



Addendum No.: 01

Date Of Addendum: 3/29/2021

CT DAS | Construction Services | Office of Legal Affairs, Policy, and Procurement

DEEP West District Headquarters
Black Rock State Park
2065 Thomaston Rd, Watertown, CT
BI – T – 615

Original Bid Due Date / Time:

April 21, 2021

1:00 PM

Previous Addenda: None

TO: Prospective Bid Proposers:

This Addendum forms part of the "Contract Documents" and modifies or clarifies the original "Contract Documents" for this Project dated May 15, 2020. Prospective Bid Proposers **shall** acknowledge receipt of the total number the Addenda issued for this Project on the space provided on Section 00 41 April 21, 2021 00 Bid Proposal Form.

Failure to acknowledge receipt of the total number the Addenda issued for this Project on the space provided on Section 00 41 00 Bid Proposal Form shall subject Bid Proposers to disqualification.

The following clarifications are applicable to drawings and specifications for the project referenced above.

Item 1:

Pre-Bid Conference Meeting Report and Sign-in Sheets are attached for Bidder's reference.

Item 2:

Project Manual, Table of Contents:

Add: Section 034150 "Precast Concrete Hollow Core Planks", attached.

Item 3:

In Section 033000 "Cast-in-Place Concrete", Paragraph 2.3 "Concrete Materials" add the following:

- G. Crystalline Waterproofing for use at Exterior Elevated Platform Topping Slab above Hollow-Core Planks:
1. **Crystalline Waterproofing Additive:** Concrete waterproofing and protection system shall be of the crystalline type that chemically controls and permanently fixes a non-soluble crystalline structure within the pores and capillary tracts of the concrete. This crystalline system causes the concrete to become sealed against the penetration of liquids from any direction, and protects the concrete from deterioration due to harsh environmental conditions. The system is used for above or below-grade walls and slabs, including liquid retaining structures and where enhanced chemical resistance is required. Dosed at 2-3% by weight of cement content.
 2. Basis of Design Product is Xypex C500 Additive, as manufactured by:
Xypex Chemical Corporation
13731 Mayfield Place, Richmond, B.C., Canada V6V 2G9
Tel: 800 961.4477 or 604 273.5265
Fax: 604 270.0451
E-mail: info@xypex.com
Website: www.xypex.com

Subject to compliance with properties of Basis of Design Product, other manufacturers shall be allowed, including products of the following:
 - a. Master Builders, a brand of MBCC Group
 - b. Sika



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Item 4:

In Section 033543 "Polished Concrete Finishing", Paragraph 2.2 "Stain Materials":

Add: "B. Color to be "Concrete Gray" (based on Basis of Design Product).

Item 5:

In Section 061533 "Wood Decking", Paragraph 2.3 "Wood Decking":

Add: "C. Tongue and groove wood roof decking (at Pavilion, ref. drawing AA805) shall be Controlled Random Layup, Nominal 2 x 6, solid wood decking. Wood shall be pressure treated southern yellow pine to match Glulams, or the heartwood of other naturally resistant species. Roof decking shall be provided by Contractor. Provide minimum 2-foot end joint spacing and minimum 2/3 backspan. Fasteners shall be (2) per board, at each frame, minimum 6", stainless steel screw.

Item 6:

In Section 061533 "Wood Decking", Paragraph 2.4 "Wood Railings": (for railings and dumpster enclosure)

Delete: "B. Dimension Lumber for wood railings to be 2 x 6, red or white oak, as furnished by Owner."

Add: "B. Dimension Lumber for wood railings to be 3 x 8, red or white oak, as furnished by Owner."

Item 7:

On Drawing S2.0 "Minimum Wall Reinforcing Detail, Add Note 3, as follows:

3. **Provide (1) #5 vertical** in each of the 3 adjacent cells at corners. Provide (1) #5 vertical at 32" o.c. max in balance of wall

Item 8 – Bid Phase RFI's:

RFI 8A: When opening Drawings S1.2 MEZZANINE FRAMING PLAN, FP001 FIRE PROTECTION LEGENDS, FP103 UPPER LEVEL FIRE PROTECTION PLAN, FP104 MEZZANINE LEVEL FIRE PROTECTION PLAN, FP501 FIRE PROTECTION DETAILS would say "Insufficient data for an image" & "An error exists on this page. Acrobat may not display the page correctly. Please contact the person who created the PDF document to correct the problem." The information on the drawings are not being displayed in full. Please provide corrected drawings.

Response: This issue seems unique to the Bidder that inquired, but in order to ensure the correct information is available to all bidders, the referenced drawings are herein attached. Note there are no changes to these drawings and are provided exactly as included in the original Bid Document.

RFI 8B: Spec section 012313 Supplemental Bid no. 3 calls for Two solar Car Charging Stations, there are FIVE (5) on the drawings but the specific locations for the supplemental bid for two solar charging stations are not identified, Please provide locations.

Response: Referencing Drawing SE-1, the two single-port charging stations (E6) at the upper lot, the one, single-port charging station (E6) at the lower lot and the two dual-port charging stations (E7) at the lower lot are all hard-wired and included in the base Bid. The two solar charging stations included as a Supplemental Bid are in addition to these and free-standing and can be located anywhere in the park, at the discretion of DEEP.



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RFI 8C: Spec section 033543 POLISHED CONCRETE FINISHING has mentioned score cuts and Dye/stain in the polished concrete specs, but nothing detailing pattern or stain/dye color. Please provide score pattern detail and dye/stain color.

Response: The score patterns for the concrete slabs are provided on Drawing AA406. Refer to Item 4 above for stain information.

Item 9 – Bid Phase Proposed Substitutions:

Substitution 9A: Specification Section 105113 – “Metal Lockers”. Proposed substitution for HDPE, Plastic Lockers, as manufactured by Scranton Products.

Response: The proposed substitution is rejected, as it is not comparable to the specified product.

Substitution 9B: Specification Section 323300 – “Site Furnishings”. Proposed substitution for Trash cans, Benches and Bike racks, as manufactured by Landscape Forms, Anova and Equiparc, respectively.

Response: Review is pending proper submission of documentation.

Substitution 9C: Specification 230923 “Direct Digital Control System for HVAC”. Proposed Siemens Talon as Equal to Alerton Control System (BOD).

Response: Note the Form 7001 provided is incorrectly filled out, referencing the incorrect Project Name, Location, Architect’s Name and Owner. Review is pending proper submission of documentation.

List of Attachments:

1. Pre-Bid Conference Meeting Report and Sign-in Sheet
2. Specification Section 034150 “Precast Concrete Hollow Core Planks” (Addendum 01, 03/29/21)
3. Drawings issued due to indication of file error. No changes are no changes to these drawings:
 - a. S1.2 Mezzanine Framing Plan
 - b. FP001 Fire Protection Legends
 - c. FP103 Upper Level Fire Protection Plan
 - d. FP104 Mezzanine Level Fire Protection Plan
 - e. FP501 Fire Protection Details

All questions must be **emailed** (not **verbal** or by **phone**) to the consulting Architect/Engineer, TLB Architecture, LLC, Email: mfortuna@tlbarchitecture.com with copies sent to the DAS/CS Project Manager (Ira Henowitz, R.A.), Email: ira.henowitz@ct.gov and Construction Manager (Atane), Email: rhewey@ataneconsulting.com

End of Addendum 01

Mellanee Walton

Mellanee Walton, Associate Fiscal Administrative Officer
State of Connecticut
Department of Administrative Services, Construction Services
Office of Legal Affairs, Policy, and Procurement
450 Columbus Boulevard, Suite 1302
Hartford, CT 06103

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DEEP West District Headquarters Black Rock State Park
 State Project Number BI-T-615
 Pre-Bid Meeting Minutes
 Tuesday March 23, 2021 @ 11:00 AM
 Location: 2065 Thomaston Road, Watertown, CT

Attendees: Identified on the sign in sheet that is attached to this Pre-Bid Meeting Minutes:

General Introductory Information:

Ira Henowitz the Project Manager for DCS/CS opened the meeting with introductions of all the DCS/CS and DEEP personnel, offering each party the opportunity to make any opening comments. The Architect and Construction Administer were introduced as a part of laying out the order in which each party would speak. Ira then handed the meeting over to Robin Hewey the Construction Administrator, from ATANE Consulting who functioned as the master of ceremonies. The items discussed generally dealt with the items outlined on the "Invitation To Bid" and the "Pre-Bid Meeting Agenda". Some items were stressed as each item came up. No content was added to the items on those two documents. Referral was always made to the Contract Documents if anyone had a question or needed further explanation.

Questions During Bidding: The Bidders were told to ask their questions in the form of an RFI to be sent to the Project Manager, the Architect and the Construction Manager. The "Cut-Off Date for RFI's was set at Tuesday April 6, 2021.

Questions about Substitutions or Equal Products During Bidding: Last Submittal Date is Tuesday April 6, 2021. Read all the requirements to make a submittal in Specification 01-25-00. Incomplete submittals will be rejected. **Substitutions after Bidding are extremely rare. Bidder should not rely on any product "Substitutions" or "Equivalents" being approved after the Bidding due date.**

ITEMS DISCUSSED:

Item#	Discussion Item	Action By:
	<p><u>"Invitation to Bid" Items Reviewed during Pre-Bid Meeting:</u></p> <ol style="list-style-type: none"> 1. Bid Opening Date was stressed as 1:00 PM on Wednesday April 21, 2021. 2. Pay close attention to the "Set Aside Requirements" for Subcontractors and/or Suppliers. SBE 25% and MBE 6.25%. 3. The Contract Time for the successful Bidder will be 365 Calendar Days. 4. Liquidated Damages were pointed out. The number of days beyond Substantial Completion and the number of days beyond 90 days after Substantial Completion to close out the Project is based on Calendar Days. 5. Bids shall be filed, and can be edited, electronically on "BizNet" until 1:00PM on Wednesday, April 21, 2021. 6. There are a lot of required attached documents that have to be electronically sent along with the actual Bid. Review Divisions 00-21-13, 00-41-00 and 00-41-10 for other documents. 7. 	
	<p><u>"Pre-Bid Meeting Agenda" Items Reviewed during Pre-Bid Meeting:</u></p> <p><u>Section 1.0 Pre-Bid Meeting:</u> No changes to the written information for Items 1.1 through 1.4.</p> <p><u>Section 2.0 Pre-Bid Meeting Agenda:</u></p> <ol style="list-style-type: none"> 2.1 Introduction of Participants: No changes to information supplied on form. 2.2 Project Summary: 2.2.1 through 2.2.4: Bidders to refer to Specification Sections listed. 2.2.5: Schedule is very important. Review Spec 01.32.16.13 CPS. Shall Primavera program. Require GC to employ a 3 year experienced Scheduler that needs to be approved by DAS/CS. 	

