE	V	SHEAR
INFO	INFORMATION	VERT	VERTICAL
INT	INTERIOR	VIF	VERIFY IN FIELD
INTRM	INTERMEDIATE	W/	WITH
JST(S)	JOIST(S)	WO	WITHOUT
JT	JOINT	WD	WOOD
K	KIPS (1,000 POUNDS)	WP	WORK POINT
KLF	KIP PER LINEAR FOOT	WPG	WATERPROOFING
KSF	KIP PER SQUARE FOOT	WS	WATERSTOP
		WWR	WELDED WIRE REINFORCEMENT

Key Plan



No. Date Description

06.20.2022	ISSUED FOR PERMIT
06.20.2022	100% CONSTRUCTION DOCUMENTS
07.01.2022	100% CONSTRUCTION DOCUMENT- 1

Plot Date: 11/10/21

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Professional Seal and Signature

Vendor Name: GENSLER  
Vendor Project No.: 006.3608.000  
Discipline: Drawn By: TT

**COVER SHEET & DRAWING LIST**

Scale: Floor:

**S-000**

GR GENERAL REQUIREMENTS

GR-1 AS USED IN THESE GENERAL NOTES: "DRAWINGS" MEANS THE LATEST STRUCTURAL DESIGN DRAWINGS, UON. "SPECIFICATIONS" MEANS THE LATEST PROJECT SPECIFICATIONS, UON. "CONTRACT DOCUMENTS" IS DEFINED AS THE DESIGN DRAWINGS AND THE SPECIFICATIONS. "SER" IS DEFINED AS THE STRUCTURAL ENGINEER OF RECORD FOR ITS FINAL CONDITION. "DESIGN PROFESSIONALS" IS DEFINED AS THE OWNER'S ARCHITECT AND SER. "MEP" INCLUDES, BUT IS NOT LIMITED TO MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION. "CONTRACTOR" IS DEFINED TO INCLUDE ANY OF THE FOLLOWING: GENERAL CONTRACTOR AND THEIR SUBCONTRACTORS, CONSTRUCTION MANAGER AND THEIR SUBCONTRACTORS, STRUCTURAL STEEL FABRICATOR OR STRUCTURAL STEEL ERECTOR. "BASE BUILDING STRUCTURE" IS DEFINED AS THE STRUCTURAL FRAME DESIGNED BY THORNTON TOMASETTI. "STRUCTURE IN ITS FINAL CONDITION" MEANS ALL STRUCTURAL ELEMENTS ON THE STRUCTURAL CONTRACT DOCUMENTS ARE INSTALLED AND COMPLETELY CONNECTED AND INSPECTED WITH NO OUTSTANDING NON-COMPLIANCE ISSUES. "DELEGATED DESIGN" MEANS A SCOPE OF WORK THAT MEETS PERFORMANCE CRITERIA ESTABLISHED IN THE CONTRACT DOCUMENTS AND IS TO BE COMPLETED BY THE CONTRACTOR'S LICENSED ENGINEER. "SERVICE LEVEL" LOADS ARE DEFINED AS NOMINAL OR UNFACTORED LOADS TO BE COMBINED USING ALLOWABLE STRESS LOAD COMBINATIONS. "STRENGTH LEVEL" LOADS ARE DEFINED AS FACTORED LOADS TO BE COMBINED USING STRENGTH DESIGN LOAD COMBINATIONS.

GR-2 THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE STRUCTURAL WORK WITH THE ARCHITECTURAL, CIVIL, MEP CONTRACT DOCUMENTS, AS WELL AS ANY OTHER APPLICABLE TRADES.

GR-3 THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE CONSTRUCTION OF THE STRUCTURE REACHES ITS FINAL CONDITION.

GR-4 THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND REMOVAL OF TEMPORARY BRACING AND CONSTRUCTION SUPPORTS, FOR NEW AND EXISTING STRUCTURES, AS NECESSARY TO COMPLETE THE PROJECT. NO PORTION OF THE PROJECT WHILE UNDER CONSTRUCTION IS INTENDED TO BE STABLE IN THE ABSENCE OF THE CONTRACTOR'S TEMPORARY SUPPORTS AND BRACES. CONTRACTOR SHALL RETAIN A [PROFESSIONAL/STRUCTURAL] ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED TO DESIGN TEMPORARY BRACING AND CONSTRUCTION SUPPORTS.

GR-5 LATERAL LOAD RESISTANCE AND STABILITY OF THE STRUCTURE IN ITS FINAL CONDITION IS PROVIDED BY SHEAR WALLS, MOMENT FRAMES AND LATERAL STABILITY OF OTHER ELEMENTS IS PROVIDED THROUGH FLOOR SLABS, ROOF DECK, AND IN FLOOR BRACING.

GR-6 THE SPECIFICATIONS ARE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS AND SHALL BE USED IN CONJUNCTION WITH THE STRUCTURAL DRAWINGS.

GR-7 THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND COORDINATE WITH THE STRUCTURAL DRAWINGS, ARCHITECTURAL DRAWINGS, DRAWINGS FROM OTHER CONSULTANTS, PROJECT SHOP DRAWINGS AND FIELD CONDITIONS.

GR-8 IN CASES OF CONFLICT BETWEEN DRAWINGS AND/OR SPECIFICATIONS AND OTHER DISCIPLINES OR EXISTING CONDITIONS, CONTRACTOR SHALL NOTIFY THE DESIGN PROFESSIONALS AND OBTAIN CLARIFICATION PRIOR TO BIDDING AND PROCEEDING WITH WORK.

GR-9 APPLY DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY DETAIL, DETAIL TITLE OR NOTE.

GR-10 ONLY USE DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE DRAWINGS.

GR-11 ASSUME EQUAL SPACING BETWEEN ESTABLISHED DIMENSIONS, IF NOT INDICATED ON DRAWINGS.

GR-12 CENTERLINES OF COLUMNS AND FOUNDATIONS COINCIDE WITH GRID LINE INTERSECTIONS, UON.

GR-13 CENTERLINES OF GRADE BEAMS AND WALLS COINCIDE WITH CENTERLINES OF FOUNDATIONS, UON.

GR-14 CENTERLINES OF FRAMING MEMBERS COINCIDE WITH COLUMN CENTERLINES, UON.

GR-15 THE CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITIES FROM DAMAGE.

GR-16 THE CONTRACTOR SHALL VERIFY THAT CONSTRUCTION LOADS DO NOT EXCEED THE CAPACITY OF THE STRUCTURE AT THE TIME THE LOAD IS APPLIED.

GR-17 THE CONTRACTOR SHALL COORDINATE THE BOTTOM OF BASE PLATE ELEVATIONS WITH THE AS-BUILT TOP OF SUPPORT ELEVATIONS.

GR-18 THE CONTRACTOR SHALL VERIFY ALL OPENING SIZES AND LOCATIONS WITH OTHER DISCIPLINES. THE DRAWINGS DO NOT SHOW ALL OPENINGS REQUIRED. ADDITIONAL OPENINGS, BLOCKOUTS AND SLEEVES MAY BE REQUIRED BY OTHER DISCIPLINES AND SHALL BE CONSTRUCTED USING THE TYPICAL DETAILS AND/OR THE CRITERIA INDICATED ON THE DRAWINGS. OPENINGS REQUIRED BUT NOT SHOWN ON THE STRUCTURAL DRAWINGS MUST BE APPROVED BY THE SER.

GR-19 ELEVATIONS INDICATED ON STRUCTURAL DRAWINGS ARE BASED ON A PROJECT DATUM INDICATED ON THE ARCHITECTURAL/CIVIL DRAWINGS.

GR-20 SEE ARCHITECTURAL, CIVIL, MEP, CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION RELATING TO THE COORDINATION OF STRUCTURAL COMPONENTS INCLUDING, BUT NOT LIMITED TO:

CIVIL: PROJECT DATUM SITING OF BUILDING GRID LINES WITH RESPECT TO CITY BENCHMARKS SITE PREPARATION BACKFILLING MATERIALS AND REQUIREMENTS PAVING AND SITE ELEMENTS OUTSIDE OF BUILDING ENVELOPE NEW AND EXISTING SITE UTILITIES

ARCHITECTURAL: PLAN DIMENSIONS AND PROJECT DATUM SLAB EDGE DIMENSIONS FINISH ELEVATIONS WATERPROOFING AND DAMP-PROOFING DETAILS RAMP GEOMETRY, PITTS, SLAB SLOPES AND DEPRESSIONS EXACT OPENING SIZES FOR PIPES, DUCTS, ETC. CONCRETE FINISHES AND TOPPING SLABS CONCRETE CURBS AND HOUSEKEEPING PADS INTERIOR NON-STRUCTURAL MASONRY PARTITIONS FIRE RATINGS METAL PAN STAIRS AND SUPPORTS

MEP: PIPE AND DUCT SIZES FOR OPENING AND SLEEVE COORDINATION FLOOR DRAINS UNDERFLOOR AND PERIMETER DRAINAGE SYSTEMS EQUIPMENT CURBS CONDUITS AND EMBEDMENTS IN WALLS AND SLABS

CD CODES AND DESIGN CRITERIA

CD-1 PERFORM ALL CONSTRUCTION IN CONFORMANCE WITH THE BUILDING AND DESIGN CODES REFERENCED WITHIN THESE DOCUMENTS. THE PROJECT DOCUMENTS REFER TO THE FOLLOWING CODES AND STANDARDS, UON:

NEW YORK STATE BUILDING CODE, 2020 EDITION

STRUCTURAL CONCRETE: "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" THE AMERICAN CONCRETE INSTITUTE (ACI 318-14)

STRUCTURAL STEEL:

"SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (AISC 360-16) CONFORMING TO THE PROVISIONS OF LOAD RESISTANCE FACTOR DESIGN, BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC-LRFD)

CD-2 LIVE LOADS (SERVICE LEVEL):

CLASSROOMS REF. S-003 LOBBIES & CORRIDORS REF. S-003 ROOF MECHANICAL SEE PLAN FOR DESIGN WEIGHTS ROOFS REF. S-003 HANDRAIL/GUARDRAIL GRAB BARS 50 LBS/FT OR 200 LBS/MIN

CD-3 SUPERIMPOSED DEAD LOADS (SERVICE LEVEL):

HANGING LOADS (BELOW ROOF) REF. S-003 ROOFING + INSULATION REF. S-003

CD-4 RISK CATEGORY:

III

CD-5 SNOW (AND RAIN) LOADS (SERVICE LEVEL):

FLAT ROOF SNOW LOAD (Pf) 33 PSF GROUND SNOW LOAD (Pg) 30 PSF SNOW EXPOSURE FACTOR (Ce) 1.0 SNOW LOAD IMPORTANCE FACTOR (Is) 1.1 THERMAL FACTOR (Ct) 1.0 SNOW DRIFTING PER CODE RAIN (INCHES/HOUR) 3.0

CD-6 WIND LOAD DESIGN DATA (STRENGTH LEVEL):

MAIN WIND FORCE RESISTING SYSTEM BASIC WIND SPEED, V 125 MPH BASIC WIND SPEED CONVERTED, V50 97 MPH EXPOSURE C INTERNAL PRESSURE COEFFICIENT ± 0.18 WIND LOAD IMPORTANCE FACTOR (Iw) 1.0 DESIGN BASE SHEAR 102 KIPS

COMPONENT AND CLADDING DESIGN PRESSURES, a=5'-6"

EFFECTIVE WIND AREA= 10 SF WALL= 35 PSF WALL END ZONE= 45 PSF

ROOF EFFECTIVE WIND AREA = SEE LOADING DIAGRAM

CD-7 SEISMIC LOAD DESIGN DATA (STRENGTH LEVEL):

SEISMIC IMPORTANCE FACTOR (I) 1.25 Ss 0.259 g S1 0.051 g Ss1 0.308 g S11 0.098 g SITE CLASS D SEISMIC DESIGN CATEGORY B LATERAL SYSTEM DESCRIPTION LIGHT FRAME WALLS WITH SHEAR PANELS SEISMIC RESPONSE COEFFICIENT (Cs) 2.5 RESPONSE MODIFICATION FACTOR (R) 3 ANALYSIS PROCEDURE DESCRIPTION EQUIVALENT LATERAL FORCE DESIGN BASE SHEAR 132 KIPS CMU COMPONENT IMPORTANCE FACTOR (Ip) 1.5

CD-9 IN CASES WHERE THE CONTRACTOR DETERMINES THAT SUSPENDED OR FLOOR MOUNTED EQUIPMENT LOADS EXIST WHICH EXCEED DESIGN LOADS INDICATED ON CONTRACT DOCUMENTS, CONTRACTOR SHALL SUBMIT LOAD DATA TO DESIGN PROFESSIONALS FOR REVIEW PRIOR TO PROCEEDING WITH WORK.

CD-10 DISTRIBUTE THE MAXIMUM LOAD HUNG FROM ANY STRUCTURAL MEMBER FOR DUCTWORK, PIPING ETC OVER THE MEMBER'S TRIBUTARY AREA IN A WAY THAT THE MEP DESIGN SUPERIMPOSED DEAD LOADS LISTED IN CONTRACT DOCUMENTS ARE NOT EXCEEDED. THE CONTRACTOR SHALL COORDINATE THE LOADS OF ALL TRADES AND PROVIDE ADDITIONAL SUPPORT OR DISTRIBUTION FRAMING AS REQUIRED TO ACHIEVE THE ALLOWABLE LOAD DISTRIBUTION.

CD-11 ESCALATOR SUPPORTS AND PITTS ARE BASED ON ESCALATOR TYPES INDICATED ON ARCHITECTURAL CONTRACT DOCUMENTS. CONTRACTOR SHALL SUBMIT FOR REVIEW ANY PLANNED CHANGE TO ESCALATORS TO DESIGN PROFESSIONALS PRIOR TO SUBMITTING CORRESPONDING STRUCTURAL SHOP DRAWINGS FOR ACTION.

CD-12 ELEVATOR GUIDELER SUPPORTS, MACHINE ROOMS, PITTS, AND PENTHOUSES ARE BASED ON ELEVATOR TYPES INDICATED ON ARCHITECTURAL CONTRACT DOCUMENTS. CONTRACTOR SHALL SUBMIT FOR REVIEW ANY PLANNED CHANGE TO ELEVATORS TO DESIGN PROFESSIONALS PRIOR TO SUBMITTING CORRESPONDING STRUCTURAL SHOP DRAWINGS FOR ACTION.

CD-13 STRUCTURAL COMPONENTS ARE NOT DESIGNED FOR VIBRATING EQUIPMENT. MOUNT VIBRATING EQUIPMENT ON VIBRATION ISOLATORS.

CD-14 SERVICEABILITY

LIVE LOAD DEFLECTION IS LESS THAN L/360

LONG-TERM TOTAL DEFLECTION IS LESS THAN L/240

EXTERIOR EDGE BEAMS HAVE BEEN DESIGNED TO LIMIT LIVE LOAD MIDSPAN VERTICAL DEFLECTION TO 1/360 OF THE SPAN OR 3/8", WHICHEVER IS LESS.

EXTERIOR EDGE BEAMS HAVE BEEN DESIGNED TO LIMIT DEAD PLUS SUPERIMPOSED DEAD LOAD MIDSPAN VERTICAL DEFLECTION TO 1/(XXXX) OF THE SPAN OR [X]", WHICHEVER IS LESS.

LATERAL DRIFT DUE TO WIND LOADS IS LESS THAN OR EQUAL TO H/400

CD-15 CONNECTIONS OF SYSTEMS DESIGNED BY CONTRACTOR'S ENGINEER SUCH AS, BUT NOT LIMITED TO, CLADDING, STAIRS, ELEVATORS, ESCALATORS, PRECAST, AND MEP LOADS ARE ASSUMED TO BE APPLIED TO THE BASE BUILDING STRUCTURAL MEMBERS WITHOUT GENERATING TORSION IN THE SUPPORTING STRUCTURAL MEMBERS. CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING ALL SUPPLEMENTARY BRACING MEMBERS AS REQUIRED TO PREVENT TORSION ON THE BASE BUILDING STRUCTURE.

CD-16 FOR FIRE RATING AND FIREPROOFING ASSEMBLY EVALUATIONS, CONSIDER THE FOLLOWING ASSEMBLIES RESTRAINED: COMPOSITE WIDE-FLANGE STEEL FRAMING, INTERIOR BAYS OF CONTINUOUS CAST-IN-PLACE CONCRETE CONSTRUCTION. CONSIDER ALL OTHER ASSEMBLIES UNRESTRAINED.

CD-17 THERE HAVE BEEN NO LOAD RESTRICTION FACTORS APPLIED TO THE STRUCTURAL DESIGN FOR THE PURPOSES OF SELECTING FIREPROOFING ASSEMBLIES.

DI DELEGATED DESIGN ITEMS

DI-1 THE CONTRACTOR SHALL EMPLOY OR RETAIN A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THIS PROJECT IS LOCATED TO DESIGN AND DETAIL DELEGATED DESIGN ITEMS TO MEET THE PERFORMANCE AND DESIGN CRITERIA ESTABLISHED AS PART OF THE BASE BUILDING STRUCTURE INDICATED IN THE CONTRACT DOCUMENTS INCLUDING BUT NOT LIMITED TO:

LIGHT GAGE METAL FRAMING STRUCTURAL LOAD BEARING WALL SYSTEM STRUCTURAL STEEL CONNECTIONS STEEL JOISTS, BRIDGING AND CONNECTIONS STEEL ROOF DECK

SU SUBMITTALS

SU-1 THE CONTRACTOR IS TO REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO DESIGN PROFESSIONALS. THE CONTRACTOR IS TO STAMP EACH SUBMITTAL VERIFYING THAT THE FOLLOWING IS ADDRESSED:

- 1. THE SHOP DRAWING IS REQUESTED.
2. THE SHOP DRAWING IS BASED ON THE LATEST DESIGN.
3. THE DESIGN PROFESSIONALS' COMMENTS FROM ANY PREVIOUS SUBMITTALS ARE ADDRESSED.
4. THE WORK IS COORDINATED AMONG ALL CONSTRUCTION TRADES.
5. REVISIONS FROM PREVIOUS SUBMITTALS ARE CLEARLY MARKED BY CIRCILING OR CLOUDS.
6. SUBMITTAL IS COMPLETE.
7. SUBMITTAL DOES NOT INCLUDE SUBSTITUTION REQUEST.
8. SUBMITTAL SHALL INCLUDE A STAMP INDICATING PROJECT NAME AND LOCATION, SUBMITTAL NUMBER, SPECIFICATION SECTION NUMBER.

THE SER SHALL RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE ABOVE REQUIREMENTS.

SU-2 THE SER'S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT. NO WORK SHALL BE STARTED WITHOUT SUCH REVIEW.

SU-3 FOR COMPONENTS THAT REQUIRE ENGINEERING BY THE CONTRACTOR, PROVIDE A NOTE ON EACH SHOP DRAWING, WRITTEN AND SIGNED BY THE SUPPLIER'S ENGINEER, INDICATING THAT THE SHOP DRAWING IS IN CONFORMANCE WITH THE CALCULATIONS OF THE CONTRACTOR'S ENGINEER.

SU-4 THE FOLLOWING ITEMS REQUIRE SUBMITTALS FOR STRUCTURAL REVIEW AS OUTLINED IN THE SPECIFICATIONS:

Table with 4 columns: Item ID, Unit, Code, Description. Includes items like 031000 \$ CALC CONCRETE FORMWORK, 032000 \$ CONCRETE REINFORCING LAYOUT, 033000 \$ CONCRETE MIX DESIGNS, 033000 \$ CONCRETE CONSTRUCTION JOINT LAYOUT, 051000 \$ STRUCTURAL STEEL, 051000 \$ STRUCTURAL STEEL CONNECTIONS, 051000 \$ SHEAR STUD LAYOUT, 052000 \$ CALC STEEL JOISTS, BRIDGING AND CONNECTIONS, 053000 \$ CALC STEEL ROOF DECK, 054000 \$ CALC COLD-FORMED METAL FRAMING.

S = SHOP DRAWINGS REQUIRED

CALC = SUPPORTING CALCULATIONS REQUIRED, SEALED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED.

SU-5 THE ITEMS IN THIS SECTION REFER TO LOADS IMPOSED BY CONTRACTOR DESIGNED SYSTEMS, SPECIFICALLY:

COLD-FORMED METAL FRAMING EXTERIOR CLADDING SYSTEMS METAL STAIRS ARCHITECTURAL ORNAMENTATION (FLAGPOLES, BANNERS, MASTS, ETC.)

