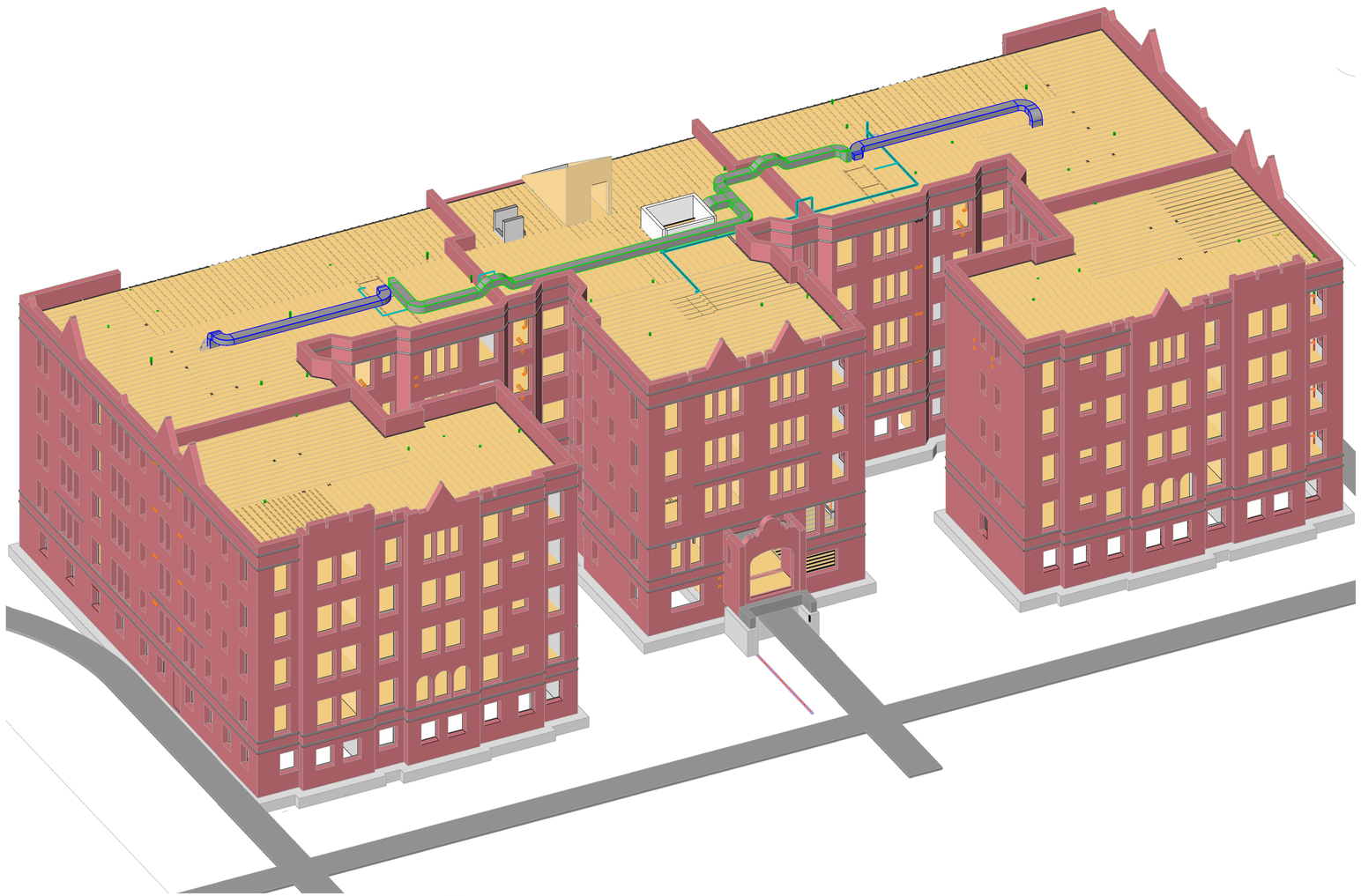
PROJECT NAME:CABOT APARTMENTS

CSC PROJECT #:25008



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S.000
BUILDING ISOMETRIC
SCALE:

ABBREVIATIONS

ADDL	ADDITIONAL
ARCH	ARCHITECTURAL (DISCIPLINE)
BOTT	BOTTOM
B/...	BOTTOM OF ...
CJ	CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
DIA/Ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DTL	DETAIL
EA	EACH
EL	ELEVATION
ELEC	ELECTRICAL (DISCIPLINE)
EMBED	EMBEDMENT
EOR	ENGINEER OF RECORD
EQUIP	EQUIPMENT
EX OR EXIST	EXISTING
EXP	EXPANSION
F/...	FACE OF ...
FND	FOUNDATION
GA	GAUGE
GALV	GALVANIZED
HORIZ	HORIZONTAL
INFO	INFORMATION
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MANUF	MANUFACTURER
MECH	MECHANICAL (DISCIPLINE)
NTS	NOT TO SCALE
OC	ON CENTER
OH	OPPOSITE HAND
OPP	OPPOSITE
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
REINF	REINFORCING
REQD	REQUIRED
SEOR	STRUCTURAL ENGINEER OF RECORD
SIM	SIMILAR
STRU	STRUCTURAL (DISCIPLINE)
T&B	TOP & BOTTOM
T/...	TOP OF ...
T/STL	TOP OF STEEL
TYP	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WP	WORKING POINT

STRUCTURAL DRAWING INDEX & REVISIONS

Sheet Number	Sheet Name	Current Revision	Current Revision Date
S.000	Structural Cover Sheet	PRIORITY REPAIRS	03.27.2026
S.001	Structural General Notes	BIDS	06.24.2025
S.002	Structural General Notes	BIDS	06.24.2025
S.003	Special Inspections & Testing	BIDS	06.24.2025
S.004	Special Inspections & Testing	BIDS	06.24.2025
S.005	Structural Specifications	BIDS	06.24.2025
S.006	Structural Specifications	BIDS	06.24.2025
S.D.101	Foundation Demolition Plan	BIDS	06.24.2025
S.D.102	Second Floor Demolition Plan	BIDS	06.24.2025
S.D.103	Third Floor Demolition Plan	BIDS	06.24.2025
S.D.104	Fourth Floor Demolition Plan	BIDS	06.24.2025
S.D.105	Fifth Floor Demolition Plan	BIDS	06.24.2025
S.D.109	Roof Demolition Plan	BIDS	06.24.2025
S.101	Foundation Plan	PRIORITY REPAIRS	03.27.2026
S.102	Second Floor Framing Plan	PRIORITY REPAIRS	03.27.2026
S.103	Third Floor Framing Plan	PRIORITY REPAIRS	03.27.2026
S.104	Fourth Floor Framing Plan	PRIORITY REPAIRS	03.27.2026
S.105	Fifth Floor Framing Plan	PRIORITY REPAIRS	03.27.2026
S.109	Roof Framing Plan	PRIORITY REPAIRS	03.27.2026
S.201	Exterior Restoration Elevations	BIDS	06.24.2025
S.202	Exterior Restoration Elevations	BIDS	06.24.2025
S.203	Exterior Restoration Elevations	BIDS	06.24.2025
S.204	Exterior Restoration Elevations	BIDS	06.24.2025
S.205	Exterior High Priority Restoration Elevations	PRIORITY REPAIRS	03.27.2026
S.206	Exterior High Priority Restoration Elevations	PRIORITY REPAIRS	03.27.2026
S.207	Exterior High Priority Restoration Elevations	PRIORITY REPAIRS	03.27.2026
S.208	Exterior High Priority Restoration Elevations	PRIORITY REPAIRS	03.27.2026
S.441	Construction Tolerances	BIDS	06.24.2025
S.402	Typical Details	BIDS	06.24.2025
S.403	Typical Details	BIDS	06.24.2025
S.404	Typical Details	BIDS	06.24.2025
S.405	Typical Details	BIDS	06.24.2025
S.411	Sections & Details	BIDS	06.24.2025
S.421	Sections & Details	BIDS	06.24.2025
S.431	Sections & Details	BIDS	06.24.2025
S.D.501	Enlarged Stair Demolition Plans	BIDS	06.24.2025
S.D.502	Enlarged Stair Demolition Plans	BIDS	06.24.2025
S.D.503	Enlarged Stair Demolition Plans	BIDS	06.24.2025
S.D.504	Enlarged Stair Demolition Plans	BIDS	06.24.2025
S.501	Enlarged Plans	BIDS	06.24.2025
S.502	Enlarged Framing Plans	BIDS	06.24.2025

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CSC PROJECT NUMBER: 25008

SEAL

STATE OF MICHIGAN
JAMES CORSIGLIA
ENGINEER
No. 4201040541
PROFESSIONAL ENGINEER

MICIGAN

PROJECT TITLE
CABOT APARTMENTS
RENOVATIONS

DETROIT

DATE	ISSUE
09.15.2026	OWNER REVISIONS
03.27.2026	PRIORITY REPAIRS
06.24.2025	BIDS
05.09.2025	BIDS/PERMITS

KEY PLAN

FSP PROJECT NO.
TRC22.066

DRAWING TITLE

Structural Cover Sheet

DRAWING NUMBER

S.000

SELECTIVE DEMOLITION - CONTINUED

14. PATCHING AND REPAIRS
    A. PROMPTLY REPAIR DAMAGE TO ADJACENT CONSTRUCTION CAUSED BY SELECTIVE DEMOLITION OPERATIONS.
    B. WHERE REPAIRS TO EXISTING SURFACES ARE REQUIRED, PATCH TO PRODUCE SURFACES SUITABLE FOR NEW MATERIALS.
    C. RESTORE EXPOSED FINISHES OF PATCHED AREAS AND EXTEND RESTORATION INTO ADJOINING CONSTRUCTION IN A MANNER THAT ELIMINATES EVIDENCE OF PATCHING AND REFINISHING.
    D. WHERE WALLS OR PARTITIONS THAT ARE DEMOLISHED EXTEND ONE FINISHED AREA INTO ANOTHER, PATCH AND REPAIR FLOOR AND WALL SURFACES IN THE NEW SPACE. PROVIDE AN EVEN SURFACE OF UNIFORM FINISH COLOR, TEXTURE, AND APPEARANCE. REMOVE EXISTING FLOOR AND WALL COVERINGS AND REPLACE WITH NEW MATERIALS, IF NECESSARY, TO ACHIEVE UNIFORM COLOR AND APPEARANCE.

15. DISPOSAL OF DEMOLISHED MATERIALS
    A. REMOVE DEMOLITION WASTE MATERIALS FROM PROJECT SITE.
    B. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE.
    C. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS.
    D. REMOVE DEBRIS FROM ELEVATED PORTIONS OF BUILDING BY CHUTE, HOIST, OR OTHER DEVICE THAT WILL CONVEY DEBRIS TO GRADE LEVEL IN A CONTROLLED DESCENT.
    E. DO NOT BURN DEMOLISHED MATERIALS.

16. CLEAN ADJACENT STRUCTURES AND IMPROVEMENTS OF DUST, DIRT, AND DEBRIS CAUSED BY SELECTIVE DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE SELECTIVE DEMOLITION OPERATIONS BEGAN.

FOUNDATION UNDERPINNING

1. THE FOLLOWING NOTES ARE GENERAL IN FORM AND CONCEPTUAL IN NATURE.
2. CONTRACTOR SHALL CHECK AND VERIFY THE GOVERNING DIMENSIONS AND ELEVATIONS, INCLUDING FIELD MEASUREMENTS OF EXISTING AND ADJOINING CONDITIONS ON WHICH THE WORK IS DEPENDENT. THIS IS TO ASSURE PROPER FIT AND CLEARANCES OF THE NEW WORK AND EXISTING CONDITIONS.
3. FOOTINGS UNDER COLUMNS TO BE UNDERPINNED AS SHOWN ON DOCUMENTS.
    A. SEQUENCE OF UNDERPINNING AS INDICATED.
    B. MATERIAL AND CONNECTIONS AS INDICATED.
    C. BUILDING SHORING AS INDICATED.
    D. EARTH RETENTION SHORING AS INDICATED.
4. WORK MUST CONFORM TO THE APPLICABLE BUILDING AND SAFETY CODES.
5. INSTALL SHORING, NEEDLE BEAMS AND DISTRIBUTION GRILLAGE. SEE PLAN FOR ESTIMATED SHORING LOADS.
6. INSTALL EARTH RETENTION SYSTEM. SEE PLANS FOR ESTIMATED LOCATIONS AND DEPTH.
7. CONTRACTOR IS PROHIBITED FROM USING VIBRATORY OR IMPACT EQUIPMENT.
8. EXISTING STRUCTURES AND ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES SERVICES AND STRUCTURES SHALL BE PROTECTED AT ALL TIMES.
9. ALL NEW WORK SHALL BE ENCASED IN CONCRETE U.O.N.
10. GRADUALLY TRANSFER LOAD TO NEW FOUNDATION AFTER CONCRETE HAS CURED FOR 7 DAYS MINIMUM AND CONCRETE HAS ACHIEVED MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI VERIFIED BY COMPRESSION TEST RESULTS.
11. REMOVE NEEDLE BEAMS AND DISTRIBUTION GRILLAGE.
12. ALLOWABLE DISPLACEMENT:
    A. HORIZONTAL DISPLACEMENT:
        a. COLUMN AND WALL UNDERPINNING SHALL BE CONSTRUCTED IN SUCH A WAY TO HAVE NEAR ZERO INCH (0.00") HORIZONTAL (INCH) DISPLACEMENT.
    B. VERTICAL DISPLACEMENT:
        a. COLUMN AND WALL UNDERPINNING SHALL BE CONSTRUCTED TO ACHIEVE A MAXIMUM 1/16" VERTICAL DISPLACEMENT.

CONCRETE

1. CONCRETE IS NORMAL WEIGHT AND SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI AT 28 DAYS.
2. CONCRETE BAR REINFORCEMENT SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615, 60,000 PSI YIELD.
3. WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM A-1064, AND SHALL BE FURNISHED AND PLACED IN FLAT SHEETS.
4. CONCRETE WORK SHALL CONFORM TO THE ACI STANDARD "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND THE ACI "DETAILING MANUAL" (SP-66).
5. WALLS, PIERS, AND COLUMNS SHALL BE DOWELED TO FOOTINGS. WALL, PIER, AND COLUMN DOWELS SHALL BE SAME SIZE AS WALL, PIER, AND COLUMN VERTICAL REINFORCING U.O.N.
6. MINIMUM ELAPSED TIME BETWEEN ADJACENT CONCRETE PLACEMENTS SHALL BE 48 HOURS.
7. BEAMS, SLABS AND COLUMNS SHALL BE PLACED MONOLITHICALLY. NO HORIZONTAL CONSTRUCTION JOINTS ARE TO BE MADE IN SLABS OR BEAMS.
8. DRILLED AND EPOXIED / GROUTED DOWELS ARE NOT AN ACCEPTABLE SUBSTITUTE FOR DOWELS SHOWN IN DETAILS.
9. MINIMUM CONCRETE COVER SHALL BE (UNLESS OTHERWISE NOTED):

A. UNFORMED SURFACES IN CONTACT WITH GROUND (FOOTING BOTTOMS):	3"
B. SLABS ON GRADE (TOP COVER):	3/4"
C. FORMED SURFACES IN CONTACT WITH GROUND OR EXPOSED TO THE WEATHER (GRADE BEAMS, WALLS, ETC.):	2"
D. BEAMS MAIN REINFORCING WITHOUT TIES	1 1/2"
E. PIER VERTICAL REINFORCING WITHOUT TIES:	1-1/2"
F. PIER TIES:	1-1/2"
G. INTERIOR WALL SURFACES	1"

    H. IN ALL CASES, CLEARANCE NOT LESS THAN THE DIAMETER OF THE BARS.

    NOTE: MAXIMUM DEVIATION FROM THESE REQUIREMENTS SHALL BE +1/4" FOR SECTIONS TEN (10) INCHES OR LESS AND +1/2" FOR SECTIONS OVER TEN (10) INCHES THICK.

10. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL BE RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AT NECESSARY SPLICES, AND HOOKED AT DISCONTINUOUS ENDS.

SELECTIVE DEMOLITION

1. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS APPLY TO THIS SECTION.
2. SUMMARY
    A. DEMOLITION AND REMOVAL OF SELECTED PORTIONS OF BUILDING OR STRUCTURE.
3. MATERIALS OWNERSHIP
    A. DEMOLITION WASTE IS THE PROPERTY OF CONTRACTOR.
    B. ANTIQUES, AND SIMILAR OBJECTS INCLUDING, BUT NOT LIMITED TO, CORNERSTONES AND THEIR CONTENTS, COMMEMORATIVE PLAQUES AND TABLETS, AND OTHER ITEMS OF INTEREST OR VALUE TO OWNER THAT MAY BE UNCOVERED DURING DEMOLITION REMAIN THE PROPERTY OF OWNER.
4. INFORMATIONAL SUBMITTALS
    A. PROPOSED PROTECTION MEASURES: SUBMIT REPORT, INCLUDING DRAWINGS, THAT INDICATES THE MEASURES PROPOSED FOR PROTECTING INDIVIDUALS AND PROPERTY FOR ENVIRONMENTAL PROTECTION, FOR DUST CONTROL AND FOR NOISE CONTROL. INDICATE PROPOSED LOCATIONS AND CONSTRUCTION OF BARRIERS
    B. SURVEY OF EXISTING CONDITIONS: SHOW EXISTING CONDITIONS OF ADJOINING CONSTRUCTION, INCLUDING FINISH SURFACES, THAT MIGHT BE MISCONSTRUED AS DAMAGE CAUSED BY DEMOLITION OPERATIONS.
5. COORDINATION
    A. COORDINATION OF OWNER'S CONTINUING OCCUPANCY OF PORTIONS OF EXISTING BUILDING AND OF OWNER'S PARTIAL OCCUPANCY OF COMPLETED WORK.
    B. ARRANGE SELECTIVE DEMOLITION SCHEDULE SO AS NOT TO INTERFERE WITH OWNER'S OPERATIONS.
    C. MAINTAIN ACCESS TO EXISTING WALKWAYS, CORRIDORS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES.
    D. DO NOT CLOSE OR OBSTRUCT WALKWAYS, CORRIDORS, OR OTHER OCCUPIED OR USED FACILITIES WITHOUT WRITTEN PERMISSION FROM AUTHORITIES HAVING JURISDICTION.
    E. OWNER ASSUMES NO RESPONSIBILITY FOR CONDITION OF AREAS TO BE SELECTIVELY DEMOLISHED.
    F. CONDITIONS EXISTING AT TIME OF INSPECTION FOR BIDDING PURPOSE WILL BE MAINTAINED BY OWNER AS FAR AS PRACTICAL.
    G. NOTIFY SEOR OF DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DRAWINGS BEFORE PROCEEDING WITH SELECTIVE DEMOLITION.
    H. UTILITY SERVICE: SHOWN ELSEWHERE IN DOCUMENTS.
6. QUALITY ASSURANCE
    A. DEMOLITION FIRM QUALIFICATIONS: AN EXPERIENCED FIRM THAT HAS SPECIALIZED IN DEMOLITION WORK SIMILAR IN MATERIAL AND EXTENT TO THAT INDICATED FOR THIS PROJECT.
    B. MINIMUM 5 YEARS OF EXPERIENCE.
    C. REGULATORY REQUIREMENTS: COMPLY WITH GOVERNING EPA NOTIFICATION REGULATIONS BEFORE BEGINNING SELECTIVE DEMOLITION.
    D. COMPLY WITH HAULING AND DISPOSAL REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
    E. COMPLY WITH ANSI A10.6 AND NFPA 241
7. VERIFY THAT UTILITIES HAVE BEEN REROUTED OR DISCONNECTED AND CAPPED BEFORE STARTING SELECTIVE DEMOLITION OPERATIONS.
8. WHEN AVAILABLE, REVIEW PROJECT RECORD DOCUMENTS OF EXISTING CONSTRUCTION OR OTHER EXISTING CONDITION AND HAZARDOUS MATERIAL INFORMATION PROVIDED BY OWNER.
    A. OWNER DOES NOT GUARANTEE THAT EXISTING CONDITIONS ARE SAME AS THOSE INDICATED IN PROJECT RECORD DOCUMENTS.
9. VERIFY THAT HAZARDOUS MATERIALS HAVE BEEN REMEDIATED BEFORE PROCEEDING WITH BUILDING DEMOLITION OPERATIONS.
10. PROTECTION
    A. TEMPORARY PROTECTION: PROVIDE TEMPORARY BARRICADES AND OTHER PROTECTION REQUIRED TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN.
    B. TEMPORARY SHORING: PROVIDE, AND MAINTAIN SHORING, BRACING, AND STRUCTURAL SUPPORTS AS SHOWN AND DELEGATED ON CONTRACT DOCUMENTS TO PRESERVE STABILITY AND PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF CONSTRUCTION AND FINISHES TO REMAIN, AND TO PREVENT UNEXPECTED OR UNCONTROLLED MOVEMENT OR COLLAPSE OF CONSTRUCTION BEING DEMOLISHED.
11. SELECTIVE DEMOLITION, GENERAL
    A. DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED.
    B. USE METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS AND AS FOLLOWS:
        1. PROCEED WITH SELECTIVE DEMOLITION SYSTEMATICALLY, FROM HIGHER TO LOWER LEVEL. COMPLETE SELECTIVE DEMOLITION OPERATIONS ABOVE EACH FLOOR OR TIER BEFORE DISTURBING SUPPORTING MEMBERS ON THE NEXT LOWER LEVEL.
        2. NEATLY CUT OPENINGS AND HOLES PLUMB, SQUARE, AND TRUE TO DIMENSIONS REQUIRED. USE CUTTING METHODS LEAST LIKELY TO DAMAGE CONSTRUCTION TO REMAIN OR ADJOINING CONSTRUCTION. USE HAND TOOLS OR SMALL POWER TOOLS DESIGNED FOR SAWING OR GRINDING, NOT HAMMERING AND CHOPPING. TEMPORARILY COVER OPENINGS TO REMAIN.
        3. CUT OR DRILL FROM THE EXPOSED OR FINISHED SIDE INTO CONCEALED SURFACES TO AVOID MARRING EXISTING FINISHED SURFACES.
        4. DO NOT USE CUTTING TORCHES UNTIL WORK AREA IS CLEARED OF FLAMMABLE MATERIALS.
        5. MAINTAIN PORTABLE FIRE-SUPPRESSION DEVICES DURING FLAME-CUTTING OPERATIONS.
        6. MAINTAIN FIRE WATCH DURING AND FOR AT LEAST 24 HOURS AFTER FLAME-CUTTING OPERATIONS.
        7. MAINTAIN ADEQUATE VENTILATION WHEN USING CUTTING TORCHES.
        8. REMOVE DECAYED, VERMIN-INFESTED, OR OTHERWISE DANGEROUS OR UNSUITABLE MATERIALS AND PROMPTLY DISPOSE OF OFF-SITE.
        9. REMOVE STRUCTURAL FRAMING MEMBERS AND LOWER TO GROUND BY METHOD SUITABLE TO AVOID FREE FALL AND TO PREVENT GROUND IMPACT OR DUST GENERATION.
12. EXISTING FACILITIES:
    A. COMPLY WITH OWNER'S REQUIREMENTS FOR USING AND PROTECTING ELEVATORS, STAIRS, WALKWAYS, LOADING DOCKS, BUILDING ENTRIES, AND OTHER BUILDING FACILITIES DURING SELECTIVE DEMOLITION OPERATIONS.
    B. EXISTING ITEMS TO REMAIN: PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION.
13. SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS
    A. WALL REMOVAL: PROCEED IN STEPS.
        a. REMOVE DRYWALL/SHEATHING ON ONE SIDE.
        b. INSPECT FOR STRUCTURAL MEMBERS ENCLOSED BY WALL COVERINGS (BRACES, BEAMS, POSTS, COLUMNS, ETC.).
        c. IF NONE ARE NOTED, PROCEED WITH REMOVAL.
        d. IF STRUCTURAL MEMBERS ARE NOTED, NOTIFY SEOR AT ONCE FOR FURTHER INSTRUCTION.
    B. CONCRETE: DEMOLISH IN SECTIONS. CUT CONCRETE FULL DEPTH AT JUNCTURES WITH CONSTRUCTION TO REMAIN AND AT REGULAR INTERVALS USING POWER-DRIVEN SAW, AND THEN REMOVE CONCRETE BETWEEN SAW CUTS.
    C. MASONRY: DEMOLISH IN SMALL SECTIONS. CUT MASONRY AT JUNCTURES WITH CONSTRUCTION TO REMAIN, USING POWER-DRIVEN SAW, AND THEN REMOVE MASONRY BETWEEN SAW CUTS.
    D. CONCRETE SLABS-ON-GRADE: SAW-CUT PERIMETER OF AREA TO BE DEMOLISHED, AND THEN BREAK UP AND REMOVE.
    E. ROOFING: REMOVE NO MORE EXISTING ROOFING THAN WHAT CAN BE COVERED IN ONE DAY BY NEW ROOFING AND SO THAT BUILDING INTERIOR REMAINS WATERTIGHT AND WEATHERTIGHT.

SHOP DRAWINGS & SUBMITTALS

1. PROVIDE THE FOLLOWING SHOP DRAWINGS AND SUBMITTALS FOR REVIEW TO THE STRUCTURAL ENGINEER OF RECORD:
    A. TESTING AND SPECIAL INSPECTION REPORTS
    B. BUILDING SHORING SHOP DRAWINGS & DESIGN CALCULATIONS
    C. FOUNDATION UNDERPINNING SHOP DRAWINGS & DESIGN CALCULATIONS
    D. CONCRETE FOUNDATIONS AND REINFORCING SHOP DRAWINGS
    E. MASONRY REINFORCING SHOP DRAWINGS:
        a. WALL ELEVATIONS
        b. PRODUCT DATA
    F. STRUCTURAL STEEL SHOP DRAWINGS
    G. STRUCTURAL STEEL CONNECTION DESIGN CALCULATIONS

TYPICAL DETAILS

1. TYPICAL DETAILS ARE GENERAL IN NATURE AND THEIR USE MAY BE WARRANTED IN A VARIETY OF SITUATIONS.
2. CONDITIONS SHOWN IN THE TYPICAL DETAILS MAY NOT EXACTLY REPRESENT EVERY GIVEN SITE CONDITION, IN WHICH CASE THE CONTRACTOR IS RESPONSIBLE TO COMPLETE THE WORK IN A MANNER CONSISTENT WITH THE SPIRIT OF, AND INTENT SHOWN IN THE TYPICAL DETAIL.
3. SLIGHT VARIATIONS FROM THE DETAIL ENCOUNTERED IN SITE CONDITIONS SHALL IN NO WAY RELIEVE THE CONTRACTOR FROM THE COMPLETION OF THEIR WORK.
4. MANUFACTURERS WRITTEN INSTALLATION PROCEDURES MAY DIFFER FROM THOSE SHOWN IN THE TYPICAL DETAILS. IN SUCH CASE, CONSTRUCTION SHALL BE BASED ON THE MORE CONSERVATIVE INSTALLATION PROCEDURE.
5. DELEGATED DESIGN STRUCTURAL ENGINEER SHALL FOLLOW THE GENERAL CONCEPT OF TYPICAL DETAILS.

BUILDING SHORING

1. THE FOLLOWING NOTES ARE GENERAL IN FORM AND CONCEPTUAL IN NATURE.
2. BUILDING SHORING SYSTEMS ARE DELEGATED TO THE CONTRACTOR.
    A. DESIGN SHALL BE PERFORMED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MICHIGAN.
3. CONTRACTOR SHALL CHECK AND VERIFY THE GOVERNING DIMENSIONS AND ELEVATIONS, INCLUDING FIELD MEASUREMENTS OF EXISTING AND ADJOINING CONDITIONS ON WHICH THE WORK IS DEPENDENT. THIS IS TO ASSURE PROPER FIT AND CLEARANCES OF THE NEW WORK AND EXISTING CONDITIONS.
4. WORK MUST CONFORM TO THE APPLICABLE BUILDING AND SAFETY CODES.
5. INSTALL SHORING, NEEDLE BEAMS AND DISTRIBUTION GRILLAGE. SEE DOCUMENTS FOR ESTIMATED SHORING LOADS.
6. CONTRACTOR SHALL PROVIDE ADEQUATE BEARING AREA UNDER EACH SHORE SO AS NOT TO DAMAGE THE EXISTING SLAB. MAXIMUM LOADING ON THE SLAB ON GRADE IS NOT TO EXCEED 500 PSF.
7. EXISTING STRUCTURES, ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SERVICES SHALL BE PROTECTED AT ALL TIMES.
8. CONTRACTOR IS PROHIBITED FROM USING VIBRATORY OR IMPACT EQUIPMENT FOR THE BUILDING SHORING WORK.
9. PROVIDE DIRECT LOAD PATH BETWEEN TEMPORARY SUPPORTS.
10. ALLOWABLE DISPLACEMENT:
    A. HORIZONTAL DISPLACEMENT:
        a. COLUMN AND WALL UNDERPINNING SHALL BE CONSTRUCTED IN SUCH A WAY TO HAVE NEAR ZERO INCH (0.00") HORIZONTAL (INCH) DISPLACEMENT.
    B. VERTICAL DISPLACEMENT:
        a. COLUMN AND WALL UNDERPINNING SHALL BE CONSTRUCTED TO ACHIEVE A MAXIMUM 1/16" VERTICAL DISPLACEMENT.
11. SHORING PORTIONS OF THE EXISTING BUILDINGS AS REQUIRED ON THE STRUCTURAL DRAWINGS, IN ACCORDANCE WITH GENERALLY ACCEPTED BUILDING SHORING PROCEDURES.
12. PROVIDE SUFFICIENT TEMPORARY LATERAL BRACING TO SAFELY RESIST ANY LATERAL PRESSURE ACTING AGAINST THE BUILDING SHORING IN ORDER TO AVOID HORIZONTAL AND VERTICAL MOVEMENT OF THE EXISTING BUILDING.
13. AFTER NEW CONSTRUCTION IS COMPLETE, CONTRACTOR SHALL REMOVE SHORE WITH DUE CARE AND CAUTION SO LOAD IS APPLIED GRADUALLY TO BUILDING STRUCTURE.
14. SHORING SHOP DRAWINGS:
    A. ALL MATERIAL, CLEARLY DETAILED.
    B. INDICATE SHORING MEMBERS, BEARING DETAILS, AND CONNECTIONS FOR COMPLETE SHORING SYSTEM.
    C. EQUIPMENT REQUIRED FOR COMPLETION OF WORK, SUCH AS CALIBRATED LOAD INDICATOR JACKS, SHALL BE SHOWN ON THE DRAWINGS.
    D. PROVIDE INSTALLATION SEQUENCE.
    E. SUBMIT CALCULATIONS.
    F. PROVIDE DIRECT LOAD PATH BETWEEN TEMPORARY SUPPORTS AND COLUMN TO PREVENT UNACCEPTABLE MOVEMENT DURING INSTALLATION AND USE.
    G. SHOP DRAWINGS FOR DELEGATED DESIGN SYSTEMS SHALL BEAR THE SEAL AND SIGNATURE OF THE PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MICHIGAN.

FOUNDATIONS

1. THE FOUNDATION DESIGN IS BASED ON PRESUMPTIVE LOAD BEARING VALUES OF 2021 MBC SECTION 1806.2 AND TABLE 1806.2.
2. FOOTINGS SHALL BE CARRIED DOWN TO UNDISTURBED SOIL HAVING A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 1,500 POUNDS PER SQUARE FOOT.
3. WHERE NEW FOOTINGS ABUT EXISTING FOUNDATIONS, CAREFULLY HAND EXCAVATE AND DETERMINE BOTTOM OF EXISTING FOUNDATION. IF DIFFERENT THAN ANTICIPATED, ADJUST NEW FOUNDATIONS TO MATCH EXISTING. IN NO CASE SHALL THE NEW FOOTING BE LOWER THAN THE EXISTING WITHOUT PROTECTION AGAINST UNDERMINING SUCH AS UNDERPINNING AND/OR SHORING.
4. FINISHED EXCAVATIONS AND BEARING GRADES SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL INSPECTION AGENCY BEFORE ANY CONCRETE IS PLACED.
5. BACKFILL AGAINST FOUNDATION WALLS AND GRADE BEAMS:
    A. DO NOT PLACE BACKFILL UNTIL CONCRETE STRENGTH HAS ATTAINED 75% OF ITS 28 DAY STRENGTH.
    B. PROVIDE BRACING FOR GRADE BEAMS OR WALL BUTTRESSES SUSTAINING MORE THAN 2 FEET OF UNBALANCED EARTH PRESSURE. THIS BRACING IS TO REMAIN UNTIL THE PERMANENT RESTRAINTS BECOME EFFECTIVE.
6. CONCRETE FOR FOOTINGS AND GRADE BEAMS MAY ONLY BE PLACED AT CONTRACTOR'S OPTION INTO UNFORMED TRENCHES IF THE BUILDING OFFICIAL CONCURS THAT SOIL CONDITIONS DO NOT REQUIRE FORMWORK.
    A. CUT TRENCH FOOTING SIDES IN VERTICAL MANNER TO NOT ALLOW TRENCH FOOTING TO "MUSHROOM OUT" NEAR THE TOP.
    B. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MINIMIZE SLOUGHING OF SIDEWALLS.
    C. WHERE SLOUGHING OCCURS, REMOVE SLOUGHED SOIL AND/OR OVER EXCAVATE, EITHER ONE OR BOTH AS REQUIRED AS REQUIRED BY THE SPECIAL INSPECTION AND TESTING AGENT.

EXISTING CONDITIONS

1. THE PROJECT AREA OCCURS WITHIN AN EXISTING BUILDING.
2. AS-BUILT DOCUMENTS FOR THE SPACE ARE NOT CURRENTLY AVAILABLE.
3. EXPLORATORY INVESTIGATION IS REQUIRED TO DETERMINE EXISTING CONDITIONS.
    A. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR DOCUMENTING ALL EXISTING CONDITIONS.
    B. CONTRACTOR TO NOTIFY STRUCTURAL ENGINEER OF RECORD OF ALL DISCREPANCIES.
    C. CONDITIONS THAT VARY FROM EXPLORATORY INVESTIGATION ARE TO BE EXPECTED.
4. EXPLORATORY DEMOLITION MAY BE REQUIRED TO VERIFY EXISTING CONDITIONS.
    A. THE PROJECT AREA IS AN OCCUPIED SPACE:
        a. EXPLORATION MAY REQUIRE AFTER HOURS ACCESS.
        b. ADDITIONAL EXPLORATION IS REQUIRED ONCE THE SPACE IS UNOCCUPIED AND ADDITIONAL DEMOLITION CAN TAKE PLACE.
5. UPDATES TO A/E DRAWINGS SHALL BE ANTICIPATED.
6. TESTING OF EXISTING BUILDING SYSTEMS OR MATERIALS MAY BE REQUIRED.
7. PROJECT BUDGET AND CONSTRUCTION SCHEDULE SHALL ACCOUNT FOR UNKNOWN FIELD CONDITIONS.

GENERAL

1. DESIGN REFERENCE STANDARDS IN ACCORDANCE WITH MICHIGAN BUILDING CODE 2021 CHAPTER 35 "REFERENCED STANDARDS".
2. THE STRUCTURAL DRAWINGS SHOW A PORTION OF THE WORK TO BE PERFORMED BY THE CONTRACTOR. SUPPLEMENTARY REQUIREMENTS ARE FOUND WITHIN THE DRAWINGS OF OTHER DISCIPLINES AND REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.
3. THESE NOTES ARE COMPLEMENTARY TO THE SPECIFICATIONS AND SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS.
4. SPECIFICATIONS AND DRAWINGS SHALL BE EQUAL IN AUTHORITY AND PRIORITY. SHOULD THE SPECIFICATIONS AND DRAWINGS DISAGREE IN THEMSELVES, OR WITH EACH OTHER, CONSTRUCTION SHALL BE BASED ON THE MOST STRINGENT. THE WORK REQUIRED TO BE CONSTRUCTED BY THE DOCUMENTS SHALL BE DECIDED BY THE STRUCTURAL ENGINEER OF RECORD IN THE EVENT OF THE ABOVE MENTIONED DISAGREEMENTS.
5. VERIFY THE SIZES, LOCATIONS, UTILITIES, ELEVATIONS AND DETAILS OF EXISTING CONDITIONS THAT AFFECT THE WORK.
    A. INFORM THE STRUCTURAL ENGINEER OF RECORD OF ANY DISCREPANCIES IN DIMENSIONS, SIZES, LOCATIONS, AND CONDITIONS.
    B. PROCEED WITH WORK ONLY AFTER DISCREPANCIES ARE RESOLVED.
6. PROVIDE SHORING, BRACING, UNDERPINNING, AND ANY OTHER MEANS REQUIRED TO PROTECT AND MAINTAIN THE SAFETY, INTEGRITY AND STABILITY OF ALL EXISTING AND NEW CONSTRUCTION.
7. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGE HE CAUSES TO THE PROPERTY, EXISTING AND NEW CONSTRUCTION, AND FOR ANY UNAUTHORIZED DISRUPTIONS TO THE OWNER'S NORMAL USE OF UTILITIES, SERVICES AND THE SURROUNDING FACILITIES.
8. CONTRACTOR SHALL OBTAIN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD PRIOR TO PLACING OPENINGS OR SLEEVES NOT SHOWN ON DRAWINGS THROUGH ANY STRUCTURAL MEMBERS.
9. TYPICAL DETAILS APPLY TO ALL DRAWINGS AND SHALL BE USED EXCEPT WHERE OTHERWISE SHOWN OR NOTED.

DELEGATED DESIGN

1. THE CONTRACTOR SHALL RETAIN A DELEGATED PROFESSIONAL LICENSED IN THE STATE OF MICHIGAN, TO DESIGN AND DETAIL THE FOLLOWING DELEGATED DESIGN COMPONENTS:
    A. MASONRY WALL TEMPORARY ERECTION BRACING
    B. STRUCTURAL STEEL CONNECTIONS
    C. STRUCTURAL STEEL ERECTION BRACING
    D. METAL FABRICATIONS
    E. BUILDING SHORING
2. THE CONTRACTOR SHALL RETAIN A DELEGATED DESIGN PROFESSIONAL LICENSED IN THE STATE OF MICHIGAN, TO DESIGN, SPECIFY AND DETAIL PROJECT DEWATERING.
3. DELEGATED DESIGN PROFESSIONAL SHALL VERIFY IN WRITING COMPONENTS SHOWN IN SHOP DRAWINGS ARE IN CONFORMANCE WITH THEIR DESIGN.
4. DELEGATED DESIGN PROFESSIONAL SHALL BE AVAILABLE TO ANSWER FIELD QUESTIONS RELATED TO THEIR DESIGN.
5. TYPICAL DETAILS INDICATE GENERAL CRITERIA FOR THE DESIGN AND DETAILING OF CONNECTIONS.
    A. TYPICAL DETAILS ARE NOT INTENDED TO CONVEY COMPLETE CONNECTOR SIZE, TYPE, SPACING, NUMBER OF CONNECTORS, OR ANY OTHER SPECIFIC INFORMATION THAT IS OBTAINED THROUGH DESIGNING OF AN INDIVIDUAL CONNECTION FOR A GIVEN SET OF LOADS.
    B. DETAILS THAT CONVEY SPECIFIC COMPONENT INFORMATION ESTABLISH MINIMUM REQUIREMENTS AND ARE NOT INTENDED TO CONVEY COMPLETED DESIGN.
6. SUBMITTALS FOR COMPONENTS INDICATED ABOVE SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND SHALL BEAR THE SIGNATURE AND SEAL OF THE DELEGATED DESIGN PROFESSIONAL.
7. STRUCTURAL CALCULATIONS FOR DELEGATED DESIGN COMPONENTS SHALL BE:
    A. FURNISHED WITH THE SHOP DRAWINGS FOR CONCURRENT REVIEW.
    B. CALCULATIONS SHALL BEAR THE SIGNATURE AND SEAL OF THE DELEGATED DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN.
8. PROFESSIONAL LIABILITY INSURANCE:
    A. DELEGATED DESIGN PROFESSIONAL SHALL KEEP IN FORCE, AT ITS SOLE COST AND EXPENSE, A PROFESSIONAL LIABILITY INSURANCE POLICY WITH THE MINIMUM LIMITS OF ONE MILLION ($1,000,000) DOLLARS PER CLAIM AND IN THE ANNUAL AGGREGATE AMOUNT OF ONE MILLION ($1,000,000) DOLLARS UNLESS HIGHER LIMITS ARE REQUIRED BY PRIME OR SUBCONTRACT.
    B. SUCH POLICY SHALL PROVIDE THAT IT MAY NOT BE SUBSTANTIALLY MODIFIED OR CANCELED WITHOUT THIRTY (30) DAYS PRIOR WRITTEN NOTICE TO THE OWNER.
    C. THE DELEGATED DESIGN PROFESSIONAL SHALL IMMEDIATELY NOTIFY THE OWNER OF ANY MATERIAL CHANGE IN THE POLICY.
    D. THE DELEGATED DESIGN PROFESSIONAL SHALL DO EVERYTHING NECESSARY TO KEEP THE POLICY IN FULL FORCE AND EFFECT THROUGHOUT THE PROJECT AND FOR A PERIOD OF THREE (3) YEARS AFTER THE FINAL COMPLETION DATE.
    E. THE DELEGATED DESIGN PROFESSIONAL SHALL PROMPTLY PROVIDE THE OWNER WITH A COPY OF THEIR PROFESSIONAL LIABILITY INSURANCE POLICY.

