GENERAL

1. These notes serve as the specifications for the work.
2. The applicable building code is 2018 IEBC as amended by the New York State.
3. Refer to the Special Inspections tables on sheet S002 for special inspection requirements for the project
4. Contractor is solely responsible for means and methods and protecting adjacent structures during the course of the work. Do not damage or endanger the structural integrity of the Work or Existing Structure.
5. Contractor shall be responsible for the proper and safe design of shoring systems for trenches and excavations.
6. Notify Engineer in case of discrepancies between drawings and these notes before proceeding with the work.
7. Use architectural drawings and drawings of other disciplines in conjunction with the structural drawings to properly perform the work.
8. If conditions disclosed during excavation and demolition reveal unforeseen conditions, promptly request direction from Architect before proceeding.
9. Contractor is responsible for coordinating between trades.
10. Do not scale drawings.
11. Field dimensions
    A. If structural drawings are used for laying out column centers and wall lines, all dimensions shall first be verified with the architectural drawings. Layout shall be closed before work is begun.
12. Sections and details shown, while drawn for specific locations, are intended to establish the general types of details to be used throughout.
13. The Engineer's review of a submittal shall not relieve the Contractor of their responsibility to follow the intent of the contract drawings.
14. Wind Speed for special wind region applies to all properties within highland falls for the building department for the Village of Highland and the town of Highland Falls.
15. The roof live load is designed to be 30 psf plus drift.

DELEGATED DESIGN ITEMS

1. Employ or retain a licensed professional engineer in the project jurisdiction to design and detail the following performance specified structural components:
   A. Concrete mix design
   B. Structural steel connections
   C. Shoring / Scaffolding
   D. Temporary Excavation Support
   E. Underpinning
   F. Stairs and railings
   G. Roof Walkways
2. See individual material sections for additional requirements.

EXISTING BUILDING/STRUCTURE NOTES

1. Existing building conditions have been established based on existing structural drawings prepared by Office of the Construction Quartermaster dated 1933. The contractor shall reference these drawings for existing structural information not shown. These drawings are available from the Owner upon request.
2. Verify all existing dimensions and elevations before beginning work or preparing shop drawings
3. Utmost care shall be exercised at all times when working on existing structural members and masonry bearing walls to avoid impairing the carrying capacity of the existing structure.
   A. Should the Architect determine that the carrying capacity of the existing structure has been impaired by, or as a result of, the operations of the Contractor, or is otherwise not in conformance with the contract documents, appropriate remedial work shall be required.
   B. Any damage resulting from the operations of the Contractor shall be repaired as directed by the Owner's representative at no additional cost to the Owner.
4. Notify the Architect before cutting or removal of any part of the existing structure not indicated to be modified or demolished.
5. Burning or welding in the building is strictly prohibited.
6. Contractor shall coordinate locations and dimensions of all penetrations through existing masonry walls with mechanical/electrical/plumbing drawings and provide lintels or sleeves per structural details. The contractor shall provide an allowance in their bid/pricing for this work.
7. Contractor shall infill all abandoned mechanical/electrical/plumbing penetrations in existing masonry walls with new or salvaged masonry, to the satisfaction of the Architect. The masonry sub-contractor shall provide an allowance in their bid/pricing for this work.

FOUNDATIONS

1. Foundations are designed for a bearing pressure of 6000 psf based on a the original 1933 drawings.
2. Footings should be cast on the same day in which excavation for them is completed. If placing of concrete is delayed, footing bottom shall be trimmed to firm material immediately before casting.
3. Place concrete in dry excavations only.
4. Provide dowels equal in size and number to pedestal vertical reinforcing in top of footings.
5. Footings shall be formed unless otherwise permitted by the Engineer.
6. Provide continuous keyway and dowels in top of wall footing supporting concrete walls.
7. Provide keyway and joint filler at expansion joints in concrete walls. Discontinue reinforcing at joint.
8. Backfilling:
   A. Before backfilling walls, grout and/or concrete shall have attained design strength, and all slabs and beams that are necessary for the stability of the walls shall be in place.
   B. Backfill shall be carried up evenly on both sides of wall to lower grade.
   C. Backfill shall be placed in maximum of 12" loose lift thickness and compacted to 92% of Modified Proctor in accordance with ASTM D1557.
   D. Tests shall be performed for each lift at a rate of two tests per lift minimum and not less than one test per 100' of wall length.
9. Structural fill, including under footings:
   A. Fill shall be placed in maximum of 12" loose lift thickness and compacted to 92% of Modified Proctor in accordance with ASTM D1557.
   B. On-site or imported granular fills including GW, GP, GM, SW, SP, ND, SM Classified in accordance with the Unified Soil Classification System (USCS) and within 2% of optimum moisture. Furthermore, the material to be utilized as structural fill should have a plasticity index (PI) less than 2.
10. Fill under slabs on grade shall be placed in maximum of 12" loose lift thickness and compacted to 92% of Modified Proctor in accordance with ASTM D1557.

UNDERPINNING-DELEGATED DESIGN

1. Underpinning of existing building foundation is required. The extent of underpinning is indicated on the foundation plan. Bottom of existing foundation elevations are approximate and will require field verification by the contractor and specialty engineer prior to preparation of underpinning submittals.
2. Engage a qualified Professional Engineer licensed in the state in which the project is contracted to design underpinning and permanent tie-backs. Submit signed and sealed shop drawings and calculations for the underpinning system.
3. Information Submittal Requirements:
   A. Underpinning Contractor Statements of Qualifications-Proof and descriptions of at least five (5) underpinning projects of similar size and scope performed within the past 5 years.
   B. Delegated Designer Qualifications-Contractor shall also provide a resume and brief history of delegated designer engaged by the contractor to perform calculations and prepare plans and details for underpinning.
4. Action Submittal Requirements:
   A. Engineered Calculations and Shop Drawings-Bound calculations, signed and sealed by the specialty engineer shall be submitted with plans, sections and details prepared to describe the scope and sequence of the underpinning. Shop drawings shall convey construction sequence, methods, proposed depths, and bearing conditions of underpinning.
   B. Underpinning Concrete Mix Designs
   C. Tie-back Components
5. Prior to the start of work, the contractor and specialty engineer shall visit the site to review and verify conditions that may impact the design and construction of underpinning.
6. Contractor shall photograph and document all existing conditions. Submit one (1) copy of existing condition documentation to the Owner/Owner's Representative and maintain one (1) copy in the field office.
7. Typical completed underpinning details provided on sheet S400 convey the intent of the completed design. It is the responsibility of the contractor and their engineer to develop the construction sequence, and provide the means and methods required to satisfy the intent of these drawings.
8. Pre-Installation Conference: Conduct a pre-installation conference at the site to review underpinning procedures prior to execution of underpinning work. Attendees should include the Owner, Contractor
9. Concrete: Provide 3000 psi (at 28 days) concrete. Use Type I/II or III cement.
10. Non-Shrink Grout: Provide a 5000 psi (at 28 days) non-metallic, non-shrink grout complying with ASTM C1107.
11. Refer to the project manual for additional product information.
12. Bear the bottom of underpinning on subgrade having a bearing capacity equal to or greater than the allowable soil bearing pressure as indicated in the foundation notes. Prior to casting concrete, notify the geotechnical engineer so subgrade inspection services at the bearing level are provided for each underpinning pier.
13. Allow underpinning concrete to cure 24 hours before dry-packing the void between underside of existing foundation and top of underpinning. Dry-pack material shall be damp, not wet. Dry-packing material shall be non-shrink, non-metallic grout or consist of 1 part Portland cement and 2 to 3 parts coarse sand mix. Ram in place with a hardwood compactor. Allow dry-packing to cure 24 hours before excavating the next section.

REINFORCED CONCRETE

1. Concrete construction shall follow requirements of ACI 301 "Specifications for Structural Concrete".
2. Detail, fabricate and place reinforcing and bar supports in accordance with the provisions set forth by the American Concrete Institute and the CRSI "Manual of Standard Practice."
3. Provide shop drawings showing full information for reinforcing placement. Develop all member elevations and sections with pertinent elevations given, to clearly indicate the position of the reinforcement and construction joints, without reproducing sections, plans, or elevations from the design drawings.
4. Provide reinforcing steel conforming to ASTM A615, Grade 60.
5. Length of reinforcing bars, if shown, does not include hooks.
6. Headed Reinforcing Bar Anchors shall conform to ACI 318 and ASTM A970. Install according to manufacturer's written instructions. Submit product information and ICC-ES Evaluation Report.
7. Mechanical splice couplers shall conform to ACI 318, Type 2, mechanical-lap type couplers. Coupler to be same material as reinforcing bar being spliced. Submit product information and ICC-ES Evaluation Report.
8. Welded wire fabric shall conform to ASTM A1064.
9. Concrete properties: See schedule, this sheet.
10. Clear cover for cast-in-place concrete reinforcing: See schedule, this sheet.
11. Reinforcement not shown on sections and plans is the same as that shown in similar sections and at similar locations.
12. Extend reinforcing through construction joints or provide dowels equal in size and number to bars in the doweled member. Develop or splice dowels on each side of cold joint according to the reinforcing development length tables on S001 and respective typical details.
13. Use stirrup and tie bending radii for all #3 through #5 bars.
14. Ties and stirrups:
    A. Provide pedestal ties as scheduled.
15. Slabs on Grade:
    A. The use of Macro Synthetic fiber is an acceptable substitution for temperature reinforcing in slab on grades. Contractor to submit calculations and product data showing the dosage rates which equate to the WWF reinforcing shown on the construction documents for review and approval by EOR. Provide #4@18" x 4'-0" long at all construction joints. All reinforcing shown on drawings that are not WWF, such as hooked bars and cont. edge bars cannot be substituted. Coordinate control joint size and depth per fiber manufactures recommendations but not less than shown on construction documents.
    B. Contractor shall submit a layout of proposed construction joints for review before making any pours.
    C. Provide premolded joint filler where slab abuts vertical surface ex: columns, pedestals.
16. See other drawings in this project for size and location of equipment pads and curbs.
17. Contractor shall notify Owner's inspection agency before placement of concrete to allow for inspection of reinforcing placement, clearance, stud quantities on steel beams, and to confirm debris has been removed from forms.
18. Locate all new cores in existing elevated structural slabs such that they do not penetrate the concrete beams. Space cores a min of 2D apart with D being the max diameter of the cores in question.