	<p>A Preliminary Schedule shall be submitted and approved before any work can be done on the site or "notice to proceed" will be issued.</p> <p>2.2.6: Contract time is 365 calendar days from Notice to Proceed is given by DAS/CS.</p> <p>2.2.7: No changes to information supplied on form</p> <p><u>Section 2.3 Procurement and Contracting Requirements:</u></p> <p>No changes to the written information for Items 2.3.1 through 2.3.10. Refer to all the Specifications listed and follow those instructions. If there are any questions; send an RFI to the Architect, Project Manager, and Construction Administrator.</p> <p><u>Section 2.4 Communication During Bidding Period:</u></p> <p>No changes to the written information for Items 2.4.1 to 2.4.3 and 2.4.5 to 2.4.6.</p> <p>Change to Item 2.4.4: All Pre-Bid Substitutions shall be submitted for review and possible approval by 4:00 PM Tuesday, April 6, 2021.</p> <p><u>Section 2.5 Contract Considerations:</u></p> <p>2.5.1: Allowances. There are NO Allowances included in this Project.</p> <p>2.5.2: Unit Prices: There are unit prices in this contract for Site Work only.</p> <p>2.5.3: Supplemental Bid: There are 3 Supplemental Bids included in this Project. (Refer to specifications indicated and Contract Drawings for items and their location.)</p> <p><u>Section 2.6 Separate Contracts:</u></p> <p>2.6.1: Work by Owner: Contractor to cooperate with Owner when Owner has other Contractors or workers on site.</p> <p>2.6.2: Work of Other Contracts: Contractor to cooperate with Owner and other Contractors doing work on the site.</p> <p><u>Section 2.7 Post Pre-Bid Meeting Addendum:</u></p> <p>2.7.1: Interpretations of the Bidding Documents shall be in writing as an RFI and shall be submitted for review by no later than 4:00 PM on April 6, 2021. This allows 14 days for any interpretations and any supplemental instructions, given in writing if issued, as an Addenda that will be posted on CT source.</p> <p>2.7.2: Bidder questions are to be submitted as RFI's to Architect, Project Manager, and Construction Administrator.</p> <p><u>Section 2.8 Other Agenda Topics and Notes:</u></p> <p>2.8.1: The General Contractor will need someone with LEED experience so that they can perform all the paperwork associated with the LEED system.</p> <p>2.8.2: Black Rock State Park will be occupied by the DEEP staff and the Public during construction. General Contractor is to cooperate with the DEEP staff and keep their operations a safe distance from the Public. All access roads shall remain in good condition and open to the public.</p> <p>2.8.3: Work with DEEP on gaining access to existing site utilities and with all the Utility Companies for water, sewer, electricity and communications connections.</p> <p><u>Section 3 Pre-Bid Meeting Minutes:</u> No changes to the written information for Items 3.1 through 3.4.</p>	
	<p><u>MISCELLANEOUS:</u></p> <p>PMWeb is to be utilized by all parties to keep all the official documents for this Project.</p>	
	<p><u>MEETING FOLLOW -UP:</u></p> <p>The contractors were given the opportunity to walk up the hill to where both the new Storage Garage and new Office Building will be constructed so that they could see the general character of the land and the existing grading.</p>	

Minutes prepared by Robin Hewey, Construction Administrator, from ATANE Consulting. If there are any omissions, corrections or clarifications required, please notify the writer within 5 days.



Bid Phase Meeting Attendance Log

DAS/CS Project Title:	DEEP West District Headquarters Black Rock State Park		
DAS/CS Project No.:	BI-T-615	Meeting Purpose (insert "X" below):	
Date:	March 23, 2021	<input checked="" type="checkbox"/>	Pre-Bid Meeting
Meeting Start Time:	11:00 AM	<input type="checkbox"/>	Post Bid Review Meeting
Meeting Location:	Black Rock State Park 2065 Thomaston Road, Watertown, CT	<input type="checkbox"/>	Other:

Name: Robin Hewey	Title: Construction Manager
Company/Department: ATANE Consulting	E-mail: rhewey@ataneconsulting.com
Street: 100 Great Meadow Road – Suite 400	Phone: 860-761-1001 - Ext 237
City/State/Zip Wethersfield, CT 06109	FAX:

Name: Michael Fortuna	Title: Principal
Company/Department: TLB Architecture LLC	E-mail: mfortuna@tlbarchitecture.com
Street: 92 West Main St	Phone: 860-526-9448
City/State/Zip Chester, CT 06412	FAX:

Name: Ira Henowitz	Title: Project Manager
Company/Department: CT DAS/CS	E-mail: Ira.henowitz@ct.gov
Street: 450 Columbus Boulevard, Suite1201	Phone: 860-614-1733
City/State/Zip Hartford, CT 06103	FAX:

Name: Allan duFrend	Title: Ast. Project Manager
Company/Department: CT-DAS/CS	E-mail: Allan.dufrend@ct.gov
Street: 450 Columbus Boulevard, Suite1201	Phone: 860-381-9319
City/State/Zip Hartford, CT 06103	FAX:

Name: David Cooley	Title: Supervising Civil Engineer
Company/Department: DEEP	E-mail: David.cooley@ct.gov
Street: 163 Great Hill Road	Phone: 860-205-7552
City/State/Zip Portland, CT 06441	FAX:



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Meeting Location:	Black Rock State Park 2065 Thomaston Road, Watertown, CT	<input type="checkbox"/>	Other:

Name: Robert Hofferth	Title: PS-1
Company/Department: DEEP	E-mail: robert.hofferth@ct.gov
Street: 163 Great Hill Road	Phone: 860-398-0218
City/State/Zip Portland, CT 06441	FAX:

Name: Gary Guimond	Title: Principal
Company/Department: Richter & Cegan	E-mail: ggumond@richtercegan.com
Street: P.O. Box 567	Phone: 860-678-0669
City/State/Zip Avon, CT 06001	FAX:

Name: Skip Kearns	Title: Operations Supervisor
Company/Department: DEEP	E-mail: skip.kearns@ct.gov
Street: 230 Plymouth Road	Phone: 860-803-1585
City/State/Zip Harwinton, CT 06791	FAX:

Name: Andrey Kaplum	Title: Manager
Company/Department: Castillo Property Services	E-mail: Andrey@castillopropertyservices.com
Street: 18 Bix Rd	Phone: 860-833-2892
City/State/Zip Wethersfield, CT 06109	FAX:

Name: Gary Broderick	Title: Project Manager
Company/Department: A.Secondino & Son, INC.	E-mail: gbroderick@asecondinoandson.com
Street: 21 Acorn Road	Phone: 203-915-3802
City/State/Zip Branford, CT 06405	FAX:



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Meeting Location:	Black Rock State Park 2065 Thomaston Road, Watertown, CT	Other:	

Name: Michael Flaherty	Title: VP
Company/Department: Burlington Construction	E-mail: michaelflaherty@burlingtonconstruction.com
Street: 450 New Litchfield St.	Phone: 860-482-5017
City/State/Zip Torrington, CT 06790	FAX: 860-496-0639

Name: Jon Jackopsic	Title: P.M>
Company/Department: WJ Mountford Co.	E-mail: jjackopsic@WJ.mountford.com
Street: 170 Commerce Way	Phone: 860-291-9448, EXT 123
City/State/Zip South Windsor, CT 06074	FAX:

Name: Lawrence Rosati	Title: P.X
Company/Department: The Morganti Group	E-mail: lrosati@morganti.com
Street: 100 Reserve Road, Suite D210	Phone: 203-994-2693
City/State/Zip Danbury CT, 06811	FAX:

Name: Bob Labanara	Title: Dr. BD
Company/Department: Wohlsen Construction	E-mail: blabanara@wohlsen.com
Street: 2321 Whitney Ave.	Phone: 203-710-0491
City/State/Zip Hamden, CT 06518	FAX:

Name: Jonathan Sygrove	Title: Estimator
Company/Department: Sarazin General Contractors	E-mail: jsygrove@sarazin.com
Street: 6 Commerce Drive	Phone: 860-456-4576
City/State/Zip North Windham, CT 06256	FAX:



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Meeting Location:	Black Rock State Park 2065 Thomaston Road, Watertown, CT	<input type="checkbox"/>	Other:

Name: Brian Wetzel	Title: PM
Company/Department: CES	E-mail: bwetzel@CESeng.com
Street: 811 Middle St	Phone: 860-632-1682
City/State/Zip Middletown, CT 06457	FAX:

Name: Kevin McDonnell	Title: Estimator
Company/Department: PAC Group LLC	E-mail: kmcdonnell@pacgroupllc.com
Street: 126 South Main St.	Phone: 860-485-9363
City/State/Zip Torrington, CT 06790	FAX: 860-485-9404

Name: Roel Legaspi	Title: SR. Estimator
Company/Department: Nosal Builders INC.	E-mail: roel@nosalbuilders.com
Street: 85 Fieldstone Court, Unit 1	Phone: 203-439-9320, Ext. 306
City/State/Zip Cheshire, CT 06410	FAX: 203-439-9319

Name: James Principi	Title: Estimator
Company/Department: Richards Corp	E-mail: dczapor@richardscorp.com
Street: 72 N. Harwinton Ave.	Phone: 860-583-9229
City/State/Zip Plymouth, CT	FAX:

Name: Maya Hadley	Title: Program Manager
Company/Department: JA Rosa Construction	E-mail: pete@jarosa.com
Street: 17 Town Line Road	Phone: 203-879-3495
City/State/Zip Wolcott, CT 06757	FAX:



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Name: Eric Lamore	Title: Operations
Company/Department: Enterprise Builders, Inc	E-mail: elamore@enterbuilders.com
Street: 46 Shepard Drive	Phone: 860-985-4920
City/State/Zip Newington, CT	FAX:

Name: Sean Carlin	Title: Estimator
Company/Department: Carlin Construction	E-mail: scarlin@carlinconstruction.com
Street: 5 Shaws Cove	Phone: 860-444-2567
City/State/Zip New London, CT 06320	FAX:

Name: Bill Church	Title:
Company/Department: Open Systems	E-mail: bchurch@osmetroct.com
Street: 258 Bypass Road	Phone: 860-815-7662
City/State/Zip Bedford Hills , New York 10507	FAX:

Name: Brian Baril	Title: Director of Estimating
Company/Department: Enterprise Builders, Inc.	E-mail: bbaril@enterbuilders.com
Street: 46 Shephard Drive	Phone: 860-466-5128
City/State/Zip Newington, CT 06111	FAX: 860-466-4119

Name: Kathleen Ryan	Title:
Company/Department: Open Systems Metro	E-mail: kryan@osmetro.com
Street: 258 Bypass Road	Phone: 914-241-0057
City/State/Zip Bedford Hills, NY 10507	FAX:



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Name: Charles Van Zanten	Title: Executive VP
Company/Department: Hawley Construction Corp.	E-mail: ccvz@hawleycompanies.com
Street: 30 Germantown Road	Phone: 203-792-5442
City/State/Zip Danbury, CT 06810	FAX: 203-743-7381

Name: Jacob Gawendo	Title: Estimator
Company/Department: The Nutmeg Companies, Inc.	E-mail: bids@nutmegcompanies.com
Street: 1 Ohio Ave.	Phone: 860-823-1780
City/State/Zip Norwich, CT 06340	FAX: 860-885-1421

Name: Matt Roberts	Title: P.M
Company/Department: Goldseal Roofing and Sheetmetal	E-mail: mroberts@gsroofs.com
Street: 1349 Waterbury Road	Phone: 203-527-9430
City/State/Zip Thomaston, CT 06787	FAX: 203-527-9431

Name: Mark Putchovich	Title: Estimator
Company/Department: Worth Construction	E-mail: chiefestimator@worthconstruction.com
Street: 24 Taylor Ave.	Phone: 203-797-8788
City/State/Zip Bethel, CT 06801	FAX: 203-791-2515

Name: Fred Tynes	Title: Business Development
Company/Department: La Rosa Building Group	E-mail: ftynes@larosabg.com
Street: 163 Research Parkway	Phone: 203-600-9343
City/State/Zip Meriden, CT 06450	FAX: 203-791-2515



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Name: Joe Piscitelli	Title: Assistant PM
Company/Department: Banton	E-mail: jpiscitelli@bantonconstruction.com
Street: 339 Washington Ave.	Phone: 203-234-2353
City/State/Zip North Haven, CT 06516	FAX:

Name:	Title:
Company/Department:	E-mail:
Street:	Phone:
City/State/Zip	FAX:

Name:	Title:
Company/Department:	E-mail:
Street:	Phone:
City/State/Zip	FAX:

Name:	Title:
Company/Department:	E-mail:
Street:	Phone:
City/State/Zip	FAX:

Name:	Title:
Company/Department:	E-mail:
Street:	Phone:
City/State/Zip	FAX:

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SECTION 034150 - PRECAST CONCRETE HOLLOW CORE PLANKS

PART 1 - GENERAL:

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.