STATEMENT OF DESIGN CERTIFICATION

1. THESE CONSTRUCTION DOCUMENTS WERE PREPARED FOR COMPLIANCE WITH THE 2021 MICHIGAN BUILDING CODE, 2021 MICHIGAN REHABILITATION CODE, AND ADOPTED DESIGN REFERENCE STANDARDS IN EFFECT AT THE TIME OF PERMIT SUBMITTAL.
2. DESIGN REFERENCE STANDARDS IN ACCORDANCE WITH MICHIGAN BUILDING CODE 2015 CHAPTER 35 "REFERENCED STANDARDS".

    I HEREBY CERTIFY THE STRUCTURAL DESIGN AND DOCUMENTATION CONTAINED HEREIN WAS PREPARED UNDER MY DIRECT SUPERVISION AS A REGISTERED DESIGN PROFESSIONAL LICENSED IN THE STATE OF MICHIGAN.

    DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE: JAMES A. CORSIGLIA, PE
    STATE OF MICHIGAN PROFESSIONAL ENGINEERING LICENSE NO: 6201045541
    LICENSE EXPIRATION DATE: OCTOBER 31, 2025

STRUCTURAL DESIGN LOADS

1. DESIGN CODE — MICHIGAN BUILDING CODE 2021
2. DESIGN REFERENCE STANDARDS IN ACCORDANCE WITH MICHIGAN BUILDING CODE 2021 CHAPTER 35 "REFERENCED STANDARDS"
3. DESIGN LOAD COMBINATIONS — PER ASCE 7 SECTION 2.3 & 2.4 & MBC SECTION 1605
4. WOOD FRAMING DESIGN LOADS (UNFACTORED)

	DEAD LOAD	LIVE LOAD
A. TYPICAL FLOOR U.O.N.	35 PSF	40 PSF
B. CORRIDORS, LOBBIES	20 PSF	100 PSF
C. STAIRS	20 PSF	100 PSF
D. ROOF	20 PSF	20 PSF

5. ROOF LIVE LOADS (UNFACTORED)

A. RISK CATEGORY	II
B. SNOW LOAD IMPORTANCE FACTOR, "I_s"	1.0
C. GROUND SNOW LOAD, "P_g"	20 PSF
D. MINIMUM FLAT ROOF DESIGN SNOW LOAD, "P_m"	20 PSF
E. SNOW EXPOSURE FACTOR, "C_e"	1.0
F. SNOW THERMAL FACTOR, "C_t"	1.0
G. FLAT ROOF SNOW LOAD, "P_f"	14 PSF
H. ROOF SLOPE FACTOR, "C_s"	1.0
I. MINIMUM ROOF LIVE LOAD	20 PSF

    J. SNOW LOADS ADJACENT TO VERTICAL PROJECTIONS, ON LO

WOOD FRAMING (GENERAL) -CONTINUED

22. BOLT AND BOLT HOLES:
    A. HOLES FOR BOLTS 1/32" TO 1/16" LARGER THAN NOMINAL BOLT DIAMETER.
    B. A307 BOLTS, UNLESS NOTED OTHERWISE.
    C. LAG BOLTS SHALL CONFORM TO ASME B18.2.1
    D. STANDARD CUT WASHER UNDER BOLT HEAD AND NUT.
    E. STANDARD WASHERS UNDER HEADS OF LAG SCREWS.
    F. DO NOT COUNTERSINK BOLTS OR LAG SCREWS.

23. RE-TIGHTEN BOLTS PRIOR TO APPLICATION OF SHEATHING.

24. SCREWS SHALL CONFORM WITH ASME B18.6.1

25. NAILS, UNLESS INDICATED OTHERWISE, ARE COMMON NAILS:
    A. DIMENSIONAL PROPERTIES COMPLYING WITH AF&PA NDS TABLE L4 AND ASTM F1667.
    B. FEDERAL SPECIFICATION FF-N-105.
    C. INSTALL NAILS IN COMPLIANCE WITH MBC CHAPTER 23, INCLUDING TABLE 2304.10.1.
    D. "D" HEAD NAILS NOT PERMITTED.

26. WOOD HARDWARE CONNECTORS TO BE MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC.

STRUCTURAL STEEL

1. SHOP DETAILS, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF AISC "SPECIFICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", AND AISC "DETAILING FOR STEEL CONSTRUCTION".

2. STRUCTURAL STEEL SHALL CONFORM TO THE YIELD STRENGTH (F_y) LISTED BELOW:
    A. W, WT SHAPES, ASTM A992 — 50 KSI
    B. HSS SQUARE AND RECTANGULAR, ASTM A500 GR B — 46 KSI
    C. HSS ROUND, ASTM A500 GR B — 42 KSI
    D. PIPE, ASTM A53 GR B — 35 KSI
    E. ALL OTHER PLATES AND SHAPES, U.O.N., ASTM A36 — 36 KSI

3. BEAMS SHALL BE FABRICATED WITH MILL CAMBER UP.
    A. FABRICATOR SHALL VERIFY MILL CAMBER IS WITHIN ASTM A6 TOLERANCES.
    B. MEMBERS EXCEEDING ASTM A6 TOLERANCE SHALL NOT BE USED.

4. HIGH STRENGTH BOLTS SHALL CONFORM TO "GROUP A" OR "GROUP B" U.O.N. AS OUTLINED BY AISC AND THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS.

5. WELDING SHALL BE DONE WITH APPROPRIATE E70 SERIES ELECTRODES COMPATIBLE WITH THE NEW AND EXISTING STEEL AND SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.1 "STRUCTURAL WELDING CODE - STEEL" OF THE AMERICAN WELDING SOCIETY.

6. REFER TO ARCHITECTURAL DOCUMENTS FOR STEEL PLATES, ANGLES, ETC., ATTACHED TO BEAMS, FRAMES, ETC., FOR SUPPORT OF FASCIA AND OTHER CONSTRUCTION.

7. THE LENGTH DIMENSION AND THE CONNECTION DETAIL FROM NEW STRUCTURAL MEMBER TO THE EXISTING STRUCTURE SHALL BE FIELD VERIFIED BEFORE FABRICATION.
    A. NO FIELD MODIFICATION TO THE FABRICATED MEMBER OR CONNECTION IS ALLOWED WITHOUT PRIOR APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.
    B. PROVIDE CONTRACTOR'S SKETCHES OR SHOP DRAWINGS REFLECTING THESE MODIFICATIONS.

8. STEEL CONNECTION DESIGN IS DELEGATED TO THE STEEL FABRICATOR.

9. BEAM REACTIONS ARE NOTED ON THE DOCUMENTS:
    A. ALL CONNECTION CAPACITIES TO BE GREATER THAN 80 KIPS (FACTORED)

10. ANGLES ARE LONG LEG VERTICAL (LLV) UNLESS OTHERWISE NOTED.

11. THE CONTRACTOR IS RESPONSIBLE FOR THE ERECTION SAFETY OF STEEL CONNECTIONS, INCLUDING BUT NOT LIMITED TO: CONFIGURATION, SEQUENCE, USE OF: BLOCKING, EXTENDED CLIP ANGLES, CLAMPS, ETC.

WOOD FRAMING (GENERAL)

1. WOOD FRAMING FABRICATION INSTALLATION SHALL CONFORM TO THE REQUIREMENTS:
    A. THE MICHIGAN BUILDING CODE.
    B. THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC).
    C. THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS).
    D. SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC (ANSI/AF&PA SDPWS).
    E. THE DEPARTMENT OF ENERGY "ADVANCED FRAMING" INSTALLATION.

2. ALL LUMBER SHALL COMPLY WITH DOC PS20 "AMERICAN SOFTWOOD LUMBER STANDARD" AND WITH APPLICABLE GRADE RULES OF INSPECTION AGENCIES CERTIFIED BY ALSC'S BOARD OF REVIEW.

3. FRAMING LUMBER 2" THICK OR LESS
    A. SHALL BE STRESS RATED OR GRADED FOR THE SPECIES AS SCHEDULED.
    B. MOISTURE CONTENT OF 19% OR LESS.
    C. MINIMUM PROPERTIES SHALL BE AS FOLLOWS:
        a. NO. 1/NO. 2 SPRUCE PINE FIR, USED FOR JOISTS, RAFTERS, WALL STUDS, & WALL PLATES:
            F_b = 875 PSI F_v = 135 PSI E = 1,400,000 PSI
        b. STUD GRADE DOUGLAS FIR, USED FOR BLOCKING & NON-BEARING STUD:
            F_b = 675 PSI F_v = 135 PSI E = 900,000 PSI

4. FRAMING LUMBER GREATER THAN 2"
    A. SHALL BE STRESS RATED OR GRADED FOR THE SPECIES AS SCHEDULED.
    B. MOISTURE CONTENT OF 19% OR LESS.
    C. MINIMUM PROPERTIES SHALL BE AS FOLLOWS:
        a. NO. 1/NO. 2 SPRUCE PINE FIR:
            F_b = 875 PSIF_v = 135 PSI E = 1,400,000 PSI
        b. USED FOR 4x BEAMS, HEADERS, & STRINGERS:
            F_b = 875 PSIF_v = 135 PSI E = 1,400,000 PSI
        c. USED FOR 4x POSTS:
            F_b = 1,000 PSI F_c = 1,150 PSI E = 1,400,000 PSI

5. WOOD STUDS:
    A. TOP PLATE OF STUD WALLS SHALL BE 2 PIECES SAME WIDTH AS STUDS EXCEPT AT STAGGERED STUD WALLS, AS INDICATED AS ON DRAWINGS.
    B. NOTCH OR BORE HOLES IN WOOD STUDS IN COMPLIANCE WITH [[[MBC]]] SECTIONS 2308.5.9 AND 2308.5.10.
    C. PROVIDE SPACED DOUBLE JOISTS UNDER PARTITIONS WHICH ARE PARALLEL TO JOISTS.
    D. PROVIDE SOLID FULL DEPTH BLOCKING UNDER PARTITIONS WHICH ARE PERPENDICULAR TO JOISTS.

6. PROVIDE PLYWOOD COMPLYING WITH DOC PS 1 AND CLASSIFIED AS EXPOSURE 1. EACH SHEET OF PLYWOOD SHALL BE IDENTIFIED WITH APPROPRIATE TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION.

7. FLOOR SHEATHING SHALL BE
    A. APA RATED STURD-I-FLOOR.
    B. EXPOSURE 1.
    C. TONGUE AND GROOVE UNDERLAYMENT GRADE.
    D. SOUTHERN YELLOW PINE.
    E. 23/32 INCH THICK, 24" OC SPAN RATING, CONTINUOUS OVER TWO OR MORE SPANS, WITH LONG DIMENSION ACROSS SUPPORTS.
    F. U.O.N. FASTEN WITH 8d NAILS 6" OC @ EDGES AND 12" OC @ INTERMEDIATE SUPPORTS.
    G. STAGGER PANELS.

8. WALL SHEATHING SHALL BE
    A. APA RATED STRUCTURAL 1 SHEATHING.
    B. DOC PS 1 OR PS2
    C. EXPOSURE 1
    D. PLYWOOD (MIN 4 PLIES) OR OSB
    E. 15/32 INCH THICK, 24" OC SPAN RATING, CONTINUOUS OVER TWO OR MORE SPANS, WITH LONG DIMENSION ACROSS SUPPORTS.
    F. U.O.N. FASTEN WITH 8d NAILS 6" OC @ EDGES AND 12" OC @ INTERMEDIATE SUPPORTS.
    G. STAGGER PANELS.

9. ROOF SHEATHING SHALL BE:
    A. APA RATED STRUCTURAL 1 SHEATHING.
    B. EXPOSURE 1.
    C. 19/32 INCH THICK, CONTINUOUS OVER TWO OR MORE SPANS WITH LONG DIMENSION ACROSS SUPPORTS.
    D. U.O.N. FASTEN WITH 8d NAILS 6" OC @ EDGES AND 12" OC @ INTERMEDIATE SUPPORTS.
    E. STAGGER PANELS.

10. GYPSUM WALLBOARD(SHEAR WALLS):
    A. SHEETS MAY BE APPLIED PERPENDICULAR OR PARALLEL TO STUDS.
    B. GYPSUM WALLBOARD SHALL CONFORM TO ASTM C1396.
    C. GYPSUM WALLBOARD SHALL BE INSTALLED PER ASTM C 840.

11. LAMINATED VENEER LUMBER (LVL) SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH APA H815.
    A. ADHESIVES SHALL CONFORM TO ASTM D 2559.
    B. MINIMUM PROPERTIES SHALL BE AS FOLLOWS:
        F_b = 2,800 PSI F_v = 285 PSI E = 2,000,000 PSI

12. PARALLEL STRAND LUMBER (PSL) SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH ASTM D 5456.
    A. ADHESIVES SHALL CONFORM TO ASTM D 2559.
    B. MINIMUM PROPERTIES SHALL BE AS FOLLOWS:
        F_b = 2,800 PSI F_v = 285 PSI E = 2,000,000 PSI

13. GLUED LAMINATED TIMBER (GLULAM) SHALL BE:
    A. DESIGNED IN ACCORDANCE WITH APAH815.
    B. ADHESIVES SHALL CONFORM TO ASTM D2559.
    C. MINIMUM PROPERTIES SHALL BE AS FOLLOWS:
        F_b = 2,400 PSI F_v = 1,650 PSI E = 1,800,000 PSI F_c = 425 PSI (EACH FACE)

14. LATERAL SUPPORT FOR BEAMS, RAFTERS AND JOISTS AS STIPULATED IN MBC SECTION 2308.4.6.

15. SUPPORT UNDER HEADERS, WOOD BEAMS, AND GIRDER TRUSSES SHALL BE BLOCKED SOLID DOWN TO FOUNDATION.

16. PROVIDE MINIMUM (4) STUDS EACH CORNER OF EXTERIOR WALL.

17. PERMANENT BRACING FOR OVERALL BUILDING STABILITY IS COMPLETE WHEN ROOF SHEATHING AND BEARING WALL SHEATHING IS COMPLETE WITH FASTENING.
    A. PROVIDE TEMPORARY BRACING UNTIL ROOF AND BEARING WALL SHEATHING IS INSTALLED AND FASTENED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.

18. PRESSURE TREAT WOOD MEMBERS IN CONTACT WITH GROUND OR CONCRETE WITH WATERBORNE PRESERVATIVES IN COMPLIANCE WITH MBC 2304.12.
    A. AFTER TREATMENT, KILN DRY TO A MAXIMUM MOISTURE CONTENT 19%.
    B. MINIMUM RETENTION OF 0.40 PSF.
    C. STEEL FASTENERS:
        a. HOT-DIPPED GALVANIZED
        b. STAINLESS STEEL
        c. ASTM A153.
    D. HARDWARE CONNECTORS (FASTENERS, ANCHORS, ANCHOR BOLTS, HANGERS):
        a. ASTM A123 AT PRESERVATIVE TREATED STRUCTURAL LUMBER.
        b. DOUBLE DIPPED G185 FASTENERS.
        c. STAINLESS STEEL

19. PROVIDE FIRE TREATED LUMBER WHERE INDICATED ON THE ARCHITECTURAL PLANS.
    A. STEEL FASTENERS:
        a. HOT-DIPPED GALVANIZED
        b. STAINLESS STEEL
        c. ASTM A153.
    B. HARDWARE CONNECTORS PER ASTM A123 AT FIRE TREATED STRUCTURAL LUMBER.

20. WOOD FRAMING CONNECTIONS SHALL BE SEATED CONNECTIONS, U.O.N.
    A. DO NOT COPE ANY MEMBER.
    B. DO NOT USE TOE NAILING TO SUPPORT VERTICAL LOADS.
    C. USE STANDARD PREFABRICATED, GALVANIZED, MANUFACTURED FRAMING DEVICES PER ASTM D1761, DESIGNED TO SUPPORT THE MEMBER SIZE.

21. DO NOT CUT OR NOTCH STRUCTURAL LUMBER UNLESS SPECIFICALLY DETAILED OR INDICATED ON STRUCTURAL DOCUMENTS.

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REINFORCED HOLLOW CONCRETE MASONRY

1. SHALL BE IN ACCORDANCE WITH BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530/ASCE 5) AND SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1/ASCE 6).

2. MORTAR SHALL BE PORTLAND CEMENT LIME MORTAR OR MASONRY CEMENT MORTAR, IN ACCORDANCE WITH ASTM C 270, TYPE S.

3. GROUT SHALL BE "FINE OR COARSE GROUT" IN ACCORDANCE WITH ASTM C 476. GROUT STRENGTH SHALL BE f'_c = 2500 PSI MIN.

4. MINIMUM MASONRY STRENGTH SHALL BE:
    A. f'_m = 2000 PSI.
    B. UNITS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH ON THE NET AREA OF 2,000 PSI.
    C. EXCEPTION: IF PRISM TESTS ARE PERFORMED IN ACCORDANCE WITH ASTM E 447 METHOD B UNITS OF LESSER STRENGTH MAY BE USED TO ACHIEVE THE REQUIRED f'_m.

5. CONCRETE MASONRY UNITS SHALL BE IN ACCORDANCE WITH ASTM C90.
    A. MASONRY UNITS SHALL BE NORMAL WEIGHT.
    B. MINIMUM DENSITY OF 125 PCF.

6. REINFORCEMENT: ASTM A 615 GRADE 60.

7. HORIZONTAL BOND BEAM AND VERTICAL REINFORCEMENT SHALL BE CONTINUOUS U.O.N.

8. LAP SPLICE HORIZONTAL REINFORCEMENT PER TYPICAL DETAILS OR PROVIDE MECHANICAL TENSION BAR COUPLERS. STAGGER SPLICE LOCATIONS.

9. GROUT SOLID ALL CORES AND BOND BEAMS WITH REINFORCEMENT.

10. GROUT SOLID ALL MASONRY BELOW FINISH FLOOR AND/OR FINISH GRADE.

11. MASONRY CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN, INSTALLATION, AND MAINTENANCE OF TEMPORARY BRACING.

12. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL THE FOLLOWING REQUIREMENTS ARE MET:
    A. THE FLOOR/ROOF DIAPHRAGMS ARE INSTALLED AND FASTENED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
    B. THE MASONRY UNITS HAVE REACHED THE REQUIRED STRENGTH, f'_m.

POST-INSTALLED ANCHORS

1. WHERE SPECIFIC ANCHOR MANUFACTURER, TYPE, SIZE, AND EMBED REQUIREMENTS ARE SHOWN ON DETAILS, DRAWINGS, OR SPECIFICATIONS, SUBSTITUTIONS ARE NOT ACCEPTABLE.

2. CONTRACTOR SHALL DESIGNATE ALL PERSONNEL PERFORMING ANCHOR INSTALLATION AND SHALL ARRANGE FOR ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING TO DESIGNATED PERSONNEL FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED.
    A. DOCUMENTED CONFIRMATION THAT EACH OF THE CONTRACTORS PERSONNEL WHO INSTALL ANCHORS HAVE RECEIVED TRAINING SHALL BE PROVIDED TO THE SPECIAL INSPECTIONS & TESTING INSPECTOR WITH COPY TO THE STRUCTURAL ENGINEER OF RECORD PRIOR TO COMMENCEMENT OF INSTALLING ANCHORS.

3. HOLES FOR THROUGH BOLTS SHALL BE FILLED WITH EPOXY TO ENSURE UNIFORM BEARING OF THE BOLT ON THE SUBSTRATE. THE VOLUME OF EPOXY SHALL BE SUFFICIENT TO FILL THE ANNULAR SPACE BETWEEN THE BOLT AND THE HOLE THROUGH THE ENTIRE WIDTH OF THE SUPPORTING ELEMENT.

4. HOLES FOR POST INSTALLED ANCHORS (MECHANICAL OR EPOXY) SHALL BE DRILLED WITH HAMMER OR ROTARY DRILLS ONLY. CONTRACTOR SHALL NOT SUBSTITUTE WITH CORE-DRILLED HOLES.

5. POST-INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR/ADHESIVE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS, INCLUDING BUT NOT LIMITED TO:
    A. BASE MATERIAL HOLE DIAMETER
    B. DEPTH FOR SPECIFIED ANCHOR/ADHESIVE
    C. HOLE CLEANING INSTRUCTIONS
    D. PROPER INSTALLATION TORQUE FOR EXPANSION ANCHORS.

6. WHERE NOT SPECIFICALLY INDICATED OTHERWISE, CONTRACTOR SHALL USE HILTI HIT-HY 200 V3 SAFE SET ADHESIVE SYSTEM WHERE ADHESIVE ANCHORING W/ DOWELS, THREADED ROD ANCHORS, OR REINFORCING IS ANCHORED INTO HARDENED CONCRETE IS INDICATED ON CONTRACT DOCUMENTS.

7. WHERE NOT SPECIFICALLY INDICATED OTHERWISE, CONTRACTOR SHALL USE HILTI HIT-HY 270 ADHESIVE WHERE ADHESIVE ANCHORING TO GROUT FILLED CONCRETE MASONRY IS SPECIFIED. PLASTIC MESH SCREEN TUBES SHALL NOT BE USED.

8. WHERE NOT SPECIFICALLY INDICATED OTHERWISE, CONTRACTOR SHALL USE HILTI KWIK HUS-EZ SCREW ANCHORS WHERE SCREW ANCHORING INTO HARDENED CONCRETE OR GROUT FILLED CONCRETE MASONRY IS INDICATED ON CONTRACT DOCUMENTS.

9. WHERE NOT SPECIFICALLY INDICATED OTHERWISE, CONTRACTOR SHALL USE HILTI KWIK BOLT KB-TZ2 EXPANSION ANCHORS WHERE EXPANSION ANCHORING INTO HARDENED CONCRETE OR GROUT FILLED CONCRETE MASONRY IS INDICATED ON CONTRACT DOCUMENTS.

10. ADHESIVE ANCHORS IN OVERHEAD VERTICAL APPLICATIONS ARE NOT PERMITTED.

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CSC PROJECT NUMBER: 25008

SEAL

STATE OF MICHIGAN
JAMES CORSIGLIA
ENGINEER
No. 6201040041
LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT MICHIGAN

DATE	ISSUE
09.15.2026	OWNER REVISIONS
06.24.2025	BIDS
05.09.2025	BIDS/PERMITS

KEY PLAN

FSP PROJECT NO.
TRC22.066

DRAWING TITLE

Structural General Notes

DRAWING NUMBER

S.002

1705.1 - REQUIRED VERIFICATION AND INSPECTION OF POST-INSTALLED ANCHORS

INSPECTION TASK	FREQUENCY OF INSPECTION CONTINUOUS	FREQUENCY OF INSPECTION PERIODIC	REFERENCED STANDARD	RESPONSIBLE AGENT
1. Expansion, wedge, screw, and powder-actuated fasteners/anchors:				
a. Prior to installation, verify anchor type, anchor dimensions, concrete type, concrete compressive strength, and drill bit type.		X	ACI 355.2, ICC ES AC193, Manuf. Requirements	SI,PE
b. During installation, verify hole dimensions, hole cleaning procedures, anchor spacing, edge distance, concrete thickness, anchor embedment, and installation torque.		X		
2. Adhesive anchors installed in horizontal or overhead application:			ACI 355.4, ICC ES AC308, Manuf. Requirements	SI,PE
a. Prior to installation:				
1) Review certifications from each installer indicating completion of the ACI/CRSI Adhesive Anchor Installation Certification Program.	X			
b. During installation verify the following:				
1) Verify anchor type, adhesive identity and expiration date, anchor dimensions, concrete type, concrete compressive strength, hole drilling method, hole dimensions, hole-cleaning procedures, anchor spacing, edge distances, concrete thickness, anchor embedment, and installation torque.	X			
2) Verify compliance with proof-loading program (when required)	X			
3. Adhesive anchors not installed in horizontal or overhead application:			ACI 355.4, ICC ES AC308, Manuf. Requirements	SI,PE
a. Prior to installation verify the following:				
1) Review certifications from each installer indicating completion of the adhesive manufacturers training and quality assurance program, or ACI/CRSI Adhesive Anchor Installation Certification Program.	X			
2) Anchor type, anchor dimensions, concrete type, concrete compressive strength, adhesive identification and expiration date.	X			
b. During installation verify the following:				
1) Verify anchor type, adhesive identity and expiration date, anchor dimensions, concrete type, concrete compressive strength, hole drilling method, hole dimensions, hole-cleaning procedures, anchor spacing, edge distances, concrete thickness, anchor embedment, and installation torque.	X			
2) Verify initial installations of each type and size of adhesive anchor. Subsequent installations of the same anchor type and size by the same construction personnel may be performed in the absence of the special inspector and inspected on a periodic basis.		X		
3) For ongoing installations, perform periodic inspections in accordance with item 3.b.1		X		

1705.5 - REQUIRED VERIFICATION AND INSPECTION OF WOOD CONSTRUCTION

INSPECTION TASK	FREQUENCY OF INSPECTION CONTINUOUS	FREQUENCY OF INSPECTION PERIODIC	REFERENCED STANDARD	RESPONSIBLE AGENT
1. Inspect wood structural panel sheathing or gypsum sheathing to ascertain whether it is of the grade and thickness shown on the approved building plans and/or approved submittals. Verify fasteners do not break skin of structural panels.		X		SI,PE
2. Verify nominal size of framing members at adjoining panel edges, the nail or staple diameter and length, the number of fastener lines and that the spacing between fasteners in each line and at edge margins agrees with the approved building plans and/or shop drawings.		X		SI,PE
3. Verify bolts and washers, connectors and fastening of connectors, anchor bolt size and spacing, and nailing schedule.		X		SI,PE
4. Verify connections to roof and sill plates, including hold down connections.		X		SI,PE

SPECIAL INSPECTION LEGEND & NOTES

1. Special inspections shall be performed in accordance with 2021 Michigan Building Code Chapter 17 and as modified herein.
2. SI: Special Inspector - A qualified person employed or retained by an approved agency and approved by the building official having jurisdiction as having the competence necessary to inspect a particular type of construction requiring special inspection.
3. PE: Registered Professional Engineer licensed in the State of Michigan meeting the minimum qualification requirements to perform the indicated special inspection service and approved by the Building Official Having Jurisdiction.
4. GEOR: The geotechnical engineer of record who provided the original project geotechnical soils investigation report and meets the minimum qualification requirements to perform the indicated special inspection service and approved by the Building Official Having Jurisdiction.
5. GEOR shall submit records of the inspection results to the SI. The SI shall compile and submit inspection records to the Architect/Engineer of Record and Building Official. Records shall include statements of tests, whether installed/fabricated item complies with contract documents, remedial work performed, retests.
6. Special Inspectors performing inspection services shall refer to and familiarize themselves with the Contract Documents, approved submittals, RFI responses, and field directives related to the work being inspected.
7. SI shall develop and maintain a list of each reported discrepancy and suggested remedial action. It shall list method of how discrepancy was resolved and when the remedial action is performed.
8. The Special Inspection Agency and/or Special Inspector shall be paid by the Owner or the registered design professional in responsible charge acting as the Owner's agent, in compliance with the Michigan Building Code.
9. Refer to the Michigan Building Code Chapter 35 for current reference standard editions.
10. Refer to the International Code Council Special Inspection Manual 2021 Edition for additional information.

1705.6 - REQUIRED VERIFICATION AND INSPECTION OF SOILS

INSPECTION TASK	FREQUENCY OF INSPECTION CONTINUOUS	FREQUENCY OF INSPECTION PERIODIC	REFERENCED STANDARD	RESPONSIBLE AGENT
1. Verify materials below shallow footings are adequate to achieve the design bearing capacity.		X	Contract Documents Geotechnical Report	GEOR,SI,PE
2. Verify excavations are extended to proper depth and have reached proper material.		X		
3. Perform classification and testing of compacted fill materials.		X		
4. During fill placement, verify use of proper materials and procedures in accordance with the provisions of the approved geotechnical report. Verify density and lift thicknesses during placment and compaction of compacted fill.	X			
5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.		X		
6. Verify earth retaining structures (permanent or temporary) are backfilled in accordance with performance specifications and delegated design submittals.	X			
7. Verify subgrade preparation for concrete slabs on grade in accordance with specification requirements immediately prior to placement of the concrete slab on grade.	X			

1705.3 - REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

INSPECTION TASK	FREQUENCY OF INSPECTION CONTINUOUS	FREQUENCY OF INSPECTION PERIODIC	REFERENCED STANDARD	RESPONSIBLE AGENT
1. Inspect reinforcement and verify placement.		X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	SI,PE
2. Inspect anchors cast in concrete.		X	ACI 318: 26.13.3.3	SI,PE
3. Inspect anchors post-installed in hardened concrete members.				SI,PE
a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads.	X		ACI 318: 26.13.3.2	
b. Mechanical anchors and adhesive anchors not defined in 4.a.		X	ACI 318: 26.13.3	
4. Verify use of required mix designs.		X	ACI 318: Ch. 19, 26.4.3, 26.4.4	SI,PE
5. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X		ASTM C31 ASTM C172 ACI 318: 26.5, 26.12	SI,PE
6. Inspect concrete placement for proper application techniques.	X		ACI 318: 26.5	SI,PE
7. Verify maintenance of specified curing temperature and techniques.		X	ACI 318: 26.5.3-26.5.5	SI,PE
8. Inspect formwork for shape, location and dimensions of the concrete member being formed.		X	ACI 318: 26.11.1.2(b)	SI,PE

1705.4 - REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION - LEVEL 2

INSPECTION TASK	FREQUENCY OF INSPECTION CONTINUOUS	FREQUENCY OF INSPECTION PERIODIC	Reference for Criteria TMS 402	Reference for Criteria TMS 602	RESPONSIBLE AGENT
1. Prior to construction, verification of compliance of submittals.		X		Art. 1.5	SI,PE
2. Prior to construction, verification of f'm except where specifically exempted by TMS 602-16.	X			Art. 1.4 B	SI,PE
3. During construction, verification of Slump flow and Visual Stability Index (VSI) when self-consolidating grout is delivered to the project site.	X			Art. 1.5 & 1.6.3	SI,PE
4. As masonry construction begins, verify that the following are in compliance:					SI,PE
a. Proportions of site-prepared mortar.		X		Art. 2.1, 2.6 A, 2.6 C	
b. Grade, type, and size of reinforcement, connectors, and anchor bolts.		X		Art. 3.4	
c. Sample panel construction.		X		Art. 1.6 D	
5. Prior to grouting, verify that the following are in compliance:					SI,PE
a. Grout space is clean.		X		Art. 3.2 D, 3.2 F	
b. Placement of reinforcement, connectors, and anchor bolts.		X	Sec. 6.1, 6.3.1, 6.3.6, & 6.3.7	Art. 3.2 E, 3.4	
c. Proportions of site-prepared grout.		X		Art. 2.6 B, & 2.4 G.1.b	
6. Verify compliance of the following during construction:					SI,PE
a. Materials and procedures with the approved submittals.		X		Art. 1.5	
b. Placement of masonry units and mortar joint construction.		X		Art. 3.3 B	
c. Size and location of structural elements.		X		Art. 3.3 F	
d. Type, size and locations of anchors, including other details of anchorage of masonry to structural members, frames, or other construction.		X	Sec. 1.2.1(e), 6.2.1, & 6.3.1		
e. Welding of reinforcement.	X		Sec. 6.1.6.1.2		
f. Preparation, construction and protection of masonry during cold weather (temperature below 40 degrees F) or hot weather (temperatures above 90 degrees F).		X		Art. 1.8 C, 1.8 D	
g. Placement of grout is in compliance.	X			Art 3.5	
7. Observe preparation of grout specimens, mortar specimens, and/or prisms.		X		Art. 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4	SI,PE

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CSC PROJECT NUMBER: 25008

SEAL

STATE OF MICHIGAN
JAMES CORSIGLIA
ENGINEER
No. 6201040041
LICENSED PROFESSIONAL ENGINEER

MICHIGAN

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT

DATE	ISSUE
09.15.2026	OWNER REVISIONS
06.24.2025	BIDS
05.09.2025	BIDS/PERMITS

KEY PLAN

FSP PROJECT NO.
TRC22.066

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Special Inspections & Testing

DRAWING NUMBER

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1705.2.1 - REQUIRED VERIFICATION AND INSPECTION OF STRUCTURAL STEEL

INSPECTION TASK	FREQUENCY OF INSPECTION: CONTINUOUS	FREQUENCY OF INSPECTION: PERIODIC	REFERENCED STANDARD	RESPONSIBLE AGENT
1. Material verification of structural steel:				SI,PE
a. For structural steel, identification markings to conform to AISC 360.		X	AISC 303, Section 5	
b. For other steel, identification markings to conform to ASTM standards specified in the approved construction documents.		X	Applicable ASTM material standards	
c. Manufacturers' certified mill test reports.		X	AISC 303, Section 6.1	
2. Inspection tasks prior to welding:			AISC 360, AWS D1.1	SI, PE
a. Welder qualification records and continuity records		X		
b. Welding procedure specifications (WPSs) available.	X			
c. Manufacturer certifications for welding consumables available.	X			
d. Material identification (type/grade).		X		
e. Welder identification system by which a welder who has welded a joint or member can be identified.		X		
f. Configuration and finish of access holes.		X		
g. Fit-up of fillet welds:				
1) Dimensions (alignment, gaps at root).		X		
2) Cleanliness (condition of steel surface).		X		
3) Tacking (tack weld quality and location).		X		
3. Inspection tasks during welding:			AISC 360, AWS D1.1	SI, PE
a. Control and handling of welding consumables:				
1) Packaging.		X		
2) Exposure control.		X		
b. No welding over cracked tack welds.		X		
c. Environmental conditions:				
1) Wind speed within limits.		X		
2) Precipitation and temperature.		X		
d. Welding procedure specifications (WPSs) followed:				
1) Settings on welding equipment.		X		
2) Travel speed.		X		
3) Selected welding materials.		X		
4) Shielding gas type/flow rate.		X		
5) Preheat applied.		X		
6) Interpass temperature maintained (min/max).		X		
7) Proper position (F,V,H, OH).		X		
e. Welding techniques:				
1) Interpass and final cleaning.		X		
2) Each pass within profile limitations.		X		
3) Each pass meets quality requirements.		X		
4. Inspection tasks after welding:			AISC 360, AWS D1.1	SI, PE
a. Welds cleaned.		X		
b. Size, length and location of welds.	X			
c. Welds meet visual acceptance criteria:				
1) Crack prohibition.	X			
2) Welds/base metal fusion.	X			
3) Crater cross section.	X			
4) Weld profile.	X			
5) Weld Size.	X			
6) Undercut.	X			
7) Porosity.	X			
d. Arc strikes.	X			
e. k-area, when welding of doubler plates, continuity plates, or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks within 3 in. of the weld.	X			
f. Weld access holes in heavy shapes and built-up shapes. After rolled heavy shapes and built-up heavy shapes are welded, visually inspect the weld access hole for cracks.	X			
g. Backing removed and weld tabs removed (if required).	X			
h. Repair activities.	X			
i. Document acceptance or rejection of welded joints or members.	X			
j. No prohibited welds have been added without the approval of the EOR.	X			
5. Nondestructive testing of welded joints:			AISC 360, AWS D1.1	SI, PE
a. Ultrasonic testing of 10% CJP groove welds in butt, T- and corner joints in Risk Category II structures subject to transversely applied tension loading, in materials 5/16 in. thick or greater. Increase rate of inspection to 100% when required per AISC 360-16 N5.5f.	X			
6. Inspection tasks prior to bolting:			AISC 360, RCSC	SI, PE
a. Manufacturers certifications available for fastener materials.	X			
b. Fasteners marked in accordance with ASTM requirements.		X		
c. Correct fastener selected for joint details (grade, type, bolt length if threads are to be excluded from shear plane).		X		
d. Correct bolting procedure selected for joint detail.		X		
e. Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements.		X		
f. Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used.		X		
g. Protected storage provided for bolts, nuts, washers, and other fastener components.		X		
7. Inspection tasks during bolting:			AISC 360, RCSC	SI, PE
a. Fastener assemblies placed in all holes and washers and nuts are positioned as required.		X		
b. Joint brought to snug-tight condition prior to pretensioning operation.		X		
c. Fastener component not turned by the wrench prevented from rotating.		X		
d. Fasteners are pretensioned in accordance with the RCSC specification, progressing systematically from the most rigid point toward the free edges.		X		
8. Inspection tasks after bolting:			AISC 360, RCSC	SI, PE
a. Document acceptance or rejection of bolted connections.	X			

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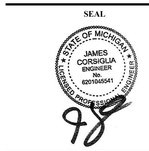
SEAL



MICHIGAN

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

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CONCRETE SPECIFICATIONS - CONTINUED

8. CONCRETE REINFORCEMENT:
   A. REINFORCEMENT SHALL BE ACCURATELY FABRICATED TO DIMENSIONS ON THE APPROVED SHOP DRAWINGS, DETAILS AND SCHEDULES.
   B. REINFORCEMENT SHALL BE BENT COLD AND SHALL NOT BE HEATED FOR ANY PURPOSE.
   C. REINFORCING SHALL BE ACCURATELY PLACED AND RIGIDLY SECURED IN POSITION IN ACCORDANCE WITH THE CRSI REQUIREMENTS FOR RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS AND RECOMMENDED PRACTICE FOR PLACING BAR SUPPORTS.
   D. REINFORCEMENT SHALL BE SPLICED IN ACCORDANCE WITH DIMENSIONS ON THE APPROVED SHOP DRAWINGS, DETAILS AND SCHEDULES.
   E. WELDED WIRE REINFORCEMENT SHALL BE CONTINUOUS, SHALL HAVE JOINTS LAPPED AT LEAST ONE FULL MESH, BUT NOT LESS THAN 6" AND SHALL BE SUPPORTED AT PROPER ELEVATIONS BY ACCESSORIES.

9. CONCRETE PLACEMENT
   A. GENERAL:
      a. CONCRETING SHALL NOT BE CONTINUED WHEN THE AIR TEMPERATURE IS BELOW 45 DEGREES F. UNLESS THE AGGREGATES AND/OR WATER ARE HEATED TO PRODUCE A PLACING TEMPERATURE OF THE CONCRETE BETWEEN 60 DEGREES F. AND 90 DEGREES F. AND WHEN ADEQUATE PROVISIONS ARE IN PLACE FOR MAINTAINING PROTECTION AGAINST FREEZING OF THE CONCRETE FOR AT LEAST 7 DAYS AFTER PLACING.
      b. NO CONCRETE SHALL BE PLACED ON FROZEN SUBGRADE.
      c. COMPLY WITH ACI 304, "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE," AND AS HEREIN SPECIFIED.
      d. ADDITION OF WATER AFTER THE BATCH WILL NOT BE PERMITTED.
         1. INCREASE SLUMP FOR WORKABILITY BY ADDING WATER REDUCING ADMIXTURES.
   B. PLACING CONCRETE:
      a. DO NOT PLACE CONCRETE ON SURFACES CONTAINING WATER.
      b. DEPOSIT CONCRETE IN FORMS IN HORIZONTAL LAYERS
         1. NOT DEEPER THAN 24 INCHES AND IN A MANNER TO AVOID INCLINED CONSTRUCTION JOINTS.
         2. DEPOSIT CONCRETE CONTINUOUSLY OR IN LAYERS OF SUCH THICKNESS THAT NO CONCRETE WILL BE PLACED ON CONCRETE THAT HAS HARDENED SUFFICIENTLY TO CAUSE THE FORMATION OF SEAMS OR PLANES OF WEAKNESS.
         3. WHERE PLACEMENT CONSISTS OF SEVERAL LAYERS, PLACE EACH LAYER WHILE PRECEDING LAYER IS STILL PLASTIC TO AVOID COLD JOINTS.
      c. CONCRETE SHALL HAVE AN UNRESTRICTED FREE VERTICAL DROP. THE STREAM OF CONCRETE SHALL NOT FALL OVER REINFORCING, TIES OR EMBEDDED ITEMS.
      d. CONSOLIDATION: CONSOLIDATE CONCRETE BY MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND SPADING, RODDING OR TAMPING.
      e. MAINTAIN REINFORCING IN PROPER POSITION DURING CONCRETE PLACEMENT.
   C. COLD-WEATHER PLACING:
      a. COMPLY WITH PROVISIONS OF ACI 306.
      b. PROTECT CONCRETE WORK FROM PHYSICAL DAMAGE OR REDUCED STRENGTH THAT COULD BE CAUSED BY FROST, FREEZING ACTIONS, OR LOW TEMPERATURES.
   D. HOT-WEATHER PLACING:
      a. COMPLY WITH PROVISIONS OF ACI 305.
      b. COOL INGREDIENTS BEFORE MIXING TO MAINTAIN CONCRETE TEMPERATURE AT TIME OF PLACEMENT BELOW 90 DEG F.

10. FORMED CONCRETE FINISHING:
   A. ROUGH FORM FINISH:
      a. REPAIR AND PATCH DEFECTIVE AREAS. CHIP OFF OR RUB DOWN FINS AND OTHER PROJECTIONS EXCEEDING 1/4 INCH IN HEIGHT.
   B. SMOOTH FORM FINISH:
      a. FOR FORMED CONCRETE SURFACES EXPOSED TO VIEW OR TO BE COVERED WITH A COATING MATERIAL. THIS IS AN AS-CAST CONCRETE SURFACE OBTAINED WITH SELECTED FORM-FACING MATERIAL, ARRANGED IN AN ORDERLY AND SYMMETRICAL MANNER WITH A MINIMUM OF SEAMS.
      b. REPAIR AND PATCH DEFECTIVE AREAS WITH FINS AND OTHER PROJECTIONS COMPLETELY REMOVED AND SMOOTHED.