STRUCTURAL STEEL

1. Detail, fabricate, and erect structural steel in accordance with AISC 360 and AISC 303 "Code of Standard Practice".
2. Structural steel design is based on the Allowable Strength Design (ASD) methodology. All loads shown on drawings are unfactored (service) loads, unless noted otherwise.
3. The structural steel detailer shall develop all elevations, plans, and sections without reproducing same from the design drawings. Detailer shall adequately cross reference the structural drawings to the satisfaction of the engineer. All shop drawings shall be submitted for review and review comments incorporated prior to fabrication.
4. Materials shall conform to the following:
   ASTM A36 Bars, rods, angles, channels and plates
   ASTM A992 W and WT shapes
   ASTM A53, Grade B Pipes
   ASTM A500, Grade C Hollow Structural Sections
   ASTM A325 or F1852 TC Bolts High strength bolts
   ASTM F1554 Grade 36 Anchor Rods
   AWS A5.1 E70XX Welding electrodes
   ASTM A36 All other structural shapes
5. Connections:
   A. DELEGATED DESIGN: The design of all connections is the responsibility of the Contractor and shall be performed by the Contractor's qualified Professional Engineer. See plans for reactions and forces. Submit comprehensive engineering design calculations, signed and sealed by a Professional Engineer licensed in the state of construction, prior to submitting piece detail shop drawings.
   B. Connections shall be standard AISC connections using 3/4" dia. high-strength bearing, type N bolts, unless noted otherwise.
   C. All bolted moment and bracing connections shall be slip-critical joints. Faying surfaces in slip-critical joints shall be uncoated.
   D. Provide standard AISC high-strength bolted connections for connections of new work to existing steel beams and columns. Drill existing steel to receive new bolted connections; do not flame-cut holes.
   E. Minimum depth of shear connections shall be half the beam depth, two bolt minimum.
   F. All bolts, nuts, washers and related hardware for exterior and other galvanized steel construction shall be mechanically galvanized according to ASTM B695, Class 55.
   G. Provide minimum weld sizes in accordance with AISC 360 Specification for Structural Steel Buildings.
   H. Electrodes shall be suited to grade and weldability of base metal.
   I. Use AWS certified welders for structural welding.
   J. Remove galvanizing from steel in the area of field welding. Repair abraded surfaces and coat weld with zinc-rich coating.
6. Steel framing shall be properly guyed, aligned and plumbed within AISC tolerances before proceeding with final connections.
7. Base plates shall be shop welded to columns.
8. Cap all HSS and pipe columns with 1/8" plate.
9. Field cutting or burning of structural steel is prohibited.
10. Steel deck shall be manufactured by a member firm of the Steel Deck Institute (SDI) and shall be detailed, fabricated and erected in accordance with SDI specifications.
    A. See plans for steel deck type, depth and gauge.
    B. Attach steel deck to supporting steel and fasten side laps in accordance with SDI requirements.
    C. Deck gauges indicated are minimums based on three span conditions. Contractor shall verify all steel deck shoring requirements and provide temporary shoring in accordance with the steel deck manufacturer. The contractor may elect to provide heavier deck gauges to reduce temporary shoring requirements.
11. Cap all exterior HSS and pipe sections with 1/4" plates and galvanize. Seal weld to bottom end of member. Fill all vent holes after galvanizing by plugging with zinc plug and grinding off smooth. Maintain permanent weep holes at the base of exposed columns and beams.
12. Galvanize exterior exposed steel in accordance with ASTM A_123. Repair scratched or abraded galvanized surfaces with zinc-rich coating. After galvanizing, straighten members to meet AISC standard mill tolerances.
13. Galvanize all lintels, shelf angles, beams and plates (including their associated shims, bolts and accessories) in direct contact with the exterior wythe of masonry. Additional members/assemblies shall be galvanized where noted on the drawings.
14. Where plates, angles or other miscellaneous members require welding (either field or shop) or slip-critical connections, mask connection surfaces prior to shop priming and touch-up with primer after completing connection.
15. Provide adjustability in connections for members supporting the exterior masonry wythe. Permit the following adjustments from the connection work point to compensate for steel erection tolerances:
    Horizontal: 1/2" outward or inward
    Vertical: 1/2" upward or downward
16. Provide adjustable connections for all members designated as AESS to facilitate adjustment to achieve the specified tolerance.

STEEL STAIRS

1. Stairs shall be designed by a professional engineer (engaged by the Contractor) licensed in the state of the project.
2. Contractor shall submit signed and sealed shop drawings and calculations from the stair design engineer to the design team for review and incorporate review comments prior to fabrication.
3. See architectural drawings for stair locations, dimensions and details.

MASONRY

1. Masonry shall be constructed in accordance with TMS 602.
2. All concrete masonry units shall conform to ASTM C90. Provide two-cell units, unless noted otherwise on plans.
3. Compressive strength (f'm) of all concrete unit masonry assemblies shall be 2500 psi at 28 days.
4. Concrete Unit Masonry Strength: Compressive strength of concrete unit masonry (f'm) may be determined either by strength or individual units, grout strength, and mortar type in accordance with TMS 602 article 1.4.B.2.b or by prism test method in accordance with TMS 602 article 1.4.B.3. Submit data and test results to validate masonry system strength via one of the two referenced methods.
5. Use ASTM C270, Type S mortar below grade.
6. Use ASTM C270, Type S mortar for CMU above grade.
7. Use ASTM C270, Type N mortar for veneer.
8. Lay CMU in piers, columns, pedestals and partially-grouted walls with face shells and webs fully bedded in mortar. Align vertical cells to be grouted. Fully-grouted walls may be bedded with face shells only.
9. Grout for masonry shall conform to ASTM C476 with a minimum 3000 psi compressive strength at 28 days. Provide coarse grout unless dimensions of grout spaces and pour heights dictate fine grout according to TMS 602/ACI 530.1/ASCE 6.
10. See architectural drawings for other masonry requirements.
11. Lintels for non-bearing walls are shown in loose lintel schedule.
12. Lintels for load bearing walls are shown in schedule.
13. Grout a minimum of two complete courses solid under bearing for beams and bearing lintels.
14. Provide continuous bond beam at top of wall. Reinforce bond beams with 1-#5 continuous.
15. Install ladder-type joint reinforcement at 16" o.c. Discontinue joint reinforcing at control joints.
16. Provide partition top anchors at the top of non-load bearing masonry walls, spaced per the manufacturer's requirements.
17. In existing rubble and brick masonry walls, infill unused joist and beam pockets, openings, or other cavities and recesses with solid masonry. Provide an allowance in bid/pricing for this work.
18. Rebuild masonry jambs when saw cutting new openings into existing masonry walls. Provide an allowance in bid/pricing for this work.
19. Coordinate control and expansion joints with architectural drawings and recommendations of the Brick Industry Association and the National Concrete Masonry Association.
20. Provide shop drawings showing full information for reinforcing steel placement.
    A. Reinforcing steel detailer shall adequately cross reference the structural drawings to the satisfaction of the Engineer.
    B. Reinforcing steel detailer shall develop all wall elevations and sections with pertinent elevations given, to clearly indicate the position of the reinforcement and construction joints, without reproducing sections, plans, or elevations from the design drawings.

POST-INSTALLED ANCHORS

1. Refer to Post Installed Anchor table on sheet S001 for anchor products. Substitution requests for alternate products must be approved in writing by the Engineer prior to use.
2. Drill and install post-installed anchors according to manufacturer's printed installation instructions. All holes shall be drilled using the Hilti SafeSet system with Hilti hollow drill bit.
3. Anchor capacity is dependent upon spacing between adjacent anchors and distance of anchors to the edge of base material. Anchors shall be installed in accordance with spacing and edge distance requirements indicated on the drawings.
4. Do not cut or damage existing reinforcement in concrete or CMU during drilling operations without prior approval from the Engineer. Offset anchor locations to clear existing reinforcement should reinforcing bars be encountered during drilling. It is recommended that the existing concrete or CMU be scanned to locate existing reinforcement prior to drilling for anchors.
5. Oversized holes may be provided for field adjustment of the anchors, provided 5/16" thick plate washers are field welded (3/16" all around) to the member. Provide standard holes in plate washers.
6. All post-installed anchors shall meet ICC-ES Compliance for each type of application.
7. Submit product information and ICC-ES Evaluation Report for each anchor.
8. All anchor designs are for installation in the following conditions, unless noted otherwise. Written approval must be received from Engineer prior to installation of adhesive anchors in alternate conditions.
   A. Dry concrete.
   B. Concrete temperature at time of installation must be between 14° F and 104° F. See manufacturer's printed installation instruction for adhesive gel and cure times.
   C. Anchor holes to be hammer drilled.
   D. Anchor holes to be cleaned per manufacturer's printed installation instructions prior to adhesive injection.
9. All installers of post-installed anchors shall be Hilti Certified. Submit certificates for record.
10. All post-installed anchors in concrete shall be suited for use in seismic and cracked concrete applications.
11. Cells at the anchor and one course above and below the anchor shall be grouted solid for expansion or adhesive anchors installed in CMU grouted solid.
12. Adhesive anchors in masonry and hollow CMU shall be installed with mesh sleeves.
13. Coordinate required holes sizes in steel members with manufacturer's installation requirements and method of installation.
14. Testing: 25% of each type and size of drilled-in anchor shall be proof loaded by the independent testing laboratory. Adhesive anchors and capsule anchors shall not be torque tested unless otherwise directed by the Engineer. If any of the tested anchors fail to achieve the specified torque or proof load within the limits as defined in the Drawings, all anchors of the same diameter and type as the failed anchors shall be tested, unless otherwise instructed by the Engineer.
    A. Perform tension testing in accordance with ASTM E488.
    B. Apply torque with a calibrated torque wrench.
    C. Apply proof loads with a calibrated hydraulic ram. Displacement of adhesive and capsule anchors at proof load shall not exceed D/10, where D is the nominal anchor diameter.

SHORING/SCAFFOLDING

1. The contractor shall submit shoring/scaffolding shop drawings and calculations, prepared and sealed by a professional engineer licensed in the state of the project, for the following:
   A. Earthwork sheeting and shoring.
   B. Building/structure support shoring.
   C. Scaffolding.
2. Shoring and scaffolding shall comply with O.S.H.A. regulations.
3. The structural engineer of record (SER) will review shoring/scaffolding submittals only for loads transmitted to the building structure. Submittals shall clearly indicate the location and magnitude of all loads applied to the building or structure. The contractor is responsible for design and performance of the shoring/scaffold system.
4. The suggested shoring and scaffolding diagrams or loads shown on the structural drawings have been developed on the basis of the assumed limitations of the existing building's structure, and are intended as an aid to the contractor in preparing their proposal for the shoring/scaffolding of the building. The diagrams shown are not intended to limit or direct the extent of the system to be provided by the scaffold and shoring contractor.

REINFORCING DEVELOPMENT LENGTHS (INCHES)

BEAMS, FOOTINGS, & SLABS ≤ 13" DEEP AND VERTICAL BARS IN WALLS

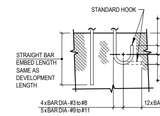
BAR SIZE	CONDITION	3000 psi CONCRETE	3500 psi CONCRETE	4000 psi CONCRETE	5000 psi CONCRETE
#3	DEV. LENGTH	17	16	15	13
	CLASS B SPLICE	22	20	19	17
#4	DEV. LENGTH	22	21	19	17
	CLASS B SPLICE	29	27	25	22
#5	DEV. LENGTH	28	26	24	22
	CLASS B SPLICE	36	33	31	28
#6	DEV. LENGTH	33	31	29	26
	CLASS B SPLICE	43	40	37	33
#7	DEV. LENGTH	48	45	42	37
	CLASS B SPLICE	63	58	54	49
#8	DEV. LENGTH	55	51	48	43
	CLASS B SPLICE	72	66	62	55
#9	DEV. LENGTH	62	57	54	48
	CLASS B SPLICE	81	74	70	63
#10	DEV. LENGTH	70	64	61	54
	CLASS B SPLICE	91	84	79	70
#11	DEV. LENGTH	78	72	67	60
	CLASS B SPLICE	101	93	87	78

DEVELOPMENT LENGTH NOTES:

1. SCHEDULE IS BASED ON GRADE 60, UNCOATED REINFORCING IN NORMAL WEIGHT CONCRETE.
2. CONCRETE STRENGTH INDICATED IS 28-DAY COMPRESSIVE STRENGTH.
3. ALL LAP SPLICES SHALL BE CLASS B, UNLESS NOTED OTHERWISE.
4. CLASS A SPLICE IS THE SAME AS DEVELOPMENT LENGTH.
5. WHEN BARS OF DIFFERENT SIZE ARE SPLICED, SPLICE LENGTH SHALL BE THE LARGER OF EITHER DEVELOPMENT LENGTH OF THE LARGER BAR OR SPLICE LENGTH OF THE SMALLER BAR.
6. FOR HOOKED DOWELS IN FOOTINGS MEETING REQUIREMENTS OF ACI 318 12.5.3.a, THE HOOK LENGTH CAN BE 0.7 x TABLE VALUE.
7. TOP BAR DESIGNATES HORIZONTAL BAR PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS CAST BELOW THE BAR.

