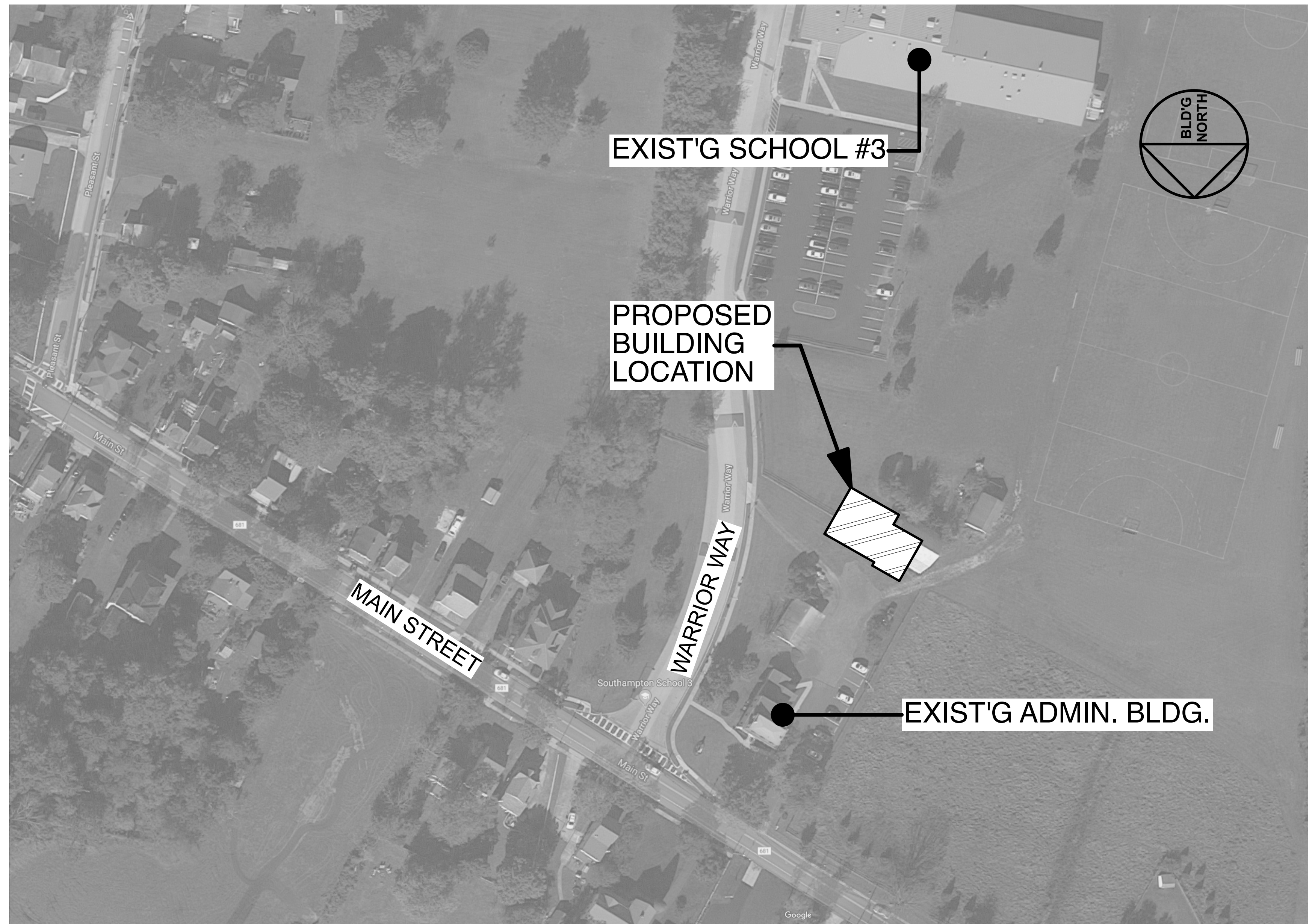


MAINTENANCE & OPERATIONS BUILDING

SOUTHAMPTON TOWNSHIP BOE
177 MAIN STREET
BLOCK 1202, LOT 8
VINCENTOWN, BURLINGTON COUNTY, NJ 08088

NJDOE SP #05-4930-070-19-1000



EXIST'G SCHOOL #3

PROPOSED BUILDING LOCATION



EXIST'G ADMIN. BLDG.

ARCHITECT
REGAN YOUNG ENGLAND BUTERA, PC
456 HIGH STREET
MOUNT HOLLY, NJ 08060
609.265.2652
609.265.0333 FAX

MPE ENGINEER
KELTER & GILLIGO
14 WASHINGTON ROAD
PRINCETON JUNCTION, NJ 08550
609.799.8336
609.275.9306 FAX

STRUCT. ENGINEER
SE2 ENGINEERING
1705 BUTLER PIKE
CONSHOHOCKEN, PA 19428
610.828.1550
610.828.5080 FAX

Building Code Synopsis: New Construction

0100.0 Administration
(Not Applicable)

0200.0 NJUCC Exempts

5:23-2.1(e) *New Jersey Uniform Construction Code (NUCC)* shall control all matters concerning construction, alteration, addition, repair, removal, demolition, use, location, and occupancy of all buildings and structures and their service equipment, and shall apply to existing or proposed buildings and structures in the State of New Jersey.

5:23-2.2 The *NUCC* shall apply to all new construction.

5:23-2.15 Application for a Construction Permit shall be submitted by the Contractor(s) per *IBC/NJ* Section 5.2.3.2.15.

5:23-2.16(a) A true copy of the construction permit shall be kept on the site of operations open to inspection during the entire time of prosecution of the Work and until the completion of the same.

5:23-2.16(a) At least 24 hours notice of start of work under a construction permit shall be given to the Construction Official.

5:23-2.16(a) The issuance of the construction permit shall be conditioned upon 1) payment of appropriate fees, 2) the Contractor's & Owner's assurance that the Work will conform to the requirements of the Code applicable to the Work for which the permit has been issued, including prior approvals and any approved amendments thereto, 3) that the permit is a license to proceed with the Work and shall not be construed as authority to violate, cancel, or set aside any of the provisions of the regulations, 4) that the Owner & Contractor will assist the Enforcing Agency in its inspection work, and 5) that all escrows required to be paid by the applicant in connection with the Work have been paid.

5:23-2.18(b) The Construction Official and appropriate Subcode Officials shall carry out periodic inspections during the progress of the Work to ensure that Work inspected conforms to the requirements of the Code.

5:23-2.18(b)(2) Inspections for all subcodes of construction shall be limited to those required for one- and two-family dwellings plus the following: fire suppression systems; heat producing devices; and any special inspections required by any subcode of the regulations. The mid-point inspection shall include a review for compliance with *IBC/NJ* Chapter 11.

5:23-2.18(c)(1) The Contractor shall notify the enforcing agency when the Work is ready for any required inspection specified by the NJUCC or required by the Construction Official or appropriate Subcode Official. This notice shall be given at least 24 hours prior to the time the inspection is desired. This notice shall represent an attestation on the part of the Contractor that the Work has been completed in conformance with the *NUCC* and is ready for inspection.

5:23-2.18(c)(2) The *NUCC* states that Inspections shall be performed within three business days of the time for which it was requested. The Work shall not proceed in a manner that will preclude the inspection until it has been made.

5:23-2.18(d) Upon completion of the Work, and before the issuance of a Certificate of Use and Occupancy required by the *NUCC*, a final inspection shall be made, and any violations of the code shall be noted and the holder of the permit shall be notified of any discrepancies by the Construction Official.

5:23-2.21(e)(4) The Contractor shall perform the necessary services and be present on the construction site on a regular and periodic basis to determine that the Work is proceeding in accordance with the *NUCC* and any conditions of the construction permit.

5:23-2.21(e) The actual construction of the Work shall be the responsibility of the Contractor(s) as identified on the approved construction permit(s), and shall involve 1) execution of the Work in accordance with the regulations, 2) execution & control of all methods of construction in a safe & satisfactory manner, and 3) execution of all Work in accordance with the *NUCC* and those portions of the plans and specifications controlled by the *NUCC*. The Contractor(s) shall render all such construction services as required to effect a safe & satisfactory installation of the project.

5:23-2.21(e)(5) Upon completion of the construction, the Contractor(s) shall certify to the best of their knowledge & belief that such has been done substantially in accordance with the *NUCC* and with those portions of the plans & specifications controlled by the *NUCC*, with any substantially deviations specifically noted.

5:23-2.23(a) A new building or structure shall not be used or occupied in whole or part until a Certificate of Occupancy is issued by the Construction Official.

5:23-2.29(a) The Owner of any premises upon which a building or structure is to be constructed shall be deemed to have consented to inspection, by the Enforcing Agency, of the entire premises and of any and all construction being performed on it until a Certificate of Occupancy has been issued.

5:23-3.5(a) Every building and structure and part thereof designed for business, factory, and industrial, high hazard, mercantile, or storage use (Use Groups B, F, H, M, & S) as defined by the *IBC/NJ* shall be posted on all floors by the Owner with a suitably designed placard in a form designated by the Building Subcode official, which shall be securely fastened to the structure in a readily visible place, stating the Use Group, and the maximum allowable Live Load & Occupancy Load.

5:23-3.5(c) All posting signs shall be furnished by the Owner and shall be of permanent design; they shall not be removed, or defaced and, if lost, removed or defaced, shall be immediately replaced.

5:23-3.5(e) Identifying emblems shall be permanently affixed to the front of structures with truss construction as required by the New Jersey Uniform Fire Code section 5:70-2.20. The emblem shall be of a bright and reflective color, or made of reflective material. The shape of the emblem shall be an isosceles triangle and the size shall be 12" W by 6" T. The letter "R" (to signify a roof truss construction) of a size & color to make them conspicuous, shall be printed on the emblem. The emblem shall be permanently affixed to the left of the main entrance door at a height between 4' & 6' above the ground, and shall be installed & maintained by the Owner.

5:23-3.14(a)(1) The Building subcode for new construction is the *International Building Code/2015, New Jersey Edition (IBC/NJ)*, as adopted by *NUCC*.

5:23-3.15(a)(1) The Plumbing subcode for new construction is the *National Standard Plumbing Code/2015 (NPS)*, as adopted by *NUCC*.

5:23-3.16(a)(1) The Electrical subcode for new construction is the *National Electrical Code/2014 (NEC)*, as adopted by *NUCC*.

5:23-3.17(a)(1) The Fire Protection subcodes for new construction are the *International Building Code/2015, New Jersey Edition*, the *National Electrical Code/2014*, the *International Mechanical Code/2015*, and the *International Fuel Gas Code/2015*, all as adopted by *NUCC*.

5:23-3.18(a)(1) The Energy subcode for new construction is the *International Energy Conservation Code 2015 (IECC)* and the *ASHRAE/IESNA Standard 90.1/2013*, both as adopted by *NUCC*.

5:23-3.20(a)(1) The Mechanical subcode for new construction is the *International Mechanical Code/2015 (IMC)*, as adopted by *NUCC*.

5:23-3.22(a)(1) The Fuel Gas subcode for new construction is the *International Fuel Gas Code/2015 (IFGC)*, as adopted by *NUCC*.

0300.0 Use & Occupancy Classification

302.1 The following Use Classification apply to this project:

0311.2 Because this building will be used for storage of book & paper, it shall be classified per the *International Building Code/New Jersey 2006 (IBC/NJ)* as Use Group S-1, Moderate-Hazard Storage.

0500.0 General Building Heights & Areas

Table 504.3 Allowable Building Height -
• Use Group S-1, NS Construction Type V-B, 40'

1 Proposed Height
Vertical distance from grade to average height of highest roof surface 18.5'

Table 504.4 Allowable Number of Stories above grade plane: 1
• Use Group S-1, NS Construction Type V-B, 40'

1 Proposed Number of Stories 1

Table 506.2 Allowable Building Area -
• Use Group S-1, NS Construction Type V-B, 9000 SF

1 Proposed Areas
First Floor S-2, Low-Hazard Storage 3173 SF
1 Proposed Volume 58,700 CF

5:23-4.3A(d)(1)(ii) Because the building is a Use Group S-1 less than 4200 SF, it shall be classified by the *NUCC* as a Class 3 structure.

0600.0 Types of Construction

0602.5 Proposed construction system is classified as Type VB, in which the structural elements, exterior walls, and interior walls are of any materials permitted by the *IBC/NJ*.

1000.0 Accessibility

101.2 Buildings and facilities shall be designed and constructed to be Accessible in accordance with *IBC/NJ* Chapter 11 and *ICC A117.1* as amended by the *NUCC*.

101.4.3 At least one Accessible Route shall be provided to each portion of the building, to Accessible building entrances connecting Accessible pedestrian walkways, and to the public way.

101.4.1 Small buildings, defined as those with a total gross enclosed floor area of less than 10,000 SF, shall be required to have at least one accessible entrance on the ground (or first) floor and accessible interior building features on all floors

105.1 At least 60% of all public entrances shall be Accessible.

1200.0 Interior Environment

1203.2 Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof framing members shall have cross ventilation for each separate space by ventilation openings protected against the entrance of rain and snow. Blocking and bridging shall be arranged so as not to interfere with the movement of air. An airspace of not less than 1/4" shall be provided between the insulation and the roof sheathing. The net free ventilating area shall be not less than 1/150 of the area of the space ventilated. Ventilators shall be installed in accordance with manufacturer's installation instructions.

1203.2.1 Exterior openings into the attic space of any building intended for human occupancy shall be protected to prevent the entry of birds, squirrels, rodents, snakes, and other similar creatures. Openings for ventilation having a least dimension of not less than 1/16" and not more than 1/4" shall be permitted. Openings for ventilation having a least dimension larger than 1/4" shall be provided with corrosion-resistant wire cloth screening, hardware cloth, perforated vinyl, or similar material with openings having a least dimension of not less than 1/16" and not more than 1/4".

0700.0 Fire and Smoke Protection

0718.2 In combustible construction, Fireblocking shall be installed to cut off concealed draft openings (both vertical and horizontal) and shall form an effective barrier between floors, between a top story and a roof or attic space. Fireblocking shall be installed in the locations specified in *IBC/NJ* Sections 718.2.2 through 718.2.7.

0718.2.1 Fireblocking shall consist of the materials listed in *IBC/NJ* Section 718.2.1.

0720 Insulating materials, where concealed as installed in buildings of any type of construction, shall have a flame spread index of not more than 25 and a smoke-developed index of not more than 450.

0800.0 Interior Finishes

0803.1.1 Interior Wall and Ceiling Finishes shall be classified in accordance with ASTM E84 or UL 723. Such interior finish materials shall be grouped in the following classes in accordance with their flame spread and smoke-developed index.

• Class A: flame spread 0-25; smoke developed 0-450
• Class B: flame spread 26-75; smoke developed 0-450
• Class C: flame spread 76-200; smoke developed 0-450

IBC/NJ 2015 Table 0803.1.1 Interior Wall & Ceiling Finish Requirements:
• Use Group S, NS, Rooms & enclosed spaces C

0804.1 Interior floor finish and floor covering materials shall comply with *IBC/NJ* Sections 804.2 thru 804.4.2, except for floor finishes and coverings of a traditional type, such as wood, vinyl, linoleum, or terrazzo, and resilient floor covering materials that are not comprised of fibers.

0900.0 Fire Protection Systems

0906.1 Portable fire extinguishers shall be provided in sizes and locations as required by *IBC/NJ* Section 906.

0915.1 Carbon Monoxide detection shall be installed in new buildings in accordance with *IBC/NJ* Sections 915.1.1 thru 915.6.

1000.0 Means of Egress

1003.3 Protruding objects on circulation paths shall comply with the requirements of *IBC/NJ* Sections 1003.3.1 through 1003.3.4.

1003.4 Walking surfaces of the Means of Egress shall have a slip-resistant surface and be securely attached.

1003.5 Where changes in elevation of less than 12" exist in the Means of Egress, sloped surfaces shall be used. Where the slope is greater than one unit vertical in 20 units horizontal (5% slope), ramps complying with *IBC/NJ* Section 1010.1 shall be used. Where the difference in elevation is 6" or less, the ramp shall be equipped with either handrails or floor finish materials that contrast with adjacent floor finish materials.

1003.5.1 A single step with a maximum riser height of 7" is permitted for buildings with occupancies in Group S at Exit doors not required to be accessible by *IBC/NJ* Chapter 11.

Table 1004.1.2 - Maximum Floor Area Allowances per Occupant:
• Warehouses 500 SF/Occupant

1 Proposed Occupancy:
• Warehouse 3173 SF ÷ 500 SF/Occupant 6 Occupants

1005.3.2 - Egress Width (in inches) per Occupant Served:
• Egress Components 0.2

1 Minimum Egress Widths:
• Egress Components - 0.2" / Occupant x 6 Occupants 1.2"
(but not less than specified elsewhere in Code)

Table 1006.2.1 Spaces with one Exit or Exit Access Doorway
• Use Group S, Maximum Occupant load 29, Maximum Common Path of Egress Travel Distance NS 0.4-20, 100'

1008.2 The Means of Egress serving a room or space shall be illuminated at all times that room or space is occupied.

1008.2.1 The Means of Egress illumination level shall not be less than 1 foot-candle at the walking surface.

1008.3 The power supply for Means of Egress illumination shall normally be provided by the premises' electrical supply.

1009.1 Accessible spaces shall be provided with not less than one accessible Means of Egress.

1009.2 Each required accessible Means of Egress shall be continuous to a public way and shall consist of one or more of the components listed in *IBC/NJ* Section 1009.2

1010.1 Means of Egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Mirrors or similar reflecting materials shall not be used on Means of Egress doors. Means of Egress doors shall not be concealed by curtains, drapes, decorations, or similar materials.

1010.1.1 The required capacity of each egress door opening shall be sufficient for the Occupant Load thereof and shall provide a minimum clear width 32". Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. The maximum width of a swinging door leaf shall be 48" nominal. The height of doors shall not be less than 80".

1010.1.1.1 There shall not be projections into the required clear width lower than 34" above the floor or ground. Projections into the clear opening width between 34" and 80" above the floor or ground shall not exceed 4". Door closers and door stops shall be permitted to be 78" minimum above the floor.

1010.1.2 Egress doors shall be of the pivoted or side-hinged swinging type.

1010.1.3 The force for pushing or pulling open interior side-swinging egress doors, other than Fire Doors, shall not exceed 5 pounds. These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position. For other side-swinging doors, as well as sliding & folding doors, the door latch shall release when subjected to a 15-pound force. The door shall be set in motion when subjected to a 30-pound force. The door shall swing to a full-open position when subjected to a 15-pound force. Forces shall be applied to the latch side of the door.

1010.1.5 There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed .25" unit vertical in 12 units horizontal (2% slope).

1010.1.6 Landings shall have a width not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7". Landings shall have a length measured in the direction of travel of not less than 44".

1010.1.7 Thresholds at doorways shall not exceed 0.5 inch. Raised thresholds and floor level changes greater than 0.25 at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (5% slope).

1010.1.9 Except as specifically permitted by *IBC/NJ* Section 1010.1.9, egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.

1010.1.9.1 Door handles, pulls, latches, and other operating devices on doors required to be accessible by *IBC/NJ* Chapter 11 shall not require tight grasping, tight pinching, or twisting of the wrist to operate.

1010.1.9.2 Door handles, pulls, latches, locks, and other operating devices shall be installed 34" minimum and 48" maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permitted at any height.

1010.1.9.4 Manually operated flush bolts or surface bolts are not permitted.

1010.1.9.5 The unlatching of any door or leaf shall not require more than one operation.

1010.0 Accessibility

1011.2 Buildings and facilities shall be designed and constructed to be Accessible in accordance with *IBC/NJ* Chapter 11 and *ICC A117.1* as amended by the *NUCC*.

1014.3 At least one Accessible Route shall be provided to each portion of the building, to Accessible building entrances connecting Accessible pedestrian walkways, and to the public way.

1014.4.1 Small buildings, defined as those with a total gross enclosed floor area of less than 10,000 SF, shall be required to have at least one accessible entrance on the ground (or first) floor and accessible interior building features on all floors

105.1 At least 60% of all public entrances shall be Accessible.

1205.3 Artificial light shall be provided that is adequate to provide an average illumination of 10 foot-candles over the area of the room at a height of 30" above the floor level.

1209.2 An opening not less than 20" by 30" shall be provided to any attic area having a clear height of over 30". Clear headroom of not less than 30" shall be provided in the attic space at or above the access opening.

1300.0 Energy Efficiency

Table EC-301.1 - Climate Zones:
• Burlington County, NJ 4A

EC-302.1 Interior design condition temperatures used for heating and cooling load calculations shall be maximum 72°F for heating and a minimum 75°F for cooling.

EC-401.1 The provisions contained in *IECC* Chapter 4 shall be applicable to commercial buildings, and their building sites. These commercial buildings shall meet the *ASHRAE/IESNA 90.1-2013, Energy Standard for Buildings Except for Low-Rise Residential Buildings* or the applicable sections of the *IECC*.

Table 5.5.4-4 - Building Envelope Requirements for Climate Zone 4 (A, B, C):
• Attic and Other U-0.021
• Wood Frame, Walls U-0.064
• Unheated Slab-on-Grade Floor F-0.520

EC-901 Exterior & Interior building lighting and controls shall meet the requirements of *ASHRAE/IESNA 90.1/2013* Chapter 9.

1400.0 Exterior Walls

1403.2 Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing, as described in *IBC/NJ* Section 1403.4. The exterior wall envelope shall be designed & constructed in such a manner as to prevent the accumulation of water within the wall assembly by providing a water-resistive barrier behind the exterior veneer, as described in *IBC/NJ* Section 1404.2 and a means for draining water that enters the assembly to the exterior. Protection against condensation in the exterior wall assembly shall be provided in accordance with the *IBC/NJ* Section 1405.3.

1500.0 Roof Assemblies

1507.1 Roof coverings shall be applied in accordance with *IBC/NJ* Chapter 15 and the approved manufacturer's installation instructions.

1600.0 Structural Design

1603.2 Building, structures, and parts thereof shall be designed & constructed to support safely the factored loads in load combinations defined in the *IBC/NJ* without exceeding the appropriate strength limit states for the materials of construction.

Table 1604.5 - Occupancy Category of Buildings & Other Structures:
! Occupancy Category II

Table 1607.1 - Minimum Uniform/Concentrated Floor Live Loads:
Storage 250 PSF
Ordinary Flat, Pitched, and Curved Roofs 20 PSF
Vehicle Driveways Subject to Trucking 250 PSF/8,000# Concentrated

1603.1.3 The minimum Roof Snow Load is based upon 25 PSF Ground Snow Load [per DCA Bulletin 94-8, revised December 2015].

1603.1.4 The design Basic Wind Speed for a Risk Category I building at this location is 115 mph (per DCA Bulletin 03-4, revised December 2015, and the ATC web site).

1800.0 Soils & Foundations

1803.2 Geotechnical investigations shall be conducted in accordance with *IBC/NJ* Sections 1803.3 thru 1803.5.

1804.3 The excavation outside the foundation shall be backfilled with soil that is free of organic material, construction debris, cobbles and boulders or a controlled low-strength material. The backfill shall be placed in lifts and compacted, in a manner that does not damage the foundation or the waterproofing or dampproofing materials.

