

**CITY OF BURLINGTON
REQUEST FOR PROPOSALS**

Bay Floor Replacement Fire Station Two

Date of Issuance:	July 16, 2024
Issued by:	City of Burlington Department of Parks, Recreation & Waterfront
Site Visit:	July 29, 2024 10:00 AM Mandatory for Contractors
Questions Due:	August 05, 2024 12:00 PM
Answers Posted:	August 08, 2024 12:00 PM
Proposal Due Date:	August 15, 2024 12:00 PM
Point of Contact:	Kim Bleakley, Central Facilities Manager Parks, Recreation & Waterfront 645 Pine Street, Burlington, Vermont 05401 802-557-7082 kbleakley@burlingtonvt.gov

I. PROJECT BACKGROUND

Fire Station Number 2, also known as the John D. Boardman Station, has served the city since it was completed in 1980. This project will replace the existing concrete bay floor at Fire Station Two, located at 132 North Ave. in Burlington, VT. The current floor has deteriorated over time due to wear and tear from heavy fire trucks and equipment. The replacement is essential to ensure the safety of personnel and the proper functioning of emergency response operations.

II. SCOPE OF WORK

This project has been professionally designed and specified by Engineering Ventures and LN Consulting. Professional plans and specifications are available in the RFP as exhibits A and B. This project will be coordinated by City Project Coordinator and Facilities Manager along with the Burlington Fire Department while the building is being occupied. If possible, the City would like to have the project done before Winter, however, is open to best scheduling between the awarded contractor and the City. Zoning and Building permits will be filed and paid for by the City. Subcontractor permits are the responsibility of the Contractor.

II. RESPONSE FORMAT

Bidders are encouraged to be concise. All documents shall be in .pdf format and should be emailed before the due date and time. All proposals must include, and are limited, to the following:

1. Proposed scope of work. Responses should provide a straightforward and concise description of the respondent's capabilities to satisfy the requirements of this request.
2. Completed contractor proposal form (Exhibit C) signed by an authorized representative for the firm or company.
3. A description of your firm's history and experience with providing similar construction work, and a work history of up to three (3) related projects showing for each:
 - a. Name, address, and phone number for each client.
 - b. Brief project description.
4. Location of the office from which the management of the project will take place.
5. Signed and notarized Livable Wage, Outsourcing, and Union Deterrence Ordinance Certifications (Exhibits F-H).

Certificate of insurance with the City named as an additional insured with coverage limits in accordance with the Burlington Standard Contract Conditions (Exhibit E).

III. CONTRACTOR SELECTION

A. Criteria: Proposals shall be evaluated based on the criteria listed below:

1. Priority assigned to the project and current workload of the firm, with particular reference to the personnel and other resources proposed, as capacity to complete the work in an efficient timeframe will be critical;
2. Past performance record and relevant experience;
3. Approach to project to complete in timeline;
4. Quality of work, timeliness, and experience, and;
5. Financial responsibility of the firm. *

Each General Contractor shall respond to the above evaluation criteria in a concise and easily identifiable manner. This information will be utilized in the final selection.

*The firm must agree to carry professional liability insurance including errors and omissions in an amount not less than \$1,000,000. (See additional insurance requirements in Exhibit E: Burlington Standard Contract Conditions.)

B. Evaluation Criteria Assigned Weight:

1. Total Project Cost: 35%
2. Qualifications: 35%

3. Schedule: 30%

TOTAL WEIGHT: 100%

Proposals will be reviewed and evaluated by City staff based on the information provided. Additional information may be requested prior to final selection.

- C. Rejection of Proposals: The City reserves the right to reject any or all proposals, to negotiate with one or more parties, or to award the contract in the City's best interests, including proposed contractor's schedule. The City reserves the right to re-advertise for additional proposals and to extend the deadline for submission of the proposals.

No proposal will be considered accepted until all necessary City authorizations, including those required by Board of Finance and City Council if necessary, have been received and an agreement is executed by both parties.

IV. SUBMISSIONS

Deadline for Receipt of Proposals: All proposals in response to this Request for Proposals (RFP) must be received by the point of contact no later than 12:00 p.m. on the due date. The proposal shall be marked "Bay Floor Replacement Fire Station Two." Late proposals will not be accepted under any circumstances. Electronic proposals are preferred as long as they are received by the point of contact by the required deadline. It is the responsibility of the entity submitting replies and proposals to ensure that the point of contact has received a completed proposal by the required deadline.

Answers to Questions and Revisions to Request for Proposal: Any revisions, addendums, and answers to questions received by the question deadline will be sent to contractor who directly received this RFP via email. In addition, revisions will be posted on the City's RFP web page, <http://burlingtonvt.gov/RFP/>. It is advised that contractors sign up for the GovDelivery notification so that they will be notified of any changes to the RFP page.

Point of Contact:

Kim Bleakley,
Central Facilities Manager
Department of Parks, Recreation & Waterfront
kbleakley@burlingtonvt.gov
(802) 557-7982

V. EXHIBITS

- A. Exhibit A: Structural IFC Set
- B. Exhibit B: MEPFP IFC Set
- C. Exhibit C: Contractor Proposal Form
- D. Exhibit D: Draft Contract
- E. Exhibit E: Burlington Standard Contract Conditions
- F. Exhibit F: Burlington Livable Wage Ordinance Certification
- G. Exhibit G: Burlington Outsourcing Ordinance Certification
- H. Exhibit H: Burlington Union Deterrence Ordinance Certification

Bid documents include this main body of the request for proposals and all exhibits.

VI. CONTRACTING

The contractor must qualify as an independent contractor and, prior to being awarded a contract, must apply for registration with the Vermont Secretary of State's Office to do business in the State of Vermont, if not already so registered. The registration form may be obtained from the Vermont Secretary of State, 128 State Street, Montpelier, VT 05633-1101, PH: 802-828-2363, Toll-free: 800-439-8683; Vermont Relay Service – 711; web site: <https://www.sec.state.vt.us/>. The contract will not be executed until the consultant is registered with the Secretary of State's Office.

Prior to beginning any work, the consultant shall obtain Insurance Coverage in accordance with the Burlington Contract Conditions (Exhibit E in this RFP). The certificate of insurance coverage shall be documented on forms acceptable to the City.

VII. AGREEMENT REQUIREMENTS

The selected consultant will be required to execute a contract with the City on the terms and conditions required by the City, including but not limited to those in the Burlington Contract Conditions (Exhibit E) and the attached Draft Agreement. No proposal will be considered accepted until all necessary City authorizations—including those required by Board of Finance and City Council if necessary—have been received and an agreement is executed by both parties.

VIII. LIMITATIONS OF LIABILITY

The City assumes no responsibility or liability for the response to this Request for Proposals.

IX. COSTS ASSOCIATED WITH PROPOSAL

Any costs incurred by any person or entity in preparing, submitting, or presenting a proposal are the sole responsibility of that person or entity, including any requests for additional information or interviews. The City will not reimburse any person or entity for any costs incurred prior to the issuance of the contract.

X. INDEMNIFICATION

Any party responding to this Request for Proposals is acting in an independent capacity and not as an officer or employee of the City. Any party responding to this Request for Proposals will be required to indemnify, defend, and hold harmless the City, its officers, and employees from all liability and any claims, suits, expenses, losses, judgments, and damages arising as a result of the responding party's acts and/or omissions in or related to the response.

XI. REJECTION OF PROPOSALS

The City reserves the right to reject any or all proposals, to negotiate with one or more parties, or to award the contract to the proposal the City deems will meet its best interests, even if that proposal is not the lowest bid. The City reserves the right to re-advertise for additional proposals and to extend the deadline for submission of the proposals. This Request for Proposals in no way obligates the City to award a contract.

XII. OWNERSHIP OF DOCUMENTS

Any materials submitted to the City in response to this Request for Proposals shall become the property of the City unless another arrangement is made by written agreement between the City and the responding party. The responding party may retain copies of the original documents.

XIII. DUTY TO INFORM CITY OF BID DOCUMENT ERRORS

If a bidder knows, suspects, or has reasonable cause to believe, that an error or omission exists in any bid documents, including but not limited to unit prices and rate calculations, the bidder shall immediately give the City written notice thereof. Contractor shall not cause or permit any work to be conducted that may related to the error or omission without first receiving written acknowledgment from the City that City representatives understand the possible error or omission and have approved the requested modifications to the bid or contract documents or that the contractor may proceed without any modification being made to the bid or contract documents.

XIV. PUBLIC RECORDS

Any and all records submitted to the City, whether electronic, paper, or otherwise recorded, are subject to the Vermont Public Records Act. The determination of how those records must be handled is solely within the purview of City. All records the responding party considers to be trade secrets, as that term is defined by subsection 317(c)(9) of the Vermont Public Records Act, or that the responding party otherwise seeks to have the City consider as exempt must be identified clearly and specifically at the time of submission. It is not sufficient to merely state generally that a proposal is proprietary, contains a trade secret, or is otherwise exempt. Particular records, pages, and sections which are believed to be exempt must be specifically identified as such and must be

separated from other records with a convincing explanation and rationale sufficient to justify each exemption from release consistent with Section 317 of Title 1 of the Vermont Statutes Annotated.

XV. PUBLIC HEALTH EMERGENCIES

Bidders are advised that public health emergencies, as declared by the City, the State of Vermont, or the Federal Government, including the current pandemic of Novel Coronavirus (COVID-19), may introduce significant uncertainty into the project, including disruption of timelines or revised practices. Contractors shall consider public health emergencies as they develop project schedules and advance the work.

The City may require a public health emergency plan be submitted as part of the bid. This plan will contain:

- 1) Measures to manage risk and ensure that potential impacts to safety and mobility are mitigated in accordance with health and safety standards and guidelines proposed by local, state, and federal agencies (see attached Draft Contract, Sections 15 and Exhibit D
- 2) A schedule for possible updates to the plan in advance of the start of work (see attached Draft Contract, Section 15); and
- 3) Means to adjust the schedule and sequence of work should the emergency change in nature or duration.

The City will have sole discretion to approve, deny, or require changes to this plan as a condition of consideration of the bid, will retain the right to inspect all work to ensure compliance with health and safety standards, and may at any time require the contractor to stop work because of the emergency.

If a public health emergency is declared, the City will not be responsible for any delays related to the sequence of operations or any expenses or losses incurred as a result of any delays. Any delays related to public emergencies, including the current pandemic of Novel Coronavirus (COVID-19), will be excusable, but will not be compensable.

A. GENERAL NOTES

- ALL STRUCTURAL WORK SHALL CONFORM TO THE PROJECT SPECIFICATIONS, DRAWINGS, AND THE 2015 VERMONT FIRE AND BUILDING SAFETY CODE.
- CONTRACTOR SHALL COORDINATE STRUCTURAL WORK WITH RELATED TRADES AND WITH OTHER DESIGN DISCIPLINE REQUIREMENTS PRIOR TO MAKING SUBMITTALS. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO PERFORMING WORK.
- REFER TO OTHER DESIGN DISCIPLINE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION REQUIRED FOR THE SUBMITTALS AND INSTALLATION OF STRUCTURES, INCLUDING BUT NOT LIMITED TO DIMENSIONS, ELEVATIONS, SLOPES, LOCATIONS OF OTHER SYSTEMS AND EQUIPMENT, OPENINGS, WALLS, STAIRS, FINISHES, COATINGS, AND OTHER NON-STRUCTURAL ITEMS. NOTES PROVIDED ON THE DRAWINGS ARE INTENDED FOR USE IN CONJUNCTION WITH PROJECT SPECIFICATIONS.
- DETAILS LABELED AS TYPICAL DETAILS ON THE DRAWINGS SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH TYPICAL DETAILS SHALL APPLY WHETHER OR NOT THEY ARE DEMARKED AT EACH LOCATION IN THE DRAWINGS. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS OF A SIMILAR NATURE. VERIFY APPLICABILITY BY SUBMITTALS.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION DETAILS AND ACCURACY OF THE WORK; FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; FOR SELECTING FABRICATION PROCESSES, FOR TECHNIQUES OF ASSEMBLY IN ACCORDANCE WITH GENERAL CONDITIONS AND DIVISION 1 SPECIFICATION REQUIREMENTS; AND FOR PERFORMING ALL WORK IN A SAFE AND SECURE MANNER IN ACCORDANCE WITH GOVERNING JOB SAFETY STANDARDS.
- CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE SITE, INCLUDING LOCATIONS OF ALL EXISTING STRUCTURES AND EXISTING UTILITIES ABOVE AND BELOW GROUND (AS ANY INFORMATION SHOWN IS APPROXIMATE AND NOT NECESSARILY COMPLETE.) CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO PERFORMING WORK.
- LOADS APPLIED DURING CONSTRUCTION SHALL NOT EXCEED THE DESIGN LOADS NOTED ON THE DRAWINGS OR THE CAPACITY OF PARTIALLY COMPLETED CONSTRUCTIONS AS DETERMINED BY THE CONTRACTOR. THE STRUCTURAL ELEMENTS OF THE PROJECT AS SHOWN IN THE CONSTRUCTION DOCUMENTS HAVE BEEN DESIGNED FOR THE SPECIFIED VERTICAL AND LATERAL FORCES ACTING ON THE COMPLETED BUILDING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DESIGN AND PROVIDE ALL REQUIRED SHORING AND BRACING NEEDED DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF THE PARTIALLY-COMPLETED STRUCTURE AND FOR CONSTRUCTION LOADINGS THAT EXCEED THE SPECIFIED DESIGN LOADS.
- SHORING, BRACING, PROTECTING, AND MAINTAINING THE INTEGRITY OF ANY EXISTING, ADJACENT, AND/OR ONGOING PARTIALLY COMPLETED STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR.

B. EXISTING BUILDING NOTES

- DIMENSIONS, ELEVATIONS, MEMBER SIZES, AND DETAILS OF EXISTING STRUCTURE SHOWN IN THE STRUCTURAL DRAWINGS HAVE BEEN EXTRACTED FROM RECORD DRAWINGS AND/OR LIMITED FIELD MEASUREMENTS. AS SUCH THEY ARE NOT TO BE CONSIDERED SUITABLY ACCURATE FOR ANY CONSTRUCTION WORK SHOWN, INCLUDING FABRICATIONS, SUBMITTALS, ETC. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF THE EXISTING CONSTRUCTION, INCLUDING PLUMBNESS OR FLATNESS OF WALLS, FLOORS, ETC. AT THE JOB SITE PRIOR TO SUBMITTAL, FABRICATION OR CONSTRUCTION WORK. ANY DEVIATIONS FOUND IN THE FIELD FROM WHAT IS SHOWN ON THE DRAWINGS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO FABRICATION OR CONSTRUCTION.
- TEMPORARY SHORING AND BRACING OF FLOORS, WALLS, AND OTHER STRUCTURAL ELEMENTS OF THE EXISTING BUILDINGS REQUIRED TO ACHIEVE THE INSTALLATION OF NEW AND/OR THE REMOVAL OF EXISTING STRUCTURAL ELEMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL, AT THEIR DISCRETION AND WHERE SPECIFIED, EMPLOY ENGINEERING SERVICES FOR DESIGN OF TEMPORARY BRACING, SHORING AND PROTECTION. EXISTING BUILDING MOVEMENTS SHALL BE LIMITED TO PREVENT DISTRESS FROM OCCURRING.
- REPORT EXISTING CONDITIONS UNCOVERED, REVEALED, FOUND OR DEVELOPED DURING CONSTRUCTION INDICATIVE OF STRUCTURAL INTEGRITY LOSS OR DETERIORATION, UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.
- DO NOT CUT, DRILL OR ALTER ANY EXISTING STRUCTURAL ELEMENTS UNLESS SHOWN OR NOTED ON THE STRUCTURAL DRAWINGS WITHOUT NOTIFYING THE ENGINEER FOR REVIEW, INCLUDING TEMPORARY MEASURES OR FOR THE INSTALLATION OF OTHER DESIGN DISCIPLINE WORK.
- MONITORING OF CONSTRUCTION WORK SHALL INCLUDE, BUT IS NOT LIMITED TO FIRE WATCH DURING AND AT LEAST 24 HOURS AFTER ALL STEEL WELDING OR DRILLING, WOOD DRILLING, AND HEAT TRANSFERRING CONSTRUCTION MEASURES. DO NOT ALLOW HEAT OR ENERGY FROM EQUIPMENT TO DAMAGE OR OTHERWISE ALTER EXISTING STRUCTURAL ELEMENTS TO REMAIN.
- FOR EXISTING STEEL ELEMENTS, DO NOT ALLOW THE THROUGH THICKNESS TEMPERATURE OF THE STEEL TO EXCEED 300° FAHRENHEIT DURING WELDING PROCESSES UNLESS SPECIFICALLY NOTED OTHERWISE. USE ACTIVE, OBSERVABLE SURFACE MONITORING METHODS.

C. CAST-IN-PLACE CONCRETE

- CODES AND STANDARDS: COMPLY WITH THE PROVISIONS OF THE LATEST EDITIONS OF:
 - ACI 318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
 - ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE
 - ACI 304 GUIDE FOR MIXING, TRANSPORTING AND PLACING CONCRETE
 - ACI 305 HOT WEATHER CONCRETING
 - ACI 306 STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING
 - ACI 308 STANDARD PRACTICE FOR CURING CONCRETE
- CONCRETE TESTING: THE CONTRACTOR SHALL PREPARE A SET OF 4 CYLINDERS/TEST SET TO BE TESTED AT AN INDEPENDENT LABORATORY. THE CYLINDERS SHALL BE TAKEN FROM ONE CONCRETE TRUCK AND LABELED WITH DATE, TRUCK NUMBER, AND LOCATION OF CONCRETE PLACEMENT. EACH SAMPLE SHALL ALSO BE TESTED FOR SLUMP, AIR CONTENT, AND TEMPERATURE. THE CYLINDERS SHALL BE TESTED AS FOLLOWS: 1 AT 7 DAYS; 2 AT 28 DAYS; AND A THIRD HELD FOR A 90 DAY BREAK IF REQUIRED. TEST CYLINDERS SHALL BE TAKEN AT LEAST ONCE PER PLACEMENT OR AT THE FOLLOWING INCREMENTS:
 - SLABS: 50 CUBIC YARDS
FIELD TESTING SHALL BE PERFORMED BY A GRADE I ACI (MINIMUM) FIELD TESTING TECHNICIAN.
- SUBMIT MIX DESIGN AND EITHER TRIAL MIX DESIGNS OR HISTORIC FIELD DATA FOR APPROVAL IN ACCORDANCE WITH ACI 318, CHAPTER 5, INCLUDE TECHNICAL DATA SHEETS, GRADATIONS, AND MATERIAL VERIFICATIONS ON ALL COMPONENTS. SUBMIT MIX DESIGNS, PRIOR TO PLACEMENT OF CONCRETE. TRANSIT MIX SHALL CONFORM TO ASTM C94.
- COMPRESSIVE MIXTURES AS DELINEATED IN TABLE 1 AND:
 - SLUMP: 3"-5" BEFORE ADDITION OF WATER REDUCER, 6"-8" AFTER ADDITION OF WATER REDUCER
 - ALL CONCRETE NORMAL WEIGHT.
- MAXIMUM AGGREGATE SIZE IN ACCORDANCE WITH ACI 301; CLEARLY NOTE LOCATION WHERE AGGREGATES GREATER THAN 3/4" MAXIMUM SIZE ARE PROPOSED FOR USE.
- NO CHLORIDE OR OTHER UNAUTHORIZED ADMIXTURES SHALL BE USED. MAINTAIN MAXIMUM WATER SOLUBLE CHLORIDE ION (CL-) IN CONCRETE, BY WEIGHT OF CEMENT AT LESS THAN 1.00 FOR NON-EXPOSED CONCRETES AND 0.30 FOR EXTERIOR EXPOSED CONCRETES.
- WHEN AMBIENT TEMPERATURE IS BELOW 40° FAHRENHEIT OR MORE THAN 90° FAHRENHEIT PLACE AND PROTECT CONCRETE IN ACCORDANCE WITH ACI STANDARDS LISTED ABOVE.
- CONCRETE PLACEMENT MAY REQUIRE ADJUSTMENT OF REINFORCEMENT, EMBEDDED ITEMS OR ANCHOR BOLTS. REVIEW DRAWINGS IDENTIFY THESE LOCATIONS TO ARCHITECT PRIOR TO SUBMITTALS. PROVIDE ADDITIONAL SUPERVISION AT ALL STEEL TO CONCRETE CONNECTION LOCATIONS AND MODIFY PLACEMENT MEASURES TO ACCOUNT FOR CONGESTIONS.
- COMPLY WITH ACI CODES AND PLACE CONCRETE IN A CONTINUOUS OPERATION WITHIN PLANNED JOINTS OR SECTIONS. DO NOT PERMIT COLD JOINTS TO OCCUR.
- CURING: COVER OR WET CURE ALL ELEMENTS. BEGIN INITIAL CURING AS SOON AS FREE WATER HAS DISAPPEARED FROM EXPOSED SURFACES. WHERE POSSIBLE, KEEP CONTINUOUSLY WET FOR 72 HOURS. CONTINUE CURING BY USE OF MOISTURE RETAINING COVER. USE OF MEMBRANE-FORMING CURING COMPOUNDS IS PROHIBITED.
- SLAB FINISH: FLOAT & TROWEL FINISH.

D. CONCRETE REINFORCEMENT

- SHOP DRAWINGS SHALL BE PROVIDED PRIOR TO START OF CONCRETE PLACING AND BE IN ACCORDANCE WITH:
 - ACI 301
 - ACI 315 DETAILS AND DETAILING OF CONCRETE REINFORCEMENT
 - ACI SP-66 ACI DETAILING MANUAL
 - CRSI MSP MANUAL OF STANDARD PRACTICE

SHOW ALL SLABS IN PLAN WITH OPENINGS AND PENETRATIONS SHOWN BASED ON MEP COORDINATION SUBMITTALS AND ARCHITECTURAL REQUIREMENTS.
- REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60, STEEL BARS PER ASTM A305, UNLESS NOTED OTHERWISE.
- FIELD BENDING OR REINFORCEMENT SHALL CONFORM TO ACI 301, INCLUDING PRE-HEAT REQUIREMENTS.
- PROVIDE MINIMUM CONCRETE COVER TO REINFORCEMENT AS FOLLOWS, UNLESS OTHERWISE NOTED:
 - TOP AND BOTTOM OF ELEVATED SLABS: 1"
- ALL LAPS SHALL BE FULL TENSION LAPS (CLASS B SPLICE) UNLESS SPECIFICALLY NOTED OTHERWISE. DOWELS SHALL MATCH SIZE AND SPACING OF MAIN REINFORCEMENT, UNLESS OTHERWISE NOTED.
- HEADED STUD ANCHORS, DEFORMED BAR ANCHORS (DBA'S), AND OTHER EMBEDDED ITEMS AS SPECIFIED FOR STRUCTURAL STEEL. ALL WELDS FOR STUDS AND DBA'S SHALL BE AUTOMATICALLY WELDED WITH MANUFACTURER'S EQUIPMENT AND RECOMMENDATIONS FOR FLUX FILLED HEADS.
- CHAIRS AND SPACERS SHALL BE PLACED TO ADEQUATELY SUPPORT REINFORCING DURING PLACEMENT. FOREIGN MATERIALS SUCH AS WOOD, CLAY BRICK OR OTHER UNSUITABLE SUPPORTS SHALL NOT BE USED TO SUPPORT REINFORCING. SET WIRE TIES SO ENDS ARE DIRECTED INTO CONCRETE WHERE CONCRETE WILL BE EXPOSED. DO NOT USE CONCRETE SUPPORTS OR PUDDLING FOR SLABS UNLESS SUBMITTED AND ACCEPTABLY REVIEWED.

E. CONCRETE FORMWORK

- CONCRETE FORMS SHALL BE CLEAN AND FREE FROM DEBRIS. IF FORMS ARE COATED WITH A VEGETABLE BASED (SOY) RELEASE AGENT, WHICH SHALL NOT STAIN CONCRETE OR ABSORB MOISTURE OR IMPAIR NATURAL BONDING OF CONCRETE.
- COORDINATE WITH REINFORCING SUBMITTAL FOR OPENING AND ADDITIONAL REQUIREMENTS. SUBMIT, BEFORE FRAMING OPENINGS IN STRUCTURAL ELEMENTS WHICH ARE NOT INDICATED ON DRAWINGS.
- PROVIDE BRACING TO ENSURE STABILITY OF FORMWORK. FOR PLACEMENT OPERATIONS, DO NOT REMOVE FORMS OR BRACING UNTIL CONCRETE HAS GAINED SUFFICIENT STRENGTH TO CARRY ITS OWN WEIGHT AND IMPOSED LOADS.
- ALL WALL SIDES AND SLAB EDGES EXPOSED TO VIEW TO HAVE CLASS A -- CLASS OF SURFACE.

TABLE 1 - CONCRETE MIXTURES						
APPLICATION	EXPOSURE CLASS ¹	TYPE	STRENGTH	CEMENTITIOUS MATERIALS	MAX W/C	AIR CONTENT
ELEVATED INTERIOR SLABS	F3, S0, P0, C2	NORMAL WEIGHT	5,000 PSI @ 28 DAYS	15% FA OR GGBFS (MAX)	0.40	5% +/- 1.5%

NOTES:

- EXPOSURE CLASS REFERENCES ACI 318-14 TABLE 19.3.1.1. CONCRETE SHALL BE PROPORTIONED TO COMPLY WITH REQUIREMENTS PROVIDED IN ACI 318-14 TABLES 19.3.2.1 AND 19.3.3.1 WITH RESPECT TO EXPOSURE CLASS.
- DO NOT POWER TROWEL SLABS WITH ENTRAINED AIR.
- FA = FLY ASH; GGBFS = GROUND GRANULATED BLAST-FURNACE SLAG

F. STRUCTURAL STEEL

- UNLESS OTHERWISE NOTED, STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:
 - WIDE FLANGE SECTIONS: ASTM A572 GRADE 50 OR ASTM A992 (FY = 50 KSI)
 - ANGLES, CHANNELS, PLATE AND OTHER HOT-ROLLED SHAPES: ASTM A36 (FY = 36 KSI)
 - THREADED RODS: ASTM A572 GRADE 50
- BOLTS, NUTS AND WASHERS: ASTM A325 TYPE 1 BOLTS (3/4" MINIMUM DIAMETER), ASTM A563 DH HEAVY HEX NUTS WITH ASTM F436 HARDENED WASHERS. PROVIDE BOLT ASSEMBLIES GALVANIZED TO ASTM A153 AT GALVANIZED STRUCTURAL MEMBERS.
- SUBMITTALS FOR REVIEW
 - SHOP DRAWINGS: INDICATE PROFILES, SIZES, SPACING, AND LOCATIONS OF STRUCTURAL MEMBERS, DECKING, OPENINGS, ATTACHMENTS, AND FASTENERS. SHOW ALL CONNECTION DETAILS. PROVIDE DESIGN OF CONNECTIONS NOT DETAILED ON DRAWINGS. INDICATE WELDED CONNECTIONS WITH AWS A2.0 WELDING SYMBOLS. INDICATE NET WELD LENGTHS.
 - EACH SHOP DRAWING SHALL BE DATED AND IDENTIFIED WITH A UNIQUE DRAWING NUMBER AND REVISION NUMBER. RESUBMITTED SHOP DRAWINGS SHALL BE GIVEN A NEW REVISION NUMBER, AND ALL CHANGES/ADDITIONS/DELETIONS FROM THE PREVIOUS SUBMISSION SHALL BE CLEARLY IDENTIFIED.
 - ERECTION DRAWINGS SHALL INCLUDE DETAILS OF ALL FIELD WELDING AND ANY OTHER SPECIAL FIELD INSTRUCTIONS SEE SPECIFICATION SECTION 05120 AND NOTES BELOW FOR ADDITIONAL REQUIREMENTS
- SUBMITTALS FOR INFORMATION
 - MANUFACTURER'S MILL CERTIFICATE: CERTIFY THAT PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.
 - MILL TEST REPORTS: SUBMIT INDICATING STRUCTURAL STRENGTH, DESTRUCTIVE AND NON-DESTRUCTIVE TEST ANALYSIS.
 - WELDERS CERTIFICATES: CERTIFY WELDERS EMPLOYED ON THE WORK, VERIFYING AWS QUALIFICATION WITH THE PREVIOUS 12 MONTHS.
- DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STEEL CONSTRUCTION" 14TH EDITION, BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AND THE STRUCTURAL WELDING CODE (AWS D1.1) LATEST EDITION, BY THE AMERICAN WELDING SOCIETY.
- STRUCTURAL STEEL CONNECTIONS SHALL BE AS FOLLOWS:
 - ALL CONNECTIONS UNLESS INDICATED OTHERWISE SHALL BE MADE WITH 3/4 INCH DIAMETER A325 BOLTS. BOLTS MAY BE BEARING BOLTS (THREADS INCLUDED) TIGHTENED TO THE SNUG-TIGHT CONDITION, UNLESS NOTED OTHERWISE.
 - THE MINIMUM NUMBER OF BOLTS IN ANY CONNECTION SHALL BE TWO 3/4 INCH DIAMETER A325 BOLTS UNLESS INDICATED OTHERWISE.
- ALL STRUCTURAL SHOP AND FIELD WELDING SHALL BE MADE WITH ELECTRODES DESIGNED BY E70XX LOW HYDROGEN, IN ACCORDANCE WITH AWS D1.1, PERFORMED BY CERTIFIED WELDERS.
- PROVIDE 3/4" DIAMETER SOLID FLUXED SHEAR CONNECTIONS STUDS AUTOMATICALLY END WELDED AS INDICATED AND IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. STUDS SHALL BE 3 INCHES LONG AFTER WELDING.
- SHOP AND TOUCH-UP PRIMER (DESIGN BASIS): TNEPEC SERIES 1.
- FINISH
 - WHERE INDICATED, STRUCTURAL STEEL MEMBERS ARE TO BE GALVANIZED IN ACCORDANCE WITH ASTM A123. PROVIDE MINIMUM 1.25 OZ/SQ FT GALVANIZED COATING. ALL MEMBERS EXPOSED TO THE EXTERIOR OR EXTENDING THROUGH AND BEYOND BUILDING ELEMENT SHALL BE GALVANIZED.
- ERECTION
 - ALLOW FOR ERECTION LOADS, AND FOR SUFFICIENT TEMPORARY BRACING TO MAINTAIN STRUCTURE SAFE, PLUMB, AND IN TRUE ALIGNMENT UNTIL COMPLETION OF ERECTION AND INSTALLATION OF PERMANENT BRACING.
 - FIELD WELD COMPONENTS INDICATED ON DRAWINGS AND SHOP DRAWINGS.
 - DO NOT FIELD CUT OR ALTER STRUCTURAL MEMBERS WITHOUT APPROVAL OF ARCHITECT/ENGINEER.
 - AFTER ERECTION, PRIME WELDS, ABRASIONS, AND SURFACES NOT SHOP PRIMED, EXCEPT SURFACES TO BE IN CONTACT WITH CONCRETE.

G. HEADED STUD AND DEFORMED BAR ANCHOR CONNECTORS

- STUD SHEAR CONNECTORS SHALL BE TYPE B HEADED STUDS MADE FROM ASTM A108 MATERIAL (Fu=65 KSI) AND CONFORMING TO THE REQUIREMENTS OF AWS D1.1. USE 3/4" DIAMETER STUDS; UNLESS NOTED OTHERWISE. SEE DRAWINGS FOR STUD LENGTH.
- STUDS SHALL BE FASTENED USING AN AUTOMATIC STUD WELDING SYSTEM USING MANUFACTURERS' EQUIPMENT. MANUAL STICK WELDING OF STUDS IS PROHIBITED.
- FOR ELEVATED COMPOSITE BEAM AND SLAB FRAMING:
 - MAXIMUM STUD SPACING IS 24" ON CENTER, WHERE STUD COUNT SHOWN IN PLAN RESULTS IN SPACING EXCEEDING 24" ON CENTER, PROVIDE ADDITIONAL STUDS TO MAINTAIN THE 24" MAXIMUM SPACING.

H. POST-INSTALLED ANCHORS INTO CONCRETE AND MASONRY

- WHERE A MANUFACTURER'S ANCHORS IS SPECIFICALLY CALLED OUT ON THE DRAWINGS, IT SHALL BE CONSIDERED THE DESIGN BASIS FOR THE REQUIRED ANCHOR. ALTERNATES MEETING OR EXCEEDING ANCHOR SYSTEM DEMANDS, INCLUDING, BUT NOT LIMITED TO CAPACITY LOADING, EDGE DISTANCE, SUBSTRATE THICKNESS FOR CONNECTION ELEMENTS AND BASE MATERIAL SHALL BE SUBMITTED FOR PROPOSED USE PENDING ACCEPTABLE REVIEW. SUBMIT ICC-ES CODE REPORTS.
- ADHESIVE ANCHORS, WHERE NOT SPECIFICALLY DETAILED, SHALL BE:
 - FOR CONCRETE AND CONCRETE MASONRY: HILTI HIT-HY-200
 - FOR EXISTING BRICK MASONRY: HILTI HIT-HY-270

INSTALL IN ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS. USE 3/4 INCH DIAMETER AT MINIMUM EMBEDMENT UNLESS OTHERWISE INDICATED BY DETAIL. SEE NOTE 1.
- EXPANSION ANCHORS, WHERE NOT SPECIFICALLY DETAILED, SHALL BE:
 - FOR CONCRETE: HILTI KWIK BOLT TZ
 - FOR MASONRY: HILTI KWIK BOLT 3Z

INSTALL IN ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS. USE 3/4 INCH DIAMETER AT MINIMUM EMBEDMENT UNLESS OTHERWISE INDICATED BY DETAIL. SEE NOTE 1.

I. MISCELLANEOUS SPECIFICATIONS

SUBMIT ALL PRODUCTS AND SYSTEMS LISTED IN THIS SECTION IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS APPLICABLE TO PROJECT USE.

- INTERIOR EXPOSED SLABS:
 - EXPANSION JOINT FILLER: 3/8" WIDTH (UNO), CERAMAR, BY W R MEADOWS WHERE NOT OTHERWISE INDICATED.
 - JOINT SEALANT: POURTHANE, BY W R MEADOWS.
 - SEALER: ASHFORD FORMULA, BY CURECRETE.
 - RESINOUS FLOORING SYSTEM: TNEPEC SERIES 242 ULTRA-TREAD URETHANE FLOORING SYSTEM, BY TNEPEC.
 - MOISTURE RETAINING COVER CURE COVERED SLABS.

BASIS OF DESIGN

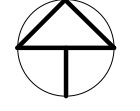
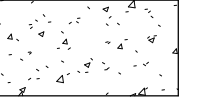




- BUILDING CODE: 2015 VERMONT FIRE AND BUILDING SAFETY CODE
2015 INTERNATIONAL BUILDING CODE
- DEAD LOADS:
 - GARAGE FLOOR DEAD LOAD: 110 PSF
- LIVE LOADS:
 - FLOOR LIVE LOAD: 200 PSF OR 18,600 LB CONCENTRATED WHEEL LOAD (DESIGN BASIS: L-2 FIRE ENGINE, TOTAL WEIGHT = 55,800 LB)

ABBREVIATIONS

AB	ANCHOR BOLT	o/c	ON CENTER
B.S.	BOTH SIDES	PL	PLATE
DWG	DRAWING	STD	STANDARD
ELEV.	ELEVATION	T.O.S.	TOP OF STEEL
EQ	EQUAL	TYP.	TYPICAL
E.W.	EACH WAY	U.N.O.	UNLESS NOTED OTHERWISE
EX	EXISTING	V.I.F.	VERIFY IN FIELD

DRAWING LEGEND

NOTE: NOT ALL SYMBOLS AND NOTATIONS USED

	NORTH ARROW		CONCRETE
	ELEVATION		GROUT
	SECTION NUMBER DRAWING WHERE SHOWN		
	SLOPE DIRECTION, and MAGNITUDE		



Date

Description

No.

ENGINEERING VENTURES PC
208 Flynn Avenue, Suite 2A, Burlington, VT 05401
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85 Mechanic Street, Suite B2-2, Lebanon, NH 03766
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BURLINGTON FIRE DEPARTMENT
132 NORTH AVENUE
BURLINGTON, VT 05401

Sheet Title: BASIS OF DESIGN, GENERAL NOTES

Project Title: BURLINGTON FIRE STATION 2

Designed By: JLR

Checked By: JLR

Drawn By: ITP/JTM

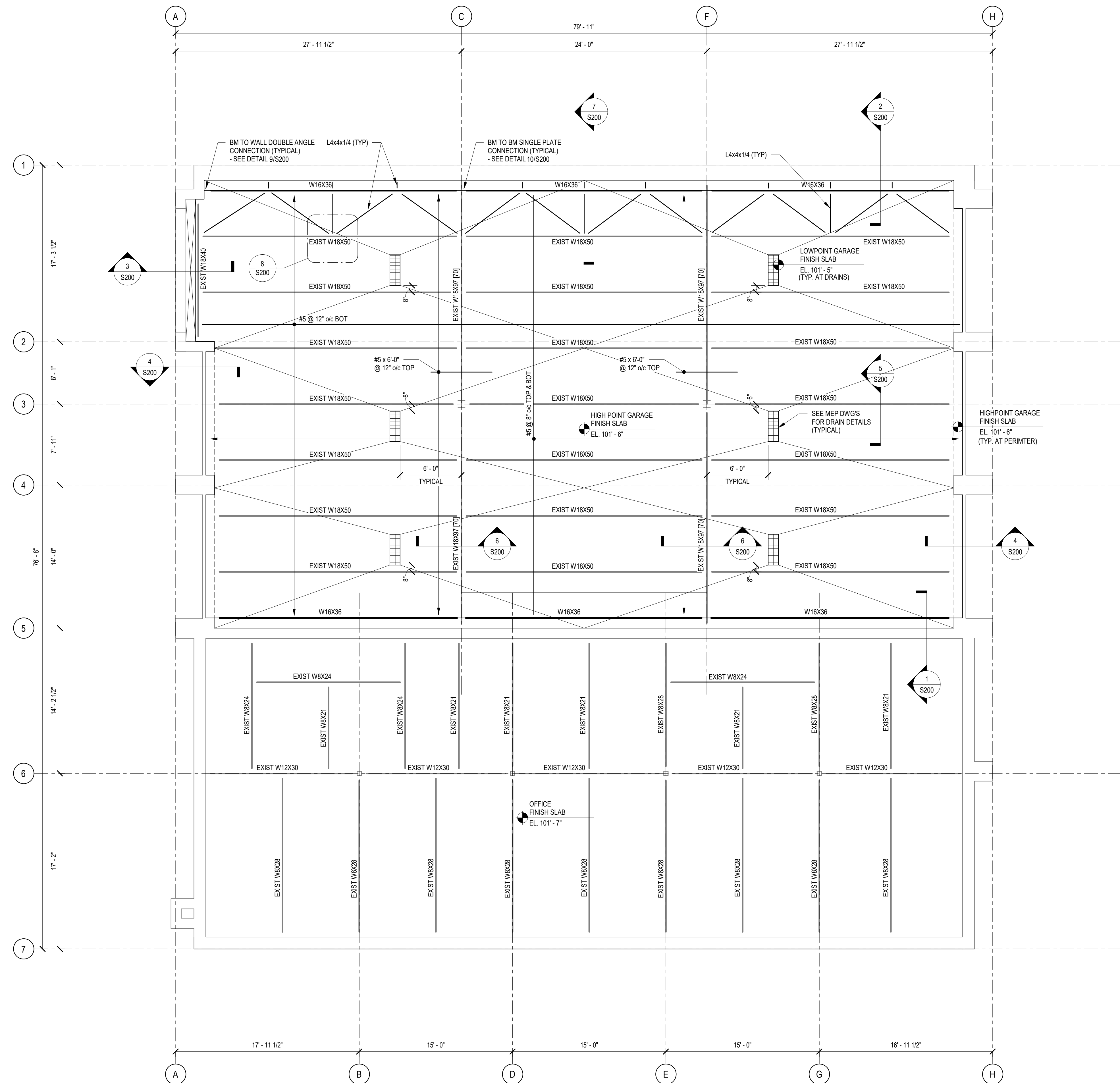
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S001

EV Project #22765



1 FIRST FLOOR FRAMING PLAN
 3/16" = 1'-0"
NOTES:
 1. TOP OF CONCRETE SLAB ELEVATION = VARIES - SEE PLAN.
 2. TOP OF STEEL ELEVATION = 100' - 10" (VERIFY IN FIELD).
 3. [H] INDICATES NUMBER OF 3/4" x 3" HEADED SHEAR STUDS REQUIRED (UNIFORM SPACING).
 4. PROVIDE ALLOWANCE FOR REPLACING DAMAGED EXISTING SHEAR STUDS ON GIRDERS.
 5. COORDINATE FLOOR DRAIN SIZE AND LOCATIONS WITH MEP DRAWINGS.
 6. COORDINATE FLOOR PENETRATIONS WITH MEP DRAWINGS.