BEAMS, FOOTINGS, & SLABS > 13" DEEP AND HORIZONTAL BARS IN WALLS

BAR SIZE	CONDITION	3000 psi CONCRETE TOP BARS	3000 psi CONCRETE OTHER BARS	3500 psi CONCRETE TOP BARS	3500 psi CONCRETE OTHER BARS	4000 psi CONCRETE TOP BARS	4000 psi CONCRETE OTHER BARS	5000 psi CONCRETE TOP BARS	5000 psi CONCRETE OTHER BARS
#3	DEV. LENGTH	22	17	20	16	19	15	17	13
	CLASS B SPLICE	28	22	26	20	24	19	22	17
#4	DEV. LENGTH	29	22	27	21	25	19	22	17
	CLASS B SPLICE	37	29	35	27	32	25	29	22
#5	DEV. LENGTH	36	28	33	26	31	24	28	22
	CLASS B SPLICE	47	36	43	33	40	31	36	28
#6	DEV. LENGTH	43	33	40	31	37	29	33	25
	CLASS B SPLICE	56	43	52	40	48	37	43	33
#7	DEV. LENGTH	63	48	58	45	54	42	49	37
	CLASS B SPLICE	81	63	75	58	70	54	63	49
#8	DEV. LENGTH	72	55	66	51	62	47	55	42
	CLASS B SPLICE	93	72	86	66	80	62	72	55
#9	DEV. LENGTH	81	62	74	57	70	54	63	48
	CLASS B SPLICE	105	81	97	74	91	70	81	63
#10	DEV. LENGTH	91	70	84	64	79	60	70	54
	CLASS B SPLICE	118	91	109	84	102	79	91	70
#11	DEV. LENGTH	101	77	93	72	87	67	78	60
	CLASS B SPLICE	131	101	121	93	113	87	101	78



VERTICAL COMPRESSION BARS IN COLUMNS

BAR SIZE	CONDITION	CONCRETE STRENGTH 3000 psi	4000 psi	5000 psi
#4	DEV. LENGTH	11	10	9
	LAP SPLICE	15	13	12
#5	DEV. LENGTH	14	12	12
	LAP SPLICE	18	16	15
#6	DEV. LENGTH	17	15	14
	LAP SPLICE	22	19	18
#7	DEV. LENGTH	20	17	16
	LAP SPLICE	25	22	21
#8	DEV. LENGTH	22	19	18
	LAP SPLICE	29	25	24
#9	DEV. LENGTH	25	22	21
	LAP SPLICE	32	28	27
#10	DEV. LENGTH	28	24	23
	LAP SPLICE	36	32	30
#11	DEV. LENGTH	31	27	26
	LAP SPLICE	40	35	33

DEVELOPMENT LENGTH OF STANDARD HOOK

BAR SIZE	CONCRETE STRENGTH 3000 psi	3500 psi	4000 psi	5000 psi
#3	9	8	7	7
#4	11	11	10	9
#5	14	13	12	11
#6	17	16	15	13
#7	20	18	17	15
#8	22	21	19	17
#9	25	23	22	19
#10	28	26	24	22
#11	31	29	27	24

CAST-IN-PLACE CONCRETE PROPERTIES SCHEDULE

TYPE	28 DAY COMPRESSIVE STRENGTH	MAXIMUM W/C RATIO	*AIR CONTENT (±1%)	NOMINAL AGGREGATE SIZE (ASTM C33 GRADING)
INTERIOR SLABS 5" THICK & LESS	4,000 psi	0.50	--	1" (#57)
SLABS ON DECK	3,500 psi	0.55	--	¾" (#67)
UNDERPINNING	3,000 psi	0.50	3%	1" (#57)
ALL OTHER BUILDING CONCRETE	4,000 psi	0.55	6%	1" (#57)
SITE SLABS	4,000 psi	0.45	6%	1" (#57)
SITE WALLS & FOUNDATIONS	4,000 psi	0.45	6%	1" (#57)

* AIR-ENTRAIN CONCRETE SUBJECTED TO FREEZE-THAW ENVIRONMENTS.
DO NOT ALLOW AIR CONTENT OF TROWELED FINISHED FLOORS TO EXCEED 3%.

CAST-IN-PLACE CONCRETE CLEAR COVER FOR REINFORCING

TYPE	COVER
Footings	3"
Walls:	
Interior face	¾"
Face permanently exposed to earth or weather	2"
Exterior Slab	1½"
Interior Slab	¾"
Interior Beams & Columns	1½"

DRAWING INDEX

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Philadelphia, PA 19106
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Dimitri J. Ververelli, Inc.
Mechanical, Electrical, Plumbing, Fire Protection Engineering
211 North 13th Street
Philadelphia, PA 19107
215.496.0000 www.djvinc.com

Langan
Civil Engineering
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
212.479.5400 www.langan.com

Theatre Projects
Acoustical Design
47 Water Street
South Norwalk, CT 06854
203.299.0830 www.theatreprojects.com

General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid & Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300
Date: July 06, 2022

Drawing Title:
General Notes & Schedules

S001

SPECIAL INSPECTIONS PROGRAM - SOILS

VERIFICATION AND INSPECTION		CONTINUOUS	PERIODIC	2018 IBC REFERENCE SECTION	REFERENCE STANDARD	COMMENTS
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY			X	1705.6, 1803, 1806		OBTAIN APPROVED GEOTECH REPORT IF APPLICABLE
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL			X	1705.6, 1804, 1808, 1809, 1810		do.
CONTROLLED FILL	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS		X	1705.6, 1803, 1804		do.
	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X		1705.6, 1804		do.
	PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X	1705.6, 1804		do.

SPECIAL INSPECTIONS PROGRAM - CONCRETE & PRECAST CONCRETE

VERIFICATION AND INSPECTION		CONTINUOUS	PERIODIC	2018 IBC REFERENCE SECTION	REFERENCE STANDARD	COMMENTS
GENERAL	INSPECTION OF FABRICATORS		X	1704.2.5		SEE NOTE 2.
INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, & PLACEMENT			X	1705.3, 1908.4	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-3	
WELDING OF REINFORCING STEEL	VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706		X	1705.3	AWS D1.4 ACI 318: 26.6.4	
	INSPECT SINGLE, PASS FILLET WELDS 5/16" OR LESS		X	1705.3	AWS D1.4 ACI 318: 26.6.4	
	ALL OTHER WELDS	X		1705.3	AWS D1.4 ACI 318: 26.6.4	
INSPECTION OF ANCHORS CAST IN CONCRETE			X	1705.3	ACI 318: 17.8.2	
VERIFYING USE OF REQUIRED DESIGN MIX			X	1705.3,1904.1,1904.2,1908.2,1908.3	ACI 318: Ch. 19, 26.4.3, 26.4.4	
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE		X		1705.3, 1908.10	ASTM C 172 ASTM C 31 ACI 318: 26.5.2, 26.12	
INSPECTION OF CONCRETE & SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES		X		1705.3,1908.6, 1908.7,1908.8	ACI 318: 26.5	
VERIFYING MAINTENANCE OF SPECIFIED CURING TEMPERATURE & TECHNIQUES			X	1705.3, 1908.9	ACI 318: 26.5.3-5.5	
PRESTRESSED CONCRETE	APPLICATION OF PRESTRESSING FORCES	X		1705.3	ACI 318: 26.10	
	GROUTING OF BONDED PRESTRESSING TENDONS	X		1705.3	ACI 318: 26.10	
ERECTION OF PRECAST CONCRETE MEMBERS			X	1705.3	ACI 318: 26.9	
VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE & PRIOR TO REMOVAL OF SHORES & FORMS FROM BEAMS & STRUCTURAL SLABS			X	1705.3	ACI 318: 26.11.2	
INSPECT FORMWORK FOR SHAPE, LOCATION & DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED			X	1705.3	ACI 318: 26.11.2	

SPECIAL INSPECTIONS PROGRAM - POST INSTALLED ANCHORS

VERIFICATION AND INSPECTION		CONTINUOUS	PERIODIC	2018 IBC REFERENCE SECTION	REFERENCE STANDARD	COMMENTS
INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE	ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X		TABLE 1705.3	ACI 318: 17.8.2	SEE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS
	ALL OTHER MECHANICAL ANCHORS AND ADHESIVE ANCHORS		X	TABLE 1705.3	ACI 318: 17.8.2	SEE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS
INSPECTION OF ANCHORS INSTALLED IN MASONRY		X FOR LEVEL 3	X FOR LEVEL 2		ACI 530: TABLE 3.1.3, 3.1.2	REFER TO MASONRY SECTION FOR LEVEL OF INSPECTION REQUIRED. SEE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.

NOTE: OWNER SHALL ENGAGE THE INDEPENDENT SPECIAL INSPECTION AGENCY. CONTRACTOR TO NOTIFY INSPECTOR OF PROGRESS OF CONSTRUCTION AND PROVIDE ACCESS TO THE SITE TO COMPLETE INSPECTIONS.

STRUCTURAL TESTING & INSPECTION PROGRAM NOTES:

1. THE INTENTION OF THIS TABLE IS TO IDENTIFY THE CONSTRUCTION REQUIRING SPECIAL INSPECTION AS REQUIRED BY THE INTERNATIONAL BUILDING CODE (IBC). OWNER SHALL ENGAGE INDEPENDENT SPECIAL INSPECTION AGENCY. CONTRACTOR TO NOTIFY SPECIAL INSPECTOR OF PROGRESS OF CONSTRUCTION AND PROVIDE ACCESS TO THE SITE TO COMPLETE INSPECTIONS. EACH SPECIAL INSPECTOR IS RESPONSIBLE FOR JOB SPECIFIC ITEMS AS DEFINED IN CHAPTER 17 OF THE IBC (AND IN ACCORDANCE WITH THE SPECIFICATION).
2. INSPECTIONS OF FABRICATORS IS NOT REQUIRED IF THE FABRICATOR IS APPROVED IN ACCORDANCE TO IBC SECTION 1704.2.5 AND CERTIFIES COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
3. THE ITEMS CHECKED WITH AN "X" SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE MATERIAL SAMPLING AND TESTING SECTION OF THE PROJECT SPECIFICATIONS AND THE GENERAL NOTES. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ENGINEER, CONTRACTOR AND BUILDING OFFICIAL. ANY CONSTRUCTION WHICH FAILS TO MEET THE PROJECT SPECIFICATIONS AND IBC REQUIREMENTS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION AND THE ENGINEER IF UNCORRECTED. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
4. FREQUENCY OF INSPECTIONS.
   A. CONTINUOUS SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR SHALL BE ON SITE AT ALL TIMES OBSERVING THE WORK REQUIRING SPECIAL INSPECTION. FOR STRUCTURAL STEEL, INSPECTION TASK MUST BE COMPLETED FOR EACH MEMBER OR CONNECTION.
   B. PERIODIC SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IN ON THE SITE AT THE TIME INTERVALS NECESSARY TO CONFIRM THAT ALL WORK REQUIRING SPECIAL INSPECTIONS IS IN COMPLIANCE. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
5. STRUCTURAL STEEL SPECIAL INSPECTIONS:
   A. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY THE TESTING AGENCY.
   B. "O" INDICATES OBSERVATIONS TO BE PERFORMED ON A RANDOM BASIS. "P" INDICATES TASKS TO BE PERFORMED FOR EACH WELDED JOINT OR MEMBER.
6. ALL WELDS SHALL BE VISUALLY INSPECTED BY AN AWS CERTIFIED WELDING INSPECTOR. ALL PROVISIONS OF AWS D1.1/D1.1M "STRUCTURAL WELDING CODE- STEEL" SHALL APPLY TO STEEL CONSTRUCTION. NON-DESTRUCTIVE TESTING OF WELD JOINTS SHALL BE IN ACCORDANCE WITH AISC 360 SECTION N5.