1804.4 The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of not less than one unit vertical in 20 units horizontal (5% slope) for a minimum distance of 10' measured perpendicular to the face of the wall.

Table 1806.2 - Allowable Foundation and Lateral Pressure to be confirmed by Contractor:
• Sand, silty sand, clayey sand, silty gravel, and clayey gravel 2000PSF/150PSF/ft

1808.1 Foundations shall be constructed in accordance with *IBC/NJ* Sections 1808.2 thru 1808.9.

1900.0 Concrete

1901.2 Structural concrete shall be designed and constructed in accordance with *IBC/NJ* Chapter 19 and *ACI 318* as amended in *IBC/NJ* Section 1905.

2100.0 Masonry

2104.2 Masonry construction shall comply with the requirements of *IBC/NJ* Sections 2104.1.1 and 2104.1.2 and with *TMS 602/ACI 530.1/ASCE 6*.

Electrical Systems

5:23-3.16(a)(1) Electrical Power & Lighting plans, circuiting, grounding, receptacles, fixtures, devices, & appliances shall be designed, installed, & tested in accordance with the requirements of the *NEC* as adopted by *NUCC*.

Mechanical Systems

5:23-3.20(a)(1) Heating, Ventilation, & Air Conditioning equipment, supply, exhaust, combustion air, & controls shall be designed, installed, & tested in accordance with the requirements of the *IMC* as adopted by *NUCC*.

This code analysis is based upon NJAC5:23, the New Jersey Uniform Construction Code. The most recent Update (20 August 2018) was received at RYEBREAD Architects on 19 October 2018. This Code adopts and amends the International Building Code 2015 (New Jersey edition), received at RYEBREAD Architects on 25 September 2015.

LIST OF DRAWINGS

All Contractors shall examine all drawings indicated herein for required coordination between different trades and/or for work included in other sections of the Project Manual that may pertain to their respective contract.

CS	COVER SHEET
C1	DEMOLITION PLAN
C2	SITE PLAN
C3	GRADING & SOIL EROSION AND SEDIMENT CONTROL PLAN
C4	SOIL EROSION & SEDIMENT CONTROL DETAILS
A1.0	PROPOSED PLAN & DETAILS
A1.1	BUILDING ELEVATIONS & SECTIONS
A1.2	ROOF PLANS & DETAILS
S1	STRUCTURAL GENERAL NOTES
S2	FOUNDATION & ROOF FRAMING PLANS
S3	CONSTRUCTION DETAILS
H-1	FLOOR PLAN - HVAC
H-2	SCHEDULES & SPECIFICATIONS - HVAC
P-1	FLOOR PLAN, RISER DIAGRAMS, & DETAILS - PLUMBING
P-2	SCHEDULES & SPECIFICATIONS - PLUMBING
E-1	PLANS, DIAGRAMS, SCHEDULES AND SYMBOL LIST - ELECTRICAL
E-2	SPECIFICATIONS - ELECTRICAL

PRINT DATE: 2/28/19

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NJDOE SP #05-4930-070-19-1000

COVER SHEET

DRAWING DATE: 14 FEB 2019

REVISION DATE:

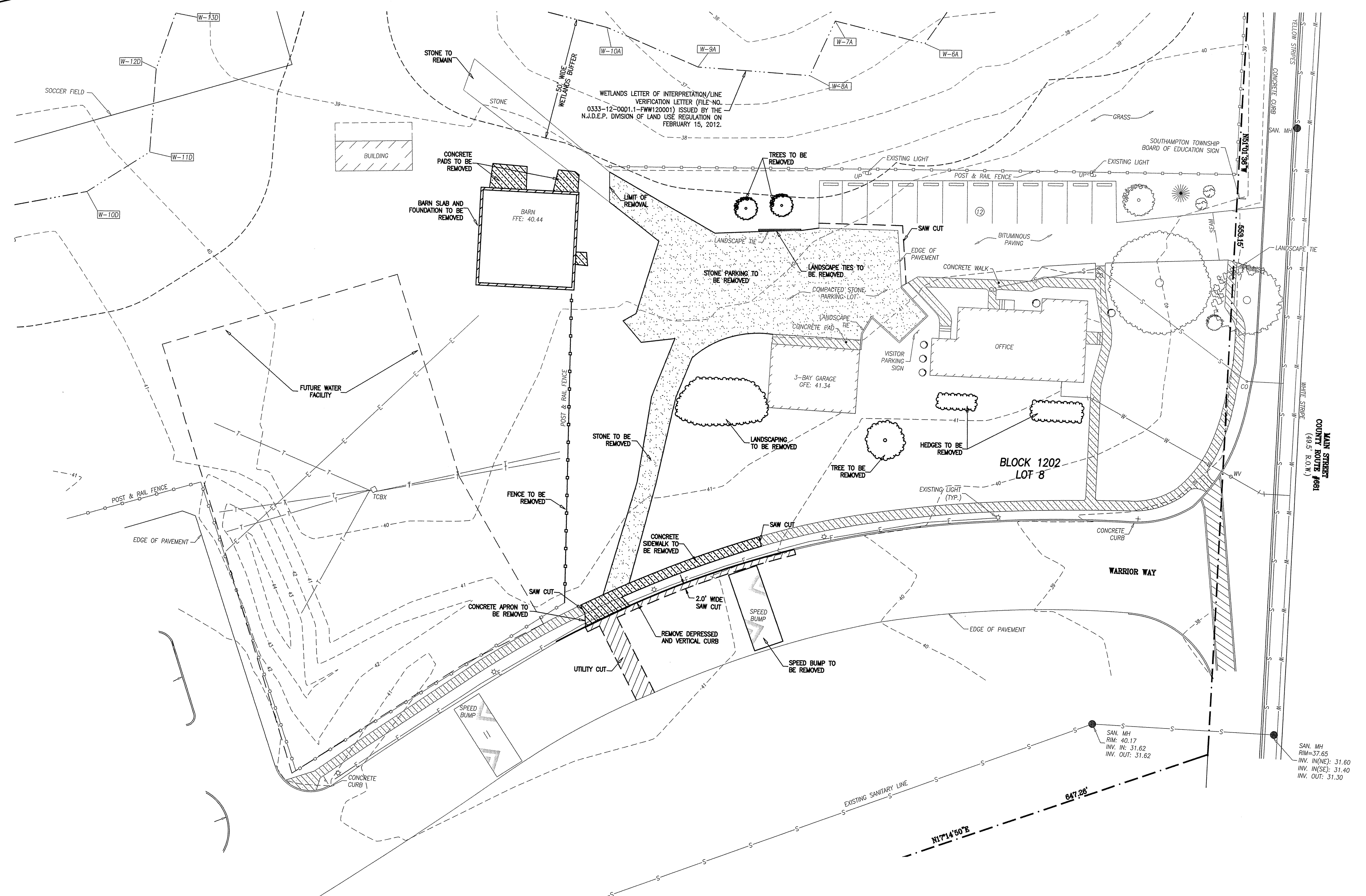
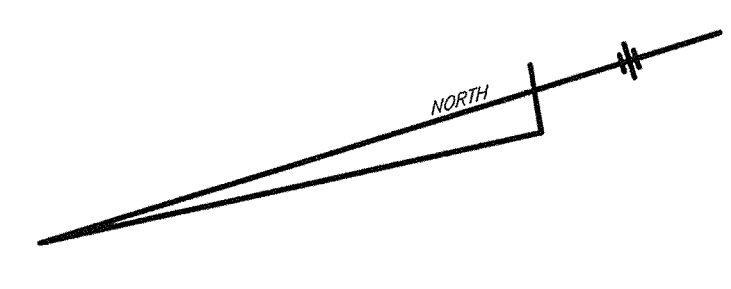
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COMMISSION NO: 5561A

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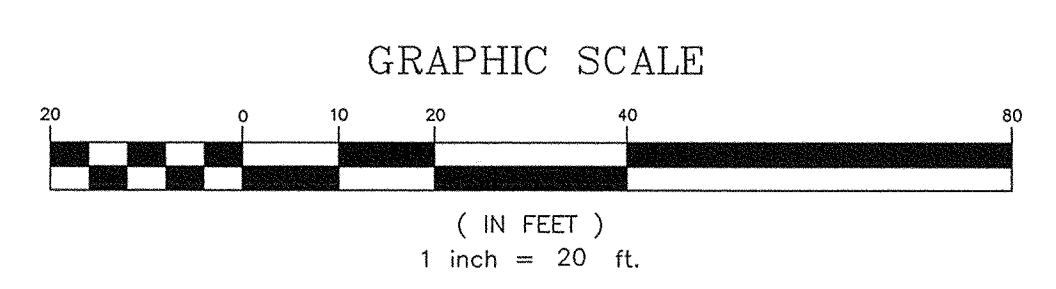
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DEMOLITION PLAN
SCALE : 1"=20'

LEGEND

- ⊥ SIGN
- ⊕ UTILITY POLE
- 40.78 SPOT ELEVATIONS
- CO CLEANOUT
- CURBING
- CONCRETE
- STONE PARKING



UTILITY MARKOUT REQUIRED. CONTRACTOR IS RESPONSIBLE TO CALL NEW JERSEY ONE CALL (800-272-1000) FOR UTILITY MARK-OUT 3 FULL BUSINESS DAYS PRIOR TO COMMENCEMENT OF EXCAVATION.

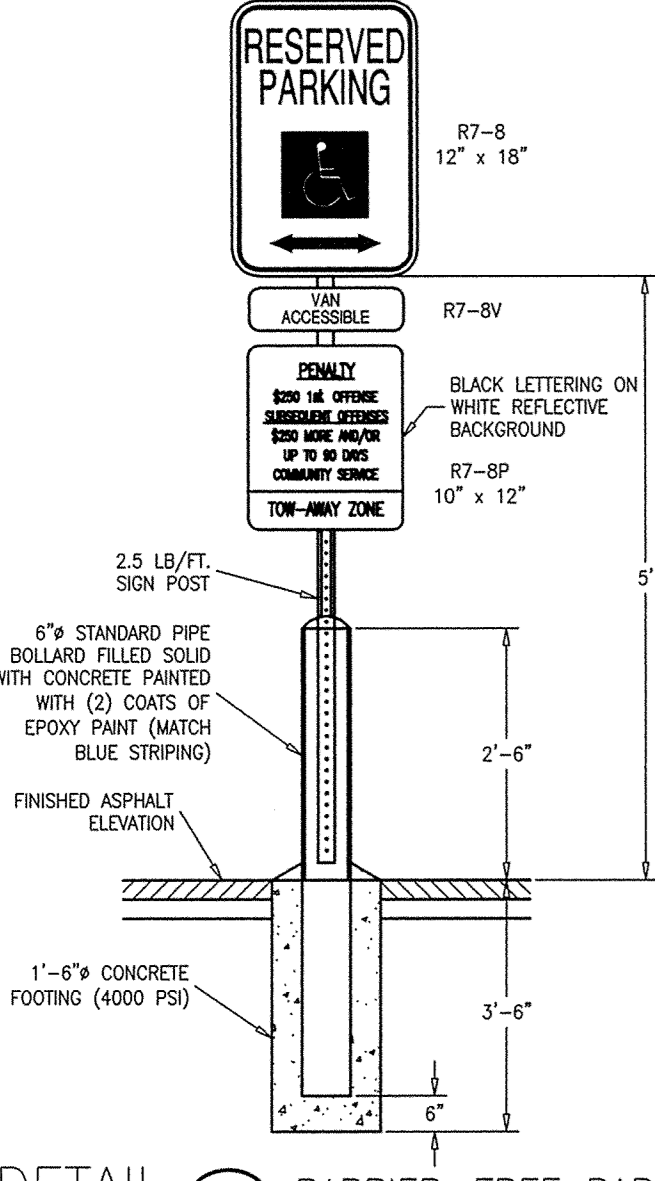
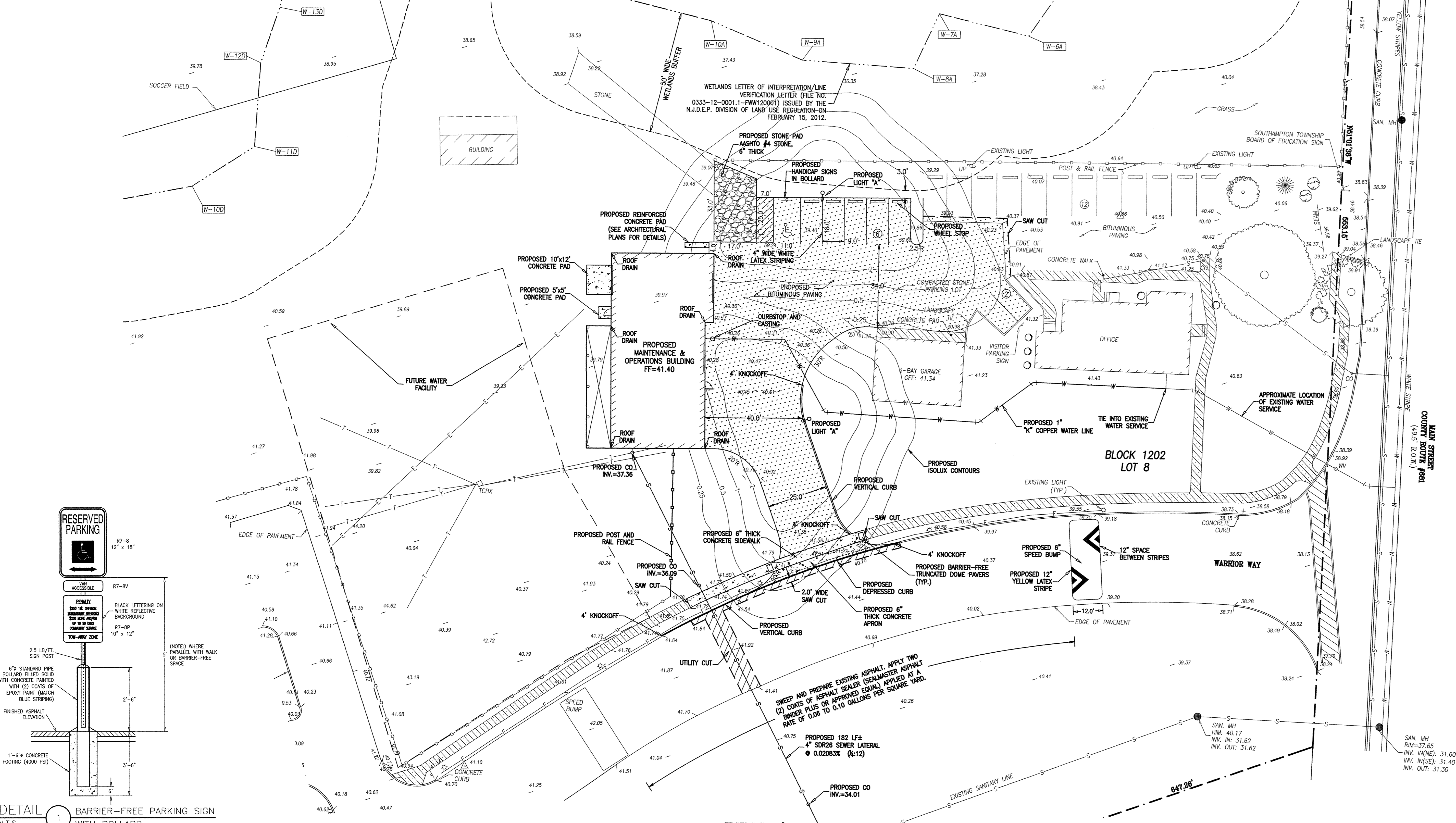
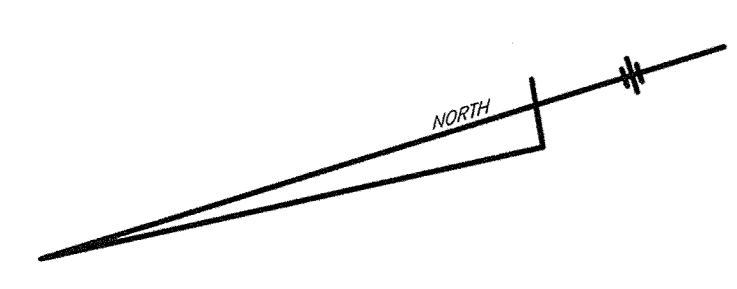
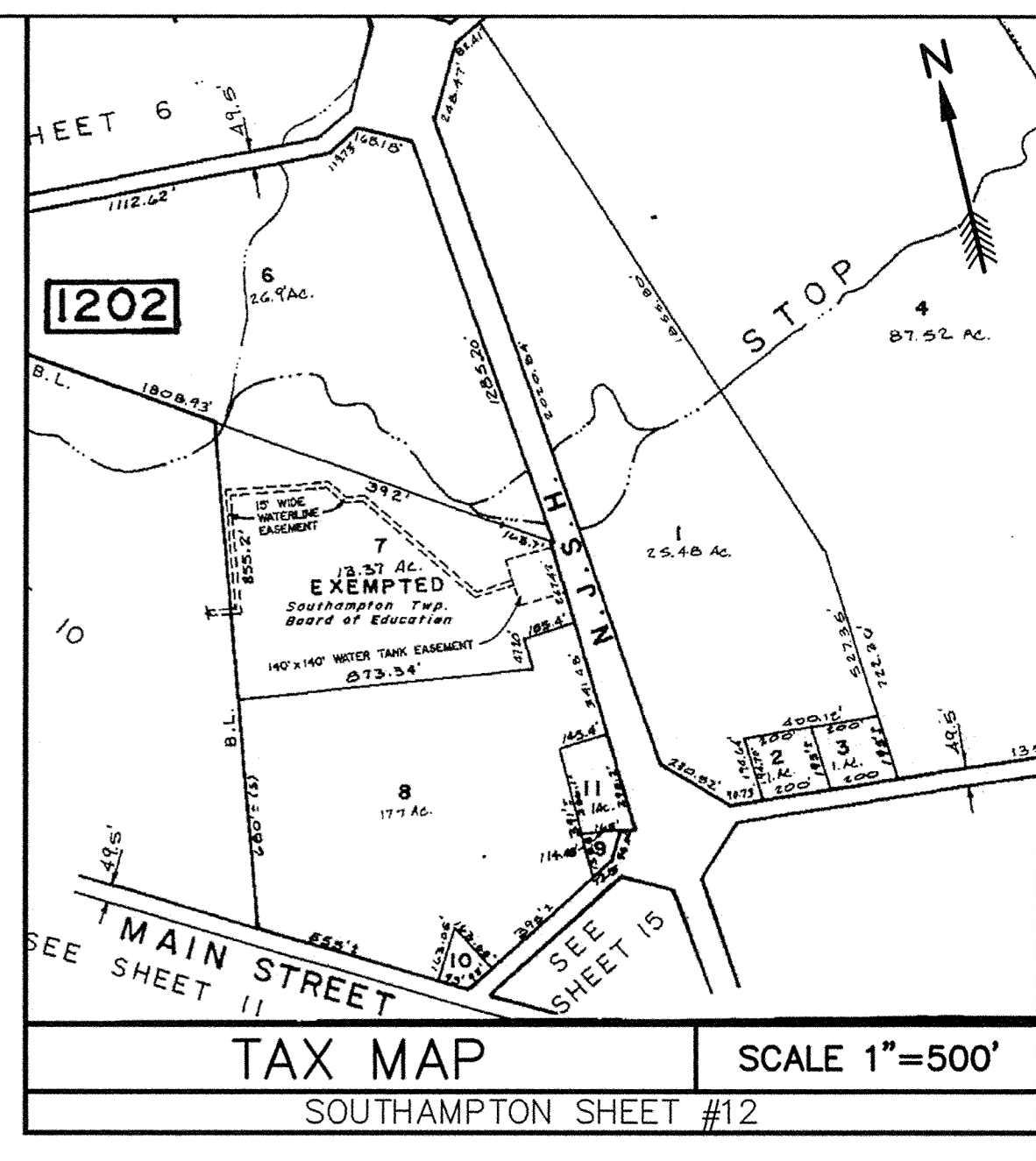
NO.	DATE	APPR.	REVISION

Dante Guzzi Engineering Associates
 419 Stokes Road, P.O. Box 1625, Medford, New Jersey 08055
 Telephone (609) 654-4440 Fax (609) 654-7792 www.guzziengineering.com

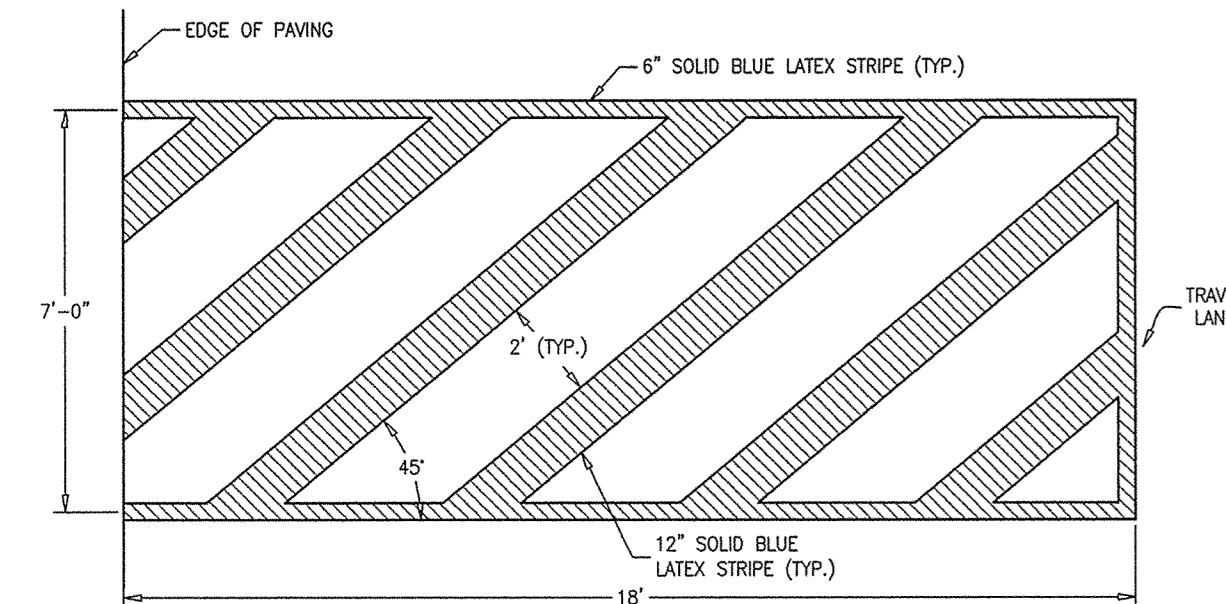
SCOTT D. BROWN, P.E., P.L.S.
 PROFESSIONAL ENGINEER AND LAND SURVEYOR N.J. LICENSE NO. 38250

177 MAIN STREET			
DEMOLITION PLAN			
SOUTHAMPTON BOARD OF EDUCATION			
PART OF BLOCK 1202, LOT 8			
SOUTHAMPTON TOWNSHIP			
BURLINGTON COUNTY, NEW JERSEY			
FILE	DATE	DRAWN BY	REV. NO.
SOUTHAMPTONBOE-SP	01/22/2019	DM	1
SCALE	PROJECT NO.	CHECKED BY	SHEET
AS SHOWN	M-09-021	SDB	1 OF 4

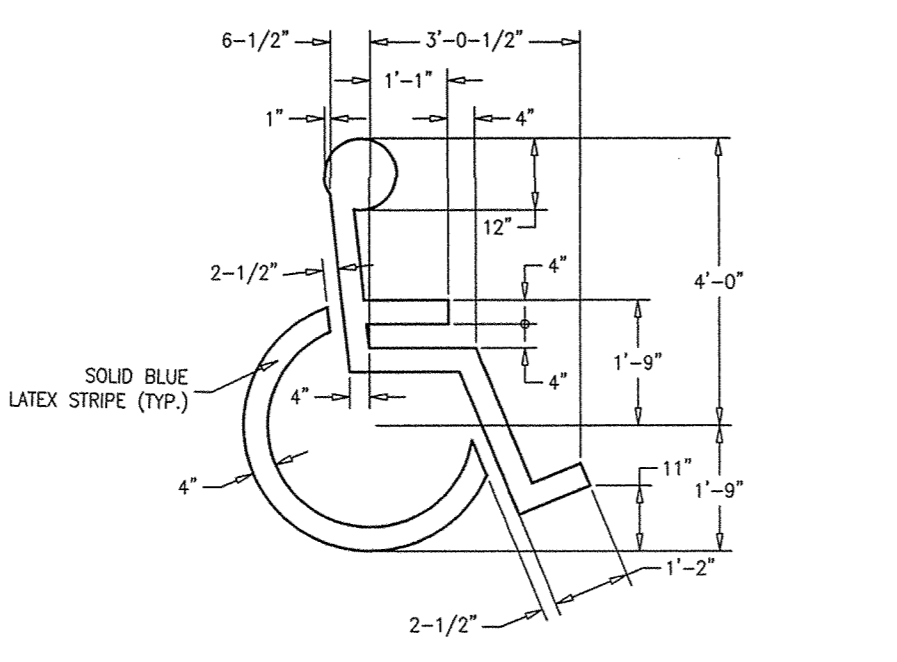
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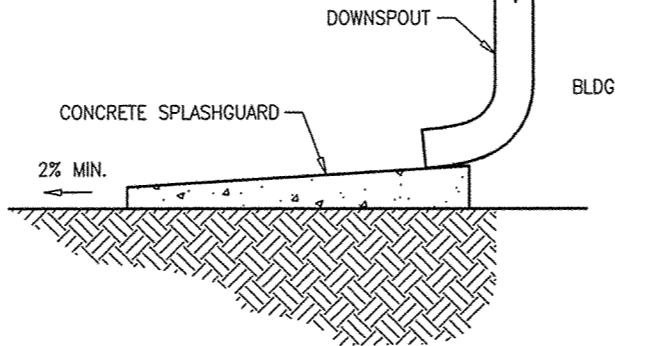
DETAIL 1 BARRIER-FREE PARKING SIGN WITH BOLLARD
N.T.S.