STEEL:
1. SURFACE PREPARATION:
 A. ALL PREVIOUSLY COATED SURFACES SCHEDULED FOR PAINTING SHALL INITIALLY BE POWER WASHED WITH HIGH PRESSURE (3,000-4,000 PSI), WASHING SYSTEM EQUIPPED WITH A 'ZERO' OSCILLATING TIP AND USED IN A MANNER TO REMOVE LOOSE AND PEELING EXISTING COATING, LOOSE RUST AND RUST SCALE AND SOLUBLE SURFACE CONTAMINATION.
 B. FOLLOWING THE WASHING OPERATIONS, ALL SURFACES SCHEDULED FOR COATING SHALL BE CLEANED IN ACCORDANCE WITH SSPC SP #3 POWER TOOL CLEANING TO BARE METAL, WHERE RUST, RUST-SCALE, LOOSE AND NON-ADHERING COATING AND UNDERFILM CORROSION EXIST. SPECIAL CLEANING EMPHASIS SHALL BE GIVEN TO SURFACES WHERE INTACT RUST SCALE EXISTS TO REMOVE BACK TO BARE METAL.
2. COATING SCHEDULE:
 A. ALL COATINGS SHALL BE SUPPLIED BY THE TNEC COMPANY, INC., LOCAL REPRESENTATIVES, THE RIGHTER GROUP INC., WILMINGTON MA (978) 988-0100, AND APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURERS PRINTED DATA SHEETS.
 B. STRUCTURAL STEEL COLUMNS AND BEAMS:
 • SPOT PRIMER: SHALL BE ONE SPOT COAT OF TNEC SERIES 100METHANE PRIME COAT APPLIED TO ALL CLEANED TO METAL SURFACES AT A DRY FILM THICKNESS OF 2.5-3.5 MILS.
 • INTERMEDIATE COAT: SHALL BE ONE FULL COAT OF SERIES 135 CHEMBUILD APPLIED TO ALL SURFACES SCHEDULED FOR COATING AT A DRY FILM THICKNESS OF 4.0-5.0 MILS DFT.
 • FINISH COAT: SHALL BE ONE FULL COAT OF TNEC SERIES 1029 ENDURATONE APPLIED TO ALL SURFACES SCHEDULED FOR COATING AT A DRY FILM THICKNESS OF 2.0-3.0 MILS DFT.
CONCRETE SLAB:
 1. APPLY ASHFORD FORMULA BY CURECRETE (OR EQUIVALENT) PENETRATING CONCRETE SEALER TO SURFACE OF GARAGE SLAB. FOLLOW MANUFACTURER'S RECOMMENDATIONS.
 2. OPTIONAL RESINOUS FLOORING SYSTEM: TNEC SERIES 242 ULTRA-TREAD URETHANE FLOORING SYSTEM, BY TNEC. FOLLOW MANUFACTURER'S RECOMMENDATIONS.



Date	
No.	
Description	

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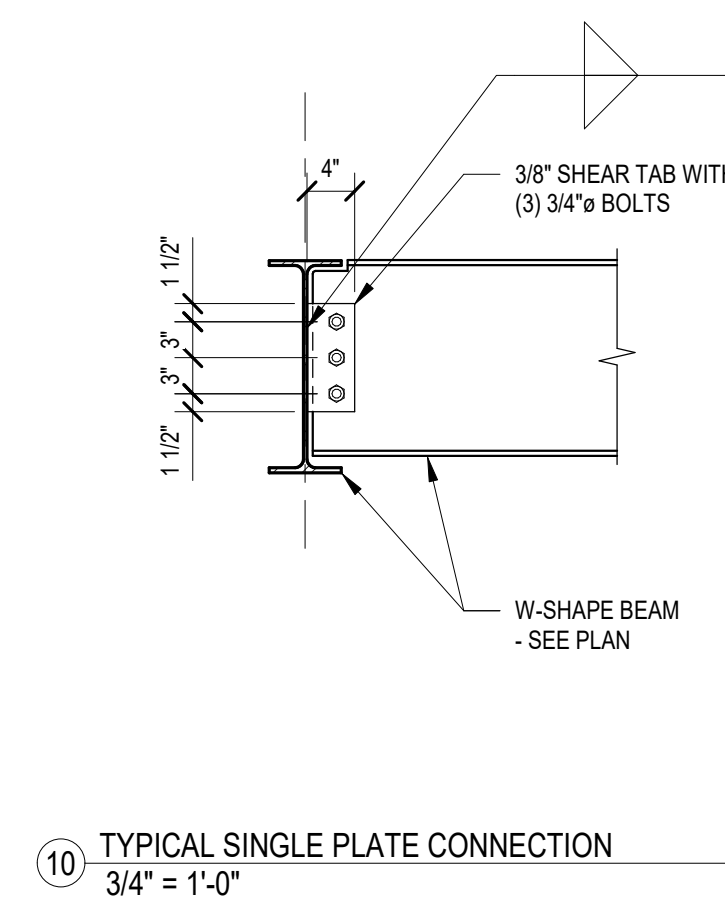
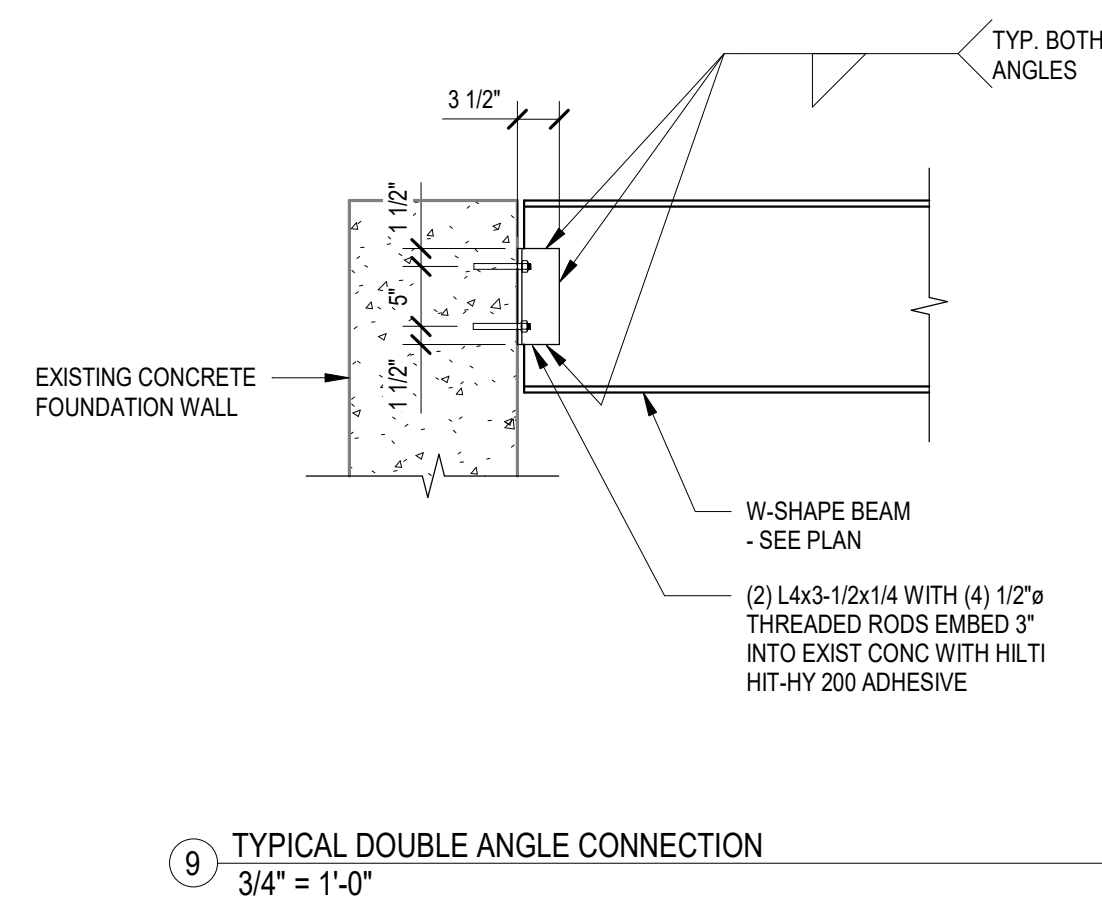
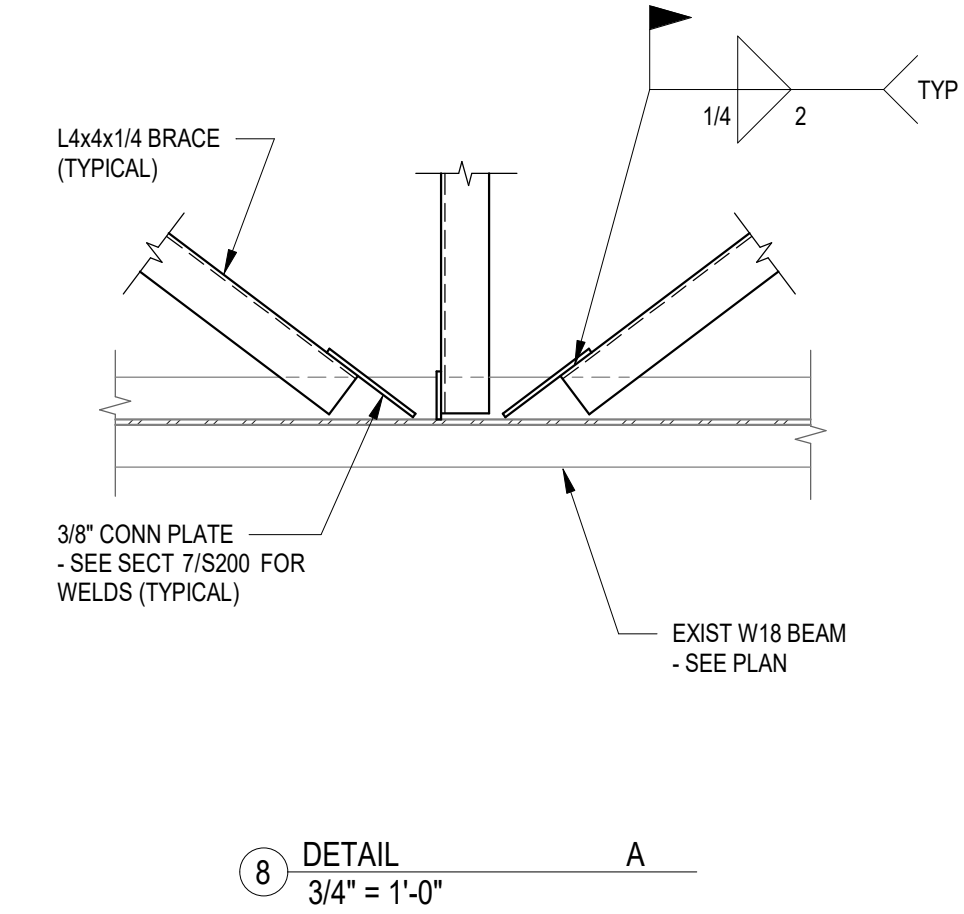
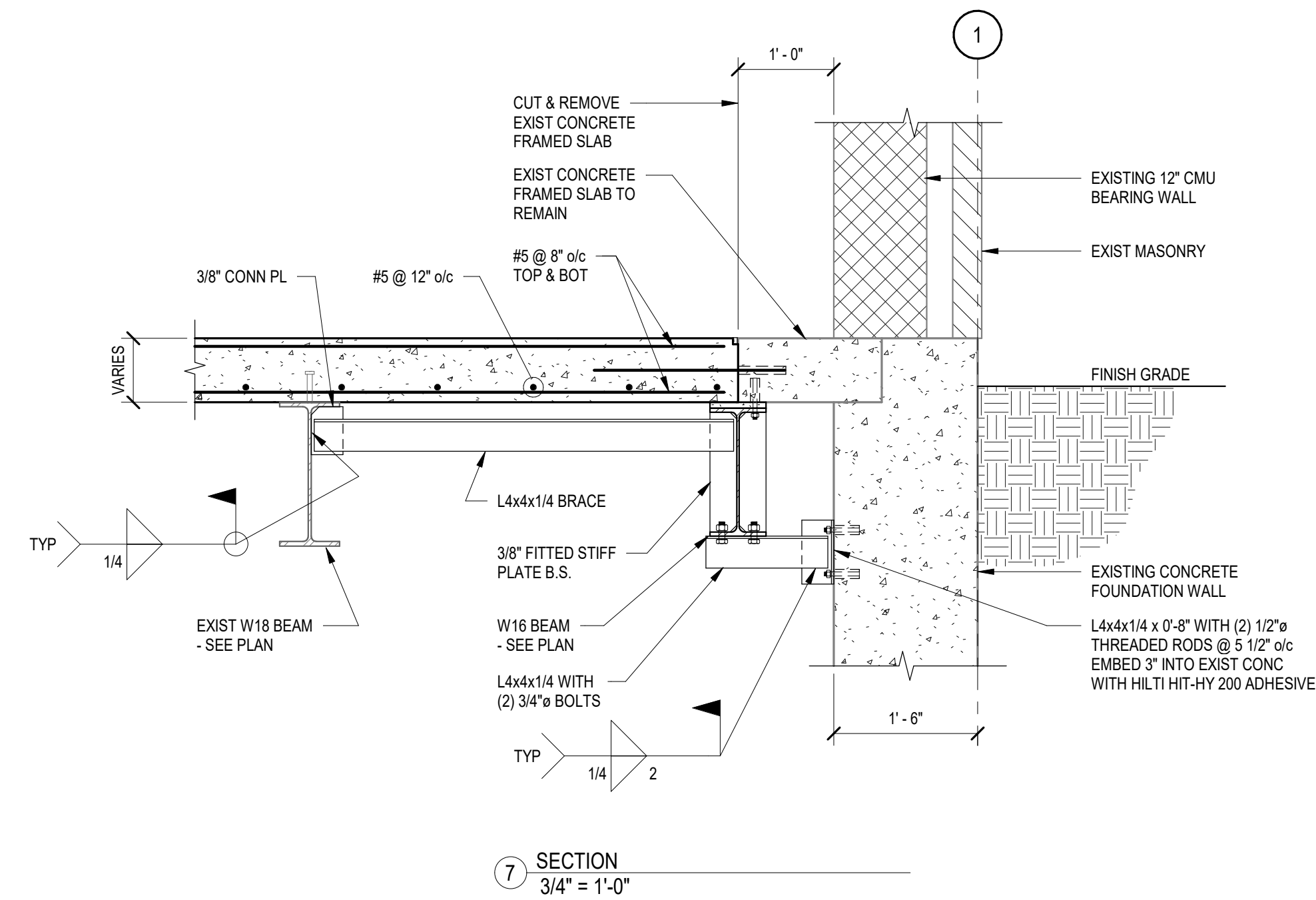
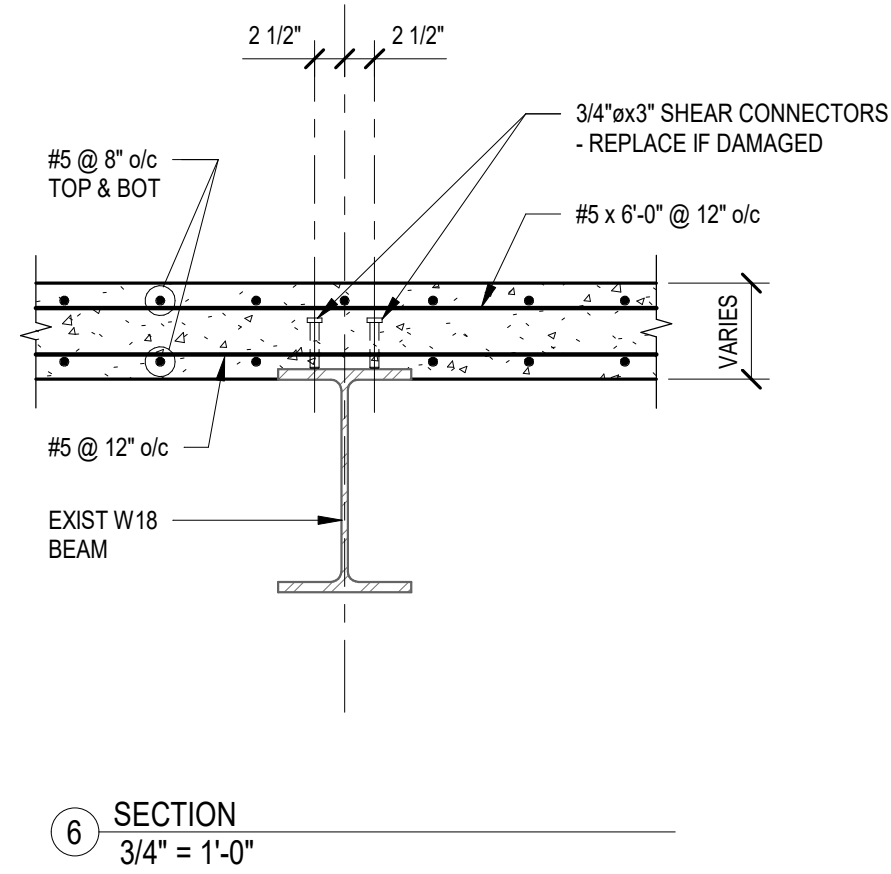
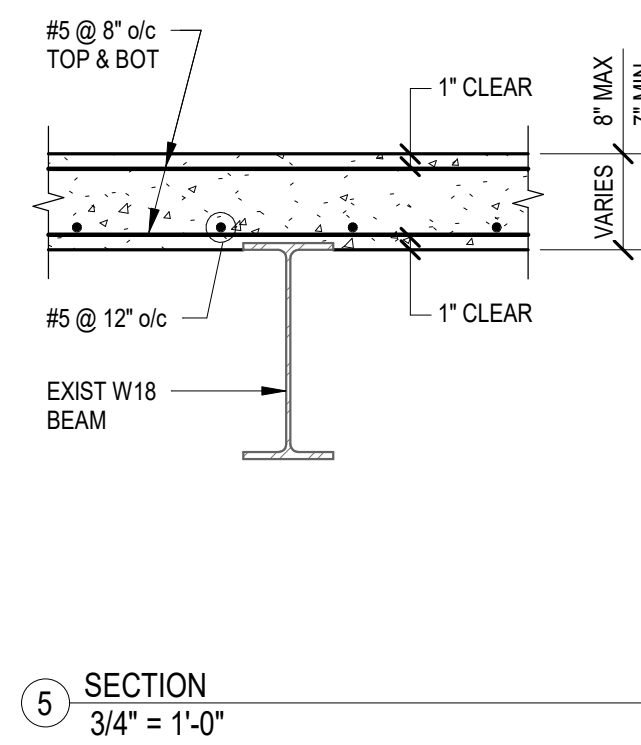
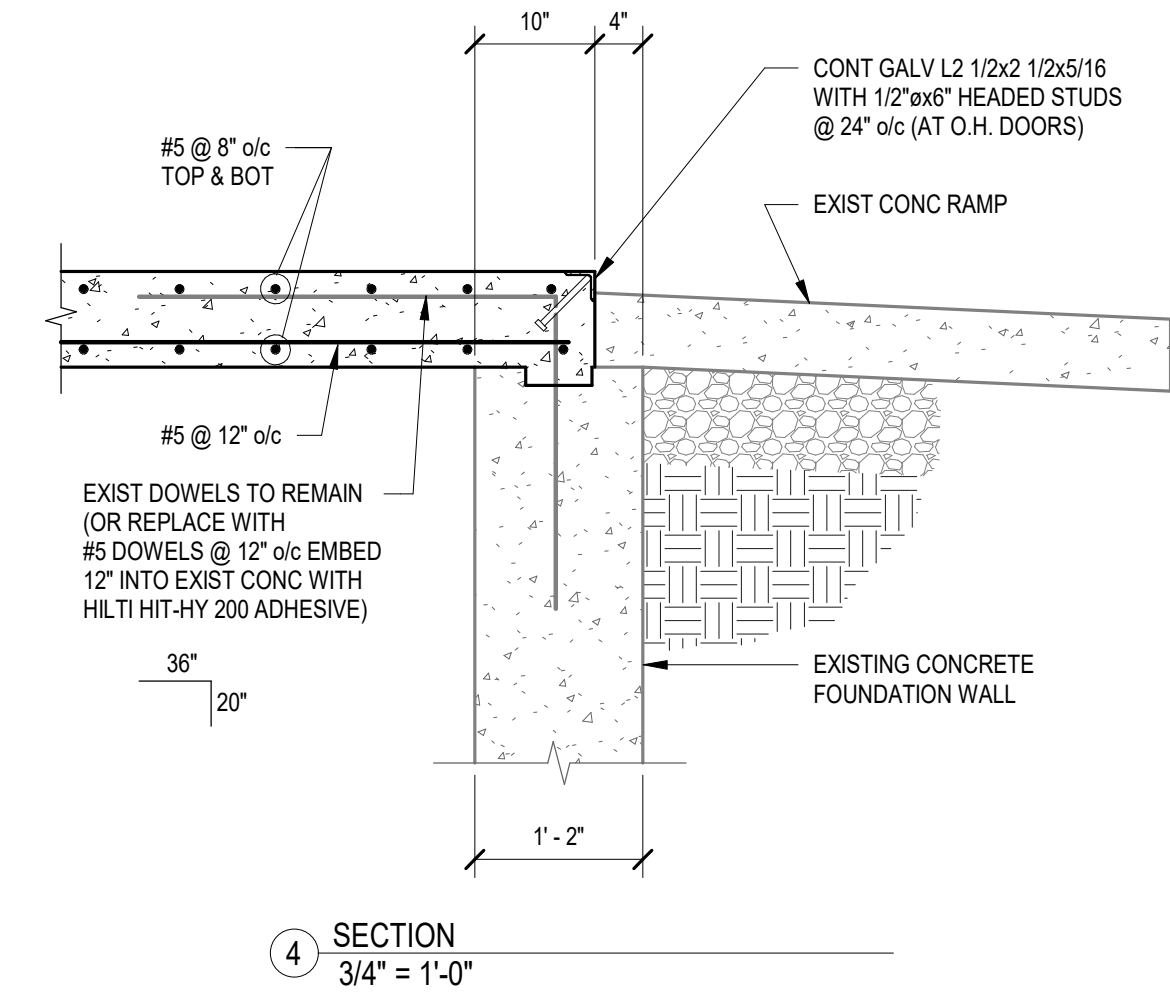
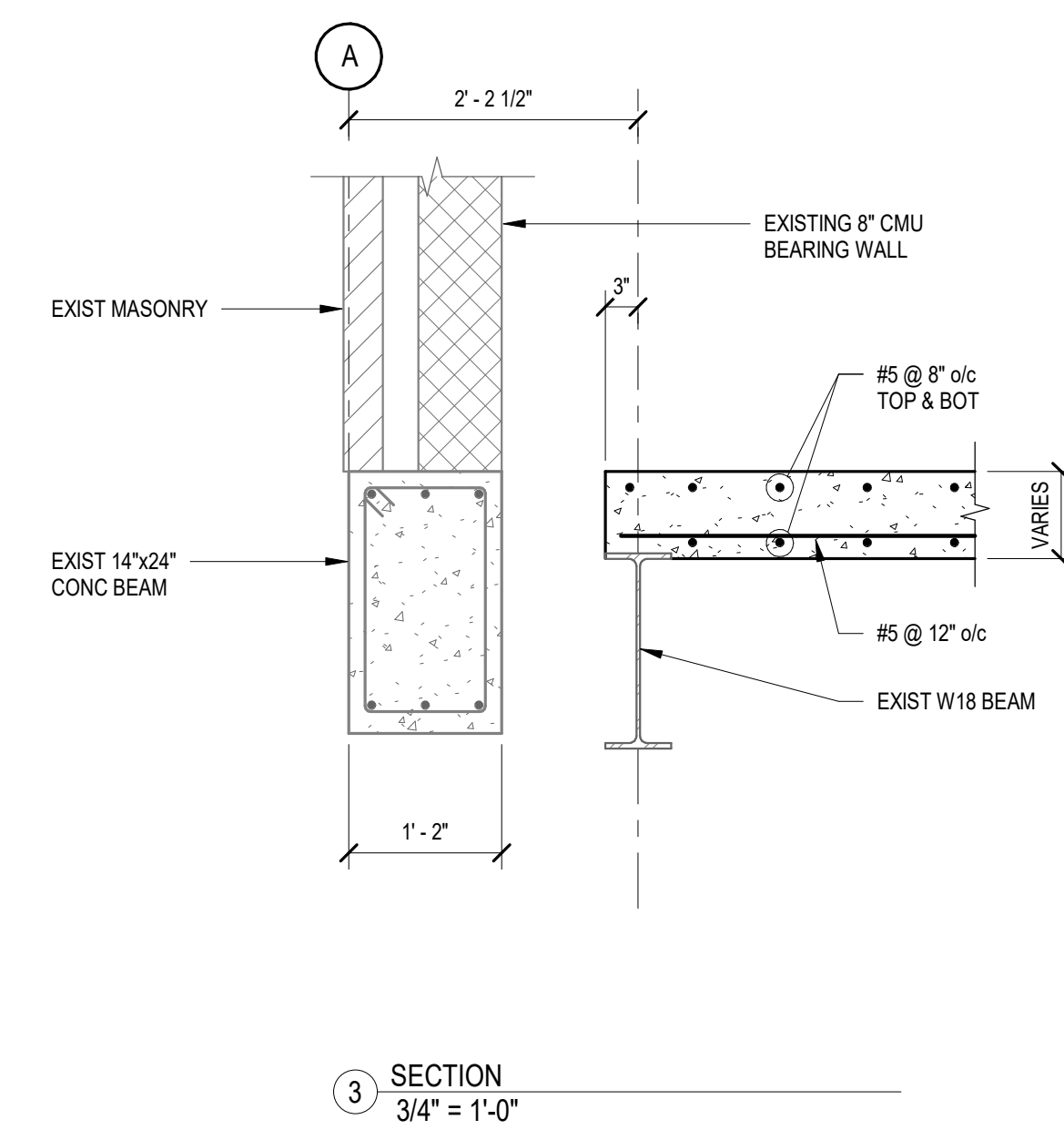
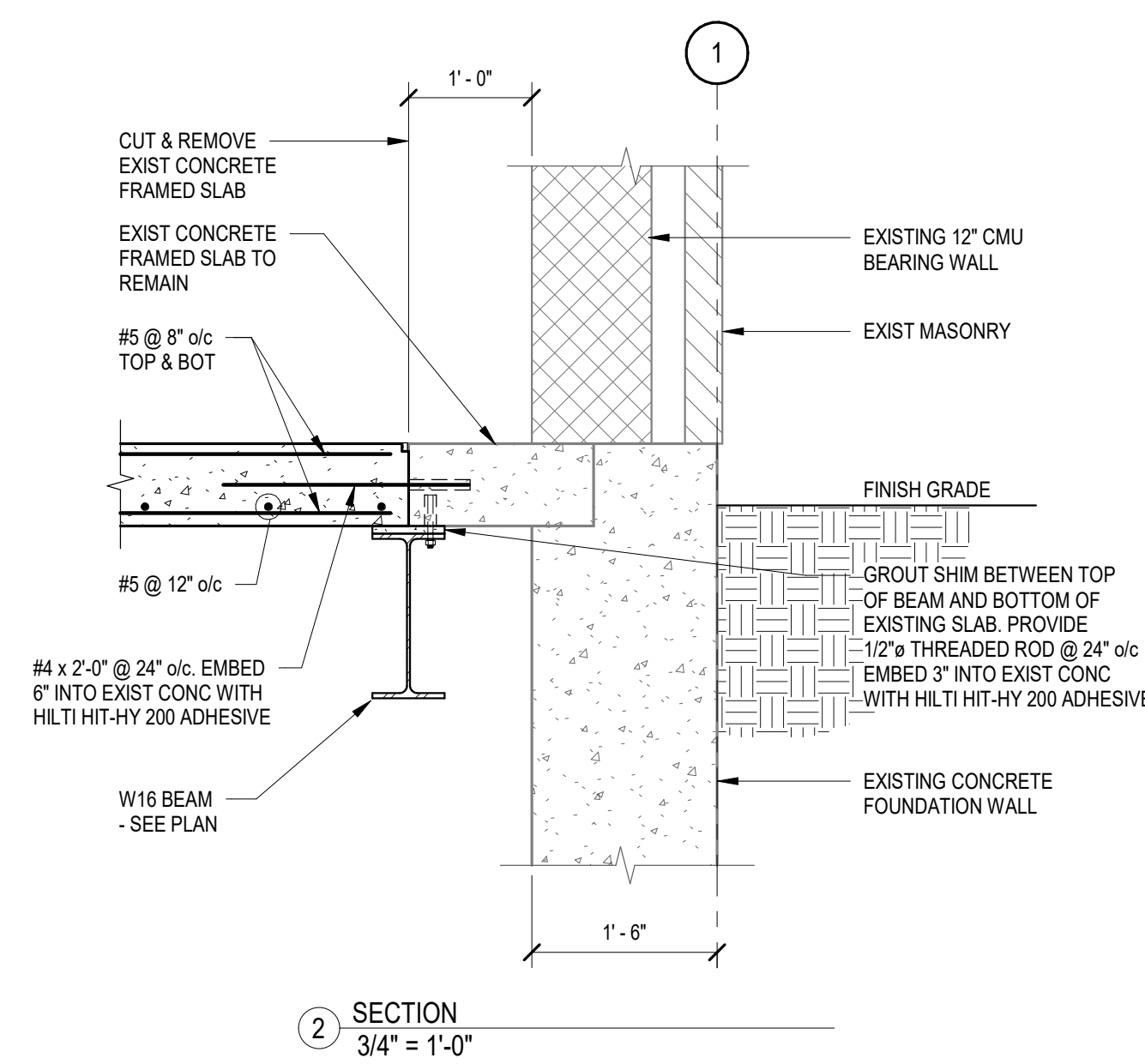
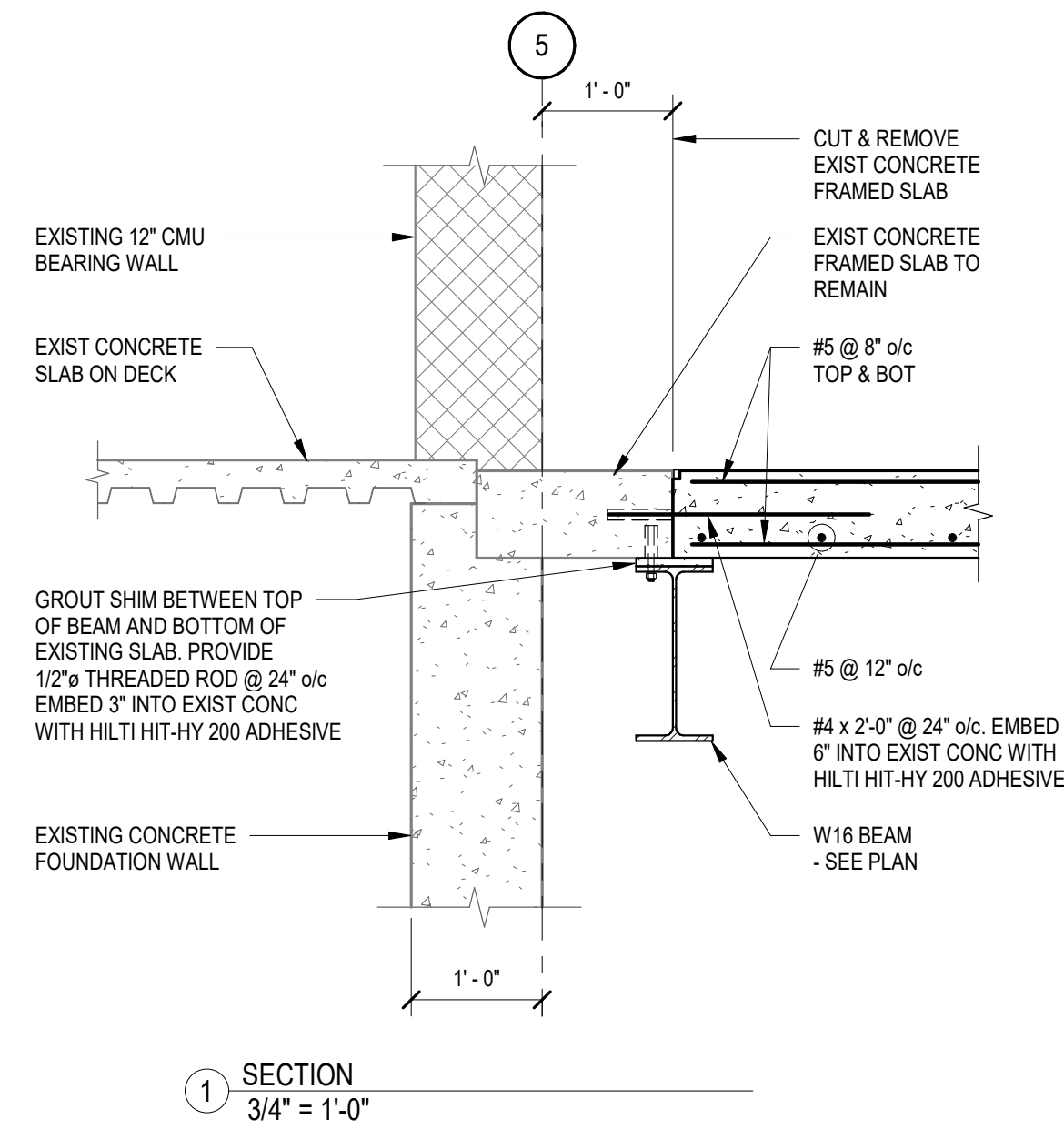
BURLINGTON FIRE DEPARTMENT
 132 NORTH AVENUE
 BURLINGTON, VT 05401

FIRST FLOOR FRAMING PLAN
 BURLINGTON FIRE STATION 2

Designed By: JLR
 Checked By: JLR
 Drawn By: ITP/UTM
 Scale:
 Date: FOR CONSTRUCTION

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Date	Description	No.

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BURLINGTON FIRE DEPARTMENT
132 NORTH AVENUE
BURLINGTON, VT 05401

SECTIONS AND DETAILS
BURLINGTON FIRE STATION 2

Designed By: JLR
Checked By: JLR
Drawn By: ITP/JTM
Scale: FOR CONSTRUCTION
Date: FOR CONSTRUCTION

ISSUED FOR CONSTRUCTION
05/24/2024

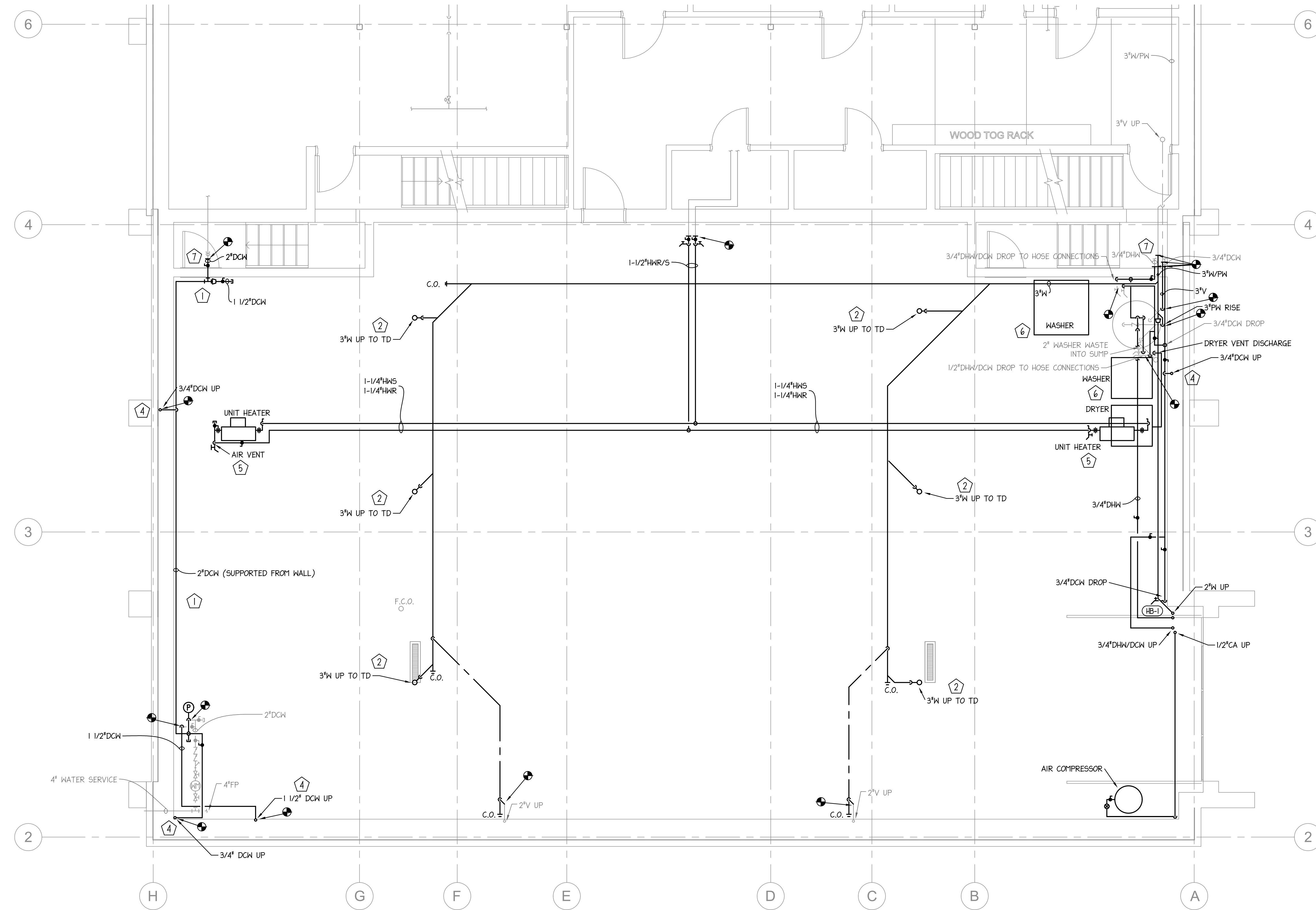
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EV Project #22765



MECH./PLUMB. NEW WORK LEGEND	
	NEW MECH./PLUMB. TO BE INSTALLED
	EXISTING MECH./PLUMB. REMAINING

1 SPECIFIC MECH./PLUMB. NEW WORK NOTES

1. A NEW 2" DCW MAIN IS TO BE INSTALLED THAT WRAPS AROUND THE EXTERIOR FOUNDATION WALL (AND IS SUPPORTED BY ANCHORS/SUPPORTS SECURED TO THE EXTERIOR WALL) AS PART OF THE FIRST STAGE OF WORK. THIS LINE IS TO BE INSTALLED TO CONNECT TO THE EXISTING 2" DCW LINE THAT SERVES THE REST OF THE FACILITY. COORDINATE WATER SERVICE SHUTDOWNS WITH THE G.C. AND THE WATER DEPARTMENT TO ENABLE THE MECH./PLUMB. SERVICE TO CUT OVER AND UTILIZE THE NEW LINE TO PROVIDE SERVICE TO THE FACILITY.
2. PROVIDE AND INSTALL NEW TRENCH DRAINS IN THE FIRST FLOOR SLAB. COORDINATE EXACT LOCATION WITH STRUCTURAL PLANS AND ENSURE FLOOR IS PROPERLY SLOPED TO THE DRAIN LOCATIONS. INSTALL PER MANUFACTURER'S REQUIREMENTS.
3. REINSTALL THE EXISTING SERVICE SINK AND EYEWASH STATION APPROXIMATELY IN THE LOCATIONS INDICATED. COORDINATE THE EXACT LOCATIONS IN THE FIELD. INSTALL THE HOSE BIB HB-1 FOR THE HOT WATER LINE UNDER THE SERVICE SINK. INSTALL THE EYEWASH MIXING VALVE EX-1 UNDER THE REINSTALLED EYEWASH STATION. REINSTALL THE EXISTING STUDDOR VENT FOR THE EYEWASH WASTE LINE.
4. INSTALL THE 3/4" AND 1-1/2" DCW LINES THAT RISE UP THROUGH THE FIRST FLOOR SLAB ARE TO BE INSTALLED. INSULATION IS TO BE CONTINUOUS UP THROUGH THE SLAB AND IS TO BE ELASTOMERIC FOAM. PROVIDE PVC JACKETING AROUND THE INSULATION TO PROTECT IT FROM DAMAGE.
5. REINSTALL THE EXISTING UNIT HEATERS APPROXIMATELY IN THE LOCATIONS INDICATED. INSTALL THE NEW HEATING HOT WATER PIPING AS INDICATED BY THE PIPING DETAIL DRAWING. UTILIZE CLEVIS HANGERS WITH 12" PIPE SHIELDS TO SUPPORT THE PIPING. WORK WITH THE ELECTRICAL CONTRACTOR TO RECONNECT THE THERMOSTAT WIRING AND POWER WIRING FOR THE UNITS. INSTALL ISOLATION VALVES ON THE HEATING HOT WATER PIPING (AS INDICATED) TO ENABLE THE NEW WORK PIPING TO BE INSTALLED WITH THE EXISTING SYSTEM TO CONTINUALLY OPERATING.
6. WORK WITH THE G.C. TO REINSTALL THE EXISTING WASHER MACHINES AND THE DRYER. REINSTALL ALL UTILITIES TO MATCH THE EXISTING INSTALLATIONS.
7. RECONNECT THE DOMESTIC WATER AND SANITARY WASTE/VENT PIPING TO THE EXISTING UTILITIES. ENSURE ALL PENETRATIONS THROUGH THE FIRE RATED WALL MAINTAIN THE FIRE RESISTANCE RATING. THESE JOINTS ARE TO BE FIRE CAULKED WITH U.L. APPROVED SEALANT AND INSTALLED PER THE DETAILS. TRANSITION THE PVC WASTE/VENT PIPING TO CAST-IRON PIPING WITH NO-HUB JOINTS WHERE THE PIPING PASSES THROUGH THE FIRE RATED WALL. UTILIZE HEAVY-DUTY NO-HUB COUPLINGS.



DRAWN	LNC
APPROVED	LNC
DATE	05/24/2024
1	5/24/24 ISSUED FOR CONST.
NO.	DATE REVISION

PROJECT TITLE BURLINGTON FIRE STATION 2
BURLINGTON FIRE DEPARTMENT, 132 NORTH AVENUE,
BURLINGTON, VT 05401

SHEET TITLE MECHANICAL/PLUMBING
LOWER LEVEL NEW WORK PLAN

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

PROJECT NO. 22390

SHEET NO.

DRAWN	LN
APPROVED	LN
DATE	05/24/2024
1	5/24/24 ISSUED FOR CONST.
NO.	DATE REVISION

PROJECT TITLE: BURLINGTON FIRE STATION 2
BURLINGTON FIRE DEPARTMENT, 132 NORTH AVENUE, BURLINGTON, VT 05401

SHEET TITLE: MECHANICAL/PLUMBING SCHEDULES, LEGENDS, NOTES AND DETAILS

SCALE: N.T.S.
PROJECT NO. 22390
SHEET NO.

