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January 26, 2021

SOLICITATION ADDENDUM NO. 1
ITB 20-0011
Cooper Mountain Seismic Upgrades- General Contractor

THE FOLLOWING CHANGES/ADDITIONS TO THE ABOVE CITED SOLICITATION ARE ANNOUNCED:

This Addendum modifies the Invitation to Bid (ITB) document(s) only to the extent indicated herein. All other areas not changed or otherwise modified by this Addendum shall remain in full force and effect. This Addendum is hereby made an integral part of the ITB document. Bidder must be responsive to any requirements of this Addendum as if the requirements were set forth in the ITB. Failure to do so may result in Bid rejection. See the ITB regarding requests for clarification or change and protests of this Addendum, and the deadlines for the foregoing.

This addendum is to be acknowledged in the space provided on the Bidder Certification form supplied in the solicitation document. Failure to acknowledge receipt of this addendum may be cause to reject your offer.

The closing date **REMAINS UNCHANGED: February 9, 2021 at 2:00 PM Pacific Time**

CHANGES:

1) **The Revisions/Comments to Drawings and Specifications ("Revisions") attached to this Addendum 1 are hereby added to the Solicitation in the following manner. Where any Revisions correspond with pages found either in the existing ATTACHMENT J Drawings or ATTACHMENT K Specifications ("Existing Pages"), the Revisions replace their corresponding Existing Pages. If any additional pages or information are found in the Revisions, such additional information is hereby added to the Solicitation's Statement of Work.**

2) **The District will make the site (the general areas of Cooper Mountain Elementary School that were viewed during the original Pre-Bid Conference) available for additional viewing/pictures on Friday, January, 29, 2021 at 3:00 PM PST. This viewing is Non-Mandatory and may be attended by any Pre-Qualified Bidders or interested sub-contractors who wish to attend.**

SUBSTITUTION REQUEST RESPONSES:

CLARIFICATONS:

1) As a result of City permiting discussions/feedback, comments have been added, and some changes have been made to the Drawings and Specificions. See CHANGES: 1) above for details.

2) Prior to closing, the District plans to release Addendum 2 to address other timely received questions and/or substitution requests.

Revisions/Comments to Drawings and Specifications ("Revisions")

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ADDENDUM #1 TO CONTRACT DOCUMENTS FOR:
BEAVERTON SCHOOL DISTRICT
COOPER MOUNTAIN ELEMENTARY SCHOOL
SEISMIC REHABILITION GRANT PROGRAM (SRGP) IMPROVEMENTS

01/22/2021

This ADDENDUM supersedes the original SPECIFICATIONS and DRAWINGS dated December 4, 2020, wherein it contradicts them; all other conditions remain unchanged.

Prior Addenda:
None

Acknowledgement of receipt of this ADDENDUM is required.

IITEM 1: MODIFICATIONS TO SPECIFICATIONS:

1. **REVISE** Specification 00 01 10 – Table of Contents as follows:
    a. Add Section 23 05 93 – Testing, Adjusting, and Balancing for HVAC
2. **ADD** Specification 23 05 93 – Testing, Adjusting, and Balancing for HVAC in its entirety.
3. **REVISE** Specification 26 09 23 – Lighting Control Devices as follows:
    a. Section 2.02.B.7 time-off delay setting to 20 minutes.

ITEM 2: MODIFICATIONS TO PLANS

1. Sheet G-000:
    a. **ADD** Fire Sprinkler Bracing to the Deferred Submittal list.
    b. **ADD** building occupancy load to the Project Information list.
    c. **ADD** 2018 International Existing Building Code (IEBC), Section 503.13 Voluntary Lateral-Force Resisting System Alterations to the Applicable Codes list.
    d. **REMOVE** 2019 Oregon Fire Code from the Applicable Codes list.
2. Sheet G-101:
    a. **ADD** List of removed and added Plumbing Fixtures to Code Summary sheet.
    b. **ADD** building occupancy load to the Project Information list.
    c. **REVISE** exit occupant loads from Gym 100 East exit and Entry M111 south exit.
3. Sheet AD-201:
    a. **ADD** demolition of concrete slab to allow access for anchor installation at existing Cafeteria footing, and associated keynote 42.

4. Sheet A-201:
    a. **ADD** patching of demolish slab at areas of Cafeteria anchor installation.
5. Sheet A-211:
    a. **REVISED** the length of demolished sheathing at the Cafeteria west wall to reflect 34'-0" per Structural.
6. Sheet S-002:
    a. **REVISED** seismic risk category and importance category for Area D classrooms and play area.
7. Sheet S-004:
    a. **ADD** Minimum special inspections and testing for soils (7/S-004).
    b. **ADD** Minimum special inspections for fabricated items (8/S-004).
    c. **ADD** Minimum tests and special inspections of masonry construction (6/S-004).
    d. **ADD** Minimum tests for seismic resistance (4/S-004).
    e. **ADD** Structural steel special inspections for seismic resistance (3/S-004).
8. Sheet S-201:
    a. **ADD** Holdown and post at shear wall on grid A.4.
    b. **REVISE** Connection location and detail callouts along north cafeteria wall.
    c. **REVISE** Holdowns at shear wall on grid A.7 in Cafeteria
    d. **REVISE** Keynotes: HDU8 used with 7/8" dia. rod and #7 rebar.
    e. **REVISE** Detail callouts in legend for sureboard sheathing.
9. Sheet S-202:
    a. **REVISE** Keynotes: HDU8 used with 7/8" dia. rod and #7 rebar.
    b. **REVISE** Detail callouts in legend for sureboard sheathing.
10. Sheet S-203:
    a. **REVISE** Keynotes: HDU8 used with 7/8" dia. rod and #7 rebar.
    b. **REVISE** Detail callouts in legend for sureboard sheathing.
11. Sheet S-221:
    a. **ADD** Simpson strap and blocking in auditorium at grid B.B
    b. **ADD** (E) Concrete beam at grid B.2, extend detail 10/S-603 along beam for length of grid line.
    c. **ADD** (E) Glulam beam at grid A.4 in cafeteria. Add Simpson straps on both sides of glulam beam at beam splice locations and at connection to shear wall. Provide blocking for strap at shear wall.
    d. **REVISE** Detail callout at grid B.B to 13/S-603.
    e. **REVISE** Diaphragm callout D-2 to include panel edge connection detail reference.
    f. **REVISE** Detail callouts in legend for sureboard sheathing.
12. Sheet S-222:
    a. **REVISE** Diaphragm callout D-2 to include panel edge connection detail reference.

b. **REVISE** Detail callouts in legend for sureboard sheathing.

13. Sheet S-223:
    a. **REVISE** Detail callouts in legend for sureboard sheathing.
    b. **REVISE** Diaphragm D-3 detail callout to detail 16/S-601.
14. Sheet S-501:
    a. **ADD** Plate size, anchor size, and embed to detail 5/S-501.
    b. **REVISE** Detail 8/S-501: location and spacing of plate and anchors to occur inside cafeteria, add slab demo, revise ramp slab location.
15. Sheet S-601:
    a. **ADD** maximum opening dimensions and strap size to detail 6/S-601.
    b. **REVISE** diaphragm schedule detail 16/S-601 to clarify new and existing conditions and blocking types. Modify Simpson collector straps and spacing at D-1.
16. Sheet S-602:
    a. **ADD** Holdown and A35 at blocking, revise size of epoxy anchor in detail 5/S-602.
    b. **ADD** Blocking and boundary nailing at connection of (N) to (E) shear wall in detail 7/S-602.
    c. **REVISE** connection of HSS strongback, removing bolt and increasing length of angle attachment in detail 3/S-602.
    d. **REVISE** detail 11/S-602 to show holdown connection, sheathing extended through channels with blocking. Orientation of shiplap sheathing to be verified in field.
    e. **REVISE** detail 15/S-602 to show holdown connection through (E) beam flanges and add blocking at existing beam. Holdown constructability to be verified in field.
17. Sheet S-603:
    a. **ADD** Simpson strap per plan to detail 13/S-603.
    b. **ADD** detail 14/S-603 for clarity at joist parallel.
    c. **REVISE** Connection in detail 2/S-603 at top of shear wall to show boundary nailing, remove A35 clip.
    d. **REVISE** detail 10/S-603 to apply at concrete beam.
18. Sheet M-201:
    a. **REVISE** Keynote applied to relief hoods on the roof of Area B to read, “REINSTALL EXISTING ROOF MOUNTED RELIEF HOOD ON NEW ROOF CURB. CLEAN ROOF HOOD. PERFORM TESTING, ADJUSTING, AND BALANCING ON HOOD AFTER REINSTALLATION.” Refer to attached revised drawing.
19. Sheet M-203:
    a. **REVISE** Keynote 1 associated with exhaust fans on the roof of the modular building to read: “REINSTALL EXHAUST FANS, PROVIDE NEW CURBS 12” HIGH ABOVE ROOF SURFACE. CLEAN FAN. PERFORM TESTING, ADJUSTING, AND BALANCING ON FAN AND RELATED AIR INLETS. THERE ARE A TOTAL OF 3 AIR INLETS ASSOCIATED WITH 2 EXHAUST FANS.” Refer to attached revised drawing.
    b. **REVISE** Keynote 2 associated with the rooftop HVAC units on the roof of the modular building to read: “REINSTALL ROOFTOP HVAC UNITS AND SCREENING. PROVIDE NEW ROOF CURB 12” HIGH ABOVE ROOF SURFACE. RECONNECT RTU TO EXISTING SUPPLY AND RETURN DUCTWORK. RECONNECT EXISTING

CONTROLS. PERFORM MAINTENANCE SERVICE ON REINSTALLED RTUs INCLUDING SERVICING HEATING AND COOLING SYSTEMS, CLEAN AND COMB EVAPORATOR AND CONDENSER FINS, CLEAN OUTDOOR AIR SCREENS, REPLACE FILTERS. REPLACE CONDENSATE TRAPS. PERFORM TESTING, ADJUSTING, AND BALANCING ON RTU AND ITS RELATED AIR INLETS AND OUTLETS. THERE ARE A TOTAL OF 37 AIR INLETS AND OUTLETS ASSOCIATED WITH THE FIVE RTUs." Refer to attached revised drawing.

20. Sheet P-203:
    a. **REVISE** the Title of Detail 2 to read, "PLUMBING FLOOR PLAN – AREA D." Refer to attached revised drawing.
    b. **REVISE** the note in detail 2 referring to the hose bib on the north exterior wall to read, "INSTALL NEW HYDRANT H-1 WHERE EXISTING HYDRANT WAS DEMOLISHED." Refer to attached revised drawing.
21. Sheet P-300:
    a. **ADD** to the PLUMBING FIXTURE SCHEDULE hydrant H-1. Refer to the attached revised drawing.
    b. **ADD** the PLUMBING FIXTURES DEMOLISHED AND ADDED schedule. Refer to the attached revised drawing.
22. Sheet E-300:
    a. **REVISE** Lighting Controls Schedule, under note 8 lighting control description for Cafeteria, time delay setting to 20 minutes.

ITEM 3: RESPONSES TO BIDDER QUESTIONS

1. None

ITEM 4: ATTACHMENTS

1. Specifications:

00 01 10	TABLE OF CONTENTS
23 05 93	TESTING, ADJUSTING, AND BALANCING FOR HVAC
26 09 23	LIGHTING CONTROL DEVICES

2. Drawings:

G-000	COVER SHEET
G-101	CODE SUMMARY
AD-201	DEMOLITION FLOOR PLANS – AREA A, B, C NORTH
A-201	FLOOR PLANS – AREA A, B, C NORTH
A-211	REFLECTED CEILING PLANS – AREA A, B, C NORTH
S-002	GENERAL NOTES
S-004	GENERAL NOTES
S-201	FLOOR PLANS – AREA A, B, C NORTH
S-202	FLOOR PLANS – AREA C SOUTH
S-203	FLOOR PLANS – AREA D

S-221 ROOF PLANS – AREA A, B, C NORTH

S-222 ROOF PLANS – AREA C SOUTH

S-223 ROOF PLANS – AREA D

S-501 DETAILS

S-601 WOOD DETAILS

S-602 WOOD DETAILS

6-603 WOOD DETAILS

M-201 MECHANICAL PLANS – AREA A, B, C NORTH

M-203 MECHANICAL PLANS – AREA D

P-203 PLUMBING FLOOR PLAN – AREA D

P-300 PLUMBING DETAILS

E-300 ELECTRICAL ONE-LINE DIAGRAM & SCHEDULES

3. Structural Calculations dated 1/22/2021

END OF ADDENDUM 1

SECTION 00 01 10

TABLE OF CONTENTS

3.01 APPENDIX A -- ASBESTOS ABATEMENT CONTRACTOR BID DOCUMENT AND SPECIFICATIONS

END OF SECTION

SECTION 23 05 93
TESTING, ADJUSTING, AND BALANCING FOR HVAC

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Testing, adjustment, and balancing of air systems.

B. Testing, adjustment, and balancing of refrigerating systems.

C. Measurement of final operating condition of HVAC systems.

1.02 REFERENCE STANDARDS

A. AABC (NSTSB) - AABC National Standards for Total System Balance, 7th Edition 2016.

B. ASHRAE Std 111 - Measurement, Testing, Adjusting, and Balancing of Building HVAC Systems 2008 (Reaffirmed 2017).

C. SMACNA (TAB) - HVAC Systems Testing, Adjusting and Balancing 2002.

1.03 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. TAB Plan: Submit a written plan indicating the testing, adjusting, and balancing standard to be followed and the specific approach for each system and component.
   1. Submit to Architect.
   2. Include at least the following in the plan:
      a. List of all air flow, system capacity and efficiency measurements to be performed and a description of specific test procedures, parameters, formulas to be used.
      b. Copy of field checkout sheets and logs to be used, listing each piece of equipment to be tested, adjusted and balanced with the data cells to be gathered for each.
      c. Discussion of what notations and markings will be made on the duct and piping drawings during the process.
      d. Final test report forms to be used.
      e. Procedures for formal deficiency reports, including scope, frequency and distribution.

C. Final Report: Indicate deficiencies in systems that would prevent proper testing, adjusting, and balancing of systems and equipment to achieve specified performance.
   1. Revise TAB plan to reflect actual procedures and submit as part of final report.
   2. Submit draft copies of report for review prior to final acceptance of Project. Provide final copies for Architect and for inclusion in operating and maintenance manuals.
   3. Include actual instrument list, with manufacturer name, serial number, and date of calibration.
   4. Form of Test Reports: Where the TAB standard being followed recommends a report format use that; otherwise, follow ASHRAE Std 111.
   5. Units of Measure: Report data in I-P (inch-pound) units only.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

A. Perform total system balance in accordance with one of the following:
   1. AABC (NSTSB), AABC National Standards for Total System Balance.
   2. SMACNA (TAB).

B. Begin work after completion of systems to be tested, adjusted, or balanced and complete work prior to Substantial Completion of the project.

C. TAB Agency Qualifications:
   1. Company specializing in the testing, adjusting, and balancing of systems specified in this section.

2. Having minimum of three years documented experience.
3. Certified by one of the following:
    a. AABC, Associated Air Balance Council: www.aabc.com/#sle; upon completion submit AABC National Performance Guaranty.
    b. NEBB, National Environmental Balancing Bureau: www.nebb.org/#sle.
    c. TABB, The Testing, Adjusting, and Balancing Bureau of National Energy Management Institute: www.tabbcertified.org/#sle.

D. TAB Supervisor Qualifications: Certified by same organization as TAB agency.

3.02 EXAMINATION

A. Verify that systems are complete and operable before commencing work. Ensure the following conditions:
1. Systems are started and operating in a safe and normal condition.
2. Temperature control systems are installed complete and operable.
3. Proper thermal overload protection is in place for electrical equipment.
4. Final filters are clean and in place. If required, install temporary media in addition to final filters.
5. Duct systems are clean of debris.
6. Fans are rotating correctly.
7. Fire and volume dampers are in place and open.
8. Air coil fins are cleaned and combed.
9. Access doors are closed and duct end caps are in place.
10. Air outlets are installed and connected.
11. Duct system leakage is minimized.

B. Submit field reports. Report defects and deficiencies that will or could prevent proper system balance.

C. Beginning of work means acceptance of existing conditions.

3.03 PREPARATION

A. Provide instruments required for testing, adjusting, and balancing operations. Make instruments available to Architect to facilitate spot checks during testing.

3.04 ADJUSTMENT TOLERANCES

A. Air Handling Systems: Adjust to within plus or minus 5 percent of design for supply systems and plus or minus 10 percent of design for return and exhaust systems.

B. Air Outlets and Inlets: Adjust total to within plus 10 percent and minus 5 percent of design to space. Adjust outlets and inlets in space to within plus or minus 10 percent of design.

3.05 RECORDING AND ADJUSTING

A. Field Logs: Maintain written logs including:
1. Running log of events and issues.
2. Discrepancies, deficient or uncompleted work by others.
3. Contract interpretation requests.
4. Lists of completed tests.

B. Ensure recorded data represents actual measured or observed conditions.

C. Permanently mark settings of dampers and other adjustment devices allowing settings to be restored. Set and lock memory stops.

D. After adjustment, take measurements to verify balance has not been disrupted or that such disruption has been rectified.

E. Leave systems in proper working order, replacing belt guards, closing access doors, closing doors to electrical switch boxes, and restoring thermostats to specified settings.

3.06 AIR SYSTEM PROCEDURE

A. Adjust air handling and distribution systems to provide required or design supply, return, and exhaust air quantities at site altitude.

B. Make air quantity measurements in ducts by Pitot tube traverse of entire cross sectional area of duct.

C. Measure air quantities at air inlets and outlets.

D. Adjust distribution system to obtain uniform space temperatures free from objectionable drafts and noise.

E. Use volume control devices to regulate air quantities only to extend that adjustments do not create objectionable air motion or sound levels. Effect volume control by duct internal devices such as dampers and splitters.

F. Vary total system air quantities by adjustment of fan speeds. Provide drive changes required. Vary branch air quantities by damper regulation.

G. Provide system schematic with required and actual air quantities recorded at each outlet or inlet.

H. Measure static air pressure conditions on air supply units, including filter and coil pressure drops, and total pressure across the fan. Make allowances for 50 percent loading of filters.

I. Adjust outside air automatic dampers, outside air, return air, and exhaust dampers for design conditions.

J. Where modulating dampers are provided, take measurements and balance at extreme conditions. Balance variable volume systems at maximum air flow rate, full cooling, and at minimum air flow rate, full heating.

3.07 SCOPE

A. Test, adjust, and balance the following:
   1. Existing Air Handling Unit Serving the Cafeteria.
   2. Existing Rooftop Air Handling Units that are being removed and reinstalled in area D, on the "modular building".
   3. Existing Exhaust Fans that are being removed and reinstalled in area D, on the "modular building".
   4. Air Inlets and Outlets:
      a. Installed as new as part of the scope of this project.
      b. Associated with existing rooftop air handling units to be uninstalled and reinstalled as part of the scope of this project.
      c. Associated with existing fans that are to be uninstalled and reinstalled as part of the scope of this project.

3.08 MINIMUM DATA TO BE REPORTED

A. Electric Motors:
   1. Manufacturer.
   2. Model/Frame.
   3. HP/BHP.
   4. Phase, voltage, amperage; nameplate, actual, no load.
   5. RPM.
   6. Service factor.
   7. Starter size, rating, heater elements.
   8. Sheave Make/Size/Bore.

B. V-Belt Drives:
   1. Identification/location.
   2. Required driven RPM.
   3. Driven sheave, diameter and RPM.

4. Belt, size and quantity.
5. Motor sheave diameter and RPM.
6. Center to center distance, maximum, minimum, and actual.

C. Air Cooled Condensers:
1. Identification/number.
2. Location.
3. Manufacturer.
4. Model number.
5. Serial number.
6. Entering DB air temperature, design and actual.
7. Leaving DB air temperature, design and actual.
8. Number of compressors.

D. Cooling Coils:
1. Identification/number.
2. Location.
3. Service.
4. Manufacturer.
5. Air flow, design and actual.
6. Entering air DB temperature, design and actual.
7. Entering air WB temperature, design and actual.
8. Leaving air DB temperature, design and actual.
9. Leaving air WB temperature, design and actual.
10. Saturated suction temperature, design and actual.
11. Air pressure drop, design and actual.

E. Air Moving Equipment:
1. Location.
2. Manufacturer.
3. Model number.
4. Serial number.
5. Arrangement/Class/Discharge.
6. Air flow, specified and actual.
7. Return air flow, specified and actual.
8. Outside air flow, specified and actual.
9. Total static pressure (total external), specified and actual.
10. Inlet pressure.
11. Discharge pressure.
12. Sheave Make/Size/Bore.
13. Number of Belts/Make/Size.
14. Fan RPM.

F. Exhaust Fans:
1. Location.
2. Manufacturer.
3. Model number.
4. Serial number.
5. Air flow, specified and actual.
6. Total static pressure (total external), specified and actual.
7. Inlet pressure.
8. Discharge pressure.
9. Sheave Make/Size/Bore.
10. Number of Belts/Make/Size.
11. Fan RPM.

G. Duct Traverses:

1. System zone/branch.
2. Duct size.
3. Area.
4. Design velocity.
5. Design air flow.
6. Test velocity.
7. Test air flow.
8. Duct static pressure.
9. Air temperature.
10. Air correction factor.

H. Air Distribution Tests:
1. Air terminal number.
2. Room number/location.
3. Terminal type.
4. Terminal size.
5. Area factor.
6. Design velocity.
7. Design air flow.
8. Test (final) velocity.
9. Test (final) air flow.
10. Percent of design air flow.

I. Sound Level Reports:

END OF SECTION

SECTION 26 09 23
LIGHTING CONTROL DEVICES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Occupancy sensors.

B. Lighting contactors.

1.02 RELATED REQUIREMENTS

A. Section 26 05 29 - Hangers and Supports for Electrical Systems

B. Section 26 05 33.16 - Boxes for Electrical Systems.

C. Section 26 05 53 - Identification for Electrical Systems: Identification products and requirements.

D. Section 26 27 26 - Wiring Devices: Devices for manual control of lighting, including wall switches.
   1. Includes finish requirements for wall controls specified in this section.

1.03 REFERENCE STANDARDS

A. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.

B. NECA 130 - Standard for Installing and Maintaining Wiring Devices 2010.

C. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum) 2014.

D. NEMA ICS 2 - Industrial Control and Systems Controllers, Contactors and Overload Relays Rated 600 Volts 2000, with Errata (2008).

E. NEMA ICS 6 - Industrial Control and Systems: Enclosures 1993 (Reaffirmed 2016).

F. UL 60947-1 - Low-Voltage Switchgear and Controlgear - Part 1: General Rules Current Edition, Including All Revisions.

G. UL 60947-4-1 - Low-Voltage Switchgear and Controlgear - Part 4-1: Contactors and Motor-starters - Electromechanical Contactors and Motor-starters Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate the placement of lighting control devices with millwork, furniture, equipment, etc. installed under other sections or by others.
   2. Coordinate the placement of wall switch occupancy sensors with actual installed door swings.
   3. Coordinate the placement of occupancy sensors with millwork, furniture, equipment or other potential obstructions to motion detection coverage installed under other sections or by others.
   4. Notify Architect of any conflicts or deviations from Contract Documents to obtain direction prior to proceeding with work.

1.05 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Product Data: Include ratings, configurations, standard wiring diagrams, dimensions, colors, service condition requirements, and installed features.
   1. Occupancy Sensors: Include detailed motion detection coverage range diagrams.

C. Shop Drawings:
   1. Occupancy Sensors: Provide lighting plan indicating location, model number, and orientation of each occupancy sensor and associated system component.

D. Field Quality Control Reports.

E. Operation and Maintenance Data: Include detailed information on device programming and setup.

F. Project Record Documents: Record actual installed locations and settings for lighting control devices.

1.06 DELIVERY, STORAGE, AND PROTECTION

A. Store products in a clean, dry space in original manufacturer's packaging in accordance with manufacturer's written instructions until ready for installation.

1.07 WARRANTY

A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.

B. Provide five year manufacturer warranty for all occupancy sensors.

C. Provide five year manufacturer warranty for all daylighting controls.

PART 2 PRODUCTS

2.01 LIGHTING CONTROL DEVICES - GENERAL REQUIREMENTS

A. Provide products listed, classified, and labeled as suitable for the purpose intended.

B. Unless specifically indicated to be excluded, provide all required conduit, wiring, connectors, hardware, components, accessories, etc. as required for a complete operating system.

2.02 OCCUPANCY SENSORS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Refer to drawings and controls schedules for listed manufacturers.

B. All Occupancy Sensors:
   1. Description: Factory-assembled commercial specification grade devices for indoor use capable of sensing both major motion, such as walking, and minor motion, such as small desktop level movements, according to published coverage areas, for automatic control of load indicated.
   2. Sensor Technology:
      a. Passive Infrared (PIR) Occupancy Sensors: Designed to detect occupancy by sensing movement of thermal energy between zones.
      b. Ultrasonic Occupancy Sensors: Designed to detect occupancy by sensing frequency shifts in emitted and reflected inaudible sound waves.
      c. Passive Infrared/Ultrasonic Dual Technology Occupancy Sensors: Designed to detect occupancy using a combination of both passive infrared and ultrasonic technologies.
      d. Passive Infrared/Acoustic Dual Technology Occupancy Sensors: Designed to detect occupancy using a combination of both passive infrared and audible sound sensing technologies.
   3. Provide LED to visually indicate motion detection with separate color LEDs for each sensor type in dual technology units.
   4. Operation: Unless otherwise indicated, occupancy sensor to turn load on when occupant presence is detected and to turn load off when no occupant presence is detected during an adjustable turn-off delay time interval.
   5. Dual Technology Occupancy Sensors: Field configurable turn-on and hold-on activation with settings for activation by either or both sensing technologies.
   6. Passive Infrared Lens Field of View: Field customizable by addition of factory masking material, adjustment of integral blinders, or similar means to block motion detection in selected areas.

7. Turn-Off Delay: Field adjustable, with time delay settings up to ~~30 minutes~~ **20 minutes [Add. No. 1]**.
8. Sensitivity: Field adjustable.
9. Adaptive Technology: Field selectable; capable of self-adjusting sensitivity and time delay according to conditions.
10. Compatibility (Non-Dimming Sensors): Suitable for controlling incandescent lighting, low-voltage lighting with electronic and magnetic transformers, fluorescent lighting with electronic and magnetic ballasts, and fractional motor loads, with no minimum load requirements.
11. Load Rating for Line Voltage Occupancy Sensors: As required to control the load indicated on drawings.
12. Where wired sensors are indicated, wireless sensors are not acceptable without prior approval of Architect and Engineer.

C. Ceiling Mounted Occupancy Sensors:
   1. All Ceiling Mounted Occupancy Sensors:
      a. Description: Low profile occupancy sensors designed for ceiling installation.
      b. Occupancy sensor to be field selectable as either manual-on/automatic-off or automatic on/off.
      c. Finish: White unless otherwise indicated.

D. Directional Occupancy Sensors:
   1. All Directional Occupancy Sensors: Designed for wall or ceiling mounting, with integral swivel for field adjustment of motion detection coverage.
      a. Provide field selectable setting for disabling LED motion detector visual indicator.
      b. Finish: White unless otherwise indicated.

E. Power Packs for Low Voltage Occupancy Sensors:
   1. Description: Plenum rated, self-contained low voltage class 2 transformer and relay compatible with specified low voltage occupancy sensors for switching of line voltage loads.
   2. Provide quantity and configuration of power and slave packs with all associated wiring and accessories as required to control the load indicated on drawings.
   3. Input Supply Voltage: Dual rated for 120/277 V ac.
   4. Load Rating: As required to control the load indicated on drawings.

F. Accessories:
   1. Provide heavy duty coated steel wire protective guards compatible with specified occupancy sensors where indicated.

2.03 LIGHTING CONTACTORS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Refer to drawings and controls schedules for listed manufacturers.

B. Description: Magnetic lighting contactors complying with NEMA ICS 2, and listed and labeled as complying with UL 60947-1 and UL 60947-4-1; noncombination type unless otherwise indicated; ratings, configurations and features as indicated on the drawings.

C. Combination Contactors: NEMA ICS 2, Class A combination controllers with magnetic contactor(s) and externally operable disconnect.
   1. Disconnects: Circuit breaker or disconnect switch type as indicated.
      a. Disconnect Switches: Fusible or nonfusible type as indicated.
      b. Provide externally operable handle with means for locking in the OFF position. Provide safety interlock to prevent opening the cover with the disconnect in the ON position with capability of overriding interlock for testing purposes.

c. Provide auxiliary interlock for disconnection of external control power sources where applicable.

D. Short Circuit Current Rating:
1. Provide contactors with listed short circuit current rating as indicated on the drawings.

E. Enclosures:
1. Comply with NEMA ICS 6.
2. Environment Type per NEMA 250: Unless otherwise indicated, as specified for the following installation locations:
a. Indoor Clean, Dry Locations: Type 1 or Type 12.
b. Outdoor Locations: Type 3R or Type 4.
3. Finish: Manufacturer's standard unless otherwise indicated.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install lighting control devices in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130.

B. Coordinate locations of outlet boxes provided under Section 26 05 33.16 as required for installation of lighting control devices provided under this section.
1. Orient outlet boxes for vertical installation of lighting control devices unless otherwise indicated.

C. Install lighting control devices in accordance with manufacturer's instructions.

D. Unless otherwise indicated, connect lighting control device grounding terminal or conductor to branch circuit equipment grounding conductor and to outlet box with bonding jumper.

E. Install lighting control devices plumb and level, and held securely in place.

F. Where required and not furnished with lighting control device, provide wall plate in accordance with Section 26 27 26.

G. Provide required supports in accordance with Section 26 05 29.

H. Where applicable, install lighting control devices and associated wall plates to fit completely flush to mounting surface with no gaps and rough opening completely covered without strain on wall plate. Repair or reinstall improperly installed outlet boxes or improperly sized rough openings. Do not use oversized wall plates in lieu of meeting this requirement.

I. Identify lighting control devices in accordance with Section 26 05 53.
1. Identify controlled circuits in lighting contactors.
2. Identify circuits or luminaires controlled by photoelectric and occupancy sensors at each sensor.

J. Occupancy Sensor Locations:
1. Location Adjustments: Locations indicated are diagrammatic and only intended to indicate which rooms or areas require devices. Provide quantity and locations as required for complete coverage of respective room or area based on manufacturer's recommendations for installed devices.
2. Install and aim sensors in locations to achieve not less than 90 percent coverage of areas indicated. Do not exceed coverage limits specified in manufacturer's written instructions.

K. Combination Enclosed Lighting Contactors:
1. Except where indicated to be mounted adjacent to the equipment they supply, mount lighting contactors such that the highest position of the operating handle does not exceed 79 inches above the floor or working platform.
2. Mount electrically held lighting contactors with elastomeric isolator pads to eliminate structure-borne vibration, unless contactors are installed in an enclosure with factory-installed vibration isolators.

L. Unless otherwise indicated, install power packs for lighting control devices above accessible ceiling or above access panel in inaccessible ceiling near the sensor location.

M. Where indicated, install separate compatible wall switches for manual control interface with lighting control devices or associated power packs.

N. Where indicated or required, provide cabinet or enclosure in accordance with Section 26 05 33.16 for mounting of lighting control device system components.

3.02 FIELD QUALITY CONTROL

A. See Section 01 40 00 - Quality Requirements, for additional requirements.

B. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.

C. Inspect each lighting control device for damage and defects.

D. Test occupancy sensors to verify proper operation, including time delays and ambient light thresholds where applicable. Verify optimal coverage for entire room or area. Record test results in written report to be included with submittals.

E. Correct wiring deficiencies and replace damaged or defective lighting control devices.

3.03 ADJUSTING

A. Adjustments: When requested within 12 months from date of Substantial Completion, provide on-site assistance in adjusting sensors to suit actual occupied conditions. Provide up to two visits to Project during other-than-normal occupancy hours for this purpose.

B. Adjust devices and wall plates to be flush and level.

C. Adjust position of directional occupancy sensors to achieve optimal coverage as required.

D. Where indicated or as directed by Architect, install factory masking material or adjust integral blinders on passive infrared (PIR) and dual technology occupancy sensor lenses to block undesired motion detection.

3.04 CLOSEOUT ACTIVITIES

A. Training: Train Owner's personnel on operation, adjustment, programming, and maintenance of lighting control devices.
   1. Use operation and maintenance manual as training reference, supplemented with additional training materials as required.
   2. Instructor: Manufacturer's authorized service representative.
   3. Location: At project site.

A. END OF SECTION

COOPER MOUNTAIN ELEMENTARY

SEISMIC REHABILITATION GRANT PROGRAM (SRGP) IMPROVEMENTS

7670 SW 170th AVE
BEAVERTON, OR 97007
PERMIT / BID SET

GENERAL CONSTRUCTION NOTES

1. All work to comply with 2019 Oregon Structural Specialty Code.
2. All work shall conform to the contract documents which include the owner/contractor agreement, the drawings and specifications and all addenda and modifications issued by the designer.
3. The contractor shall review all documents and verify all dimensions and field conditions and shall confirm that work is buildable as shown. Any conflicts, discrepancies, or omissions, etc., within contract documents, drawings or between drawings and field conditions shall be immediately reported to the designer for clarification prior to the commencement of affected work.
4. All contract documents, including without limitation these general notes and the specifications shall apply not only to the general contractor but to all subcontractors and suppliers on this project. The word 'contractor' shall hereafter apply equally and without exception to all subs and suppliers. All contractors are responsible for familiarizing themselves with both these notes and specifications
5. No one drawing or specification section shall 'govern'. Contractor shall correlate work between architectural drawings and specifications and consultant drawings and specifications. Contractor shall also correlate work between drawings of different scales within each section. It is the explicit and specific responsibility of the contractor to examine the contract documents in their entirety, report all discrepancies encountered therein to the attention of the designer and await resolution before proceeding with any work affected by such discrepancies. Where the requirements of either the general notes or the specifications may be at variance with the general conditions, the more restrictive provision shall govern.
6. Contractor shall field verify all existing construction and related conditions prior to starting demolition or new construction.
7. General notes are an aid to the contractor in understanding the work and should not be construed as being complete in every detail. It is the explicit and specific responsibility of the contractor to visit the site, verify the existing conditions and familiarize himself thoroughly with the scope of work, and report all discrepancies between the drawings and the assumed or actual conditions to the attention of the designer (architect).
8. Substitutions, revisions or changes must be submitted to the designer for review (in conformance with specified procedures) prior to purchase, fabrication or installation.
9. The contractor shall maintain for the entire duration of the work all exits, exit lighting, fire protective devices and alarms in conformance with all applicable codes and ordinances.
10. Where interruption of the building's Life Safety System is required to perform the work as described in the construction documents, or to coordinate with owner's operations, the Contractor shall provide interim Life Safety measures to comply with local code and owner's requirements.
11. Protect the building, its systems, finishes and related and appurtenant items, so as not to cause damage derived from the work; comply with building rules and regulations.
12. Locate and verify existence and use of existing utilities. Take necessary measures to protect and preserve function and condition of any utilities to be repaired, replaced, or reused in new construction. Coordinate work with Architect, Engineer and Owner.
13. Contractor to coordinate installation and scheduling of Owner or Owner's vendor provided or installed fixtures and equipment.
14. Contractor shall be solely responsible for the design and construction of all shoring and bracing required for construction of the Work. Contractor shall not store construction materials or equipment in a manner such that the design live loads of the structure are exceeded.
15. 'Typical' or 'typ' shall mean that the condition is representative for similar conditions throughout unless noted otherwise. Details are usually keyed and noted 'typ' only once, when they first occur.
16. 'Similar' or 'Sim' means comparable characteristics for the conditions noted, verify dimensions and orientation on plans and elevations.
17. The contractor shall not be relieved of responsibility for deviations from requirements of the contract documents by the designer's review of shop drawings, product samples, or similar submittals unless the contractor has specifically informed the designer in writing of such deviation at the time of submittal and the designer has reviewed the specific deviation for the compliance with the intent of the contract documents. The contractor shall not be relieved of responsibility for errors or omissions in shop drawing, product samples, or similar submittals by the designer's review thereof.
18. It is the responsibility of the contractor to coordinate, request and forward to the designer for review shop drawing, product data, samples and similar submittals required by the contract documents with reasonable promptness and in such sequence as to cause no delay in the work or in the activities of the Owner or of separate contractors.
19. All open joints, penetrations and other openings in the building envelope resulting from the remodel and alterations shall be caulked, sealed, gasketed or weather stripped to limit air leakage.
20. All manufactured articles, material and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer unless herein specified to the contrary. In case of difference between the manufacturer's instruction and the contract documents, the contractor shall notify the designer before proceeding.
21. All lines, symbols, notes, tones and other graphic devices contained in the contract documents carry specific or inferential meaning. Items indicated in these are a part of the scope of work and will be required by the owner and designer to be included in the scope of the contractor's work whether they have been included in the contractor's original bid or not. Any items which require further clarification by the designer for the specific benefit of the contractor shall be brought to the attention of the designer for such clarification before commencement of any work.
22. Design work is the responsibility of the designer. The contractor shall assume design liability and all responsibility for changes in the scope of work not brought to the attention of the designer.
23. Dimensions are not adjustable without written approval from the designer.
24. The contractor shall pay specific attention to all dimensioned or inferential plan and sectional special relationships, and shall verify all alignments before commencing work.
25. Dimensions marked 'verify' are to be checked for accuracy by the contractor as work proceeds, and all discrepancies are to be brought to the attention of the designer before proceeding.
26. Dimensions marked 'clear' or minimum are not adjustable without the authorization from the designer. 'Align' means to accurately locate finished faces in same plane as indicated.
27. Contractor shall not scale the drawings, figured dimensions only are to be used for all aspects of the work. Large scale details take precedence over smaller scale drawings.
28. Contractor is responsible for all waste removal and site clean up during performance of and at completion of the work.
29. All features of the Work not fully shown shall be of the same type and character shown for similar conditions. In the event that additional work is required to complete the Work as intended or required by governing codes and safety regulations, yet omitted or not fully shown on the drawings, the contractor must still provide carpentry, mechanical, electrical and/or plumbing work as necessary for Certificate of Occupancy.
30. Keynotes are not sheet specific.

CONTACT INFORMATION

OWNER
Beaverton School District
16550 SW Merlo Road
Beaverton, Oregon 97003
Contact: Eric Bolken
Email: eric_bolken@beaverton.k12.or.us
Telephone: (503) 704-6783

ARCHITECT-OF-RECORD
Oh planning+design, architecture
115 NW First Avenue, Suite 300
Portland, OR 97209
Deb France, Principal
Email: deb.france@ohpd.net
Contact: Caitlin McGehee, Project Manager
Email: caitlin.mcgehee@ohpd.net
Telephone: (503) 551-2550

STRUCTURAL ENGINEER
Holmes Structures
555 SE MLK Blvd. Suite 602
Portland, OR 97214
Contact: Jennifer Eggers, Principal
Email: jennifer.eggers@holmesstructures.com
Telephone: (503) 850-9144

MEP ENGINEER
KCL Engineering
312 NW 10TH AVE, SUITE 100
Portland, OR 97209
Contact: Stormy Shanks, Project Manager
Email: sshanks@kclengineering.com
Telephone: (971) 400-0416

CITY/STATE CONTACTS

CITY JURISDICTION: City of Beaverton
12725 SW Millikan Way
Beaverton, OR 97005
Telephone: (503) 526-2493

STATE FIRE MARSHAL: Office of the State Fire Marshal
11945 SW 70th Ave.
Tigard, OR 97223
Telephone: (503) 649-8577

LOCATION PLAN

SITE ADDRESS:
7670 SW 170th ave. Beaverton, OR 97007

APPLICABLE CODES

2019 Oregon Structural Specialty Code (OSSC)
2017 Oregon Electrical Specialty Code (OESC)
2019 Oregon Fire Code (OFC)
2019 Oregon Mechanical Specialty Code (OMSC)
2017 Oregon Plumbing Specialty Code (OPSC)
2016 ASHRAE 90.1 Energy Code
1 2018 International Existing Building Code (IEBC), Section 503.13 Voluntary Lateral-Force Resisting System Alterations

PROJECT INFORMATION

Construction Type

Type - VB

Gross Building Area

BUILDING 'I' FIRST FLOOR	30,275 SF
BUILDING 'I' SECOND FLOOR	1,300 SF
BUILDING 'II'	7,000 SF
BUILDING 'III'	8,220 SF
BUILDING 'IV'	5,820 SF
TOTAL AREA	52,615 SF

1 **Occupant Load**

BUILDING 'I'	889
BUILDING 'II'	189
BUILDING 'III'	287
BUILDING 'IV'	260
TOTAL LOAD	1,625

Refer to Code Sheet for more information

PROPERTY DATA

Address: 7670 SW 170th Ave
Beaverton, OR 97007

Tax Lot: 1S119DD00300

Zoning: Urban Standard Density (R5)

Site Area: 9.5 Acres

PROJECT ALTERNATES

See specification section 01 23 00 for descriptions.

DEDUCTIVE ALTERNATES -
#1 - Salvage and reinstall existing ACT at Classrooms, Offices and Auxiliary Rooms. Corridor ACT to be fully replaced as outlined in the Drawings.
#2 - Existing batt insulation at Area D exterior wall assembly to remain.

ADD ALTERNATES -
#1- Sound Absorptive Panels at Music room

DEFERRED SUBMITTALS

1. MEP Equipment Bracing
2. Suspended Ceiling Bracing
3. Ladder-up at Area D roof access
4. Fire Alarm System
1 5. Fire Sprinkler Bracing

GENERAL HAZARD MATERIALS NOTE

Hazardous materials are present in this building. Reference the Project Manual, Appendix A - Asbestos Abatement Contractor Bid Document and Specifications for asbestos abatement and disturbance work related to the project. The scope of work will consist of the removal and disposal of asbestos containing materials (ACM) and presumed asbestos containing materials (PACM).

PROJECT DESCRIPTION

Voluntary seismic upgrades to the Cooper Mountain Elementary School in compliance with the Seismic Evaluation and Conceptual Seismic Strengthening Scheme dated November 14, 2018.

STRUCTURAL SEISMIC UPGRADES
- Strengthening of shear and cripple throughout.
- Strengthening of roof diaphragm throughout.
- Strengthening of steel columns at Area D.
- Provide positive anchorage to foundation at Area D.

NON-STRUCTURAL SEISMIC UPGRADES
- Seismic bracing of suspended ceilings throughout.
- New TPO roofing and R-30 rigid insulation at Areas B and D.
- Anchorage/bracing of mechanical systems, plumbing, fire protection piping, and electrical equipment throughout.
- Improvements to finishes at areas of seismic upgrades throughout.
- Replacement of the existing EIFS siding and exterior soffits at Area D modular building with new fiber cement panels.

SHEET INDEX KEY

AD-101

Discipline		Category	Page #
G: General	D: Demolition	0: General Info./Site	
C: Civil		1: Slab Edge Plans	
L: Landscape		2: Plans	
A: Architectural		3: Exterior Elevations	
S: Structural		4: Sections	
M: Mechanical		5: Vertical Circulation	
P: Plumbing		6: Interior Elevations	
E: Electrical		7: Details	
		8: Schedules/Finishes	
		9: 3D Representations	

SHEET INDEX

BEAVERTON SCHOOL DISTRICT

COOPER MOUNTAIN ELEMENTARY
7670 SW 170th AVE
BEAVERTON, OR 97007

Oh PLANNING+DESIGN, ARCHITECTURE
115 NW 1st Ave, Ste. 300
Portland, OR 97209

Consultants:

COOPER MOUNTAIN ELEMENTARY SCHOOL
SRGP IMPROVEMENTS
PERMIT / BID SET

NOT FOR CONSTRUCTION

Date:	12/04/2020
Project Number:	90060
Drawn By:	BPS
Checked By:	CSM

Revision Schedule:

1	Add. No. 1	01/22/2021

Sheet Title:
COVER SHEET

Sheet Number:
G-000

PERMIT / BID SET

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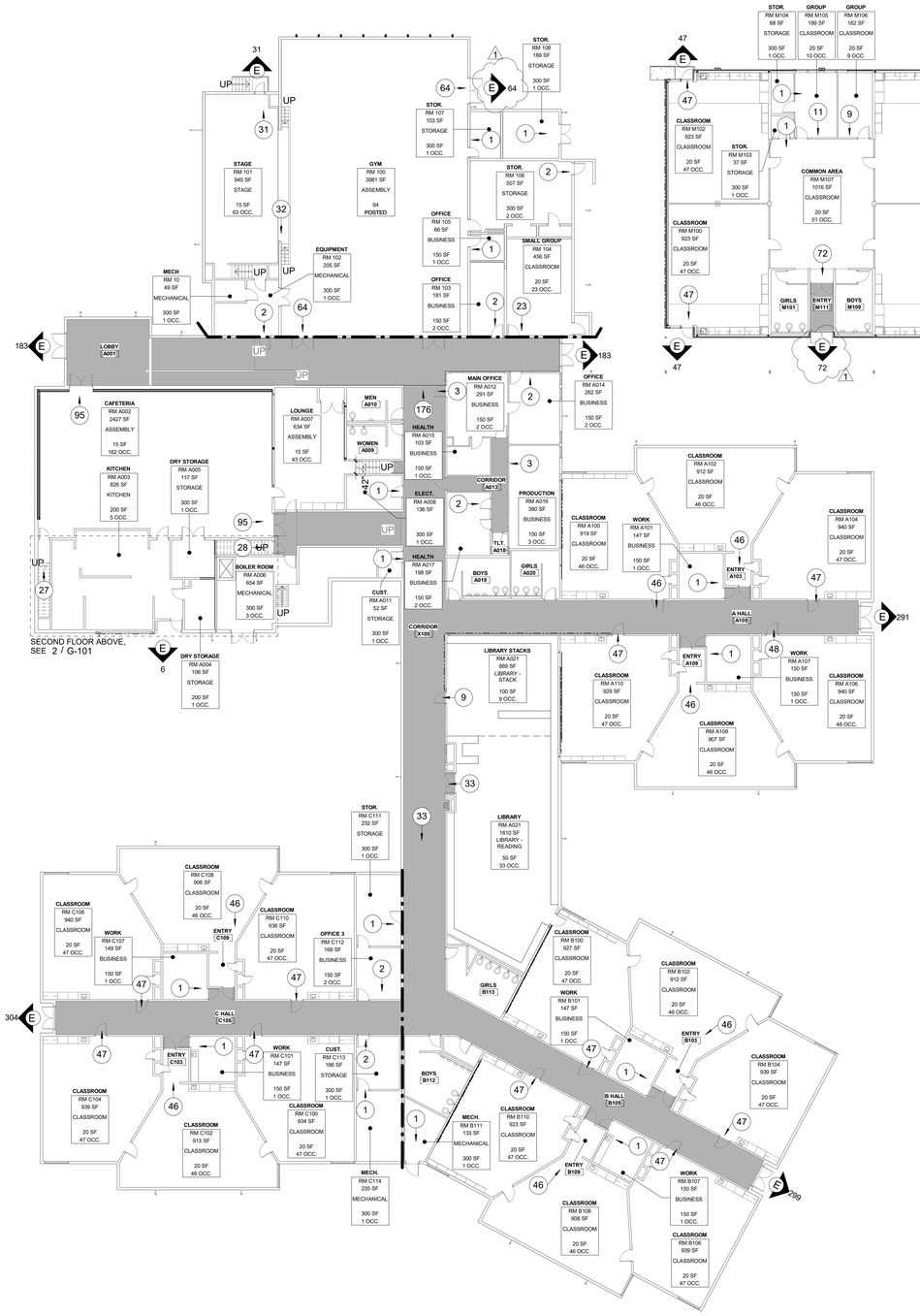


2 SECOND FLOOR PLAN
1/16" = 1'-0"

1 FIRE & LIFE SAFETY PLAN - FIRST FLOOR
1/16" = 1'-0"

NO FIRE AND LIFE SAFETY IMPROVEMENTS WITHIN THE SCOPE OF THIS PROJECT.

Information in this Fire & Life Safety Code Sheet is based on permitted documents dated September 2003.

Sheets G-101 are for reference only. It has been prepared, in part, based on information furnished by the Owner and is based on previous permitted projects. The Architect does not ensure that all conditions have been noted or accurately documented. Users of these documents should independently verify all pertinent information and conditions. Do not construe information contained within this sheet to allow work not conforming to applicable codes or requirements of authorities having jurisdiction.

BUILDING HEIGHT AND AREA

BUILDING 'I'				
Description	Allowed	Existing	Code Section	Comments
Base Allowable Building Area	9,500 SF	--	Table 506.2 OSSC	
Frontage Area Increase	4,370 SF	--	Section 506.3 OSSC	
Total Allowable Building Area	9,870 SF	30,275 SF		**Existing Exceeds Allowable
Allowable Building Height	40 Feet	22 Feet	504.3 OSSC	
Allowable Building Stories	1 Story	2 Stories	504.4 OSSC	**Existing Exceeds Allowable
Required Separation of Occupancy			Table 508.4 OSSC	

BUILDING 'II'				
Description	Allowed	Existing	Code Section	Comments
Base Allowable Building Area	9,500 SF	--	Table 506.2 OSSC	
Frontage Area Increase	3,500 SF	--	Section 506.3 OSSC	
Total Allowable Building Area	13,000 SF	7,000 SF		
Allowable Building Height	40 Feet	30 Feet	504.3 OSSC	
Allowable Building Stories	1 Story	1 Stories	504.4 OSSC	
Required Separation of Occupancy			Table 508.4 OSSC	

BUILDING 'III'				
Description	Allowed	Existing	Code Section	Comments
Base Allowable Building Area	9,500 SF	--	Table 506.2 OSSC	
Frontage Area Increase	4,750 SF	--	Section 506.3 OSSC	
Total Allowable Building Area	14,250 SF	8,220 SF		
Allowable Building Height	40 Feet	19 Feet	504.3 OSSC	
Allowable Building Stories	1 Story	1 Stories	504.4 OSSC	
Required Separation of Occupancy			Table 508.4 OSSC	

BUILDING 'IV'				
Description	Allowed	Existing	Code Section	Comments
Base Allowable Building Area	9,500 SF	--	Table 506.2 OSSC	
Frontage Area Increase	1,235 SF	--	Section 506.3 OSSC	
Total Allowable Building Area	10,735 SF	5,820 SF		
Allowable Building Height	40 Feet	21 Feet	504.3 OSSC	
Allowable Building Stories	1 Story	1 Stories	504.4 OSSC	
Required Separation of Occupancy			Table 508.4 OSSC	

DEFICIENCIES

Items listed below are not within this project's scope of work. These areas were identified from site observation and/or review of existing as-built documents provided by the Owner. Because of this, the list below may not include all egress deficiencies within the entire building.

A. Building 'I' exceeds the allowable area by 20,405 sf.
B. Building 'I' exceeds the allowable building stories by 1 level.

PLUMBING FIXTURE COUNT REQUIREMENTS

1. No change in occupancy or overall square footage of building. The scope of work of this project does not include the modification of any restrooms.

1 **REMOVED FIXTURES:**
One (1) toilet in Storage 106*.
One (1) urinal in Storage 106*.
*Fixtures are unused and were previously abandoned per 2003 permit documents
One (1) sink in Music A201.