SPECIAL INSPECTIONS PROGRAM - STRUCTURAL STEEL (AISC 360 CHAPTER N)

VERIFICATION AND INSPECTION		QC	QA	2018 IBC REFERENCE SECTION	AISC 360 REFERENCE	COMMENTS
GENERAL	INSPECTION OF FABRICATORS		P	1704.2.5		SEE NOTE 2.
	DOCUMENT ACCEPTANCE OR REJECTION OF INSPECTED ITEMS	P	P		TABLES N5.4-3, N5.6-3, N6.1	WELDED ELEMENTS, BOLTED ELEMENTS
PLACEMENT OF ANCHOR RODS & OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL	VERIFY DIAMETER, GRADE, TYPE AND LENGTH OF THE ANCHOR ROD OR EMBEDDED ITEM		P		SECTION N5.8	
	VERIFY EXTENT OR DEPTH OF EMBEDMENT INTO CONCRETE PRIOR TO CONCRETE PLACEMENT		P		SECTION N5.8	
INSPECTION OF GALVANIZED STRUCTURAL STEEL MEMBERS	EXPOSED CUT SURFACES & EXPOSED CORNERS OR RECTANGULAR HSS SHALL BE VISUALLY INSPECTED FOR CRACKS SUBSEQUENT TO GALVANIZING	P			SECTION N5.7	CRACKS SHALL BE REPAIRED OR MEMBER REJECTED
INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE w/CONSTRUCTION DOCUMENTS	DETAILS SUCH AS BRACING & STIFFENING	P			SECTION N5.8	
	MEMBER LOCATIONS	P			SECTION N5.8	
	APPLICATION OF JOINT DETAILS AT EACH CONNECTION	P			SECTION N5.8	
PRIOR TO WELDING	WELDER QUALIFACTION RECORDS & CONTINUITY RECORDS	P	O		TABLE N5.4-1	
	WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	P	P		TABLE N5.4-1	
	MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P	P		TABLE N5.4-1	
	MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O		TABLE N5.4-1	
	WELDER IDENTIFICATION SYSTEM	O	O		TABLE N5.4-1	THE FABRICATOR OR ERECTOR SHALL MAINTAIN A SYSTEM BY WITCH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED
	FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) - JOINT PREPARATION - DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) - CLEANLINESS (CONDITION OF STEEL SURFACES) - TACKING (TACK WELD QUALITY AND LOCATION) - BACKING TYPE AND FIT (IF APPLICABLE)	O	O		TABLE N5.4-1	
	CONFIGURATION AND FINISH OF ACCESS HOLES	O	O		TABLE N5.4-1	
	FIT-UP OF FILLET WELDS - DIMENSIONS (ALIGNMENT, GAPS AT ROOT) - CLEANLINESS (CONDITION OF STEEL SURFACES) - TACKING (TACK WELD QUALITY AND LOCATION)	O	O		TABLE N5.4-1	
	CHECK WELDING EQUIPMENT	O			TABLE N5.4-1	
DURING WELDING	CONTROL AND HANDLING OF WELDING CONSUMABLES - PACKAGING - EXPOSURE CONTROL	O	O		TABLE N5.4-2	
	NO WELDING OVER CRACKED TACK WELDS	O	O		TABLE N5.4-2	
	ENVIRONMENTAL CONDITIONS - WIND SPEED WITHIN LIMITS - PRECIPITATION AND TEMPERATURE	O	O		TABLE N5.4-2	
	WPS FOLLOWED - SETTINGS ON WELDING EQUIPMENT - TRAVEL SPEED - SELECTED WELDING MATERIALS - SHIELDING GAS TYPE/FLOW RATE - PREHEAT APPLIED - INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.) - PROPER POSITION (F, V, H, OH)	O	O		TABLE N5.4-2	
	WELDING TECHNIQUES - INTERPASS AND FINAL CLEANING - EACH PASS WITHIN PROFILE LIMITATIONS - EACH PASS MEETS QUALITY REQUIREMENTS	O	O		TABLE N5.4-2	
	PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	P	P		TABLE N5.4-2	
AFTER WELDING	WELDS CLEANED	O	O		TABLE N5.4-3	
	SIZE, LENGTH AND LOCATION OF WELDS	P	P		TABLE N5.4-3	
	WELDS MEET VISUAL ACCEPTANCE CRITERIA - CRACK PROHIBITION - WELD/BASE-METAL FUSION - CRATER CROSS SECTION - WELD PROFILES - WELD SIZE - UNDERCUT - POROSITY	P	P		TABLE N5.4-3	
	ARC STRIKES	P	P		TABLE N5.4-3	
	k-AREA	P	P		TABLE N5.4-3	WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES, OR STIFFENERS HAS BEEN PERFORMED IN THE k-AREA, VISUALLY INSPECT THE WEB FOR CRACKS WITHIN 3" OF WELD
	WELD ACCESS HOLES IN ROLLED HEAVY SHAPES & BUILT-UP HEAVY SHAPES	P	P		TABLE N5.4-3	AFTER ROLLED HEAVY SHAPES (SEE AISC SECTION A3.1c) & BUILT - UP HEAVY SHAPES (SEE AISC SECTION A3.1d) ARE WELDED, VISUALLY INSPECT THE WELD ACCESS HOLES FOR CRACKS
	BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	P		TABLE N5.4-3	
	REPAIR ACTIVITIES	P	P		TABLE N5.4-3	
	NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR	O	O		TABLE N5.4-3	
PRIOR TO BOLTING	MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P		TABLE N5.6-1	
	FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O		TABLE N5.6-1	
	CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	O	O		TABLE N5.6-1	
	CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O		TABLE N5.6-1	
	CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O		TABLE N5.6-1	
	PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O		TABLE N5.6-1	
	PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	O	O		TABLE N5.6-1	

SPECIAL INSPECTIONS PROGRAM - STRUCTURAL STEEL (AISC 360 CHAPTER N)

VERIFICATION AND INSPECTION		QC	QA	2018 IBC REFERENCE SECTION	AISC 360 REFERENCE	COMMENTS
DURING BOLTING	FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	O	O		TABLE N5.6-2	
	JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O		TABLE N5.6-2	
	FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O		TABLE N5.6-2	
	FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	O	O		TABLE N5.6-2	

SPECIAL INSPECTIONS PROGRAM - COLD FORMED STEEL DECK

VERIFICATION AND INSPECTION		QC	QA	2018 IBC REFERENCE SECTION	SDI QA/QC REFERENCE SECTION	COMMENTS
GENERAL	INSPECTION OF FABRICATORS		P	1704.2.5		SEE NOTE 2.
	DOCUMENT ACCEPTANCE OR REJECTION OF INSPECTED ITEMS	P	P		TABLES 1.1,1.2.1.5, &1.8	DECK MATERIALS, DECK PLACEMENT, WELDS, & MECHANICAL FASTENERS
PRIOR TO DECK PLACEMENT	VERIFY COMPLIANCE OF MATERIALS (DECK & ALL DECK ACCESSORIES) WITH CONSTRUCTION DOCUMENTS, INCLUDING PROFILES, MATERIALS PROPERTIES, AND BASE MATERIAL THICKNESS	P	P		TABLE 1.1	
AFTER DECK PLACEMENT	VERIFY COMPLIANCE OF DECK & ALL DECK ACCESSORIES INSTALLATION WITH CONSTRUCTION DOCUMENTS	P	P		TABLE 1.2	
	VERIFY DECK MATERIALS ARE REPRESENTED BY MILL CERTIFICATIONS THAT COMPLY WITH THE CONSTRUCTION DOCUMENTS		P		TABLE 1.2	
PRIOR TO WELDING	WELDING PROCEDURES SPECIFICATIONS (WPS) AVAILABLE	O	O		TABLE 1.3	
	MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	O	O		TABLE 1.3	
	MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O		TABLE 1.3	
	CHECK WELDING EQUIPMENT	O	O		TABLE 1.3	
DURING WELDING	USE QUALIFIED WELDERS	O	O		TABLE 1.4	
	CONTROL & HANDLING OF WELDING CONSUMABLES	O	O		TABLE 1.4	
	ENVIRONMENTAL CONDITIONS (WIND SPEED, MOISTURE, TEMPERATURE)	O	O		TABLE 1.4	
	WPS FOLLOWED	O	O		TABLE 1.4	
AFTER WELDING	VERIFY SIZE & LOCATION OF WELDS, INCLUDING SUPPORT, SIDELAP, & PERIMETER WELDS	P	P		TABLE 1.5	
	WELDS MEET VISUAL ACCEPTANCE CRITERIA	P	P		TABLE 1.5	
	VERIFY REPAIR ACTIVITIES	P	P		TABLE 1.5	
PRIOR TO MECHANICAL FASTENING	MANUFACTURER INSTALLATION INSTRUCTIONS AVAILABLE FOR MECHANICAL FASTENERS	O	O		TABLE 1.6	
	PROPER TOOLS AVAILABLE FOR FASTENER INSTALLATION	O	O		TABLE 1.6	
DURING MECHANICAL FASTENING	PROPER STORAGE FOR MECHANICAL FASTENERS	O	O		TABLE 1.6	
	FASTENERS ARE POSITIONED AS REQUIRED	O	O		TABLE 1.7	
	FASTENERS ARE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS	O	O		TABLE 1.7	
AFTER MECHANICAL FASTENING	CHECK SPACING, TYPE, AND INSTALLATION OF SUPPORT FASTENERS	P	P		TABLE 1.8	
	CHECK SPACING, TYPE, AND INSTALLATION OF SIDELAP FASTENERS	P	P		TABLE 1.8	
	CHECK SPACING, TYPE, AND INSTALLATION OF PERIMETER FASTENERS	P	P		TABLE 1.8	
	VERIFY REPAIR ACTIVITIES	P	P		TABLE 1.8	

SPECIAL INSPECTIONS PROGRAM - MASONRY LEVEL 1

VERIFICATION AND INSPECTION		CONTINUOUS	PERIODIC	ACI 530-16/ ASCE 5-16/ TMS 402-16 SECTION	ACI 530.1-16/ ASCE 6-16/ TMS 602-16 ARTICLE	COMMENTS
GENERAL	PRIOR TO CONSTRUCTION, VERIFICATION OF COMPLIANCE OF SUBMITTALS		X		1.5	
	VERIFICATION OF f'_m AND f'_{AAC} PRIOR TO CONSTRUCTION EXCEPT WHERE SPECIFICALLY EXEMPTED BY THE CODE		X		1.4B	
	VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO THE SITE FOR SELF-CONSOLIDATING GROUT	X			1.5.1.6.3	
	VERIFICATION OF f'_m AND f'_{AAC} FOR EVERY 5,000 sq.ft (465 sq. m).		X		1.5.1.6.3	
	VERIFICATION OF PROPORTIONS OF MATERIALS AS DELIVERED TO THE PROJECT SITE FOR PREMIXED OR PREBLENDED MORTAR, PRESTRESSING GROUT, AND GROUT OTHER THAN SELF-CONSOLIDATING GROUT		X		1.5.1.6.3	
AT START OF MASONRY CONSTRUCTION	PROPORTIONS OF SITE-PREPARED MORTAR		X		2.1, 2.6A,2.6C	
	GRADE, TYPE, & SIZE OF REINFORCEMENT, CONNECTORS, ANCHOR BOLTS, PRESTRESSING TENDONS AND ANCHORAGES		X		3.4, 3.6A	
	PRESTRESSING TECHNIQUE		X		3.6B	
	GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES		X		2.4B, 2.4H	
	PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	X			2.1C.1	CONTINUOUS FOR FIRST 5000 SF OF AAC MASONRY. PERIODIC AFTER FIRST 5000 SF OF AAC MASONRY
	SAMPLE PANEL CONSTRUCTION	X			1.6D	
PRIOR TO GROUTING	GROUT SPACE	X			3.2D, 3.2F	
	PLACEMENT OF PRESTRESSING TENDONS AND ANCHORAGES		X	10.8,10.9	2.4, 3.6	
	PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS	X		6.1, 6.3.1, 6.3.6, 6.3.7	3.2E, 3.4	
	PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS		X		2.6B, 2.4G.1.b	
DURING CONSTRUCTION	MATERIALS AND PROCEDURE WITH THE APPROVED SUBMITTALS		X		1.5	
	PLACEMENT OF MASONRY UNITS & MORTAR JOINT CONSTRUCTION		X		3.3B	
	SIZE & LOCATION OF STRUCTURAL ELEMENTS		X		3.3F	
	TYPE, SIZE & LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION	X		1.2.1(e), 6.3.1, 6.2.1		
	WELDING OF REINFORCING BARS	X		6.1.6.1.2		
	PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMP. BELOW 40°F) OR HOT WEATHER (TEMP. ABOVE 90°F)		X		1.8C, 1.8D	
	APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	X			3.6B	
	PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	X			3.5, 3.6C	
	PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	X			3.3B.9, 3.3F.1.b	CONTINUOUS FOR FIRST 5000 SF OF AAC MASONRY. PERIODIC AFTER FIRST 5000 SF OF AAC MASONRY
OBSERVE PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS			X		1.4B.2.a.3, 1.4B.2.b.3, 1.4B.2.c.3, 1.4B.3, 1.4B.4	

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General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid & Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

EGNER HALL BUILDING 685

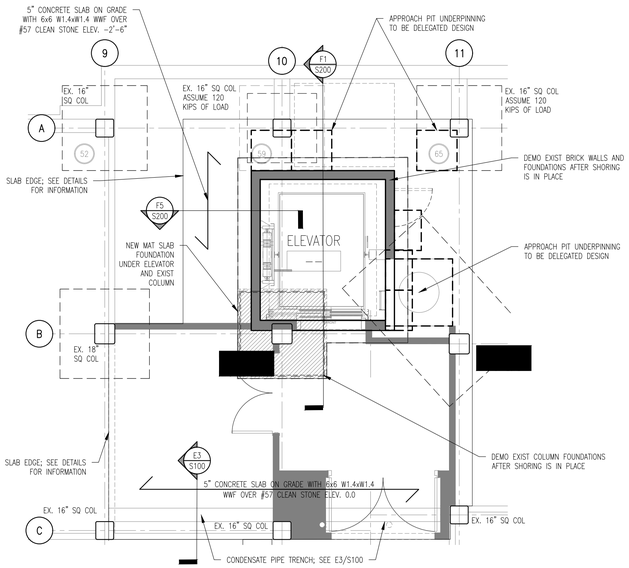
U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300
Date: July 06, 2022