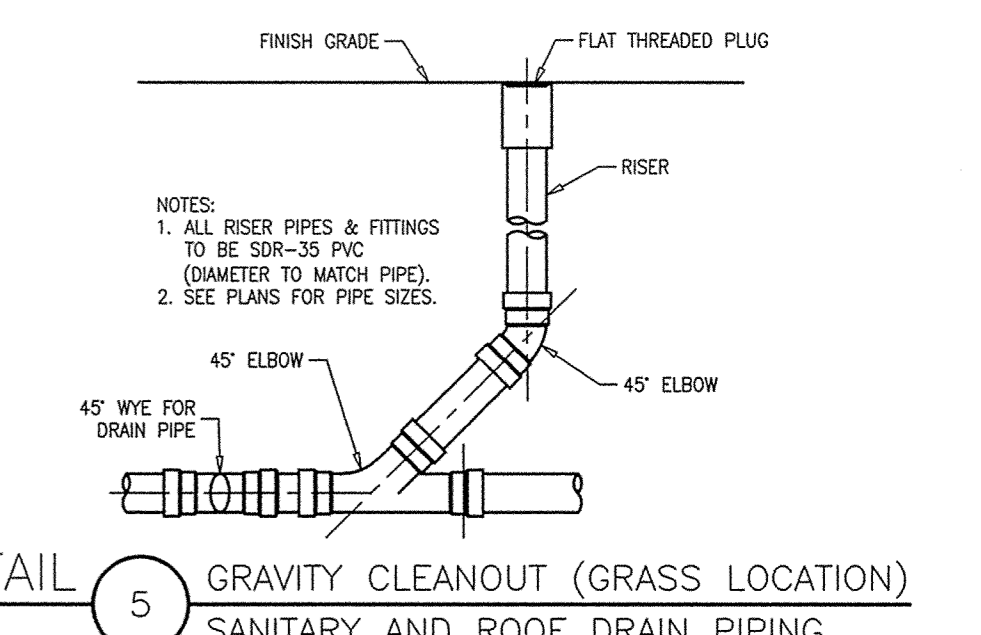
DETAIL 2 PAINTED BARRIER-FREE ACCESS AISLE
N.T.S.



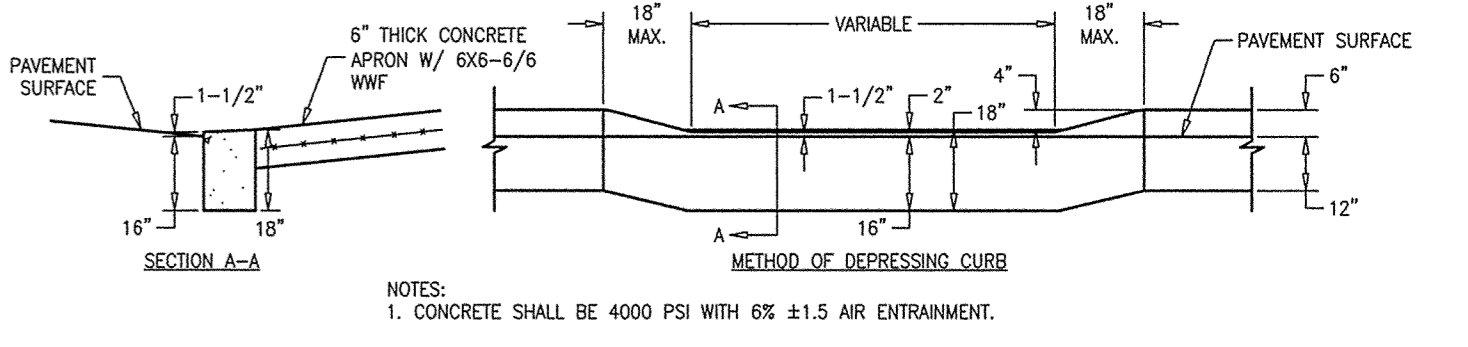
DETAIL 3 PAINTED BARRIER-FREE PARKING SYMBOL
N.T.S.



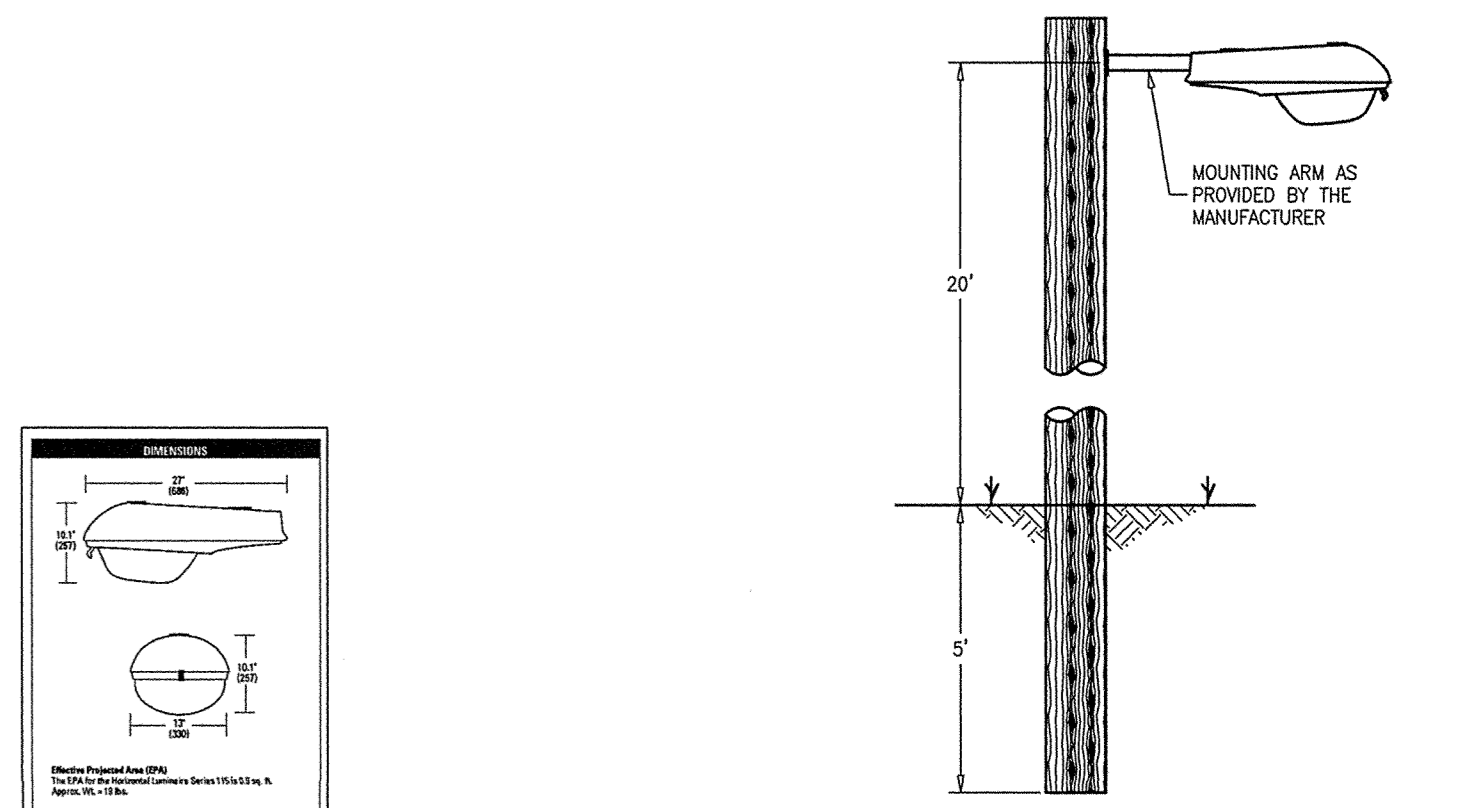
DETAIL 4 DOWNSPOUT
N.T.S.



DETAIL 5 GRAVITY CLEANOUT (GRASS LOCATION) SANITARY AND ROOF DRAIN PIPING
N.T.S.



DETAIL 6 DEPRESSED CONCRETE CURB DETAIL
N.T.S.



DETAIL 7 LITHONIA COBRA LIGHT FIXTURE ROADWAY SERIES 115 (OR EQUIVALENT)
N.T.S.

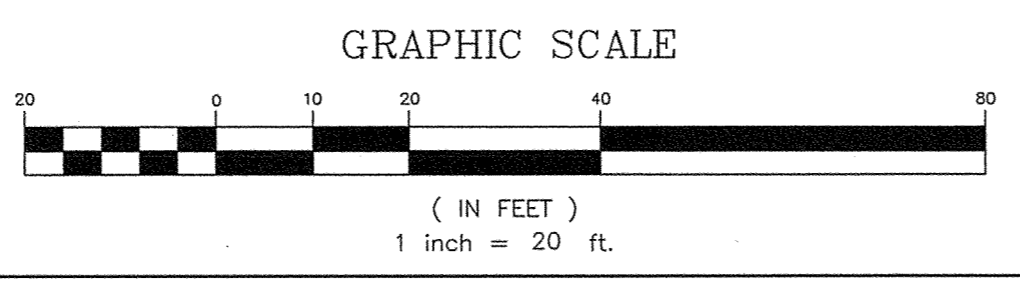
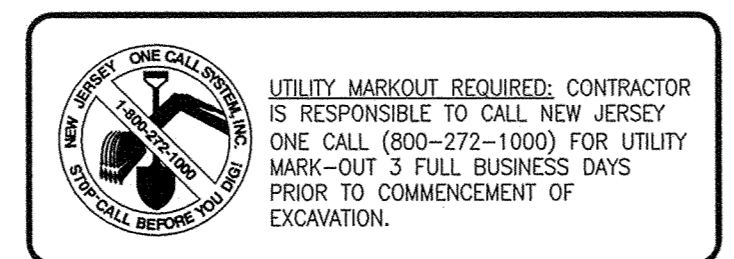
LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	Description	Lamp	Lumens	Comments
0	A	2	115-15S-R3-DG	LITHONIA COBRA STYLE UTILITY POLE MOUNTED OR EQUIVALENT	150 WATT HPS	16,000	20' MOUNTING HEIGHT

SITE PLAN
SCALE: 1"=20'

- SITE PLAN - GENERAL CONSTRUCTION NOTES**
- CONTRACTOR SHALL VERIFY THE LOCATION OF ANY UNDERGROUND ELECTRICAL CONDUIT AND IDENTIFY SAME PRIOR TO STARTING ANY EXCAVATION. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE TOWNSHIP, COUNTY, AND STATE AND SHALL PAY ALL FEES, INCLUDING THE INSPECTION FEES, AND IN GENERAL SHALL PROVIDE ALL REQUIRED PERMITS, LICENSES, INSPECTIONS, PAY ALL CHARGES AND FEES, AND OBTAIN ALL NECESSARY FOR AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING THE FINISH, TOPSOIL, FERTILIZING AND SEEDING ALL AREAS DISTURBED BY HIS ACTIVITIES. INSPECTION OF, OR FAILURE TO INSPECT ANY MATERIALS OR WORKMANSHIP, SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM THE WORK IN ACCORDANCE WITH APPLICABLE PLANS, SPECIFICATIONS, AND LAW.
 - THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING VEGETATION, SUCH AS TREES, SHRUBS, AND GRASS OR ADJACENT TO THE SITE, WHICH DO NOT REASONABLY INTERFERE WITH THE CONSTRUCTION AS MAY BE DETERMINED BY THE DESIGN ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UNAUTHORIZED CUTTING OR DAMAGING OF TREES AND SHRUBS, MATERIALS, OR TRACKING OF GRASS SEEDS BY EQUIPMENT. CARE SHALL BE TAKEN BY THE CONTRACTOR IN FELLING TREES AUTHORIZED FOR REMOVAL TO AVOID ANY UNNECESSARY DAMAGE TO VEGETATION THAT IS TO REMAIN IN PLACE. THE CONTRACTOR SHALL BE LIABLE FOR OR MAY BE REQUIRED TO REPLACE OR RESTORE, AT HIS EXPENSE, ALL VEGETATION NOT PROTECTED AND PRESERVED AS REQUIRED HEREIN THAT MAY BE DESTROYED OR DAMAGED.
 - THE CONTRACTOR SHALL ACKNOWLEDGE PRIOR TO CONSTRUCTION THAT HE HAS SATISFIED HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK, THE GENERAL AND LOCAL CONDITIONS, PARTICULARLY THOSE BEARING ON TRANSPORTATION, HANDLING AND STORAGE OF MATERIALS, THE CHARACTER OF THE EQUIPMENT AND FACILITIES NEEDED DURING THE PROSECUTION OF THE WORK AND ALL OTHER MATTERS WHICH CAN IN ANY WAY AFFECT THE WORK OR THE COST THEREOF UNDER THE CONTRACT. ANY FAILURE OF THE CONTRACTOR TO ACQUAINT HIMSELF WITH THE AVAILABLE INFORMATION CONCERNING THOSE CONDITIONS WILL NOT RELIEVE HIM FROM RESPONSIBILITY FOR ESTIMATING PROPERLY THE DIFFICULTIES OR COST OF SUCCESSFULLY PERFORMING THE WORK.
 - ALL MATERIALS, METHODS, AND DETAILS OF IMPROVEMENT CONSTRUCTION SHALL CONFORM TO THE REGULATIONS OF SOUTHAMPTON TOWNSHIP, BURLINGTON COUNTY, AND/OR THE APPROPRIATE UTILITY COMPANY, WHICHEVER REGULATION TAKES PRECEDENCE.
 - THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR ENSURING THAT ALL WORK PERFORMED CONFORMS TO ALL THE APPLICABLE SPECIFICATIONS, REGULATIONS, ORDINANCES, AND STANDARDS OF GOVERNMENTAL BODIES HAVING JURISDICTION OVER SUCH WORK. THE RESPONSIBILITY SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
 - CONFORMITY WITH THE APPROVED PLANS AS WELL AS STANDARDS AND SPECIFICATIONS OF THE TOWNSHIP;
 - CORRECTION OF ALL DEFECTS OF THE WORK, NO MATTER WHAT THE CAUSE, UNTIL THE DATE OF THE ACCEPTANCE, AND THEREAFTER, FOR THE PERIOD OF ANY GUARANTEE WHICH RUNS BEYOND THE DATE OF ACCEPTANCE;
 - SOLUTION OF ANY PROBLEMS UNFORESSEEN AT THE TIME OF THE APPROVAL OF THE PLAN, WHICH MAY OR DO NOT IMPAIR THE INTEGRITY OF ANY IMPROVEMENTS, INCLUDING PROBLEMS SUCH AS HIGH GROUND WATER, UNSTABLE SOIL, ETC.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PUBLIC SAFETY AND SECURING THE SITE AT ALL TIMES. CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL PUBLIC RIGHTS OF WAY AND ADJACENT PROPERTIES CLEAN AND SAFE FROM EXCESSIVE DUST AND DEBRIS RESULTING FROM DEMOLITION AND/OR CONSTRUCTION.
 - THE LOCATION OF ANY UTILITIES SHOWN ON THE PLANS ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION PRIOR TO BEGINNING EXCAVATION OR COMMENCING CONSTRUCTION AND SHALL BE FULLY RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES IN THE VICINITY OF THE PROJECT. NO ONE-CALL SERVICE WILL PROVIDE FOR ON-SITE DELINEATION OF EXISTING UTILITIES UPON REQUEST (1-800-272-1000).
 - EXISTING MATERIALS DESIGNATED FOR REMOVAL SHALL BE REMOVED BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED BY THE OWNER.
 - DISTURBED AREAS SHALL BE RESTORED AS SOON AS PRACTICAL.
 - THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF THERE ARE ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND HIS SITE CONDITIONS. THE CONTRACTOR SHALL PROCEED AT HIS OWN RISK PRIOR TO THE RESOLUTION IF ANY DISCREPANCIES.

- LEGEND**
- SIGN
 - UTILITY POLE
 - SPOT ELEVATIONS
 - CLEANOUT
 - CURBING
 - CONCRETE
 - PROPOSED PAVING
- NOTES:**
- BLOCK AND LOT NUMBERS REFER TO THE TAX MAPS OF SOUTHAMPTON TOWNSHIP, BURLINGTON COUNTY, N.J.
 - ELEVATIONS ARE BASED ON NVD 1929 DATUM.
 - NORTHERLY RIGHT-OF-WAY OF MAIN STREET WAS ESTABLISHED USING MONUMENTATION FOUND ON THE SOUTHERLY RIGHT-OF-WAY OF MAIN STREET AT THE TIME OF THE TOPOGRAPHIC SURVEY (04/03/2012) PERFORMED BY THIS OFFICE.
 - PAVING SLOPES SHALL NOT BE LESS THAN 0.8%.
 - ALL STANDARD PARKING STALL STRIPING SHALL BE 4 INCH WIDE WHITE LATEX.
 - SILT FENCING SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION.
 - EXISTING UNDERGROUND UTILITY INFORMATION IS APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR.