WHERE CONTRACTOR LOADS IMPOSED DO NOT EXCEED AND/OR CONNECTION CONDITIONS DO NOT DIFFER FROM WHAT IS INDICATED IN THE STRUCTURAL DRAWINGS, SUBMIT FOR RECORD A LETTER SEALED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED STATING THE FOLLOWING:

"THE CONTRACTOR DESIGNED SYSTEM HAS BEEN DESIGNED TO IMPOSE LOADS ON THE BASE BUILDING STRUCTURE THAT ARE WITHIN THE LOAD LIMITS AND AT THE LOCATIONS INDICATED ON THE STRUCTURAL DRAWINGS."

WHERE CONTRACTOR LOADS IMPOSED FOR THE FOLLOWING ITEMS EXCEED AND/OR CONNECTION CONDITIONS DIFFER FROM WHAT IS SHOWN IN THE STRUCTURAL DRAWINGS, SUBMIT FOR APPROVAL TO SER LOADS IMPOSED ON THE PRIMARY STRUCTURAL FRAME DUE TO THE DEAD, LIVE, AND WIND/SEISMIC LOADS INDICATED ON THE CONTRACT DOCUMENTS.

SUBMITTAL SHALL LIST THE DESIGN LOADS USED AND BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED. SUBMITTAL SHALL INCLUDE LOCATION, MAGNITUDE AND DIRECTION OF UNFACTORED IMPOSED LOADS, GRAPHICALLY REPRESENTED IN THEIR APPROPRIATE LOCATIONS ON A COPY OF THE CONTRACT DOCUMENT STRUCTURAL FRAMING PLANS OR ELEVATIONS AS APPROPRIATE. DETAIL REFERENCES IN THE CONNECTIONS APPLICABLE AT EACH LOCATION SHALL BE NOTED ON THE SUBMITTAL DRAWINGS.

FOR EXTERIOR WALL ASSEMBLIES, THE LOADS IMPOSED SUBMITTAL SHALL BE COMPREHENSIVE INDICATING THE LOADS IMPOSED ON THE BASE BUILDING STRUCTURE AND SHALL INCLUDE THE REACTIONS BASED ON THE ACTUAL LOADS OF THE ENTIRE ASSEMBLY, INCLUDING BUT NOT LIMITED TO GLAZING, CLADDING, METAL STUD BACKUP, AND MULLIONS.

FOR MEP SYSTEMS, THE LOADS IMPOSED SUBMITTAL SHALL BE COMPREHENSIVE INDICATING THE LOADS IMPOSED ON THE BASE BUILDING STRUCTURE AND SHALL INCLUDE THE REACTIONS BASED ON THE ACTUAL LOADS OF THE ENTIRE MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION SYSTEM, INCLUDING BUT NOT LIMITED TO PIPING, DUCTS, ELECTRICAL RACEWAYS, AND EQUIPMENT WEIGHTS.

A SUBSTITUTION REQUEST MAY BE REQUIRED WHERE CONTRACTOR LOADS IMPOSED EXCEED AND/OR CONNECTION CONDITIONS DIFFER FROM THE BASIS OF DESIGN.

FN FOUNDATIONS

FN-1 THE FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT BY CARLIN SIMPSON ASSOCIATES DATED JULY 14, 2021.

FN-2 FOUNDATIONS HAVE BEEN DESIGNED BASED ON THE FOLLOWING DESIGN VALUES FROM THE GEOTECHNICAL REPORT (SERVICE LEVEL):

BEARING STRUTUM VIRGIN SOIL/NEE COMPACTED FILL NET ALLOWABLE BEARING CAPACITY: 4,000 PSF

SEE GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS AND INFORMATION. DESIGN VALUES SHALL BE FIELD VERIFIED BY QUALIFIED GEOTECHNICAL ENGINEER RETAINED BY THE OWNER.

FN-3 THE CONTRACTOR SHALL VERIFY FOUNDATION INSTALLATION AND CONSTRUCTION IS IN CONFORMANCE WITH THE RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT.

FN-4 CONTRACTOR SHALL BE RESPONSIBLE TO ADEQUATELY PROTECT ALL EXCAVATION, WHERE NECESSARY, SHEET AND SHORE THE EXCAVATION WITH ALL REQUIRED TIEBACKS AND BRACING AS DETERMINED BY CONTRACTOR'S ENGINEER.

CM CONCRETE MATERIALS

CM-1 CONCRETE STRENGTH SHALL MEET THE FOLLOWING 28-DAY COMPRESSIVE STRENGTHS (f'c) UON:

Table with 2 columns: Item, Value. Includes FOOTINGS, PILE CAPS AND PIERS (4,000 PSI), GRADE BEAMS (4,000 PSI), FOUNDATION WALLS, PILASTERS, BUTTRESSES (4,000 PSI), NON-SHRINK GROUT (8,000 PSI), SLAB ON GRADE (4,000 PSI), CONCRETE HOUSEKEEPING PADS, AND FILL SLABS (4,000 PSI LIGHTWEIGHT).

CM-2 PROVIDE NORMALWEIGHT CONCRETE WITH CURED DENSITY OF 145 +/- 5 PCF, AND AGGREGATE CONFORMING TO ASTM C33, UON. WHERE INDICATED, PROVIDE LIGHTWEIGHT CONCRETE WITH CURED DENSITY OF 112 +/- 3 PCF AND AGGREGATE CONFORMING TO ASTM C330.

CM-3 THE USE OF CALCIUM CHLORIDE AND OTHER CHLORIDE CONTAINING AGENTS IS PROHIBITED. THE USE OF RECYCLED CONCRETE IS PROHIBITED. PLACEMENT WITHIN AND CONTACT BETWEEN ALUMINUM ITEMS, INCLUDING ALUMINUM CONDUIT, AND CONCRETE IS PROHIBITED.

CM-4 ALL CAST-IN-PLACE CONCRETE WILL EXPERIENCE DIFFERING VARIATIONS OF CRACKING. ANY ELEMENT EXPOSED TO DIRECT WEATHER AND/OR TEMPERATURE VARIATIONS DURING CONSTRUCTION OR IN THE FINAL CONDITION IS TO BE TREATED AND REGULARLY MAINTAINED TO PREVENT PROPAGATION OF CRACKS AND WATER PENETRATION. THE CONTRACTOR SHALL DEVELOP A REGULAR MAINTENANCE PROGRAM AND SUBMIT IT TO THE OWNER.

RE CONCRETE REINFORCEMENT

RE-1 ALL CONCRETE SHALL INCLUDE REINFORCEMENT. IF REINFORCEMENT IS NOT SPECIFICALLY INDICATED ON THE DRAWINGS VERIFY WITH THE SER.

RE-2 REINFORCEMENT SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES UON:

DEFORMED BARS: ASTM A615 GRADE 60 WELDEABLE DEFORMED BARS: ASTM A706 EPOXY COATED DEFORMED BARS: ASTM A615 / A775 WELDED WIRE REINFORCEMENT: ASTM A1064 EPOXY COATED WELDED WIRE REINFORCEMENT: ASTM A1064 / A884

RE-3 DETAIL REINFORCEMENT BASED ON THE PROJECT REQUIREMENTS, ACI-318 AND ACI-315, UON.

RE-4 WHERE A 90-DEG, 135 -DEG OR 180-DEG HOOK IS GRAPHICALLY INDICATED, PROVIDE CORRESPONDING ACI STANDARD HOOKS UON.

RE-5 DOWELS SHALL MATCH SIZE AND SPACING OF MAIN REINFORCEMENT UON.

RE-6 REINFORCEMENT SHALL HAVE CONCRETE PROTECTION (CLEAR COVER) PER ACI 318 UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

RE-7 LAP REINFORCEMENT ONLY AT LOCATIONS AS SPECIFICALLY DETAILED ON THE DRAWINGS EXCEPT REINFORCEMENT MARKED AS CONTINUOUS CAN BE SPLICED AT LOCATIONS DETERMINED BY CONTRACTOR USING TENSION LAP SPLICES (LTS). SEE LAP SPLICE AND EMBEDMENT SCHEDULE.

RE-8 UNLESS OTHERWISE NOTED ALL LAP SPLICES ARE TO BE TENSION LAP SPLICES PER LAP SPLICE AND EMBEDMENT SCHEDULE.

RE-9 PROVIDE MECHANICAL SPLICES FOR BARS LARGER THAN #11 OR WHERE INDICATED. PROVIDE TENSILE, PRE-QUALIFIED, WELDED OR THREADED MECHANICAL SPLICES UON.

RE-10 LAP WELDED WIRE REINFORCEMENT TWO PANEL SPACINGS, UON.

RE-11 PROVIDE LAP SPLICE LOCATIONS AS FOLLOWS, UON:

- A. GRADE BEAM / WALL (TOP HORIZONTAL REINFORCEMENT): AT CENTER OF SPAN
B. GRADE BEAM / WALL (BOTTOM HORIZONTAL REINFORCEMENT): AT SUPPORTS
C. WALL INSIDE FACE (VERTICAL REINFORCEMENT): AT SUPPORT
D. WALL OUTSIDE FACE (VERTICAL REINFORCEMENT): AT STORY MIDHEIGHT OF WALL FOR BELOW GRADE FOUNDATION WALLS, AT SUPPORT FOR OTHER WALLS
E. UNLESS OTHERWISE NOTED TERMINATE BARS AT DISCONTINUOUS ENDS WITH STANDARD HOOKS.

RE-12 PROVIDE EPOXY COATED REINFORCEMENT AND ACCESSORIES IN AREAS OF DIRECT EXPOSURE TO THE ENVIRONMENT, CHEMICALS, OR DE-ICING FOR THE AREAS INDICATED ON THE DRAWINGS.

CJ CONCRETE CONSTRUCTION JOINTS

CJ-1 PROVIDE CONSTRUCTION JOINTS IN ACCORDANCE WITH ACI-318. SUBMIT SHOP DRAWINGS SHOWING PROPOSED CONSTRUCTION JOINT LOCATIONS, DETAILS AND THE PLACEMENT SEQUENCE FOR THE SER'S APPROVAL PRIOR TO PROCEEDING WITH WORK.

CJ-2 UNLESS SPECIFICALLY SHOWN ON THE DRAWINGS, HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN FOOTINGS, PILE CAPS, MAT FOUNDATIONS, GRADE BEAMS, BEAMS, UPTURNED BEAMS, SLABS, AND WALLS WITHOUT PRIOR WRITTEN APPROVAL FROM THE SER BEFORE CONSTRUCTION.

CJ-3 PLACE VERTICAL CONSTRUCTION JOINTS TO PROVIDE A 6 FT MAXIMUM LENGTH OF CONCRETE PLACEMENT AND LOCATE AS FOLLOWS: A. FOUNDATION WALLS: MINIMUM OF 8 FT FROM ANY WALL INTERSECTION, PLASTER, PIER, OR WALL OPENING. B. BEAMS AND GRADE BEAMS: WITHIN THE MIDDLE THIRD OF THE CLEAR SPAN AVOIDING LAP SPLICES, SUBJECT TO SER APPROVAL.

CJ-4 PROVIDE CONTINUOUS WATERSTOPS AT ALL CONSTRUCTION JOINTS EXPOSED TO SOIL OR WATER, AS DESCRIBED IN THE SPECIFICATIONS AND WHERE INDICATED IN THE ARCHITECTURAL DOCUMENTS.

SS STRUCTURAL STEEL

SS-1 STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS UNLESS OTHERWISE NOTED ON THE CONTRACT DOCUMENTS. SEE ADDITIONAL MATERIAL REQUIREMENTS RELATED TO MATERIAL TOUGHNESS BELOW:

ASTM A6 ROLLED W SHAPES AND CHANNELS: ASTM A572 OR A992, MINIMUM YIELD STRENGTH 50 KSI

ANGLES FOR TRUSSES AND BRACES: ASTM A572 OR A529, MINIMUM YIELD STRENGTH 50 KSI MISCELLANEOUS ANGLES: ASTM A36, MINIMUM YIELD STRENGTH 36 KSI HOLLOW STRUCTURAL SECTIONS: ASTM A500 GRADE B, MINIMUM YIELD STRENGTH 42 KSI FOR ROUND AND 46 KSI FOR RECTANGULAR HSS PLATES: ASTM A572 OR A529, MINIMUM YIELD STRENGTH 50 KSI

SS-2 CONNECTION MATERIAL SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS OR AS NEEDED FOR CONNECTION DESIGN:

ANGLES: ASTM A572 OR A529, MINIMUM YIELD STRENGTH 50 KSI UON WTS: ASTM A572 OR A992, MINIMUM YIELD STRENGTH 50 KSI PLATES: ASTM A572 OR A529, MINIMUM YIELD STRENGTH 50 KSI UON BOLTS: ASTM F1552 GRADES A325 AND F1652 OR A490 AND F2280 OR AS INDICATED IN DETAILS NUTS: ASTM A563 WASHERS: ASTM F436 ANCHOR RODS: ASTM F1554 GRADE 55 WITH WELDABILITY SUPPLEMENT S1 HEADED STUDS: ASTM A108, GRADE 1010 THROUGH 1020 HEADED STUD TYPE, COLD-FINISHED CARBON STEEL, AWS D1.1, TYPE B 3/4" DIAMETER WELD ELECTRODES: MINIMUM TENSILE STRENGTH 70 KSI

SS-3 WHERE NO CAMBER IS INDICATED, FABRICATE BEAMS SO THAT ANY NATURAL CAMBER IS UPWARD AFTER ERECTION.

SS-4 SPLICES SHALL BE ALLOWED ONLY AT LOCATIONS SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS UNLESS APPROVED OTHERWISE BY THE SER IN WRITING.

SS-5 FOR STEEL MEMBERS AND EMBEDMENTS EXPOSED TO WEATHER, PROVIDE HOT-DIPPED GALVANIZED FINISH OR APPROVED ZINC RICH EXTERIOR COATING SYSTEM.

SS-6 PROVIDE HOLES IN ALL STEEL AS REQUIRED TO PREVENT ANY ACCUMULATION OF WATER. ALL PENETRATIONS THROUGH MAIN MEMBERS SHALL NOT EXCEED 1 1/8" DIA. AND SHALL BE ROUND SMOOTH. THESE DRAINS MUST BE KEPT CLEAN AND OPEN.

SS-7 SHOW ALL COPIES, HOLES, OPENINGS AND MODIFICATIONS REQUIRED IN STRUCTURAL STEEL MEMBERS FOR ERECTION OR THE WORK OF OTHER TRADES ON THE SHOP DRAWINGS FOR APPROVAL BY THE DESIGN PROFESSIONALS.

SS-8 FIELD MODIFICATION OF STRUCTURAL STEEL IS PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL OF THE DESIGN PROFESSIONALS.

SS-9 THE FOLLOWING STRUCTURAL STEEL SHAPES AND ELEMENTS MUST MEET ADDITIONAL MINIMUM MATERIAL TOUGHNESS REQUIREMENTS THROUGH CHARPY V-NOTCH (CVN) IMPACT TESTING VALUES AND ADDITIONAL MATERIAL PROPERTIES INDICATED:

ASTM A6 HOT-ROLLED W SHAPES ALL STRUCTURAL STEEL INCLUDED IN THIS CATEGORY TO BE FULLY KILLED AND PRODUCED TO A FINE GRAIN PRACTICE PER SUPPLEMENTARY REQUIREMENT S28, AND SURFACES OF RE-ENTRANT CORNERS/INTERNAL RADI ARE TO BE GRIND TO BRIGHT METAL, SEE PROJECT SPECIFICATIONS.

ALL OTHER ASTM A6 HOT-ROLLED SHAPES

USED AS HANGERS WITH FLANGE THICKNESS EXCEEDING 1 1/2 INCHES REGARDLESS OF MEANS OF CONNECTION: - WITH SERVICE TEMPERATURES MAINTAINED ABOVE 50 DEG F, 30 FT-LB @ 40 DEG F - EXPOSED TO TEMPERATURES IN SERVICE BELOW 50 DEG F, 40 FT-LB @ LAST BUT NOT HIGHER THAN 40 DEG F - TESTING TO BE IN ACCORDANCE WITH SUPPLEMENTARY REQUIREMENT SS WITH CVN IMPACT TEST LOCATION IN THE FLANGE OR LEG PER ASTM A673 EXCEPT THE SPECIMEN SHALL BE LOCATED AT THE MID-DEPTH OF THE MATERIAL THICKNESS.

HSS SHAPES

USED AS TRUSS MEMBERS OR HANGERS REGARDLESS OF THICKNESS OR MEANS OF CONNECTION: - WITH SERVICE TEMPERATURES MAINTAINED ABOVE 50 DEG F, 25 FT-LB @ 40 DEG F - EXPOSED TO TEMPERATURES IN SERVICE BELOW 50 DEG F, 40 FT-LB @ LAST BUT NOT HIGHER THAN 40 DEG F

PLATES AND SHAPES BUILT-UP FROM PLATES

ALL PLATE TESTING TO BE PERFORMED IN ACCORDANCE WITH WITH ASTM A673 AND PERFORMED AT FREQUENCY P. ALL STRUCTURAL STEEL INCLUDED IN THIS CATEGORY TO BE FULLY KILLED AND PRODUCED TO A FINE GRAIN PRACTICE PER SUPPLEMENTARY REQUIREMENT S28.

- 1. COLUMN BASE PLATES WITH THICKNESS EXCEEDING 2 INCHES THAT ARE CONNECTED TO COLUMNS IN THE SEISMIC FORCE RESISTING SYSTEM WITH DEMAND CRITICAL WELDS: - WITH SERVICE TEMPERATURES MAINTAINED ABOVE 50 DEG F, 30 FT-LB @ 40 DEG F - EXPOSED TO TEMPERATURES IN SERVICE BELOW 50 DEG F, 40 FT-LB @ LAST BUT NOT HIGHER THAN 40 DEG F

WELD METAL

- 2. WELD METAL USED AS PART OF THE SEISMIC FORCE RESISTING SYSTEM: - WITH SERVICE TEMPERATURES MAINTAINED ABOVE 50 DEG F, 20 FT-LB @ -20 DEG F AND 50 FT-LB @ 0 DEG F - EXPOSED TO TEMPERATURES IN SERVICE BELOW 50 DEG F, 20 FT-LB @ -40 DEG F AND 60 FT-LB @ 0 DEG F
3. WELD METAL USED FOR CJP WELDS: - WITH SERVICE TEMPERATURES MAINTAINED ABOVE 50 DEG F, 40 FT-LB @ 40 DEG F AND 20 FT-LB @ 0 DEG F - EXPOSED TO IN SERVICE TEMPERATURES BELOW 50 DEG F, 50 FT-LB @ 40 DEG F AND 30 FT-LB @ 0 DEG F

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Project No. B17-DAYCARE

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Building #17  
Campus Expansion Child  
Day-care Center

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Project No. B17-DAYCARE

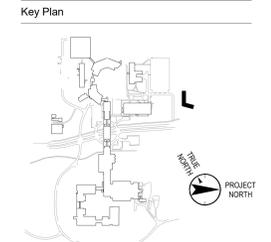
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No.	Date	Description
06.20.2022		ISSUED FOR PERMIT
06.20.2022		100% CONSTRUCTION DOCUMENTS
07.01.2022		100% CONSTRUCTION DOCUMENT - 1

Plot Date: 04/27/10  
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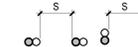
Vendor Name: GENSLER  
Vendor Project No.: 006.3608.000  
Discipline: Drawn By: Author  
**GENERAL LAP SPLICE SCHEDULES**

Scale: NOT TO SCALE Floor:

**S-004**

**LAP SPLICE NOTES:**

- TABULATED VALUES ARE PER ACI 318-11 REQUIREMENTS FOR NORMALWEIGHT CONCRETE. THE VALUES ON THIS SHEET DO NOT APPLY TO LIGHTWEIGHT CONCRETE.
- SEE TYPICAL DETAILS FOR CLEAR COVER
- MINIMUM BAR SPACING DIAGRAM - "S"



- FIRST BAR
- SECOND BAR PLACED OR SPLICE BAR

- WHERE ACTUAL CONDITIONS DIFFER FROM THE CLEAR COVER SHOWN ON THE TYPICAL DETAILS OR DIFFER FROM PROVIDED SCHEDULED BAR SIZE MINIMUM SPACING AND/OR  $f_c$ , LENGTHS SHALL BE ADJUSTED ONLY WITH THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
- TABULATED VALUES ARE FOR NON-EPOXY COATED GRADE 60 REINFORCEMENT IN NORMALWEIGHT CONCRETE

FOR EPOXY COATED REINFORCEMENT:  
MULTIPLY  $L_d$  BY 1.5  
MULTIPLY  $L_{dh}$  BY 1.2  
 $L_{dc}$  IS NOT AFFECTED  
MULTIPLY LTS BY 1.3 FOR "TOP BARS"  
MULTIPLY LTS BY 1.5 FOR ALL OTHER REINFORCEMENT

FOR GRADE 75 REINFORCEMENT:  
MULTIPLY  $L_d$ ,  $L_{dh}$ ,  $L_{dc}$  AND LTS BY 1.25  
MULTIPLY  $L_{cs}$  BY 1.45

- WHERE BARS OF DIFFERENT SIZES ARE LAP SPICED IN TENSION, THE TENSION LAP SPLICE LENGTH (LTS) SHALL BE THE LARGER OF THE TENSION DEVELOPMENT LENGTH ( $L_d$ ) OF THE LARGER BAR AND THE TENSION LAP SPLICE LENGTH OF THE SMALLER BAR.
- WHERE BARS OF DIFFERENT SIZES ARE LAP SPICED IN COMPRESSION, THE COMPRESSION LAP SPLICE LENGTH (LCS) SHALL BE THE LARGER OF THE COMPRESSION DEVELOPMENT LENGTH ( $L_{dc}$ ) OF THE LARGER BAR OR THE COMPRESSION LAP SPLICE LENGTH OF THE SMALLER BAR.