Drawing Title:
Special Inspection Tables

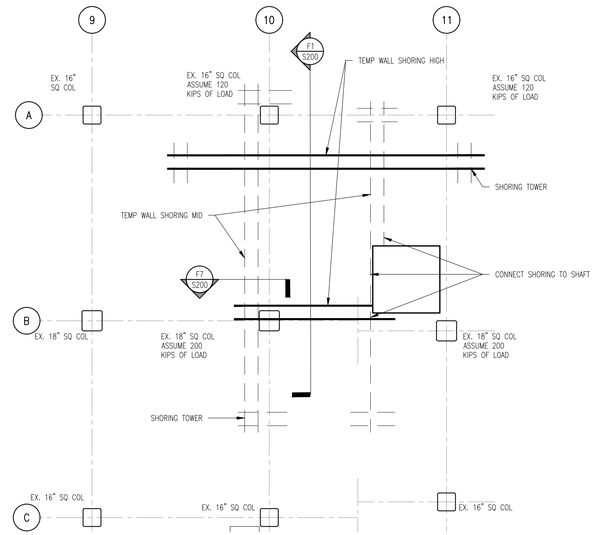
S002

ENTIRE SHEET
BID PACKAGE NO. 2 - ALTERNATE 2.1



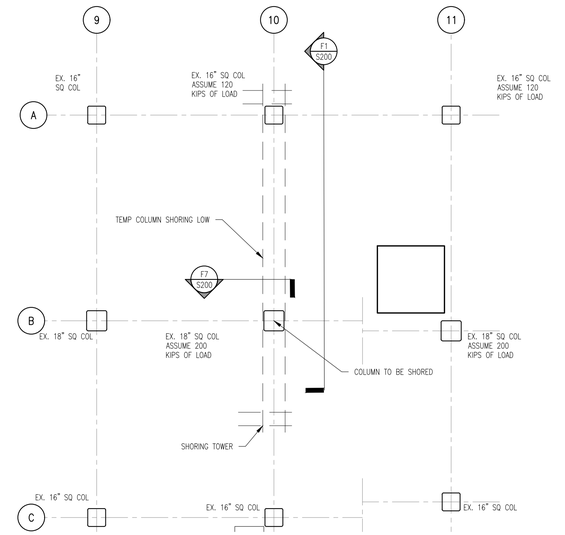
C1 / S100 **PARTIAL FOUNDATION PLAN**
3/16" = 1'-0"

NOTES:
1. SLAB ON GRADE RELATIVE ELEVATION 0'-0", CONTRACTOR TO VERIFY IN FIELD.
2. CONTRACTOR TO FIELD VERIFY ALL EXISTING STRUCTURE ELEVATIONS, SIZES, AND ORIENTATIONS.



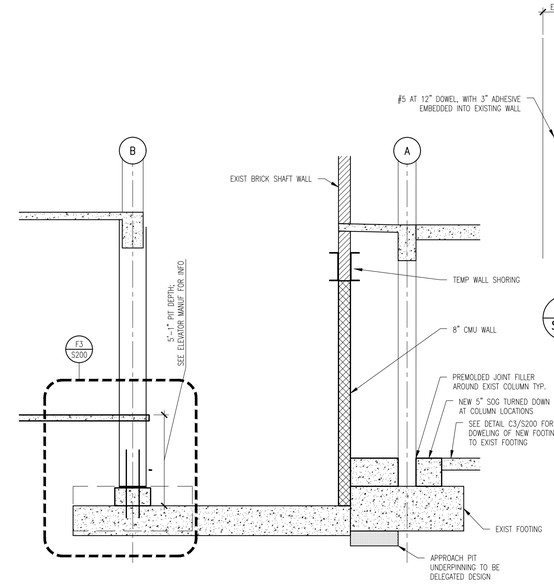
C3 / S100 **WALL SHORING PLAN**
3/16" = 1'-0"

NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL EXISTING STRUCTURE ELEVATIONS, SIZES, AND ORIENTATIONS.
2. CONTRACTOR TO PROVIDE SIGN AND SEALED DRAWINGS AND CALCULATIONS FOR SHORING. SEE EXISTING DRAWINGS FOR LOADS AND BEARING PRESSURES.
3. CONTRACTOR TO COORD LOCATION OF SHORING TOWERS SO THAT THEY ARE OUT OF THE WAY OF THE EXCAVATION.

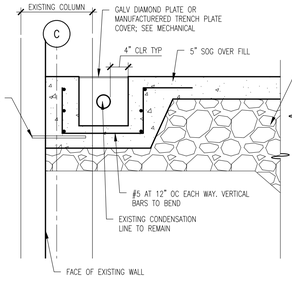


C6 / S100 **COLUMN SHORING PLAN**
3/16" = 1'-0"

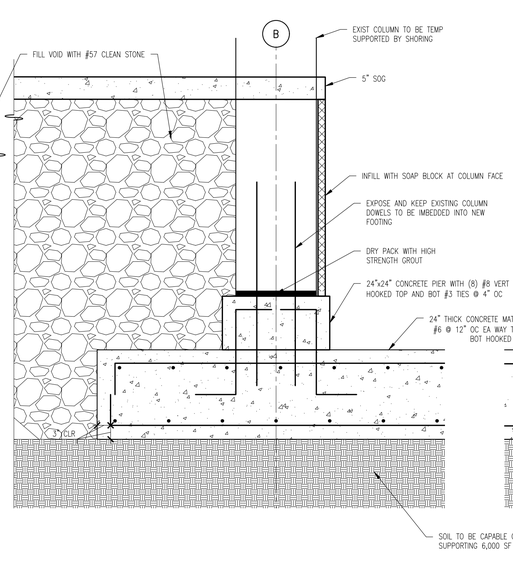
NOTES:
1. CONTRACTOR TO FIELD VERIFY ALL EXISTING STRUCTURE ELEVATIONS, SIZES, AND ORIENTATIONS.
2. CONTRACTOR TO PROVIDE SIGN AND SEALED DRAWINGS AND CALCULATIONS FOR SHORING. SEE EXISTING DRAWINGS FOR LOADS AND BEARING PRESSURES.
3. CONTRACTOR TO COORD LOCATION OF SHORING TOWERS SO THAT THEY ARE OUT OF THE WAY OF THE EXCAVATION.



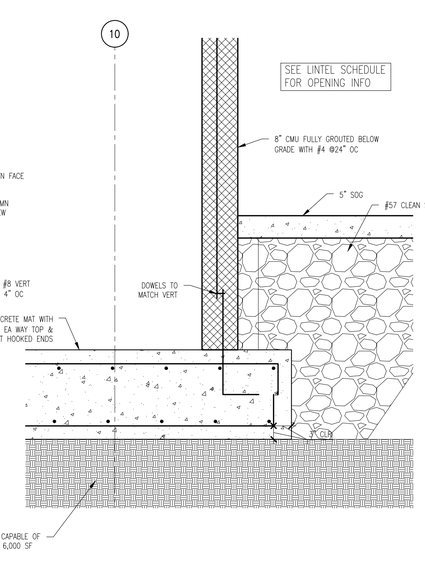
F1 / S100 **UNDERPINNING SECTION**
1" = 1'-0"



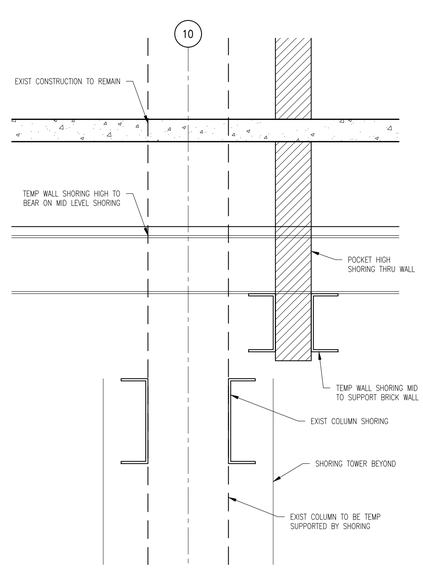
E3 / S100 **SECTION AT TRENCH**
1" = 1'-0"



F4 / S100 **REINFORCEMENT DETAIL**
1" = 1'-0"



F6 / S100 **REINFORCEMENT DETAILS**
1" = 1'-0"



F8 / S100 **SHORING DETAIL**
1" = 1'-0"

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Issue	Issued For	Date
0	Bid & Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

EGNER HALL BUILDING 685

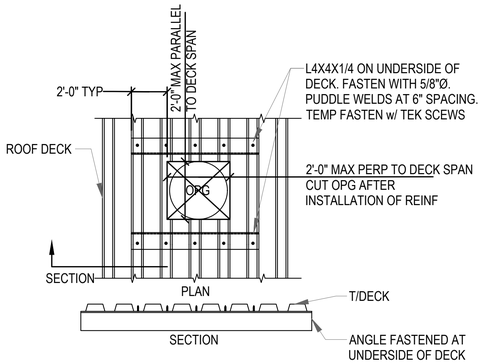
U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300
Date: July 06, 2022

Drawing Title:
Foundation Plans and Sections

S100

ENTIRE SHEET
BID PACKAGE NO. 2

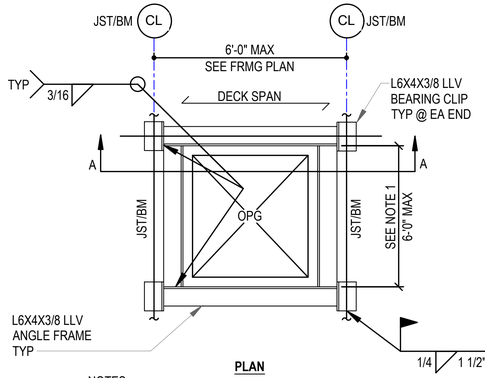


NOTE:
SPACE ADJACENT OPENINGS TO ALLOW 2'-0" MINIMUM UNDISTURBED DECK BETWEEN OPENINGS.

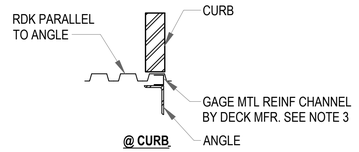
OPENING UP TO 2'-0"
(NO EQUIPMENT LOADS)

C1 / S101 ELEVATOR VENT OPENING
1/4" = 1'-0"

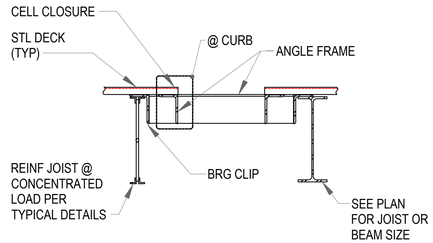
ANGLE FRAME SCHEDULE		
SPAN	SIZE	BRG CLIP
≤ 3'-0"	L6x4x5/16 LLV	AS REQUIRED



PLAN



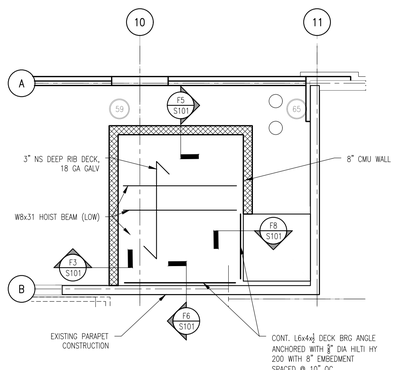
@ CURB



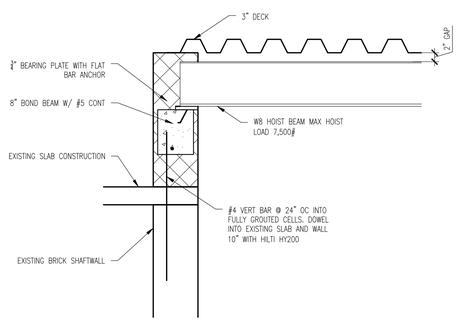
SECTION A-A

NOTES:
1. COORDINATE SIZE & LOCATION OF OPENINGS WITH PURCHASED EQUIPMENT. SEE MEP DRAWINGS FOR ADDITIONAL INFORMATION.
2. DETAIL APPLIES TO ROOF OPENINGS SUBJECT TO EQUIPMENT LOADS UP TO 1500 POUNDS. SEE PLAN FOR FRAMING AT UNITS GREATER THAN 1500 POUNDS.
3. REINFORCING CHANNEL NOT REQUIRED WHERE DECK SPAN IS PERPENDICULAR TO ANGLE.