ADDED FIXTURES:
One (1) sink in Music A201. In-kind replacement of (E) sink

APPLICABLE CODES

2019 Oregon Structural Specialty Code (OSSC)
2017 Oregon Electrical Specialty Code (OESC)
2019 Oregon Fire Code (OFC)
2019 Oregon Mechanical Specialty Code (OMSC)
2017 Oregon Plumbing Specialty Code (OPSC)
2016 ASHRAE 90.1 Energy Code
2018 International Existing Building Code (IEBC), Section 503.13 Voluntary Lateral-Force Resisting System Alteration

PROJECT INFORMATION

Construction Type
Type - VB

Occupancy Classification
Education, E

Project Area
52,615 SF

Gross Building Area

BUILDING 'I' FIRST FLOOR	30,275 SF
BUILDING 'I' SECOND FLOOR	1,300 SF
BUILDING 'II'	7,000 SF
BUILDING 'III'	8,220 SF
BUILDING 'IV'	5,820 SF
TOTAL AREA	52,615 SF

1 **Occupant Load**

BUILDING 'I'	889
BUILDING 'II'	189
BUILDING 'III'	287
BUILDING 'IV'	260
TOTAL LOAD	1,625

FIRE LIFE SAFETY LEGEND

NON-RATED EGRESS CORRIDOR

BUILDING AREA SEPARATION (ASSUMED (E) 2-HR RATING)

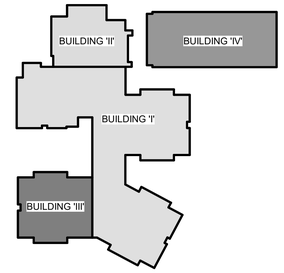
ROOM NAME
RM 101
999 SF
SPACE
XXX
XX OCC.
TOTAL ROOM AREA
FUNCTION OF SPACE
OCCUPANT LOAD FACTOR
TOTAL OCCUPANTS IN SPACE

ROOM NAME
RM 101
999 SF
SPACE
XX
POSTED
NUMBER OF POSTED OCCUPANTS

0 OCCUPANT LOAD FROM SPACE AND TRAVEL DIRECTION

E 0 EXIT WITH OCCUPANT LOAD

BUILDING SEPARATION KEY PLAN



BEAVERTON SCHOOL DISTRICT

COOPER MOUNTAIN ELEMENTARY

7670 SW 170th AVE
BEAVERTON, OR 97007

OH PLANNING+DESIGN, ARCHITECTURE
115 NW 1st Ave, Ste. 300
Portland, OR 97209

Consultants:

COOPER MOUNTAIN ELEMENTARY SCHOOL
SRGP IMPROVEMENTS

PERMIT / BID SET

NOT FOR CONSTRUCTION

Date: 12/04/2020
Project Number: 90060
Drawn By: SK, CDM
Checked By: CSM

Revision Schedule:
1 Add. No. 1 01/22/2021

Sheet Title:
CODE SUMMARY

Sheet Number:
G-101

PERMIT / BID SET

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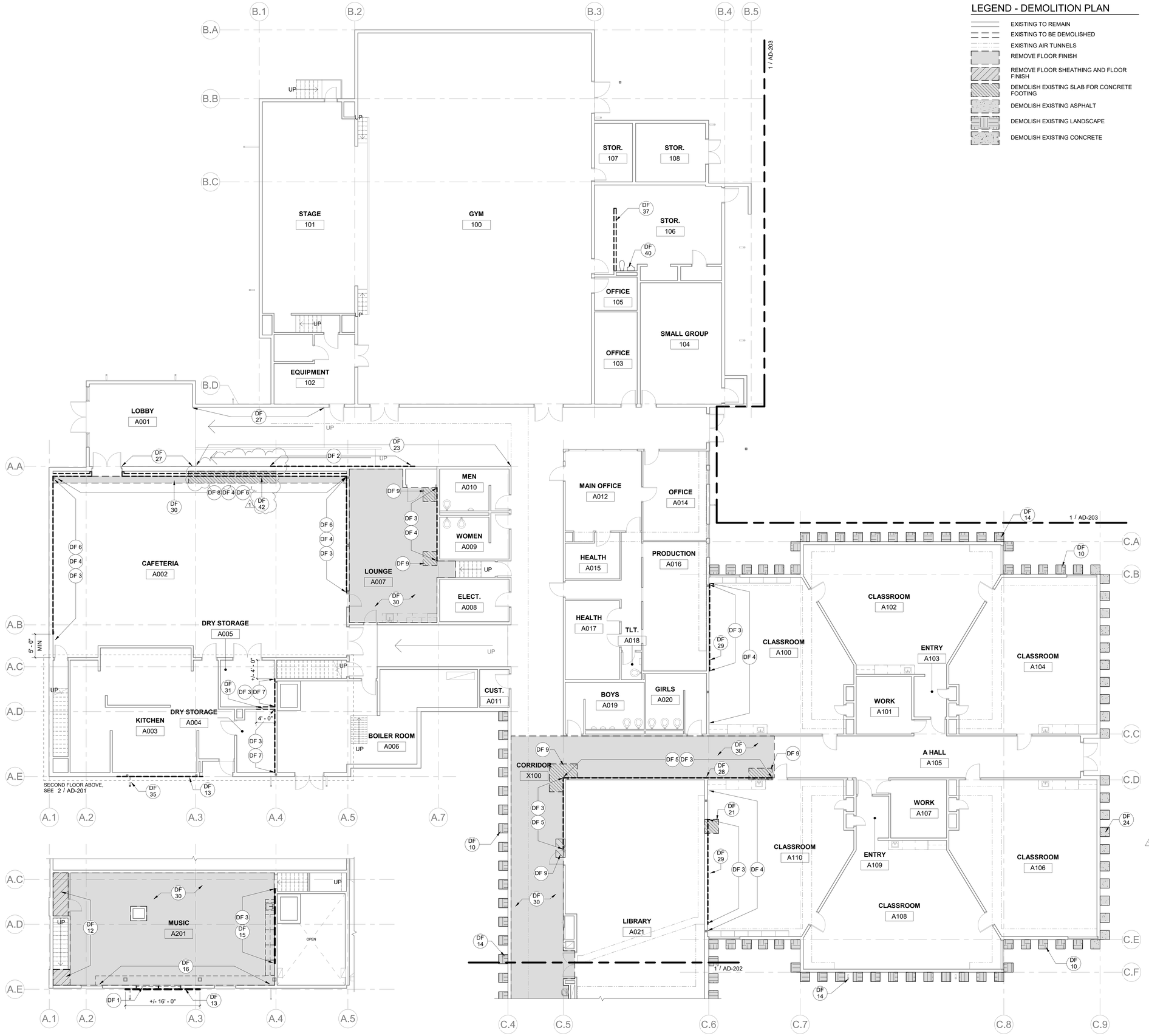


2 DEMOLITION FLOOR PLAN - AREA A SECOND FLOOR
1/8" = 1'-0"

1 DEMOLITION FLOOR PLAN - AREA A, B, C NORTH
1/8" = 1'-0"

LEGEND - DEMOLITION PLAN

- EXISTING TO REMAIN
- EXISTING TO BE DEMOLISHED
- EXISTING AIR TUNNELS
- REMOVE FLOOR FINISH
- REMOVE FLOOR SHEATHING AND FLOOR FINISH
- DEMOLISH EXISTING SLAB FOR CONCRETE FOOTING
- DEMOLISH EXISTING ASPHALT
- DEMOLISH EXISTING LANDSCAPE
- DEMOLISH EXISTING CONCRETE

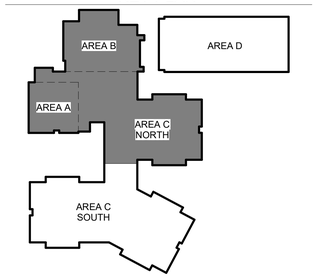
SHEET NOTES - DEMOLITION PLAN

A. All dimensions shown are to face of finish U.N.O. Do not measure drawings to determine dimensions. Large scale details take precedence over smaller scale drawings.
B. All areas of demolition shall be cleared and cleaned of all items and prepared to receive new construction, unless noted otherwise.
C. Verify limits of demolition prior to commencing work.
D. Contractor shall field verify all existing construction and related conditions prior to starting demolition or new construction.
E. Contractor to inform architect of any discrepancies within drawings or between drawings and field conditions before commencement of affected work.
F. For additional demolition information, see all consultant's drawings.
G. Locate and verify existence and use of existing utilities. Take necessary measures to protect and preserve function and condition of any utilities to be repaired, replaced, or reused in new construction. Coordinate work with architect, consultants and owner.
H. Coordinate with owner regarding any work that is to occur in the ceiling or the floor below so as not to disrupt the functions of the owner's occupied area. Contractor to replace ceiling to match existing adjacent construction and finish, unless noted otherwise.
I. Removal of existing plumbing fixtures shall include capping of piping and waste lines. See plumbing drawings for more information.
J. All acoustical ceilings and related support systems to be removed shall include ceiling tiles, light fixtures, grilles, diffusers, steel support grids and ceiling mounted equipment, unless noted otherwise.
K. Contractor shall take proper measures to protect areas outside the area of work from dust, air particulates, and debris. Coordinate with Architect, Engineer and Owner to protect against infiltration of all of the above into the remaining occupied areas.
L. Demolition Work to take place prior to interior improvements. Provide such measures as necessary to prevent property damage or bodily injury.
M. All interior Patching and Repair shall occur as part of this scope of work, U.N.O. Contractor shall protect all existing exposed construction from damage resulting from or related to demolition and construction operations.
N. Contractor shall repair or replace any existing construction to remain that is damaged in the course of the work to its original condition.
O. Where interruption of the building's Life Safety System is required to perform the work as described in the Construction Documents, or to coordinate with owner's operations, the Contractor shall provide interim Life Safety measures to comply with local code and owner's requirements.
P. Contractor is responsible for all waste removal and site clean up during performance of and at completion of the Work.

KEYNOTES - DEMOLITION PLAN

DF 1 Demolish (E) window and blinds.
DF 2 Demolish gypsum board as required to install new connection between base of wall and foundation - see Structural.
DF 3 Demolish 5/8" gypsum board and veneer plaster. Demolish rubber base at entire wall.
DF 4 Remove wall mounted equipment and devices; salvage and protect for reinstallation.
DF 5 Demolish tackable wall surface.
DF 6 Demolish wall mounted tectum acoustic panels.
DF 7 Remove shelving; salvage and protect for reinstallation.
DF 8 Demolish furred wall to expose structural framing.
DF 9 Demolish concrete slab for new structural footing - see Structural.
DF 10 Pull back soil and landscaping to provide access to foundation for structural improvements, spaced equally across length of wall - see Structural for detailing.
DF 11 Demolish exterior EIFS for installation of new siding.
DF 12 Demolish (E) floor sheathing for installation of new blocking and nailing - see Structural.
DF 13 Demolish (E) cement plaster exterior finish, full height of wall between (E) control joints.
DF 14 Protect (E) downspouts in place, typ.
DF 15 Remove upper casework; salvage and protect for reinstallation. Demolish lower casework, countertop, and sink.
DF 16 Demolish plastic laminate countertop. (E) lower casework to remain.
DF 17 Unsupported concrete wall. Improvements to occur above ceiling. Protect wall mounted equipment during construction. See Structural for detailing of seismic improvements at top of concrete wall.
DF 18 Remove (E) windows; salvage and protect for reinstallation. Protect interior p-lam sill during construction.
DF 19 Demolish floor sheathing to allow access for new wall sheathing - see Structural.
DF 20 Remove carpet in classrooms and common area. Demolish floor sheathing for access to foundation work. Remove and replace floor mounted receptacles with new.
DF 21 Demolish (E) slab to allow for new reinforced concrete footing extension doweled into (E) tunnel footing - see Structural. Pull carpet back and protect during construction.
DF 22 Prepare (E) columns to receive welded plates and paint - see Structural, typ.
DF 23 Demolish protective wall covering. Protect decorative tiles above.
DF 24 Demolish 2' x 2' asphalt for access to foundation anchor installation, spaced equally across length of wall - see Structural for detailing.
DF 25 Demolish concrete for foundation anchors - see Structural for detailing.
DF 26 Demolish (E) asphalt to install new steel angles at (E) column base - see Structural, typ.
DF 27 Protect (E) decorative tile. Contractor to provide protection to mitigate vibration of wall and damage of tile.
DF 28 Remove (E) electrical panel; salvage and protect for reinstallation - see Electrical.
DF 29 Demolish center, hinged display board.
DF 30 Demolish VCT flooring.
DF 31 Demolish wall to allow for access to install adjacent continuous shear wall.
DF 32 Protect mechanical unit during construction.
DF 33 Protect operable partitions during construction, typ.
DF 34 Protect (E) IDF cabinet during construction.
DF 35 Demolish (E) downspout.
DF 36 Prepare handrails to receive new coat of paint.
DF 37 Demolish CMU wall.
DF 38 Demolish (E) 2x wood base and adjacent subsurface along the building facade. Prepare void, building facade and concrete footing to receive new moisture barrier.
DF 39 Remove (E) sidelites; salvage and protect for reinstallation.
DF 40 Demolish plumbing fixtures.
DF 41 Protect (E) fence, remove and salvage as needed to provide access to exterior wall construction.
1 DF 42 Demolish (E) slab as required for installation of new stem wall strengthening - see Structural. Field verify all locations and coordinate with Structural prior to excavating.

KEY PLAN



BEAVERTON SCHOOL DISTRICT

COOPER MOUNTAIN ELEMENTARY
7670 SW 170th AVE
BEAVERTON, OR 97007

OH PLANNING+DESIGN, ARCHITECTURE
115 NW 1st Ave, Ste. 300
Portland, OR 97209

Consultants:

COOPER MOUNTAIN ELEMENTARY SCHOOL
SRGP IMPROVEMENTS

PERMIT / BID SET

NOT FOR CONSTRUCTION

Date:	12/04/2020
Project Number:	90060
Drawn By:	BPS
Checked By:	CSM

Revision Schedule:

1	Add. No. 1	01/22/2021

Sheet Title:
DEMOLITION FLOOR PLANS - AREA A, B, C NORTH

Sheet Number:
AD-201

PERMIT / BID SET

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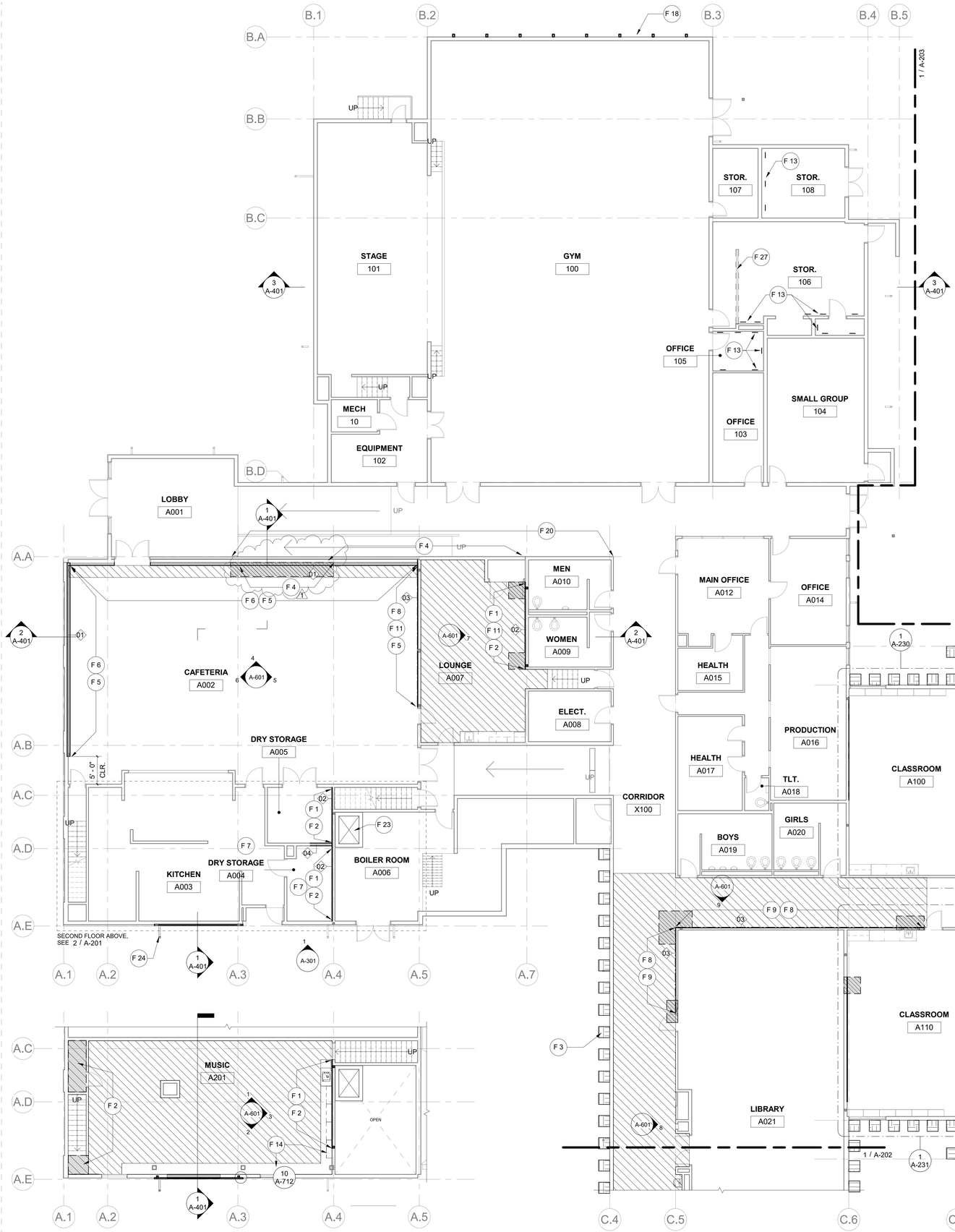


2 SECOND FLOOR PLAN - AREA A
1/8" = 1'-0"

1 FIRST FLOOR PLAN - AREA A, B, C NORTH
1/8" = 1'-0"

SHEET NOTES - FLOOR PLAN

A. All dimensions are face of finish, U.N.O.
B. All dimensions to be field verified.
C. Floor Plan Keynotes (F#) are consistent across all Floor Plan sheets. Not all keynotes are used on each sheet.
D. See Enlarged Plans, where applicable, for wall types, notes, and dimensions.
E. Coordinate all work with other trades.

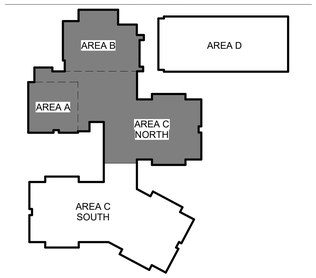
LEGEND - FLOOR PLAN

- EXISTING WALL TO REMAIN
- SEISMIC BRACE WALL
- NEW SHEATHING ON EXISTING WALL
- 1 — WALL TAG, SEE PARTITION TYPES SHEET G-003
- NEW FLOORING, SEE FINISH FLOOR PLAN
- NEW CONCRETE FOOTING - PATCH AND REPAIR FLOORING
- NEW PLYWOOD SHEATHING, PATCH AND REPAIR FLOORING FINISH
- PATCH AND REPAIR ASPHALT WHERE NECESSARY
- PATCH AND REPAIR LANDSCAPE WHERE NECESSARY
- PATCH AND REPAIR CONCRETE WHERE NECESSARY

F # KEYNOTES - FLOOR PLAN

F 1 Install new 5/8" gypsum board over new plywood sheathing - see Structural. Install new rubber base and paint wall to match (E).
F 2 Install new 1/2" plywood sheathing - see Structural.
F 3 Install new steel plates and anchors at base of wall - see Structural. Paint with high-performance coating to match (E) adjacent wall. Patch and repair soil and landscaping where necessary.
F 4 Install new steel plates and anchors at wall base - see Structural. Patch and repair gypsum finish and paint to match (E).
F 5 Install new wall mounted acoustic panels.
F 6 New full-height 2x wood framed wall. New rubber base. Paint to match (E).
F 7 Install new full-height wall protection to match (E).
F 8 Install new Sureboard sheathing panels - see Structural. Provide new rubber base and paint wall to match (E) adjacent walls.
F 9 Install new wall protection wainscot to match (E).
F 10 Patch and repair slab at area of new footing work - see Structural. Roll existing carpet back over floor and reinstall with new adhesive.
F 11 Reinstall all salvaged wall-mounted equipment and devices. Plugmold to remain surface mounted; all other devices to be recessed.
F 12 Install new steel plates and anchors at base of wall - see Structural. Paint with high-performance coating to match existing adjacent wall. Patch and repair concrete where necessary.
F 13 New angles at CMU wall base - see Structural. Paint to match (E) wall. Grind all edges to avoid protruding objects.
F 14 Reinstall (E) salvaged upper cabinets. New countertop and sink. New base cabinets at east wall. Paint all new and (E) casework to match.
F 15 Install new fiber cement panel rainscreen siding over new plywood sheathing. Prepare void, building facade and concrete footing to receive replacement materials.
F 16 Install new plywood sheathing at areas of foundation access. Provide new R-30 batt insulation at underside of entire floor. Install new carpet throughout.
F 17 Paint (E) columns with new high performance coating, typ.
F 18 New HSS strongbacks on exterior side of north wall. HSS to be full height and bolted to (E) concrete tile wall - see Structural. Paint with high-performance coating to match (E) exterior wall.
F 19 Install new steel plates and anchors at base of wall - see Structural. Paint with high-performance coating to match (E) adjacent wall. Patch and repair asphalt where necessary, replace in kind.
F 20 New protective wall covering, to match (E) adjacent walls.
F 21 Paint (E) CMU wall.
F 22 Seismic improvements above (E) concrete wall - see Structural for details.
F 23 New bracing at (E) chimney - see Structural.
F 24 Install new downspout and reconnect to (E) pipe.
F 25 Repaint (E) handrails.
F 26 Repaint (E) door and frame.
F 27 Patch and repair concrete flooring.
F 28 Patch asphalt around new steel angles at (E) column bases - see Structural, typ.
F 29 Reinstall (E) savlaged fence
F 30 (E) slab and mechanical unit. Protect during construction.
F 31 New floor mounted receptacle box; see specifications.

KEY PLAN



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Consultants:

COOPER MOUNTAIN ELEMENTARY SCHOOL
SRGP IMPROVEMENTS

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Date:	12/04/2020
Project Number:	90060
Drawn By:	BPS
Checked By:	CSM

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1	Add. No. 1	01/22/2021

Sheet Title:
FLOOR PLANS - AREA A, B, C NORTH

Sheet Number:
A-201

PERMIT / BID SET

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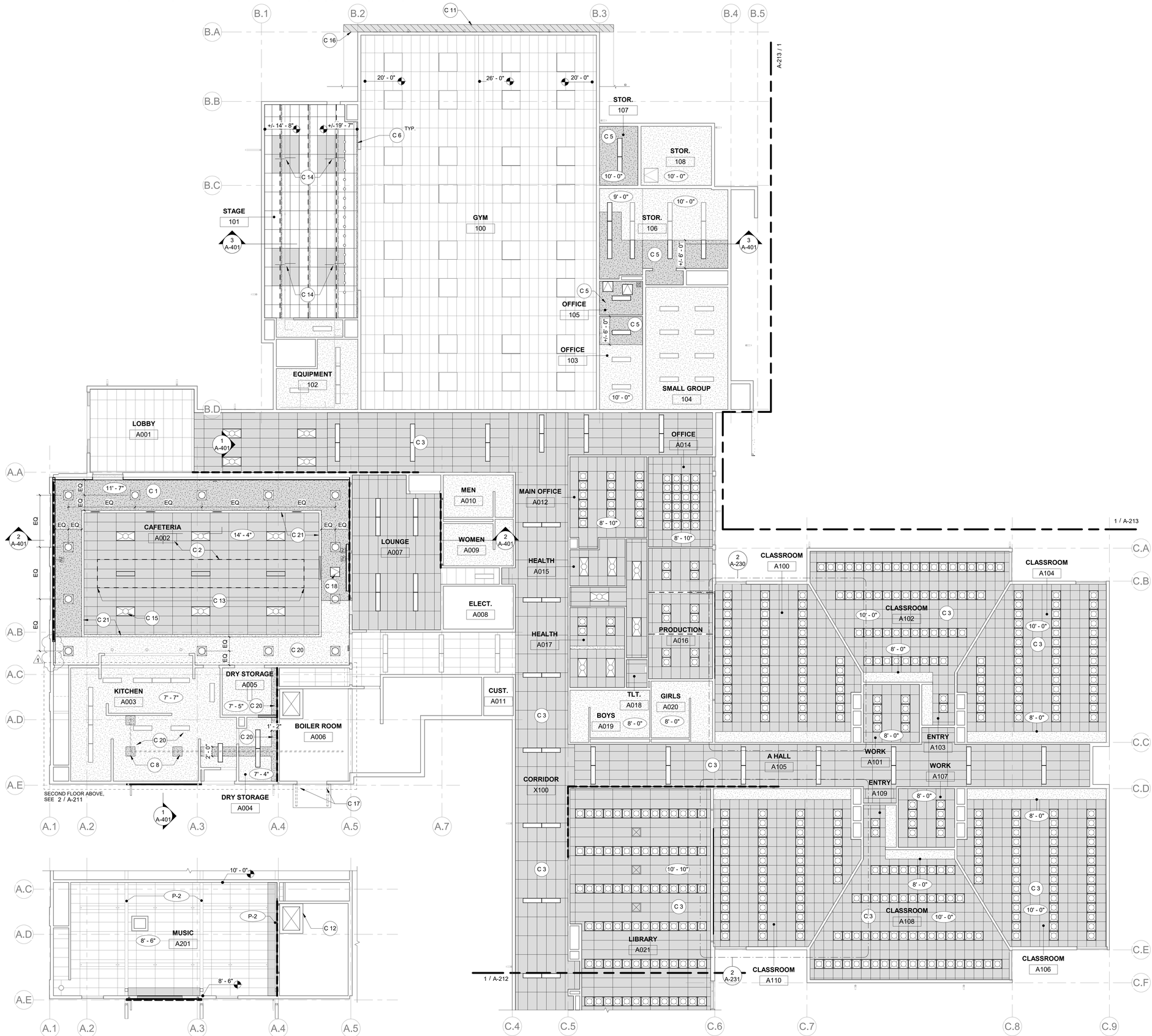


1 REFLECTED CEILING PLAN - AREA A, B, C NORTH
1/8" = 1'-0"

2 REFLECTED CEILING PLAN - SECOND FLOOR
1/8" = 1'-0"

SHEET NOTES - RCP

A. Keynotes are not sheet specific.
B. All heights shown are to bottom of grid system or gyp bd AFF, relative to the floor that the ceiling plan is shown on, UNO.
C. "Downlight" or "wall-washer" ceiling fixtures, smoke detectors, life safety speakers, AV speakers, exit signs, sprinklers, mirrors, fire alarm or signal devices, or other ceiling mounted devices are to be centered in an apparent ceiling tile, UNO.
D. Door exit signs to be located on mounting height schedule, and centered on, the door to which exit is indicated, UNO.
E. Contractor to coordinate Owner's telecom and security contractor's work.
F. Refer to electrical engineer's documents for lighting & lighting control specifications.
G. Refer to mechanical engineer's documents for HVAC & plumbing equipment & control specifications.
H. Relocate (E) sprinklers, smoke detectors, and speakers as required for ceiling layout
I. Refer to sheet A-701 for typical ceiling mounting and bracing details

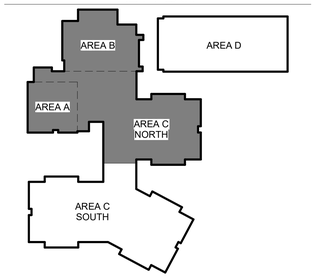
LEGEND - RCP

- EXISTING WALL TO REMAIN
- SEISMIC BRACE WALL
- DEMOLISH EXISTING SHEATHING TO EXPOSE STRUCTURE FOR INSTALL OF SEISMIC BRACING PER STRUCTURAL.
- EXISTING 2X4 ACOUSTIC CEILING TILE TO REMAIN
- EXISTING GYPSUM BOARD CEILING TO REMAIN
- EXISTING 2X2 ACOUSTIC CEILING TILE TO REMAIN
- NEW 2X4 ACOUSTIC CEILING TILE, IN EXISTING GRID U.N.O.
- NEW GYPSUM BOARD CEILING
- NEW 2X2 ACOUSTIC CEILING TILE, IN EXISTING GRID U.N.O.
- NEW PAINTED FIBER CEMENT SOFFIT
- EXISTING 2X2 FLUORESCENT
- EXISTING 1X4 FLUORESCENT
- EXISTING 96" PENDANT
- EXISTING 4X4 FLUORESCENT
- EXISTING CAN LIGHT
- REINSTALLED EXISTING 2X2 FLUORESCENT
- REINSTALLED EXISTING 1X4 FLUORESCENT
- REINSTALLED EXISTING 96" PENDANT
- NEW 2X2 VLT FIXTURE
- EXISTING ACCESS PANEL
- EXISTING SPRINKLER PIPING
- EXISTING STAGE LIGHTING
- EXISTING CURTAIN TRACK
- EXISTING GAS LINE

KEYNOTES - RCP

C 1 Install new suspended gypsum soffit with new recessed light fixtures - see Electrical. Blend new gypsum ceiling with existing. Paint entire gypsum ceiling to match (E).
C 2 Install new 2x4 ceiling tiles and grid. Reinstall salvaged light fixtures.
C 3 Install new ceiling tiles in (E) ceiling grid. See A-701 for typical seismic bracing details. Provide gap and closure angle at perimeter. Modify grid at perimeter as required at new shear wall improvements. Re-install salvaged light fixtures.
C 4 (E) Light fixtures to remain. Protect during construction.
C 5 Install new gypsum ceiling; reinstall salvaged light fixtures, access panels and supply air grilles.
C 6 (E) stage curtain to remain.
C 7 Reinstall (E) conduits above soffit.
C 8 Patch and repair ceiling at gas line bracing locations.
C 9 Install new light fixtures with conduits routed above soffit - see Electrical.
C 10 New wall pack light fixture - see Electrical.
C 11 New fiber cement soffit; paint to match (E).
C 12 Connect (E) chimney to roof framing - see structural.
C 13 Reinstall salvaged artwork.
C 14 Patch ceiling as required to seismically brace (E) fire sprinkler piping. Contractor to coordinate extents of cutting and patching with the seismic bracing installation. Reinstall salvaged fixtures and devices.
C 15 New 2x4 LED light fixture, typical.
C 16 New wood trim between new and (E) soffit materials; paint to match (E) soffit.
C 17 Install new wood blocking; paint to match (E) framing - see Structural for details.
C 18 Contractor to coordinate location of access panel to provide adequate access to damper above. Coordinate final location with Owner and Architect prior to installation.
C 19 New seismic strengthening at top of (E) concrete tilt wall - see Structural. Install new intumescent coating to maintain 2-hr rating at full length of wall.
C 20 Patch and repair gypsum ceiling. Blend finish and paint entire ceiling to match existing.
C 21 Paint angled gypsum surface to match (E).
C 22 Reinstall (E) salvaged security cameras with conduits routed above soffit.

KEY PLAN



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Consultants:

COOPER MOUNTAIN ELEMENTARY SCHOOL
SRGP IMPROVEMENTS

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NOT FOR CONSTRUCTION

Date: 12/04/2020
Project Number: 90060
Drawn By: BPS
Checked By: CSM

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1 Add. No. 1 01/22/2021

Sheet Title:
REFLECTED CEILING PLANS - AREA A, B, C NORTH

Sheet Number:
A-211

PERMIT / BID SET

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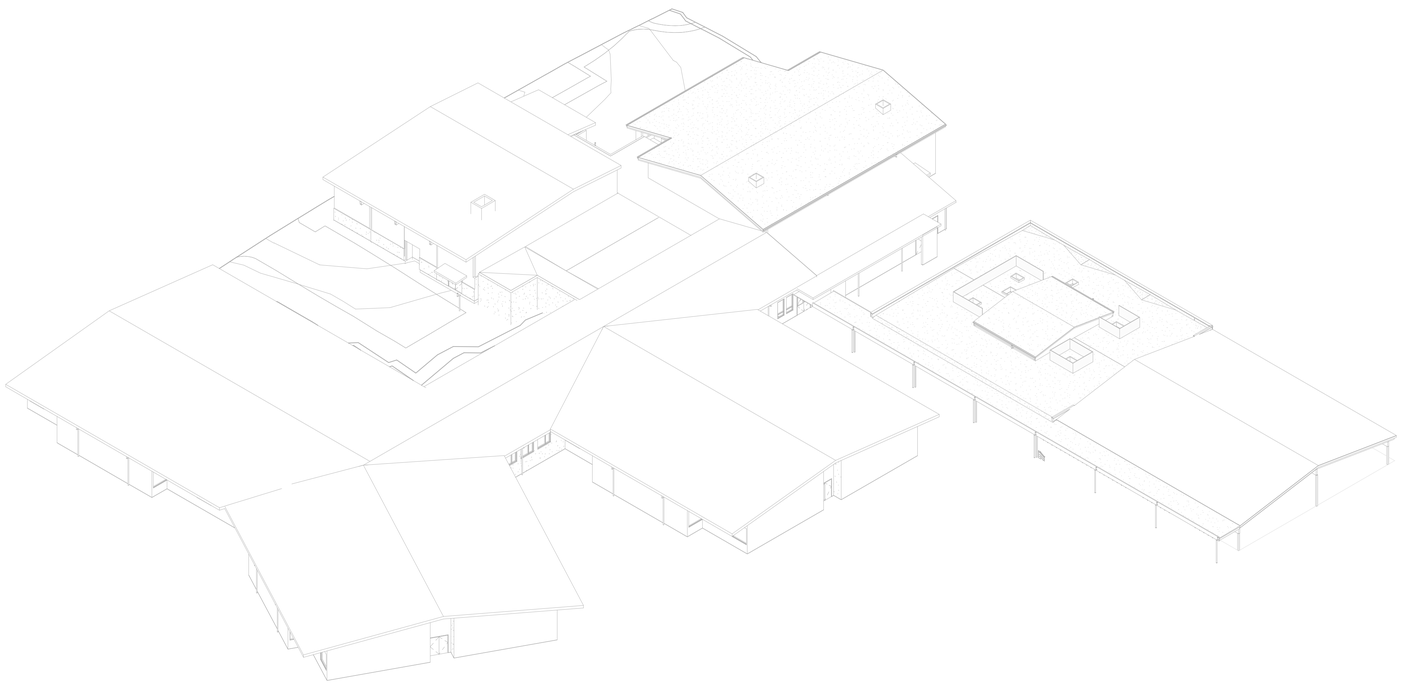
Holmes

Holmes Structures Portland



OVERALL ISOMETRIC

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S-003	GENERAL NOTES
S-004	SPECIAL INSPECTIONS
S-101	BUILDING YEAR PLAN
S-201	FLOOR PLAN - AREA A, B, C NORTH
S-202	FLOOR PLAN - AREA C SOUTH
S-203	FLOOR PLAN - AREA D
S-221	ROOF PLAN - AREA A, B, C NORTH
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S-223	ROOF PLAN - AREA D
S-501	DETAILS
S-601	WOOD DETAILS
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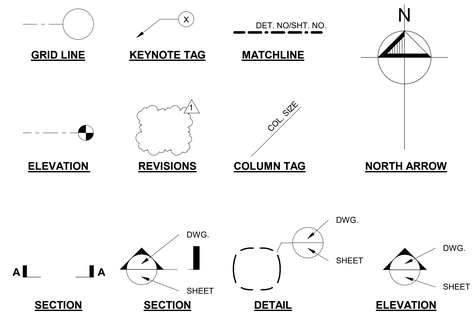
S-603	WOOD DETAILS
S-701	STEEL DETAILS



GENERAL SYMBOLS

1/4" = 1'-0"

(A)	ABOVE
A.B.	ANCHOR BOLT
ADD'L	ADDITIONAL
ADJ.	ADJACENT
A.F.F.	ARCHITECTURAL FINISHED FLOOR
APPROX.	APPROXIMATE
ARCH.	ARCHITECT
A.T.R.	ALL THREAD ROD
(B)	BELOW
BLDG.	BUILDING
BLKG.	BLOCKING
BM.	BEAM
B.N.	BOUNDARY NAILING
B.O.	BOTTOM OF
BOT.	BOTTOM
BTWN.	BETWEEN
℄	CENTERLINE
C.F.	CUBIC FEET
C.I.P.	CAST IN PLACE
C.J.	CONSTRUCTION JOINT
CLR.	CLEAR
CMU	CONCRETE MASONRY UNIT
CNTR.	CENTER
COL.	COLUMN
CNTRSNK.	COUNTER SUNK
COLL.	COLLECTOR
COMP.	COMPACTED
CONC.	CONCRETE
COND.	CONDITION
CONN.	CONNECTION
CONT.	CONTINUOUS
DBL.	DOUBLE
DET.	DETAIL
DIA. Ø	DIAMETER
DIAPH.	DIAPHRAGM
DIM.	DIMENSION
DN.	DOWN
DWG.	DRAWING
(E)	EXISTING
EA.	EACH
E/E	EACH END
E/F	EACH FACE
EL.	ELEVATION
EMB.	EMBEDMENT
E.N.	EDGE NAILING
EQ.	EQUAL
EQUIV.	EQUIVALENT
E/S	EACH SIDE
E/W	EACH WAY
EXT.	EXTERIOR
FDN.	FOUNDATION
FIN.	FINISH
FLR.	FLOOR
F.N.	FIELD NAILING
F.S.	FAR SIDE
FT.	FEET
FTG.	FOOTING
GA.	GAUGE
GALV.	GALVANIZED
G.L.	GRID LINE
GLB	GLUED LAMINATED BEAM
HD	HOLDOWN
H.D.G.	HOT DIP GALVANIZED
HDR	HEADER
HORIZ.	HORIZONTAL
HT.	HEIGHT
HSS	HOLLOW STRUCTURAL STEEL
I.D.	INSIDE DIAMETER
IN.	INCH
INT.	INTERIOR
LB	POUND
LONG.	LONGITUDINAL
LLV	LONG LEG VERTICAL
LV.	LEVEL
L.S.	LAG SCREW
LVL	LAMINATED VENEER LUMBER
L.W.	LIGHT WEIGHT
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MECH.	MECHANICAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS
ML.	MICROLLAM
MTL.	METAL
(N)	NEW
N.I.C.	NOT IN CONTRACT
N.S.	NEAR SIDE
N.T.S	NOT TO SCALE
N.W.	NORMAL WEIGHT
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OPNG.	OPENING
OPP.	OPPOSITE
PAR.	PARALLEL
PERP.	PERPENDICULAR
PL	PLATE
PSL	PARALLEL STRAND LUMBER
PLYWD.	PLYWOOD
P.T.	PRESSURE TREATED
P/T	POST TENSIONED
REF.	REFERENCE
R.C.	RELATIVE COMPACTION
REINF.	REINFORCING
REQ'D	REQUIRED
REV.	REVISION
S.A.D.	SEE ARCHITECTURAL DRAWINGS
S.C.D.	SEE CIVIL DRAWINGS
S.L.D.	SEE LANDSCAPE DRAWINGS
S.M.D	SEE MECHANICAL DRAWINGS
SCH.	SCHEDULE
SHT.	SHEET
SHTG.	SHEATHING
SIMP.	SIMPSON
SIM.	SIMILAR
S.O.G.	SLAB ON GRADE
SPEC.	SPECIFICATIONS
SQ.	SQUARE
STAG.	STAGGERED
STD.	STANDARD
STIFF.	STIFFENER
STL.	STEEL
S.W.	SHEAR WALL
SYM.	SYMMETRIC
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
THK.	THICK
THRD.	THREADED
THRU	THROUGH
T.O.	TOP OF
T.O.C	TOP OF CONCRETE
T.O.S.	TOP OF SLAB/STEEL
TRNSV.	TRANSVERSE
TS	TUBE STEEL
TYP.	TYPICAL
U.O.N	UNLESS OTHERWISE NOTED
VERT.	VERTICAL
V.I.F.	VERIFY IN FIELD
V.W.A.	VERIFY WITH ARCHITECT
W/	WITH
WD.	WOOD
W/O	WITHOUT
W.P.	WORKING POINT
WT.	WEIGHT

ABBREVIATIONS

N.T.S.

1/22/2021 10:37:39 AM

BEAVERTON SCHOOL DISTRICT

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COOPER MOUNTAIN ELEMENTARY SCHOOL
SEISMIC SRGP IMPROVEMENTS

PERMIT/BID SET

STRUCTURAL ENGINEER REGISTERED PROFESSIONAL ENGINEER OREGON JANUARY 11, 2011 JENNIFER B. GOLDEN
NOT FOR CONSTRUCTION
EXP. 12/31/2021

Date:	12-04-2020
Project Number:	20138.10
Drawn By:	IK
Checked By:	JE

Revision Schedule:

1	CITY COMMENTS #1	01/25/2021

Sheet Title:

COVER SHEET

Sheet Number:

S-001

PERMIT/BID SET

GENERAL STRUCTURAL NOTES

THE FOLLOWING IS INTENDED AS A SUMMARY SPECIFICATION. REFER TO THE PROJECT SPECIFICATION FOR FULL DETAILS. NOTIFY THE ARCHITECT WHERE THERE IS A CONFLICT BETWEEN THE PROJECT SPECIFICATION AND THE STRUCTURAL GENERAL NOTES.

SCOPE OF WORK: VOLUNTARY SEISMIC RETROFIT OF EXISTING BUILDINGS.

GOVERNING CODE: THE STRUCTURAL DESIGN OF BUILDING COMPONENTS DESCRIBED ON THESE DRAWINGS IS IN ACCORDANCE WITH ASCE 41-17 AS NOTED IN SECTION 5 AND THE 2019 OREGON STRUCTURAL SPECIALTY CODE (OSSC).

LIMITATIONS: THE LATERAL FORCE RESISTING SYSTEM SHOWN ON THESE DRAWINGS IS DESIGNED TO ACHIEVE MINIMUM REQUIRED STANDARDS FOR STRUCTURAL SEISMIC RESISTANCE, AND IS INTENDED TO REDUCE THE RISK OF LIFE LOSS OR INJURY. THIS WORK WILL NOT NECESSARILY PREVENT LOSS OF LIFE OR INJURY, NOR PREVENT EARTHQUAKE DAMAGE TO NEW OR REHABILITATED BUILDINGS.

1. GENERAL

MATERIALS AND WORKMANSHIP TO CONFORM TO THE BUILDING CODE DEFINED ABOVE AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

A. THESE NOTES APPLY TO ALL DRAWINGS AND GOVERN UNLESS OTHERWISE NOTED OR SPECIFIED. WHENEVER THERE APPEARS TO BE A CONFLICT BETWEEN THE NOTES, DRAWINGS, OR SPECIFICATIONS, CONTACT THE ENGINEER FOR CLARIFICATION.

B. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND PROPOSED DIMENSIONS AT JOB SITE. COMPARE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS BEFORE COMMENCING WORK. NOTIFY ENGINEER OF ANY DISCREPANCIES AND DO NOT PROCEED WITH AFFECTED WORK UNTIL THEY ARE RESOLVED. DO NOT SCALE DRAWINGS.

C. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, USE SIMILAR DETAILS OF CONSTRUCTION, SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER.

D. DETAILS NOTED AS “TYPICAL” IN THEIR TITLE OR ON SHEETS TITLED “TYPICAL DETAILS” APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. SUCH DETAILS ARE NOT NOTED AT EACH LOCATION THAT THEY OCCUR.

E. ALL ELEMENTS INDICATED ON THE DRAWINGS SHALL BE ASSUMED “NEW” UNLESS OTHERWISE NOTED.

F. SAFETY MEASURES: AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE INCLUDING, BUT NOT LIMITED TO:
a) SAFETY OF THE PERSONS AND PROPERTY,
b) MEANS AND METHODS OF CONSTRUCTION,
c) COMPLIANCE WITH APPLICABLE CAL/OSHA REQUIREMENTS AND GUIDELINES,
d) ALL NECESSARY INDEPENDENT ENGINEERING REVIEWS OF THESE CONDITIONS.

THE CONTRACTOR SHALL BRACE OR SHORE THE CONSTRUCTION AS REQUIRED TO PROVIDE A SAFE AND TRUE STRUCTURE. WHERE BRACING OR SHORING IS INDICATED IN THE DRAWINGS, IT IS DONE SO ONLY AS A COURTESY TO THE CONTRACTOR AND SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COORDINATE THE WORK WITH THE AFOREMENTIONED PROVISIONS. THE ARCHITECT'S OR ENGINEER'S JOB SITE REVIEW IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.

2. SUBMITTALS

A. SUBMIT IN ACCORDANCE WITH DIVISION 1 OF THE SPECIFICATIONS.

B. SUBSTITUTION REQUESTS SHALL DEMONSTRATE THE REQUESTED SUBSTITUTION’S ABILITY TO MEET OR EXCEED THE REQUIREMENTS OF THE ORIGINALLY SPECIFIED ITEM. THE REQUEST SHALL ALSO INCLUDE A ROUGH COST SAVINGS ESTIMATE TO THE OWNER, REFERENCES TO DETAILS WHERE SUBSTITUTION IS PROPOSED TO BE APPLIED, AND ALL SUPPORTING DOCUMENTATION REQUIRED FOR THE ITEM BY THIS SECTION OF THE NOTES.

C. SHOP DRAWINGS, MILL CERTIFICATES, AND/OR OTHER RELEVANT CERTIFICATIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BEFORE FABRICATION, FOR THE FOLLOWING ITEMS:

NOTE: SUBMITTING COPIES OF THE STRUCTURAL DRAWINGS IS UNACCEPTABLE AND WILL BE REJECTED FOR COMPLETE REVISION.

1) STRUCTURAL AND MISCELLANEOUS STEEL
   a. MILL CERTIFICATIONS FOR ALL STEEL AND ALL FASTENERS.
   b. SHOP DRAWINGS INCLUDING AT A MINIMUM ASTM MATERIAL DESIGNATIONS, MEMBER SIZES, SIZES AND TYPES OF WELDS, SIZES AND TYPES OF BOLTS, AND DIMENSIONS.
   c. WELD PROCEDURE SPECIFICATIONS FOR EACH TYPE OF WELD TO BE USED AND PRODUCT DATA FOR WELDING FILLER METAL.
   d. MANUFACTURER’S PRODUCT DATA FOR PRIMER AND FINISH PAINT, INCLUDING COLOR CHARTS.
   e. CONTRACTOR SHALL ESTABLISH AND VERIFY REQUIRED TOP OF STEEL (T.O.S.) ELEVATIONS, WHETHER INDICATED ON THE DRAWINGS OR NOT, AGAINST ARCHITECTURAL FINISHED FLOOR AND ROOF ELEVATIONS, AND THE STRUCTURAL DETAILS, INCLUDING ANY SPECIFIED OFFSET OR PRE-CAMBER. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.

2) REINFORCING STEEL
   a. MATERIAL CERTIFICATES FOR REINFORCING STEEL.
   b. DRAWINGS FOR FABRICATION, BENDING, AND PLACEMENT OF REINFORCING STEEL IN ACCORDANCE WITH ACI 315.

3) CAST-IN-PLACE CONCRETE AND SHOTCRETE
   a. MIX DESIGNS FOR EACH TYPE OF CONCRETE ON THE PROJECT INCLUDING RESULTS OF SLUMP, COMPRESSION, AND SHRINKAGE TESTS AND OTHER PROJECT SPECIFIC CRITERIA
   b. MATERIAL CERTIFICATES
   c. PROPOSED CONSTRUCTION AND CONTROL JOINT LOCATIONS
   d. CURING MATERIALS AND METHODS
   e. PRODUCT DATA FOR NON-SHRINK GROUT
   f. FORMWORK TYPE, FORMWORK, JOINT LOCATIONS, CHAIRS, FORM TIES, ETC.
   g. PROPOSED ROUGHENING METHODS AND TECHNIQUES TO PREPARE EXISTING SURFACES TO RECEIVE NEW CONCRETE, IN ACCORDANCE WITH AMPLITUDE NOTED IN THE CONCRETE SECTION OF THESE NOTES.

4) MECHANICAL ANCHORS AND EPOXY ANCHORS
   a. PRODUCT DATA FOR EACH TYPE OF SYSTEM INCLUDING ANCHOR TESTING IN ACCORDANCE WITH ACI 355.2 FOR MECHANICAL ANCHORS AND ACI 355.4 FOR EPOXY ANCHORS.
   b. CERTIFICATION OF ANCHOR INSTALLERS PER ACI/CRSI WHERE ANCHORS ARE INSTALLED IN HORIZONTAL OR VERTICAL CONDITIONS WITH SUSTAINED TENSION.

D. DEFERRED SUBMITTALS: DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATINS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF OREGON, AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED ON THE REQUIREMENTS OF THE OSSC AND AS NOTED UNDER "DESIGN BASIS." REF. ARCHITECTURAL DRAWINGS FOR FULL LIST OF DEFERRED SUBMITTALS. DEFERRED SUBMITTALS SHALL INCLUDE:

1) LADDERS
2) SEISMIC RESTRAINT OF MEP EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING. CONNECTIONS TO STRUCTURE SHALL CONFORM TO ASCE 7-16 CHAPTER 13, SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF OREGON, AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION.

3. SPECIAL INSPECTION REQUIREMENTS AND TESTING

A. PROVIDE SPECIAL INSPECTIONS AND TESTING FOR ALL ITEMS AS REQUIRED BY THE GOVERNING JURISDICTION. JURISDICTION SPECIFIC SPECIAL INSPECTION FORM SHALL SUPPLEMENT SPECIAL INSPECTION REQUIREMENTS NOTED IN THIS SECTION AND SHEET S-004.

B. THE OWNER SHALL BE RESPONSIBLE FOR RETAINING AN INDEPENDENT, QUALIFIED INSPECTOR AND/OR TESTING LAB TO PERFORM ALL REQUIRED TESTING AND SPECIAL INSPECTIONS.

C. IF INITIAL TESTS OR INSPECTIONS MADE BY THE OWNER’S TESTING AGENCY REVEAL THAT ANY PORTION OF THE WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, ADDITIONAL TESTS, INSPECTIONS, AND NECESSARY REPAIRS WILL BE MADE AT THE CONTRACTOR’S EXPENSE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND OWNER OF NON-CONFORMING WORK. THIS NOTIFICATION SHALL SPECIFICALLY ADDRESS THE NON-CONFORMING WORK AND SHALL BE SEPARATE FROM THE SPECIAL INSPECTION REPORTS.

D. SPECIAL INSPECTION REPORTS SHALL BE SENT TO THE ENGINEER AT THE TIME OF COMPLETION FOR REVIEW OF CONFORMANCE WITH THE REQUIREMENTS OF THE STRUCTURAL DRAWINGS.

E. THE CONTRACTOR SHALL NOTIFY THE TESTING LAB A MINIMUM OF 48 HOURS PRIOR TO TIME OF INSPECTION.

F. THE FOLLOWING SPECIFIC ITEMS SHALL BE INSPECTED AND/OR TESTED BY THE TESTING LAB:

1) CONCRETE:
   a. SAMPLE AND TEST CONCRETE AS FOLLOWS:
      1 FABRICATE SPECIMENS FOR STRENGTH TESTS PER ACI 318.
      2 PERFORM SLUMP AND AIR CONTENT TESTS.
      3 DETERMINE TEMPERATURE OF THE CONCRETE.
   b. REINFORCING STEEL AND WELDED WIRE MESH (INCLUDING PRE STRESSING TENDONS).
      1 PLACEMENT (CONTINUOUS INSPECTION FOR SPECIAL MOMENT FRAMES)
      2 OBTAIN AND REVIEW MILL TEST REPORTS.
      3 WELDING.
   c. CONCRETE PLACEMENT (CONTINUOUS INSPECTION).
   d. CAST-IN-PLACE ANCHOR BOLTS.
   e. CURING TEMPERATURE AND TECHNIQUES AND DURATION.
   f. REVIEW MIX DESIGN FOR EACH CLASS OF CONCRETE.
   g. REVIEW THE TICKET OF EACH BATCH OF CONCRETE DELIVERED.

   NOTE: TESTING DURING CONSTRUCTION IS NOT REQUIRED FOR FOUNDATION CONCRETE, EXCLUDING CAST-IN-PLACE DRILLED PILES OR CAISSONS, WHERE THE STRUCTURAL DESIGN IS BASED ON F'C NO GREATER THAN 2500 PSI AND NON-STRUCTURAL SLABS-ON-GRADE.

2) NON-SHRINK GROUT
   a. PLACEMENT
   b. CAST AND TEST SPECIMENS FOR COMPRESSION STRENGTH

3) ALL STRUCTURAL WELDING INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
   a. CONTINUOUS INSPECTION FOR ALL BUTT WELDS, COMPLETE AND PARTIAL PENETRATION WELDS, GROOVE WELDS AND PLUG WELDS, INCLUDING WELDING OF REINFORCEMENT.
   b. CONTINUOUS INSPECTION AND 100% ULTRASONIC TESTING FOR ALL COMPLETE PENETRATION WELDS BETWEEN THE PRIMARY MEMBERS OF MOMENT-RESISTING FRAMES, EXCEPT WHEN THE THICKNESS OF THE MATERIALS TO BE WELDED IS LESS THAN 5/16". IN ADDITION, MAGNETIC PARTICLE TESTING SHALL BE PERFORMED ON 25% OF ALL BEAM-TO-COLUMN COMPLETE PENETRATION WELDS.
   c. CONTINUOUS INSPECTION OF ALL FILLET WELDS EXCEEDING 5/16".
   d. PERIODIC VISUAL INSPECTION OF THE FOLLOWING ITEMS:
      1) SINGLE-PASS FILLET WELDS NOT EXCEEDING 5/16".
      2) FLOOR AND ROOF DECK WELDING.
      3) WELDED STUDS WHEN USED FOR THE STRUCTURAL DIAPHRAGM OR COMPOSITE CONNECTIONS.
      4) WELDED SHEET METAL STEEL FOR COLD-FORMED STUDS AND JOISTS.
      5) WELDING OF STAIRS AND RAILING SYSTEMS.

4) POST INSTALLED ANCHORS. WHERE ANCHORS ARE LOADED IN SUSTAINED TENSION, INSPECTION SHALL BE CONTINUOUS. REFER TO THE DRAWINGS FOR LOCATIONS.
   a. BRICK MASONRY
      1) EPOXY THREADED RODS SHALL BE TESTED PER TESTING SCHEDULE IN TYPICAL DETAILS.
   b. CONCRETE
      1) EPOXY REBAR AND THREADED RODS
      2) MECHANICAL ANCHORS

5) STRUCTURAL WOOD
   a. PERIODIC SPECIAL INSPECTION FOR NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS WITHIN THE SEISMIC FORCE RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS DRAG STRUTS, BRACES, SHEAR PANELS AND HOLD-DOWNS.

6) ALL EXCAVATIONS AND EARTH FORMS SHALL BE INSPECTED BY THE LOCAL BUILDING INSPECTOR AND INSPECTED BY THE ENGINEER PRIOR TO PLACING CONCRETE.

4. STRUCTURAL OBSERVATIONS

A. STRUCTURAL OBSERVATIONS WILL BE UNDERTAKEN BY PERSONNEL UNDER THE SUPERVISION OF THE ENGINEER OF RECORD. STRUCTURAL OBSERVATIONS ARE SEPARATE FROM THE SPECIAL INSPECTION REQUIREMENTS OUTLINED ABOVE.

B. THE PURPOSE OF STRUCTURAL OBSERVATIONS IS TO REVIEW THE OVERALL PROGRESS OF CONSTRUCTION AND ASCERTAIN ITS GENERAL COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS, THESE GENERAL NOTES, AND OTHER SPECIFICATIONS, WHERE APPLICABLE. OBSERVATIONS WILL BE NOTED IN REGULAR SITE REPORTS ISSUED TO THE OWNER’S REPRESENTATIVE.

C. UNLESS OTHERWISE AGREED UPON, THE ENGINEER OF RECORD SHALL BE ENGAGED TO PROVIDE, AT MINIMUM, A LEVEL OF CONSTRUCTION INVOLVEMENT NEEDED TO OBSERVE THE FOLLOWING AT SIGNIFICANT MILESTONES DURING THE CONSTRUCTION PROCESS:

1) FOUNDATION REINFORCEMENT AND CONSTRUCTION
2) MASONRY/CONCRETE WALL/SLAB REINFORCEMENT AND CONSTRUCTION
3) STRUCTURAL STEEL FRAMING
4) LATERAL FORCE RESISTING ELEMENTS
5) WOOD FRAMING

ADDITIONAL ENGINEER INVOLVEMENT MAY BE DESIRED. ANY AGREEMENT TO THAT EFFECT SHALL BE MADE PRIOR TO THE START OF CONSTRUCTION.

D. THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 3 DAYS PRIOR TO TIME OF OBSERVATION AND PROVIDE ACCESS FOR THE OBSERVATIONS.

E. AN OWNER’S REPRESENTATIVE MAY BE DESIGNATED, BY THE OWNER'S SPECIFIC AUTHORIZATION PRIOR TO THE START OF CONSTRUCTION, WHO WILL HAVE THE AUTHORITY TO REQUEST ADDITIONAL ENGINEER INVOLVEMENT OUTSIDE OF THE NORMAL DUTIES ASSOCIATED WITH STRUCTURAL OBSERVATION.