MECHANICAL/PLUMBING GENERAL DEMOLITION NOTES:

1. THE DEMOLITION DRAWINGS INDICATE GENERAL LOCATION AND SIZE OF SERVICES TO BE DEMOLISHED. THE SYSTEMS SHOWN ON THE DEMOLITION DRAWINGS ARE NOT INDICATIVE OF THE ENTIRE DEMOLITION SCOPE. THE HVAC CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION OF SYSTEMS NOT SHOWN ON THE DRAWINGS THAT ARE WITHIN THE PROJECT AREA AND THAT WILL NOT AFFECT THE OPERATION OF SPACE OUTSIDE OF THE CONSTRUCTION LIMITS.
2. PROVIDE DEMOLITION OF ALL DUCTWORK SHOWN ON THE DRAWINGS TO BE DEMOLISHED. PROVIDE DEMOLITION OF ALL PIPING SHOWN ON THE DRAWINGS TO BE DEMOLISHED. REMOVE ALL TERMINAL DEVICES WITHIN PIPING SYSTEM INCLUDING HANGERS AND SUPPORTS WHERE PIPING IS SHOWN TO BE REMOVED.
3. THE EXISTING AREAS NOT UNDER RENOVATION SHALL REMAIN FULLY OPERATIONAL DURING CONSTRUCTION.
4. PROVIDE PATCHING TO MATCH EXISTING CONSTRUCTION WHERE DUCTWORK AND PIPING ARE REMOVED FROM AN EXISTING PARTITION.
5. COORDINATE ALL SHUTDOWNS WITH THE CONSTRUCTION MANAGER FOUR-WEEKS IN ADVANCE.
6. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING.

MECHANICAL/PLUMBING GENERAL NEW WORK NOTES:

1. ALL INSULATION SHALL BE FURNISHED AND INSTALLED AS PER THE SPECIFIC MATERIALS LIST BELOW.
2. PROVIDE ALL EQUIPMENT AND MATERIALS NECESSARY FOR MOUNTING ALL MECHANICAL EQUIPMENT.
3. PROVIDE ALL EQUIPMENT AND MATERIALS NECESSARY FOR INSTALLATION AND DEMO WORK IN CONFINED SPACES (TRENCH WORK ETC.) PER OSHA STANDARDS AND ALL STATE AND LOCAL REQUIREMENTS WHERE APPLICABLE.
4. COORDINATE THE REMOVAL AND REPLACEMENT OF ALL EXISTING FLOOR STRUCTURE, LIGHTING, AND FIRE ALARM DEVICES FOR INSTALLATION OF NEW MECHANICAL EQUIPMENT, PIPING. COORDINATE WITH STRUCTURAL PLANS FOR CEILING SCOPE OF WORK.
5. PROVIDE VIBRATION ISOLATORS FOR NEW HVAC PIPING AND TO SUSPEND THE REINSTALLED UNIT HEATERS FROM THE STRUCTURE.
6. COORDINATE THE INSTALLATION OF ALL MECHANICAL PIPING WITH OTHER TRADES.

MECHANICAL SPECIFIC MATERIAL REQUIREMENTS:

1. ALL HYDRONIC PIPING IS TO BE CONSTRUCTED OF TYPE L COPPER DRAWN TEMPER MEETING ASTM B88 REQUIREMENTS. FITTINGS TO BE ASME B16.18 OR ASME B16.22 WROUGHT-COPPER SOLDERED JOINT FITTINGS. SOLDERED JOINTS TO USE ASTM B818, WATER-FLUSHABLE LEAD-FREE FLUX, ASTM B32 LEAD-FREE ALLOY SOLDER USING ASTM B828 PROCEDURES. PIPING TO BE INSULATED WITH RIGID GLASS FIBER MOLDED PIPE INSULATION COMPLYING WITH ASTM C547 WITH 0.24 BTU*IN/(HR*FT*2*F) K-FACTOR AND ALL SERVICE JACKET. PROVIDE PVC JACKETING OVER ALL FITTINGS AND ELBOWS. INSULATION IS TO BE 1-1/2" THICK FOR 1-1/4" PIPING AND 2" THICK FOR 1-1/2" PIPING. FLEXIBLE ELASTOMERIC CELLULAR FOAM COMPLYING WITH ASTM C534/C534M TYPE 1, GRADE 1 IS ALSO PERMITTED.
2. BALL VALVES ARE TO BE UTILIZED FOR ISOLATION. VALVES ARE TO BE TWO-PIECE BRONZE WITH FULL-PORT SIZE, CHROME PLATED BRASS BALL, TEFLON SEATS, BLOWOUT-PROOF STEMS, THREADED OR SOLDERED ENDS AND EXTENDED HANDLE. BASIS OF DESIGN TO BE NIBCO T-586-70.

PLUMBING SPECIFIC MATERIAL REQUIREMENTS:

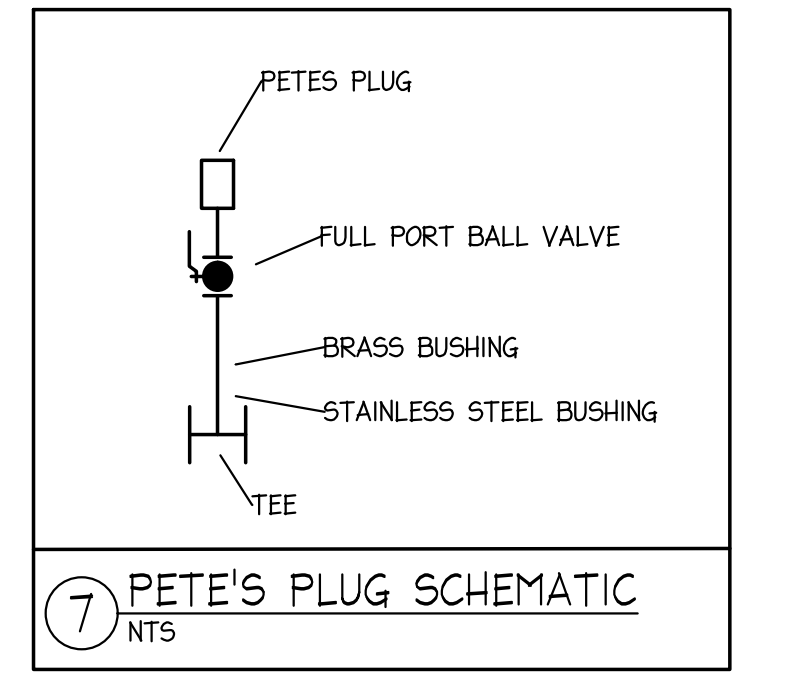
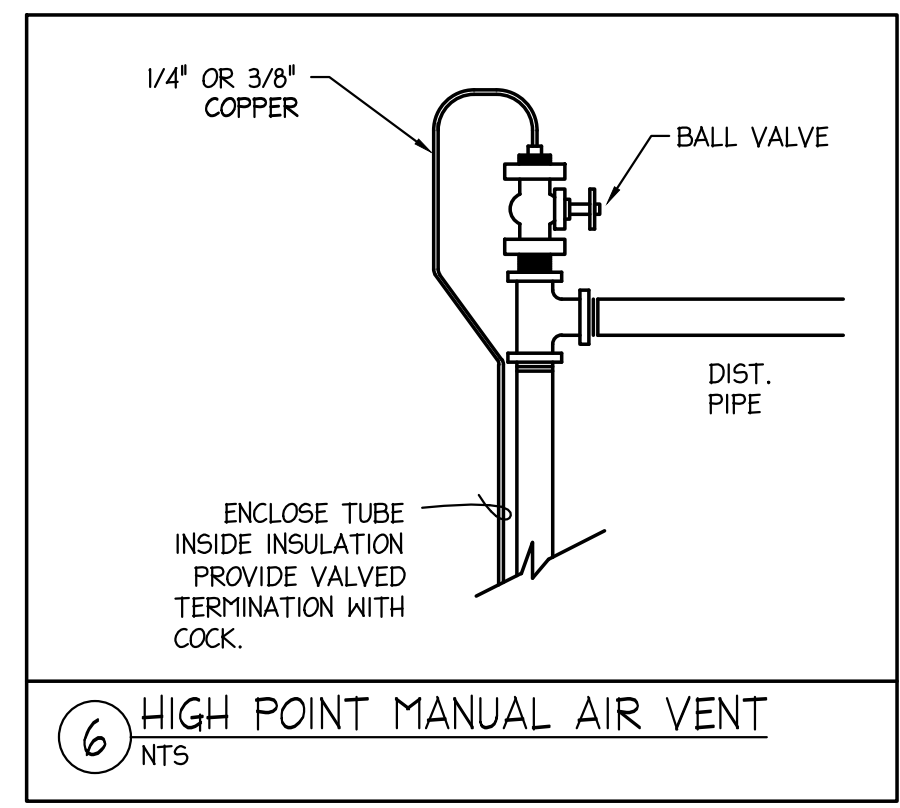
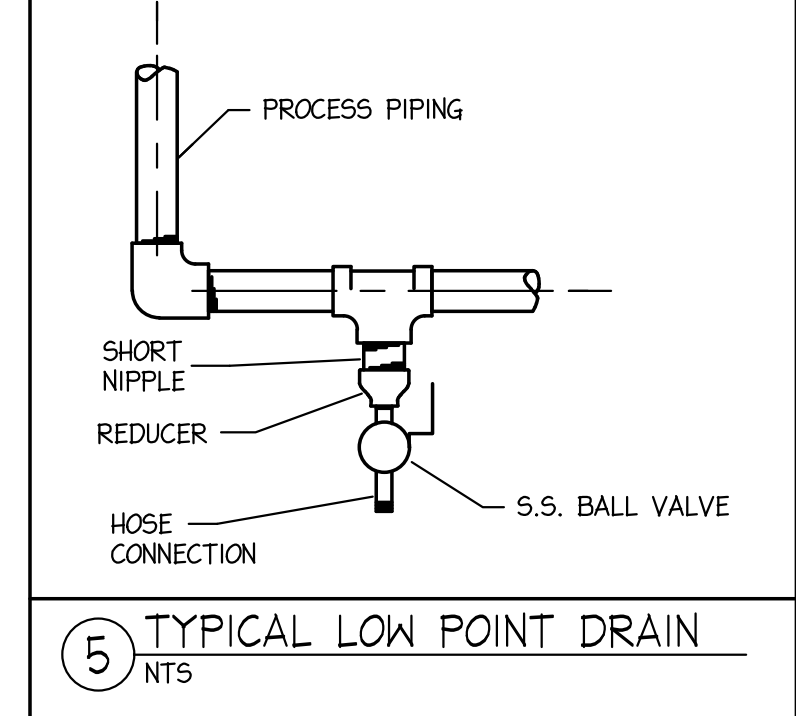
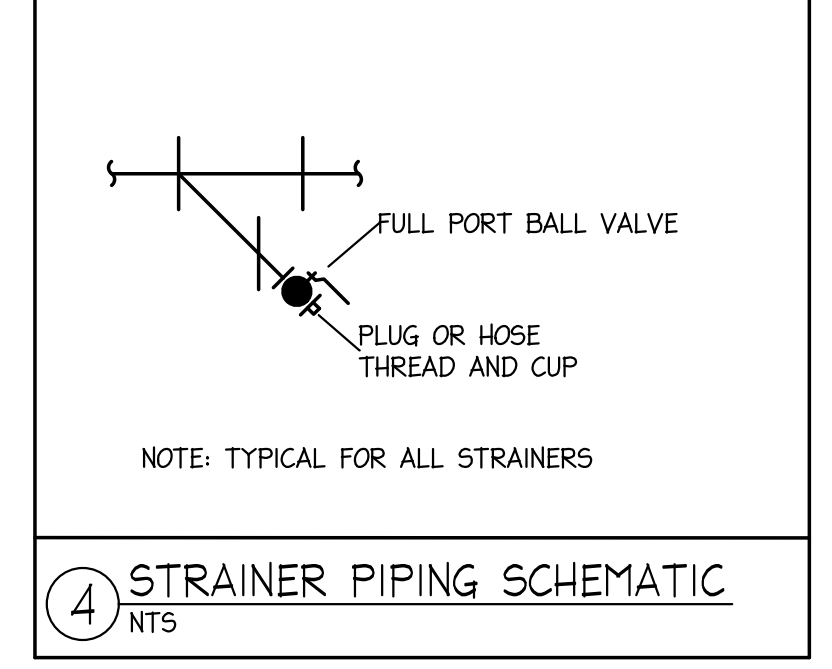
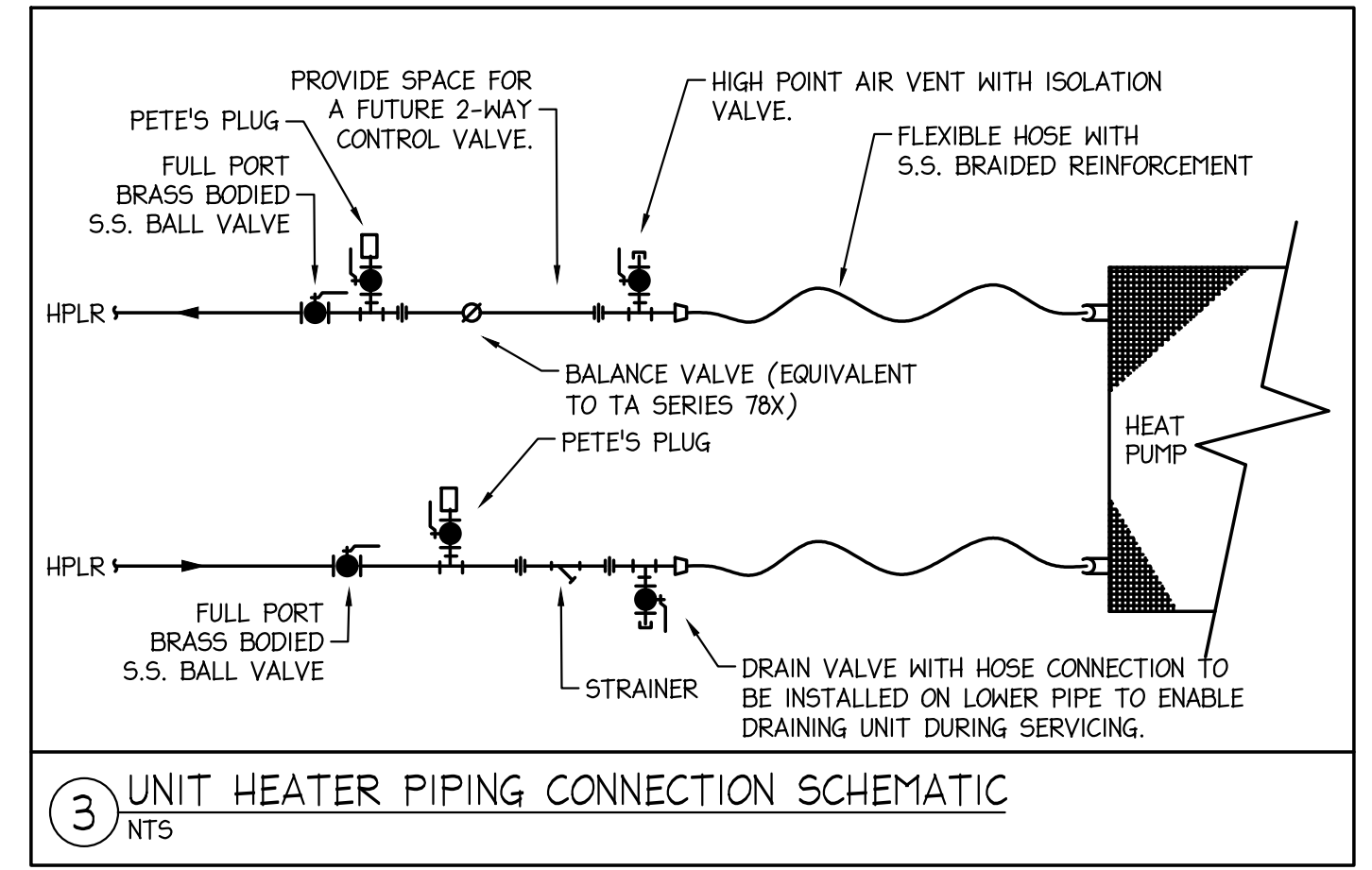
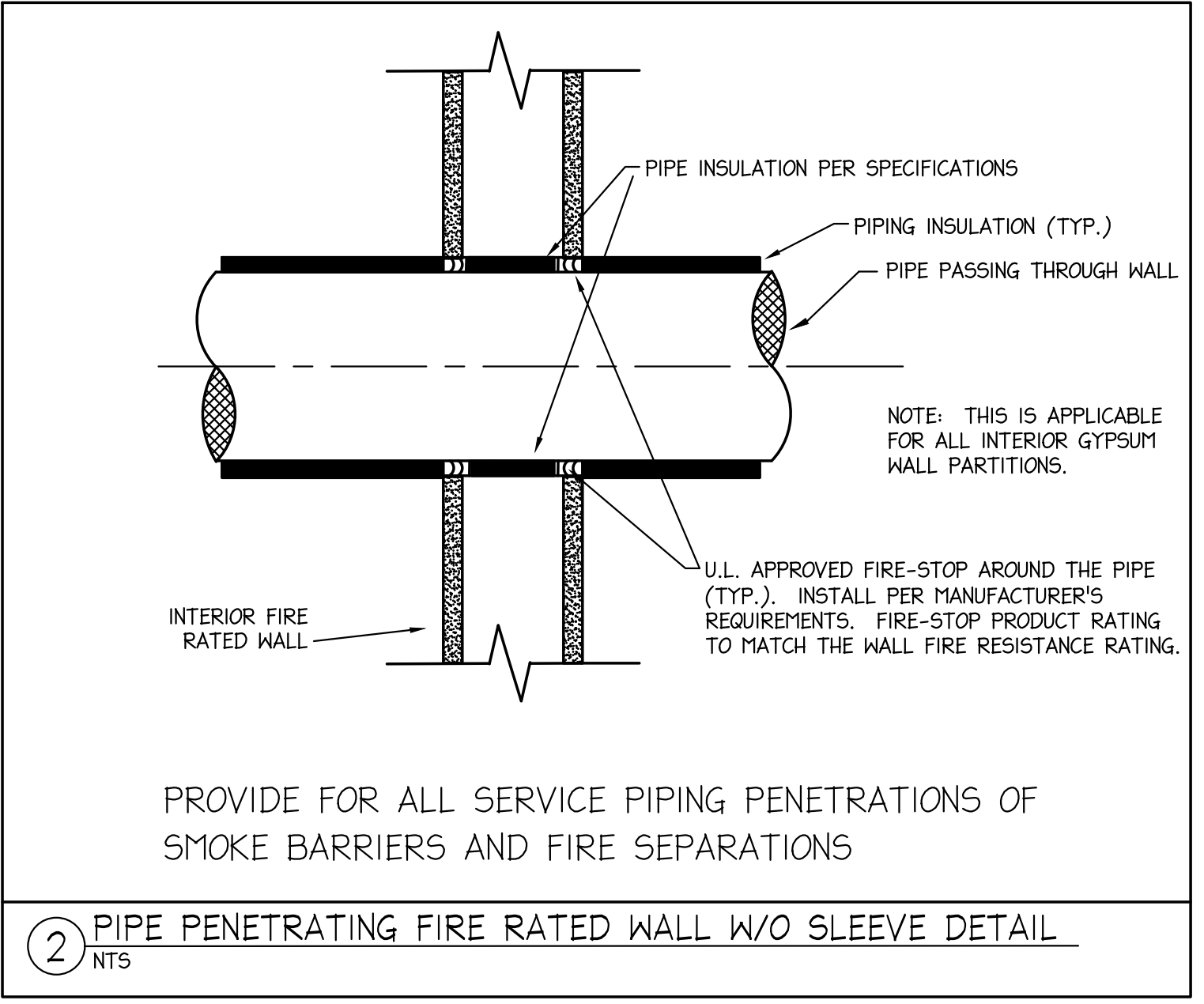
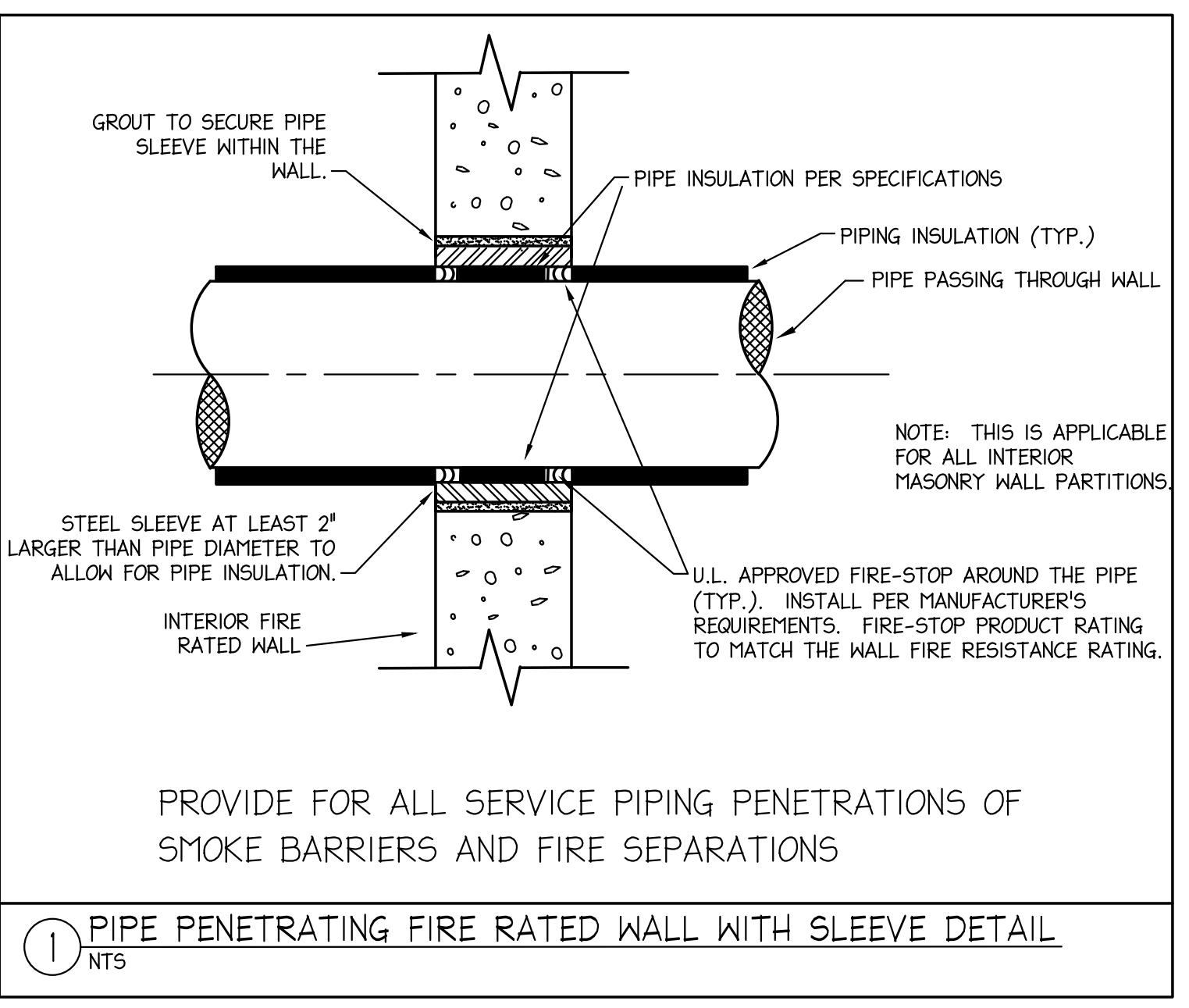
1. WASTE/VENT PIPING SHALL BE SCHEDULE 40 DWV PVC PIPING WITH SOLVENT CEMENTED JOINTS. CONDENSATE PIPING IS TO HAVE 1" OF FIBERGLASS PIPE INSULATION INSIDE THE BASEMENT. INSULATION TO HAVE ASJ JACKET/VAPOR BARRIER CONDUCTIVITY SHALL BE 0.21-0.27 BTU*IN/(HR*FT*2*F).
2. FOR ALL DOMESTIC WATER PIPING, PIPING IS TO BE CONSTRUCTED OF TYPE L COPPER DRAWN TEMPER MEETING ASTM B88 REQUIREMENTS. FITTINGS TO BE ASME B16.18 OR ASME B16.22 WROUGHT-COPPER SOLDERED JOINT FITTINGS. SOLDERED JOINTS TO USE ASTM B818, WATER-FLUSHABLE LEAD-FREE FLUX, ASTM B32 LEAD-FREE ALLOY SOLDER USING ASTM B828 PROCEDURES. PIPING TO BE INSULATED WITH RIGID GLASS FIBER MOLDED PIPE INSULATION COMPLYING WITH ASTM C547 WITH 0.24 BTU*IN/(HR*FT*2*F) K-FACTOR AND ALL SERVICE JACKET. PROVIDE PVC JACKETING OVER ALL FITTINGS AND ELBOWS. INSULATION IS TO BE 1/2" THICK FOR 3/4" AND SMALLER DOMESTIC COLD WATER PIPING, 1" THICK FOR 1" AND LARGER DOMESTIC WATER PIPING AND THE INSULATION IS TO BE COMPLETELY SEALED TO PROVIDE CONTINUOUS VAPOR BARRIER. DOMESTIC HOT WATER INSULATION IS TO BE 1" THICK FOR 1-1/4" AND SMALLER PIPING. FLEXIBLE ELASTOMERIC CELLULAR FOAM COMPLYING WITH ASTM C534/C534M TYPE 1, GRADE 1 IS ALSO PERMITTED.
3. FOR ALL FIRE RESISTANCE RATED WALL PENETRATIONS, PENETRATIONS THROUGH HORIZONTAL ASSEMBLIES, ETC. SEE DETAIL DRAWING FOR PIPING INSTALLATION.
4. ALL PIPING SHALL BE LABELED WITH PERMANENTLY FIXED PLASTIC LABELS. LABELS TO BE GREEN WITH WHITE LETTERING.
5. BALL VALVES ARE TO BE TWO-PIECE, FULL PORT WITH PTFE OR TFE SEATS, BRONZE STEM, CHROME-PLATED BRONZE BALL, STEEL WITH ZINC PLATING STEM WITH STEM EXTENSION AND CERTIFIED TO NSF/ANSI 61 AND NSF/ANSI 372 COMPLYING WITH ANTI-LEAD LAWS CONTAINING LESS THAN 0.25% LEAD BY WEIGHT. BASIS OF DESIGN VALVE IS MILWAUKEE ULTRA PURE #UPBA400.
6. COMPRESSED AIR PIPING IS TO BE SCHEDULE 40 STEEL WITH THREADED JOINTS. PIPING IS TO MATCH THE EXISTING PIPING. THE CONTRACTOR IS REQUIRED TO CONFIRM THE PIPING AND FITTING TYPE PRIOR TO DEMOLITION AND IS TO REINSTALL MATCHING PIPING AND FITTINGS DURING THE NEW WORK PHASE OF CONSTRUCTION.

HVAC LEGEND

HVAC PIPING ABBREVIATIONS		HVAC SYMBOLS	
— DCW —	DOMESTIC COLD WATER		AIR VENT
— DHW —	DOMESTIC HOT WATER		BALL VALVE
— DHWR —	DOMESTIC HOT WATER RETURN		BALANCE VALVE
— HWR —	HOT WATER HEATING RETURN		BUTTERFLY VALVE
— HWS —	HOT WATER HEATING SUPPLY		BUTTERFLY VALVE
— PW —	PUMPED WASTE		CHECK VALVE
— W —	SANITARY WASTE		AUTOMATIC CONTROL VALVE (TWO-WAY)
— V —	VENT		AUTOMATIC CONTROL VALVE (THREE-WAY)
			FLANGED CONNECTION
			FLEXIBLE CONNECTOR
			GATE VALVE
			NEEDLE VALVE
			WHEEL VALVE
			PIPE CAP
			PRESSURE GAUGE
			THERMOMETER
			HOSE BIBB
			PUMP
			PIPE TURNED DOWN
			PIPE TURNED UP
			PIPE OUTLET
			PIPE PITCH
			PIPE REDUCER
			PIPE STRAINER
			PIPE TEE DOWN
			PIPE TEE FLANGE
			PIPE UNION
			PIPE WELL
			PUMP SUCTION DIFFUSER
			RELIEF VALVE
			TRIPLE DUTY VALVE
			PRESSURE REDUCING VALVE
			WATER METER
			WALL MOUNTED THERMOSTAT

HVAC ABBREVIATIONS

UH	UNIT HEATER
A.F.F.	ABOVE FINISHED FLOOR
DN.	DOWN



PLUMBING FIXTURE SCHEDULE							
TAG	DESCRIPTION	MAKE & MODEL	C.W.	H.W.	WASTE	VENT	NOTES
(HB-1)	MILD CLIMATE WALL HYDRANT	WOODFORD MODEL #24	3/4"	-	-	-	WALL MOUNTED, ANTI-SIPHON, MILD CLIMATE, COLD ONLY WALL HYDRANT. PROVIDE SUPPORT FROM THE WALL TO SUPPORT THE WALL HYDRANT. PROVIDE LABELING TO INDICATE THAT THIS WALL HYDRANT IS NOT FOR CONSUMPTION/DRINKING.
(TD-1)	40" X 4" TRENCH DRAIN	ZURN PRODUCTS #Z886-HDG-U3-GDE-USA-DB	-	-	3"	2"	PROVIDE WITH GALVANIZED STEEL FRAME AND GRATE. TO BE CLASS E LOAD RATED. PROVIDE WITH BOTTOM DOME STRAINER.
(EX-1)	EYEWASH MIXING VALVE	GUARDIAN #G6020	1/2"	1/2"	-	-	PROVIDE AND INSTALL A NEW EYE WASH MIXING VALVE FOR THE REMOVED AND REINSTALLED EYEWASH IN THE FIRST FLOOR GARAGE. ENSURE THERE ARE ISOLATION VALVES INSTALLED UPSTREAM OF THIS MIXING VALVE TO ENABLE SERVICING. BRING 3/4" LINES TO THIS VALVE AND REDUCE JUST BEFORE THE VALVE.

GENERAL NOTES:

1. PROVIDE SHOCK ABSORBERS FOR THE WASHER MACHINES AND CHECK VALVES ON THE SUPPLY LINES. INSTALL IN SUPPLY LINE PER MANUFACTURER'S RECOMMENDATIONS. TO BE "PRECISION PLUMBING PRODUCTS" MODEL #5C-750.
2. ALL PLUMBING FIXTURES, SPECIALTIES AND COMPONENTS (EXCEPT FOR WALL HYDRANT WITH LABELING) ARE TO BE LEAD FREE TO COMPLY WITH ANTI-LEAD LAWS.

SECTION 230500 - MECHANICAL GENERAL PROVISIONS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 01 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

1.02 SUMMARY

- A. THIS SECTION INCLUDES CONTRACT REQUIREMENTS AND THE FOLLOWING BASIC MECHANICAL MATERIALS AND METHODS TO COMPLEMENT OTHER DIVISION 23 SECTIONS.
1. PIPING MATERIALS AND INSTALLATION INSTRUCTIONS COMMON TO MOST PIPING SYSTEMS.
 2. TRANSITION FITTINGS.
 3. CONCRETE BASE CONSTRUCTION REQUIREMENTS.
 4. ESCUTCHEONS.
 5. DIELECTRIC FITTINGS.
 6. FLEXIBLE CONNECTORS.
 7. MECHANICAL SLEEVE SEALS.
 8. EQUIPMENT NAMEPLATE DATA REQUIREMENTS.
 9. LABELING AND IDENTIFYING MECHANICAL SYSTEMS AND EQUIPMENT IS SPECIFIED IN DIVISION 23 SECTION "MECHANICAL IDENTIFICATION."
 10. NONSHRINK GROUT FOR EQUIPMENT INSTALLATIONS.
 11. FIELD-FABRICATED METAL AND WOOD EQUIPMENT SUPPORTS.
 12. INSTALLATION REQUIREMENTS COMMON TO EQUIPMENT SPECIFICATION SECTIONS.
 13. MECHANICAL DEMOLITION.
 14. CUTTING AND PATCHING.
 15. TOUCHUP PAINTING AND FINISHING.
- B. PIPE AND PIPE FITTING MATERIALS ARE SPECIFIED IN DIVISION 23 PIPING SYSTEM SECTIONS.

1.03 DEFINITIONS

- A. FINISHED SPACES: SPACES OTHER THAN MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS, FURRED SPACES, PIPE AND DUCT SHAFTS, UNHEATED SPACES IMMEDIATELY BELOW ROOF, SPACES ABOVE CEILINGS, UNEXCAVATED SPACES, CRAWL SPACES, AND TUNNELS.
- B. EXPOSED, INTERIOR INSTALLATIONS: EXPOSED TO VIEW IndoORS. EXAMPLES INCLUDE FINISHED OCCUPIED SPACES AND MECHANICAL EQUIPMENT ROOMS.
- C. EXPOSED, EXTERIOR INSTALLATIONS: EXPOSED TO VIEW OUTDOORS, OR SUBJECT TO OUTDOOR AMBIENT TEMPERATURES AND WEATHER CONDITIONS. EXAMPLES INCLUDE ROOFTOP LOCATIONS.
- D. CONCEALED, INTERIOR INSTALLATIONS: CONCEALED FROM VIEW AND PROTECTED FROM PHYSICAL CONTACT BY BUILDING OCCUPANTS. EXAMPLES INCLUDE ABOVE CEILINGS AND IN DUCT SHAFTS.
- E. CONCEALED, EXTERIOR INSTALLATIONS: CONCEALED FROM VIEW AND PROTECTED FROM WEATHER CONDITIONS AND PHYSICAL CONTACT BY BUILDING OCCUPANTS, BUT SUBJECT TO OUTDOOR AMBIENT TEMPERATURES. EXAMPLES INCLUDE INSTALLATIONS WITHIN UNHEATED SHELTERS.
- F. THE USE OF THE WORD "PROVIDE": WHENEVER THE WORD "PROVIDE" IS USED IN THE SPECIFICATIONS AND/OR ON THE DRAWINGS, IT SHALL MEAN "FURNISH AND INSTALL, @CONNECT, @APPLY, @ERECT, @CONSTRUCT, OR SIMILAR TERMS, UNLESS OTHERWISE INDICATED.
- G. THE USE OF THE WORD "PIPING": "PIPING" SHALL INCLUDE BUT NOT BE LIMITED TO, IN ADDITION TO PIPING OR MAINS, ALL FITTINGS, FLANGES, UNIONS, VALVES, STRAINERS, DRAINS, TRAPS, INSULATION, VENTS, HANGERS AND OTHER ACCESSORIES RELATIVE TO SUCH PIPING.
- H. THE USE OF THE WORD "MATERIAL": WHENEVER THE WORD MATERIAL IS USED IN THE SPECIFICATIONS AND/OR ON THE DRAWINGS, IT SHALL MEAN ANY "PRODUCT", "EQUIPMENT", "DEVICE", "ASSEMBLY", OR "ITEM" REQUIRED UNDER THE CONTRACT, AS INDICATED BY TRADE OR BRAND NAME, MANUFACTURER'S NAME, STANDARD SPECIFICATION REFERENCE OR OTHER DESCRIPTION.
- I. THE TERM "MECHANICAL CONTRACTOR", "HVAC CONTRACTOR", "PLUMBING CONTRACTOR" OR "CONTRACTOR" REFER TO THE SUB CONTRACTOR OR HIS SUB CONTRACTORS RESPONSIBLE FOR THE FURNISHING AND INSTALLATION OF ALL WORK INDICATED ON THE MECHANICAL, HVAC, AND/OR PLUMBING DRAWINGS AND IN THE MECHANICAL, HVAC, AND/OR PLUMBING SPECIFICATIONS.
- J. THE TERM "ACCESSIBLE" INDICATES EASE OF ACCESS WITH OR WITHOUT THE USE OF LADDERS AND WITHOUT REQUIRING EXTENSIVE REMOVAL OF OTHER EQUIPMENT, SUCH AS DUCTWORK, PIPING, CONDUIT, ETC TO GAIN ACCESS. "ACCESSIBLE CEILING" INDICATES ACOUSTICAL TILE TYPE HUNG CEILINGS. CONCEALED SPLINE OR SHEETROCK CEILINGS WITH ACCESS PANES SHALL NOT BE CONSIDERED ACCESSIBLE CEILINGS.
- K. THE FOLLOWING ARE INDUSTRY ABBREVIATIONS FOR PLASTIC MATERIALS:
1. ABS: ACRYLONITRILE-BUTADIENE-STYRENE PLASTIC.
 2. CPVC: CHLORINATED POLYVINYL CHLORIDE PLASTIC.
 3. NF: NYLON PLASTIC.
 4. PE: POLYETHYLENE PLASTIC.
 5. PVC: POLYVINYL CHLORIDE PLASTIC.
- L. THE FOLLOWING ARE INDUSTRY ABBREVIATIONS FOR RUBBER MATERIALS:
1. CR: CHLOROSULFONATED POLYETHYLENE SYNTHETIC RUBBER.
 2. EPDM: ETHYLENE PROPYLENE DIENE TERPOLYMER RUBBER.

1.04 CODES, STANDARDS, REFERENCES, AND PERMITS

- A. ALL MATERIAL AND WORKMANSHIP SHALL COMPLY WITH ALL THE LATEST EDITIONS OF ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL AND STATE ORDINANCES, INDUSTRY STANDARDS AND UTILITY COMPANY REGULATIONS.
- B. IN CASE OF DIFFERENCES BETWEEN THE BUILDING CODES, STATE LAW, LOCAL ORDINANCES, INDUSTRY STANDARDS AND UTILITY REGULATIONS AND THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING OF ANY SUCH DIFFERENCE.
- C. IN CASE OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND THE REQUIREMENTS OF ANY CODE OR AUTHORITIES HAVING JURISDICTION, THE MOST STRINGENT REQUIREMENTS OF THE AFOREMENTIONED SHALL GOVERN FOR BUDGETARY AND BID PURPOSES. HOWEVER, NO WORK WILL PROCEED UNTIL THE ENGINEER DETERMINES THE CORRECT METHOD OF INSTALLATION.
- D. SHOULD THE CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE BUILDING CODES, STATE LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS AND UTILITY COMPANY REGULATIONS, THE CONTRACTOR SHALL BEAR ALL COSTS ARISING IN CORRECTING THE DEFICIENCIES, AS APPROVED BY THE ENGINEER.

1.05 SUBMITTALS

- A. PRODUCT DATA: FOR THE FOLLOWING:
1. TRANSITION FITTINGS.
 2. DIELECTRIC FITTINGS.
 3. MECHANICAL SLEEVE SEALS.
 4. ESCUTCHEONS.
- B. WELDING CERTIFICATES.
- C. SHOP DRAWINGS: DETAIL FABRICATION AND INSTALLATION FOR METAL AND WOOD SUPPORTS AND ANCHORAGE FOR MECHANICAL MATERIALS AND EQUIPMENT.
- D. SAMPLES: OF COLOR, LETTERING STYLE, AND OTHER GRAPHIC REPRESENTATION REQUIRED FOR EACH IDENTIFICATION MATERIAL AND DEVICE.
- E. PROVIDE A SUBMITTAL FOR ALL MECHANICAL AND PLUMBING EQUIPMENT AND SPECIALTIES.

1.06 QUALITY ASSURANCE

- A. COMPLY WITH ASME A13.1 FOR LETTERING SIZE, LENGTH OF COLOR FIELD, COLORS, AND VIEWING ANGLES OF IDENTIFICATION DEVICES.
- B. EQUIPMENT SELECTION: EQUIPMENT OF HIGHER ELECTRICAL CHARACTERISTICS, PHYSICAL DIMENSIONS, CAPACITIES, AND RATINGS MAY BE FURNISHED PROVIDED SUCH PROPOSED EQUIPMENT IS APPROVED IN WRITING AND CONNECTING MECHANICAL AND ELECTRICAL SERVICES, CIRCUIT BREAKERS, CONDUIT, MOTORS, BASES, AND EQUIPMENT SPACES ARE INCREASED. ADDITIONAL COSTS SHALL BE APPROVED IN ADVANCE BY APPROPRIATE CONTRACT MODIFICATION FOR THESE INCREASES. IF MINIMUM ENERGY RATINGS OR EFFICIENCIES OF EQUIPMENT ARE SPECIFIED, EQUIPMENT MUST MEET DESIGN AND COMMISSIONING REQUIREMENTS.

1.07 SYSTEM DESCRIPTION

A. FURNISH AND INSTALL ALL MATERIALS IN ORDER TO PROVIDE FUNCTIONING SYSTEMS, UPON COMPLETION, IN COMPLIANCE WITH ALL APPLICABLE CODES, AUTHORITIES HAVING JURISDICTION, MANUFACTURER'S REQUIREMENTS, PERFORMANCE REQUIREMENTS SPECIFIED, AND ANY MODIFICATIONS RESULTING FROM REVIEWED SHOP DRAWINGS AND THE FIELD COORDINATION DRAWINGS.

1.08 SCOPE OF WORK

- A. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING ALL THE DEVICES AND EQUIPMENT SHOWN INDICATED THE MECHANICAL DRAWINGS INCLUDING MATERIALS AND EQUIPMENT REQUIRED TO CREATE FULLY OPERATIONAL SYSTEMS.
- B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THE ARCHITECTURAL, ELECTRICAL, AND FIRE PROTECTION PLANS. IN ADDITION TO ALL MECHANICAL EQUIPMENT, PLUMBING FIXTURES, AND MECHANICAL DEVICES INDICATED ON THE MECHANICAL PLANS, THE CONTRACTOR IS RESPONSIBLE FOR MECHANICAL INSTALLATION OF ALL THE EQUIPMENT AND DEVICES SHOWN ON THE ARCHITECTURAL PLANS AND THE ELECTRICAL PLANS.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THE ARCHITECTURAL, ELECTRICAL, AND FIRE PROTECTION PLANS. PRIOR TO BID, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL, ELECTRICAL, MECHANICAL, AND FIRE PROTECTION PLANS REGARDING EQUIPMENT LOCATIONS, EQUIPMENT QUANTITIES, PIPING AND DUCT WORK ROUTING, DEVICE LOCATIONS, LIGHT LOCATIONS, CHASE LOCATIONS, ETC OTHERWISE IT WILL BE ASSUMED THE CONTRACTOR IS RESPONSIBLE FOR MECHANICAL INSTALLATION OF ALL THE EQUIPMENT AND DEVICES SHOWN ON THE ARCHITECTURAL PLANS, MECHANICAL PLANS, PLUMBING PLANS, FIRE PROTECTION PLANS AND THE ELECTRICAL PLANS REGARDLESS OF WHETHER THEY ARE INDICATED ON THE MECHANICAL PLANS.