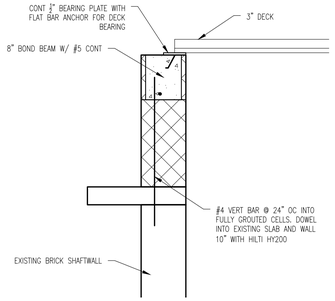
C4 / S101 ELEVATOR VENT OPENING FRAMING
1/4" = 1'-0"



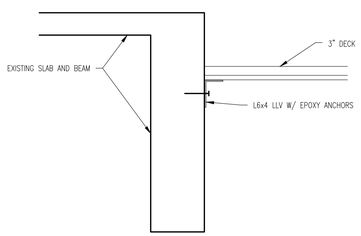
F1 / S101 ELEVATOR HOISTWAY ROOF FRAMING PLAN
3/16" = 1'-0"



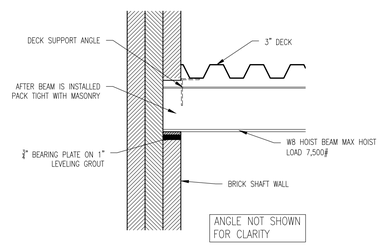
F3 / S101 ROOF SECTION
3/4" = 1'-0"



F5 / S101 ROOF SECTION
3/4" = 1'-0"



F6 / S101 ROOF SECTION
3/4" = 1'-0"



F8 / S101 ROOF SECTION
3/4" = 1'-0"

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Key Plan

EGNER HALL BUILDING 685

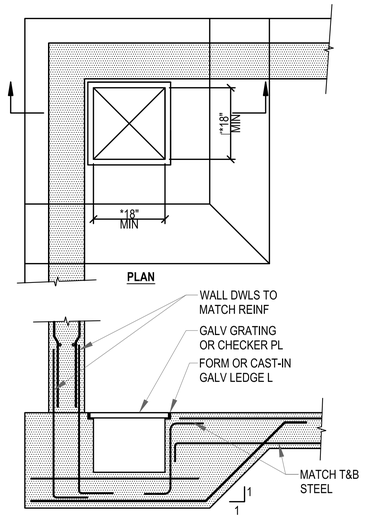
U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300
Date: July 06, 2022

Drawing Title:
Exterior Wall & Roof Details

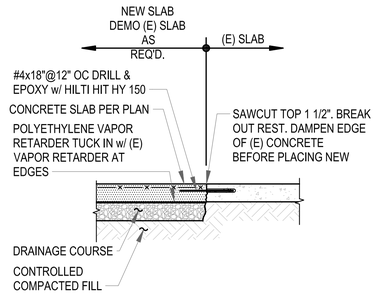
S101

ENTIRE SHEET
BID PACKAGE NO. 2



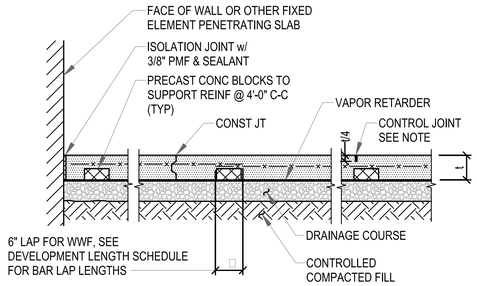
NOTE:
*-INDICATES DIMS. TO BE
COORD. w/ MECH DWGS

C1 / S200 DETAIL - ELEVATOR SUMP REINFORCING
3/4" = 1'-0"



SLAB ON GRADE INFILL
NOTE: TYP BOTH SIDES

C3 / S200 DETAIL - TYPICAL SLAB ON GRADE
3/4" = 1'-0"



NOTES:
1. CONTROL JOINT SPACING MAX OF 36xt.
2. t = SLAB THICKNESS, SEEPLAN.

C5 / S200 DETAIL - TYPICAL CONSTRUCTION JT @ NEW TO EXIST SLAB ON GRADE
3/4" = 1'-0"

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PRELIMINARY
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Key Plan

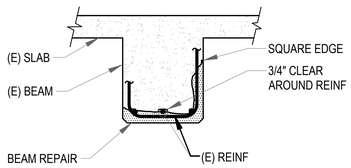
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300
Date: July 06, 2022

Drawing Title:
Foundation Details and Sections

S 2 0 0

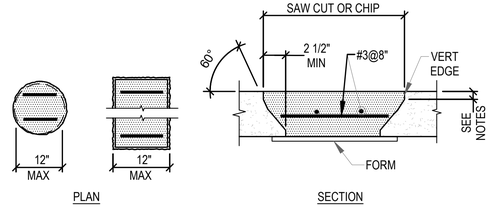


DETAIL - REPAIR @ UNDERSIDE/SIDE OF BEAM

SUGGESTED PROCEDURE:

1. LOCATE DEPTH OF REINFORCING BARS. PROVIDE SHORING IF BEAM IS IN JEOPARDY OF FALLING.
2. PROTECT BARS FROM FURTHER DAMAGE WHILE PERFORMING THE REPAIR.
3. REMOVE THE LOOSE AND DETERIORATED CONCRETE FROM THE BOTTOM AND SIDES OF BEAM BY LIGHT MECHANICAL CHIPPING TO OBTAIN A FRACTURED AGGREGATE SURFACE.
4. DAMAGED BARS (HAVING LOST MORE THAN 10% OF ORIGINAL DIAMETER) SHALL BE INSPECTED BY THE ENGINEER.
5. SQUARE THE EDGES OF THE PATCH PERPENDICULAR TO SURFACE OF BEAM AND TO A 3/8" MINIMUM DEPTH TO ELIMINATE FEATHER EDGING.
6. PROVIDE 3/4" CLEARANCE AROUND CIRCUMFERENCE OF EXPOSED REINFORCING AND REMOVE ALL LOOSE SCALE AND CORROSION FROM REINFORCING BY MECHANICAL WIRE BRUSH TO WHITE METAL.
7. CLEAN SURFACE FREE OF BOND-INHIBITING MATERIALS INCLUDING DUST, DIRT AND OIL. WET CONCRETE TO SATURATED SURFACE DRY.
8. COAT EXISTING REINFORCING WITH PROTECTING PRIMER AND BONDING AGENT IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN SPECIFICATINS.
9. USE A POILYMER-MODIFIED CEMENT-BASE REPAIR MORTAR SUITABLE FOR VERTICAL AND OVERHEAD APPLICATIONS WITH INTEGRAL CORROSION INHIBITOR. BRUSH-APPLY SCRUB COAT OF MIXED MATERIAL TO PREPARED CONCRETE THEN RESHAPE BEAM VOID. APPLY MORTAR IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN SPECIFICATIONS. APPLY THE REPAIR MORTAR WHILE BONDING COAT IS STILL WET.
10. STRIKE OFF SURFACES FLUSH AND/OR SQUARE.
11. CURE PATCH IN CONFORMANCE WITH MANUFACTURER'S WRITTEN SPECIFICATIONS.

C1 / S300 DETAIL - REPAIR @ UNDERSIDE OF BEAM
1-1/2" = 1'-0"

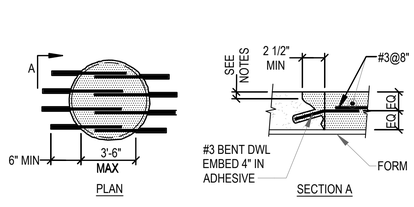


DETAIL - INFILL @ SLAB OPENINGS UP TO 12"Ø OR WIDE

SUGGESTED PROCEDURE:

1. Prepare edges by chipping with a light weight hammer. Brush off loose material.
2. Using a saw, provide a 1/2" vertical edge to eliminate feathered edges.
3. For openings > 12", angle drill #3 bent dowels or 3/8"Ø all - thread) at 8" o.c. , set in repair mortar, as shown.
4. Clean all surfaces of bond-inhibiting material including dust, dirt and oil.
5. Wet existing concrete to saturated surface dry condition.
6. Coat exposed existing reinforcing and any new reinforcing with a protecting primer and bonding agent.
7. Brush-apply bonding agent to prepared concrete.
8. Using a polymer-modified repair mortar suitable for deep voids and full-depth applications with integral corrosion inhibitor, fill void solid with repair mortar against plywood bottom form. Apply mortar in strict accordance with the manufacturer's written specifications.
9. Strike off surface flush and/or square.

C3 / S300 DETAIL - INFILL @ SLAB OPENINGS 12" Ø OR WIDE
1-1/2" = 1'-0"

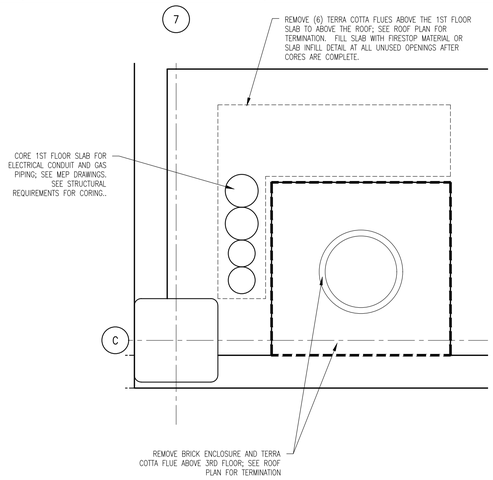


DETAIL - INFILL @ SLAB OPENINGS UP TO 3'-6"Ø OR WIDE

SUGGESTED PROCEDURE:

1. Suggested procedure applies to both details.
2. Provide mix description in notes or specs
3. Prepare edges by chipping with a light weight hammer. Brush off loose material.
4. Using a saw, provide a 1/2" vertical edge to eliminate feathered edges.
5. For openings > 12", angle drill #3 bent dowels or 3/8"Ø all - thread) at 8" o.c. , set in repair mortar, as shown.
6. Clean all surfaces of bond-inhibiting material including dust, dirt and oil.
7. Wet existing concrete to saturated surface dry condition.
8. Coat exposed existing reinforcing and any new reinforcing with a protecting primer and bonding agent.
9. Brush-apply bonding agent to prepared concrete.
10. Using a polymer-modified repair mortar suitable for deep voids and full-depth applications with integral corrosion inhibitor, fill void solid with repair mortar against plywood bottom form. Apply mortar in strict accordance with the manufacturer's written specifications.
11. Strike off surface flush and/or square.