5. DESIGN BASIS

A. CONSTRUCT IN CONFORMANCE WITH THE BUILDING CODE NOTED ABOVE.

B. DESIGN LIVE LOADS (PSF):

ROOF 20

C. DESIGN DEAD LOADS

1) SUPERIMPOSED DEAD LOADS PER STRUCTURAL CALCULATIONS

D. EARTHQUAKE DESIGN DATA

1) SEISMIC IMPORTANCE FACTOR, AREA A-C, D CLASSROOM: 1.5; AREA D PLAY AREA: 1.25 (1)

2) RISK CATEGORY: AREA A-C, D CLASSROOM: IV; AREA D PLAY AREA: III

3) ASCE 41 PERFORMANCE OBJECTIVE: BPOE

4) USGS MCEr SPECTRAL RESPONSE ACCELERATIONS:
   i. Ss = 0.864 g
   ii. S1 = 0.404 g

5) SITE CLASS: D

6) ASCE 41 BSE-2E SPECTRAL RESPONSE ACCELERATIONS:
   i. SXS = 0.809 g
   ii. SX1 = 0.579 g

7) ASCE 41 BSE-1E SPECTRAL RESPONSE ACCELERATIONS:
   i. SXS = 0.376 g
   ii. SX1 = 0.204 g

8) BASIC SESIMIC-FORCE RESISTING SYSTEM: LIGHT FRAME (WOOD) SHEAR WALLS SHEATHED WITH WOOD STRUCTURAL ~~PANELS OR STEEL SHEETS~~ CONCRETE SHEAR WALLS MASONRY SHEAR WALLS CANTILEVER COLUMNS (1)

9) ASCE 41 BASE SHEAR COEFFICIENT @ BSE-2E: 1.13

10) ASCE 41 BASE SHEAR COEFFICIENT @ BSE-1E: 0.53

11) ANALYSIS PROCEDURE USED: LSP

12) DESIGN STORY DRIFT: 2.5%

E. WIND: (1)

	AREA A-C, D CLASSROOMS:	AREA D PLAY AREA:
1) RISK CATEGORY:	IV	III
2) BASIC WIND SPEED:	107 MPH	103 MPH
3) WIND DIRECTIONALITY FACTOR, Kd:	0.85	0.85
4) EXPOSURE CATEGORY TYPE:	B	B
5) TOPOGRAPHIC FACTOR, Kzt:	1.00	1.00
6) ENCLOSURE CLASSIFICATION:	ENCLOSED	OPEN

F. FOUNDATIONS: MODIFY AS REQ’D

1) SPREAD FOOTING: 2500 PSF
2) PASSIVE PRESSURE: 350 PCF

G. DESIGN SNOW LOADS

1) GROUND SNOW LOAD, Pg: 25 PSF

6. FOUNDATION, FILL, AND SITE WORK

FOUNDATION DESIGN IS BASED ON A GEOTECHNICAL LETTER PREPARED BY GEODESIGN: DATED JANUARY 2021 (1)

A. EXCEPT WHERE OTHERWISE SHOWN, EXCAVATIONS SHALL BE MADE AS NEAR AS POSSIBLE TO THE NEAT LINES REQUIRED BY THE SIZE AND SHAPE OF THE STRUCTURE. ALL FOUNDATIONS SHALL BE POURED WITHOUT THE USE OF SIDE FORMS WHEREVER POSSIBLE. IF THE TRENCHES CANNOT STAND, FULLY FORM SIDES TO DIMENSIONS SHOWN.

B. DO NOT ALLOW WATER TO STAND IN TRENCHES. IF BOTTOMS OF TRENCHES BECOME SOFTENED DUE TO RAIN OR SLURRY OR OTHER WATER BEFORE CONCRETE IS CAST, EXCAVATE SOFTENED MATERIAL AND REPLACE WITH PROPERLY COMPACTED BACKFILL OR CONCRETE AT NO COST TO OWNER.

C. WHERE SITEWORK IS REQUIRED, COMPLY WITH THE FOLLOWING:

1) STRIP THE AREA TO BE BUILT OVER OF ALL ORGANIC MATERIAL AND TOP SOIL.
2) SCARIFY THE TOP 6 INCHES OF STRIPPED SURFACE; BRING TO CORRECT MOISTURE CONTENT; THEN RE-COMPACT TO AT LEAST 95% UNDER FOOTINGS AND 90% ELSEWHERE.
3) FILL MATERIAL TO BE PLACED IN 6 INCH LAYERS AND COMPACTED.
4) FILL MATERIAL SHALL BE FREE OF PLASTIC CLAYS, VEGETATION, AND OTHER DELETERIOUS MATERIAL; IT SHALL BE OF SUCH QUALITY THAT IT WILL COMPACT THOROUGHLY WHEN WATERED AND ROLLED. THE FILL SHALL NOT CONTAIN ROCKS OR LUMPS OVER 2 INCHES IN GREATEST DIMENSION.

D. PLACE BACKFILL BEHIND RETAINING WALLS AFTER CONCRETE HAS ATTAINED FULL DESIGN STRENGTH. BRACE BUILDING AND PIT WALLS BELOW GRADE FROM LATERAL LOADS UNTIL ATTACHED FLOORS AND SLABS ON GRADE HAVE ATTAINED FULL DESIGN STRENGTH.

E. FOR SHALLOW FOUNDATIONS, THE TOP SURFACE OF FOOTINGS SHALL BE LEVEL. THE BOTTOM SURFACE OF FOOTINGS SHALL BE PERMITTED TO HAVE A SLOPE NOT EXCEEDING ONE UNIT VERTICAL IN 10 UNITS HORIZONTAL (10-PERCENT SLOPE). FOOTINGS SHALL BE STEPPED WHERE IT IS NECESSARY TO CHANGE THE ELEVATION OF THE TOP SURFACE OF THE FOOTING OR WHERE THE SURFACE OF THE GROUND SLOPES MORE THAN ONE UNIT VERTICAL IN 10 UNITS HORIZONTAL.

7. CONCRETE

A. EXCEPT WHERE NOTED OTHERWISE ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF ACI 301 - SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS. UNLESS OTHERWISE NOTED, COMPLY WITH CONSTRUCTION TOLERANCES AS SPECIFIED IN ACI 117 “SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS”.

B. REINFORCE ALL CONCRETE. INSTALL ALL INSERTS, BOLTS, ANCHORS, AND REINFORCING AND SECURELY TIE PRIOR TO PLACING CONCRETE.

C. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150 TYPE I OR II.

D. CONCRETE SHALL BE HARDROCK CONCRETE AND CONFORM TO ALL REQUIREMENTS OF ASTM C-33, UNLESS OTHERWISE NOTED. WHERE LIGHTWEIGHT CONCRETE IS SPECIFIED, IT SHALL CONFORM TO ASTM C-330. FLY ASH SHALL COMPLY WITH ASTM C618; SLAG SHALL COMPLY WITH ASTM C989. PROPORTION CONCRETE IN ACCORDANCE WITH ACI 211.1, INCLUDING ANY REQUIRED ADMIXTURES. CONCRETE SHALL SATISFY THE FOLLOWING PROPERTIES:

DELETE ANY OF THESE VALUES THAT ARE NOT APPLICABLE OR ARE CONTAINED IN THE TABLE
ADMIXTURES WITH CHLORIDE IONS: NOT PERMITTED
MIN. SLUMP: 2½”
MAX. SLUMP: 7”
MAX. AGGREGATE SIZE: 1”
MAX. WATER/CEMENTITIOUS (W/CM) RATIO: 0.50
MIN. FLY ASH OR SLAG REPLACEMENT: 20%

LOCATION	MIN. STRENGTH AT 28 DAYS (PSI)	MAX. AGGREGATE SIZE (INCHES)	MAX. SLUMP (INCHES)
FOUNDATION	4000	1 1/2	4
SLAB ON GRADE	4000	1 1/2	4

E. THE ACTUAL SLUMP AND TOLERANCE SHALL BE ESTABLISHED BY THE CONTRACTOR AND CONCRETE SUPPLIER, AS REQUIRED TO SATISFY THE CONTRACTOR’S MEANS AND-METHODS FOR PLACEMENT, FIELD AND INSTALLATION CONDITIONS (INCLUDING REINFORCING CONGESTION), FINISH REQUIREMENTS, AND AS REQUIRED TO SATISFY THE PERFORMANCE CRITERIA SPECIFIED ABOVE.

F. IN AREAS OF HEAVY REINFORCING AND CONGESTION, CONTRACTOR SHALL PROVIDE ADEQUATE MEANS AND METHODS TO PROPERLY INSTALL CONCRETE (I.E., HIGH-RANGE WATER-REDUCING ADMIXTURE, FORM VIBRATORS, ETC.) AT SUCH LOCATIONS, THE CONTRACTOR MAY USE 3/8” MINIMUM CRUSHED ROCK OF NOT LESS THAN 1500 POUNDS/CU. YD. NO WATER SHALL BE ADDED AT THE TIME OF INSTALLATION WITHOUT WRITTEN APPROVAL OF THE ENGINEER OF RECORD.ALL CONCRETE WITH EXPOSED SURFACES SHALL HAVE HIGH-RANGE WATER-REDUCING ADMIXTURE (SUPERPLASTICIZER): ASTM C494, TYPE F OR TYPE G. PRODUCTS INCLUDE THE FOLLOWING:
1) EUCON 37/1037 OR PLASTOLSERIES, EUCLID CHEMICAL COMPANY,
2) DARACEM, W.R. GRACE COMPANY, OR
3) SIKAMENT 300, SIKA CORP.

G. WHEN PLACING NEW CONCRETE OR SHOTCRETE AGAINST EXISTING CONCRETE, AND/OR CONCRETE MASONRY, ROUGHEN EXISTING MATERIAL TO 1/4" AMPLITUDE. REMOVE ALL LOOSE CEMENTITIOUS MATERIALS AND AGGREGATES. PRESSURE WASH SURFACE AND REMOVE STANDING WATER IMMEDIATELY PRIOR TO PLACING NEW CONCRETE. AT EXISTING BRICK, ROUGHENING IS NOT REQUIRED IF EXISTING BRICK HAS A NATURAL ROUGH SURFACE (APPROXIMATELY 1/4" AMPLITUDE). THE ROUGHENED SURFACE IS SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER.

I. CONTRACTOR SHALL CONSTRUCT CONCRETE FLOORS AND SLABS PER RECOMMENDATIONS OF ACI 302.1R. CONTRACTOR SHALL SUBMIT LOCATIONS OF PROPOSED CONSTRUCTION JOINTS FOR ENGINEERS REVIEW AND APPROVAL.

J. FINISH SCHEDULE: COORDINATE WITH ARCHITECT.

9. FORMWORK

A. DESIGN AND CONSTRUCT FORMWORK IN ACCORDANCE WITH ACI 347 “RECOMMENDED PRACTICE FOR CONCRETE FORMWORK” AND ACI 301 “SPECIFICATIONS FOR STRUCTURAL CONCRETE”, UNLESS OTHERWISE NOTED.

B. AS REQUIRED, PROVIDE POUR POCKETS IN FORMS AND UNDER EXISTING MEMBERS TO PREVENT AIR POCKETS OR “HONEYCOMBS”. CONCRETE CAST WITH AIR POCKETS OR HONEYCOMBS IS NOT ACCEPTABLE.

C. PROVIDE 3/4" BY 3/4" CHAMFER STRIPS ON ALL EXTERNAL CORNERS OF BEAMS, COLUMNS, AND WALLS, UNLESS OTHERWISE NOTED.

D. REMOVE FORMS AND SHORES IN ACCORDANCE WITH THE FOLLOWING:

1) FOOTINGS, PILE CAPS, AND GRADE BEAMS – REMOVE FORMS AND SHORES NO SOONER THAN 48 HOURS.

E. CONCRETE SHALL BE CONTINUOUSLY CURED FOR 10 DAYS AFTER PLACING IN ANY APPROVED MANNER IN ACCORDANCE WITH ACI 301, INCLUDING CURING COMPOUND, CURING PAPER, WATER SPRAY, FLOODING WITH WATER (FOR SLABS), ETC. PROVIDE CURING WHERE FORMS ARE REMOVED IN LESS THAN 7 DAYS.

NOTE: FOOTINGS ARE EXEMPTED FROM THIS REQUIREMENT.

10. REINFORCING STEEL

A. ALL REINFORCING STEEL BARS, UNLESS OTHERWISE NOTED, SHALL CONFORM WITH THE LATEST STANDARD SPECIFICATIONS FOR DEFORMED BILLET STEEL FOR CONCRETE REINFORCEMENT, ASTM DESIGNATION A615 AND SHALL BE MINIMUM GRADE 60.
HEADED SHEAR STUD REINFORCING SHALL COMPLY WITH ASTM A1044

B. ALL REINFORCING STEEL THAT IS TO BE WELDED, OR USED IN SEISMIC FRAME MEMBERS AND SHEARWALL BOUNDARY ELEMENTS, SHALL CONFORM TO THE LATEST STANDARD FOR LOW-ALLOY STEEL DEFORMED BARS FOR CONCRETE REINFORCEMENT ASTM A706 (GRADE 60 ONLY). BILLET STEEL ASTM A615 REINFORCEMENT MAY BE SUBSTITUTED FOR LOW ALLOY ASTM A706 IF (1) THE \ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18,000 PSI, (2) THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRESS TO THE ACTUAL YIELD STRENGTH IS NOT LESS THAN 1.25, AND (3) MINIMUM ELONGATION IN 8" SHALL BE AT LEAST 14 PERCENT FOR BAR SIZES #3 THROUGH #6, AT LEAST 12 PERCENT FOR BAR SIZES #7 THROUGH #11, AND AT LEAST 10 PERCENT FOR BAR SIZES #14 AND #18.

C. WELDED WIRE MESH SHALL CONFORM TO LATEST EDITION OF ASTM A1064.

D. SUITABLE DEVICES (DOBIES, CHAIRS, ETC.) OF SOME STANDARD MANUFACTURE SHALL BE USED TO HOLD REINFORCEMENTS IN ITS TRUE HORIZONTAL AND VERTICAL POSITIONS. THESE DEVICES SHALL BE SUFFICIENTLY RIGID AND NUMEROUS TO PREVENT DISPLACEMENT OF THE REINFORCING DURING PLACING OF CONCRETE. ALL SUCH DEVICES HAVE PRIOR APPROVAL FROM THE ARCHITECT AND ENGINEER.

E. LAP SPLICE ALL BARS IN CONCRETE PER STANDARD DETAILS SCHEDULE, USING LAP TYPE "TOP" UNLESS OTHERWISE NOTED. WHEN LAPPING BARS OF DIFFERENT SIZES, USE THE LAP LENGTH OF THE LARGER BAR.

F. UNLESS OTHERWISE DEMONSTRATED BY SUCCESSFUL PLACEMENT OF A REPRESENTATIVE TEST PANEL, LAP SPLICES FOR SHOTCRETE WALLS SHALL BE PER NON-CONTACT SPLICE METHOD. THE LAPPED BARS SHALL BE SPACED A MINIMUM OF 2" BETWEEN THEM AND THE LAP LENGTH SHALL BE PER THE SCHEDULE USING LAP CLASS B, "TOP".

G. IN LIEU OF LAP SPLICES, REBAR COUPLERS MAY BE USED. ERICO’S AND/ OR ERICO’S CADWELD LENTON. DAYTON BAR-LOCKS AND SIMILAR DEVICES MAY BE USED ONLY IF REINFORCING DETAILER ACCOUNTS FOR COUPLER SIZE, 24 INCH STAGGERING OF COUPLERS AND REINFORCING BAR SPACING. ALTERNATES WILL BE CONSIDERED UPON SUBMITTAL OF MANUFACTURER’S TESTING REPORT. FOR APPLICATIONS IN SEISMIC FRAME MEMBERS AND BOUNDARY ELEMENTS OF SHEAR WALLS, THE COUPLERS SHALL DEVELOP THE LARGER OF 100% OF THE ULTIMATE TENSILE STRENGTH OR 125% OF THE SPECIFIED YIELD STRENGTH OF THE REBAR. FOR ALL OTHER APPLICATIONS, THE COUPLERS SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE REBAR.

H. IN LIEU OF COUPLERS, MAIN LONGITUDINAL REINFORCING BARS OF ASTM A706 STEEL MAY BE WELDED PER AWS D1.4. WELDED SPLICES SHALL NOT BE USED WITHIN A JOINT OF THE SEISMIC FRAME, OR WITHIN A DISTANCE OF ONE BEAM/COLUMN DEPTH FROM A JOINT.

I. SPIRAL REINFORCEMENT

1) LAP SPLICES FOR SPIRAL REINFORCEMENT ARE NOT PERMITTED WITHOUT SPECIFIC AUTHORIZATION FROM ENGINEER.
2) SPIRALS SHALL BE TERMINATED WITH A MINIMUM OF (3) TIGHT TIES AND A 135° HOOK UNLESS OTHERWISE NOTED.

J. HOOK DISCONTINUOUS ENDS OF REINFORCING STEEL PER TYPICAL DETAIL, UNLESS OTHERWISE NOTED. WHERE SPECIFIED OR WHERE REINFORCING IS IN A CONGESTED ZONE SO AS NOT TO PERMIT HOOK BARS, PROVED A “T-HEAD” TERMINATOR: LENTON "D6” OR “D16" TERMINATOR OR APPROVED EQUAL.

K. DETAIL ACCORDING TO THE LATEST ACI STANDARD 315, MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES. PLACE REINFORCEMENT PER ACI 301, “SPECIFICATION FOR STRUCTURAL CONCRETE”, UNLESS OTHERWISE NOTED.

L. REBAR PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.

M. REBAR SHALL ONLY BE BENT ONCE. REBAR SHALL NOT BE BENT AND STRAIGHTENED FOR CONSTRUCTION UNLESS EXPLICITLY NOTED ON THE CONSTRUCTION DOCUMENTS.

N. MAINTAIN COVERAGE TO FACE OF BARS, INCLUDING SLEEVES AND PENETRATIONS, AS FOLLOWS, UNLESS OTHERWISE NOTED:

1) CAST-IN-PLACE CONCRETE
   a. 3" WHERE CONCRETE IS DEPOSITED AGAINST EARTH EXCEPT SLAB-ON-GRADE.
   b. 2 1/2" FOR CAST-IN-PLACE DEEP FOUNDATION ELEMENTS NOT ENCLOSED BY A STEEL PIPE, TUBE OR PERMANENT CASING.
   c. 2" FOR FORMED CONCRETE WHICH IS EXPOSED TO EARTH OR WEATHER FOR #6 BAR THROUGH #18 BAR. REDUCED TO 1 1/2" FOR #5 BAR, W31 OR D31 WIRE AND SMALLER.
   d. 1 1/2" FOR INTERIOR BEAMS AND COLUMNS.
   e. 1 1/2" FOR INTERIOR SLABS AND WALLS FOR #14 AND #18 BAR. REDUCED TO 3/4" FOR #11 BAR AND SMALLER.
   f. 1 1/2" FOR SLAB-ON-GRADE.

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COOPER MOUNTAIN ELEMENTARY SCHOOL
SEISMIC SRGP IMPROVEMENTS

PERMIT/BID SET

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 88908PE OREGON MARCH 11, 2014 JENNIFER B. EGGERS
EXP. 12/31/2021
NOT FOR CONSTRUCTION

Date: 12-04-2020
Project Number: 20138.10
Drawn By: IK
Checked By: JE

Revision Schedule:
1 CITY COMMENTS #1 01/25/2021

Sheet Title:
GENERAL NOTES

Sheet Number:
S-002

PERMIT/BID SET

11. NON-SHRINK GROUT

A. NON-SHRINK GROUT SHALL ACHIEVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS (F'c) OF 7,000 PSI.

B. NON-SHRINK GROUT SHALL COMPLY WITH ONE OF THE FOLLOWING.

1) DRY PACK NON-SHRINK GROUT SHALL BE EUCLID CHEMICAL COMPANY'S "EUCO-NS", L&M CRYSTEX, MASTER BUILDERS' "MASTERFLOW 713", SIMPSON'S "FX-228", OR FIVE STAR GROUT.
2) WHERE HIGH FLUIDITY OR INCREASED PLACING TIME IS REQUIRED, USE EUCLID CHEMICAL COMPANY'S "EUCO HI-FLOW GROUT" OR MASTER BUILDERS' "MASTERFLOW 928".

C. COMPLY WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS AND REQUIREMENTS.

12. PATCHING OF CONCRETE

A. ALL INSERT HOLES, SHE-BOLTS, ETC., AND OTHER IMPERFECTIONS ON THE SURFACES OF THE CONCRETE SHALL BE FILLED WITH GROUT, BRUSHED AND SACKED TO A UNIFORM FINISH. ALL HOLES THROUGH TO THE OUTSIDE OF THE BUILDING MUST BE MADE WATERTIGHT.

B. MATERIALS AND METHODS USED FOR PATCHING OF CONCRETE IN THE EVENT OF SPALLING, HONEYCOMBING, LARGE CRACKS, ETC., SHALL BE BY MASTER BUILDERS, SIKA, OR EQUIVALENT. FINAL FINISHED APPEARANCE SUBJECT TO APPROVAL. SUBSTITUTES WILL BE CONSIDERED UPON SUBMITTAL OF MANUFACTURER'S TESTING REPORT.

13. FRAMING LUMBER

A. ALL FRAMING LUMBER SHALL BE GRADED PER WCLIB GRADING RULES NO. 17.

B. ALL FRAMING LUMBER SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19% AT TIME OF INSTALLATION.

C. ALL POSTS AND BEAMS SHALL BE DOUGLAS FIR, #1.

D. ALL FLOOR AND ROOF JOISTS SHALL BE DOUGLAS FIR, #1.

E. ALL STUDS, PLATES, ETC., SHALL BE DOUGLAS FIR, CONSTRUCTION GRADE.

F. ENGINEERED WOOD PRODUCTS MAY BE USED AS SUBSTITUTES FOR SAWN LUMBER UPON REQUEST BY THE CONTRACTOR AND APPROVAL FROM THE ARCHITECT AND ENGINEER OF RECORD. CONTRACTOR SHALL SUBMIT MANUFACTURER'S TESTING REPORTS FOR APPROVAL.

14. PLYWOOD (PW) OR ORIENTED STRAND BOARD (OSB)

A. EACH PANEL SHALL BE IDENTIFIED WITH THE APPROPRIATE GRADE, TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION, AND SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE U.S. PRODUCT STANDARD PS-1. PLYWOOD GRADE SHALL CONFORM TO CD-X FOR PLYWOOD OR TYPE 2-M-W FOR ORIENTED STRAND BOARD, UNLESS OTHERWISE NOTED.

B. WHERE PLYWOOD IS PERMANENTLY EXPOSED TO WEATHER, IT SHALL BE EXTERIOR TYPE. OTHERWISE, PANEL SHEATHING SHALL BE EXPOSURE 1. PLYWOOD TO BE CC GRADE AT LOCATIONS EXPOSED TO WEATHER; CC OR CD GRADE ELSEWHERE.

C. PANELS TO BE 5-PLY MINIMUM, EXCEPT 3/8" PANELS TO BE 3-PLY MINIMUM.

D. PLYWOOD SHEETS AT FLOORS AND ROOFS SHALL BE LAID WITH FACE GRAIN PERPENDICULAR TO JOISTS AND RAFTERS. PLYWOOD AT FLOORS SHALL BE GLUED TO FRAMING BELOW (USE SOLVENT BASED GLUE COMPLYING WITH ASTM D3498 AND VOLATILE ORGANIC COMPOUND (VOC) LIMITS PER CALGREEN). LN-950 BY LIQUID NAILS OR APPROVED EQUIVALENT, UNLESS OTHERWISE SPECIFIED BY THE ARCHTIECT. PROVIDE RING-SHANK NAILS AT FLOOR AND ROOF SHEATHING.

E. PLYWOOD SHEETS ON WALLS SHALL BE LAID WITH LONG DIMENSION VERTICAL. BLOCK ALL EDGES WITH A MINIMUM OF 3X BLOCK AND/MEMBERS. ALL NAILING SHALL HAVE 3/8" EDGE DISTANCE FOR FRAMING, BLOCKING AND PLYWOOD EDGES. USE SMOOTH-SHANK NAILS FOR PLYWOOD WALL SHEATHING.

F. STAPLES FOR PLYWOOD DIAPHRAGMS SHALL BE 14 GAGE ROUND SEMI-FLATTENED OR FLATTENED, PLAIN OR ZINC-COATED STEEL WIRE, WITH A NOMINAL CROWN WIDTH OF 7/16", DRIVEN BY PNEUMATIC OR MECHANICAL DEVICE.

G. PROVIDE 1/8" GAP BETWEEN PANELS UNLESS OTHERWISE NOTED.

H. PANELS SHALL HAVE THE FOLLOWING PROPERTIES UNLESS OTHERWISE NOTED.

1) 3/8" NOMINAL SHALL BE 3/8" ACTUAL THICKNESS WITH 24/0 SPAN RATING.
2) 1/2" NOMINAL SHALL BE 15/32" ACTUAL THICKNESS WITH 32/16 SPAN RATING.
3) 5/8" NOMINAL SHALL BE 19/32" ACTUAL THICKNESS WITH 40/20 SPAN RATING.
4) 3/4" NOMINAL SHALL BE 23/32" ACTUAL THICKNESS WITH 48/24 SPAN RATING.
5) 1 1/8" NOMINAL SHALL BE 1 1/8" ACTUAL THICKNESS WITH 48" O.C. FLOOR SPAN RATING.

I. ALL GRAVITY SUPERSTRUCTURE PRIMARY LOAD BEARING EXTERIOR WALL ASSEMBLIES AS NOTED ON ARCHITECTURAL DRAWINGS SHALL BE TREATED WITH PYRO-GUARD. STRUCTURAL DESIGN OF FIRE-RETARDANT-TREATED (FRT) SHALL ACCOMMODATE THE FOLLOWING STRENGTH REDUCTION FACTORS:
Fc = 1.00
Fv = 0.96
Ft = 0.95
E = 0.96
Fb = 0.97
FASTENERS AND CONNECTORS = 0.9
ALL FRT WOOD SHALL BE LABELED AS SPECIFIED IN IBC SECTION 2303.2.4 AND SHALL BEAR THE IDENTIFICATION MARK OF AN APPROVED AGENCY IN ACCORDANCE WITH SECTION 1703.5. ALL FASTENERS AND CONNECTORS CONNECTING OR CONNECTED TO FIRE RETARDANT TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED OR STAINLESS STEEL.

15. ROUGH CARPENTRY

A. FOR SCHEDULE OF MINIMUM NAILING TABLE 2304.10.1 OF THE **2019 CBC/2018 IBC** 16d VINYL COATED SINKERS MAY BE SUBSTITUTED FOR 16d BOX OR COMMON NAILS FOR ROUGH FRAMING. SINKERS SHALL NOT BE USED WITH METAL CONNECTORS.

B. SILLS AND LEDGERS ON CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED DOUGLAS FIR. SILLS AND LEDGERS SHALL BE FASTENED TO THE CONCRETE WITH A MINIMUM OF TWO FASTENERS PER PIECE AND A FASTENER NO FURTHER THAN 9"ES FROM END OF EACH PIECE, UNLESS OTHERWISE NOTED.

C. PLACE JOISTS WITH CROWN UP.

D. RE-TIGHTEN ALL BOLTS PRIOR TO CLOSING IN WALLS.

E. WHEN METAL CONNECTORS, ANCHORS OR FASTENERS ITEMS ARE EXPOSED TO WEATHER AND/OR PRESSURE TREATED LUMBER THE METAL ITEMS ARE TO BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. THE COATING WEIGHTS FOR ZINC-COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A153. SEE ADDITIONAL COATING REQUIREMENTS AS NOTED IN THE PRESSURE TREATMENT SECTION.

F. DOUBLE ALL JOISTS UNDER ALL PARALLEL PARTITIONS UNLESS NOTED OTHERWISE.

G. BLOCK ALL JOISTS AT SUPPORTS AND UNDER ALL PARTITIONS WITH MINIMUM 2x SOLID BLOCKING. BLOCK AND BRIDGE ROOF JOISTS AT 10 FEET AND FLOOR JOISTS AT 8 FEET UNLESS OTHERWISE NOTED.

H. 2x JOISTS SHALL BE SISTERED (VERTICAL NAIL LAMINATED) WITH SDWS 0.220x3 MIN. LENGTH AT 6" O.C. IN (2) ROWS STAGGERED UNLESS OTHERWISE NOTED.

I. ALL POSTS LOCATED OVER WOOD WALLS SHALL HAVE A POST OF EQUAL OR GREATER SIZE LOCATED IN THE WALL DIRECTLY BELOW UNLESS OTHERWISE NOTED.

J. THE STRUCTURAL DESIGN ASSUMES THAT ALL FLOORS AND ROOFS ARE CONSTRUCTED AND LOADED WITH FINISHES (OR EQUIVALENT WEIGHT) FOR A MINIMUM OF SEVEN (7) DAY PRIOR TO THE TIME OF DOOR AND WINDOW INSTALLATION.

K. ALL TIMBER FASTENERS NOT SPECIFICALLY DETAILED ON THE DRAWINGS SHALL BE SIMPSON STRONG-TIE'S STANDARD FASTENERS OR APPROVED EQUIVALENT INSTALLER PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. USP LUMBER CONNECTORS WITH REFERENCE NUMBERS FOR SUBSTITUTION MAY BE USED IN LIEU OF SIMPSON HARDWARE. ENGINEER MAY APPROVE OF OTHER SUBSTITUTIONS UPON THE FOLLOWING:

1) WRITTEN REQUEST FOR OTHER BRANDS
2) SUBMISSION OF MANUFACTURER'S TESTING REPORTS
3) REFERENCES TO PERTINENT DETAILS WHERE SUBSTITUTIONS ARE TO BE APPLIED.

L. ALL STRUCTURAL WOOD WALLS SHALL BE FRAMED WITH 2x4 MINIMUM STUDS AT 16" ON CENTER UNLESS OTHERWISE NOTED.

M. PRE-DRILL HOLES AS REQUIRED TO PREVENT SPLITTING OF WOOD.

16. PRESSURE TREATMENT

A. ALL LUMBER EXPOSED TO WEATHER SHALL BE PRESSURE TREATED IN ACCORDANCE WITH A.W.P.A. STANDARD U1, WITH A PRESERVATIVE AND RETENTION SUITABLE FOR THE APPLICATION (SEE BELOW). ALL CUT ENDS SHALL ALSO BE FIELD TREATED WITH A PRESERVATIVE. AS AN ALTERNATE, CONTRACTOR MAY USE REDWOOD OF EQUIVALENT STRENGTH PROPERTIES AS THOSE SHOWN ABOVE, AND AN APPROVED PRIMER.
THE FOLLOWING USE CATEGORIES SHALL BE REQUIRED BASED ON THE APPLICATION:
1) UC1 – INTERIOR DRY
2) UC2 – INTERIOR DAMP
3) UC3A – EXTERIOR ABOVE GROUND – PROTECTED
4) UC3B – EXTERIOR ABOVE GROUND - UNPROTECTED
5) UC4A – GROUND CONTACT, GENERAL USE
6) UC4B – GROUND CONTACT, HEAVY DUTY USE
7) UC4C – GROUND CONTACT, EXTREME DUTY
8) UC5A – MARINE USE, NORTHERN WATERS

B. ALL EXTERIOR GLUED LAMINATED BEAMS EXPOSED TO WEATHER SHALL BE PRESSURE TREATED WITH A PRESERVATIVE, PENTACHLOROPHENOL WITH A MINIMUM NET RETENTION OF 0.40#/CU. FT. FOR BOTH GROUND USE. ALL CUT ENDS SHALL ALSO BE TREATED WITH A PRESERVATIVE. AS AN ALTERNATE, GLU-LAM BEAMS MAY BE FABRICATED OF ALASKAN, OR PORT ORFORD CEDAR, AND FIELD PAINTED WITH AN APPROVED PRIMER.

C. ALL PLYWOOD EXPOSED TO WEATHER SHALL BE PRESSURE TREATED.

D. WHEN METAL CONNECTOR, ANCHOR OR FASTENER ITEMS ARE IN CONTACT WITH PRESSURE TREATED LUMBER AND/OR CORROSIVE ENVIRONMENTS THE CONTRACTOR SHALL USE CORROSION RESISTANT METAL ITEMS AS NOTED:

1) WHEN LUMBER IS TREATED WITH CHROMATED COPPER ARSENATE (CCA-C) OR DOT SODIUM ARSENATE (SBX) THE METAL ITEMS SHALL HAVE A MINIMUM G90 (0.90 OZ/SQFT) ZINC COATING OR ENGINEER APPROVED EQUIVALENT.
2) WHEN LUMBER IS TREATED WITH ALKALINE COPPER QUAT (ACQ-C OR ACQ-D), COPPER AZOLE (CBA-A OR CA-B) OR OTHER BORATE (NON-DOT) TREATMENT THE METAL ITEMS SHALL HAVE A MINIMUM G185 (1.85 OZ/SQFT) ZINC COATING OR ENGINEER APPROVED EQUIVALENT.
3) WHEN LUMBER IS TREATED WITH OTHER TREATMENTS (NOT AMMONIACAL COPPER ZINC ARSENATE (ACZA) SEE 4 BELOW) OR IS EXPOSED TO CORROSIVE ENVIRONMENTS NOT LIST ABOVE THE METAL ITEMS SHALL BE TYPE 316L STAINLESS STEEL OR ENGINEER APPROVED EQUIVALENT.
4) AMMONIACAL COPPER ZINC ARSENATE (ACZA) IS NOT PERMITTED UNLESS APPROVED BY THE ENGINEER.
5) CONTRACTOR IS TO CONFIRM LUMBER PRESSURE TREATMENT TYPE PRIOR TO PURCHASE OF METAL ITEMS.
6) AS AN ALTERNATIVE, FOR THE SITUATION WHEN THE BASE OF A HOLDOWN IS IN CONTACT WITH A PRESSURE TREATED SILL PLATE THE CONTRACTOR CAN PROVIDE A PRESSURE TREATMENT BARRIER BETWEEN THE BASE OF THE HOLDOWN AND THE SILL PLATE.

17. STRUCTURAL STEEL

A. STRUCTURAL STEEL SHALL CONFORM TO FOLLOWING ASTM DESIGNATIONS, UNLESS OTHERWISE NOTED:

1) PLATES AND BARS, INCLUDING DOUBLER PLATES, CONTINUITY PLATES, BASE PLATES, GUSSET PLATES, AND SHEAR TABS: ASTM A572 GRADE 50.
2) WIDE FLANGES (W): ASTM A992 (Fy = 50 KSI).
3) MISCELLANEOUS (M), AMERICAN STANDARD (S), CHANNEL (C), MISCELLANEOUS CHANNEL (MC), AND ANGLES (L): ASTM A36 (Fy = 36 KSI).
4) BEARING PILES (HP): ASTM A572 GRADE 50 (Fy = 50 KSI).
5) RECTANGULAR AND ROUND HSS (HSS): ASTM A1085 (Fy = 50 KSI).
6) PIPE (P): ASTM A53 GRADE B (Fy = 35 KSI)
7) STRUCTURAL TEES (WT, MT, AND ST) SHALL CONFORM TO THE ASTM SPECIFICATION OF THE CORRESPONDING FULL DEPTH SHAPE (WT SHALL CONFORM TO ASTM SPECIFICATION FOR W, ETC.)

B. STRUCTURAL FASTENERS INCLUDING BOLTS, THREADED RODS, AND ANCHOR RODS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS, UNLESS OTHERWISE NOTED.

1) ERECTION, GROUTED, AND TIMBER CONNECTION BOLTS: ASTM A307 WITH WELDABILITY SUPPLEMENT S1 GRADE A.
2) HIGH STRENGTH BOLTS: ASTM F3125 A325; WHERE TWIST-OFF TYPE BOLTS ARE SPECIFIED, PROVIDE ASTM F3125 F1852.
3) THREADED RODS: ASTM A36.
4) HIGH STRENGTH THREADED RODS: ASTM A193 GRADE B7.
5) STEEL HEADED STUD ANCHORS: ASTM A108.
6) ANCHOR RODS AND ANCHOR BOLTS: ASTM F1554 WITH WELDABILITY SUPPLEMENT S1 GRADE 55.

C. WHEN PRETENSIONED ASTM F3125 A490 BOLTS ARE SPECIFIED F436 WASHERS SHALL BE USED UNDER BOTH THE BOLT HEAD AND NUT.

D. ALL BOLTS FOR EXTERIOR USE SHALL BE ZINC-COATED BY THE BOLT MANUFACTURER BY EITHER THE HOT-DIP PROCESS IN ACCORDANCE WITH ASTM A153, CLASS C OR THE MECHANICAL DEPOSIT PROCESS IN ACCORDANCE WITH ASTM B695, CLASS 50.

E. ALL STRUCTURAL STEEL MEMBERS EXPOSED TO WEATHER OR CALLED OUT AS HOT DIP GALVANIZED (HDG) ON PLAN OR STRUCTURAL STEEL MEMBERS LOCATED IN EXTERIOR ENVIRONMENTS SHALL BE HDG IN ACCORDANCE WITH ASTM A 123. ANY MEMBER THAT HAS HAD ITS HDG COATING DAMAGED OR REMOVED DURING TRANSPORT OR ERECTION SHALL HAVE ITS COATING REPAIRED USING ZRC GALVILITE REPAIR COMPOUND OR EQUAL. REPAIR GALVANIZING AFTER WELDING IN ACCORDANCE WITH ASTM A780.

F. PAINT STEEL (EXCEPT GALVANIZED STEEL AND PORTIONS TO BE ENCASED IN CONCRETE) WITH ONE COAT OF PRIMER STANDARD TNEMEC P10-99 OR EQUIVALENT SUBJECT TO ENGINEER'S APPROVAL. ALTERNATES WILL BE CONSIDERED UPON REQUEST AND SUBMISSION OF THE MANUFACTURER'S SPECIFICATIONS.

G. ALL CONCRETE ENCASED STEEL SHALL BE CLEAN OF GREASE, PAINT AND OTHER CONTAMINANTS.

H. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST AISC 'SPECIFICATIONS' FOR DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.

I. WELDING SHALL CONFORM TO THE LATEST EDITION OF THE ANSI/AWS D1.1 STRUCTURAL WELDING CODE. USE E70XX ELECTRODES. WELDING OF METAL DECK AND OTHER SHEET METAL SHALL CONFORM TO THE LATEST EDITION OF AWS D1.3, USE E70XX ELECTRODES.

J. ALL STAIR STRINGERS SHALL BE EITHER A CHANNEL OR MISCELLANEOUS CHANNEL SECTION OR BENT PLATE WITH TOP AND BOTTOM FLANGES OF MINIMUM WIDTH OF 3/4 INCH. THE DESIGN AND USE OF STAIR STRINGERS, TREADS, GUARDRAILS, AND THEIR ATTACHMENTS TO THE BASE BUILDING STRUCTURE SHALL BE DOCUMENTED AND SUPPORTED WITH CALCULATIONS AND DRAWINGS THAT ARE STAMPED AND SIGNED BY A CIVIL/STRUCTURAL ENGINEER LICENSED IN THE STATE OF CONSTRUCTION.

K. LOCATE AND INSTALL ALL ANCHOR BOLTS, EPOXY ANCHORS, AND MECHANICAL ANCHORS BEFORE FABRICATING STEEL CONNECTION ELEMENTS.

L. STRUCTURAL STEEL AND CONNECTIONS EXPOSED TO VIEW IN THE COMPLETED BUILDING ARE DESIGNATED ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) AND ARE SUBJECT TO THE AISC AESS REQUIREMENTS.

18. MECHANICAL ANCHORS

A. EXPANSION ANCHORS INTO CONCRETE SHALL BE
a. HILTI KB-TZ
b. SIMPSON STRONG-BOLT 2
c. DeWalt POWER-STUD+ SD2
INSTALL ANCHORS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

B. SCREW ANCHORS INTO CONCRETE SHALL BE:
a. HILTI KH-EZ
b. SIMPSON TITEN HD
c. DeWalt SCREWBOLT+
INSTALL SCREWS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

C. PRIOR TO INSTALLING MECHANICAL ANCHORS IN POST TENSIONED CONCRETE ELEMENTS THE CONTRACTOR SHALL SCAN THE STRUCTURE AND LOCATE THE TENDONS. THE CONTRACTOR SHALL AVOID TENDON LOCATIONS.

D. PROVIDE STAINLESS (AISI 316) STEEL FASTENERS FOR EXTERIOR USE OR WHEN EXPOSED TO WEATHER OR IN CHEMICALLY CORROSIVE ENVIRONMENTS. PROVIDE ZINC COATED OR GALVANIZED CARBON STEEL ANCHORS AT OTHER LOCATIONS, UNLESS OTHERWISE NOTED. WHERE STAINLESS STEEL FASTENERS ARE USED IN CONJUNCTION WITH GALVANIZED OR OTHER DISSIMILAR BASE METALS, PROVIDE ELECTRICAL ISOLATION AS NOTED ON THE DRAWINGS. NOTIFY THE ENGINEER FOR CLARIFICATION IF NO ELECTRICAL ISOLATION IS SPECIFIED.

E. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. DO NOT CUT EXISTING REINFORCEMENT. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION.

F. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.

19. EPOXY GROUTING OF DOWELS, REBAR AND ANCHOR BOLTS

A. INSTALLATION OF POST-INSTALLED DOWELS, REBAR AND ANCHOR BOLTS (EPOXY ANCHORS) SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII). WHERE THERE IS A CONFLICT BETWEEN THESE NOTES AND THE MPII, SEE MPII FOR CLARIFICATION.

B. EPOXY ANCHORS SHALL MEET THE REQUIREMENTS OF ACI 355.4 AND THE FOLLOWING INSTALLATION REQUIREMENTS, UNLESS OTHERWISE NOTED.

1) MINIMUM AGE OF CONCRETE: 21 DAYS
2) CONCRETE TEMPERATURE RANGE: 50-80 DEGREES FAHRENHEIT
3) MOISTURE CONDITION OF CONCRETE: DRY

C. EPOXY GROUTING WILL BE USED IN ALL LOCATIONS WHERE EITHER ALL-THREAD ROD OR REBAR ARE BEING EMBEDDED INTO EXISTING CONCRETE, CMU, OR BRICK.

D. IN CONCRETE, HOLES SHALL BE DRILLED WITH ROTARY HAMMER UNLESS NOTED OTHERWISE. LOCATE EXISTING REINFORCEMENT PRIOR TO DRILLING. DO NOT CUT EXISTING REINFORCEMENT. IF EXISTING REINFORCEMENT CANNOT BE AVOIDED, NOTIFY THE ENGINEER OF RECORD.

E. IN BRICK, HOLES SHALL BE DRILLED WITH NON-IMPACT TOOLS, NO ROTARY HAMMERS.

F. EPOXY GROUT FOR DOWNWARD HOLES SHALL BE EITHER NON-SAG OR LIQUID TYPE, NORMAL SET. HORIZONTAL OR OVERHEAD HOLES SHALL BE NON-SAG TYPE. FOR OVERHEAD APPLICATIONS A PISTON PLUG SHALL BE USED.

G. UNLESS OTHERWISE NOTED, EPOXY TYPES SHALL BE AS FOLLOWS:
FOR DOWELS AND REBAR IN CONCRETE, EPOXY SHALL BE:
a. HILTI HIT-RE 500 V3
b. SIMPSON SET-3G

FOR ANCHOR BOLTS IN CONCRETE, EPOXY SHALL BE
a. SIMPSON SET-XP
b. HILTI HIT-HY 200
c. DeWalt PURE 110+

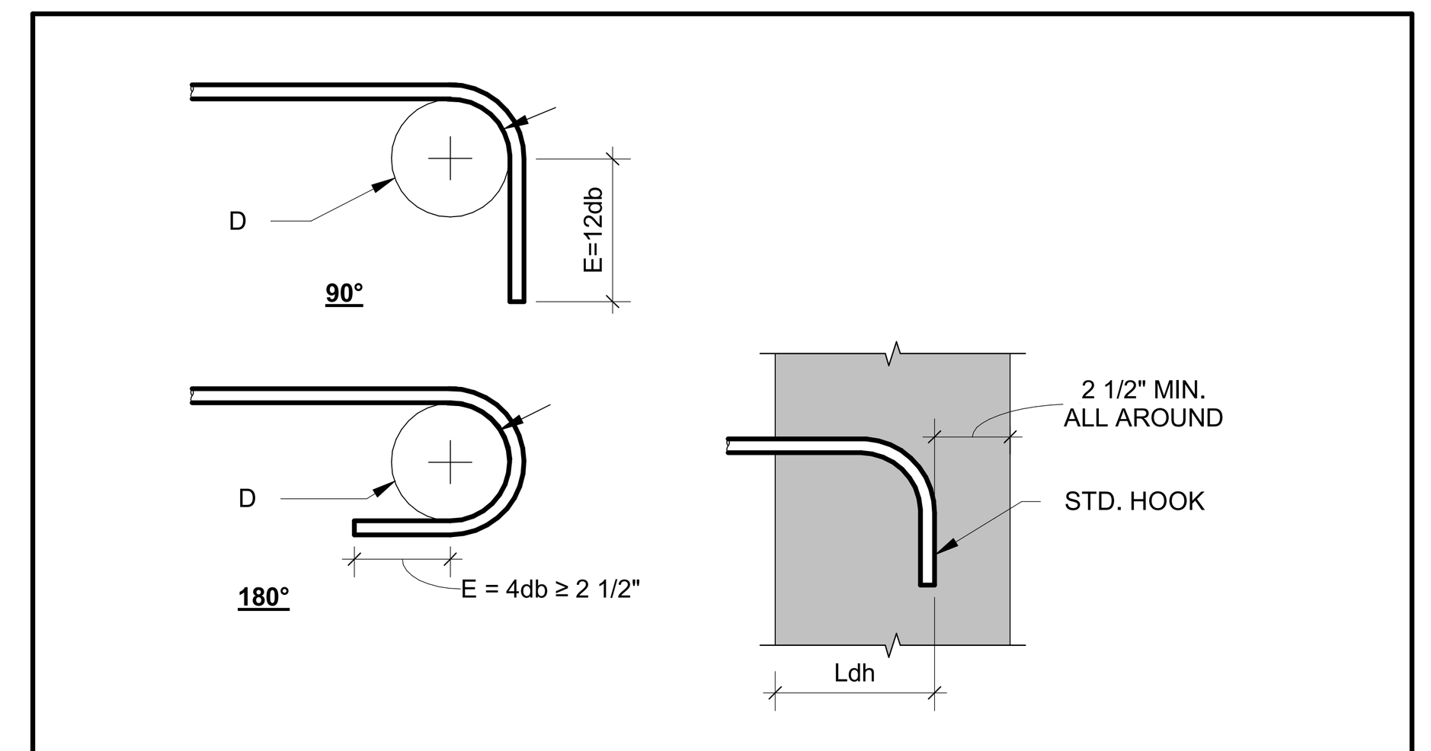
FOR UNREINFORCED MASONRY (URM), EPOXY SHALL BE:
a. SIMPSON SET 1
b. HILTI HIT-HY 270
c. DeWalt AC100+ GOLD

FOR CONCRETE MASONRY UNITS (CMU), EPOXY SHALL BE SIMPSON SET OR POWERS PURE 100+.ALTERNATES WILL BE CONSIDERED UPON REQUEST AND SUBMISSION OF PRODUCT EVALUATION REPORT IN ACCORDANCE WITH ACI 355.4.

1) WHEN INSTALLING ANCHORS, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS OR POST TENSIONING TENDONS. IN POST TENSION ELEMENTS THE CONTRACTOR SHALL SCAN PRIOR TO LOCATE THE EXISTING TENDONS PRIOR TO INSTALLING THE ANCHOR.
2) IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED, THE ENGINEER WILL DETERMINE A NEW LOCATION.
3) LOCATE EXISTING REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH ANCHORS.

20. FINISHES - FOR WORK ON EXISTING BUILDINGS

A. REPLACE ALL DAMAGED FINISH MATERIALS WITH NEW MATERIALS OF EQUIVALENT QUALITY AND KIND. SUBMIT SAMPLES AND/OR PRESENT SAMPLE INSTALLATION TO OWNER FOR APPROVAL PRIOR TO INSTALLATION.

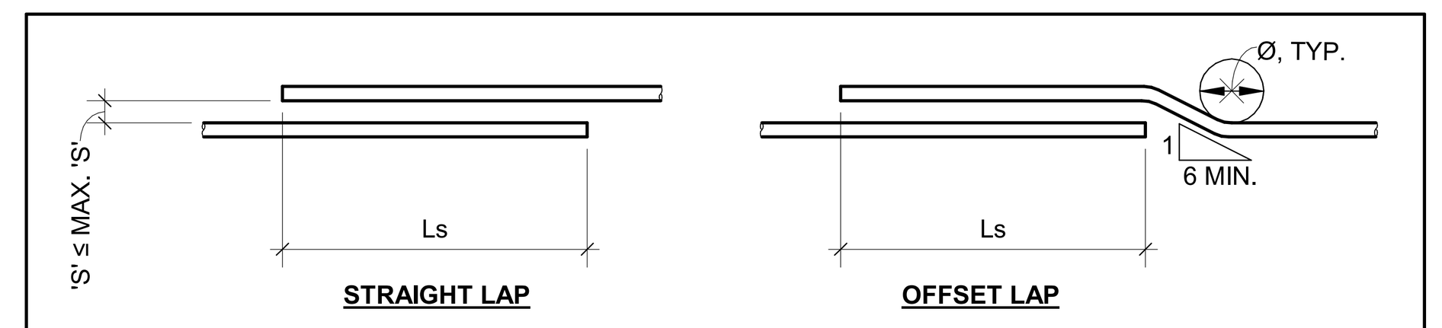


BAR SIZE	D (BEND Ø)	E (HOOK EXTENSION)		Ldh (HOOK DEVELOPMENT LENGTH)		
		90° BEND	180° BEND	f'c=3000psi	f'c=4000psi	f'c≥5000psi
#3	2 1/4"	4 1/2"	2 1/2"	6"	6"	6"
#4	3"	6"	2 1/2"	8"	7"	6"
#5	3 3/4"	7 1/2"	2 1/2"	10"	9"	8"
#6	4 1/2"	9"	3"	12"	10"	9"
#7	5 1/4"	10 1/2"	3 1/2"	14"	12"	11"
#8	6"	12"	4"	16"	14"	12"

NOTES:
1. db = BAR DIAMETER.
2. UNCOATED BARS.
3. NORMAL WEIGHT CONCRETE.
4. MULTIPLY HOOK DEVELOPMENT LENGTH BY 1.33 FOR LIGHTWEIGHT CONCRETE.
5. DO NOT FIELD BEND REINFORCEMENT PARTALLY EMBEDDED IN CONCRETE.

3 S-003 STANDARD HOOK DIM. / DEVELOPMENT SCHED.

N.T.S.



Ls = SPLICE LENGTH										
BAR SIZE	D (BEND Ø)	f'c=3000 PSI			f'c=4000 PSI			f'c≥5000 PSI		
		TOP	OTHER	MAX. 'S'	TOP	OTHER	MAX. 'S'	TOP	OTHER	MAX. 'S'
#3	2 1/4"	28"	22"	4"	25"	19"	3"	22"	17"	3"
#4	3"	38"	29"	5"	33"	25"	4"	29"	23"	4"
#5	3 3/4"	47"	36"	6"	41"	31"	6"	36"	28"	5"
#6	4 1/2"	56"	43"	6"	49"	37"	6"	44"	34"	6"

NOTES:
1. THIS TABLE CONTAINS MIN. LENGTHS FOR LAP SPLICES & BAR DEVELOPMENT NOT OTHERWISE SPECIFIEDON THESE DRAWINGS THESE LENGTHS MAY BE REDUCED IN CERTAIN SITUATIONS, SUBJECT TO PRIOR REVIEW & APPROVAL OF THE ENGINEER.
2. SPLICE LENGTHS ARE FOR NORMAL WEIGHT CONC. W/ GRADE 60 REINF.
3. MULTIPLY SPLICE LENGTHS BY 1.33 FOR LIGHTWEIGHT CONC.
4. SPLICE LENGTHS ARE FOR UNCOATED BARS.
5. DIVIDE LENGTHS IN TABLE BY 1.3 TO OBTAIN SINGLE STRAIGHT BAR, DEVELOPMENT LENGTHS IN CONCRETE
6. USE "TOP" FOR WALL BOUNDARIES & WHEN MORE THAN 12" OF FRESH CONC. IS PLACED BELOW SPLICE, "OTHER" FOR ALL OTHER SITUATIONS.
7. 'S' = SPACING.
8. PROVIDE MIN. COVER PER GENERAL NOTES, BUT NOT LESS THAN 1x BAR DIAMETER.

2 S-003 LAP SPLICE / DEVELOPMENT SCHEDULE

NO SCALE

REBAR SIZE-BOLT Ø	TORQUE REQUIREMENT (FT./LBS.)	TEST QUANITITY (MIN. 2 PER 500 S.F. OR 4 PER WALL/BEAM/COL.)[1]	PULL-TEST REQUIREMENT (LBS.)	TEST QUANITITY OF BARS (RANDOMLY SELECTED)
#3 - 3/8"	20	25%	3200	10%
#4 - 1/2"	40	25%	5700	10%
#5 - 5/8"	60	25%	8900	10%
#6 - 3/4"	80	25%	12800	10%
#7 - 7/8"	100	25%	17500	10%
#8 - 1"	150	25%	22800	10%

NOTE:
1. THE QUANTITY OF TORQUE-TESTED BOLTS MAY BE REDUCED TO 10% WHEN PERIODIC SPECIAL INSPECTION IS PROVIDED.

1 S-003 BOLT/REBAR TESTING SCHEDULE

N.T.S.

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COOPER MOUNTAIN ELEMENTARY SCHOOL
SEISMIC SRGP IMPROVEMENTS

PERMIT/BID SET

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 88903PE OREGON MARCH 11, 2014 JENNIFER B. EGGERS
EXP. 12/31/2021
NOT FOR CONSTRUCTION

Date: 12-04-2020
Project Number: 20138.10
Drawn By: IK
Checked By: JE

Revision Schedule:
1 CITY COMMENTS #1 01/25/2021

Sheet Title:
GENERAL NOTES

Sheet Number:
S-003

PERMIT/BID SET

1/22/2021 10:37:40 AM

REQUIRED SPECIAL INSPECTIONS OF FABRICATED ITEMS (2019 OSSC SECTION 1705.10)		
TYPE	CONTINUOUS	PERIODIC
1. INSPECTION DURING FABRICATION OF STRUCTURAL, LOAD-BEARING, OR LATERAL LOAD-RESISTING MEMBERS OR ASSEMBLIES ON THE PREMISES OF A FABRICATOR'S SHOP	-	X

8 S-004 MINIMUM INSPECTION OF FABRICATED ITEMS

N.T.S.

REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS (2019 OSSC TABLE 1705.6)		
TYPE	CONTINUOUS	PERIODIC
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	X
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. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X

7 S-004 MINIMUM TESTS AND SPECIAL INSPECTIONS OF SOILS

N.T.S.