11. MONOLITHIC SLAB FINISHES:
   A. FINISH SURFACE IN SUCH FASHION THAT THE GAP AT ANY POINT BETWEEN THE CONCRETE SURFACE AND A 10-FOOT LONG STRAIGHTEDGE PLACED AT A TRUE HORIZONTAL PLANE, RESTING ON THE HIGH- SPOT AND PLACED ANYWHERE ON THE SURFACE DOES NOT EXCEED ¼ INCH.
   B. TROWEL FINISH:
      a. APPLY TROWEL FINISH TO SLAB SURFACES TO BE EXPOSED TO VIEW, COVERED WITH PAINT, OR OTHER THIN FILM FINISH COATING SYSTEM.
   C. SCRATCH FINISH:
      a. APPLY SCRATCH FINISH TO SLAB SURFACES TO RECEIVE COMPOSITE CONCRETE FLOOR TOPPING OR MORTAR SETTING BEDS FOR TILE, TERRAZZO, AND OTHER BONDED APPLIED CEMENTITIOUS FINISH FLOORING MATERIAL.
   D. TROWEL AND FINE BROOM FINISH:
      a. WHERE TILE IS TO BE INSTALLED WITH THIN-SET MORTAR, APPLY TROWEL FINISH THEN IMMEDIATELY FOLLOW WITH SLIGHTLY SCARIFYING SURFACE BY FINE BROOMING.
   E. NONSLIP BROOM FINISH:
      a. APPLY NONSLIP BROOM FINISH TO EXTERIOR CONCRETE PLATFORMS, STEPS, AND RAMPS.

12. CONCRETE CURING AND PROTECTION:
   A. GENERAL:
      a. PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND AGAINST INJURY FROM HEAT, COLD AND DEFACEMENT OF ANY NATURE DURING CONSTRUCTION OPERATIONS.
      b. START INITIAL CURING AS SOON AS FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE AFTER PLACING AND FINISHING.
      c. CURING SHALL BE IN ACCORDANCE WITH ACI 301 PROCEDURES.
   B. CURING METHODS:
      a. PERFORM CURING OF CONCRETE BY ONE OF THE FOLLOWING METHODS:
         1. MOIST CURING.
         2. MOISTURE-RETAINING COVER CURING.
            A. BURLAP IS NOT PERMITTED.
         3. APPLICATION OF A DISSIPATING CURING COMPOUND.
   C. PROVIDE MOISTURE CURING BY FOLLOWING METHODS:
      a. KEEP CONCRETE SURFACE CONTINUOUSLY WET BY COVERING WITH WATER.
      b. COVER CONCRETE SURFACE WITH SPECIFIED ABSORPTIVE COVER, THOROUGHLY SATURATE COVER WITH WATER, AND KEEP CONTINUOUSLY WET.
   D. PROVIDE MOISTURE-RETAINING COVER CURING AS FOLLOWS:
      a. COVER CONCRETE SURFACES WITH MOISTURE-RETAINING COVER FOR CURING CONCRETE, PLACED IN WIDEST PRACTICABLE WIDTH WITH SIDES AND ENDS LAPPED AT LEAST 3 INCHES AND SEALED BY WATERPROOF TAPE OR ADHESIVE.
   E. PROVIDE DISSIPATING CURING COMPOUND TO INTERIOR SLABS AS FOLLOWS:
      a. APPLY SPECIFIED DISSIPATING CURING COMPOUND TO CONCRETE SLAB AS SOON AS FINAL FINISHING OPERATIONS ARE COMPLETE.
      b. USE OF DISSIPATING CURING COMPOUND REQUIRES FLOORING CONTRACTORS APPROVAL.
      c. REMOVE COMPOUND IN ACCORDANCE WITH FLOORING MANUFACTURERS REQUIREMENTS.

13. CONCRETE SEALING:
   A. INTERIOR CONCRETE SLABS SHALL BE SEALED WITH INTERIOR SLAB SEALER COMPLIANT WITH MATERIAL REQUIREMENTS INDICATED IN SECTION "MATERIALS" EXCEPT WHERE COVERED WITH FLOOR FINISHES.
   B. EXTERIOR CONCRETE SLAB SHALL BE SEALED WITH EXTERIOR SLAB SEALER COMPLIANT WITH MATERIAL REQUIREMENTS INDICATED IN SECTION "MATERIALS".
   C. PREPARE CONCRETE SURFACE AND APPLY CONCRETE SEALER IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS FOR APPROVED SLAB SEALER.

14. SAMPLING AND TESTING: IN ACCORDANCE WITH THE STATEMENT OF SPECIAL INSPECTION AND TESTING.

CONCRETE SPECIFICATIONS

1. CONCRETE WORK SHALL CONFORM TO THE ACI STANDARD "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, STRENGTH, SAFETY AND ADEQUACY OF FORMWORK, SHORING, BRACING AND METHODS OF CONSTRUCTION.
   A. THE CONTRACTOR IS RESPONSIBLE TO ENGAGE THE SERVICES OF A QUALIFIED DELEGATED DESIGN PROFESSIONAL LICENSED IN THE STATE OF MICHIGAN.
   B. FORMWORK SHALL LEND ITSELF TO A RATIONAL STRUCTURAL ANALYSIS.
   C. FORMWORK STRUCTURAL CALCULATIONS AND DRAWINGS SHALL BE SIGNED AND SEALED BY THE DELEGATED DESIGN PROFESSIONAL RESPONSIBLE FOR THEIR PREPARATION.

3. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE MIX DESIGN, STRENGTH, SLUMP, CONSISTENCY, FINISH AND GENERAL QUALITY OF CONCRETE.

4. ACTION SUBMITTALS:
   A. SUBMIT PRODUCT DATA STEEL-REINFORCEMENT, FIBER-REINFORCING, FORMING ACCESSORIES, ADMIXTURES, PATCHING COMPOUNDS, WATER STOPS, JOINT SYSTEMS, CURING COMPOUNDS AND/OR MATERIALS, AND CONCRETE SEALERS.
   B. CONCRETE MIX DESIGN (FIELD DATA OR TRIAL MIX):
      a. TESTING FOR MATERIAL CERTIFICATION OF COMPLIANCE WITH ASTM AND MDOT STANDARDS SHALL BE PERFORMED NOT MORE THAN 90 DAYS FROM RECEIPT OF SUBMITTAL BY THE STRUCTURAL ENGINEER.
      b. PRODUCT DATA FOR ALL MATERIALS AND ADMIXTURES USED IN PROPOSED CONCRETE MIX.
      c. TESTING DATA INDICATING MIX DESIGN MEETS OR EXCEEDS MINIMUM REQUIREMENTS FOR DRYING SHRINKAGE FOR CONCRETE SLAB MIX DESIGNS.
      d. BREAK HISTORY:
         1. MINIMUM 15 TEST RESULTS EXAMPLES.
         2. OLDEST BREAK HISTORY SHALL BE WITHIN 180 CALENDAR DAYS OF CONCRETE PLACEMENT.
   C. REINFORCEMENT SHOP DRAWINGS:
      a. SUBMIT SHOP DRAWINGS FOR REINFORCEMENT, FOR FABRICATION, BENDING, AND PLACEMENT OF CONCRETE REINFORCEMENT. COMPLY WITH ACI SP-66, "ACI DETAILING MANUAL"

5. MATERIALS:
   A. REINFORCING BARS: ASTM A 615, GRADE 60, DEFORMED.
   B. WELDED WIRE REINFORCING (WWR): ASTM A 1064.
      a. WELDED WIRE REINFORCEMENT SHALL BE FURNISHED IN SHEETS, NOT ROLLS.
   C. MACRO-SYNTHETIC FIBER REINFORCING:
      a. SYNTHETIC MACRO-FIBER REINFORCEMENT; ENGINEERED 100 PERCENT VIRGIN POLYOLEFIN FIBRILLATED FIBERS SPECIFICALLY MANUFACTURED FOR USE AS CONCRETE REINFORCEMENT AND SO CERTIFIED BY THE MANUFACTURER AND CONTAINING NO REPROCESSED OLEFIN MATERIALS; MEET REQUIREMENTS OF ASTM C 1116.
   D. PORTLAND CEMENT: ASTM C 150, TYPE I/II.
   E. BLENDED HYDRAULIC CEMENT: ASTM C 595, TYPE 1L
   F. BLENDED HYDRAULIC CEMENT: ASTM C 595, TYPE 1T
   G. FLY ASH: ASTM C 618, TYPE C OR F, WITH ALKALI LESS THAN 1.5%.
      a. FOR AIR ENTRAINED CONCRETE RESTRICT LOSS ON IGNITION TO LESS THAN 1.5%.
      b. FLY ASH CONTAINING AMMONIA SHALL BE MITIGATED PRIOR TO SHIPMENT TO THE CONCRETE PRODUCER.
         1. DOSAGE OF MITIGATION AGENT TO BE APPROPRIATE TO AMOUNT OF AMMONIA IN FLY-ASH.
      c. MAXIMUM DOSAGE: 25% (BY WEIGHT) OF CEMENTITIOUS MATERIALS WHEN NO SLAG CEMENT IS USED.
      d. MAXIMUM DOSAGE: 35% SLAG + 15% FLY-ASH USED IN COMBINATION.
      e. MAXIMUM DOSAGE: 40% SLAG + 10% FLY-ASH USED IN COMBINATION.
   H. SLAG CEMENT: ASTM C989, GRADE 100 OR 120.
      a. MAXIMUM DOSAGE: 40% (BY WEIGHT) OF CEMENTITIOUS MATERIALS WHEN NO FLY-ASH IS USED.
      b. MAXIMUM DOSAGE: 35% SLAG + 15% FLY-ASH USED IN COMBINATION.
      c. MAXIMUM DOSAGE: 40% SLAG + 10% FLY-ASH USED IN COMBINATION.
   I. NORMAL WEIGHT AGGREGATES: ASTM C 33
      a. NORMAL WEIGHT AGGREGATE FOR CONCRETE SLABS SHALL BE CRUSHED LIMESTONE ONLY, SUBSTITUTIONS ARE NOT ACCEPTABLE.
      b. RESTRICTION: THE USE OF BLAST FURNACE SLAG AS AN AGGREGATE IS NOT PERMITTED IN ANY CONCRETE.
   J. WATER: ASTM C 1602 AND POTABLE.
   K. AIR-ENTRAINING ADMIXTURE: ASTM C 260.
   L. WATER-REDUCING ADMIXTURE: ASTM C 494, TYPE A.
   M. HIGH-RANGE WATER-REDUCING ADMIXTURE: ASTMC494, TYPE F.
   N. CONTROL JOINT FILLER NOT EXPOSED TO UV: 2 COMPONENT 100% SOLIDS COMPOUND, WITH 28 DAY SHORE A HARDNESS 90, OR SHORE D HARDNESS 50 (ASTM D 2240).
   O. CONTROL JOINT FILLER EXPOSED TO UV: 2 COMPONENT POLYUREA 100% SOLIDS COMPOUND, WITH 28 DAY SHORE HARDNESS OF 80-100 (ASTM D2240).
   P. VAPOR RETARDER: ASTM E 1745-09, CLASS A.
   Q. MOISTURE-RETAINING COVER: COMPLYING WITH ASTMC171.
   R. DISSIPATING CURING COMPOUNDS: ASTM 309, TYPE 1.
      a. REMOVE PRIOR TO FINISH FLOOR INSTALLATION.
   S. SELF-LEVELING COMPOUND: K-15"; ARDEX, INC.;
   T. INTERIOR SLAB SEALER: ACRYLIC, HIGH SOLIDS LIQUID SEALER COMPLYING WITH ASTM C-1315.
      a. MINIMUM SOLIDS CONTENT: 20%
   U. EXTERIOR SLAB SEALER: SILOXANE OR SILANE PENETRATING SEALER.
      a. MINIMUM SOLIDS CONTENT: 40%

6. PROPORTIONING AND DESIGN OF MIXES:
   A. BASIC MIX PROPORTIONS SHALL BE ESTABLISHED BY THE CONTRACTOR IN ACCORDANCE WITH ACI 211.1.
   B. NORMAL-WEIGHT CONCRETE, COMPRESSIVE STRENGTH AND WATER/CEMENT RATIO OF 0.45.
   C. FOR CONCRETE SLABS ON GRADE: LIMIT 28 DAY DRYING SHRINKAGE TO 0.035% MAXIMUM, MEASURED IN ACCORDANCE WITH ASTM C-157.
   D. ADMIXTURES:
      a. USE ADMIXTURES FOR WATER REDUCTION AND SET CONTROL IN STRICT COMPLIANCE WITH MANUFACTURER'S DIRECTIONS.
      b. AIR-ENTRAINING ADMIXTURES.
         1. USE AIR-ENTRAINING ADMIXTURE IN EXTERIOR EXPOSED CONCRETE.
         2. ADD AIR-ENTRAINING ADMIXTURE AT MANUFACTURER'S PRESCRIBED RATE TO RESULT IN CONCRETE AT POINT OF PLACEMENT HAVING TOTAL AIR CONTENT WITH A TOLERANCE OF PLUS OR MINUS 1-1/2 PERCENT FROM THE FOLLOWING:
         3. EXTERIOR CONCRETE EXPOSED TO FREEZING AND THAWING, DEICER CHEMICALS, OR HYDRAULIC PRESSURE:
            A. 5.5 % (SEVERE EXPOSURE) 1-1/2-INCH MAX. AGGREGATE.
            B. 6.0 % (SEVERE EXPOSURE) 1-INCH MAX. AGGREGATE.
            C. 6.0 % (SEVERE EXPOSURE) 3/4-INCH MAX. AGGREGATE.
            D. 7.0 % (SEVERE EXPOSURE) 1/2-INCH MAX. AGGREGATE.

EARTHWORK SPECIFICATIONS - CONTINUED

17. FILL AND BACKFILL:
   A. FILL EXCAVATIONS AS PROMPTLY AS WORK PERMITS, BUT NOT UNTIL COMPLETION OF THE FOLLOWING:
      a. INSPECTION, TESTING AND APPROVAL OF SUBGRADE BY THE SPECIAL INSPECTION AGENCY.
      b. ACCEPTANCE OF CONSTRUCTION BELOW FINISH GRADE INCLUDING, WHERE APPLICABLE; DAMPPROOFING, WATERPROOFING, AND PERIMETER INSULATION.
      c. INSPECTION, TESTING, APPROVAL, AND RECORDING LOCATIONS OF UNDERGROUND UTILITIES HAVE BEEN PERFORMED AND RECORDED.
      d. REMOVAL OF CONCRETE FORMWORK.
      e. FILLING OF VOIDS WITH SATISFACTORY MATERIALS.
      f. REMOVAL OF TRASH AND DEBRIS FROM EXCAVATION.
   B. PLACE FILL MATERIALS IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
   C. PLACE FILL MATERIALS EVENLY ADJACENT TO STRUCTURES, PIPING, OR CONDUIT TO REQUIRED ELEVATIONS. PREVENT WEDGING ACTION OF FILL AGAINST STRUCTURES OR DISPLACEMENT OF PIPING OR CONDUIT BY CARRYING MATERIAL UNIFORMLY AROUND STRUCTURE, PIPING, OR CONDUIT TO APPROXIMATELY SAME ELEVATION IN EACH LIFT.
   D. PLACE BASE COURSE MATERIAL ON PREPARED SUBGRADE IN LAYERS OF UNIFORM THICKNESS, CONFORMING TO INDICATED CROSS-SECTION AND THICKNESS. MAINTAIN OPTIMUM MOISTURE CONTENT FOR COMPACTING BASE MATERIAL DURING PLACEMENT OPERATIONS.
   E. WHEN A COMPACTED BASE COURSE IS INDICATED TO BE 6 INCHES THICK OR LESS, PLACE MATERIAL IN A SINGLE LAYER. WHEN INDICATED TO BE MORE THAN 6 INCHES THICK, PLACE MATERIAL IN EQUAL LAYERS, EXCEPT NO SINGLE LAYER MORE THAN 6 INCHES OR LESS THAN 3 INCHES IN THICKNESS WHEN COMPACTED.

18. COMPACTION:
   A. AFTER GRADING, COMPACT SUBGRADE SURFACES TO THE DEPTH AND INDICATED PERCENTAGE OF MAXIMUM OR RELATIVE DENSITY.
   B. BEFORE COMPACTION, MOISTEN OR AERATE EACH LAYER AS NECESSARY TO PROVIDE OPTIMUM MOISTURE CONTENT.
   C. MOISTURE CONTENT OF FILL AT TIME OF PLACEMENT SHALL BE WITHIN 2% OF THE OPTIMUM MOISTURE.
   D. COMPACT EACH LAYER TO REQUIRED PERCENTAGE OF MAXIMUM DRY DENSITY OR RELATIVE DRY DENSITY FOR EACH AREA CLASSIFICATION.
   E. DO NOT PLACE FILL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST OR ICE.
   F. CORRECT IMPROPERLY COMPACTED AREAS OR LIFTS AS DIRECTED BY THE SPECIAL INSPECTION AGENCY IF SOIL DENSITY TESTS INDICATE INADEQUATE COMPACTION.

19. FIELD QUALITY CONTROL
   A. SPECIAL INSPECTION AGENCY SHALL INSPECT AND APPROVE EACH SUBGRADE AND FILL LAYER BEFORE FURTHER FILL OR CONSTRUCTION WORK IS PERFORMED.
   B. PERFORM FIELD DENSITY TESTS IN ACCORDANCE WITH ASTM D 1557 (MODIFIED PROCTOR). COMPACT SOIL TO MINIMUM 95% MAXIMUM UNIT WEIGHT.
   C. ALTERNATE: PERFORM FIELD DENSITY TESTS IN ACCORDANCE WITH ASTM D 1556 (SAND CONE METHOD) OR ASTM D 2167 (RUBBER BALLOON METHOD). COMPACT SOIL TO MINIMUM 100% MAXIMUM UNIT WEIGHT.
   D. FIELD DENSITY TESTS MAY ALSO BE PERFORMED BY THE NUCLEAR METHOD IN ACCORDANCE WITH ASTM D 2922, PROVIDING THAT CALIBRATION CURVES ARE PERIODICALLY CHECKED AND ADJUSTED TO CORRELATE TO TESTS PERFORMED USING ASTM D 1556.
      a. IN CONJUNCTION WITH EACH DENSITY CALIBRATION CHECK, CHECK THE CALIBRATION CURVES FURNISHED WITH THE MOISTURE GAGES IN ACCORDANCE WITH ASTM D 3017.
   E. MAKE CALIBRATION CHECKS OF BOTH DENSITY AND MOISTURE GAGES AT BEGINNING OF WORK, ON EACH DIFFERENT TYPE OF MATERIAL ENCOUNTERED, AND AT INTERVALS AS REQUIRED BY EQUIPMENT MANUFACTURER.

20. MAINTENANCE:
   A. PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION. KEEP FREE OF TRASH AND DEBRIS.
   B. REPAIR AND REESTABLISH GRADES IN SETTLED, ERODED, AND RUTTED AREAS TO SPECIFIED TOLERANCES.

21. RECONDITIONING COMPACTED AREAS:
   A. WHERE COMPLETED COMPACTED AREAS ARE DISTURBED BY SUBSEQUENT CONSTRUCTION OPERATIONS OR ADVERSE WEATHER, SCARIFY SURFACE, RESHAPE, AND COMPACT TO REQUIRED DENSITY PRIOR TO FURTHER CONSTRUCTION.

EARTHWORK SPECIFICATIONS

1. THIS SECTION INCLUDES THE FOLLOWING:
   A. EXCAVATION AND BACKFILL FOR FOUNDATIONS AND STRUCTURES SHOWN ON STRUCTURAL DRAWINGS.
   B. THIS SECTION APPLIES TO THE BUILDING FOOTPRINT, PLUS AN AREA OUTSIDE THE BUILDING FOOTPRINT WITHIN 5 FEET THEREOF.

2. QUALITY ASSURANCE
   A. CODES AND STANDARDS: PERFORM EXCAVATION WORK IN COMPLIANCE WITH APPLICABLE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.

3. MATERIALS:
   A. SATISFACTORY SOIL MATERIALS ARE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, SM, SW, AND SP.
   B. UNSATISFACTORY SOIL MATERIALS ARE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS GC, SC, ML, MH, CH, OL, OH, AND PT.
   C. UNSATISFACTORY SOILS ALSO INCLUDE SATISFACTORY SOILS NOT MAINTAINED WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT AT TIME OF COMPACTION.

4. UNSUITABLE MATERIAL:
   A. ORGANIC MATERIAL, OIL, ALKALI, CHEMICAL COMPOUNDS, ICE, SNOW, FROZEN MATERIALS, RUBBLE, RUBBISH, WOOD, AND OTHER SUBSTANCES SUBJECT TO DECOMPOSITION.
   B. LOOSE NON-COMPACTED FILL, LOOSE SOIL OR OBVIOUSLY COMPRESSIVE MATERIALS.

5. PEA STONE:
   A. NATURAL GRAVEL, STONE OR GRAVEL CRUSHINGS, CONFORMING TO ASTM D 448, TABLE 1, SIZE 67

6. GRANULAR FILL:
   A. MDOT 21AA AGGREGATE OR WELL-GRADED NATURAL SAND AND GRAVEL, CONTAINING NOT MORE THAN SEVEN (7) PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE, SIXTY (60) TO ONE-HUNDRED (100) PERCENT PASSING A ONE (1) INCH SIEVE, WITH A MAXIMUM PARTICLE SIZE OF THREE (3) INCHES.

7. LEAN CONCRETE:
   A. NORMAL WEIGHT, 1500 PSI 28-DAY COMPRESSIVE STRENGTH, CONFORMING TO APPLICABLE REQUIREMENTS OF ASTM C 94.

8. OPEN GRADED AGGREGATE:
   A. AGGREGATE PRODUCED BY CRUSHING, WASHING AND SCREENING LIMESTONE. PARTICLE SIZE VARY FROM 1-1/2" TO DUST.
   B. MDOT 4G. (MDOT SPECIAL PROVISIONS FOR OPEN-GRADED DRAINAGE COURSES, 03 SP 303 (A); FHWA APPROVED 11-01-08).

9. LOW STRENGTH FLOWABLE FILL CONCRETE:
   A. MIXTURE COMPONENTS: PORTLAND CEMENT, FLY ASH, WATER.
   B. COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 50 PSI.
      a. TESTING SHALL BE IN ACCORDANCE WITH ASTM C 495.

10. WATER CONTROL:
   A. PREVENT SURFACE WATER AND SUBSURFACE OR GROUND WATER FROM FLOWING INTO EXCAVATIONS AND FROM FLOODING OR IMPAIRING PROJECT SITE AND SURROUNDING PROPERTY.
   B. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DRAINAGE DITCHES.
   C. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS.
   D. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS.
   E. MAINTAIN WATER TO A MINIMUM OF 2 FEET BELOW SUBGRADE LEVELS RECEIVING COMPACTION; AND IN THE CASE WHERE FOOTINGS BEAR ON SOIL, 2 FEET BELOW BOTTOM OF FOOTING.
   F. PROVIDE AND MAINTAIN PUMPS, WELL POINTS, SUMPS, SUCTION AND DISCHARGE LINES, AND OTHER DEWATERING SYSTEM COMPONENTS NECESSARY TO CONVEY WATER AWAY FROM EXCAVATIONS.
   G. ESTABLISH AND MAINTAIN TEMPORARY DRAINAGE DITCHES AND OTHER DIVERSIONS OUTSIDE EXCAVATION LIMITS TO CONVEY RAIN WATER AND WATER REMOVED FROM EXCAVATIONS TO COLLECTING OR RUNOFF AREAS.

11. EXCAVATIONS FOR FOOTINGS AND FOUNDATIONS:
   A. REMOVE VEGETATION, DEBRIS, UNSUITABLE MATERIAL, UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PROOF ROLLING AND PLACEMENT OF FILLS.
   B. SOILS CONTAINING 4% OR GREATER ORGANIC CONTENT SHALL BE REMOVED.
   C. DO NOT DISTURB BOTTOM OF EXCAVATION. TRIM BOTTOMS TO REQUIRED LINES AND GRADES TO LEAVE SOLID BASE TO RECEIVE OTHER WORK.
   D. IF BOTTOM OF EXCAVATION IS DISTURBED, OR IF BEARING PRESSURE CANNOT BE OBTAINED:
      a. EXCAVATE UNTIL BEARING STRATA IS REACHED.
      b. FOR DISTURBANCE ONLY: RECOMPACT OR EXCAVATE PER SPECIAL INSPECTORS DIRECTION.

12. COLD WEATHER PROTECTION:
   A. PROTECT EXCAVATION BOTTOMS AGAINST FREEZING WHEN ATMOSPHERIC TEMPERATURE IS LESS OR PREDICTED TO BE LESS THAN 35 DEGREES F.

13. EXCAVATION STABILITY:
   A. COMPLY WITH LOCAL CODES, ORDINANCES, AND REQUIREMENTS OF AGENCIES HAVING JURISDICTION.
   B. SLOPE SIDES OF EXCAVATIONS TO COMPLY WITH LOCAL CODES, ORDINANCES, AND REQUIREMENTS OF AGENCIES HAVING JURISDICTION.
   C. TEMPORARILY SHORE AND BRACE WHERE SLOPING IS NOT POSSIBLE BECAUSE OF SPACE RESTRICTIONS OR STABILITY OF MATERIAL EXCAVATED.
   D. MAINTAIN SIDES AND SLOPES OF EXCAVATIONS IN SAFE CONDITION UNTIL COMPLETION OF FILLING.

14. DO NOT PLACE NEW FILL ON FROZEN GROUND, GROUND CONTAINING LENSES OF FROZEN MATERIAL, ICE OR SNOW.

15. PROTECT SUBGRADE AGAINST FREEZING WHEN SUBSEQUENT WORK, SUCH AS FILL, SLAB ON GRADE, FOOTINGS, ETC., WILL BE PLACED ON IT.

16. PROTECT AREAS AT AND ADJACENT TO UNPROTECTED FOOTINGS FROM FREEZING AT THE FOOTING BEARING SURFACE.

SPECIAL INSPECTIONS & TESTING SPECIFICATIONS

1. THE OWNER'S REPRESENTATIVE SHALL EMPLOY ONE OR MORE APPROVED INDEPENDENT TESTING AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OR WORK LISTED UNDER MBC 2021 SECTION 1705 AND THE CONTRACT DOCUMENTS.

2. MATERIALS, SYSTEMS, COMPONENTS, AND WORK AS PART OF DELEGATED DESIGNS OR DELEGATED SYSTEMS ARE REQUIRED TO HAVE SPECIAL INSPECTIONS IN ACCORDANCE WITH THIS SECTION.

3. RELATED DOCUMENTS:
   A. SPECIAL INSPECTION AND TESTING MATRIX SHOWN ON CONTRACT DRAWINGS.
   B. INTERNATIONAL ACCREDITATION SERVICES, INC. ACCREDITATION CRITERIA FOR SPECIAL INSPECTION AGENCIES, AC291.
   C. ACI MANUAL OF CONCRETE PRACTICE LATEST ADDITION FOR TESTING AND INSPECTION OF CONCRETE MATERIALS AND PROCEDURES.
   D. TMS 402-16 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES" FOR TESTING AND INSPECTION OF MASONRY MATERIALS AND PROCEDURES.
   E. TMS 602-16 QUALITY ASSURANCE PROGRAM REQUIREMENTS.
   F. AISC 360-16 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", INCLUDING "COMMENTARY" AND SUPPLEMENTS THERE TO ISSUED FOR TESTING AND INSPECTION OF STEEL MATERIALS AND PROCEDURES.
   G. RCSC AUGUST 1, 2014 "SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS" FOR TESTING AND INSPECTION OF BOLTING MATERIALS, CONNECTIONS, AND PROCEDURES.
   H. AWS D1.1 - 2015 "STRUCTURAL WELDING CODE" FOR TESTING AND INSPECTION OF WELD MATERIALS AND PROCEDURES.
   I. AWS D1.8 - 2016 "STRUCTURAL WELDING CODE - SEISMIC SUPPLEMENT" FOR TESTING AND INSPECTION OF WELD MATERIALS AND PROCEDURES IN SEISMIC REGIONS.

4. ACTION SUBMITTALS:
   A. DAILY REPORTS: THE INDEPENDENT TESTING AGENCY SHALL SUBMIT WITHIN 10 CALENDAR DAYS, A CERTIFIED REPORT OF EACH INSPECTION, TEST OR SIMILAR SERVICE.
   B. SUBMIT ONE COPY OF THE REPORTS TO THE OWNER'S REPRESENTATIVE, TO THE ARCHITECT, TO THE STRUCTURAL ENGINEER, TO THE CONTRACTOR, AND TO THE BUILDING OFFICIAL HAVING JURISDICTION.

5. INSPECTION REPORTS ISSUED BY THE INDEPENDENT TESTING AGENCY SHALL ACCURATELY AND CLEARLY OUTLINE THE RESULTS OF THE SPECIAL INSPECTIONS AND TESTING. INSPECTION REPORTS SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF MBC 2021, CHAPTER 17 AND CONTAIN THE FOLLOWING MINIMUM INFORMATION, AS APPLICABLE:
   A. INSPECTION DATE, AND ARRIVAL AND DEPARTURE TIMES (OR TOTAL DURATION ON-SITE) OF THE INSPECTOR.
   B. REPORT NUMBER.
   C. STRUCTURAL ENGINEERS PROJECT TITLE.
   D. STRUCTURAL ENGINEERS PROJECT NUMBER.
   E. NAME, ADDRESS AND TELEPHONE NUMBER OF INDEPENDENT TESTING AGENCY.
   F. DATES AND LOCATIONS OF SAMPLES AND TESTS OR INSPECTIONS.
   G. NAMES OF INDIVIDUALS MAKING THE INSPECTION OR TEST.
   H. DESIGNATION OF THE WORK AND TEST METHOD.
   I. IDENTIFICATION OF PRODUCT AND/OR TEST.
   J. COMPLETE INSPECTION OR TEST DATA.
   K. TEST RESULTS AND AN INTERPRETATION OF TEST RESULTS.
   L. AMBIENT CONDITIONS AT THE TIME OF SAMPLE-TAKING AND TESTING.
   M. PROFESSIONAL EVALUATION AS TO WHETHER INSPECTED OR TESTED WORK COMPLIES WITH CONTRACT DOCUMENT REQUIREMENTS, INCLUDING REFERENCED CODES.
   N. NAME AND SIGNATURE OF LABORATORY INSPECTOR.
   O. RECOMMENDATIONS ON RETESTING.

6. FINAL REPORT AND CERTIFICATION:
   A. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND/OR TESTING ALONG WITH CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED BY THE INDEPENDENT TESTING AGENCY UPON SUBSTANTIAL COMPLETION OF THE WORK BEING PERFORMED.

STRUCTURAL STEEL SPECIFICATIONS-CONTINUED

13. SHOP FABRICATION AND ASSEMBLY:
    A. FABRICATE AND ASSEMBLE STRUCTURAL ASSEMBLIES IN SHOP TO GREATEST EXTENT POSSIBLE. FABRICATE ITEMS OF STRUCTURAL STEEL IN ACCORDANCE WITH AISC SPECIFICATIONS AND AS INDICATED ON APPROVED SHOP DRAWINGS.
    B. BOLTED CONNECTIONS:
        a. INSTALL THREADED FASTENERS IN ACCORDANCE WITH AISC "SPECIFICATIONS.
        b. FOR STRUCTURAL JOINTS USE ASTM A 325 OR A 490 BOLTS".
        c. CUT, DRILL, OR PUNCH HOLES PERPENDICULAR TO METAL SURFACES.
            1. DO NOT FLAME-CUT HOLES OR ENLARGE HOLES BY BURNING.
            2. DRILL HOLES IN BEARING PLATES. REMOVE BURRS FROM FAYING SURFACES OF BEARING-TYPE CONNECTIONS.
            3. THE USE OF BURNT HOLES FOR BOLTED CONNECTIONS IS PROHIBITED. VIOLATION OF THIS CLAUSE WILL BE SUFFICIENT CAUSE FOR THE REJECTION OF THE WHOLE MEMBER INTO WHICH SUCH HOLES WERE BURNT.
    C. WELDED CONNECTIONS:
        a. COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND METHODS USED IN CORRECTING WELDING WORK.
        b. UNLESS OTHERWISE NOTED, NO WELDS SHALL BE APPLIED TO FLANGES OF TENSION MEMBERS PERPENDICULAR TO THE DIRECTION OF STRESS.
        c. TURN SIDE AND END FILLET WELDS AROUND CORNERS FOR A MINIMUM LENGTH OF TWICE THE NOMINAL SIZE OF THE WELD. LENGTH OF END RETURNS ARE NOT TO BE INCLUDED IN THE CALCULATED WELDED LENGTH.
        d. PARTS TO BE JOINED SHALL BE BROUGHT INTO CONTACT AS CLOSE AS POSSIBLE.
            1. IF THE SEPARATION EXCEEDS 1/16 INCH, THE SIZE OF THE WELD SHALL BE INCREASED BY THE AMOUNT OF SEPARATION.
        e. MATERIAL THICKER THAN 3/4 INCH SHALL BE PREHEATED BEFORE WELDING PER THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY.

14. STRUCTURAL STEEL COATINGS:
    A. STEEL AND CONNECTIONS STEEL EXPOSED TO WEATHER SHALL BE CLEANED PER SSPC-SP8 PICKLING AND HOT DIP GALVANIZED U.O.N.
        a. PROVIDE ELECTROPLATED GALVANIZED BOLTS.
    B. STEEL AND CONNECTIONS NOT EXPOSED TO WEATHER SHALL BE CLEANED PER SSPC-SP3 POWER-TOOL CLEANING AND SHOP PRIME PAINTED WITH ONE COAT SHOP PRIMER.
    C. STEEL AND CONNECTIONS TO RECEIVE SPRAY-APPLIED FIRE PROOFING SHALL NOT BE PRIME PAINTED.
    D. SURFACE PREPARATION, PRIMING AND FINISH PAINTING FOR STEEL AND CONNECTION TO RECEIVE INTUMESCENT FIRE PROOFING SHALL BE COORDINATED WITH APPROVED INTUMESCENT PAINT SYSTEM REQUIREMENTS.

15. SHOP PAINTING
    A. IN GENERAL, STRUCTURAL STEEL IS COVERED WITH PRIME PAINT OR FIREPROOFING.
    B. DO NOT PAINT THE FOLLOWING SURFACES:
        a. TO RECEIVE FIREPROOFING.
        b. TO BE WELDED.
        c. TOP OF TOP FLANGES OF COMPOSITE BEAMS TO RECEIVE SHEAR CONNECTORS.
    C. CLEANING AND PREPARATION:
        a. AFTER INSPECTION AND BEFORE SHIPPING, CLEAN STEEL WORK, PAINTED OR UNPAINTED. REMOVE LOOSE RUST, LOOSE MILL SCALE, AND SPATTER, SLAG, OR FLUX DEPOSITS.
        b. CLEAN STEEL IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL (SSPC).
    D. SHOP PAINTING:
        a. IMMEDIATELY AFTER SURFACE PREPARATION, APPLY STRUCTURAL STEEL PRIMER PAINT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. USE PAINTING METHODS THAT RESULT IN FULL COVERAGE OF JOINTS, CORNERS, EDGES, AND EXPOSED SURFACES.
        b. DO NOT SHOP PAINT SURFACES TO RECEIVE FIELD WELD OR SLIP CRITICAL BOLTS.
        c. IF FOR ANY REASON ANY SURFACE TO RECEIVE FIELD WELDS OR SLIP CRITICAL BOLTS IS PAINTED, REMOVE SUCH PAINT COMPLETELY TO WITHIN STATED LIMITS BEFORE FIELD WELDING OR BOLTING.

16. TEMPORARY BRACING:
    A. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE DESIGN, STRENGTH, SAFETY AND ADEQUACY OF ALL TEMPORARY BRACING AND ALL METHODS OF CONSTRUCTION.
    B. THE SPECIFYING HEREIN OF REQUIREMENTS FOR BRACING OR CONSTRUCTION METHODS, OR ANY OTHER REQUIREMENTS OF THE SPECIFICATIONS SHALL BE CONSTRUED AS THE MINIMUM ACCEPTABLE, AND SHALL NOT ELIMINATE, LESSEN OR RESTRICT IN ANY MANNER THE RESPONSIBILITY OF THE CONTRACTOR FOR ALL CONSTRUCTION METHODS AND FOR THE SAFETY AND STABILITY OF THE STRUCTURAL STEEL WORK AT ALL STAGES OF ERECTION, UNTIL SUCH TIME AS THE PERMANENT BRACING SYSTEM BECOMES EFFECTIVE.
    C. PROVIDE TEMPORARY SHORING AND BRACING MEMBERS WITH CONNECTIONS OF SUFFICIENT STRENGTH TO BEAR IMPOSED LOADS.
    D. PROVIDE TEMPORARY GUY LINES TO ACHIEVE PROPER ALIGNMENT OF STRUCTURES AS ERECTION PROCEEDS.
    E. REMOVE TEMPORARY MEMBERS AND CONNECTIONS AFTER PERMANENT MEMBERS ARE IN PLACE, FINAL CONNECTIONS ARE MADE, CONCRETE HAS CURED TO 75% DESIGN STRENGTH AND BASE PLATES ARE GROUTED.

17. SETTING BASES AND BEARING PLATES:
    A. CLEAN CONCRETE AND MASONRY BEARING SURFACES OF BOND-REDUCING MATERIALS. CLEAN BOTTOM SURFACE OF BASE AND BEARING PLATES.
    B. TIGHTEN ANCHOR RODS AFTER SUPPORTED MEMBERS HAVE BEEN POSITIONED AND PLUMBED.
    C. GROUT SOLID BETWEEN BEARING SURFACES AND BASES OR PLATES TO ENSURE THAT NO VOIDS REMAIN. FINISH EXPOSED SURFACES, PROTECT INSTALLED MATERIALS, AND ALLOW TO CURE.
    D. GROUT COLUMN BASE PLATES BEFORE CONCRETE SLABS ON METAL DECK ARE PLACED.

18. FIELD WELDING: SIMILAR PROCEDURES AS FOR SHOP WELDING.
    A. AT SUBFREEZING TEMPERATURES, PREHEAT ALL METAL LOCATED WITHIN 3 INCHES OF THE WELD TO A MINIMUM TEMPERATURE OF ABOUT 70 DEGREES FAHRENHEIT. NO WELDING SHALL BE DONE AT TEMPERATURES BELOW ZERO DEGREES FAHRENHEIT.

19. GAS CUTTING:
    A. DO NOT USE GAS CUTTING TORCHES IN FIELD FOR CORRECTING FABRICATION ERRORS IN PRIMARY STRUCTURAL FRAMING.
    B. CUTTING WILL BE PERMITTED ONLY ON SECONDARY MEMBERS THAT ARE NOT UNDER STRESS, AS ACCEPTABLE TO THE STRUCTURAL ENGINEER OF RECORD. FINISH GAS-CUT SECTIONS EQUAL TO A SHEARED APPEARANCE WHEN PERMITTED.

20. TOUCH-UP PAINTING:
    A. APPLY PAINT USING SAME MATERIAL AS USED FOR SHOP PAINTING.
    B. APPLY EPOXY PAINT USING SAME EPOXY PAINTING MATERIAL.
    C. APPLY BY BRUSH OR SPRAY TO PROVIDE A MINIMUM DRY FILM THICKNESS OF 2.0 MILS
    D. APPLY ZINC CLAD II BY SHERWIN WILLIAMS OR TNEMEC - ZINC 90E-92 FOR GALVANIZING TOUCH UP PAINT.

STRUCTURAL STEEL SPECIFICATIONS

1. SUBMIT CHECKED SHOP DRAWINGS FOR FABRICATION AND ASSEMBLY OF STRUCTURAL STEEL MEMBERS.
    A. PROVIDE DETAILS, PROCEDURES, DIAGRAMS AND SCHEDULES AS NECESSARY FOR FABRICATION AND ASSEMBLY IN SHOP AND FIELD.
    B. INCLUDE DETAILS OF CUTS, CONNECTIONS, CAMBER, HOLES, SURFACE PREP, SHOP FINISH (PAINT/GALV.) AND OTHER PERTINENT DATA.
    C. INDICATE WELDS BY STANDARD AWS SYMBOLS, AND SHOW SIZE, LENGTH, AND TYPE OF EACH WELD. IDENTIFY SHOP AND FIELD WELDS.
    D. SUBMIT SIGNED AND SEALED CALCULATIONS FOR THE DESIGN OF ALL COMPONENTS DELEGATED TO THE CONTRACTOR. REFER TO ITEM 3 FOR DELEGATED DESIGN REQUIREMENTS.

2. CODES AND STANDARDS: COMPLY WITH PROVISIONS OF FOLLOWING:
    A. AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
    B. AISC "SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", INCLUDING "COMMENTARY" AND SUPPLEMENTS THERETO AS ISSUED.
    C. AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS" APPROVED BY THE RESEARCH COUNCIL ON RIVETED AND BOLTED STRUCTURAL JOINTS OF THE ENGINEERING FOUNDATION.
    D. AWS D1.1 "STRUCTURAL WELDING CODE - STEEL".
    E. ASTM A 6 "GENERAL REQUIREMENTS FOR DELIVERY OF ROLLED STEEL PLATES, SHAPES, SHEET PILING AND BARS FOR STRUCTURAL USE".
    F. TO THE EXTENT THAT ANY PROVISIONS CONTAINED IN ANY OF THE AFOREMENTIONED CODES AND STANDARDS CONFLICT WITH ANY OTHER TERMS, REQUIREMENTS OR DEFINITIONS CONTAINED IN THE CONTRACT DOCUMENTS, THEN THE TERMS, REQUIREMENTS OR DEFINITIONS CONTAINED ELSEWHERE IN THE CONTRACT DOCUMENTS THE MORE STRINGENT SHALL CONTROL.

