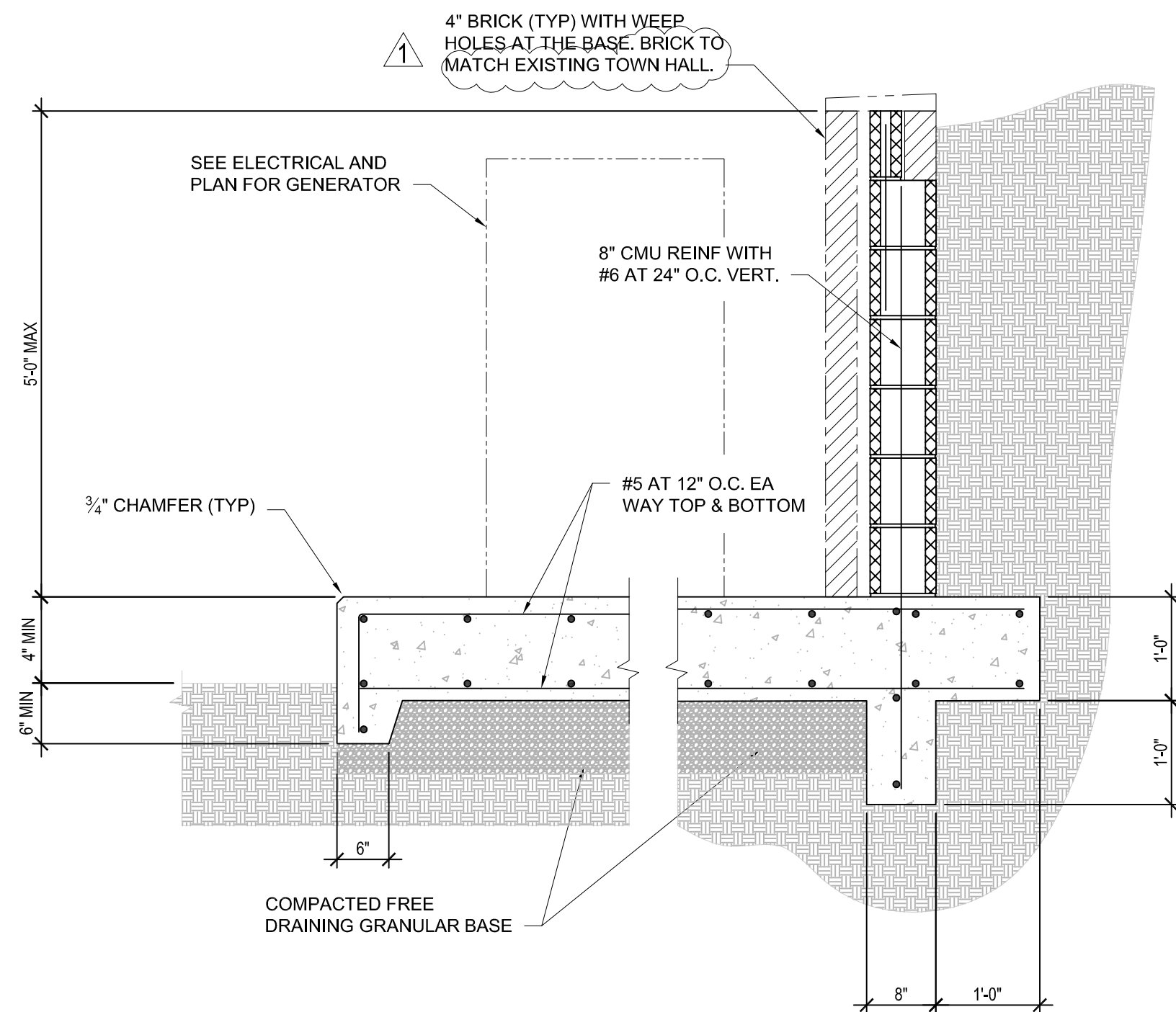


1 PARTIAL FOUNDATION PLAN

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

NOTES:

- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PERTINENT TO SCOPE OF WORK PRIOR TO FABRICATING REINFORCEMENT STEEL.
- CONTRACTOR SHALL VERIFY WITH THE GENERATOR SUPPLIER FINAL EQUIPMENT WEIGHTS AND DIMENSIONS ALIGN WITH THE DESIGN ASSUMPTIONS NOTED ON PLAN.
- CONTRACTOR SHALL VERIFY EQUIPMENT CLEARANCES ARE PROPERLY MAINTAINED, INCLUDING TO RETAINING WALLS AND/OR CURBS.
- REFER TO MEP DRAWINGS FOR LOCATION OF CURB.



2 RETAINING WALL AND GENERATOR PAD

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

I. DESIGN CRITERIA

A. GENERAL BUILDING CODE

- THE CONSTRUCTION DOCUMENTS ARE BASED ON THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, EDITION 2015, AND ALL LOCAL AMENDMENTS.

B. DEAD LOADS

- SUPERIMPOSED DEAD LOADS
 - GENERATOR: AS NOTED

C. LIVE LOADS

- DESIGN LIVE LOADS ARE BASED ON THE MORE RESTRICTIVE OF THE UNIFORM LOAD LISTED BELOW OR THE CONCENTRATED LOAD LISTED ACTING OVER AN AREA 2.5 FEET SQUARE OR, IN THE CASE OF STAIR TREADS, 4 SQUARE INCHES.

- LIVE: 100 PSF, 2000 LB

II. FOUNDATIONS

A. FOUNDATION DESIGN IS BASED ON A 1,500 PSF ALLOWABLE BEARING PRESSURE.

- ALL SOILS SUPPORTING FOUNDATIONS, SLABS ON GRADE OR OTHER STRUCTURAL ELEMENTS SHALL BE PROPERLY COMPACTED.
- THE BEARING ELEVATION OF ALL EXTERIOR SHALLOW FOOTINGS SHALL BE A MINIMUM OF 2'-8" BELOW FINISH GRADE FOR FROST PROTECTION.
- THE SOIL BEARING CAPACITY AND FOUNDATION SUBGRADES SHALL BE INSPECTED WITHOUT ANY DEFICIENCIES BY THE GEOTECHNICAL INSPECTOR PRIOR TO POURING CONCRETE OR INSTALLATION OF STEEL REINFORCEMENT.
- EXCAVATIONS FOR FOUNDATIONS SHALL REMAIN PROTECTED UNTIL THE INSTALLATION OF THE FOUNDATION.
- IN THE EVENT OPEN EXCAVATION HAS BEEN EXPOSED FOR MORE THAN 48 HOURS OR HAS BEEN POTENTIALLY COMPROMISED IN ANY WAY, INCLUDING BUT NOT LIMITED TO STORM WATER, THE SUBGRADE SHALL BE RE-INSPECTED BY THE GEOTECHNICAL INSPECTOR PRIOR TO CASTING THE FOUNDATION.

G. BASEMENT WALLS / RETAINING WALLS

DESIGN CRITERIA:

- ACTIVE PRESSURE: 60 PSF/FT
- AT-REST PRESSURE: 90 PSF/FT
- PASSIVE PRESSURE: 250 PSF/FT
- THE FIRST PRESSURES SPECIFIED ABOVE ARE BASED ON DRAINED BACKFILL WITH NO BUILDUP OF WATER PRESSURE BEHIND THE WALLS.

III. CONCRETE

1. CONCRETE MIX REQUIREMENTS

- ALL CONCRETE SHALL CONFORM TO THE REQUIREMENTS BELOW UNLESS NOTED OTHERWISE ON THE DRAWINGS.

FOUNDATION & RETAINING WALL

- COMPRESSIVE STRENGTH AT 28 DAYS = 4,000 PSI
- MAXIMUM WATER TO CEMENT RATIO = 0.45
- MINIMUM AIR CONTENT = 5%
- SLUMP RANGE = 2-4 INCHES

- THE USE OF ADITIVES SHALL NOT BE PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD OR NOTED IN THE PROJECT SPECIFICATIONS.