- "TOP BARS" ARE DEFINED AS HORIZONTAL REINFORCEMENT PLACED SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST BELOW THE DEVELOPMENT LENGTH OR SPLICE
- "OTHER BARS" ARE ALL BARS FOR WHICH THIS DOES NOT APPLY

SLAB/SLAB-ON-GRADE REINFORCEMENT LAP SPLICE LENGTH SCHEDULE (INCHES)								SEE NOTE 5
BAR SIZE	MINIMUM BAR SPACING (INCHES)	TENSION (LTS)						
		$f_c = 3$ KSI	$f_c = 4$ KSI	$f_c = 5$ KSI	$f_c = 6$ KSI	$f_c = 7$ KSI	$f_c = 8$ KSI	
#4	5.500	22	19	17	16	14	14	
#5	5.375	32	28	25	23	21	20	
#6	5.250	43	37	34	31	28	27	
#7	5.125	69	60	54	49	46	43	
#8	5.000	86	74	67	61	56	53	

DEVELOPMENT LENGTH SCHEDULE (INCHES)														SEE NOTE 5														
BAR SIZE	MINIMUM BAR SPACING (INCHES) (MAX(1" db + db)) NOTE 2	TENSION										COMPRESSION																
		NOTED AS $L_d$ ON DRAWINGS					NOTED AS $L_{dh}$ ON DRAWINGS					NOTED AS $L_{dc}$ ON DRAWINGS																
		$f_c$ (PSI)										$f_c$ (PSI)																
#4	1.500	22	19	17	16	15	14	13	12	12	11	10	9	8	8	7	7	6	6	6	11	10	9	9	9	9	9	9
#5	1.625	28	24	22	20	18	17	16	15	15	14	12	11	10	9	8	8	8	8	8	14	12	12	12	12	12	12	12
#6	1.750	33	29	26	24	22	21	19	18	18	18	17	15	13	12	11	11	10	9	9	17	15	14	14	14	14	14	14
#7	1.875	48	42	38	34	32	30	28	27	27	27	20	17	15	14	13	12	12	11	11	20	17	16	16	16	16	16	16
#8	2.000	55	48	43	39	36	34	32	30	30	30	22	19	17	16	15	14	13	12	12	22	19	18	18	18	18	18	18
#9	2.375	62	54	48	44	41	38	36	34	34	34	25	22	20	18	17	16	15	14	14	25	22	21	21	21	21	21	21
#10	2.625	70	61	54	50	46	43	41	39	39	39	28	25	22	20	19	18	17	16	16	28	25	23	23	23	23	23	23
#11	2.875	78	67	60	55	51	48	45	43	43	43	31	27	24	22	21	19	18	17	17	31	27	26	26	26	26	26	26

**DEVELOPMENT LENGTH SCHEDULE NOTES:**

- WHERE MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST BELOW THE DEVELOPMENT LENGTH, MULTIPLY  $L_d$  BY 1.5.
- WHERE STIRRUPS OR TIES ARE NOT PRESENT THROUGHOUT  $L_d$ , MINIMUM BAR SPACING MUST BE INCREASED TO  $(MAX(1" db + 2db))$  FOR SCHEDULED VALUES TO BE APPLICABLE.

GRADE BEAM/BEAM REINFORCEMENT LAP SPLICE LENGTH SCHEDULE (INCHES)														SEE NOTE 5	
BAR SIZE	MINIMUM BAR SPACING (INCHES)	TENSION (LTS)													
		$f_c = 4$ KSI		$f_c = 5$ KSI		$f_c = 6$ KSI		$f_c = 7$ KSI		$f_c = 8$ KSI		$f_c = 9$ KSI		$f_c = 10$ KSI	
		TOP BARS	OTHER	TOP BARS	OTHER										
#4	1.500	33	25	29	23	27	21	25	19	23	18	22	17	21	16
#5	1.625	41	31	36	28	33	26	31	24	29	22	27	21	26	20
#6	1.750	49	37	44	34	40	31	37	28	35	27	33	25	31	24
#7	1.875	71	54	63	49	58	45	54	41	50	39	47	36	45	35
#8	2.000	81	62	72	56	66	51	61	47	57	44	54	42	51	39
#9	2.375	91	70	81	63	74	57	69	53	64	50	61	47	58	44
#10	2.625	102	79	92	71	84	64	77	60	72	56	68	53	65	50
#11	2.875	114	87	102	78	93	71	86	66	80	62	76	58	72	55

FOOTING/MAT REINFORCEMENT LAP SPLICE LENGTH SCHEDULE (INCHES)																SEE NOTE 5
BAR SIZE	MINIMUM BAR SPACING (INCHES)	TENSION LAP (LTS)														
		$f_c = 4$ KSI		$f_c = 5$ KSI		$f_c = 6$ KSI		$f_c = 7$ KSI		$f_c = 8$ KSI		$f_c = 9$ KSI		$f_c = 10$ KSI		
		TOP BARS	OTHER	TOP BARS	OTHER	TOP BARS	OTHER	TOP BARS	OTHER	TOP BARS	OTHER	TOP BARS	OTHER	TOP BARS	OTHER	
#4	5.500	20	15	18	14	16	13	15	12	14	12	13	12	13	12	
#5	5.375	25	19	22	17	20	16	19	14	18	14	17	13	16	12	
#6	5.250	29	23	26	20	24	19	22	17	21	16	20	15	19	15	
#7	5.125	43	33	38	29	35	27	32	25	30	23	29	22	27	21	
#8	5.000	49	37	44	34	40	31	37	28	35	27	33	25	31	24	
#9	4.875	63	49	57	44	52	40	48	37	45	35	42	33	40	31	
#10	4.750	82	63	74	57	67	52	62	48	58	45	55	42	52	40	
#11	4.625	104	80	93	72	85	65	79	61	74	57	69	54	66	51	

FOUNDATION WALL REINFORCEMENT - VERTICAL INSIDE BARS LAP SPLICE LENGTH SCHEDULE (INCHES)													SEE NOTE 5
BAR SIZE	MINIMUM BAR SPACING (INCHES)	TENSION (LTS)										COMPRESSION (LCS)	
		$f_c = 4$ KSI	$f_c = 5$ KSI	$f_c = 6$ KSI	$f_c = 7$ KSI	$f_c = 8$ KSI	$f_c = 9$ KSI	$f_c = 10$ KSI	$f_c = 11$ KSI	$f_c = 12$ KSI			
#4	5.500	15	14	13	12	12	12	12	12	12	12	15	
#5	5.375	23	20	18	17	16	15	14	14	14	14	19	
#6	5.250	31	28	25	23	22	21	20	20	20	20	23	
#7	5.125	50	45	41	38	35	33	32	32	32	32	27	
#8	5.000	62	56	51	47	44	42	39	39	39	39	30	
#9	4.875	76	68	62	57	54	51	48	48	48	48	34	
#10	4.750	92	82	75	69	65	61	58	58	58	58	39	
#11	4.625	108	97	89	82	77	72	69	69	69	69	43	

FOUNDATION WALL REINFORCEMENT - HORIZONTAL INSIDE BARS LAP SPLICE LENGTH SCHEDULE (INCHES)													SEE NOTE 5
BAR SIZE	MINIMUM BAR SPACING (INCHES)	TENSION (LTS)										COMPRESSION (LCS)	
		$f_c = 4$ KSI	$f_c = 5$ KSI	$f_c = 6$ KSI	$f_c = 7$ KSI	$f_c = 8$ KSI	$f_c = 9$ KSI	$f_c = 10$ KSI	$f_c = 11$ KSI	$f_c = 12$ KSI			
#4	5.500	20	18	16	15	14	13	13	13	13	13	15	
#5	5.375	25	22	20	19	18	17	16	16	16	16	19	
#6	5.250	29	26	24	22	21	20	19	19	19	19	23	
#7	5.125	48	43	39	36	34	32	31	31	31	31	27	
#8	5.000	61	54	50	46	43	41	39	39	39	39	30	
#9	4.875	75	67	61	57	53	50	47	47	47	47	34	
#10	4.750	91	82	75	69	65	61	58	58	58	58	39	
#11	4.625	109	97	89	82	77	73	69	69	69	69	43	

FOUNDATION WALL REINFORCEMENT - VERTICAL OUTSIDE BARS LAP SPLICE LENGTH SCHEDULE (INCHES)													SEE NOTE 5
BAR SIZE	MINIMUM BAR SPACING (INCHES)	TENSION (LTS)										COMPRESSION (LCS)	
		$f_c = 4$ KSI	$f_c = 5$ KSI	$f_c = 6$ KSI	$f_c = 7$ KSI	$f_c = 8$ KSI	$f_c = 9$ KSI	$f_c = 10$ KSI	$f_c = 11$ KSI	$f_c = 12$ KSI			
#4	5.500	15	14	13	12	12	12	12	12	12	12	15	
#5	5.375	19	17	16	14	14	14	14	14	14	14	19	
#6	5.250	23	20	19	17	16	15	15	15	15	15	23	
#7	5.125	33	29	27	25	23	22	21	21	21	21	27	
#8	5.000	37	34	31	28	27	25	24	24	24	24	30	
#9	4.875	49	44	40	37	35	33	31	31	31	31	34	
#10	4.750	63	57	52	48	45	42	40	40	40	40	39	
#11	4.625	80	72	65	61	57	54	51	51	51	51	43	

FOUNDATION WALL REINFORCEMENT - HORIZONTAL OUTSIDE BARS LAP SPLICE LENGTH SCHEDULE (INCHES)													SEE NOTE 5
BAR SIZE	MINIMUM BAR SPACING (INCHES)	TENSION (LTS)										COMPRESSION (LCS)	
		$f_c = 4$ KSI	$f_c = 5$ KSI	$f_c = 6$ KSI	$f_c = 7$ KSI	$f_c = 8$ KSI	$f_c = 9$ KSI	$f_c = 10$ KSI	$f_c = 11$ KSI	$f_c = 12$ KSI			
#4	5.500	20	18	16	15	14	13	13	13	13	13	15	
#5	5.375	25	22	20	19	18	17	16	16	16	16	19	
#6	5.250	29	26	24	22	21	20	19	19	19	19	23	
#7	5.125	43	38	35	32	30	29	27	27	27	27	27	
#8	5.000	49	44	40	37	35	33	31	31	31	31	30	
#9	4.875	63	57	52	48	45	42	40	40	40	40	34	
#10	4.750	82	74	67	62	58	55	52	52	52	52	39	
#11	4.625	104	93	85	7								

**NOTES:**

- SEE GENERAL NOTES FOR CONCRETE COMPRESSIVE STRENGTH
- T/FOOTING = EL -2'-6" BELOW FF ELEVATION, UON
- TOP OF SLAB EL +217'-3" UON THUS:
  - X - INDICATES CHANGE IN STRUCTURAL SLAB ELEVATION
- SLAB TO BE 6" THICK NORMALWEIGHT CONCRETE SLAB ON GRADE, UON REINFORCED WITH WWF6X6-W2.9XW2.9
- SEE GENERAL NOTES FOR CONCRETE COMPRESSIVE STRENGTH
- FOR ADDITIONAL INFORMATION REFER TO THE FOLLOWING DRAWINGS:
  - DRAWING LISTS, GENERAL NOTES S0 SERIES DRAWINGS AND LOADING DIAGRAMS
  - TYPICAL FOUNDATION DETAILS S2 SERIES DRAWINGS
  - LATERAL SYSTEM ELEVATIONS, CONNECTION FORCES AND DETAILS S3 SERIES DRAWINGS
  - STEEL SUPERSTRUCTURE SCHEDULES AND DETAILS S5 SERIES DRAWINGS

- INDICATES LGMF LOAD BEARING WALL (BY OTHERS)
  - INDICATES LGMF SHEAR WALL (BY OTHERS)

REFER TO ARCHITECTURAL DRAWINGS FOR FINAL WALL LAYOUTS, LOCATIONS AND GEOMETRY. GC TO COORDINATE WITH LGMF SUB-CONTRACTOR

SEE CIVIL DRAWINGS FOR UNDERSLAB DRAINAGE PIPING. ELEVATIONS RANGE FROM EL 215' TO 215.5'. GC TO CONFIRM/COORDINATE. PROVIDE PENETRATIONS THRU. KNEE WALLS WHERE REQUIRED. SEE 3/S-202 FOR WALL PENETRATION DETAILS

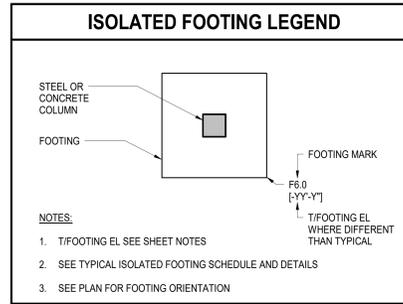
SEE MEP DRAWINGS FOR UNDERSLAB PIPING INFORMATION. ELEVATIONS RANGE FROM EL 215.5 TO 216'. GC TO CONFIRM/COORDINATE. PROVIDE VERTICAL PENETRATIONS THRU. SLABS (REF. 6/S-201) AND HORIZONTAL PENETRATIONS THRU. KNEE WALLS (REF. 3/S-202). VERTICAL PENETRATIONS THRU. KNEE WALLS ARE NOT PERMITTED.

EXTERIOR WALL FOOTING TO STEP WHERE REQUIRED TO ACCOMMODATE SEWER AND STORMWATER TIE-IN. SEE PLANS FOR LOCATIONS. GC TO COORDINATE. REF. 3/S-200 FOR STEPPED WALL FOOTING DETAILS.

MARK	SIZE			REINFORCEMENT		REMARKS
	L	W	H	BOTTOM (SHORT)	TOP BARS	
F3	3'-0"	3'-0"	1'-6"	6#5 E.W.	-	-
F4	4'-0"	4'-0"	1'-6"	9#5 E.W.	-	-
F5	5'-0"	5'-0"	1'-6"	8#5 E.W.	-	-

**NOTES:**

- REINFORCEMENT SHALL NOT BE SPLICED WITHOUT PRIOR WRITTEN APPROVAL FROM SER.



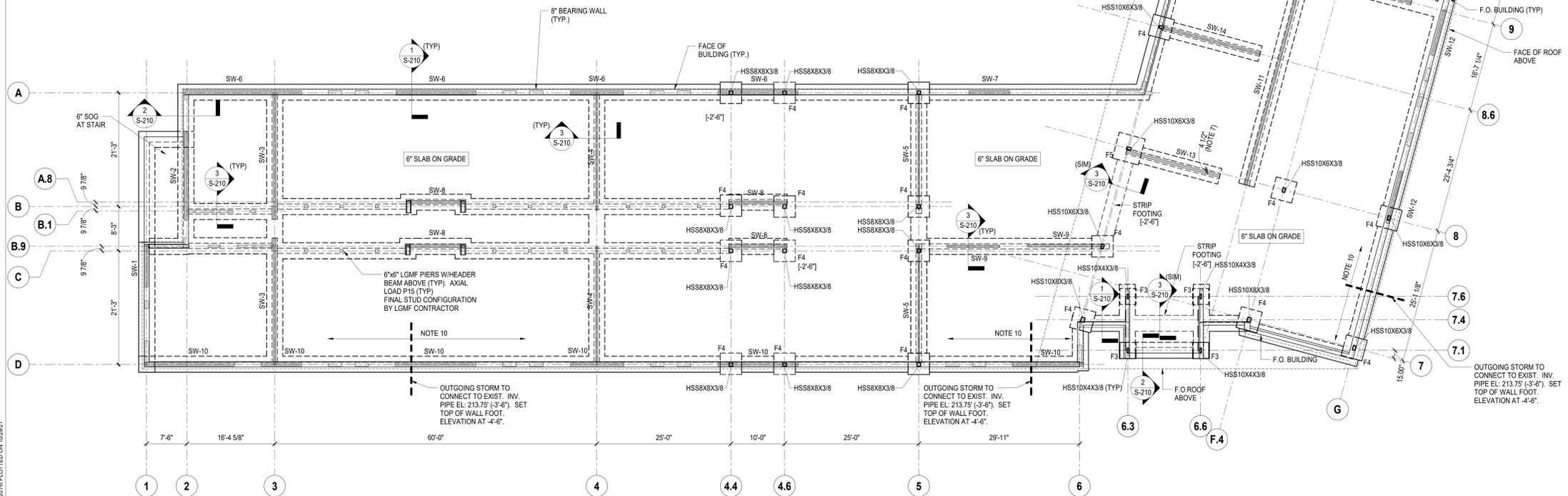
**ISOLATED FOOTING LEGEND**  
SCALE: 12" = 1'-0"

COLUMN SIZE	BASE PLATE SIZE	ANCHOR ROD MARK
HSS10X6	3/4" X 18" X 18"	1
HSS10X8	3/4" X 16" X 16"	1
HSS8X8	3/4" X 16" X 16"	1
HSS10X4	3/4" X 18" X 18"	1

SEE S-500 FOR COLUMN BASE DETAILS

LGMF BEARING WALL SCHEDULE				
BEARING WALL	LOCATION	MAX WALL HEIGHT (FT)	STUD SIZE	MIN. STUD SIZE
EXTERIOR	WEST WING	12'-0"	8" @ 16" O.C.	800S162-43
EXTERIOR	EAST WING	14'-0"	8" @ 16" O.C.	800S162-54
INTERIOR	WEST WING	12'-0"	6" @ 16" O.C.	600S162-33
INTERIOR	EAST WING	16'-0"	6" @ 16" O.C.	600S200-43
EXTERIOR	EAST WING - GRID 14	SLOPES 19'-0" AT GRID E.	12"	1200S
EXTERIOR	EAST WING - GRID E BTW. 13/14	19'-0"	12"	1200S

NOTE: FINAL STUD SIZE AND SPACING TO BE VERIFIED BY SUB-CONTRACTOR BASED ON INFORMATION PROVIDED AND PROJECT LOADING CRITERIA NOTE IN S-500 SERIES. MINIMUM DEPTH OF STUDS TO BE AS NOTED IN TABLES ABOVE



**GROUND FLOOR FRAMING PLAN**  
SCALE: 1/8" = 1'-0"

777 Old Saw Mill River Road  
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**Building #17**  
Campus Expansion Child Day-care Center

777 Old Saw Mill River Road  
Mount Pleasant, NY 10591

Project No. B17-DAYCARE

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**Gensler**

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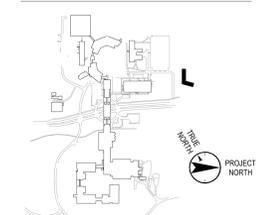
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Landscape Architect

Langan  
21 Penn Plaza, 360 West 31st Street, 8th Floor  
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**Key Plan**



**No. Date Description**

06.20.2022	ISSUED FOR PERMIT
06.20.2022	100% CONSTRUCTION DOCUMENTS
07.01.2022	100% CONSTRUCTION DOCUMENT - 1

**Plot Date: 10/29/21**

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Professional Seal and Signature

Vendor Name: GENSLER  
Vendor Project No.: 006.3608.000  
Discipline: Drawn By: Author  
**GROUND FLOOR PLAN**

Scale: As indicated Floor:

**S-100**



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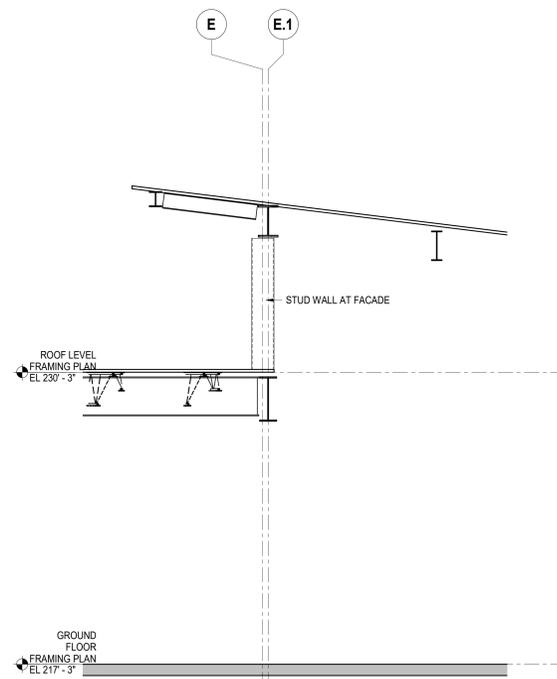
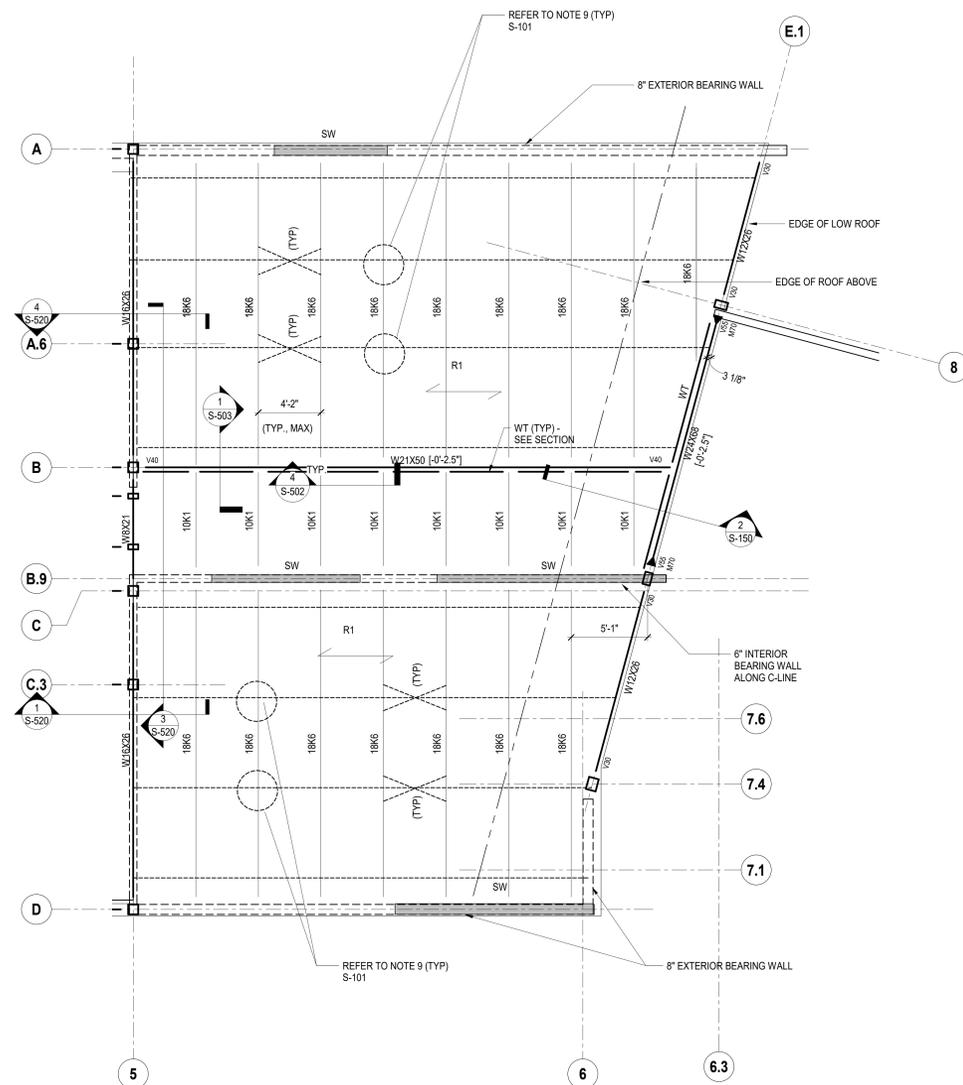
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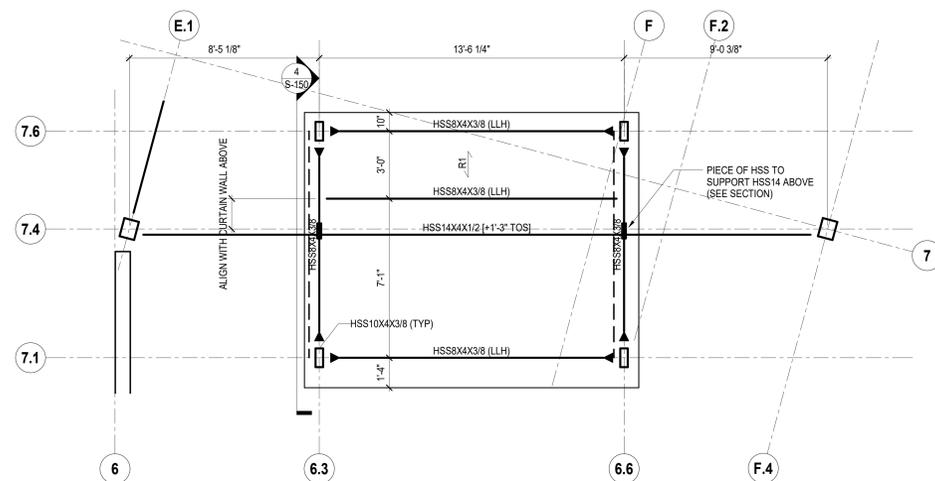


**1 PART PLAN AT LOW ROOF WEST WING**

SCALE: 1/4" = 1'-0"

**2 SECTION THRU. EAST - WEST WINGS**

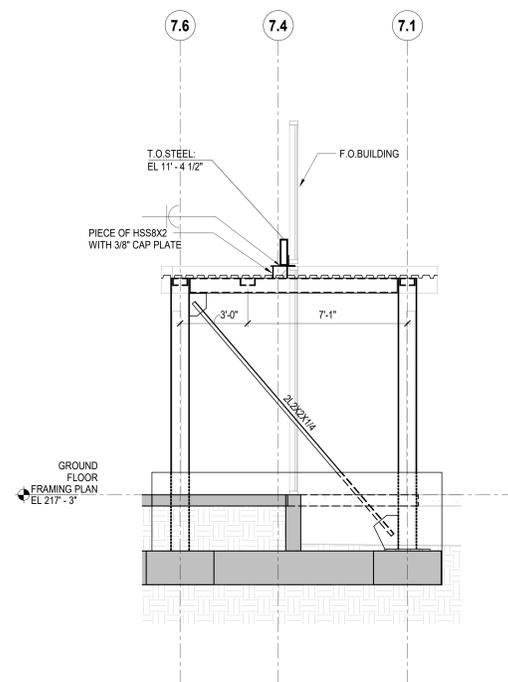
SCALE: 3/8" = 1'-0"



NOTES:  
1. T/STEEL #9-7 3/4" UON

**3 TOS LOBBY VESTIBULE**

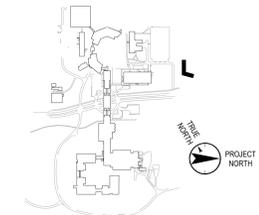
SCALE: 3/8" = 1'-0"



**4 SECTION THRU. VESTIBULE**

SCALE: 3/8" = 1'-0"

Key Plan



No.	Date	Description
06.20.2022	ISSUED FOR PERMIT	
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Plot Date: 03/08/22  
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Professional Seal and Signature

Vendor Name: GENSLER  
Vendor Project No.: 006.3608.000  
Discipline: Drawn By: Author  
**PART PLANS**

Scale: As indicated Floor:

**S-150**



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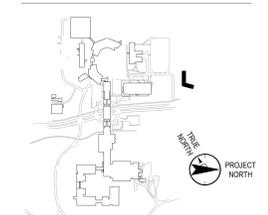
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Key Plan



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07.01.2022	100% CONSTRUCTION DOCUMENT-1	

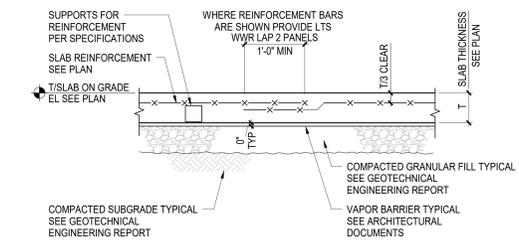
Plot Date: 04/19/10  
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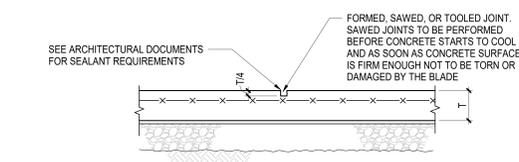
Vendor Name: GENSLER  
Vendor Project No.: 006.3608.000  
Discipline: Drawn By: Author  
**TYPICAL SLAB ON GRADE DETAILS**

Scale: As indicated Floor:

**S-201**



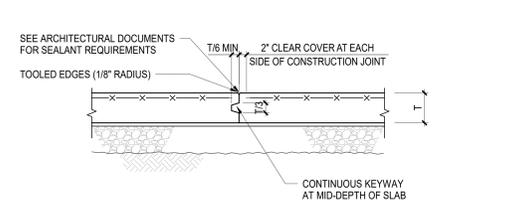
**A SLAB ON GRADE**



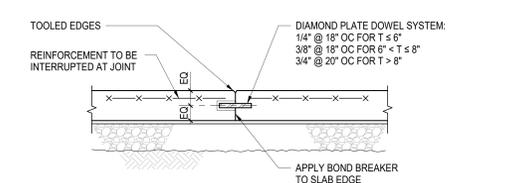
**C CONTRACTION JOINT**

- NOTES:**
- WHERE NOT INDICATED ON DRAWINGS PROVIDE JOINTS AT COLUMN CENTERLINES AND BETWEEN COLUMN CENTERLINES WITH SPACING OF JOINTS NOT TO EXCEED 36 TIMES THE SLAB THICKNESS (T-INCHES)

**1 TYPICAL SLAB ON GRADE DETAILS**  
NOT TO SCALE



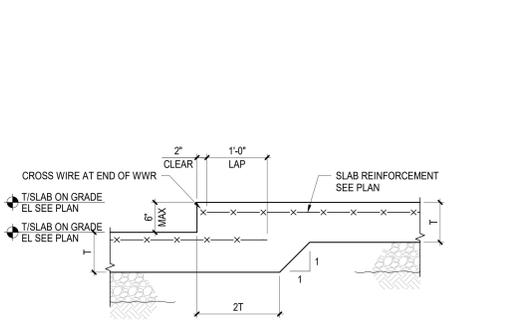
**B CONSTRUCTION JOINT / CONTRACTION JOINT**



**D DOWELED CONSTRUCTION JOINT (WHERE INDICATED ON PLAN)**

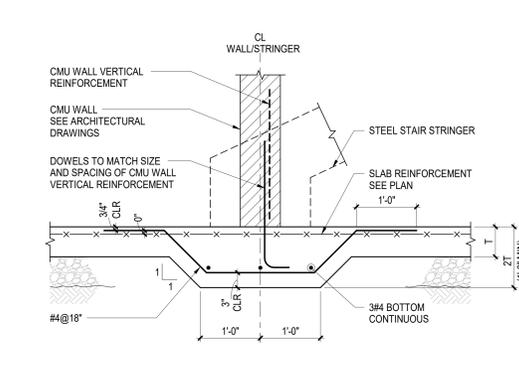
- NOTES:**
- SEE TYPICAL SLAB ON GRADE DETAILS FOR JOINT SPACING REQUIREMENTS
  - CONCRETE INFILL BETWEEN COLUMN AND ISOLATION JOINT TO BE POURED AFTER ALL THE SLABS SUPPORTED BY THE COLUMN HAVE BEEN POURED
  - PROVIDE ADDITIONAL CLEARANCE AS REQUIRED TO ENSURE 3" MINIMUM CONCRETE COVER OVER BASE PLATE AND ANCHOR RODS BELOW.

**2 TYPICAL ISOLATION JOINT DETAILS AT SLAB ON GRADE**  
NOT TO SCALE



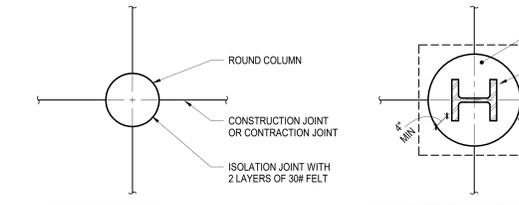
**3 TYPICAL SLAB ON GRADE STEP 6" MAXIMUM**  
NOT TO SCALE

- NOTES:**
- SEE TYPICAL SLAB ON GRADE DETAILS FOR ADDITIONAL INFORMATION

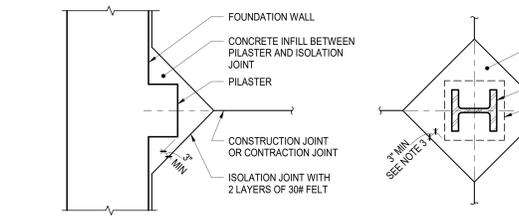


- NOTES:**
- SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF WALLS AND STAIRS
  - SEE TYPICAL SLAB ON GRADE DETAILS FOR MORE INFORMATION

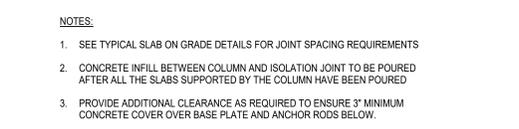
**4 TYPICAL THICKENED SLAB ON GRADE AT NON-BEARING CMU WALL OR STAIR STRINGER**  
NOT TO SCALE



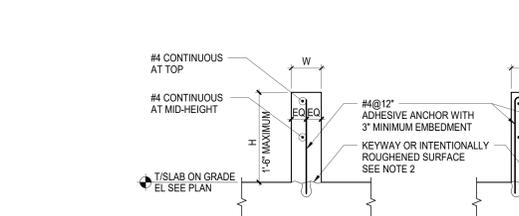
**A ROUND COLUMN**



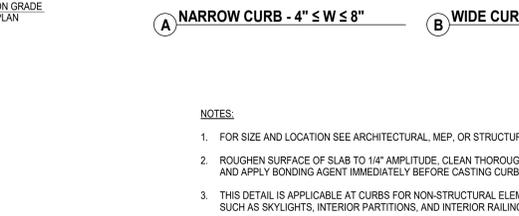
**B CONCRETE ENCASE COLUMN AND BASE PLATE WHERE INDICATED ON PLAN**



**D PILASTER**



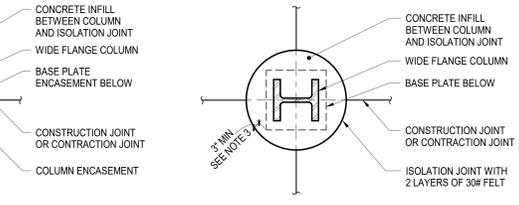
**E TYPICAL BASE PLATE WITHIN CONCRETE INFILL UNLESS OTHERWISE NOTED**



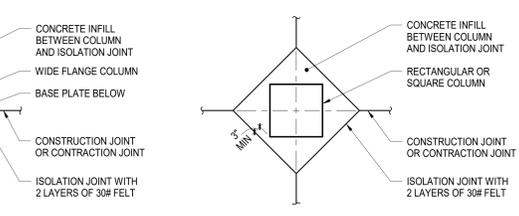
**F RECTANGULAR OR SQUARE COLUMN**

- NOTES:**
- FOR SIZE AND LOCATION SEE ARCHITECTURAL, MEP, OR STRUCTURAL DRAWINGS
  - ROUGHEN SURFACE OF SLAB TO 1/4" AMPLITUDE, CLEAN THOROUGHLY AND APPLY BONDING AGENT IMMEDIATELY BEFORE CASTING CURB
  - THIS DETAIL IS APPLICABLE AT CURBS FOR NON-STRUCTURAL ELEMENTS SUCH AS SKYLIGHTS, INTERIOR PARTITIONS, AND INTERIOR RAILINGS
  - SEE ARCHITECTURAL DRAWINGS FOR EMBEDDED PLATES AND BLOCKOUTS REPLACE REINFORCEMENT INTERRUPTED BY BLOCKOUTS
  - CORING AND/OR CUTTING OF REINFORCEMENT IS NOT PERMITTED USE EMBED PLATES FOR ATTACHMENT TO CURBS

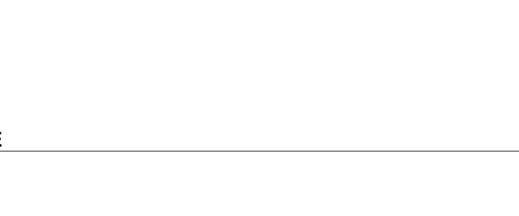
**5 TYPICAL CURB DETAILS AT INTERIOR**  
SCALE: NOT TO SCALE



**C TYPICAL BASE PLATE WITHIN CONCRETE INFILL (ROUND ISOLATION JOINT OPTION)**



**E TYPICAL BASE PLATE WITHIN CONCRETE INFILL UNLESS OTHERWISE NOTED**



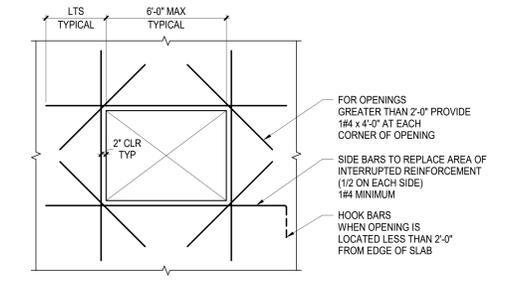
**F RECTANGULAR OR SQUARE COLUMN**



**A NARROW CURB - 4" ≤ W ≤ 8"**

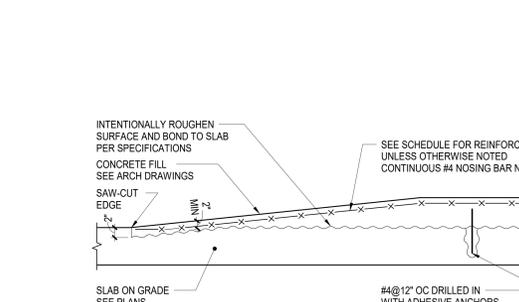


**B WIDE CURB - W ≥ 8"**



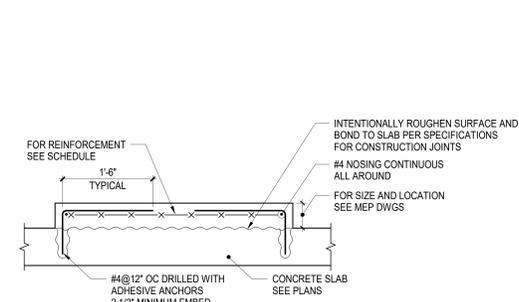
**6 TYPICAL SLAB ON GRADE DETAIL OF ADDITIONAL REINFORCEMENT AT ANY OPENINGS OR AT STEP GREATER THAN 6" UP TO 3'-0"**  
NOT TO SCALE

- NOTES:**
- FOR SIZE OF OPENINGS SEE ARCHITECTURAL DRAWINGS
  - ADDITIONAL REINFORCEMENT IS NOT REQUIRED AT OPENINGS THAT DO NOT INTERRUPT THE TYPICAL REINFORCEMENT



**7 TYPICAL DETAIL OF CONCRETE FILL HOUSEKEEPING PAD / MECHANICAL PAD / RAMP**  
NOT TO SCALE

- NOTES:**
- THIS DETAIL IS NOT APPLICABLE TO GENERAL RAISED SLAB AREA HIGHER THAN 4" OTHER THAN MECHANICAL PADS AND HOUSEKEEPING PADS



**8 SECTION AT RAMP OR PAD**

THICKNESS	REINFORCEMENT
≤ 3"	WWR 6x6 - W2.9xW2.9
≤ 4"	WWR 6x6 - W4.0xW4.0
≤ 6"	#4 @ 12" TOP EACH WAY
≤ 12"	#4 @ 12" TOP & BOTTOM EACH WAY