MINIMUM TESTS AND SPECIAL INSPECTION OF MASONRY CONSTRUCTION (2019 OSSC SECTION 1705.4) LEVEL B TESTS AND SPECIAL INSPECTIONS FOR RISK CATEGORY I, II, AND III PER ACI 530.1-13 TABLE 4			
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD
1. TESTS: VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) AS DELIVERED TO THE PROJECT SITE FOR SELF-CONSOLIDATING GROUT.	X	-	ACI 530.1 ART. 1.5B.1.b.3
2. TESTS: VERIFICATION OF f'm AND f'$_{AAC}$ PRIOR TO CONSTRUCTION EXCEPT WHERE SPECIFICALLY EXEMPTED BY THE CODE.	X	-	ACI 530.1 ART. 1.4B
3. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS.	-	X	ACI 530.1 ART. 1.5
4. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:			
a. PROPORTIONS OF SITE-PREPARED MORTAR.	-	X	ACI 530.1 ART. 2.1, 2.6A
b. CONSTRUCTION OF MORTAR JOINTS.	-	X	ACI 530.1 ART. 3.3B
c. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES.	-	X	ACI 530.1 ART. 2.4B, 2.4H
d. LOCATION OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES.	-	X	ACI 530.1 ART. 3.4, 3.6A
e. PRESTRESSING TECHNIQUE.	-	X	ACI 530.1 ART. 3.6B
f. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY.	X[a]	X[b]	ACI 530.1 ART. 2.1C
5. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:			
a. GROUT SPACE.	-	X	ACI 530.1 ART. 3.2D, 3.2F
b. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES.	-	X	ACI 530 SEC. 6.1; ACI 530.1 ART. 2.4, 3.4
c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES.	-	X	ACI 530 SEC. 6.1, 6.2.1, 6.2.6, 6.2.7; ACI 530.1 ART. 3.2E, 3.4, 3.6A
d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS.	-	X	ACI 530.1 ART. 2.6B, 2.4G.1.b
e. CONSTRUCTION OF MORTAR JOINTS.	-	X	ACI 530.1 ART. 3.3B
6. VERIFY DURING CONSTRUCTION:			
a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	-	X	ACI 530.1 ART. 3.3F
b. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION.	-	X	ACI 530 SEC. 1.2.1(e), 6.1.4.3, 6.2.1
c. WELDING OF REINFORCEMENT.	X	-	ACI 530 SEC. 8.1.6.7.2, 9.3.3.4(c) 11.3.3.4(b)
d. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40ºF) OR HOT WEATHER (TEMPERATURE ABOVE 90ºF).	-	X	ACI 530.1 ART. 1.8C, 1.8D
e. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE.	X	-	ACI 530.1 ART. 3.6B
f. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE.	X	-	ACI 530.1 ART. 3.5, 3.6C
g. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS.	X[a]	X[b]	ACI 530.1 ART. 3.3B.9, 3.3F.1.b
7. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRIS.M.S..	-	X	ACI 530.1 ART. 1.4B.2.a.3, 1.4B.2.b.3, 1.4B.2.c.3, 1.4B.3, 1.4B.4

a. REQUIRED FOR THE FIRST 5,000 SQUARE FEET OF AAC MASONRY.
b. REQUIRED AFTER THE FIRST 5,000 SQUARE FEET OF AAC MASONRY.

6 S-004 MINIMUM TESTS AND SPECIAL INSPECTION OF MASONRY CONSTRUCTION

N.T.S.

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION (2019 OSSC SECTION 1705.2.1 AND AISC 360-16 CHAPTER N)[a]			
VERIFICATION AND INSPECTION	PERFORM[b]	OBSERVE[c]	REF. STANDARD
1. FABRICATOR AND ERECTOR DOCUMENTS: VERIFY REPORTS, CERTIFICATIONS, SPECIFICATIONS AND QUALIFICATIONS LISTED IN AISC 360-16 SECTION N3 FOR COMPLIANCE WITH CONSTRUCTION DOCUMENTS.	-	X	AISC 360 N3
2. MATERIAL VERIFICATION OF STRUCTURAL STEEL.	-	X	
3. VERIFY MEMBER LOCATIONS, BRACES, STIFFENERS, AND APPLICATION OF JOINT DETAILS AT EACH CONNECTION COMPLY WITH CONSTRUCTION DOCUMENTS.	-	X	AISC 360 N5.7
4. WELDING			AISC 360 N5.4
A. INSPECTION TASKS PRIOR TO WELDING			AISC TABLE N5.4-1
1. WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE.	X	-	
2. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE.	X	-	
3. MATERIAL IDENTIFICATION (TYPE/GRADE).	-	X	
4. WELDER IDENTIFICATION SYSTEM (FABRICATOR SHALL BE ABLE TO IDENTIFY WELDERS PERFORMING WELDING OF JOINTS OR MEMBERS).	-	X	
5. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY): JOINT PREPARATION, DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION), AND BACKING TYPE AND FIT (IF APPLICABLE).	-	X	
6. CONFIGURATION AND FINISH OF ACCESS HOLES.	-	X	
7. FIT-UP OF FILLET WELDS: DIMENSIONS (ALIGNMENT, GAPS AT ROOT), CLEANLINESS (CONDITION OF STEEL SURFACES), AND TACKING (TACK WELD QUALITY AND LOCATION).	-	X	
8. CHECK WELDING EQUIPMENT.	N/A	N/A	
B. INSPECTION TASKS DURING WELDING			AISC TABLE N5.4-2
1. USE OF QUALIFIED WELDERS.	-	X	
2. CONTROL AND HANDLING OF WELDING CONSUMABLES: PACKAGING, AND EXPOSURE CONTROL.	-	X	
3. NO WELDING OVER CRACKED TACK WELDS.	-	X	
4. ENVIRONMENTAL CONDITIONS: WIND SPEED WITHIN LIMITS, AND PRECIPITATION AND TEMPERATURE.	-	X	
5. WPS FOLLOWED: SETTINGS ON WELDING EQUIPMENT, TRAVEL SPEED, SELECTED WELDING MATERIALS, SHIELDING GAS TYPE/FLOW RATE, PREHEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED (MIN/MAX), AND PROPER POSITION (F,V,H,OH).	-	X	
6. WELDING TECHNIQUES: INTERPASS AND FINAL CLEANING, EACH PASS WITHIN PROFILE LIMITATIONS, AND EACH PASS MEETS QUALITY REQUIREMENTS.	-	X	
C. INSPECTION TASKS AFTER WELDING			AISC TABLE N5.4-3
1. WELDS CLEANED.	-	X	
2. SIZE, LENGTH, AND LOCATION OF WELDS.	X	-	
3. WELDS MEET VISUAL ACCEPTANCE CRITERIA: CRACK PROHIBITION, WELD/BASE-METAL FUSION, CRATER CROSS SECTION, WELD PROFILES, WELD SIZE, UNDERCUT, AND POROSITY.	X	-	
4. ARC STRIKES.	X	-	
5. 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" OF THE WELD).	X	-	
6. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED).	X	-	
7. REPAIR ACTIVITIES.	X	-	
8. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER.	X	-	
D. NONDESTRUCTIVE TESTING OF WELDED JOINTS (EXCEPTION NDT OF WELDS COMPLETED IN AN APPROVED FABRICATOR'S SHOP. SEE AISC 360-10 N7):			AISC 360 N5.5
1. COMPLETE PENETRATION GROOVE WELDS 5/16" OR GREATER IN RISK CATEGORY III OR IV. UT ON 100% MAY BE REDUCED TO 25% PER AISC 360-10 N5e.	X	-	
2. COMPLETE PENETRATION GROOVE WELDS 5/16" OR GREATER IN RISK CATEGORY II. UT ON 10%, MAY INCREASE TO 100% PER AISC 360-16 N5f.	X	-	
3. THERMALLY CUT SURFACES OF ACCESS HOLES WHEN MATERIAL t>2".	X	-	
4. WELDED JOINTS SUBJECT TO FATIGUE WHEN REQUIRED BY AISC 360, APPENDIX 3, TABLE A-3.1.	X	-	
5. FABRICATOR'S NDT REPORTS WHEN FABRICATOR PERFORMS NDT.	X	-	
5. BOLTING			AISC 360 N5.6
A. INSPECTION TASKS BEFORE BOLTING			AISC TABLE N5.6-1
1. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS.	X	-	
2. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS.	-	X	
3. PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE).	-	X	
4. PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL.	-	X	
5. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS.	-	X	
6. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENT FOR FASTENER ASSEMBLIES AND METHODS USED.	-	X	
7. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS.	-	X	
B. INSPECTION TASKS DURING BOLTING			AISC TABLE N5.6-2
1. FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED.	-	X	
2. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION.	-	X	
3. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING.	-	X	
4. FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES.	-	X	
C. INSPECTION TASKS AFTER BOLTING: DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS.	X	-	AISC TABLE N5.6-3
6. PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL. VERIFY AS A MINIMUM DIAMETER, GRADE, TYPE, AND LENGTH OF THE ANCHOR ROD OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE.	X	-	AISC 360 N5.7

a. SEE AISC 360-16 CHAPTER N FOR ADDITIONAL INFORMATION NOT SHOWN HEREIN.

b. "PERFORM" INDICATES PERFORMANCE OF THE TASK FOR EACH STEEL ELEMENT, MEMBER, WELDED JOINT, OR BOLTED CONNECTION.

c. "OBSERVE" INDICATES OBSERVATION OF ITEM ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS. THIS REQUIRES PURPOSEFUL, REGULAR, RANDOM INSPECTION WITH FREQUENCY THAT IS APPROPRIATE TO ASSURE THAT THE PROCESS IS BEING PERFORMED CORRECTLY.

5 S-004 MINIMUM TESTS AND SPECIAL INSPECTION OF STEEL CONSTRUCTION

N.T.S.

TESTING FOR SEISMIC RESISTANCE (2019 OSSC SECTION 1705.13)	
TESTING	
1. STRUCTURAL STEEL TESTING AND QUALIFICATION FOR SEISMIC RESISTANCE: TEST IN ACCORDANCE WITH THE QUALITY ASSURANCE REQUIREMENTS OF AISC 341.	OSSC SEC. 1705.13.1, AISC 341-10
2. NONSTRUCTURAL COMPONENTS: REVIEW CERTIFICATE OF COMPLIANCE FOR NONSTRUCTURAL COMPONENT, SUPPORT, OR ATTACHMENT FOR CONFORMANCE WITH ASCE 7-10 SECTION 13.2.1 WHERE QUALIFICATION IS ACHIEVED THROUGH ANALYSIS, TESTING, OR EXPERIENCE DATA.	OSSC SEC. 1705.13.2
3. DESIGNATED SEISMIC SYSTEMS: REVIEW CERTIFICATE OF COMPLIANCE FOR ELEMENTS OF THE DESIGNATED SEISMIC SYSTEM (WHERE NOTED ON THESE DRAWINGS) FOR CONFORMANCE WITH ASCE 7-10 SECTION 13.2.2.	OSSC SEC. 1705.13.3

4 S-004 MINIMUM TEST FOR SEISMIC RESISTANCE

N.T.S.

REQUIRED VERIFICATION AND INSPECTION FOR SEISMIC RESISTANCE (2019 OSSC SECTION 1705.12)			
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC[a]	REFERENCED STANDARD
1. STRUCTURAL STEEL SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE: INSPECTION OF STRUCTURAL STEEL IN ACCORDANCE WI AISC 341.	-	O	OSSC SEC. 1705.12.1 AISC 341
2. STRUCTURAL WOOD SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE:			OSSC SEC. 1705.12.2
a. INSPECTION OF FIELD GLUING OPERATIONS OF ELEMENTS OF THE SEISMIC-FORCE RESISTING SYSTEM.	X	-	
b. INSPECTION OF NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS WITHIN THE SEISMIC-FORCE RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS*, WOOD SHEAR PANELS*, WOOD DIAPHRAGMS*, DRAG STRUTS, AND HOLD-DOWNS.	-	X	* NOT REQUIRED WHERE FASTENER SPACING OF SHEATHING IS MORE THAN 4" O.C.
3. DESIGNATED SEISMIC SYSTEMS VERIFICATIONS: INSPECT AND VERIFY THAT THE COMPONENT LABEL, ANCHORAGE OR MOUNTING CONFORMS TO THE CERTIFICATE OF COMPLIANCE IN ACCORDANCE WITH SECTION 1705.12.4.	-	X	OSSC SEC. 1705.12.4
4. ARCHITECTURAL COMPONENTS SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE:			OSSC SEC. 1705.12.5
a. INSPECTION DURING ERECTION AND FASTENING OF EXTERIOR CLADDING.	-	X	
b. INSPECTION DURING ERECTION AND FASTENING OF INTERIOR AND EXTERIOR VENEER.	-	X	
c. INSPECTION DURING THE ERECTION AND FASTENING OF INTERIOR AND EXTERIOR NONBEARING WALLS.	-	X	
d. INSPECTION DURING ANCHORAGE OF ACCESS FLOORS.	-	X	
5. PLUMBING, MECHANICAL AND ELECTRICAL COMPONENTS SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE:			OSSC SEC. 1705.12.6
a. INSPECTION DURING THE ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY OR STANDBY POWER SYSTEMS.	-	X	
b. INSPECTION DURING THE ANCHORAGE OF OTHER ELECTRICAL EQUIPMENT.	-	X	
c. INSPECTION DURING INSTALLATION AND ANCHORAGE OF PIPING SYSTEMS DESIGNED TO CARRY HAZARDOUS MATERIALS, AND THEIR ASSOCIATED MECHANICAL UNITS.	-	X	
d. INSPECTION DURING THE INSTALLATION AND ANCHORAGE OF HVAC DUCTWORK THAT WILL CONTAIN HAZARDOUS MATERIALS.	-	X	
e. INSPECTION DURING THE INSTALLATION AND ANCHORAGE OF VIBRATION ISOLATION SYSTEMS.	-	X	

a. "O" INDICATES AN ACTIVITY THAT IS EITHER A ONE-TIME ACTIVITY OR ONE WHOSE FREQUENCY IS ON A RANDOM BASIS OR IS DEFINED IN SOME OTHER MANNER (SEE REFERENCED CODE SECTION).

3 S-004 MINIMUM INSPECTION FOR SEISMIC RESISTANCE

N.T.S.

REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION (2019 OSSC TABLE 1705.3)				
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD	OSSC REFERENCE
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.	-	X	ACI 318: CH. 20, 25.2, 25.3, 26.5.1-26.5.3	1908.4
2. REINFORCING BAR WELDING:				
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706.	-	X	AWS D1.4 ACI 318: 26.5.4	-
b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16".	-	X		
c. INSPECT ALL OTHER WELDS.	X	-		
3. INSPECT ANCHORS CAST IN CONCRETE.	-	X	ACI 318: 17.8.2	-
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS[b].				
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X	-	ACI 318: 17.8.2.4	-
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	-	X	ACI 318: 17.8.2	-
5. VERIFY USE OF REQUIRED MIX DESIGN.	-	X	ACI 318: CH.19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C172, ASTM C31, ACI 318: 26.4.5, 26.12	1908.10
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318: 26.4.5	1908.6, 1908.7, 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	ACI 318: 26.4.7-26.4.9	1908.0
9. INSPECT FORMWORK FOR SHAPE LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X	ACI 318: 26.10.1(b)	-

a. WHERE APPLICABLE, SEE ALSO SECTION 1705.12 (SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE).
b. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH ACI 318-14 SECTION 17.8.2, OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK. SPECIAL INSPECTIONS FOR EPOXY ADHESIVE ANCHORS SHALL BE CONTINUOUS UNLESS NOTED OTHERWISE.

2 S-004 MINIMUM TEST AND SPECIAL INSPECTIONS OF CONCRETE CONSTRUCTION

N.T.S.

STATEMENT OF SPECIAL INSPECTIONS

1. SPECIAL INSPECTIONS AND TESTS SHALL BE PERFORMED BY AN INDEPENDENT QUALIFIED INSPECTION AND/OR TESTING AGENCY APPROVED BY THE JURISDICTION FOR SUCH WORK,AND IN ACCORDANCE WITH CHAPTER 17 OF THE CODE. THESE SPECIAL INSPECTIONS AND TESTS ARE IN ADDITION TO THE INSPECTIONS PERFORMED BY THE BUILDING OFFICIAL.
2. THE OWNER SHALL BE RESPONSIBLE FOR RETAINING THE SPECIAL INSPECTION AND/OR TESTING AGENCY.
3. THE SPECIAL INSPECTION AND/OR TESTING AGENCY SHALL KEEP RECORDS AND SUBMIT SPECIAL INSPECTION AND TEST REPORTS TO THE BUILDING OFFICIAL AND THE STRUCTURAL ENGINEER OF RECORD IN ACCORDANCE WITH SECTIONS 1704.2.4 AND 1704.5 OF THE CODE AND JURISDICTION-SPECIFIC REQUIREMENTS.
4. THE CONTRACTOR SHALL NOTIFY THE TESTING LAB A MINIMUM OF 48 HOURS PRIOR TO TIME OF INSPECTION.
5. THE CONSTRUCTION OR WORK FOR WHICH SPECIAL INSPECTION OR TESTING IS REQUIRED SHALL REMAIN ACCESSIBLE AND EXPOSED FOR SPECIAL INSPECTION OR TESTING PURPOSES UNTIL COMPLETION OF THE REQUIRED SPECIAL INSPECTIONS OR TESTS.
6. IF INITIAL TESTS OR INSPECTIONS MADE BY THE OWNER'S TESTING OR INSPECTION AGENCY REVEAL THAT ANY PORTION OF THE WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, ADDITIONAL TESTS, INSPECTIONS, AND NECESSARY REPAIRS SHALL BE MADE AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER IMMEDIATELY OF NON-CONFORMING WORK. THIS NOTIFICATION SHALL SPECIFICALLY ADDRESS THE NON-CONFORMING WORK AND SHALL BE SEPARATE FROM THE SPECIAL INSPECTION REPORTS.
7. SPECIAL INSPECTION REPORTS SHALL BE SENT TO THE ENGINEER AT THE TIME OF COMPLETION FOR REVIEW OF CONFORMANCE WITH THE REQUIREMENTS OF THE STRUCTURAL DRAWINGS.
8. SPECIAL INSPECTIONS AND TESTS FOR SEISMIC RESISTANCE SHALL BE PERFORMED FOR THE DESIGNATED SEISMIC SYSTEM/SEISMIC FORCE RESISTING COMPONENT WHEN APPLICABLE AND AS PER SECTIONS 1705.12 & 1705.13 OF THE CODE.
   a. DESIGNATED SEISMIC SYSTEM/SEISMIC FORCE RESISTING SYSTEM: N/A
   SEE THE ABOVE-REFERENCED CODE SECTIONS FOR ADDITIONAL SPECIAL INSPECTION AND TEST REQUIREMENTS FOR STRUCTURAL STEEL, STRUCTURAL WOOD, COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION, DESIGNATED SEISMIC SYSTEMS, ARCHITECTURAL COMPONENTS, MEP COMPONENTS, STORAGE RACKS, SEISMIC ISOLATIONS SYSTEMS, AND COLD-FORMED STEEL SPECIAL BOLTED MOMENT FRAMES.
9. SPECIAL INSPECTIONS FOR WIND RESISTANCE SHALL BE PERFORMED FOR THE MAIN WIND FORCE RESISTING SYSTEM AND WIND RESISTING COMPONENTS WHEN APPLICABLE AND AS PER SECTION 1705.11 OF THE CODE.
   a. MAIN WIND FORCE RESISTING SYSTEM/WIND RESISTING COMPONENT: N/A
   SEE THE ABOVE-REFERENCED CODE SECTIONS FOR ADDITIONAL SPECIAL INSPECTION REQUIREMENTS FOR STRUCTURAL WOOD, COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION, AND WIND-RESISTING COMPONENTS.
10. EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND OR SEISMIC FORCE RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM, OR A WIND OR SEISMIC RESISTING COMPONENT LISTED ABOVE SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THIS STATEMENT OF SPECIAL INSPECTIONS.
11. STEEL CONSTRUCTION: SPECIAL INSPECTIONS FOR STEEL ELEMENTS OF BUILDINGS AND STRUCTURES SHALL BE AS REQUIRED BY SECTION 1705.2 OF THE CODE AND IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360-16, INCLUDING THE SPECIAL INSPECTION TABLE SHOWN HEREIN. SEE ALSO REQUIREMENTS NOTED FOR SEISMIC AND WIND RESISTANCE OF INSPECTION NOTES #8 AND #9.
12. CONCRETE CONSTRUCTION: SPECIAL INSPECTIONS AND VERIFICATIONS FOR CONCRETE CONSTRUCTION SHALL BE AS REQUIRED BY SECTION 1705.3 OF THE CODE, INCLUDING THE SPECIAL INSPECTION TABLE SHOWN HEREIN.
   CONCRETE SPECIAL INSPECTIONS AND TESTS ARE NOT REQUIRED FOR:
   a. ISOLATED SPREAD FOOTINGS OF BUILDINGS 3 STORIES OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK.
   b. NONSTRUCTURAL CONCRETE SLABS SUPPORTED DIRECTLY ON THE GROUND, INCLUDING PRESTRESSED SLABS ON GRADE WHERE THE EFFECTIVE PRESTRESS IN THE CONCRETE IS LESS THAN 150 PSI.
   c. CONCRETE PATIOS, DRIVEWAYS AND SIDEWALKS, ON GRADE.
13. MASONRY CONSTRUCTION: SPECIAL INSPECTIONS AND VERIFICATIONS FOR MASONRY CONSTRUCTION SHALL BE AS REQUIRED BY SECTION 1705.4 OF THE CODE AND IN ACCORDANCE WITH TMS 402/ACI 530/ASCE 5 AND TMS 602/ACI 530.1/ASCE 6 QUALITY ASSURANCE REQUIREMENTS, INCLUDING THE SPECIAL INSPECTION TABLES SHOWN HEREIN.
14. WOOD CONSTRUCTION: SPECIAL INSPECTIONS FOR WOOD CONSTRUCTION SHALL BE AS REQUIRED BY SECTION 1705.5 OF THE CODE. SEE ALSO REQUIREMENTS NOTED FOR SEISMIC AND WIND RESISTANCE OF INSPECTION NOTES #8 AND #9.
15. SOILS: SPECIAL INSPECTIONS FOR EXISTING SOIL CONDITIONS, FILL PLACEMENT, AND LOAD BEARING REQUIREMENTS SHALL BE AS REQUIRED BY SECTIONS 1705.6 THROUGH 1705.9 OF THE CODE, INCLUDING THE SPECIAL INSPECTION TABLES SHOWN HEREIN.

1 S-004 STATEMENT OF SPECIAL INSPECTIONS

N.T.S.

BEAVERTON SCHOOL DISTRICT
Cooper Mtn SRGP

7670 SW 170th Ave
Beaverton, OR 97007

OH PLANNING+DESIGN, ARCHITECTURE
115 NW 1st Ave, Ste. 300
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COOPER MOUNTAIN ELEMENTARY SCHOOL
SEISMIC SRGP IMPROVEMENTS

PERMIT/BID SET

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 88903PE OREGON MARCH 11, 2014 JENNIFER B. EGGERS
NOT FOR CONSTRUCTION
EXP. 12/31/2021

Date:	12-04-2020
Project Number:	20138.10
Drawn By:	IK
Checked By:	JE

Revision Schedule:

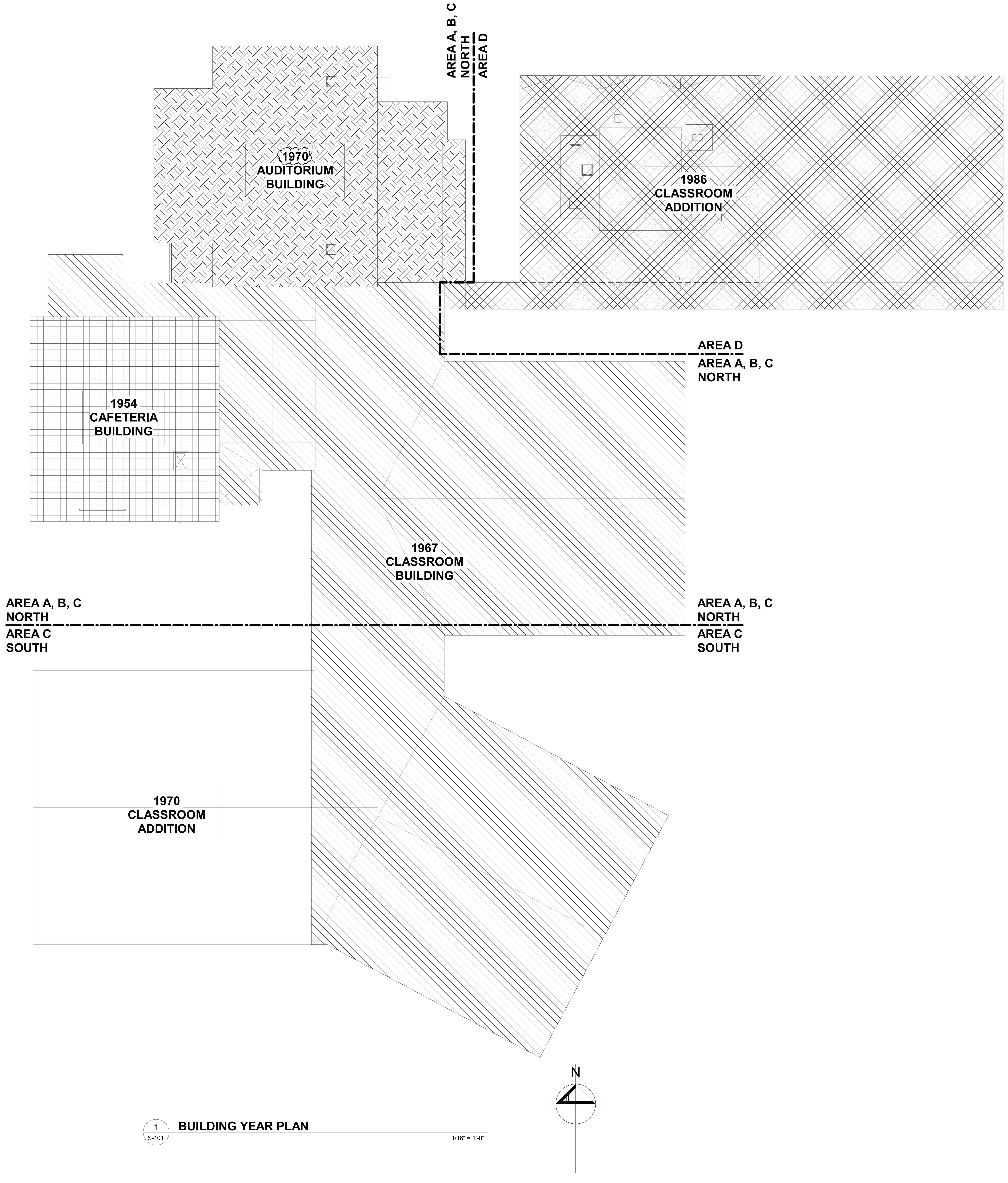
1 CITY COMMENTS #1 01/25/2021

Sheet Title:
SPECIAL INSPECTIONS

Sheet Number:
S-004

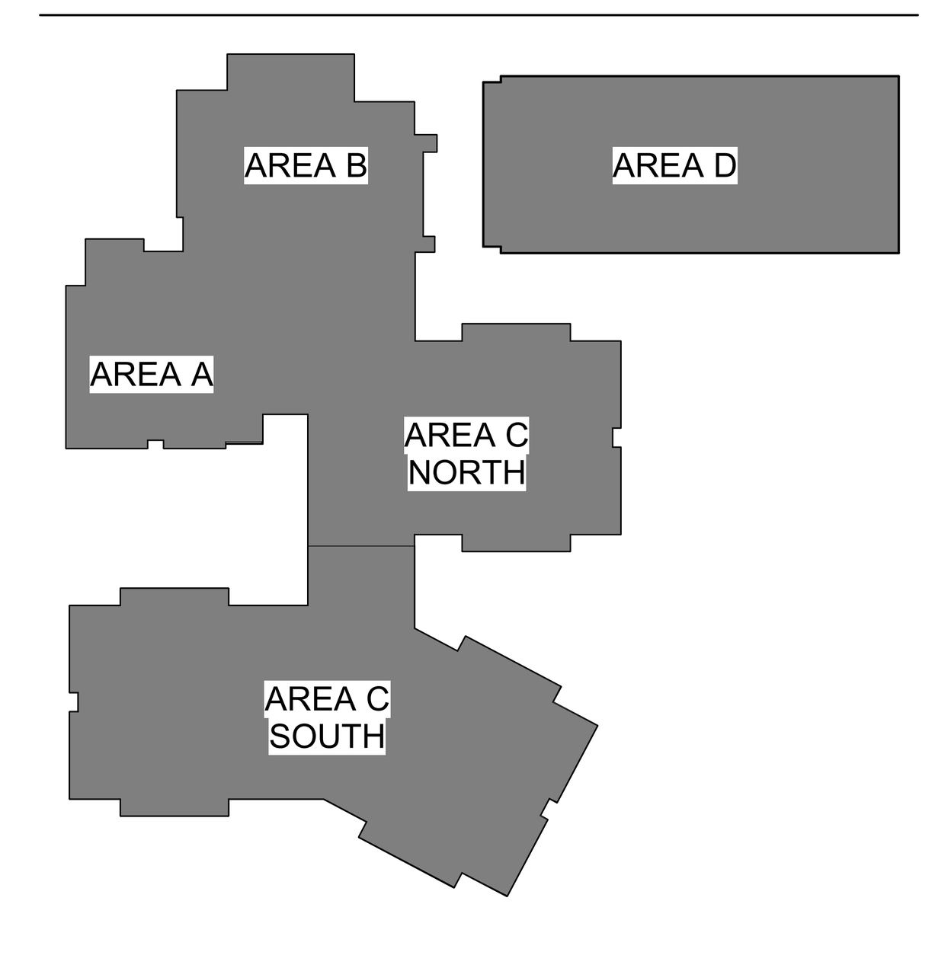
PERMIT/BID SET

1/22/2021 10:37:43 AM



1 S-101 **BUILDING YEAR PLAN** 1/16" = 1'-0"

KEY PLAN



BEAVERTON SCHOOL DISTRICT

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COOPER MOUNTAIN ELEMENTARY SCHOOL
SEISMIC SRGP IMPROVEMENTS

PERMIT/BID SET

NOT FOR CONSTRUCTION

Date:	12-04-2020
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Revision Schedule:

1 CITY COMMENTS #1 01/25/2021

Sheet Title:

BUILDING YEAR PLAN

Sheet Number:

S-101

PERMIT/BID SET

1/22/2021 10:37:44 AM

SHEET NOTES:

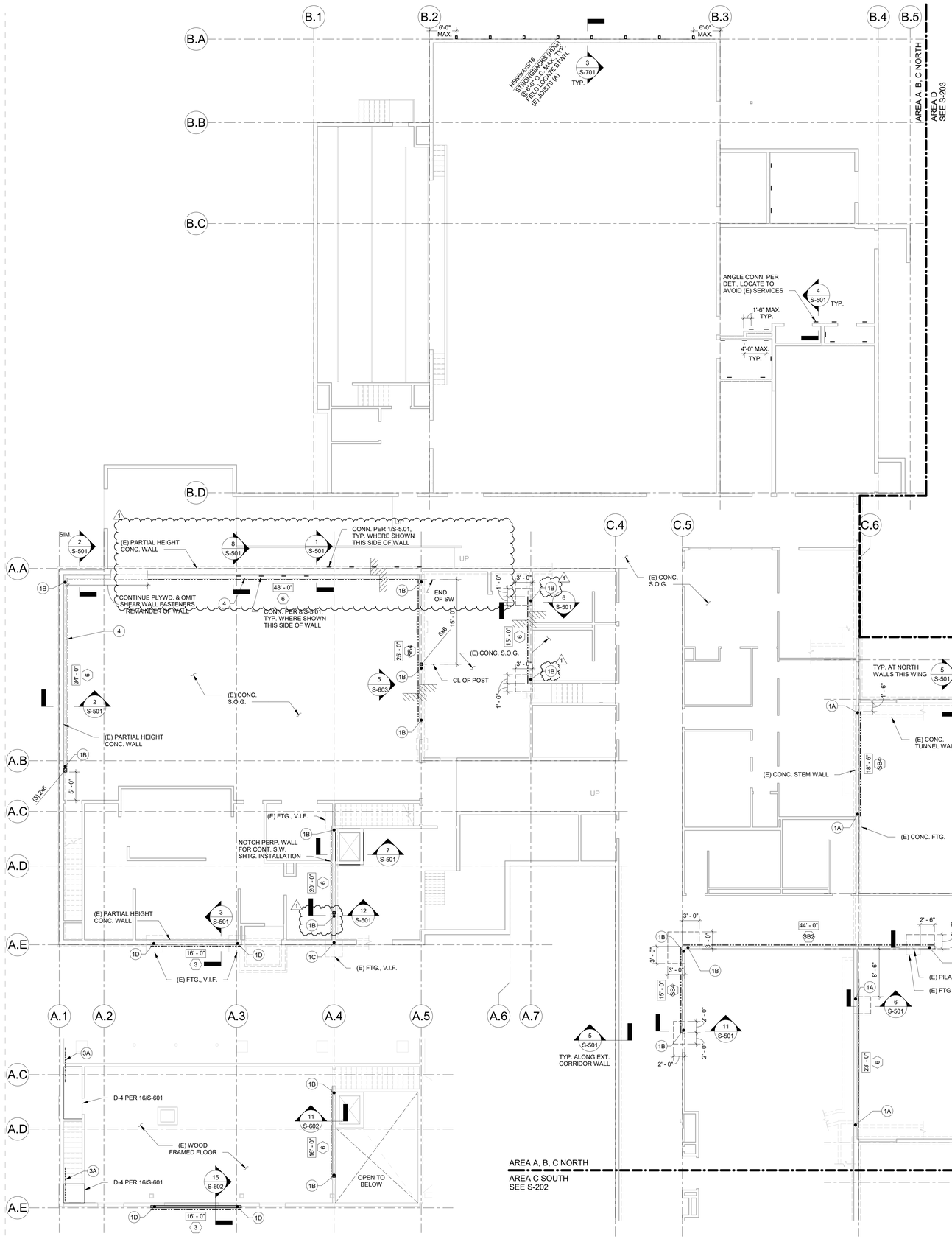
1. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AND INFORMATION NOT SHOWN.
2. SEE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR RELATED NON-STRUCTURAL ELEMENTS EMBEDDED OR CONNECTED TO THE STRUCTURE.
3. FIELD VERIFY ALL EXISTING STRUCTURAL CONDITIONS.
4. FIELD VERIFY ALL FINISHES AND SERVICES TO BE RELOCATED OR REPLACED FOR CONSTRUCTION.
5. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR NON-STRUCTURAL ITEMS REQUIRING RETROFIT.
6. (X) INDICATES SHEAR WALL, SEE LEGEND BELOW FOR SHEAR WALL SCHEDULE INFORMATION.

KEY NOTES:

1. HOLDOWN REQUIRED AT EA. END OF SHEAR WALL, HOLDOWN POST TO RECEIVE EDGE NAIL. PROVIDE SISTERED STUDS OR (N) TO MEET MIN. POST SIZE PER SCHEDULE, U.O.N. PER PLAN
   - 1A. HDU2 W/ 4X4 POST. W/ 5/8"Ø THR'D. ROD COUPLED TO #5 REBAR W/ 18" EPOXY EMB. IN (E) FDN. OR 5/8"Ø ANCHOR W/ 3x3x3/8" PL. WASHER, 12" MIN EMB. IN (N) FTG.
   - 1B. HDU5 W/ 4X4 POST W/ 5/8"Ø THR'D. ROD COUPLED TO #5 REBAR W/ 24" EPOXY EMB. IN (E) FDN. OR 5/8"Ø ANCHOR W/ 3x3x3/8" PL. WASHER, 12" MIN EMB. IN (N) FTG.
   - 1C. HDU8 W/ 4X4 POST W/ 7/8"Ø THR'D. ROD COUPLED TO #7 REBAR W/ 28" EPOXY EMB. IN (E) FDN.
   - 1D. HDU11 W/ 4X6 POST W/ 1"Ø THR'D. ROD COUPLED TO #8 REBAR W/ 45" EPOXY EMB. IN (E) FDN.
2. BOLT (E) WOOD POST TO (E) FOUNDATION AND PROVIDE BRACING WHERE NOT PROVIDED. ACCESS TO AREA IS LIMITED, REMOVE FLOORING AS REQUIRED.
3. SIMPSON STRAP, BLOCK UNDER STRAPS WHERE NO FRAMING MEMBER EXISTS
   - 3A. CMST14 W/ (33) 10d NAILS, 30" MIN. LENGTH
   - 3B. LMST
4. (N) FULL HEIGHT STUD WALL W/ (2) 2x6 @ 16" O.C., FASTEN TO PARTIAL HEIGHT CONCRETE WALL BEHIND.
9. EXISTING SCREEN WALLS TO REMAIN, REPLACE IN KIND AFTER ROOF RETROFIT

LEGEND:

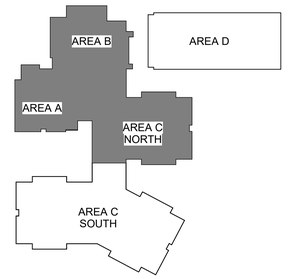
- (E) CONC. WALL
- (E) CMU WALL
- (E) STUD WALL
- (E) WALL (B)
- (N) STUD WALL
- (N) WALL (B)
- (N) 1/2" CDX PLYWOOD SHTG. OVER (E) WOOD WALL, SEE 1 & 9/S-601
  - X-XX" MIN. LENGTH
  - X S.W. MARK
- SUREBOARD SHTG. OVER (E) WOOD WALL, SEE 5 & 9/S-601
  - X-XX" MIN. LENGTH
  - SBX S.W. MARK
- (E) WD. COLUMN
- (E) TS COLUMN
- (E) COLUMN (B)
- HSS COLUMN
- 1x HOLDOWN & POST AT SHEAR WALL END. EPOXY DOWEL AT (E) FOOTINGS PER KEY NOTE 1
- 3X DIAPHRAGM STRAP. PER KEY NOTE 3
- PLYWOOD
- (N) 3'-0" SQ. x 18" THK. CONC. FOOTING
- (E) DIAPHRAGM STRENGTHENING



2 S-201 **SECOND FLOOR PLAN - AREA A** 1/8" = 1'-0"

1 S-201 **FIRST FLOOR PLAN - AREA A, B, C NORTH** 1/8" = 1'-0"

KEY PLAN



BEAVERTON SCHOOL DISTRICT

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Consultants:

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565 SE MLK Jr Blvd, Suite 602
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T: 503 673 9323 holmesstructures.com

COOPER MOUNTAIN ELEMENTARY SCHOOL
SEISMIC SRGP IMPROVEMENTS

PERMIT/BID SET

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER OREGON JENNIFER B. EDGES EXP. 12/31/2021

NOT FOR CONSTRUCTION

Date:	12-04-2020
Project Number:	20138.10
Drawn By:	IK
Checked By:	JE

Revision Schedule:

1	CITY COMMENTS #1	01/25/2021

Sheet Title:

FLOOR PLAN - AREA A, B, C NORTH

Sheet Number:

S-201

PERMIT/BID SET

1/22/2021 10:37:44 AM

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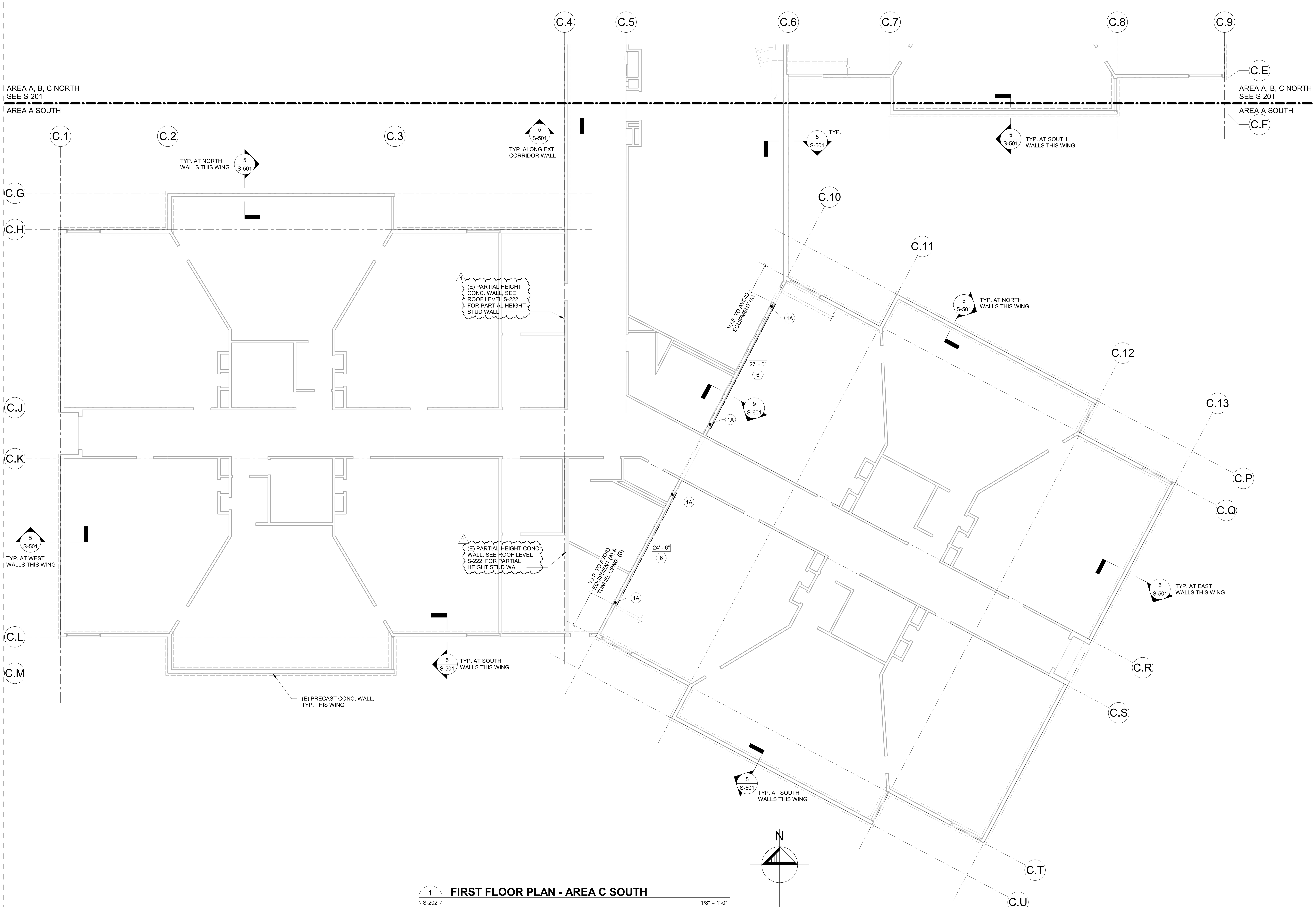
(3) SIMPSON STRAP, BLOCK UNDER STRAPS WHERE NO FRAMING MEMBER EXISTS

- (3A) CMST14 W/ (33) 10d NAILS, 30" MIN. LENGTH
- (3B) LMST

(4) (N) FULL HEIGHT STUD WALL W/ (2) 2x6 @ 16" O.C., FASTEN TO PARTIAL HEIGHT CONCRETE WALL BEHIND.

(9) EXISTING SCREEN WALLS TO REMAIN, REPLACE IN KIND AFTER ROOF RETROFIT



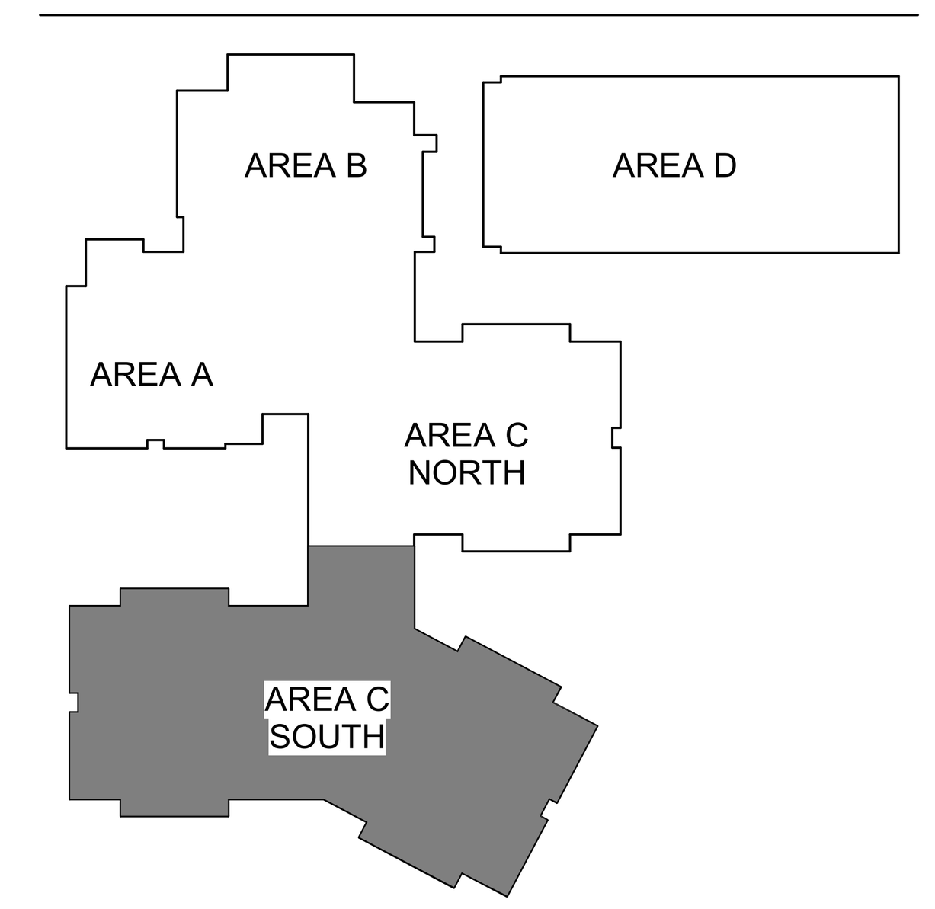
1 S-202 FIRST FLOOR PLAN - AREA C SOUTH

1/8" = 1'-0"

LEGEND:

- (E) CONC. WALL
- (E) CMU WALL
- (E) STUD WALL
- (E) WALL (B)
- (N) STUD WALL
- (N) WALL (B)
- (N) 1/2" CDX PLYWOOD SHTG. OVER (E) WOOD WALL, SEE 1 & 9/S-601 — SW: S.W. MARK; X'-XX": MIN. LENGTH
- SUREBOARD SHTG. OVER (E) WOOD WALL, SEE 5 & 9/S-601 — SBSW: S.W. MARK; X'-XX": MIN. LENGTH
- (E) WD. COLUMN
- (E) TS COLUMN
- (E) COLUMN (B)
- HSS COLUMN
- 1x: HOLDOWN & POST AT SHEAR WALL END, EPOXY DOWEL AT (E) FOOTINGS PER KEY NOTE (1)
- X: WALL TO DIAPHRAGM CONN. PER KEY NOTE (X)
- PLYWOOD
- (N) 3'-0" SQ. x 18" THK. CONC. FOOTING
- (N) D-2 PER 16/S-601 STRENGTHENING AT (E) DIAPHRAGM
- SIMP. STRAP

KEY PLAN



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COOPER MOUNTAIN ELEMENTARY SCHOOL
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PERMIT/BID SET

NOT FOR CONSTRUCTION

EXP. 12/31/2021

Date:	12-04-2020
Project Number:	20138.10
Drawn By:	IK
Checked By:	JE

Revision Schedule:

1	CITY COMMENTS #1	01/25/2021

Sheet Title:

FLOOR PLAN - AREA C SOUTH

Sheet Number:

S-202

PERMIT/BID SET

1/22/2021 10:37:46 AM

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  - SW — S.W. MARK
  - X'-XX" — MIN. LENGTH
- SUREBOARD SHTG. OVER (E) WOOD WALL, SEE 5 & 9/S-601 (1)
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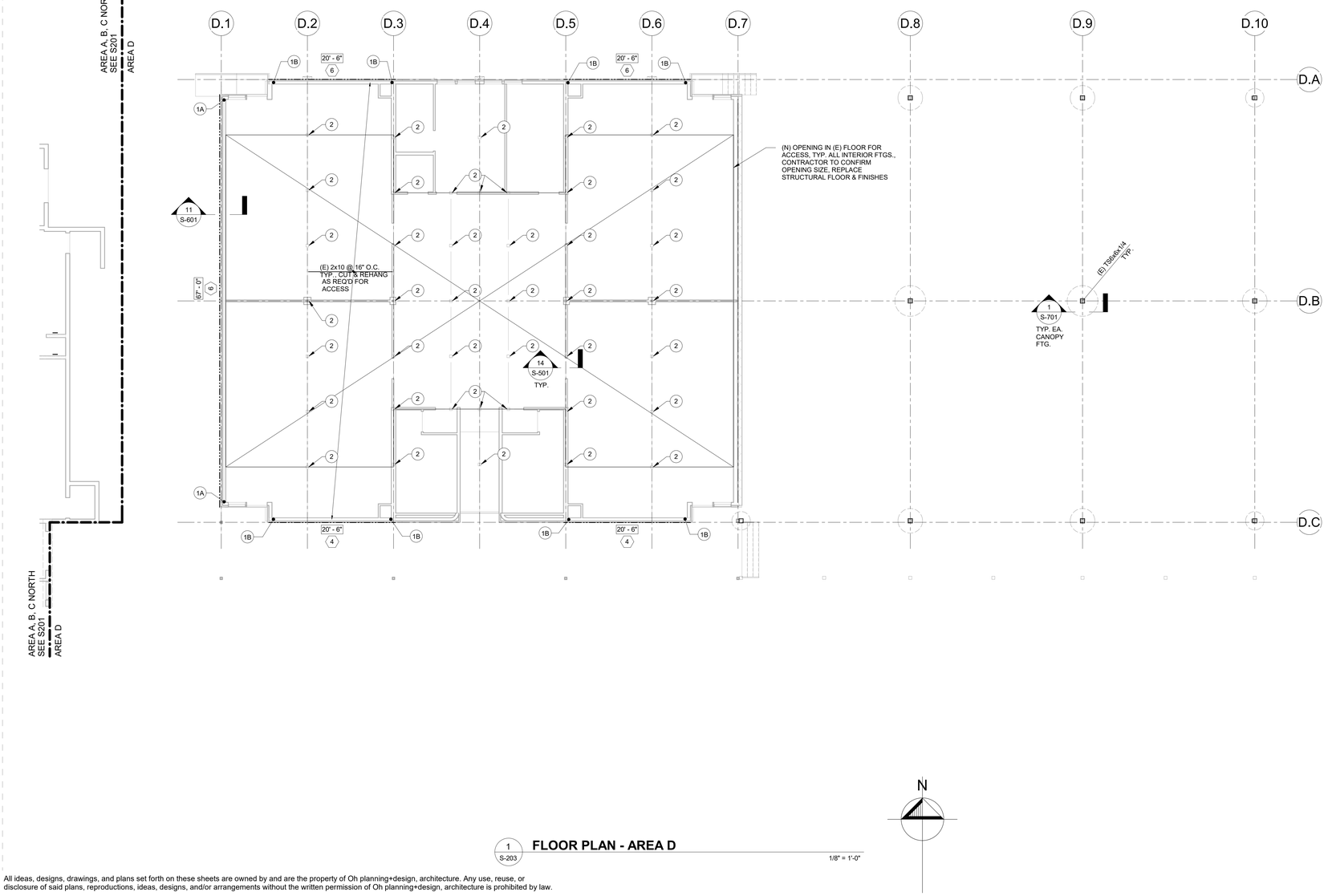
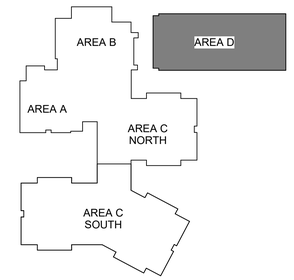


1 S-203 **FLOOR PLAN - AREA D**

1/8" = 1'-0"

N

KEY PLAN



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COOPER MOUNTAIN ELEMENTARY SCHOOL
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PERMIT/BID SET

STRUCTURAL ENGINEER — REGISTERED PROFESSIONAL — OREGON — JENNIFER B. SQUIRES — JULY 11, 2014 — NOT FOR CONSTRUCTION — EXP. 12/31/2021

Date:	12-04-2020
Project Number:	20138.10
Drawn By:	IK
Checked By:	JE

Revision Schedule:

1	CITY COMMENTS #1	01/25/2021

Sheet Title:

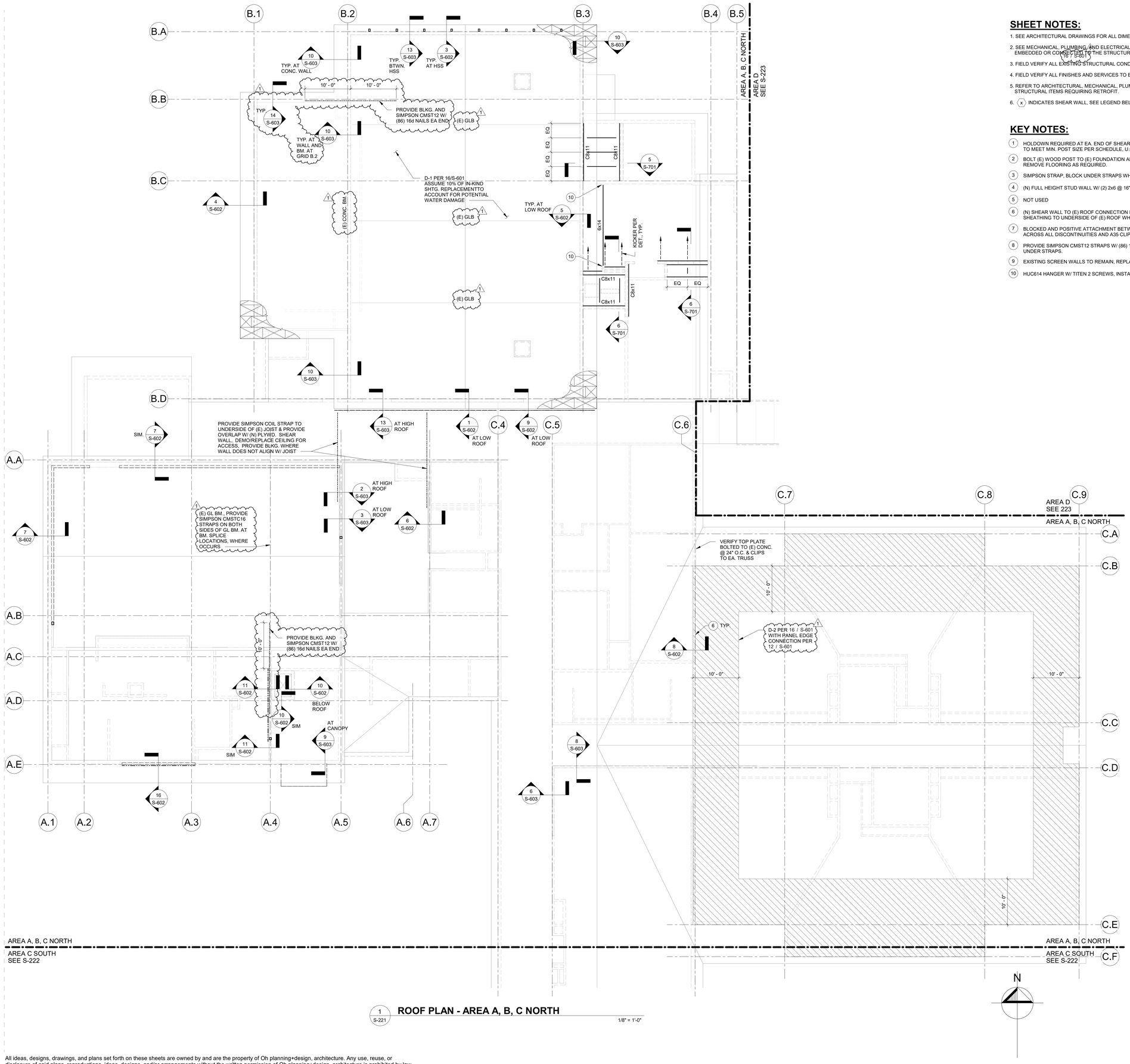
FLOOR PLAN - AREA D

Sheet Number:

S-203

PERMIT/BID SET

1/22/2021 10:37:49 AM



1 S-221 **ROOF PLAN - AREA A, B, C NORTH**

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5. NOT USED
6. (N) SHEAR WALL TO (E) ROOF CONNECTION FROM BELOW. CUT (E) RAFTER NON-LOAD-BEARING TAILS TO ALLOW FOR CONT. SHEATHING TO UNDERSIDE OF (E) ROOF WHERE OCCURS.
7. BLOCKED AND POSITIVE ATTACHMENT BETWEEN STACKED ROOF MEMBERS. INCLUDE CMST14 STRAPPING W/ (66) 10d NAILS ACROSS ALL DISCONTINUITIES AND A35 CLIPS TO UNDERSIDE OF (E) SHEATHING.
8. PROVIDE SIMPSON CMST12 STRAPS W/ (86) 16d NAILS AT ALL DIAPHRAGM DISCONTINUITIES (MODULE BOUNDARIES). BLOCK UNDER STRAPS.
9. EXISTING SCREEN WALLS TO REMAIN, REPLACE IN KIND AFTER ROOF RETROFIT
10. HUC614 HANGER W/ TITEN 2 SCREWS, INSTALL PER MANUFACTURER'S RECOMMENDATIONS

LEGEND:

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- (E) CMU WALL
- (E) STUD WALL
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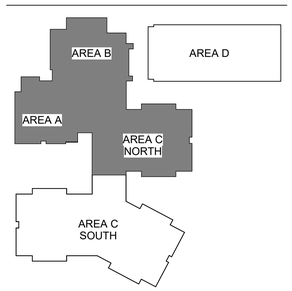
KEY PLAN



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PERMIT/BID SET

REGISTERED PROFESSIONAL ENGINEER — OREGON — JENNIFER B. GOLDEN — EXP. 12/31/2021

NOT FOR CONSTRUCTION

Date: 12-04-2020
Project Number: 20138.10
Drawn By: IK
Checked By: JE

Revision Schedule:

1 CITY COMMENTS #1 01/25/2021

Sheet Title:
ROOF PLAN - AREA A, B, C NORTH

Sheet Number:
S-221

PERMIT/BID SET

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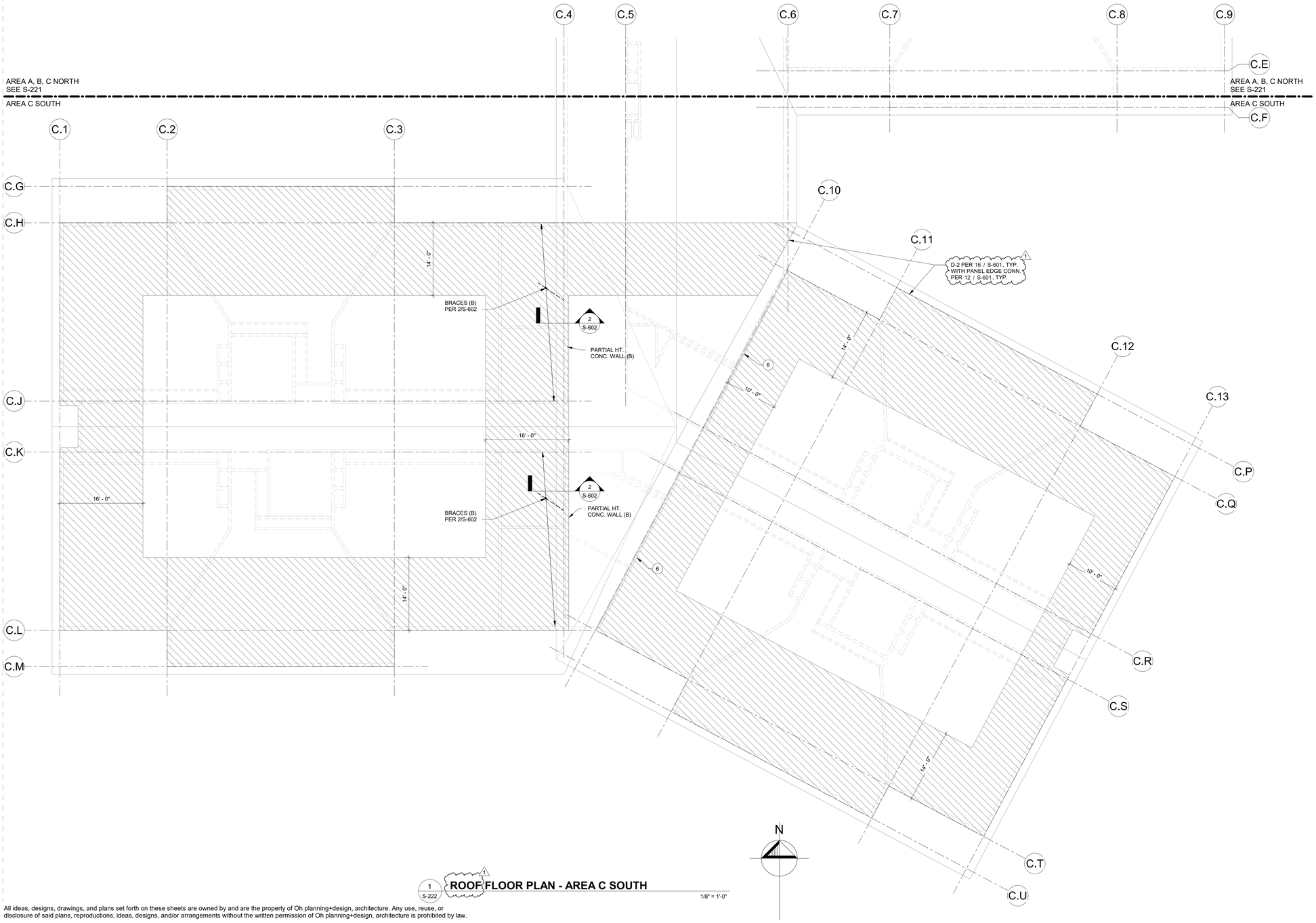

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- (N) D-2 PER 16/S-601 STRENGTHENING AT (E) DIAPHRAGM
- SIMP. STRAP

1 S-222 **ROOF FLOOR PLAN - AREA C SOUTH** (1)

1/8" = 1'-0"

1/22/2021 10:37:50 AM

BEAVERTON SCHOOL DISTRICT

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COOPER MOUNTAIN ELEMENTARY SCHOOL
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PERMIT/BID SET

OREGON STRUCTURAL ENGINEER REGISTERED PROFESSIONAL ENGINEER JENNIFER B. EDKINS NOV. 11, 2014 EXP. 12/31/2021

NOT FOR CONSTRUCTION

Date:	12-04-2020
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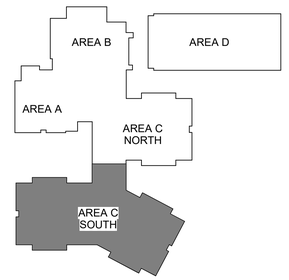
Drawn By:	IK
Checked By:	JE

Revision Schedule:

1	CITY COMMENTS #1	01/25/2021

KEY PLAN



Sheet Title:

ROOF PLAN - AREA C SOUTH

Sheet Number:

S-222

PERMIT/BID SET

SHEET NOTES:

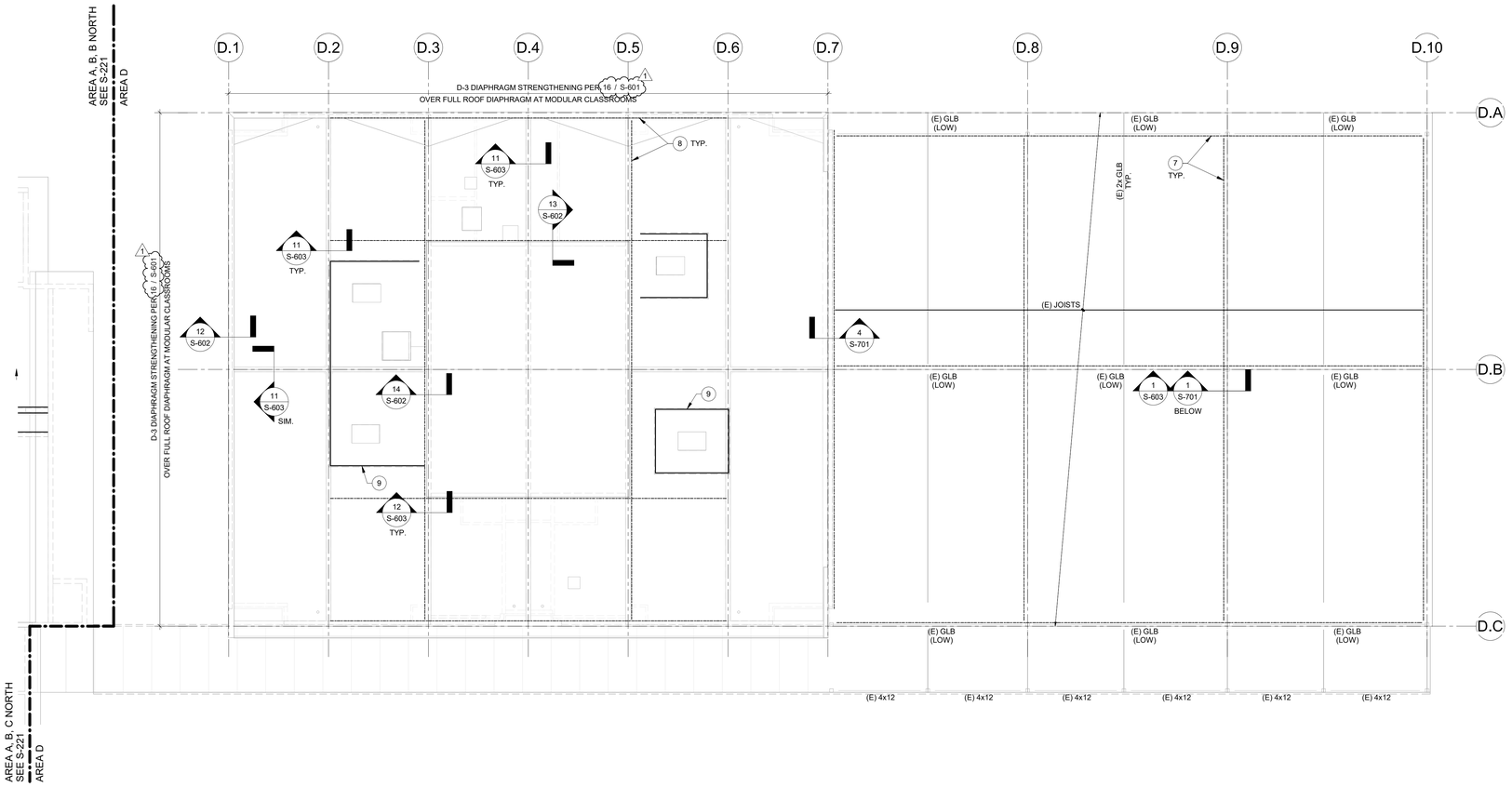
1. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AND INFORMATION NOT SHOWN.
2. SEE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR RELATED NON-STRUCTURAL ELEMENTS EMBEDDED OR CONNECTED TO THE STRUCTURE.
3. FIELD VERIFY ALL EXISTING STRUCTURAL CONDITIONS.
4. FIELD VERIFY ALL FINISHES AND SERVICES TO BE RELOCATED OR REPLACED FOR CONSTRUCTION.
5. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR NON-STRUCTURAL ITEMS REQUIRING RETROFIT.
6. (x) INDICATES SHEAR WALL, SEE LEGEND BELOW FOR SHEAR WALL SCHEDULE INFORMATION.

KEY NOTES:

1. HOLDOWN REQUIRED AT EA. END OF SHEAR WALL. HOLDOWN POST TO RECEIVE EDGE NAIL. PROVIDE SISTERED STUDS OR (N) TO MEET MIN. POST SIZE PER SCHEDULE, U.O.N. PER PLAN
2. BOLT (E) WOOD POST TO (E) FOUNDATION AND PROVIDE BRACING WHERE NOT PROVIDED. ACCESS TO AREA IS LIMITED, REMOVE FLOORING AS REQUIRED.
3. SIMPSON STRAP, BLOCK UNDER STRAPS WHERE NO FRAMING MEMBER EXISTS
4. (N) FULL HEIGHT STUD WALL W/ (2) 2x6 @ 16" O.C., FASTEN TO PARTIAL HEIGHT CONCRETE WALL BEHIND.
5. NOT USED
6. (N) SHEAR WALL TO (E) ROOF CONNECTION FROM BELOW. CUT (E) RAFTER NON-LOAD-BEARING TAILS TO ALLOW FOR CONT. SHEATHING TO UNDERSIDE OF (E) ROOF WHERE OCCURS.
7. BLOCKED AND POSITIVE ATTACHMENT BETWEEN STACKED ROOF MEMBERS. INCLUDE CMST14 STRAPPING W/ (66) 10d NAILS ACROSS ALL DISCONTINUITIES AND A35 CLIPS TO UNDERSIDE OF (E) SHEATHING.
8. PROVIDE SIMPSON CMST12 STRAPS W/ (86) 16d NAILS AT ALL DIAPHRAGM DISCONTINUITIES (MODULE BOUNDARIES), BLOCK UNDER STRAPS.
9. EXISTING SCREEN WALLS TO REMAIN, REPLACE IN KIND AFTER ROOF RETROFIT
10. HUC614 HANGER W/ TITEN 2 SCREWS, INSTALL PER MANUFACTURER'S RECOMMENDATIONS

LEGEND:

- (E) CONC. WALL
- (E) CMU WALL
- (E) STUD WALL
- (E) WALL (B)
- (N) STUD WALL
- (N) WALL (B)
- (N) 1/2" CDX PLYWOOD SHTG. OVER (E) WOOD WALL, SEE 1 & 9/S-601
  - SW = SHEAR WALL MARK
  - X'-XX" = MIN. LENGTH
- SUREBOARD SHTG. OVER (E) WOOD WALL, SEE 5 & 9/S-601 (1)
  - SBSW = SHEAR WALL MARK
  - X'-XX" = MIN. LENGTH
- (E) WD. COLUMN
- (E) TS COLUMN
- (E) COLUMN (B)
- HSS COLUMN
- 1x HOLDOWN & POST AT SHEAR WALL END, EPOXY DOWEL AT (E) FOOTINGS PER KEY NOTE (1)
- (X) WALL TO DIAPHRAGM CONN. PER KEY NOTE (X)
- PLYWOOD
- (N) 3'-0" SQ. x 18" THK. CONC. FOOTING
- (N) D-2 PER 16/S-601 STRENGTHENING AT (E) DIAPHRAGM
- SIMP. STRAP



1 S-223 **ROOF PLAN - AREA D**

1/8" = 1'-0"

N

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COOPER MOUNTAIN ELEMENTARY SCHOOL
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PERMIT/BID SET

STRUCTURAL ENGINEER REGISTERED PROFESSIONAL ENGINEER OREGON JANUARY 11, 2011 JENNIFER B. GOLDEN EXP. 12/31/2021

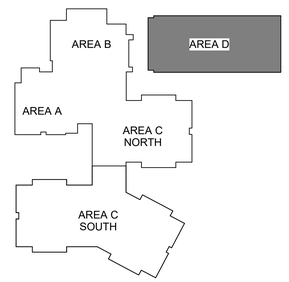
NOT FOR CONSTRUCTION

Date:	12-04-2020
Project Number:	20138.10
Drawn By:	IK
Checked By:	JE

Revision Schedule:

1	CITY COMMENTS #1	01/25/2021

KEY PLAN



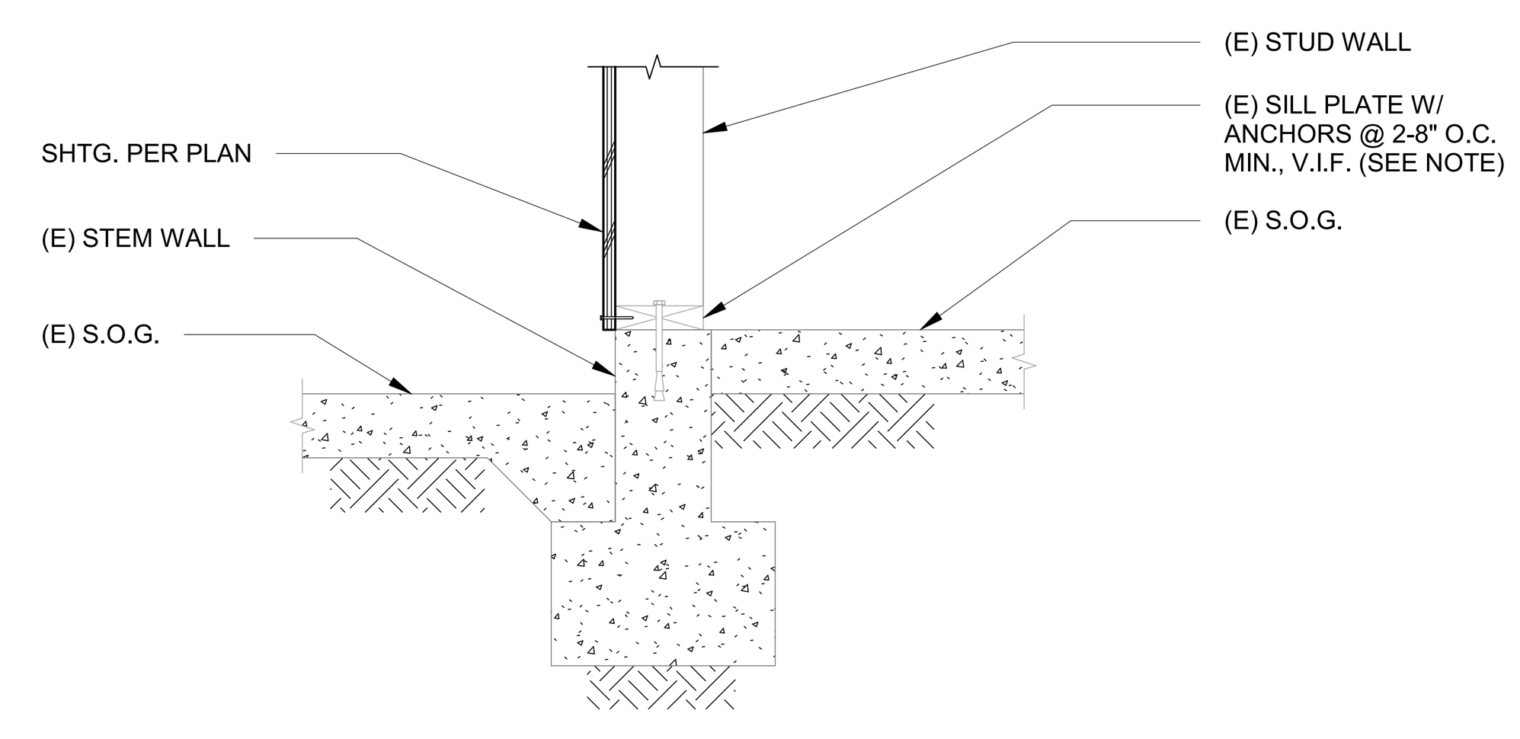
Sheet Title:

ROOF PLAN - AREA D

Sheet Number:

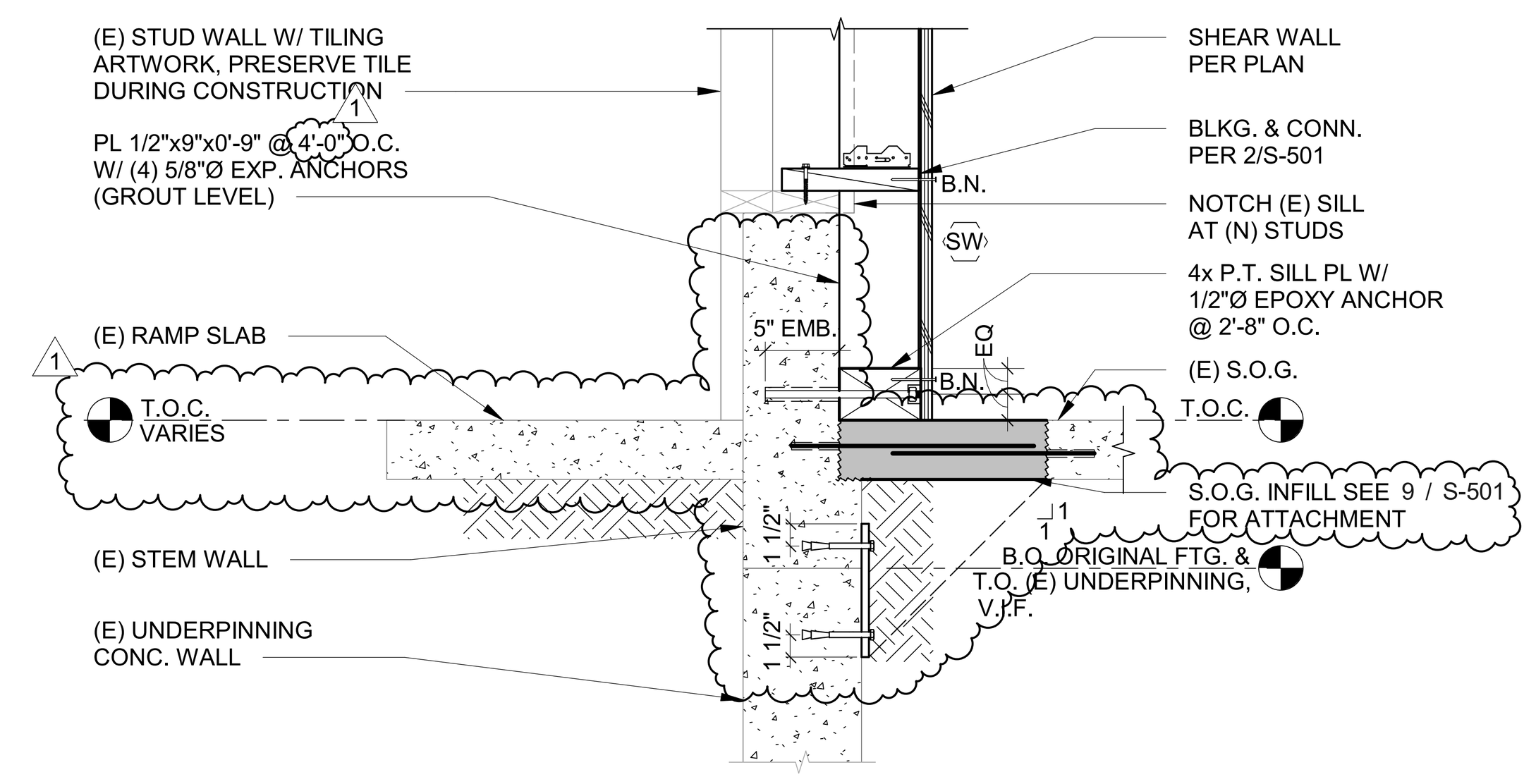
S-223

PERMIT/BID SET

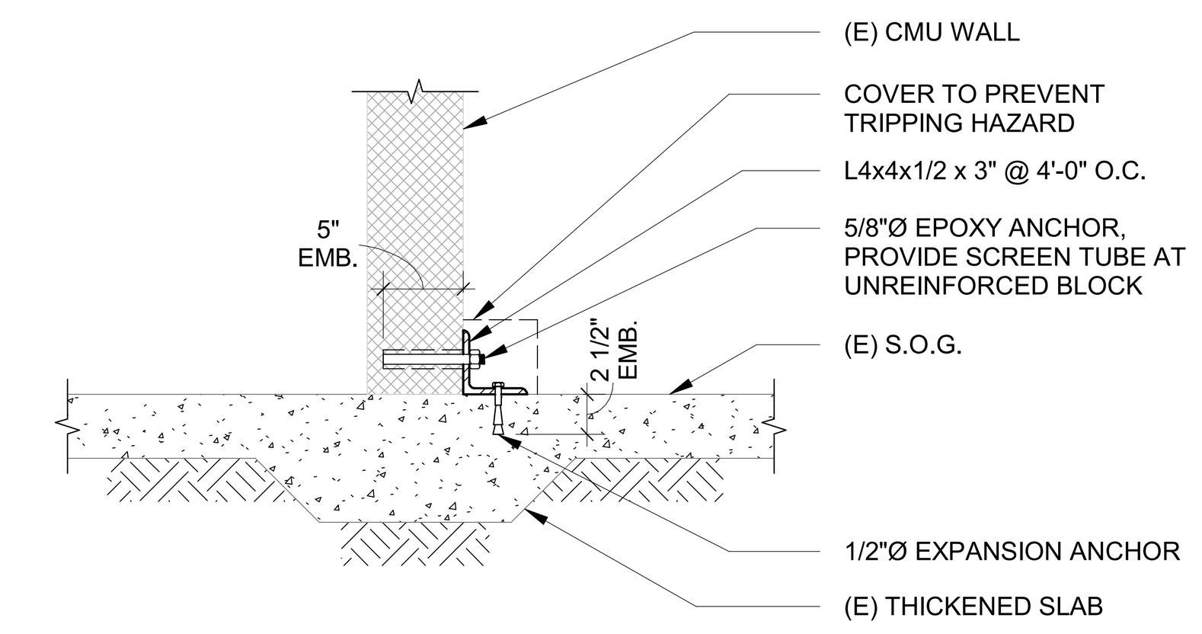


NOTE:
PROVIDE EPOXY DOWEL SILL ANCHORS WHERE NO (E) ANCHORS PRESENT

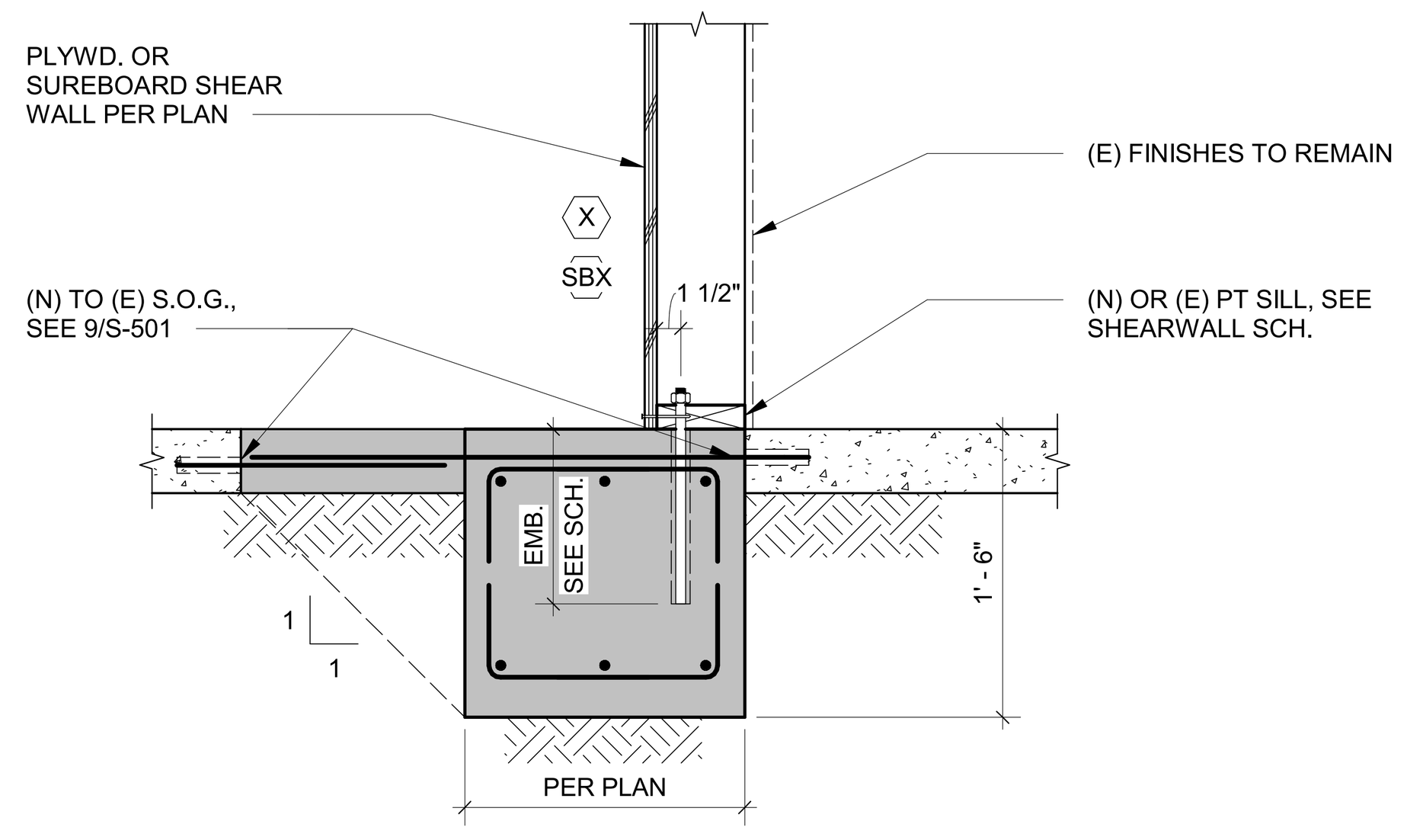
12 S-501 WALL TO (E) FOUNDATION (AREA A) 1" = 1'-0"



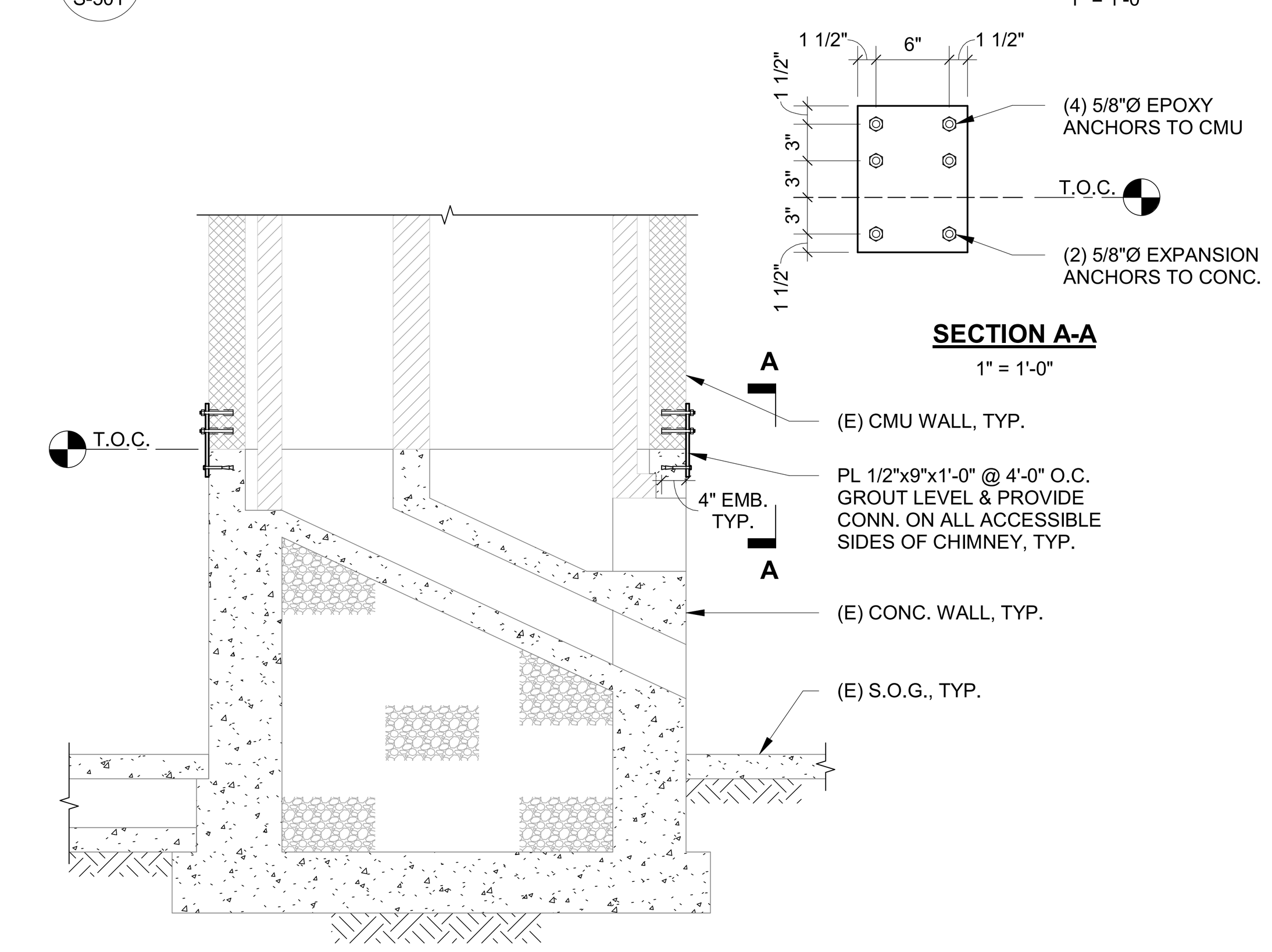
8 S-501 SECTION AT RAMP - HIGH (AREA A) 1" = 1'-0"



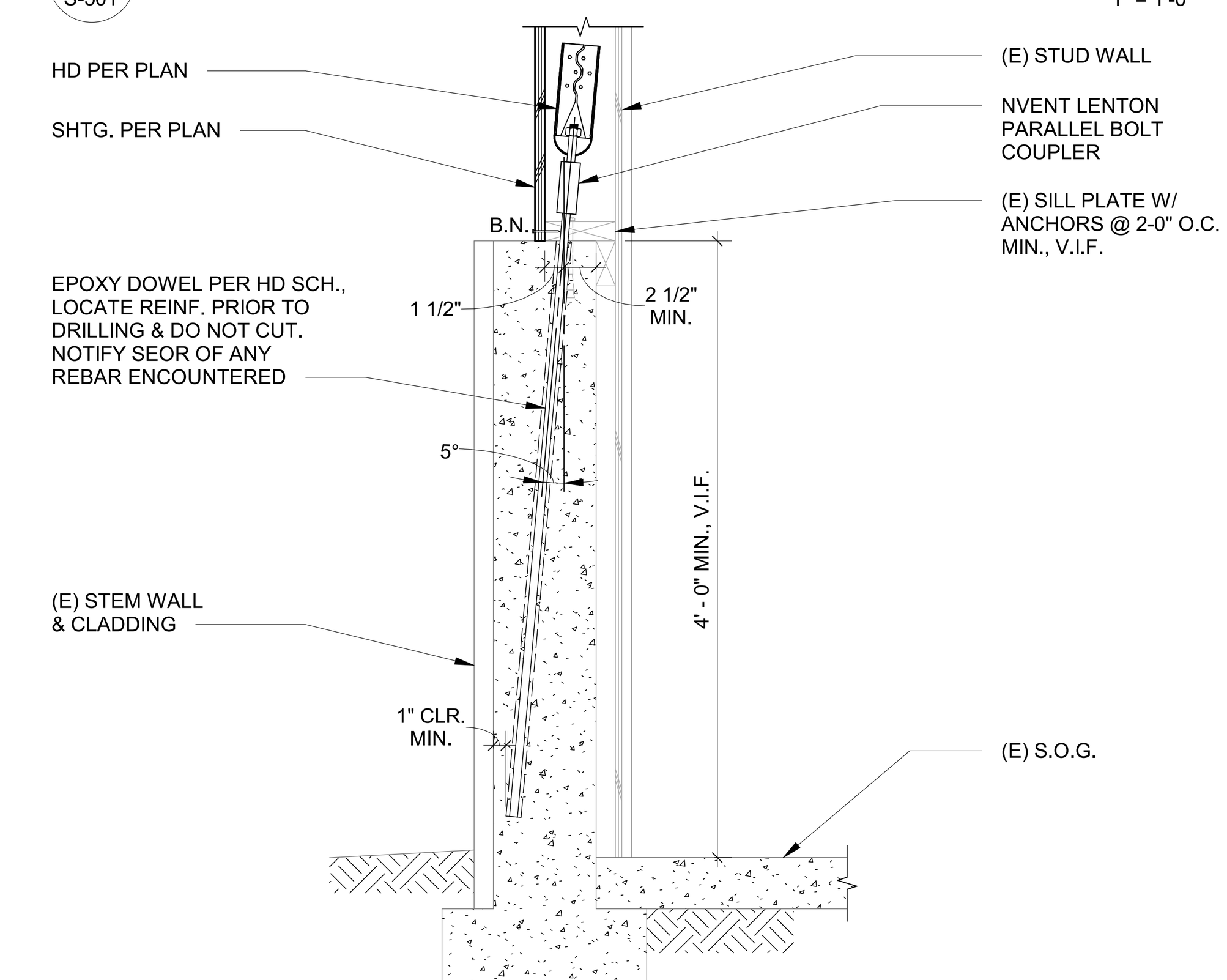
4 S-501 CMU WALL ANCHORAGE - SLAB ON GRADE 1" = 1'-0"



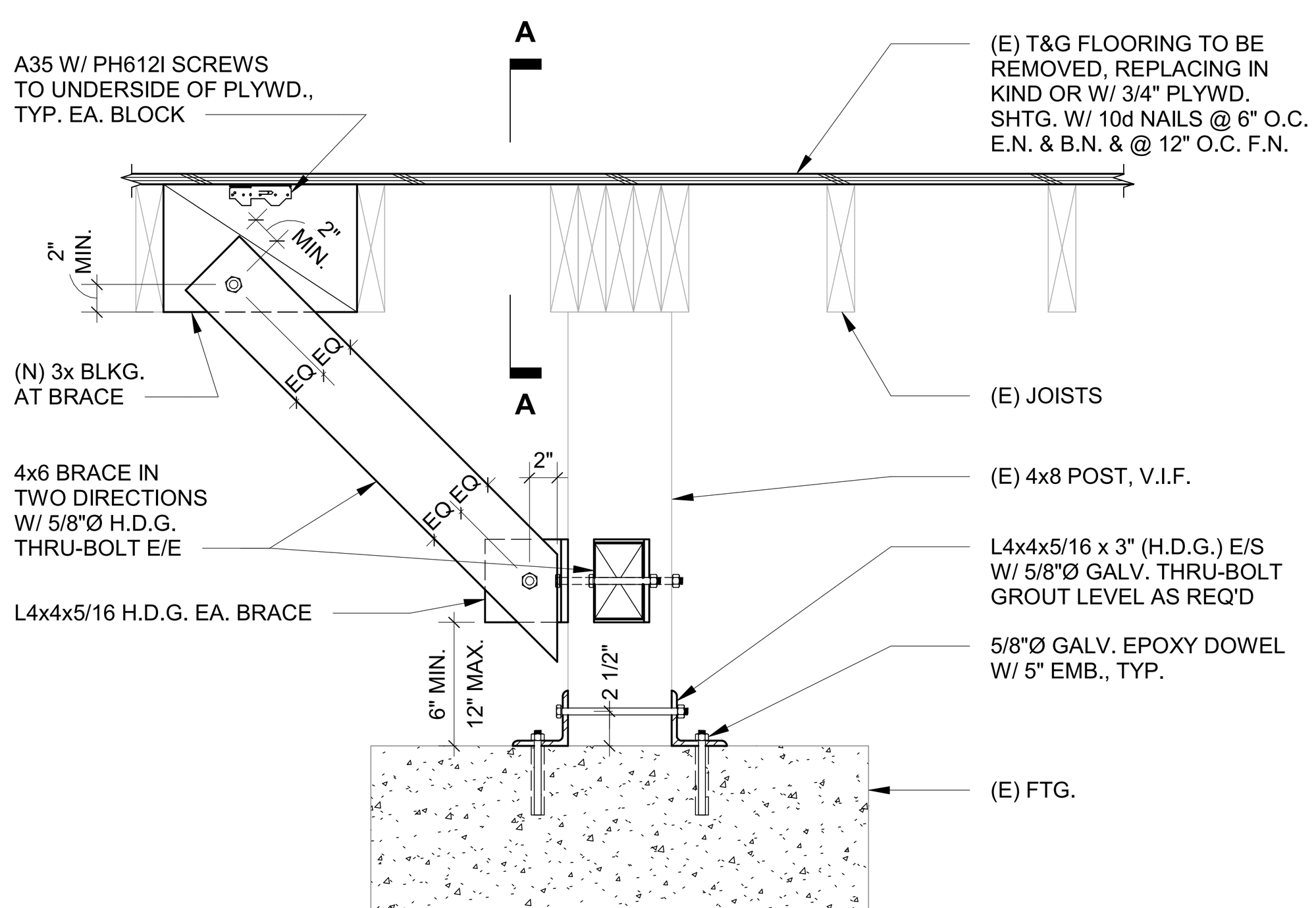
11 S-501 SHEARWALL AT (N) FTG 1" = 1'-0"



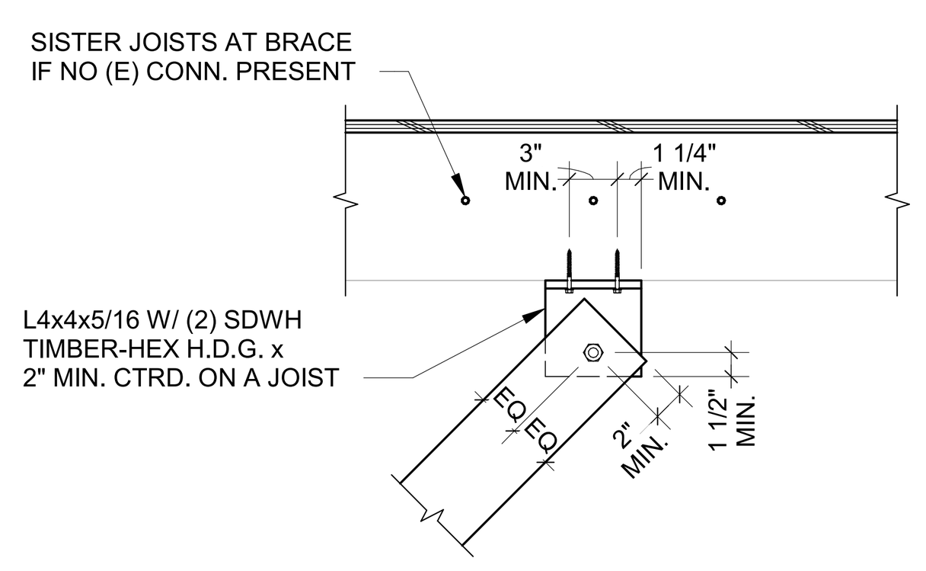
7 S-501 CHIMNEY CONNECTIONS 1/2" = 1'-0"



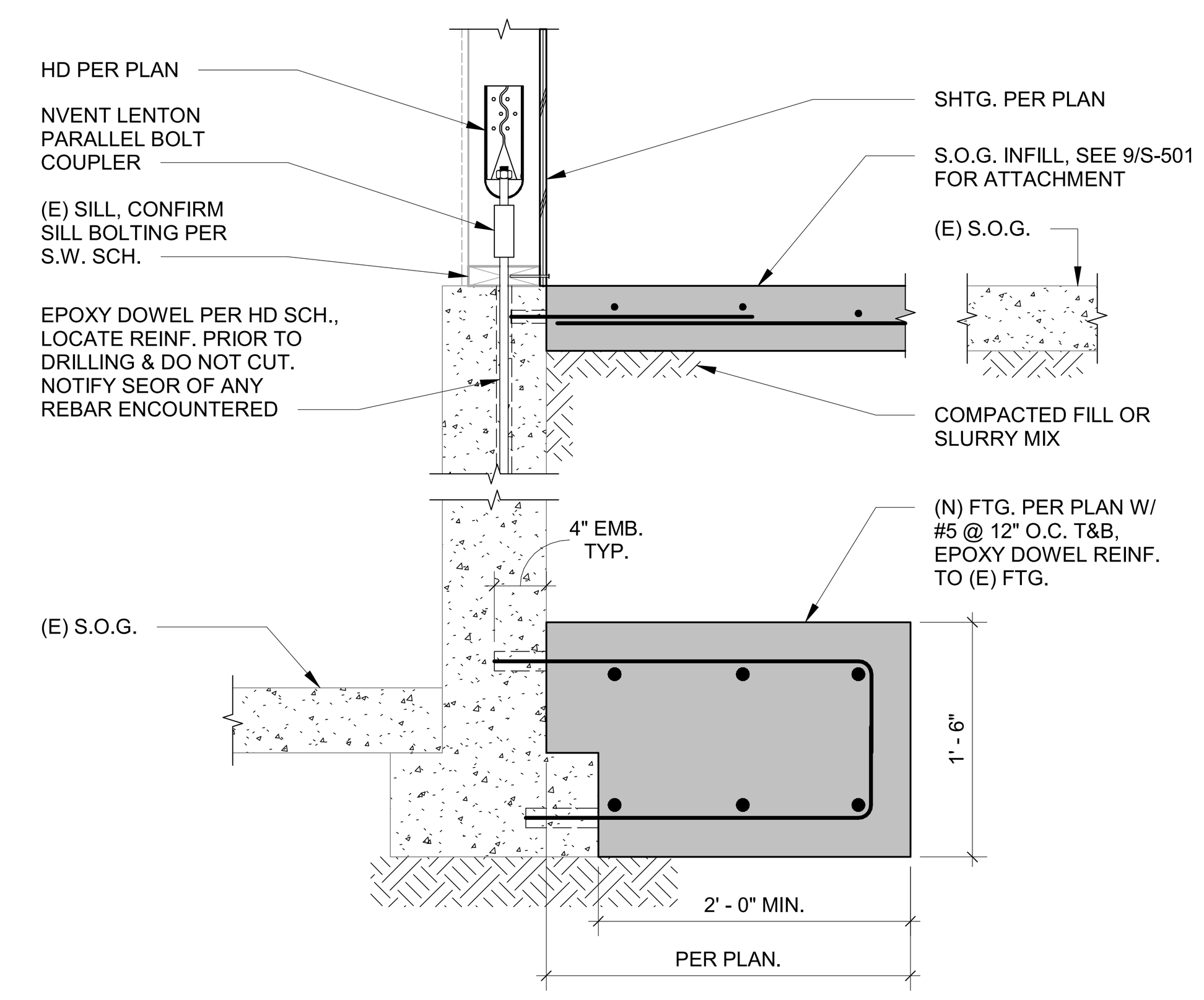
3 S-501 SECTION AT SOUTH WALL (AREA A) 1" = 1'-0"



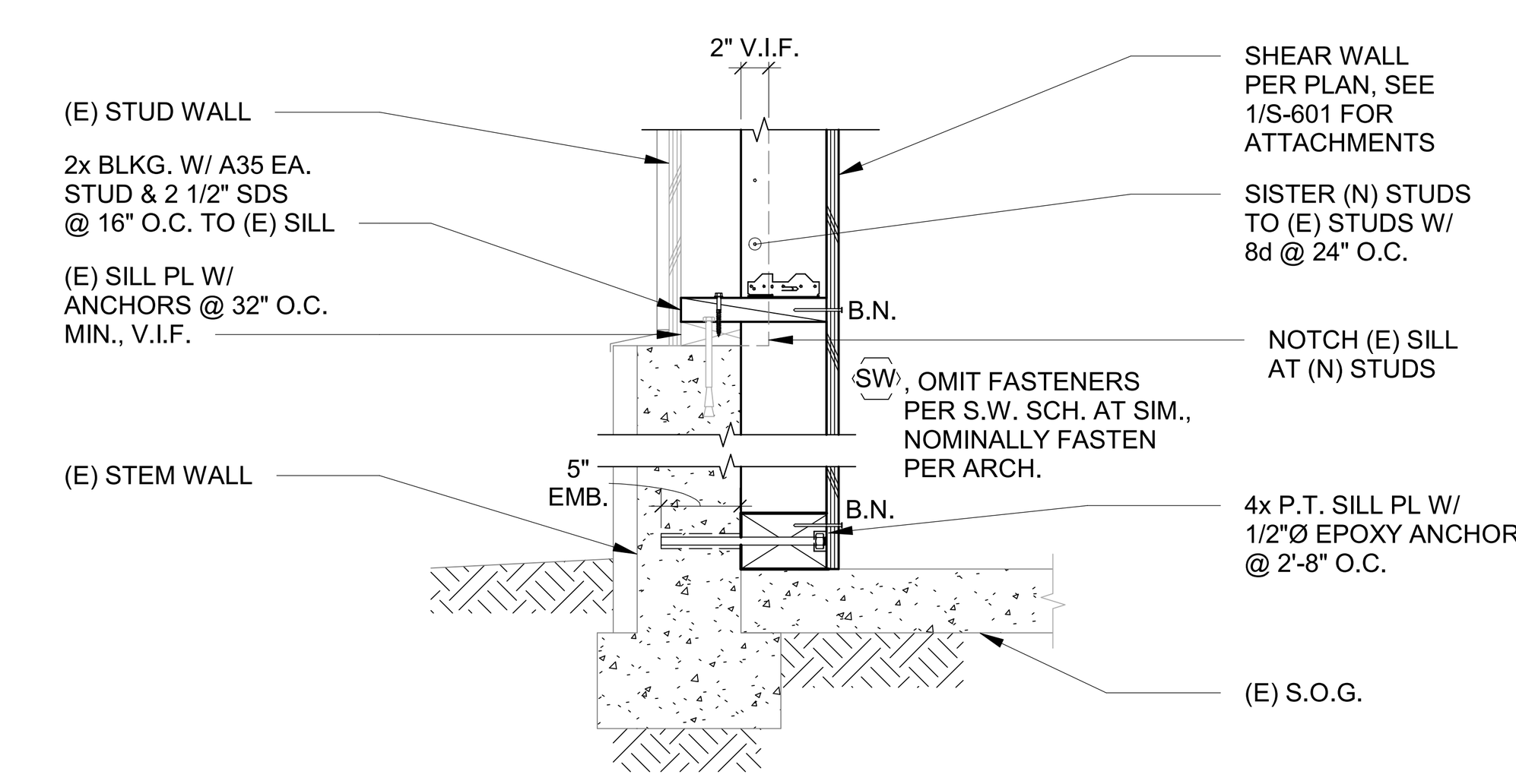
14 S-501 POST CONNECTION AT (E) FTG. (AREA D) 1" = 1'-0"