C. HORIZONTAL CONSTRUCTION JOINTS IN CONCRETE POURS

- THERE SHALL BE NO HORIZONTAL CONSTRUCTION JOINTS IN ANY CONCRETE POURS UNLESS SHOWN ON THE DRAWINGS. THE ARCHITECT/ENGINEER SHALL APPROVE ALL DEVIATIONS OR ADDITIONAL JOINTS IN WRITING.

D. REINFORCING STEEL

- ALL REINFORCING STEEL NOTED AS CONTINUOUS SHALL BE LAPPED AS REQUIRED WITH CLASS B TENSION LAP SPLICES PER ACI 318.
- ALL REINFORCING STEEL SHALL BE ASTM A 615 GRADE 60 UNLESS NOTED OTHERWISE ON THE DRAWINGS OR IN THESE NOTES.
- PROVIDE REINFORCING STEEL CONFORMING TO ASTM A706 FOR ALL REINFORCING STEEL REQUIRED TO BE WELDED AND WHERE NOTED ON THE DRAWINGS.
- DEFORMED BAR AND CHORS SHALL BE AIN 5 D1.1 TYPE C (TABLE 7.1) STUDS MANUFACTURED IN CONFORMANCE WITH SPECIFICATION ASTM A 496 WITH A MINIMUM YIELD STRENGTH 70,000 PSI.

- REINFORCING STEEL COVERAGE REINFORCING STEEL COVERAGE SHALL CONFORM TO THE REQUIREMENTS SPECIFIED BELOW UNLESS NOTED OTHERWISE ON THE DRAWINGS. COVER SPECIFIED SHALL BE CONSIDERED MINIMUM THAT MAY REQUIRE INCREASING WHERE REINFORCING STEEL INTERSECTS FOR DIFFERENT MEMBER TYPES. COVER IN STRUCTURAL MEMBERS NOT SPECIFIED BELOW SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 UNLESS SPECIFIED OTHERWISE ON THE DRAWINGS. THE REINFORCING STEEL DETAILER SHALL ADJUST REINFORCING STEEL CASE SIZES AT INTERSECTING STRUCTURAL MEMBERS. AS REQUIRED TO ALLOW CLEARANCE FOR INTERSECTING REINFORCING BAR LAYERS WITH MINIMUM SPECIFIED COVER.

b. FOOTINGS:

- FOOTINGS: 3"

b. FOUNDATION WALLS:

- FOUNDATION WALLS: 2"

F. SPLICES AND HOOKS IN REINFORCING STEEL

- SPLICE LOCATION, TYPE AND HOOKS FOR UNSCHEDULED BEAMS, SLABS AND WALLS:
- BEAMS AND SLABS: UNSCHEDULED BEAMS AND SLABS, INCLUDING GRADE BEAMS, SHALL HAVE CONTINUOUS TOP BARS LAPPED AT MIDSPAN BETWEEN SUPPORTS WITH A CLASS B TENSION SPLICE. BOTTOM BARS SHALL BE LAPPED AT THE SUPPORTS WITH A CLASS B TENSION SPLICE. ALL BEAM BARS SHALL BE HOOKED AT DISCONTINUOUS END, UNLESS NOTED OTHERWISE.
- BASEMENT WALLS: VERTICAL BARS PLACED ON THE DIRT FACE SIDE SHALL BE LAPPED AT MIDSPAN BETWEEN SUPPORTS WITH A CLASS B TENSION SPLICE. VERTICAL BARS PLACED OPPOSITE THE DIRT FACE SIDE SHALL BE LAPPED AT THE SUPPORTS WITH A CLASS B TENSION SPLICE. HORIZONTAL BARS SHALL HAVE A CLASS B TENSION SPLICE.