1.09 DRAWING INTERPRETATION

- A. THE PROJECT DRAWINGS ARE SCHEMATIC IN NATURE AND INDICATE GENERAL ARRANGEMENT OF EQUIPMENT. IT IS NOT THE INTENT OF THE DRAWINGS TO SUBSTITUTE FOR SHOP DRAWINGS. IN MANY INSTANCES, EQUIPMENT AND DEVICES ARE SIZED ON ONE MANUFACTURER'S PRODUCT. IN THE EVENT OF A FIELD VERIFICATION OR COORDINATION ISSUE, REPORT ISSUE TO OWNERS CONSTRUCTION SUPERVISOR.
- B. PIPING AND AIR DUCT PLANS ARE INTENDED TO SHOW SIZE, CAPACITY, APPROXIMATE LOCATION, DIRECTION AND GENERAL RELATIONSHIP OF ONE WORK PHASE TO ANOTHER, BUT NOT EXACT DETAIL OR ARRANGEMENT. THE DRAWINGS DO NOT NECESSARILY INDICATE ALL REQUIRED OFFSETS, DETAILS AND ACCESSORIES AND EQUIPMENT TO BE CONNECTED OR ENCOUNTERED IN THE WAY OF NEW WORK.
- C. GENERALLY, LAYOUT PIPELINES REQUIRING DRAINAGE FIRST, FOLLOWED BY LARGE PIPE MAINS, AIR DUCT AND ELECTRICAL CONDUIT. FOLLOW THIS PROCEDURE FOR AN ORDERLY INSTALLATION BUT NOT TO ESTABLISH PRECEDENCE OF ONE TRADE OVER ANOTHER. IT MUST BE UNDERSTOOD THAT PIPE AND DUCT HANGER INSTALLATIONS MUST COMPLY WITH SEISMIC BRACING REQUIREMENTS. MINIMIZING HANGER LENGTHS (STRUCTURE TO EQUIPMENT AND CROSSBARS) TO 12' AND UNDER MINIMIZES THE REQUIREMENT FOR SEISMIC BRACING.
- D. INSTALL WORK AS CLOSELY AS POSSIBLE TO LAYOUTS SHOWN ON DRAWINGS. MODIFY WORK AS NECESSARY TO MEET JOB CONDITIONS AND TO CLEAR OTHER EQUIPMENT. OFFSETS, TRANSITIONS AND CHANGES OF DIRECTION IN ALL SYSTEMS SHALL BE MADE AS REQUIRED TO MAINTAIN PROPER HEADROOM AND PITCH OF SLOPING LINES, TO AVOID EXISTING FIELD CONDITIONS AS WELL AS TO MAINTAIN CLEARANCES TO EQUIPMENT WHETHER OR NOT INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE ALL DRAINS, TRAPS AND ACCESSORIES AS REQUIRED FOR HIS WORK TO EFFECT THESE OFFSETS, TRANSITIONS AND CHANGES IN DIRECTION. CONSULT DESIGN PROFESSIONAL BEFORE MAKING CHANGES THAT EFFECT THE FUNCTION OR APPEARANCE OF SYSTEMS.
- E. DO NOT INSTALL EQUIPMENT, AIR DUCTING OR PIPING IN A NON-CODE COMPLIANT FASHION DUE TO DRAWING INTERPRETATION. PROVIDE MODIFICATION OF ILLUSTRATED WORK IN ORDER TO ACCOMMODATE JOB CONDITIONS AT NO COST TO OWNER.
- F. IN SOME CASES, DRAWINGS ARE BASED ON PRODUCTS OF ONE OR SEVERAL MANUFACTURERS, AS LISTED ON THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MODIFICATIONS MADE NECESSARY BY SUBSTITUTION OF PRODUCTS OR OTHER MANUFACTURERS.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. DELIVER PIPES AND TUBES WITH FACTORY-APPLIED END CAPS. MAINTAIN END CAPS THROUGH SHIPPING, STORAGE, AND HANDLING TO PREVENT PIPE END DAMAGE AND PREVENT ENTRANCE OF DIRT, DEBRIS, AND MOISTURE.
- B. PROTECT STORED PIPES AND TUBES FROM MOISTURE AND DIRT. ELEVATE ABOVE GRADE. DO NOT EXCEED STRUCTURAL CAPACITY OF FLOOR, IF STORED INSIDE.
- C. PROTECT FLANGES, FITTINGS, AND PIPING SPECIALTIES FROM MOISTURE AND DIRT.
- D. STORE PLASTIC PIPES PROTECTED FROM DIRECT SUNLIGHT. SUPPORT TO PREVENT SAGGING AND BENDING.

1.11 COORDINATION

- A. DO NOT INSTALL ANY PART OF A SYSTEM UNTIL ALL CRITICAL COMPONENTS OF THE SYSTEMS AND RELATED SYSTEMS HAVE BEEN APPROVED. COORDINATE INDIVIDUAL PARTS OF SYSTEMS.
- B. COORDINATE CONTRACT WORK WITH OTHER WORK SPECIFIED IN OTHER SECTIONS. RELOCATE WORK IF REQUIRED FOR PROPER INSTALLATION AND FUNCTIONING OF OTHER SYSTEMS, AT NO EXTRA COST TO THE OWNER.
- C. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. NOTIFY DESIGN PROFESSIONAL IF CONTRACT DOCUMENTS CONFLICT WITH MANUFACTURER'S INSTRUCTIONS. COMPLY WITH DESIGN PROFESSIONAL'S INTERPRETATIONS.
- D. IN GENERAL, AIR DUCT, HEATING AND SPRINKLER PIPING, AND DRAINAGE LINES TAKE PRECEDENCE OVER WATER, GAS, AND ELECTRICAL CONDUITS. THE DESIGN PROFESSIONAL WILL FINAL DECISIONS REGARDING THE ARRANGEMENT OF WORK, WHICH CANNOT BE AGREED UPON BY THE CONTRACTORS.

1.12 SEQUENCING AND SCHEDULING

- A. COORDINATE MECHANICAL EQUIPMENT INSTALLATION WITH OTHER BUILDING COMPONENTS.
- B. ARRANGE FOR PIPE SPACES, CHASES, SLOTS, AND OPENINGS IN BUILDING STRUCTURE DURING PROGRESS OF CONSTRUCTION TO ALLOW FOR MECHANICAL INSTALLATIONS.
- C. COORDINATE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SET SLEEVES IN POURED-IN-PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS, AS THEY ARE CONSTRUCTED.
- D. SEQUENCE, COORDINATE, AND INTEGRATE INSTALLATIONS OF MECHANICAL MATERIALS AND EQUIPMENT FOR EFFICIENT FLOW OF THE WORK. COORDINATE INSTALLATION OF LARGE EQUIPMENT REQUIRING POSITIONING BEFORE CLOSING IN BUILDING.
- E. COORDINATE CONNECTION OF MECHANICAL SYSTEMS WITH EXTERIOR UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES. COMPLY WITH REQUIREMENTS OF GOVERNING REGULATIONS, FRANCHISED SERVICE COMPANIES, AND CONTROLLING AGENCIES.
- F. COORDINATE REQUIREMENTS FOR ACCESS PANELS AND DOORS IF MECHANICAL ITEMS REQUIRING ACCESS ARE CONCEALED BEHIND FINISHED SURFACES. ACCESS PANELS AND DOORS ARE SPECIFIED IN DIVISION 08 SECTION "ACCESS DOORS."
- G. COORDINATE INSTALLATION OF IDENTIFYING DEVICES AFTER COMPLETING COVERING AND PAINTING, IF DEVICES ARE APPLIED TO SURFACES. INSTALL IDENTIFYING DEVICES BEFORE INSTALLING ACOUSTICAL CEILINGS AND SIMILAR CONCEALMENT.

1.13 "AS-BUILT" RECORD DRAWINGS

- A. RECORD DAILY PROGRESS ON ONE SET OF CONSTRUCTION DOCUMENTS. UTILIZE A PERMANENT BLACK OR BLUE MARKING MEDIA. ALL PROGRESS OF RECORD DRAWINGS SHALL BE PROVIDED IN A NEAT AND ACCURATE FASHION.
- B. AS-BUILT DRAWING REVIEWS WILL BE COMPLETED ON A MONTHLY BASIS BY THE ENGINEER OF RECORD. RELEASE OF REQUISITIONS WILL BE BASED ON THE REGULAR PROGRESS OF AS-BUILT DRAWINGS. THE LATEST AS-BUILT DRAWINGS SHALL BE SUBMITTED FOR REVIEW WITH EACH REQUISITION FOR PAYMENT.
- C. FORMAL AS-BUILT DRAWINGS SHALL BE SUBMITTED FOR REVIEW AT THE COMPLETION OF EACH PHASE OF THE WORK. THE AS-BUILT DRAWINGS SHALL BE 1/4" SCALE AND CREATED IN ELECTRONIC FORMAT UTILIZING BOTH AUTOCAD RELEASE 2010. AT THE COMPLETION OF EACH PHASE OF WORK, THE MECHANICAL CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE ORIGINAL FIELD PROGRESS AS-BUILT DRAWINGS, THE ELECTRONIC FILES OF THE FORMAL AS-BUILT DRAWINGS, AND FOUR SETS OF FINAL AS-BUILT DRAWINGS PLOTTED ON 24" X 36" D12 SIZED SHEETS. FINAL PAYMENT FOR THE PHASE OF WORK AND THE START OF THE NEXT PHASE SHALL BE DEPENDANT ON APPROVAL OF THE AS-BUILT DRAWINGS.

1.14 GUARANTEE

- A. PROVIDE WRITTEN GUARANTEE OF ALL COMPLETED/INSTALLED WORK. MATERIALS, EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED FOR A MINIMUM PERIOD OF ONE YEAR AFTER OWNERS ACCEPTANCE OF WORK. ANY FAILURE DUE TO DEFECTIVE MATERIAL, EQUIPMENT OR WORKMANSHIP SHALL BE CORRECTED AT NO ADDITIONAL COST TO OWNER. THIS SHALL INCLUDE DAMAGE COMPLETED TO OTHER AREAS OF CONSTRUCTION OR FACILITY RESULTING FROM THIS FAILURE. PROVIDE CORRECTION OF ANY FAILURE WITHIN AN ACCEPTABLE/REASONABLE TIME PERIOD.
- B. PROVIDE ALL EQUIPMENT AND MATERIAL MANUFACTURERS' GUARANTEES AND/OR WARRANTIES TO OWNER AFTER ACCEPTANCE OF INSTALLATION.

1.15 OPERATING AND MAINTENANCE MANUALS

- A. PROVIDE OPERATING AND MAINTENANCE INFORMATION FOR ALL EQUIPMENT, DEVICES, SYSTEMS, AND MATERIALS. THIS SHALL INCLUDE ALL MAINTENANCE AND OPERATIONS PROCEDURES, RECOMMENDATIONS, AND SERVICE REQUIREMENTS. ALL SUBMITTED DATA MUST INCLUDE MINIMUM EQUIPMENT/DEVICE OPERATIONS AND MAINTENANCE REQUIREMENTS TO FULFILL MANUFACTURERS' WARRANTIES.
- B. SUBMIT ALL ENGINEERING SELECTION AND SPECIFICATION DOCUMENTATION WITH OPERATING AND MAINTENANCE INFORMATION FOR ALL EQUIPMENT, DEVICES, SYSTEMS, AND MATERIALS.
- C. SUBMIT ALL DATA MEDIA IN A DETAILED, ORGANIZED, AND COMPLETE MANNER. PROVIDE A MINIMUM OF THREE COPIES TO OWNERS CONSTRUCTION SUPERVISOR FOR ENGINEER/ARCHITECT REVIEW. SUBMIT IN 3 RING BOUND ENCLOSURE.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
1. DIELECTRIC FLANGES:
 - a) CAPITOL MANUFACTURING CO.
 - b) CENTRAL PLASTICS CO.
 - c) EPCO SALES INC.
 - d) MATTS INDUSTRIES, INC.; WATER PRODUCTS DIV.
 2. DIELECTRIC-FLANGE INSULATING KITS:
 - a) CALPICO, INC.
 - b) CENTRAL PLASTICS CO.
 3. DIELECTRIC COUPLINGS:
 - a) CALPICO, INC.
 - b) LOCHINVAR CORP.
 4. DIELECTRIC NIPPLES:
 - a) GRINNELL CORP.; GRINNELL SUPPLY SALES CO.
 - b) PERFECTION CORP.
 - c) VICTAULIC CO. OF AMERICA.
 5. METAL, FLEXIBLE CONNECTORS:
 - a) ANAMET INDUSTRIAL, INC.
 - b) FLEXICRAFT INDUSTRIES.
 - c) MERCER RUBBER CO.
 - d) UNIFLEX, INC.
 6. RUBBER, FLEXIBLE CONNECTORS:
 - a) GENERAL RUBBER CORP.
 - b) MERCER RUBBER CO.
 - c) PROCO PRODUCTS, INC.
 - d) UNIFLEX, INC.
 7. MECHANICAL SLEEVE SEALS:
 - a) CALPICO, INC.
 - b) METRAFLEX CO.
 - c) THUNDERLINE/LINK-SEAL.

2.02 PIPE AND PIPE FITTINGS

- A. REFER TO MECHANICAL AND PLUMBING SCHEDULES PAGES FOR PIPE AND PIPE FITTING SPECIFICATIONS.

2.03 JOINING MATERIALS

- A. REFER TO INDIVIDUAL DIVISION 23 PIPING SECTIONS FOR SPECIAL JOINING MATERIALS NOT LISTED BELOW.
- B. PIPE-FLANGE GASKET MATERIALS: SUITABLE FOR CHEMICAL AND THERMAL CONDITIONS OF PIPING SYSTEM CONTENTS.
1. ASME B16.21, NONMETALLIC, FLAT, ASBESTOS-FREE, 1/8-INCH MAXIMUM THICKNESS UNLESS THICKNESS OR SPECIFIC MATERIAL IS INDICATED.
 - a) FULL-FACE TYPE: FOR FLAT-FACE, CLASS 125, CAST-IRON AND CAST-BRONZE FLANGES.
 - b) NARROW-FACE TYPE: FOR RAISED-FACE, CLASS 250, CAST-IRON AND STEEL FLANGES.
 2. AMMA C10, RUBBER, FLAT FACE, 1/8 INCH THICK, UNLESS OTHERWISE INDICATED; AND FULL-FACE OR RING TYPE, UNLESS OTHERWISE INDICATED.
- C. FLANGE BOLTS AND NUTS: ASME B16.2.1, CARBON STEEL, UNLESS OTHERWISE INDICATED.
- D. PLASTIC, PIPE-FLANGE GASKET, BOLTS, AND NUTS: TYPE AND MATERIAL RECOMMENDED BY PIPING SYSTEM MANUFACTURER, UNLESS OTHERWISE INDICATED.
- E. SOLDER FILLER METALS: ASTM B 32, LEAD-FREE ALLOYS. INCLUDE WATER-FLUSHABLE FLUX ACCORDING TO ASTM B 913.
- F. BRAZING FILLER METALS: AWS A5.8, BCUP SERIES, COPPER-PHOSPHORUS ALLOYS FOR GENERAL-DUTY BRAZING, UNLESS OTHERWISE INDICATED; AND AWS A5.8, BAGI, SILVER ALLOY FOR REFRIGERANT PIPING, UNLESS OTHERWISE INDICATED.
- G. WELDING FILLER METALS: COMPLY WITH AWS D10.12 FOR WELDING MATERIALS APPROPRIATE FOR WALL THICKNESS AND CHEMICAL ANALYSIS OF STEEL PIPE BEING WELDED.
- H. SOLVENT CEMENTS FOR JOINING PLASTIC PIPING:
1. ABS PIPING: ASTM D 2235.
 2. CPVC PIPING: ASTM F 493.
 3. PVC PIPING: ASTM D 2564. INCLUDE PRIMER ACCORDING TO ASTM F 656.
 4. PVC TO ABS PIPING TRANSITION: ASTM D 3138.

- I. FIBERGLASS PIPE ADHESIVE: AS FURNISHED OR RECOMMENDED BY PIPE MANUFACTURER.

2.04 TRANSITION FITTINGS

- A. AMMA TRANSITION COUPLINGS: SAME SIZE AS, AND WITH PRESSURE RATING AT LEAST EQUAL TO AND WITH ENDS COMPATIBLE WITH, PIPING TO BE JOINED.
1. MANUFACTURERS:
 - a) DRESSER INDUSTRIES, INC.; DMD DIV.
 - b) SMITH-BLAIR, INC.
 - c) VIKING JOHNSON.
 2. UNDERGROUND PIPING NPS 1-1/2 AND SMALLER: MANUFACTURED FITTING OR COUPLING.
 3. UNDERGROUND PIPING NPS 2 AND LARGER: AMMA C219, METAL SLEEVE-TYPE COUPLING.
 4. ABOVEGROUND PRESSURE PIPING: PIPE FITTING.
- B. PLASTIC-TO-METAL TRANSITION FITTINGS: CPVC AND PVC ONE-PIECE FITTING WITH MANUFACTURER'S SCHEDULE 80 EQUIVALENT DIMENSIONS; ONE END WITH THREADED BRASS INSERT, AND ONE SOLVENT-CEMENT-JOINT END.
1. MANUFACTURERS:
 - a) ESLOON THERMOPLASTICS.
 2. UNDERGROUND PIPING: ONE-PIECE FITTING WITH MANUFACTURER'S SDR II EQUIVALENT DIMENSIONS; ONE END WITH THREADED BRASS INSERT, AND ONE SOLVENT-CEMENT-JOINT END.
 1. MANUFACTURERS:
 - a) THOMPSON PLASTICS, INC.
 2. PLASTIC-TO-METAL TRANSITION UNIONS: M55 SP-107, CPVC AND PVC FOUR-PART UNION. INCLUDE BRASS END, SOLVENT-CEMENT-JOINT END, RUBBER O-RING, AND UNION NUT.
 1. MANUFACTURERS:
 - a) NIBCO INC.
 - b) NIBCO, INC.; CHEMTROL DIV.
 2. FLEXIBLE TRANSITION COUPLINGS FOR UNDERGROUND NONPRESSURE DRAINAGE PIPING: ASTM C 1173 WITH ELASTOMERIC SLEEVE, ENDS SAME SIZE AS PIPING TO BE JOINED, AND CORROSION-RESISTANT METAL BAND ON EACH END.
 1. MANUFACTURERS:
 - a) CASCADE WATERWORKS MFG. CO.
 - b) FERNO, INC.
 - c) MISSION RUBBER COMPANY.
 - d) PLASTIC ODDITIES, INC.
- 2.05 DIELECTRIC FITTINGS
- A. GENERAL: ASSEMBLY OR FITTING WITH INSULATING MATERIAL ISOLATING JOINED DISSIMILAR METALS, TO PREVENT GALVANIC ACTION AND STOP CORROSION.
- B. DIELECTRIC UNIONS: DIELECTRIC UNIONS ARE NOT ACCEPTABLE.
- C. DESCRIPTION: COMBINATION OF COPPER ALLOY AND FERROUS; THREADED, SOLDER, PLAIN, AND WELD-NECK END TYPES AND MATCHING PIPING SYSTEM MATERIALS.
- D. INSULATING MATERIAL: SUITABLE FOR SYSTEM FLUID, PRESSURE, AND TEMPERATURE.
- E. DIELECTRIC FLANGES: FACTORY-FABRICATED, COMPANION-FLANGE ASSEMBLY, FOR 150- OR 300-PSIG MINIMUM WORKING PRESSURE AS REQUIRED TO SUIT SYSTEM PRESSURES.
- F. DIELECTRIC-FLANGE INSULATION KITS: FIELD-ASSEMBLED, COMPANION-FLANGE ASSEMBLY, FULL-FACE OR RING TYPE. COMPONENTS INCLUDE NEOPRENE OR PHENOLIC GASKET, PHENOLIC OR POLYETHYLENE BOLT SLEEVES, PHENOLIC WASHERS, AND STEEL BACKING WASHERS.
1. PROVIDE SEPARATE COMPANION FLANGES AND STEEL BOLTS AND NUTS FOR 150- OR 300-PSIG MINIMUM WORKING PRESSURE AS REQUIRED TO SUIT SYSTEM PRESSURES.



DRAWN	LNC
APPROVED	LNC
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PROJECT TITLE: BURLINGTON FIRE STATION 2
 BURLINGTON FIRE DEPARTMENT, 132 NORTH AVENUE,
 BURLINGTON, VT 05401

SHEET TITLE: MECHANICAL/PLUMBING SPECIFICATIONS

SCALE: N.T.S.

PROJECT NO. 22390

SHEET NO.

MP6.01

- G. DIELECTRIC COUPLINGS: GALVANIZED-STEEL COUPLING WITH INERT AND NONCORROSIVE, THERMOPLASTIC LINING; THREADED ENDS; AND 300-PSIG MINIMUM WORKING PRESSURE AT 250 DEG F.
- H. DIELECTRIC NIPPLES: ELECTROPLATED STEEL NIPPLE WITH INERT AND NONCORROSIVE, THERMOPLASTIC LINING; PLAIN, THREADED, OR GROOVED ENDS; AND 300-PSIG MINIMUM WORKING PRESSURE AT 250 DEG F.
- 2.06 FLEXIBLE CONNECTORS
- A. GENERAL: FABRICATED FROM MATERIALS SUITABLE FOR SYSTEM FLUID AND THAT WILL PROVIDE FLEXIBLE PIPE CONNECTIONS. INCLUDE 250-PSIG MINIMUM WORKING-PRESSURE RATING, UNLESS HIGHER WORKING PRESSURE IS INDICATED, AND ENDS ACCORDING TO THE FOLLOWING:
- 2-INCH NPS AND SMALLER: THREADED.
 - 2-1/2-INCH NPS AND LARGER: FLANGED.
 - OPTION FOR 2-1/2-INCH NPS AND LARGER: GROOVED FOR USE WITH KEYED COUPLINGS.
- B. BRONZE-HOSE, FLEXIBLE CONNECTORS: CORRUGATED, BRONZE, INNER TUBING COVERED WITH BRONZE WIRE BRAID. INCLUDE COPPER-TUBE ENDS OR BRONZE FLANGED ENDS, BRAZE WELDED TO HOSE.
- C. STAINLESS-STEEL-HOSE/STEEL PIPE, FLEXIBLE CONNECTORS: CORRUGATED, STAINLESS-STEEL, INNER TUBING COVERED WITH STAINLESS-STEEL WIRE BRAID. INCLUDE STEEL NIPPLES OR FLANGES, WELDED TO HOSE.
- D. STAINLESS-STEEL-HOSE/STAINLESS-STEEL PIPE, FLEXIBLE CONNECTORS: CORRUGATED, STAINLESS-STEEL, INNER TUBING COVERED WITH STAINLESS-STEEL WIRE BRAID. INCLUDE STAINLESS-STEEL NIPPLES OR FLANGES, WELDED TO HOSE.
- E. RUBBER, FLEXIBLE CONNECTORS: CR OR EPDM ELASTOMER RUBBER CONSTRUCTION, WITH MULTIPLE LIPS OF NP FABRIC, MOLDED AND CURED IN HYDRAULIC PRESSES. INCLUDE 125-PSIG MINIMUM WORKING-PRESSURE RATING AT 220 DEG F. UNITS MAY BE STRAIGHT OR ELBOW TYPE, UNLESS OTHERWISE INDICATED.

2.07 SLEEVES

- A. GALVANIZED-STEEL SHEET: 0.0239-INCH MINIMUM THICKNESS; ROUND TUBE CLOSED WITH WELDED LONGITUDINAL JOINT.
- B. STEEL PIPE: ASTM A 53, TYPE E, GRADE B, SCHEDULE 40, GALVANIZED, PLAIN ENDS.
- C. CAST IRON: CAST OR FABRICATED "WALL PIPE" EQUIVALENT TO DUCTILE-IRON PRESSURE PIPE, WITH PLAIN ENDS AND INTEGRAL WATERSTOP, UNLESS OTHERWISE INDICATED.
- D. STACK SLEEVE FITTINGS: MANUFACTURED, CAST-IRON SLEEVE WITH INTEGRAL CLAMPING FLANGE. INCLUDE CLAMPING RING AND BOLTS AND NUTS FOR MEMBRANE FLASHING.
- UNDERDECK CLAMP: CLAMPING RING WITH SET SCREWS.
- E. MOLDED PVC: PERMANENT, WITH NAILING FLANGE FOR ATTACHING TO WOODEN FORMS.
- F. PVC PIPE: ASTM D 1785, SCHEDULE 40.
- G. MOLDED PE: REUSABLE, PE, TAPERED-CUP SHAPED, AND SMOOTH-OUTER SURFACE WITH NAILING FLANGE FOR ATTACHING TO WOODEN FORMS.

2.08 MECHANICAL SLEEVE SEALS

- A. DESCRIPTION: MODULAR DESIGN, WITH INTERLOCKING RUBBER LINKS SHAPED TO CONTINUOUSLY FILL ANNULAR SPACE BETWEEN PIPE AND SLEEVE. INCLUDE CONNECTING BOLTS AND PRESSURE PLATES.

2.09 PIPING SPECIALTIES

- A. SLEEVES: THE FOLLOWING MATERIALS ARE FOR WALL, FLOOR, SLAB, AND ROOF PENETRATIONS:
- STEEL SHEET METAL: 0.0239-INCH MINIMUM THICKNESS, GALVANIZED, ROUND TUBE CLOSED WITH WELDED LONGITUDINAL JOINT.
 - STEEL PIPE: ASTM A 53, TYPE E, GRADE A, SCHEDULE 40, GALVANIZED, PLAIN ENDS.
 - CAST IRON: CAST OR FABRICATED "WALL PIPE" EQUIVALENT TO DUCTILE-IRON PRESSURE PIPE, WITH PLAIN ENDS AND INTEGRAL WATERSTOP, UNLESS OTHERWISE INDICATED.
 - STACK SLEEVE FITTINGS: MANUFACTURED, CAST-IRON SLEEVE WITH INTEGRAL CLAMPING FLANGE. INCLUDE CLAMPING RING AND BOLTS AND NUTS FOR MEMBRANE FLASHING.
 - UNDERDECK CLAMP: CLAMPING RING WITH SET SCREWS.
- B. ESCUTCHEONS: MANUFACTURED WALL, CEILING, AND FLOOR PLATES; DEEP-PATTERN TYPE IF REQUIRED TO CONCEAL PROTRUDING FITTINGS AND SLEEVES.
- ID: CLOSELY FIT AROUND PIPE, TUBE, AND INSULATION OF INSULATED PIPING.
 - OD: COMPLETELY COVER OPENING.
3. CAST BRASS: SPLIT CASTING, WITH CONCEALED HINGE AND SET SCREW.
- FINISH: ROUGH BRASS.
 - FINISH: POLISHED CHROME-PLATE.

2.10 GROUT

- A. NONSHRINK, NONMETALLIC GROUT: ASTM C 1107, GRADE B.
- CHARACTERISTICS: POST-HARDENING, VOLUME-ADJUSTING, DRY, HYDRAULIC-CEMENT GROUT, NONSTAINING, NONCORROSIVE, NONGASEOUS, AND RECOMMENDED FOR INTERIOR AND EXTERIOR APPLICATIONS.
 - DESIGN MIX: 5000-PSIG, 28-DAY COMPRESSIVE STRENGTH.
 - PACKAGING: PREMIXED AND FACTORY PACKAGED.

PART 3 EXECUTION

3.01 PIPING SYSTEMS - COMMON REQUIREMENTS

- A. INSTALL PIPING ACCORDING TO THE FOLLOWING REQUIREMENTS AND DIVISION 23 SECTIONS SPECIFYING PIPING SYSTEMS.
- B. DRAWING PLANS, SCHEMATICS, AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF PIPING SYSTEMS. INDICATED LOCATIONS AND ARRANGEMENTS WERE USED TO SIZE PIPE AND CALCULATE FRICTION LOSS, EXPANSION, PUMP SIZING, AND OTHER DESIGN CONSIDERATIONS. INSTALL PIPING AS INDICATED UNLESS DEVIATIONS TO LAYOUT ARE APPROVED ON COORDINATION DRAWINGS.
- C. INSTALL PIPING IN CONCEALED LOCATIONS, UNLESS OTHERWISE INDICATED AND EXCEPT IN EQUIPMENT ROOMS AND SERVICE AREAS.
- D. INSTALL PIPING INDICATED TO BE EXPOSED AND PIPING IN EQUIPMENT ROOMS AND SERVICE AREAS AT RIGHT ANGLES OR PARALLEL TO BUILDING WALLS. DIAGONAL RUNS ARE PROHIBITED UNLESS SPECIFICALLY INDICATED OTHERWISE.
- E. INSTALL PIPING ABOVE ACCESSIBLE CEILINGS TO ALLOW SUFFICIENT SPACE FOR CEILING PANEL REMOVAL.
- F. INSTALL PIPING TO PERMIT VALVE SERVICING.
- G. INSTALL PIPING AT INDICATED SLOPES.
- H. INSTALL PIPING FREE OF SAGS AND BENDS.
- I. INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS.
- J. INSTALL PIPING TO ALLOW APPLICATION OF INSULATION.
- K. SELECT SYSTEM COMPONENTS WITH PRESSURE RATING EQUAL TO OR GREATER THAN SYSTEM OPERATING PRESSURE.
- L. INSTALL ESCUTCHEONS FOR PENETRATIONS OF WALLS, CEILINGS, AND FLOORS ACCORDING TO THE FOLLOWING:
- NEW PIPING:
 - PIPE WITH FITTING OR SLEEVE PROTRUDING FROM WALL: ONE-PIECE, DEEP-PATTERN TYPE.
 - CHROME-PLATED PIPING: ONE-PIECE, CAST-BRASS TYPE WITH POLISHED CHROME-PLATED FINISH.
 - INSULATED PIPING: ONE-PIECE, STAMPED-STEEL TYPE WITH SPRING CLIPS.
 - BARE PIPING AT WALL AND FLOOR PENETRATIONS IN FINISHED SPACES: ONE-PIECE, CAST-BRASS TYPE WITH POLISHED CHROME-PLATED FINISH.
 - BARE PIPING AT CEILING PENETRATIONS IN FINISHED SPACES: SPLIT-CASTING, CAST-BRASS TYPE WITH POLISHED CHROME-PLATED FINISH.
 - BARE PIPING IN UNFINISHED SERVICE SPACES: ONE-PIECE, CAST-BRASS TYPE WITH POLISHED CHROME-PLATED FINISH.
 - BARE PIPING IN EQUIPMENT ROOMS: ONE-PIECE, CAST-BRASS TYPE.
 - BARE PIPING AT FLOOR PENETRATIONS IN EQUIPMENT ROOMS: ONE-PIECE, FLOOR-PLATE TYPE.
- M. SLEEVES ARE NOT REQUIRED FOR CORE-DRILLED HOLES WITH SMOOTH CONCRETE BORE.
- N. PERMANENT SLEEVES ARE NOT REQUIRED FOR HOLES FORMED BY REMOVABLE PE SLEEVES.
- O. INSTALL SLEEVES FOR PIPES PASSING THROUGH CONCRETE AND MASONRY WALLS AND CONCRETE FLOOR AND ROOF SLABS.
- P. INSTALL SLEEVES FOR PIPES PASSING THROUGH CONCRETE AND MASONRY WALLS, GYPSUM-BOARD PARTITIONS, AND CONCRETE FLOOR AND ROOF SLABS.
- CUT SLEEVES TO LENGTH FOR MOUNTING FLUSH WITH BOTH SURFACES.
 - EXCEPTION: EXTEND SLEEVES INSTALLED IN FLOORS OF MECHANICAL EQUIPMENT AREAS OR OTHER WET AREAS 2 INCHES ABOVE FINISHED FLOOR LEVEL. EXTEND CAST-IRON SLEEVE FITTINGS BELOW FLOOR SLAB AS REQUIRED TO SECURE CLAMPING RING IF RING IS SPECIFIED.
 - INSTALL SLEEVES IN NEW WALLS AND SLABS AS NEW WALLS AND SLABS ARE CONSTRUCTED.

- INSTALL SLEEVES THAT ARE LARGE ENOUGH TO PROVIDE 1/4-INCH ANNULAR CLEAR SPACE BETWEEN SLEEVE AND PIPE OR PIPE INSULATION. USE THE FOLLOWING SLEEVE MATERIALS:
 - STEEL PIPE SLEEVES: FOR PIPES SMALLER THAN NPS 6.
 - STEEL SHEET SLEEVES: FOR PIPES NPS 6 AND LARGER, PENETRATING GYPSUM-BOARD PARTITIONS.
 - STACK SLEEVE FITTINGS: FOR PIPES PENETRATING FLOORS WITH MEMBRANE WATERPROOFING. SECURE FLASHING BETWEEN CLAMPING FLANGES. INSTALL SECTION OF CAST-IRON SOIL PIPE TO EXTEND SLEEVE TO 2 INCHES ABOVE FINISHED FLOOR LEVEL. REFER TO DIVISION 07 SECTION "SHEET METAL FLASHING AND TRIM" FOR FLASHING.
 - SEAL SPACE OUTSIDE OF SLEEVE FITTINGS WITH GROUT.
- EXCEPT FOR UNDERGROUND WALL PENETRATIONS, SEAL ANNULAR SPACE BETWEEN SLEEVE AND PIPE OR PIPE INSULATION, USING JOINT SEALANTS APPROPRIATE FOR SIZE, DEPTH, AND LOCATION OF JOINT. REFER TO DIVISION 07 SECTION "JOINT SEALANTS" FOR MATERIALS AND INSTALLATION.
- ABOVEGROUND, EXTERIOR-WALL PIPE PENETRATIONS: SEAL PENETRATIONS USING SLEEVES AND MECHANICAL SLEEVE SEALS. SELECT SLEEVE SIZE TO ALLOW FOR 1-INCH ANNULAR CLEAR SPACE BETWEEN PIPE AND SLEEVE FOR INSTALLING MECHANICAL SLEEVE SEALS.
 - INSTALL STEEL PIPE FOR SLEEVES SMALLER THAN 6 INCHES IN DIAMETER.
 - INSTALL CAST-IRON "WALL PIPES" FOR SLEEVES 6 INCHES AND LARGER IN DIAMETER.
- MECHANICAL SLEEVE SEAL INSTALLATION: SELECT TYPE AND NUMBER OF SEALING ELEMENTS REQUIRED FOR PIPE MATERIAL AND SIZE. POSITION PIPE IN CENTER OF SLEEVE. ASSEMBLE MECHANICAL SLEEVE SEALS AND INSTALL IN ANNULAR SPACE BETWEEN PIPE AND SLEEVE. TIGHTEN BOLTS AGAINST PRESSURE PLATES THAT CAUSE SEALING ELEMENTS TO EXPAND AND MAKE WATERTIGHT SEAL.
 - MECHANICAL SLEEVE SEAL INSTALLATION: SELECT TYPE AND NUMBER OF SEALING ELEMENTS REQUIRED FOR PIPE MATERIAL AND SIZE. POSITION PIPE IN CENTER OF SLEEVE. ASSEMBLE MECHANICAL SLEEVE SEALS AND INSTALL IN ANNULAR SPACE BETWEEN PIPE AND SLEEVE. TIGHTEN BOLTS AGAINST PRESSURE PLATES THAT CAUSE SEALING ELEMENTS TO EXPAND AND MAKE WATERTIGHT SEAL.
 - FIRE-BARRIER PENETRATIONS: MAINTAIN INDICATED FIRE RATING OF WALLS, PARTITIONS, CEILINGS, AND FLOORS AT PIPE PENETRATIONS. SEAL PIPE PENETRATIONS WITH FIRESTOP MATERIALS. UTILIZE UL LISTED FIRESTOP SYSTEMS FOR NON-METALLIC PIPE PENETRATIONS. REFER TO DIVISION 07 SECTION "THROUGH-PENETRATION FIRESTOP SYSTEMS" FOR MATERIALS.
 - VERIFY FINAL EQUIPMENT LOCATIONS FOR ROUGHING-IN.
- REFER TO EQUIPMENT SPECIFICATIONS IN OTHER SECTIONS OF THESE SPECIFICATIONS FOR ROUGHING-IN REQUIREMENTS.

3.02 PIPING JOINT CONSTRUCTION

- A. JOIN PIPE AND FITTINGS ACCORDING TO THE FOLLOWING REQUIREMENTS AND DIVISION 23 SECTIONS SPECIFYING PIPING SYSTEMS.
- B. REAM ENDS OF PIPES AND TUBES AND REMOVE BURRS. BEVEL PLAIN ENDS OF STEEL PIPE.
- C. REMOVE SCALE, SLAG, DIRT, AND DEBRIS FROM INSIDE AND OUTSIDE OF PIPE AND FITTINGS BEFORE ASSEMBLY.
- D. SOLDERED JOINTS: APPLY ASTM B 813, WATER-FLUSHABLE FLUX, UNLESS OTHERWISE INDICATED, TO TUBE END. CONSTRUCT JOINTS ACCORDING TO ASTM B 828 OR CDA'S "COPPER TUBE HANDBOOK," USING LEAD-FREE SOLDER ALLOY COMPLYING WITH ASTM B 32.
- E. BRAZED JOINTS: CONSTRUCT JOINTS ACCORDING TO AWS'S "BRAZING HANDBOOK," "PIPE AND TUBE" CHAPTER, USING COPPER-PHOSPHORUS BRAZING FILLER METAL COMPLYING WITH AWS A5.8.
- F. THREADED JOINTS: THREAD PIPE WITH TAPERED PIPE THREADS ACCORDING TO ASME B1.20.1. CUT THREADS FULL AND CLEAN USING SHARP DIES. REAM THREADED PIPE ENDS TO REMOVE BURRS AND RESTORE FULL ID. JOIN PIPE FITTINGS AND VALVES AS FOLLOWS:
- APPLY APPROPRIATE TAPE OR THREAD COMPOUND TO EXTERNAL PIPE THREADS UNLESS DRY SEAL THREADING IS SPECIFIED.
 - DAMAGED THREADS: DO NOT USE PIPE OR PIPE FITTINGS WITH THREADS THAT ARE CORRODED OR DAMAGED. DO NOT USE PIPE SECTIONS THAT HAVE CRACKED OR OPEN NELS.
 - WELDED JOINTS: CONSTRUCT JOINTS ACCORDING TO AWS D10.12, USING QUALIFIED PROCESSES AND WELDING OPERATORS ACCORDING TO PART 1 "QUALITY ASSURANCE" ARTICLE.
 - FLANGED JOINTS: SELECT APPROPRIATE GASKET MATERIAL, SIZE, TYPE, AND THICKNESS FOR SERVICE APPLICATION. INSTALL GASKET CONCENTRICALLY POSITIONED. USE SUITABLE LUBRICANTS ON BOLT THREADS.
- I. PLASTIC PIPING SOLVENT-CEMENT JOINTS: CLEAN AND DRY JOINING SURFACES. JOIN PIPE AND FITTINGS ACCORDING TO THE FOLLOWING:
- COMPLY WITH ASTM F 402 FOR SAFE-HANDLING PRACTICE OF CLEANERS, PRIMERS, AND SOLVENT CEMENTS.
 - ABS PIPING: JOIN ACCORDING TO ASTM D 2235 AND ASTM D 2661 APPENDIXES.
 - CPVC PIPING: JOIN ACCORDING TO ASTM D 2846/D 2846M APPENDIX.
 - PVC PRESSURE PIPING: JOIN SCHEDULE NUMBER ASTM D 1785, PVC PIPE AND PVC SOCKET FITTINGS ACCORDING TO ASTM D 2672. JOIN OTHER-THAN-SCHEDULE-NUMBER PVC PIPE AND SOCKET FITTINGS ACCORDING TO ASTM D 2855.
 - PVC NONPRESSURE PIPING: JOIN ACCORDING TO ASTM D 2855.
 - PVC TO ABS NONPRESSURE TRANSITION FITTINGS: JOIN ACCORDING TO ASTM D 3138 APPENDIX.
 - PLASTIC PRESSURE PIPING GASKETED JOINTS: JOIN ACCORDING TO ASTM D 3139.
 - J. PLASTIC NONPRESSURE PIPING GASKETED JOINTS: JOIN ACCORDING TO ASTM D 3212.
 - PE PIPING HEAT-FUSION JOINTS: CLEAN AND DRY JOINING SURFACES BY WIPING WITH CLEAN CLOTH OR PAPER TOWELS. JOIN ACCORDING TO ASTM D 2657.

- PLAIN-END PIPE AND FITTINGS: USE BUTT FUSION.
 - PLAIN-END PIPE AND SOCKET FITTINGS: USE SOCKET FUSION.
 - FIBERGLASS BONDED JOINTS: PREPARE PIPE ENDS AND FITTINGS, APPLY ADHESIVE, AND JOIN ACCORDING TO PIPE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 3.03 PIPING CONNECTIONS
- A. MAKE CONNECTIONS ACCORDING TO THE FOLLOWING, UNLESS OTHERWISE INDICATED:
- INSTALL UNIONS, IN PIPING NPS 2 AND SMALLER, ADJACENT TO EACH VALVE AND AT FINAL CONNECTION TO EACH PIECE OF EQUIPMENT.
 - INSTALL FLANGES, IN PIPING NPS 2-1/2 AND LARGER, ADJACENT TO FLANGED VALVES AND AT FINAL CONNECTION TO EACH PIECE OF EQUIPMENT.
 - DRY PIPING SYSTEMS: INSTALL DIELECTRIC UNIONS AND FLANGES TO CONNECT PIPING MATERIALS OF DISSIMILAR METALS.
 - WET PIPING SYSTEMS: INSTALL DIELECTRIC COUPLING AND NIPPLE FITTINGS TO CONNECT PIPING MATERIALS OF DISSIMILAR METALS.