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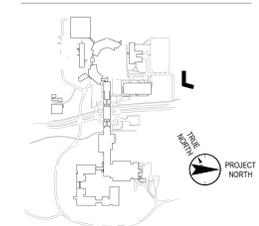
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Key Plan



No.	Date	Description
06.20.2022		ISSUED FOR PERMIT
06.20.2022		100% CONSTRUCTION DOCUMENTS
07.01.2022		100% CONSTRUCTION DOCUMENT- 1

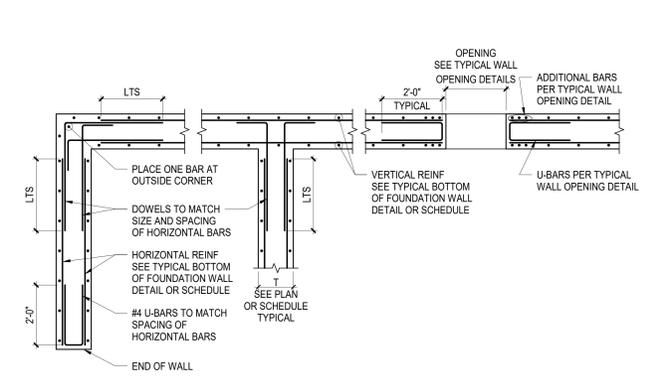
Plot Date: 06/04/10  
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Professional Seal and Signature

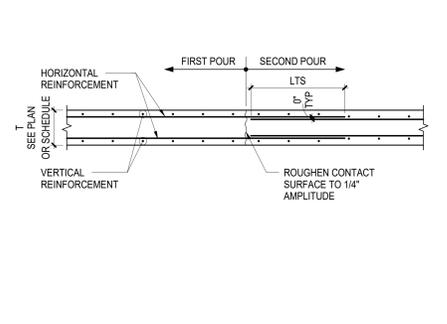
Vendor Name: GENSLER  
Vendor Project No.: 006.3608.000  
Discipline: Drawn By: Author  
**TYPICAL FOUNDATION WALL DETAILS**

Scale: As indicated Floor:

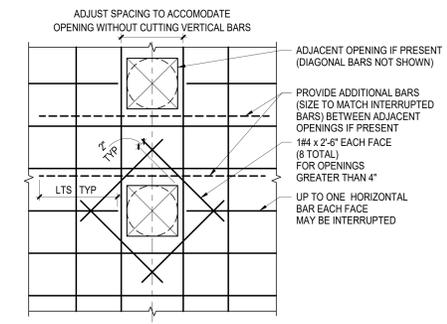
**S-202**



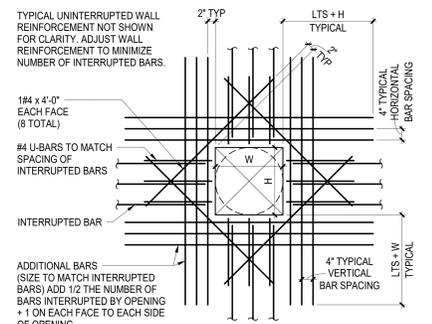
**1 TYPICAL FOUNDATION WALL DETAIL - PLAN**  
NOT TO SCALE



**2 TYPICAL VERTICAL CONSTRUCTION JOINT IN CONCRETE WALL**  
NOT TO SCALE



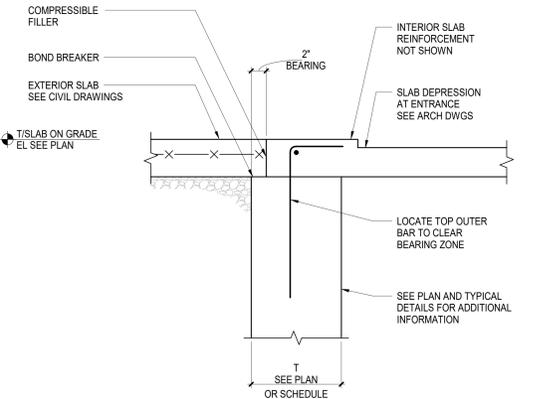
**A OPENING LESS THAN 10\"/>**



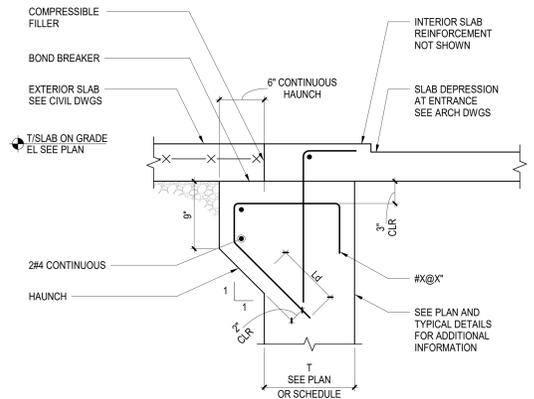
**B OPENING 10\"/>**

- NOTES:
- MINIMUM CLEAR DISTANCE BETWEEN OPENINGS IS 2 TIMES MAXIMUM OPENING SIZE
  - FOR OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS, CONTRACTOR TO SUBMIT LOCATIONS AND SPACING TO STRUCTURAL ENGINEER FOR WRITTEN APPROVAL

**3 TYPICAL WALL OPENING DETAILS**  
NOT TO SCALE



**4 TYPICAL SECTION AT ENTRANCE**  
SCALE: NOT TO SCALE



**5 TYPICAL SECTION AT ENTRANCE WITH HAUNCH**  
SCALE: NOT TO SCALE

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**Building #17**  
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**Day-care Center**

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Project No. B17-DAYCARE

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**Structural Engineer**  
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**MEP / IT / Security Engineer**

Cosentini Associates  
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New York, NY 10018  
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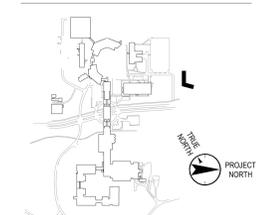
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(914) 273-2102 Fax

**Landscape Architect**

Langan  
21 Penn Plaza, 360 West 31st Street, 8th Floor  
New York, NY 10001  
(212) 479-5400 Phone  
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**Key Plan**



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07.01.2022	100% CONSTRUCTION DOCUMENT- 1	

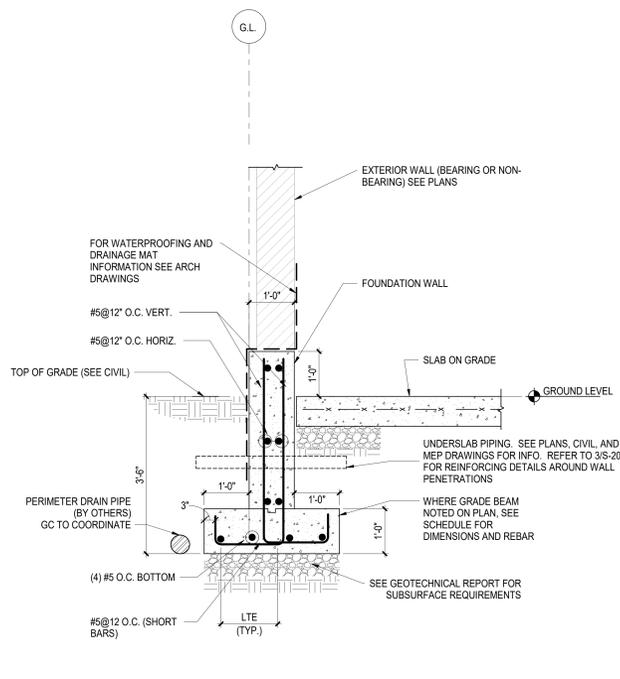
Plot Date: 10/29/21  
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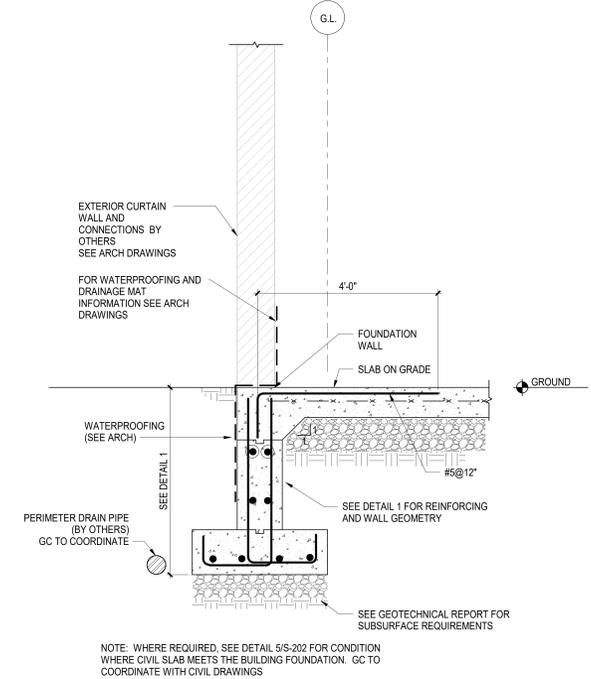
Vendor Name: GENSLER  
Vendor Project No.: 006.3608.000  
Discipline: Drawn By: Author  
**FOUNDATION SECTIONS AND DETAILS**

Scale: As indicated Floor:

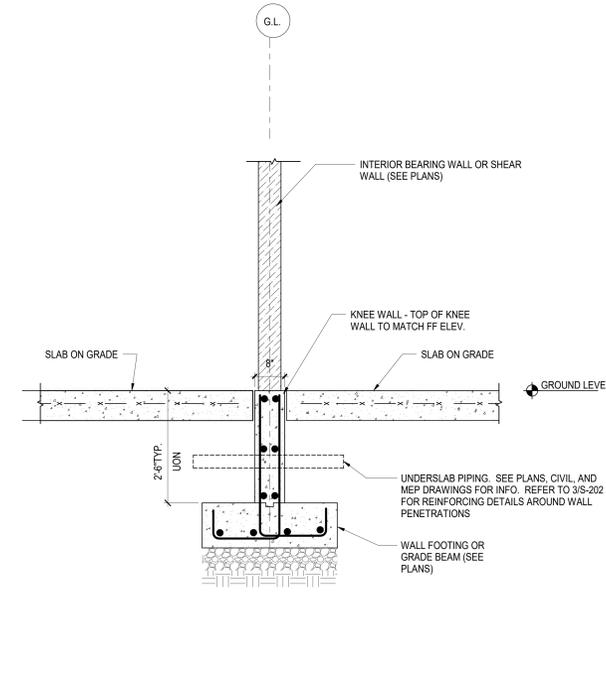
**S-210**



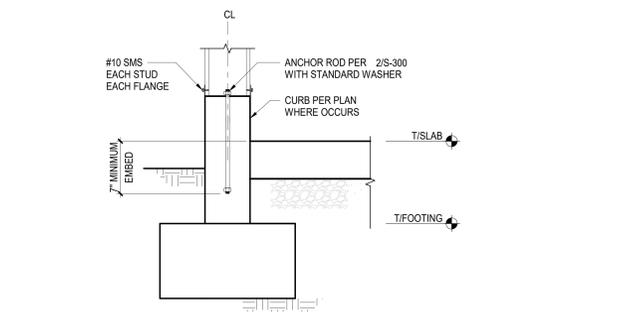
**1 TYPICAL PERIMETER WALL**  
SCALE: 3/4" = 1'-0"



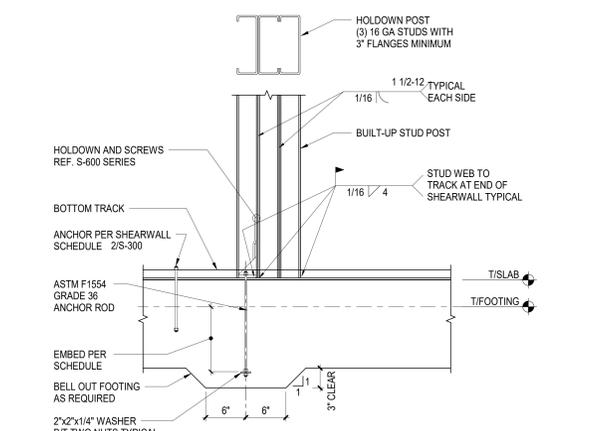
**2 KNEE WALL AT DOORWAYS**  
SCALE: 3/4" = 1'-0"



**3 TYPICAL INTERIOR BEARING/SHEAR WALL FOOTING**  
SCALE: 3/4" = 1'-0"



**4 ANCHOR AT EXTERIOR**  
SCALE: 1 1/2" = 1'-0"



**5 HOLDOWN DETAIL**  
SCALE: 1" = 1'-0"

- NOTES:**
- HOLDOWNS TO BE SIMPSON SHDU SERIES PER IAPMO ERS124 OR APPROVED EQUIVALENT.
  - ADD CURB HEIGHT TO ANCHOR ROD LENGTH IF THERE IS A CONCRETE CURB.
  - FINAL DESIGN AND CONFIGURATION BY THE CONTRACTOR BASED ON PROJECT CRITERIA NOTED IN CONTRACT DOCUMENTS

DETAIL FOR WALL BASE CONNECTION ONLY. REFER TO DETAILS 1, 2, 3 FOR FOUNDATION SECTIONS AND DETAILS





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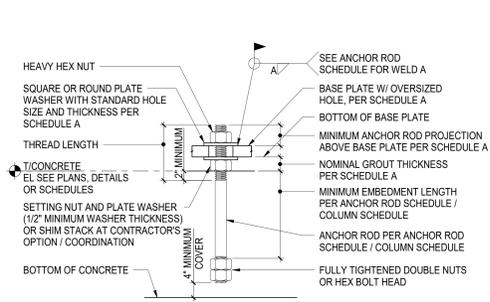
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(212) 615-3700 Fax

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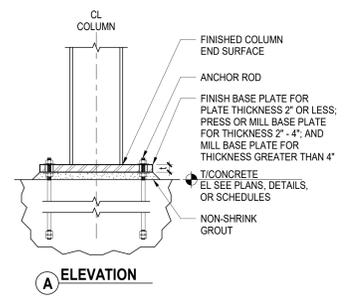
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Armonk, NY 10504  
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Landscape Architect

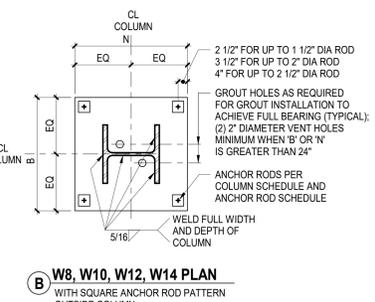
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21 Penn Plaza, 360 West 31st Street, 8th Floor  
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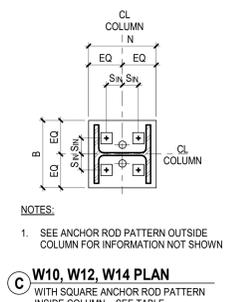
SCHEDULE A					
ANCHOR ROD DIAMETER	BASE PL HOLE DIA	MIN WASHER SIZE	MIN WASHER t	MIN PROJ ABOVE BASE PL	NOMINAL GROUT THICKNESS
3/4"	1-5/16"	2"	1/4"	3"	2"
1"	1-13/16"	3"	3/8"	3-1/2"	2"
1-1/4"	2-1/16"	3"	1/2"	4"	3"
1-1/2"	2-5/16"	3-1/2"	1/2"	4"	3"
1-3/4"	2-3/4"	4"	3/4"	5"	3"
2"	3-1/4"	5"	3/4"	5"	4"
2-1/2"	3-3/4"	5-1/2"	1"	5-1/2"	4"



- NOTES:**
- SEE COLUMN SCHEDULE FOR BASE PLATE SIZE, ORIENTATION AND THICKNESS
  - BASE PLATE THICKNESS SHOWN ON SCHEDULE IS A MINIMUM. DIMENSION AFTER ALL MILLING IS COMPLETED.
  - COLUMN STABILITY DURING ERECTION IS RESPONSIBILITY OF CONTRACTOR
  - SEE ANCHOR ROD SCHEDULE AND TYPICAL ANCHOR ROD DETAIL FOR ADDITIONAL INFORMATION
  - CONTRACTOR'S OPTION TO FIELD WELD COLUMNS TO BASEPLATES FOR HEAVY BASEPLATES
  - ANCHOR ROD CONFIGURATION IS TO USE SQUARE PATTERN OUTSIDE COLUMN. IF SPECIFIED BASE PLATE SIZE DOES NOT PERMIT OUTSIDE PLACEMENT USE SQUARE PATTERN INSIDE COLUMN. USE RECTANGULAR ANCHOR ROD CONFIGURATION WHERE NOTED

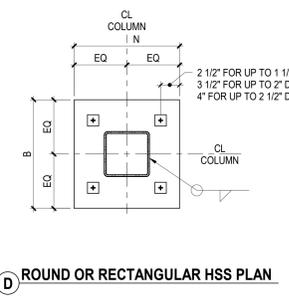


- NOTES:**
- SEE ANCHOR ROD PATTERN OUTSIDE COLUMN FOR INFORMATION NOT SHOWN

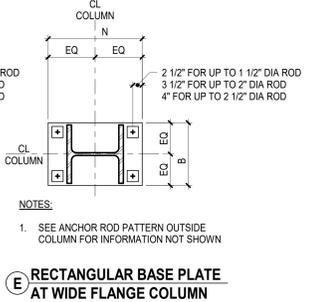


- NOTES FOR TABLE:**
- INSIDE ANCHOR ROD CONFIGURATION NOT APPLICABLE TO ROD DIAMETERS GREATER THAN 1 1/4" FOR W14, 1" FOR W12, AND 3/4" FOR W10. INSIDE BOLT CONFIGURATION NOT APPLICABLE TO W8
  - INSIDE ANCHOR ROD CONFIGURATION NOT APPLICABLE TO COLUMNS HEAVIER THAN W14X426

S n FOR SQUARE ANCHOR ROD PATTERN INSIDE COLUMN	
SHAPE	S <sub>n</sub>
W8	NA
W10	2 1/2"
W12	3"
W14	4"



- NOTES:**
- SEE ANCHOR ROD PATTERN OUTSIDE COLUMN FOR INFORMATION NOT SHOWN



- NOTES:**
- SEE ANCHOR ROD PATTERN OUTSIDE COLUMN FOR INFORMATION NOT SHOWN

**1 TYPICAL ANCHOR ROD DETAIL**  
NOT TO SCALE

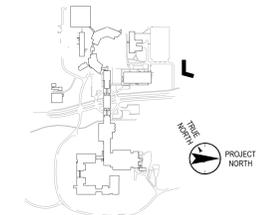
**2 TYPICAL BASE PLATE DETAIL**  
NOT TO SCALE

ANCHOR ROD SCHEDULE					
ANCHOR ROD MARK	ANCHOR RODS				REMARKS
	NUMBER	TYPE	EMBED LENGTH	WELD A	
1	4	1" DIA ASTM F1554 GR 55 (SUPP S1)	1'-3"		

- NOTES:**
- SEE TYPICAL ANCHOR ROD AND BASE PLATE DETAILS
  - WHERE WELD 'A' IS NOT SHOWN, TACK-WELD AS REQUIRED FOR ERECTION

**3 ANCHOR ROD SCHEDULE**  
NOT TO SCALE

Key Plan



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Vendor Name: GENSLER  
Vendor Project No.: 006.3608.000  
Discipline: Drawn By: Author  
**TYPICAL COLUMN BASE**  
**DETAILS**

Scale: As indicated Floor:

**S-500**

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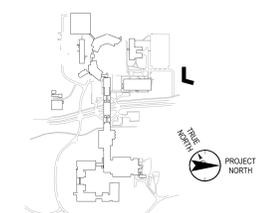
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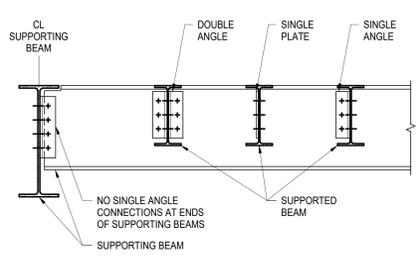
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Vendor Name: GENSLER  
Vendor Project No.: 006.3608.000  
Discipline: Structural  
Drawn By: Author  
TYPICAL BEAM DETAILS