- ALL TENSION SPLICES SHALL BE CLASS B TENSION LAP SPLICES AS INDICATED BELOW:

IV. MASONRY

A. CONCRETE MASONRY UNITS

- CONCRETE STRENGTH OF MASONRY UNITS (BASED ON NET AREA) SHALL BE 1,900 PSI MINIMUM.
- UNITS SHALL CONFORM TO ASTM C 55 OR ASTM C 90 AND SAMPLED IN ACCORDANCE WITH ASTM C 140.

B. MORTAR

- USE ONLY PORTLAND CEMENT/TYPE M OR S. MORTAR CONFORMING TO ASTM C 270. PROVIDE AN AVERAGE COMPRESSIVE STRENGTH AT 28 DAYS OF 1,800 PSI MINIMUM.

D. GROUT

- MIX DESIGNS:
 - FOR FILLING SPACES 4" OR LARGER IN BOTH HORIZONTAL DIRECTIONS, USE "COARSE GROUT" WITH A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI. THE GROUT SHALL BE TESTED IN ACCORDANCE WITH ASTM C 1019. FOR FILLING SPACES LESS THAN 4" IN ONE OR BOTH HORIZONTAL DIRECTIONS, USE "FINE GROUT" PROPORTIONED PER ASTM C 416.
 - USE 3,000 PSI NORMAL WEIGHT CONCRETE FOR FILLING SPACES 10" AND LARGER IN BOTH DIRECTIONS. THE GROUT SHALL BE TESTED IN ACCORDANCE WITH ASTM C 1019.
 - ALL GROUT MIX DESIGN SUBMITTALS SHALL INCLUDE THE RESULTS OF THE TESTS PERFORMED IN ACCORDANCE WITH ASTM C 1019.
 - SLUMP RANGE AT POINT OF FINAL DISCHARGE: 8" TO 11".

E. MINIMUM REINFORCEMENT FOR CONCRETE MASONRY UNITS

- PROVIDE HORIZONTAL REINFORCEMENT IN BED JOINTS EVERY OTHER COURSE (MAXIMUM 16" SPACING) IN TYPICAL WALLS AND IN EVERY COURSE (MAXIMUM 8" SPACING) IN PARAPETS AND CANTILEVERED WALLS.

2. TERMINATION OF REINFORCING STEEL:

- ALL VERTICAL REINFORCEMENT SHALL HAVE STANDARD HOOK INTO BOND BEAM. TERMINATE AT HIGHEST BOND BEAM IF MASONRY DOES NOT EXTEND TO ROOF OR GROUTED CELL IS NOT CONTINUOUS TO ROOF. HOOK SHALL EXTEND TO THE UPPERMOST HORIZONTAL REINFORCEMENT OF THE BOND BEAM AND HAVE A MINIMUM EMBEDMENT OF 6".
- ALL HORIZONTAL REINFORCEMENT AT ENDS OF BOND BEAMS SHALL HAVE STANDARD HOOK INTO VERTICAL GROUTED CELL. PROVIDE CORNER BARS SUCH THAT HORIZONTAL REINFORCEMENT IS CONTINUOUS AROUND CORNERS.

F. REINFORCING STEEL COVERAGE

- COVER TO REINFORCING STEEL WITHIN MASONRY ELEMENTS SHALL NOT BE LESS THAN THE FOLLOWING:
 - EXPOSED TO EARTH OR WEATHER: 2" (#6 AND LARGER BARS), 1.5" (#5 AND SMALLER BARS).
 - NOT EXPOSED TO EARTH OR WEATHER: 1.5"
 - LONGITUDINAL WIRES OF JOINT REINFORCEMENT SHALL BE FULLY EMBEDDED IN MORTAR OR GROUT WITH A MINIMUM COVER OF 5/8" WHEN EXPOSED TO EARTH AND WEATHER AND 1/2" WHEN NOT EXPOSED TO EARTH OR WEATHER.

III. SPECIAL INSPECTIONS

- THE OWNER'S TESTING LABORATORY SHALL PROVIDE SPECIAL INSPECTION SERVICES IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE FOR THE FOLLOWING ITEMS.