3.04 PERMITTED SPACE ENTRY

- A. ALL WORKERS IN PERMIT-REQUIRED CONFINED SPACES SHALL COMPLY WITH OSHA 29 CFR 1910.146 REQUIREMENTS FOR PERMIT-REQUIRED CONFINED SPACES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING IF A PARTICULAR SPACE IS A PERMIT REQUIRED CONFINED SPACE. THIS EVALUATION SHALL OCCUR AS A MINIMUM EACH TIME THE SPACE EGRESS OR CONFIGURATION CHANGES.

3.05 EQUIPMENT INSTALLATION - COMMON REQUIREMENTS

- A. INSTALL EQUIPMENT TO ALLOW MAXIMUM POSSIBLE HEADROOM UNLESS SPECIFIC MOUNTING HEIGHTS ARE NOT INDICATED.
- B. INSTALL EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS IN EXPOSED INTERIOR SPACES, UNLESS OTHERWISE INDICATED.
- C. INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICE, MAINTENANCE, AND REPAIR OR REPLACEMENT OF COMPONENTS. CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH MINIMUM INTERFERENCE TO OTHER INSTALLATIONS. EXTEND GREASE FITTINGS TO ACCESSIBLE LOCATIONS.
- D. INSTALL EQUIPMENT TO ALLOW RIGHT OF WAY FOR PIPING INSTALLED AT REQUIRED SLOPE.
- E. INSTALL EQUIPMENT ACCORDING TO APPROVED SUBMITTAL DATA. PORTIONS OF THE WORK ARE SHOWN ONLY IN DIAGRAMMATIC FORM. REFER CONFLICTS TO ARCHITECT.
- F. INSTALL EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS IN EXPOSED INTERIOR SPACES, UNLESS OTHERWISE INDICATED.
- G. INSTALL FLEXIBLE CONNECTORS ON EQUIPMENT SIDE OF SHUTOFF VALVES, HORIZONTALLY AND PARALLEL TO EQUIPMENT SHAFTS IF POSSIBLE.

3.06 PAINTING AND FINISHING

- A. APPLY PAINT TO EXPOSED PIPING ACCORDING TO THE FOLLOWING, UNLESS OTHERWISE INDICATED:
- INTERIOR, FERROUS PIPING: USE SEMILOSS, ACRYLIC-ENAMEL FINISH. INCLUDE FINISH COAT OVER ENAMEL UNDERCOAT AND PRIMER.
 - INTERIOR, GALVANIZED-STEEL PIPING: USE SEMILOSS, ACRYLIC-ENAMEL FINISH. INCLUDE TWO FINISH COATS OVER GALVANIZED METAL PRIMER.
 - INTERIOR, FERROUS SUPPORTS: USE SEMILOSS, ACRYLIC-ENAMEL FINISH. INCLUDE FINISH COAT OVER ENAMEL UNDERCOAT AND PRIMER.
 - EXTERIOR, FERROUS PIPING: USE SEMILOSS, ACRYLIC-ENAMEL FINISH. INCLUDE TWO FINISH COATS OVER RUST-INHIBITIVE METAL PRIMER.
 - EXTERIOR, GALVANIZED-STEEL PIPING: USE SEMILOSS, ACRYLIC-ENAMEL FINISH. INCLUDE TWO FINISH COATS OVER GALVANIZED METAL PRIMER.
 - EXTERIOR, FERROUS SUPPORTS: USE SEMILOSS, ACRYLIC-ENAMEL FINISH. INCLUDE TWO FINISH COATS OVER RUST-INHIBITIVE METAL PRIMER.
- B. DO NOT PAINT PIPING SPECIALTIES WITH FACTORY-APPLIED FINISH.
- C. DAMAGE AND TOUCHUP: REPAIR MARRED AND DAMAGED FACTORY-PAINTED FINISHES WITH MATERIALS AND PROCEDURES TO MATCH ORIGINAL FACTORY FINISH.

3.07 CONCRETE BASES

- A. CONSTRUCT CONCRETE BASES OF DIMENSIONS INDICATED, BUT NOT LESS THAN 4 INCHES LARGER IN BOTH DIRECTIONS THAN SUPPORTED UNIT. PROVIDE 2" CHAMFERED EDGES ON TOP OF CONCRETE PADS. FOLLOW SUPPORTED EQUIPMENT MANUFACTURER'S SETTING TEMPLATES FOR ANCHOR BOLT AND TIE LOCATIONS. USE 3000-PSIG, 28-DAY COMPRESSIVE-STRENGTH CONCRETE AND REINFORCEMENT AS SPECIFIED IN DIVISION 03 SECTION "CAST-IN-PLACE CONCRETE." PROVIDE BROOM FINISH.
- B. THE MECHANICAL CONTRACTOR SHALL FILL EACH AIR HANDLING UNIT FAN INERTIA BASE WITH CAST-IN-PLACE CONCRETE. USE 3000-PSIG, 28-DAY COMPRESSIVE-STRENGTH CONCRETE AND REINFORCEMENT AS SPECIFIED IN DIVISION 03 SECTION "CAST-IN-PLACE CONCRETE."

3.08 ERECTION OF METAL SUPPORTS AND ANCHORAGE

- A. REFER TO DIVISION 05 SECTION "METAL FABRICATIONS" FOR STRUCTURAL STEEL.
- B. CUT, FIT, AND PLACE MISCELLANEOUS METAL SUPPORTS ACCURATELY IN LOCATION, ALIGNMENT, AND ELEVATION TO SUPPORT AND ANCHOR MECHANICAL MATERIALS AND EQUIPMENT.
- C. FIELD WELDING: COMPLY WITH AWS D1.1, "STRUCTURAL WELDING CODE--STEEL."

3.09 ERECTION OF WOOD SUPPORTS AND ANCHORAGE

- A. CUT, FIT, AND PLACE WOOD GROUNDS, NAILERS, BLOCKING, AND ANCHORAGE TO SUPPORT AND ANCHOR MECHANICAL MATERIALS AND EQUIPMENT.
- B. SELECT FASTENER SIZES THAT WILL NOT PENETRATE MEMBERS IF OPPOSITE SIDE WILL BE EXPOSED TO VIEW OR WILL RECEIVE FINISH MATERIALS. TIGHTEN CONNECTIONS BETWEEN MEMBERS. INSTALL FASTENERS WITHOUT SPLITTING WOOD MEMBERS.
- C. ATTACH TO SUBSTRATES AS REQUIRED TO SUPPORT APPLIED LOADS.

3.10 CUTTING AND PATCHING

- A. CUT, CHANNEL, CHASE, AND DRILL FLOORS, WALLS, PARTITIONS, CEILINGS, AND OTHER SURFACES NECESSARY FOR MECHANICAL INSTALLATIONS. PERFORM CUTTING BY SKILLED MECHANICS OF TRADES INVOLVED.
- B. REPAIR CUT SURFACES TO MATCH ADJACENT SURFACES.
- C. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PATCHING OF EXISTING PARTITIONS AFTER REMOVAL OF DUCT WORK AND HVAC PIPING.
- D. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PATCHING OF EXISTING PARTITIONS AFTER REMOVAL OF PLUMBING PIPING.

3.11 GROUTING

- A. INSTALL NONMETALLIC, NONSHRINK, GROUT FOR MECHANICAL EQUIPMENT BASE BEARING SURFACES, PUMP AND OTHER EQUIPMENT BASE PLATES, AND ANCHORS. MIX GROUT ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
- B. CLEAN SURFACES THAT WILL COME INTO CONTACT WITH GROUT.
- C. PROVIDE FORMS AS REQUIRED FOR PLACEMENT OF GROUT.
- D. AVOID AIR ENTRAPMENT DURING PLACING OF GROUT.
- E. PLACE GROUT, COMPLETELY FILLING EQUIPMENT BASES.
- F. PLACE GROUT ON CONCRETE BASES TO PROVIDE SMOOTH BEARING SURFACE FOR EQUIPMENT.
- G. PLACE GROUT AROUND ANCHORS.
- H. CURE PLACED GROUT ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

3.12 FIRESTOPPING

- A. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROPER U.L. LISTED FIRESTOPPING AND SMOKESTOPPING FOR ALL DUCT, PIPE, CONTROLS CONDUIT, AND RELATED ELECTRICAL CONDUIT INSTALLED BY THE MECHANICAL CONTRACTOR.
- B. THE MECHANICAL CONTRACTOR SHALL UTILIZE THE LATEST FIRE AND SMOKE PROTECTION MATERIALS AND INSTALLATION METHODS. THE MECHANICAL CONTRACTOR SHALL GUARANTEE THAT ALL MATERIALS INSTALLED ARE FIRE AND SMOKE STOPPED PER U.L. LISTING, NFPA, BUILDING CODE REQUIREMENTS.
- C. THE MECHANICAL CONTRACTOR SHALL VERIFY EXISTING PARTITION RATINGS. IF THE MECHANICAL CONTRACTOR IS UNSURE OF PARTITION RATING THEN HE OR SHE MUST INQUIRE TO CONSTRUCTION MANAGER.

END OF SECTION



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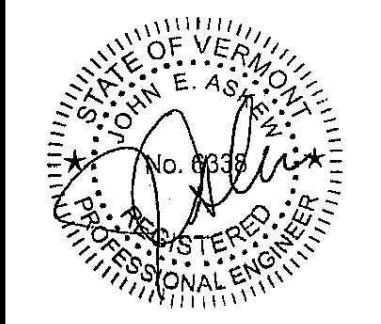
NO.	DATE	REVISION

PROJECT TITLE	BURLINGTON FIRE STATION 2
	BURLINGTON FIRE DEPARTMENT, 132 NORTH AVENUE, BURLINGTON, VT 05401
SHEET TITLE	MECHANICAL/PLUMBING SPECIFICATIONS
SCALE:	N.T.S.
PROJECT NO.	22390
SHEET NO.	

MP6.02



CONSULTING



ELECTRICAL DEMOLITION LEGEND	
---	EXISTING ELECTRICAL TO BE DEMOLISHED
---	EXISTING ELECTRICAL REMAINING

GENERAL ELECTRICAL DEMOLITION NOTES

1. PRIMARY SCOPE OF WORK FOR THIS PROJECT IS TO FACILITATE THE REPLACEMENT OF THE FIRST FLOOR SLAB. ALL UTILITIES THAT ARE BELOW, SUSPENDED/SUPPORTED BY AND INSTALLED WITHIN THE SLAB ARE TO BE DEMOLISHED OR REMOVED AS INDICATED ON THE DRAWINGS.
2. THE FACILITY WILL REMAIN OPERATIONAL FOR THE MAJORITY OF THE CONSTRUCTION PHASE. PRIOR TO BEGINNING THE DEMOLITION OF THE ELECTRICAL DOMESTIC COLD WATER MAIN THAT SERVES THE FACILITY, THE NEW WORK DOMESTIC COLD WATER MAIN LINE INSTALLATION IS TO BE COMPLETED TO ENABLE A BRIEF SHUTDOWN FOR THE CUT-OVER TO THE NEW LINE TO ENABLE THE MAJORITY OF THE FACILITY DOMESTIC WATER SYSTEM TO REMAIN IN OPERATION THROUGHOUT THE MAJORITY OF CONSTRUCTION. COORDINATE PHASING WITH THE G.C.
3. AS PART OF THE INITIAL SCOPE OF WORK, THE ELECTRICAL CONTRACTOR IS REQUIRED TO TRACE OUT AND IDENTIFY ALL POWER, FIRE ALARM, CONTROLS, ETC. CONDUITS AND TO DETERMINE CIRCUITS, FIRE ALARM WIRING, AND CONTROLS DEVICES ETC. THE CONTRACTOR IS REQUIRED TO DETERMINE WHAT SYSTEMS AND DEVICES ARE SERVED BY THE DEMOLISHED CONDUITS/FEEDS THROUGHOUT THE SPACE. GENERALLY, ALL ELECTRICAL POWER, FIRE ALARM, CONTROLS, AND LIGHTING DEVICES ARE TO EITHER REMAIN EXISTING (WHERE INSTALLED ON THE CEILING) OR ARE TO BE REMOVED AND REINSTALLED DURING THE NEW PHASE OF CONSTRUCTION. CONTRACTOR IS REQUIRED TO INSTALL JUNCTION BOXES AS NECESSARY TO FACILITATE THE NEW WIRING, ETC.

SPECIFIC ELECTRICAL DEMOLITION NOTES

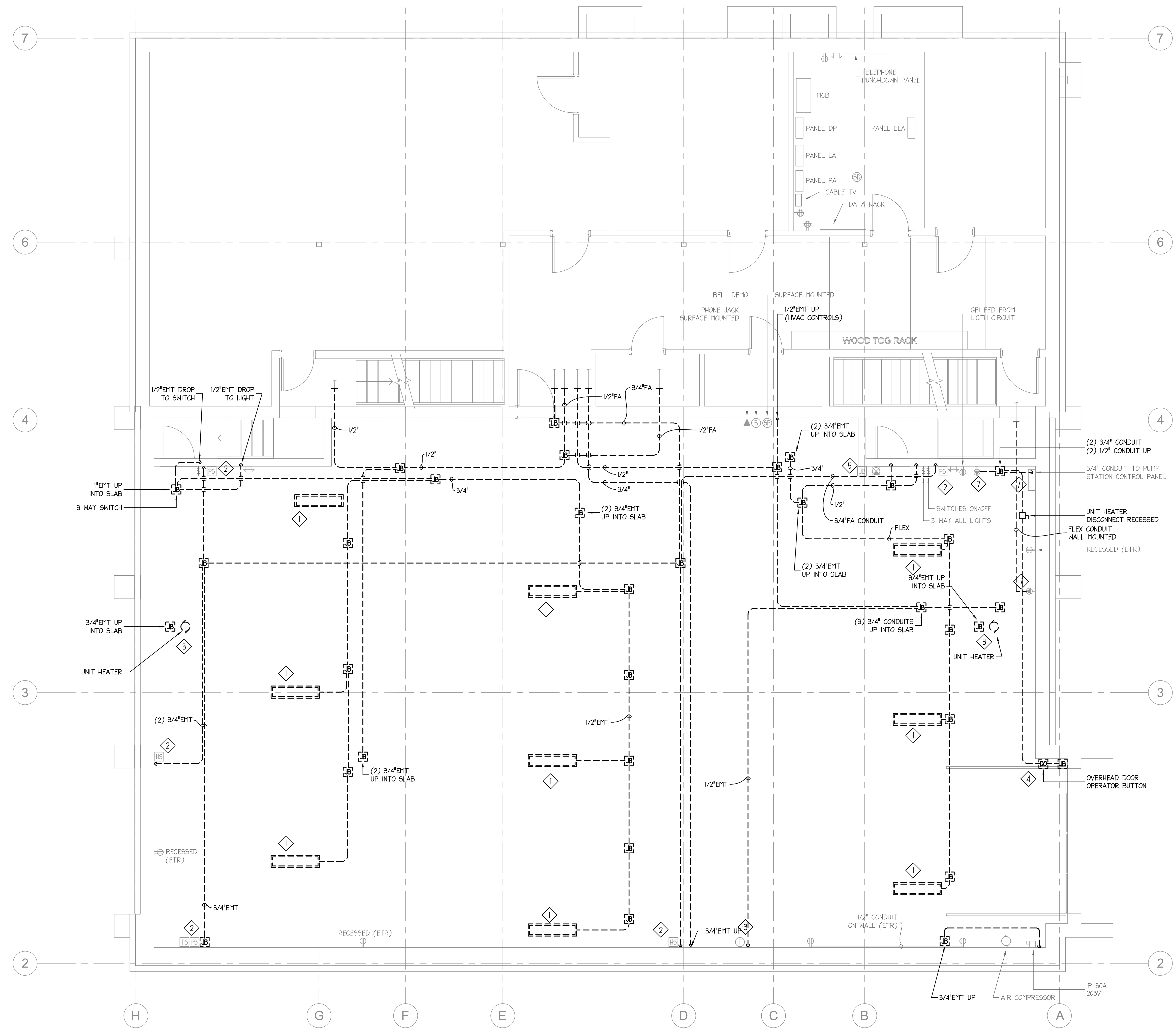
1. EXISTING LIGHT FIXTURES ARE TO BE CAREFULLY REMOVED AND STORED THROUGHOUT CONSTRUCTION. THE LIGHT FIXTURES WILL BE REINSTALLED AS PART OF THE NEW WORK PHASE OF CONSTRUCTION.
2. EXISTING FIRE ALARM DEVICES ARE INTENDED ON REMAINING EXISTING. CONTRACTOR IS TO REINSTALL FIRE ALARM CONDUIT AND WIRING AS REQUIRED TO RECONNECT THE FIRE ALARM DEVICES INTO THE EXISTING FIRE ALARM SYSTEM.
3. THE EXISTING UNIT HEATERS WILL BE REMOVED AND REINSTALLED. THE UNIT HEATER FANS ARE CONTROLLED BY A REVERSE ACTING THERMOSTAT. COORDINATE REQUIREMENTS OF CONTROLLING/POWERING THE UNIT HEATERS PRIOR TO DEMOLITION. THE UNIT HEATERS WILL BE REPOWERED AND CONTROLLED AS PART OF THE NEW PHASE OF CONSTRUCTION.
4. DURING THE DEMOLITION PHASE OF CONSTRUCTION COORDINATE THE POWER REQUIREMENTS FOR THE GARAGE DOOR OPERATOR TO BE REINSTALLED DURING THE NEW WORK PHASE OF CONSTRUCTION.
5. THE EXISTING ELECTRIC CAR CHARGER IS TO BE CAREFULLY REMOVED AND STORED THROUGHOUT CONSTRUCTION. THIS UNIT IS TO BE REINSTALLED DURING THE NEW WORK PHASE.
6. CONTRACTOR IS TO COORDINATE POWER REQUIREMENTS AND CIRCUITING FOR THE EXISTING TO REMAIN FIRST FLOOR DOOR OPERATOR SYSTEM AND EXHAUST SYSTEMS. THESE ARE TO BE REPOWERED AS PART OF THE NEW PHASE OF WORK.
7. COORDINATE EXISTING POWER REQUIREMENTS FOR THE (2) WASHER MACHINES AND (1) DRYER ALONG WITH THE SUMP PUMP. ENSURE THAT THESE DEVICES ARE REFEED AS PART OF THE NEW PHASE OF WORK.

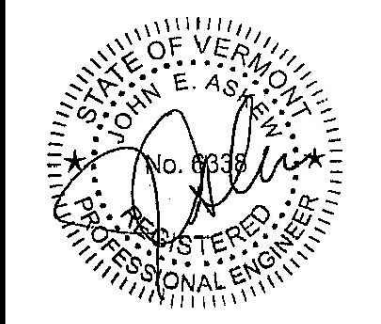
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APPROVED	LNC
DATE	05/24/2024
1- 5/24/24 ISSUED FOR CONST.	
NO.	REVISION

PROJECT TITLE BURLINGTON FIRE STATION 2
BURLINGTON FIRE DEPARTMENT, 132 NORTH AVENUE,
BURLINGTON, VT 05401
SHEET TITLE ELECTRICAL LOWER LEVEL DEMOLITION PLAN

SCALE:	1/4"=1'-0"
PROJECT NO.	22390
SHEET NO.	

E0.01





ELECTRICAL DEMOLITION LEGEND	
	EXISTING ELECTRICAL TO BE DEMOLISHED
	EXISTING ELECTRICAL REMAINING

GENERAL ELECTRICAL DEMOLITION NOTES

1. PRIMARY SCOPE OF WORK FOR THIS PROJECT IS TO FACILITATE THE REPLACEMENT OF THE FIRST FLOOR SLAB. ALL UTILITIES THAT ARE BELOW, SUSPENDED/SUPPORTED BY AND INSTALLED WITHIN THE SLAB ARE TO BE DEMOLISHED OR REMOVED AS INDICATED ON THE DRAWINGS.
2. THE FACILITY WILL REMAIN OPERATIONAL FOR THE MAJORITY OF THE CONSTRUCTION PHASE. PRIOR TO BEGINNING THE DEMOLITION OF THE ELECTRICAL DOMESTIC COLD WATER MAIN THAT SERVES THE FACILITY, THE NEW WORK DOMESTIC COLD WATER MAIN LINE INSTALLATION IS TO BE COMPLETED TO ENABLE A BRIEF SHUTDOWN FOR THE CUT-OVER TO THE NEW LINE TO ENABLE THE MAJORITY OF THE FACILITY DOMESTIC WATER SYSTEM TO REMAIN IN OPERATION THROUGHOUT THE MAJORITY OF CONSTRUCTION. COORDINATE PHASING WITH THE G.C.
3. AS PART OF THE INITIAL SCOPE OF WORK, THE ELECTRICAL CONTRACTOR IS REQUIRED TO TRACE OUT AND IDENTIFY ALL POWER, FIRE ALARM, CONTROLS, ETC. CONDUITS AND TO DETERMINE CIRCUITS, FIRE ALARM WIRING, AND CONTROLS DEVICES ETC. THE CONTRACTOR IS REQUIRED TO DETERMINE WHAT SYSTEMS AND DEVICES ARE SERVED BY THE DEMOLISHED CONDUITS/FEEDS THROUGHOUT THE SPACE. GENERALLY, ALL ELECTRICAL POWER, FIRE ALARM, CONTROLS, AND LIGHTING DEVICES ARE TO EITHER REMAIN EXISTING (WHERE INSTALLED ON THE CEILING) OR ARE TO BE REMOVED AND REINSTALLED DURING THE NEW PHASE OF CONSTRUCTION. CONTRACTOR IS REQUIRED TO INSTALL JUNCTION BOXES AS NECESSARY TO FACILITATE THE NEW WIRING, ETC.

◇ SPECIFIC ELECTRICAL DEMOLITION NOTES

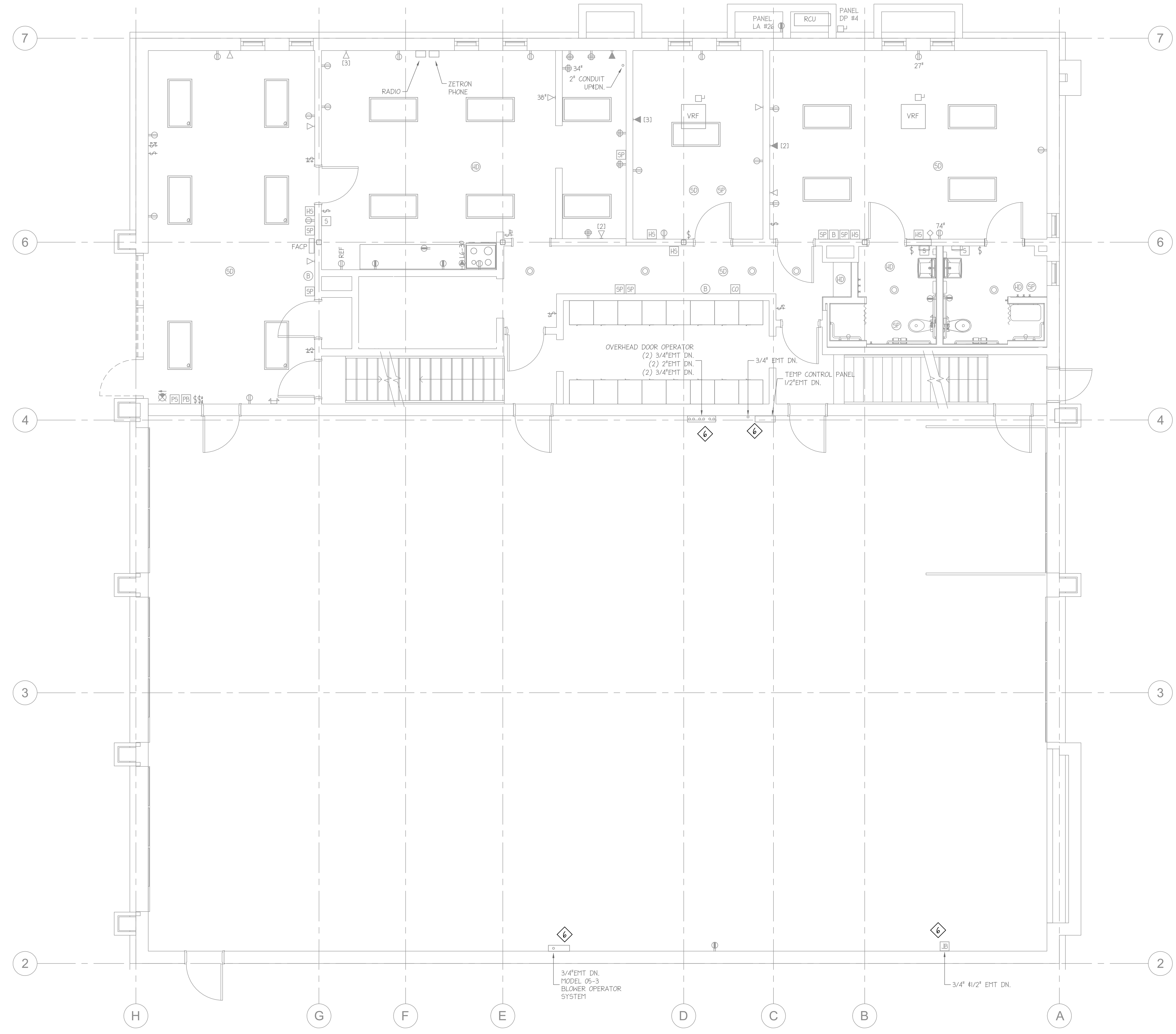
1. EXISTING LIGHT FIXTURES ARE TO BE CAREFULLY REMOVED AND STORED THROUGHOUT CONSTRUCTION. THE LIGHT FIXTURES WILL BE REINSTALLED AS PART OF THE NEW WORK PHASE OF CONSTRUCTION.
2. EXISTING FIRE ALARM DEVICES ARE INTENDED ON REMAINING EXISTING. CONTRACTOR IS TO REINSTALL FIRE ALARM CONDUIT AND WIRING AS REQUIRED TO RECONNECT THE FIRE ALARM DEVICES INTO THE EXISTING FIRE ALARM SYSTEM.
3. THE EXISTING UNIT HEATERS WILL BE REMOVED AND REINSTALLED. THE UNIT HEATER FANS ARE CONTROLLED BY A REVERSE ACTING THERMOSTAT. COORDINATE REQUIREMENTS OF CONTROLLING/POWERING THE UNIT HEATERS PRIOR TO DEMOLITION. THE UNIT HEATERS WILL BE REPOWERED AND CONTROLLED AS PART OF THE NEW PHASE OF CONSTRUCTION.
4. DURING THE DEMOLITION PHASE OF CONSTRUCTION COORDINATE THE POWER REQUIREMENTS FOR THE GARAGE DOOR OPERATOR TO BE REINSTALLED DURING THE NEW WORK PHASE OF CONSTRUCTION.
5. THE EXISTING ELECTRIC CAR CHARGER IS TO BE CAREFULLY REMOVED AND STORED THROUGHOUT CONSTRUCTION. THIS UNIT IS TO BE REINSTALLED DURING THE NEW WORK PHASE.
6. CONTRACTOR IS TO COORDINATE POWER REQUIREMENTS AND CIRCUITING FOR THE EXISTING TO REMAIN FIRST FLOOR DOOR OPERATOR SYSTEM AND EXHAUST SYSTEMS. THESE ARE TO BE REPOWERED AS PART OF THE NEW PHASE OF WORK.
7. COORDINATE EXISTING POWER REQUIREMENTS FOR THE (2) WASHER MACHINES AND (1) DRYER ALONG WITH THE SUMP PUMP. ENSURE THAT THESE DEVICES ARE REFEED AS PART OF THE NEW PHASE OF WORK.

DRAWN	LNC
APPROVED	LNC
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PROJECT TITLE
BURLINGTON FIRE STATION 2
BURLINGTON FIRE DEPARTMENT, 132 NORTH AVENUE,
BURLINGTON, VT 05401

SHEET TITLE
ELECTRICAL
FIRST FLOOR DEMOLITION PLAN

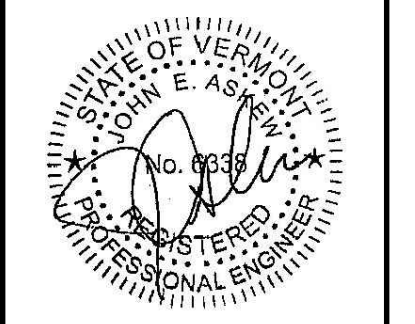
SCALE:	1/4"=1'-0"
PROJECT NO.	22390
SHEET NO.	



ELECTRICAL NEW WORK LEGEND	
	NEW ELECTRICAL TO BE INSTALLED
	EXISTING ELECTRICAL REMAINING

Ⓛ SPECIFIC ELECTRICAL NEW WORK NOTES

1. REINSTALL THE EXISTING LIGHT FIXTURES APPROXIMATELY IN THE LOCATIONS INDICATED. THESE DEVICES ARE TO BE WIRED TO MATCH THE EXISTING CONTROL CONFIGURATION.
2. REPOWER THE REINSTALLED UNIT HEATERS. COORDINATE REQUIREMENTS WITH EXISTING PRIOR TO DEMOLITION. THE EXISTING THERMOSTAT SHALL REMAIN AND WILL BE UTILIZED TO OPERATE THE REINSTALLED UNIT HEATERS.
3. REPOWER AND RECONNECT ALL FIRST FLOOR GARAGE DEVICES INCLUDING EXHAUST SYSTEMS, GARAGE DOOR OPERATORS ETC.
4. REPOWER THE DRYER, SUMP PUMP AND (2) WASHER MACHINES.
5. RECONNECT THE EXISTING TO REMAIN FIRE ALARM DEVICES TO THE EXISTING FIRE ALARM SYSTEM.
6. RECONNECT/REPOWER THE EXISTING LIGHT FIXTURES AND ELECTRICAL POWER DEVICES THAT ARE TO REMAIN EXISTING.



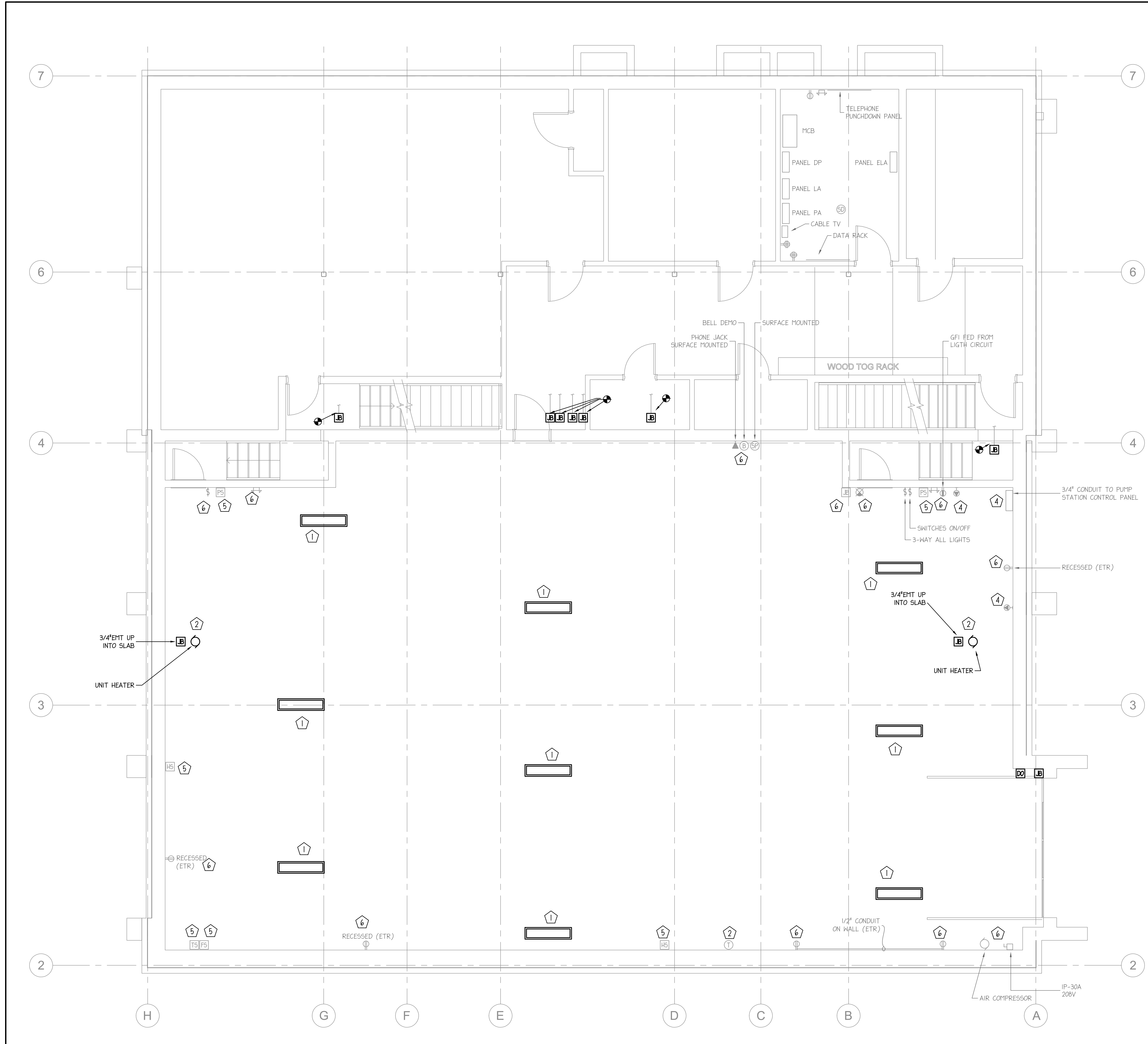
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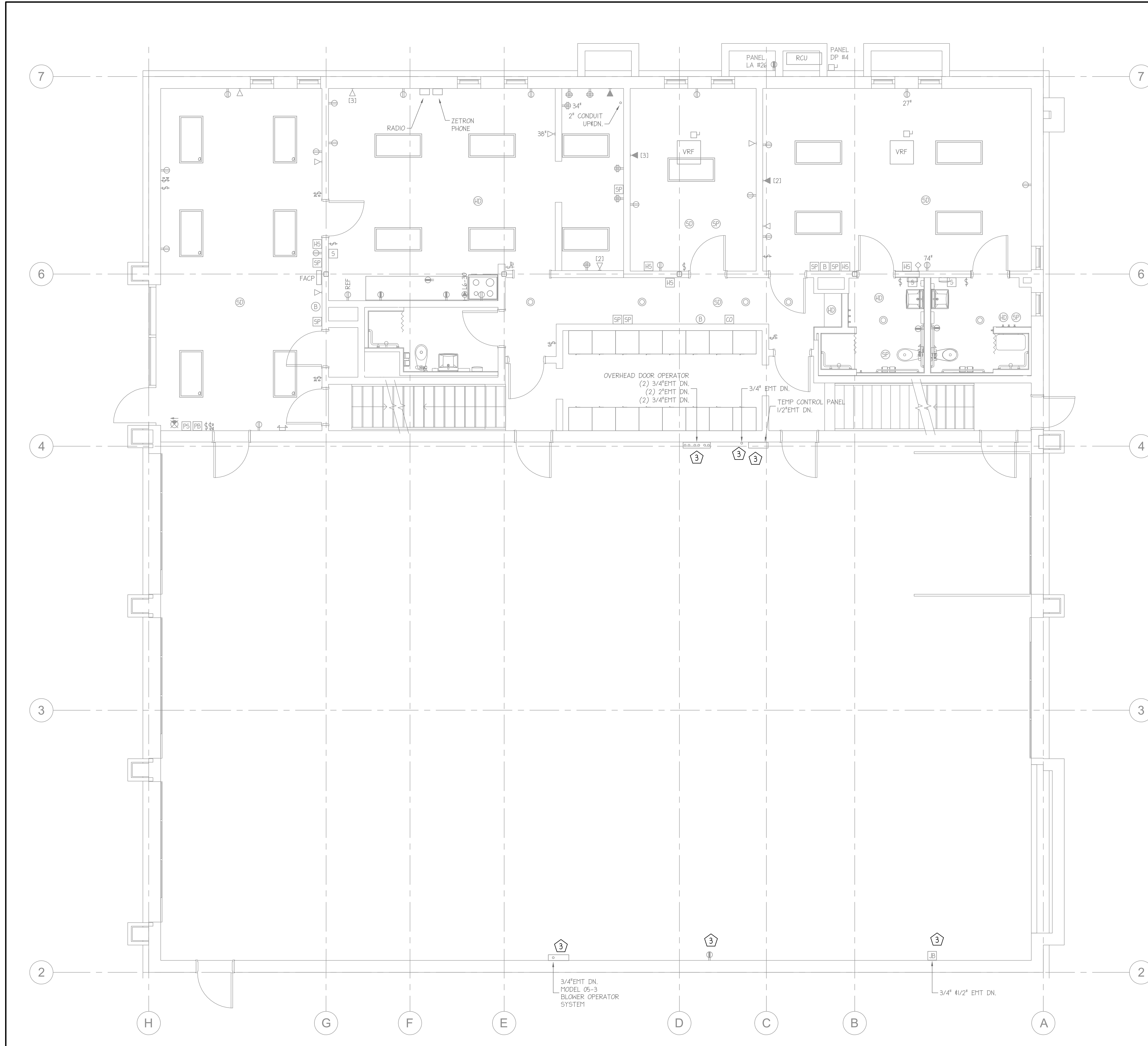
PROJECT TITLE BURLINGTON FIRE STATION 2
BURLINGTON FIRE DEPARTMENT, 132 NORTH AVENUE,
BURLINGTON, VT 05401

SHEET TITLE ELECTRICAL
LOWER LEVEL NEW WORK PLAN

SCALE: 1/4"=1'-0"
PROJECT NO. 22390
SHEET NO.

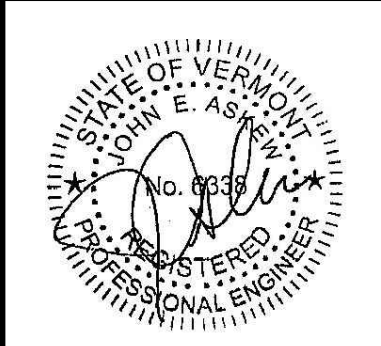
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ELECTRICAL NEW WORK LEGEND	
	NEW ELECTRICAL TO BE INSTALLED
	EXISTING ELECTRICAL REMAINING

- Ⓜ SPECIFIC ELECTRICAL NEW WORK NOTES**
1. REINSTALL THE EXISTING LIGHT FIXTURES APPROXIMATELY IN THE LOCATIONS INDICATED. THESE DEVICES ARE TO BE WIRED TO MATCH THE EXISTING CONTROL CONFIGURATION.
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 3. REPOWER AND RECONNECT ALL FIRST FLOOR GARAGE DEVICES INCLUDING EXHAUST SYSTEMS, GARAGE DOOR OPERATORS ETC.
 4. REPOWER THE DRYER, SUMP PUMP AND (2) WASHER MACHINES.
 5. RECONNECT THE EXISTING TO REMAIN FIRE ALARM DEVICES TO THE EXISTING FIRE ALARM SYSTEM.
 6. RECONNECT/REPOWER THE EXISTING LIGHT FIXTURES AND ELECTRICAL POWER DEVICES THAT ARE TO REMAIN EXISTING.