1.02 DESCRIPTION OF WORK:

- A. Extent of structural precast concrete work is shown on drawings and in schedules.
- B. Structural precast concrete includes the following:

Hollow slab units

1.03 RELATED WORK:

- A. Section 017419 - Construction and Demolition Waste Management and Disposal
- B. Section 018113 "Sustainable Design Requirements" for general, administrative, procedural and product requirements for compliance with requirements of the USGBC's, LEED for BD & C, Version 4.1.
- C. Section 033000 "Cast-in-Place Concrete" for concrete requirements and topping slab
- D. Section 079200 "Joint Sealants" for sealants at penetrations.

1.03 SUSTAINABLE DESIGN REQUIREMENTS

- B. The Owner requires the Contractor to implement practices and procedures to meet the Project's environmental performance goals, which include achieving LEED v4 Certification and demonstrating compliance with the State of Connecticut's High-Performance Building Standards. Refer to Section 018113 - SUSTAINABLE DESIGN REQUIREMENTS for the Project's target certification level and specific LEED requirements. The Contractor shall ensure that the requirements related to the Project's sustainability design goals are implemented to the fullest extent. Substitutions, or other changes to the work proposed by the Contractor or their Subcontractors, shall not be allowed if such changes compromise the Project's sustainability goals and LEED certification

1.04 QUALITY ASSURANCE:

- A. Codes and Standards: Comply with provisions of the following codes, specifications and standards, except where more stringent requirements are shown or specified. For the codes and standards listed in this section and in subsequent sections, follow the latest edition recognized by building authority having jurisdiction at the time of construction.
1. American Concrete Institute ACI 301, "Specifications for Structural concrete for Buildings."
 2. ACI-318, "Building Code Requirements for Reinforced Concrete."
 3. Concrete Reinforcing Steel Institute, CRSI, "Manual of Standard Practice."
 4. Prestressed Concrete Institute MNL 116, "Manual for Quality Control for Plants and Production of Precast Concrete Products."
- B. Fabricator Qualifications: Firms which have 2 years successful experience in fabrication of precast concrete units similar to units required for this project will be acceptable. Fabricator must have sufficient production capacity to produce required units without causing delay in work.

Fabricator must be producer member of the Prestressed Concrete Institute (PCI) and/or participate in its Plant Certification Program.

- C. Fabrication Qualifications: Produce precast concrete units at fabricating plant engaged primarily in manufacturing of similar units, unless plant fabrication or delivery to project site is impractical.

If units are not produced at precast concrete fabricating plant, maintain procedures and conditions for quality control which are equivalent to plant production.

1.05 SUBMITTALS:

- A. Product Data: Submit manufacturer's specifications and instructions for manufactured materials and products. Include manufacturer's certifications and laboratory test reports as required.
- B. Sustainable Design Submittals:
1. LEED v4 Submittals: For all permanently installed products and materials related to the work of this Section, submit product and material documentation to comply with and contribute to the Project's LEED requirements, as outlined in the Submittals article of Section 018113 – Sustainable Design Requirements.
- B. Shop Drawings; Reinforcement: Submit shop drawings showing complete information for fabrication and installation of precast concrete units. Indicate member dimensions and cross-section; location, size and type of reinforcement, including special reinforcement and lifting devices necessary for handling and erection.

-
- C. Indicate layout, dimensions, and identification of each precast unit corresponding to sequence and procedure of installation. Indicate welded connections by AWS standard symbols. Detail inserts, connections, and joints, including accessories and construction at openings in precast units.
 - D. Provide location and details of anchorage devices that are to be embedded in other construction. Furnish templates if required for accurate placement.
 - E. Include erection procedure for precast units and sequence of erection.
 - F. Engineered Shop Drawings: For precast hollow core planks, include design analysis data to verify compliance with requirements, as well as details for attachment to other work..

1.06 DELIVERY, STORAGE AND HANDLING:

- A. Deliver precast concrete units to project site in such quantities and at such times to assure continuity of installation. Store units at project site to prevent cracking, distortion, staining, or other physical damage, and so that markings are visible. Lift and support units at designated lift points.
- B. Deliver anchorage items which are to be embedded in other construction before start of such work. Provide setting diagrams, templates, instructions and directions as required for installation.

PART 2 - PRODUCTS

2.01 FORMWORK:

- A. Provide forms and, where required, form facing materials of metal, plastic, wood, or other acceptable material that is nonreactive with concrete and will produce required finish surfaces.
- B. Accurately construct forms, mortar-tight, of sufficient strength to withstand pressures due to concrete placing operations, temperature changes, and when prestressed, pretensioning and detensioning operations. Maintain formwork to provide completed precast concrete units of shapes, lines, and dimensions indicated, within fabrication tolerances specified in PCI MNL 116.

Unless forms for plant-manufactured prestressed concrete units are stripped prior to detensioning, design forms so that stresses are not induced in precast units due to deformation of concrete under prestress or to movement during detensioning.

2.02 REINFORCING MATERIALS:

- A. Reinforcing Bars (Rebar): ASTM A 615, Grade 60, unless otherwise indicated.
- C. Welded Wire Fabric (WWF): ASTM A 185, welded steel wire fabric.
- D. Supports for Reinforcement: Provide supports for reinforcement including bolsters, chairs, spacers

and other devices for spacing, supporting and fastening reinforcing complying with CRSI recommendations.

- E. For exposed-to-view concrete surfaces, where legs of supports are in contact with forms, provide supports with legs which are plastic protected CRSI, Class 1.

2.03 PRESTRESSING TENDONS:

- A. Uncoated, 7-wire stress-relieved strand complying with ASTM A 416. Use Grade 250 unless Grade 270 indicated.

2.04 CONCRETE MATERIALS:

- A. Portland Cement: ASTM C 150, Type I.

Use only one brand and type of cement throughout project, unless otherwise acceptable to Engineer.

- B. Aggregates: ASTM C 33, and as herein specified. Provide aggregates from a single source for exposed concrete.

- C. Lightweight Aggregate: ASTM C 330.

- D. Water: Potable and free from foreign materials in amounts harmful to concrete and embedded steel.

- E. Air-Entraining Admixture: ASTM C 260.

- F. Water-Reducing Admixture: ASTM C 494, Type A.

2.05 CONNECTION MATERIALS:

- A. Steel Plates: Structural quality, hot-rolled carbon steel, ASTM A 283, Grade C.

- B. Steel Shapes: ASTM A 36.

- C. Anchor Bolts: ASTM A 307, low-carbon steel bolts, regular hexagon nuts and carbon steel washers.

- D. Finish of Steel Units: Exposed units galvanized per ASTM A 153; others painted with rust-inhibitive primer.

- E. Bearing Pads: Provide bearing pads for precast concrete units as indicated on drawings.

- F. Accessories: Provide clips, hangers, and other accessories required for installation of project units for support of subsequent construction or finishes.

2.06 GROUT MATERIALS:

-
- A. Cement Grout: Portland cement, ASTM C 150, Type I, and clean, natural sand, ASTM C 404. Mix at ratio of 1.0 part cement to 3.0 parts sand, by volume, with minimum water required for placement and hydration.
 - B. Non-metallic Shrinkage-Resistant Grout: Pre-mixed, non-metallic, non-corrosive, non-staining product containing selected silica sands, portland cement, shrinkage compensating agents, plasticizing and water reducing agents, complying with CRD-C621.

2.07 PROPORTIONING AND DESIGN OF MIXES:

- A. Prepare design mixes for each type of concrete required. Design mixes may be prepared by independent testing facility or by qualified precast manufacturing plant personnel, at precast manufacturer's option. Proportion mixes by either laboratory trial batch or field experience methods, using materials to be employed on the project for each type of concrete required, complying with ACI 301 Section 3.9 "Proportioning on the Basis of Previous Field Experience or Trial Mixtures."
- B. Produce normal-weight concrete consisting of specified portland cement, aggregates, admixtures, and water to produce the following properties.

Compressive strength; 5000 psi minimum at 28 days. Release strength for prestressed units: 3500 psi.

- C. Produce lightweight concrete consisting of specified portland cement, aggregates, admixtures, and water to produce the following properties:

Compressive strength; 5000 psi minimum of 28 days. Air-dry density; not less than 90 no more than 115 lbs. per cu. ft.

Release strength for prestressed units: 3500 psi.

Cure compression test cylinders using same methods as used for precast concrete work.

2.08 FABRICATION:

- A. General: Fabricate precast concrete units complying with manufacturing and testing procedures, quality control recommendations, and dimensional tolerances of PCI MNL-116, and as specified for types of units required.
- B. Built-in Anchorages: Accurately position built-in anchorage devices and secure to formwork. Locate anchorage where they do not affect position of main reinforcement or placing of concrete. Do not relocate bearing plates in units unless acceptable to Architect.
- C. Cast-in holes for openings larger than 10" diameter or 10" square in accordance with final shop drawings. Other smaller holes will be field cut by trades requiring them, as acceptable to Engineer.
- D. Coat surfaces of forms with bond-breaking compound before reinforcement is placed. Provide

commercial formulation formcoating compounds that will not bond with, stain nor adversely affect concrete surfaces, and will not impair subsequent treatments of concrete surfaces requiring bond or adhesion. Apply in compliance with manufacturer's instructions.

- E. Clean reinforcement of loose rust and mill scale, earth and other materials which reduce or destroy bond with concrete.
- F. Accurately position, support and secure reinforcement against displacement by formwork, construction, or concrete placement operations. Locate and support reinforcing by metal chairs, runners, bolsters, spacers and hangers, as required.
- G. Place reinforcement to obtain at least the minimum coverages for concrete protection. Arrange, space and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.
- H. Pretensioning of tendons for prestressed concrete may be accomplished either by single strand tensioning method or multiple-strand tensioning method. Comply with PCI MNL-116 requirements.
- I. Place concrete in a continuous operation to prevent formation of seams or planes of weakness in precast units, complying with requirements of ACI 304. Thoroughly consolidate placed concrete by internal and external vibration without dislocation or damage for reinforcement and built-in items.
- J. Identification: Provide permanent markings to identify pick-up points and orientation in structure, complying with markings indicated on final shop drawings. Imprint date of casting on each precast unit on a surface which will not show in finished structure.
- K. Curing by low-pressure steam, by steam vapor, by radiant heat and moisture, or other similar process may be employed to accelerate concrete hardening and to reduce curing time.
- L. Delay detensioning of prestressed units until concrete has attained at least 70% of design stress, as established by test cylinders.