NO.	DATE	APPR.	REVISION
1	01/22/2019	SDB	REVISED FOR PLANNING BOARD COMMENTS (DA)

Dante Guzzi Engineering Associates
418 Stokes Road, P.O. Box 1625, Medford, New Jersey 08055
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SCOTT D. BROWN, P.E., P.L.S.
PROFESSIONAL ENGINEER AND LAND SURVEYOR N.J. LICENSE NO. 36250

DATE: 01/22/2019

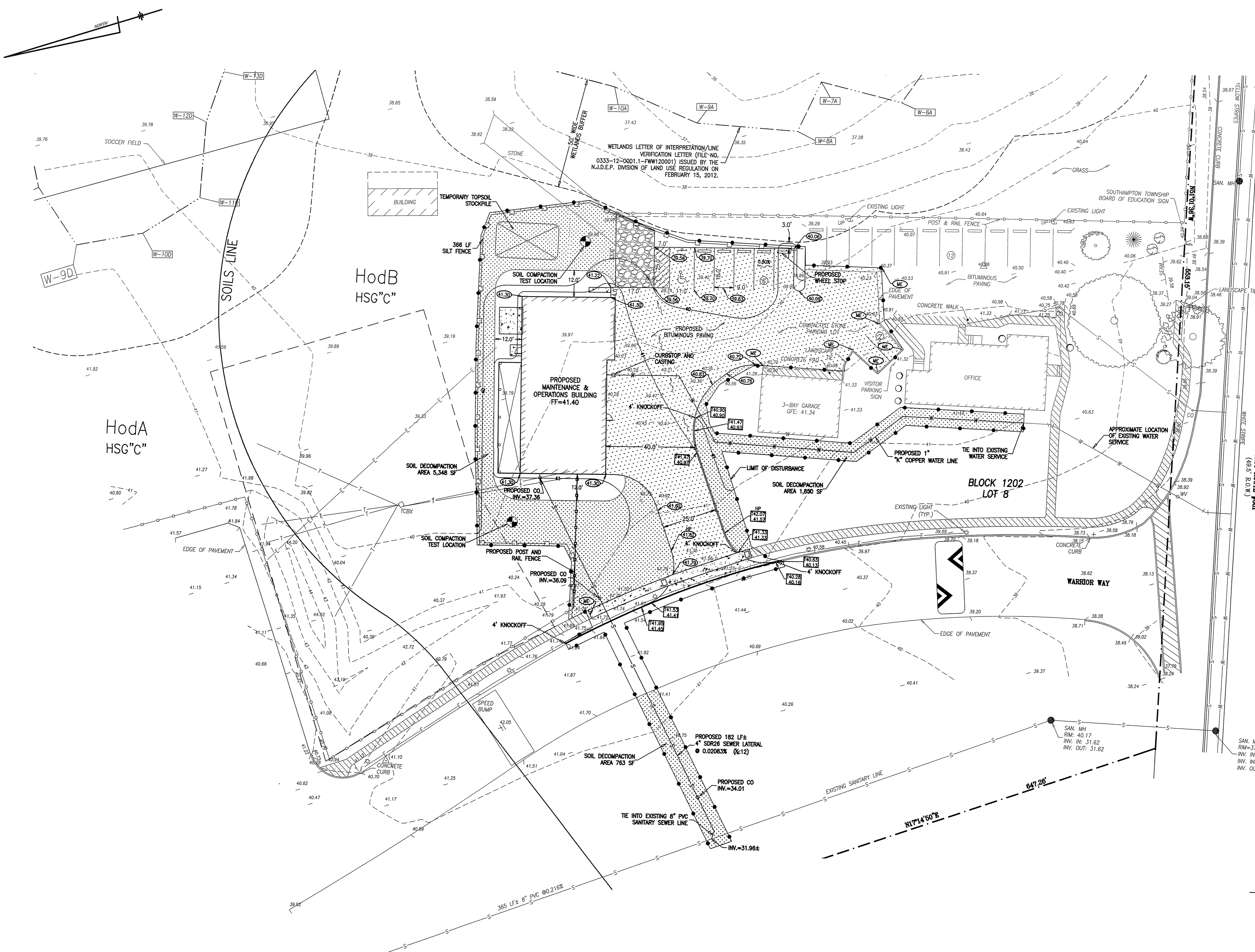
177 MAIN STREET

SITE PLAN
SOUTHAMPTON BOARD OF EDUCATION
PART OF BLOCK 1202, LOT 8
SOUTHAMPTON TOWNSHIP
BURLINGTON COUNTY, NEW JERSEY

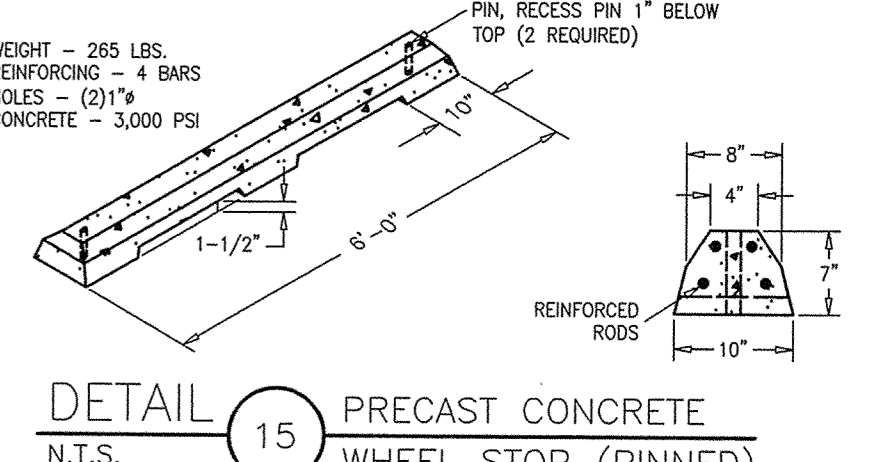
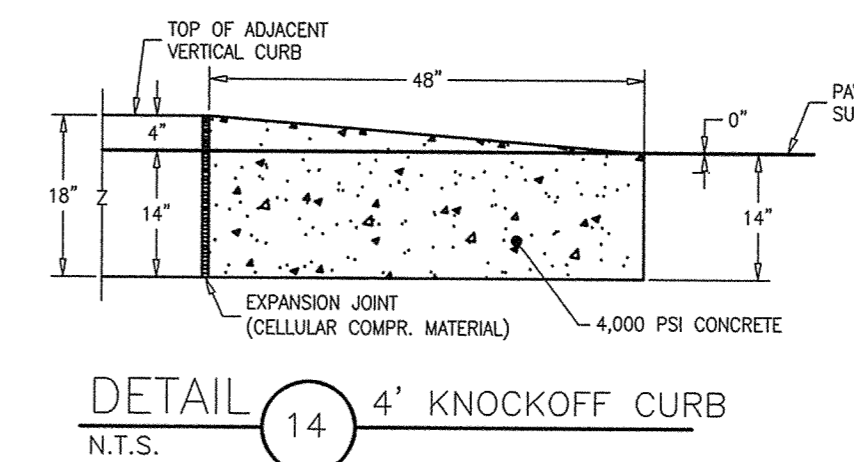
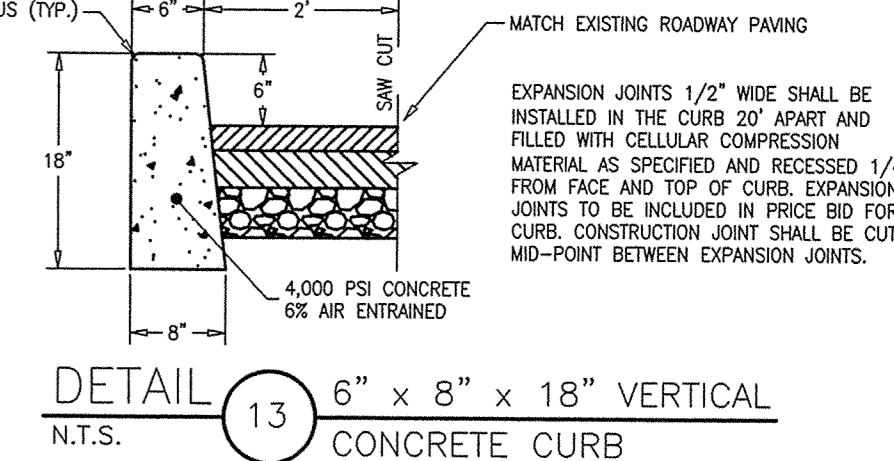
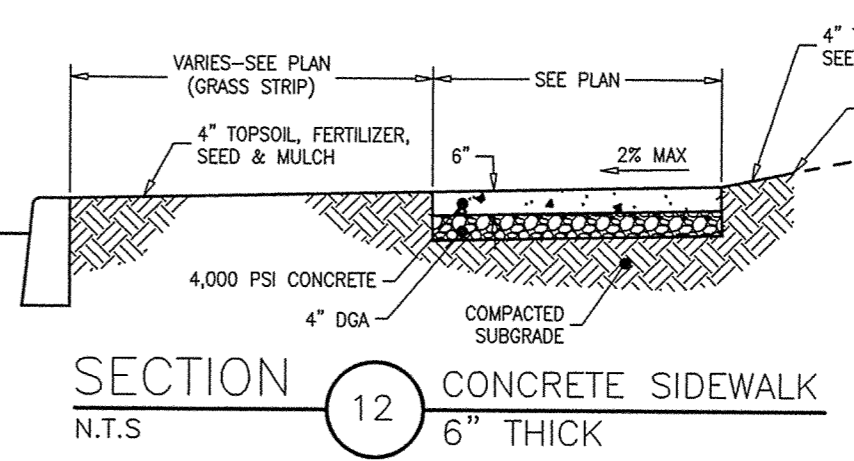
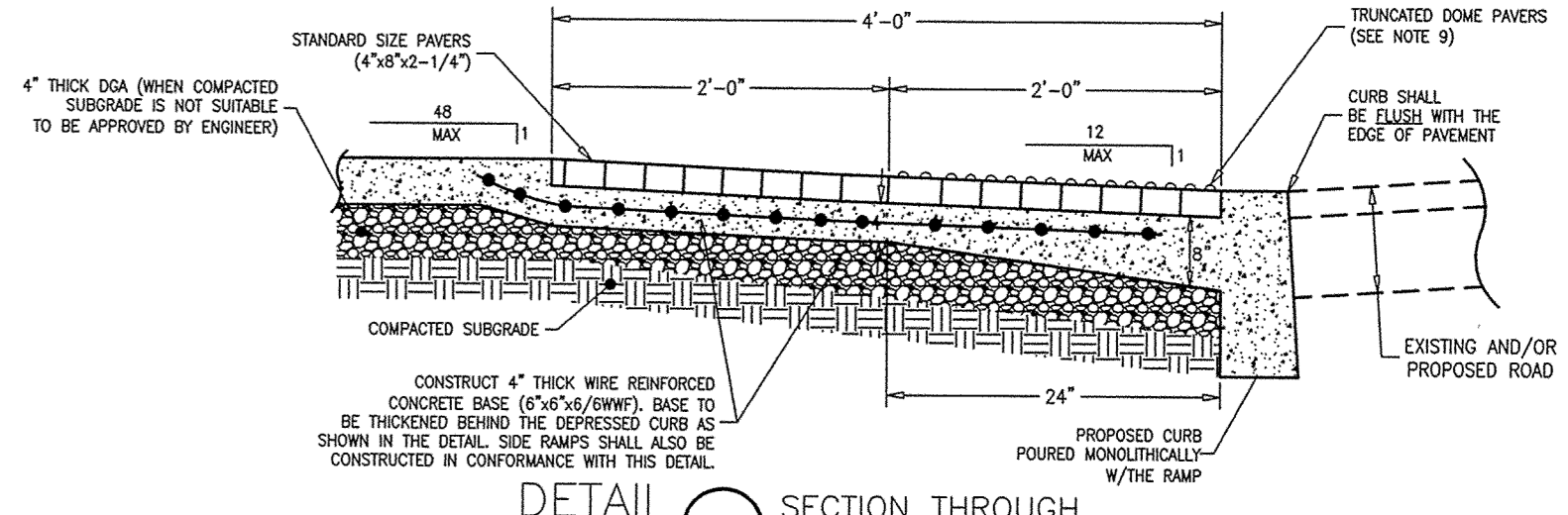
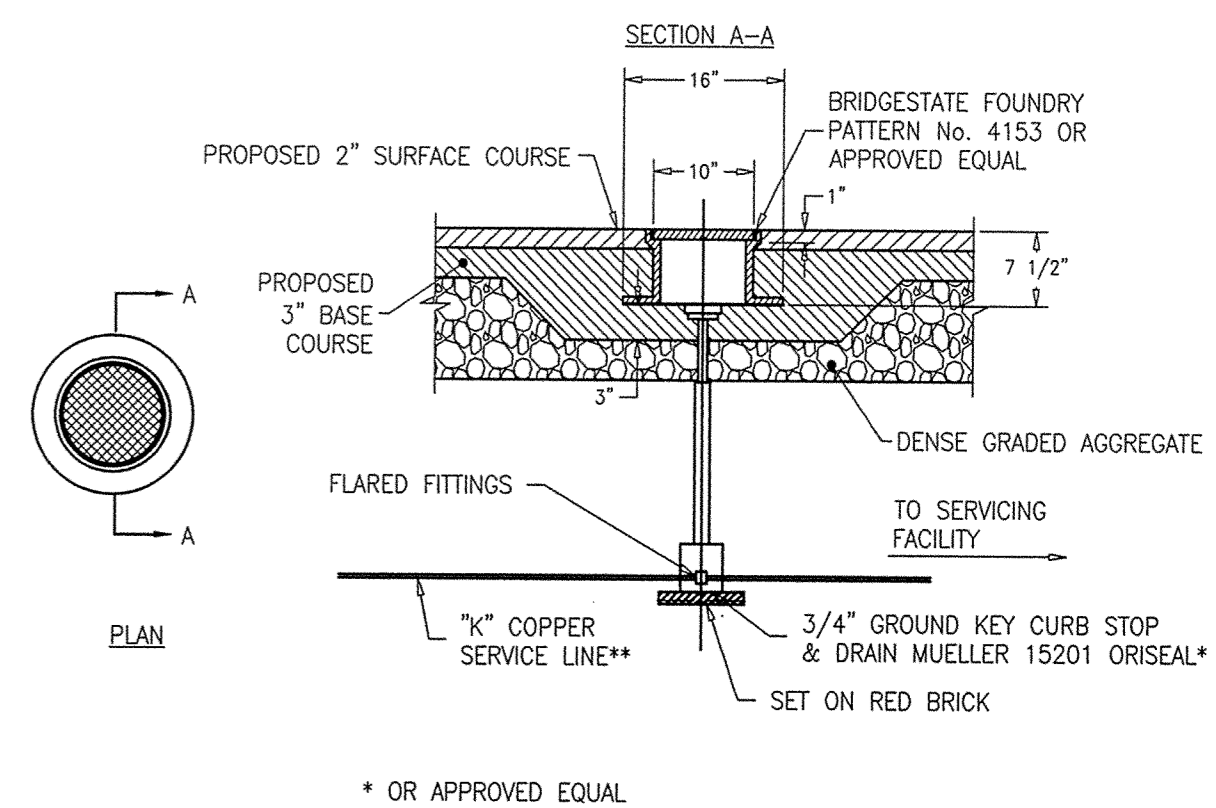
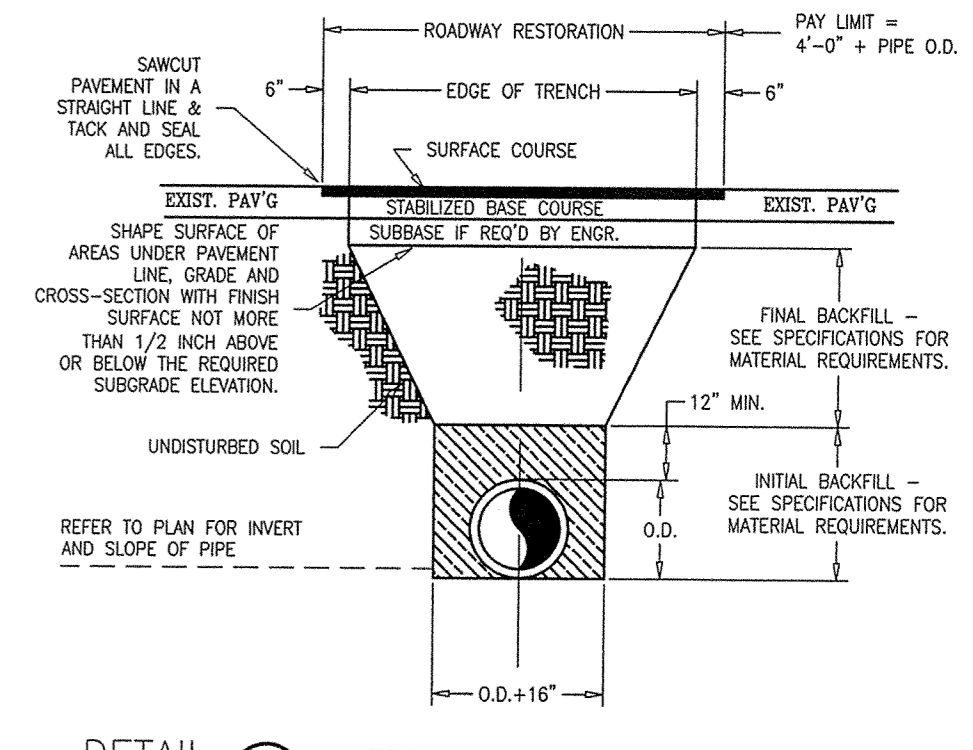
FILE	DATE	DRAWN BY	DATE	CHECKED BY	DATE	SHEET	OF
SOUTHAMPTONBOE-SP	01/22/2019	DM		SDB	01/22/2019	2	4

AS SHOWN PROJECT NO. M-09-021

C2

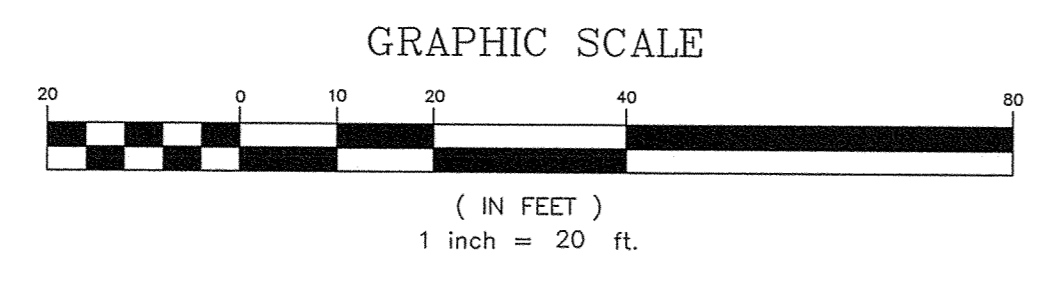
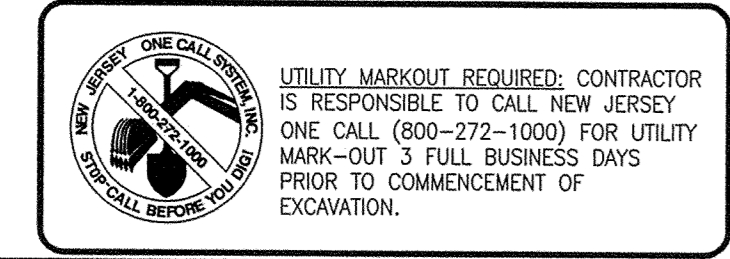


GRADING & SOIL EROSION AND SEDIMENT CONTROL PLAN
SCALE: 1"=20'



- LEGEND**
- ⊕ SIGN
 - UTILITY POLE
 - 40.78 SPOT ELEVATIONS
 - CO CLEANOUT
 - CURBING
 - ▨ CONCRETE
 - ▨ PROPOSED PAVING
 - ▨ SOIL COMPACTION AREA
 - 45.35 PROPOSED PAVEMENT ELEVATIONS
 - 45.75 PROPOSED TOP OF CURB ELEVATION AND GUTTER ELEVATION
 - ME MATCH EXISTING GRADE
 - SWALE/DIRECTION OF FLOW

- NOTES:**
1. THE MINIMUM CONSTRUCTED PAVING SLOPE SHALL BE 0.80%.
 2. THE MINIMUM CONSTRUCTED GROUND SLOPE SHALL BE 1.5%.
 3. THE MAXIMUM CONSTRUCTED GROUND SLOPE SHALL BE 3:1 (33.3%).
 4. ALL SOIL EROSION MEASURES MUST BE IN PLACE BEFORE CONSTRUCTION COMMENCES.
 5. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES BEFORE CONSTRUCTION BEGINS.



NO.	DATE	APPR.	REVISION
1	3/22/2019	SRB	ISSUED PER PLANNING BOARD COMMENTS (M)

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PROFESSIONAL ENGINEER AND LAND SURVEYOR N.J. LICENSE NO. 38250

177 MAIN STREET			
GRADING & SOIL EROSION AND SEDIMENT CONTROL PLAN			
SOUTHAMPTON BOARD OF EDUCATION			
PART OF BLOCK 1202, LOT 8			
SOUTHAMPTON TOWNSHIP			
BURLINGTON COUNTY, NEW JERSEY			
FILE	DATE	DRAWN BY	SHEET
SOUTHAMPTONBOE-SP	01/22/2019	DM	1
SCALE	PROJECT NO.	CHECKED BY	DATE
AS SHOWN	M-09-021	SDB	01/22/2019

INCREASE IN IMPERVIOUS AREA=5,375 SF OR 0.12339 AC.
LIMIT OF DISTURBANCE=24,824 SF± OR 0.57 AC.

C3

SOIL EROSION AND SEDIMENT CONTROL REQUIREMENTS

GENERAL REQUIREMENTS:

- THE SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED SEVENTY-TWO (72) HOURS PRIOR TO ANY LAND DISTURBANCE.
- A CERTIFIED COPY OF THIS SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE MAINTAINED ON THE PROJECT SITE DURING CONSTRUCTION.
- SOIL EROSION AND SEDIMENT CONTROL PRACTICES IN THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
- ANY CHANGES TO THE SITE PLAN WILL REQUIRE THE SUBMISSION AND RE-CERTIFICATION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN TO THE SOIL CONSERVATION DISTRICT. THE REVISED PLAN MUST BE IN ACCORDANCE WITH THE CURRENT NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.
- NJSA 4: 24-39, *et seq.*, REQUIRES THAT UPON PERMANENT STABILIZATION AND COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL APPLY TO THE SOIL CONSERVATION DISTRICT FOR A FINAL COMPLIANCE INSPECTION TO CHECK THAT ALL THE PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES.
- NJSA 4: 24-39, *et seq.*, REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE ALL THE PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES. ALL SITE WORK FOR THE PROJECT MUST BE COMPLETED PRIOR TO THE DISTRICT ISSUING THE REPORT OF COMPLIANCE AS A PREREQUISITE TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.
- COMPLIANCE WITH THE CERTIFIED PLAN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR DURING AND IMMEDIATELY FOLLOWING THE CONSTRUCTION PHASE. UNLESS OTHERWISE SET FORTH BY CONTRACTUAL PROVISIONS, UPON ACCEPTANCE OF THE PROJECT BY THE OWNER THE RESPONSIBILITY SHALL TRANSFER TO THE OWNER.
- ANY CONVEYANCE OF THIS PROJECT PRIOR TO ITS COMPLETION WILL TRANSFER FULL RESPONSIBILITY FOR COMPLIANCE WITH THE CERTIFIED PLAN TO ANY SUBSEQUENT OWNERS.

GENERAL PROCEDURES:

- THE CONTRACTOR SHALL COORDINATE ALL SOIL SEDIMENT RELATED MATTERS WITH THE SOIL CONSERVATION DISTRICT.
- ALL APPLICABLE SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATIONS AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
- ALL APPLICABLE SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND/OR THE AREA IS STABILIZED.
- ADDITIONAL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED WHEN AND WHERE DIRECTED BY THE SOIL CONSERVATION DISTRICT. THIS MAY INCLUDE AREAS OF OFFSITE SOIL DISTURBANCE.
- THE SITE SHALL BE GRADED AND MAINTAINED AT ALL TIMES SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
- ALL SEDIMENTATION FACILITIES SHALL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
- EXISTING STORMWATER INLETS SHALL BE PROTECTED WITH CRUSHED STONE OR HAYBALE FILTER. ALL NEW INLETS, OUTLETS, DITCHES, ETC., SHALL BE PROTECTED BY APPROVED MEASURES BEFORE THEY BECOME OPERATIONAL.
- CONSTRUCTION TRAFFIC SHALL USE THE DESIGNATED INGRESS/EGRESS POINT(S). A STABILIZED CONSTRUCTION ACCESS (CRUSHED STONE TRACKING PAD) SHALL BE INSTALLED AND MAINTAINED WHENEVER CONSTRUCTION TRAFFIC ACCESS PAVED AREAS FROM UNPAVED AREAS. THE ACCESS SHALL BE THE FULL WIDTH OF THE INGRESS/EGRESS AND BE A MINIMUM LENGTH AS SPECIFIED ON THE PLANS. THE STONE MUST BE ANGULAR, 1.5" - 4" IN SIZE, PLACED NOT LESS THAN 12" THICK AND UNDERLAIN WITH A SUITABLE SYNTHETIC FILTER FABRIC.
- ALL DRIVEWAYS AND ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
- THE DOWNSLOPE PERIMETER OF ALL DISTURBED AREAS AND STOCKPILES SHALL BE PROTECTED BY A HAY BALE BARRIER OR SEDIMENT FENCE.
- STOCKPILES SHALL NOT BE LOCATED WITHIN FIFTY (50) FEET OF A FLOOD PLAIN, WETLAND, SLOPE, ROADWAY OR DRAINAGE FACILITY.
- IMMEDIATELY UPON COMPLETION OF STRIPPING AND STOCKPILING OF SOIL, STOCKPILES SHALL BE SEEDED WITH TEMPORARY VEGETATION. REFER TO STABILIZATION WITH TEMPORARY VEGETATIVE COVER.
- ALL DISTURBED AREA THAT WILL BE LEFT EXPOSED FOR MORE THAN SIXTY (60) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY BE SEEDED WITH TEMPORARY VEGETATION. REFER TO STABILIZATION WITH TEMPORARY VEGETATIVE COVER.
- ALL CRITICAL AREAS SUBJECT TO EROSION SUCH AS SLOPES SHALL BE SEEDED WITH TEMPORARY VEGETATION AND THEN MULCHED AT A RATE OF 2 TONS PER ACRE IMMEDIATELY FOLLOWING ROUGH GRADING. REFER TO STABILIZATION WITH TEMPORARY VEGETATIVE COVER.
- ALL DISTURBED AREAS SHALL BE SEEDED WITH PERMANENT VEGETATION IMMEDIATELY FOLLOWING FINAL GRADING. REFER TO STABILIZATION WITH PERMANENT VEGETATIVE COVER.
- IF THE SEASON DOES NOT PERMIT THE ESTABLISHMENT OF SEED THE STOCKPILE AND/OR DISTURBED AREA SHALL BE PROTECTED WITH MULCH. OR AN APPROVED EQUIVALENT. MULCH SHALL BE SECURED BY AN APPROVED METHOD (LIQUID BINDER, CRIMPING, PEG AND TWINE). REFER TO STABILIZATION WITH MULCH ONLY.
- ALL DEWATERING OPERATIONS MUST DISCHARGE INTO AN APPROVED SEDIMENT FILTRATION DEVICE SO PLACED AS NOT TO CAUSE EROSION OF THE DOWNSLOPE AREA. FIELD PLACEMENT AND USE OF STRUCTURES MUST BE APPROVED BY THE SOIL CONSERVATION DISTRICT PRIOR TO COMMENCEMENT OF THE DEWATERING OPERATION.
- ALL DEBRIS CREATED AS A RESULT OF CONSTRUCTION IS TO BE STOCKPILED, PROPERLY CONTAINED, AND THEN REMOVED BY THE CONTRACTOR.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE CONFIRMATION OF LIME, FERTILIZER AND SEED APPLICATION RATES AT THE REQUEST OF THE SOIL CONSERVATION DISTRICT.
- MAXIMUM SIDE SLOPES OF ALL PROPOSED SURFACES SHALL NOT BE CONSTRUCTED STEEPER THAN 4:1.
- OFF SITE SEDIMENT DISTURBANCE MAY REQUIRE ADDITIONAL CONTROL MEASURES TO BE DETERMINED BY THE DISTRICT EROSION CONTROL INSPECTOR.