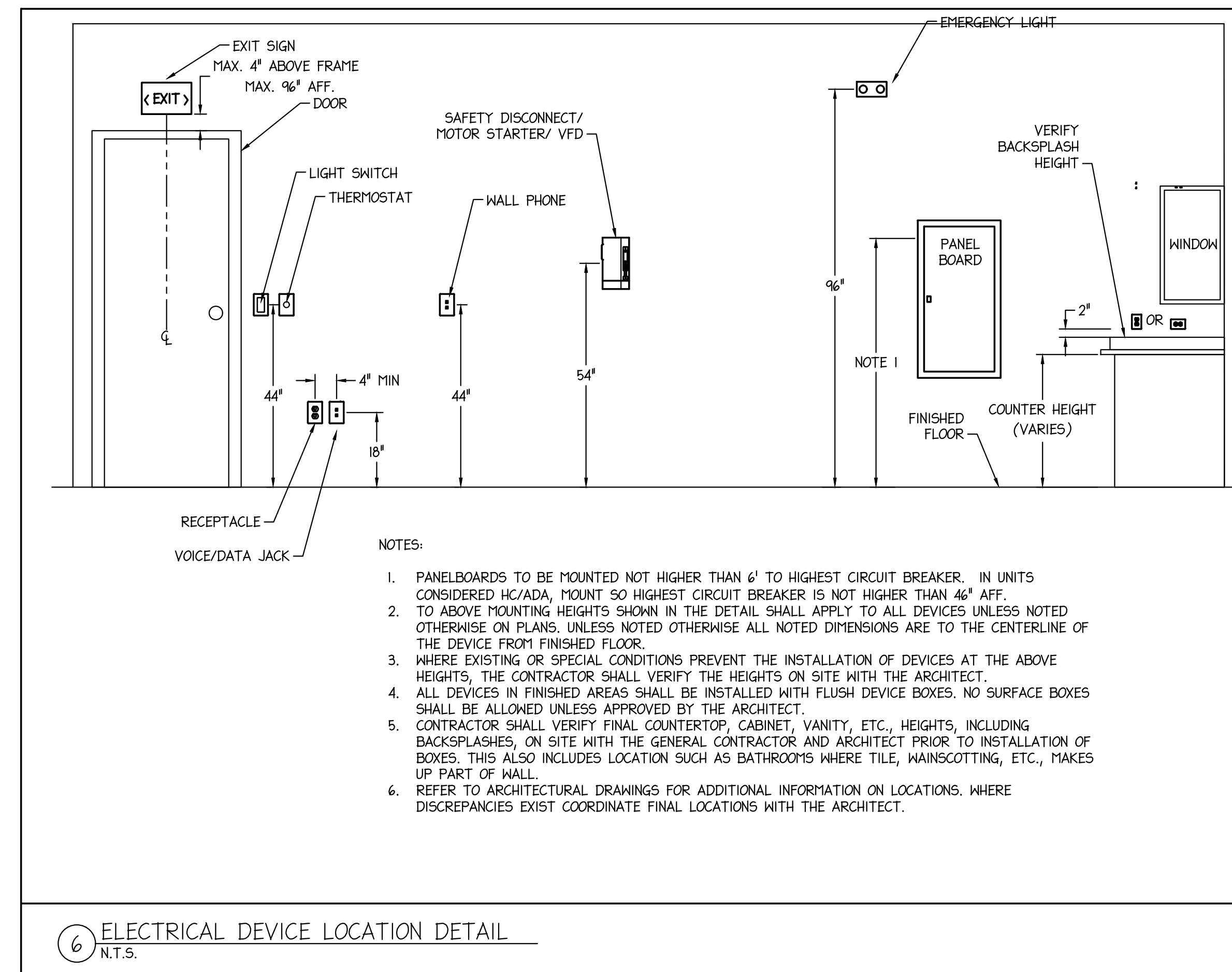
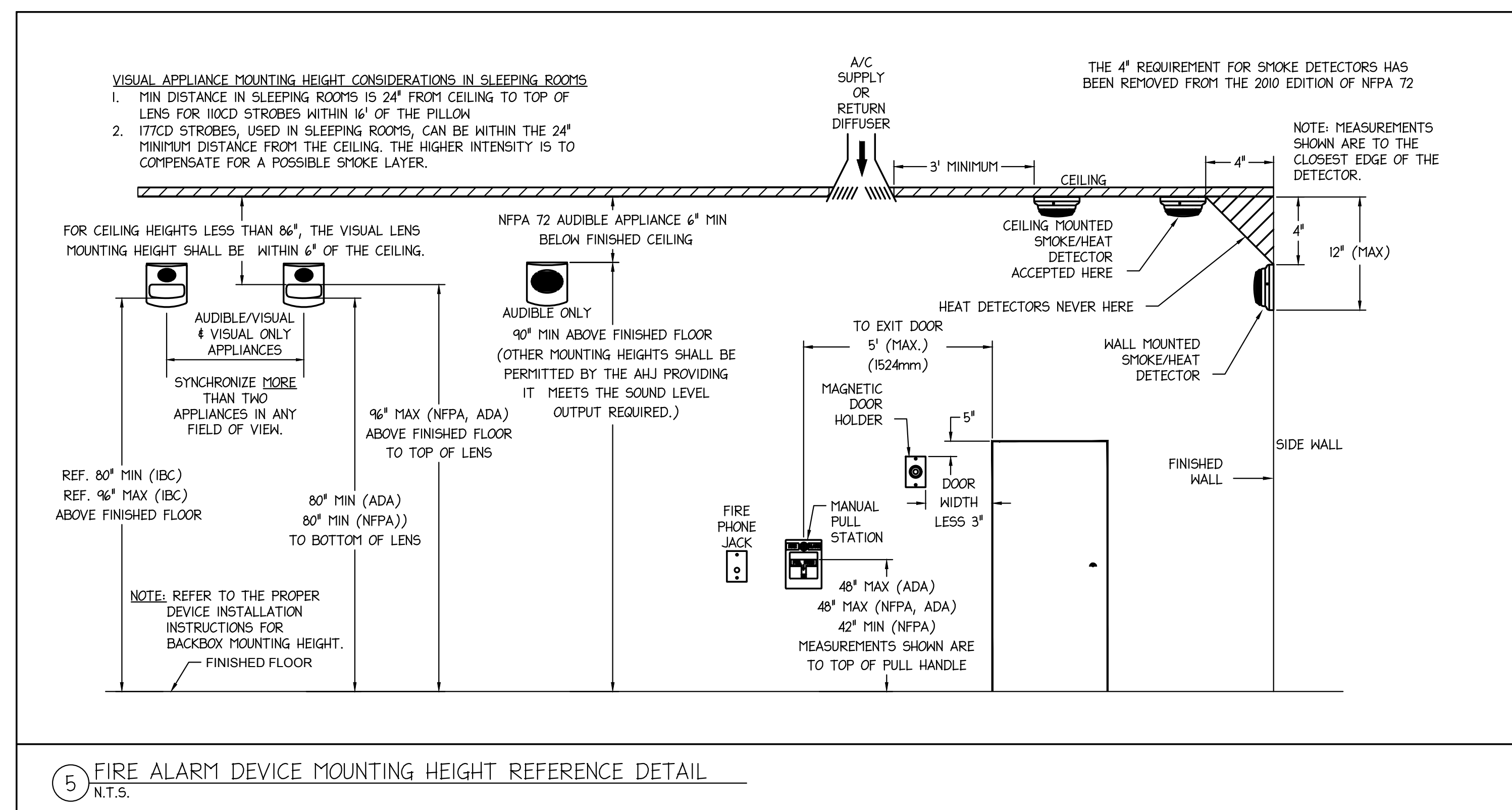
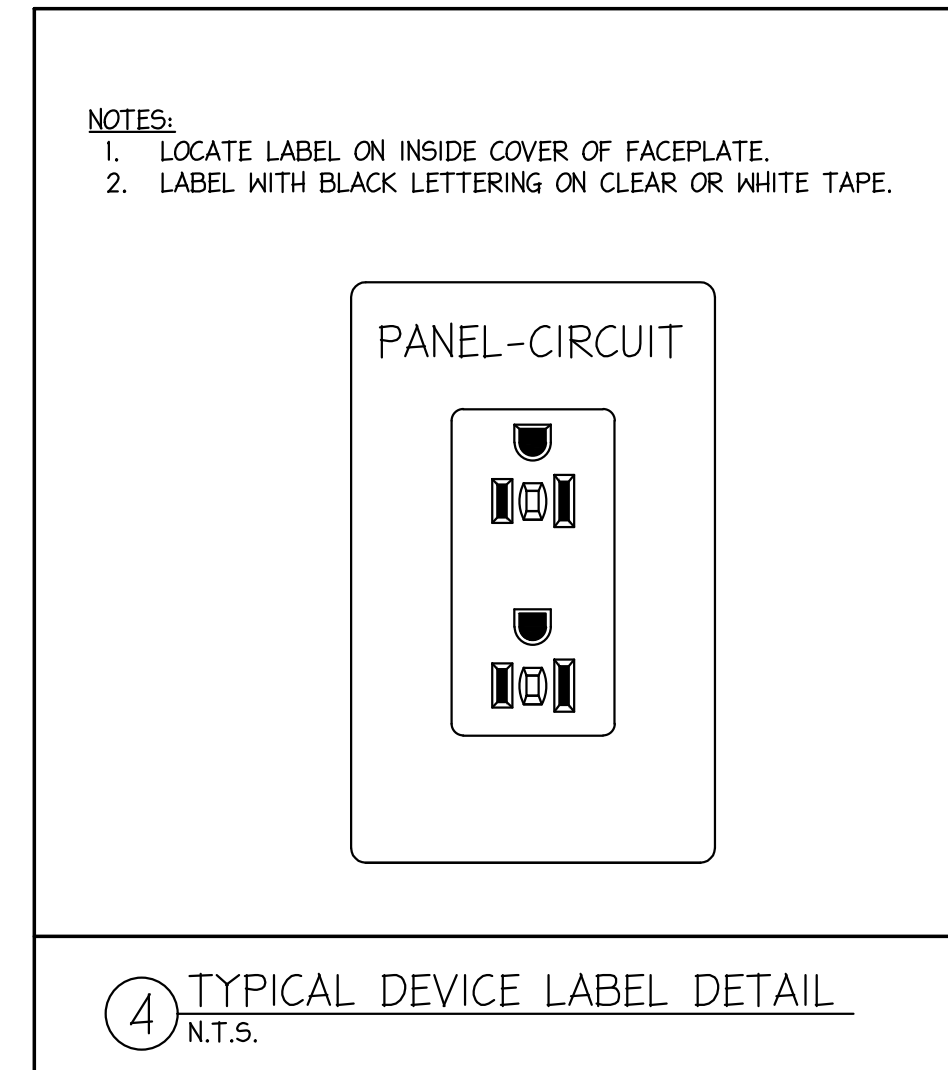
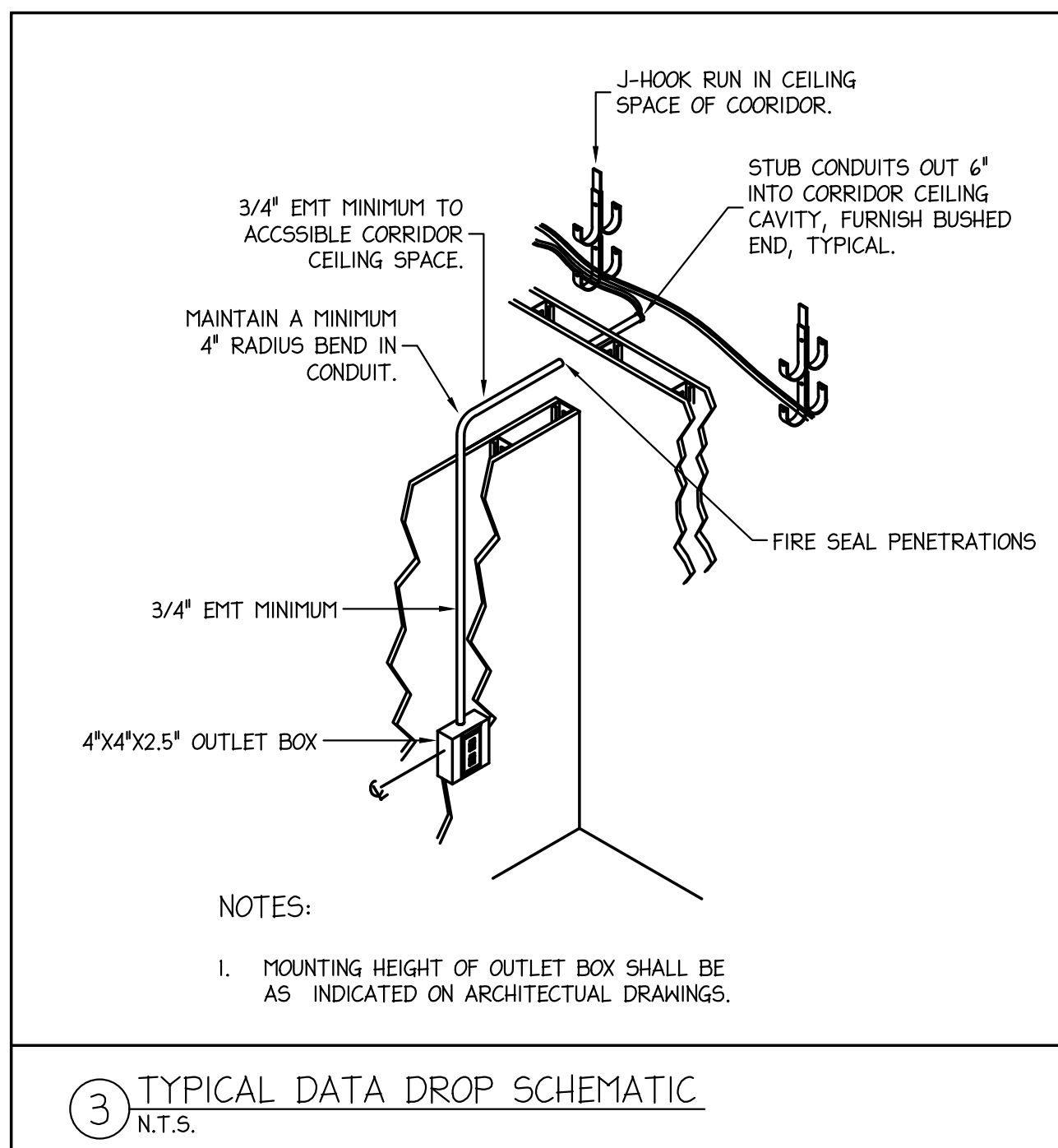
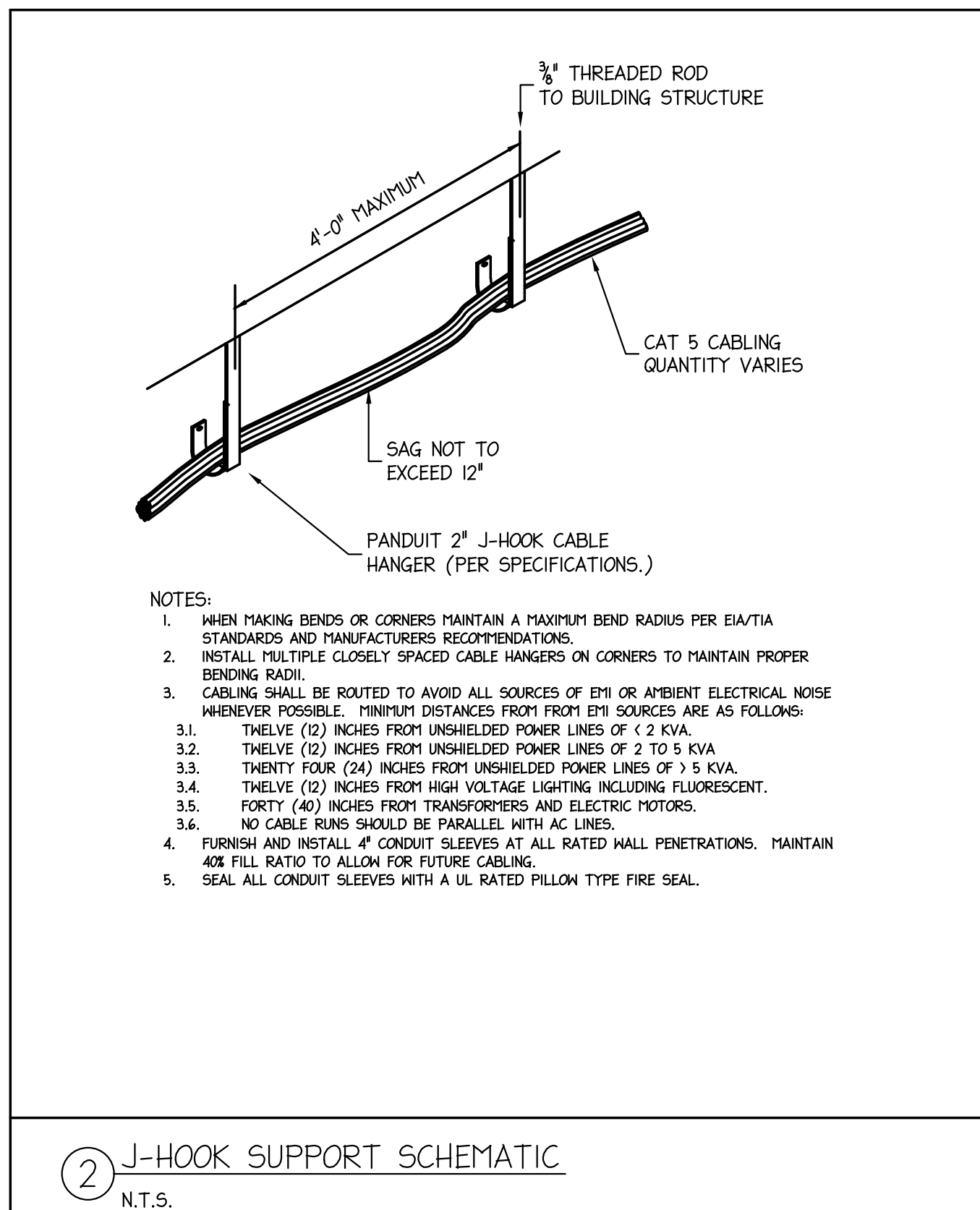
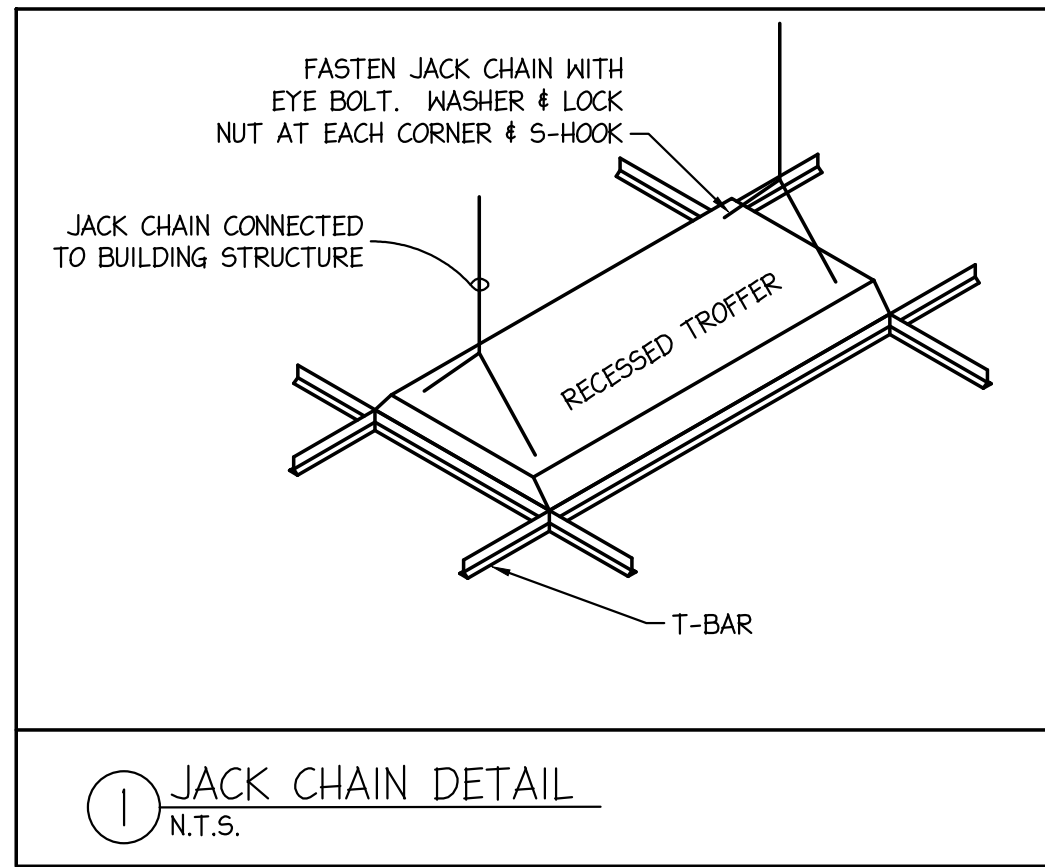
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APPROVED	LNC
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PROJECT TITLE: BURLINGTON FIRE STATION 2
 BURLINGTON FIRE DEPARTMENT, 132 NORTH AVENUE,
 BURLINGTON, VT 05401

SHEET TITLE: ELECTRICAL
 FIRST FLOOR NEW WORK PLAN

SCALE: 1/4"=1'-0"
 PROJECT NO. 22390
 SHEET NO.

E1.11



DRAWN	LNC
APPROVED	LNC
DATE	05/24/2024
NO.	5/24/24
DATE	ISSUED FOR CONST.
NO.	REVISION

PROJECT TITLE BURLINGTON FIRE STATION 2
BURLINGTON FIRE DEPARTMENT, 132 NORTH AVENUE,
BURLINGTON, VT 05401

SHEET TITLE ELECTRICAL DETAILS

SCALE: N.T.S.
PROJECT NO. 22390
SHEET NO.

E6.01



FIRE PROTECTION DEMOLITION LEGEND	
---	EXISTING FIRE PROTECTION TO BE DEMOLISHED
—	EXISTING FIRE PROTECTION REMAINING
RR	EXISTING TO BE REMOVED AND RELOCATED

GENERAL FIRE PROTECTION DEMOLITION NOTES

1. PRIMARY SCOPE OF WORK FOR THIS PROJECT IS TO FACILITATE THE REPLACEMENT OF THE FIRST FLOOR SLAB. ALL UTILITIES THAT ARE BELOW, SUSPENDED/SUPPORTED BY AND INSTALLED WITHIN THE SLAB ARE TO BE DEMOLISHED OR REMOVED AS INDICATED ON THE DRAWINGS.
2. THE FACILITY WILL REMAIN OPERATIONAL FOR THE MAJORITY OF THE CONSTRUCTION PHASE. PRIOR TO BEGINNING THE DEMOLITION OF THE FIRE PROTECTION MAIN THAT SERVES THE FACILITY, THE NEW WORK MAIN LINE INSTALLATION IS TO BE COMPLETED TO ENABLE A BRIEF SHUTDOWN FOR THE CUT-OVER TO THE NEW LINE TO ENABLE THE MAJORITY OF THE FACILITY FIRE PROTECTION SYSTEM TO REMAIN IN OPERATION THROUGHOUT THE MAJORITY OF CONSTRUCTION. AFTER THE REST OF THE FACILITY IS CONNECTED TO THE NEW PIPING, THE REST OF THE DEMOLITION WORK MAY COMMENCE.

◆ SPECIFIC FIRE PROTECTION DEMOLITION NOTES

1. THE FIRE PROTECTION CONTRACTOR IS TO COORDINATE WITH THE G.C. TO DETERMINE IF THE 4" FDC LINE AND 2" TEST AND DRAIN LINES THROUGH THE SLAB WILL NEED TO BE DEMOLISHED AND REINSTALLED. FOR BUDGETING PURPOSES, THE CONTRACTOR IS TO CARRY DEMOLISHING AND REINSTALLING THESE LINES. COORDINATE ANY SHUTDOWNS WITH THE G.C. TO PERFORM THIS WORK.
2. THE EXISTING FIRE PROTECTION SERVICE IS TO REMAIN EXISTING AND IN SERVICE THROUGHOUT CONSTRUCTION. THE FIRE PROTECTION CONTRACTOR SHALL WORK WITH THE G.C. TO INSTALL ANCHORS AND GALVANIZED STEEL SUPPORTS FROM THE SIDEWALL TO SUPPORT THE PIPING. THIS PIPING IS TO BE PROTECTED THROUGHOUT CONSTRUCTION FROM ANY DAMAGE CAUSED BY THE DEMOLITION OF THE OTHER UTILITIES AND THE SLAB ABOVE. COORDINATE WITH THE G.C. TO ENSURE THAT PIPING AND EQUIPMENT IS PROTECTED FROM FALLING DEBRIS ETC.
3. THE FIRE PROTECTION CONTRACTOR SHALL COORDINATE THE FIRE ALARM INTERCONNECTION REQUIREMENTS TO THE TAMPER AND FLOW SWITCHES. THE FIRE ALARM CONTRACTOR WILL NEED TO RUN NEW WIRES/CONDUIT AND WILL NEED TO DISCONNECT THESE DEVICES FROM THE EXISTING FIRE ALARM SYSTEM AND RECONNECT THEM VIA THE NEW CONDUIT RUN.
4. THE 2-1/2" FP LINE THAT RISES UP THROUGH THE SLAB WILL NEED TO BE DEMOLISHED AND REINSTALLED. THE INTENTION IS THAT THIS LINE WILL REMAIN IN SERVICE AS LONG AS POSSIBLE AND WILL BE DEMOLISHED AS PART OF A BRIEF SHUTDOWN WHEN THE NEW SLAB IS INSTALLED. WORK WITH THE G.C. TO KEEP THE EXISTING PIPE IN SERVICE. THE NEW FIRE PROTECTION LINE SHALL CONNECT INTO THE EXISTING PIPING TO KEEP THE REST OF THE FACILITY OPERATIONAL DURING CONSTRUCTION. WHERE THE NEW PIPING RISES UP THROUGH THE SLAB THE PIPING IS TO BE INSULATED WITH 1/2" OF ELASTOMERIC FOAM TO PREVENT THE CONCRETE FROM DIRECTLY CONTACTING THE PIPING.
5. THE FIRE PROTECTION CONTRACTOR SHALL DEMOLISH ALL EXISTING FIRE PROTECTION PIPING, DEVICES, ETC. THAT IS SUPPORTED BY OR LOCATED BELOW THE FIRST FLOOR GARAGE SLAB (WITH THE EXCEPTION OF THE SERVICE ENTRANCE). AFTER THE NEW PIPING MAIN HAS BEEN INSTALLED TO ENABLE THE FACILITY TO CONTINUE TO OPERATE AFTER A BRIEF SHUTDOWN, THE EXISTING PIPING MAY THEN BE DEMOLISHED.

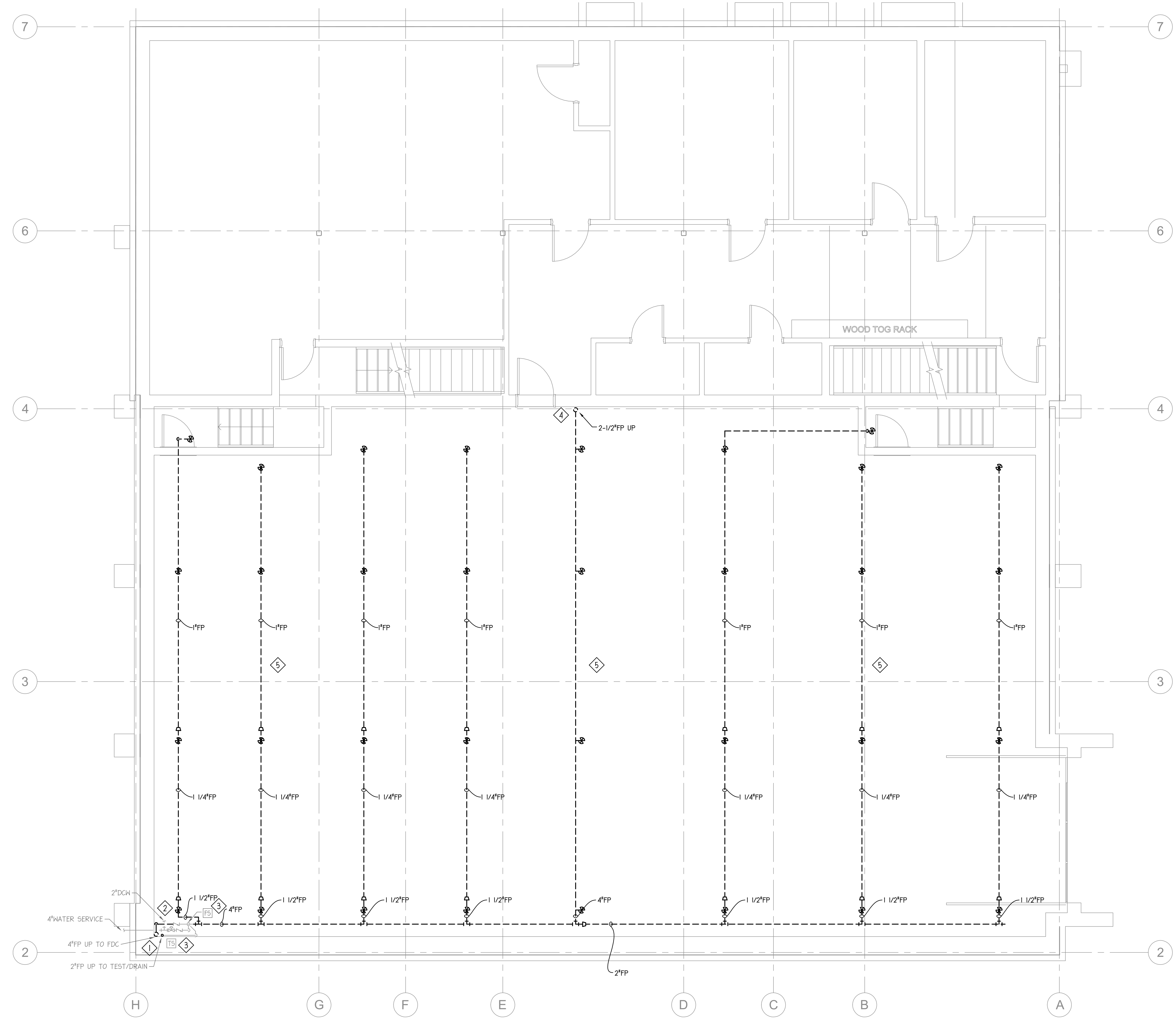
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APPROVED	LNC
DATE	05/24/2024
1-	5/24/24
NO.	DATE
	ISSUED FOR CONST.
	REVISION

PROJECT TITLE: BURLINGTON FIRE STATION 2
BURLINGTON FIRE DEPARTMENT, 132 NORTH AVENUE,
BURLINGTON, VT 05401

SHEET TITLE: FIRE PROTECTION
LOWER LEVEL DEMOLITION PLAN

SCALE: 1/4" = 1'-0"
PROJECT NO. 22390
SHEET NO.

FP0.01





FIRE PROTECTION DEMOLITION LEGEND	
---	EXISTING FIRE PROTECTION TO BE DEMOLISHED
—	EXISTING FIRE PROTECTION REMAINING
RR	EXISTING TO BE REMOVED AND RELOCATED

GENERAL FIRE PROTECTION DEMOLITION NOTES

1. PRIMARY SCOPE OF WORK FOR THIS PROJECT IS TO FACILITATE THE REPLACEMENT OF THE FIRST FLOOR SLAB. ALL UTILITIES THAT ARE BELOW, SUSPENDED/SUPPORTED BY AND INSTALLED WITHIN THE SLAB ARE TO BE DEMOLISHED OR REMOVED AS INDICATED ON THE DRAWINGS.
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◆ SPECIFIC FIRE PROTECTION DEMOLITION NOTES

1. THE FIRE PROTECTION CONTRACTOR IS TO COORDINATE WITH THE G.C. TO DETERMINE IF THE 4" FDC LINE AND 2" TEST AND DRAIN LINES THROUGH THE SLAB WILL NEED TO BE DEMOLISHED AND REINSTALLED. FOR BUDGETING PURPOSES, THE CONTRACTOR IS TO CARRY DEMOLISHING AND REINSTALLING THESE LINES. COORDINATE ANY SHUTDOWNS WITH THE G.C. TO PERFORM THIS WORK.
2. THE EXISTING FIRE PROTECTION SERVICE IS TO REMAIN EXISTING AND IN SERVICE THROUGHOUT CONSTRUCTION. THE FIRE PROTECTION CONTRACTOR SHALL WORK WITH THE G.C. TO INSTALL ANCHORS AND GALVANIZED STEEL SUPPORTS FROM THE SIDEWALL TO SUPPORT THE PIPING. THIS PIPING IS TO BE PROTECTED THROUGHOUT CONSTRUCTION FROM ANY DAMAGE CAUSED BY THE DEMOLITION OF THE OTHER UTILITIES AND THE SLAB ABOVE. COORDINATE WITH THE G.C. TO ENSURE THAT PIPING AND EQUIPMENT IS PROTECTED FROM FALLING DEBRIS ETC.
3. THE FIRE PROTECTION CONTRACTOR SHALL COORDINATE THE FIRE ALARM INTERCONNECTION REQUIREMENTS TO THE TAMPER AND FLOW SWITCHES. THE FIRE ALARM CONTRACTOR WILL NEED TO RUN NEW WIRES/CONDUIT AND WILL NEED TO DISCONNECT THESE DEVICES FROM THE EXISTING FIRE ALARM SYSTEM AND RECONNECT THEM VIA THE NEW CONDUIT RUN.
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5. THE FIRE PROTECTION CONTRACTOR SHALL DEMOLISH ALL EXISTING FIRE PROTECTION PIPING, DEVICES, ETC. THAT IS SUPPORTED BY OR LOCATED BELOW THE FIRST FLOOR GARAGE SLAB (WITH THE EXCEPTION OF THE SERVICE ENTRANCE). AFTER THE NEW PIPING MAIN HAS BEEN INSTALLED TO ENABLE THE FACILITY TO CONTINUE TO OPERATE AFTER A BRIEF SHUTDOWN, THE EXISTING PIPING MAY THEN BE DEMOLISHED.

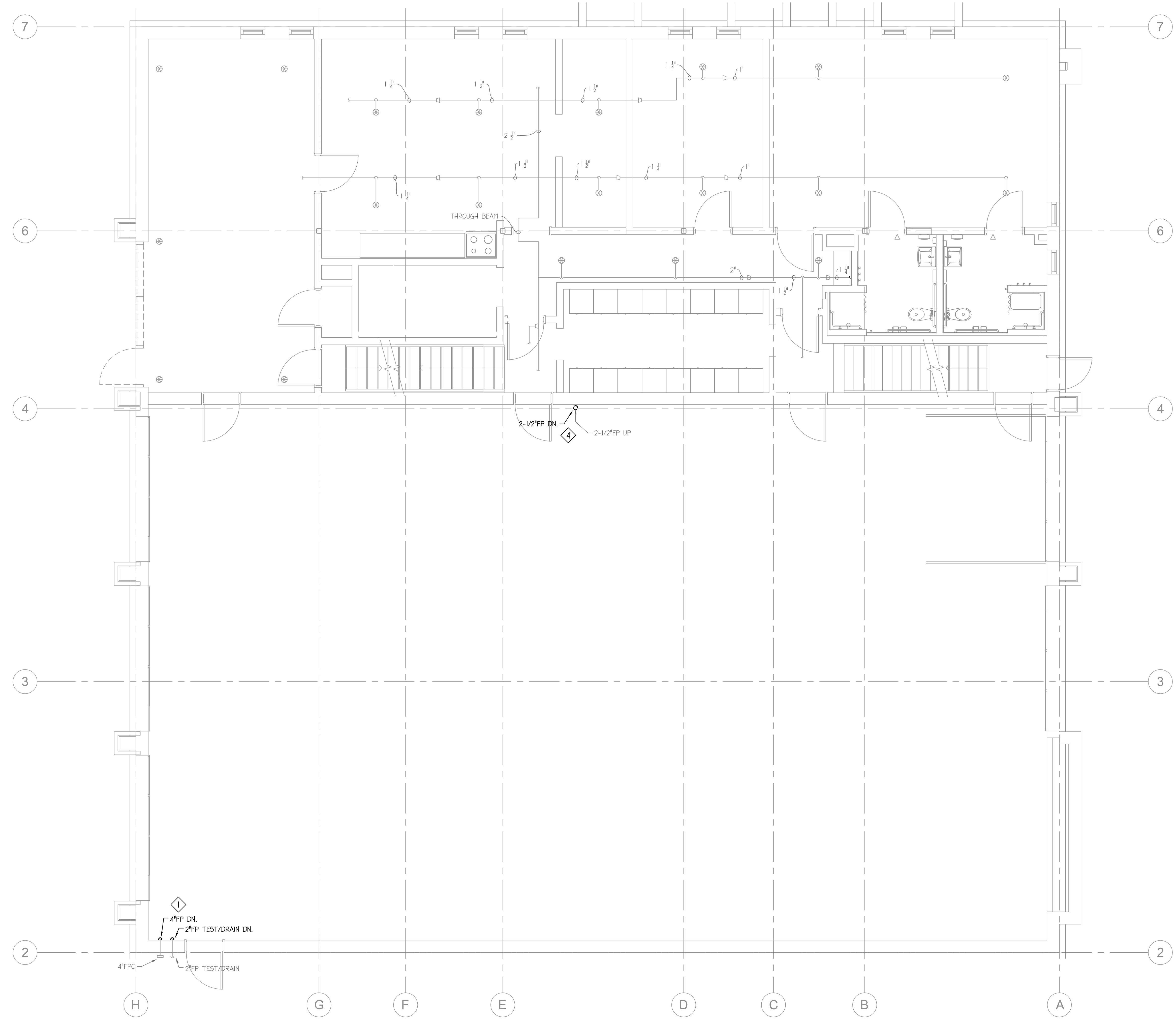
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PROJECT TITLE BURLINGTON FIRE STATION 2
BURLINGTON FIRE DEPARTMENT, 132 NORTH AVENUE,
BURLINGTON, VT 05401

SHEET TITLE FIRE PROTECTION
FIRST FLOOR DEMOLITION PLAN

SCALE: 1/4" = 1'-0"
PROJECT NO. 22390
SHEET NO.

FP0.11



FIRE PROTECTION LEGEND	
TAG	DESCRIPTION
TS	TAMPER SWITCH
FS	FLOW SWITCH
PS	PRESSURE SWITCH
⊕	SPRINKLER HEAD
⊕	TIE INTO EXISTING
X	GATE VALVE
—	PIPE CAP
—	PIPE REDUCER

FIRE PROTECTION GENERAL NOTES:

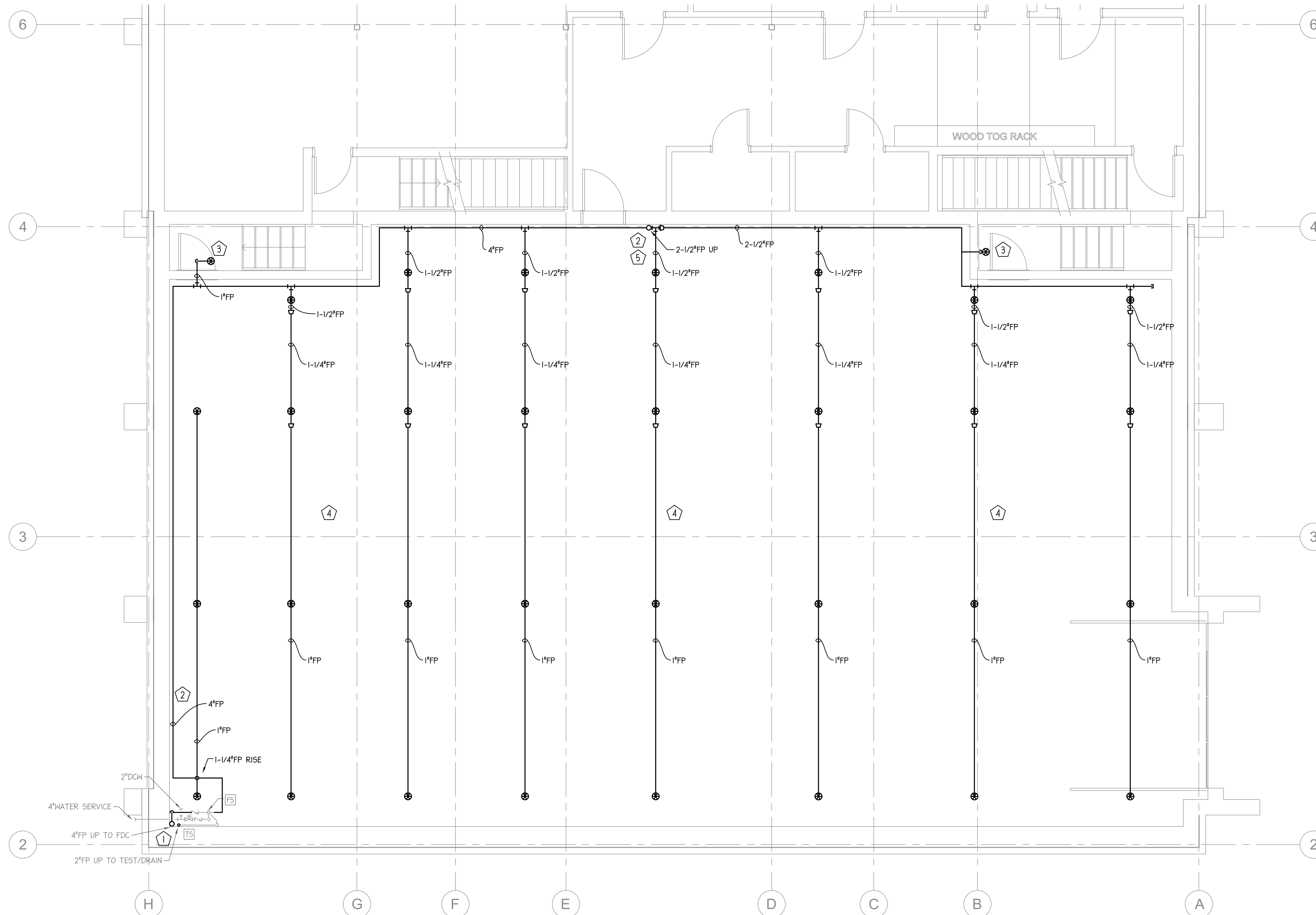
- FIRE PROTECTION SYSTEM DESIGN AND SPRINKLER HEAD CONFIGURATION SHALL CONFORM TO NFPA 13, AUTHORITY HAVING JURISDICTION, AND LOCAL BUILDING CODE.
- COORDINATE PIPE ROUTING WITH OTHER TRADES INCLUDING NEW SLAB INSTALLATION WORK BY THE G.C.
- THE FIRE PROTECTION DRAWINGS ARE DIAGNOSTIC IN NATURE AND SHOULD NOT BE UTILIZED FOR FIRE PROTECTION DESIGN. THE FIRE PROTECTION CONTRACTOR SHALL PROVIDE SPRINKLER SYSTEM DESIGN, SPRINKLER HEAD LAYOUT, AND FLOW CALCULATIONS (HYDRAULIC DESIGN). THIS SHALL BE COMPLETED BY A NICET LEVEL (3) THREE CERTIFIED TECHNICIAN. SHOP DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL. A NEW FLOW TEST SHALL BE PERFORMED FOR SYSTEM DESIGN.
- PROVIDE FIRE AND SMOKE PROOF CAULKING FOR ALL WALL AND FLOOR PENETRATIONS. COORDINATE ALL FIRE AND SMOKE PROOFING WITH THE CONSTRUCTION SUPERVISOR.
- PROVIDE SEISMIC BRACING FOR SPRINKLER PIPING INSTALLATION PER NFPA 13 AND ADOPTED SECTIONS OF THE INTERNATIONAL BUILDING CODES.
- COORDINATE TAMPER & FLOW SWITCH RECONNECTION TO THE FIRE ALARM SYSTEM WITH THE FIRE ALARM CONTRACTOR.
- PROVIDE A 10 PSI CUSHION BETWEEN FIRE PROTECTION SYSTEM DEMAND AND FIRE PROTECTION SYSTEM WATER SUPPLY.
- PROVIDE AUXILIARY DRAINS AS REQUIRED PER NFPA 13. PIPE AUXILIARY DRAINS TO EXTERIOR LOCATION. COORDINATE EXACT LOCATION OF DRAIN LOCATIONS WITH ARCHITECT AND AUTHORITY HAVING JURISDICTION. ALL PIPING SHALL BE PITCHED TO DRAIN. EXISTING TEST/DRAIN LINE MAY BE UTILIZED AS APPLICABLE.
- COORDINATE FIRE PROTECTION PIPING (BRANCH, MAINS, ETC) WITH MECHANICAL AND PLUMBING EQUIPMENT. DO NOT LOCATE ANY PIPING WITHIN 12" OF ANY MECHANICAL EQUIPMENT. ANY PIPING RUN UNDER EQUIPMENT SHALL BE REROUTED BY THE FIRE PROTECTION CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

- COORDINATE FIRE PROTECTION PIPING (BRANCHES, MAINS, ETC.) WITH ELECTRICAL EQUIPMENT. DO NOT ROUTE ANY PIPING OVER ELECTRICAL EQUIPMENT. ANY PIPING RUN OVER ELECTRICAL EQUIPMENT SHALL BE REROUTED BY THE FIRE PROTECTION CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
- PIPING 2" AND SMALLER SHALL BE SCHEDULE 40 STEEL PIPE WITH THREADED ENDS. PIPING TO BE ASTM A 53/A 53M. PIPING TO HAVE CAST- OR MALLEABLE-IRON THREADED FITTINGS AND THREADED JOINTS. PIPING 2-1/2" AND LARGER SHALL BE SCHEDULE 10 STEEL PIPE (ASTM A 195 OR ASTM A 796) WITH FACTORY OR FIELD FORMED GROOVED ENDS WITH GROOVED FITTINGS EQUIVALENT TO VICTAULIC DUCTILE IRON FITTINGS CONFORMING TO ASTM A536 GRADE 45-46-12. ENSURE COUPLINGS AND ACCESSORIES ARE COMPLIANT WITH THE MANUFACTURER'S FITTINGS.