1. CONCRETE CONSTRUCTION:

- REINFORCEMENT SIZE, GRADE, AND PLACEMENT
- CONCRETE MIX DESIGNS
- CONCRETE COMPRESSIVE STRENGTH TESTS

2. FOUNDATION CONSTRUCTION:

- COMPACTION OF SUBGRADE

B. STATEMENT OF SPECIAL INSPECTIONS

- SPECIAL INSPECTION IS REQUIRED FOR THE ITEMS LISTED ABOVE AND INSPECTIONS SHALL BE PERFORMED CONTINUOUSLY.

V. SUBMITTALS

A. SUBMITTALS TO BE PROVIDED TO STRUCTURAL ENGINEER:

- STRUCTURAL SUBMITTALS:
 - CONCRETE REINFORCEMENT
 - CONCRETE MIX DESIGNS
- NON-STRUCTURAL SUBMITTALS
 - ELECTRICAL GENERATOR CUT SHEETS (INCLUDING VIBRATION ISOLATORS)
- SUBMITTAL REQUIREMENTS
 - ALL SUBMITTALS SHALL BE REVIEWED AND APPROVED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTING TO THE ARCHITECT AND ENGINEER OF RECORD.
 - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL MATERIALS REQUIRED BY THE CONTRACT DOCUMENTS, REGARDLESS OF ANY OMISSIONS DURING THE SUBMITTAL PROCESS.
 - THE CONTRACTOR SHALL PROVIDE THE ARCHITECT AND ENGINEER OF RECORD A MINIMUM OF 3-DAY ADVANCE NOTICE OF SUBMITTAL SUBMISSION DATE FOR ANY SUBMITTALS IN WHICH THE CONTRACTOR IS REQUESTING AN EXPEDITED REVIEW. AN EXPEDITED REVIEW IS CONSIDERED LESS THAN 10 BUSINESS DAYS.
- REPRODUCTION
 - REPRODUCTION OF THE CONTRACT DOCUMENTS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, MATERIAL SUPPLIER OR SIMILAR FOR ASSISTANCE IN PREPARING SUBMITTALS SHALL CONSTITUTE THEIR ACCEPTANCE OF ALL INFORMATION SHOWN, AND THEY ARE THEREFORE RESPONSIBLE FOR ANY JOB EXPENSE ARISING DUE TO ANY ERRORS THAT MAY OCCUR AS A RESULT OF THE REPRODUCTION OF THE DOCUMENTS.

VI. MISCELLANEOUS

A. CONTRACT DOCUMENTS

- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO SUBMIT SUCH DOCUMENTS TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS. FABRICATION OF ANY STRUCTURAL MEMBERS, AND ERECTION IN THE FIELD.

- THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, AND, EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCE.

B. DRAWING CONFLICTS

- THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL, MEP AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.

C. CONFLICTS IN STRUCTURAL REQUIREMENTS

- WHERE CONFLICT EXISTS AMONG THE VARIOUS PARTS OF THE STRUCTURAL CONTRACT DOCUMENTS, STRUCTURAL DRAWINGS, GENERAL NOTES, AND SPECIFICATIONS, THE STRICTEST REQUIREMENTS, AS INDICATED BY THE ENGINEER, SHALL GOVERN.

D. EXISTING CONDITIONS

- WORK SHOWN ON THE DRAWINGS IS NEW, UNLESS NOTED AS EXISTING.
- EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS WAS OBTAINED FROM LIMITED SITE OBSERVATION. THE CONTRACTOR SHALL FIELD VERIFY ALL PERTINENT INFORMATION.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION AND TAKE CARE TO PROTECT EXISTING UTILITIES THAT ARE TO REMAIN IN SERVICE.
- THE CONTRACTOR SHALL REPAIR ALL DAMAGE CAUSED DURING CONSTRUCTION WITH SIMILAR MATERIALS AND WORKMANSHIP TO RESTORE CONDITIONS TO LEVELS ACCEPTABLE TO THE ARCHITECT.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING NEW WORK WITH EXISTING CONDITIONS.