If concrete has been heat-cured, perform detensioning while concrete is still warm and moist, to avoid dimensional changes which may cause cracking or undesirable stresses in concrete.

Detensioning of pretensioned tendons may be accomplished either by gradual release of tensioning jacks or by heat cutting tendons, using a sequence and pattern to prevent shock or unbalanced loading.

- M. Finish of Formed Surfaces: Provide finishes for formed surfaces of precast concrete as indicated for each type of unit, and as follows:
 - 1. Standard Finish: Normal plant run finish produced in forms that impart a smooth finish to concrete. Small surface holes caused by air bubbles, normal form joint marks, and minor chips and spalls will be tolerated, but no major or unsightly imperfections, honeycomb, or

structural defects will be permitted.

- N. Finish of Unformed Surfaces: Apply trowel finish to unformed surfaces unless otherwise indicated. Consolidate concrete, bring to proper level with straightedge, float, and trowel to a smooth uniform finish.

Apply scratch finish to precast units which will receive concrete topping after installation. Following initial strike off, transversely scarify surface to provide ridges approximately ¼” deep.

2.09 HOLLOW SLAB UNITS:

- A. Type: Precast prestressed concrete units with open voids running full length of slabs.
- B. Furnish units which are free of voids or honeycomb, with straight true edges and surfaces.
- C. Provide “Standard Finish” units unless otherwise indicated.
- D. Fabrication: Manufacturer units of concrete materials which will provide a minimum 3500 psi compressive strength at time of initial prestress and 28-day compressive strength of 5000 psi.

Adequately reinforce slab units to resist transporting and handling stresses.

- E. Include cast-in weld plates where required for anchorage or lateral bracing to structural steel members.
- F. Cooperate with other trades for installation of items to be cast in hollow slab units. Notify Contractor of items not received in ample time so as not to delay work.
- G. Provide solid, monolithic precast slab units indicated to be an integral part of hollow slab unit system. Design and fabricate solid units to dimensions and details indicated, s specified for hollow slab units.
- H. Provide headers of cast-in-place concrete or structural steel shapes for openings larger than one slab width in accordance with hollow slab unit manufacturer’s recommendations.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL:

- A. Bearing Pads: Install flexible bearing pads where indicated, as precast units are being erected. Set pads on level, uniform bearing surfaces and maintain in correct position until precast units are placed.
- B. Welding: Perform welding in compliance with AWS D 1.1, including qualification of welders.
- C. Protect units from damage by field welding or cutting operations and provide non-combustible shield as required.

-
- D. Repair damaged metal surfaces by cleaning and applying a coat of liquid galvanizing repair compound to galvanized surfaces and compatible primer to painted surfaces.
- E. Powder-Actuated Fasteners: Do not use powder-actuated fasteners for surface attachment of accessory items in precast, prestressed unit unless otherwise accepted by precast manufacturer.
- F. Installation Tolerances: Install precast units without exceeding following tolerance limits.
1. Variations from Plumb: $\frac{1}{4}$ " in any 20' run or story height, $\frac{1}{2}$ " total in any 40' or longer run.
 2. Variations from Level or Elevation: $\frac{1}{4}$ " in any 20' run; $\frac{1}{2}$ " in any 40' run; total plus or minus $\frac{1}{2}$ " at any location.
 3. Variation from position in plan: Plus or minimum $\frac{1}{2}$ " maximum at any location.
 4. Offsets in alignment and joints: After precast concrete units have been placed and secured, grout open spaces at connection and joints as follows:
- G. Grouting connections and joints: After precast concrete units have been placed and secured, grout open spaces at connection and joints as follows:

Cement grout consisting of 1 part portland cement, 3.0 parts sand, and only enough water to properly mix and for hydration.

Shrinkage-resistant grout consisting of premixed compound and water to provide a flowable mixture without segregation or bleeding.

Provide forms or other acceptable method to retain grout in place until sufficiently hard to support itself. Pack spaces with stiff grout material, tamping until voids are completely filled. Place grout to finish smooth, plumb, and level with adjacent concrete surfaces. Keep grouted joints damp for not less than 24 hours after initial set. Promptly remove grout material from exposed surfaces before it hardens.

3.02 PLANT QUALITY CONTROL EVALUATIONS:

- A. The Owner may employ a separate testing laboratory to evaluate precast manufacturer's quality control and testing methods.
- B. The precast manufacturer shall allow Owner's testing facility access to materials storage areas, concrete production equipment, and concrete placement and curing facilities. Cooperate with Owner's testing laboratory and provide samples of materials and concrete mixes as may be requested for additional testing and evaluation.
- C. Dimensional Tolerances: Units having dimensions smaller or greater than required, and outside specified tolerance limits, will be subject to additional testing as herein specified.

Precast units having dimensions greater than required will be rejected if appearance or function of the structure is adversely affected, or if larger dimensions interfere with other construction. Repair, or remove and replace rejected units as required to meet construction conditions.

- D. **Strength of Units:** The strength of precast concrete units will be considered potentially deficient if the manufacturing processes fail to comply with any of the requirements which may affect the strength of the precast units, including the following conditions.

Failure to meet compressive strength tests requirements.

Reinforcement, and pretensioning and detensioning of tendons of prestressed concrete, not conforming to specified fabrication requirements.

Concrete curing, and protection of precast units against extremes in temperature, not as specified.

Precast units damaged during handling and erection.

- E. **Testing Precast Units:** When there is evidence that the strength of precast concrete units does not meet specification requirements for hardened concrete for compressive strength determination, complying with ASTM C 42 and as follows.

Take at least 3 representative cores from precast units of suspect strength, from locations directed by Engineer.

Test cores in a saturated-surface-dry condition per ACI 318 if concrete will be wet during use of completed structure.

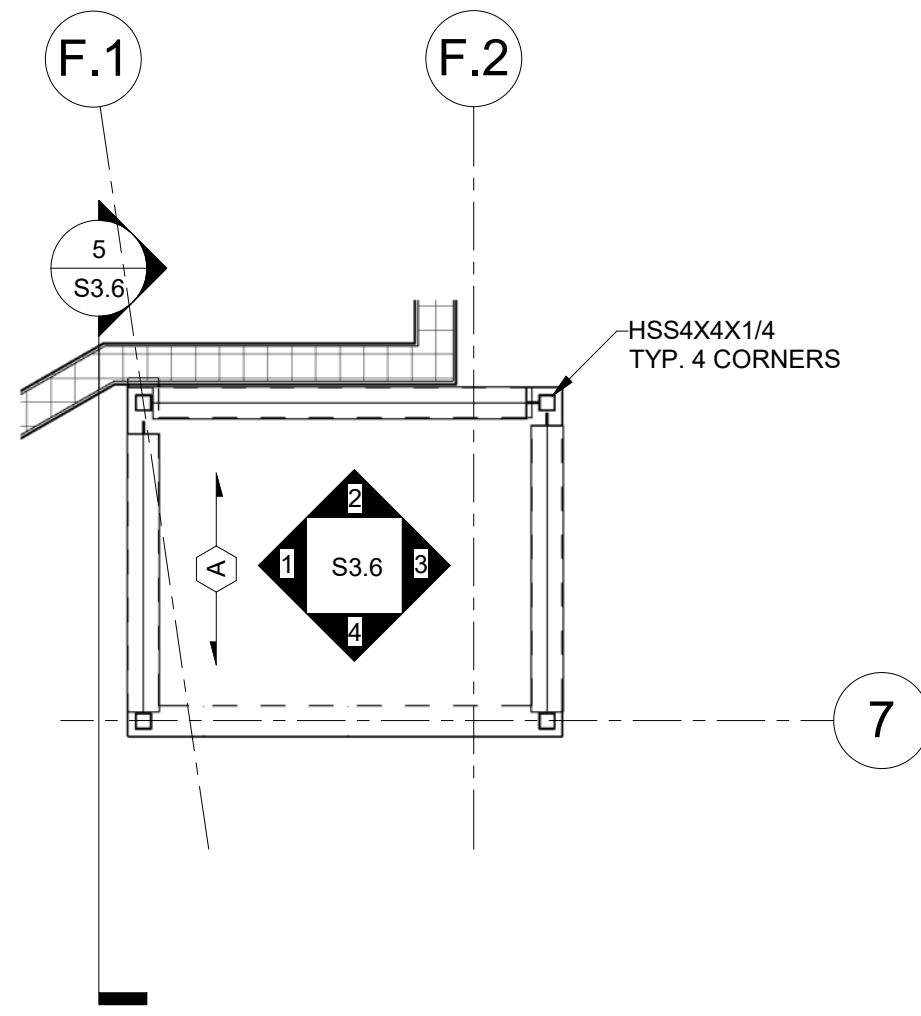
Strength of concrete for each series of cores will be considered satisfactory if their average compressive strength is at least 85% of 28-day design compressive strength.

Test results will be made in writing on same day that tests are made, with copies to Engineer, Contractor, and Precast Manufacturer. Include in test reports the project identification name and number, date, name of precast concrete manufacturer, name of concrete testing service, identification letter, name, and type of member or members represented by core test, design compressive strength, compression breaking strength and type of break (corrected for length-diameter ratio), direction of applied load to core with respect to horizontal plan of concrete as placed, and moisture condition of core at time of bearing.