C6 / S300 DETAIL INFILL @ SLAB OPENINGS UP TO 3'-6" Ø OR WIDE
1-1/2" = 1'-0"



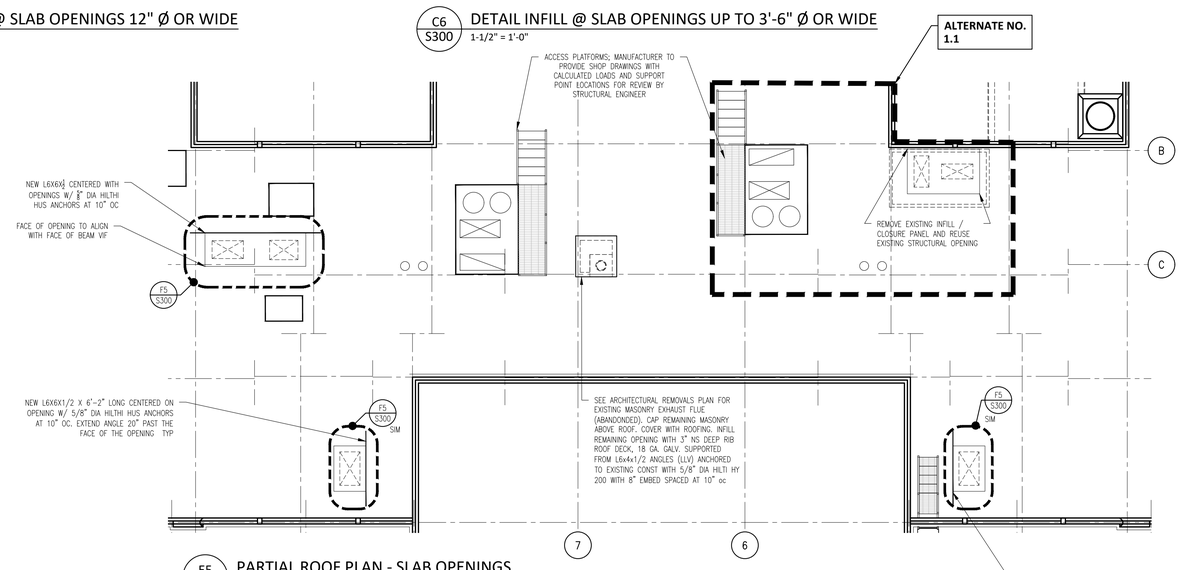
SEE STRUCTURAL GENERAL NOTES FOR CORING PROCEDURES

C8 / S300 DETAIL AT ABANDONED FLUE AT 'C7'
1-1/2" = 1'-0"

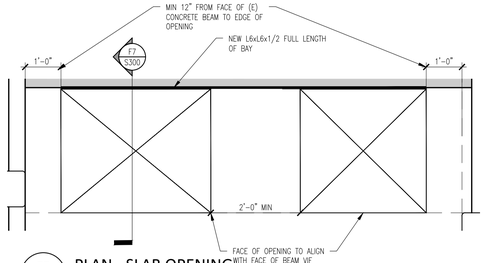
LOOSE LINTEL SCHEDULE (ELEVATOR SHAFT WALLS AND NON-LOAD BEARING WALLS)				
M.O. WIDTH (MAX)	WALL THICKNESS		SECTION	
	4"	6"	4"	6"
TO 3'-0"	L 3 1/2 x 3 1/2 x	L 5 x 5 x 5/16	L	L
TO 4'-0"	L 3 1/2 x 3 1/2 x 1/4	L 5 x 5 x 5/16	L	L
TO 5'-0"	L 4 x 3 1/2 x 1/4	L 5 x 5 x 5/16	L	L
TO 6'-0"	L 4 x 3 1/2 x 1/4	L 5 x 5 x 5/16	L	L
TO 7'-0"	L 5 x 3 1/2 x 1/4	L 5 x 5 x 3/8	L	L
TO 8'-0"	L 6 x 3 1/2 x 5/16	L 6 x 6 x 3/8	L	L
TO 8'-0"	4" x 8" NOM DIMENSION PRECAST LINTEL w/ 1-#4 T&B	6" x 8" NOM DIMENSION PRECAST LINTEL w/ 2-#4 T&B		

BEARING AND NON-LOADBEARING WALL LINTEL SCHEDULE NOTES:

1. GALVANIZE ALL LINTELS IN EXTERIOR WALLS AND EXTERIOR WALL BACKUP.
2. MINIMUM THICKNESS OF LOOSE LINTEL ANGLES IN EXTERIOR WALLS TO BE 5/16".
3. BEARING WIDTH SHALL BE 1" PER FOOT OF CLEAR SPAN ON EACH END. MINIMUM WIDTH SHALL BE 8" IN BEARING WALLS, AND 6" IN NON- LOADBEARING WALLS, UNO.
4. GROUT CMU FOR (16") x (FULL HEIGHT OF OPENING) TO UNDERSIDE OF LINTEL BEARING (TYP, UNO).
5. GROUT OPEN CELLS OF UPPER COURSES MONOLITHICALLY w/ U-SHAPED BLOCK LINTEL.
6. PRECAST CONCRETE (PC) LINTELS SHALL BE MADE OF 3000 PSI CONCRETE (MINIMUM 28 DAY COMPRESSIVE STRENGTH).
7. USE (2) 4" PC UNITS FOR 8" WALL, 4" + 6" PC UNITS FOR 10" WALL, (2) 6" OR (3) 4" PC UNITS FOR 12" WALL, ETC.
8. USE ARCHITECTURAL AND MECHANICAL DRAWINGS TO COORDINATE LINTEL ELEVATIONS WITH DOOR SCHEDULE, CEILING HEIGHTS, DUCT ELEVATIONS, ETC. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW WITH THIS INFORMATION.



E5 / S300 PARTIAL ROOF PLAN - SLAB OPENINGS
SCALE AT FULL SIZE: NTS



F5 / S300 PLAN - SLAB OPENING
SCALE AT FULL SIZE: NTS

F7 / S300 SECTION - SLAB OPENING
SCALE AT FULL SIZE: NTS

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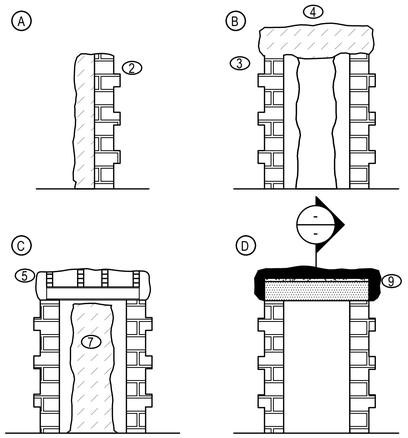
U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300
Date: July 06, 2022

Drawing Title:
Framing Details and Sections

S 3 0 0

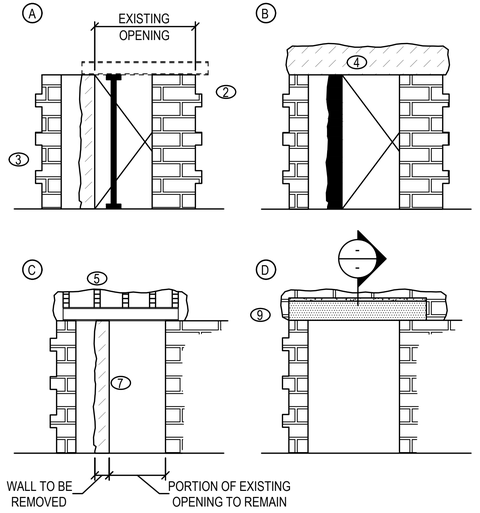
SUGGESTED LINTEL DETAILS FOR OPENINGS THROUGH RUBBLE STONE OR BRICK LOADBEARING WALLS



C1 / S301 ELEVATIONS - LINTEL INSTALLATION #1
SCALE AT FULL SIZE: NTS

SUGGESTED LINTEL INSTALLATION PROCEDURE #1

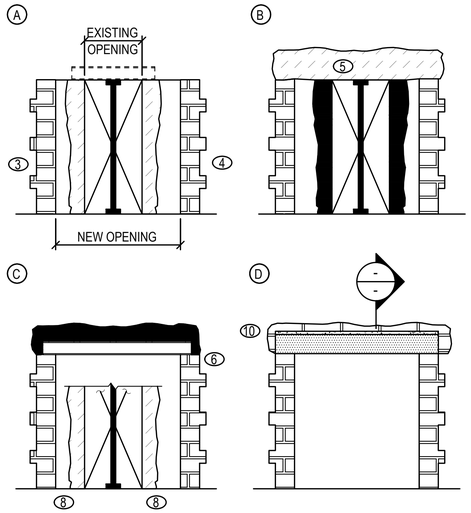
1. ANY ADJACENT OPENINGS WHICH ARE TO BE INFILLED SHOULD BE INFILLED PRIOR TO ANY DEMOLITION.
2. REMOVE A FULL HEIGHT SECTION OF THE EXISTING MASONRY WALL STRADDLING THE JAMB LINE OF THE NEW MASONRY OPENING. THIS SECTION WILL BE APPROXIMATELY 2'-0" WIDE x FULL WALL THICKNESS. REBUILD JAMB IN BRICK MASONRY, FORMING A MINIMUM 12" SOLID MASONRY JAMB, FULLY TOOTHED INTO THE EXISTING MASONRY. NEW MASONRY JAMBS ARE TO BEAR ON THE EXISTING WALL BELOW.
3. REPEAT STEP 2 ON THE OPPOSITE JAMB.
4. REMOVE A HORIZONTAL BAND OF MASONRY APPROXIMATELY 1'-6" HIGH. BY ONE HALF THE WALL THICKNESS AT THE HEAD OF THE NEW OPENING.
5. BOLT (2) BEAMS TOGETHER AT ENDS AND AT 2'-0" O.C. WITH 5/8"Ø A36 THREADED RODS. (OMIT IF IT IS A TWO BEAM LINTEL.) INSTALL THE (2) BEAMS BOLTED TOGETHER AND TEMPORARY BLOCKING AT 2'-0" BETWEEN TOP FLANGES AND UNDERSIDE OF EXISTING MASONRY AS NECESSARY. (SEE LINTEL SCHEDULE FOR LINTEL SIZES AND REQ BEARING). DRY-PACK BEARING ENDS OF BEAMS AND ANY VOIDS BETWEEN BLOCKING AND MASONRY ABOVE WITH NON-SHRINK GROUT. ALLOW GROUT TO CURE 24 HOURS.
6. REPEAT STEPS 4 AND 5 ON THE OPPOSITE FACE OF THE WALL.
7. DEMOLISH REMAINING MASONRY NECESSARY TO COMPLETE NEW OPENING.
8. FOR TWO BEAM LINTELS ONLY, BOLT TOGETHER AT ENDS AND AT 2'-0" O.C. WITH 5/8"Ø A36 THREADED RODS.
9. ENCASE LINTELS IN CONCRETE, LEAVING A 2"(+) GAP BETWEEN TOP OF CONCRETE AND THE UNDERSIDE OF THE EXISTING MASONRY. DRY-PACK THIS GAP WITH NON-SHRINK GROUT AND REBUILD INFILL MASONRY ABOVE LINTEL AS NECESSARY WITH BRICK.
10. WHEN CUTTING NEW OPENING INTO AN EXIST. MASONRY WALL WITH EXIST. FLOOR FRAMING BEARING ONTO WALL, SHORE FRAMING TO THE FLOOR BELOW.
11. USE SIMILAR PROCEDURES WHEN USING PRECAST CMU LINTELS.



C5 / S301 ELEVATIONS - LINTEL INSTALLATION #2
SCALE AT FULL SIZE: NTS

SUGGESTED LINTEL INSTALLATION PROCEDURE #2
(SIMILAR FOR INSTALLING AN ADJACENT LINTEL AND NEW ELEVATION)

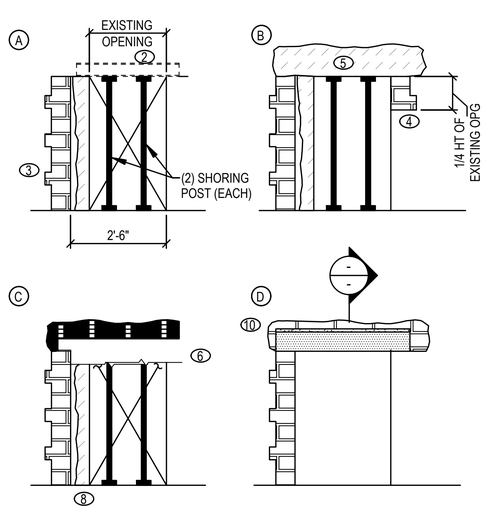
1. ANY ADJACENT OPENINGS WHICH ARE TO BE INFILLED SHOULD BE INFILLED PRIOR TO ANY DEMOLITION.
2. INSTALL (2) SHORING POSTS WITHIN THE EXSIT. WIDTH OF WALL OPENING. IF EXIST. LINTELS ARE STEEL BEAMS, REMOVE EXIST. LINTELS & INFILL PORTION OF EXISTING OPENING. IF THERE IS AN EXIST. OPENING IN WALL BELOW, CONTINUE THE SHORING DOWN UNTIL THERE IS A SOLID WALL BELOW OPENING.
3. REMOVE A FULL HEIGHT SECTION OF THE EXISTING MASONRY WALL STRADDLING THE JAMB LINE OF THE NEW MASONRY OPENING. THIS SECTION WILL BE APPROXIMATELY 2'-0" WIDE x FULL WALL THICKNESS. REBUILD JAMB IN BRICK MASONRY, FORMING A MINIMUM 12" SOLID MASONRY JAMB, FULLY TOOTHED INTO THE EXISTING MASONRY. NEW MASONRY JAMBS ARE TO BEAR ON THE EXISTING WALL BELOW.
4. REMOVE A HORIZONTAL BAND OF MASONRY APPROXIMATELY 1'-6" HIGH BY ONE HALF THE WALL THICKNESS AT THE HEAD OF THE NEW OPENING.
5. BOLT (2) BEAMS TOGETHER AT ENDS AND AT 2'-0" O.C. WITH 5/8" ∅ A36 THREADED RODS. (OMIT IF IT IS A TWO BEAM LINTEL.) INSTALL THE (2) BEAMS BOLTED TOGETHER AND TEMPORARY BLOCKING AT 2'-0" BETWEEN TOP FLANGES AND UNDERSIDE OF EXISTING MASONRY AS NECESSARY. (SEE LINTEL SCHEDULE FOR LINTEL SIZES AND REQ BEARING). DRY-PACK BEARING ENDS OF BEAMS AND ANY VOIDS BETWEEN BLOCKING AND MASONRY ABOVE WITH NON-SHRINK GROUT. ALLOW GROUT TO CURE 24 HOURS.
6. REPEAT STEPS 4 AND 5 ON THE OPPOSITE FACE OF THE WALL.
7. DEMOLISH REMAINING MASONRY NECESSARY TO COMPLETE NEW OPENING.
8. FOR TWO BEAM LINTELS ONLY, BOLT TOGETHER AT ENDS AND AT 2'-0" O.C. WITH 5/8" ∅ A36 THREADED RODS.
9. ENCASE LINTELS IN CONCRETE, LEAVING A 2"(+) GAP BETWEEN TOP OF CONCRETE AND THE UNDERSIDE OF THE EXISTING MASONRY. DRY-PACK THIS GAP WITH NON-SHRINK GROUT AND REBUILD INFILL MASONRY ABOVE LINTEL AS NECESSARY WITH BRICK.
10. WHEN CUTTING NEW OPENING INTO AN EXIST. MASONRY WALL WITH EXIST. FLOOR FRAMING BEARING ONTO WALL, SHORE FRAMING TO THE FLOOR BELOW.
11. USE SIMILAR PROCEDURES WHEN USING PRECAST CMU LINTELS.