FIRE PROTECTION NEW WORK LEGEND	
—	NEW FIRE PROTECTION TO BE INSTALLED
---	EXISTING FIRE PROTECTION REMAINING
RR	EXISTING TO BE REINSTALLED

① SPECIFIC FIRE PROTECTION NEW WORK NOTES

- THE FIRE PROTECTION CONTRACTOR IS TO COORDINATE WITH THE G.C. TO DETERMINE IF THE 4" FDC LINE AND 2" TEST AND DRAIN LINES THROUGH THE SLAB WILL NEED TO BE DEMOLISHED AND REINSTALLED. FOR BUDGETING PURPOSES, THE CONTRACTOR IS TO CARRY DEMOLISHING AND REINSTALLING THESE LINES. COORDINATE ANY SHUTDOWNS WITH THE G.C. TO PERFORM THIS WORK.
- A NEW 4" FIRE PROTECTION MAIN IS TO BE INSTALLED THAT WRAPS AROUND THE EXTERIOR WALL (AND IS SUPPORTED BY ANCHORS/SUPPORTS SECURED TO THE EXTERIOR WALL) AS PART OF THE FIRST STAGE OF WORK. THIS LINE IS TO BE INSTALLED TO CONNECT TO THE EXISTING 2-1/2" FP LINE THAT RISES UP THROUGH THE SLAB AND SERVES THE REST OF THE FACILITY. COORDINATE WATER SERVICE SHUTDOWNS WITH THE G.C. AND THE WATER DEPARTMENT TO ENABLE THE FIRE PROTECTION SERVICE TO CUT OVER AND UTILIZE THE NEW TO PROVIDE SERVICE TO THE FACILITY. ONCE THE NEW LINE HAS BEEN CONNECTED, THE EXISTING LOWER LEVEL GARAGE FIRE PROTECTION PIPING MAY BE DELETED.
- PROVIDE NEW FIRE PROTECTION COVERAGE IN THE EXISTING STAIRWELLS AS INDICATED AS PART OF THE INITIAL PHASE OF WORK WHEN THE FACILITY IS SHUTDOWN TO CUT OVER TO THE NEW MAIN LINE. PROVIDE NEW FIRE PROTECTION HEADS (DO NOT REUSE THE EXISTING HEADS).
- FIRE PROTECTION COVERAGE IN THE LOWER LEVEL GARAGE IS TO BE DESIGNED TO ORDINARY HAZARD GROUP 2 COVERAGE. THE PIPE SIZES AND FIRE PROTECTION HEAD LAYOUT ARE DEPICTED FOR BUDGETING PURPOSES ONLY. THE FIRE PROTECTION DESIGNER IS RESPONSIBLE FOR THE EXACT LAYOUT AND DESIGN OF THE SYSTEM COVERAGE AND SHALL BE COORDINATED WITH THE G.C. AND THE OTHER UTILITIES WITHIN THE SPACE (PIPE ROUTING MAY NEED TO BE ALTERED BASED ON THE G.C.'S CONSTRUCTION SCHEDULE FOR INSTALLATION OF THE FLOOR ABOVE).
- FOR BUDGETING PURPOSES, COORDINATE INSTALLING A NEW 2-1/2" FIRE PROTECTION LINE THROUGH THE SLAB (WITH 1/2" ELASTOMERIC FOAM INSULATION INSTALLED TO KEEP THE CONCRETE FROM DIRECTLY CONTACTING THE PIPING). COORDINATE ALL SHUTDOWNS WITH THE G.C. AS INDICATED PREVIOUSLY THE INTENTION IS FOR MINIMAL SHUTDOWN OF THE REST OF THE FACILITY FIRE PROTECTION SYSTEM.



DRAWN	LNC
APPROVED	LNC
DATE	05/24/2024

1-	5/24/24	ISSUED FOR CONST.
NO.	DATE	REVISION

PROJECT TITLE BURLINGTON FIRE STATION 2
BURLINGTON FIRE DEPARTMENT, 132 NORTH AVENUE,
BURLINGTON, VT 05401

SHEET TITLE
FIRE PROTECTION
LOWER LEVEL NEW WORK PLAN

SCALE: 1/4" = 1'-0"
PROJECT NO. 22390

SHEET NO.

FP1.01

FIRE PROTECTION LEGEND	
TAG	DESCRIPTION
TS	TAMPER SWITCH
FS	FLOW SWITCH
PS	PRESSURE SWITCH
⊕	SPRINKLER HEAD
⊕	TIE INTO EXISTING
X	GATE VALVE
—	PIPE CAP
— —	PIPE REDUCER

FIRE PROTECTION GENERAL NOTES:

- FIRE PROTECTION SYSTEM DESIGN AND SPRINKLER HEAD CONFIGURATION SHALL CONFORM TO NFPA 13, AUTHORITY HAVING JURISDICTION, AND LOCAL BUILDING CODE.
- COORDINATE PIPE ROUTING WITH OTHER TRADES INCLUDING NEW SLAB INSTALLATION WORK BY THE G.C.
- THE FIRE PROTECTION DRAWINGS ARE DIAGNOMATIC IN NATURE AND SHOULD NOT BE UTILIZED FOR FIRE PROTECTION DESIGN. THE FIRE PROTECTION CONTRACTOR SHALL PROVIDE SPRINKLER SYSTEM DESIGN, SPRINKLER HEAD LAYOUT, AND FLOW CALCULATIONS (HYDRAULIC DESIGN). THIS SHALL BE COMPLETED BY A NICET LEVEL (3) THREE CERTIFIED TECHNICIAN. SHOP DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL. A NEW FLOW TEST SHALL BE PERFORMED FOR SYSTEM DESIGN.
- PROVIDE FIRE AND SMOKE PROOF CAULKING FOR ALL WALL AND FLOOR PENETRATIONS. COORDINATE ALL FIRE AND SMOKE PROOFING WITH THE CONSTRUCTION SUPERVISOR.
- PROVIDE SEISMIC BRACING FOR SPRINKLER PIPING INSTALLATION PER NFPA 13 AND ADOPTED SECTIONS OF THE INTERNATIONAL BUILDING CODES.
- COORDINATE TAMPER & FLOW SWITCH RECONNECTION TO THE FIRE ALARM SYSTEM WITH THE FIRE ALARM CONTRACTOR.
- PROVIDE A 10 PSI CUSHION BETWEEN FIRE PROTECTION SYSTEM DEMAND AND FIRE PROTECTION SYSTEM WATER SUPPLY.
- PROVIDE AUXILIARY DRAINS AS REQUIRED PER NFPA 13. PIPE AUXILIARY DRAINS TO EXTERIOR LOCATION. COORDINATE EXACT LOCATION OF DRAIN LOCATIONS WITH ARCHITECT AND AUTHORITY HAVING JURISDICTION. ALL PIPING SHALL BE PITCHED TO DRAIN. EXISTING TEST/DRAIN LINE MAY BE UTILIZED AS APPLICABLE.
- COORDINATE FIRE PROTECTION PIPING (BRANCH, MAINS, ETC) WITH MECHANICAL AND PLUMBING EQUIPMENT. DO NOT LOCATE ANY PIPING WITHIN 12" OF ANY MECHANICAL EQUIPMENT. ANY PIPING RUN UNDER EQUIPMENT SHALL BE REROUTED BY THE FIRE PROTECTION CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

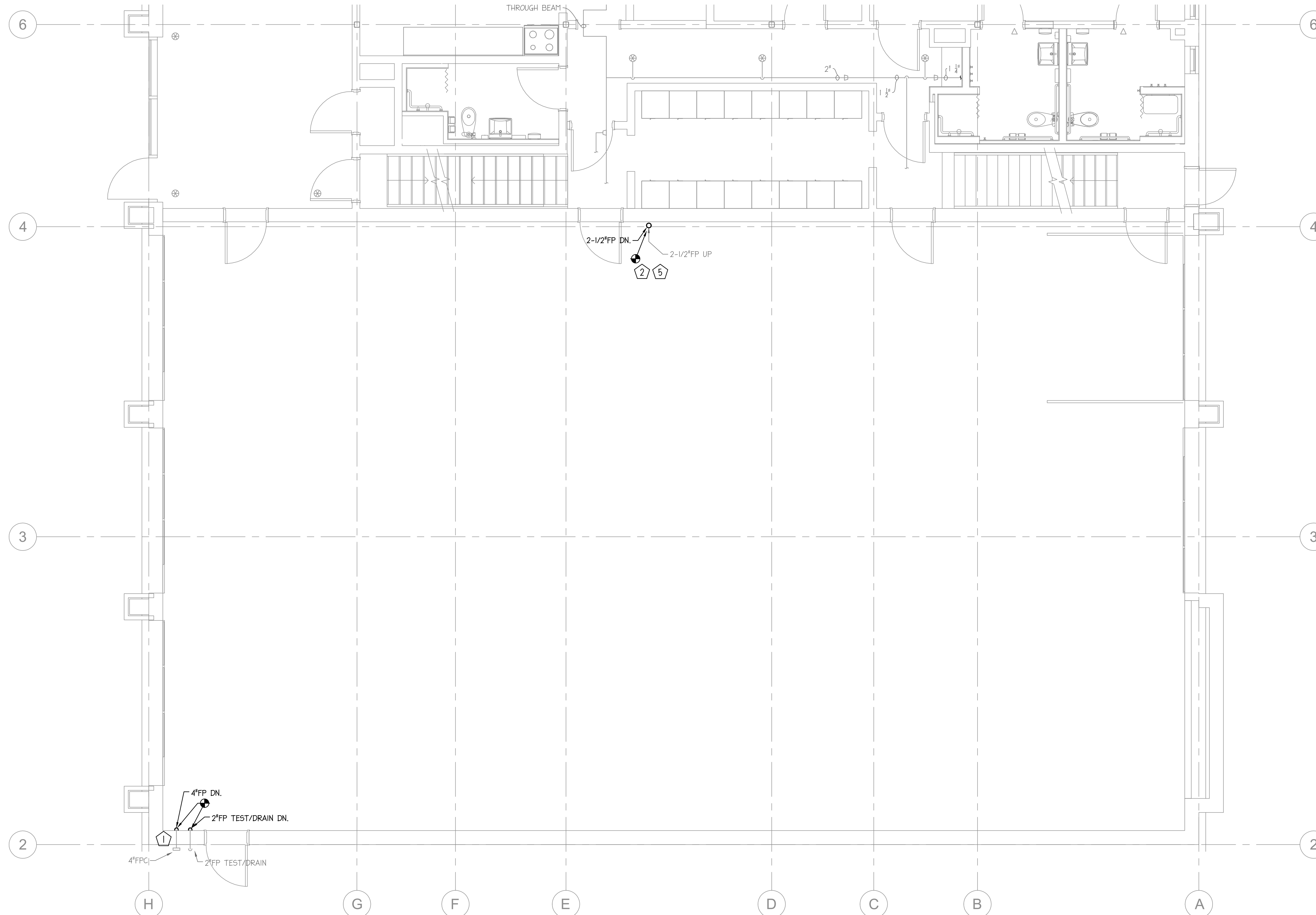
10. COORDINATE FIRE PROTECTION PIPING (BRANCHES, MAINS, ETC.) WITH ELECTRICAL EQUIPMENT. DO NOT ROUTE ANY PIPING OVER ELECTRICAL EQUIPMENT. ANY PIPING RUN OVER ELECTRICAL EQUIPMENT SHALL BE REROUTED BY THE FIRE PROTECTION CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

11. PIPING 2" AND SMALLER SHALL BE SCHEDULE 40 STEEL PIPE WITH THREADED ENDS. PIPING TO BE ASTM A 53/A 53M. PIPING TO HAVE CAST- OR MALLEABLE-IRON THREADED FITTINGS AND THREADED JOINTS. PIPING 2-1/2" AND LARGER SHALL BE SCHEDULE 10 STEEL PIPE (ASTM A 195 OR ASTM A 746) WITH FACTORY OR FIELD FORMED GROOVED ENDS WITH GROOVED FITTINGS EQUIVALENT TO VICTAULIC DUCTILE IRON FITTINGS CONFORMING TO ASTM A536 GRADE 45-46-12. ENSURE COUPLINGS AND ACCESSORIES ARE COMPLIANT WITH THE MANUFACTURER'S FITTINGS.

FIRE PROTECTION NEW WORK LEGEND	
—	NEW FIRE PROTECTION TO BE INSTALLED
---	EXISTING FIRE PROTECTION REMAINING
RR	EXISTING TO BE REINSTALLED

1. SPECIFIC FIRE PROTECTION NEW WORK NOTES

- THE FIRE PROTECTION CONTRACTOR IS TO COORDINATE WITH THE G.C. TO DETERMINE IF THE 4" FDC LINE AND 2" TEST AND DRAIN LINES THROUGH THE SLAB WILL NEED TO BE DEMOLISHED AND REINSTALLED. FOR BUDGETING PURPOSES, THE CONTRACTOR IS TO CARRY DEMOLISHING AND REINSTALLING THESE LINES. COORDINATE ANY SHUTDOWNS WITH THE G.C. TO PERFORM THIS WORK.
- A NEW 4" FIRE PROTECTION MAIN IS TO BE INSTALLED THAT WRAPS AROUND THE EXTERIOR WALL (AND IS SUPPORTED BY ANCHORS/SUPPORTS SECURED TO THE EXTERIOR WALL) AS PART OF THE FIRST STAGE OF WORK. THIS LINE IS TO BE INSTALLED TO CONNECT TO THE EXISTING 2-1/2" FP LINE THAT RISES UP THROUGH THE SLAB AND SERVES THE REST OF THE FACILITY. COORDINATE WATER SERVICE SHUTDOWNS WITH THE G.C. AND THE WATER DEPARTMENT TO ENABLE THE FIRE PROTECTION SERVICE TO CUT OVER AND UTILIZE THE NEW TO PROVIDE SERVICE TO THE FACILITY. ONCE THE NEW LINE HAS BEEN CONNECTED, THE EXISTING LOWER LEVEL GARAGE FIRE PROTECTION PIPING MAY BE DELETED.
- PROVIDE NEW FIRE PROTECTION COVERAGE IN THE EXISTING STAIRWELLS AS INDICATED AS PART OF THE INITIAL PHASE OF WORK WHEN THE FACILITY IS SHUTDOWN TO CUT OVER TO THE NEW MAIN LINE. PROVIDE NEW FIRE PROTECTION HEADS (DO NOT REUSE THE EXISTING HEADS).
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- FOR BUDGETING PURPOSES, COORDINATE INSTALLING A NEW 2-1/2" FIRE PROTECTION LINE THROUGH THE SLAB (WITH 1/2" ELASTOMERIC FOAM INSULATION INSTALLED TO KEEP THE CONCRETE FROM DIRECTLY CONTACTING THE PIPING). COORDINATE ALL SHUTDOWNS WITH THE G.C. AS INDICATED PREVIOUSLY THE INTENTION IS FOR MINIMAL SHUTDOWN OF THE REST OF THE FACILITY FIRE PROTECTION SYSTEM.



DRAWN	LNC
APPROVED	LNC
DATE	05/24/2024

NO.	DATE	REVISION
1	5/24/24	ISSUED FOR CONST.

PROJECT TITLE: BURLINGTON FIRE STATION 2
 BURLINGTON FIRE DEPARTMENT, 132 NORTH AVENUE,
 BURLINGTON, VT 05401
 SHEET TITLE: FIRE PROTECTION NEW WORK PLAN
 FIRST FLOOR NEW WORK PLAN

SCALE: 1/4" = 1'-0"
 PROJECT NO. 22390
 SHEET NO.

FP1.11

Exhibit C – Contractor’s BID FORM

PROJECT: Bay Floor Replacement Fire Station Two

Contractor: _____ Address: _____

Contact Person: _____ Telephone/Email: _____

Estimated Start Date: _____ Estimated End Date: _____

BASE BID

ITEM	UNIT	SUBTOTAL
Materials & Labor	Lump Sum	\$

TOTAL BID: \$ _____

Note: This project is tax exempt. Prices quoted shall not include sales tax.

SIGNATURES FOLLOW ON NEXT PAGE

BY SIGNING THIS BID FORM, THE CONTRACTOR AGREES TO ABIDE BY ALL SPECIFICATIONS AND CONDITIONS IN THE CONTRACT DOCUMENTS, INCLUDING THE FOLLOWING:

- 1) Perform work in accordance with applicable rules, regulations, codes, and ordinances of local, state and federal authorities;

- 2) Obtain and pay for necessary permits, licenses and certificates and give notices as required during the performance of the work; and

SIGNATURE & DATE

NAME

TITLE

WITH THIS BID, THE CONTRACTOR MUST INCLUDE SIGNED CERTIFICATES OF COMPLIANCE WITH LIVABLE WAGE, OUTSOURCING, AND UNION DETERRENCE. THESE FORMS ARE INCLUDED IN EXHIBITS F, G, AND H.

CITY OF BURLINGTON
DRAFT CONTRACTOR CONTRACT

This Contractor Contract (“Contract”) is entered into by and between the City of Burlington, Vermont (“the City”), and [REDACTED] (“Contractor”), a Vermont corporation located at [REDACTED].

Contractor and the City agree to the terms and conditions of this Contract.

1. DEFINITIONS

The following terms shall be construed and interpreted as follows:

- A. **“Contract Documents”** means all the documents identified in Section 4 (Scope of Work) of this Contract.
- B. **“Effective Date”** means the date on which this Contract is approved and signed by the City, as shown on the signature page.
- C. **“Party”** means the City or Contractor, and **“Parties”** means the City and Contractor.
- D. **“Project”** means the [REDACTED].
- E. **“Work”** means the services described in Section 5 (Payment for Services) of this Contract, along with the specifications contained in the Contract Documents as defined in Section 4 (Scope of Work) below.

2. RECITALS

- A. **Authority.** Each Party represents and warrants to the other that the execution and delivery of this Contract and the performance of such Party’s obligations have been duly authorized.
- B. **Consideration.** The Parties acknowledge that the mutual promises and covenants contained herein and other good and valuable consideration are sufficient and adequate to support this Contract.
- C. **Purpose.** The City seeks to employ the Contractor to [REDACTED].

3. EFFECTIVE DATE & TERM

- A. **Effective Date.** This Contract shall not be valid or enforceable until the Effective Date. The City shall not be bound by any provision of this Contract before the Effective Date and shall have no obligation to pay Contractor for any performance or expense incurred before the Effective Date or after the expiration or termination of this Contract.

B. Term. This Contract and the Parties' respective performance shall commence on the Effective Date and expire on [redacted] or upon the satisfaction of the City, unless sooner terminated as provided herein.

4. SCOPE OF WORK

The Contractor shall perform the services listed in Attachment A (Request for Proposals) to the reasonable satisfaction of the [redacted] or designee and as described in Attachment B (Contractor's Response to Request for Proposals), subject to Section 7.B hereof and the reasonable directions of [redacted] or designee.

5. PAYMENT FOR SERVICES

A. Amount. The City shall pay the Contractor for completion of the Work in accordance with Attachment B (Contractor's Response to Request for Proposals) [redacted].

Contractor agrees to accept this payment as full compensation for performance of all services and expenses incurred under this Agreement.

B. Payment Schedule. The City shall pay the Contractor in the manner and at such times as set forth in the Contract Documents [redacted]. The City seeks to make payment within thirty days of receipt of an invoice and any backup documentation requested under subsection D (Invoice) below.

C. Maximum Limiting Amount. The total amount that may be paid to the Contractor for all services and expenses under this Contract shall not exceed the maximum limiting amount of \$[redacted]. The City shall not be liable to Contractor for any amount exceeding the maximum limiting amount without duly authorized written approval.

D. Invoice. Contractor shall submit one copy of each invoice, including rates and a detailed breakdown by task for each individual providing services, and backup documentation for any equipment or other expenses to the following:

[redacted]

The City reserves the right to request supplemental information prior to payment. Contractor shall not be entitled to payment under this Contract without providing sufficient backup documentation satisfactory to the City.

6. SECTION & ATTACHMENT HEADINGS

The article and attachment headings throughout this Contract are for the convenience of City and Contractor and are not intended nor shall they be used to construe the intent of this Contract or any part hereof, or to modify, amplify, or aid in the interpretation or construction of any of the provisions hereof.

7. CONTRACT DOCUMENTS & ORDER OF PRECEDENT

A. Contract Documents. The Contract Documents are hereby adopted, incorporated by reference, and made part of this Contract. The intention of the Contract Documents is to establish the necessary terms, conditions, labor, materials, equipment, and other items necessary for the proper execution and completion of the Work to ensure the intended results.

The following documents constitute the Contract Documents:

Attachment A: Request for Proposals dated [REDACTED]

Attachment B: Contractor’s Response to Request for Proposals dated [REDACTED]

Attachment C: Burlington Standard Contract Conditions for Contractors

Attachment D: Burlington Livable Wage Ordinance Certification

Attachment E: Burlington Outsourcing Ordinance Certification

Attachment F: Burlington Union Deterrence Ordinance Certification

Attachment G: Contractor’s Certificate of Insurance & Endorsements

B. Order of Precedent. To the extent a conflict or inconsistency exists between the Contract Documents, or provisions therein, then the Contract take precedent. Any Request for Proposals or other solicitation, Additional Contract Provisions, and the City Ordinance Certifications shall prevail over any inconsistency with the Contractor’s Scope of Work and Cost Proposal.

8. [Reserved]

— Signatures follow on the next page —

SIGNATURE

Persons signing for the Parties hereby swear and affirm that they are authorized to act on behalf of their respective Party and acknowledge that the other Party is relying on their representations to that effect. This Contract may be executed in counterparts, each of which may be deemed an original. This Contract may be executed electronically, and an electronic copy or other facsimile shall be treated as an original.

Contractor
[Name of Contractor]

By: _____

Date: _____

City of Burlington
[Department]

By: _____
 [Name]
 [Title]

Date: _____

Exhibit E
BURLINGTON STANDARD CONTRACT CONDITIONS
FOR CONSTRUCTION CONTRACTORS

1. DEFINITIONS:

- A. The “Contract” shall mean the Contract between Contractor and the City to which these conditions apply and includes this Attachment C.
- B. The “Contractor” shall mean _____.
- C. The “City” shall mean the City of Burlington, Vermont or any of its departments.
- D. The “Effective Date” shall mean the date on which the Contract becomes effective according to its terms, or if no effective date is stated, the date that all parties to it have signed.
- E. The “Parties” shall mean the parties to this Contract.
- F. The “Work” shall mean the services being provided by the Contractor, as provided in the Contract.

2. REGISTRATION: The Contractor agrees to be registered with the Vermont Secretary of State’s office as a business entity doing business in the State of Vermont at all times this contract is effective. This registration must be complete prior to contract execution.

3. INSURANCE & INDEMNIFICATION: The insurance and indemnification provisions set forth in Attachment C-1 are incorporated by this reference as though fully set forth. Any provisions of this Contract for indemnification, defense, release of liability, or warranty, shall survive termination hereof.

4. CONFLICT OF INTEREST: The Contractor shall disclose in writing to the City any actual or potential conflicts of interest or any appearance of a conflict of interest by the Contractor, its employees or agents, or its subcontractors, if any.

5. PERSONNEL REQUIREMENTS AND CONDITIONS: A Contractor shall employ only qualified personnel with responsible authority to supervise the work. The City shall have the right to approve or disapprove key personnel assigned to administer activities related to the Contract.

Except with the approval of the City, during the life of the Contract, the Contractor shall not employ:

- 1. Any City employees who are directly involved with the awarding, administration, monitoring, or performance of the Contract or any project(s) that are the subjects of the Contract.
- 2. Any City employees so involved within one (1) year of termination of employment with the City.

The Contractor warrants that no company or person has been employed or retained (other than a bona fide employee working solely for the Contractor) to solicit or secure this Contract, and that no company or person has been paid or has a contract with the Contractor to be paid, other

than a bona fide employee working solely for the Contractor, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of the Contract. For breach or violation of this warranty, the City shall have the right to annul the Contract, without liability to the City, and to regain all costs incurred by the City in the performance of the Contract.

The City reserves the right to require removal of any person employed by a Contractor from work related to the Contract, for misconduct, incompetence, or negligence, in the opinion of the City, in the due and proper performance of Contractor's duties, or who neglects or refuses to comply with the requirements of the Contract.

6. **PERFORMANCE:** Contractor warrants that performance of Work will conform to the requirements of this Contract. Contractor shall use that degree of ordinary care and reasonable diligence that an experienced and qualified provider of similar services would use acting in like circumstances and experience in such matters and in accordance with the standards, practices and procedures established by Contractor for its own business.
7. **RESPONSIBILITY FOR SUPERVISION:** The Contractor shall assume primary responsibility for general supervision of Contractor employees and any subcontractors for all work performed under the Contract and shall be solely responsible for all procedures, methods of analysis, interpretation, conclusions, and contents of work performed under the Contract. The Contractor shall be responsible to the City for all acts or omissions of its subcontractors and any other person performing work under this Contract.
8. **INSPECTION OF WORK:** The City shall, at all times, have access to the Contractor's work for the purposes of inspection, accounting, and auditing, and the Contractor shall provide whatever access is considered necessary to accomplish such inspections. At any time, the Contractor shall permit the City or representative for the City the opportunity to inspect any plans, drawings, estimates, specifications, or other materials prepared or undertaken by the Contractor pursuant to the Contract, as well as any preparatory work, work-in-progress, or completed work at a field site.

Conferences, visits to a site, or an inspection of the work, may be held at the request of any involved party or by representatives of the City.

9. **UTILITIES & ACCESS:** Whenever a facility or component of a private, public, or cooperatively-owned utility will be affected by any proposed construction, the Contractor will counsel with the City and will enter into any necessary contacts and discussions with the affected owners regarding any requirement necessary for revisions of facilities or existing installations, both above and below ground. Any such installations must be completely and accurately exhibited on any detail sheets or plans. The Contractor shall inform the City, in writing, of any such contacts and the results thereof.

The City shall provide the land and/or construction easements for the land upon which the Work under this Contract is to be done, and will, so far as is convenient, permit the Contractor to use as much of the land as is required for the erection of temporary construction facilities

and storage of materials, together with the right of access to same, but beyond this, the Contractor shall provide at the Contractor's cost and expense any additional land required.

10. PROTECTION OF PROPERTY:

- A. In General: Contractor shall avoid damage, as a result of its operations, to trees, plant life, existing sidewalks, curbs, streets, alleys, pavements, utilities, adjoining property, the work of other contractors, and the property of the City and others. Contractor shall, at its own expense, repair any damage to any property caused by Contractor's operations.
- B. Underpinning and Shoring: Contractor shall become familiar with the requirements of local and state laws applicable to underpinning, shoring and other work affecting adjoining property, and wherever required by law Contractor shall shore up, brace, underpin, secure and protect as may be necessary all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be affected in any way by the excavations or other operations connected with the work to be performed under this Contract.
- C. Damage to Utilities: Contractor shall be responsible for all damage to any utility equipment or structures caused by its acts or omissions to act, whether negligent or otherwise, and shall leave the utility equipment or structures in as good condition as they were in prior to the commencement of operations under this contract. However, any utility equipment or structures damaged as a result of any act, or omission to act, of the contractor may, at the option of the city department, utility company, or other party owning or operating the utility equipment or structures damaged, be repaired by the city department, utility company, or other party, and in that event, the cost of repairs shall be borne by Contractor.

11. PUBLIC RELATIONS: Throughout the performance of the Contract, the Contractor will endeavor to maintain good relations with the public and any affected property owners. Personnel employed by or representing the Contractor shall conduct themselves with propriety. The Contractor agrees to inform property owners and/or tenants, in a timely manner, if there is need for entering upon private property as an agent of the City, in accordance with 19 V.S.A. § 35 and §.503, to accomplish the work under the Contract. The Contractor agrees that any work will be done with minimum damage to the property and disturbance to the owner. Upon request of the Contractor, the City shall furnish a letter of introduction to property owners soliciting their cooperation and explaining that the Contractor is acting as an agent of the City.

12. ACKNOWLEDGEMENTS: Acknowledgment of the City's support must be included in any and all publications, renderings and project publicity, including audio/visual materials developed under this contract.

13. APPEARANCES:

- A. Hearings and Conferences: The Contractor shall provide services required by the City and

necessary for furtherance of any work covered under the Contract. These services shall include appropriate representation at design conferences, public gatherings and hearings, and appearances before any legislative body, commission, board, or court, to justify, explain and defend its contractual services covered under the Contract.

The Contractor shall perform any liaison that the City deems necessary for the furtherance of the work and participate in conferences with the City, at any reasonable time, concerning interpretation and evaluation of all aspects covered under the Contract.

The Contractor further agrees to participate in meetings with the City and any other interested or affected participant, for the purpose of review or resolution of any conflicts pertaining to the Contract.

The Contractor shall be equitably paid for such services and for any reasonable expenses incurred in relation thereto in accordance with the Contract.

- B. Appearance as Witness:** If and when required by the City, the Contractor, or an appropriate representative, shall prepare and appear for any litigation concerning any relevant project or related contract, on behalf of the City. The Contractor shall be equitably paid, to the extent permitted by law, for such services and for any reasonable expenses incurred in relation thereto, in accordance with the Contract.

14. RESPONSIBILITY OF COST: The Contractor shall furnish and pay the cost, including taxes (except tax-exempt entities) and all applicable fees, of all the necessary materials and shall furnish and pay for full time on-site superintendence during any construction activity, labor, tools, equipment, and transportation. The Contractor shall perform all the Work required for the construction of all items listed and itemized under Attachment A (Request for Proposals) and Attachment B (Contractor's Response to Request for Proposals) and in strict accordance with the Contract Documents and any amendments thereto and any approved supplemental plans and specifications. The Contractor agrees to pay all claims for labor, materials, services and supplies and agrees to allow no such charge, including no mechanic's lien, to be fixed on the property of the City.

15. PAYMENT PROCEDURES: The City shall pay or cause to be paid to the Contractor or the Contractor's legal representative payments in accordance with the Contract. When applicable, for the type of payment specified in the Contract, a progress report shall summarize actual costs and any earned portion of fixed fee. All payments will be made in reliance upon the accuracy of all representations made by the Contractor, whether in invoices, progress reports, emails, or other proof of work.

All invoices and correspondence shall indicate the applicable project name, project number and the Contract number. When relevant, the invoice shall further be broken down in detail between projects.

When applicable, for the type of payment specified in the Contract, expenses for meals and travel shall be limited to the current approved in-state rates, as determined by the State of Vermont's

labor contract, and need not be receipted. All other expenses are subject to approval by the City and must be accompanied by documentation to substantiate their charges.

No approval given or payment made under the Contract shall be conclusive evidence of the performance of the Contract, either wholly or in part, and no payment shall be construed to be acceptance of defective work or improper materials.

The City agrees to pay the Contractor and the Contractor agrees to accept as full compensation, for performance of all services rendered and expenses encompassed in conformance therewith, the fee specified in the Contract.

16. DUTY TO INFORM CITY OF CONTRACT DOCUMENT ERRORS: If Contractor knows, or has reasonable cause to believe, that a clearly identifiable error or omission exists in the Contract Documents, including but not limited to unit prices and rate calculations, Contractor shall immediately give the City written notice thereof. Contractor shall not cause or permit any Work to be conducted which may relate to the error or omission without first receiving written notice by the City that City representatives understand the possible error or omission and have approved of modifications to the Contract Documents or that Contractor may proceed without any modification being made to Contract Documents.

17. NON-APPROPRIATION: The obligations of the City under this Contract are subject to annual appropriation by the Burlington City Council. If no funds or insufficient funds are appropriated or budgeted to support continuation of payments due under this Contract, the Contract shall terminate automatically on the first day of the fiscal year for which funds have not been appropriated. The Parties understand and agree that the obligations of the City to make payments under this Contract shall constitute a current expense of the City and shall not be construed to be a debt or a pledge of the credit of the City. The decision whether or not to budget and appropriate funds during each fiscal year of the City is within the discretion of the Mayor and City Council of the City. The City shall deliver written notice to Contractor as soon as practicable of any non-appropriation, and Contractor shall not be entitled to any payment or compensation of any kind for work performed after the City has delivered written notice of non-appropriation.

18. CHANGE ORDERS & AMENDMENTS: No changes or amendments to the Contract shall be effective unless documented in writing and signed by authorized representatives of the City and the Contractor. All changes affecting the Project's construction cost, length of time, or modifications of the terms or conditions of the Contract, must be authorized by means of a written Contract Change Order which is mutually agreed to by the City and Contractor. The Contract Change Order will include extra Work, Work for which quantities have been altered from those shown in the Bid Schedule, as well as decreases or increases in the quantities of installed units from those shown in the Bid Schedule because of final measurements. All changes must be recorded on a Contract Change Order (which form is part of these Contract Documents) and fully executed before they can be included in a partial payment estimate. Changes for Work, quantities, and/or conditions will include any respective time adjustment, if justified. Time adjustments will require an updated Project Schedule with the Change Order.

19. EXTENSION OF TIME: The Contractor agrees to prosecute the work continuously and diligently, and no charges or claims for damages shall be made by the Contractor for delays or hindrances, from any cause whatsoever, during the progress of any portion of services specified in the Contract. The Contractor may request an extension of time for such delays or hindrances, if any.

Time extensions may be granted by amendment only for excusable delays, such as delays beyond the control of the Contractor and without the fault or negligence of the Contractor.

The City may suspend the work or any portion thereof for a period of not more than ninety (90) days at its discretion or such further time as agreed by the Contractor. The Contractor will be allowed an extension of contract time directly attributable to any suspension.

20. PUBLIC HEALTH EMERGENCY:

A. Compliance with Mandates and Guidance: The Contractor is advised that public health emergencies—meaning public health emergencies, as declared by the City, the State of Vermont, or the Federal Government—may introduce significant uncertainty into the project. The Contractor must comply with all local, state, federal orders, directives, regulations, guidance, advisories during a public health emergency. Contractor shall adhere to the below provisions and consider public health emergencies as it develops project schedules and advances the Work.

B. Creation of Public Health Emergency Plan: For any work performed on-site at a City location, the Contractor shall create a public health emergency plan acceptable to the City. The Contractor shall be responsible for following this plan and ensuring that the project or site is stable and in a safe and maintainable condition.

- a. **Public Health Emergency Plan:** The Public Health Emergency Plan will contain:
 - i. Measures to manage risk and mitigate potential impacts to the health and safety of the public, the City and Contractor’s workers;
 - ii. Explicit reference to any health and safety performance standards and mandates provided by the City, the State of Vermont, the Federal government, or other relevant governmental entities;
 - iii. A schedule for possible updates to the plan as standards and mandates change; and
 - iv. Means to adjust the schedule and sequence of work should the emergency change in nature or duration.

- b. **Review and Acceptance of Plan:**
 - i. Contractor must provide the plan to the City by the Effective Date of this Contract or by one (1) week prior to the commencement of on-site activities, whichever is later.
 - ii. The City shall have sole discretion to require changes to the plan.

- iii. The City may revisit the plan at any time to verify compliance with obligations that arise under a state of emergency.

C. Enforcement & Stoppage of Work: Contractor fails to comply with either 1) the approved public health emergency plan, or 2) any local, state, federal orders, directives, regulations, guidance, or advisories during a public health emergency, the City may stop Work under the Contract until such failure is corrected. Such failure to comply shall constitute a breach of the Contract.

Upon stoppage of work, the City may allow Work to resume, at a time determined by the City, under this Contract if such failure to comply is adequately corrected. The City shall have sole discretion in determining if Contractor has adequately corrected its failure to comply with the above.

If Contractor's breach of Contract has not been cured within seven (7) days after notice to stop Work from the City, then City may terminate this Contract, at its discretion.

D. City Liability Relating to Potential Delays: If a public health emergency is declared, the City will not be responsible for any delays related to the sequence of operations or any expenses or losses incurred as a result of any delays. Any delays related to a public health emergency will be excusable, but will not be compensable.

21. FORCE MAJEURE: Neither Party to this Contract shall be liable to the other for any failure or delay of performance of any obligation under this Contract to the extent the failure or delay is caused by acts of God, public health emergencies, epidemics, acts of the public enemy, acts of superior governmental authority, weather conditions, riots, rebellion, sabotage, or any other circumstances for which it is not responsible or which is not under its control ("Force Majeure"). To assert Force Majeure, the nonperforming party must prove that a) it made all reasonable efforts to remove, eliminate, or minimize the cause of delay or damage, b) diligently pursued performance of its obligations, c) substantially fulfilled all obligations that could be fulfilled, and d) timely notified the other part of the likelihood or actual occurrence of a Force Majeure event. If any such causes for delay are of such magnitude as to prevent the complete performance of the Contract within two (2) years of the originally scheduled completion date, either Party may by written notice request to amend or terminate the Contract. The suspension of any obligations under this section shall not cause the term of this Contract to be extended and shall not affect any rights accrued under this Contract prior to the occurrence of the Force Majeure. The Party giving notice of the Force Majeure shall also give notice of its cessation.

22. PAYMENT FOR EXTRA WORK, ADDITIONAL SERVICES OR CHANGES: The City may, in writing, require or agree to changes, or additions to or deletions from the originally contemplated scope of work.

The value of such changes, to the extent not reflected in other payments to the Contractor, shall be incorporated in an amendment and be determined by mutual agreement, by one or more of the following:

1. Fixed Price. By a price that is not subject to any adjustment on the basis of the Contractor's expenses experienced in performing the work. The Contractor is fully responsible for all costs and resulting profit or loss.
2. Rate Schedule. By unit prices designated in the Contract, or by unit prices covered under any subsequent contracts.
3. Actual Cost. By amounts determined on the basis of actual costs incurred, as distinguished from forecasted expenditures.

No changes for which additional fee payment is claimed shall be made unless pursuant to a written order from the City, and no claim for payment shall be valid unless so ordered.

The Contractor agrees to maintain complete and accurate records of all change work, in a form satisfactory to the City. The City reserves the right to audit the records of the Contractor related to any extra work or additional services. Any such services rendered shall be subject, in all other respects, to the terms of the Contract. When changes are so ordered, no additional work shall be performed by the Contractor until a Contract amendment has been fully executed, unless written notice to proceed is issued by the City. Any claim for extension of time that may be necessitated as a result of extra work or additional services and changes shall be given consideration and evaluated insofar as it directly relates to the change.

- 23. FAILURE TO COMPLY WITH TIME SCHEDULE:** If the City is dissatisfied because of slow progress or incompetence in the performance of the Work in accordance with the schedule for completion of the various aspects of construction, the City shall give the Contractor written notice in which the City shall specify in detail the cause of dissatisfaction. Should the Contractor fail or refuse to remedy the matters complained of within five days after the written notice is received by the Contractor, the City shall have the right to take control of the Work and either make good the deficiencies of the Contractor itself or direct the activities of the Contractor in doing so, employing such additional help as the City deems advisable. In such events, the City shall be entitled to collect from the Contractor any expenses in completing the Work. In addition, the City may withhold from the amount payable to the Contractor an amount approximately equal to any interest lost or charges incurred by the City for each calendar day that the Contractor is in default after the time of completion stipulated in the Contract Documents.
- 24. RETURN OF MATERIALS:** Contractor agrees that at the expiration or termination of this Contract, it shall return to City all materials provided to it during its engagement on behalf of City.
- 25. ACCEPTANCE OF FINAL PAYMENT; RELEASE:** Contractor's acceptance of the final payment shall be a release in full of all claims against the City or its agents arising out of or by

reason of the Work. Any payment, however, final or otherwise, shall not release the Contractor or its sureties from any obligations under the Contract Documents or any performance or payment bond.