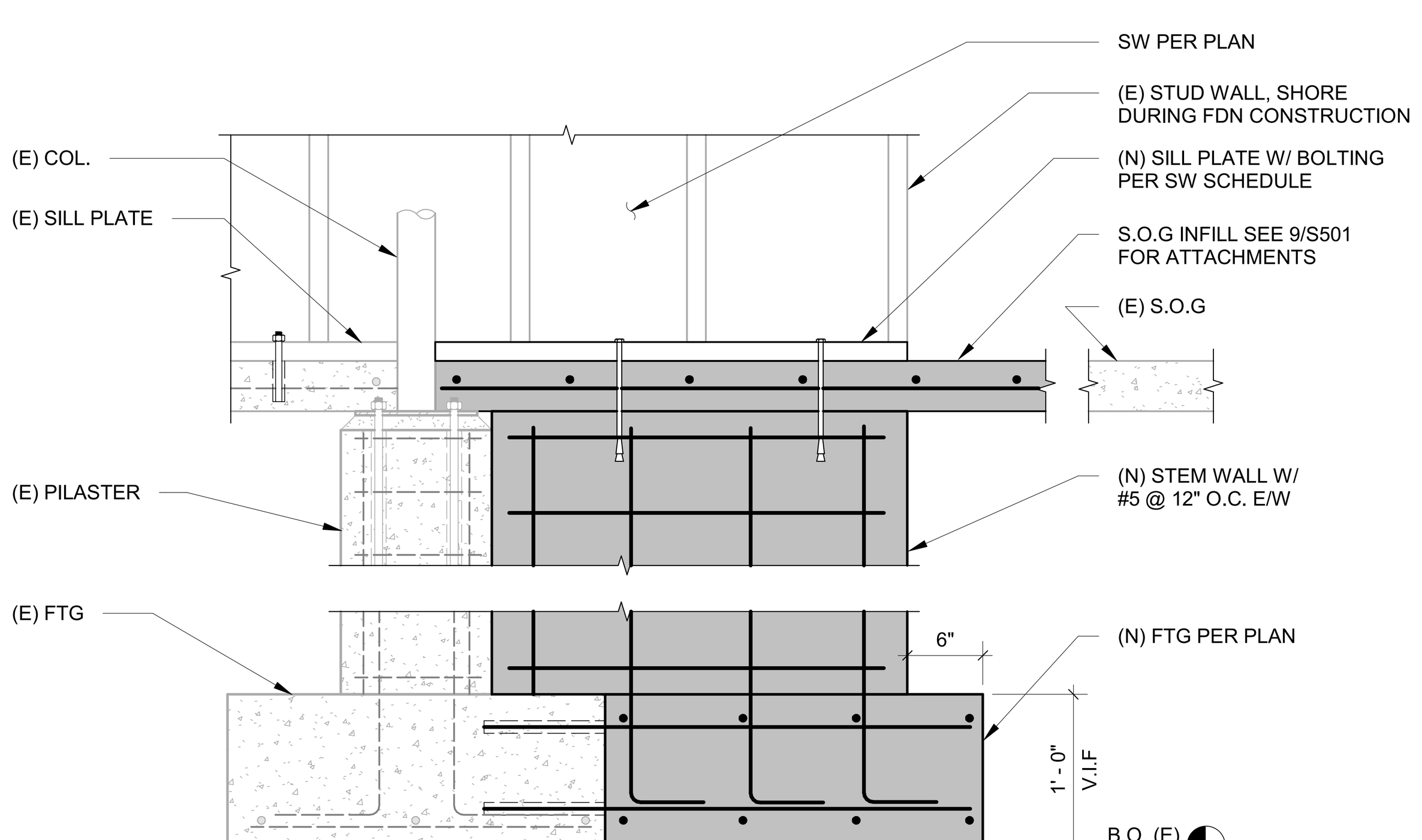
SECTION A-A



6 S-501 NEW TO FOOTING AT (E) RETAINING WALL 1" = 1'-0"

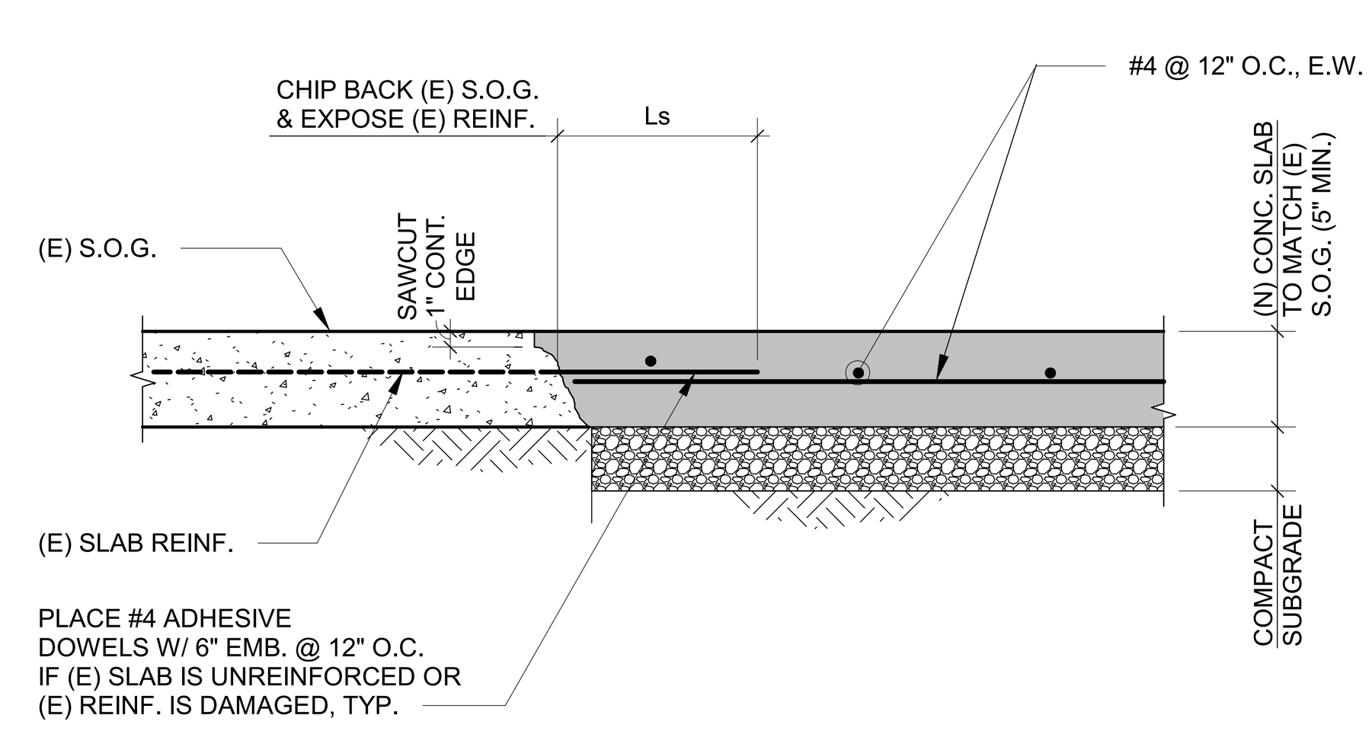


2 S-501 SECTION AT WEST WALL (AREA A) 1" = 1'-0"

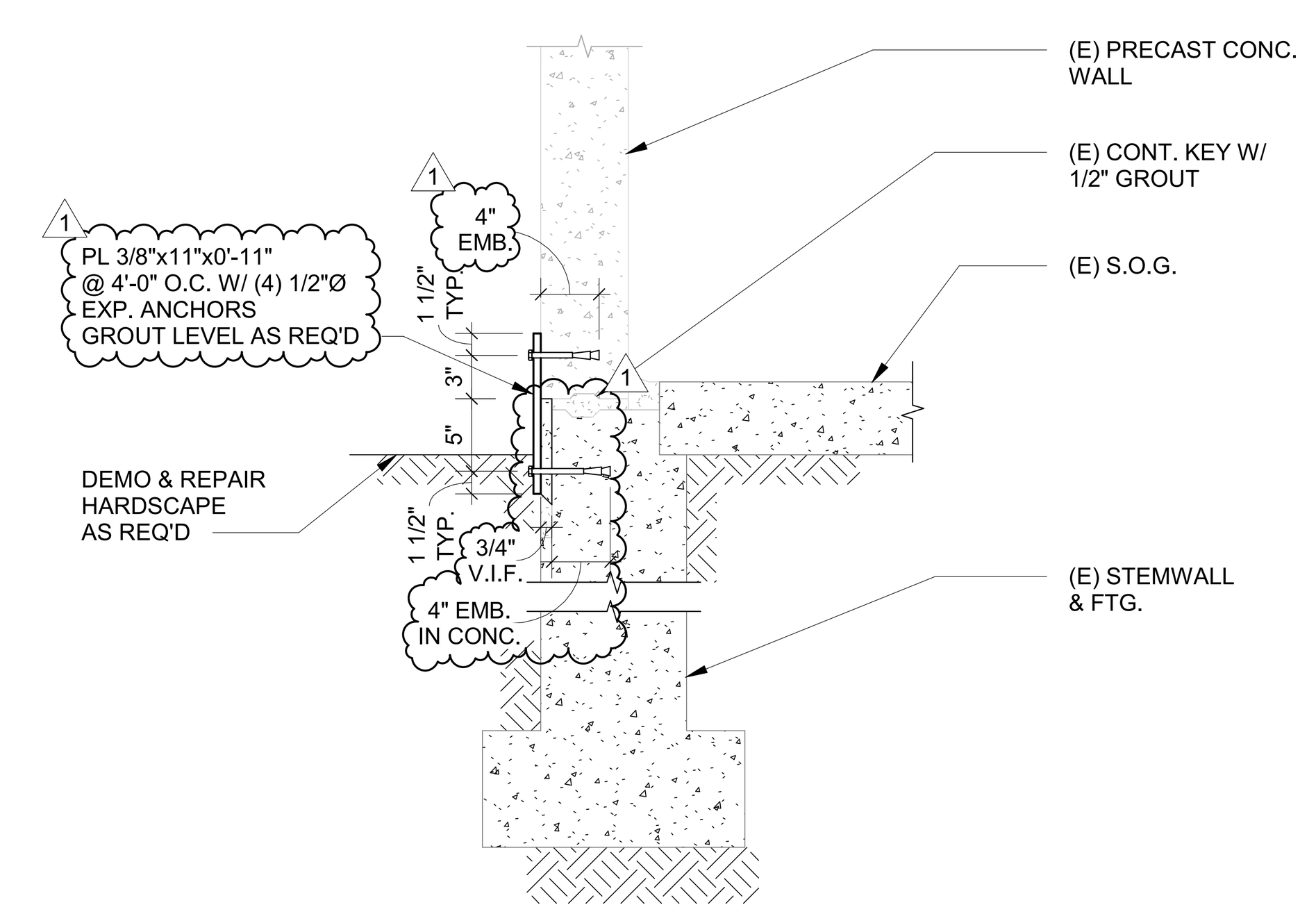


NOTE:
LOCATE SINK DRAIN & PLUMBING & COORDINATE FTG. LOCATION PRIOR TO CONSTRUCTION

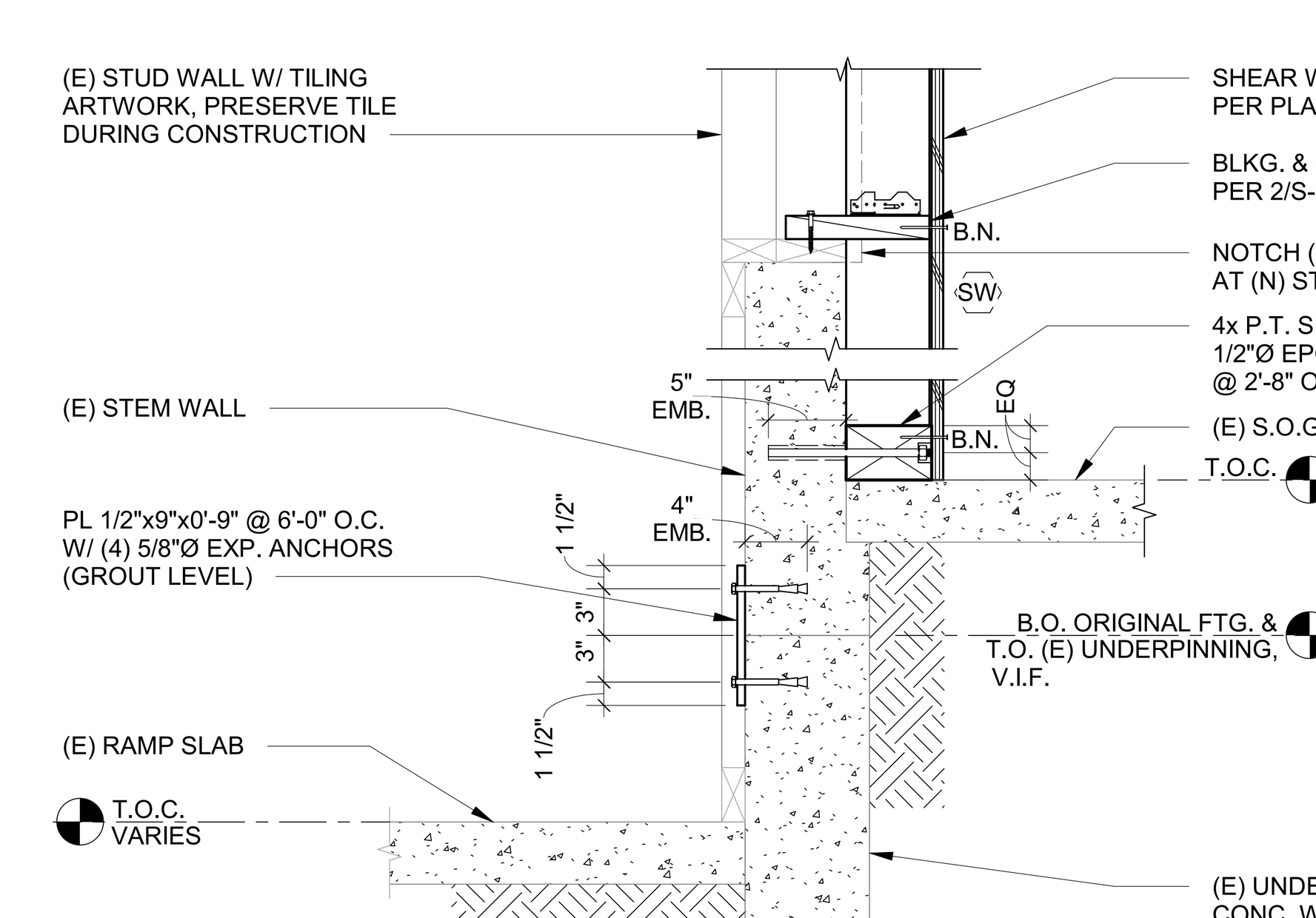
13 S-501 SHEARWALL FTG AT (E) COL. 1" = 1'-0"



9 S-501 NEW SLAB ON GRADE TO EXISTING SLAB ON GRADE 1" = 1'-0"



5 S-501 WALL TO FOUNDATION (AREA C) 1" = 1'-0"



1 S-501 SECTION AT RAMP - LOW (AREA A) 1" = 1'-0"

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EXP. 12/31/2021

Date:	12-04-2020
Project Number:	20138.10
Drawn By:	IK
Checked By:	JE

Revision Schedule:
1 CITY COMMENTS #1 01/25/2021

Sheet Title:
DETAILS

Sheet Number:
S-501

PERMIT/BID SET

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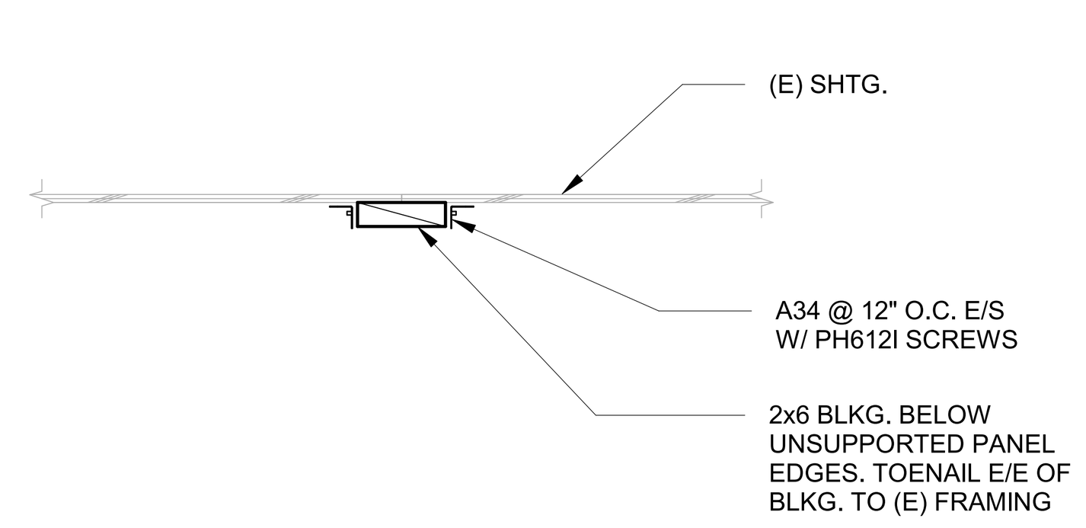
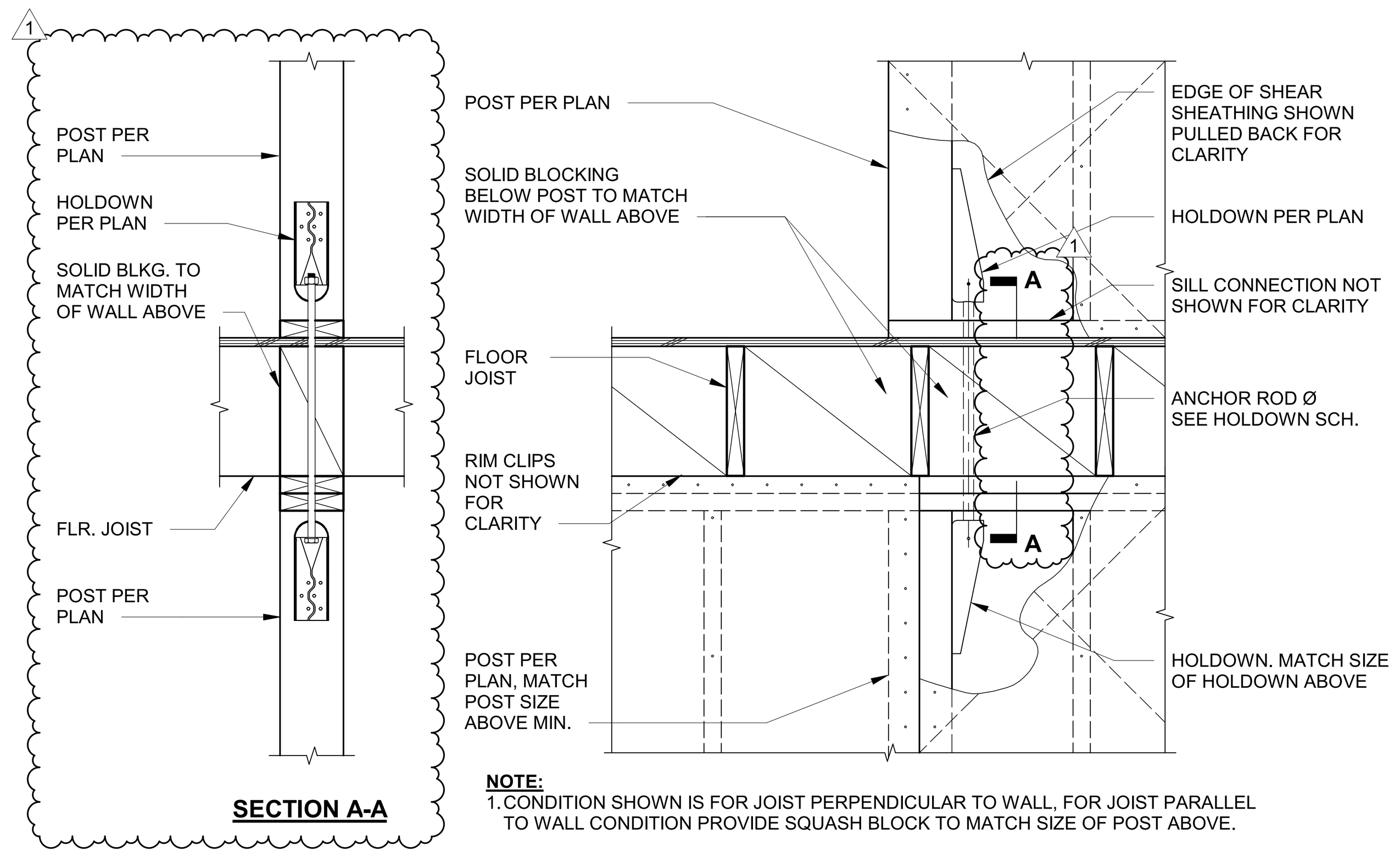
WOOD DIAPHRAGM SCHEDULE					
TAG	WOOD STRUCTURAL PANEL	EDGE NAILING	FIELD NAILING	(N) BLKG. & ATTACHMENTS	(N) BLKG.
D-1	(E) 1/2" PLYWD.	(N) 10d @ 4" O.C., STAG. W/ (E) NAILS	(N) 10d @ 6" O.C., STAG. W/ (E) NAILS	14GA STAPLES @ 2" O.C. E/S OF JOINT IN 24GA x 3" COIL STRAP, ALL PANEL EDGES & SIMP. COLLECTOR STRAPS @ 48" O.C. BOTH DIRECTIONS. PROVIDE 8' LONG STRAPS PERPENDICULAR TO WALL EDGES ALL DIRECTIONS (3)	STRAP BLOCKING ABOVE SHEATHING 15 / S-601
D-2	(E) 15/32" PLYWD.	(E) 8d @ 4" O.C. (NEED NOT BE VERIFIED)	(E) 8d @ 12" O.C. (NEED NOT BE VERIFIED)	2x6 BLKG. AT ALL UNSUPPORTED PANEL EDGES, CONNECT BLKG. W/ A34 E/S E/E PER 12 / S-601	BLOCKED PER 12 / S-601 AT HATCHING PER PLAN
D-3	(E) 1/2" PLYWD., V.I.F.	(N) 10d @ 4" O.C., STAG. W/ (E) NAILS	(N) 10d @ 6" O.C., STAG. W/ (E) NAILS	16GA STAPLES @ 2" O.C. E/S OF JOINT IN 24GA x 3" MTL. STRAP, ALL PANEL EDGES	BLOCKED PER 15 / S-601
D-4	(E) 3/8" PLYWD.	(E) 8d @ 6" O.C., V.I.F.	(E) 8d @ 6" O.C., V.I.F.	16GA STAPLES @ 1" O.C. E/S OF JOINT IN 26GA x 3" MTL. STRAP, ALL PANEL EDGES	STRAP BLOCKING ABOVE SHEATHING 15 / S-601

NOTES:
1. PROVIDE MINIMUM FASTENER PENETRATION TO MAIN FRAMING MEMBERS PER GENERAL NOTES.
2. USE ZINC COATED RING-SHANK GUN NAILS AT EXTERIOR DECKS.
3. SEE DETAIL 15 / S-601 FOR MORE INFORMATION.
4. PROVIDE SPAX UNIDRIVE #8 x 1" LONG

16 / S-601 WOOD DIAPHRAGM SCHEDULE
N.T.S.

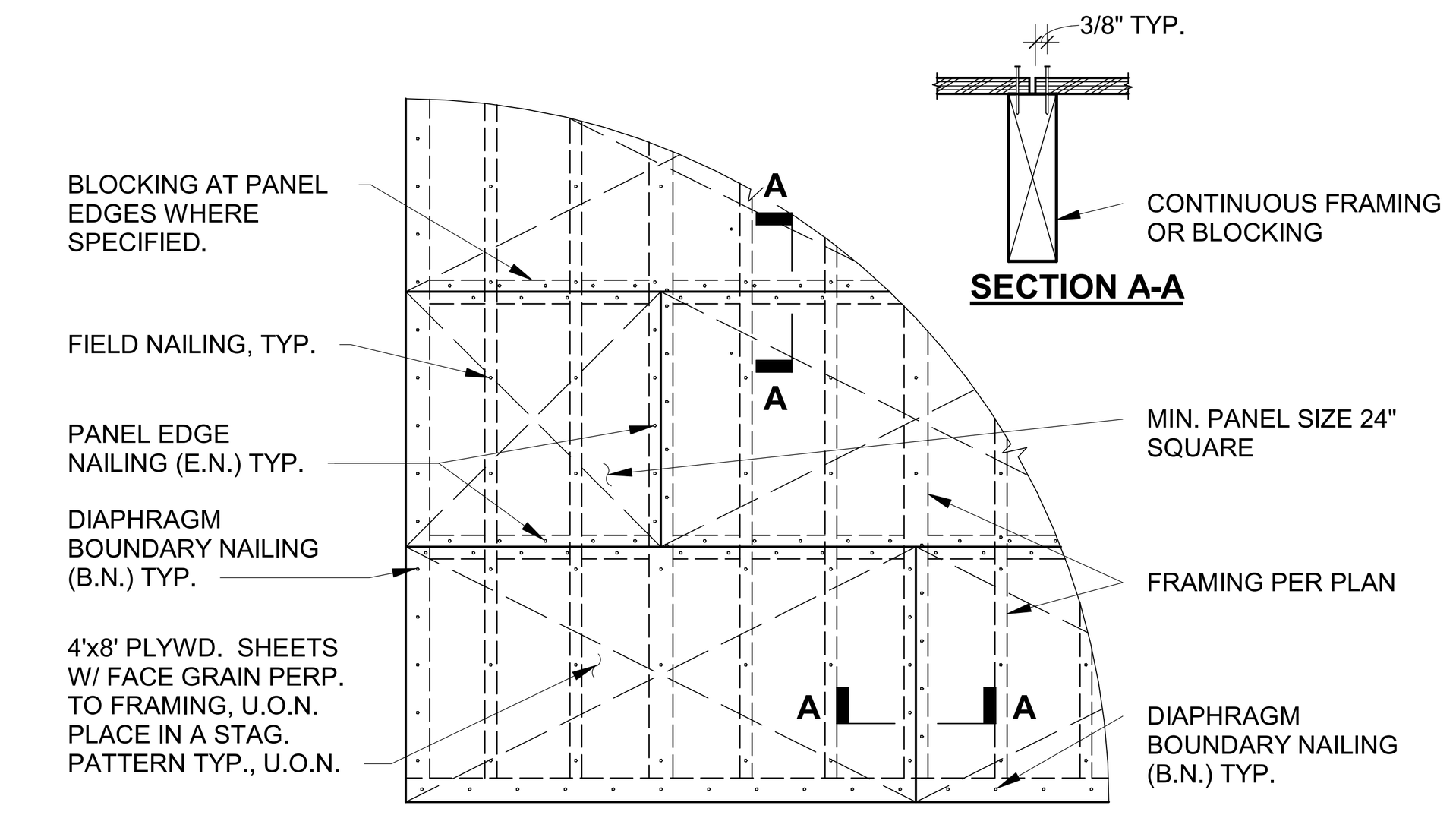


12 / S-601 PANEL EDGE CONNECTION (AREA C)
1" = 1'-0"

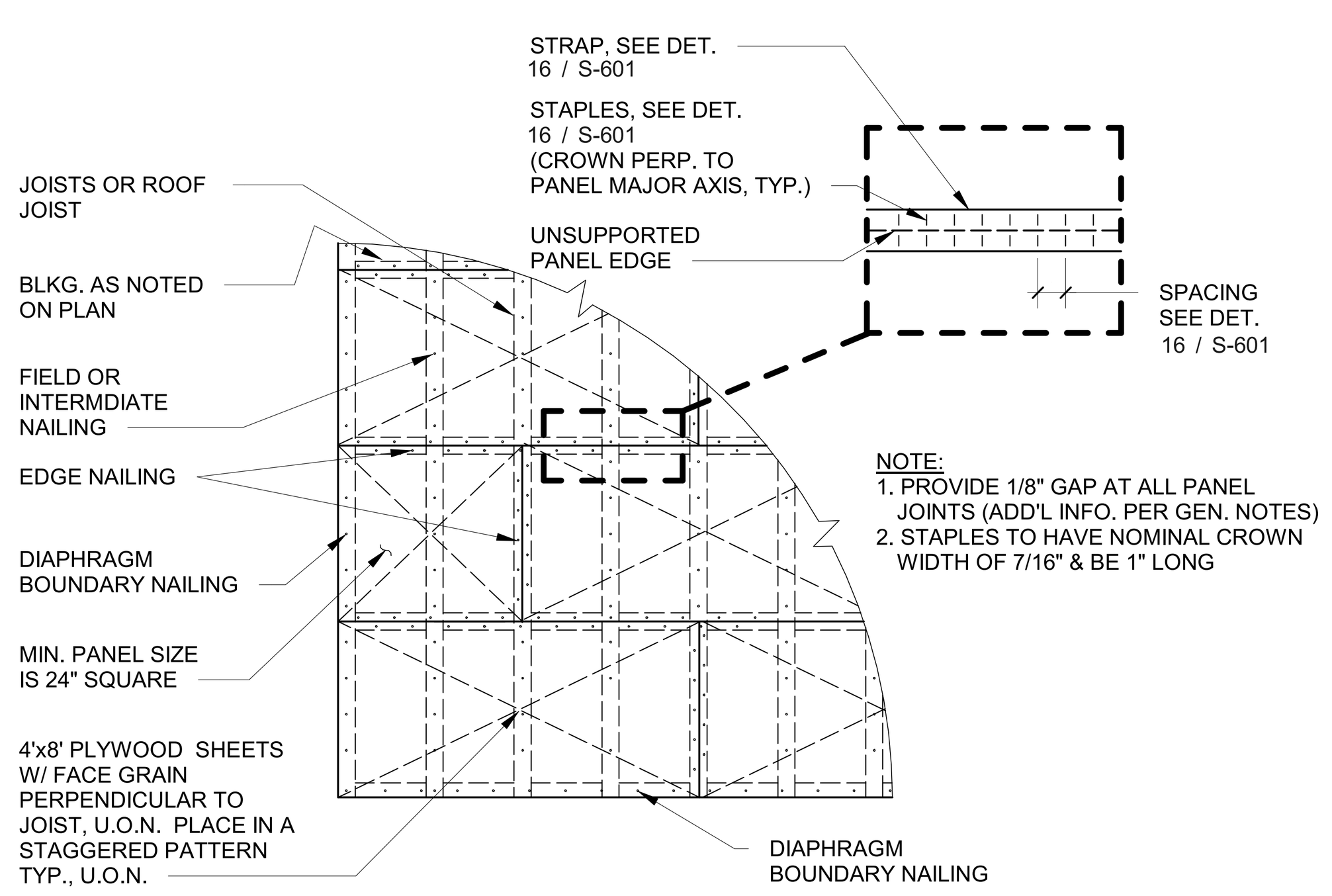


NOTE:
1. CONDITION SHOWN IS FOR JOIST PERPENDICULAR TO WALL, FOR JOIST PARALLEL TO WALL CONDITION PROVIDE SQUASH BLOCK TO MATCH SIZE OF POST ABOVE.

8 / S-601 HOLDOWN BETWEEN FLOORS
1" = 1'-0"

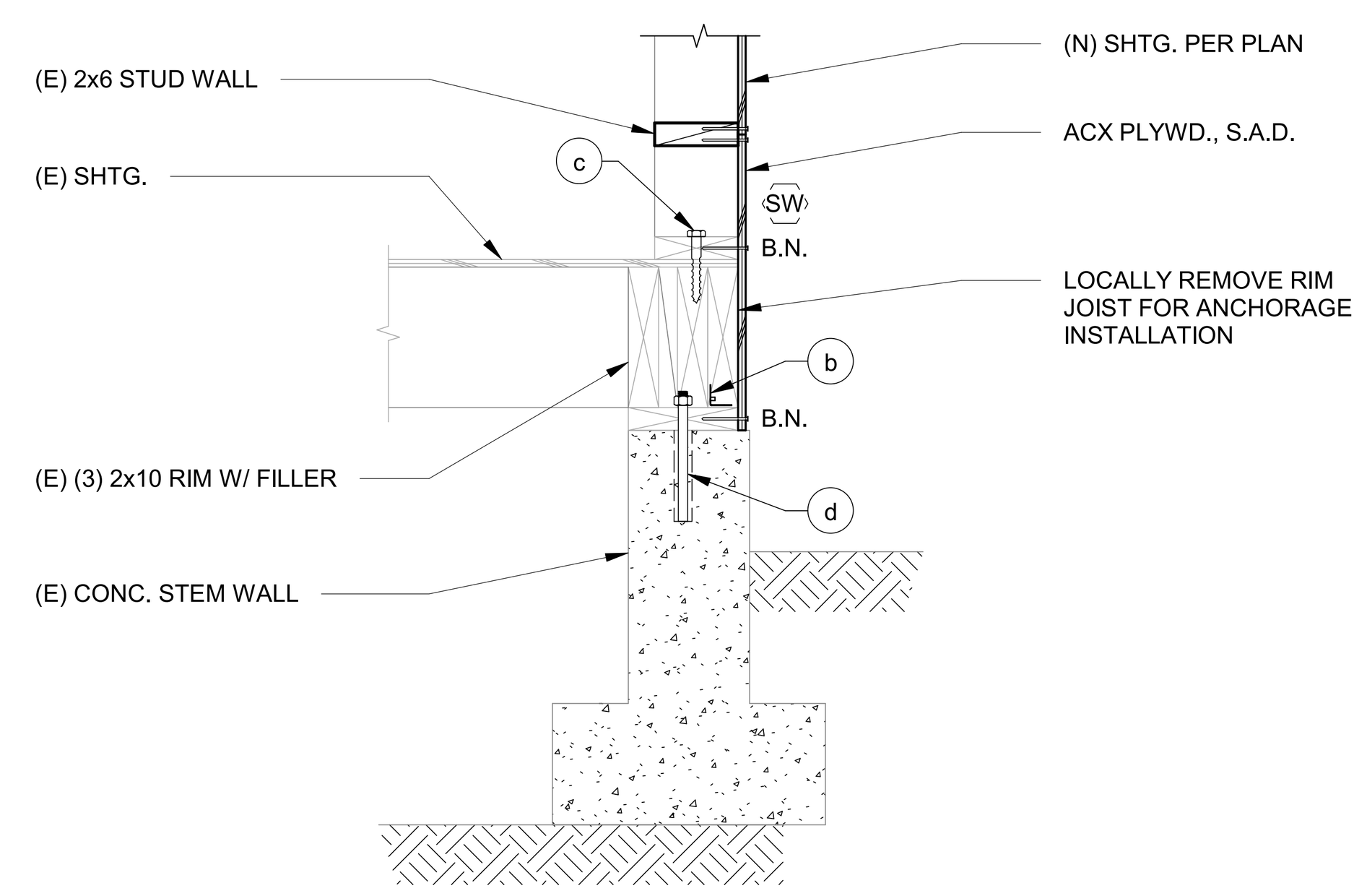


4 / S-601 TYP. DIAPHRAGM
N.T.S.



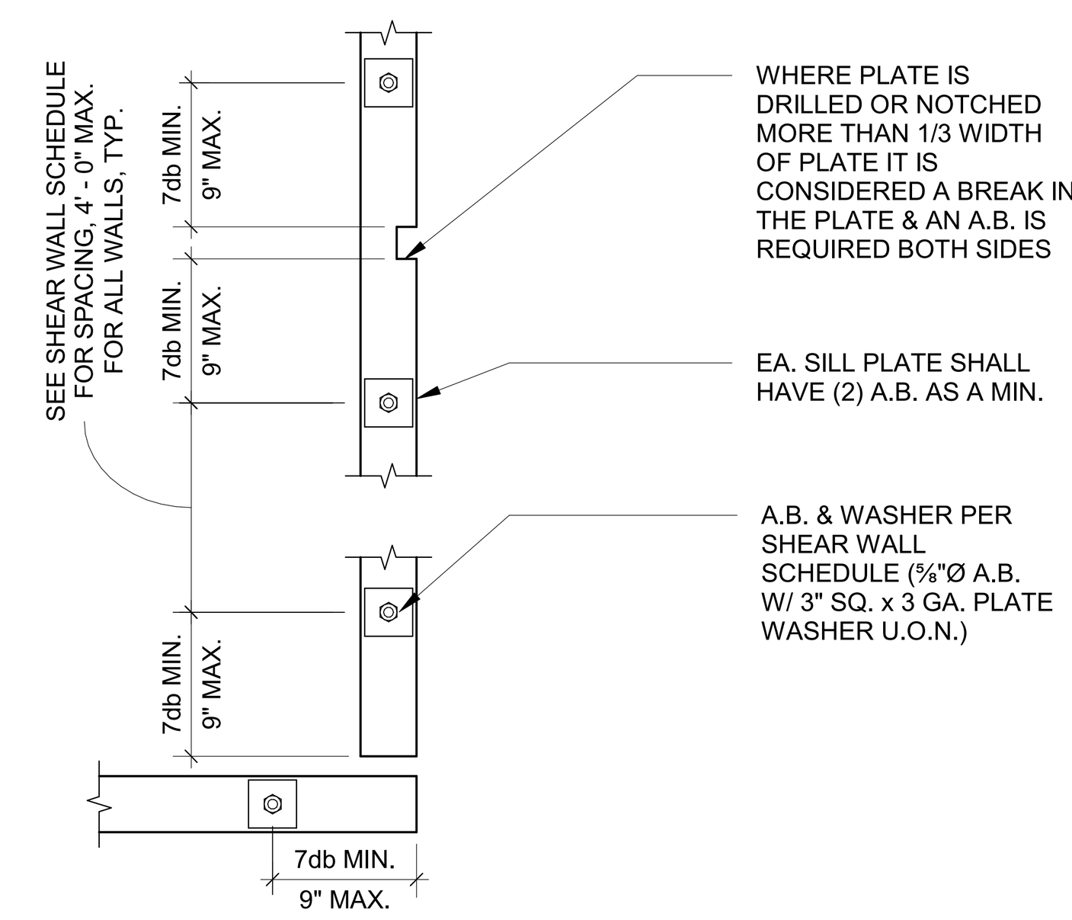
NOTE:
1. PROVIDE 1/8" GAP AT ALL PANEL JOINTS (ADD'L INFO. PER GEN. NOTES)
2. STAPLES TO HAVE NOMINAL CROWN WIDTH OF 7/16" & BE 1" LONG

15 / S-601 TYP PLYWD. DIAPHRAGM NAILING WITH STRAP BLOCKING
N.T.S.



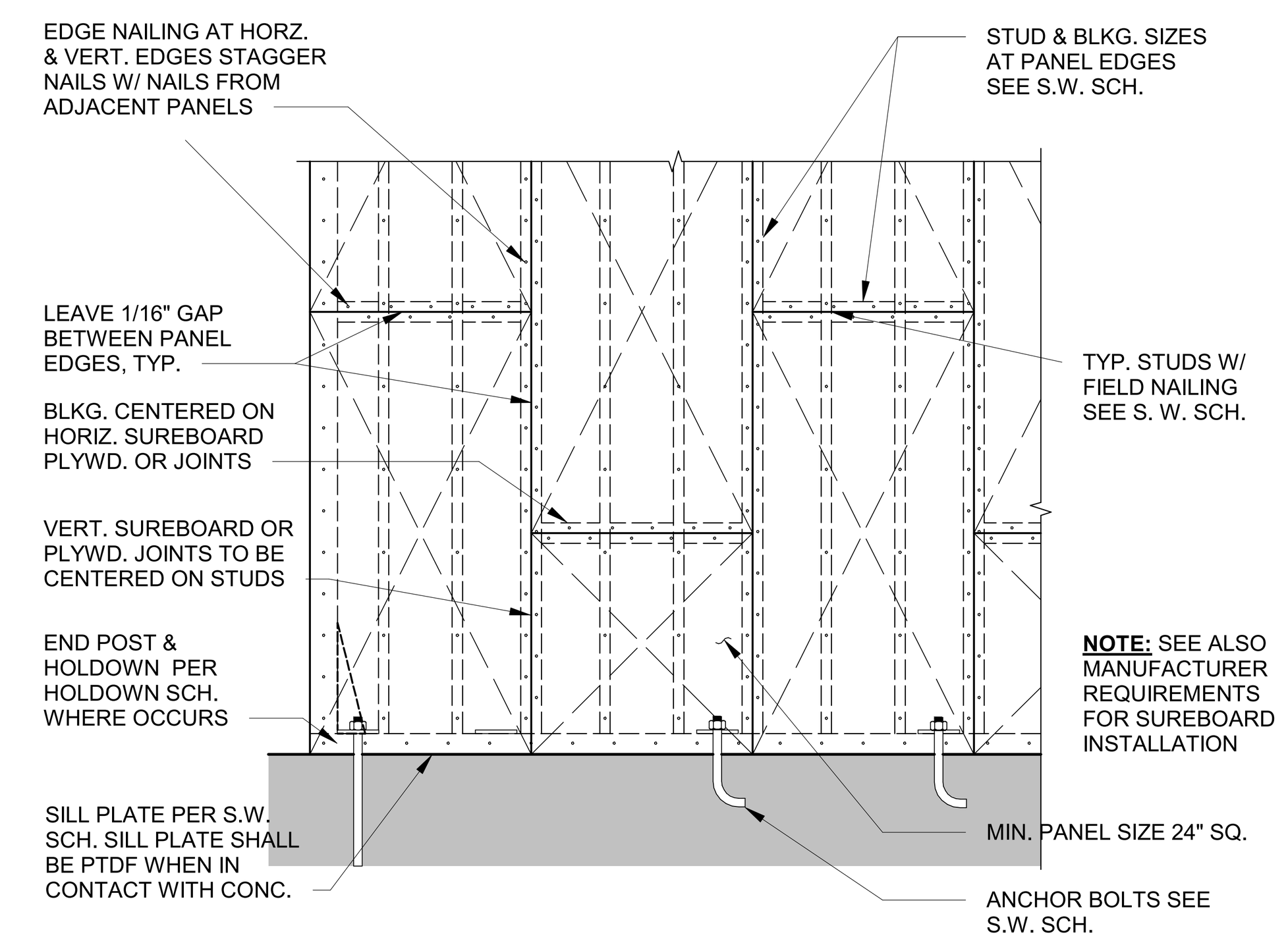
NOTE:
CONNECTIONS INDICATED W/ LETTERS ARE DEFINED IN S.W. SCH. 1 / S-601

11 / S-601 SHEAR WALL (AREA D)
1" = 1'-0"

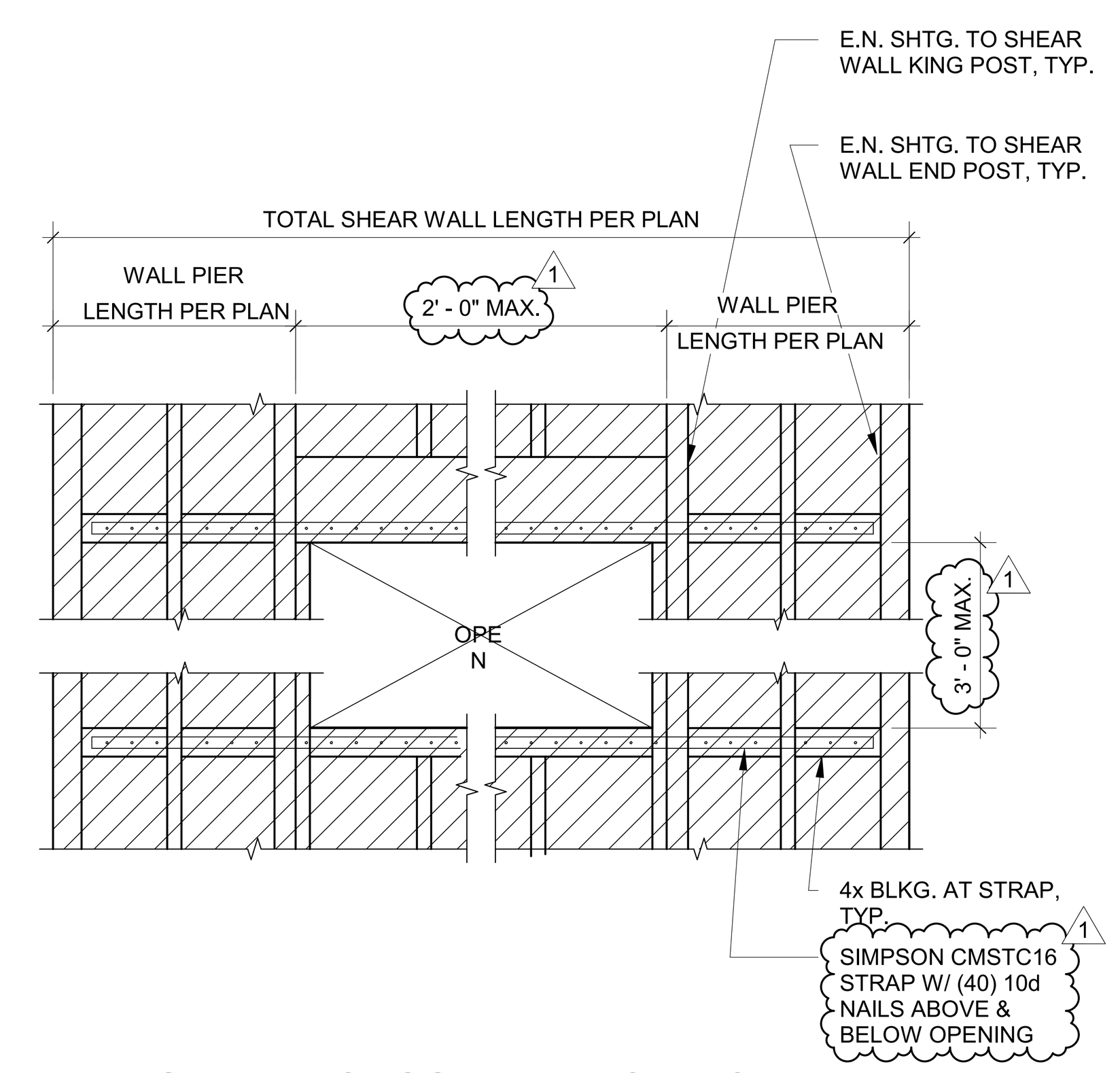


NOTES:
1. db REFERS TO A.B. Ø.
2. SILL PLATES IN CONTACT W/ CONCRETE SHALL BE P.T.D.F. OR FOUNDATION GRADE REDWOOD.
3. IF 7db MIN./12" MAX. DIM. W/ HD THEN MEASURE FROM CENTERLINE HD A.B.
4. SILL BOLTS SHALL BE 5/8"Ø L-BOLTS W/ 7" EMB. INTO FTG. (BELOW SLAB WHERE OCCURS) AT 4'-0" MAX. SPACING.

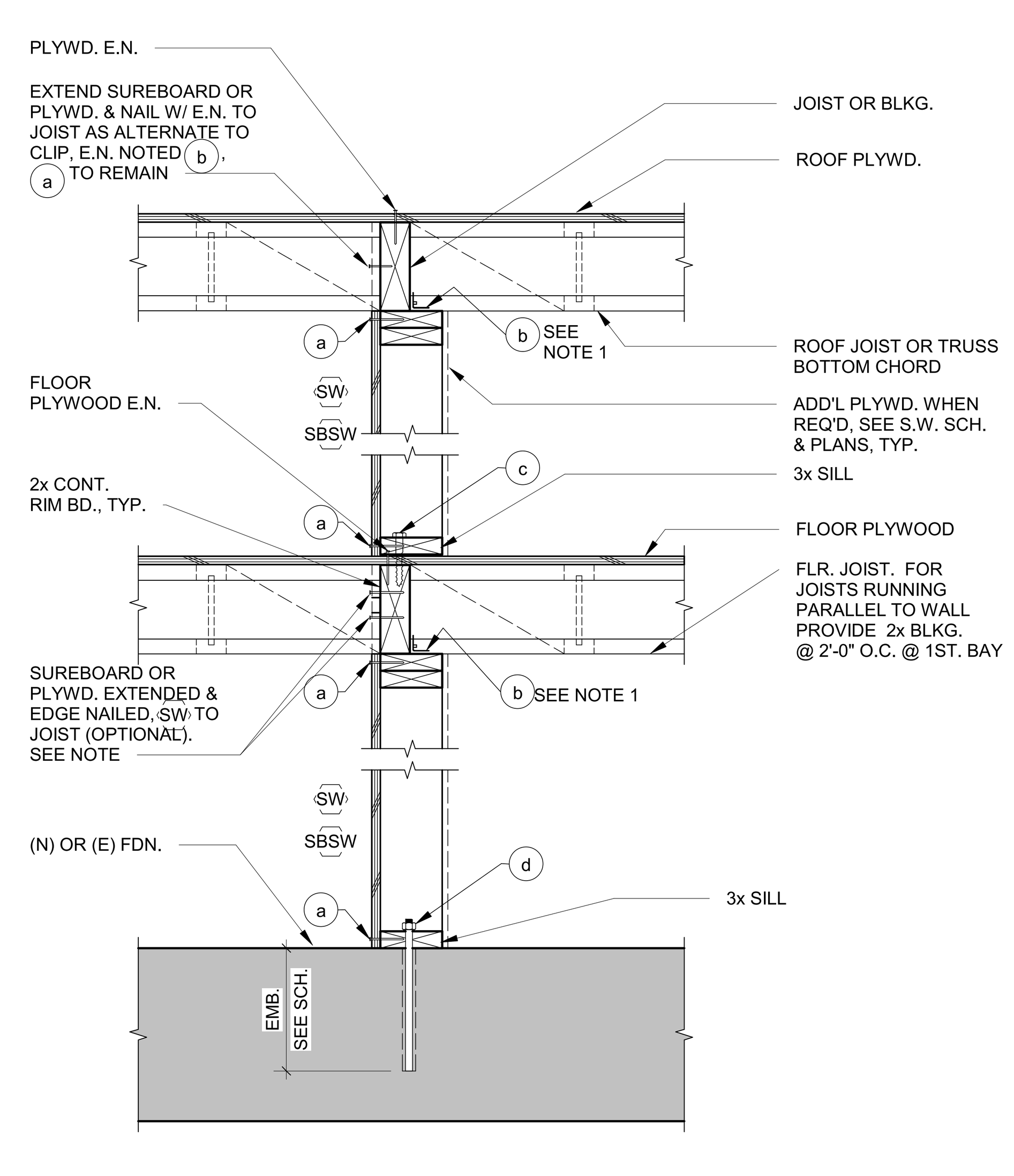
7 / S-601 TYP. SILL BOLTING LAYOUT
1" = 1'-0"



3 / S-601 TYPICAL PLYWD. OR SUREBOARD SHEAR WALL ELEV.
N.T.S.



6 / S-601 OPENING AT RECESSED ELECTRICAL PANEL (AREA C)
1" = 1'-0"



NOTES:
1. THIS CONN. MAY BE OMITTED AT FLR. (NOT AT ROOF) IF JOISTS ARE PARALLEL TO WALL & PLYWD. IS EXTENDED UP & EDGE NAILED,TO JOISTS. DOES NOT APPLY TO WALLS W/ PLYWD. ON BOTH SIDES.
2. CONNECTIONS INDICATED W/ LETTERS ARE DEFINED IN S.W. SCH.

9 / S-601 TYPICAL INTERIOR SHEAR WALL
1" = 1'-0"

MARK	(a) EDGE NAILING (E.N.) SEE NOTE 2	ALLOWABLE CAPACITY (PLF)	(b) RIM CONN. SPACING (SIMP. A35, LTP4 OR LS50) SEE NOTE 8	(c) SILL PL CONN. SPACING (SIMP. SDWS 0.220 x 6) SEE NOTE 5	(d) FDN. ANCHOR SPACING. SEE NOTES 4 & 6	
					STEMWALLS	S.O.G.
SB4	10d @ 4" O.C.	583	16" O.C.	12" O.C.	48" O.C.	16" O.C.
SB2 NOTE 7	10d @ 2" O.C.	950	8" O.C.	8" O.C.	24" O.C.	8" O.C.

NOTES:
1. USE SUREBOARD 200W OR EQUIVALENT ASSEMBLY.
2. E.N. ACROSS ALL PANEL EDGES, FIELD NAILING IS 6" O.C. ALL NAILS ARE SMOOTH SHANK 10d MIN. 2 1/4" LONG x 0.148" SHANK DIAMETER.
3. ALL MEMBERS RECEIVING E.N. INCLUDING SILL PLATE SHALL BE 3x AS A MIN. NAILING SHALL BE STAGGERED. ALL PANEL EDGES SHALL BE BLOCKED. PANELS MAY BE INSTALLED HORIZONTALLY OR VERTICALLY.
4. PROVIDE A 3" SQ. x 3 GA. PLATE WASHER AT THE SILL. CONTRACTOR MAY USE BP⅝-3 OR BPS⅝-3 SIMPSON WASHERS. PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE(S) WITH SHEATHING. WHERE WALL IS GREATER THAN 2x4 AND SHEATHING OCCURS ON BOTH SIDES, ANCHOR BOLTS SHALL BE STAGGERED. A.B. & WASHER SHALL BE HOT DIPPED GALVANIZED.
5. SILL CONNECTION IS FOR WOOD TO WOOD CONNECTION ONLY, TYP. BTWN. FLOORS. WHERE SPACING IS CLOSER THAN 8" O.C. RIM OR RIM BLOCKING SHALL BE 3 1/2" MIN. WIDTH AND FASTENERS SHALL BE STAGGERED. SDS 1/4 x 6 MAY BE USED IN LIEU OF SDWS 0.220 x 6 AT CONTRACTOR'S DISCRETION.
6. 3/8"Ø SIMPSON TITEN HD W/ 2 1/2" EMB. AT SLAB ON GRADE CONNECTIONS. WHEN SHEAR WALLS ARE LOCATED ON (E) CONCRETE STEMWALLS, 5/8"Ø ALL THREAD ROD WITH SIMPSON SET-XP EPOXY MAY BE USED. ANCHORS SHALL HAVE A MIN. EMBEDMENT OF 7" AND A MIN. EDGE DISTANCE OF 1 3/4".
7. AT ALL MEMBERS TO RECEIVE 2" O.C. NAILING, SISTER (E) 2x STUDS W/ (N) 2x W/ 1/4"Øx3" SDS SCREWS @ 5" O.C. STAGGERED.
8. PROVIDE U.O.N. IN DETAILS

5 / S-601 SUREBOARD SHEAR WALL SCHEDULE
N.T.S.

MARK	(a) EDGE NAILING (E.N.) SEE NOTE 2	CAPACITY (PLF)	(b) RIM CONN. SPACING (SIMP. A35, LTP4 OR LS50) SEE NOTE 7	(c) SILL PL CONN. SPACING (SIMP. SDWS 0.220 x 6) SEE NOTE 5	(d) FDN. ANCHOR SPACING SEE NOTE 4 & 6	
					STEMWALLS	S.O.G.
6	10d @ 6" O.C.	310	24" O.C.	16" O.C.	48" O.C.	24" O.C.
4	10d @ 4" O.C.	460	16" O.C.	12" O.C.	48" O.C.	16" O.C.
3	10d @ 3" O.C.	600	12" O.C.	8" O.C.	24" O.C.	16" O.C.
2 NOTE 3	10d @ 2" O.C.	770	8" O.C.	8" O.C.	24" O.C.	12" O.C.

NOTES:
1. USE 1/2" CDX PLYWD.
2. E.N. ACROSS ALL PANEL EDGES, FIELD NAILING IS 12" O.C. ALL NAILS ARE COMMON WIRE NAILS, MAY USE 10d SHORTS (2 1/8" MIN. LENGTH) W/ FULL HEADS.
3. AT ALL MEMBERS TO RECEIVE 2" O.C. NAILING, SISTER (E) 2x STUDS W/ (N) 2x W/ 1/4"Øx3" SDS SCREWS @ 5" O.C. STAGGERED.
4. PROVIDE A 3" SQ. x 3 GA. PLATE WASHER AT THE SILL. CONTRACTOR MAY USE BP⅝-3 OR BPS⅝-3 SIMPSON WASHERS. PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE(S) WITH SHEATHING. WHERE WALL IS GREATER THAN 2x4 AND SHEATHING OCCURS ON BOTH SIDES, ANCHOR BOLTS SHALL BE STAGGERED. A.B. & WASHER SHALL BE HOT DIPPED GALVANIZED.
5. SILL CONNECTION IS FOR WOOD TO WOOD CONNECTION ONLY, TYP. BTWN. FLOORS. WHERE SPACING IS CLOSER THAN 8" O.C. RIM OR RIM BLOCKING SHALL BE 3½" MIN. WIDTH AND FASTENERS SHALL BE STAGGERED. SDS 1/4 x 6 MAY BE USED IN LIEU OF SDWS 0.220 x 6 AT CONTRACTOR'S DISCRETION.
6. 3/8"Ø SIMPSON TITEN HD W/ 2 1/2" EMB. AT SLAB ON GRADE CONNECTIONS. WHEN SHEAR WALLS ARE LOCATED ON (E) CONCRETE STEMWALLS, 5/8"Ø ALL THREAD ROD WITH SIMPSON SET-XP EPOXY MAY BE USED. ANCHORS SHALL HAVE A MIN. EMBEDMENT OF 7" AND A MIN. EDGE DISTANCE OF 1 3/4".
7. PROVIDE U.O.N. IN DETAILS

1 / S-601 SHEAR WALL SCHEDULE
N.T.S.