INTERMEDIATE CONTROL STANDARDS

DUST CONTROL

A. APPLICABILITY

- THIS PRACTICE IS APPLICABLE IF DUST BECOMES A PROBLEM DURING EXCAVATION AND GRADING OPERATIONS BECAUSE OF LOW MOISTURE CONTENT IN THE SOIL.

B. MATERIAL AND METHODS

- ALL AREAS SUBJECT TO DUST MOVEMENT SHALL BE SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. THIS PROCEDURE SHALL BE REPEATED AS REQUIRED TO MAINTAIN A MOISTURE CONTENT IN THE SOIL THAT IS SUFFICIENT TO PREVENT DUST MOVEMENT.
- IF THE APPLICATION OF WATER BECOMES IMPRACTICAL OR INEFFECTIVE, THE USE OF CALCIUM CHLORIDE IS ACCEPTABLE, PROVIDED THAT THERE ARE NO LOCAL OR STATE REGULATIONS RESTRICTING ITS USE. CALCIUM CHLORIDE IN THE FORM OF LOOSE, DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH A COMMON SPREADER SHALL BE SPREAD OVER THE SUSCEPTIBLE AREAS AT A RATE THAT WILL KEEP THE SURFACE MOIST BUT NOT CAUSE POLLUTION OR DAMAGE TO VEGETATION. IF USED ON STEEP SLOPES, OTHER PRACTICES SHALL BE IMPLEMENTED TO PREVENT WASHING IN TO STREAMS OR ACCUMULATION AROUND VEGETATION.

MANAGEMENT OF HIGH ACID PRODUCING SOILS

A. APPLICABILITY

- THIS PRACTICE IS APPLICABLE TO ANY HIGH ACID PRODUCING SOIL MATERIAL HAVING A pH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE. THESE SOILS MAY BE PRESENT IN UNDISTURBED SOILS AT VARYING DEPTHS INCLUDING NEAR THE SURFACE TO EXCAVATIONS OR DEEP DISTURBANCES. ITS PRESENCE MAY BE SIGNIFICANT OR LIMITED IN THE SOIL PROFILE. HIGH ACID PRODUCING SOILS ARE COMMONLY BLACK, DARK BROWN, GRAY OR GREENISH WITH SILVERY PYRITE OR MARCASITE NUGGETS OR FLAKES.

B. MATERIAL AND METHODS

- LIMIT THE AREA OF DISTURBANCE AREA AND EXPOSURE TIME WHEN THESE SOILS ARE ENCOUNTERED.
- TO PREVENT CROSS CONTAMINATION, TOPSOIL STRIPPED FROM THE SITE SHALL BE STOCKPILED SEPARATELY FROM HIGH ACID PRODUCING SOILS. STOCKPILES SHOULD BE LOCATED ON LEVEL LAND AND THEIR ENTIRE PERIMETER ENCLOSED BY A SILT FENCE TO MINIMIZE MOVEMENT. STOCKPILES STORED FOR MORE THAN 30 DAYS SHALL BE COVERED WITH A PROPERLY ANCHORED, HEAVY GRADE SHEET OF POLYETHYLENE.
- IMMEDIATELY UPON COMPLETION OF ROUGH GRADING, THESE SOILS SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SETTLED SOIL HAVING A pH OF 5.0 OR MORE.
 - AREAS WHERE TREES AND SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF 24 INCHES OF SETTLED SOIL HAVING A pH OF 5.0 OR MORE.
 - DISPOSAL AREAS SHALL NOT BE LOCATED WITHIN 24 INCHES OF ANY SURFACE OF A SLOPE OR BANK SUCH AS BERMS, DITCHES, STREAM BANKS AND OTHER WATERCOURSES TO PREVENT POTENTIAL LATERAL LEACHING DAMAGES.
- ADDITIONAL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PLACED WHEN SUCH SOIL IS ENCOUNTERED TO LIMIT ITS MOVEMENT FROM, AROUND OR OFF THE SITE.

STABILIZATION WITH TEMPORARY VEGETATIVE COVER

A. APPLICABILITY

- THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO EROSION, WHERE TEMPORARY STABILIZATION OF EXPOSED SOILS IS NEEDED TO REDUCE DAMAGE FROM WIND AND RAIN, SLOW THE OVERLAND MOVEMENT OF RUNOFF AND INCREASE INFILTRATION AND RETAIN SOIL AND NUTRIENT ON SITE.
- B. MATERIAL AND METHODS**
- REFER TO PERMANENT VEGETATIVE COVER, ITEM B, #1, #2, #3 AND #6.
 - UNIFORMLY APPLY PERENNIAL RYE GRASS AT A RATE OF 2.3 POUND PER 1,000 SQUARE FEET.
 - REFER TO PERMANENT VEGETATIVE COVER, ITEM C, #2 AND #3.
 - REFER TO PERMANENT VEGETATIVE COVER, ITEM D, #1, #2, #3 AND #4.

STABILIZATION WITH MULCH ONLY

A. APPLICABILITY

- THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO EROSION, WHERE THE SEASON AND OTHER CONDITIONS MAY NOT BE SUITABLE FOR GROWING AN EROSION-RESISTANT COVER OR WHERE STABILIZATION IS NEEDED FOR A SHORT PERIOD UNTIL MORE SUITABLE PROTECTION CAN BE APPLIED.
- B. METHODS AND MATERIALS**
- MULCH MATERIALS SHALL BE UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS OR SALT HAY UNIFORMLY APPLIED AT A RATE OF 90 TO 115 POUNDS PER 1,000 SQUARE FEET. THE MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MATERIAL.
 - SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 85% OF THE SOIL SURFACE WILL BE COVERED.
 - MULCH SHALL BE SECURED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER BY AN APPROVED METHOD (LIQUID-MULCH BINDER, CRIMPING, PEG AND TWINE, OR NETTING).
 - OTHER SUITABLE METHODS MAY BE USED IF PREAPPROVED BY THE SOIL CONSERVATION DISTRICT SUCH AS:
 - ASPHALT EMULSION OR OUTBACK ASPHALT IS RECOMMENDED AT A RATE OF 14 TO 28 GALLONS PER 1,000 SQUARE FEET. THIS IS SUITABLE A LIMITED PERIOD OF TIME WHERE CONSTRUCTION TRAFFIC IS NOT A PROBLEM.
 - SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER.
 - WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE MAY BE APPLIED BY A HYDROSEEDER OR HYDROMULCHING.
 - WOOD CHIPS APPLIED UNIFORMLY TO MINIMUM DEPTH OF 2 INCHES MAY BE USED, BUT SHALL NOT BE USED ON AREAS WHERE FLOWING WATER COULD WASH THEM INTO AN INLET AND PLUG IT.

SOIL DE-COMPACTION AND TESTING REQUIREMENTS

SOIL COMPACTION TESTING REQUIREMENTS

- SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL (SEE PERMANENT CONTROL STANDARDS NOTES FOR TOPSOIL REQUIREMENTS) SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
- AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION ARE GRAPHICALLY DENOTED ON THE CERTIFIED SOIL EROSION CONTROL PLAN.
- COMPACTION TESTING LOCATIONS ARE DENOTED ON THE PLAN. A COPY OF THE PLAN OR PORTION OF THE PLAN SHALL BE USED TO MARK LOCATIONS OF TESTS, AND ATTACHED TO THE COMPACTION REMEDIATION FORM, AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.
- IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE SIMPLIFIED TESTING METHODS (SEE DETAILS), THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (1) COMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THE PLAN (EXCLUDING EXEMPT AREAS), OR (2) PERFORM ADDITIONAL, MORE DETAILED TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DETAILED TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

COMPACTION TESTING METHODS

- PROBING WIRE TEST (SEE DETAIL)
- HAND-HELD PENETROMETER TEST (SEE DETAIL)
- TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)
- NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)

NOTE: ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULKY DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.

SOIL COMPACTION TESTING IS NOT REQUIRED IF WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

PROCEDURES FOR SOIL COMPACTION MITIGATION

PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.), IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAY BE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

PERMANENT CONTROL STANDARDS

STABILIZATION WITH PERMANENT VEGETATIVE COVER

A. TOPSOIL

- IMMEDIATELY BEFORE TOPSOIL APPLICATION, THE SUBGRADE SHALL BE SCARIFIED A MINIMUM DEPTH OF 6" TO PROVIDE A GOOD BOND WITH THE TOPSOIL. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES. WITHIN DRAINAGE BASINS AND SWALES, THE SUBGRADE SHALL BE SCARIFIED A MINIMUM DEPTH OF 12" TO PROMOTE INFILTRATION.
- TOPSOIL OBTAINED FROM STRIPPING WITHIN THE LIMITS OF THE SITE OR FURNISHED FROM OUTSIDE THE SITE SHALL CONTAIN NO STONES, LUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN TWO INCHES IN ANY DIMENSION, AND SHALL HAVE A pH OF NOT LESS THAN 5.0 NOR GREATER THAN 7.5.
- WHEN THE pH VALUE OF THE TOPSOIL IS LESS THAN 5.0, IT SHALL BE INCREASED BY APPLYING GROUND LIMESTONE AT A RATE NECESSARY TO ATTAIN AN ACCEPTABLE pH LEVEL.
- TOPSOIL FURNISHED FROM SOURCES OUTSIDE THE LIMITS OF THE SITE SHALL HAVE A MINIMUM ORGANIC CONTENT OF NOT LESS THAN 2.75% ORGANIC MATTER CONTENT MAY NOT BE RAISED BY ADDITIVES.
- THE TOPSOIL SHALL BE APPLIED TO A UNIFORM DEPTH OF 5 INCHES (FIRMED IN PLACE).

B. SEEDBED PREPARATION

- APPLY LIMESTONE GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS COOPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICE.
- APPLY LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDES) AT THE FOLLOWING RATE UNLESS SOIL TESTING INDICATES OTHERWISE:

SOIL TEXTURE	APPLICATION RATE
CLAY, CLAY LOAM & HIGH ORGANIC SOIL	135 POUNDS PER 1,000 SQUARE FEET
SANDY LOAM, LOAM & SILT LOAM	90 POUNDS PER 1,000 SQUARE FEET
LOAMY SAND & SAND	45 POUNDS PER 1,000 SQUARE FEET
- APPLY FERTILIZER AT A RATE OF 11 LB. PER 1,000 SQ. FT USING 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS SOIL TESTING INDICATES OTHERWISE.
- WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHALL BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.
- REMOVE FROM THE SURFACE ALL STONES TWO INCHES OR LARGER IN ANY DIMENSION, REMOVE ALL OTHER DEBRIS SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE MATERIAL.
- INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT SOIL COMPACTED, THE AREA MUST BE RETILLED AND FIRMED AS ABOVE.

C. SEEDING

1. SEED MIXTURE:

MIX FOR LAWN AREAS	APPLICATION RATE
SPREADING FESCUE	0.75 POUNDS PER 1,000 SQUARE FEET
RED FESCUE	0.75 POUNDS PER 1,000 SQUARE FEET
KENTUCKY BLUE GRASS	1.75 POUNDS PER 1,000 SQUARE FEET
PERENNIAL RYE GRASS	0.75 POUNDS PER 1,000 SQUARE FEET

- ALL SEED MUST BE RAKED OR DRILLED INTO SOIL. NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH.
- WHERE FEASIBLE, EXCEPT WHERE EITHER A CULPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER OR LIGHT DRAG. SEEDING OPERATIONS SHOULD BE ON THE CONTOUR.

D. MULCHING

- MULCH IS REQUIRED ON ALL SEEDBED AREAS TO INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND TO PROMOTE FASTER AND EARLIER ESTABLISHMENT.
- MULCH MATERIALS SHALL BE UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS OR SALT HAY UNIFORMLY APPLIED AT A RATE OF 70 TO 90 POUNDS PER 1,000 SQUARE FEET. OTHER SUITABLE METHODS MAY BE USED IF PREAPPROVED BY THE SOIL CONSERVATION DISTRICT. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MATERIAL.
- SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 85% OF THE SOIL SURFACE WILL BE COVERED.
- MULCH SHALL BE SECURED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER BY AN APPROVED METHOD (LIQUID-MULCH BINDER, CRIMPING, PEG AND TWINE, OR NETTING).

E. IRRIGATION (WHERE FEASIBLE)

IF SOIL MOISTURE IS DEFICIENT, AND MULCH IS NOT USED, SUPPLY NEW SEEDING WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH TWICE DAILY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDING IN ABNORMALLY DRY OR THOROUGHLY DRY SITES.

F. TOP DRESSING

SINCE SLOW RELEASE NITROGEN FERTILIZER IS PRESCRIBED UNDER SEEDBED PREPARATION, NO FOLLOW-UP TOP DRESSING IS MANDATORY. IF GROSS NITROGEN DEFICIENCY EXISTS TO THE EXTENT THE TURF FAILURE MAY DEVELOP, TOP DRESS WITH 10-10-10 OR EQUIVALENT AT 10 POUNDS PER 1,000 SQUARE FEET.

SOIL CLASSIFICATION:

SOILS MAP PROVIDED BY WEB SOIL SURVEY 2.0, NATIONAL COOPERATIVE SOIL SURVEY, USDA NATIONAL RESOURCES CONSERVATION SERVICE

PROJECT IS IN: H0d8 - HOLMDEL FINE SANDY LOAM, 2 TO 5 PERCENT SLOPES, HSG "C"

POTENTIAL ENVIRONMENTAL RESTRICTIONS:

FLOOD PLAINS DO NOT OCCUR ON THE PROJECT LIMITS

SEQUENCE OF CONSTRUCTION

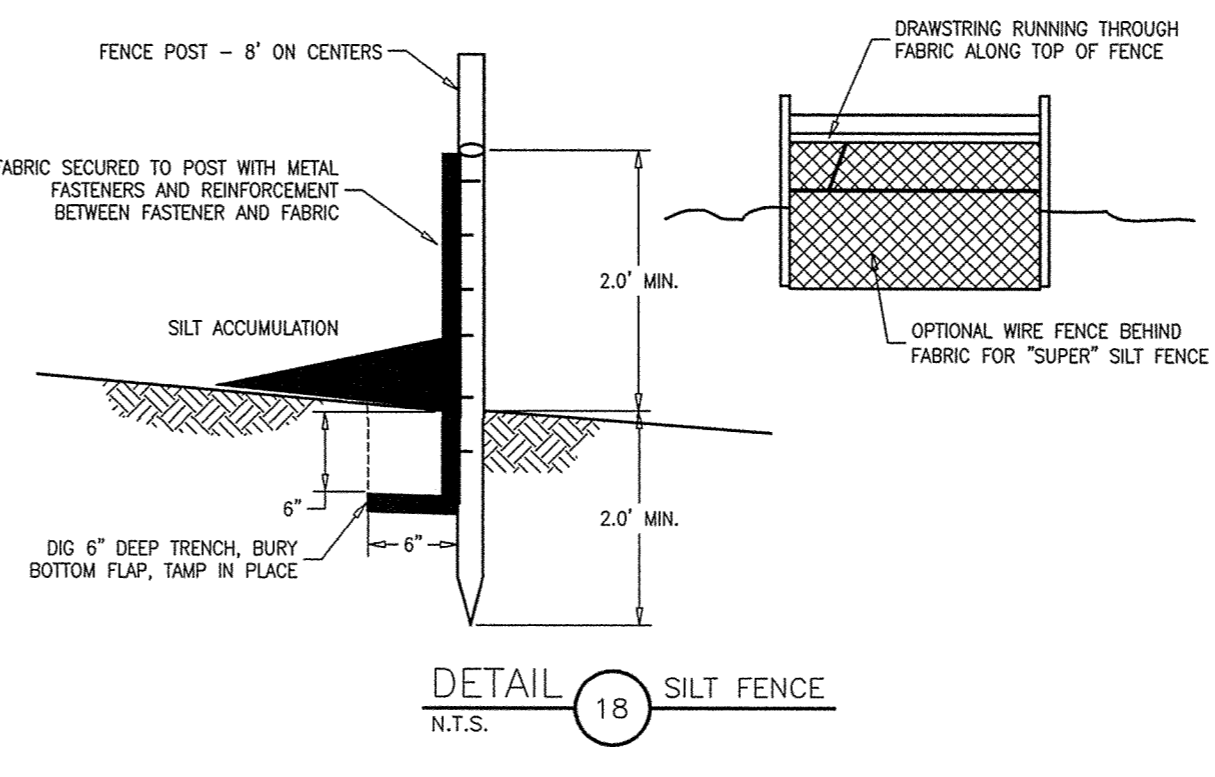
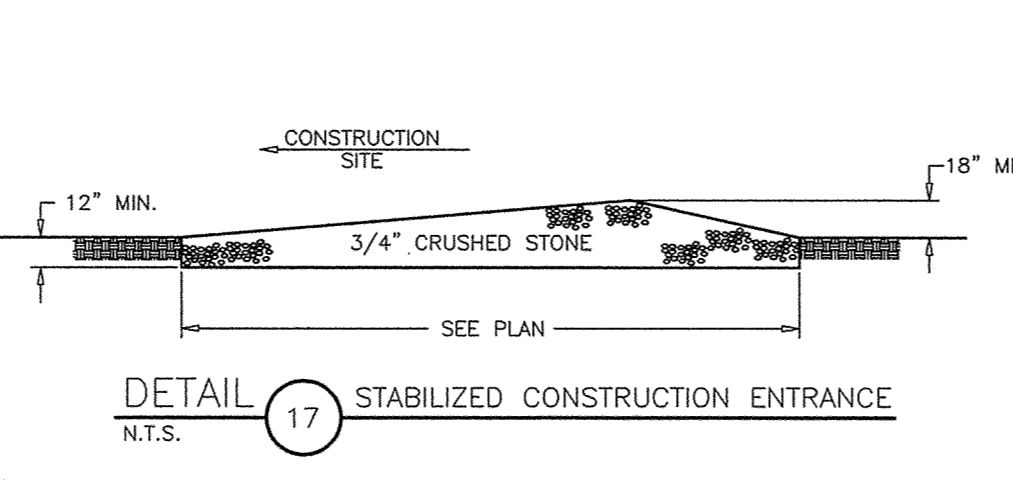
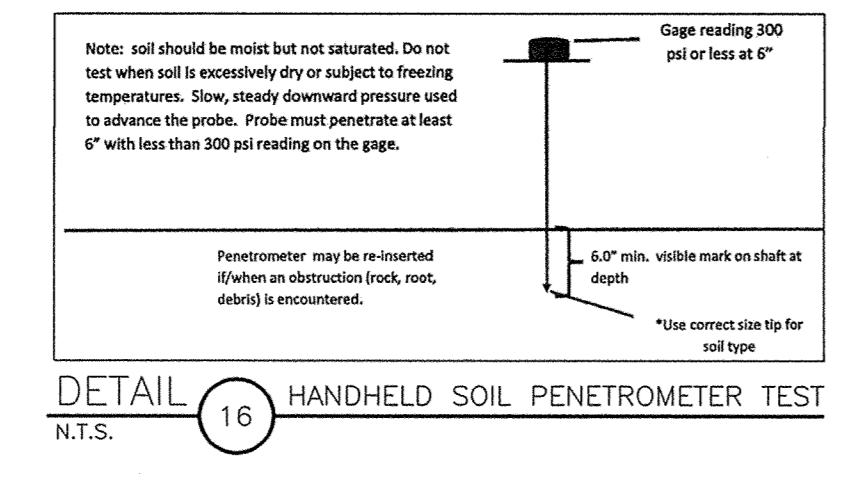
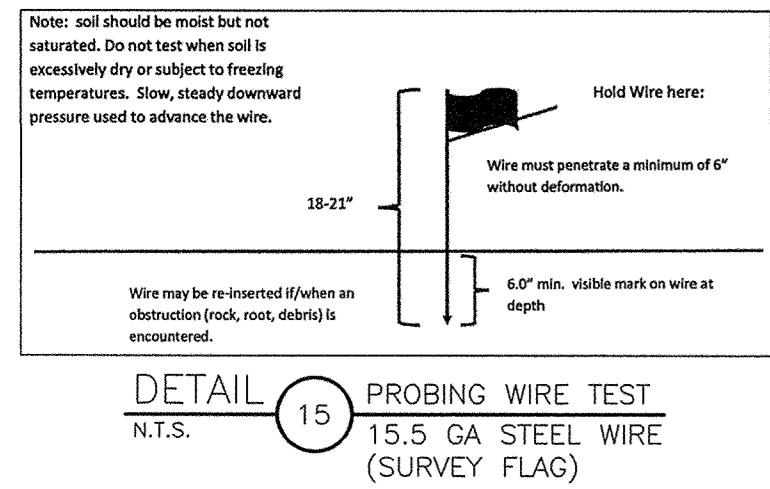
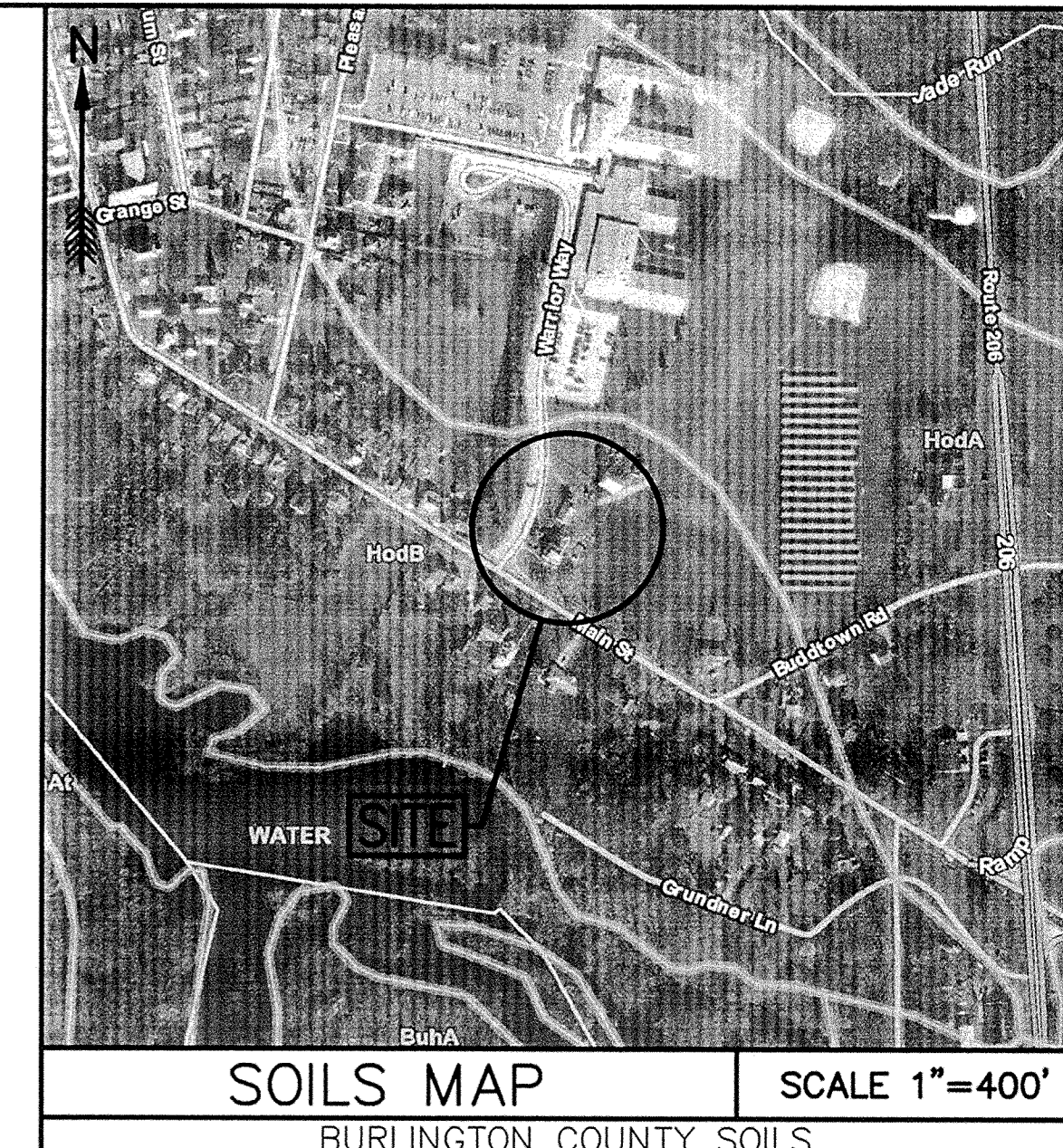
DURATION OF CONSTRUCTION