- 26. OWNERSHIP OF THE WORK:** The Contractor agrees that the ownership of all studies, data sheets, survey notes, subsoil information, drawings, tracings, estimates, specifications, proposals, diagrams, calculations, EDM and other material prepared or collected by the Contractor, hereafter referred to as "instruments of professional service", shall become the property of the City as they are prepared and/or developed in the course of the Contract. The Contractor agrees to allow the City access to all "instruments of professional service" at any time. The Contractor shall not copyright any material originating under the Contract without prior written approval of the City. No publications or publicity of the work, in part or in total, shall be made without the express written agreement of the City, except that Contractor may in general terms use previously developed instruments of professional service to describe its abilities for a project in promotional materials.
- 27. PROPRIETARY RIGHTS:** The Parties under the Contract hereby mutually agree that, if patentable discoveries or inventions should result from work performed by the Contractor under the Contract, all rights accruing from such discoveries or inventions shall be the sole property of the Contractor. The Contractor, however, agrees to and does hereby grant to the City an irrevocable, nonexclusive, non-transferable, and royalty-free license to the manufacture, use, and disposition of any discovery or invention that may be developed as a part of the Work under the Contract.
- 28. PUBLIC RECORDS:** The Contractor understands that any and all records related to and acquired by the City, whether electronic, paper, or otherwise recorded, are subject to the Vermont Public Records Act and that the determination of how those records must be handled is solely within the purview of City. The Contractor shall identify all records that it considers to be trade secrets as that term is defined by subsection 317(c)(9) of the Vermont Public Records Act and shall also identify all other records it considers to be exempt under the Act. It is not sufficient to merely state generally that the record is proprietary or a trade secret or is otherwise exempt. Particular records, pages or section which are believed to be exempt must be specifically identified as such and must be separated from other records with a convincing explanation and rationale sufficient to justify each exemption from release consistent with Section 317 of Title 1 of the Vermont Statutes Annotated.
- 29. RECORDS RETENTION AND ACCESS:** The Contractor agrees to retain, in its files, and to produce to the City—within the time periods requested—all books, documents, electronic data media (EDM), accounting records, and other records produced or acquired by the Contractor in the performance of this Contract which are related to the City, at any time during this Contract and for a period of at least three (3) years after its completion or termination. In addition, if any audit, claim, or litigation is commenced before the expiration of that three (3) year period, the records shall be retained until all related audits, claims, or litigation are resolved. The Contractor further agrees that the City shall have access to all the above information for the purpose of review and audit during the Contract period and any time within the aforementioned retention period. Copies of all of the above referenced information shall

be provided to the City, if requested, in the format in which the records were obtained, created, or maintained, such that their original use and purpose can be achieved. Contractor, subcontractors, or their representatives performing work related to the Contract, are responsible to ensure that all data and information created or stored on EDM is secure and can be duplicated and used if the EDM mechanism is subjected to power outage, obsolescence, or damage.

30. WARRANTY: In addition to any warranty provided by the manufacturer or distributor, Contractor guarantees the Work performed, and all materials or equipment furnished, to be free from defects in material and workmanship for a minimum period of one (1) year from the date of the City's acceptance of completion. The Contractor's warranty is not intended and shall not be interpreted as a limitation upon the City's rights or a waiver of manufacturer and distributor warranties, any subcontractor warranties, or any other warranties provided in connection with the Work.

Contractor, at its own expense, shall make any repairs, or replacement necessary to correct these defects to the satisfaction of the City.

This warranty of material and workmanship applies only:

1. To the property only as long as it remains in the possession of the City.
2. To the Work that has not been subject to accident, misuse, or abuse by someone other than the Contractor.
3. To the Work that has not been modified, altered, defaced, or had repairs made or attempted by someone other than the Contractor.
4. If the Contractor is immediately notified in writing within ten (10) days of first knowledge of the defect by the City.
5. If the Contractor is given the first opportunity to make any repairs, replacements, or corrections to the defective construction at no cost to the City within a reasonable period of time.

Under no circumstances shall Contractor be liable by virtue of this warranty or otherwise for damage to any person or property whatsoever for any special, indirect, secondary or consequential damages of any nature however arising out of the use or inability to use because of the construction defect.

If the Contractor is unable, after receipt of two (2) written notices given to Contractor by the City, to successfully repair or replace the labor, equipment, or materials within six (6) months of the second notice, then the District's repair and replace warranty shall be deemed to have failed and the City's rights and remedies shall not be limited by the provisions of this section.

31. CONTRACT DISPUTES: In the event of a dispute between the parties to this Contract, each party will continue to perform its obligations unless the Contract is terminated in accordance

with these terms.

32. SETTLEMENTS OF MISUNDERSTANDINGS: Neither Party shall file any litigation arising from this Contract without first attempting in good faith to resolve the Parties' dispute through negotiated settlement or mediation; provided, however, that any applicable statute of limitations shall toll during any period in which the Parties are actively and mutually engaged in dispute resolution; and provided further that nothing herein shall prevent either Party from seeking emergency relief in appropriate circumstances from a court of competent jurisdiction.

33. CITY'S OPTION TO TERMINATE: The Contract may be terminated in accordance with the following provisions, which are not exclusive:

A. Termination for Convenience: At any time prior to completion of services specified under the Contract, the City may terminate the Contract for any reason by submitting written notice via certified or registered mail to the Contractor, not less than fifteen (15) days prior to the termination date, of its intention to do so. If the termination is for the City's convenience, payment to the Contractor will be made promptly for the amount of any fees earned to the date of the notice of termination and costs of materials obtained in preparation for Work but not yet installed or delivered, less any payments previously made. However, if a notice of termination is given to a Contractor prior to completion of twenty (20) percent of the estimated services, as set forth in the approved Work Schedule and Progress Report, the Contractor will be reimbursed for that portion of any reasonable and necessary expenses incurred to date of the notice of termination that are in excess of the amount earned under its approved fee to the date of said termination. Such requests for reimbursement shall be supported with factual data and shall be subject to the City's approval. The Contractor shall make no claim for additional compensation against the City by reason of such termination.

B. Termination for Cause:

- i. Breach: Contractor shall be in default if Contractor fails in any manner to fully perform and carry out each and all conditions of this Contract, including, but not limited to, Contractor's failure to begin or to prosecute the Work in a timely manner or to make progress as to endanger performance of this Contract; failure to supply a sufficient number of properly skilled employees or a sufficient quantity of materials of proper quality; failure to perform the Work unsatisfactorily as determined by the City; failure to neglect or refuse to remove materials; or in the event of a breach of warranty with respect to any materials, workmanship, or performance guaranty. Contractor will not be in default for any excusable delays as provided in Sections 18-20.

The City may give Contractor written notice of such default. If Contractor does not cure such default or provide a plan to cure such default which is acceptable to the City within the time permitted by the City, then the City may terminate this contract for cause.

- ii. Dishonest Conduct: If Contractor engages in any dishonest conduct related to the performance or administration of this Contract then the City may immediately terminate this contract.
- iii. Cover: In the event the City terminates this contract as provided in this section, the City may procure, upon such terms and in such manner as the City may deem appropriate, services similar in scope and level of effort to those so terminated, and Contractor shall be liable to the City for all of its costs and damages, including, but not limited to, any excess costs for such services, interest, or other charges the City incurs to cover.
- iv. Rights and Remedies Not Exclusive: The rights and remedies of the City provided in this section shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

34. GENERAL COMPLIANCE WITH LAWS: The Contractor and any subcontractor approved under this Contract shall comply with all applicable Federal, State and local laws, including but not limited to the Burlington Livable Wage Ordinance, the Non-Outsourcing Ordinance, and the Union-Deterrence Ordinance and shall provide the required certifications attesting to compliance with these ordinances (see attached ordinances and certifications).

35. SAFETY REQUIREMENTS: The Contractor shall comply with all pertinent provisions of the Occupational Safety and Health Administration (OSHA) and any VOSHA (Vermont OSHA) Safety and Health requirements, including the provision and use of appropriate safety equipment and practices.

The Contractor, and not the City, shall be responsible for the safety, efficiency, and adequacy of Contractor's or its subcontractors' plant, appliances, equipment, vehicles, and methods, and for any damages, which may result from their failure or their improper construction, maintenance or operation.

36. CIVIL RIGHTS AND EQUAL EMPLOYMENT OPPORTUNITY: During performance of the Contract, the Contractor will not discriminate against any employee or applicant for employment because of religious affiliation, race, color, national origin, place of birth, ancestry, age, sex, sexual orientation, gender identity, marital status, veteran status, disability, HIV positive status, crime victim status, or genetic information. Contractor, and any subcontractors, shall comply with any Federal, State, or local law, statute, regulation, executive order, or rule that applies to it or the services to be provided under this contract concerning equal employment, fair employment practices, affirmative action, or prohibitions on discrimination or harassment in employment.

37. CHILD SUPPORT PAYMENTS: By signing the Contract, the Contractor certifies, as of the date of signing the Contract, that the Contractor (a) is not under an obligation to pay child support; or (b) is under such an obligation and is in good standing with respect to that obligation; or (c) has agreed to a payment plan with the Vermont Office of Child Support

Services and is in full compliance with that plan. If the Contractor is a sole proprietorship, the Contractor's statement applies only to the proprietor. If the Contractor is a partnership, the Contractor's statement applies to all general partners with a permanent residence in Vermont. If the Contractor is a corporation, this provision does not apply.

38. TAX REQUIREMENTS: By signing the Contract, the Contractor certifies, as required by law under 32 VSA, Section 3113, that under the pains and penalties of perjury, the Contractor is in good standing with respect to payment, or in full compliance with a plan to pay, any and all taxes due the State of Vermont as of the date of signature on the Contract.

39. NO GIFTS OR GRATUITIES: The Contractor shall not make any payment or gift or donation of substantial value to any elected official, officer, employee, or agent of the City during the term of this Contract.

40. ASSIGNMENT: Contractor shall not sublet or assign this Work, or any part of it, without the written consent of the City. If any subcontractor is approved, Contractor shall be responsible and liable for all acts or omissions of that subcontractor for any Work performed. If any subcontractor is approved, Contractor shall be responsible to ensure that the subcontractor is paid as agreed and that no lien is placed on any City property.

41. TRANSFERS, SUBLETTING, ASSIGNMENTS, ETC: Contractor shall not assign, sublet, or transfer any interest in the work, covered by this Contract, without prior written consent of the City and further, if any subcontractor participates in any work involving additional services, the estimated extent and cost of the contemplated work must receive prior written consent of the City. The approval or consent to assign or sublet any portion of the work, shall in no way relieve the Contractor of responsibility for the performance of that portion of the work so transferred. The form of the subcontractor's contract shall be as developed by the Contractor and approved by the City. The Contractor shall ensure that insurance coverage exists for any operations to be performed by any subcontractor as specified in the insurance requirements section of this Contract.

The services of the Contractor, to be performed under the Contract, shall not be transferred without written authorization of the City. Any authorized sub-contracts shall contain all of the same provisions contained in and attached to the original Contract with the City.

42. CONTINUING OBLIGATIONS: The Contractor agrees that if because of death, disability, or other occurrences, it becomes impossible to effectively perform its services in compliance with the Contract, neither the Contractor nor its surviving members shall be relieved of their obligations to complete the Contract unless the City agrees to terminate the Contract because it determines that the Contractor is unable to satisfactorily execute the Contract.

43. INTERPRETATION & IMPLEMENTATION: Provisions of the Contract shall be interpreted and implemented in a manner consistent with each other and using procedures that will achieve the intent of both Parties.

44. ARM'S LENGTH: This Contract has been negotiated at arm's length, and any ambiguity in any of its terms or provisions shall be interpreted in accordance with the intent of the Parties and not against or in favor of either the City or Contractor.

45. RELATIONSHIP: The Contractor is an independent contractor and shall act in an independent capacity and not as officers or employees of the City. To that end, the Contractor shall determine the method, details, and means of performing the work, but will comply with all legal requirements in doing so. The Contractor shall provide its own tools, materials, or equipment. The Parties agree that neither the Contractor nor its principal(s) or employees are entitled to any employee benefits from the City. Contractor understands and agrees that it and its principal(s) or employees have no right to claim any benefits under the Burlington Employee Retirement System, the City's worker's compensation benefits, health insurance, dental insurance, life insurance, or any other employee benefit plan offered by the City. The Contractor agrees to execute any certifications or other documents and provide any certificates of insurance required by the City and understands that this Contract is conditioned on its doing so, if requested.

The Contractor understands and agrees that it is responsible for the payment of all taxes on the above sums and that the City will not withhold or pay for Social Security, Medicare, or other taxes or benefits or be responsible for any unemployment benefits.

46. CHOICE OF LAW: Vermont law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this Contract, notwithstanding conflicts of law principles. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. Any provision rendered null and void by operation of this provision shall not invalidate the remainder of this Contract to the extent capable of execution.

47. JURISDICTION: All suits or actions related to this Contract shall be filed and proceedings held in the State of Vermont, notwithstanding any other law.

48. BINDING EFFECT AND CONTINUITY: This Contract shall be binding upon and shall inure to the benefit of the Parties, their' respective heirs, successors, representatives, and assigns. If a dispute arises between the Parties, each Party will continue to perform its obligations under this Contract during the resolution of the dispute, until the Contract is terminated in accordance with its terms.

49. SEVERABILITY: The invalidity or unenforceability of any provision of this Contract or the Contract Documents shall not affect the validity or enforceability of any other provision, which shall remain in full force and effect, provided that the Parties can continue to perform their obligations under this Contract in accordance with the intent of this Contract.

50. ENTIRE CONTRACT & AGREEMENT: This Contract, including the Contract Documents, constitutes the entire Contract, agreement, and understanding of the Parties with respect to the subject matter of this Contract. Prior or contemporaneous additions, deletions, or other changes to this Contract shall not have any force or effect whatsoever, unless embodied herein.

51. APPENDICES: The City may attach, to these specifications, appendices containing various forms and typical sample sheets for guidance and assistance to the Contractor in the performance of the work. It is understood, however, that such forms and samples may be modified, altered, and augmented from time to time by the City as occasions may require. It is the responsibility of the Contractor to ensure that they have the latest versions applicable to the Contract.

52. NO THIRD PARTY BENEFICIARIES: This Contract does not and is not intended to confer any rights or remedies upon any person or entity other than the Parties. Enforcement of this Contract and all rights and obligations hereunder are reserved solely to the Parties. Any services or benefits which third parties receive as a result of this Contract are incidental to this Contract, and do not create any rights for such third parties.

53. WAIVER: Notwithstanding the passage of time, a Party's failure or delay in exercising any right, power, or privilege under this Contract, whether explicit or by lack of enforcement, shall not operate as a waiver, nor shall any single or partial exercise of any right, power, or privilege preclude any other or further exercise of such right, power, or privilege.

**Attachment E-1
Insurance & Indemnification**

INSURANCE: Prior to beginning any work, the Contractor shall obtain the following insurance coverage from an insurance company registered and licensed to do business in the State of Vermont and having an A.M. Best insurance rating of at least A-, financial size category VII or greater (www.ambest.com). The certificate of insurance coverage shall be documented on forms acceptable to the City. Compliance with minimum limits and coverage, evidenced by a certificate of insurance showing policies and carriers that are acceptable to the City, must be received prior to the Effective Date of the Contract. If this Contract extends to more than one year, evidence of continuing coverage must be submitted to the City on an annual basis. Copies of any insurance policies may be required.

The Contractor is responsible to verify and confirm in writing to the City that: (i) all subcontractors must comply with the same insurance requirements as the Contractor; (ii) all work activities related to the Contract shall meet minimum coverage and limits; and (iii) all coverage shall include adequate protection for activities involving hazardous materials.

No warranty is made that the coverage and limits listed herein are adequate to cover and protect the interests of the Contractor for the Contractor's operations. These are solely minimums that have been developed and must be met to protect the interests of the City.

A. Commercial General Liability: With respect to all operations performed by the Contractor, subcontractors, agents or workers, it is the Contractor's responsibility to ensure that commercial general liability insurance coverage, covering bodily injury and property damage, on an occurrence form, provides all major divisions of coverage including, but not limited to:

1. Premises Operations
2. Independent Contractors' Protective
3. Products and Completed Operations
4. Personal Injury Liability
5. Medical Expenses

Coverage limits shall not be less than:

- | | |
|----------------------------------|-------------|
| 1. General Aggregate | \$2,000,000 |
| 2. Products-Completed/Operations | \$2,000,000 |
| 3. Personal & Advertising Injury | \$1,000,000 |
| 4. Each Occurrence | \$1,000,000 |
| 5. Damage to Rented Premises | \$ 250,000 |
| 6. Med. Expense (Any one person) | \$ 5,000 |

B. Workers' Compensation/Employer Liability: With respect to all operations performed, the Contractor shall carry workers' compensation insurance in accordance with the laws of the

State of Vermont and ensure that all subcontractors carry the same workers' compensation insurance for all work performed by them under this contract. Minimum limits for Employer's Liability:

1. Bodily Injury by Accident: \$500,000 each accident
2. Bodily Injury by Disease: \$500,000 policy limit,
\$500,000 each employee

For contracts involving work of any kind or nature on Lake Champlain, Workers' Compensation/Employer's Liability policy shall include a Maritime Endorsement (USL&H).

C. Automobile Liability: The Contractor shall carry commercial automobile liability insurance covering all motor vehicles, including owned, non-owned and hired, used in connection with the Contract. Each policy shall provide coverage with a limit not less than: \$1,000,000 - Combined Single Limit for each occurrence.

D. Professional Liability/Errors & Omissions:

1. General: The Contractor shall carry appropriate professional liability insurance covering errors and omissions made during their performance of contractual duties with the following minimum limits:
 - (a) \$2,000,000 - Annual Aggregate/Policy Limit
 - (b) \$1,000,000 - Per Claim/Occurrence
2. Deductibles: The Contractor is responsible for any and all deductibles.
3. Coverage: The Contractor shall maintain continuous professional liability coverage for the period of the Contract and for a period of five years following substantial completion of construction.

E. [Special Coverages]

- a. Cyber liability, including privacy liability: \$1,000,000
- b. Technology Errors & Omissions Liability: \$1,000,000
- c. Builders' Risk or Installation Floater: Value of project or contract
- d. Garagekeeper's Liability - \$500,000 (minimum)
- e. Sexual Misconduct - \$1,000,000
- f. Employee Dishonesty Coverage, including third party (client) coverage
- g. Marine (protection and indemnity) liability - \$1,000,000
- h. Pollution Liability (Contractor's) – Included or \$1,000,000
- i. Valuable Papers & Records Insurance: The Contractor shall carry valuable papers insurance in a form and amount sufficient to ensure the restoration or replacement of

any plans, drawings, field notes, or other information or data relating to the work, whether supplied by the City or developed by the Contractor, sub-contractor, worker, or agent, in the event of loss, impairment, or destruction. Such coverage shall remain in force until the final plans as well as all related materials have been delivered by the Contractor to, and accepted by, the City. Unless otherwise provided, Valuable Papers and Records Insurance shall provide coverage on an “individual occurrence” basis with limits in the amount of one hundred and fifty thousand dollars (\$150,000) when the insured items are in the Contractor’s possession, and in the amount of forty thousand dollars (\$40,000) regardless of the physical location of the insured items.

F. Umbrella/Excess Liability:

1. \$ __,000,000 Each Event Limit
2. \$ __,000,000 General Aggregate Limit
3. Umbrella/Excess Liability is excess above Commercial General Liability, Automobile Liability, and Workers’ Compensation/Employer Liability.

All policies shall be endorsed to provide the City thirty (30) days’ notice of cancellation. Each policy (except workers compensation/employers’ liability and errors & omissions/professional liability) shall be endorsed to name the City and its officers, employees, agents, successors, and assigns as additional insureds on a primary, non-contributory basis. Each policy (except errors & omissions/professional liability) shall be endorsed to waive subrogation against the City.

INDEMNIFICATION: Contractor shall hold harmless, indemnify, and defend the City and its officers, employees, agents, successors, and assigns (collectively, the “Indemnitees”) from and against all claims, causes of action, lawsuits, damages, liabilities, liens, penalties, fines, and costs (including attorneys’ fees and costs) of every kind and nature whatsoever (collectively, “Claims”) arising from or relating to this Contract or Contractor’s operations hereunder, excepting any Claims arising from the City’s own gross negligence or willful misconduct. Contractor’s indemnification and defense obligations shall survive termination of this Contract, and Contractor shall ensure that any subcontract for work under this Contract requires the subcontractor to satisfy the same indemnification and defense obligations in favor of the Indemnitees.

ARTICLE VI. LIVABLE WAGES¹

21-80 Findings and purpose.

In enacting this article, the city council states the following findings and purposes:

- (a) Income from full-time work should be sufficient to meet an individual's basic needs;
- (b) The City of Burlington is committed to ensuring that its employees have an opportunity for a decent quality of life and are compensated such that they are not dependent on public assistance to meet their basic needs;
- (c) The City of Burlington is committed, through its contracts with vendors and provision of financial assistance, to encourage the private sector to pay its employees a livable wage and contribute to employee health care benefits;
- (d) The creation of jobs that pay livable wages promotes the prosperity and general welfare of the City of Burlington and its residents, increases consumer spending with local businesses, improves the economic welfare and security of affected employees and reduces expenditures for public assistance;
- (e) It is the intention of the city council in passing this article to provide a minimum level of compensation for employees of the City of Burlington and employees of entities that enter into service contracts or receive financial assistance from the City of Burlington.

(Ord. of 11-19-01; Ord. of 10-21-13)

21-81 Definitions.

As used in this article, the following terms shall be defined as follows:

- (a) *Contractor or vendor* is a person or entity that has a service contract with the City of Burlington where the total amount of the service contract or service contracts exceeds fifteen thousand dollars (\$15,000.00) for any twelve (12) month period, including any subcontractors of such contractor or vendor.
- (b) *Grantee* is a person or entity that is the recipient of financial assistance from the City of Burlington in the form of grants, including any contractors or subgrantees of the grantee, that exceed fifteen thousand dollars (\$15,000.00) for any twelve (12) month period.

(c) *Covered employer* means the City of Burlington, a contractor or vendor or a grantee as defined above. The primary contractor, vendor, or grantee shall be responsible for the compliance of each of its subcontractors (or of each subgrantee) that is a covered employer.

(d) *Covered employee* means an "employee" as defined below, who is employed by a "covered employer," subject to the following:

(1) An employee who is employed by a contractor or vendor is a "covered employee" during the period of time he or she expends on furnishing services under a service contract with the City of Burlington, notwithstanding that the employee may be a temporary or seasonal employee;

(2) An employee who is employed by a grantee who expends at least half of his or her time on activities funded by the City of Burlington is a "covered employee."

(e) *Designated accountability monitor* shall mean a nonprofit corporation which has established and maintains valid nonprofit status under Section [501\(c\)\(3\)](#) of the United States Internal Revenue Code of 1986, as amended, and that is independent of the parties it is monitoring.

(f) *Employee* means a person who is employed on a full-time or part-time regular basis. In addition, commencing with the next fiscal year, a seasonal or temporary employee of the City of Burlington who works ten (10) or more hours per week and has been employed by the City of Burlington for a period of four (4) years shall be considered a covered employee commencing in the fifth year of employment. "Employee" shall not refer to volunteers working without pay or for a nominal stipend, persons working in an approved apprenticeship program, persons who are hired for a prescribed period of six (6) months or less to fulfill the requirements to obtain a professional license as an attorney, persons who are hired through youth employment programs or student workers or interns participating in established educational internship programs.

(g) *Employer-assisted health care* means health care benefits provided by employers for employees (or employees and their dependents) at the employer's cost or at an employer contribution towards the purchase of such health care benefits, provided that the employer cost or contribution consists of at least one dollar and twenty cents (\$1.20) per hour. (Said amount shall be adjusted every two (2) years for inflation, by the chief administrative officer of the city.)

(h) *Livable wage* has the meaning set forth in Section [21-82](#).

(i) *Retaliation* shall mean the denial of any right guaranteed under this article, and any threat, discipline, discharge, demotion, suspension, reduction of hours, or any other adverse action against an employee for exercising any right guaranteed under this article. Retaliation shall also include coercion, intimidation, threat, harassment, or interference in any manner with any investigation, proceeding, or hearing under this article.

(j) *Service contract* means a contract primarily for the furnishing of services to the City of Burlington (as opposed to the purchasing or leasing of goods or property). A contract involving the furnishing of financial products, insurance products, or software, even if that contract also includes some support or other services related to the provision of the products, shall not be considered a service contract.

(Ord. of 11-19-01; Ord. of 10-21-13)

21-82 Livable wages required.

(a) Every covered employer shall pay each and every covered employee at least a livable wage no less than:

(1) For a covered employer that provides employer-assisted health care, the livable wage shall be at least fifteen dollars and thirty-five cents (\$15.35) per hour on the effective date of the amendments to this article.

(2) For a covered employer that does not provide employer-assisted health care, the livable wage shall be at least sixteen dollars and seventy-four cents (\$16.74) per hour on the effective date of the amendments to this article.

(3) Covered employees whose wage compensation consists of more or other than hourly wages, including, but not limited to, tips, commissions, flat fees or bonuses, shall be paid so that the total of all wage compensation will at least equal the livable wage as established under this article.

(b) The amount of the livable wage established in this section shall be adjusted by the chief administrative officer of the city as of July 1 of each year based upon a report of the Joint Fiscal Office of the State of Vermont that describes the basic needs budget for a single person but utilizes a model of two (2) adults residing in a two (2) bedroom living unit in an urban area with the moderate cost food plan. Should there be no such report from the Joint Fiscal Office, the chief administrative officer shall obtain and utilize a basic needs budget that applies a similar methodology. The livable wage rates derived from utilizing a model of two (2) adults residing in a two (2) bedroom living unit in an urban area with a moderate cost food plan shall not become effective until rates meet or exceed the 2010 posted livable wage rates. Prior to May 1 preceding any such adjustment and prior to

May 1 of each calendar year thereafter, the chief administrative officer will provide public notice of this adjustment by posting a written notice in a prominent place in City Hall by sending written notice to the city council and, in the case of covered employers that have requested individual notice and provided contact information to the chief administrative officer, by notice to each such covered employer. However, once a livable wage is applied to an individual employee, no reduction in that employee's pay rate is permissible due to this annual adjustment.

(c) Covered employers shall provide at least twelve (12) compensated days off per year for full-time covered employees, and a proportionate amount for part-time covered employees, for sick leave, vacation, personal, or combined time off leave.

(Ord. of 11-19-01; Ord. of 5-2-11; Ord. of 6-13-11; Ord. of 10-21-13)

21-83 Applicability.

(a) This article shall apply to any service contract or grant, as provided by this article that is awarded or entered into after the effective date of the article. After the effective date of the article, entering into any agreement or an extension, renewal or amendment of any contract or grant as defined herein shall be subject to compliance with this article.

(b) The requirements of this article shall apply during the term of any service contract subject to the article. Covered employers who receive grants shall comply with this article during the period of time the funds awarded by the City of Burlington are being expended by the covered employer.

(Ord. of 11-19-01; Ord. of 10-21-13)

21-84 Enforcement.

(a) Each service contract or grant covered by this article shall contain provisions requiring that the covered employer or grantee submit a written certification, under oath, during each year during the term of the service contract or grant, that the covered employer or grantee (including all of its subcontractors and subgrantees, if any) is in compliance with this article. The failure of a contract to contain such provisions does not excuse a covered employer from its obligations under this article. The covered employer shall agree to post a notice regarding the applicability of this section in any workplace or other location where employees or other persons contracted for employment are working. The covered employer shall agree to provide payroll records or other documentation for itself and any subcontractors or subgrantees, as deemed necessary by the chief

administrative officer of the City of Burlington, within ten (10) business days from receipt of the City of Burlington's request.

(b) The chief administrative officer of the City of Burlington may require that a covered employer submit proof of compliance with this article at any time, including but not limited to:

- (1) Verification of an individual employee's compensation;
- (2) Production of payroll, health insurance enrollment records, or other relevant documentation; or
- (3) Evidence of proper posting of notice.

If a covered employer is not able to provide that information within ten (10) business days of the request, the chief administrative officer may turn the matter over to the city attorney's office for further enforcement proceedings.

(c) The City of Burlington shall appoint a designated accountability monitor that shall have the authority:

- (1) To inform and educate employees of all applicable provisions of this article and other applicable laws, codes, and regulations;
- (2) To create a telephonic and electronic accountability system under this article that shall be available at all times to receive complaints under this article;
- (3) To establish and implement a system for processing employees' complaints under this article, including a system for investigating complaints and determining their initial credibility; and
- (4) To refer credible complaints to the city attorney's office for potential enforcement action under this article.

The designated accountability monitor shall forward to the City of Burlington all credible complaints of violations within ten (10) days of their receipt.

(d) Any covered employee who believes his or her covered employer is not complying with this article may file a complaint in writing with the city attorney's office within one (1) year after the alleged violation. The city attorney's office shall conduct an investigation of the complaint, during which it may require from the covered employer evidence such as may be required to determine whether the covered employer has been compliant, and shall make a finding of compliance or noncompliance within a reasonable time after receiving the

complaint. Prior to ordering any penalty provided in subsection (e), (f), or (g) of this section, the city attorney's office shall give notice to the covered employer. The covered employer may request a hearing within thirty (30) days of receipt of such notice. The hearing shall be conducted by a hearing officer appointed by the city attorney's office, who shall affirm or reverse the finding or the penalty based upon evidence presented by the city attorney's office and the covered employer.

(e) The City of Burlington shall have the right to modify, terminate and/or seek specific performance of any contract or grant with a covered employer from any court of competent jurisdiction, if the covered employer has not complied with this article.

(f) Any covered employer who violates this article may be barred from receiving a contract or grant from the city for a period up to two (2) years from the date of the finding of violation.

(g) A violation of this article shall be a civil offense subject to a civil penalty of from two hundred dollars (\$200.00) to five hundred dollars (\$500.00). All law enforcement officers and any other duly authorized municipal officials are authorized to issue a municipal complaint for a violation of this article. Each day any covered employee is not compensated as required by this article shall constitute a separate violation.

(h) If a complaint is received that implicates any City of Burlington employee in a possible violation of this article, that complaint will be handled through the City's personnel procedures, not through the process outlined in this article.

(i) Any covered employee aggrieved by a violation of this article may bring a civil action in a court of competent jurisdiction against the covered employer within two (2) years after discovery of the alleged violation. The court may award any covered employee who files suit pursuant to this section, as to the relevant period of time, the following:

(1) The difference between the livable wage required under this article and the amount actually paid to the covered employee;

(2) Equitable payment for any compensated days off that were unlawfully denied or were not properly compensated;

(3) Liquidated damages in an amount equal to the amount of back wages and/or compensated days off unlawfully withheld or fifty dollars (\$50.00) for each employee or person whose rights under this article were violated for each day that the violation occurred or continued, whichever is greater;

(4) Reinstatement in employment and/or injunctive relief; and

(5) Reasonable attorneys' fees and costs.

(j) It shall be unlawful for an employer or any other person to interfere with, restrain, or deny the exercise of, or the attempt to exercise, any right protected under this article. No person shall engage in retaliation against an employee or threaten to do so because such employee has exercised rights or is planning to exercise rights protected under this article or has cooperated in any investigation conducted pursuant to this article.

(Ord. of 11-19-01; Ord. of 2-17-04; Ord. of 5-2-11; Ord. of 10-21-13)

21-85 Other provisions.

(a) No covered employer shall reduce the compensation, wages, fringe benefits or leave available to any covered employee in order to pay the livable wage required by this article. Any action in violation of this subsection shall be deemed a violation of this article subject to the remedies of Section [21-84](#).

(b) No covered employer with a current contract, as of the effective date of this provision, with the City of Burlington for the use of property located at the Burlington International Airport may reduce, during the term of that contract, the wages of a covered employee below the livable wage as a result of amendments to this article.

(c) Where pursuant to a contract for services with the city, the contractor or subcontractor incurs a contractual obligation to pay its employees certain wage rates, in no case except as stated in subsection (d) of this section, shall the wage rates paid pursuant to that contract be less than the minimum livable wage paid pursuant to this article.

(d) Notwithstanding subsection (c) of this section, where employees are represented by a bargaining unit or labor union pursuant to rights conferred by state or federal law and a collective bargaining labor agreement is in effect governing the terms and conditions of employment of those employees, this chapter shall not apply to those employees, and the collective bargaining labor agreement shall control.

(e) Covered employers shall inform employees making less than twelve dollars (\$12.00) per hour of their possible right to the Earned Income Tax Credit under federal and state law.

(f) The chief administrative officer of the city shall have the authority to promulgate rules as necessary to administer the provisions of this article, which shall become effective upon approval by the city council.

(Ord. of 11-19-01; Ord. of 10-21-13)

21-86 Exemptions.

An exemption from any requirement of this article may be requested for a period not to exceed two (2) years:

- (a) By a covered employer where payment of the livable wage would cause substantial economic hardship;
and
- (b) By the City of Burlington where application of this article to a particular contract or grant is found to violate specific state or federal statutory, regulatory or constitutional provisions or where granting the exemption would be in the best interests of the City.

A covered employer or grantee granted an exemption under this section may reapply for an exemption upon the expiration of the exemption. Requests for exemption may be granted by majority vote of the city council. All requests for exemption shall be submitted to the chief administrative officer. The finance committee of the City of Burlington shall first consider such request and make a recommendation to the city council. The decision of the city council shall be final.

(Ord. of 11-19-01; Ord. of 10-21-13)

21-87 Severability.

If any part or parts or application of any part of this article is held invalid, such holding shall not affect the validity of the remaining parts of this article.

(Ord. of 11-19-01; Ord. of 10-21-13)

21-88 Annual reporting.

On or before April 15 of each year, the city attorney's office shall submit a report to the city council that provides the following information:

- (a) A list of all covered employers broken down by department;
- (b) A list of all covered employers whose service contract did not contain the language required by this article;
and
- (c) All complaints filed and investigated by the city attorney's office and the results of such investigation.

(Ord. of 10-21-13)

21-89 Effective date.

The amendments to this article shall take effect on January 1, 2014, and shall not be retroactively applied.

(Ord. of 10-21-13)

Certification of Agreement to Comply with the City of Burlington’s Livable Wage Ordinance

I, _____, on behalf of _____ (“the Contractor”), in connection with a contract for _____

services to be provided to the City of Burlington (“the City”), hereby certify, under oath, that the Contractor (and any of its subcontractors or subgrantees under this contract) shall comply with the City’s Livable Wage Ordinance (“LWO”), B.C.O. 21-80 et seq., and that:

- (1) The Contractor shall pay all “covered employees” as defined by the LWO (including covered employees of subcontractors or subgrantees) a livable wage (as determined, or adjusted, annually by the City’s chief administrative officer), and shall provide required paid time off for the term of the contract (*or the duration of the contracted project*);
 - (a) Full-time employees are entitled to 12 days of paid time off per year; and
 - (b) Part-time employees are entitled to 12 days of paid time off per year on a prorated basis;
 - (c) For a covered employer that provides employer assisted health care, the livable wage shall be at least \$17.96 per hour; and
 - (d) For a covered employer that does not provide employer assisted health care, the livable wage shall be at least \$19.15 per hour.
- (2) The Contractor shall post a notice regarding the applicability of the LWO in the workplace or in other locations where covered employees normally work, and where such notice can be readily seen;
- (3) Upon request of the City’s chief administrative officer, the Contractor, for itself and, as applicable, for any of its subcontractors or subgrantees, shall provide payroll records, health insurance enrollment records, and other relevant documentation, as deemed necessary by the chief administrative officer, within ten (10) business days from receipt of the City’s request;
- (4) The Contractor shall cooperate in any investigation conducted pursuant to the LWO by the City’s designated accountability monitors or the City’s Office of City Attorney & Corporate Counsel;
- (5) The Contractor shall not retaliate, nor allow any of its subcontractors or subgrantees to retaliate, against an employee or other person because such employee or person has exercised rights or is planning to exercise rights protected under the LWO, or has cooperated in an investigation conducted pursuant to the LWO;
- (6) The Contractor is required to insert in all subcontracts the requirements of the LWO. The Contractor is liable for violations of the LWO committed by its covered subcontractors.

Date: _____

By: _____
Contractor, or its duly authorized agent

Subscribed and sworn to before me:

Date: _____

Notary Public

ARTICLE VII. OUTSOURCING

21-90 Policy.

It is the policy of the City of Burlington to let service contracts to contractors, subcontractors and vendors who perform work in the United States.

(Ord. of 11-21-05/12-21-05)

21-91 Definitions.

(a) *Contractor or vendor.* A person or entity that has a contract with the City of Burlington primarily for the furnishing of services (as opposed to the purchasing of goods), including any subcontractors of such contractor or vendor.

(b) *Government funded project.* Any contract for services which involves any city funds and the total amount of the contract is fifty thousand dollars (\$50,000.00) or more. Burlington School Department contracts shall not be considered government funded projects under this article.

(c) *Outsourcing.* The assigning or reassigning, directly, or indirectly through subcontracting, of services under a government funded project to workers performing the work outside of the United States.

(Ord. of 11-21-05/12-21-05)

21-92 Implementation.

(a) No contract for a government funded project shall be let to any contractor, subcontractor, or vendor who is outsourcing, or causing the work to be performed outside of the United States or Canada.

(b) Prior to the commencement of work on a government funded project a contractor, subcontractor or vendor shall provide written certification that the services provided under the contract will be performed in the United States or Canada.

(Ord. of 11-21-05/12-21-05)

21-93 Exemption.

An exemption from requirements of this article may be authorized by the chief administrative officer based upon a determination that the services to be performed for the government funded project are not available in the United States or Canada at a reasonable cost. Any such exemption decision by the chief administrative officer

shall be reported to the board of finance in writing within five (5) days. The board of finance may, if it should vote to do so, override the exemption decision if such vote occurs within fourteen (14) days of the date of the chief administrative officer's communication to such board.

(Ord. of 11-21-05/12-21-05)

21-94 Enforcement.

(a) Any contractor, subcontractor or vendor who files false or materially misleading information in connection with an application, certification or request for information pursuant to the provisions of this article or outsources work on a government funded project shall be deemed to be in violation of this article.

(b) A violation of this article shall be a civil offense subject to a civil penalty of from one hundred dollars (\$100.00) to five hundred (\$500.00). All law enforcement officers and any other duly authorized municipal officials are authorized to issue a municipal complaint for a violation of this article. Each day any violation of any provision of this article shall continue shall constitute a separate violation.

(c) The City of Burlington shall have the right to modify, terminate and or seek specific performance of any contract for a government funded project if the contractor, subcontractor or vendor has not complied with this article.

(Ord. of 11-21-05/12-21-05)

21-95—21-99 Reserved.

Certification of Compliance with the City of Burlington's Outsourcing Ordinance

I, _____, on behalf of

_____ (Contractor) and in connection with the

_____ [project], hereby certify under oath that (1) Contractor shall comply with the City of Burlington's Outsourcing Ordinance (Ordinance §§ 21-90 – 21-93); (2) as a condition of entering into this contract or grant, Contractor confirms that the services provided under the above-referenced contract will be performed in the United States or Canada.

Dated at _____, Vermont this ____ day of _____, 20__.

By: _____
Duly Authorized Agent

Subscribed and sworn to before me: _____
Notary

ARTICLE VIII. UNION DETERRENCE

21-100 Policy.

It is the policy of the City of Burlington to limit letting contracts to organizations that provide union deterrence services to other companies.

(Ord. of 3-27-06/4-26-06)

21-101 Definitions.

(a) *Contractor or vendor.* A person or entity that has a contract with the City of Burlington primarily for the furnishing of services (as opposed to the purchasing of goods), including any subcontractors of such contractor or vendor.

(b) *Government funded project.* Any contract for services which involves any City funds and the total amount of the contract is fifteen thousand dollars (\$15,000.00) or more. Burlington School Department contracts shall not be considered government funded projects under this article.

(c) *Union deterrence services.* Services provided by a contractor, subcontractor or vendor that are not restricted to advice concerning what activities by an employer are prohibited and permitted by applicable laws and regulations, but extend beyond such legal advice to encouraging an employer to do any of the following:

- 1) Hold captive audience, (i.e., mandatory) meetings with employees encouraging employees to vote against the union;
- 2) Have supervisors force workers to meet individually with them to discuss the union;
- 3) Imply to employees, whether through written or oral communication, that their employer may have to shut down or lay people off if the union wins the election;
- 4) Discipline or fire workers for union activity;
- 5) Train managers on how to dissuade employees from supporting the union.

(d) *Substantial portion of income.* For the purposes of this article, substantial portion of income shall mean greater than ten (10) percent of annual gross revenues or one hundred thousand dollars (\$100,000.00), whichever is less.

(Ord. of 3-27-06/4-26-06)

21-102 Implementation.

- (a) No contract for a government funded project shall be let to any contractor, subcontractor, or vendor who
- 1) Advises or has advised an employer to conduct any illegal activity in its dealings with a union.
 - 2) Advertises union deterrence services as specialty services;
 - 3) Earns a substantial portion of its income by providing union deterrence services to other companies in order to defeat union organizing efforts.
- (b) Prior to the commencement of work on a government funded project a contractor, subcontractor or vendor shall provide written certification that it has not advised the conduct of any illegal activity, it does not currently, nor will it over the life of the contract provide union deterrence services in violation of this article.

(Ord. of 3-27-06/4-26-06)

21-103 Enforcement.

- (a) Any contractor, subcontractor or vendor who files false or materially misleading information in connection with an application, certification or request for information pursuant to the provisions of this article or provided union deterrence services during the life of a contract for a government funded project shall be deemed to be in violation of this article.
- (b) The City of Burlington shall have the right to modify, terminate and or seek specific performance of any contract for a government funded project if the contractor, subcontractor or vendor has not complied with this article.

(Ord. of 3-27-06/4-26-06)

21-104—21-110 Reserved.

Certification of Compliance with the City of Burlington's
Union Deterrence Ordinance

I, _____, on behalf of _____
(Contractor) and in connection with _____ (City
contract/project/grant), hereby certify under oath that _____
(Contractor) has not advised the conduct of any illegal activity, and it does not currently, nor will
it over the life of the contract advertise or provide union deterrence services in violation of the
City's union deterrence ordinance.

Dated at _____, Vermont this ____ day of _____, 20__.

By: _____
Duly Authorized Agent