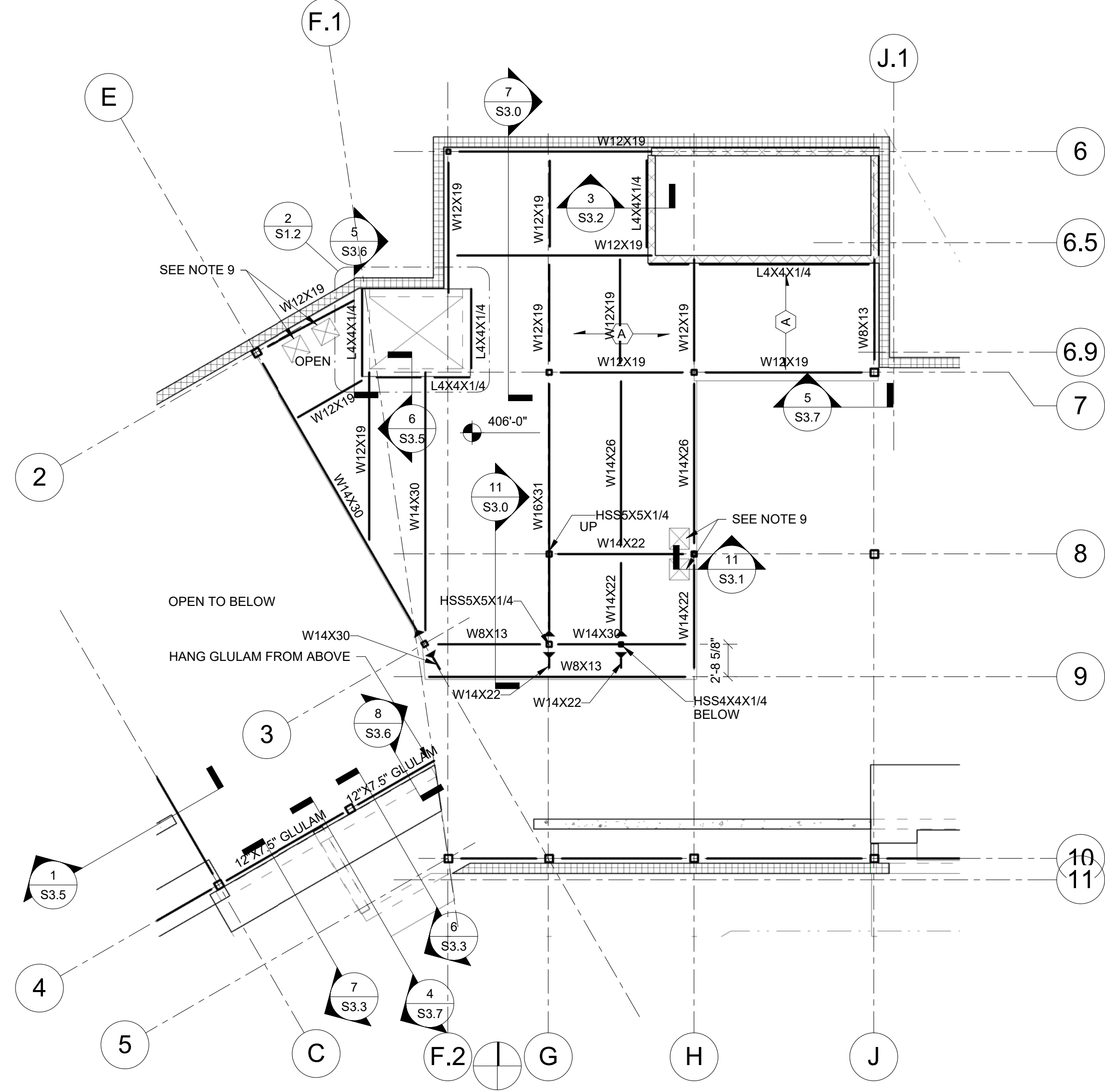
- F. **Patching:** Where core test results are satisfactory and precast units are acceptable for use in work, fill core holes solid with patching mortar, and finish to match adjacent concrete surfaces.

-
- G. Defective work: Precast concrete units which do not conform to specified requirements, including strength, tolerances, and finishes, shall be replaced with precast concrete units that meet requirements of this section. Contractor shall also be responsible for cost of corrections to other work affected by or resulting from corrections to precast concrete work.

END OF SECTION 034150



② PART PLAN AT TOP OF ELEVATOR SHAFT
1/4" = 1'-0"



① 04 MEZZANINE
1/8" = 1'-0"

PLAN NOTES

- SEE S0.1 FOR GENERAL NOTES.
- SEE S2.x SERIES DRAWINGS FOR TYPICAL DETAILS
- {xx'-xx"} INDICATES TOP OF STEEL BEAM ELEVATION
- {xx} DENOTES QUANTITY OF 3/4" x 5" DIAMETER HEADED SHEAR STUDS EQUALLY SPACED ON BEAM
- PROVIDE 3/4" DIAMETER HEADED SHEAR STUDS ON ALL STEEL BEAMS WITH SLAB ON METAL DECK. SPACE STUDS AT 1'-0" O.C. UNLESS A SPECIFIC NUMBER OF STUDS IS SPECIFIED THUS {xx}.
- REINF. ALL SLABS ON GRADE WITH 6x6 W2.9xW2.9 WWF
- CONCRETE "TROMBE" WALLS TO BE BOARD FORMED. OWNER TO PROVIDE FORM BOARDS. SEE ARCH DWGS FOR ADD'L INFO.
- ALL INTERIOR SLABS TO USE 3/8" STONE AGGREGATE.
- MECHANICAL OPENING. COORD SIZE AND LOCATION WITH ARCH AND MECH DRAWINGS. FRAME OPENING WITH TYPICAL ANGLE FRAME DETAIL ON S2.0

SLAB ON DECK / ROOF DECK SCHEDULE

MARK	DESCRIPTION	REINFORCEMENT
A	6" LW CONC W/3" 18GA COMPOSITE METAL DECK	6x6 W2.9xW2.9 WWF
B	6" PRECAST CONC PLANK W/ PITCHED TOPPING	6x6 W2.0xW2.0WWF IN TOPPING
C	12 7/8" SIPS PANEL	
D	3"-18 Ga Metal Roof Deck	

DRAWING SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	DECK SPAN DIRECTION AND TYPE
SD1	1" SLAB DEPRESSION CM TO CONFIRM DIMENSIONS WITH OTHER TRADES.
SD2	2" SLAB DEPRESSION

drawing title MEZZANINE FRAMING PLAN		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
REVISIONS			
mark	date	description	
drawing prepared by GNCB Consulting Engineers, P.C. 1358 BOSTON POST ROAD OLD SAYBROOK, CT		date 05/15/2020	scale AS NOTED
project DEEP - West District Headquarters		drawn by RC	approved by
BLACK ROCK STATE PARK WATERTOWN, CONNECTICUT		drawing no. S1.2	project no. 18156

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FIRE PROTECTION SCHEDULE					
SYMBOL	MANUFACTURER MODEL #	DESCRIPTION	COMPONENTS AND ACCESSORIES	MOUNTING HEIGHT	REMARKS
DCVA-1	WATTS MODEL # LF757-OSY	DOUBLE CHECK VALVE ASSEMBLY, 3/4" SST HOUSING & SLEEVE, 2 INDEPENDENTLY OPERATING CHECK VALVES	(2) INDEPENDENT CHECK VALVES, (2) OS&Y GATE VALVES, AND (4) TEST COCKS	MAX 5'0" AFF	#1
REMARKS: 1. REFER TO FLOOR PLANS FOR SIZES					

FIRE PROTECTION SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	ALARM BELL (PLAN/DETAIL VIEW)
	"WET" ALARM VALVE RISER
	FIRE DEPARTMENT CONNECTION
	90° ELBOW DOWN
	90° ELBOW UP
	TEE UP
	TEE DOWN
	DROP AND RUN
	TEE OFF TOP OF PIPE
	TEE OFF BOTTOM OF PIPE
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	UNION
	FLANGE
	END CAP
	OS&Y GATE VALVE
	GATE VALVE
	GATE VALVE ON RISE
	CHECK VALVE
	BALL VALVE/DRAIN VALVE
	BUTTERFLY VALVE
	RELIEF VALVE
	DOUBLE CHECK VALVE ASSEMBLY
	STRAINER
	PRESSURE GAUGE
	PRESSURE REDUCING VALVE
	FIRE VALVE (IN CABINET)
	FLOW SWITCH
	TAMPER SWITCH
	PRESSURE SWITCH

SPRINKLER SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	FLUSH MOUNTED SIDEWALL SPRINKLER
	DRY FLUSH MOUNTED SIDEWALL SPRINKLER
	DRY HIGH TEMPERATURE CLASSIFICATION FLUSH MOUNTED SIDEWALL SPRINKLER
	PENDENT SPRINKLER
	RECESSED PENDENT SPRINKLER
	UPRIGHT SPRINKLER
	UPRIGHT GUARDED SPRINKLER
	UPRIGHT GUARDED SPRINKLER INSTALLED UNDER DUCT OR GARAGE DOOR

UNLESS OTHERWISE NOTED ALL SPRINKLERS SHALL BE:
1. QUICK RESPONSE
2. ORDINARY TEMPERATURE CLASSIFICATION
3. WET SYSTEM TYPE

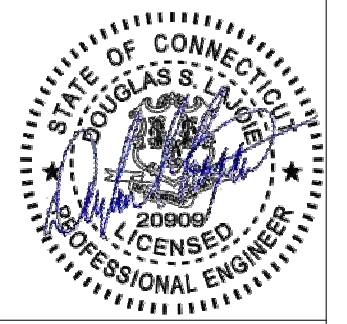
- ### FIRE PROTECTION SYSTEM NOTES
- THESE GENERAL NOTES ARE APPLICABLE TO ALL FIRE PROTECTION DRAWINGS.
 - DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL INTENT OF WORK, SEE DETAILS, RISERS, AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 - THE DRAWINGS INDICATE A SUGGESTED SPRINKLER HEAD LAYOUT AND THAT EACH AREA IS COVERED BY SPRINKLER PROTECTION AS REQUIRED BY ALL APPLICABLE STATE OF CT BUILDING AND FIRE CODES. THE SPRINKLER QUANTITIES SHALL NOT BE COUNTED, AS A TAKE OFF OR AS EXACT LOCATIONS, EXACT SPACING, DENSITY, AND LOCATION REQUIREMENTS SHALL BE AS DICTATED BY THE STATE INSURANCE CARRIER AND NFPA 13.
 - FLOW DATA PERFORMED ON 12/10/2019 AT A HYDRANT LOCATED AT WATERTOWN ROAD, THOMASTON HYDRANT #13 WAS RECORDED AS FOLLOWS:

STATIC PRESSURE:	118 PSI
RESIDUAL PRESSURE:	106 PSI
FLOW RATE:	671 GPM

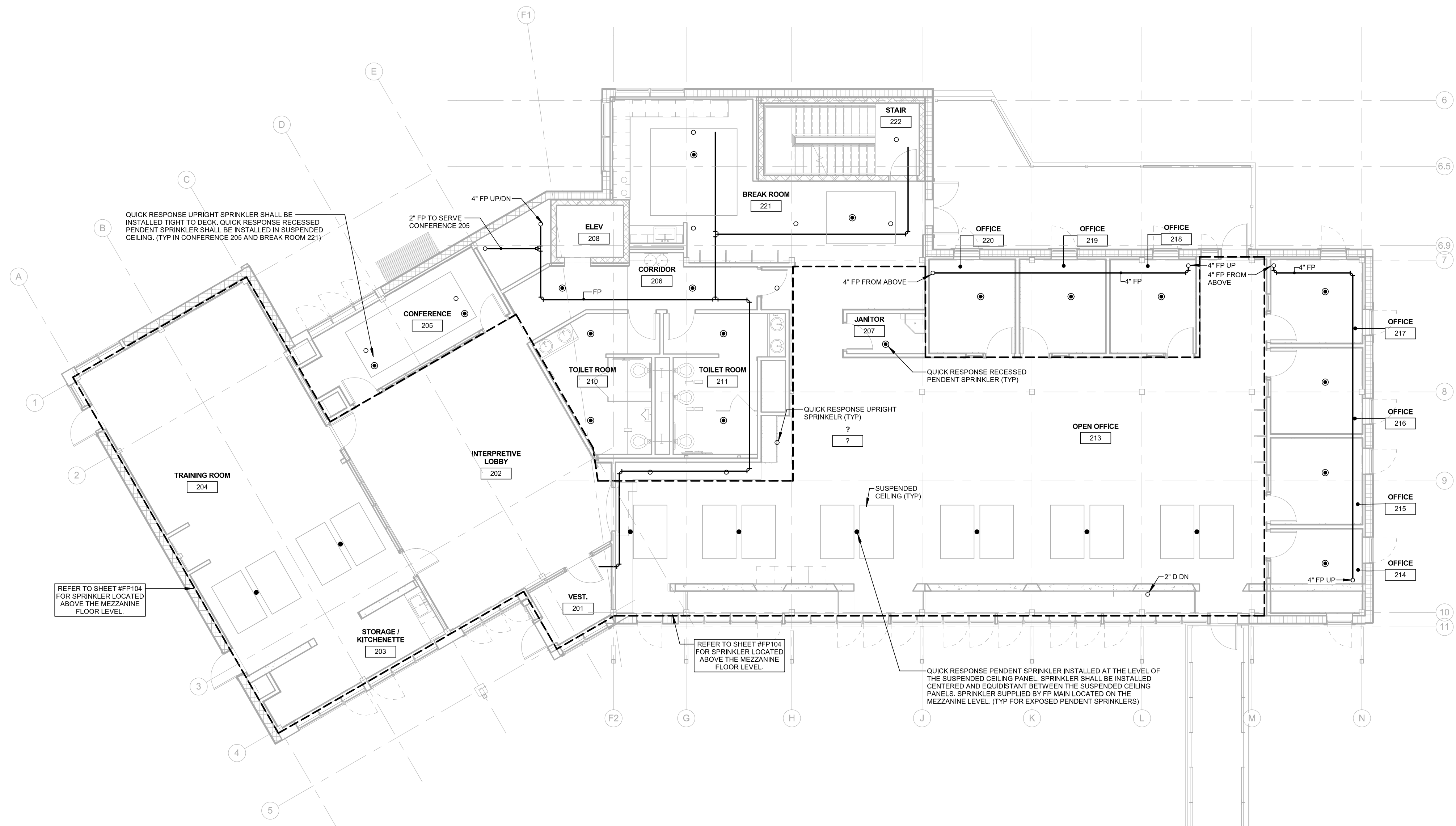
THIS FLOW DATA SHALL BE USED AS A GUIDE BY THE CONTRACTOR. THE CONTRACTOR SHALL PERFORM AN ADDITIONAL FLOW TEST TO VERIFY THIS INFORMATION, INFORMATION FROM THE CONTRACTOR'S FLOW TEST SHALL BE USED FOR HYDRAULIC CALCULATIONS.
 - COMBINED INSIDE AND OUTSIDE HOSE STREAM ALLOWANCE FOR HYDRAULIC CALCULATIONS SHALL BE 250 GPM.
 - HYDRAULIC CALCULATIONS SHALL INCLUDE A SAFETY FACTOR OF 10 PSI
 - PIPE VELOCITY AT ANY POINT OF THE SYSTEM SHALL NOT EXCEED 18 FPS
 - INSTALLATION OF SPRINKLERS SHALL BE BASED ON THE FOLLOWING:

OCCUPANCY	FM GLOBAL HAZARD CLASSIFICATION	DENSITY (GPM/SF)	AREA OF APPLICATION (SF)	MINIMUM SPRINKLER
MECHANICAL ROOM, UTILITY ROOMS, ETC.	HC-2	0.20	2500	K8.0
REMAINDER OF THE BUILDING	HC-1	0.10	1500	K5.6

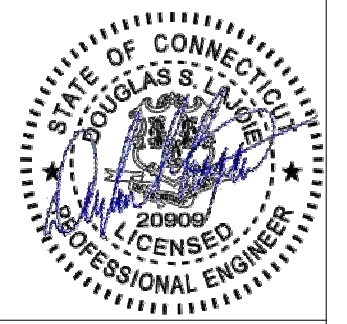
FIRE PROTECTION ABBREVIATIONS	
ABBREVIATION	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
CR	CORROSION RESISTANT
D	DRAIN
DCV	DOUBLE CHECK VALVE
DRY	DRY SPRINKLER SYSTEM
EC	EXTENDED COVERAGE
ELEV	ELEVATION
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FD	FIRE DEPARTMENT
FDC	FIRE DEPARTMENT CONNECTION
FHV	FIRE HOSE VALVE
FP	FIRE PROTECTION
FPM	FEET PER MINUTE
FS	FLOW SWITCH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HD	TOTAL DEVELOPED HEAD
HTC	HIGH TEMPERATURE CLASSIFICATION
HVC	HOSE VALVE CABINET
ITC	INTERMEDIATE TEMPERATURE CLASSIFICATION
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OS&Y	OUTSIDE SCREW AND YOLK
PD	PRESSURE DROP
PIV	PRESSURE INDICATOR VALVE
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
SS	SUPERVISORY SWITCH
TS	TAMPER SWITCH
TYP	TYPICAL
V	VOLTS
VEL	VELOCITY
WET	WET SPRINKLER SYSTEM
WG	WIRE GUARD



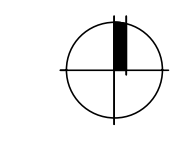
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REVISIONS			
mark	date	description	
			drawing prepared by CONSULTING ENGINEERING SERVICES 811 MIDDLE ST. MIDDLETOWN, CT 06457 date 05/15/2020 scale AS NOTED project DEEP WEST DISTRICT HEADQUARTERS drawn by JMP approved by BDW BLACK ROCK STATE PARK 2065 THOMASTON ROAD WATERTOWN, CONNECTICUT drawing no. FP001 CAD no. project no. BI-T-615

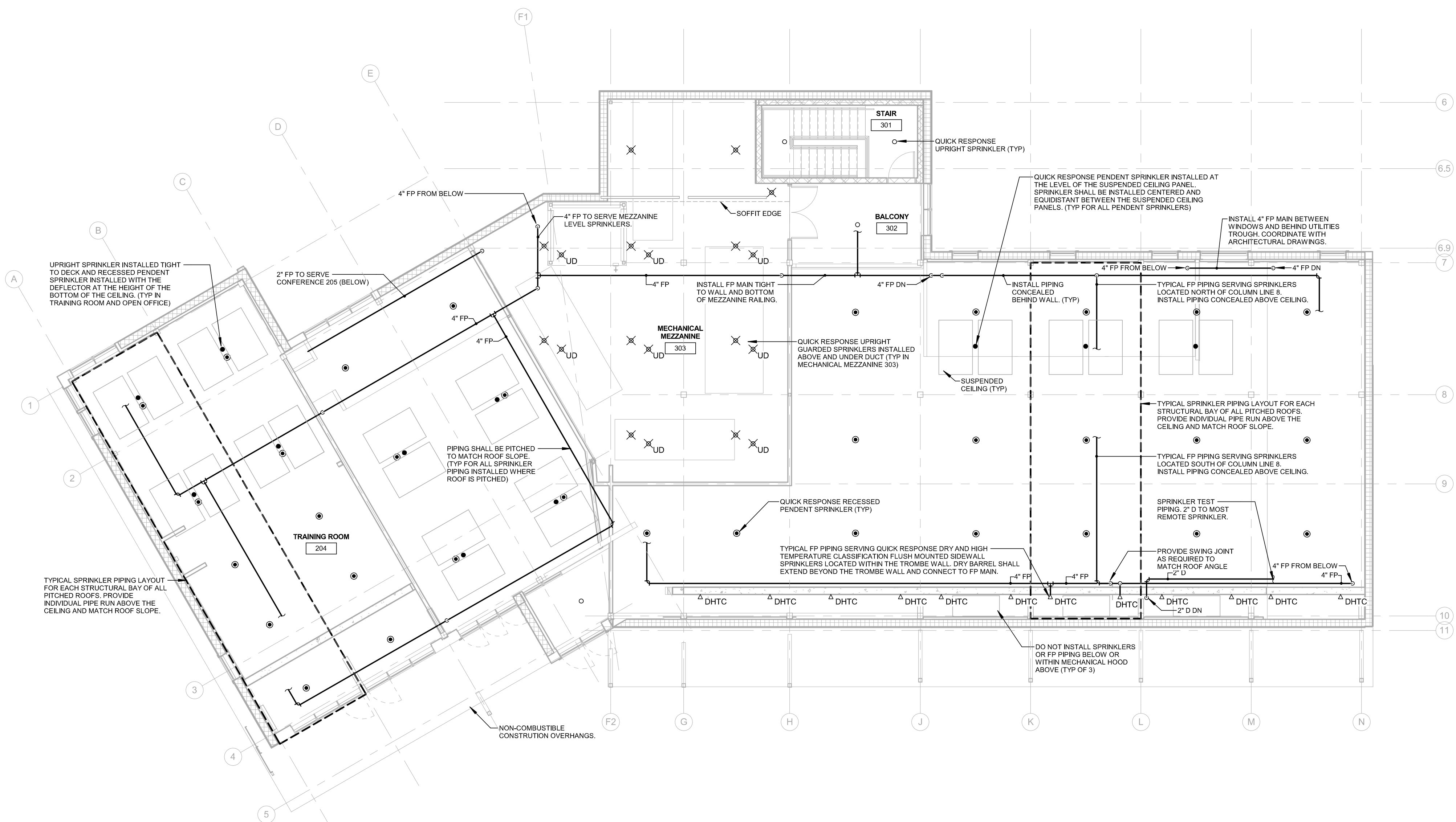


1 UPPER LEVEL FIRE PROTECTION PLAN
1/8" = 1'-0"

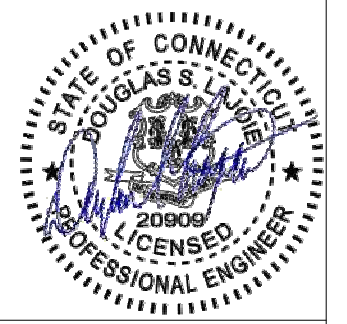


drawing title UPPER LEVEL FIRE PROTECTION PLAN			STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
REVISIONS				
mark	date	description	drawing prepared by CONSULTING ENGINEERING SERVICES 811 MIDDLE ST. MIDDLETOWN, CT 06457	date 05/15/2020 scale AS NOTED
			project DEEP WEST DISTRICT HEADQUARTERS	drawn by JMP
			approved by BDW	approved by BDW
			CAD no.	drawing no. FP103
			project no. BI-T-615	