ANTICIPATED COMMENCEMENT: JUNE 2019

ANTICIPATED COMPLETION: SEPTEMBER 2019

DESCRIPTION OF CONSTRUCTION ACTIVITY

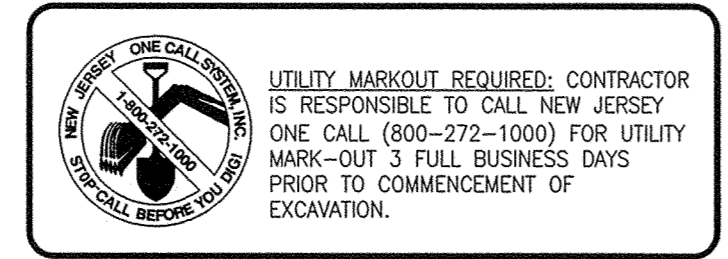
DESCRIPTION OF CONSTRUCTION ACTIVITY	WEEK
1. PLACE APPLICABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES AT CONSTRUCTION ENTRANCE AND AROUND PERIMETER AS SHOWN ON THE PLANS.	1ST
2. REMOVE EXISTING CURBING, SIDEWALK & CONCRETE APRON AS SHOWN ON SITE PLANS.	1ST
3. REMOVE EXISTING STORAGE BUILDING & CONCRETE.	2ND-3RD
4. CONSTRUCT PROPOSED BUILDING & UTILITY CONNECTIONS.	4TH-9TH
5. REMOVE STONE PARKING LOT.	9TH
6. INSTALL CURBING.	10TH
7. PAVE PARKING AREA.	11TH
8. INSTALL STONE RUNOFF PAD.	12TH
9. FINE GRADING.	12TH
10. STRIPE PARKING LOT.	13TH
11. FILL ALL DISTURBED SOIL AREAS TO 6" DEPTH AND ADD TOPSOIL PER SOIL CONSERVATION DISTRICT STANDARDS.	13TH
12. APPLY PERMANENT STABILIZATION TO THE SITE.	14TH
13. REMOVE REMAINING SOIL EROSION AND SEDIMENT CONTROL MEASURES WHEN PERMANENT STABILIZATION IS ACHIEVED.	WHEN STABLE



LEGEND

+	SIGN
U	UTILITY POLE
40,78	SPOT ELEVATIONS
CO	CLEANOUT
—	CURBING
▨	CONCRETE

GRAPHIC SCALE
1 inch = 20 ft.



NO.	DATE	APPR.	REVISION
1	2/22/2019	SDB	REVISED FOR PLANNING BOARD COMMENTS (M)

Dante Guzzi Engineering Associates
418 Stokes Road, P.O. Box 1826, Medford, New Jersey 08055
Telephone (609) 654-4440 N.J. Certificate of Authorization No. 94629879500
Facsimile (609) 654-7792 www.guzziengineering.com

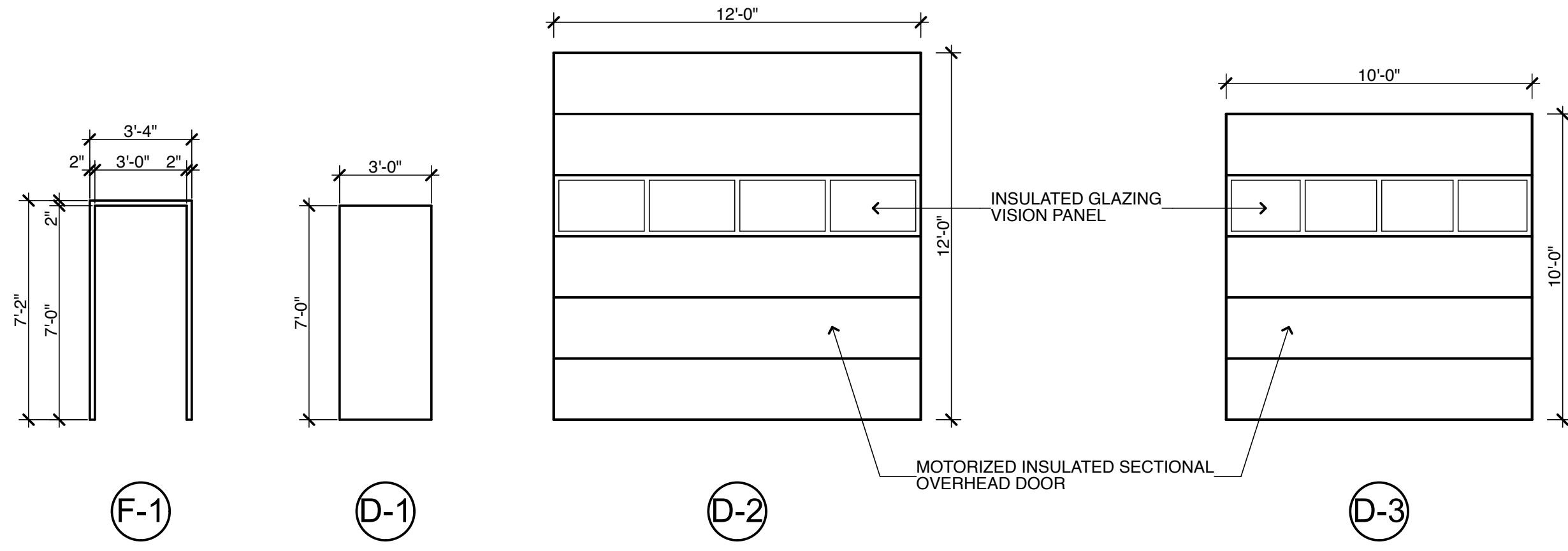
SCOTT D. BROWN, P.E., P.L.S.
PROFESSIONAL ENGINEER AND LAND SURVEYOR N.J. LICENSE NO. 38250

DATE: 2/22/2019

FILE	DATE	DESIGNED BY	CHECKED BY	SHEET	OF
SOUTHAMPTON08-SP	01/22/2019	DM	SDB	4	4

177 MAIN STREET
SOIL EROSION & SEDIMENT CONTROL DETAILS
SOUTHAMPTON BOARD OF EDUCATION
PART OF BLOCK 1202, LOT 8
SOUTHAMPTON TOWNSHIP
BURLINGTON COUNTY, NEW JERSEY

C4



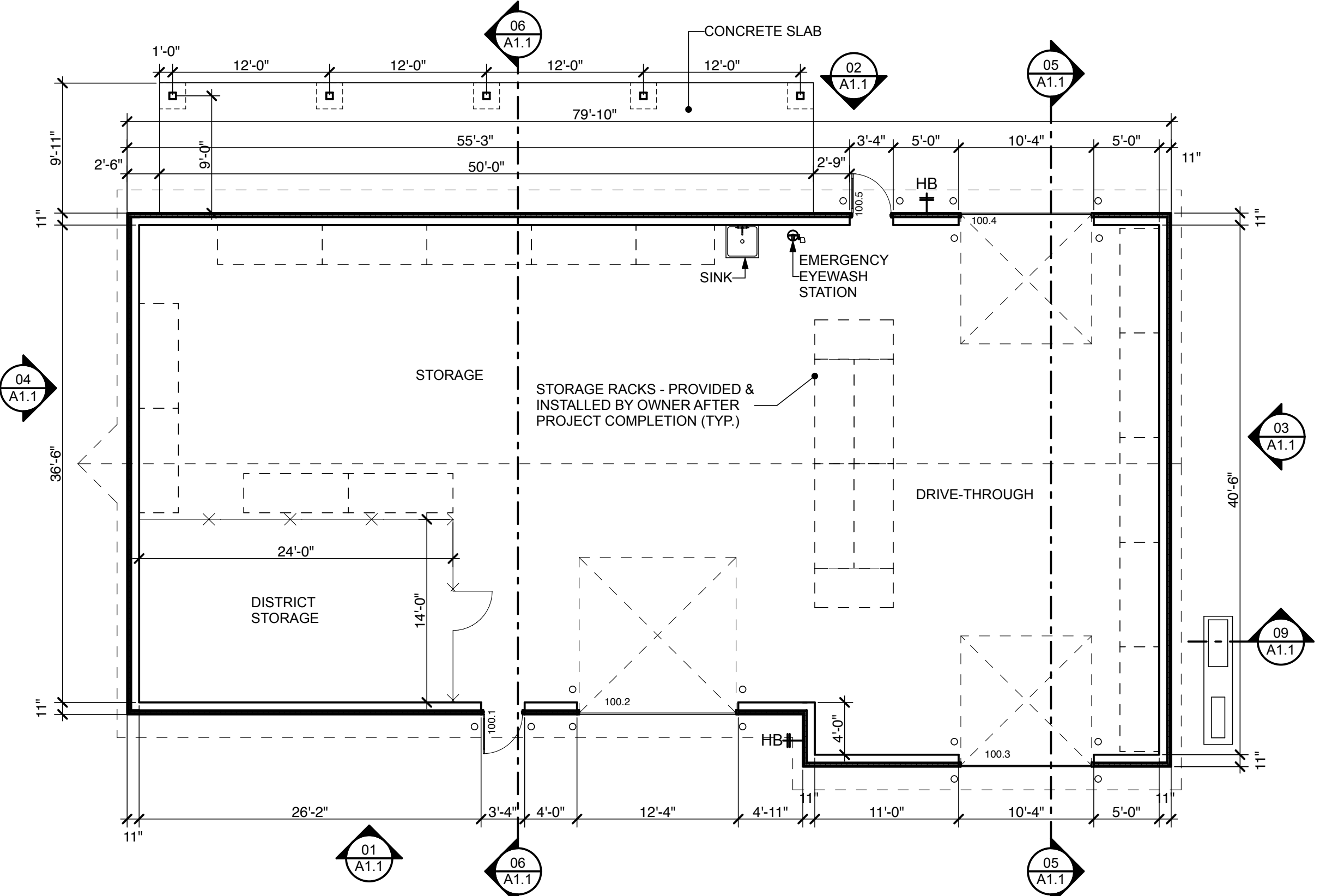
DOOR/FRAME TYPES SCALE: 1/4" = 1'-0" **06**

2015 NATIONAL STANDARD PLUMBING CODE
 13.6 SIZING OF VERTICAL AND HORIZONTAL STORM DRAIN PIPING

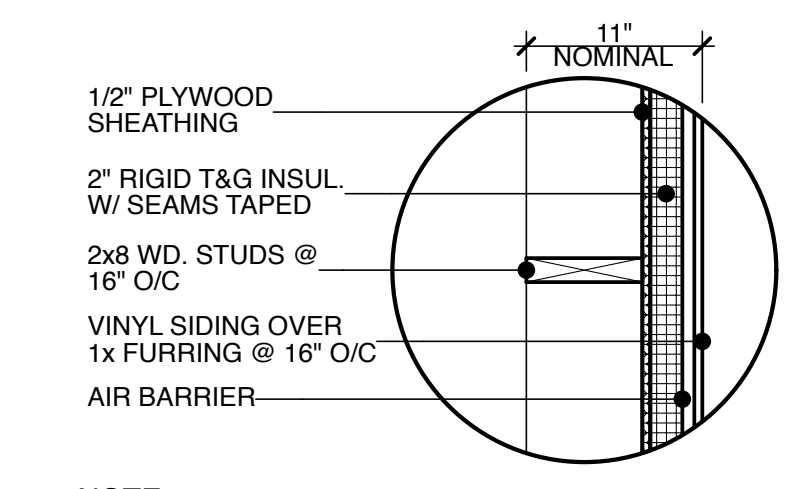
Local Rate in Inches/Hour: **6**
 (NJAC 5:23-3.15 (a), II, ii)

13.6.1 Vertical Conductors
 Largest Roof Area (between 2 DS and ridge & eave): **1,309 ft²**
 Smallest Allowable DS: **4" Ø @ 6"/hr = 2,307 ft² > 1,309 ft²**
 Area of 3" Ø DS: **3.14(2)² = 12.57 in²**
 Min. Code Required DS: **3" x 5" = 15 in²**
 Proposed DS: **3" x 5" = 15 in²**

13.6.2 Size of Horizontal Storm Drain Piping
 Projected Roof Area: **1,309 sf/1.118 (6° slope) = 1,171 ft²**
 Smallest Allowable Gutter: **1,171 sf < 5" Ø @ 1,556 ft²**
 Area of 5" Ø Gutter: **3.14(2.5)² = 19.64 in²**
 Minimum Gutter Req'd: **4" x 5" = 20 in²**
 Proposed Gutter: **4" x 5" = 20 in²**
 (Based on Largest Roof Area & Table 13.6.2)

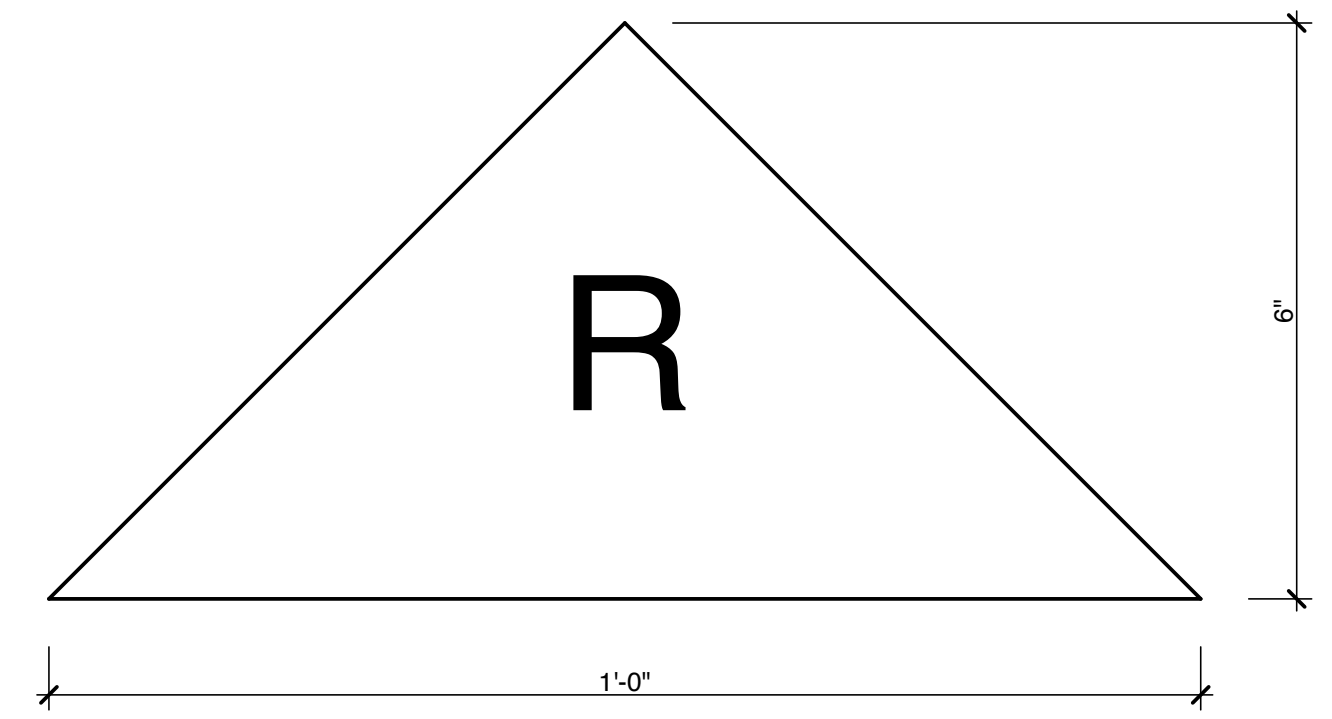


PROPOSED PLAN SCALE: 1/8" = 1'-0" **01 A1.0**

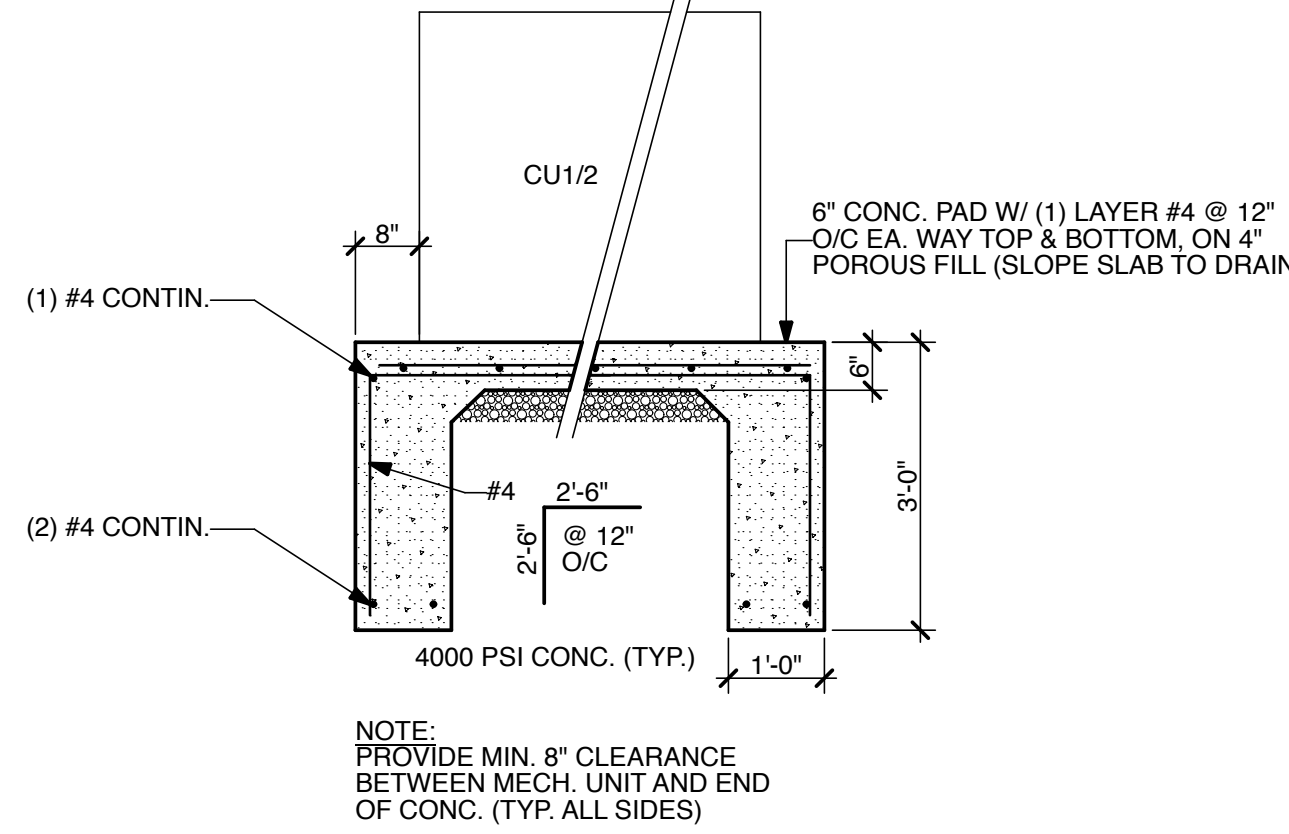


WALL TYPE W1 SCALE: 1" = 1'-0" **07**

CONTRACTOR'S OPTION: 8" MTL. STUDS @ 16" O/C IN LIEU OF WOOD STUDS SHOWN - SEE STRUCT. DWGS. FOR ADD'L INFO.