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EXP. 12/31/2021

Date: 12-04-2020
Project Number: 20138.10
Drawn By: IK
Checked By: JE

Revision Schedule:

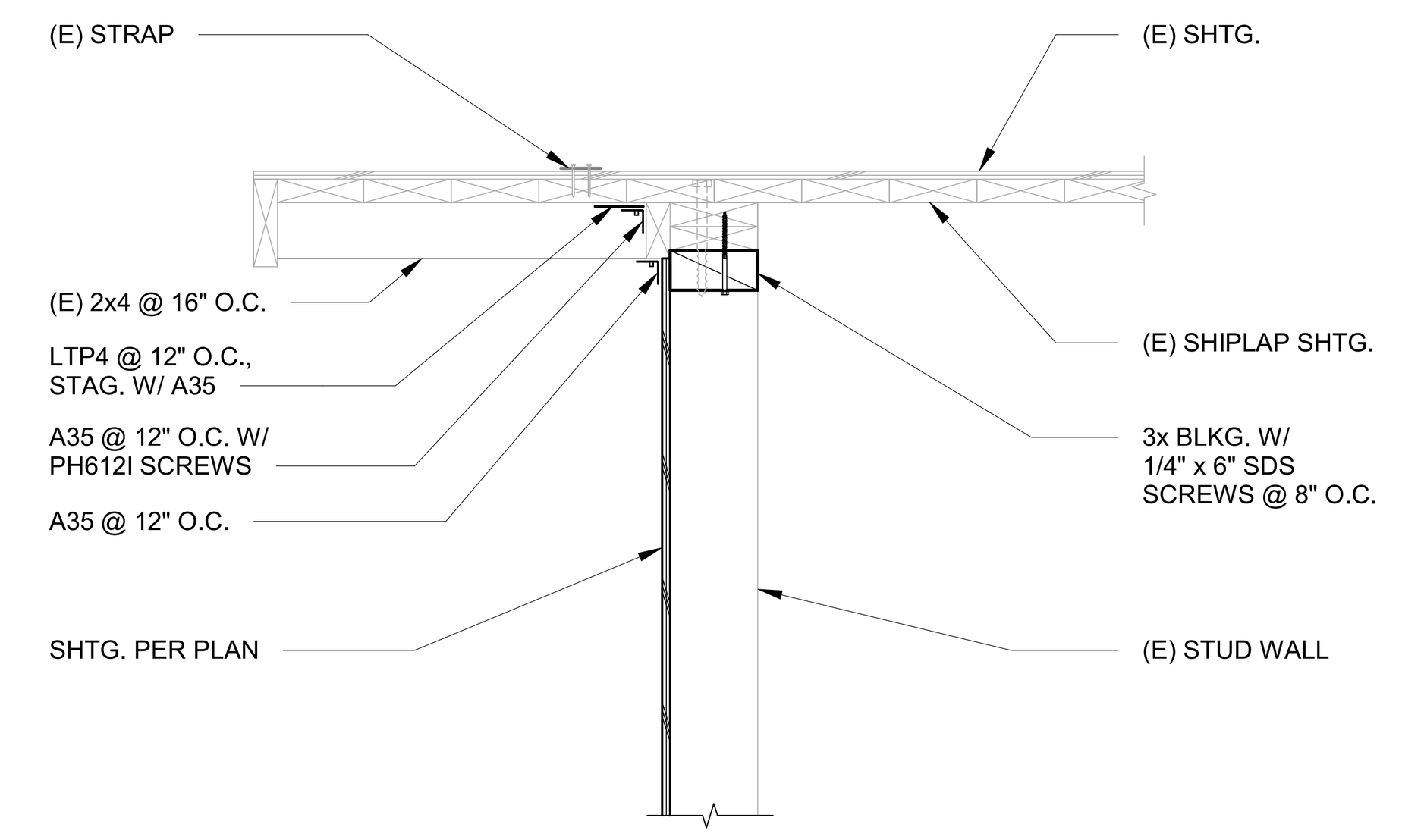
1	CITY COMMENTS #1	01/25/2021

Sheet Title:
WOOD DETAILS

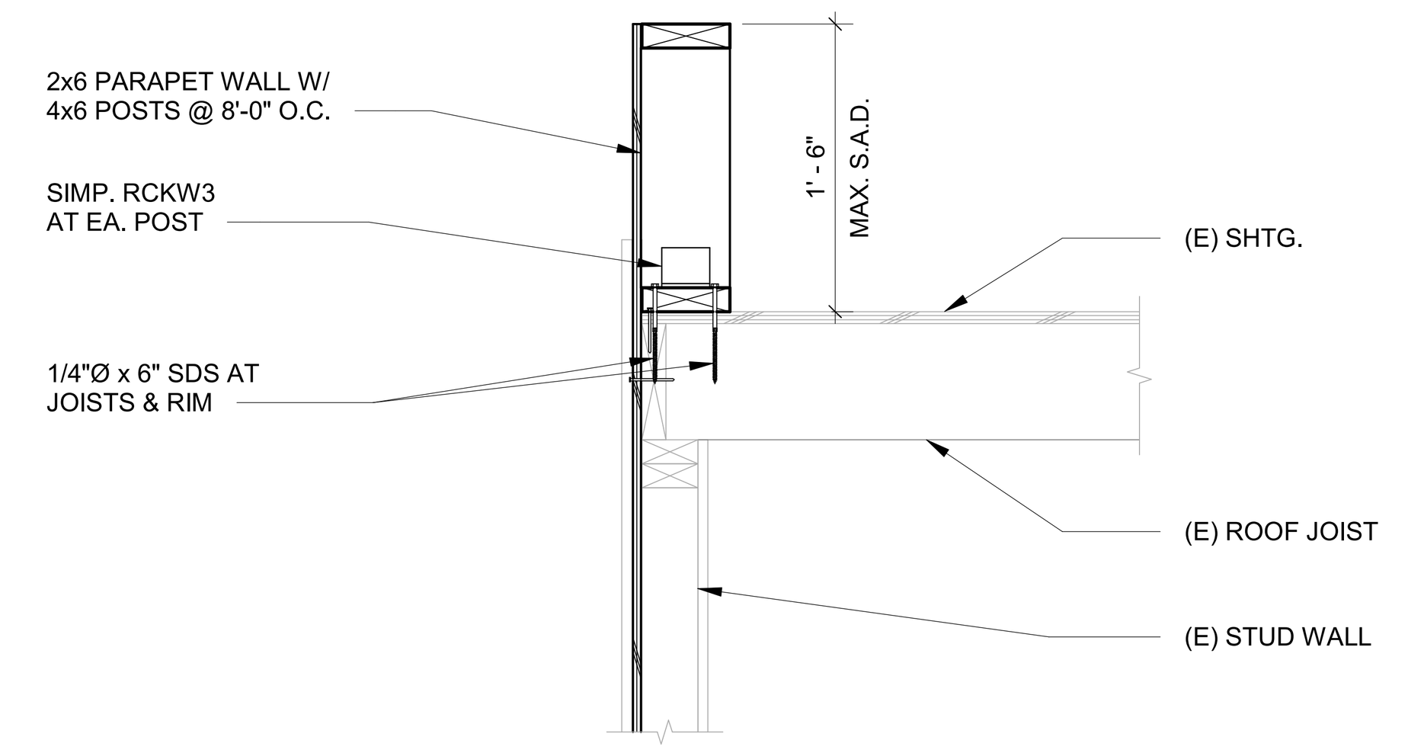
Sheet Number:
S-601

PERMIT/BID SET

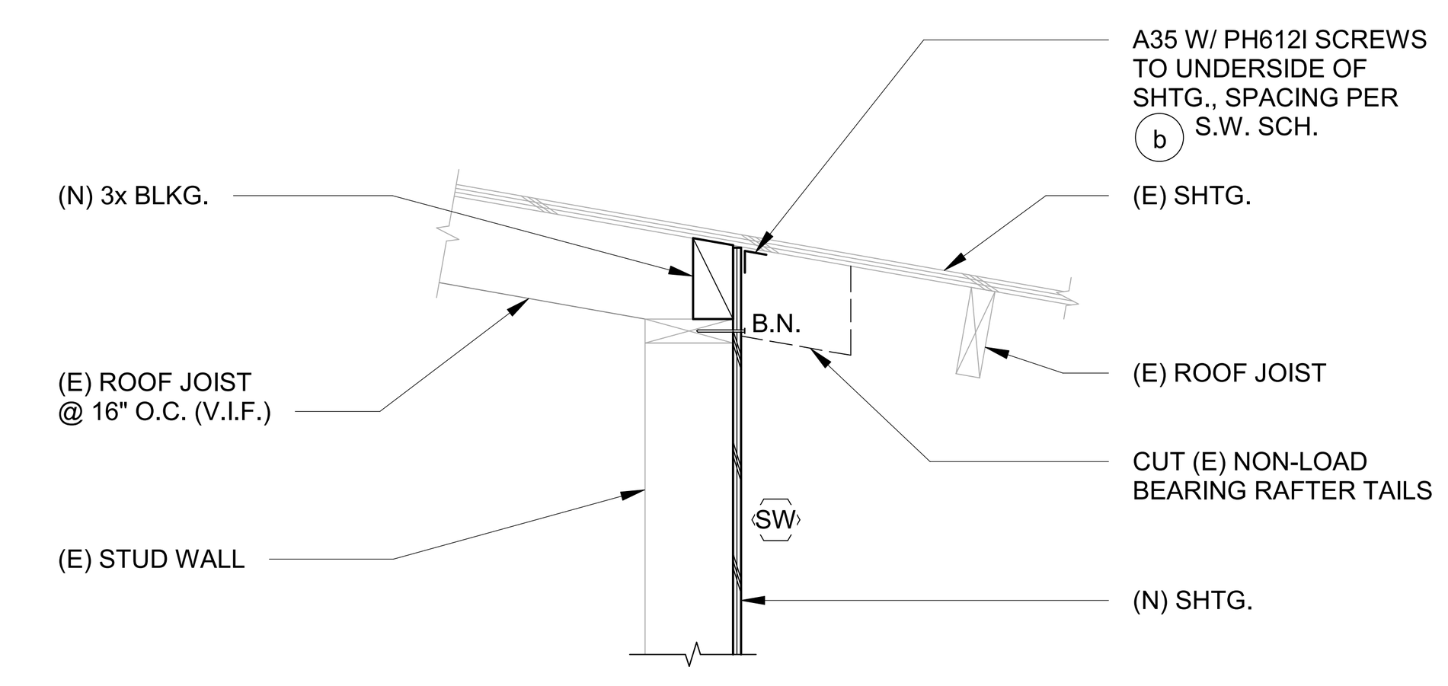
1/22/2021 10:37:55 AM



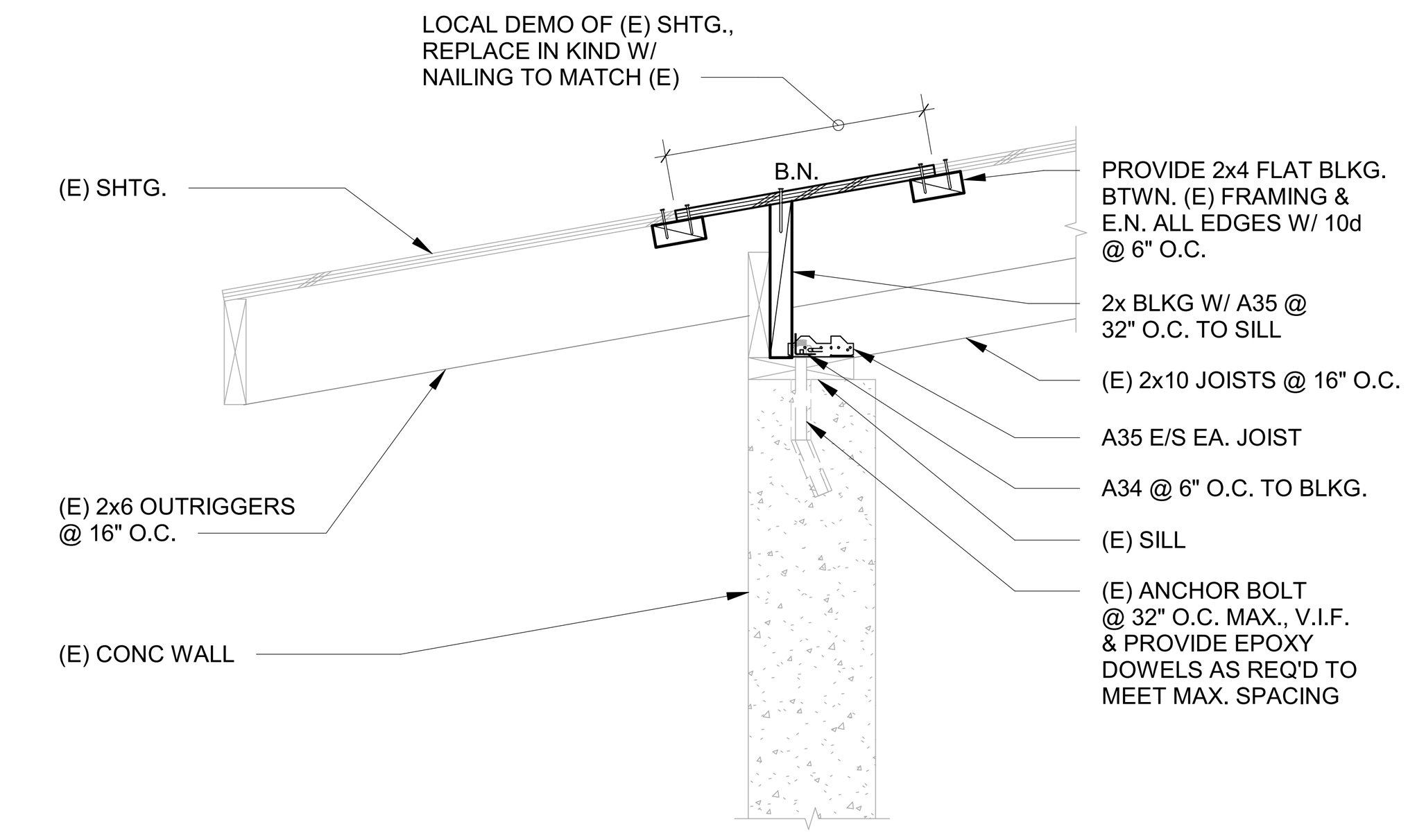
16 S-602 **(E) ROOF FRAMING TO SHEAR WALL** 1" = 1'-0"



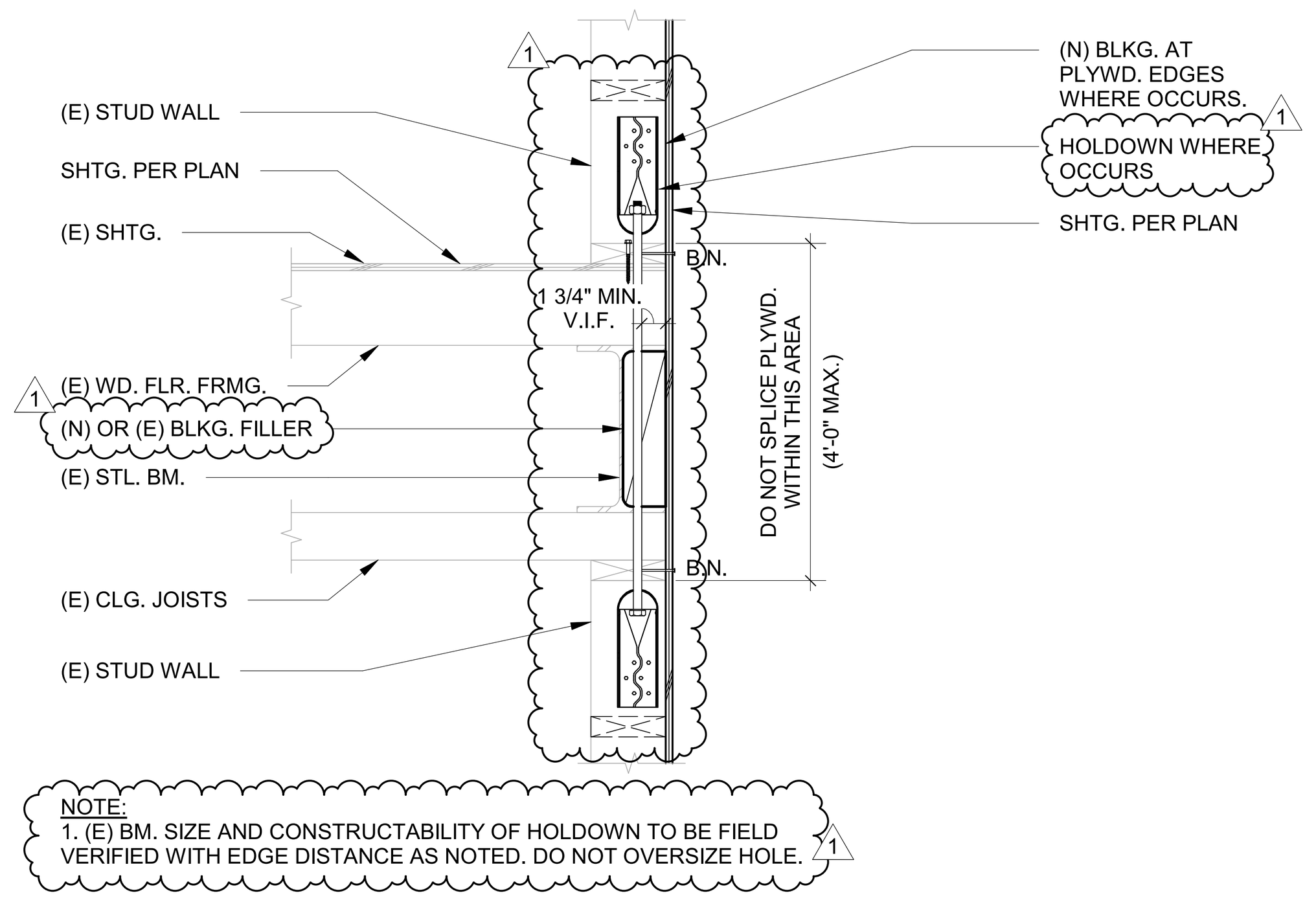
12 S-602 **SECTION AT WEST WALL (ZONE D)** 1" = 1'-0"



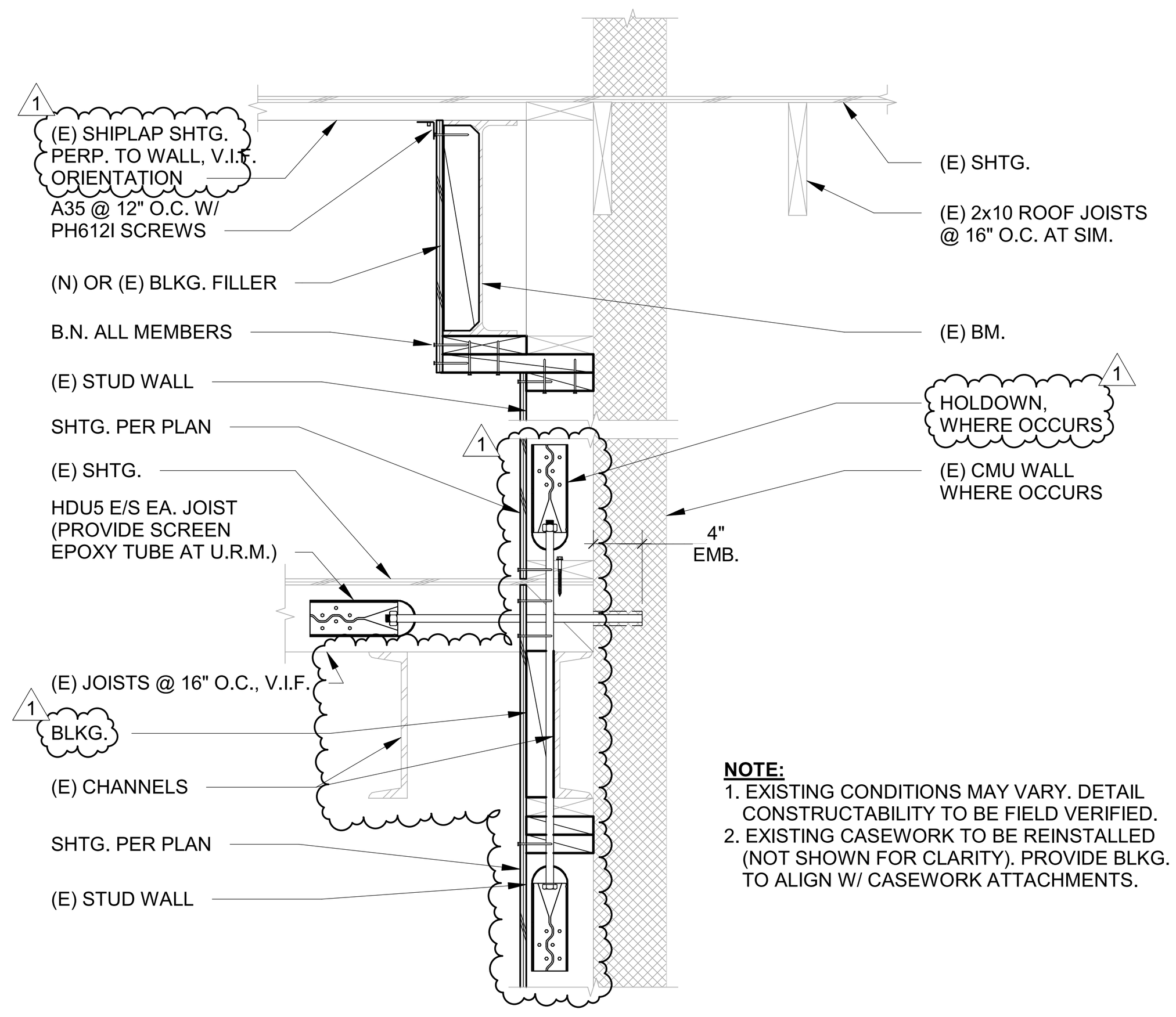
8 S-602 **SHEAR WALLS AT (E) ROOF (AREA C)** 1" = 1'-0"



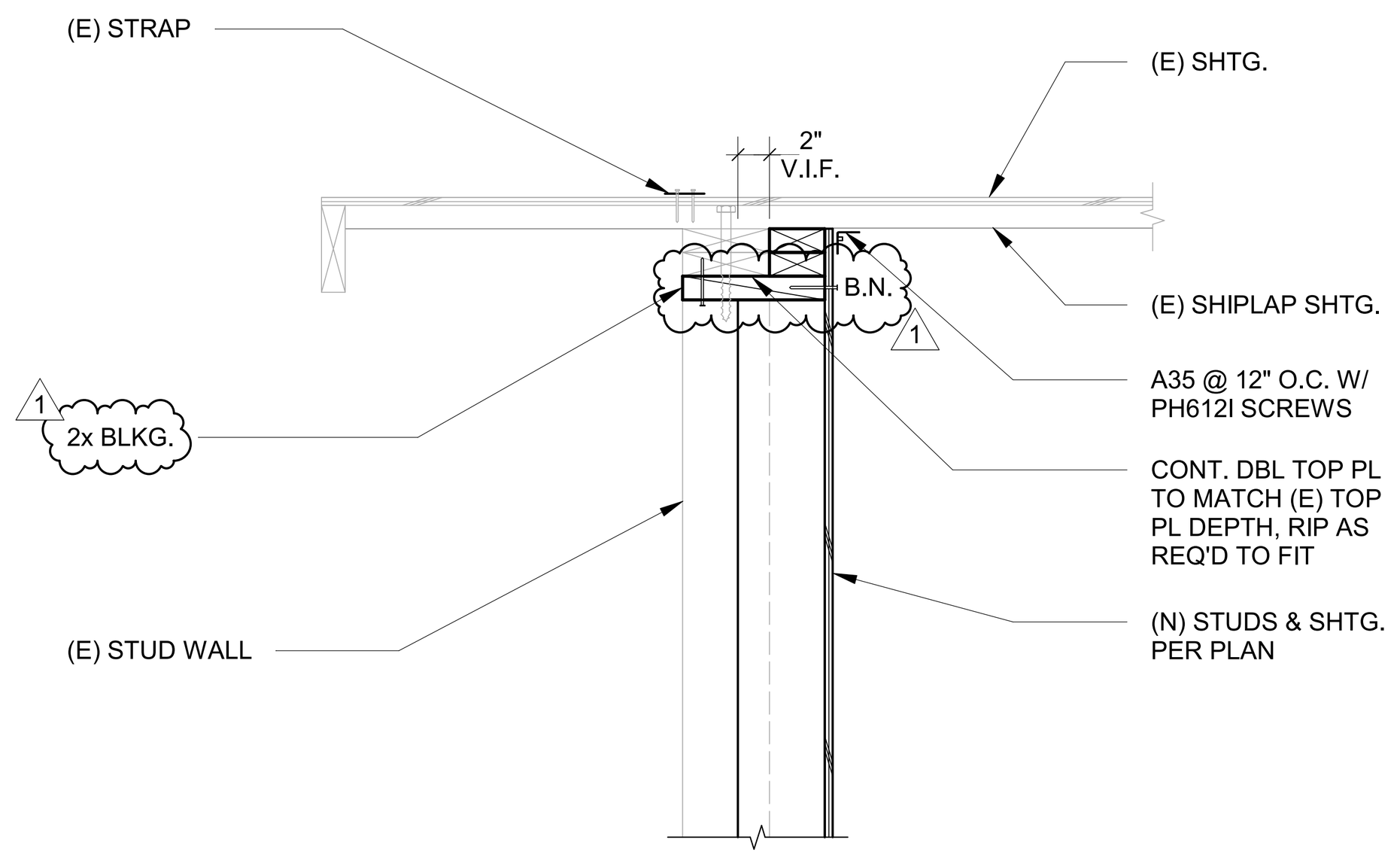
4 S-602 **(E) CONCRETE WALL AT DIAPHRAGM (AREA B)** 1" = 1'-0"



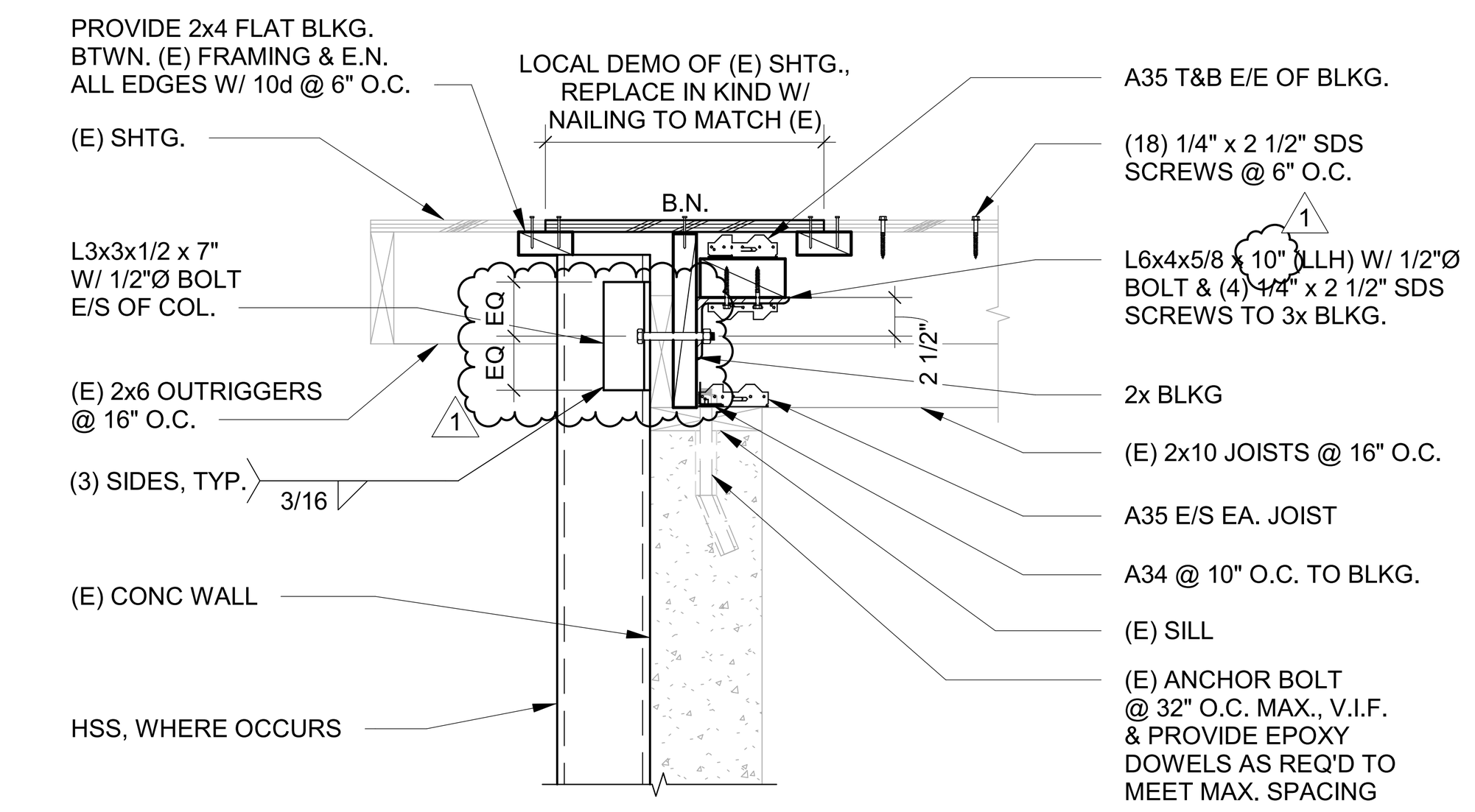
15 S-602 **(E) SECOND FLOOR FRAMING AT (N) SHEAR WALL** 1" = 1'-0"



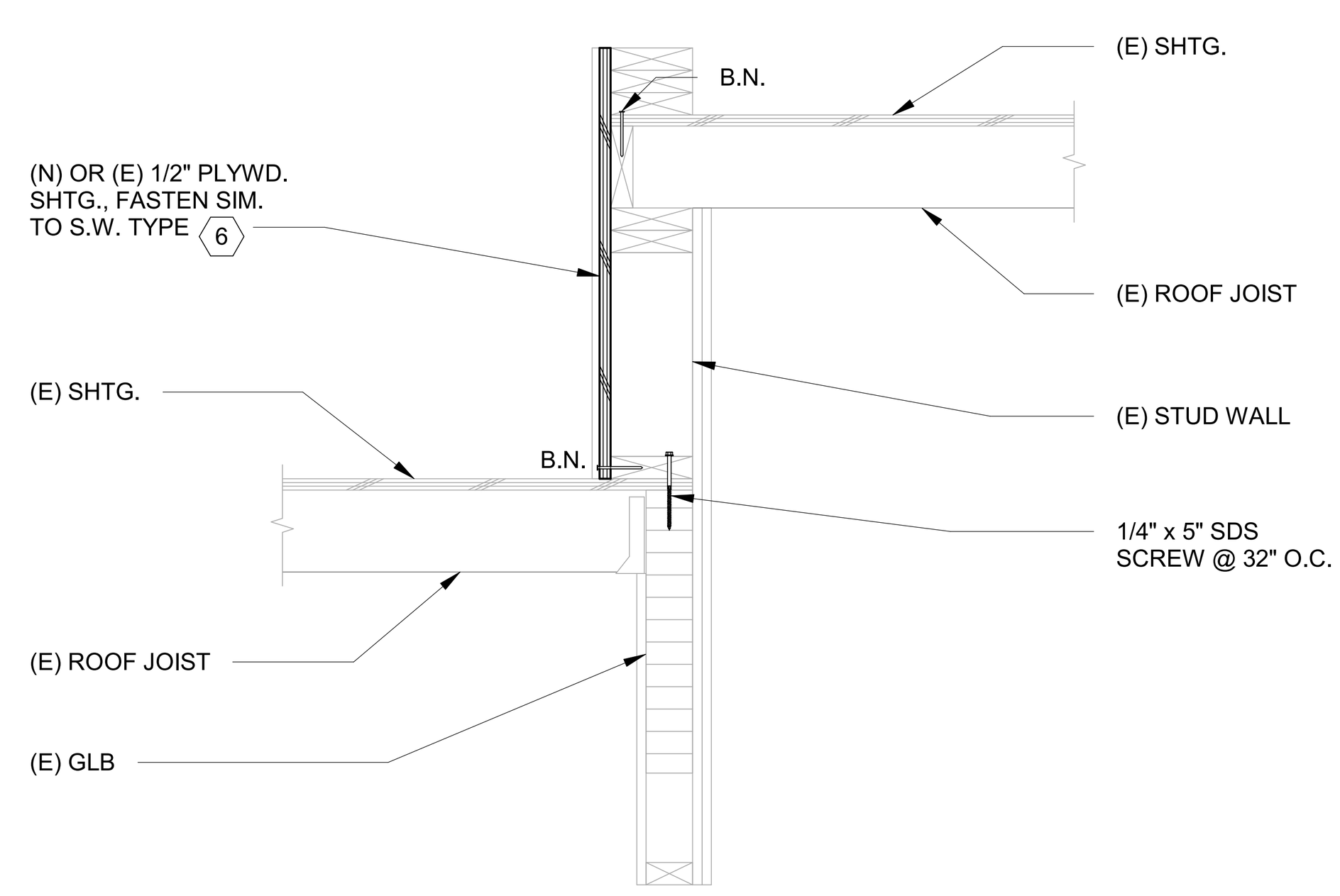
11 S-602 **SECTION AT MUSIC ROOM (AREA A)** 1" = 1'-0"



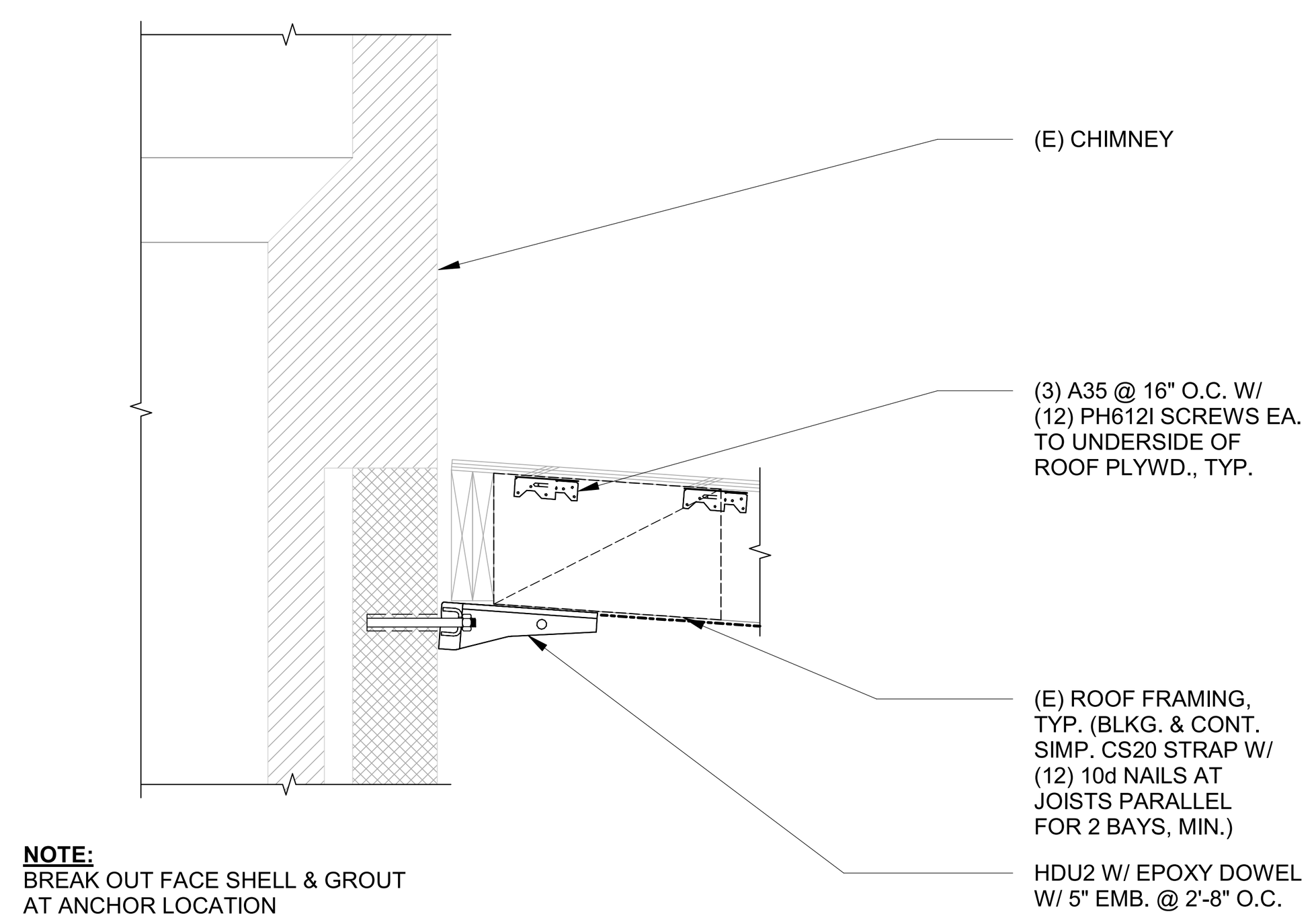
7 S-602 **(E) FRAMING TO SHEAR WALL (AREA A)** 1" = 1'-0"



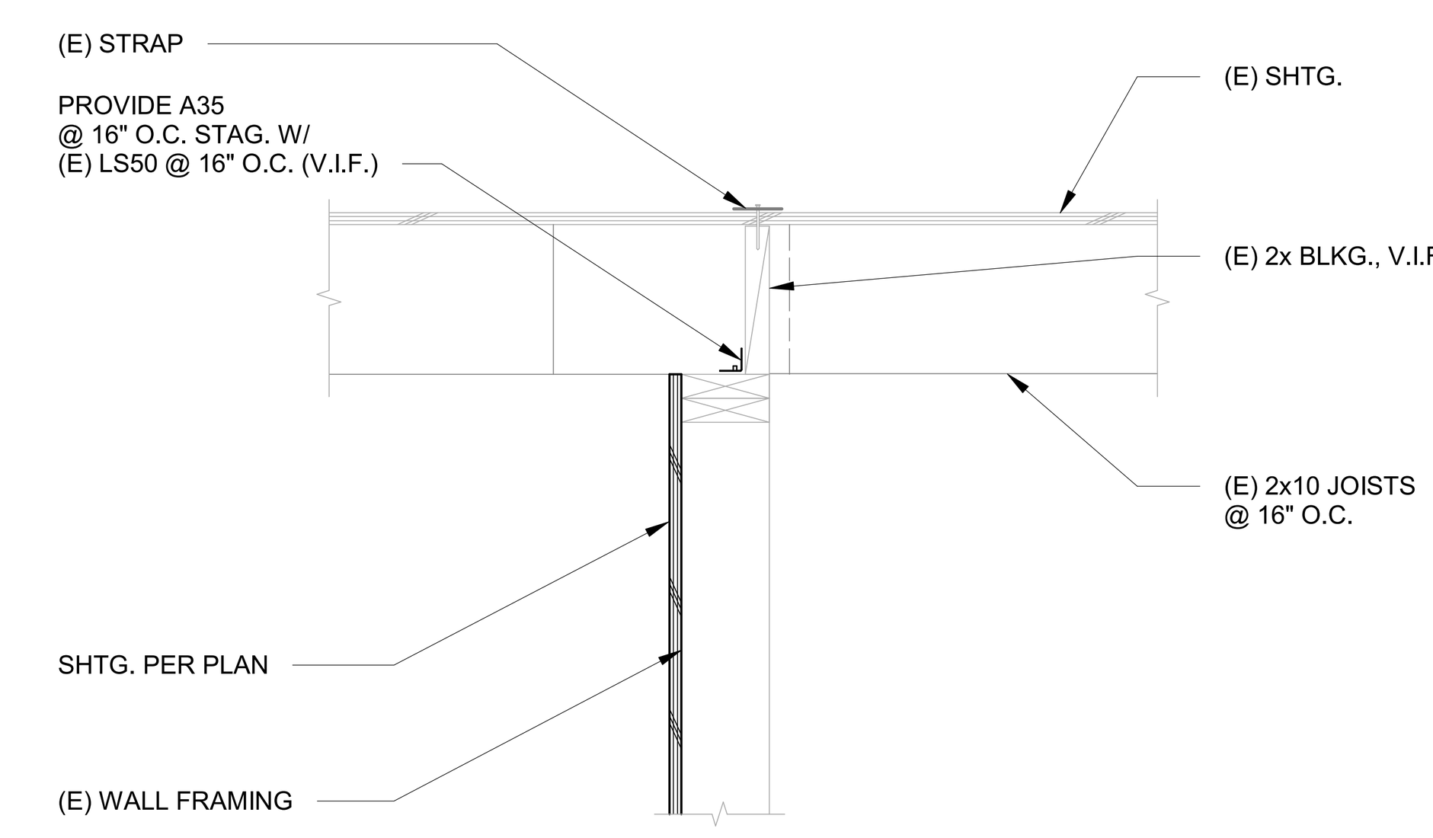
3 S-602 **(E) CONCRETE WALL AT DIAPHRAGM (AREA B)** 1" = 1'-0"



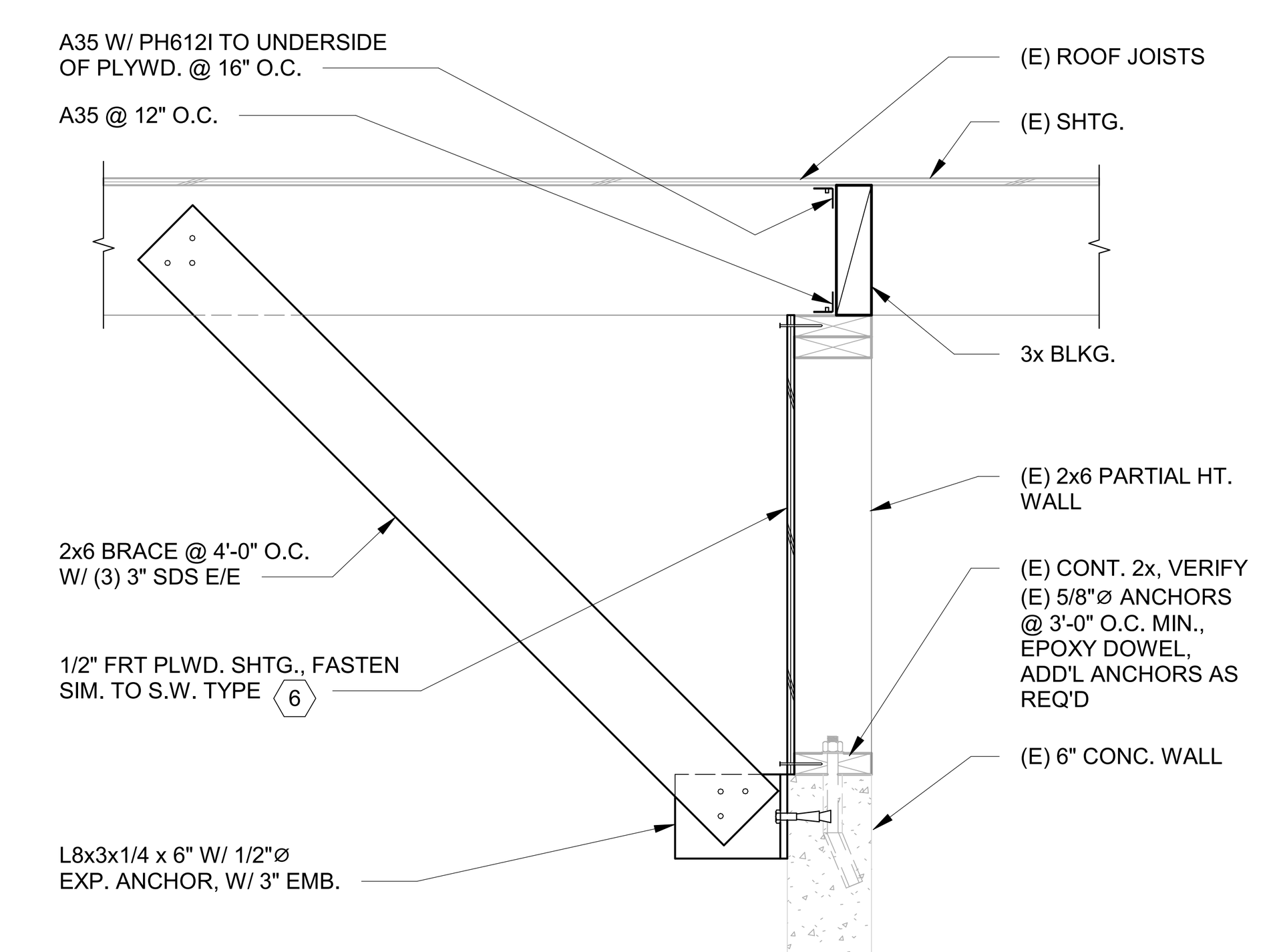
14 S-602 **SECTION AT ROOF POP-UP** 1" = 1'-0"



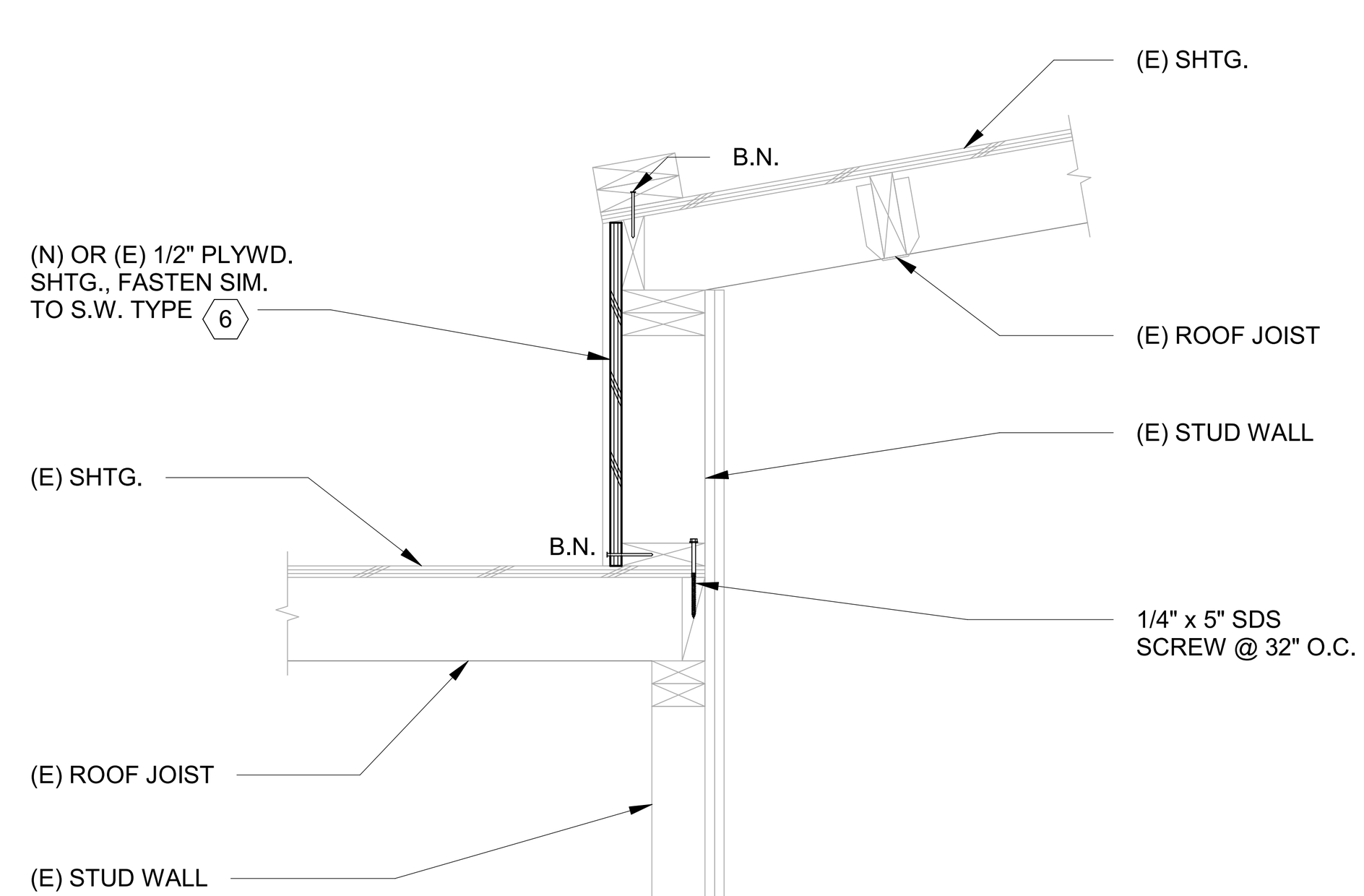
10 S-602 **CHIMNEY SUPPORT AT ROOF** 1" = 1'-0"



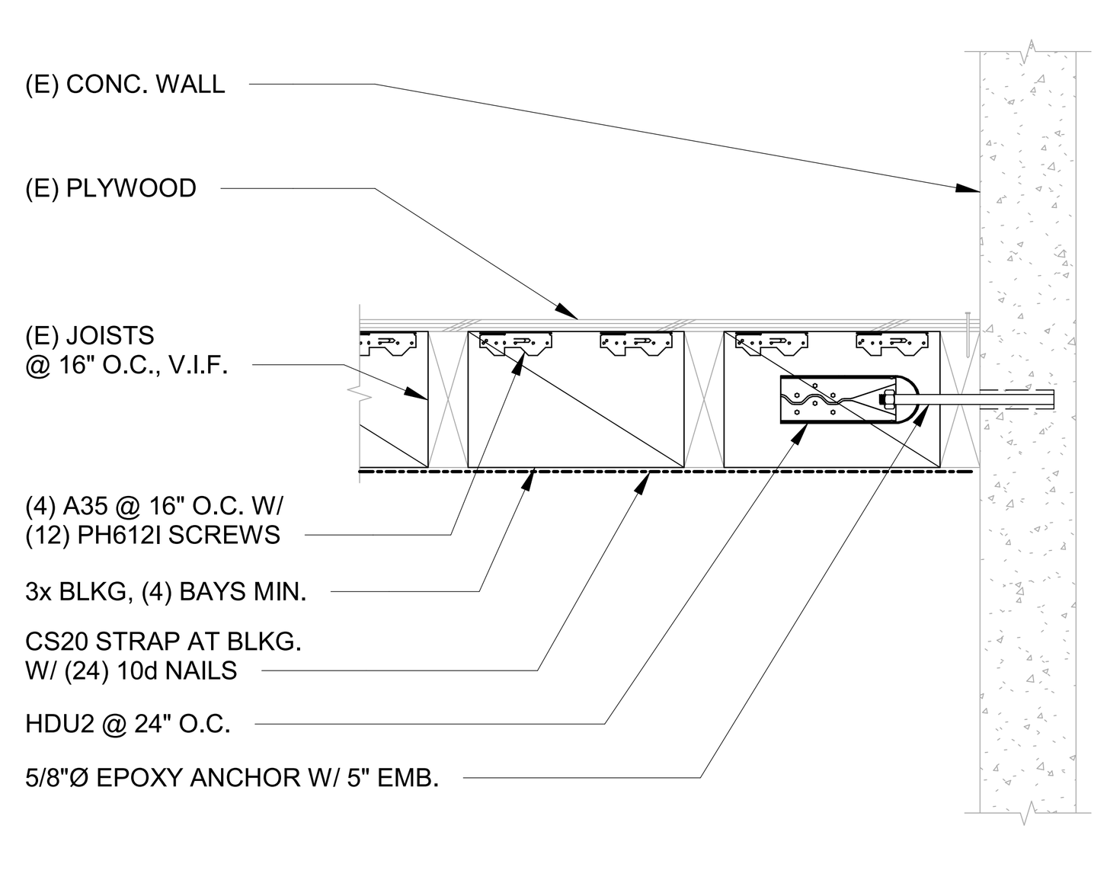
6 S-602 **(E) FRAMING TO SHEAR WALL (AREA A)** 1" = 1'-0"



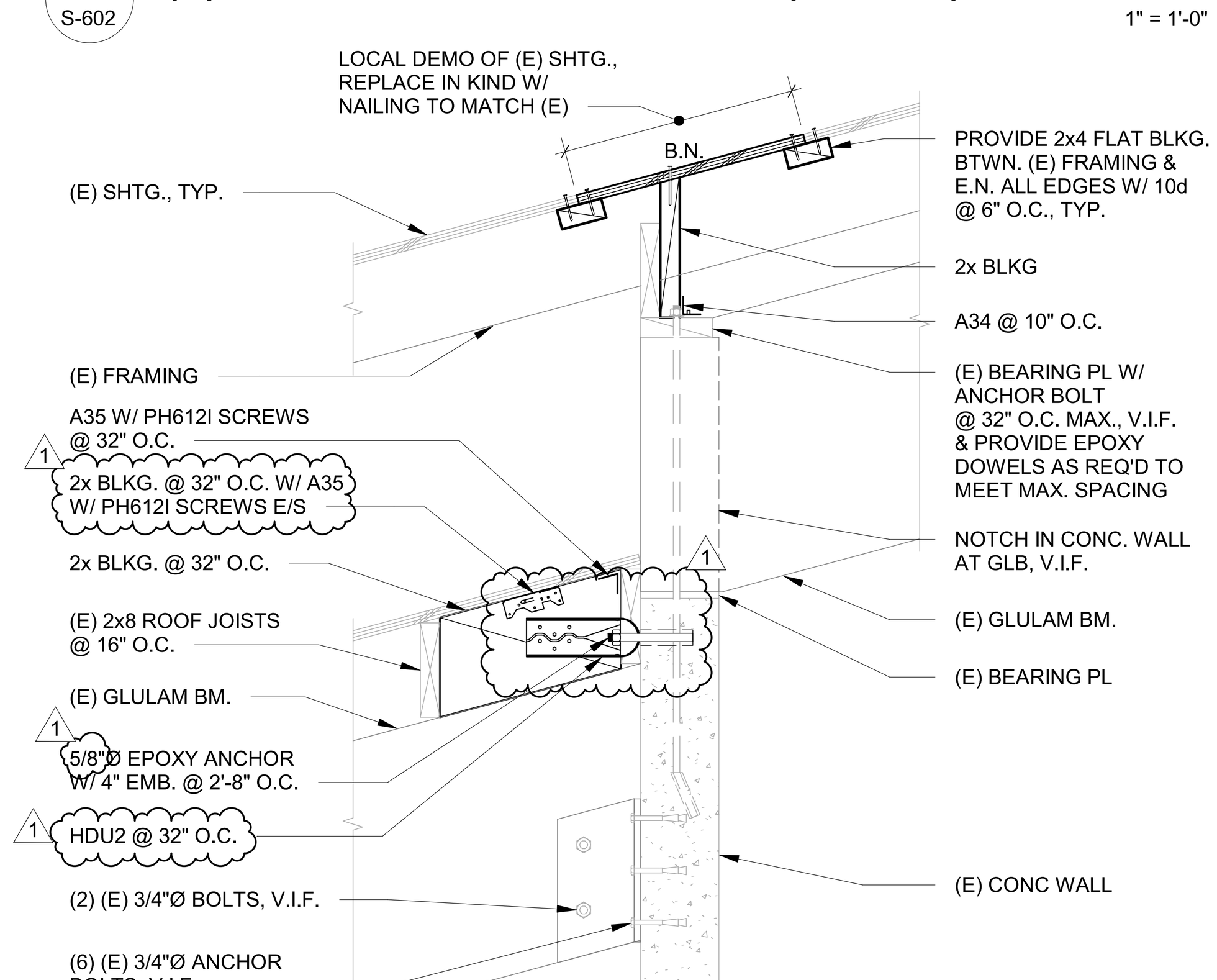
2 S-602 **SUPPORT AT UNBRACED CONC. WALL (AREA C)** 1" = 1'-0"