3. DETAILS AND CONNECTIONS:
    A. DESIGN OF STRUCTURAL STEEL CONNECTIONS IS DELEGATED TO THE CONTRACTOR.
        a. DELEGATED DESIGN ENGINEER SHALL BE A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MICHIGAN.
        b. CALCULATIONS FOR CONNECTION DESIGN BY THE DELEGATED DESIGN STRUCTURAL ENGINEER SHALL BE FURNISHED WITH SHOP DRAWINGS.
        c. SHOP DRAWINGS WILL NOT BE REVIEWED WITHOUT CORRESPONDING CONNECTION CALCULATIONS.
        d. CONTRACTOR SHALL SUBMIT SIGNED AND SEALED CALCULATIONS FOR THE DESIGN OF COMPONENTS DELEGATED TO THE CONTRACTOR.
    B. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS, UNLESS OTHERWISE INDICATED.
    C. THE FOLLOWING ARE NOT PERMITTED FOR DELEGATED DESIGN CONNECTIONS:
        a. EXTENDED SHEAR TABS.
        b. OVER SIZED HOLES IN BEAM CONNECTIONS.
        c. VERTICAL SLOTTED BEAM CONNECTIONS.
        d. OTHER RESTRICTIONS OR REQUIREMENTS SHOWN ON STRUCTURALLY DOCUMENTS.
    D. PROMPTLY NOTIFY STRUCTURAL ENGINEER OR RECORD WHENEVER MEMBERS SIZES AND CONNECTIONS REQUIREMENTS FOR ANY PORTION OF STRUCTURE ARE NOT CLEARLY INDICATED.
    E. DESIGN AND DETAIL CONNECTIONS TO RESIST THE REQUIRED LOADS AND REACTIONS.
        a. DETAILS SHALL SUPPLEMENT AND BE CONSISTENT WITH DETAILS SHOWN ON THE DRAWINGS.
        b. PROPER ACCOUNT OF ECCENTRICITY SHALL BE TAKEN IN THE DESIGN OF CONNECTIONS SO THAT THERE IS NO OVERSTRESSING OF ANY MATERIAL, EITHER IN THE CONNECTIONS THEMSELVES OR IN THE CONNECTED MEMBERS.
    F. THE USE OF OVERSIZED AND SLOTTED HOLES IN THE LOAD DIRECTION FOR BEARING BOLTS IS NOT PERMITTED.
    G. BOLTED CONNECTIONS WITH VARIOUS BOLT DIAMETER SIZES SHALL BE INCREASED BY 1/4" INCREMENTS.

4. QUALIFICATIONS FOR WELDING WORK:
    A. QUALIFY WELDING PROCESSES AND WELDING OPERATORS IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURE".
    B. PROVIDE CERTIFICATION THAT WELDERS TO BE EMPLOYED IN WORK HAVE SATISFACTORILY PASSED AWS QUALIFICATION TESTS.
    C. IF RECERTIFICATION OF WELDERS IS REQUIRED, RETESTING WILL BE CONTRACTOR'S RESPONSIBILITY.

5. EMBEDDED ITEMS: ANCHOR BOLTS, BEARING PLATES AND OTHER ANCHORAGE ITEMS TO BE EMBEDDED IN OR ATTACHED TO OTHER CONSTRUCTION. SUPPLY WITHOUT DELAYING THE WORK.
    A. SETTING DIAGRAMS, TEMPLATES, INSTRUCTIONS, AND DIRECTIONS FOR INSTALLATION.
    B. ANCHOR ROD TEMPLATE WITH TARGET ARROWS FOR COLUMN CENTER LINES, STAMPED FOR COLUMN LOCATION, ORIENTATION AND ELEVATION.

6. DELIVERY, STORAGE, AND HANDLING:
    A. STORE MATERIALS TO PERMIT EASY ACCESS FOR INSPECTION AND IDENTIFICATION. KEEP STEEL MEMBERS OFF GROUND BY USING PALLETS, PLATFORMS, OR OTHER SUPPORTS.
    B. DO NOT STORE MATERIALS ON STRUCTURE IN A MANNER THAT MIGHT CAUSE DISTORTION OR DAMAGE TO MEMBERS OR SUPPORTING STRUCTURES.
    C. PROTECT STEEL MEMBERS AND PACKAGED MATERIALS FROM EROSION AND DETERIORATION.
        a. IF BOLTS AND NUTS BECOME DRY OR RUSTY, CLEAN AND RELUBRICATE BEFORE USE.

7. TUBULAR SECTIONS, (HSS ROUND, HSS RECTANGULAR) SHALL BE MANUFACTURED IN USA OR CANADA.

8. ELECTRODES FOR WELDING: COMPLY WITH AWS CODE.
    A. FOR HIGH-STRENGTH LOW-ALLOY STEEL AND EXISTING STEEL, PROVIDE ELECTRODES, WELDING RODS AND FILLER METALS EQUAL IN STRENGTH AND COMPATIBLE IN APPEARANCE WITH PARENT METAL JOINED.
    B. COMPLY WITH AWS REQUIREMENTS.

9. ANCHOR RODS:
    A. ASTM F1554 HEX-HEADED BOLT AND CARBON-STEEL NUT. GRADE INDICATED ON DRAWINGS.

10. PAINT - SHOP PRIMER:
    A. PAINT FOR SHOP PRIMER SHALL BE VOC COMPLIANT, BE LEAD AND CHROMATE FREE, AND HAVE NOT LESS THAN 50 PERCENT SOLIDS PER VOLUME.
    B. COLOR: WHITE OR LIGHT GRAY.
    C. PRODUCTS/MANUFACTURERS: PROVIDE ONE OF THE FOLLOWING:
        a. #10-99 PRIMER/TNEMEC
        b. KEM KROMIK B50 NZ6/SHERWIN WILLIAMS
        c. 960/RUSTOLEUM

11. NONMETALLIC SHRINKAGE-RESISTANT GROUT: PREMIXED, NONMETALLIC, NONCORROSIVE, NONSTAINING PRODUCT CONTAINING SELECTED SILICA SANDS, PORTLAND CEMENT, SHRINKAGE COMPENSATING AGENTS, PLASTICIZING AND WATER-REDUCING AGENTS, COMPLYING WITH CE-CRD-C621.
    A. PRODUCTS:
        a. EUCO N.S.; EUCLID CHEMICAL CO.
        b. CRYSTEX; L & M CONSTRUCTION CHEMICALS, INC.
        c. MASTERFLOW 928; MASTER BUILDERS.
        d. SEALTIGHT 588 GROUT; W. R. MEADOWS.
        e. FIVE STAR GROUT; U.S. GROUT CORP.
        f. SIKA GROUT 212, SIKA CORP.

REINFORCED UNIT MASONRY ASSEMBLIES SPECIFICATIONS - CONTINUED

18. LAY CONCRETE MASONRY UNITS WITH FULL-FACE SHELL MORTAR BEDS.
    A. FILL VERTICAL HEAD JOINTS (END JOINTS BETWEEN UNITS) SOLIDLY WITH MORTAR FROM FACE OF UNIT TO A DISTANCE BEHIND FACE EQUAL TO NOT LESS THAN THE THICKNESS OF LONGITUDINAL FACE SHELLS.
    B. SOLIDLY BED CROSS-WEBS OF STARTING COURSES IN MORTAR.

19. MAINTAIN HEAD AND BED JOINT WIDTHS SHOWN, OR IF NOT SHOWN, PROVIDE 3/8" JOINTS.

20. WALLS:
    A. PATTERN BOND:
        a. UNLESS OTHERWISE NOTED, LAY CMU WALL UNITS IN 1/2-RUNNING BOND WITH VERTICAL JOINTS IN EACH COURSE CENTERED ON UNITS IN COURSES ABOVE AND BELOW, UNLESS OTHERWISE INDICATED.
            1. BOND AND INTERLOCK EACH COURSE AT CORNERS AND INTERSECTIONS.
            2. USE SPECIAL-SHAPED UNITS WHERE SHOWN, AND AS REQUIRED FOR CORNERS, JAMBS, SASH, CONTROL JOINTS, LINTELS, BOND BEAMS AND OTHER SPECIAL CONDITIONS.
        b. MAINTAIN VERTICAL CONTINUITY OF CORE OR CELL CAVITIES, WHICH ARE TO BE REINFORCED AND GROUTED.
            1. KEEP CAVITIES FREE OF MORTAR.
            2. SOLIDLY BED WEBS IN MORTAR WHERE ADJACENT TO REINFORCED CORES OR CELLS.
        c. WHERE HORIZONTAL REINFORCED BEAMS (BOND BEAMS) ARE SHOWN, USE SPECIAL UNITS OR MODIFY REGULAR UNITS TO ALLOW FOR PLACEMENT OF CONTINUOUS HORIZONTAL REINFORCING BARS.
            1. PLACE SMALL MESH EXPANDED METAL LATH OR WIRE SCREENING IN MORTAR JOINTS UNDER BOND BEAM COURSES OVER CORES OR CELLS OF NON-REINFORCED VERTICAL CELLS, OR PROVIDE UNITS WITH SOLID BOTTOMS.

21. PRIOR TO GROUTING, INSPECT AND CLEAN GROUT SPACES.

22. AFTER FINAL CLEANING AND INSPECTION, CLOSE CLEANOUT HOLES AND BRACE CLOSURES TO RESIST GROUT PRESSURES.

23. PLACE GROUT WITHIN 90 MIN FROM INTRODUCING WATER IN THE MIXTURE AND PRIOR TO INITIAL SET.

24. CONSOLIDATE GROUT AT THE TIME OF PLACEMENT.
    A. CONSOLIDATE GROUT POURS 12 IN. OR LESS IN HEIGHT BY MECHANICAL VIBRATION OR BY PUDDLING.
    B. CONSOLIDATE POURS EXCEEDING 12 IN. IN HEIGHT BY MECHANICAL VIBRATION, AND RECONSOLIDATE BY MECHANICAL VIBRATION AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED.

25. IF, IN THE JUDGMENT OF THE STRUCTURAL ENGINEER OF RECORD, THE ULTIMATE LOAD CARRYING CAPACITY OR DURABILITY HAS BEEN AFFECTED, THE REINFORCED MASONRY SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

REINFORCED UNIT MASONRY ASSEMBLIES SPECIFICATIONS

1. EXTENT OF EACH TYPE OF REINFORCED UNIT MASONRY WORK IS INDICATED ON DRAWINGS AND IN SCHEDULES.

2. SUBMIT SHOP DRAWINGS FOR FABRICATION, BENDING, AND PLACEMENT OF REINFORCING BARS. COMPLY WITH ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES". SHOW BAR SCHEDULES, DIAGRAMS OF BENT BARS, STIRRUP SPACING, LATERAL TIES AND OTHER ARRANGEMENTS AND ASSEMBLIES AS REQUIRED FOR FABRICATION AND PLACEMENT OF REINFORCEMENT FOR UNIT MASONRY WORK.

3. GROUT SHALL BE "FINE OR COARSE GROUT" IN ACCORDANCE WITH ASTM C 476.

4. GROUTING PROCEDURE:
    A. SUBMIT PROPOSED GROUTING PROCEDURES WITH AT MINIMUM THE FOLLOWING INFORMATION:
        a. USE OF FINE GROUT.
        b. LIFT HEIGHTS:
            1. PROPOSED LIFT HEIGHT AS IT APPLIES TO THE TYPE OF GROUT AND BLOCK SIZE.
        c. GROUT CONSOLIDATION METHOD:
            1. IF MORE THAN ONE METHOD IS PROPOSED, INDICATED RESPECTIVE AREA OF USE.
        d. LOCATION OF CLEANOUTS AS APPLICABLE.

5. CODES AND STANDARDS:
    A. COMPLY WITH PROVISIONS OF FOLLOWING CODES, SPECIFICATIONS, AND STANDARDS, EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE SHOWN OR SPECIFIED:
        a. ACI 530, BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
        b. ACI 530.1, SPECIFICATIONS FOR MASONRY STRUCTURES.

6. RESPONSIBILITY OF CONTRACTOR:
    A. THE CONTRACTOR ALONE SHALL BE FULLY RESPONSIBLE FOR THE DESIGN, STRENGTH, SAFETY AND ADEQUACY OF ALL FORMWORK, SHORING, BRACING AND ALL METHODS OF CONSTRUCTION, AND FOR THE STRENGTH, CONSISTENCY, FINISH AND GENERAL QUALITY OF MASONRY.
        a. THE SPECIFYING HEREIN OF REQUIREMENTS FOR CONSTRUCTION METHODS, PRELIMINARY APPROVALS BY THE STRUCTURAL ENGINEER OF RECORD, INSPECTION TESTING AND QUALITY CONTROL PERFORMED BY THE TESTING AGENCY, OR ANY OTHER REQUIREMENTS OF THE SPECIFICATIONS SHALL BE CONSTRUED AS THE MINIMUM ACCEPTABLE, AND SHALL NOT ELIMINATE, LESSEN OR RESTRICT IN ANY MANNER THE RESPONSIBILITY OF THE CONTRACTOR FOR CONSTRUCTION METHODS AND FOR PROVIDING MASONRY IN THE COMPLETED STRUCTURE THAT FULLY MEETS THE STRENGTH, APPEARANCE AND THE REQUIREMENTS OF THE SPECIFICATIONS AND DRAWINGS.
    B. DELEGATED DESIGN
        a. MASONRY CONTRACTOR IS RESPONSIBLE FOR TEMPORARY BRACING DESIGN.

7. MATERIALS
    A. CONCRETE MASONRY UNITS:
        a. ASTM C90, MINIMUM COMPRESSIVE STRENGTH ON THE NET AREA AND UNIT DENSITY SHALL BE AS INDICATED IN REINFORCED HOLLOW CONCRETE MASONRY GENERAL NOTES.
        b. FOR ALIGNMENT OF CELLS TO RECEIVE REINFORCEMENT AND GROUT, BLOCK SHALL BE 2-CELL UNITS, WITH A RECOMMENDED OPEN END AT ONE SIDE.
    B. MORTAR:
        a. PORTLAND CEMENT LIME MORTAR OR MASONRY CEMENT MORTAR, IN ACCORDANCE WITH ASTM C 270, TYPE S.
    C. GROUT:
        a. COMPLY WITH ASTM C 476.
        b. UNLESS OTHERWISE INDICATED, USE TYPE (FINE OR COARSE) SLUMP: 8 TO 11 INCHES, IN ACCORDANCE WITH ASTM C 143.
    D. REINFORCEMENT BARS:
        a. GRADE ASTM A 615 - GRADE 60, DEFORMED.
        b. SHOP-FABRICATE REINFORCEMENT BARS WHICH ARE SHOWN TO BE BENT OR HOOKED.
    E. REINFORCING BAR POSITIONERS:
        a. SPACING:
            1. GENERAL VERTICAL SPACING 4'-0" OC.
            2. WITHIN 8" OF GROUT TOP AND BOTTOM COLD JOINT.
        b. BARS AT CENTER OF BLOCK:
            1. D/A 811; DUR-O-WAL,
            2. NO. 376 REBAR POSITIONER; HECKMANN BUILDING PRODUCTS,
            3. #RB REBAR POSITIONER, HOHMANN & BARNARD, INC.,
            4. WIRE-BOND CORELOCK SINGLE BAR POSITIONER.
            5. FIGURE 8 REBAR POSITIONER, MASONRY REINFORCING CORP. OF AMERICA,
        c. BARS NEAR FACE OF BLOCK:
            1. POSITIONERS TO PLACE REBARS WITH ½ INCH COVER TO INSIDE FACE OF BLOCK.
            2. WIRE-BOND CORELOCK DOUBLE BAR POSITIONER.
    F. FOR HORIZONTAL BARS IN BOND BEAMS:
        a. BOTTOM REINFORCING:
            1. USE STANDARD CHAIRS OR BOLSTERS FOR SPACING, SUPPORTING AND FASTENING BARS IN PLACE. USE WIRE BAR TYPE SUPPORTS COMPLYING WITH CRSI RECOMMENDATIONS.
    G. MECHANICAL TYPE TENSION SPLICES:
        a. LENTON REBAR SPLICES; ERICO PRODUCTS, INC.
        b. DS-BAR-LOCK COUPLER SYSTEM; DAYTON SUPERIOR.

8. DO NOT PROCEED WITH MASONRY INSTALLATION UNTIL CONSTRUCTION THAT MASONRY IS DEPENDANT-ON IS COMPLETED AND THAT UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

9. CLEAN REINFORCEMENT OF LOOSE RUST, MILL SCALE, EARTH, ICE OR OTHER MATERIALS WHICH WILL REDUCE BOND TO MORTAR OR GROUT.
    A. DO NOT USE REINFORCING BARS WITH BENDS NOT SHOWN ON DRAWINGS OR FINAL SHOP DRAWINGS, OR BARS WITH REDUCED CROSS-SECTION DUE TO EXCESSIVE RUSTING OR OTHER CAUSES.

10. POSITION REINFORCEMENT ACCURATELY AT THE SPACING INDICATED.
    A. SUPPORT AND SECURE VERTICAL BARS AGAINST DISPLACEMENT.
    B. HORIZONTAL REINFORCEMENT MAY BE PLACED AS THE MASONRY WORK PROGRESSES.
    C. EXCEPT AT SPLICES, WHERE VERTICAL BARS ARE SHOWN IN CLOSE PROXIMITY, PROVIDE A CLEAR DISTANCE BETWEEN BARS OF NOT LESS THAN THE NOMINAL BAR DIAMETER OR 1" WHICHEVER IS GREATER.

11. PLACE REINFORCEMENT AND TIES IN GROUT SPACES PRIOR TO GROUTING.

12. SPLICE REINFORCEMENT BARS WHERE SHOWN; DO NOT SPLICE AT OTHER POINTS UNLESS ACCEPTABLE IN WRITING TO THE STRUCTURAL ENGINEER OR RECORD.
    A. FOR BARS WHERE LAP SPLICES ARE PERMITTED, PROVIDE NOT LESS THAN REQUIRED MINIMUM LAP.

13. SUPPORT VERTICAL REINFORCING WITH REINFORCING BAR POSITIONERS.
    A. LOCATE REINFORCING BAR POSITIONERS AS SHOWN ON THE DRAWINGS.

14. EMBED PREFABRICATED HORIZONTAL JOINT REINFORCEMENT AS THE WORK PROGRESSES, WITH A MINIMUM COVER OF 5/8" ON EXTERIOR FACE OF WALLS AND 1/2" AT OTHER LOCATIONS.
    A. LAP UNITS NOT LESS THAN 6" AT ENDS. USE PREFABRICATED "L" AND "T" UNITS TO PROVIDE CONTINUITY AT CORNERS AND INTERSECTIONS. CUT UNITS AS RECOMMENDED BY MANUFACTURER FOR CONTINUITY AT RETURNS, OFFSETS, COLUMN FIREPROOFING, PIPE ENCLOSURES AND OTHER SPECIAL CONDITIONS.

15. ANCHOR REINFORCED MASONRY WORK TO SUPPORTING STRUCTURE AS INDICATED.

16. CONSTRUCT GROUT SPACES FREE OF MORTAR DROPPINGS, DEBRIS, LOOSE AGGREGATES, AND ANY MATERIAL DELETERIOUS TO MASONRY GROUTING.

17. DO NOT WET CONCRETE MASONRY UNITS (CMU).

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CSC CARNAGHI STRUCTURAL CONSULTING
16950 19 Mile Road, Suite II ● Clinton Township, MI 48038
Phone: (586) 277-0700 ● Website: carnaghisc.com

CSC PROJECT NUMBER: 25008

SEAL

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT MICHIGAN

DATE	ISSUE
09.15.2026	OWNER REVISIONS
06.24.2025	BIDS
05.09.2025	BIDS/PERMITS

KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

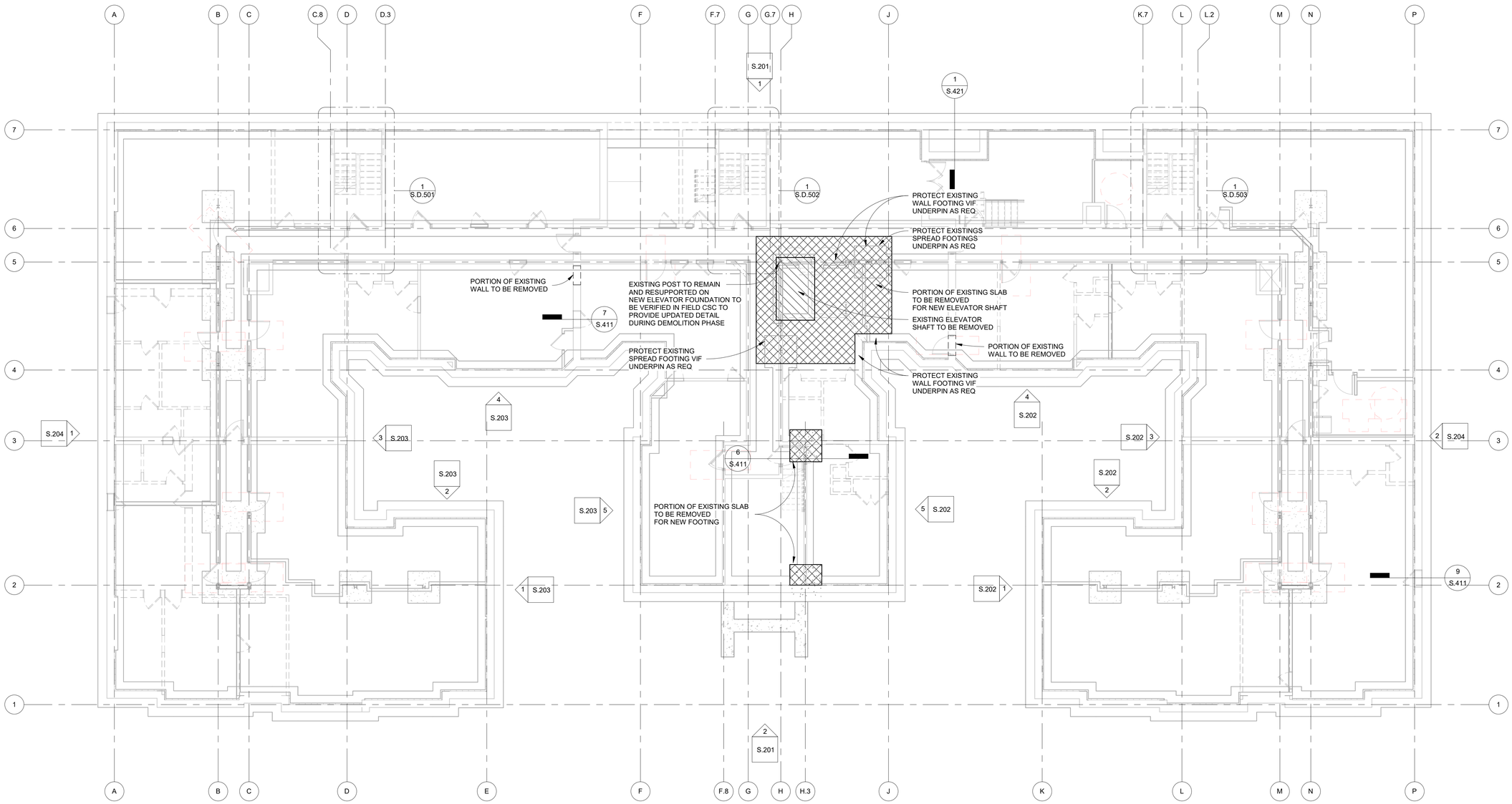
Structural Specifications

DRAWING NUMBER

S.006

DEMOLITION PLAN NOTES

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES
   B. DRAWINGS S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWINGS S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
   D. REFER TO "SURVEY OF EXISTING CONDITIONS" FOR ADDITIONAL REQUIREMENTS.
2. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
3. EXTENT OF DEMOLITION IS TO BE AS INDICATED ON PLANS, SECTIONS AND ELEVATIONS. DEMOLITION IS TO INCLUDE REMOVAL AND DISPOSAL.
4. DIMENSIONS PROVIDED TO AND OF THE EXISTING STRUCTURE ARE APPROXIMATE. VERIFY THE DIMENSIONS OF THE EXISTING STRUCTURE BY FIELD MEASUREMENTS.
5. SHORE OR BRACE BEAMS, COLUMNS AND WALLS AS REQUIRED TO MAINTAIN THE STABLE INTEGRITY OF THE EXISTING STRUCTURE PRIOR TO DEMOLITION.
   A. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE COMPETENT SHORING AND BRACING FOR ALL LOADS IMPOSED DURING AND AFTER DEMOLITION THROUGH COMPLETION OF NEW CONSTRUCTION.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS, AS THEY APPLY TO THIS PROJECT, OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF MICHIGAN, LATEST EDITION, AND ALL OSHA REQUIREMENTS.
7. EXPLORATORY INVESTIGATION IS REQUIRED TO DETERMINE EXISTING CONDITIONS.
   a. THE AOR/EOR IS NOT RESPONSIBLE FOR DOCUMENTING ALL EXISTING CONDITIONS.
   b. CONDITIONS THAT VARY FROM EXPLORATORY INVESTIGATION ARE TO BE EXPECTED.



FOUNDATION DEMOLITION PLAN

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

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CSC PROJECT NUMBER: 25008

SEAL

STATE OF MICHIGAN
JAMES CORSIGLIA
ENGINEER
No. 6201040541
LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT MICHIGAN

DATE	ISSUE
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06.24.2025	BIDS
05.09.2025	BIDS/PERMITS

KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

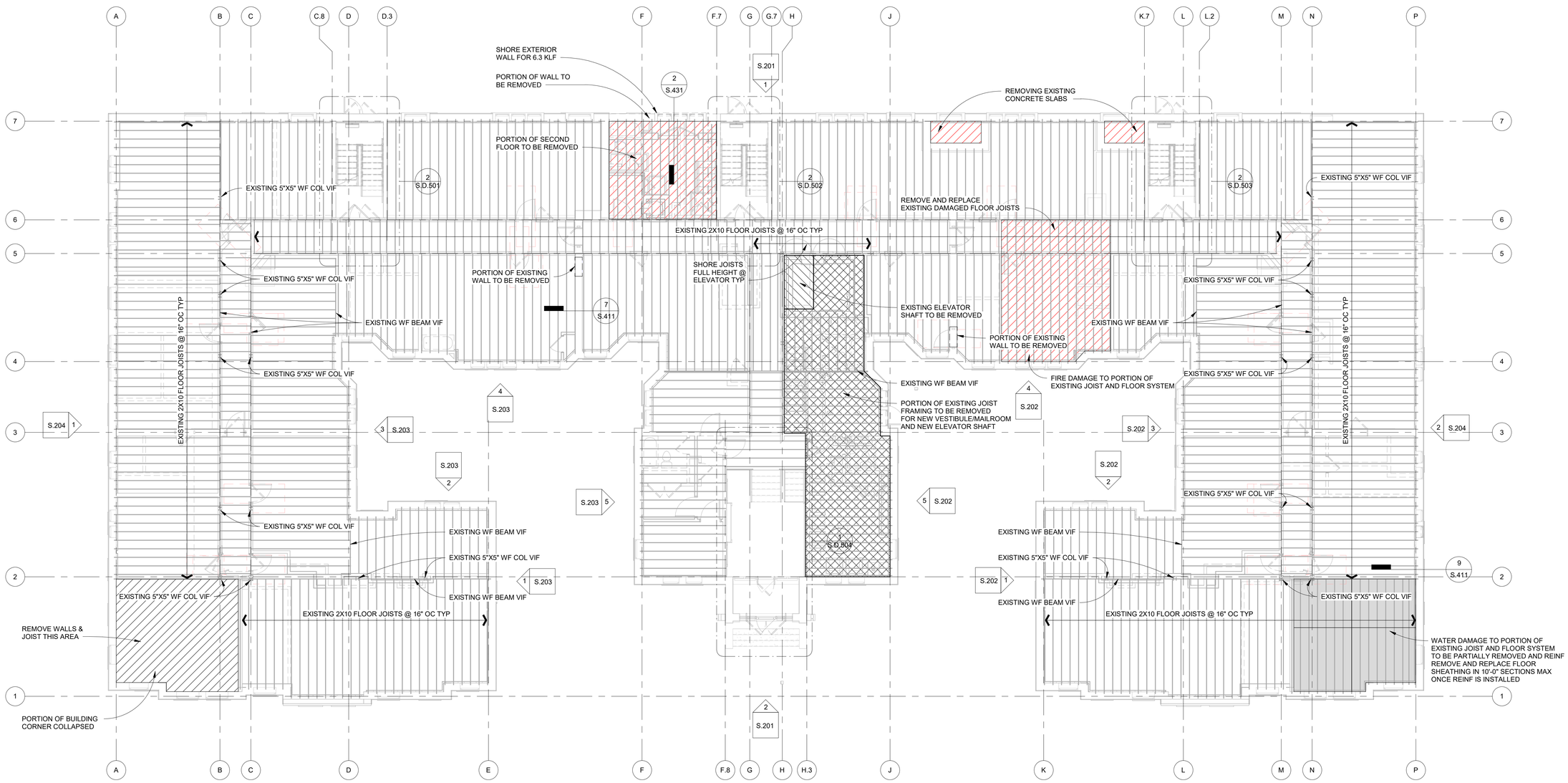
Foundation Demolition Plan

DRAWING NUMBER

S.D.101

DEMOLITION PLAN NOTES

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES
   B. DRAWINGS S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWINGS S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
   D. REFER TO "SURVEY OF EXISTING CONDITIONS" FOR ADDITIONAL REQUIREMENTS.
2. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
3. EXTENT OF DEMOLITION IS TO BE AS INDICATED ON PLANS, SECTIONS AND ELEVATIONS. DEMOLITION IS TO INCLUDE REMOVAL AND DISPOSAL.
4. DIMENSIONS PROVIDED TO AND OF THE EXISTING STRUCTURE ARE APPROXIMATE. VERIFY THE DIMENSIONS OF THE EXISTING STRUCTURE BY FIELD MEASUREMENTS.
5. SHORE OR BRACE BEAMS, COLUMNS AND WALLS AS REQUIRED TO MAINTAIN THE STABLE INTEGRITY OF THE EXISTING STRUCTURE PRIOR TO DEMOLITION.
   A. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE COMPETENT SHORING AND BRACING FOR ALL LOADS IMPOSED DURING AND AFTER DEMOLITION THROUGH COMPLETION OF NEW CONSTRUCTION.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS, AS THEY APPLY TO THIS PROJECT, OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF MICHIGAN, LATEST EDITION, AND ALL OSHA REQUIREMENTS.
7. EXPLORATORY INVESTIGATION IS REQUIRED TO DETERMINE EXISTING CONDITIONS.
   a. THE AOR/EOR IS NOT RESPONSIBLE FOR DOCUMENTING ALL EXISTING CONDITIONS.
   b. CONDITIONS THAT VARY FROM EXPLORATORY INVESTIGATION ARE TO BE EXPECTED.



FIRST FLOOR DEMOLITION PLAN

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

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CSC PROJECT NUMBER: 25008

SEAL

STATE OF MICHIGAN
JAMES CORSIGLIA
ENGINEER
No. 6201040541
LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT MICHIGAN

DATE	ISSUE
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05.09.2025	BIDS/PERMITS

KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

First Floor Demolition Plan

DRAWING NUMBER

S.D.102

DEMOLITION PLAN NOTES

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES
   B. DRAWINGS S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWINGS S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
   D. REFER TO "SURVEY OF EXISTING CONDITIONS" FOR ADDITIONAL REQUIREMENTS.
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3. EXTENT OF DEMOLITION IS TO BE AS INDICATED ON PLANS, SECTIONS AND ELEVATIONS. DEMOLITION IS TO INCLUDE REMOVAL AND DISPOSAL.
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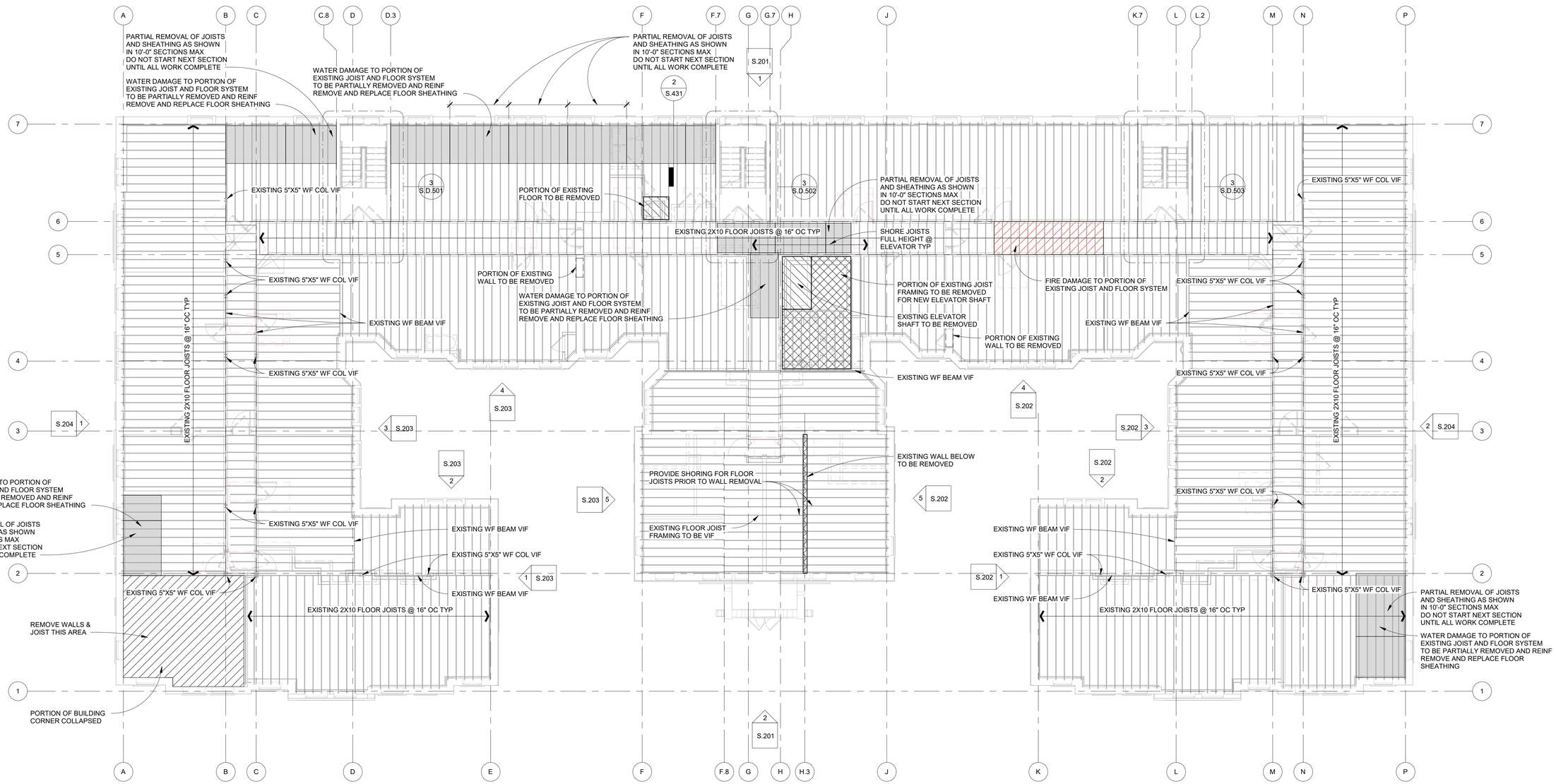
7. EXPLORATORY INVESTIGATION IS REQUIRED TO DETERMINE EXISTING CONDITIONS.
   a. THE AOR/EOR IS NOT RESPONSIBLE FOR DOCUMENTING ALL EXISTING CONDITIONS.
   b. CONDITIONS THAT VARY FROM EXPLORATORY INVESTIGATION ARE TO BE EXPECTED.



SECOND FLOOR DEMOLITION PLAN

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

FUSCO, SHAFFER & PAPPAS, INC.
ARCHITECTS AND PLANNERS
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CARNAGHI STRUCTURAL CONSULTING
16950 19 Mile Road, Suite B • Clinton Township, MI 48038
Phone: (586) 277-0700 • Website: carnaghisc.com

CSC PROJECT NUMBER: 25008

SEAL

STATE OF MICHIGAN
JAMES CORSIGLIA
ENGINEER
No. 6201040541
LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT MICHIGAN

DATE	ISSUE
09.15.2026	OWNER REVISIONS
06.24.2025	BIDS
05.09.2025	BIDS/PERMITS

KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

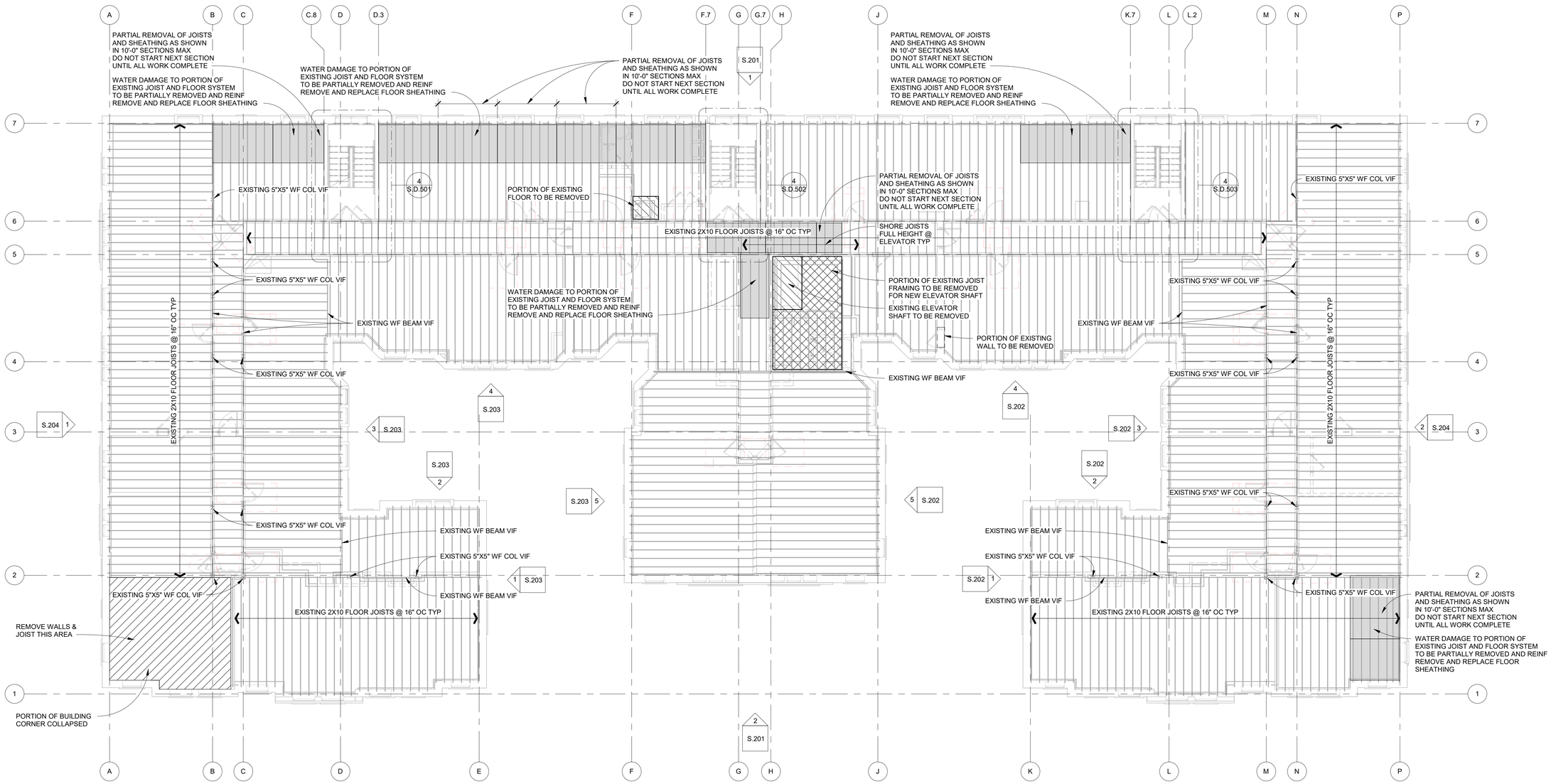
Second Floor Demolition Plan

DRAWING NUMBER

S.D.103

DEMOLITION PLAN NOTES

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES
   B. DRAWINGS S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWINGS S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
   D. REFER TO "SURVEY OF EXISTING CONDITIONS" FOR ADDITIONAL REQUIREMENTS.
2. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
3. EXTENT OF DEMOLITION IS TO BE AS INDICATED ON PLANS, SECTIONS AND ELEVATIONS. DEMOLITION IS TO INCLUDE REMOVAL AND DISPOSAL.
4. DIMENSIONS PROVIDED TO AND OF THE EXISTING STRUCTURE ARE APPROXIMATE. VERIFY THE DIMENSIONS OF THE EXISTING STRUCTURE BY FIELD MEASUREMENTS.
5. SHORE OR BRACE BEAMS, COLUMNS AND WALLS AS REQUIRED TO MAINTAIN THE STABLE INTEGRITY OF THE EXISTING STRUCTURE PRIOR TO DEMOLITION.
   A. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE COMPETENT SHORING AND BRACING FOR ALL LOADS IMPOSED DURING AND AFTER DEMOLITION THROUGH COMPLETION OF NEW CONSTRUCTION.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS, AS THEY APPLY TO THIS PROJECT, OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF MICHIGAN, LATEST EDITION, AND ALL OSHA REQUIREMENTS.
7. EXPLORATORY INVESTIGATION IS REQUIRED TO DETERMINE EXISTING CONDITIONS.
   a. THE AOR/EOR IS NOT RESPONSIBLE FOR DOCUMENTING ALL EXISTING CONDITIONS.
   b. CONDITIONS THAT VARY FROM EXPLORATORY INVESTIGATION ARE TO BE EXPECTED.