F1 / S301 ELEVATIONS - LINTEL INSTALLATION #3
SCALE AT FULL SIZE: NTS

SUGGESTED LINTEL INSTALLATION PROCEDURE #3

1. ANY ADJACENT OPENING WHICH ARE TO BE INFILLED SHOULD BE INFILLED PRIOR TO ANY DEMOLITION.
2. INSTALL (2) SHORING POSTS WITHIN THE EXIST. WIDTH OF WALL OPENING. IF EXIST. LINTELS ARE STEEL BEAMS, REMOVE EXIST. LINTELS. IF THERE IS AN EXIST. OPENING IN WALL BELOW, CONTINUE THE SHORING DOWN UNTIL THERE IS A SOLID WALL BELOW OPENING.
3. REMOVE A FULL HEIGHT SECTION OF THE EXISTING MASONRY WALL STRADDLING THE JAMB LINE OF THE NEW MASONRY OPENING. THIS SECTION WILL BE APPROXIMATELY 2'-0" WIDE x FULL WALL THICKNESS. REBUILD JAMB IN BRICK MASONRY, FORMING A MINIMUM 12" SOLID MASONRY JAMB, FULLY TOOTHED INTO THE EXISTING MASONRY. NEW MASONRY JAMBS ARE TO BEAR ON THE EXISTING WALL BELOW.
4. REPEAT STEP 3 ON THE OPPOSITE JAMB.
5. REMOVE A HORIZONTAL BAND OF MASONRY APPROXIMATELY 1'-6" HIGH BY ONE HALF THE WALL THICKNESS AT THE HEAD OF THE NEW OPENING.
6. BOLT (2) BEAMS TOGETHER AT ENDS AND AT 2'-0" O.C. WITH 5/8" Ø A36 THREADED RODS. (OMIT IF IT IS A TWO BEAM LINTEL.) INSTALL THE (2) BEAMS BOLTED TOGETHER AND TEMPORARY BLOCKING AT 2'-0" BETWEEN TOP FLANGES AND UNDERSIDE OF EXISTING MASONRY AS NECESSARY. (SEE LINTEL SCHEDULE FOR LINTEL SIZES AND REQ BEARING). DRY-PACK BEARING ENDS OF BEAMS AND ANY VOIDS BETWEEN BLOCKING AND MASONRY ABOVE WITH NON-SHRINK GROUT. ALLOW GROUT TO CURE 24 HOURS.
7. REPEAT STEPS 5 AND 6 ON THE OPPOSITE FACE OF THE WALL.
8. DEMOLISH REMAINING MASONRY NECESSARY TO COMPLETE NEW OPENING.
9. FOR TWO BEAM LINTELS ONLY, BOLT TOGETHER AT ENDS AND AT 2'-0" O.C. WITH 5/8"Ø A36 THREADED RODS.
10. ENCASE LINTELS IN CONCRETE, LEAVING A 2"(+) GAP BETWEEN TOP OF CONCRETE AND THE UNDERSIDE OF THE EXISTING MASONRY. DRY-PACK THIS GAP WITH NON-SHRINK GROUT AND REBUILD INFILL MASONRY ABOVE LINTEL AS NECESSARY WITH BRICK.
11. WHEN CUTTING NEW OPENING INTO AN EXIST. MASONRY WALL WITH EXIST. FLOOR FRAMING BEARING ONTO WALL, SHORE FRAMING TO THE FLOOR BELOW.
12. USE SIMILAR PROCEDURES WHEN USING PRECAST CMU LINTELS.



F5 / S301 ELEVATIONS - LINTEL INSTALLATION #4
SCALE AT FULL SIZE: NTS

SUGGESTED LINTEL INSTALLATION PROCEDURE #4

1. ANY ADJACENT OPENINGS WHICH ARE TO BE INFILLED SHOULD BE INFILLED PRIOR TO ANY DEMOLITION.
2. INSTALL (4) SHORING POSTS WITHIN WIDTH OF WALL OPENING. IF EXIST. LINTELS ARE STEEL BEAMS, REMOVE EXIST. LINTELS. IF THERE IS AN EXISTING OPENING IN WALL BELOW, CONTINUE THE SHORING DOWN UNTIL THERE IS A SOLID WALL BELOW OPENING.
3. REMOVE A FULL HEIGHT SECTION OF THE EXISTING MASONRY WALL STRADDLING THE JAMB LINE OF THE NEW MASONRY OPENING. THIS SECTION WILL BE APPROXIMATELY 2'-0" WIDE x FULL WALL THICKNESS. REBUILD JAMB IN BRICK MASONRY, FORMING A MINIMUM 12" SOLID MASONRY JAMB, FULLY TOOTHED INTO THE EXISTING MASONRY. NEW MASONRY JAMBS ARE TO BEAR ON THE EXISTING WALL BELOW.
4. REPEAT STEP 3 FOR PARTIAL REBUILD OF OPPOSITE JAMB.
5. REMOVE A HORIZONTAL BAND OF MASONRY APPROXIMATELY 1'-6" HIGH BY ONE HALF THE WALL THICKNESS AT THE HEAD OF THE NEW OPENING.
6. BOLT (2) BEAMS TOGETHER AT ENDS AND AT 2'-0" O.C. WITH 5/8" ∅ A36 THREADED RODS. (OMIT IF IT IS A TWO BEAM LINTEL.) INSTALL THE (2) BEAMS BOLTED TOGETHER AND TEMPORARY BLOCKING AT 2'-0" BETWEEN TOP FLANGES AND UNDERSIDE OF EXISTING MASONRY AS NECESSARY. (SEE LINTEL SCHEDULE FOR LINTEL SIZES AND REQ BEARING). DRY-PACK BEARING ENDS OF BEAMS AND ANY VOIDS BETWEEN BLOCKING AND MASONRY ABOVE WITH NON-SHRINK GROUT. ALLOW GROUT TO CURE 24 HOURS.
7. REPEAT STEPS 5 AND 6 ON THE OPPOSITE FACE OF THE WALL.
8. DEMOLISH REMAINING MASONRY NECESSARY TO COMPLETE NEW OPENING.
9. FOR TWO BEAM LINTELS ONLY, BOLT TOGETHER AT ENDS AND AT 2'-0" O.C. WITH 5/8"∅ A36 THREADED RODS.
10. ENCASE LINTELS IN CONCRETE, LEAVING A 2"(+) GAP BETWEEN TOP OF CONCRETE AND THE UNDERSIDE OF THE EXISTING MASONRY. DRY-PACK THIS GAP WITH NON-SHRINK GROUT AND REBUILD INFILL MASONRY ABOVE LINTEL AS NECESSARY WITH BRICK.
11. WHEN CUTTING NEW OPENING INTO AN EXIST. MASONRY WALL WITH EXIST. FLOOR FRAMING BEARING ONTO WALL, SHORE FRAMING TO THE FLOOR BELOW.
12. USE SIMILAR PROCEDURES WHEN USING PRECAST CMU LINTELS.

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General Notes
1. All dimensions and existing conditions shall be checked and verified by contractor at the site prior to proceeding with the work.
2. Contractor shall inform Architect/ Engineer of any discrepancies on drawings before construction begins.
3. No existing service may be cut without Architect/Engineers's consent. Any existing service severed or damaged shall be replaced at no cost to owner.
4. Contractor must notify Architect/ Engineer at once if hidden existing conditions encountered require design modifications.

Issue	Issued For	Date
0	Bid & Permit	07-06-2022

PRELIMINARY
Not For Construction

Key Plan

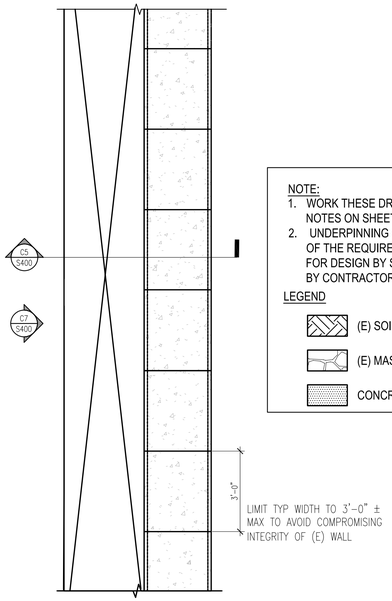
EGNER HALL BUILDING 685

U.S. MILITARY ACADEMY
West Point, New York

Project No.: 11300
Date: July 06, 2022

Drawing Title:
Framing Details and Sections

S 3 0 1



NOTE:
1. WORK THESE DRAWINGS WITH THE UNDERPINNING NOTES ON SHEET S000
2. UNDERPINNING & SEQUENCING OF CONSTRUCTION OF THE REQUIRED UNDERPINNING ARE DELEGATED FOR DESIGN BY SPECIALITY ENGINEER ENGAGED BY CONTRACTOR.

LEGEND

(E) SOIL

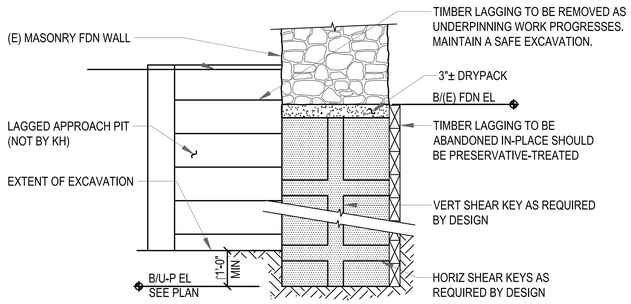
(E) MASONRY

CONCRETE UNDERPINNING

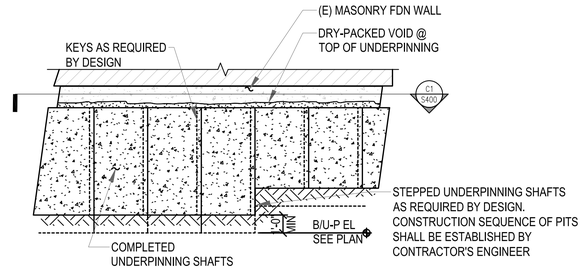
LIMIT TYP WIDTH TO 3'-0" ± MAX TO AVOID COMPROMISING INTEGRITY OF (E) WALL

NOTE: LAGGING NOT SHOWN IN PLAN VIEWS FOR CLARITY.

C1 / S400 PLAN - COMPLETED UNDERPINNING SHAFTS
SCALE AT FULL SIZE: NTS



C5 / S400 TYPICAL SECTION - EXISTING MASONRY FOUNDATION WALL UNDERPINNING
SCALE AT FULL SIZE: NTS



C7 / S400 TYPICAL ELEVATION - COMPLETED UNDERPINNING
SCALE AT FULL SIZE: NTS

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U.S. MILITARY ACADEMY
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Underpinning Details

S400