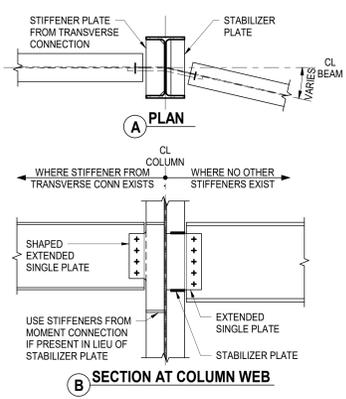
Scale: As indicated Floor:

**S-501**



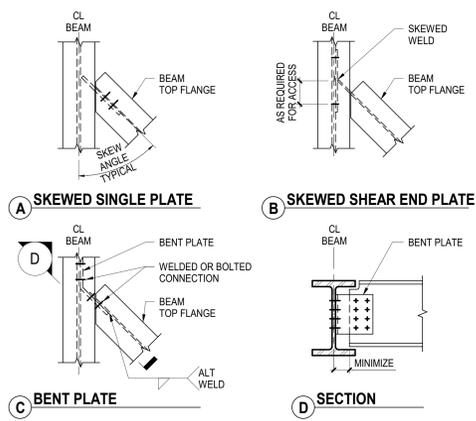
- NOTES:
- SUPPORTED BEAMS PRIMARILY SUPPORT DISTRIBUTED LOADS FROM SLABS OR DECKING
  - SUPPORTING BEAMS SUPPORT SIGNIFICANT POINT LOADS FROM ONE OR MORE SUPPORTED BEAMS OR FROM COLUMNS BEING TRANSFERRED. SUPPORTING BEAMS MAY BE SUPPORTED BY COLUMNS OR BY OTHER SUPPORTING BEAMS
  - FOR SHEAR CONNECTIONS AT SUPPORTED BEAM ENDS, DOUBLE ANGLE, SINGLE PLATE OR SINGLE ANGLE MAY BE USED UNLESS OTHERWISE NOTED
  - SEE TYPICAL STEEL BEAM SHEAR CONNECTIONS FOR INFORMATION NOT SHOWN

**1 TYPICAL BEAM TO BEAM SHEAR CONNECTION (3 TYPES)**  
NOT TO SCALE



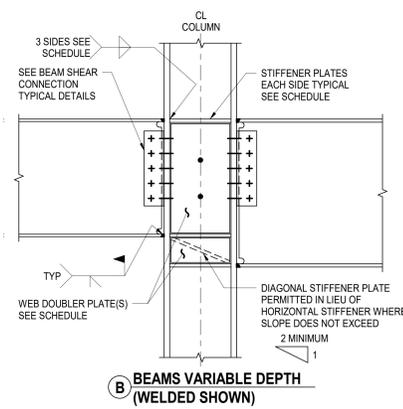
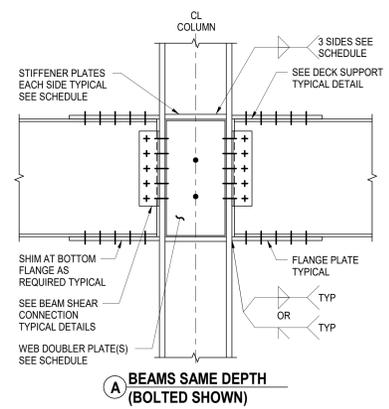
- NOTES:
- SEE TYPICAL STEEL BEAM SHEAR CONNECTIONS FOR INFORMATION NOT SHOWN

**2 TYPICAL EXTENDED SINGLE PLATE BEAM TO COLUMN WEB SHEAR CONNECTION**  
NOT TO SCALE



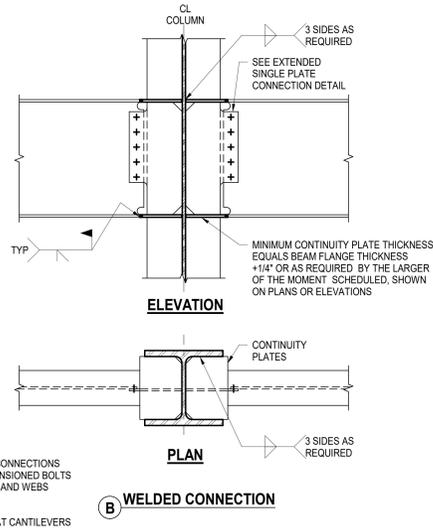
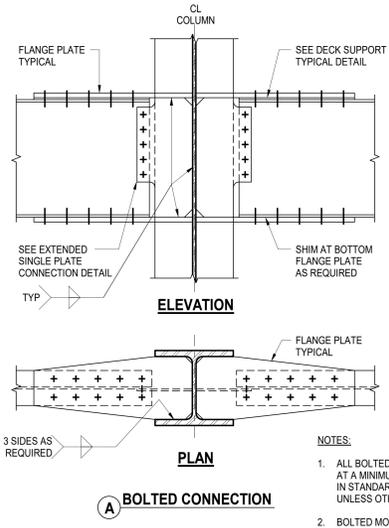
- NOTES:
- SEE TYPICAL STEEL BEAM SHEAR CONNECTIONS FOR ADDITIONAL INFORMATION FOR DETAIL A
  - DETAILS B AND C ARE CONCEPTUAL (NOT COMPLETELY DESIGNED) AND ARE INTENDED FOR FRAMING CONDITIONS OUTSIDE THE LIMITS OF COMPLETELY DESIGNED TYPICAL STEEL BEAM SHEAR CONNECTIONS IN THESE DRAWINGS

**3 TYPICAL SKEWED BEAM SHEAR CONNECTION**  
NOT TO SCALE



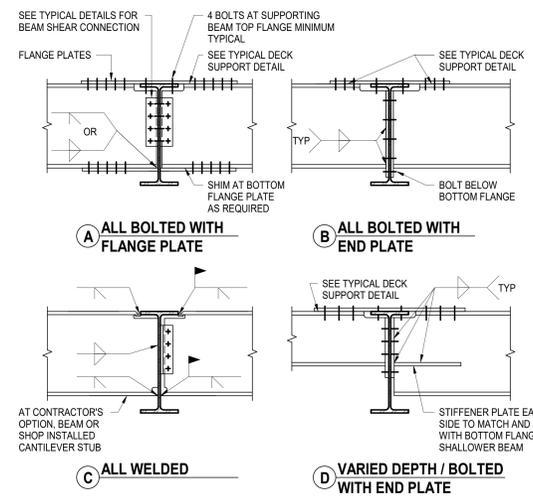
- NOTES:
- ALL BOLTED MOMENT AND AXIAL CONNECTIONS AT A MINIMUM SHALL HAVE PRETENSIONED BOLTS IN STANDARD HOLES AT FLANGES AND WEBS UNLESS OTHERWISE NOTED
  - BOLTED MOMENT CONNECTIONS AT CANTILEVERS AND BACKSPANS SHALL USE SLIP CRITICAL BOLTS
  - AT CONTRACTOR'S OPTION, WEB DOUBLER PLATES CAN TERMINATE OUTSIDE STIFFENER PLATE. CONTRACTOR'S ENGINEER MUST FULLY DESIGN THE CONNECTION

**4 TYPICAL BEAM TO COLUMN FLANGE MOMENT CONNECTION - BOLTED/WELDED**  
NOT TO SCALE



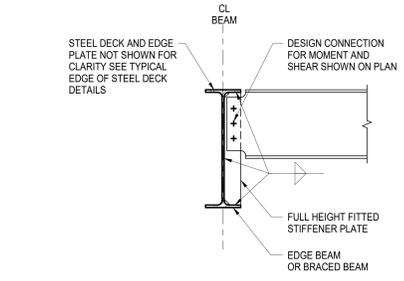
- NOTES:
- ALL BOLTED MOMENT AND AXIAL CONNECTIONS AT A MINIMUM SHALL HAVE PRETENSIONED BOLTS IN STANDARD HOLES AT FLANGES AND WEBS UNLESS OTHERWISE NOTED
  - BOLTED MOMENT CONNECTIONS AT CANTILEVERS AND BACKSPANS SHALL USE SLIP CRITICAL BOLTS

**5 TYPICAL BEAM TO COLUMN WEB MOMENT CONNECTION - BOLTED / WELDED**  
NOT TO SCALE



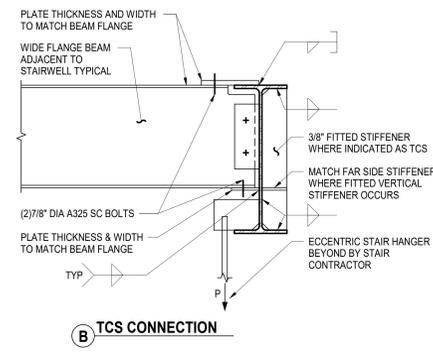
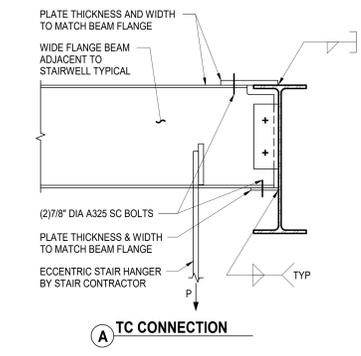
- NOTES:
- ALL BOLTED MOMENT AND AXIAL CONNECTIONS AT A MINIMUM SHALL HAVE PRETENSIONED BOLTS IN STANDARD HOLES AT FLANGES AND WEBS UNLESS OTHERWISE NOTED
  - BOLTED MOMENT CONNECTIONS AT CANTILEVERS AND BACKSPANS SHALL USE SLIP CRITICAL BOLTS

**6 TYPICAL BEAM TO BEAM MOMENT CONNECTION**  
NOT TO SCALE



- NOTES:
- SEE PLAN FOR LOCATIONS

**7 TYPICAL FULL HEIGHT FITTED STIFFENER AT EDGE BEAM OR BRACED BEAM CONNECTION**  
SCALE: NOT TO SCALE



- NOTES:
- SEE TYPICAL PLAN DETAILS FOR STAIRWELLS
  - SUBMIT SHOP DRAWINGS THAT SHOW THE MAGNITUDES, DIRECTIONS, LOCATIONS, AND CONNECTION CONDITIONS OF ALL LOADS IMPOSED ON THE SUPPORTING STRUCTURE BY STAIR CONTRACTOR

**8 TYPICAL TORSIONAL CONNECTION AT STAIRWELL / TC AND TCS LOCATIONS**  
SCALE: NOT TO SCALE





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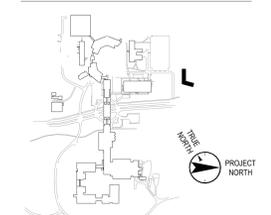
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Key Plan



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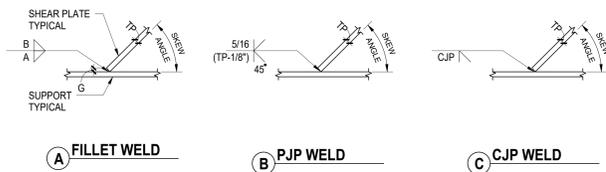
Vendor Name: GENSLER  
Vendor Project No.: 006.3608.000  
Discipline: Drawn By: TLL  
TYPICAL STEEL BEAM SHEAR CONNECTIONS 3/4" DIAMETER BOLTS

Scale: As indicated Floor:

**S-510**

**NOTES:**

- ALL SHEAR CONNECTIONS PROVIDED ON THIS SHEET ARE COMPLETELY DESIGNED REFER TO STRUCTURAL GENERAL NOTES FOR ADDITIONAL REQUIREMENTS
- ALL CONNECTION CAPACITIES PROVIDED IN SCHEDULES ARE STRENGTH LEVEL PER AISC LOAD AND RESISTANCE FACTOR DESIGN. SELECT CONNECTION CAPACITY BASED ON FACTORED SHEAR REACTIONS SHOWN ON PLAN AND REQUIREMENTS OF DETAILS.
- SINGLE PLATE, SINGLE ANGLE, OR DOUBLE ANGLE SHEAR ONLY CONNECTIONS MAY BE USED AT THE CONTRACTOR'S OPTION UNLESS OTHERWISE NOTED IN THE CONSTRUCTION DOCUMENTS
- ALL CONNECTIONS SHOWN ARE DESIGNED UTILIZING BOLTS INDICATED
- THE FOLLOWING MINIMUM BOLT EDGE DISTANCES AND SPACING SHALL BE USED:  
HORIZONTAL EDGE DISTANCE = 2 x BOLT DIAMETER  
VERTICAL EDGE DISTANCE = 1-1/2"  
SPACING = 3"
- ALL CONNECTIONS SHOWN ARE DESIGNED UTILIZING PLATE MATERIAL CONFORMING TO ASTM A572 OR A529 GRADE 50
- PROVIDE STANDARD HOLES IN BEAM. STANDARD OR HORIZONTAL SHORT SLOTTED HOLES ARE PERMITTED IN THE SINGLE PLATE
- TYPICAL SINGLE PLATE SHEAR CONNECTION DETAILS SHOWN ARE FOR PERPENDICULAR FRAMING CONDITIONS. AT SKEWED FRAMING CONDITIONS, PROVIDE WELDS AS INDICATED IN TYPICAL SKEWED SINGLE PLATE WELD DETAILS.



**SKEWED SINGLE PLATE WELD SCHEDULE**

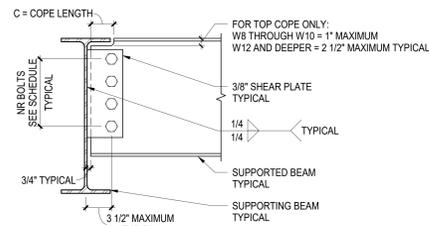
SKEW ANGLE (DEGREES)	WELD	
	WELD A	WELD B
< 30	CJP WELD	
> 30 - 45	PJP WELD	
> 45 - 50	D + 1/8"	(D*1.31) + G
> 50 - 55	D + 1/8"	(D*1.28) + G
> 55 - 60	D + 1/8"	(D*1.25) + G
> 60 - 65	D	(D*1.23) + G
> 65 - 70	D	(D*1.19) + G
> 70 - 75	D	(D*1.16) + G
> 75 - 80	D	(D*1.12) + G
> 80 - 85	D	(D*1.08) + G
> 85 - 90	D	D + G

**NOTES:**

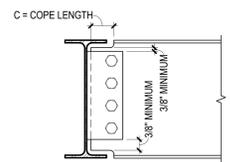
- DETAIL NOTATIONS:  
TP INDICATES THICKNESS OF PLATE  
D INDICATES FILLET WELD SIZE AS SPECIFIED FOR PERPENDICULAR FRAMING CONDITION (OTHER DETAILS THIS SHEET)  
G INDICATES GAP IF SQUARE CUT PLATE IS USED
- FILLET WELDS:  
FOR G ≤ 3/16" USE SQUARE CUT PLATE  
FOR G > 3/16", BEVEL PLATE SUCH THAT G = 0 (TOLERANCE = +1/16", -0)  
FOR (D + G) > 3/4", BEVEL PLATE SUCH THAT G = 0 (TOLERANCE = +1/16", -0)
- PJP AND CJP WELDS:  
WELD PREPARATIONS NOT SHOWN

**1 SINGLE PLATE SHEAR CONNECTION NOTES**

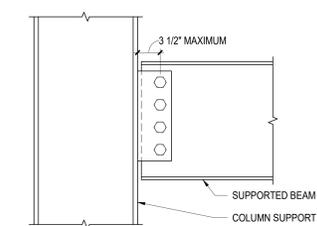
**2 TYPICAL SKEWED SINGLE PLATE WELD DETAILS**



**A TOP COPE ONLY (TC)**



**B TOP AND BOTTOM COPE (TBC)**



**C BEAM TO COLUMN FLANGE (NO COPE)**

**NOTES:**

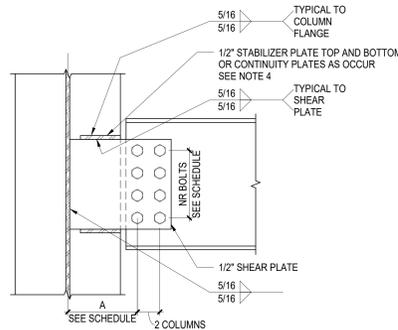
- SEE TYPICAL SINGLE PLATE SHEAR CONNECTION GENERAL NOTES FOR ADDITIONAL INFORMATION
- SELECT CONNECTION CAPACITY BASED ON COPE CONDITION OF BEAM
- TBC VALUES IN TABLE ALSO APPLY TO BOTTOM COPE ONLY CONDITION

**3 TYPICAL SINGLE PLATE SHEAR CONNECTION AT BEAM OR COLUMN FLANGE (TYPE SP1)**

**4 TYPICAL SINGLE PLATE SHEAR CONNECTION AT COLUMN WEB (TYPE SP2)**

**NOTES:**

- SEE TYPICAL SINGLE PLATE SHEAR CONNECTION GENERAL NOTES FOR ADDITIONAL INFORMATION
- SELECT CONNECTION CAPACITY BASED ON DETAILING DIMENSION "A"
- MINIMUM COLUMN WEB THICKNESS SHALL BE 0.29" (INCLUDES: W8x31+, W10x33+, W12x40+, W14x43+)
- STABILIZER PLATES ONLY REQUIRED FOR SHADED CAPACITY CASES
- SEE TYPICAL DETAIL FOR ADDITIONAL INFORMATION ON SINGLE PLATE CONNECTIONS TO COLUMN WEB WHEN STIFFENERS FROM OTHER CONNECTIONS ARE PRESENT



**TYPE SP2 SINGLE PLATE SHEAR CONNECTION SCHEDULE:**  
3/4" DIAMETER ASTM F3125-N BOLTS  
GRADES A325 OR F1852

BEAM SIZE	NR BOLTS	CONNECTION CAPACITY (KIPS)			
		A ≤ 6"	A ≤ 8"	A ≤ 10 1/2"	A ≤ 12"
W8 - W12	2	13	10	8	8
W12 - W18	3	30	24	20	18
W16 - W24	4	54	44	36	32
W18 - W30	5	80	66	54	48
W21 - W40	6	110	91	75	68
W27 - W44	7	142	120	99	89
W30 - W44	8	177	151	125	114
W33 - W44	9	214	184	154	140
W36 - W44	10	251	219	186	169

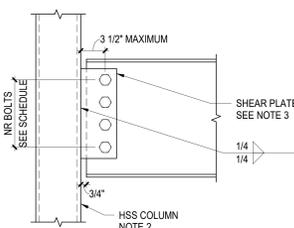
**TYPE SP1 SINGLE PLATE SHEAR CONNECTION SCHEDULE:**  
3/4" DIAMETER ASTM F3125-N BOLTS  
GRADES A325 OR F1852

BEAM SIZE	NR BOLTS	NO. COPE	CONNECTION CAPACITY (KIPS)						
			C = 4"		C = 6"		C = 8"		
			TC	TBC	TC	TBC	TC	TBC	
W8	x10	2	23	20	9	14	6	11	4
	x13-24	2	23	23	13	19	9	14	7
	x28+	2	23	23	16	23	11	20	9
W10	x12	2	23	23	11	23	7	19	5
	x15-26	2	23	23	13	23	9	23	7
	x30+	2	23	23	17	23	12	23	9
W12	x14-16	2	23	23	11	23	8	20	6
		3	42	40	25	28	16	20	11
	x19-30	2	23	23	13	23	9	23	7
W14	x22-30	3	42	42	29	42	19	37	14
	x34-48	3	42	42	36	42	26	42	19
	x53+	3	42	42	42	42	33	42	26
W16	x26-31	3	42	42	32	42	22	42	16
	x36-40	3	42	42	38	42	27	42	20
		4	62	62	62	62	47	62	33
W18	x45+	3	42	42	42	42	31	42	24
	x35-50	3	42	42	38	42	27	42	20
		4	62	62	62	62	48	62	34
W21	x55+	3	42	42	42	42	35	42	27
	x44-63	4	62	62	62	62	62	62	49
		5	81	81	81	81	81	81	64
W24 - 4 MIN	x68+	4	62	62	62	62	62	62	53
		6	85	85	85	85	85	85	85
		6	85	85	85	85	85	85	85
W27, W30 - 5 MIN		4	62	62	62	62	62	62	49
		5	81	81	81	81	81	81	76
		6	85	85	85	85	85	85	85
W33-W40 - 7 MIN		7	104	104	104	104	104	104	104
		8	123	123	123	123	123	123	123
		8	123	123	123	123	123	123	123
W36-W44		7	104	104	104	104	104	104	104
		8	123	123	123	123	123	123	123
		9	142	142	142	142	142	142	142
	10	161	161	161	161	161	161	161	