TRUSS SIGNAGE SCALE: NTS **08**



CONCRETE PAD DETAIL SCALE: 1/2" = 1'-0" **09**

NUMBER	DOOR				FRAME						REMARKS					
	TYPE	WIDE	HEIGHT	THICKNESS	MATERIAL	GLAZING	TYPE	WIDE	HEIGHT	MATERIAL		GLAZING	JAMB/HEAD (BY)	RATING (MIN)	THRESHOLD	HDW SET
100.1	D-1	3'-0"	7'-0"	1 3/4"	IM	N/A	F-1	3'-4"	7'-2"	PHM	N/A	02/03	N/A	AL	01	HINGED DOOR
100.2	D-2	12'-0"	12'-0"	2"	IM	MANUF	N/A	12'-4"	12'-2"	MANUF	N/A	04/05	N/A	N/A	(A)	SECTIONAL DOOR
100.3	D-3	10'-0"	10'-0"	2"	IM	MANUF	N/A	10'-4"	10'-2"	MANUF	N/A	04/05	N/A	N/A	(A)	SECTIONAL DOOR
100.4	D-3	10'-0"	10'-0"	2"	IM	MANUF	N/A	10'-4"	10'-2"	MANUF	N/A	04/05	N/A	N/A	(A)	SECTIONAL DOOR
100.5	D-1	3'-0"	7'-0"	1 3/4"	IM	N/A	F-1	3'-4"	7'-2"	PHM	N/A	02/03	N/A	AL	01	HINGED DOOR

DOOR SCHEDULE KEY
 IM: Insulated Metal
 N/A: Not Applicable
 PHM: Painted Hollow Metal
 MANUF: Sectional Door Manufacturer Frame & Trims

NOTES:
 (A) Refer to Spec Section 083613
 (B) Jamb/Head details located on sheet A1.0

WOOD STUD OPTION

COMcheck Software Version COMcheck-Web Envelope Compliance Certificate

Project Information
 Energy Code: 90.1 (2013) Standard
 Project Title: Southampton Operations and Maintenance Building - Wood Studs
 Location: Pemberton, New Jersey
 Climate Zone: 4a
 Project Type: New Construction
 Performance Sim. Specs: EnergyPlus 8.1.0.009 (EPW: USA_PA_Philadelphia.Intl.AP.724080_TMY3.epw)

Construction Site: 40 White Horse Avenue, Lindenwold, New Jersey 08021
Owner/Agent: Lindenwold Board of Education, 803 Egg Harbor Road, Lindenwold, New Jersey 08021
Designer/Contractor: RYEBREAD Architects, 456 High Street, Mount Holly, New Jersey 08060, 609-265-2652

Building Area	Floor Area
1-Equipment storage building (Warehouse) - Nonresidential	2952

Envelope Assemblies	Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor _{req}
Roof: Attic Roof, Wood Joists, [Bldg. Use 1 - Equipment storage building]		2952	49.0	0.0	0.021	0.021
Floor: Unheated Slab-On-Grade, Horizontal with vertical 2 ft., [Bldg. Use 1 - Equipment storage building] (c)		237	---	10.0	0.700	0.520
NORTH						
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Equipment storage building]		1015	0.0	10.0	0.073	0.064
Door: Other (U-Factor option), Non-Swinging, [Bldg. Use 1 - Equipment storage building]		100	---	---	0.098	0.500
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Equipment storage building]		21	---	---	0.450	0.500
EAST						
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Equipment storage building]		603	0.0	10.0	0.073	0.064
SOUTH						
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Equipment storage building]		813	0.0	10.0	0.073	0.064
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Equipment storage building]		21	---	---	0.450	0.500
Door: Other (U-Factor option), Non-Swinging, [Bldg. Use 1 - Equipment storage building]		144	---	---	0.098	0.500
Door: Other (U-Factor option), Non-Swinging, [Bldg. Use 1 - Equipment storage building]		100	---	---	0.098	0.500
WEST						
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Equipment storage building]		603	0.0	10.0	0.073	0.064

Envelope PASSES: Design 1% better than code

METAL STUD OPTION

COMcheck Software Version COMcheck-Web Envelope Compliance Certificate

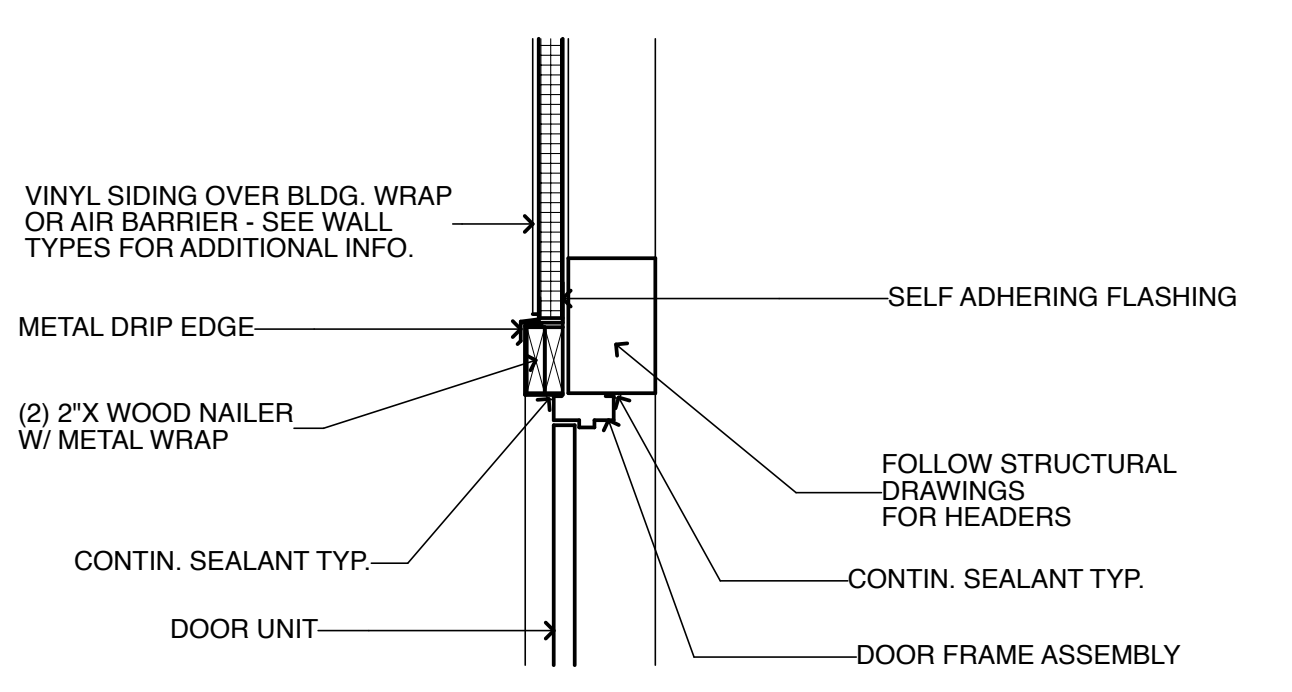
Project Information
 Energy Code: 90.1 (2013) Standard
 Project Title: Southampton Operations and Maintenance Building - Metal Studs
 Location: Pemberton, New Jersey
 Climate Zone: 4a
 Project Type: New Construction
 Performance Sim. Specs: EnergyPlus 8.1.0.009 (EPW: USA_PA_Philadelphia.Intl.AP.724080_TMY3.epw)

Construction Site: 40 White Horse Avenue, Lindenwold, New Jersey 08021
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Designer/Contractor: RYEBREAD Architects, 456 High Street, Mount Holly, New Jersey 08060, 609-265-2652

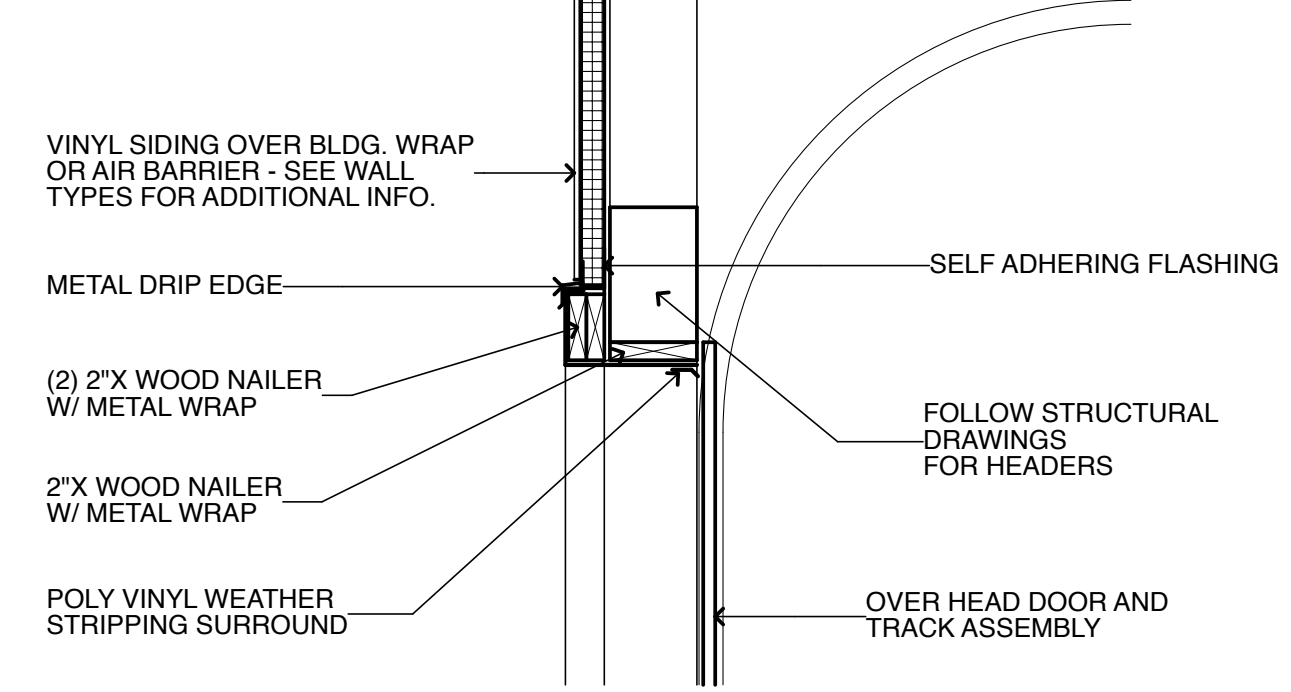
Building Area	Floor Area
1-Equipment storage building (Warehouse) - Nonresidential	2952

Envelope Assemblies	Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor _{req}
Roof: Attic Roof, Wood Joists, [Bldg. Use 1 - Equipment storage building]		2952	49.0	0.0	0.021	0.021
Floor: Unheated Slab-On-Grade, Horizontal with vertical 2 ft., [Bldg. Use 1 - Equipment storage building] (c)		237	---	10.0	0.700	0.520
NORTH						
Ext. Wall: Steel-Framed, 16in. o.c., [Bldg. Use 1 - Equipment storage building]		945	0.0	10.0	0.078	0.064
Door: Other (U-Factor option), Non-Swinging, [Bldg. Use 1 - Equipment storage building]		100	---	---	0.098	0.500
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Equipment storage building]		21	---	---	0.450	0.500
EAST						
Ext. Wall: Steel-Framed, 16in. o.c., [Bldg. Use 1 - Equipment storage building]		768	0.0	10.0	0.078	0.064
SOUTH						
Ext. Wall: Steel-Framed, 16in. o.c., [Bldg. Use 1 - Equipment storage building]		744	0.0	10.0	0.078	0.064
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Equipment storage building]		21	---	---	0.450	0.500
Door: Other (U-Factor option), Non-Swinging, [Bldg. Use 1 - Equipment storage building]		144	---	---	0.098	0.500
Door: Other (U-Factor option), Non-Swinging, [Bldg. Use 1 - Equipment storage building]		100	---	---	0.098	0.500
WEST						
Ext. Wall: Steel-Framed, 16in. o.c., [Bldg. Use 1 - Equipment storage building]		768	0.0	10.0	0.078	0.064

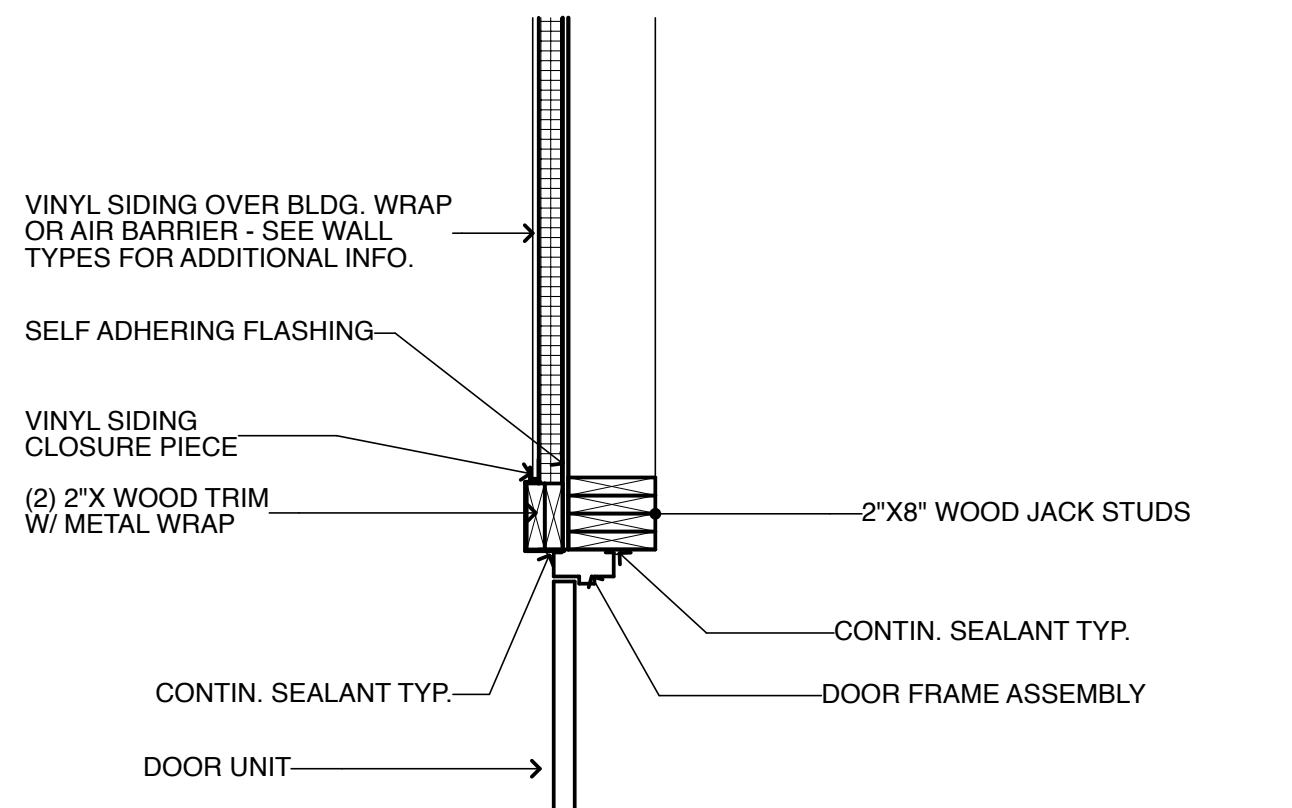
Envelope PASSES: Design 1% better than code



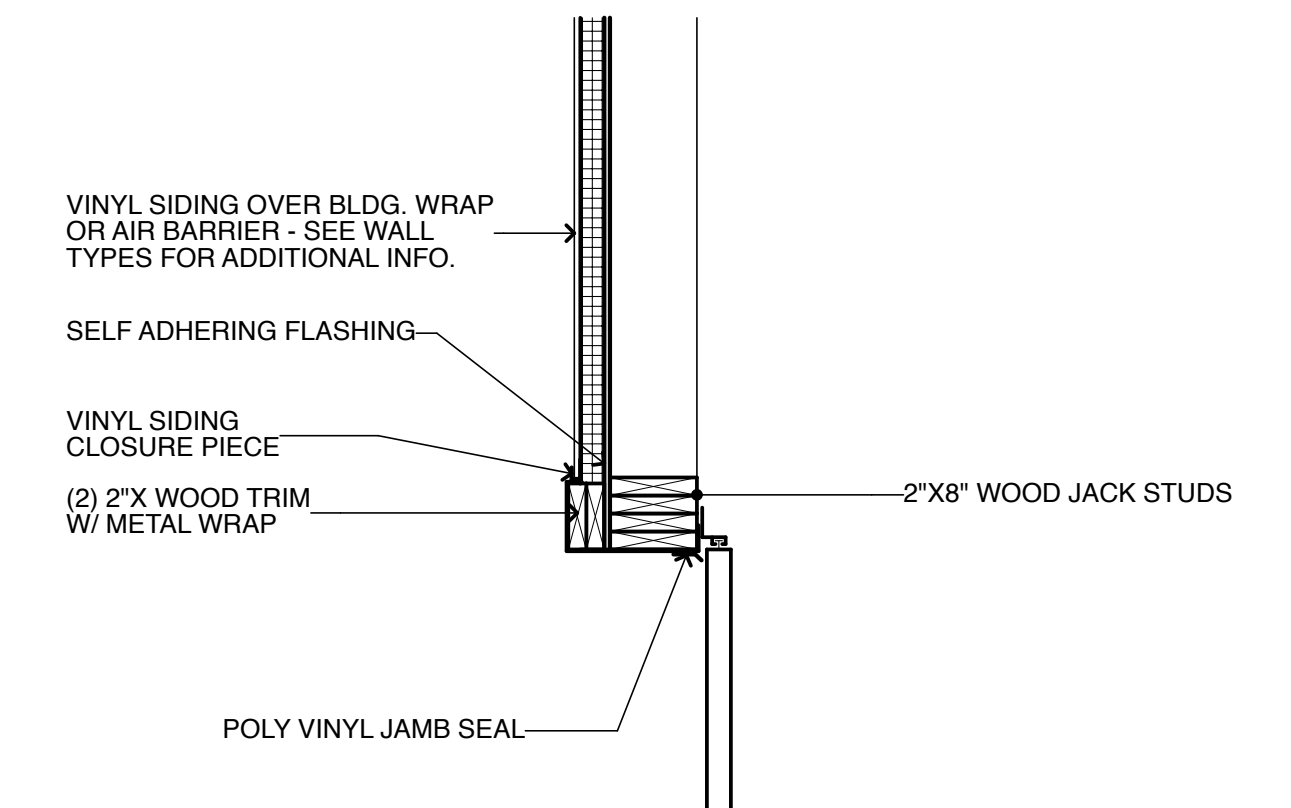
EXT. DOOR HEAD DETAIL SCALE: 3/4" = 1'-0" **02**



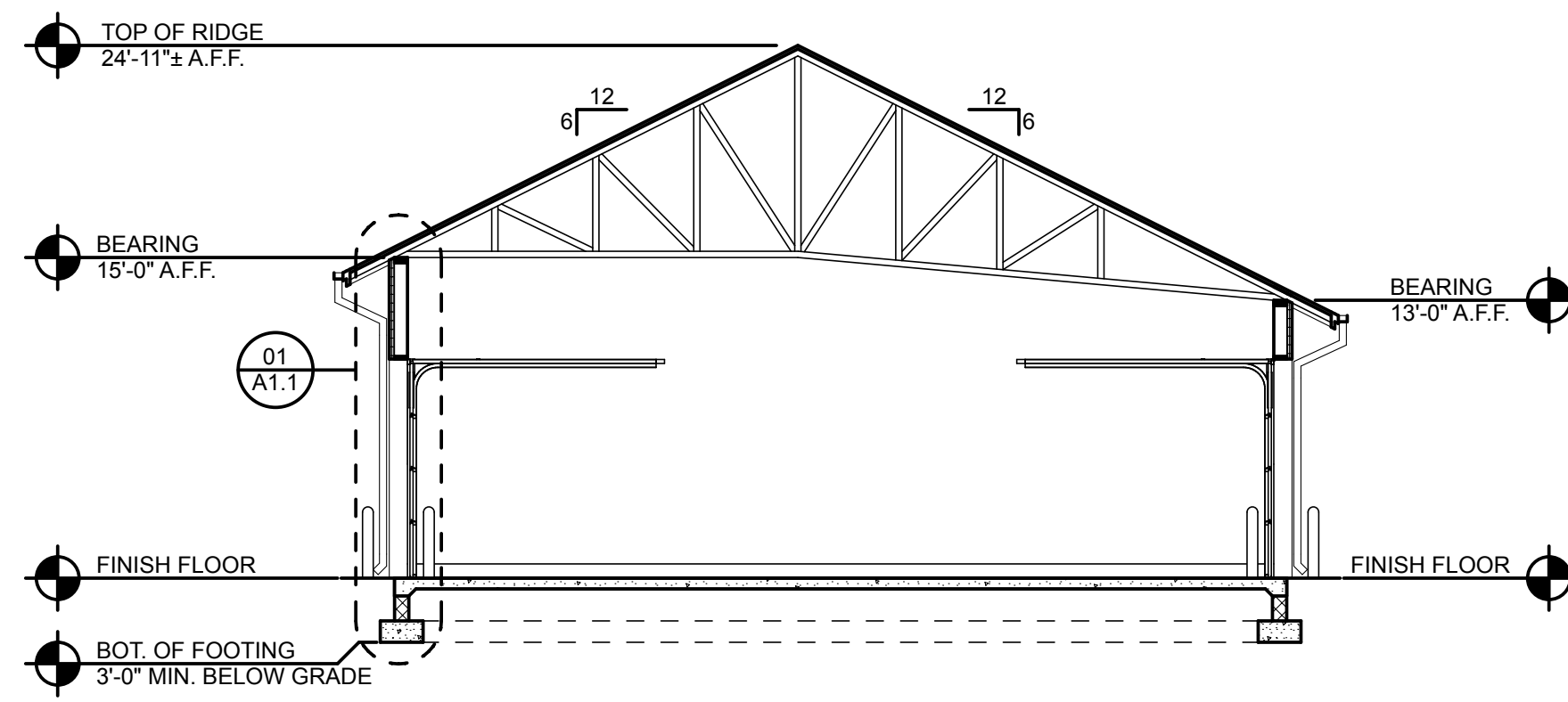
O.H. DOOR HEAD DETAIL SCALE: 3/4" = 1'-0" **04**