N

THIRD FLOOR DEMOLITION PLAN

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

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CSC PROJECT NUMBER: 25008

SEAL

STATE OF MICHIGAN
JAMES CORSIGLIA
ENGINEER
No. 6201040541
LICENSED PROFESSIONAL ENGINEER

MICHIGAN

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT

DATE	ISSUE
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06.24.2025	BIDS
05.09.2025	BIDS/PERMITS

KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

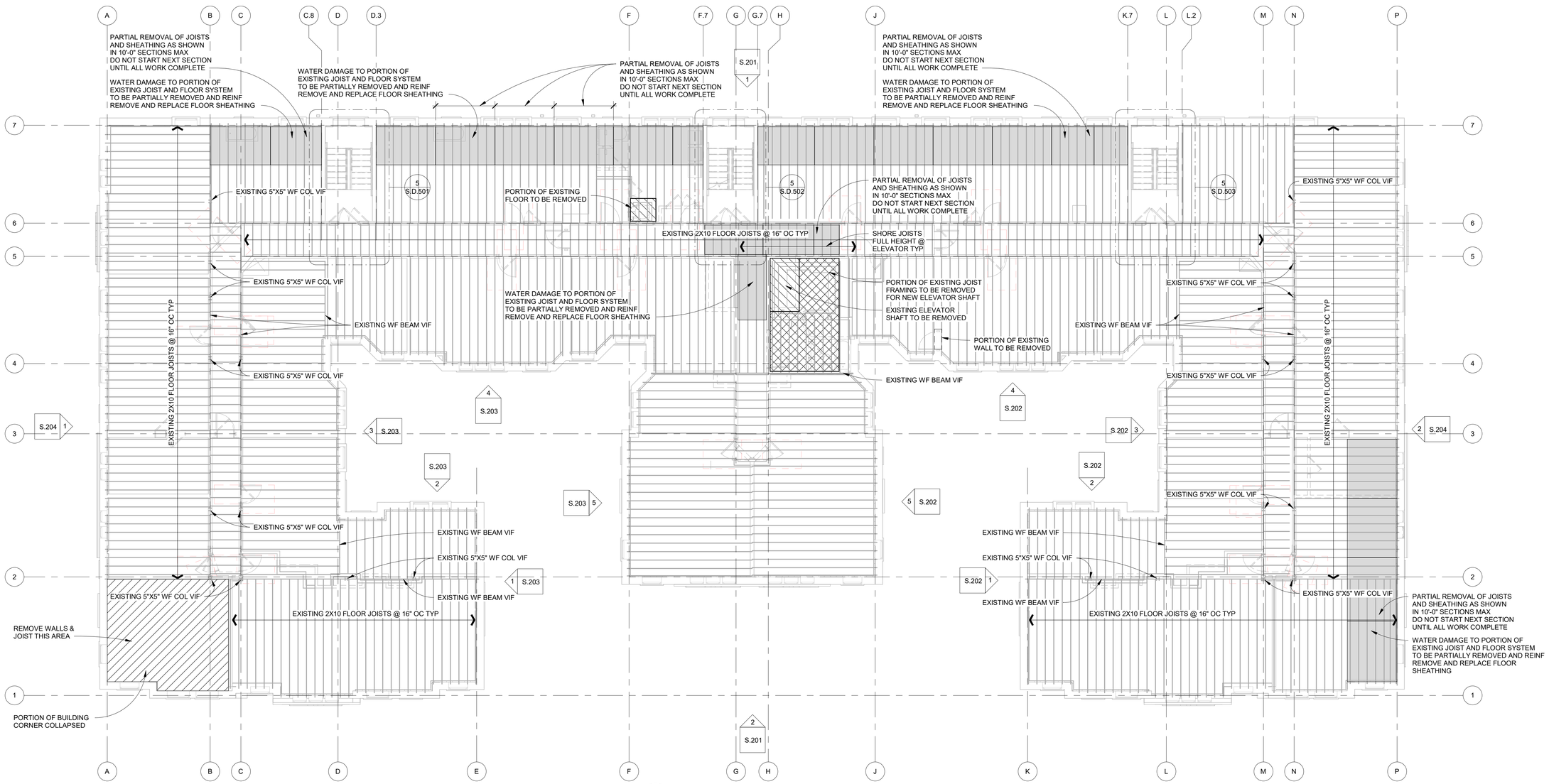
Third Floor Demolition Plan

DRAWING NUMBER

S.D.104

DEMOLITION PLAN NOTES

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES
   B. DRAWINGS S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWINGS S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
   D. REFER TO "SURVEY OF EXISTING CONDITIONS" FOR ADDITIONAL REQUIREMENTS.
2. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
3. EXTENT OF DEMOLITION IS TO BE AS INDICATED ON PLANS, SECTIONS AND ELEVATIONS. DEMOLITION IS TO INCLUDE REMOVAL AND DISPOSAL.
4. DIMENSIONS PROVIDED TO AND OF THE EXISTING STRUCTURE ARE APPROXIMATE. VERIFY THE DIMENSIONS OF THE EXISTING STRUCTURE BY FIELD MEASUREMENTS.
5. SHORE OR BRACE BEAMS, COLUMNS AND WALLS AS REQUIRED TO MAINTAIN THE STABLE INTEGRITY OF THE EXISTING STRUCTURE PRIOR TO DEMOLITION.
   A. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE COMPETENT SHORING AND BRACING FOR ALL LOADS IMPOSED DURING AND AFTER DEMOLITION THROUGH COMPLETION OF NEW CONSTRUCTION.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS, AS THEY APPLY TO THIS PROJECT, OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF MICHIGAN, LATEST EDITION, AND ALL OSHA REQUIREMENTS.
7. EXPLORATORY INVESTIGATION IS REQUIRED TO DETERMINE EXISTING CONDITIONS.
   a. THE AOR/EOR IS NOT RESPONSIBLE FOR DOCUMENTING ALL EXISTING CONDITIONS.
   b. CONDITIONS THAT VARY FROM EXPLORATORY INVESTIGATION ARE TO BE EXPECTED.



N

FOURTH FLOOR DEMOLITION PLAN

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

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CSC PROJECT NUMBER: 25008

SEAL

STATE OF MICHIGAN
JAMES CORSIGLIA
ENGINEER
No. 6201040541
LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT MICHIGAN

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KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

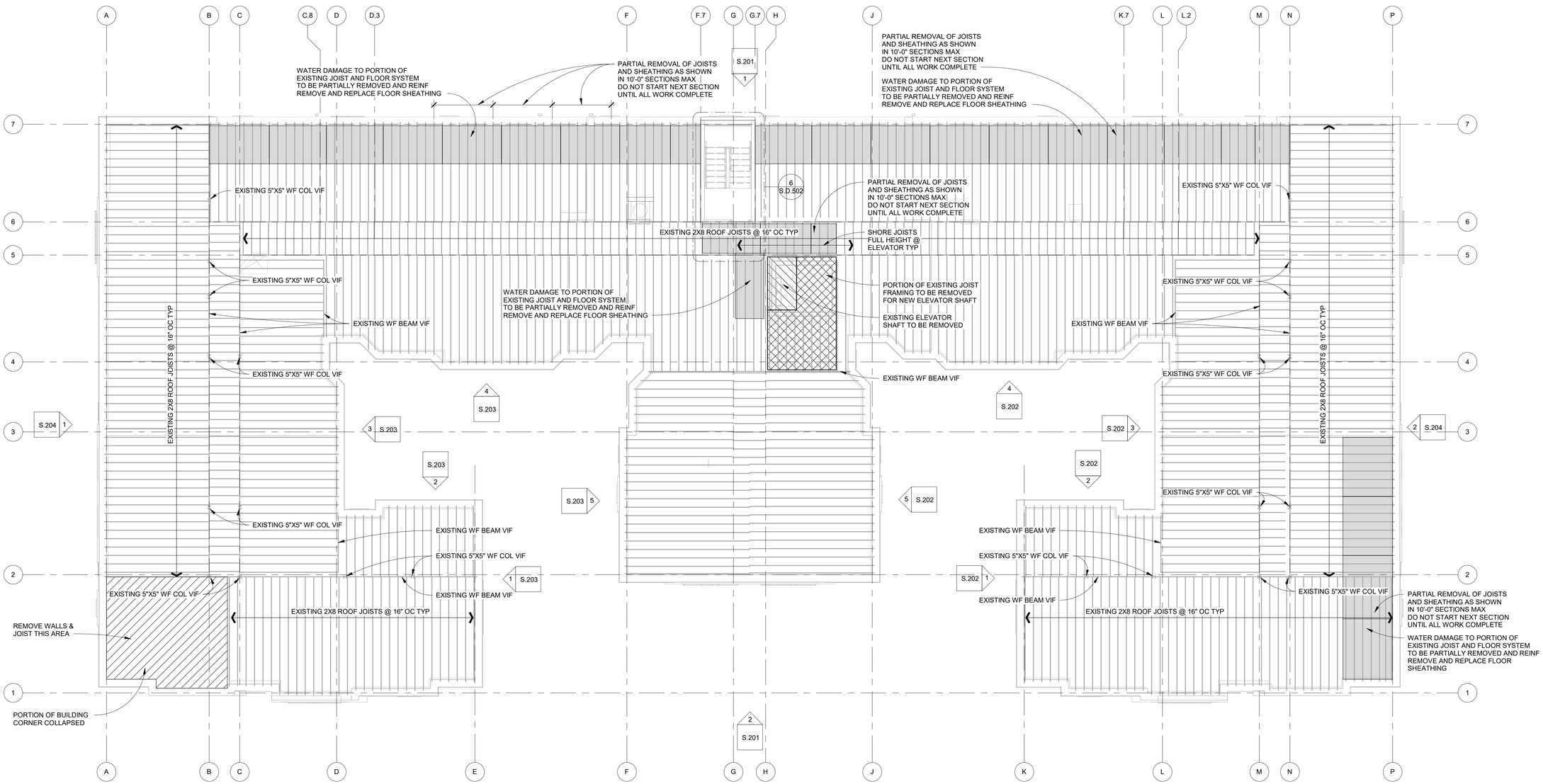
Fourth Floor Demolition Plan

DRAWING NUMBER

S.D.105

DEMOLITION PLAN NOTES

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES
   B. DRAWINGS S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWINGS S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
   D. REFER TO "SURVEY OF EXISTING CONDITIONS" FOR ADDITIONAL REQUIREMENTS.
2. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
3. EXTENT OF DEMOLITION IS TO BE AS INDICATED ON PLANS, SECTIONS AND ELEVATIONS. DEMOLITION IS TO INCLUDE REMOVAL AND DISPOSAL.
4. DIMENSIONS PROVIDED TO AND OF THE EXISTING STRUCTURE ARE APPROXIMATE. VERIFY THE DIMENSIONS OF THE EXISTING STRUCTURE BY FIELD MEASUREMENTS.
5. SHORE OR BRACE BEAMS, COLUMNS AND WALLS AS REQUIRED TO MAINTAIN THE STABLE INTEGRITY OF THE EXISTING STRUCTURE PRIOR TO DEMOLITION.
   A. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE COMPETENT SHORING AND BRACING FOR ALL LOADS IMPOSED DURING AND AFTER DEMOLITION THROUGH COMPLETION OF NEW CONSTRUCTION.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS, AS THEY APPLY TO THIS PROJECT, OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF MICHIGAN, LATEST EDITION, AND ALL OSHA REQUIREMENTS.
7. EXPLORATORY INVESTIGATION IS REQUIRED TO DETERMINE EXISTING CONDITIONS.
   a. THE AOR/EOR IS NOT RESPONSIBLE FOR DOCUMENTING ALL EXISTING CONDITIONS.
   b. CONDITIONS THAT VARY FROM EXPLORATORY INVESTIGATION ARE TO BE EXPECTED.



ROOF DEMOLITION PLAN

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

FSP FUSCO, SHAFFER & PAPPAS, INC.
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CSC PROJECT NUMBER: 25008

SEAL

STATE OF MICHIGAN
JAMES CORSIGLIA
ENGINEER
No. 6201040541
LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT MICHIGAN

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05.09.2025	BIDS/PERMITS

KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

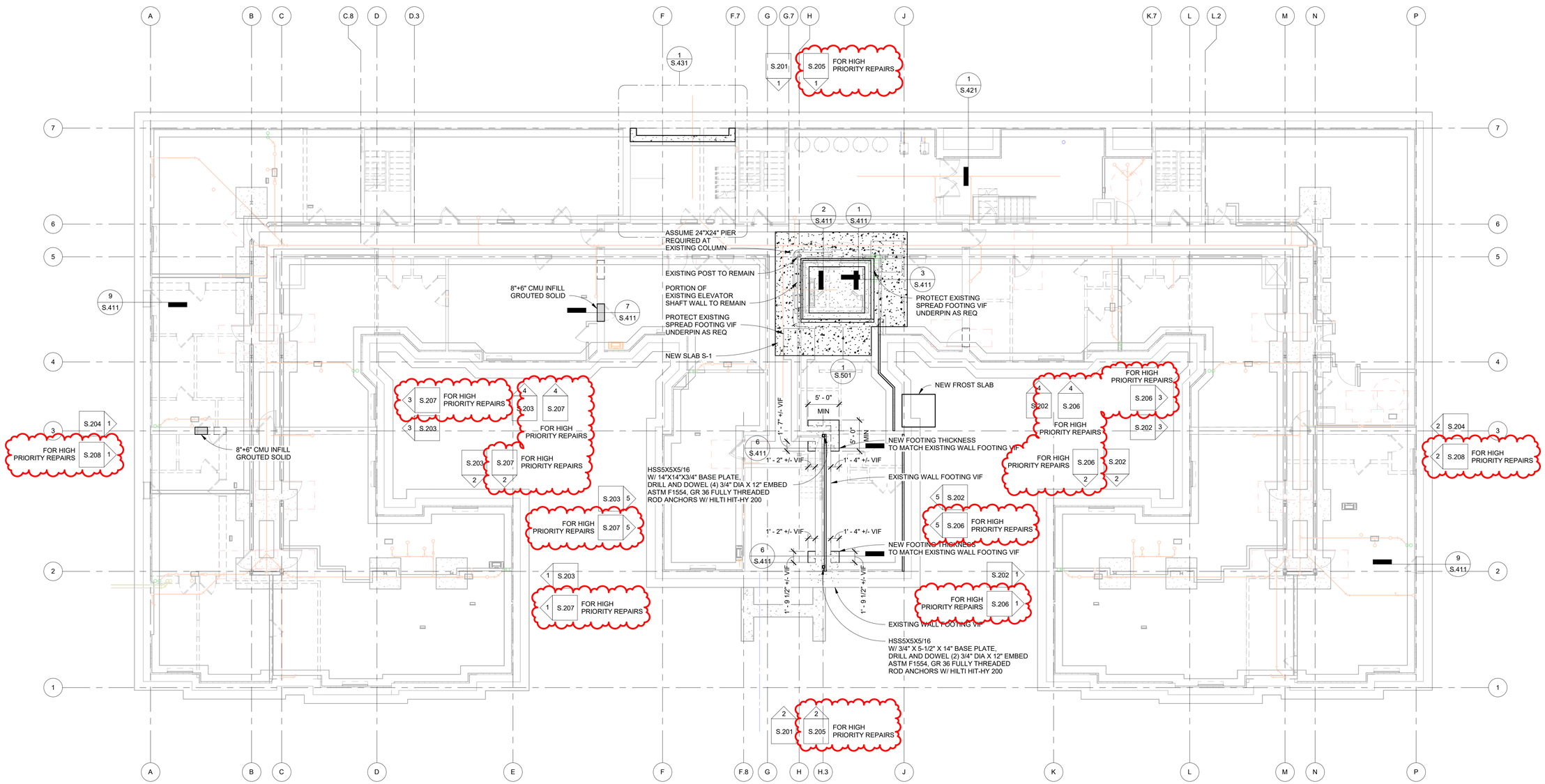
Roof Demolition Plan

DRAWING NUMBER

S.D.109

FOUNDATION PLAN NOTES

1. REFER TO DRAWINGS FOR ADDITIONAL INFORMATION
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES.
   B. DRAWING S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWING S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
2. TYPICAL DETAILS APPLY TO ALL DRAWINGS.
   USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
3. DO NOT BACKFILL FOUNDATION WALLS UNTIL LOWER LEVEL SLAB ON GRADE AND ELEVATED SLAB HAVE BEEN PLACED AND ACHIEVE 75% REQUIRED f'c.
4. TOP OF SLAB REFERENCE ELEVATION = -9' - 4" U.O.N.
5. CONCRETE SLAB ON GRADE:
   S-1, TYP:
   4" THICK NORMAL WEIGHT CONCRETE W/
   REINFORCING: 4 PCY - MACRO-SYNTHETIC FIBERS
   OVER 6milL VAPOR BARRIER
   OVER 6" COMPACTED MDOT GRANULAR FILL
   SLAB ON GRADE CONTROL JOINTS AT 10' - 0" OC MAX.
   MAX ASPECT RATIO OF 1.5:1



FOUNDATION PLAN

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

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CSC PROJECT NUMBER: 25008

SEAL

STATE OF MICHIGAN
JAMES CORSIGLIA
ENGINEER
No. 4201040541
LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE

CABOT APARTMENTS
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KEY PLAN

FSP PROJECT NO.
TRC22.066

DRAWING TITLE

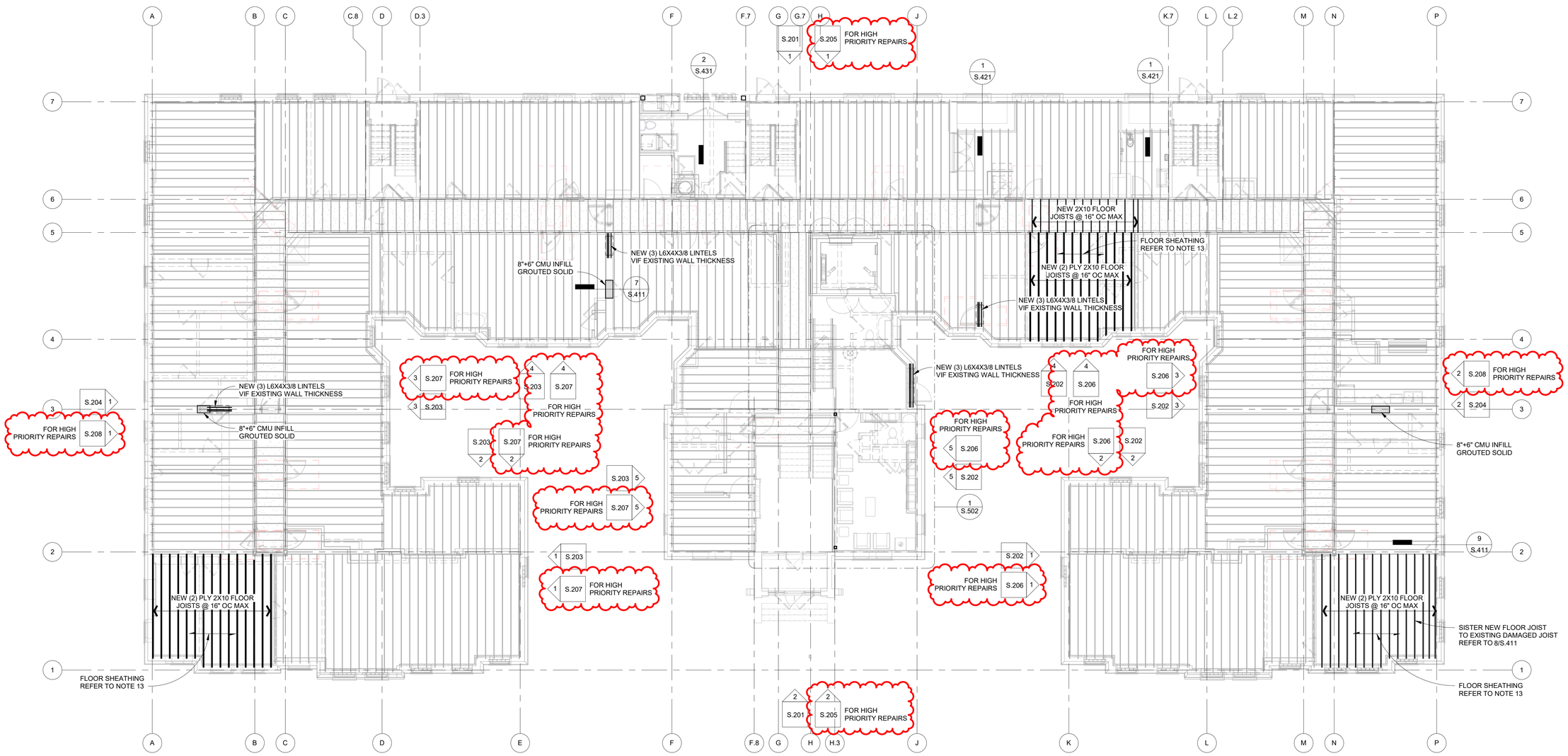
Foundation Plan

DRAWING NUMBER

S.101

WOOD FLOOR FRAMING PLANS

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES.
   B. DRAWING S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWING S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
2. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
3. FINISH FLOOR ELEVATION:
   A. FIRST FLOOR -9'-4"
   B. FINISH GRADE -6'-3"
   C. VESTIBULE FLOOR -3'-6"
   D. SECOND FLOOR 0'-0"
   E. THIRD FLOOR 9'-4"
   F. FOURTH FLOOR 18'-8"
   G. FIFTH FLOOR 28'-0"
   H. ROOF FRAMING BEARING ELEVATION 37'-4"
4. ALL NAILS FOR STRUCTURAL WORK SHALL BE COMMON WIRE NAILS CONFORMING TO THE FOLLOWING MINIMUM SIZES:
   a. 8d 0.131" DIAM x 2-1/2" LONG
   b. 10d 0.148" DIAM x 3" LONG
   c. 10d SHORT 0.148" DIAM x 1-5/8" PLUS SHEATHING THICKNESS LONG
   d. 16d 0.162" DIAM x 3-1/2" LONG
   e. 20d 0.192" DIAM x 4" LONG
5. NO D HEAD NAILS PERMITTED.
6. PROVIDE NAILS AT CONNECTIONS AS INDICATED ON THE STRUCTURAL DRAWINGS. WHERE NAILS AT CONNECTIONS ARE NOT INDICATED, NAIL PER NAILING SCHEDULE.
7. NAILING NOT NOTED IN SCHEDULE BELOW OR IN THE STRUCTURAL DRAWINGS SHALL BE A MINIMUM OF TWO NAILS AT EACH CONTACT. USE 8d NAILS FOR NOMINAL 1x MATERIAL AND 16d FOR NOMINAL 2x MATERIAL.
8. HOLES SHALL BE PRE-DRILLED TO PREVENT SPLITTING.
9. ALL FRAMING IN DIRECT CONTACT WITH CONCRETE SHALL BE PRESERVATIVE TREATED.
10. NAILS INTO PRESERVATIVE TREATED LUMBER SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER.
11. EXTERIOR WALL AND LOAD BEARING WALLS SHALL BE 2X6 STUDS AT 16" OC, DF #2 OR BETTER.
12. INTERIOR NON-LOAD BEARING WALLS SHALL BE 2X4 OR 2X6 STUDS (AS INDICATED) @ 16" OC.
13. FLOOR SHEATHING SHALL BE (GLUED AND NAILED) 23/32" OSB OR PLYWOOD W/ 10D NAILS AT 6" OC AROUND PANEL BOUNDARY (PERIMETER) AND 12" OC IN PANEL FIELD. BLOCKING IS NOT REQUIRED. TOP OF SHEATHING TO MATCH TOP OF EXISTING DECK
14. ALL MECHANICAL CONNECTION HARDWARE SHALL BE SIMPSON STRONG-TIE OR APPROVED EQUAL.
15. COORDINATE FRAMING PLANS WITH MECHANICAL, ELECTRICAL, PLUMBING AND ARCHITECTURAL TRADES AND DOCUMENTS.
16. REFER TO ARCHITECTURAL DRAWINGS FOR NON-LOAD BEARING WALLS.
17. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
18. PROVIDE SOLID BLOCKING AND STUDS UNDER GIRDER TRUSS BEARING LOCATIONS.
   A. BLOCK SOLID TO FOUNDATION INCLUDING FLOOR TRUSS SPACE.
   B. BLOCKING SHALL MATCH THE GIRDER TRUSS PLYS.
19. WOOD POSTS AND STUDS SUPPORTING HEADERS SHALL BE CARRIED DOWN TO THE FOUNDATION.
   A. BLOCK SOLID TO FOUNDATION INCLUDING FLOOR TRUSS SPACE.
   B. BLOCKING SHALL MATCH THE POST/STUD SIZE.



FIRST FLOOR FRAMING PLAN

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

FUSCO, SHAFFER & PAPPAS, INC.
ARCHITECTS AND PLANNERS
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JAMES CORSIGLIA
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KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

First Floor Framing Plan

DRAWING NUMBER

S.102

WOOD FLOOR FRAMING PLANS

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES.
   B. DRAWING S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWING S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
2. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
3. FINISH FLOOR ELEVATION:
   A. FIRST FLOOR -9'-4"
   B. FINISH GRADE -6'-3"
   C. VESTIBULE FLOOR -3'-6"
   D. SECOND FLOOR 0'-0"
   E. THIRD FLOOR 9'-4"
   F. FOURTH FLOOR 18'-8"
   G. FIFTH FLOOR 28'-0"
   H. ROOF FRAMING BEARING ELEVATION 37'-4"
4. ALL NAILS FOR STRUCTURAL WORK SHALL BE COMMON WIRE NAILS CONFORMING TO THE FOLLOWING MINIMUM SIZES:
   a. 8d 0.131" DIAM x 2-1/2" LONG
   b. 10d 0.148" DIAM x 3" LONG
   c. 10d SHORT 0.148" DIAM x 1-5/8" PLUS SHEATHING THICKNESS LONG
   d. 16d 0.162" DIAM x 3-1/2" LONG
   e. 20d 0.192" DIAM x 4" LONG
5. NO D HEAD NAILS PERMITTED.
6. PROVIDE NAILS AT CONNECTIONS AS INDICATED ON THE STRUCTURAL DRAWINGS. WHERE NAILS AT CONNECTIONS ARE NOT INDICATED, NAIL PER NAILING SCHEDULE.
7. NAILING NOT NOTED IN SCHEDULE BELOW OR IN THE STRUCTURAL DRAWINGS SHALL BE A MINIMUM OF TWO NAILS AT EACH CONTACT. USE 8d NAILS FOR NOMINAL 1x MATERIAL AND 16d FOR NOMINAL 2x MATERIAL.
8. HOLES SHALL BE PRE-DRILLED TO PREVENT SPLITTING.
9. ALL FRAMING IN DIRECT CONTACT WITH CONCRETE SHALL BE PRESERVATIVE TREATED.
10. NAILS INTO PRESERVATIVE TREATED LUMBER SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER.
11. EXTERIOR WALL AND LOAD BEARING WALLS SHALL BE 2X6 STUDS AT 16" OC, DF #2 OR BETTER.
12. INTERIOR NON-LOAD BEARING WALLS SHALL BE 2X4 OR 2X6 STUDS (AS INDICATED) @ 16" OC.
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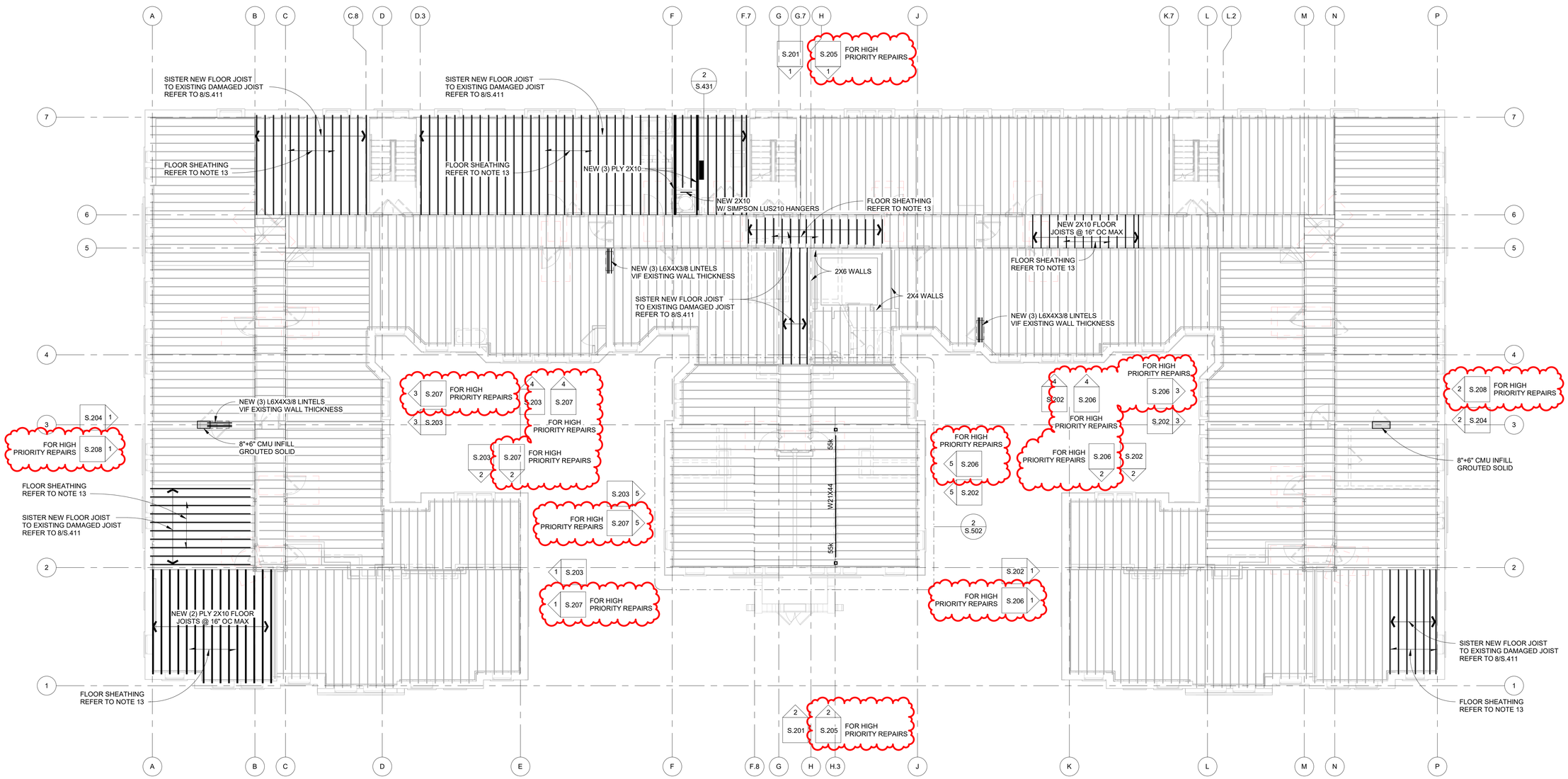
18. PROVIDE SOLID BLOCKING AND STUDS UNDER GIRDER TRUSS BEARING LOCATIONS.
   A. BLOCK SOLID TO FOUNDATION INCLUDING FLOOR TRUSS SPACE.
   B. BLOCKING SHALL MATCH THE GIRDER TRUSS PLYS.
19. WOOD POSTS AND STUDS SUPPORTING HEADERS SHALL BE CARRIED DOWN TO THE FOUNDATION.
   A. BLOCK SOLID TO FOUNDATION INCLUDING FLOOR TRUSS SPACE.
   B. BLOCKING SHALL MATCH THE POST/STUD SIZE.



SECOND FLOOR DEMOLITION PLAN

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

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KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

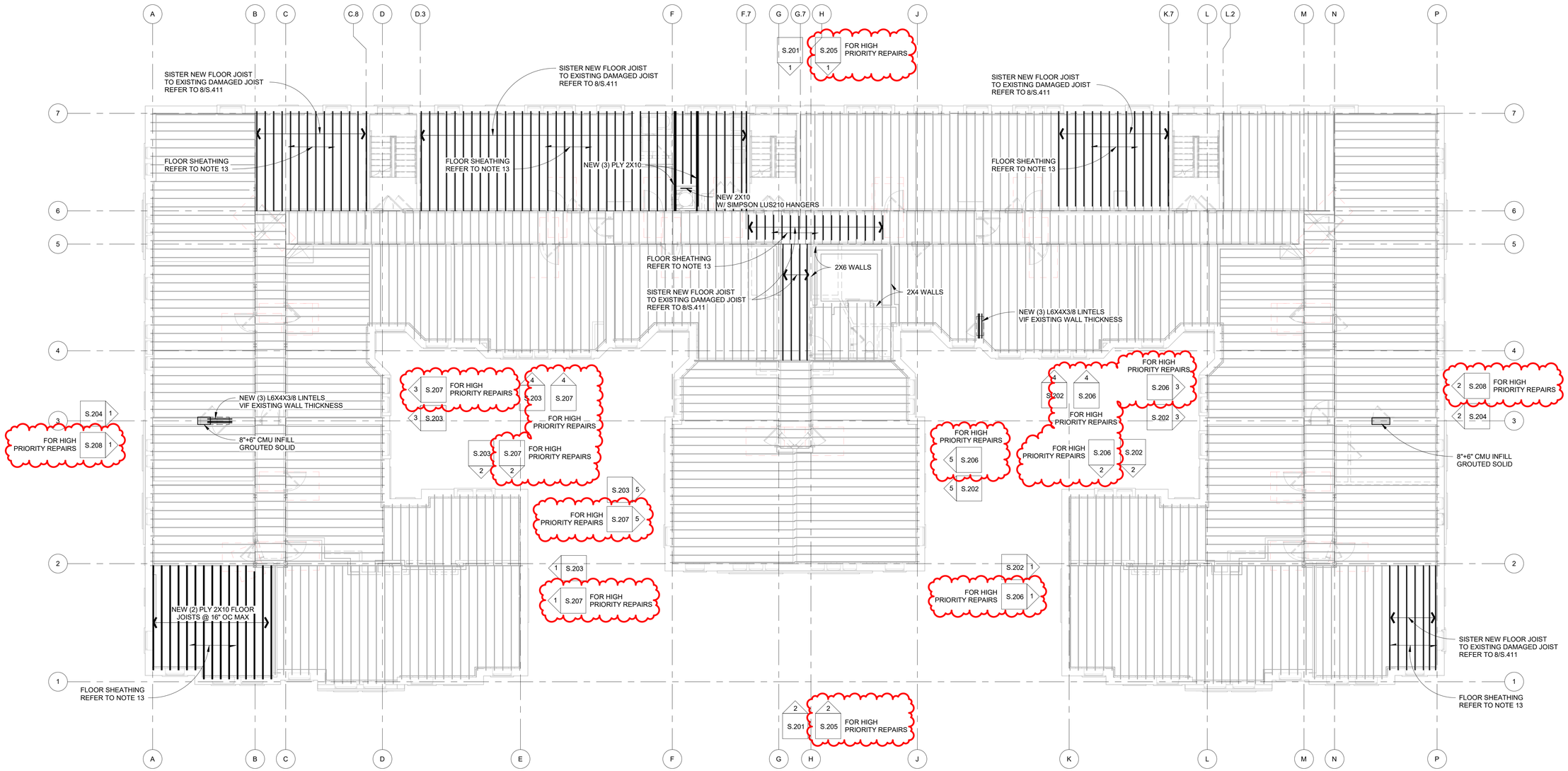
Second Floor Framing Plan

DRAWING NUMBER

S.103

WOOD FLOOR FRAMING PLANS

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES.
   B. DRAWING S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWING S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
2. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
3. FINISH FLOOR ELEVATION:
   A. FIRST FLOOR -9'-4"
   B. FINISH GRADE -6'-3"
   C. VESTIBULE FLOOR -3'-6"
   D. SECOND FLOOR 0'-0"
   E. THIRD FLOOR 9'-4"
   F. FOURTH FLOOR 18'-8"
   G. FIFTH FLOOR 28'-0"
   H. ROOF FRAMING BEARING ELEVATION 37'-4"
4. ALL NAILS FOR STRUCTURAL WORK SHALL BE COMMON WIRE NAILS CONFORMING TO THE FOLLOWING MINIMUM SIZES:
   a. 8d 0.131" DIAM x 2-1/2" LONG
   b. 10d 0.148" DIAM x 3" LONG
   c. 10d SHORT 0.148" DIAM x 1-5/8" PLUS SHEATHING THICKNESS LONG
   d. 16d 0.162" DIAM x 3-1/2" LONG
   e. 20d 0.192" DIAM x 4" LONG
5. NO D HEAD NAILS PERMITTED.
6. PROVIDE NAILS AT CONNECTIONS AS INDICATED ON THE STRUCTURAL DRAWINGS. WHERE NAILS AT CONNECTIONS ARE NOT INDICATED, NAIL PER NAILING SCHEDULE.
7. NAILING NOT NOTED IN SCHEDULE BELOW OR IN THE STRUCTURAL DRAWINGS SHALL BE A MINIMUM OF TWO NAILS AT EACH CONTACT. USE 8d NAILS FOR NOMINAL 1x MATERIAL AND 16d FOR NOMINAL 2x MATERIAL.
8. HOLES SHALL BE PRE-DRILLED TO PREVENT SPLITTING.
9. ALL FRAMING IN DIRECT CONTACT WITH CONCRETE SHALL BE PRESERVATIVE TREATED.
10. NAILS INTO PRESERVATIVE TREATED LUMBER SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER.
11. EXTERIOR WALL AND LOAD BEARING WALLS SHALL BE 2X6 STUDS AT 16" OC, DF #2 OR BETTER.
12. INTERIOR NON-LOAD BEARING WALLS SHALL BE 2X4 OR 2X6 STUDS (AS INDICATED) @ 16" OC.
13. FLOOR SHEATHING SHALL BE (GLUED AND NAILED) 23/32" OSB OR PLYWOOD W/ 10D NAILS AT 6" OC AROUND PANEL BOUNDARY (PERIMETER) AND 12" OC IN PANEL FIELD. BLOCKING IS NOT REQUIRED. TOP OF SHEATHING TO MATCH TOP OF EXISTING DECK
14. ALL MECHANICAL CONNECTION HARDWARE SHALL BE SIMPSON STRONG-TIE OR APPROVED EQUAL.
15. COORDINATE FRAMING PLANS WITH MECHANICAL, ELECTRICAL, PLUMBING AND ARCHITECTURAL TRADES AND DOCUMENTS.
16. REFER TO ARCHITECTURAL DRAWINGS FOR NON-LOAD BEARING WALLS.
17. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
18. PROVIDE SOLID BLOCKING AND STUDS UNDER GIRDER TRUSS BEARING LOCATIONS.
   A. BLOCK SOLID TO FOUNDATION INCLUDING FLOOR TRUSS SPACE.
   B. BLOCKING SHALL MATCH THE GIRDER TRUSS PLYS.
19. WOOD POSTS AND STUDS SUPPORTING HEADERS SHALL BE CARRIED DOWN TO THE FOUNDATION.
   A. BLOCK SOLID TO FOUNDATION INCLUDING FLOOR TRUSS SPACE.
   B. BLOCKING SHALL MATCH THE POST/STUD SIZE.