**NOTES:**

- SEE TYPICAL SINGLE PLATE SHEAR CONNECTION GENERAL NOTES FOR ADDITIONAL INFORMATION
- DETAIL APPLIES TO SQUARE, RECTANGULAR, OR ROUND HSS COLUMNS
- SINGLE PLATE THICKNESS BASED ON HSS WALL THICKNESS PER SCHEDULE

**5 TYPICAL SINGLE PLATE SHEAR CONNECTION AT HSS COLUMN (TYPE SP3)**



**TYPE SP3 SINGLE PLATE SHEAR CONNECTION SCHEDULE:**  
3/4" DIAMETER ASTM F3125-N BOLTS GRADES A325 OR F1852

BEAM SIZE	NR BOLTS	CONNECTION CAPACITY (KIPS)	
		HSS WALL THICKNESS ≥ 3/8" SHEAR PLATE THICKNESS = 3/8"	HSS WALL THICKNESS = 1/4" or 5/16" SHEAR PLATE THICKNESS = 1/4"
W8 - W12	2	23	23
W12 - W18	3	42	42
W16 - W24	4	62	62
W18 - W30	5	81	78
W21 - W40	6	85	85
W27 - W44	7	104	104
W30 - W44	8	123	123
W33 - W44	9	142	142
W36 - W44	10	161	161



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Building #17  
Campus Expansion Child  
Day-care Center

777 Old Saw Mill River Road  
Mount Pleasant, NY 10591

Project No. B17-DAYCARE

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Thornton Tomasetti  
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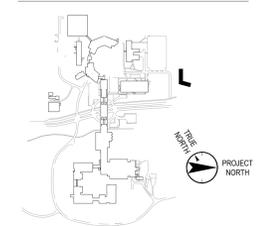
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Landscape Architect

Langan  
21 Penn Plaza, 360 West 31st Street, 8th Floor  
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Key Plan



No. Date Description

06.20.2022	ISSUED FOR PERMIT
06.20.2022	100% CONSTRUCTION DOCUMENTS
07.01.2022	100% CONSTRUCTION DOCUMENT - 1

Plot Date: 08/07/20

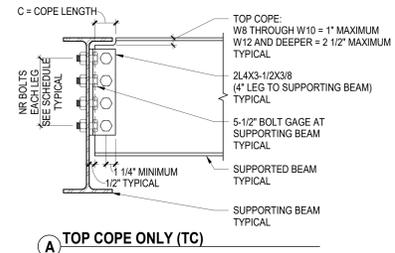
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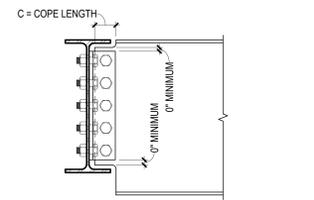
Vendor Name: GENSLER  
Vendor Project No.: 006.3608.000  
Discipline: Drawn By: Author  
TYPICAL STEEL BEAM SHEAR CONNECTIONS 3/4" DIAMETER BOLTS

Scale: NOT TO SCALE. Floor:

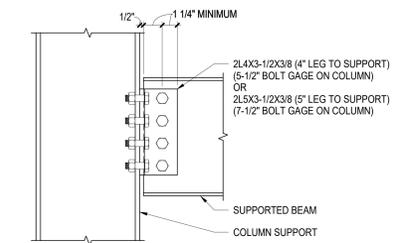
**S-512**



**A TOP COPE ONLY (TC)**

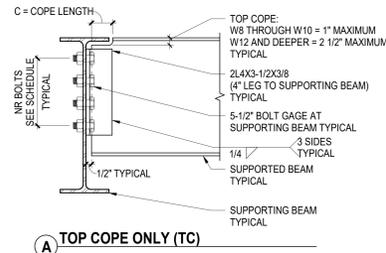


**B TOP AND BOTTOM COPE (TBC)**

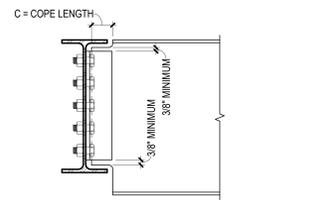


**C BEAM TO COLUMN FLANGE (NO COPE)**

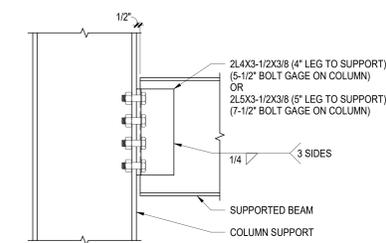
BEAM SIZE		CONNECTION CAPACITY (KIPS)							
		C = 4"		C = 6"		C = 8"			
NR BOLTS	NO COPE	TC	TBC	TC	TBC	TC	TBC		
W8	x10	2	25	20	9	14	6	11	4
	x13-24	2	34	27	13	19	9	14	7
	x28+	2	43	37	16	26	11	20	9
W10	x12	2	28	28	11	24	7	19	5
	x15-26	2	34	34	13	30	9	23	7
	x30+	2	44	44	17	44	12	37	9
W12	x14-16	2	30	30	11	28	8	20	6
		3	48	40	25	28	16	20	11
	x19-30	2	35	35	13	35	9	28	7
W14	x15-26	3	56	49	30	37	20	28	14
	x30+	2	44	44	17	44	12	41	9
	x35+	3	66	65	38	54	27	41	20
W16	x22-30	3	55	53	29	49	19	37	14
	x34-48	3	66	66	36	66	26	51	19
	x53+	3	66	66	47	66	33	66	26
W18	x26-31	3	59	58	32	58	22	54	16
	x36-40	3	70	68	38	68	27	68	20
	x45+	4	96	85	67	85	47	70	33
W20	x35-50	3	82	80	44	80	31	80	24
		4	112	101	78	101	55	85	42
	x55+	4	123	115	89	115	62	115	48
W21	x44-63	3	71	69	38	69	27	69	20
		4	98	88	68	88	48	88	34
	x68+	5	124	95	93	95	73	88	52
W24 - 4 MIN		3	92	90	50	90	35	90	27
		4	123	115	89	115	62	115	48
		5	154	128	121	128	98	128	75
W27, W30 - 5 MIN		6	184	168	168	168	155	168	119
		4	123	116	90	116	63	116	49
		5	154	141	123	141	99	141	76
W33-W40 - 7 MIN		6	184	165	147	165	142	165	108
		7	215	215	200	215	200	215	174
		8	246	246	234	246	234	246	232
W36 - W44		9	276	276	276	276	276	276	276
		10	307	307	307	307	307	307	307
		10	307	307	307	307	307	307	307



**A TOP COPE ONLY (TC)**



**B TOP AND BOTTOM COPE (TBC)**



**C BEAM TO COLUMN FLANGE (NO COPE)**

BEAM SIZE		CONNECTION CAPACITY (KIPS)							
		C = 4"		C = 6"		C = 8"			
NR BOLTS	NO COPE	TC	TBC	TC	TBC	TC	TBC		
W8	x10	2	44	20	9	14	6	11	4
	x13-24	2	44	27	13	19	9	14	7
	x28+	2	44	37	16	26	11	20	9
W10	x12	2	44	34	11	24	7	19	5
	x15-26	2	44	43	13	30	9	23	7
	x30+	2	44	44	17	44	12	41	9
W12	x14-16	2	44	40	11	28	8	20	6
		3	66	40	25	28	16	20	11
	x19-30	2	44	44	13	37	9	28	7
W14	x15-26	3	66	52	30	37	20	28	14
	x30+	2	44	44	17	44	12	41	9
	x35+	3	66	66	38	54	27	41	20
W16	x22-30	3	66	66	29	49	19	37	14
	x34-48	3	66	66	36	66	26	51	19
	x53+	3	66	66	47	66	33	66	26
W18	x26-31	3	92	92	32	72	22	54	16
	x36-40	3	92	92	38	91	27	70	20
	x45+	4	123	119	67	91	47	70	33
W20	x35-50	3	92	92	44	92	31	85	24
		4	123	123	78	111	55	85	42
	x55+	4	123	123	89	123	62	123	48
W21	x44-63	3	92	92	38	92	27	88	20
		4	123	123	68	114	48	88	34
	x68+	5	154	137	107	114	73	88	52
W24 - 4 MIN		3	92	92	50	92	35	92	27
		4	123	123	89	123	62	123	48
		5	154	154	139	154	108	154	83
W27, W30 - 5 MIN		6	184	184	184	184	155	184	119
		4	123	123	90	123	63	123	49
		5	154	154	140	154	99	154	76
W33-W40 - 7 MIN		6	184	184	184	184	142	184	108
		7	215	215	215	215	215	174	
		8	246	246	246	246	246	232	
W36 - W44		9	276	276	276	276	276	276	276
		10	307	307	307	307	307	307	307
		10	307	307	307	307	307	307	307

- NOTES:**
- SEE TYPICAL ANGLE SHEAR CONNECTION GENERAL NOTES FOR ADDITIONAL INFORMATION
  - SELECT CONNECTION CAPACITY BASED ON COPE CONDITION OF BEAM
  - TBC VALUES IN TABLE ALSO APPLY TO BOTTOM COPE ONLY CONDITION
  - SSLT HOLES IN ANGLE LEG TO SUPPORT
  - MINIMUM COLUMN FLANGE WIDTH SHALL BE 8" (INCLUDES: W10x33+, W12x40+, W14x43+)

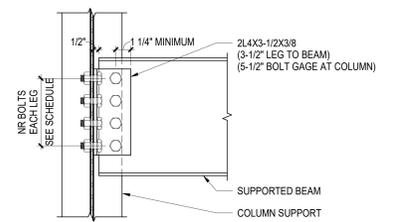
**2 TYPICAL DOUBLE ANGLE SHEAR CONNECTION AT BEAM OR COLUMN FLANGE (TYPE 2L2) - BOLTED-WELDED**

NOT TO SCALE

- NOTES:**
- SEE TYPICAL ANGLE SHEAR CONNECTION GENERAL NOTES FOR ADDITIONAL INFORMATION
  - SELECT CONNECTION CAPACITY BASED ON COPE CONDITION OF BEAM
  - TBC VALUES IN TABLE ALSO APPLY TO BOTTOM COPE ONLY CONDITION
  - SSLT HOLES IN ANGLE LEG TO SUPPORT
  - MINIMUM COLUMN FLANGE WIDTH SHALL BE 8" (INCLUDES: W10x33+, W12x40+, W14x43+)

**1 TYPICAL DOUBLE ANGLE SHEAR CONNECTION AT BEAM OR COLUMN FLANGE (TYPE 2L1) - BOLTED-BOLTED**

NOT TO SCALE



- NOTES:**
- SEE TYPICAL ANGLE SHEAR CONNECTION GENERAL NOTES FOR ADDITIONAL INFORMATION
  - SSLT HOLES IN ANGLE LEG TO COLUMN SUPPORT
  - PROVIDE ERECTION SEAT PER FABRICATOR WHEN SAME DEPTH CONNECTION IS REQUIRED ON BOTH SIDES AND BOLT STAGGERING IS NOT POSSIBLE
  - MINIMUM COLUMN WEB THICKNESS SHALL BE 0.29" (INCLUDES: W8x31+, W10x33+, W12x40+, W14x43+)

**3 TYPICAL DOUBLE ANGLE SHEAR CONNECTION AT COLUMN WEB (TYPE 2L3) - BOLTED-BOLTED**

NOT TO SCALE

BEAM SIZE		CONNECTION CAPACITY (KIPS)	
		NR BOLTS	NO COPE
W8 - W12	2	25	48
W14 - W18	3	55	81
W16 - W24	4	81	124
W18 - W30	5	124	153
W21 - W40	6	153	178
W27 - W44	7	178	204
W30 - W44	8	204	229
W33 - W44	9	229	254
W36 - W44	10	254	

- NOTES:**
- SEE TYPICAL ANGLE SHEAR CONNECTION GENERAL NOTES FOR ADDITIONAL INFORMATION
  - SSLT HOLES IN ANGLE LEG TO COLUMN SUPPORT
  - PROVIDE ERECTION SEAT PER FABRICATOR WHEN SAME DEPTH CONNECTION IS REQUIRED ON BOTH SIDES AND BOLT STAGGERING IS NOT POSSIBLE
  - MINIMUM COLUMN WEB THICKNESS SHALL BE 0.29" (INCLUDES: W8x31+, W10x33+, W12x40+, W14x43+)

**4 TYPICAL DOUBLE ANGLE SHEAR CONNECTION AT COLUMN WEB (TYPE 2L4) - BOLTED-WELDED**

NOT TO SCALE

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**Building #17**  
Campus Expansion Child  
Day-care Center

777 Old Saw Mill River Road  
Mount Pleasant, NY 10591

Project No. B17-DAYCARE

**Architect**  
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**Structural Engineer**  
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**MEP / IT / Security Engineer**

**Cosentini Associates**  
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New York, NY 10018  
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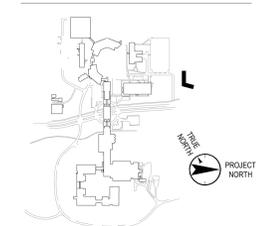
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**Landscape Architect**

**Langan**  
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Key Plan



No.	Date	Description
06.20.2022		ISSUED FOR PERMIT
06.20.2022		100% CONSTRUCTION DOCUMENTS
07.01.2022		100% CONSTRUCTION DOCUMENT-1

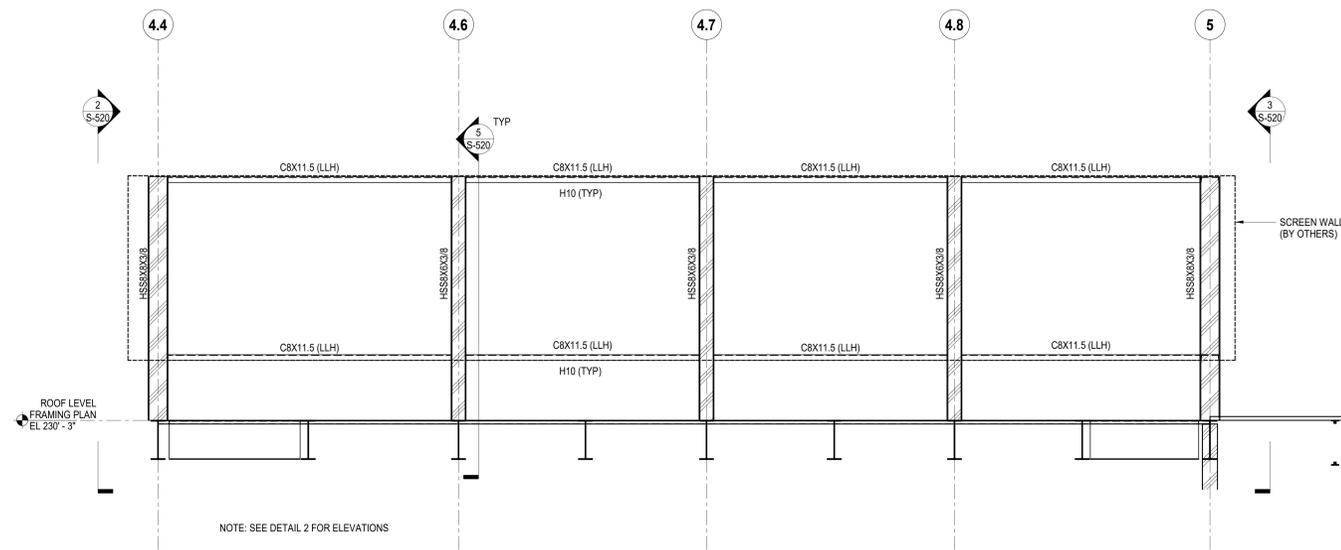
Plot Date: 05/18/22  
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Professional Seal and Signature

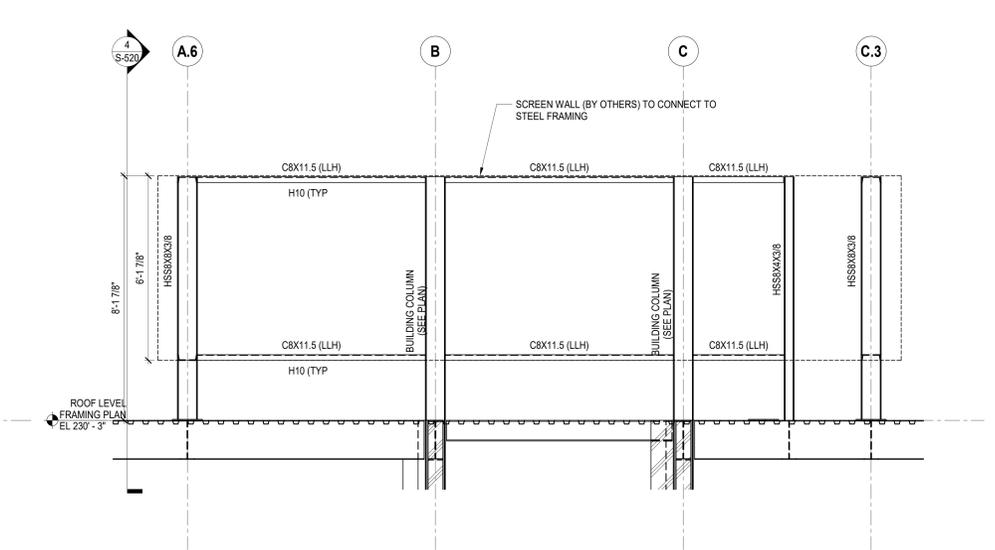
Vendor Name: GENSLER  
Vendor Project No.: 006.3608.000  
Discipline: Drawn By: Author  
**SCREEN WALL SECTIONS AND DETAILS**

Scale: As indicated Floor:

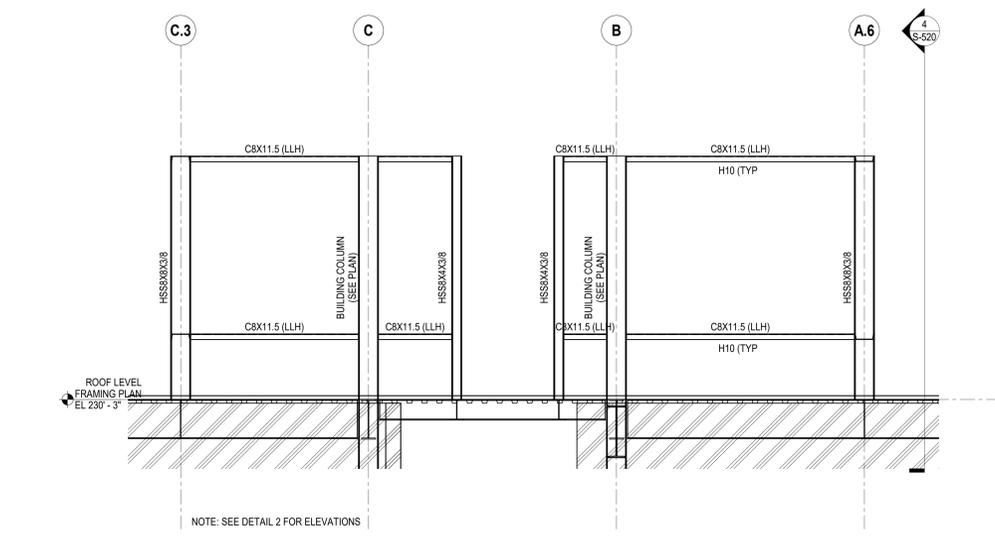
**S-520**



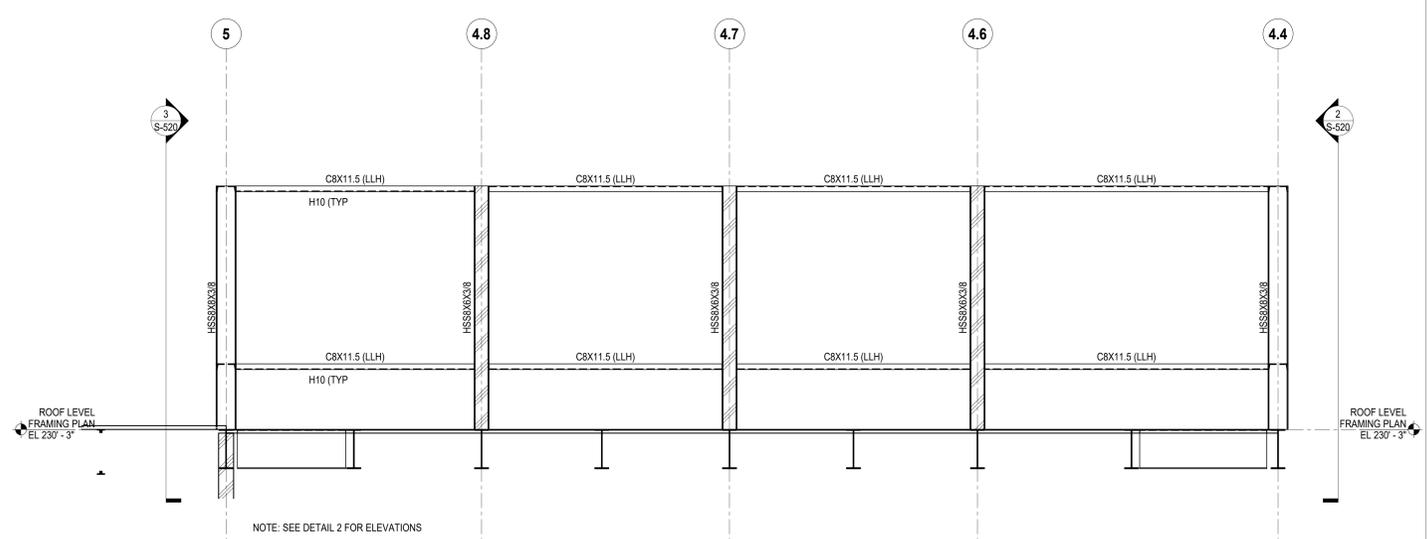
**1 SCREEN WALL ELEVATION**  
SCALE: 1/2" = 1'-0"