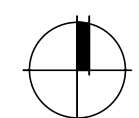


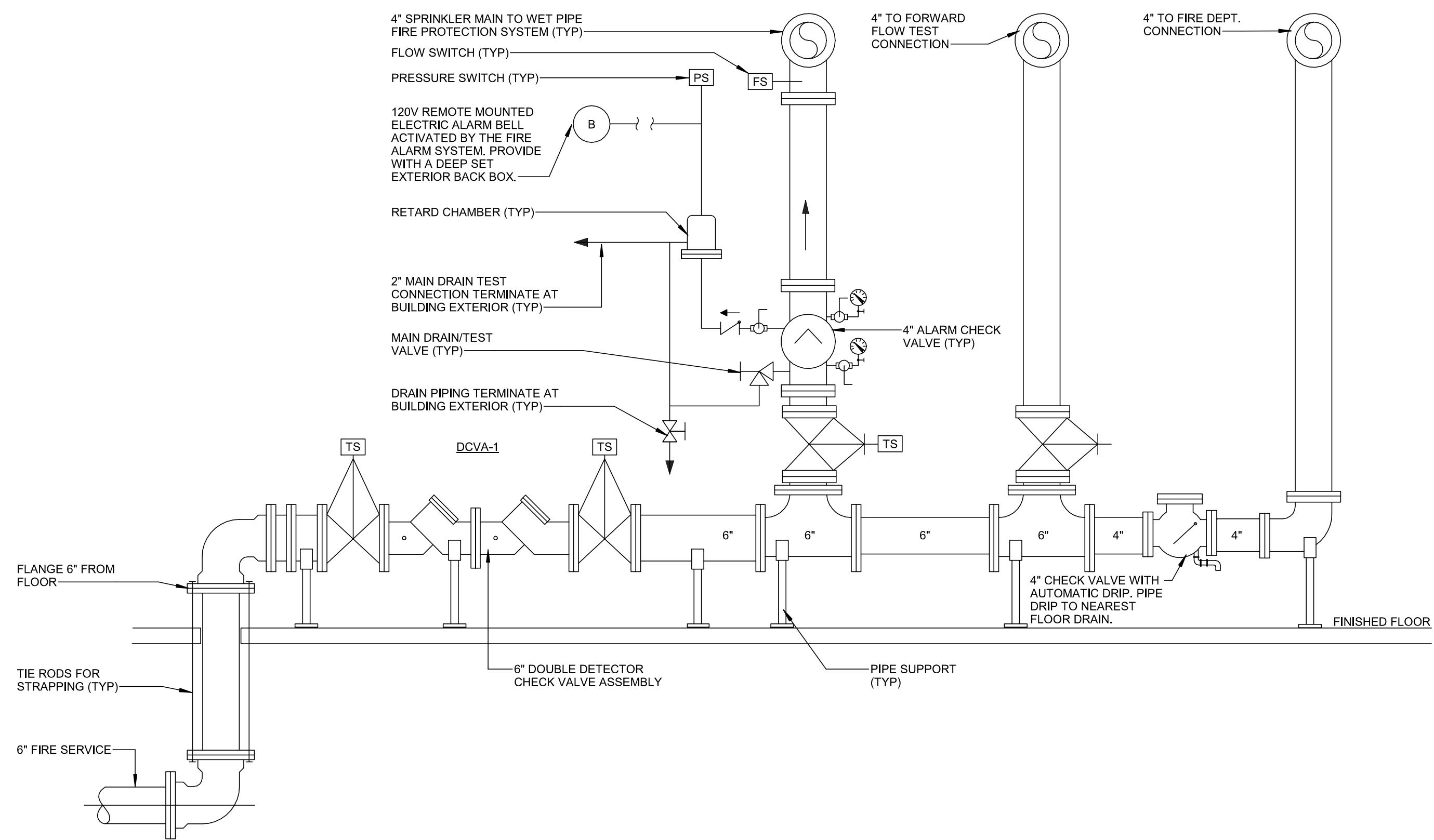


1 MEZZANINE FIRE PROTECTION PLAN
1/8" = 1'-0"

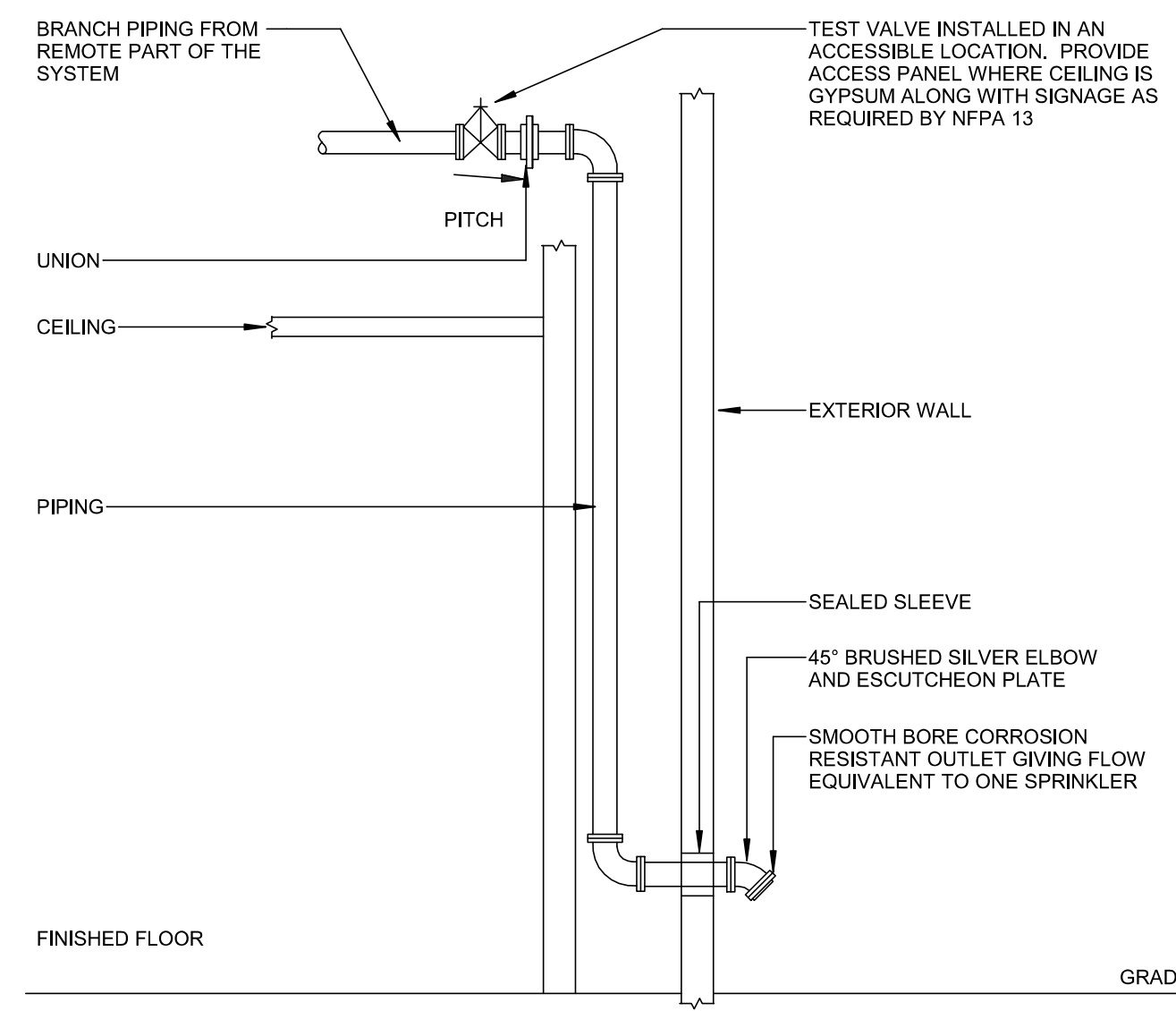


drawing title		MEZZANINE LEVEL FIRE PROTECTION PLAN		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
REVISIONS					
mark	date	description		drawing prepared by	date
				CONSULTING ENGINEERING SERVICES	05/15/2020
				811 MIDDLE ST. MIDDLETOWN, CT 06457	scale AS NOTED
				DEEP WEST DISTRICT HEADQUARTERS	drawn by JMP
				BLACK ROCK STATE PARK 2065 THOMASTON ROAD WATERTOWN, CONNECTICUT	approved by BDW
		CAD no.	project no.	BI-T-615	drawing no. FP104