THIRD FLOOR FRAMING PLAN

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

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CSC PROJECT NUMBER: 25008

SEAL

STATE OF MICHIGAN
JAMES CORSIGLIA
ENGINEER
No. 4201040541
LICENSED PROFESSIONAL ENGINEER

MICIGAN

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT

DATE	ISSUE
09.15.2026	OWNER REVISIONS
03.27.2026	PRIORITY REPAIRS
06.24.2025	BIDS
05.09.2025	BIDS/PERMITS

KEY PLAN

FSP PROJECT NO.
TRC22.066

DRAWING TITLE

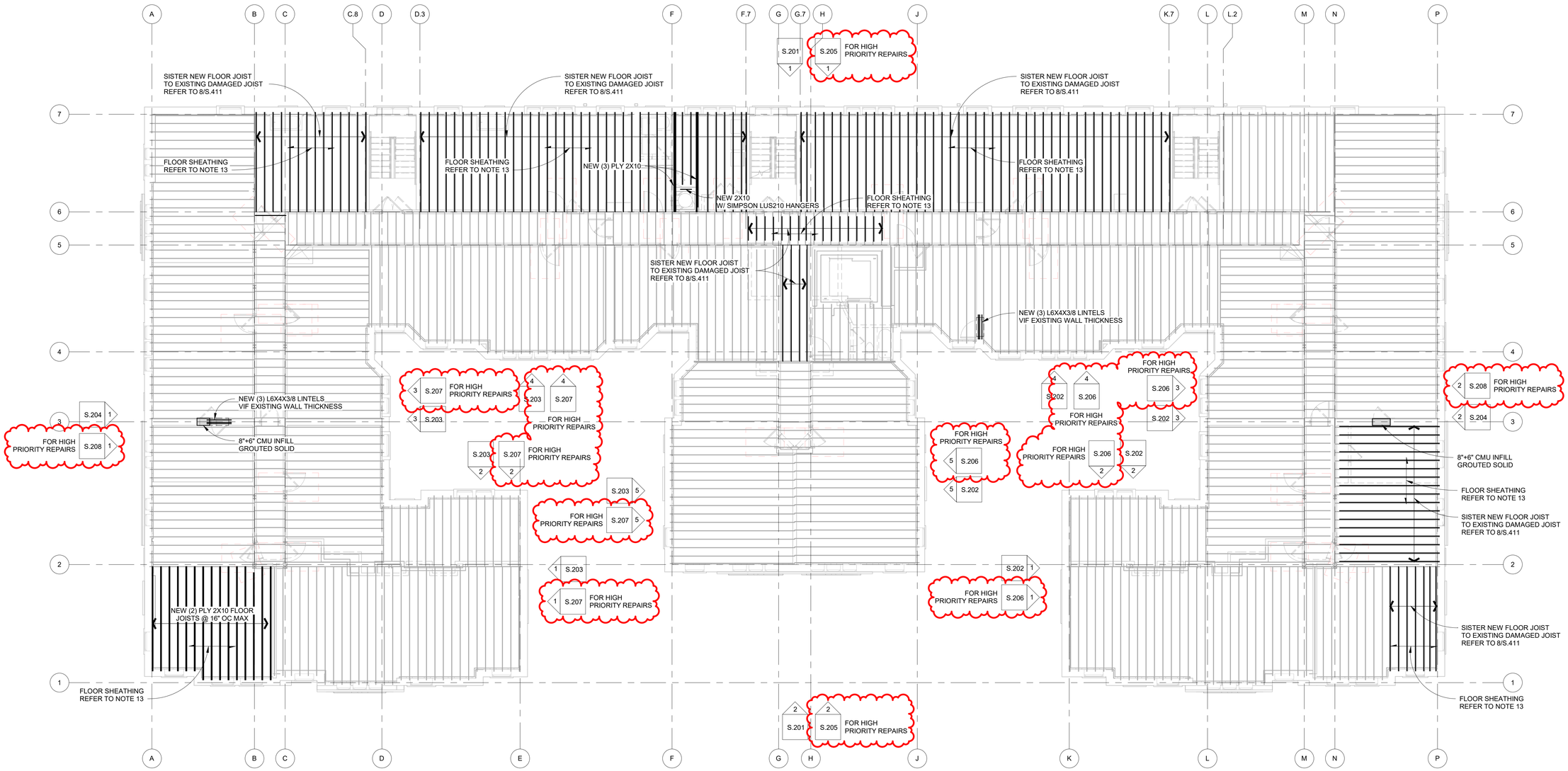
Third Floor Framing Plan

DRAWING NUMBER

S.104

WOOD FLOOR FRAMING PLANS

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES.
   B. DRAWING S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWING S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
2. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
3. FINISH FLOOR ELEVATION:
   A. FIRST FLOOR -9'-4"
   B. FINISH GRADE -6'-3"
   C. VESTIBULE FLOOR -3'-6"
   D. SECOND FLOOR 0'-0"
   E. THIRD FLOOR 9'-4"
   F. FOURTH FLOOR 18'-8"
   G. FIFTH FLOOR 28'-0"
   H. ROOF FRAMING BEARING ELEVATION 37'-4"
4. ALL NAILS FOR STRUCTURAL WORK SHALL BE COMMON WIRE NAILS CONFORMING TO THE FOLLOWING MINIMUM SIZES:
   a. 8d 0.131" DIAM x 2-1/2" LONG
   b. 10d 0.148" DIAM x 3" LONG
   c. 10d SHORT 0.148" DIAM x 1-5/8" PLUS SHEATHING THICKNESS LONG
   d. 16d 0.162" DIAM x 3-1/2" LONG
   e. 20d 0.192" DIAM x 4" LONG
5. NO D HEAD NAILS PERMITTED.
6. PROVIDE NAILS AT CONNECTIONS AS INDICATED ON THE STRUCTURAL DRAWINGS. WHERE NAILS AT CONNECTIONS ARE NOT INDICATED, NAIL PER NAILING SCHEDULE.
7. NAILING NOT NOTED IN SCHEDULE BELOW OR IN THE STRUCTURAL DRAWINGS SHALL BE A MINIMUM OF TWO NAILS AT EACH CONTACT. USE 8d NAILS FOR NOMINAL 1x MATERIAL AND 16d FOR NOMINAL 2x MATERIAL.
8. HOLES SHALL BE PRE-DRILLED TO PREVENT SPLITTING.
9. ALL FRAMING IN DIRECT CONTACT WITH CONCRETE SHALL BE PRESERVATIVE TREATED.
10. NAILS INTO PRESERVATIVE TREATED LUMBER SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER.
11. EXTERIOR WALL AND LOAD BEARING WALLS SHALL BE 2X6 STUDS AT 16" OC, DF #2 OR BETTER.
12. INTERIOR NON-LOAD BEARING WALLS SHALL BE 2X4 OR 2X6 STUDS (AS INDICATED) @ 16" OC.
13. FLOOR SHEATHING SHALL BE (GLUED AND NAILED) 23/32" OSB OR PLYWOOD W/ 10D NAILS AT 6" OC AROUND PANEL BOUNDARY (PERIMETER) AND 12" OC IN PANEL FIELD. BLOCKING IS NOT REQUIRED. TOP OF SHEATHING TO MATCH TOP OF EXISTING DECK
14. ALL MECHANICAL CONNECTION HARDWARE SHALL BE SIMPSON STRONG-TIE OR APPROVED EQUAL.
15. COORDINATE FRAMING PLANS WITH MECHANICAL, ELECTRICAL, PLUMBING AND ARCHITECTURAL TRADES AND DOCUMENTS.
16. REFER TO ARCHITECTURAL DRAWINGS FOR NON-LOAD BEARING WALLS.
17. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
18. PROVIDE SOLID BLOCKING AND STUDS UNDER GIRDER TRUSS BEARING LOCATIONS.
   A. BLOCK SOLID TO FOUNDATION INCLUDING FLOOR TRUSS SPACE.
   B. BLOCKING SHALL MATCH THE GIRDER TRUSS PLYS.
19. WOOD POSTS AND STUDS SUPPORTING HEADERS SHALL BE CARRIED DOWN TO THE FOUNDATION.
   A. BLOCK SOLID TO FOUNDATION INCLUDING FLOOR TRUSS SPACE.
   B. BLOCKING SHALL MATCH THE POST/STUD SIZE.



N

FOURTH FLOOR FRAMING PLAN

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

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CSC PROJECT NUMBER: 25008

SEAL

STATE OF MICHIGAN
JAMES CORSIGLIA
ENGINEER
No. 4201040541
LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT MICIGAN

DATE	ISSUE
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KEY PLAN

FSP PROJECT NO.
TRC22.066

DRAWING TITLE

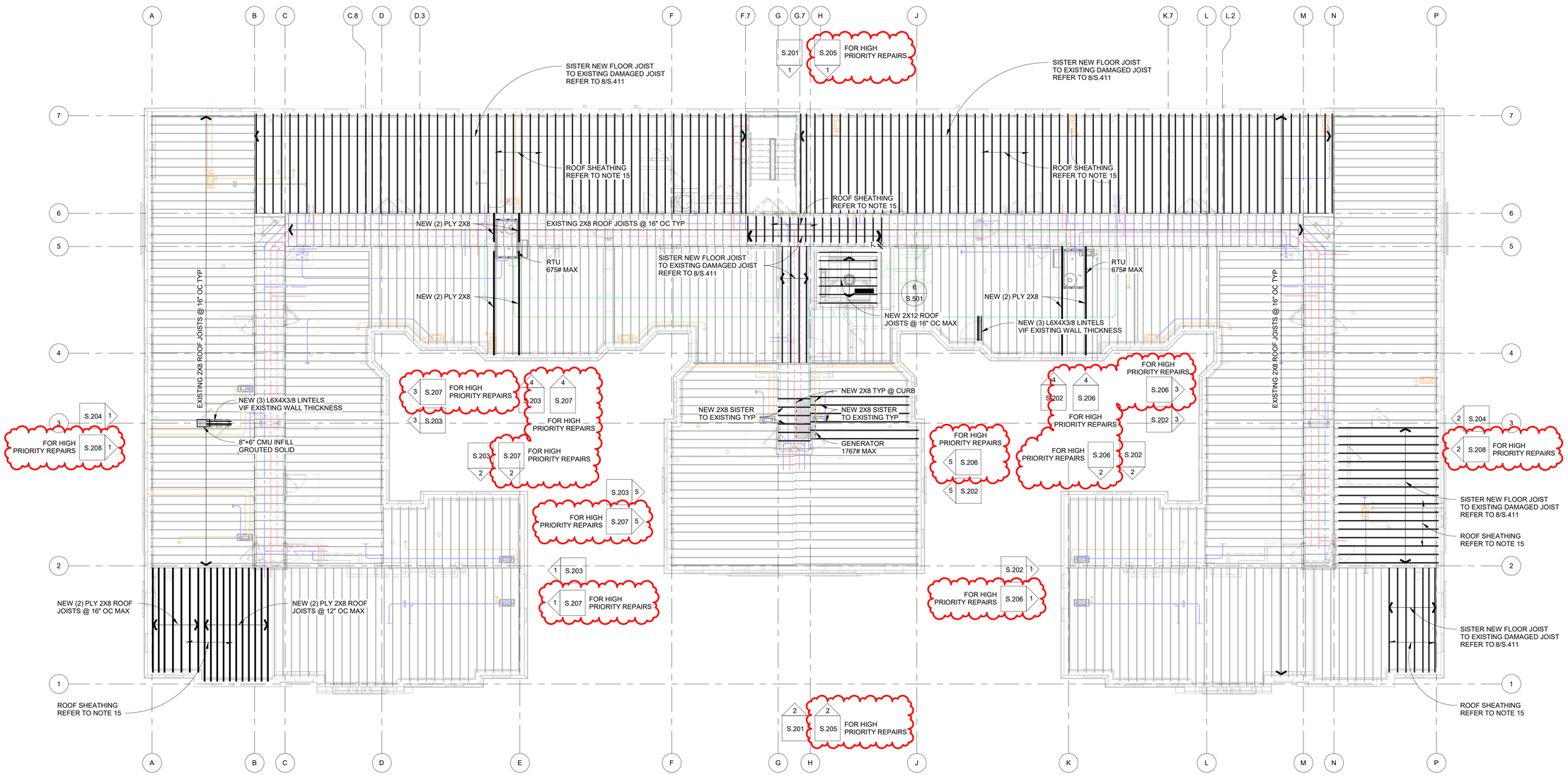
Fourth Floor Framing Plan

DRAWING NUMBER

S.105

WOOD ROOF FRAMING PLAN NOTES

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES.
   B. DRAWING S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWING S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
2. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
3. FINISH FLOOR ELEVATION:
   A. FIRST FLOOR -9'-4"
   B. FINISH GRADE -6'-3"
   C. VESTIBULE FLOOR -3'-6"
   D. SECOND FLOOR 0'-0"
   E. THIRD FLOOR 9'-4"
   F. FOURTH FLOOR 18'-8"
   G. FIFTH FLOOR 28'-0"
   H. ROOF FRAMING BEARING ELEVATION 37'-4"
4. ALL NAILS FOR STRUCTURAL WORK SHALL BE COMMON WIRE NAILS CONFORMING TO THE FOLLOWING MINIMUM SIZES:
   a. 8d 0.131" DIAM x 2-1/2" LONG
   b. 10d 0.148" DIAM x 3" LONG
   c. 10d SHORT 0.148" DIAM x 1-5/8" PLUS SHEATHING THICKNESS LONG
   d. 16d 0.162" DIAM x 3-1/2" LONG
   e. 20d 0.192" DIAM x 4" LONG
5. NO D HEAD NAILS PERMITTED.
6. PROVIDE NAILS AT CONNECTIONS AS INDICATED ON THE STRUCTURAL DRAWINGS. WHERE NAILS AT CONNECTIONS ARE NOT INDICATED, NAIL PER NAILING SCHEDULE.
7. NAILING NOT NOTED IN SCHEDULE BELOW OR IN THE STRUCTURAL DRAWINGS SHALL BE A MINIMUM OF TWO NAILS AT EACH CONTACT. USE 8d NAILS FOR NOMINAL 1x MATERIAL AND 16d FOR NOMINAL 2x MATERIAL.
8. HOLES SHALL BE PRE-DRILLED TO PREVENT SPLITTING.
9. ALL FRAMING IN DIRECT CONTACT WITH CONCRETE SHALL BE PRESERVATIVE TREATED.
10. NAILS INTO PRESERVATIVE TREATED LUMBER SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER.
11. EXTERIOR WALL AND LOAD BEARING WALLS SHALL BE 2X6 STUDS AT 16" OC.
12. INTERIOR NON-LOAD BEARING WALLS SHALL BE 2X4 OR 2X6 STUDS (AS INDICATED) @ 16" OC.
13. MECHANICAL CONNECTION HARDWARE SHALL BE SIMPSON STRONG-TIE OR APPROVED EQUAL.
14. PRE-ENGINEERED METAL PLATE ROOF TRUSSES SHALL BE AT 24" OC MAX.
15. ROOF SHEATHING SHALL BE 19/32" OSB OR PLYWOOD W/ 8D NAILS AT 6" OC AROUND PANEL BOUNDARY (PERIMETER) AND 12" OC IN PANEL FIELD. BLOCKING IS NOT REQUIRED.
16. COORDINATE FRAMING PLANS WITH MECHANICAL, ELECTRICAL, PLUMBING AND ARCHITECTURAL TRADES AND DOCUMENTS.
   A. REINFORCE ROOF JOISTS TO SUPPORT WATER MAIN AND FIRE SUPPRESSION MAIN LOADS.
17. REFER TO ARCHITECTURAL DRAWINGS FOR NON-LOAD BEARING WALLS.
18. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
19. PROVIDE SOLID BLOCKING AND STUDS UNDER GIRDER TRUSS BEARING LOCATIONS.
   A. BLOCK SOLID TO FOUNDATION INCLUDING FLOOR TRUSS SPACE.
   B. BLOCKING SHALL MATCH THE GIRDER TRUSS PLYS.
20. WOOD POSTS AND STUDS SUPPORTING HEADERS SHALL BE CARRIED DOWN TO THE FOUNDATION.
   A. BLOCK SOLID TO FOUNDATION INCLUDING FLOOR TRUSS SPACE.
   B. BLOCKING SHALL MATCH THE POST/STUD SIZE.
21. ROOF TRUSSES TO BE ANCHORED TO INTERIOR AND EXTERIOR WALLS WITH HURRICANE TIES SIMPSON TYPE H10A AT EACH END.
22. ROOF GIRDER TRUSS REACTIONS SHALL BE COORDINATED WITH APPROVED SHOP DRAWINGS.
   A. INSTALL SIMPSON CONNECTORS PER APPROVED SHOPS OR SELECT HURRICANE TIES CAPABLE OF RESISTING THE REACTIONS INDICATED ON THE SHOP DRAWINGS.



N

ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"

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CSC PROJECT NUMBER: 25008

SEAL

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JAMES CORSIGLIA
ENGINEER
No. 4201040541
LICENSED PROFESSIONAL ENGINEER

MICIGAN

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CABOT APARTMENTS
RENOVATIONS

DETROIT

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KEY PLAN

FSP PROJECT NO.
TRC22.066

DRAWING TITLE

Roof Framing Plan

DRAWING NUMBER

S.109

EXTERIOR HIGH PRIORITY RESTORATION ELEVATION NOTES

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES.
   B. DRAWING S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWING S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
2. WINDOW BASIS OF DESIGN:
   A. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
   B. 100% OF WINDOWS TO BE REPLACED.
   C. REMOVE EXISTING SEALANTS, CLEAN SUBSTRATE, APPLY NEW SEALANT AT WINDOW/BUILDING INTERFACE.
3. BASIS OF DESIGN FOR ALL EXISTING STEEL LINTELS U.O.N.:
   A. SCRAPE AND WIRE BRUSH ALL EXPOSED SURFACES.
   B. REMOVE ALL LOOSE SCALE AND PAINT.
   C. PRIME AND PAINT PER PROJECT SPECIFICATIONS.
4. ADDITIONAL DISTRESSED VENEER IS EXPECTED. PORTIONS OF THE FACADE COULD NOT BE VISUALLY ASSESSED.
5. NOTE THIS DRAWING REPRESENTS HIGH PRIORITY REPAIRS ONLY. FURTHER RECOMMENDED REPAIRS CAN BE FOUND ON EXTERIOR RESTORATION ELEVATION DRAWINGS S.201 THROUGH S.204.
6. LEGEND KEY:

HATCH PATTERN OR LINE TYPE	REPAIR TYPE	NOTES
	HIGH PRIORITY MASONRY FAILING - REMOVE AND REPLACE/REBUILD	HIGH PRIORITY MASONRY REPAIRS SHOWN ON THIS DRAWING. REFER TO S.201 THROUGH S.204 FOR TOTAL RECOMMENDED MASONRY REPAIRS.
	REMOVE AND REPLACE STEEL LINTEL	HIGH PRIORITY LINTELS SHOWN ON THIS DRAWING. REFER TO S.201 THROUGH S.204 FOR RECOMMENDED TOTAL LINTELS TO BE REPLACED.

2 / S.101 EAST FACADE HIGH PRIORITY RESTORATION

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

1 / S.101 WEST FACADE HIGH PRIORITY RESTORATION

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

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SEAL

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JAMES CORSIGLIA
ENGINEER
No. 4201040541
LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

MICIGAN DETROIT

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05.09.2025	BIDS/PERMITS

KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

Exterior High Priority Restoration Elevations

DRAWING NUMBER

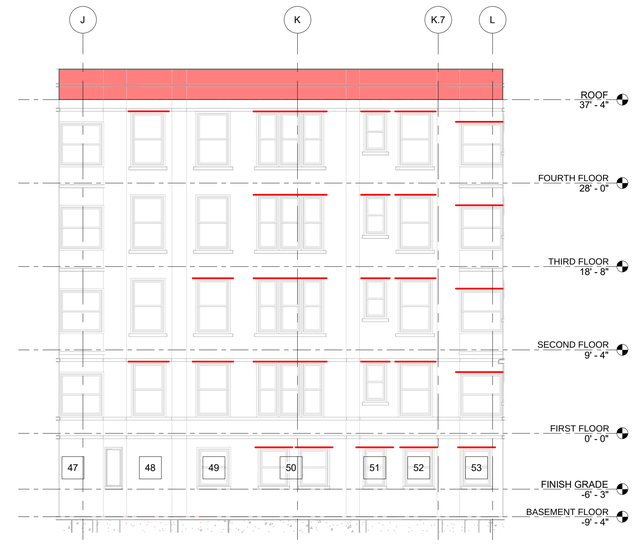
S.205

EXTERIOR HIGH PRIORITY RESTORATION ELEVATION NOTES

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES.
   B. DRAWING S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWING S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
2. WINDOW BASIS OF DESIGN:
   A. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
   B. 100% OF WINDOWS TO BE REPLACED.
   C. REMOVE EXISTING SEALANTS, CLEAN SUBSTRATE, APPLY NEW SEALANT AT WINDOW/BUILDING INTERFACE.
3. BASIS OF DESIGN FOR ALL EXISTING STEEL LINTELS U.O.N.:
   A. SCRAPE AND WIRE BRUSH ALL EXPOSED SURFACES.
   B. REMOVE ALL LOOSE SCALE AND PAINT.
   C. PRIME AND PAINT PER PROJECT SPECIFICATIONS.
4. ADDITIONAL DISTRESSED VENEER IS EXPECTED. PORTIONS OF THE FACADE COULD NOT BE VISUALLY ASSESSED.
5. NOTE THIS DRAWING REPRESENTS HIGH PRIORITY REPAIRS ONLY. FURTHER RECOMMENDED REPAIRS CAN BE FOUND ON EXTERIOR RESTORATION ELEVATION DRAWINGS S.201 THROUGH S.204.
6. LEGEND KEY:

HATCH PATTERN OR LINE TYPE	REPAIR TYPE	NOTES
	HIGH PRIORITY MASONRY FAILING - REMOVE AND REPLACE/REBUILD	HIGH PRIORITY MASONRY REPAIRS SHOWN ON THIS DRAWING. REFER TO S.201 THROUGH S.204 FOR TOTAL RECOMMENDED MASONRY REPAIRS.
	REMOVE AND REPLACE STEEL LINTEL	HIGH PRIORITY LINTELS SHOWN ON THIS DRAWING. REFER TO S.201 THROUGH S.204 FOR RECOMMENDED TOTAL LINTELS TO BE REPLACED.

5 / S.101 NORTH COURTYARD - NORTH FACADE HIGH PRIORITY RESTORATION
SCALE: 1/8" = 1'-0"



4 / S.101 NORTH COURTYARD - EAST FACADE HIGH PRIORITY RESTORATION
SCALE: 1/8" = 1'-0"

3 / S.101 NORTH COURTYARD - SOUTH FACADE HIGH PRIORITY ELEVATION
SCALE: 1/8" = 1'-0"

2 / S.101 NORTH COURTYARD - WEST FACADE HIGH PRIORITY ELEVATION
SCALE: 1/8" = 1'-0"

1 / S.101 NORTH COURTYARD - SOUTH FACADE HIGH PRIORITY RESTORATION
SCALE: 1/8" = 1'-0"

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KEY PLAN

FSP PROJECT NO.
TRC22.066

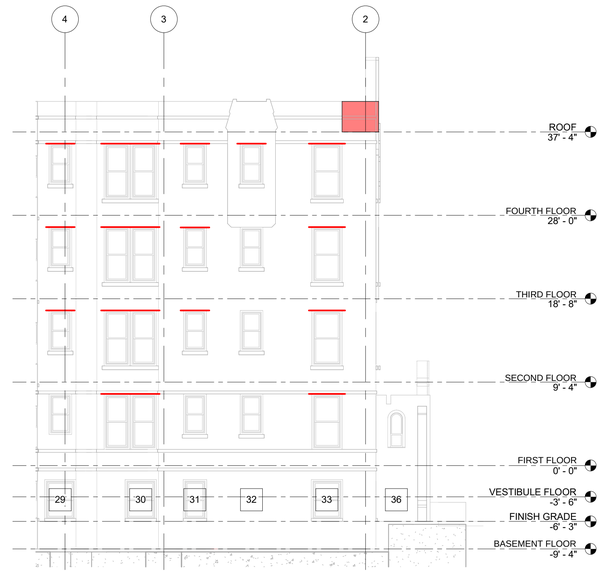
DRAWING TITLE
Exterior High Priority Restoration Elevations

DRAWING NUMBER
S.206

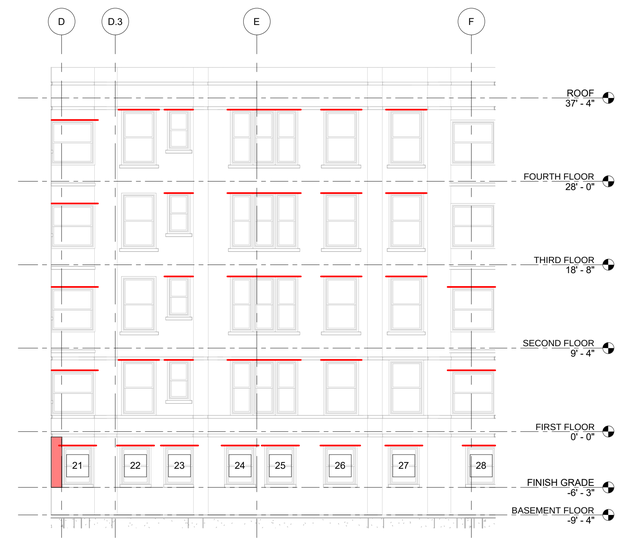
EXTERIOR HIGH PRIORITY RESTORATION ELEVATION NOTES

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES.
   B. DRAWING S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWING S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
2. WINDOW BASIS OF DESIGN:
   A. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
   B. 100% OF WINDOWS TO BE REPLACED.
   C. REMOVE EXISTING SEALANTS, CLEAN SUBSTRATE, APPLY NEW SEALANT AT WINDOW/BUILDING INTERFACE.
3. BASIS OF DESIGN FOR ALL EXISTING STEEL LINTELS U.O.N.:
   A. SCRAPE AND WIRE BRUSH ALL EXPOSED SURFACES.
   B. REMOVE ALL LOOSE SCALE AND PAINT.
   C. PRIME AND PAINT PER PROJECT SPECIFICATIONS.
4. ADDITIONAL DISTRESSED VENEER IS EXPECTED. PORTIONS OF THE FACADE COULD NOT BE VISUALLY ASSESSED.
5. NOTE THIS DRAWING REPRESENTS HIGH PRIORITY REPAIRS ONLY. FURTHER RECOMMENDED REPAIRS CAN BE FOUND ON EXTERIOR RESTORATION ELEVATION DRAWINGS S.201 THROUGH S.204.
6. LEGEND KEY:

HATCH PATTERN OR LINE TYPE	REPAIR TYPE	NOTES
	HIGH PRIORITY MASONRY FAILING - REMOVE AND REPLACE/REBUILD	HIGH PRIORITY MASONRY REPAIRS SHOWN ON THIS DRAWING. REFER TO S.201 THROUGH S.204 FOR TOTAL RECOMMENDED MASONRY REPAIRS.
	REMOVE AND REPLACE STEEL LINTEL	HIGH PRIORITY LINTELS SHOWN ON THIS DRAWING. REFER TO S.201 THROUGH S.204 FOR RECOMMENDED TOTAL LINTELS TO BE REPLACED.



5 / S.101 SOUTH COURTYARD - SOUTH FACADE HIGH PRIORITY RESTORATION
SCALE: 1/8" = 1'-0"



4 / S.101 SOUTH COURTYARD - EAST FACADE HIGH PRIORITY RESTORATION
SCALE: 1/8" = 1'-0"

3 / S.101 SOUTH COURTYARD - NORTH FACADE HIGH PRIORITY RESTORATION
SCALE: 1/8" = 1'-0"

2 / S.101 SOUTH COURTYARD - WEST FACADE HIGH PRIORITY RESTORATION
SCALE: 1/8" = 1'-0"

1 / S.101 SOUTH COURTYARD - NORTH FACADE HIGH PRIORITY RESTORATION
SCALE: 1/8" = 1'-0"

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KEY PLAN

FSP PROJECT NO.
TRC22.066

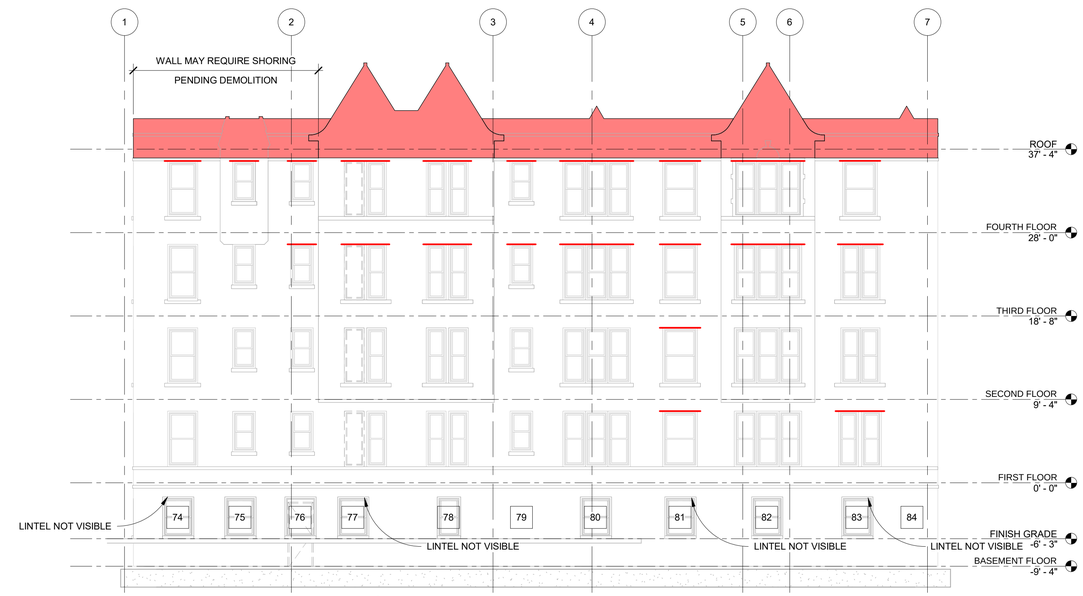
DRAWING TITLE
Exterior High Priority Restoration Elevations

DRAWING NUMBER
S.207

EXTERIOR HIGH PRIORITY RESTORATION ELEVATION NOTES

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S.001 THROUGH S.002 FOR STRUCTURAL GENERAL NOTES.
   B. DRAWING S.003 THROUGH S.004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWING S.005 THROUGH S.006 FOR STRUCTURAL SPECIFICATIONS.
2. WINDOW BASIS OF DESIGN:
   A. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
   B. 100% OF WINDOWS TO BE REPLACED.
   C. REMOVE EXISTING SEALANTS, CLEAN SUBSTRATE, APPLY NEW SEALANT AT WINDOW/BUILDING INTERFACE.
3. BASIS OF DESIGN FOR ALL EXISTING STEEL LINTELS U.O.N.:
   A. SCRAPE AND WIRE BRUSH ALL EXPOSED SURFACES.
   B. REMOVE ALL LOOSE SCALE AND PAINT.
   C. PRIME AND PAINT PER PROJECT SPECIFICATIONS.
4. ADDITIONAL DISTRESSED VENEER IS EXPECTED. PORTIONS OF THE FACADE COULD NOT BE VISUALLY ASSESSED.
5. NOTE THIS DRAWING REPRESENTS HIGH PRIORITY REPAIRS ONLY. FURTHER RECOMMENDED REPAIRS CAN BE FOUND ON EXTERIOR RESTORATION ELEVATION DRAWINGS S.201 THROUGH S.204.
6. LEGEND KEY:

HATCH PATTERN OR LINE TYPE	REPAIR TYPE	NOTES
	HIGH PRIORITY MASONRY FAILING - REMOVE AND REPLACE/REBUILD	HIGH PRIORITY MASONRY REPAIRS SHOWN ON THIS DRAWING. REFER TO S.201 THROUGH S.204 FOR TOTAL RECOMMENDED MASONRY REPAIRS.
	REMOVE AND REPLACE STEEL LINTEL	HIGH PRIORITY LINTELS SHOWN ON THIS DRAWING. REFER TO S.201 THROUGH S.204 FOR RECOMMENDED TOTAL LINTELS TO BE REPLACED.



2 S.101 NORTH FACADE HIGH PRIORITY RESTORATION

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

1 S.101 SOUTH FACADE HIGH PRIORITY RESTORATION

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

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CSC PROJECT NUMBER: 25008

SEAL

STATE OF MICHIGAN
JAMES CORSIGLIA
ENGINEER
No. 4201040041
LICENSED PROFESSIONAL ENGINEER

MICIGAN DETROIT

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DATE	ISSUE
09.15.2026	OWNER REVISIONS
03.27.2026	PRIORITY REPAIRS
06.24.2025	BIDS
05.09.2025	BIDS/PERMITS

KEY PLAN

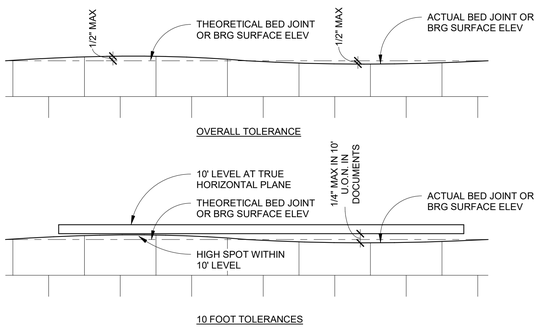
FSP PROJECT NO.
TRC22.066

DRAWING TITLE

Exterior High Priority Restoration Elevations

DRAWING NUMBER

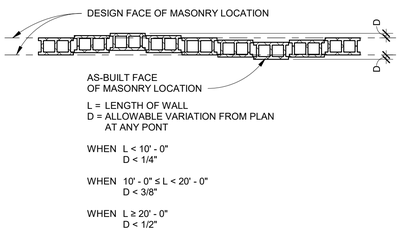
S.208



9 TYP

MASONRY TOLERANCES OUT-OF-LEVEL

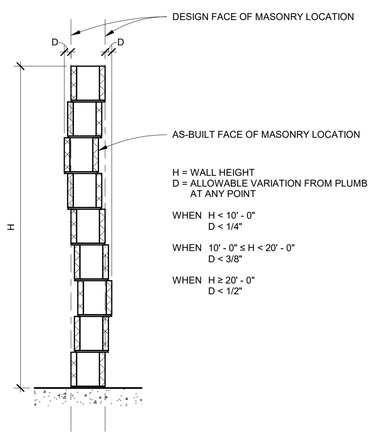
SCALE: NTS



8 TYP

MASONRY TOLERANCES OUT-OF-PLANE

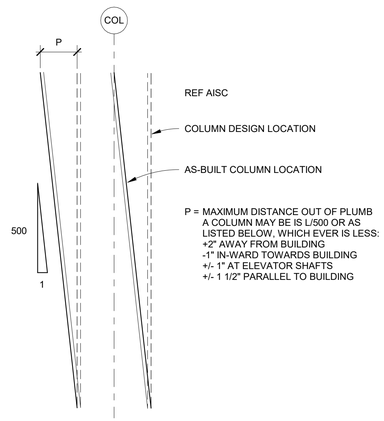
SCALE: NTS



7 TYP

MASONRY TOLERANCES OUT-OF-PLUMB

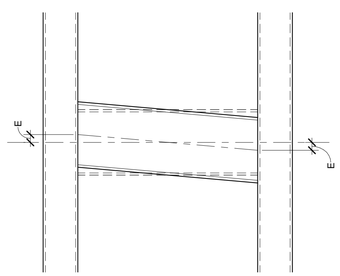
SCALE: NTS



6 TYP

STEEL COLUMN OUT-OF-PLUMB TOLERANCE

SCALE: NTS



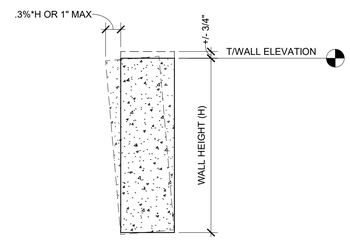
E = ELEVATION TOLERANCE OF BEAM FRAMING INTO COLUMN +3/16", - 5/16"

NOTE:
FOR PLAN TOLERANCES NONE ARE PERMISSIBLE EXCEPT FOR THOSE BASED SOLELY ON COLUMNS

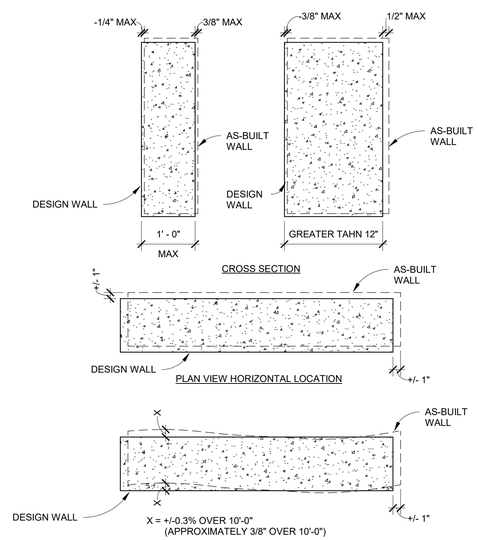
5 TYP

STEEL BEAM ELEVATION TOLERANCE

SCALE: NTS



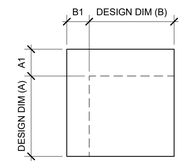
PLUMBNESS AND TOP OF WALL ELEVATION



4 TYP

CONCRETE WALL TOLERANCES

SCALE: NTS



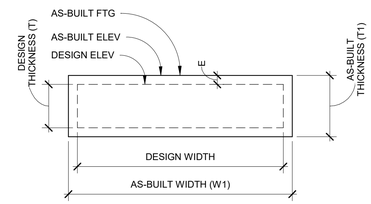
REFERENCE ACI 117.3

A1, B1 = INCREASED THICKNESS OF MEMBERS (i.e. WALLS, COLUMNS, PIERS, BEAMS, AND SLABS) FOR A/B:
1. 12" OR LESS - A1/B1 = +3/8", -1/4"
2. GREATER THAN 12" BUT LESS THAN OR EQUAL TO 36" - A1/B1 = +1/2", -3/8"
3. GREATER THAN 36" - A1/B1 = +1", -3/4"

3 TYP

TOLERANCE IN CROSS-SECTION DIM FOR CONCRETE MEMBERS

SCALE: NTS

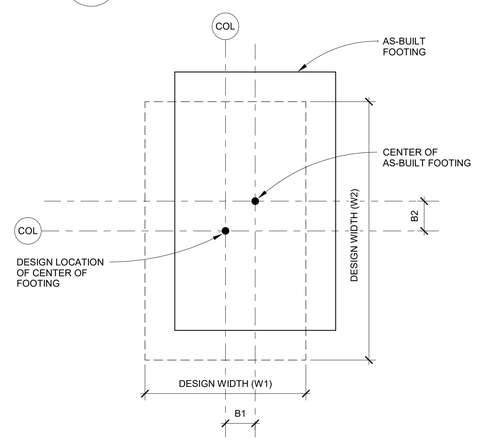


E = ELEVATION TOLERANCE (TOP OF FTG): SUPPORTING MASONRY (+/- 1/2") OTHERWISE (+1/2", -2")
T1 = AS-BUILT THICKNESS NO LIMIT ON LARGER THAN THICKNESS (T) U.O.N. NOT THINNER THAN (0.95xT)
W1 = AS-BUILT WIDTH NOT LESS THAN (W-1/2")

2 TYP

CONCRETE FOOTING SECTION TOLERANCE

SCALE: NTS



B1 & B2 = LATERAL ALIGNMENT TOLERANCE +/- 0.02x(W1 OR W2 RESPECTIVELY); BUT NOT GREATER THAN 2"

1 TYP

SPREAD FOOTING PLAN TOLERANCE

SCALE: NTS

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CSC PROJECT NUMBER: 25008

SEAL

MICHIGAN

PROJECT TITLE
CABOT APARTMENTS RENOVATIONS

DETROIT

DATE	ISSUE
09.15.2026	OWNER REVISIONS
06.24.2025	BIDS
05.09.2025	BIDS/PERMITS

KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

Construction Tolerances

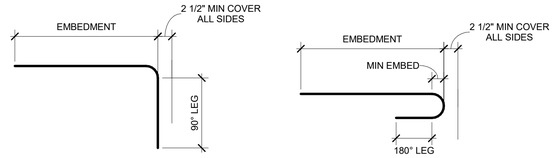
DRAWING NUMBER

S.401

BAR SIZE	EMBEDMENT	90 DEGREE LEG	180 DEGREE LEG	MIN EMBED
f'c=	3500 PSI	3500 PSI	3500 PSI	3500 PSI
3	8"	5"	2 1/2"	1 1/2"
4	11"	6"	2 1/2"	2"
5	14"	8"	2 1/2"	2 1/2"
6	16"	9"	3"	3"
7	19"	11"	3 1/2"	3 1/2"
8	22"	12"	4"	4"

NOTES:

1. HOOKS SHALL NOT BE USED TO DEVELOP COMPRESSION EMBEDMENT.
2. BEND HOOKS ACCORDING TO ACI 318 "STANDARD HOOKS"



12 TYP — TYP 3500 PSI CONCRETE REINFORCING BAR STANDARD TENSION HOOK

SCALE: NTS

BAR SIZE	BEAM & MAT TOP BARS	BEAM & MAT BARS OTHER THAN TOP BARS	COLUMN & WALL BARS TENSION	COMPRESSION BARS (REF NOTE #4)
f'c=	3500 PSI	3500 PSI	3500 PSI	3500 PSI
3	22"	17"	17"	9"
4	29"	22"	22"	11"
5	36"	28"	28"	14"
6	43"	33"	33"	17"
7	63"	48"	48"	20"
8	72"	55"	55"	22"

NOTES:

1. BEAM BARS SPACED @ NOT LESS THAN 3 d_b C/C
2. COLUMN BARS SPACED @ NOT LESS THAN 4 d_b C/C
3. REINFORCING BARS ARE CLASSED AS TOP BARS WHEN MORE THAN 12" OF CONCRETE IS CAST BENEATH RESPECTIVE REINFORCING BAR.
4. COMPRESSION DEVELOPMENT IS PERMISSIBLE ONLY WHEN SPECIFICALLY NOTED ON THE DRAWINGS, DETAILS, OR SCHEDULES.

11 TYP — TYP 3500 PSI CONCRETE REINFORCING BAR DEVELOPMENT LENGTH

SCALE: NTS

BAR SIZE	BEAM & MAT TOP BARS (CLASS B)	BEAM & MAT BARS OTHER THAN TOP BARS (CLASS B)	COLUMN & WALL BARS TENSION (CLASS B)	COMPRESSION BARS (REF NOTE #5)
f'c=	3500 PSI	3500 PSI	3500 PSI	3500 PSI
3	28"	22"	22"	11"
4	37"	29"	29"	15"
5	47"	36"	36"	18"
6	56"	43"	43"	22"
7	81"	63"	63"	25"
8	93"	72"	72"	29"

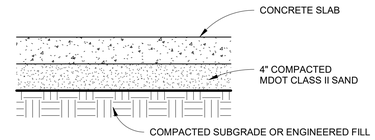
NOTES:

1. USE MECH. TENSION SPLICE FOR 125% TENSILE CAPACITY OF REINFORCEMENT
2. BEAM BARS SPACED @ NOT LESS THAN 3 d_b C/C
3. COLUMN BARS SPACED @ NOT LESS THAN 4 d_b C/C
4. REINFORCING BARS ARE CLASSED AS TOP BARS WHEN MORE THAN 12" OF CONCRETE IS CAST BENEATH RESPECTIVE REINFORCING BAR.
5. COMPRESSION SPLICES ARE PERMISSIBLE ONLY WHEN SPECIFICALLY NOTED ON THE DRAWINGS, DETAILS OR SCHEDULES.
6. TENSION SPLICES SHALL BE USED IN ALL BEAMS, SLABS, AND WALLS UNLESS OTHERWISE NOTED.
7. WHEN LAPPING LARGER BAR WITH SMALLER BAR, LAP LENGTH OF THE SMALLER BAR SHALL GOVERN RESPECTIVE SPLICE.