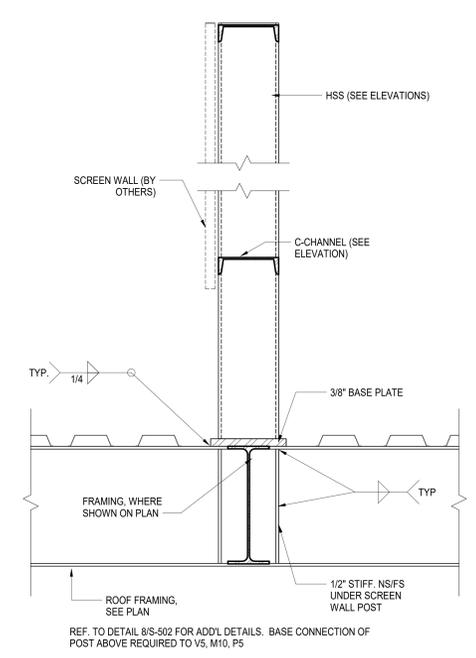
**2 SCREEN WALL ELEVATION II**  
SCALE: 1/2" = 1'-0"



**3 SCREEN WALL ELEVATION III**  
SCALE: 1/2" = 1'-0"



**4 SCREEN WALL ELEVATION IV**  
SCALE: 1/2" = 1'-0"



**5 SECTION THRU. SCREEN WALL**  
SCALE: 1 1/2" = 1'-0"

777 Old Saw Mill River Road  
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F: 914.847.7991  
www.regeneron.com

**Building #17**  
Campus Expansion Child Day-care Center

777 Old Saw Mill River Road  
Mount Pleasant, NY 10591

Project No. B17-DAYCARE

**Architect**  
**Gensler**  
1700 Broadway, Suite 400  
New York, NY 10019  
(212) 492-1400 Phone  
(212) 492-1472 Fax

**Structural Engineer**  
Thornton Tomasetti  
120 Broadway, 15th Floor  
New York, NY 10021  
(917) 661-7800 Phone  
(917) 661-7801 Fax

**MEP / IT / Security Engineer**

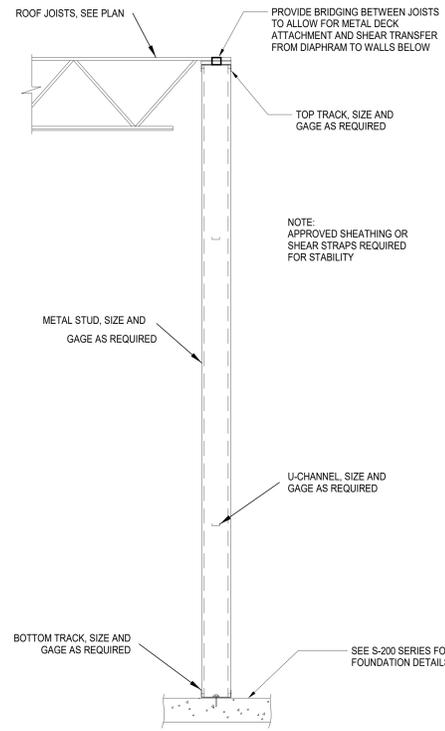
**Cosentini Associates**  
498 Seventh Avenue  
New York, NY 10018  
(212) 615-3600 Phone  
(212) 615-3700 Fax

**Civil Engineer**

**JMC**  
120 Bedford Road  
Armonk, NY 10504  
(914) 273-5225 Phone  
(914) 273-2102 Fax

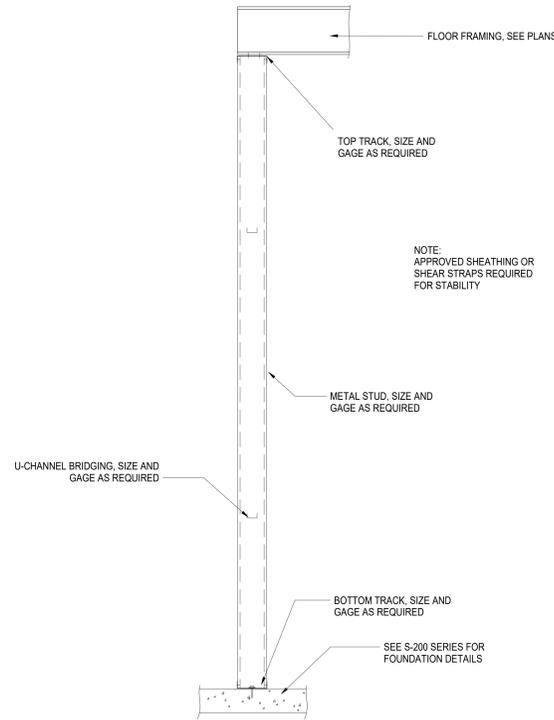
**Landscape Architect**

**Langan**  
21 Penn Plaza, 360 West 31st Street, 8th Floor  
New York, NY 10001  
(212) 479-5400 Phone  
(212) 479-5444 Fax



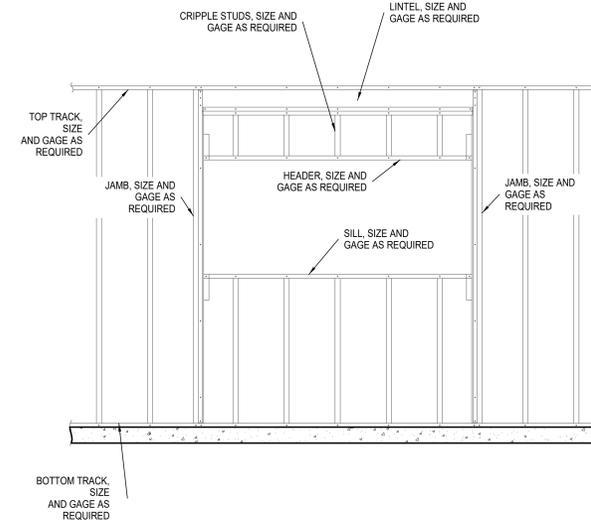
**1 LOAD BEARING WALL WITH JOIST**

SCALE: 1 1/2" = 1'-0"



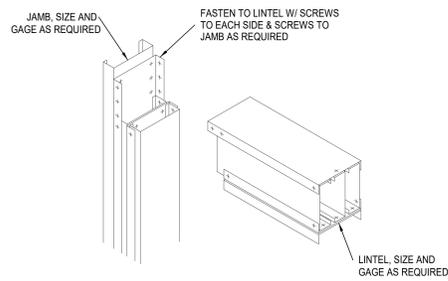
**2 LOAD BEARING WALL WITH W-SHAPE**

SCALE: 1 1/2" = 1'-0"



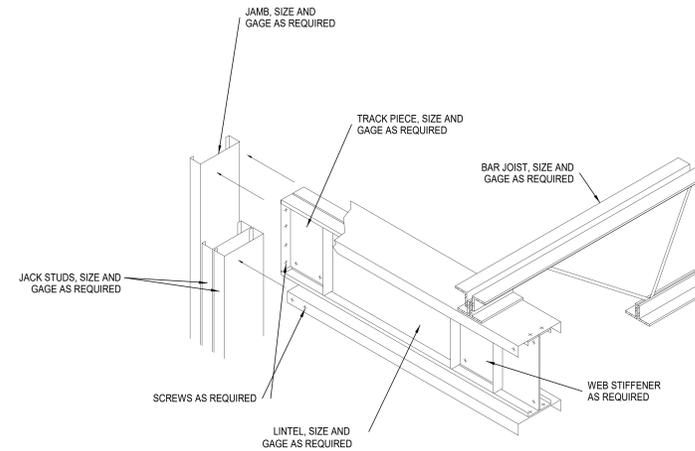
**3 TYPICAL LOAD BEARING WINDOW OPENING ELEVATION**

SCALE: 1" = 1'-0"



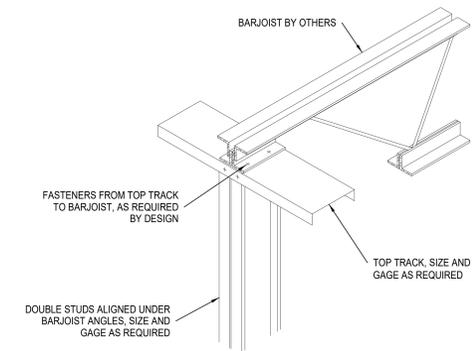
**4 TYPICAL LOAD BEARING BOX HEADER LINTEL**

SCALE: 1" = 1'-0"



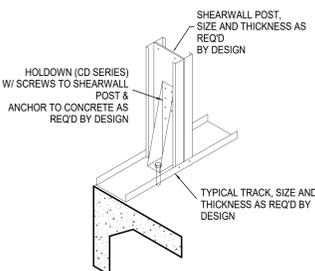
**5 TYPICAL LOAD BEARING LINTEL AT BAR JOIST**

SCALE: 1" = 1'-0"



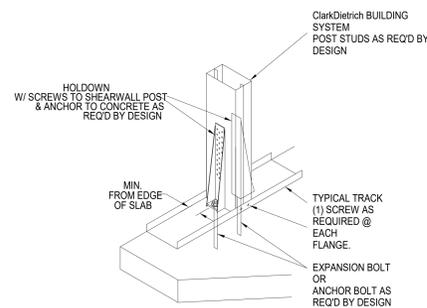
**6 LOAD BEARING POST AT BAR JOIST**

SCALE: 1" = 1'-0"



**7 TYP. HOLD DOWN DETAIL I**

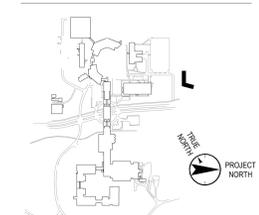
SCALE: 3/4" = 1'-0"



**8 TYP. HOLD DOWN DETAIL II**

SCALE: 3/4" = 1'-0"

Key Plan



No.	Date	Description
06.20.2022	06.20.2022	ISSUED FOR PERMIT
06.20.2022	06.20.2022	100% CONSTRUCTION DOCUMENTS
07.01.2022	07.01.2022	100% CONSTRUCTION DOCUMENT-1

Plot Date: 03/08/22

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Professional Seal and Signature

Vendor Name: GENSLER  
Vendor Project No.: 006.3608.000  
Discipline: LGMF BEARING WALL DETAILS  
Drawn By: Author

Scale: As indicated Floor:

**S-600**

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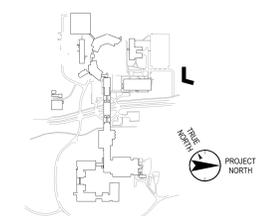
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Key Plan



No.	Date	Description
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06.20.2022		100% CONSTRUCTION DOCUMENTS
07.01.2022		100% CONSTRUCTION DOCUMENT - 1

Plot Date: 03/08/22

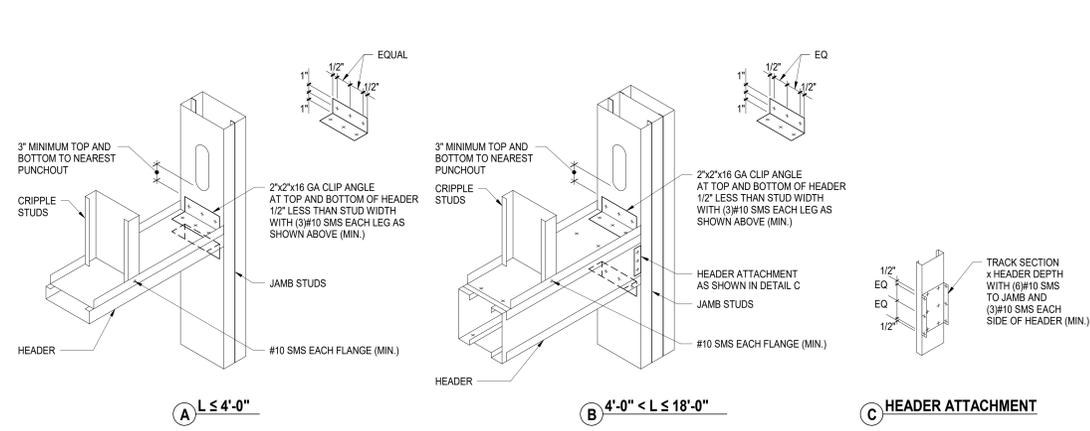
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Professional Seal and Signature

Vendor Name: GENSLER  
Vendor Project No.: 006.3608.000  
Discipline: Drawn By: Author  
LGMF BEARING WALL  
DETAILS II

Scale: As indicated Floor:

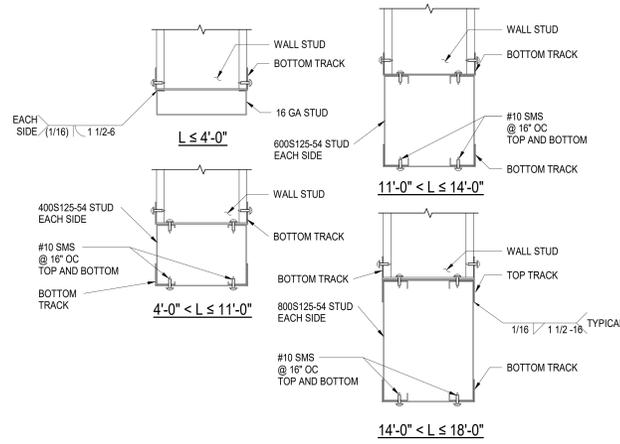
**S-601**



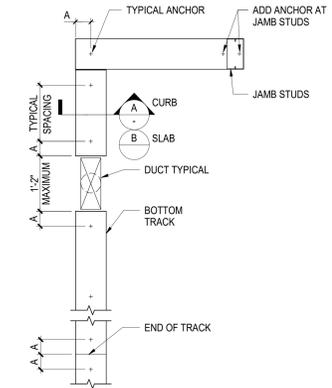
NOTES: DETAIL FOR INFORMATION ONLY. FINAL DESIGN OF LGMF SYSTEM IS DELEGATED TO THE CONTRACTOR BASED ON CONTRACT DOCUMENTS

**1 TYPICAL INTERIOR HEADER AND JAMB CONNECTION**

SCALE: 1" = 1'-0"



**D HEADER SECTION**



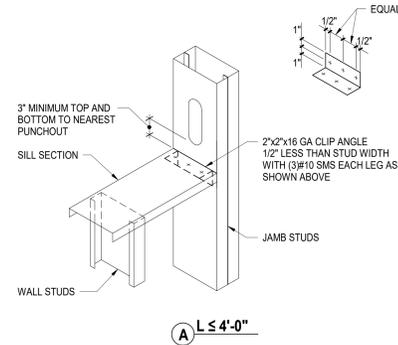
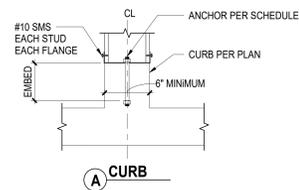
NOTES:  
1. "A" DIMENSION SHALL BE 4" MINIMUM AND 12" MAXIMUM.  
2. USE A MINIMUM OF 3 PAF IN EACH PIECE OF SILL TRACK.

**2 TYPICAL INTERIOR BOTTOM TRACK**

SCALE: 1" = 1'-0"

INTERIOR BOTTOM TRACK SILL ANCHOR SCHEDULE - W/ CURB	
ANCHOR TYPE	SIZE AND SPACING (MINIMUM, OR AS REQUIRED)
ANCHOR BOLT	3/8"Ø @ 2'-8" OC W/ 5" EMBED
EXPANSION ANCHOR*	3/8"Ø HILTI KB-TZ @ 2'-8" OC
SCREW ANCHOR*	3/8"Ø @ 2'-8" OC

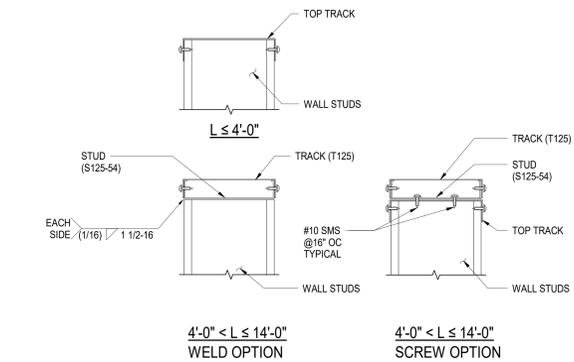
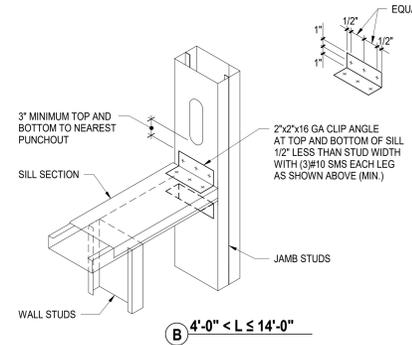
\*EMBED PER GENERAL NOTES



NOTES:  
1. WHEN L > 14'-0", SEE [Symbol] FOR WALLS ON SLAB-ON-GRADE.  
2. DETAIL FOR INFORMATION ONLY. FINAL DESIGN OF LGMF SYSTEM IS DELEGATED TO THE CONTRACTOR BASED ON CONTRACT DOCUMENTS

**4 TYPICAL INTERIOR SILL AND JAMB CONNECTION**

SCALE: 1" = 1'-0"



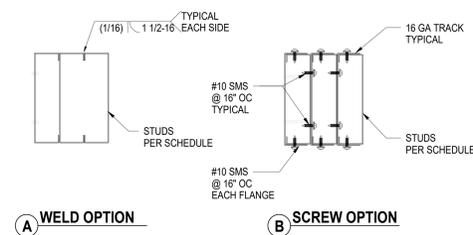
**C SILL DETAILS**

**5 INTERIOR SILLS SECTION**

SCALE: 3" = 1'-0"

**3 BOTTOM TRACK SECTION**

SCALE: 1 1/2" = 1'-0"



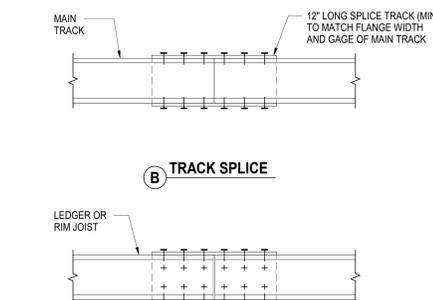
**A WELD OPTION**      **B SCREW OPTION**

JAMB STUD SCHEDULE	
MAX ALLOWABLE OPENING WIDTH L OR COMBINED OPENING WIDTH L1 + L2 AT ADJACENT OPENING	STUDS
11'-0"	2-18GA STUDS
18'-0"	3-18GA STUDS

NOTES:  
1. JAMB STUDS DEPTHS SHALL MATCH TYPICAL WALL STUD DEPTHS.  
2. WHEN OPENING WIDTH IS GREATER THAN 14'-0" AND STORY "HT" IS GREATER THAN 14'-0", PROVIDE TOP TRACK REINF AT JAMB STUDS PER [Symbol]

**6 TYPICAL INTERIOR JAMBS**

SCALE: 3" = 1'-0"



**A LEDGER AND RIM JOIST SPLICE**

**7 SPLICES**

SCALE: 1 1/2" = 1'-0"