E. RESPONSIBILITY OF THE CONTRACTOR FOR CONSTRUCTION LOADS

- THE STRUCTURE HAS BEEN DESIGNED FOR THE LOADS IDENTIFIED WITHIN THESE STRUCTURAL DRAWINGS THAT ARE ANTICIPATED TO BE APPLIED TO THE FINAL STRUCTURE ONCE COMPLETED AND OCCUPIED. THE CONTRACTOR SHALL NOT OVERLOAD THE STRUCTURE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE ADEQUACY OF THE STRUCTURE TO SUPPORT ANY APPLIED CONSTRUCTION LOADS, INCLUDING THOSE DUE TO CONSTRUCTION VEHICLES OR EQUIPMENT, MATERIAL HANDLING OR STORAGE, SHORING OR RESHORING, OR ANY OTHER CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL SUBMIT CALCULATIONS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED VERIFYING THE ADEQUACY OF THE STRUCTURE FOR ANY PROPOSED CONSTRUCTION LOADS THAT ARE IN EXCESS OF THE STATED DESIGN LOADS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE TO DESIGN OR CHECK THE STRUCTURE FOR LOADS APPLIED TO THE STRUCTURE FOR ANY CONSTRUCTION ACTIVITY.

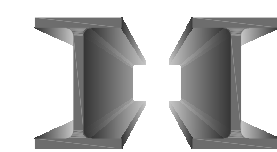
F. CONTRACTOR SUBSTITUTIONS

- ANY MATERIALS OR PRODUCTS SUBMITTED FOR APPROVAL THAT ARE DIFFERENT FROM THE MATERIAL OR PRODUCTS SPECIFIED IN THE STRUCTURAL CONTRACT DOCUMENTS WILL BE CONSIDERED ONLY IF ONE OF THE FOLLOWING CRITERIA ARE SATISFIED:
 - A COST SAVINGS TO THE OWNER IS DOCUMENTED AND SUBMITTED WITH THE REQUEST.
 - THE PROPOSED SUBSTITUTION WILL PROVIDE EFFICIENCIES DURING CONSTRUCTION WHICH WILL RESULT IN A SHORTERED CONSTRUCTION TIMELINE, COST AND SCHEDULE DATA SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER OF RECORD, AS WELL AS THE CLIENT.
- SUBMITTALS NOT SATISFYING THE ABOVE CRITERIA WILL NOT BE CONSIDERED.

G. EQUIPMENT WEIGHTS

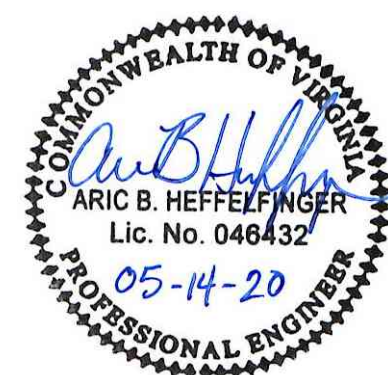
- THE GENERAL CONTRACTOR SHALL SUBMIT ACTUAL WEIGHTS OF EQUIPMENT TO BE USED IN THE PROJECT TO THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD FOR VERIFICATION OF LOADS USED IN THE DESIGN AT LEAST THREE WEEKS PRIOR TO FABRICATION AND CONSTRUCTION OF THE SUPPORTING STRUCTURE.

Consultants



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Seal



Project

VIENNA TOWN HALL GENERATOR REPLACEMENT

127 CENTER STREET SOUTH
VIENNA, VA 22180

REVISION 1	05-14-2020
PERMIT SET	04-10-2020
Issue Description	Date

BEE Project No.	2020.0003
Checked By	ABH
Drawn By	ABH
Scale	AS NOTED

Sheet Title

PARTIAL FOUNDATION PLAN, DETAILS AND NOTES

Sheet No.

S001

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