10 TYP — TYP 3500 PSI CONCRETE REINFORCING BAR LAP SPLICE SCHEDULE

SCALE: NTS

NOTE:
NO CONDUIT PERMITTED
IN CONCRETE SLAB-ON-GRADE



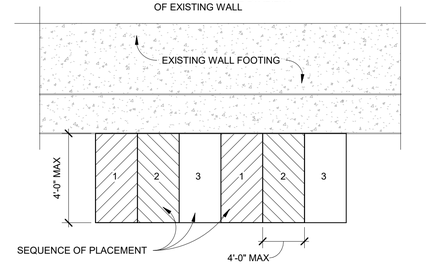
9 TYP — TYP SLAB ON GRADE WITH VAPOR RETARDER

SCALE: NTS

SEQUENCE OF UNDERPINNING FOR WALL FOOTINGS AND SLABS

1. UNDERPINNING TO BE INSTALLED IN (3) PLACEMENTS OF 4'-0" WIDE SECTIONS.
2. USE 3000 PSI CONCRETE @ 7 DAYS W/ HIGH EARLY CEMENT OR ADMIXTURE.
3. PLACEMENT SEQUENCE
   A. THOROUGHLY CLEAN UNDERSIDE OF EXISTING FOOTING PRIOR TO PLACEMENT OF UNDERPINNING.
   B. AFTER FIRST PLACEMENT, REMOVE ALL DIRT, LAITANCE, OIL, GREASE, ETC. FROM BOTH NEW AND EXISTING SURFACES. SATURATE SURFACES WITH WATER.
4. 36 HOURS AFTER GROUTING OF FIRST PLACEMENT REPEAT THE ABOVE OPERATIONS FOR THE SECOND PLACEMENT, ETC.

NOTE:
MAINTAIN LATERAL STABILITY
OF EXISTING WALL

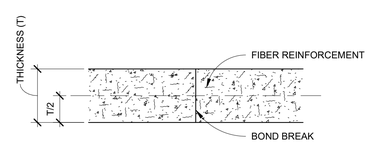


8 TYP — TYP WALL UNDERPINNING

SCALE: NTS

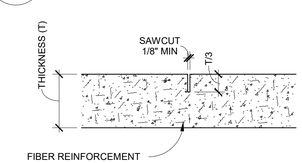
7 TYP — TYP NEW SLAB AT EXISTING SLAB

SCALE: NTS



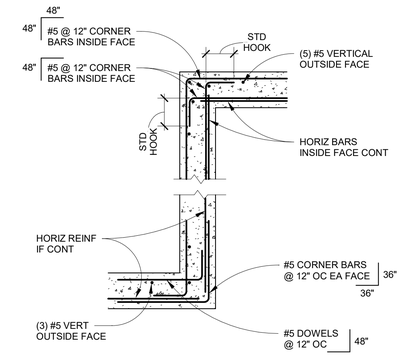
6 TYP — TYP CONSTRUCTION JOINT SLAB ON GRADE

SCALE: NTS



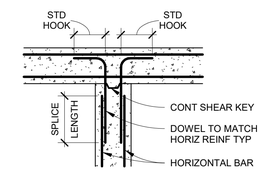
5 TYP — TYP CONTROL JOINT WITH FIBER REINF

SCALE: NTS



4 TYP — TYP DOUBLE LAYER REINFORCING AT CORNERS IN BASEMENT WALLS

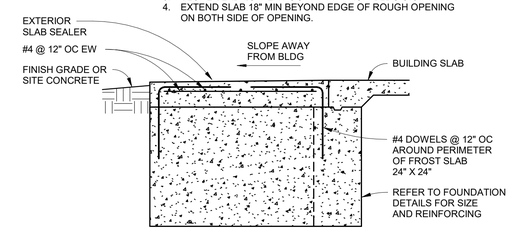
SCALE: NTS



3 TYP — TYP HORIZ REINFORCING AT INTERSECTING CONC WALLS

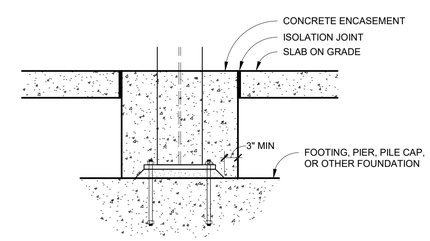
SCALE: NTS

NOTES:
1. REFER ELSEWHERE FOR BLDG FOUNDATION SIZE AND REINF.
2. REFER ELSEWHERE FOR BLDG SLAB EDGE.
3. SLOPE SLAB 1/8" PER FOOT AWAY FROM BLDG U.O.N.
4. EXTEND SLAB 18" MIN BEYOND EDGE OF ROUGH OPENING ON BOTH SIDE OF OPENING.



2 TYP — TYP FROST SLAB DETAIL

SCALE: NTS



1 TYP — TYP CONC ENCASEMENT AT STEEL COL BELOW GRADE

SCALE: NTS

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CSC PROJECT NUMBER: 25008

SEAL

MICHIGAN

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT

DATE	ISSUE
09.15.2026	OWNER REVISIONS
06.24.2025	BIDS
05.09.2025	BIDS/PERMITS

KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

Typical Details

DRAWING NUMBER

S.402

MASONRY OPENING	STEEL LINTEL TYPE			
	4" WALL	6" WALL	8" WALL	12" WALL
UP TO 4'-0"	L3 1/2X3 1/2X1/4	WT4X9	(2) - L3 1/2X3 1/2X1/4	(3) - L3 1/2X3 1/2X1/4 OR (2) - L5X3 1/2X1/4 (LLH)
4'-2" TO 6'-0"	L3 1/2X3 1/2X1/4	WT4X9	(2) - L4X3 1/2X1/4	(3) - L4X3 1/2X1/4 OR (2) - L5X5X5/16
6'-2" TO 8'-0"	L5X3 1/2X1/4	WT7X11	(2) - L5X3 1/2X5/16	(3) - L5X3 1/2X5/16 OR (2) - L5X5X5/16
8'-2" TO 10'-0"	L6X3 1/2X3/8	WT8X13	(2) - L6X3 1/2X3/8	(3) - L6X3 1/2X3/8 OR TS8X4X5/16 + 1/4" PL*
10'-2" TO 12'-0"	————	——	TS8X4X1/4X1/4 PL W/ 1/2" DIA HEADED STUDS @ 16" OC	TS8X4X3/8 + 1/4" PL*

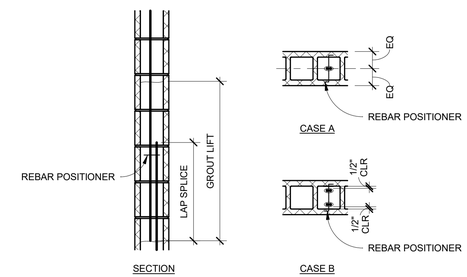
* WELD PLATE TO TUBE 3/16"X3" @ 12" OC EACH SIDE

NOTES:

1. ALL ANGLES ARE TO BE LONG LEG VERTICAL U.O.N.
2. PROVIDE MINIMUM 4" OF SOLID BEARING EACH END OF LINTEL
3. REFER TO ARCH FOR ALL MASONRY OPENINGS AND LINTEL CONFIGURATION
4. TACK WELD ANGLES TOGETHER, EACH SIDE, 12" OC MAXIMUM

3 TYP — TYP LOOSE LINTEL SCHEDULE - NON LOAD BEARING WALL

SCALE: NTS



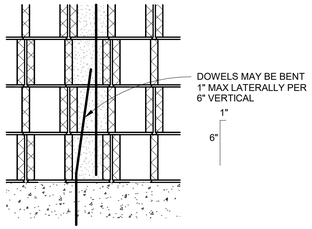
TYPICAL SPLICE LENGTHS FOR MASONRY BLOCK - STRENGTH DESIGN												
BLOCK WIDTH	BARS CENTERED - CASE A						BARS EACH FACE - CASE B					
	VERTICAL BAR SIZE						VERTICAL BAR SIZE					
	#3	#4	#5	#6	#7	#8	#9	#3	#4	#5	#6	#7	#8	#9
6" BLOCK	12"	17"	28"	53"	--	--	--	--	--	--	--	--	--	--
8" BLOCK	12"	13"	20"	38"	52"	72"	--	14"	25"	39"	54"	63"	--	--
10" BLOCK	12"	12"	16"	29"	40"	61"	*	14"	25"	39"	54"	63"	72"	*
12" BLOCK	12"	12"	13"	24"	33"	50"	*	14"	25"	39"	54"	63"	72"	*

SYMBOLS:
-- REINFORCING CONFIGURATION NOT PERMISSIBLE
* MECHANICAL TENSION SPLICE REQUIRED

NOTES:
1) MECH TENSION SPLICE CAN BE FOR ANY BAR SIZE IF NOT NOTED.
2) FOR USE WITH: f'm = 2,000 psi & fy = 60,000 psi

2 TYP — TYP MASONRY LAP SPLICE LENGTHS

SCALE: NTS



1 TYP — TYP MASONRY DOWEL POSITION TOLERANCE

SCALE: NTS

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KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

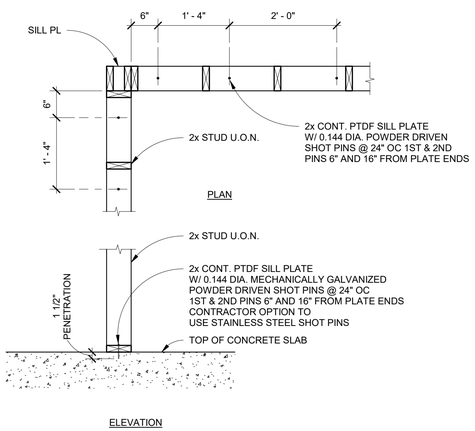
Typical Details

DRAWING NUMBER

S.403

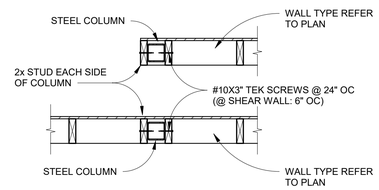
NOTE:

SHOT PINS SHALL BE MANUFACTURED BY SIMPSON OR EQUAL (SEE ICBO REPORT NO. 2138)



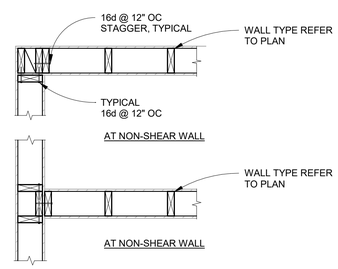
9 TYP — TYPICAL WALL TO CONCRETE SLAB CONNECTION DETAIL

SCALE: NTS



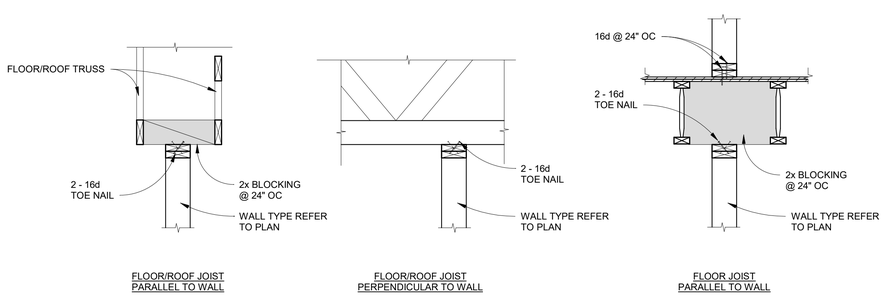
8 TYP — TYPICAL STUD WALL TO COLUMN CONNECTION DETAIL

SCALE: NTS



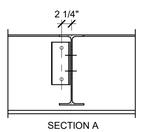
7 TYP — TYPICAL STUD WALL AT INTERSECTIONS DETAIL U.O.N.

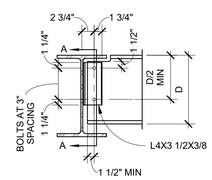
SCALE: NTS



6 TYP — TYPICAL NON-BEARING PARTITION WALL FRAMING DETAIL

SCALE: NTS





NOTE:
CONTRACTOR'S OPTION
1. TO ALIGN OR STAGGER BOLTS
2. TO USE EITHER WELDED OR BOLTED CONN OPTION OF SECTION A
3. CONNECTION DESIGN INCLUDES REDUCTION FOR BOLT ECCENTRICITY

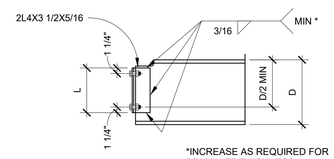
NUMBER OF 3/4" DIA A325N BOLTS EA ROW	CONNECTION CAPACITY (KIPS), LRFD
2	16
3	31
4	48
5	66
6	83

NUMBER OF 3/4" DIA A325N BOLTS EA ROW	CONNECTION CAPACITY (KIPS), LRFD
7	100
8	116
9	132
10	149

NOTE: USE FOR BEAM TO BEAM CONNECTIONS ONLY

5 TYP — TYP SINGLE ANGLE CONNECTION - BOLTED

SCALE: NTS



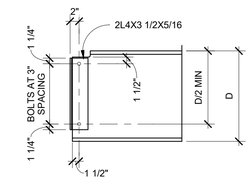
*INCREASE AS REQUIRED FOR BEAM WEB THICKNESS GREATER THAN .286"

"L" (INCHES)	WELDED CONNECTION CAPACITY (KIPS), LRFD
5 1/2	75
8 1/2	110
11 1/2	142
14 1/2	172
17 1/2	200
20 1/2	228

"L" (INCHES)	WELDED CONNECTION CAPACITY (KIPS), LRFD
23 1/2	253
26 1/2	278
29 1/2	303

4 TYP — TYP DOUBLE ANGLE CONNECTION - WELDED

SCALE: NTS

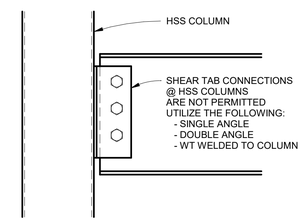


NUMBER OF 3/4" DIA A325N BOLTS	CONNECTION CAPACITY (KIPS), LRFD	MINIMUM BEAM WEB THICKNESS
2	33	1/4"
3	60	5/16"
4	80	5/16"
5	119	3/8"
6	142	3/8"
7	195	7/16"
8	221	7/16"
9	278	1/2"
10	308	1/2"

* FOR SMALLER WEB THICKNESS REDUCE CAPACITY IN PROPORTION W/ REDUCTION FOR BLOCK SHEAR & BEARING

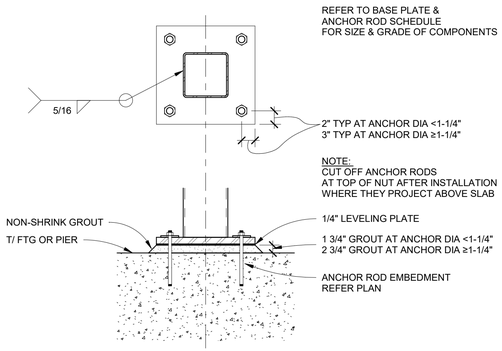
3 TYP — TYP DOUBLE ANGLE CONNECTION - BOLTED

SCALE: NTS



2 TYP — TYP BEAM TO HSS COLUMN CONNECTION

SCALE: NTS



1 TYP — TYP COLUMN BASE PLATE AND ANCHOR RODS

SCALE: NTS

FUSCO, SHAFFER & PAPPAS, INC.
ARCHITECTS AND PLANNERS
550 E. NINE MILE ROAD
FERNDALE, MICHIGAN, 48220
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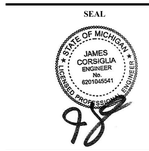
CSC PROJECT NUMBER: 25008

SEAL



MICHIGAN

PROJECT TITLE

CABOT APARTMENTS
RENOVATIONS

DETROIT

DATE	ISSUE
09.15.2026	OWNER REVISIONS
06.24.2025	BIDS
05.09.2025	BIDS/PERMITS

KEY PLAN

FSP PROJECT NO.
TRC22.066

DRAWING TITLE

Typical Details

DRAWING NUMBER

S.404

WOOD NAILING

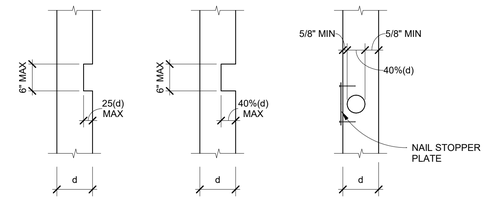
WOOD NAILING

1. ALL NAILS FOR STRUCTURAL WORK SHALL BE COMMON WIRE NAILS CONFORMING TO THE FOLLOWING MINIMUM SIZES:
   a. 8d 0.131" DIAM x 2-1/2" LONG
   b. 10d 0.148" DIAM x 3" LONG
   c. 10d SHORT 0.148" DIAM x 1-5/8" PLUS SHEATHING THICKNESS LONG
   d. 16d 0.162" DIAM x 3-1/2" LONG
   e. 20d 0.192" DIAM x 4" LONG
2. PROVIDE NAILS AT CONNECTIONS AS INDICATED ON THE STRUCTURAL DRAWINGS. WHERE NAILS AT CONNECTIONS ARE NOT INDICATED, NAIL PER NAILING SCHEDULE BELOW (CBC TABLE 2304.10.1).
3. NAILING NOT NOTED IN SCHEDULE BELOW OR IN THE STRUCTURAL DRAWINGS SHALL BE A MINIMUM OF TWO NAILS AT EACH CONTACT. USE 8d NAILS FOR NOMINAL 1x MATERIAL AND 16d FOR NOMINAL 2x MATERIAL.
4. HOLES SHALL BE PRE-DRILLED WHERE NECESSARY TO PREVENT SPLITTING.
5. NAILS INTO PRESERVATIVE TREATED LUMBER SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER.

TABLE 2304.10.1
FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
ROOF		
BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW	3-8D COMMON (2 1/2" x 0.131")	EACH END, TOENAIL
BLOCKING BETWEEN RAFTERS OR TRUSS NOT AT WALL TOP PLATE, TO RAFTER OR TRUSS	2-8D COMMON (2 1/2" X 0.131")	EACH END, TOENAIL
	2-16D COMMON (3 1/2" X 0.162")	END NAIL
RAFTER OR ROOF TRUSS TO TOP PLATE	3-10D COMMON (3" X 0.148")	TOENAIL
ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2-INCH RIDGE BEAM	2-16D COMMON (3 1/2" X 0.162")	END NAIL
	3-10D COMMON (3 1/2" X 0.148")	TOENAIL
WALL		
STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS	16D COMMON (3" X 0.162")	16" OC FACE NAIL
BUILT-UP HEADER (2" TO 2" HEADER)	16D COMMON (3 1/2" X 0.162")	16" OC EACH EDGE, FACE NAIL
CONTINUOUS HEADER TO STUD	4-8D COMMON (2 1/2" x 0.131"	TOENAIL
TOP PLATE TO TOP PLATE	16D COMMON (3 1/2" X 0.162")	16" OC FACE NAIL
TOP PLATE TO TOP PLATE, AT END JOINTS	8-16D COMMON (3 1/2" X 0.162")	EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)
BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING AT BRACED WALL PANELS	2-16D COMMON (3 1/2" X 0.162")	16" OC FACE NAIL
STUD TO TOP OR BOTTOM PLATE	4-8D COMMON (2 1/2" X 0.131")	TOENAIL
	2-16D COMMON (3 1/2" X 0.162")	END NAIL
TOP OR BOTTOM PLATE TO STUD	2-16D COMMON (3 1/2" X 0.162")	END NAIL
TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	2-16D COMMON (3 1/2" X 0.162")	FACE NAIL
FLOOR		
JOIST TO SILL, TOP PLATE, OR GIRDER	3-8D COMMON (2 1/2" X 0.131")	TOENAIL
RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILL OR OTHER FRAMING BELOW	8D COMMON (2 1/2" X 0.131")	6" OC TOENAIL
BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS	20D COMMON (4" X 0.192")	32" OC FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
	AND: 2-20D COMMON (4" X 0.192")	ENDS AND AT EACH SPLICE, FACE NAIL
LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	3-16D COMMON (3 1/2" X 0.162")	EACH JOIST OR RAFTER, FACE NAIL
JOIST TO BAND JOIST OR RIM JOIST	3-16D COMMON (3 1/2" X 0.162")	END NAIL
BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS	2-8D COMMON (2 1/2" X 0.131")	EACH END, TOENAIL

NOTCH/BORE % OF STUD	2 X 4	2 X 6
25%	7/8"	1 3/8"
40%	1 3/8"	2 1/8"

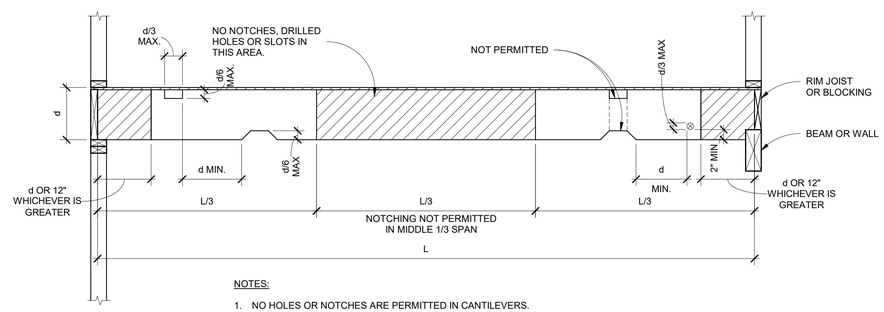


NOTES:

1. NO HOLES OR NOTCHES ARE PERMITTED IN CANTILEVERS.
2. NOTCH AND BORING NOT TO OCCUR IN SAME STUD SECTION.
3. DO NOT BORE OR NOTCH POSTS

7 TYP — TYPICAL NOTCHING AND BORING AT SAWN LUMBER STUDS DETAIL

SCALE: NTS

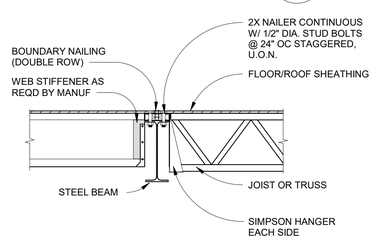


NOTES:

1. NO HOLES OR NOTCHES ARE PERMITTED IN CANTILEVERS.
2. HATCHED AREA INDICATES NO HOLES OR NOTCHES ALLOWED IN THIS AREA.
3. DO NOT NOTCH OR BORE INTO 2 X 6 AND SMALLER JOIST.

6 TYP — TYPICAL NOTCHING AND BORING AT SAWN LUMBER JOIST DETAIL

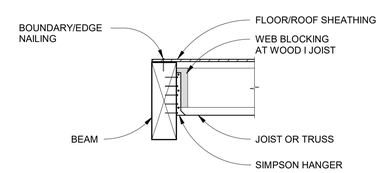
SCALE: NTS



HANGER SCHEDULE		
MEMBER	HANGER TYPE	REMARKS
2X	SIMPSON "BA" HANGER	U.O.N. ON PLAN
4X, 6X	SIMPSON "HB" HANGER	U.O.N. ON PLAN
I JOIST	SIMPSON "HB" HANGER	U.O.N. ON PLAN
OTHERS		PER PLAN

5 TYP — TYPICAL JOSIT HANGER SCHEDULE (AT STEEL BEAM)

SCALE: NTS



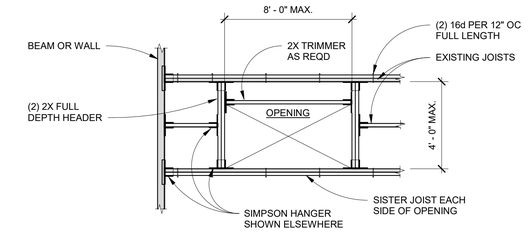
SINGLE SIDED CONDITION

HANGER SCHEDULE		
MEMBER	HANGER TYPE	REMARKS
2X	SIMPSON "LUS" HANGER	UNLESS OTHERWISE NOTED
4X, 6X, I JOIST	SIMPSON "HUTF" HANGER	UNLESS OTHERWISE NOTED
3 1/2X LVL	SIMPSON "GLTV4" HANGER	UNLESS OTHERWISE NOTED
5 1/4X LVL	SIMPSON "GLTV" HANGER	UNLESS OTHERWISE NOTED
7X LVL	SIMPSON "HGLTV" HANGER	UNLESS OTHERWISE NOTED

USE SADDLE HANGERS WHERE POSSIBLE

4 TYP — TYPICAL JOIST HANGER SCHEDULE AT WOOD BEAM

SCALE: NTS



PLAN

NOTE:

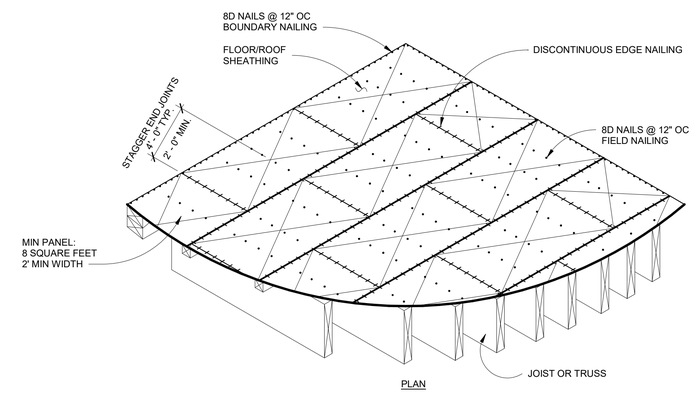
PROVIDE 8D @ 12" NAILING TO ALL EDGES OF SHEATHING

3 TYP — TYPICAL FLOOR/ROOF OPENING DETAIL

SCALE: NTS

NOTES:

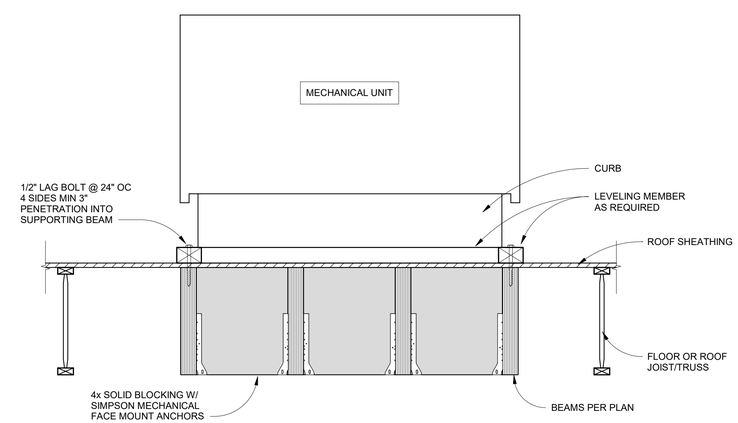
1. RUN LONG DIMENSION OF PLYWOOD PERPENDICULAR TO JOIST.
2. NAILS SHALL HAVE A MINIMUM 3/8" EDGE DISTANCE.
3. MINIMUM PANEL DIMENSION IS 2' - 0" WIDE.
4. FOR FLOOR PLYWOOD, GLUE TO JOISTS WITH CONSTRUCTION ADHESIVE PER SHEATHING MANUFACTURER'S RECOMMENDATION PRIOR TO NAILING.
5. SHEATHING NAILS OR OTHER APPROVED SHEATHING CONNECTORS SHALL BE DRIVEN SUCH THAT THEIR HEAD OR CROWN IS FLUSH WITH THE SURFACE OF THE SHEATHING. OVER-DRIVEN NAILS WILL BE DEEMED UNSATISFACTORY.



PLAN

2 TYP — TYPICAL PLYWOOD FLOOR OR ROOF FRAMING DETAIL

SCALE: NTS



1 TYP — TYPICAL ROOF TOP UNIT FRAMING

SCALE: NTS

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CSC PROJECT NUMBER: 25008

SEAL

STATE OF MICHIGAN — JAMES CORSIGLIA — ENGINEER — No. 6201040041 — LICENSED PROFESSIONAL ENGINEER

MICHIGAN

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT

DATE	ISSUE
09.15.2026	OWNER REVISIONS
06.24.2025	BIDS
05.09.2025	BIDS/PERMITS

KEY PLAN

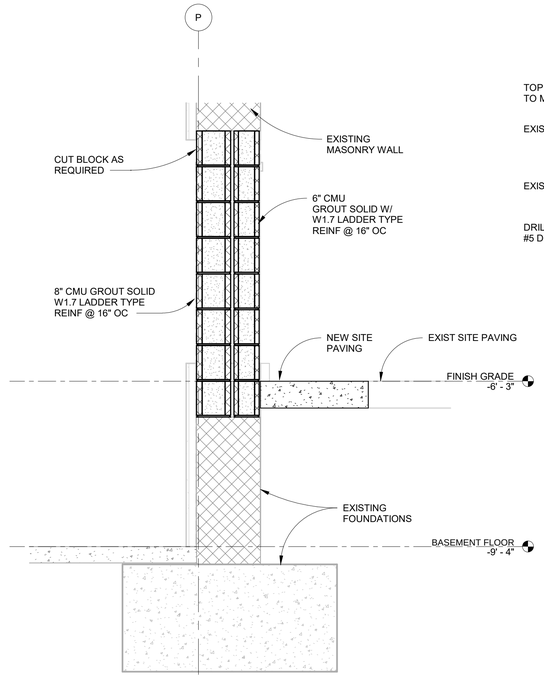
FSP PROJECT NO. TRC22.066

DRAWING TITLE

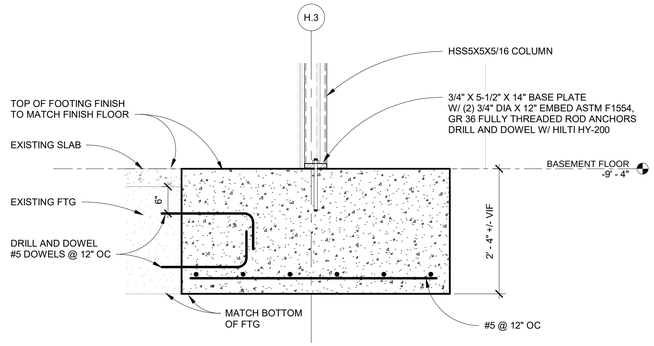
Typical Details

DRAWING NUMBER

S.405



9 S.101 SECTION
SCALE: 3/4" = 1'-0"



6 S.101 SECTION
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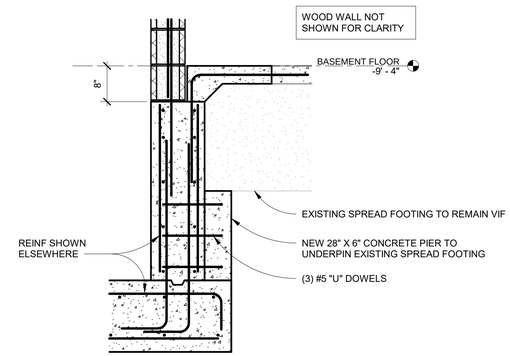
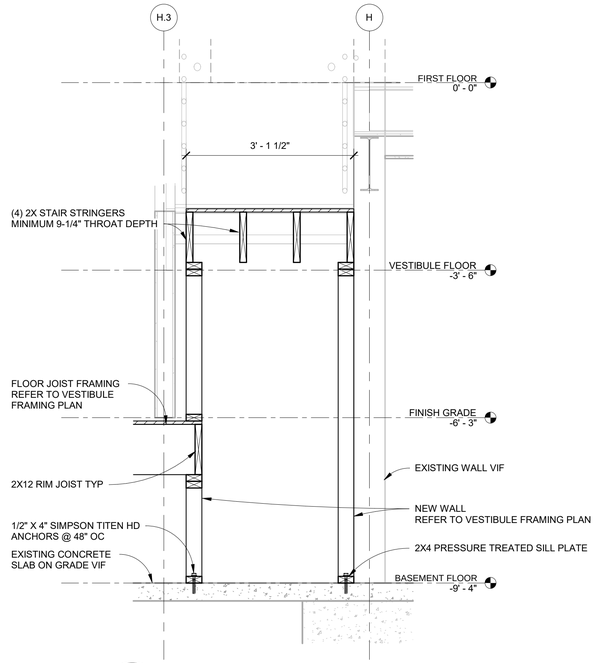
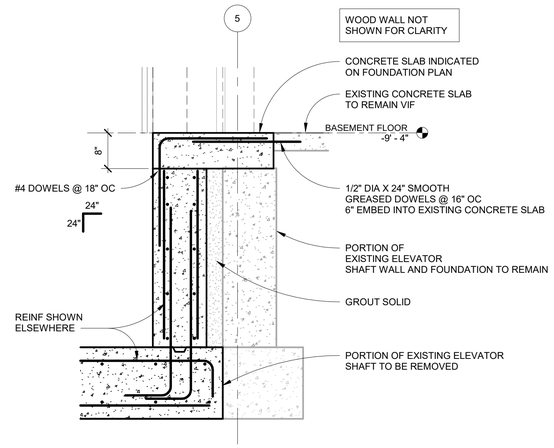


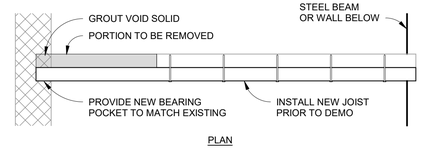
3 S.101 SECTION
SCALE: 3/4" = 1'-0"

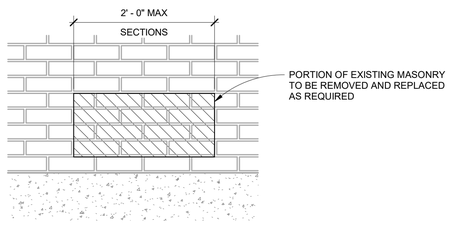


5 S.502 SECTION
SCALE: 3/4" = 1'-0"

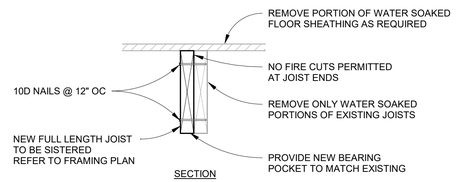


2 S.101 SECTION
SCALE: 3/4" = 1'-0"

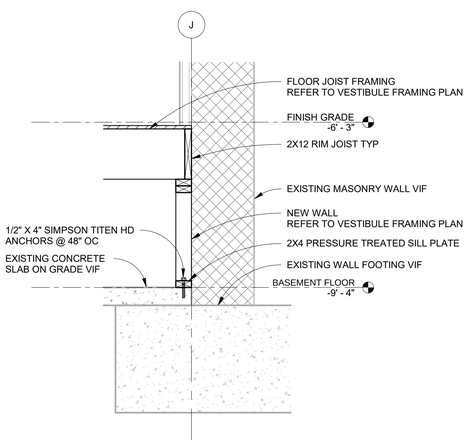




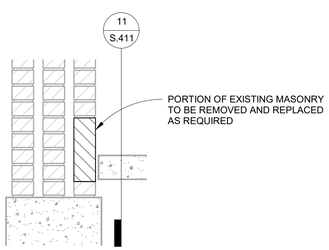
11 S.411 SECTION
SCALE: 1" = 1'-0"



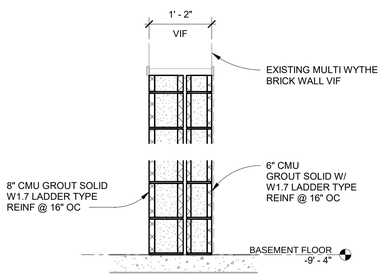
8 S.411 TYPICAL JOIST SISTER DETAIL
SCALE: 1 1/2" = 1'-0"



4 S.502 SECTION
SCALE: 3/4" = 1'-0"



10 S.411 SECTION
SCALE: 1" = 1'-0"



7 S.101 SECTION
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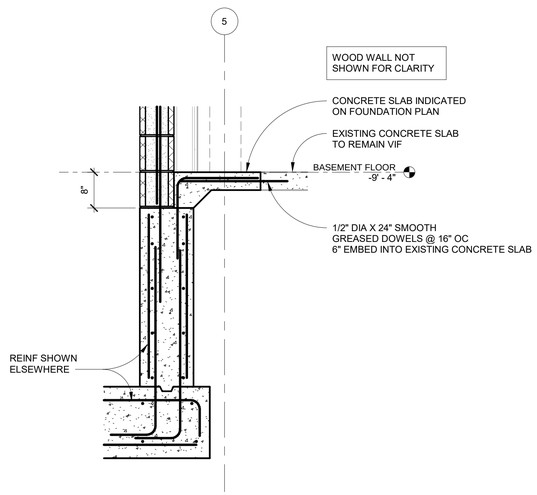

1 S.101 SECTION
SCALE: 3/4" = 1'-0"

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ARCHITECTS AND PLANNERS
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FERNDALE, MICHIGAN, 48220
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Phone: (586) 277-0700 • Website: carnaghisc.com

CSC PROJECT NUMBER: 25008

SEAL

MICHIGAN

PROJECT TITLE
CABOT APARTMENTS RENOVATIONS

DETROIT

DATE	ISSUE
09.15.2026	OWNER REVISIONS
06.24.2025	BIDS
05.09.2025	BIDS/PERMITS

KEY PLAN

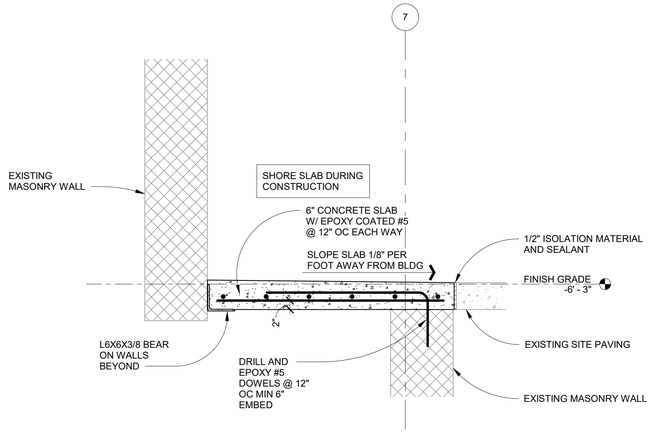
FSP PROJECT NO.
TRC22.066

DRAWING TITLE

Sections & Details

DRAWING NUMBER

S.411



1
S.101

SECTION

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

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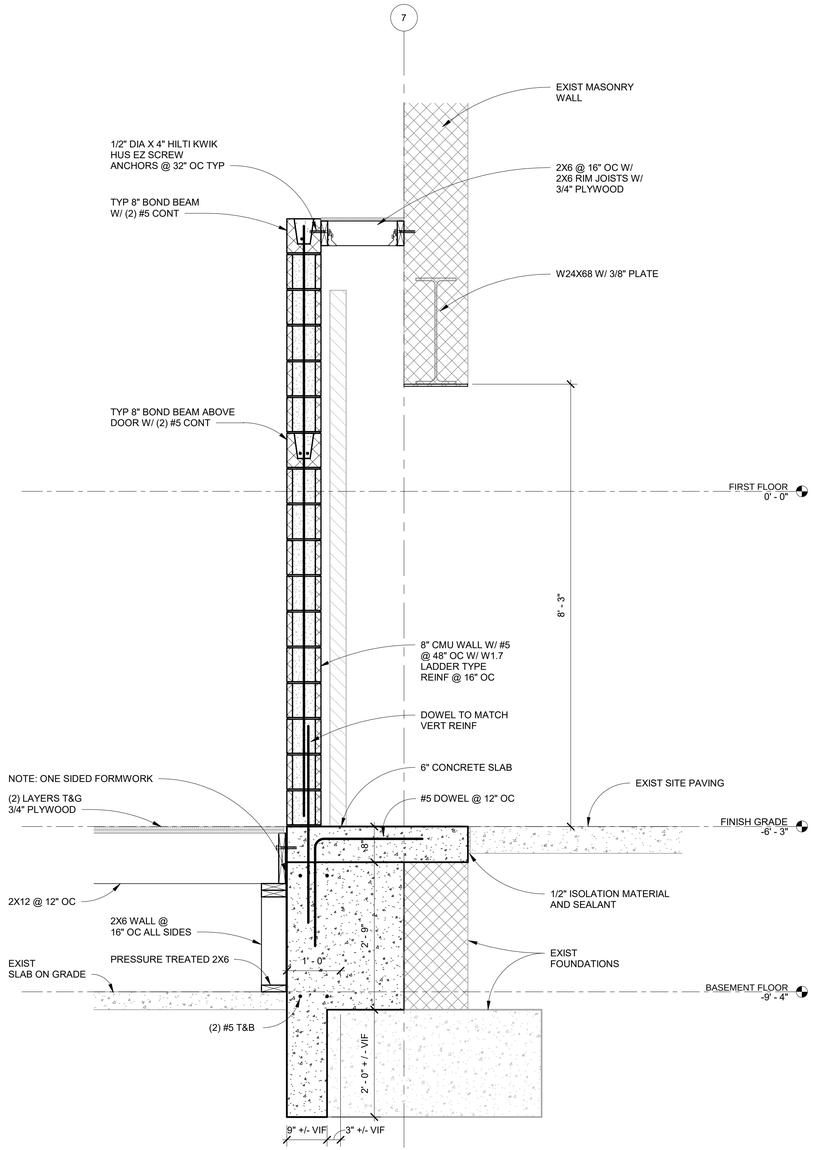
DRAWING TITLE