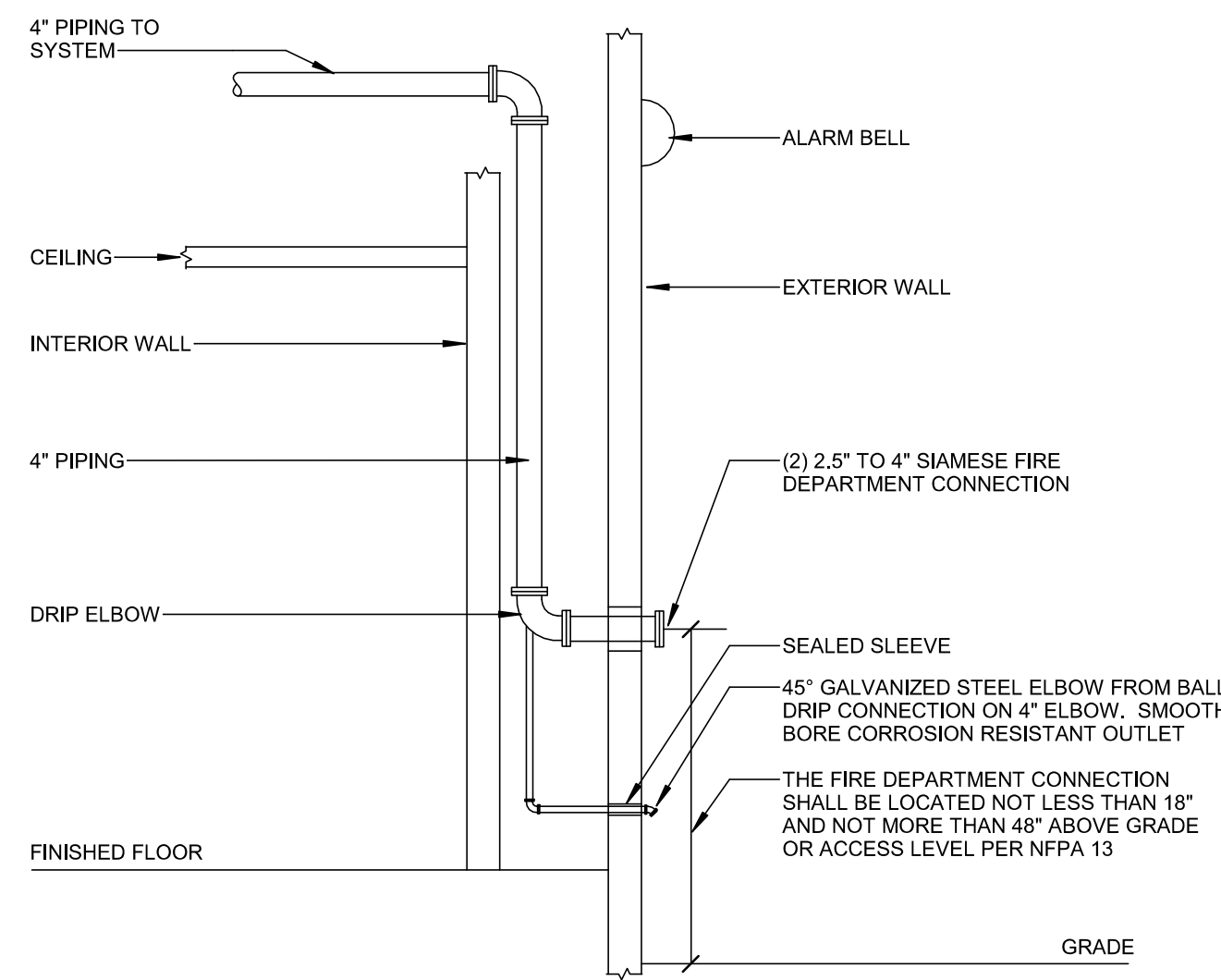




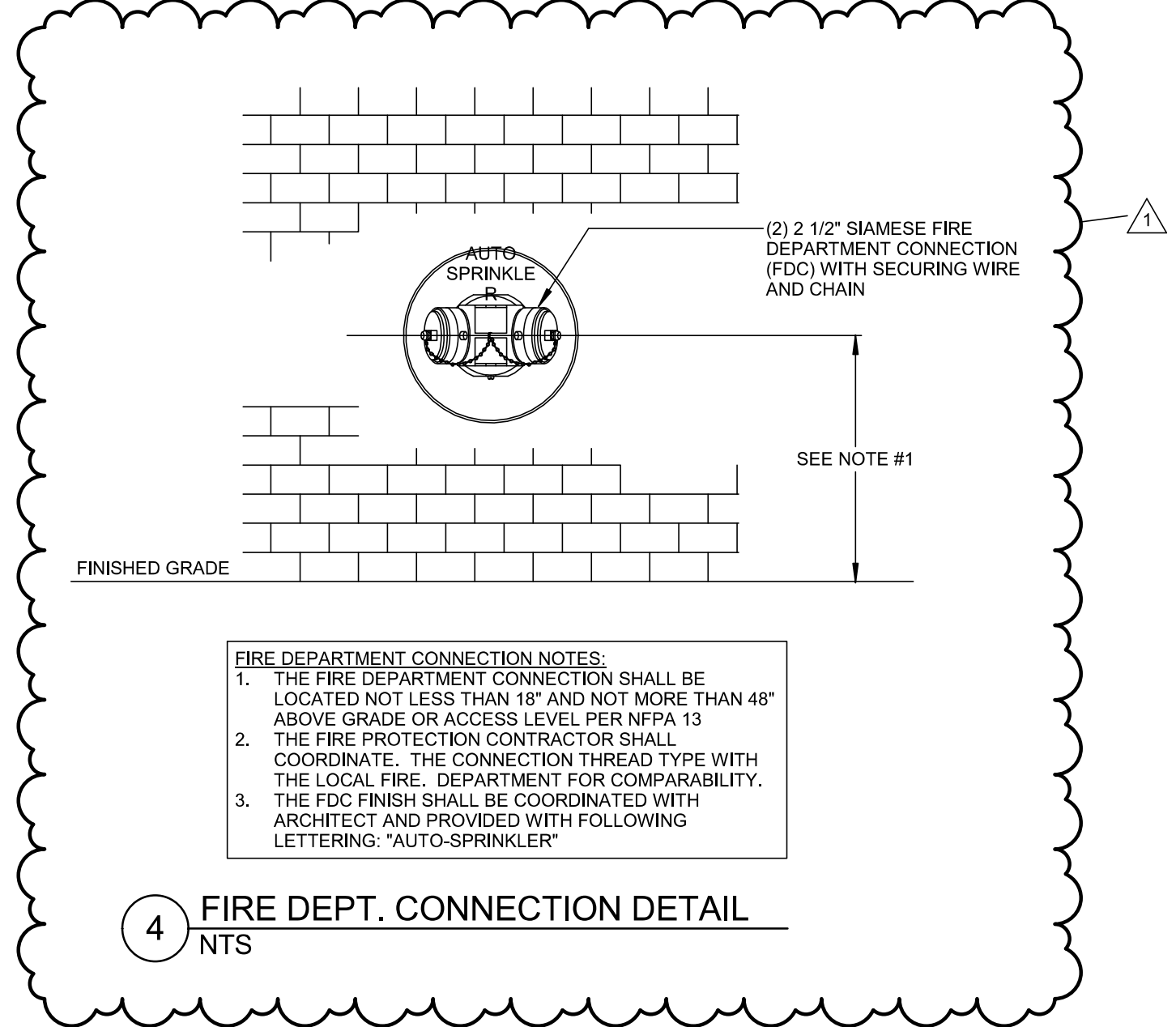
1 FIRE PROTECTION SERVICE DETAIL
NTS



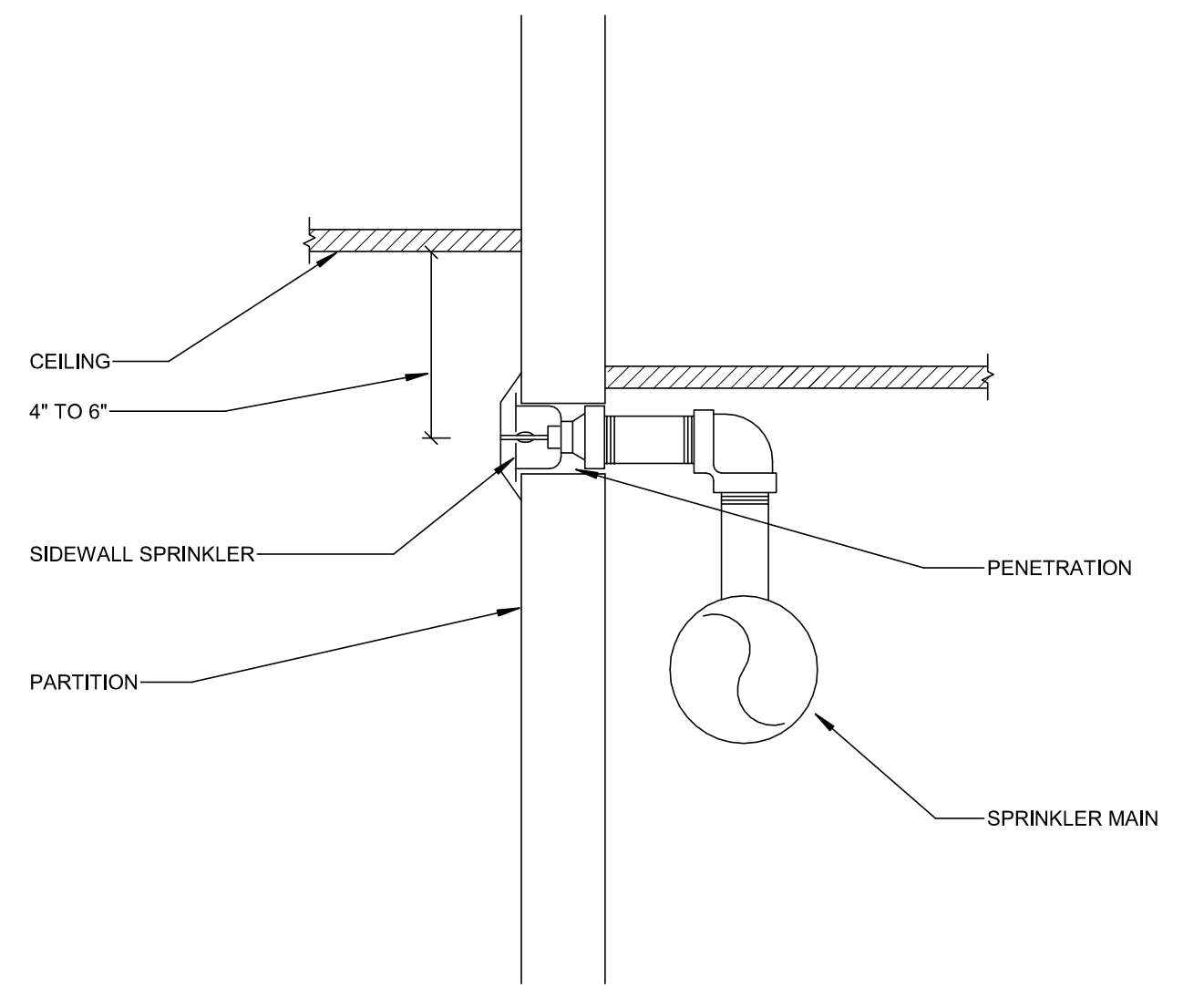
2 TEST CONNECTION DETAIL
NTS



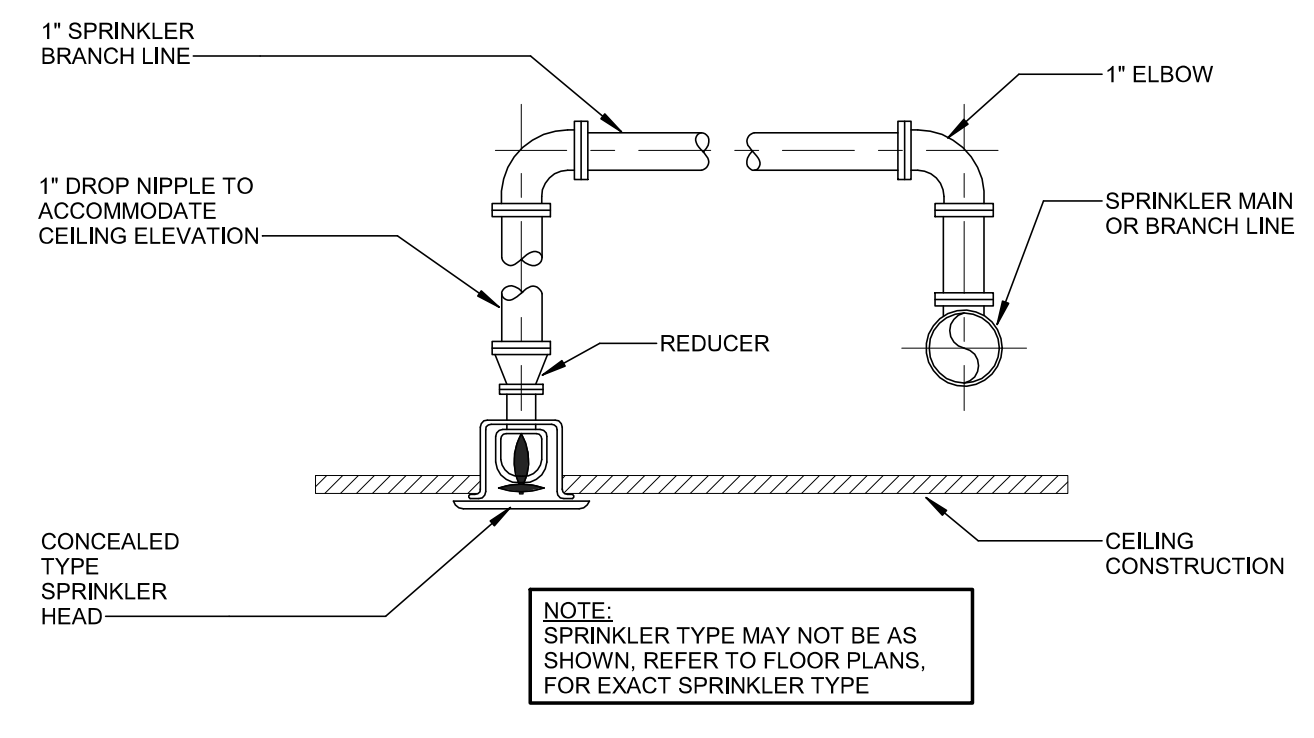
3 FIRE DEPT. CONNECTION PIPING DETAIL
NTS



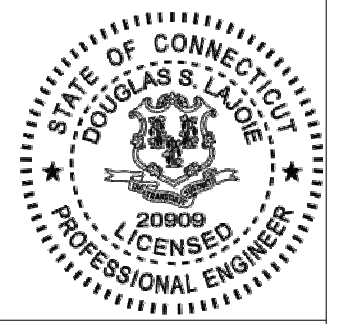
4 FIRE DEPT. CONNECTION DETAIL
NTS



5 SIDEWALL SPRINKLER DIAGRAM
NTS



6 ARMORER DETAIL
NTS



drawing title FIRE PROTECTION DETAILS			STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
REVISIONS				
mark	date	description		
1	02/05/21	Permit Comments		
drawing prepared by CONSULTING ENGINEERING SERVICES 811 MIDDLE ST. MIDDLETOWN, CT 06457			date 05/15/2020	scale AS NOTED
project DEEP WEST DISTRICT HEADQUARTERS			drawn by JMP	approved by BDW
BLACK ROCK STATE PARK 2065 THOMASTON ROAD WATERTOWN, CONNECTICUT			drawing no. FP501	
CAD no.			project no. BI-T-615	