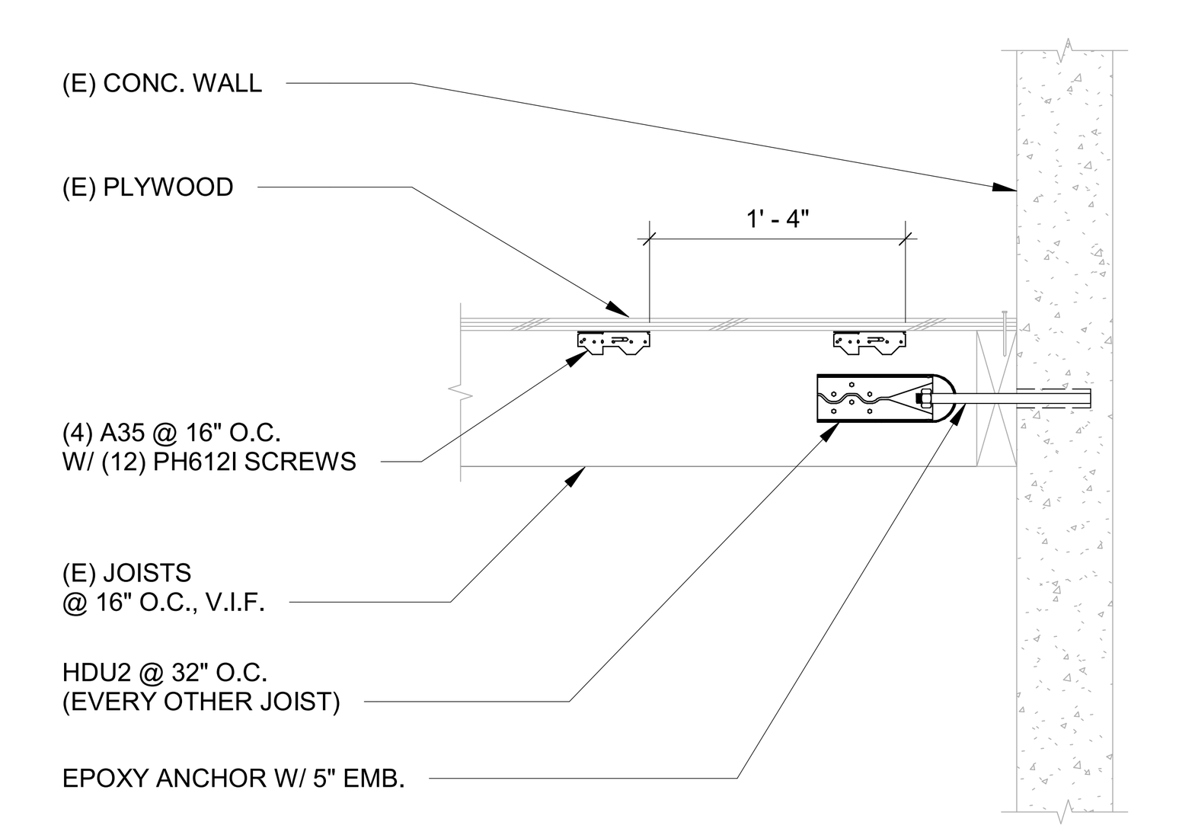
13 S-602 **SECTION AT ROOF POP-UP** 1" = 1'-0"



9 S-602 **CONCRETE WALL AT JOISTS PARALLEL (AREA A-B)** 1" = 1'-0"



5 S-602 **(E) FRAMING AT DIAPHRAGM (AREA B)** 1" = 1'-0"



1 S-602 **CONCRETE WALL AT JOISTS PERPENDICULAR (AREA A-B)** 1" = 1'-0"

BEAVERTON SCHOOL DISTRICT

Cooper Mtn SRGP

7670 SW 170th Ave
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Consultants:

Holmes
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COOPER MOUNTAIN ELEMENTARY SCHOOL
SEISMIC SRGP IMPROVEMENTS

PERMIT/BID SET

NOT FOR CONSTRUCTION
EXP. 12/31/2021

Date:	12-04-2020
Project Number:	20138.10
Drawn By:	IK
Checked By:	JE

Revision Schedule:

1 CITY COMMENTS #1 01/25/2021

Sheet Title:

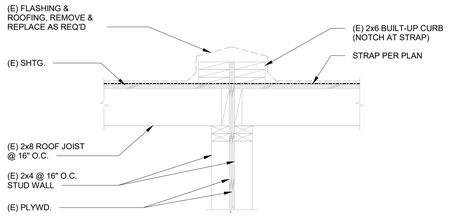
WOOD DETAILS

Sheet Number:

S-602

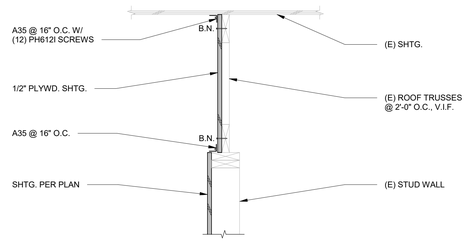
PERMIT/BID SET

1/22/2021 10:37:56 AM



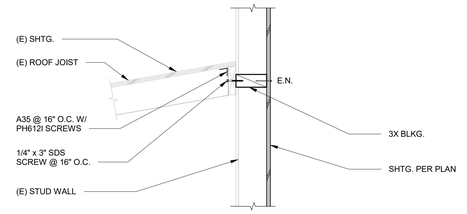
12 S-603 **ROOF BUMP-UP (AREA D)**

1" = 1'-0"



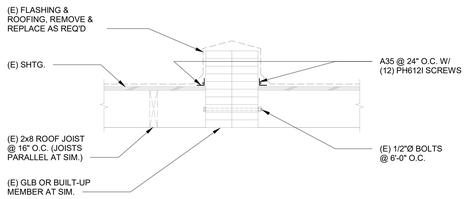
8 S-603 **(E) FRAMING TO SHEAR WALL (AREA C)**

1" = 1'-0"



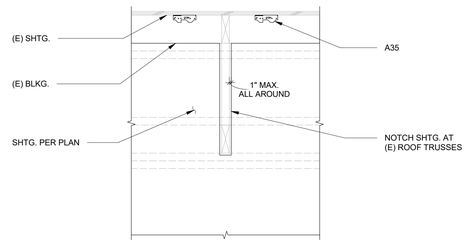
3 S-603 **(E) FRAMING TO SHEAR WALL (AREA A)**

1" = 1'-0"

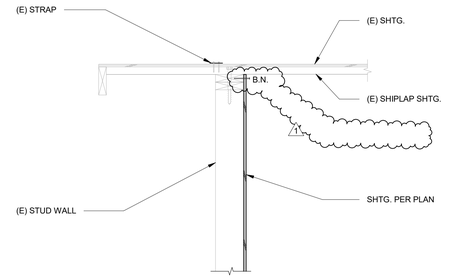


11 S-603 **ROOF BUMP-UP (AREA D)**

1" = 1'-0"

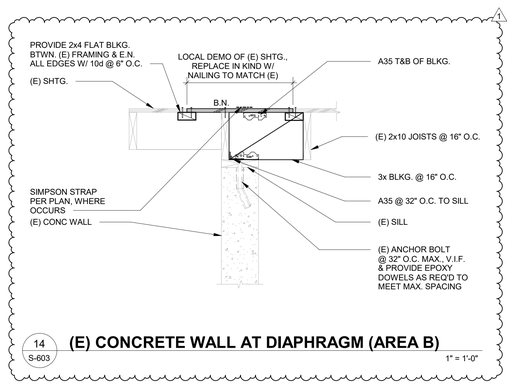


SECTION A-A



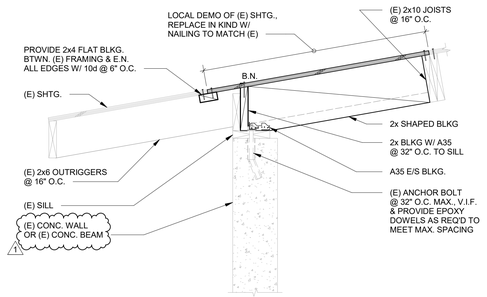
2 S-603 **(E) FRAMING TO SHEAR WALL (AREA A)**

1" = 1'-0"



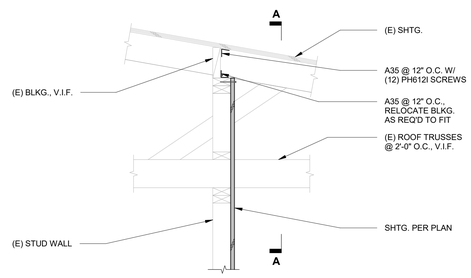
14 S-603 **(E) CONCRETE WALL AT DIAPHRAGM (AREA B)**

1" = 1'-0"



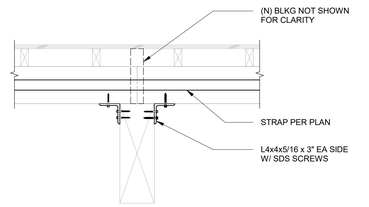
10 S-603 **(E) CONCRETE WALL AT DIAPHRAGM (AREA B)**

1" = 1'-0"

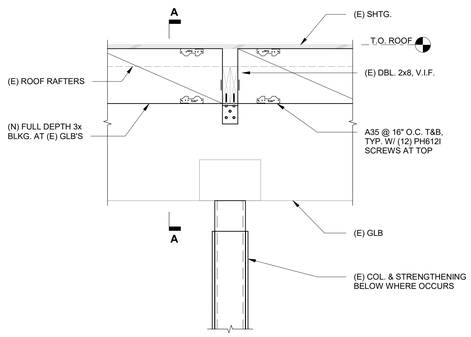


6 S-603 **(E) FRAMING TO SHEAR WALL (AREA C)**

1" = 1'-0"

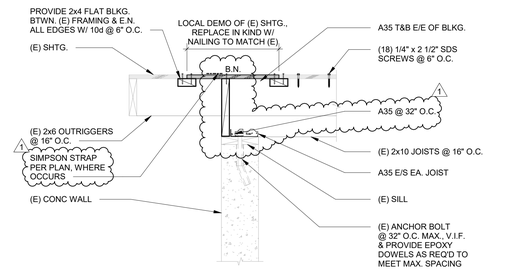


SECTION A-A



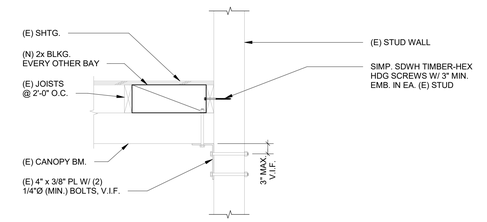
1 S-603 **ROOF STRENGTHENING (AREA D)**

1" = 1'-0"



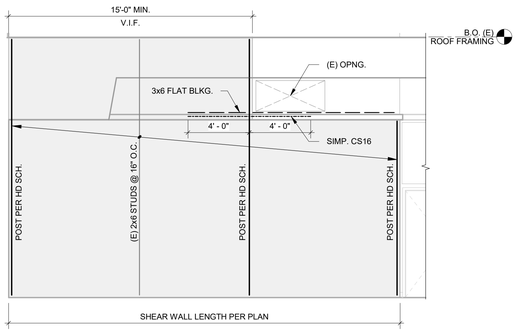
13 S-603 **(E) CONCRETE WALL AT DIAPHRAGM (AREA B)**

1" = 1'-0"



9 S-603 **(E) CANOPY DETAIL (AREA C)**

1" = 1'-0"



5 S-603 **CAFETERIA WALL EAST**

1/4" = 1'-0"

BEAVERTON SCHOOL DISTRICT

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7670 SW 170th Ave
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Consultants:

Holmes

Holmes Structures
555 SE MLK Jr Blvd, Suite 602
Portland, OR 97214 USA
T: 503 673 9323 holmesstructures.com

COOPER MOUNTAIN ELEMENTARY SCHOOL
SEISMIC SRGP IMPROVEMENTS

PERMIT/BID SET

STRUCTURAL ENGINEERED PROFESSIONAL JENNIFER B. HOLMES OREGON JULY 11, 2014 EXP. 12/31/2021

NOT FOR CONSTRUCTION

Date: 12-04-2020
Project Number: 20138.10
Drawn By: IK
Checked By: JE

Revision Schedule:

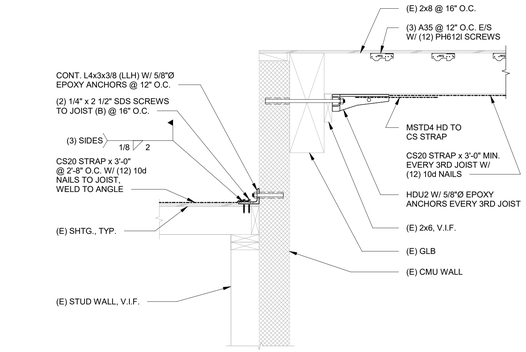
1	CITY COMMENTS #1	01/25/2021

Sheet Title:
WOOD DETAILS

Sheet Number:
S-603

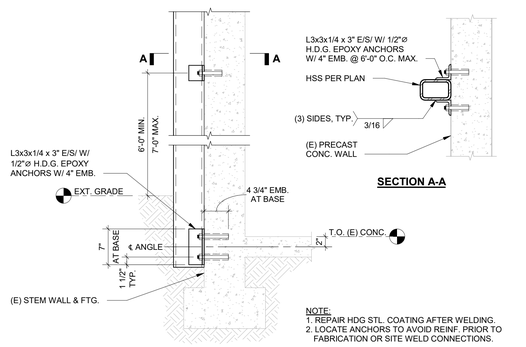
PERMIT/BID SET

1/22/2021 10:37:57 AM



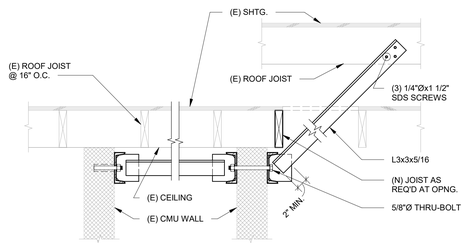
4 S-701 **(E) CMU AT (N) ROOF DIAPHRAGM**

1" = 1'-0"



3 S-701 **HSS TO (E) CONC. WALL**

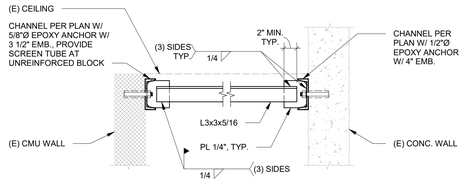
1" = 1'-0"



NOTE:
CHANNELS, ANGLE, PLATES & CONNECTIONS PER 5/S-701

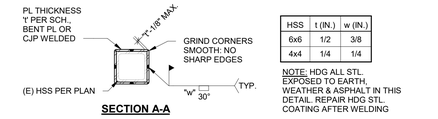
6 S-701 **SUPPORT AT UNBRACED CMU WALL**

1" = 1'-0"



5 S-701 **SUPPORT AT UNBRACED CMU WALL**

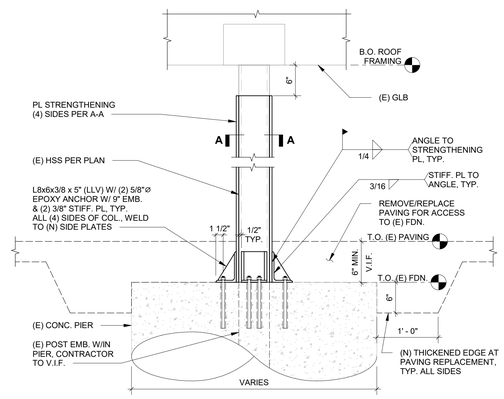
1" = 1'-0"



SECTION A-A

HSS	t (IN.)	w (IN.)
6x6	1/2	3/8
4x4	1/4	1/4

NOTE: HDG ALL STL. EXPOSED TO EARTH, WEATHER & ASPHALT IN THIS DETAIL. REPAIR HDG STL. COATING AFTER WELDING



1 S-701 **HSS STRENGTHENING**

1" = 1'-0"

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COOPER MOUNTAIN ELEMENTARY SCHOOL SEISMIC SRGP IMPROVEMENTS

PERMIT/BID SET

Date:	12-04-2020
Project Number:	20138.10
Drawn By:	IK
Checked By:	JE

Revision Schedule:

1	CITY COMMENTS #1	01/25/2021

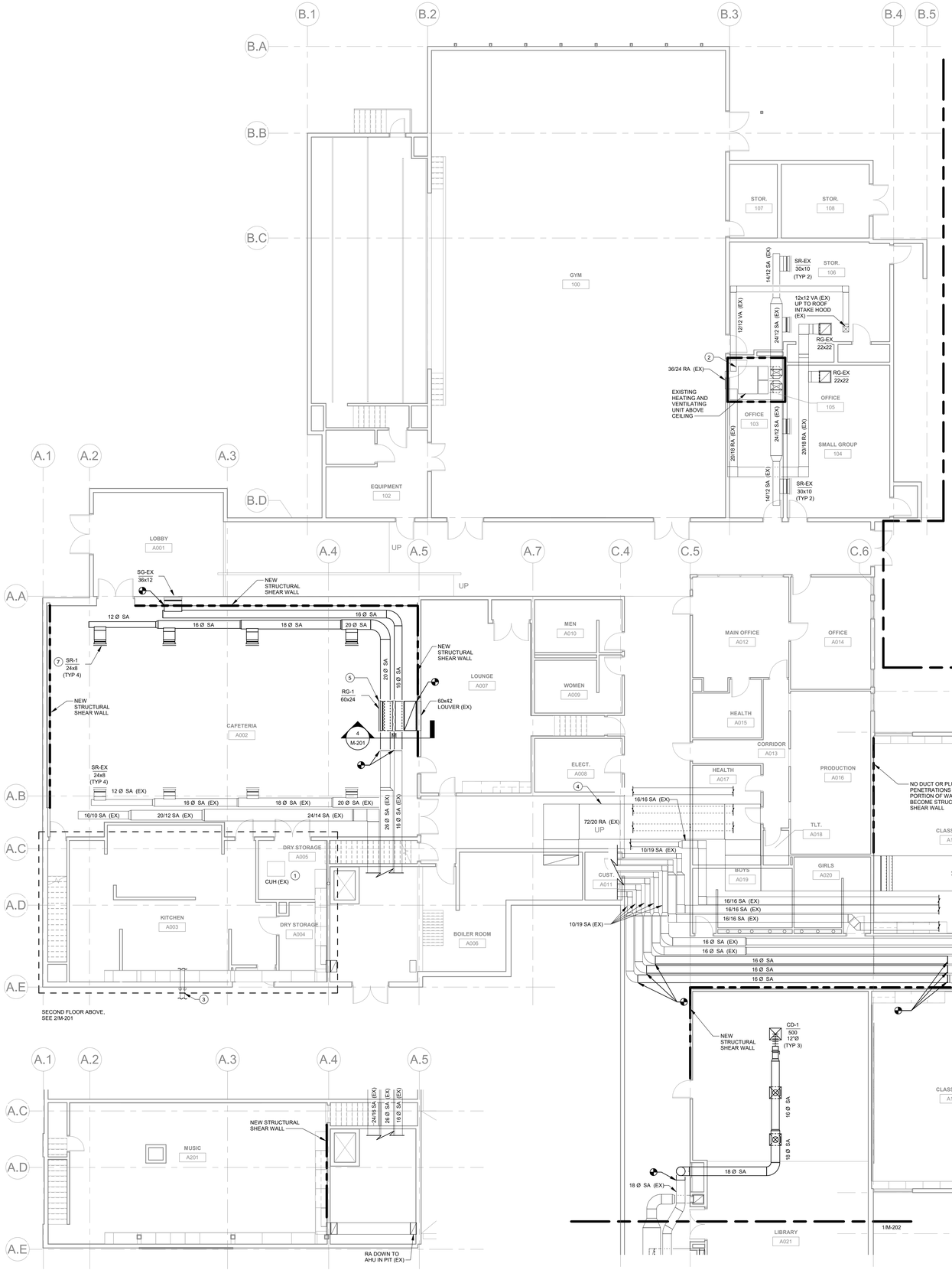
Sheet Title:

STEEL DETAILS

Sheet Number:

S-701

PERMIT/BID SET



3 MECHANICAL ROOF PLAN - AREA B
1/8" = 1'-0"

2 MECHANICAL FLOOR PLAN - AREA A SECOND FLOOR
1/8" = 1'-0"

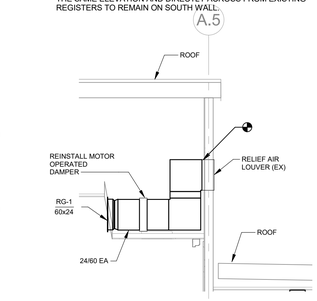
1 MECHANICAL FLOOR PLAN - AREA B
1/8" = 1'-0"

GENERAL NOTES:

1. REFER TO M-000 FOR GENERAL NOTES & SYMBOLS.
2. REFER TO M-300 FOR MECHANICAL DETAILS.
3. REFER TO M-500 FOR MECHANICAL SCHEDULES.
4. BRANCH DUCTS TO AIR TERMINALS TO MATCH NECK SIZE OF GRILLE, REGISTER OR DIFFUSER UNLESS OTHERWISE NOTED.
5. MAXIMUM FLEXIBLE DUCT LENGTH TO DIFFUSER IS 60".

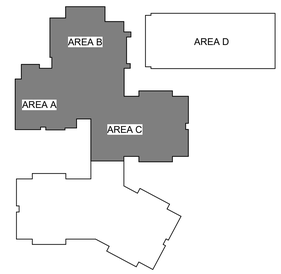
SHEET - KEYNOTES

1 INSTALL SEISMIC CONTROLS AT EXISTING SUSPENDED CABINET UNIT HEATER
2 ADD SEISMIC CONTROLS AT HEATING AND VENTILATING UNIT AND HEATING COILS SUSPENDED FROM ROOF STRUCTURE ABOVE THE OFFICE CEILING.
3 RECONNECT EXISTING REFRIGERANT LINESETS FROM OUTDOOR CONDENSERS TO WALK-IN COOLERS AFTER CONSTRUCTION.
4 INSTALL SEISMIC CONTROLS ON 72/20 RETURN AIR DUCT. ITS CROSS SECTIONAL AREA EXCEEDS 6 SQ. FT.
5 INSTALL NEW 60x24 RELIEF AIR GRILLE, 60x24 DUCTWORK. REINSTALL EXISTING MOTOR OPERATED DAMPER. CEILING ACCESS PANEL BY OTHERS FOR DAMPER ACTUATOR ACCESS. CONFIRM ACTUATOR LOCATION IN THE FIELD AND COORDINATE WITH ARCHITECT. SEE 4/M201 FOR MORE DETAIL.
6 REINSTALL EXISTING ROOF MOUNTED RELIEF HOOD ON NEW ROOF CURB. CLEAN ROOF HOOD. PERFORM TESTING, ADJUSTING, AND BALANCING ON HOOD AFTER REINSTALLATION.
7 INSTALL SUPPLY REGISTER IN SIDEWALL OF CEILING SOFFIT. INSTALL AT THE SAME ELEVATION AND DIRECTLY ACROSS FROM EXISTING REGISTERS TO REMAIN ON SOUTH WALL.



4 RELIEF AIR SECTION
1/4" = 1'-0"

KEY PLAN



1/20/2021 10:18:51 AM

BEAVERTON SCHOOL DISTRICT

COOPER MOUNTAIN ELEMENTARY

7670 SW 170th AVE
BEAVERTON, OR 97007

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Portland, OR 97209

Consultants:

KCL ENGINEERING © 2020
KCL Engineering
2175 NW Raleigh Street, Suite 110
Portland, OR, 97210

COOPER MOUNTAIN ELEMENTARY SCHOOL
SRGP IMPROVEMENTS

PERMIT/BID SET

REGISTERED PROFESSIONAL ENGINEER — OREGON — 84 — SHAWN L. SHANKS — 13, 2018 — NOT FOR CONSTRUCTION

EXPIRES: 6/30/2022

Date:	12/04/2020
Project Number:	90060
Drawn By:	MK
Checked By:	SLS

Revision Schedule:

1	Add. No. 1	1/22/21

Sheet Title:
MECHANICAL PLANS - AREA A, B, C NORTH

Sheet Number:
M-201

PERMIT/BID SET

GENERAL NOTES:

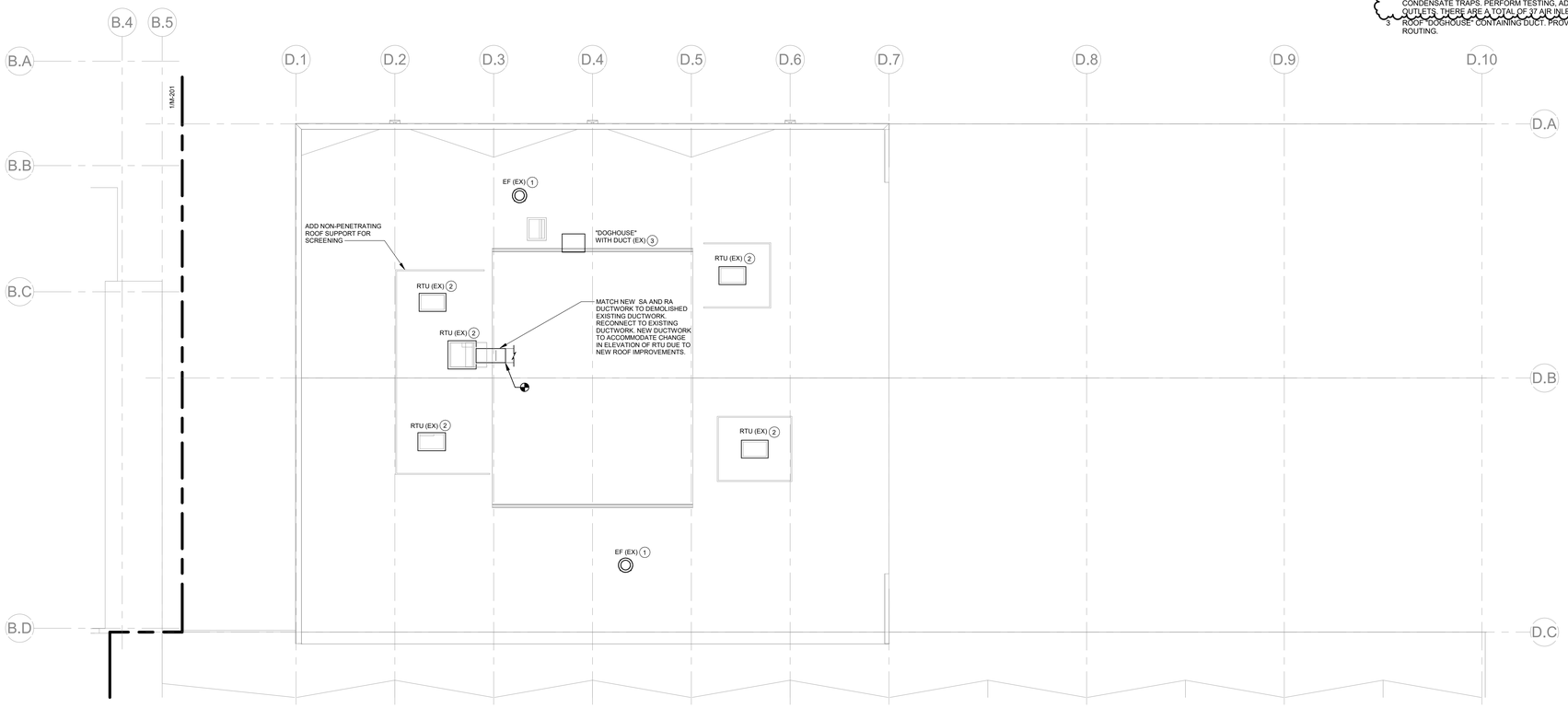
1. REFER TO M-000 FOR GENERAL NOTES & SYMBOLS.
2. REFER TO M-300 FOR MECHANICAL DETAILS.
3. REFER TO M-500 FOR MECHANICAL SCHEDULES.
4. BRANCH DUCTS TO AIR TERMINALS TO MATCH NECK SIZE OF GRILLE, REGISTER OR DIFFUSER UNLESS OTHERWISE NOTED.
5. MAXIMUM FLEXIBLE DUCT LENGTH TO DIFFUSER IS 60".

SHEET - KEYNOTES (1)

1 REINSTALL EXHAUST FANS. PROVIDE NEW CURBS 12" HIGH ABOVE ROOF SURFACE. CLEAN FAN. PERFORM TESTING, ADJUSTING, AND BALANCING ON FAN AND RELATED AIR INLETS. THERE ARE A TOTAL OF 3 AIR INLETS ASSOCIATED WITH 2 EXHAUST FANS.

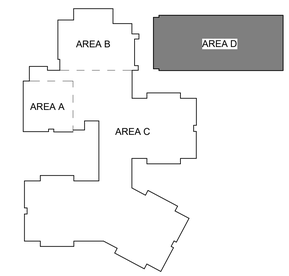
2 REINSTALL ROOFTOP HVAC UNITS AND SCREENING. PROVIDE NEW ROOF CURB 12" HIGH ABOVE ROOF SURFACE. RECONNECT RTU TO EXISTING SUPPLY AND RETURN DUCTWORK. RECONNECT EXISTING CONTROLS. PERFORM MAINTENANCE SERVICE ON REINSTALLED RTUs INCLUDING SERVICING HEATING AND COOLING SYSTEMS, CLEAN AND COMB COIL EVAPORATOR AND CONDENSER FINS, CLEAN OUTDOOR AIR SCREENS, REPLACE FILTERS, REPLACE CONDENSATE TRAPS. PERFORM TESTING, ADJUSTING, AND BALANCING ON RTU AND ITS RELATED AIR INLETS AND OUTLETS. THERE ARE A TOTAL OF 37 AIR INLETS AND OUTLETS ASSOCIATED WITH THE FIVE RTUs.

3 "ROOF "DOGHOUSE" CONTAINING DUCT. PROVIDE NEW CURB AND ENCLOSURE TO MAINTAIN EXISTING DUCT ROUTING.



2 MECHANICAL ROOF PLAN - AREA D
1/8" = 1'-0"

KEY PLAN



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BEAVERTON SCHOOL DISTRICT

COOPER MOUNTAIN ELEMENTARY
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Portland, OR 97209

Consultants:

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2175 NW Raleigh Street, Suite 110
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COOPER MOUNTAIN ELEMENTARY SCHOOL
SRGP IMPROVEMENTS

PERMIT/BID SET

REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 13, 2018
TIMMY L. SHANKS
EXPIRES: 6/30/2022

NOT FOR CONSTRUCTION

Date:	12/04/2020
Project Number:	90060
Drawn By:	MK
Checked By:	SLS

Revision Schedule:

1	Add. No. 1	1/22/21

Sheet Title:
MECHANICAL PLANS - AREA D

Sheet Number:
M-203

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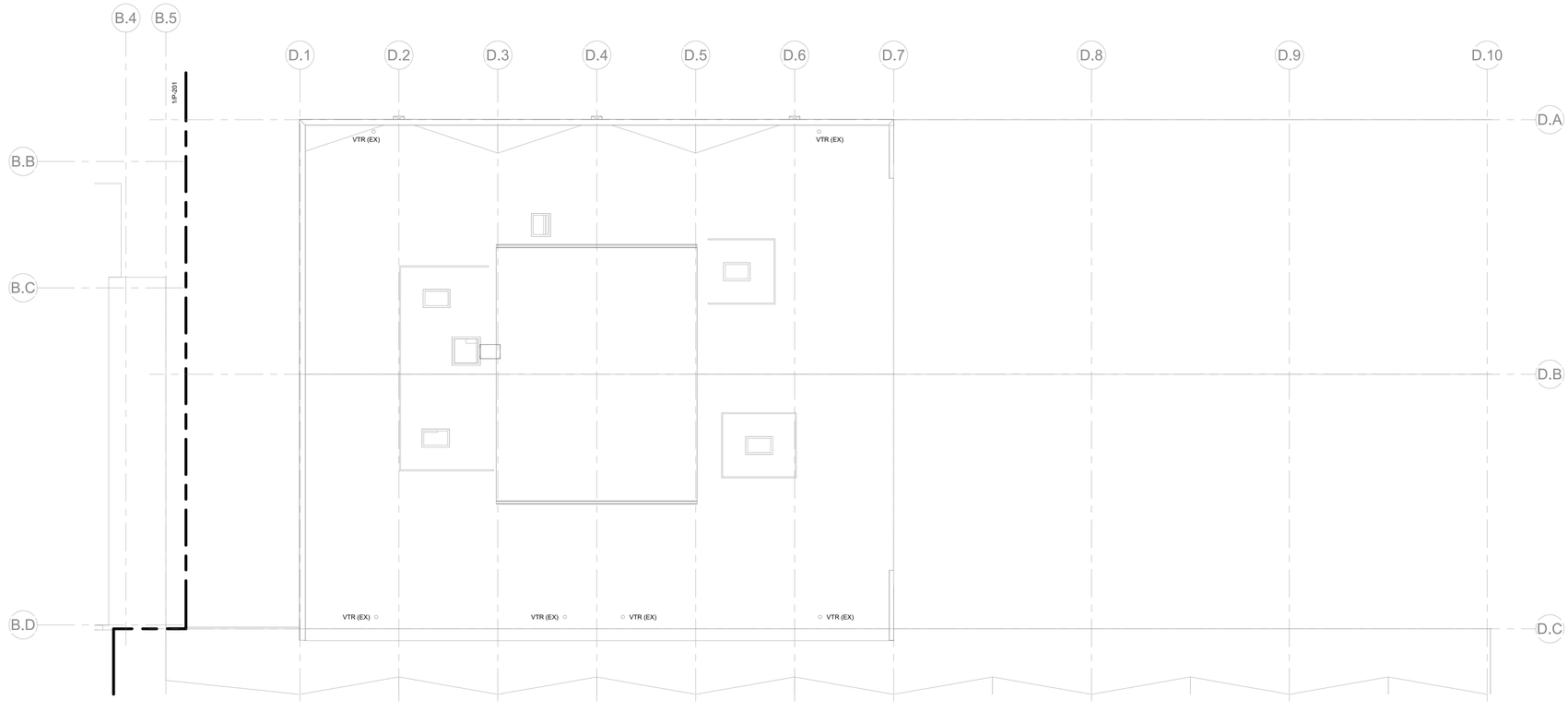
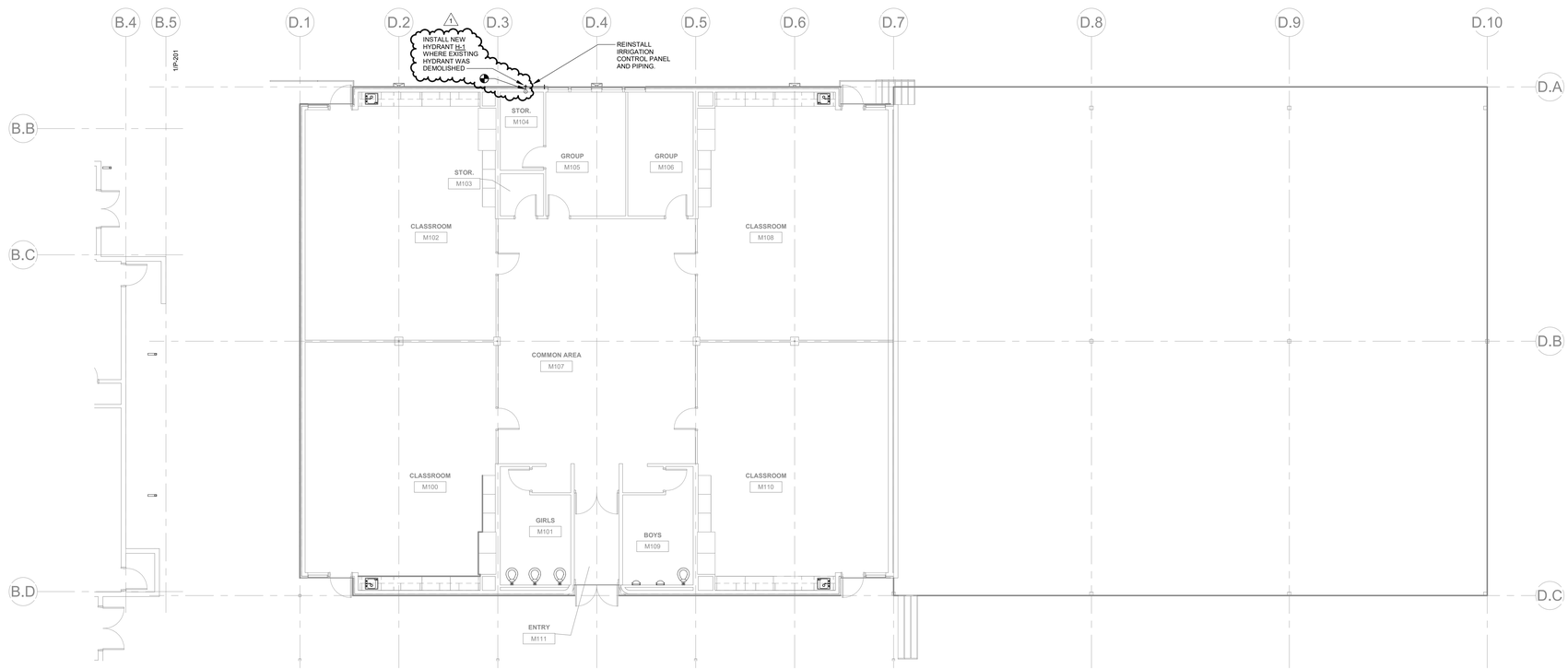
GENERAL NOTES:

1. REFER TO M-000 FOR GENERAL NOTES & SYMBOLS.
2. REFER TO P-300 FOR PLUMBING DETAILS.
3. REFER TO P-500 FOR PLUMBING SCHEDULES.
4. COORDINATE PIPE ROUTING WITH DUCTWORK. DUCTWORK HAS PRIORITY OVER PRESSURE PIPING.
5. BRANCH PIPING SHALL BE TAKEN OFF THE TOP OF MAIN PIPING.

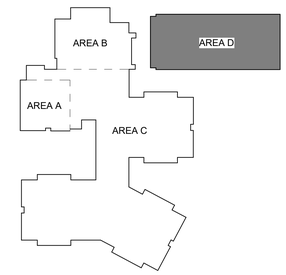


1 PLUMBING ROOF PLAN - AREA D
1/8" = 1'-0"



2 PLUMBING FLOOR PLAN - AREA D
1/8" = 1'-0"

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 13, 2016
JEREMY L. SHAWN
EXPIRES: 6/30/2022

NOT FOR CONSTRUCTION

Date:	12/04/2020
Project Number:	90060
Drawn By:	MK
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Sheet Title:
PLUMBING FLOOR PLAN - AREA D

Sheet Number:
P-203

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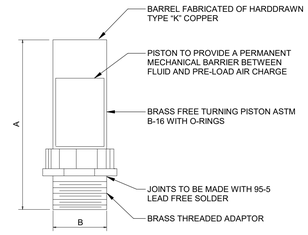
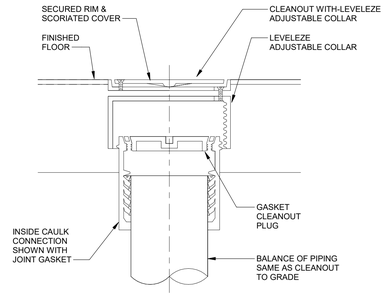


SIZE	SYMBOL	FIXTURE UNIT RATINGS	A SIZE	B SIZE
1/2"	A	1 - 11	5"	1/2"
3/4"	B	12 - 32	5"	3/4"
1"	C	33 - 60	7"	1"
1-1/4"	D	61 - 113	7"	1-1/4"
1-1/2"	E	114 - 154	9"	1-1/2"
2"	F	155 - 330	9"	2"



PLUMBING FIXTURE SCHEDULE

REFERENCE	MFR	MODEL	DESCRIPTION	TRIM
H-1	WOODFORD	65	FREEZELESS WALL HYDRANT, BRASS VALVE BODY AND SEAT, STANDARD FINISH, NON-FERROUS METAL STEM, AUTOMATIC DRAINING, VACUUM BREAKER, 3/4" MALE HOSE THREAD, WALL CLAMP, KEY OPERATED, ASSE 1019 APPROVED AND LISTED. INSTALL AT 18" ABOVE FINISH GRADE.	NA
SK-1 (ADA)	ELKAY	DRKR2517	SINGLE BOWL, COUNTER TOP MOUNT, 18-GAUGE 304 STAINLESS STEEL SINK WITH LEFT HAND FAUCET...	FAUCET - CHICAGO FAUCET [1100-CP] or [1100-GN2AE3VPAXKCP] or [50-CP]...

PLUMBING FIXTURES DEMOLISHED AND ADDED

DEMOLISHED FIXTURES			
DESCRIPTION	QUANTITY	SFU	DFU
CLASSROOM SINK	1	1.5	0
WALL HYDRANT	1	2.5	0
ADDED FIXTURES			
DESCRIPTION	QUANTITY	SFU	DFU
CLASSROOM SINK SK-1	1	1.5	0
WALL HYDRANT H-1	1	2.5	0

SUPPLY FIXTURE UNIT NET CHANGE:	0

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JEREMY L. SHAWN
EXPIRES: 6/30/2022

NOT FOR CONSTRUCTION

Date: 12/04/2020
Project Number: 90060
Drawn By: MK
Checked By: SLS

Revision Schedule:
1 Add. No. 1 1/22/21

Sheet Title:
PLUMBING DETAILS

Sheet Number:
P-300

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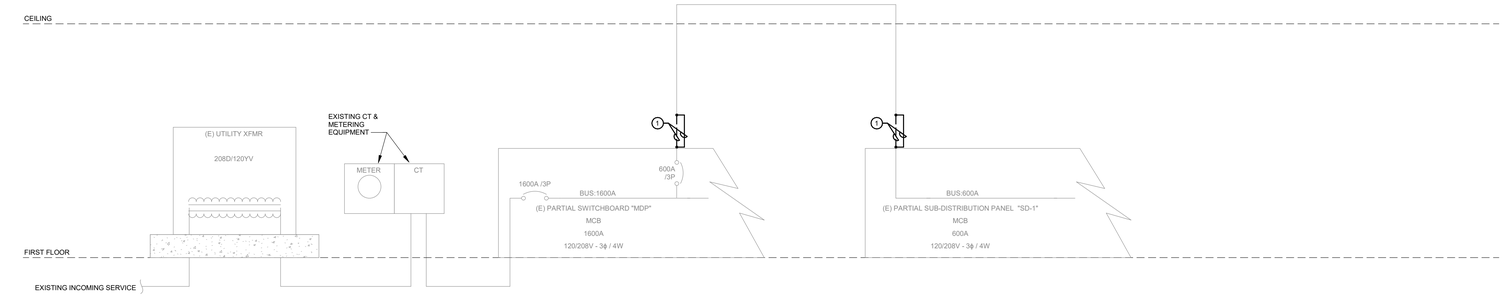


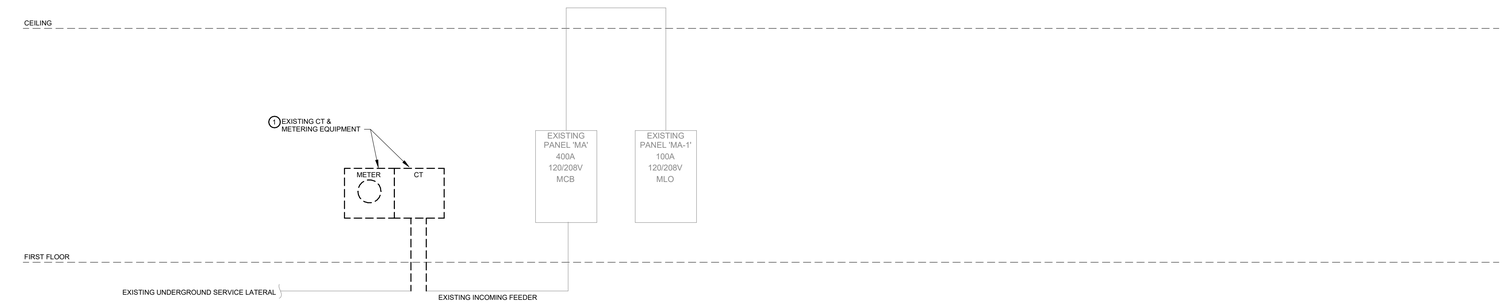
1 PARTIAL ONE-LINE DIAGRAM
NOT TO SCALE

ELECTRICAL RISER DIAGRAM NOTES

A. DIAGRAM INDICATES OVERALL LAYOUT OF ELECTRICAL DISTRIBUTION SYSTEM. REFER TO FLOOR PLANS FOR EQUIPMENT LOCATIONS.

POWER RISER KEYED NOTES: (#)

1. EXPOSED FEEDER CONDUIT ENTRY AT EQUIPMENT, (2) EXISTING 4" RIGID CONDUIT WITH #500KCMIL COPPER CONDUCTORS WITH GROUND. REPLACE EXISTING RIGID CONDUIT ENTRY WITH FLEXIBLE METAL CONDUIT AT EQUIPMENT, 2FT LENGTH. DISCONNECT, PULL BACK AND RETERMINATE CONDUCTORS TO ALLOW CONDUIT WORK.



2 PARTIAL ONE-LINE DIAGRAM (1986 MODULAR BUILDING)
NOT TO SCALE

ELECTRICAL RISER DIAGRAM NOTES

A. DIAGRAM INDICATES OVERALL LAYOUT OF ELECTRICAL DISTRIBUTION SYSTEM. REFER TO FLOOR PLANS FOR EQUIPMENT LOCATIONS.

POWER RISER KEYED NOTES: (#)

1. REMOVE EXISTING UTILITY METER, CT CABINET, CONDUCTORS AND CONDUIT AS REQUIRED TO ALLOW FOR EXTERIOR WALL IMPROVMENTS. COORDINATE WITH ARCHITECTURAL AND STRUCTURAL WORK. REINSTALL UPON COMPLETION OF WORK.

LIGHTING FIXTURE SCHEDULE

NOTES:

1. ALL FIXTURES SHALL BE U.L. OR SIMILARLY LISTED.
2. REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT MOUNTING LOCATIONS, DETAILS, AND CONFIGURATIONS OF ALL LUMINAIRES. IF ARCHITECTURAL DRAWINGS DO NOT CLARIFY EXACT MOUNTING LOCATION OR DETAIL, ISSUE AN RFI FOR ARCHITECT TO SPECIFICALLY CLARIFY PRIOR TO FIXTURE ROUGH-IN.
3. VERIFY COMPATIBILITY OF LIGHT FIXTURES WITH CEILING MATERIAL, ADJACENT CONSTRUCTION, AND ADJACENT FINISHES PRIOR TO SHOP DRAWINGS SUBMITTAL NOTIFY THE ARCHITECT OF ANY CONFLICTS WITH THE PROPOSED INSTALLATION.
4. CONTRACTOR IS RESPONSIBLE FOR ALL MISCELLANEOUS HARDWARE NECESSARY TO INSTALL AND SUPPORT THE LUMINAIRES.
5. VERIFY COLOR TEMPERATURE SELECTIONS OF EACH LIGHTING FIXTURE WITH OWNER PRIOR TO ORDERING AND INSTALLATION.
6. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND FILLING OUT ALL UTILITY REBATE FORMS FOR OWNER.

DESIGNED BY: INITIALS

TYPE	MANUFACTURER	MODEL	DESCRIPTION	VOLTAGE	LOAD-VA	LAMP TYPE	APPROVED EQUALS
F1	LITHONIA	2VTL2-48L-ADP-EZ1-LP835	RECESSED 2X2 ARCHITECTURAL TROFFER, 3500K, 80CRI. COLD ROLLED STEEL COATED POLYESTER, SINGLE ARCYLIC DIFFUSER, WIDE DISTRIBUTION. 0-10V DIMMING TO 1%.	120 V	38 VA	LED, 4800LM	AS APPROVED BY ENGINEER
F2	LITHONIA	2VTL4-72L-ADP-EZ1-LP835	RECESSED 2X4 ARCHITECTURAL TROFFER, 3500K, 80CRI. COLD ROLLED STEEL COATED POLYESTER, SINGLE ARCYLIC DIFFUSER, WIDE DISTRIBUTION 0-10V DIMMING TO 1%.	120 V	60 VA	LED, 7200LM	AS APPROVED BY ENGINEER
L1	KENALL	MS11FD-PP-DB-20L40K-1 20-BPC	ROUGH SERVICE SURFACE MOUNT SQUARE LED	120 V	20 VA	LED, 2500LM	AS APPROVED BY ENGINEER
W1	LITHONIA	TWR1-40K	EXTERIOR WALL PACK, LED, 4000K, TEXTURED DARK BRONZE, WITH INTEGRAL PHOTOCELL	120 V	14 VA	LED, 1700LM	AS APPROVED BY ENGINEER

LIGHTING CONTROLS SCHEDULE

NOTES:

1. ALL DEVICES SHALL BE U.L. OR SIMILARLY LISTED.
2. ALL DEVICES PROVIDED WITH MANUFACTURER LIMITED 5 YEAR WARRANTY.
3. PROVIDE LIGHTING CONTROLS WITH MANUFACTURER COMPLIANT POWER PACKS AND LOW VOLTAGE ROOM CONTROLLERS IN QUANTITY REQUIRED TO INSTALL A COMPLETE AND OPERATIONAL SYSTEM. MANUFACTURER OR MANUFACTURERS REP TO PROVIDE DEVICE QUANTITES, LAYOUTS AND TYPICAL WIRING DETAILS DURING SHOP SUBMITTAL PROCESS. PROVIDE DIMMING COMPATIBLE DEVICES WHERE DIMMING CONTROLS ARE SHOWN. COORDINATE DIMMING TYPE WITH LIGHTING FIXTURES SHOWN. REFER TO LUMINAIRE SCHEDULE FOR FIXTURE DIMMING TYPE.
4. WHERE WIRELESS LIGHTING CONTROLS ARE PROVIDED. POWERPACKS SHALL BE PROVIDED AND INSTALLED WITHIN MANUFACTURER RECOMENDED DISTANCES TO ENSURE CONTROLLER OPERATION.
5. INSTALL LOW VOLTAGE POWER PACKS AND ROOM CONTROLLERS ABOVE NEARBY ACCESSIBLE CEILING TILES OR IN MECHANICAL/STORAGE SPACES ADJACENT TO CONTROLLED FIXTURES. DO NOT INSTALL POWERPACKS EXPOSED IN COMMON SPACES OR IN INACCESSIBLE LOCATIONS.
6. PROVIDE FACTORY AUTHORIZED REPRESENTATIVE TO DEMONSTRATE TYPICAL INSTALLATION AND COMMISSIONING OF EQUIPMENT.
7. WHERE APPROVED EQUAL MANUFACTURER PRODUCTS SENSOR COVERAGE OR LOAD RATINGS DIFFER FROM BASIS OF DESIGN, CONTRACTOR AND MANUFACTURER ARE RESPONSIBLE FOR PROVIDING ADDITIONAL DEVICES AS NECCESARY TO PROVIDE A COMPLETE AND OPERABLE SYSTEM.
8. LIGHTING CONTROLS BASIS OF DESIGN IS COOPER/GREENGATE STAND-ALONE ROOM CONTROLLER, WITH LOW VOLTAGE INTERFACE TO OCCUPANCY SENSORS AND WALL CONTROLS, AND ADEQUATE NUMBER OF SWITCHING AND DIMMABLE RELAYS TO CONTROL THE LIGHTING AND CIRCUITING DESCRIBED.
9. UNLESS INDICATED OTHERWISE, LIGHTING CONTROL SCHEMES/OPERATION SHALL BE AS FOLLOWS:

CAFETERIA:	ROOM CONTROLLER WITH SENSORS PROGRAMMED FOR VACANCY MODE, MANUAL ON/AUTOMATICOFF OPERATION, 10 MINUTES MINIMUM, 30 MINUTES MAXIMUM DELAY, SET TO 20 MINUTES. PROVIDE DIMMING AND SWITCHING RELAYS COMPATIBLE WITH LIGHTING AND ZONES ON PLANS, INCLUDING A SWITCHED RELAY FOR 3 EXISTING DOWNLIGHTS, DIMMABLE RELAY COMPATIBLE WITH EXISTING INCANDESCENT TRACK LIGHTING, AND DIMMABLE RELAYS COMPATIBLE WITH NEW 0-10V DIMMING LIGHTING FIXTURES SPECIFIED.
EXTERIOR CANOPY:	PHOTOCELL CONTROL, DUSK ON/DAWN OFF.

TYPE	DESCRIPTION	ELECTRICAL	MOUNTING	SENSOR TYPE	COVERAGE	APPROVED MANUFACTURERS
PC	LINE VOLTAGE EXTERIOR PHOTOCELL. WET LOCATION LISTED. ADJUSTABLE SWIVEL MOUNTING, ADJUSTABLE LIGHT LEVEL SLIDE. FAIL-ON OPERATION. UNIVERSAL 120-277V RATED, 1800VA RATED.	120/277V	SWIVEL/KNOCKOUT	N/A	N/A	INTERMATIC, PARAGON, TORK
S2a	MULTI-ZONE WALL STATION. PROVIDE FOUR ZONE PRESET WITH 3 RAISE LOWER (DIMMING) AND ONE ON/OFF (SWITCHING). ROOM CONTROLLER COMPATIBLE, ENABLING MULTI-ZONE SWITCHING CONTROL AND MULTI-SOURCE DIMMING. PROVIDED WITH MANUFACTURER DECORATIVE WALLPLATE. DEVICE FINISH MATCHING WIRING DEVICES SPEC. 2-GANG GROUP OF ZONE CONTROLLER DEVICES AND RELATED BUTTONS. LABEL EACH ZONE WITH NUMBER AND RELATED RAISE/LOWER OR ON/OFF CONTROL.	LOW VOLTAGE	WALL SWITCH / SINGLE GANG	N/A	N/A	COOPER/GREENGATE, LC&D, WATTSTOPPER
OS 1	CEILING MOUNTED, HIGH-CEILING VACANCY/OCCUPANCY SENSOR. WHITE FINISH. ROOM CONTROLLER COMPATIBLE. AUTOMATIC SELF-ADAPTIVE COVERAGE THRESHOLD AND FALSE ON/FALSE OFF CORRECTION. INDOOR USE.	LOW VOLTAGE	CEILING / 14FT MH	PIR	2000 SQ FT / 360 DEG	COOPER/GREENGATE, LC&D, WATTSTOPPER

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REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 13, 2007
KIM R. KOBLE
EXPIRES: 6/30/2021

NOT FOR CONSTRUCTION

Date: 12/04/2020
Project Number: 90060
Drawn By: NB
Checked By: AK

Revision Schedule:

1	Add. No. 1	1/22/21

Sheet Title:
ELECTRICAL ONE-LINE DIAGRAM & SCHEDULES

Sheet Number:
E-300

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