Sections & Details

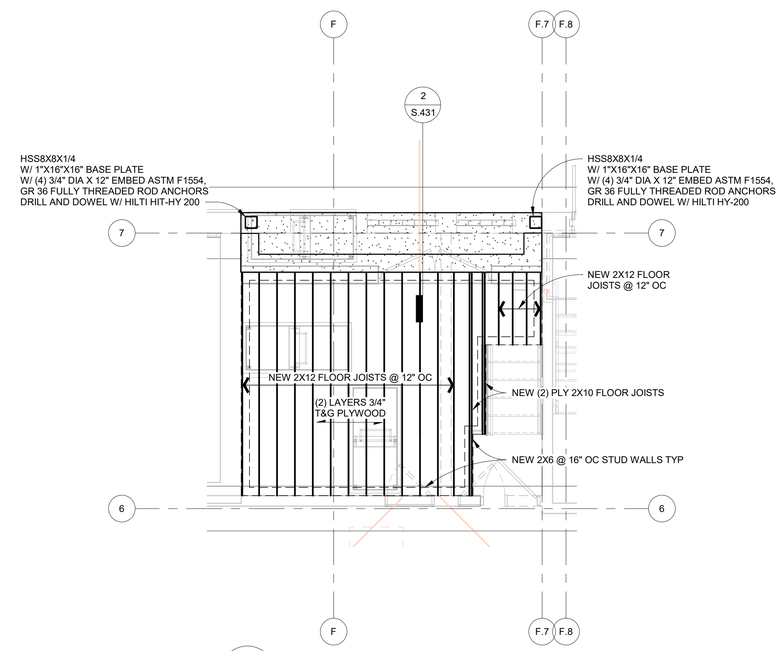
DRAWING NUMBER

S.421



2 / S.102 **SECTION**

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



1 / S.101 **TRASH ROOM**

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

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CSC PROJECT NUMBER: 25008

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STATE OF MICHIGAN
JAMES CORSIGLIA
ENGINEER
No. 6201040541
LICENSED PROFESSIONAL ENGINEER

MICHIGAN

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT

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KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

Sections & Details

DRAWING NUMBER

S.431

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CSC PROJECT NUMBER: 25008

SEAL

MICHIGAN

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT

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KEY PLAN

FSP PROJECT NO.
TRC22.066

DRAWING TITLE

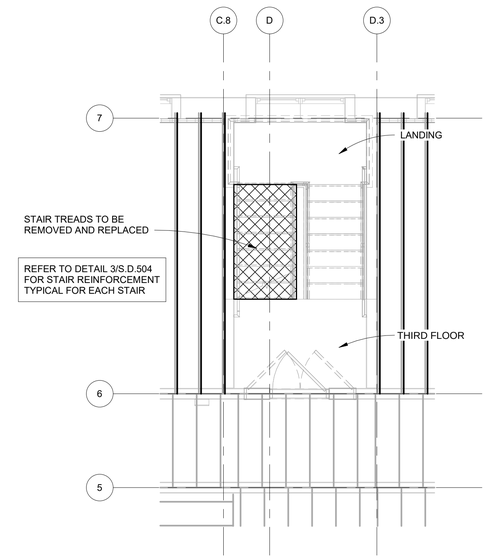
Enlarged Stair Demolition Plans

DRAWING NUMBER

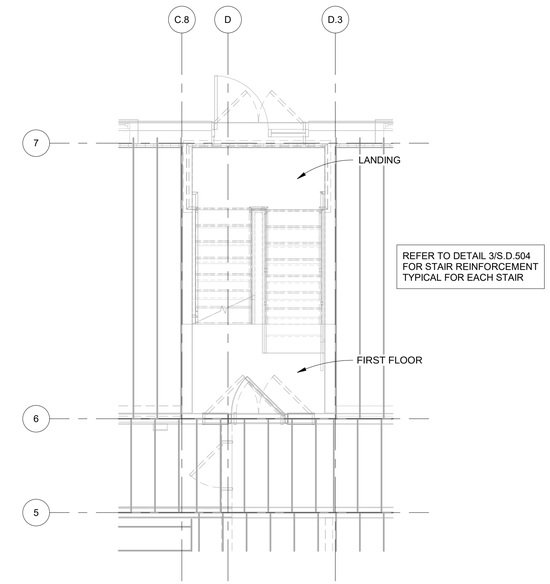
S.D.501

STAIR DEMOLITION PLAN NOTES

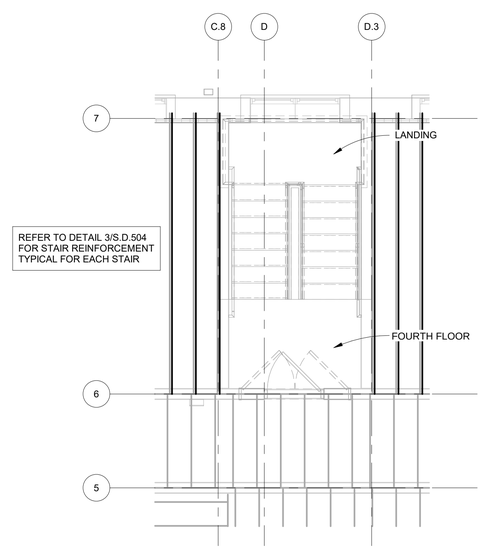
1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S-001 FOR STRUCTURAL GENERAL NOTES
   B. DRAWINGS S-002 THROUGH S-003 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWINGS S-004 THROUGH S-005 FOR STRUCTURAL SPECIFICATIONS.
   D. REFER TO "SURVEY OF EXISTING CONDITIONS" FOR ADDITIONAL REQUIREMENTS.
2. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
3. THE PROJECT AREA OCCURS WITHIN AN EXISTING BUILDING.
4. EXTENT OF DEMOLITION IS TO BE AS INDICATED ON PLANS, SECTIONS AND ELEVATIONS.
   A. DEMOLITION IS TO INCLUDE REMOVAL AND DISPOSAL.
5. DEMOLITION AND REMOVAL OF EXISTING CONSTRUCTION SHALL BE MADE IN SUCH A MANNER AS TO AVOID OR MINIMIZE DAMAGE TO ADJACENT CONSTRUCTION.
6. DIMENSIONS PROVIDED TO AND OF THE EXISTING STRUCTURE ARE APPROXIMATE.
   A. VERIFY THE DIMENSIONS OF THE EXISTING STRUCTURE BY FIELD MEASUREMENTS.
   B. WHERE ACTUAL CONDITIONS DEVIATE FROM THE DETAILS SHOWN ON DRAWINGS, NOTIFY THE STRUCTURAL ENGINEER OF RECORD FOR INSTRUCTIONS PRIOR TO PROCEEDING WITH WORK.
7. SHORE OR BRACE BEAMS, COLUMNS AND WALLS AS REQUIRED TO MAINTAIN THE STABLE INTEGRITY OF THE EXISTING STRUCTURE PRIOR TO DEMOLITION.
   A. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE COMPETENT SHORING AND BRACING FOR ALL LOADS IMPOSED DURING AND AFTER DEMOLITION THROUGH COMPLETION OF NEW CONSTRUCTION.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS, AS THEY APPLY TO THIS PROJECT, OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF MICHIGAN, LATEST EDITION, AND ALL OSHA REQUIREMENTS.
9. EXPLORATORY INVESTIGATION IS REQUIRED TO DETERMINE EXISTING CONDITIONS.
   a. THE AOR/EOR IS NOT RESPONSIBLE FOR DOCUMENTING ALL EXISTING CONDITIONS.
   b. CONDITIONS THAT VARY FROM EXPLORATORY INVESTIGATION ARE TO BE EXPECTED.
10. TESTING OF EXISTING BUILDING SYSTEMS OR MATERIALS MAY BE REQUIRED.
11. PROJECT BUDGET AND CONSTRUCTION SCHEDULE SHALL ACCOUNT FOR UNKNOWN FIELD CONDITIONS.
12. NAIL ALL STAIR TREADS AND RISERS TO REMAIN PER DETAIL 3/S.D.504.
13. LEGEND:
    - INDICATES AREA OF SELECTIVE STAIR DEMOLITION
    - INDICATES AREA OF SELECTIVE STAIR TREAD DEMOLITION



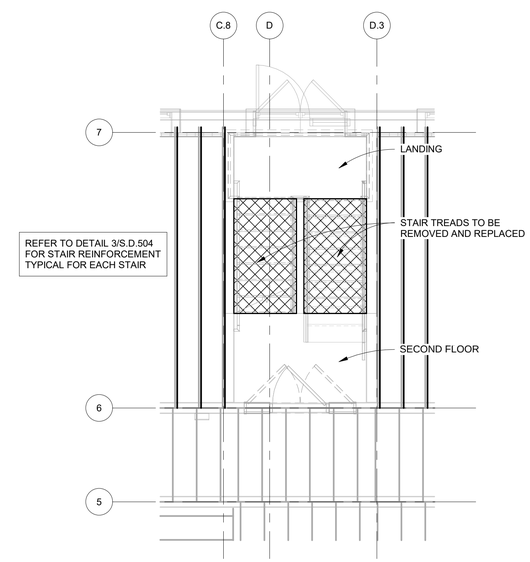
N 4 S.201 STAIR 1 ENLARGED FRAMING PLAN - THIRD FLOOR PLAN
SCALE: 1/4" = 1'-0"



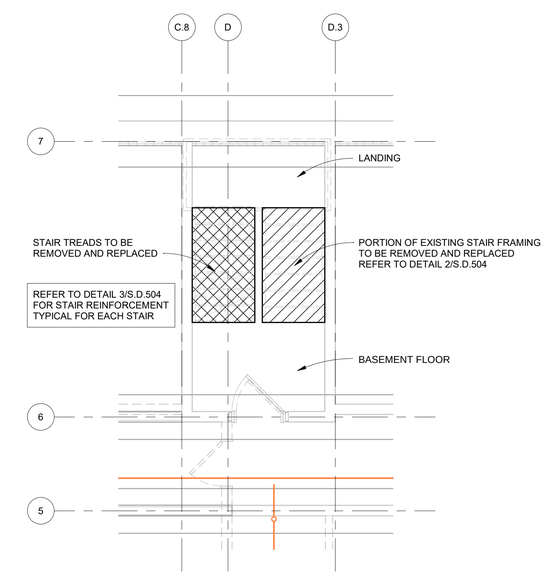
N 2 S.201 STAIR 1 ENLARGED FRAMING PLAN - FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"



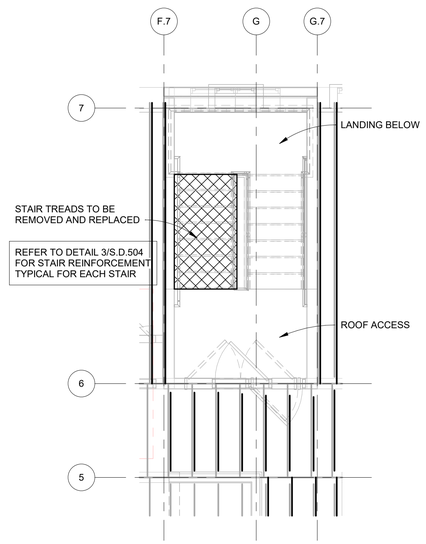
N 5 S.201 STAIR 1 ENLARGED FRAMING PLAN - FOURTH FLOOR PLAN
SCALE: 1/4" = 1'-0"



N 3 S.201 STAIR 1 ENLARGED FRAMING PLAN - SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

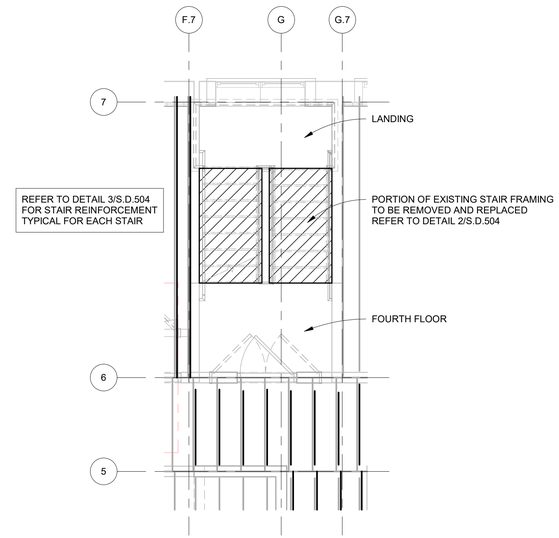


N 1 S.201 STAIR 1 ENLARGED FRAMING PLAN - BASEMENT FLOOR PLAN
SCALE: 1/4" = 1'-0"



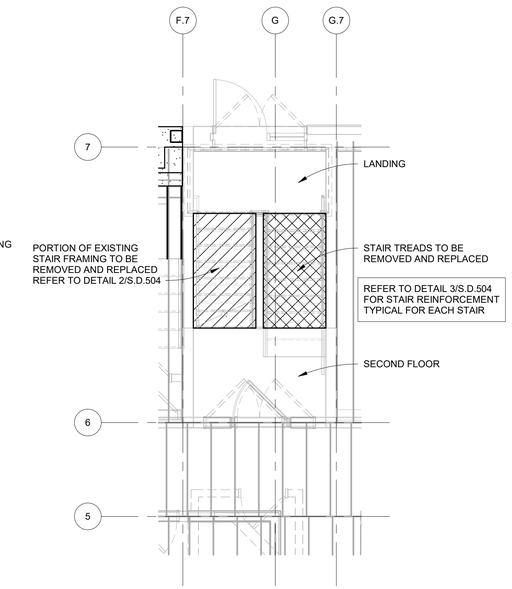
N 6 S.201 STAIR 2 ENLARGED FRAMING PLAN - ROOF PLAN

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



N 4 S.201 STAIR 2 ENLARGED FRAMING PLAN - THIRD FLOOR PLAN

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



N 2 S.201 STAIR 2 ENLARGED FRAMING PLAN - FIRST FLOOR PLAN

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

STAIR DEMOLITION PLAN NOTES

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S-001 FOR STRUCTURAL GENERAL NOTES
   B. DRAWINGS S-002 THROUGH S-003 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWINGS S-004 THROUGH S-005 FOR STRUCTURAL SPECIFICATIONS.
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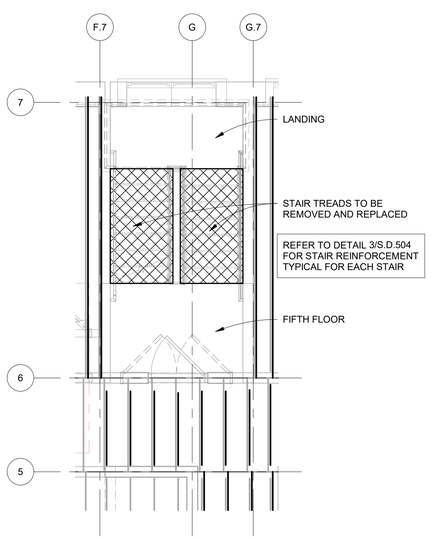
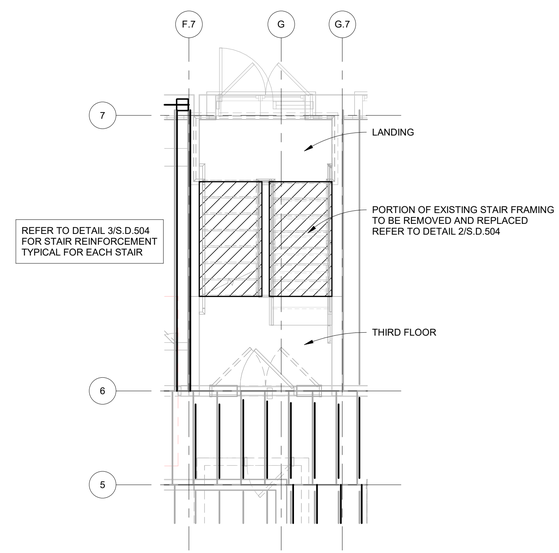


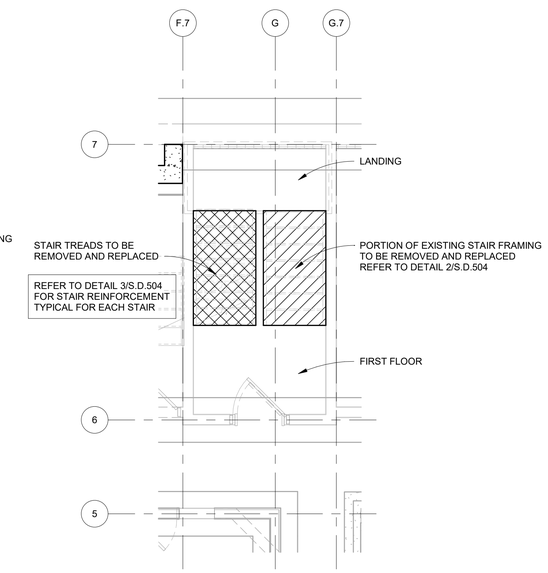
N 5 S.201 STAIR 2 ENLARGED FRAMING PLAN - FOURTH FLOOR PLAN

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



N 3 S.201 STAIR 2 ENLARGED FRAMING PLAN - SECOND FLOOR PLAN

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



N 1 S.201 STAIR 2 ENLARGED FRAMING PLAN - FOUNDATION PLAN

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

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MICHIGAN

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KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

Enlarged Stair Demolition Plans

DRAWING NUMBER

S.D.502

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SEAL

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT MICHIGAN

STAIR DEMOLITION PLAN NOTES

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
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   B. DRAWINGS S-002 THROUGH S-003 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWINGS S-004 THROUGH S-005 FOR STRUCTURAL SPECIFICATIONS.
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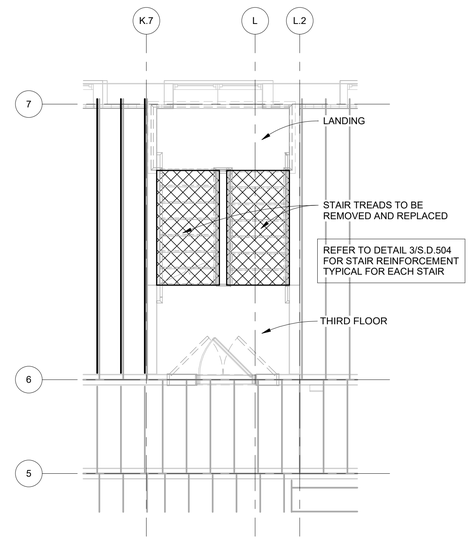
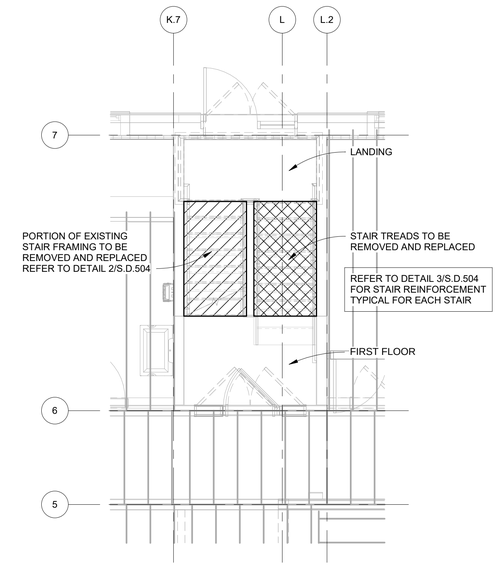
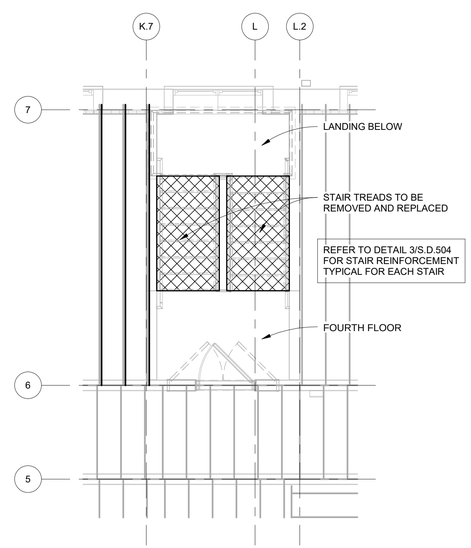


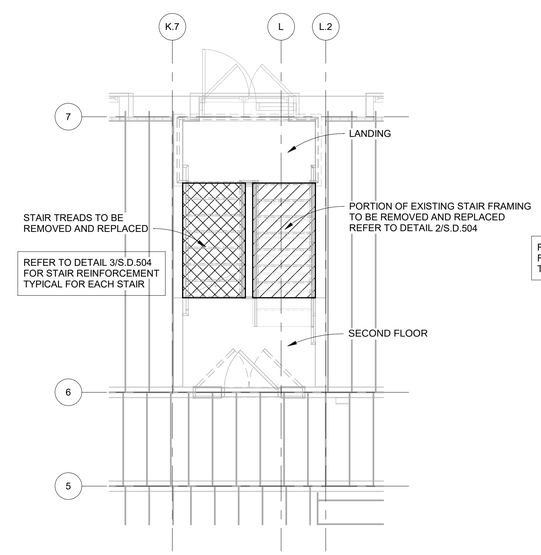
N 4 S.201 STAIR 3 ENLARGED FRAMING PLAN - THIRD FLOOR PLAN
SCALE: 1/4" = 1'-0"



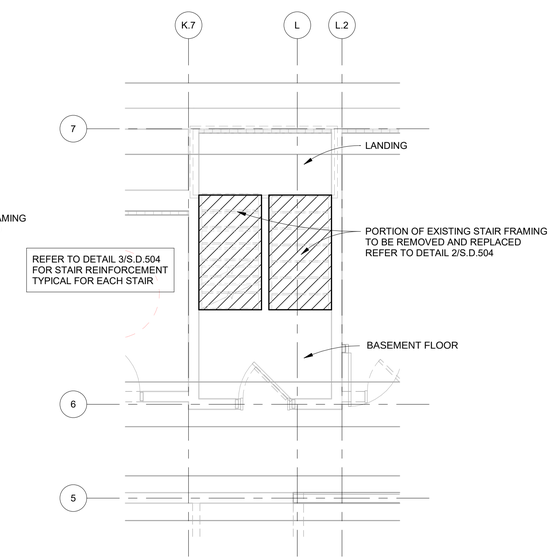
N 2 S.201 STAIR 3 ENLARGED FRAMING PLAN - FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"



N 5 S.201 STAIR 3 ENLARGED FRAMING PLAN - FOURTH FLOOR PLAN
SCALE: 1/4" = 1'-0"



N 3 S.201 STAIR 3 ENLARGED FRAMING PLAN - SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"



N 1 S.201 STAIR 3 ENLARGED FRAMING PLAN - FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

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KEY PLAN

FSP PROJECT NO. TRC22.066

DRAWING TITLE

Enlarged Stair Demolition Plans

DRAWING NUMBER

S.D.503

STAIR DEMOLITION PLAN NOTES

1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S-001 FOR STRUCTURAL GENERAL NOTES
   B. DRAWINGS S-002 THROUGH S-003 FOR SPECIAL INSPECTIONS & TESTING.
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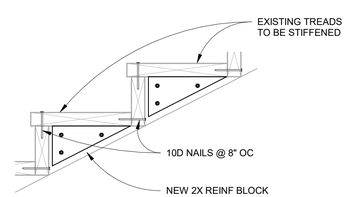
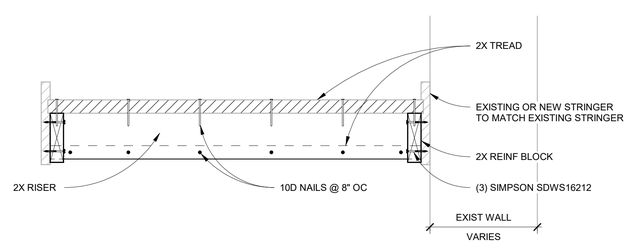
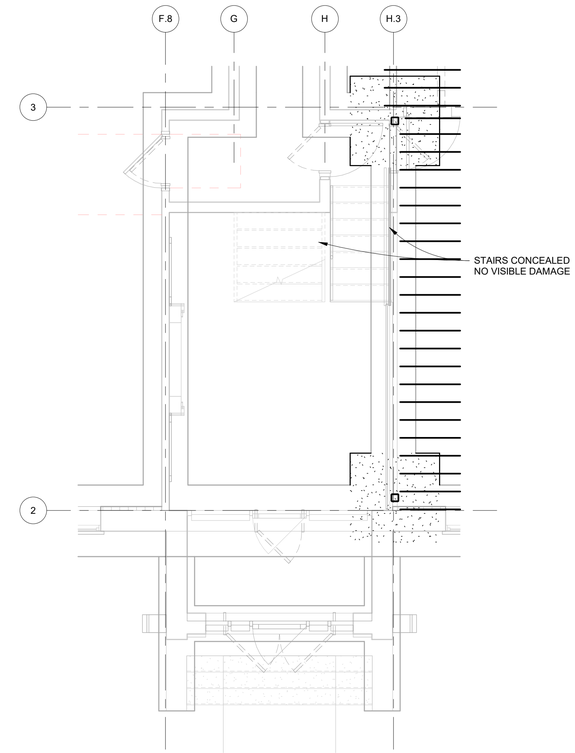
   a. THE AOR/EOR IS NOT RESPONSIBLE FOR DOCUMENTING ALL EXISTING CONDITIONS.
   b. CONDITIONS THAT VARY FROM EXPLORATORY INVESTIGATION ARE TO BE EXPECTED.
10. TESTING OF EXISTING BUILDING SYSTEMS OR MATERIALS MAY BE REQUIRED.
11. PROJECT BUDGET AND CONSTRUCTION SCHEDULE SHALL ACCOUNT FOR UNKNOWN FIELD CONDITIONS.
12. NAIL ALL STAIR TREADS AND RISERS TO REMAIN PER DETAIL 3/S.D.504.
13. LEGEND:
    - INDICATES AREA OF SELECTIVE STAIR DEMOLITION
    - INDICATES AREA OF SELECTIVE STAIR TREAD DEMOLITION



3 / S.D.504 TYPICAL STAIR REINFORCING
SCALE: 1 1/2" = 1'-0"



2 / S.D.504 TYPICAL STAIR REPLACEMENT
SCALE: 1 1/2" = 1'-0"



N

1 / S.201 VESTIBULE FLOOR FRAMING PLAN
SCALE: 1/4" = 1'-0"

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CSC PROJECT NUMBER: 25008

SEAL

STATE OF MICHIGAN
JAMES CORSIGLIA
ENGINEER
No. 6201040041
LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE
CABOT APARTMENTS
RENOVATIONS
DETROIT MICHIGAN

DATE	ISSUE
09.15.2026	OWNER REVISIONS
06.24.2025	BIDS
05.09.2025	BIDS/PERMITS

KEY PLAN

FSP PROJECT NO.
TRC22.066

DRAWING TITLE

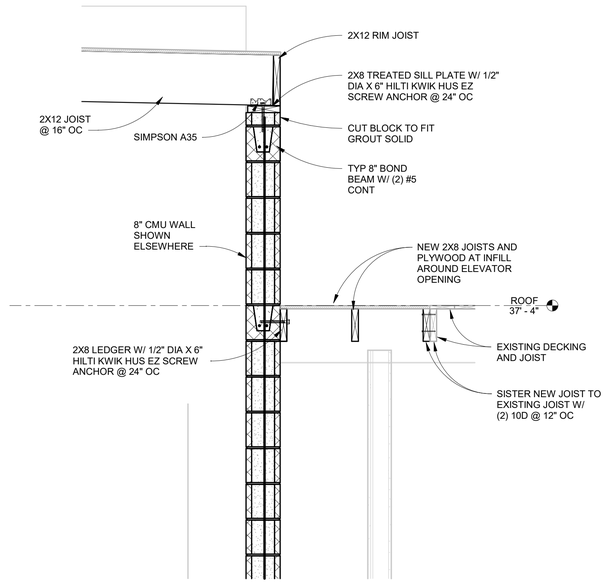
Enlarged Stair Demolition Plans

DRAWING NUMBER

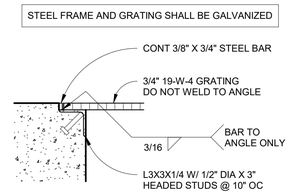
S.D.504

ELEVATOR NOTES

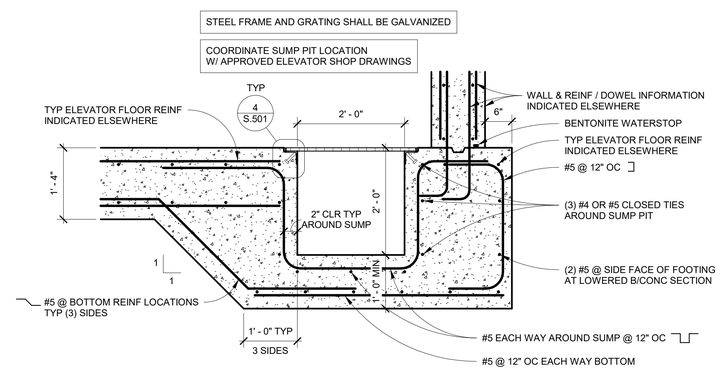
1. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INFORMATION:
   A. DRAWING S-001 THROUGH S-002 FOR STRUCTURAL GENERAL NOTES.
   B. DRAWING S-003 THROUGH S-004 FOR SPECIAL INSPECTIONS & TESTING.
   C. DRAWING S-005 THROUGH S-006 FOR STRUCTURAL SPECIFICATIONS.
2. TYPICAL DETAILS APPLY TO ALL DRAWINGS.
   USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
3. REFER TO FOUNDATION AND FRAMING PLANS FOR REFERENCE ELEVATIONS.
4. GROUT CMU CORES TO RECEIVE ELEVATOR BRACKET AND RAIL ANCHORS SOLID.
   COORDINATE LOCATIONS WITH APPROVED ELEVATOR SHOP DRAWINGS.
5. REFER TO SECTIONS & DETAILS FOR MASONRY SIZE & REINFORCING.
6. ELEVATOR HOIST BEAM SHALL BE W8X18 W/ 6"X8"X5/16" BRG PL TYP EA END
   W/ (2) 1/2" DIA X 6" HEADED STUDS.
   GROUT SOLID 3 COURSES MIN BELOW BEARING ELEVATION.
   COORDINATE HOIST BEAM LOCATION, ELEVATION, AND ORIENTATION
   WITH APPROVED ELEVATOR SHOP DRAWINGS.
   ELEVATOR HOIST BEAM HAS BEEN DESIGNED FOR A 10,000# LOAD
   APPLIED AT ANY LOCATION ALONG THE HOIST BEAM.
7. PROVIDE 1/2" DIA X 6" LONG HEADED STUDS @ 16" OC ON TOP FLANGE OF LINTELS.
8. LINTELS SHALL BE WELDED TO BEARING PLATE TYP U.O.N.
9. VERTICAL REINFORCING SHALL BE LOCATED IN CENTER OF CMU WALL U.O.N.
10. GROUT SOLID ALL COURSES WITH REINFORCING.
11. PROVIDE W1.7 LADDER TYPE HORIZONTAL WIRE REINFORCING @ 16" OC TYPICAL.
12. MASONRY WALLS SHALL BE GROUTED SOLID 3 COURSES MINIMUM BELOW LINTEL BEARING LOCATIONS.
13. BEARING POCKETS FOR BEAMS / JOISTS SHALL BE GROUTED SOLID AFTER INSTALLATION OF BEAM OR JOIST.
14. REFER TO ARCHITECTURAL FOR SLAB EDGE LOCATIONS AND SILL DETAILS.
15. MASONRY REINFORCING SHOP DRAWINGS SHALL BE PROVIDED TO STRUCTURAL ENGINEER FOR REVIEW IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS. MASONRY WALL REINFORCING ELEVATIONS SHALL BE PROVIDED.



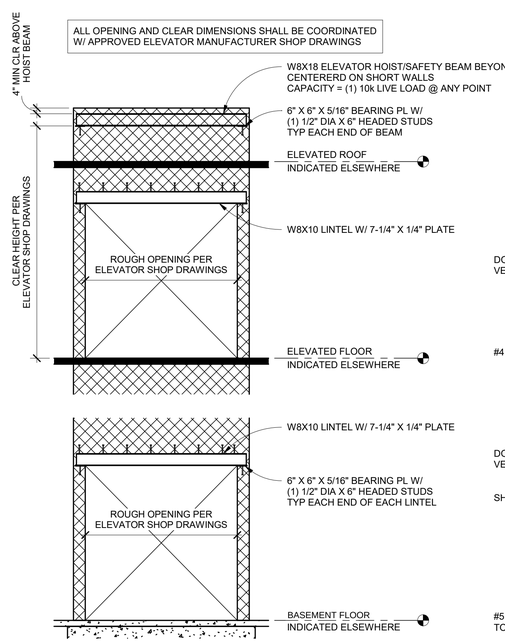
6 / S.109 SECTION
SCALE: 3/4" = 1'-0"



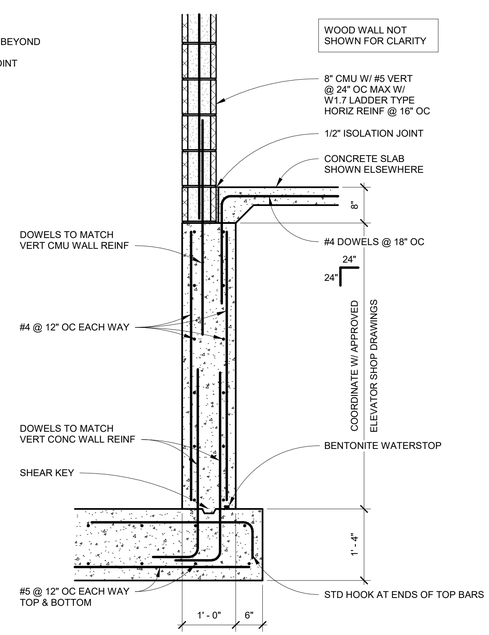
4 / S.501 DETAIL
SCALE: 1 1/2" = 1'-0"



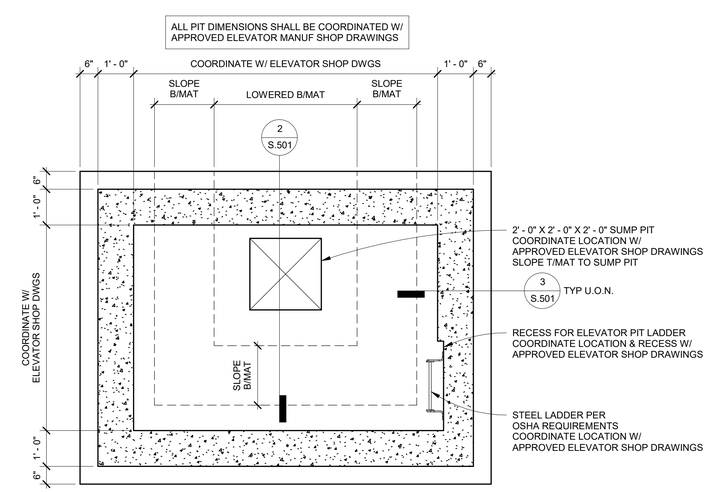
2 / S.501 SECTION
SCALE: 3/4" = 1'-0"



5 / S.501 ELEVATOR ELEVATION
SCALE: 1/4" = 1'-0"



3 / S.501 SECTION
SCALE: 3/4" = 1'-0"



1 / S.101 ELEVATOR PIT PLAN
SCALE: 1/2" = 1'-0"

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CSC PROJECT NUMBER: 25008

SEAL

MICHIGAN

PROJECT TITLE

CABOT APARTMENTS RENOVATIONS

DETROIT

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KEY PLAN

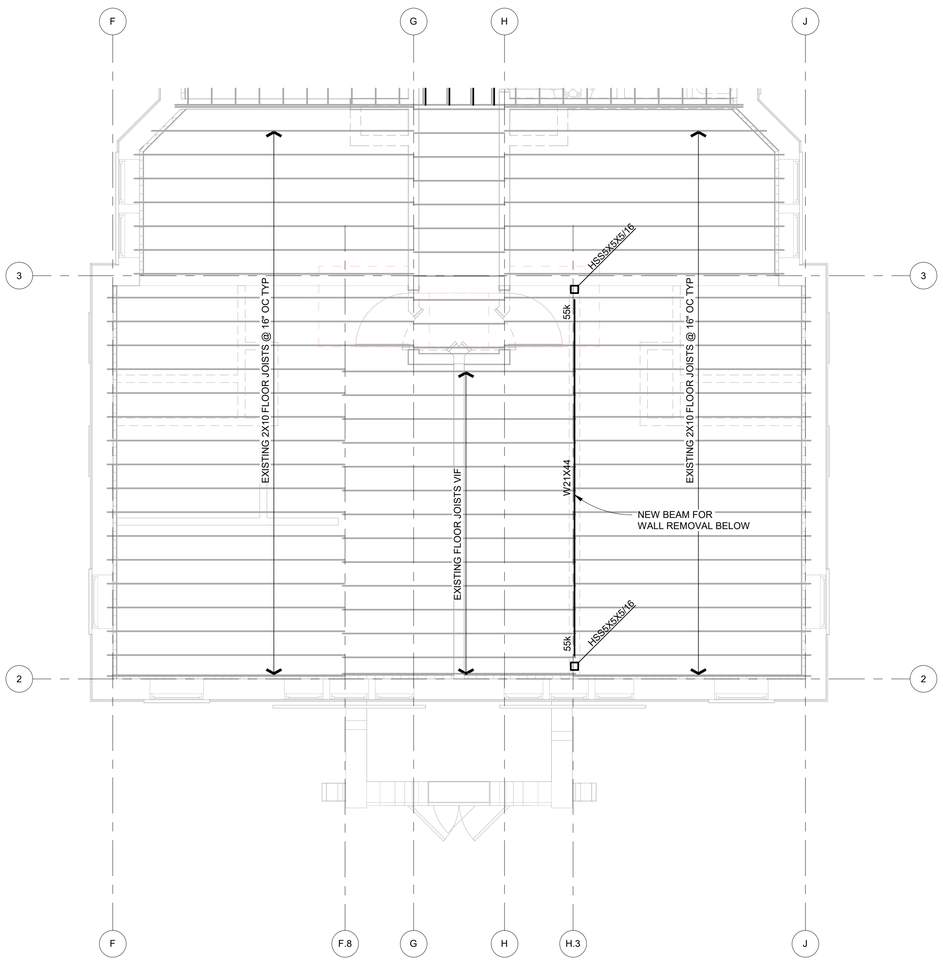
FSP PROJECT NO. TRC22.066

DRAWING TITLE

Enlarged Plans

DRAWING NUMBER

S.501

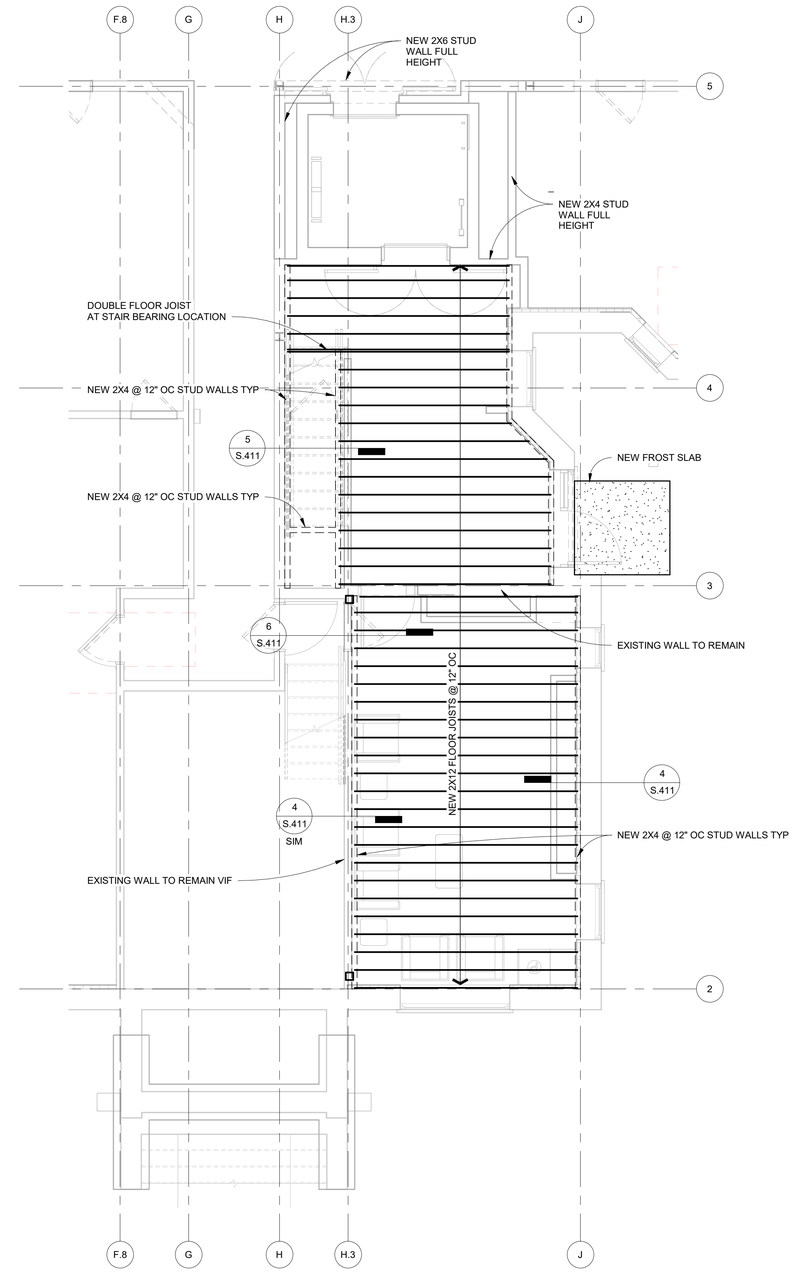


N

2
S.103

SECOND FLOOR ENLARGED FRAMING PLAN AT LOBBY

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



N

1
S.102

NEW VESTIBULE ENLARGED FRAMING PLAN

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

FSP FUSCO, SHAFFER & PAPPAS, INC.
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TRC22.066

DRAWING TITLE

Enlarged Framing Plans

DRAWING NUMBER

S.502