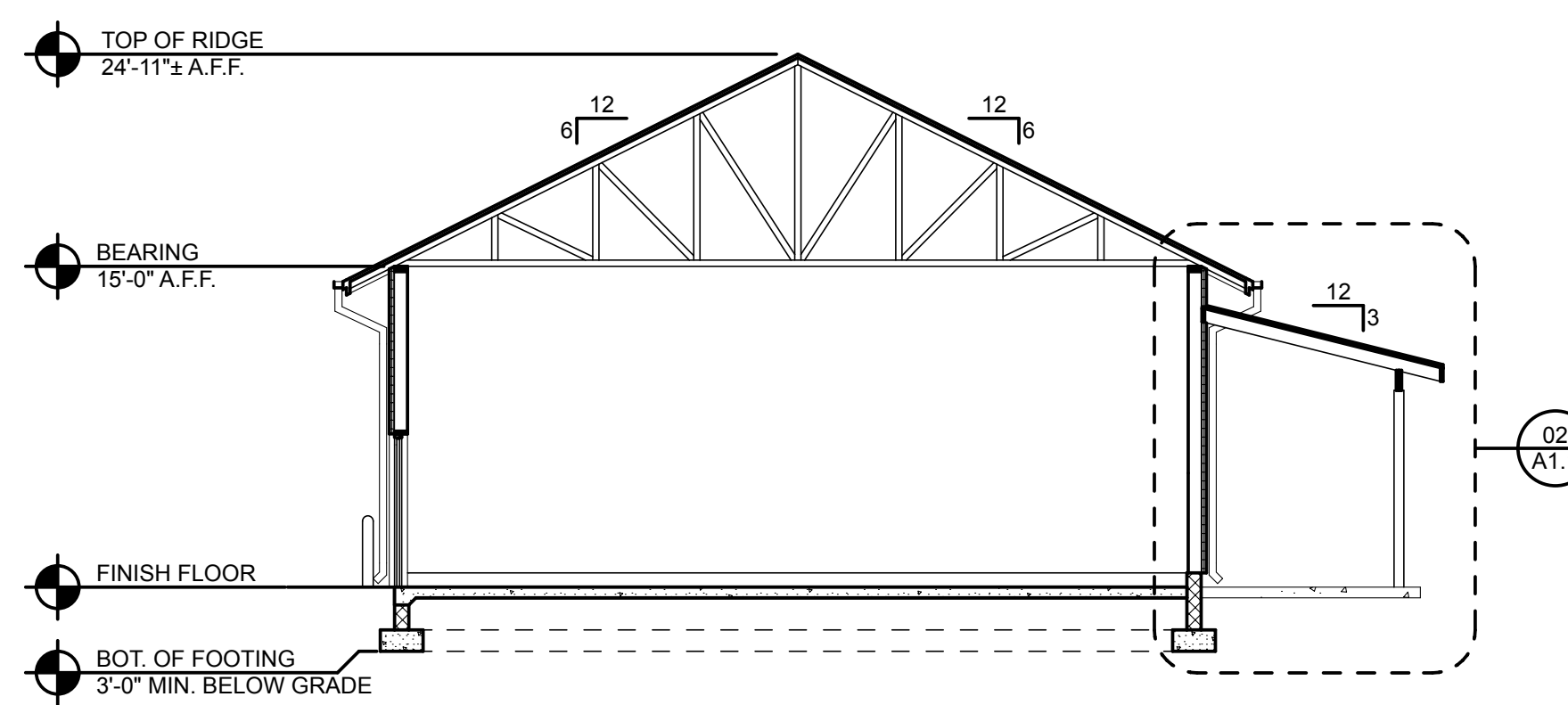
EXT. DOOR JAMB DETAIL SCALE: 3/4" = 1'-0" **03**



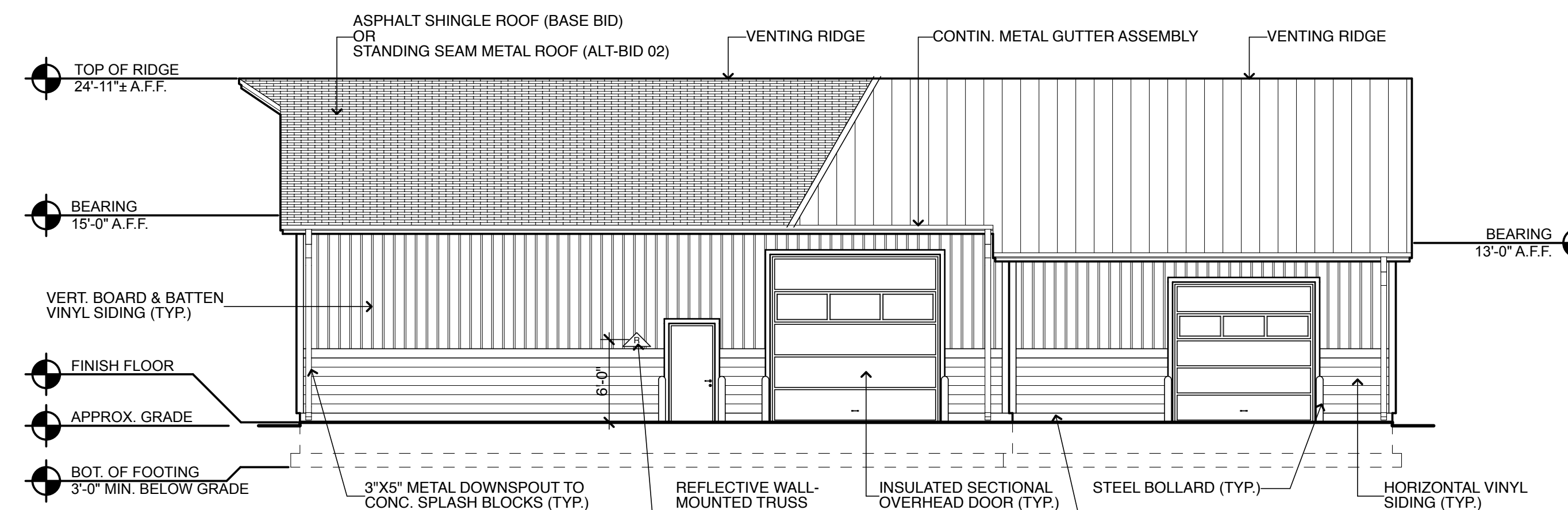
O.H. DOOR JAMB DETAIL SCALE: 3/4" = 1'-0" **05**



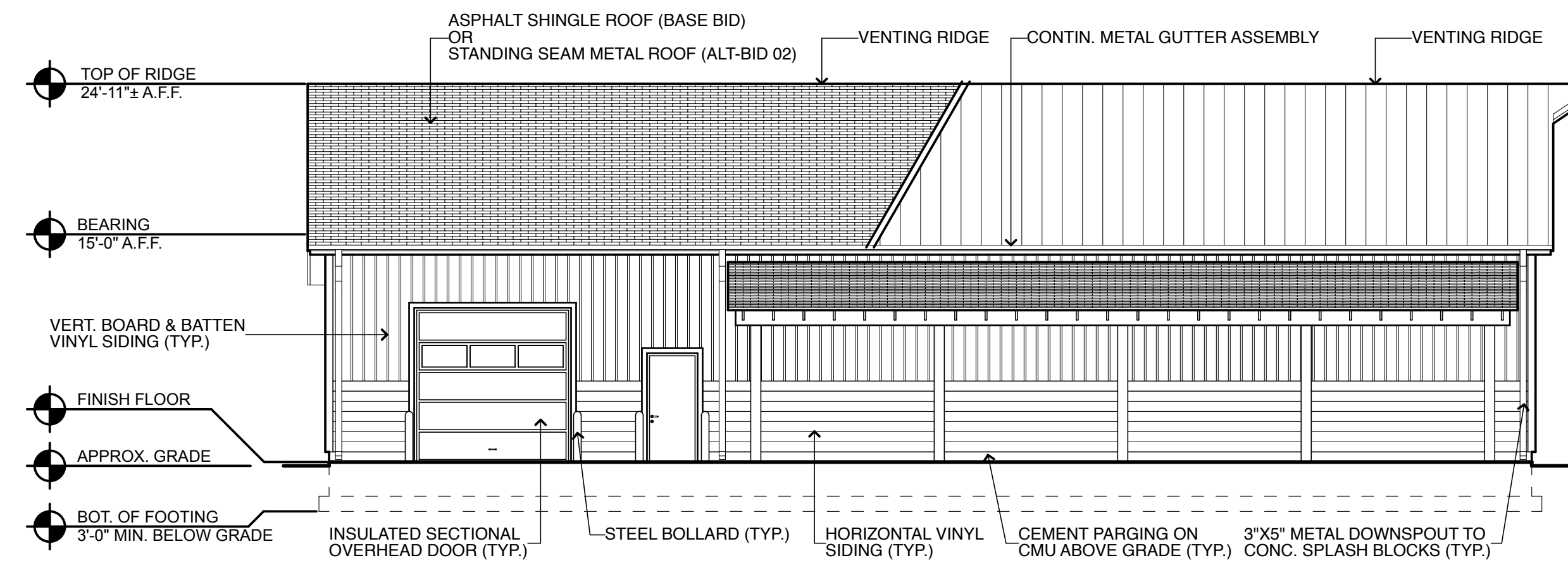
BUILDING SECTION SCALE: 1/8" = 1'-0" **05 A1.1**



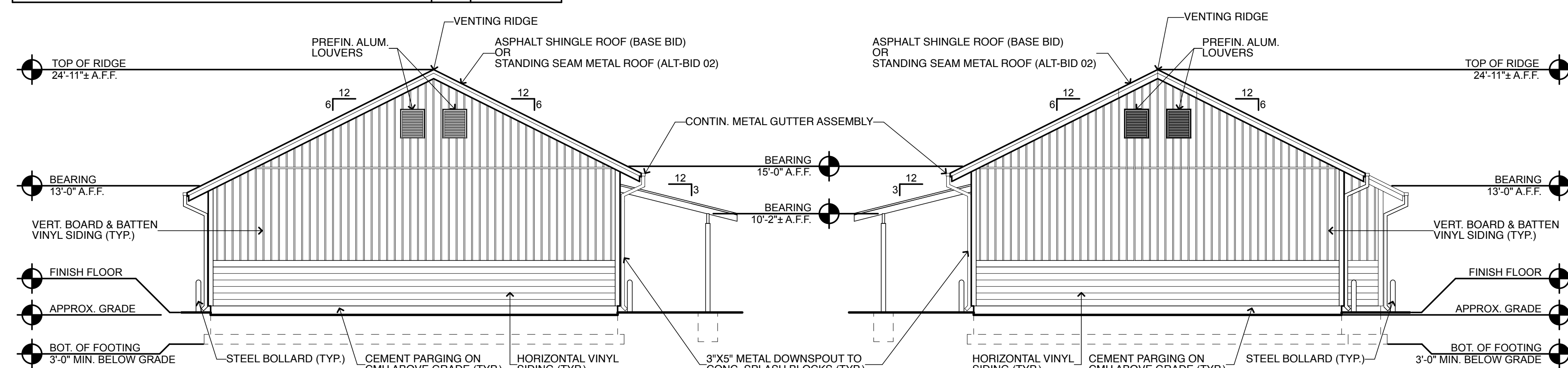
BUILDING SECTION SCALE: 1/8" = 1'-0" **06 A1.1**



FRONT ELEVATION SCALE: 1/8" = 1'-0" **01 A1.1**

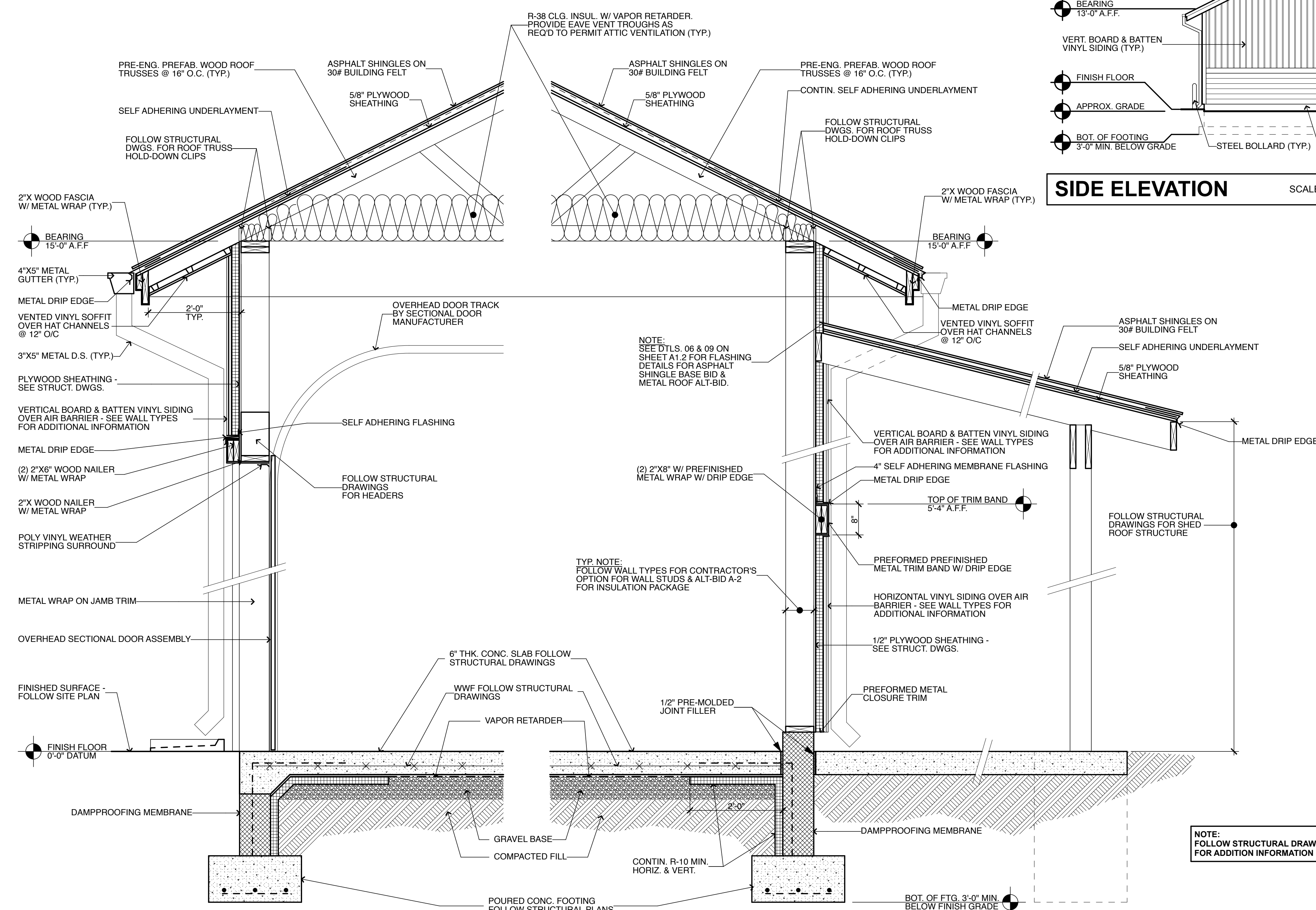


REAR ELEVATION SCALE: 1/8" = 1'-0" **02 A1.1**



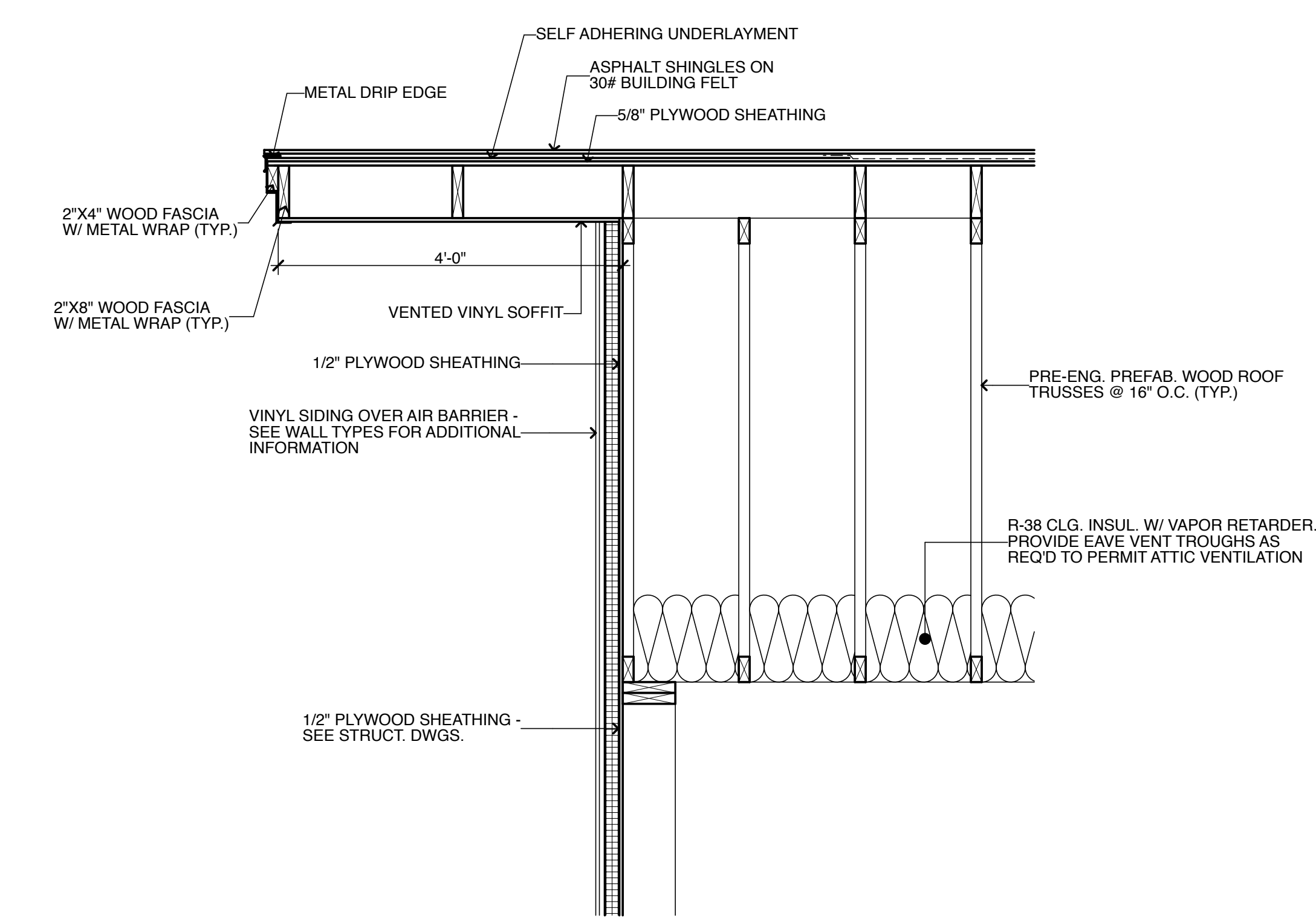
SIDE ELEVATION SCALE: 1/8" = 1'-0" **03 A1.1**

SIDE ELEVATION SCALE: 1/8" = 1'-0" **04 A1.1**



WALL SECTION SCALE: 3/4" = 1'-0" **07 A1.1**

WALL SECTION SCALE: 3/4" = 1'-0" **08 A1.1**



GABLE END DETAIL SCALE: 3/4" = 1'-0" **09 A1.1**

PRINT DATE: 2/28/19
REGAN YOUNG ENGLAND BUTERA
 REGISTERED PROFESSIONAL ENGINEER - ARCHITECTURE - DESIGN
 456 HIGH STREET • MT. HOLLY, NEW JERSEY 08060 USA
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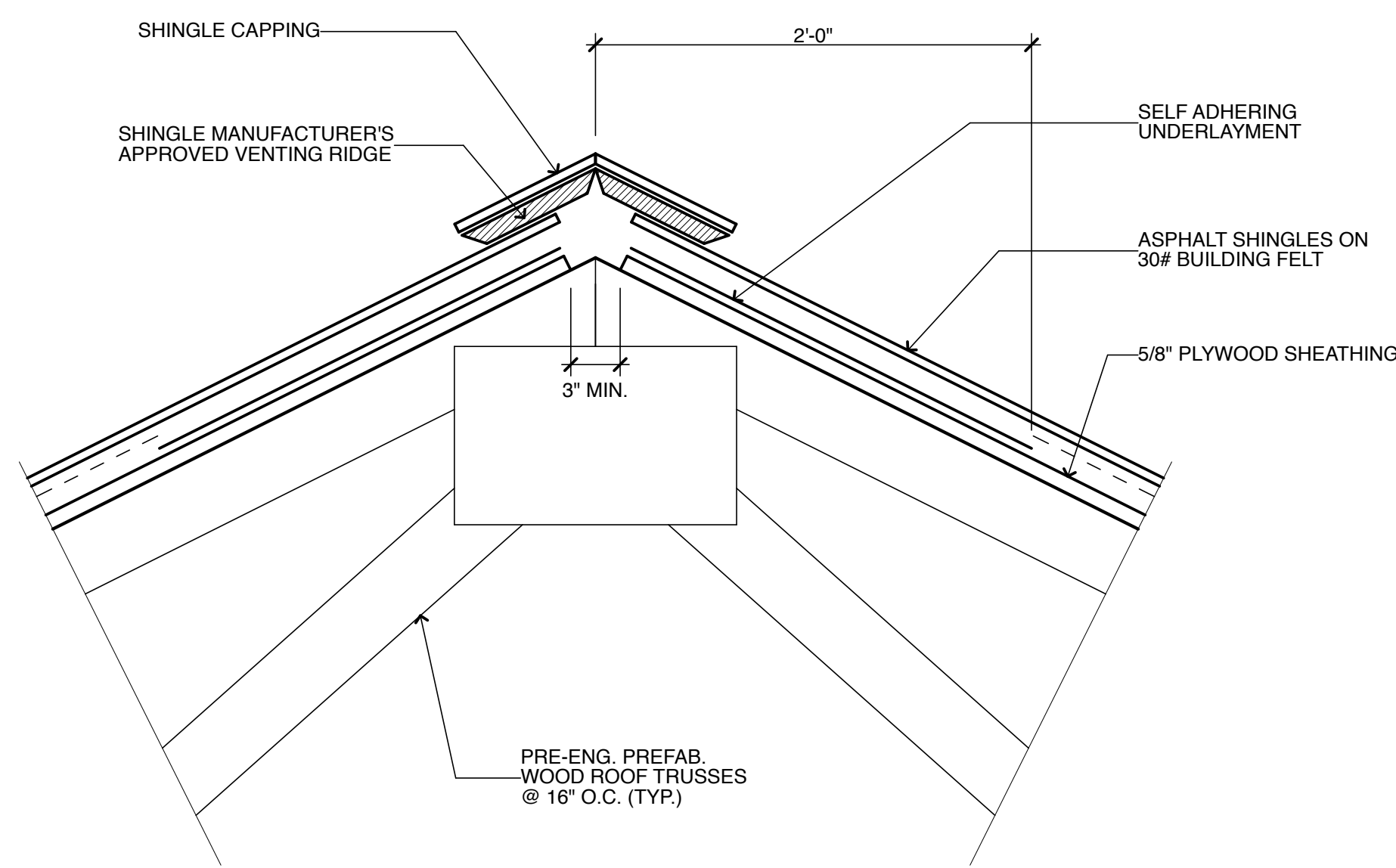
NJDOE SP #05-4930-070-19-1000
PROPOSED MAINTENANCE & OPERATIONS BUILDING
 SOUTHAMPTON TOWNSHIP BOE
 26 PLACANT STREET
 SOUTHAMPTON, NEW JERSEY
BUILDING ELEVATIONS & SECTIONS

DRAWING DATE:
 14 FEB 2019
 REVISION DATE:
 DRAWN BY:
 PF
 COMMISSION NO.
 5561A

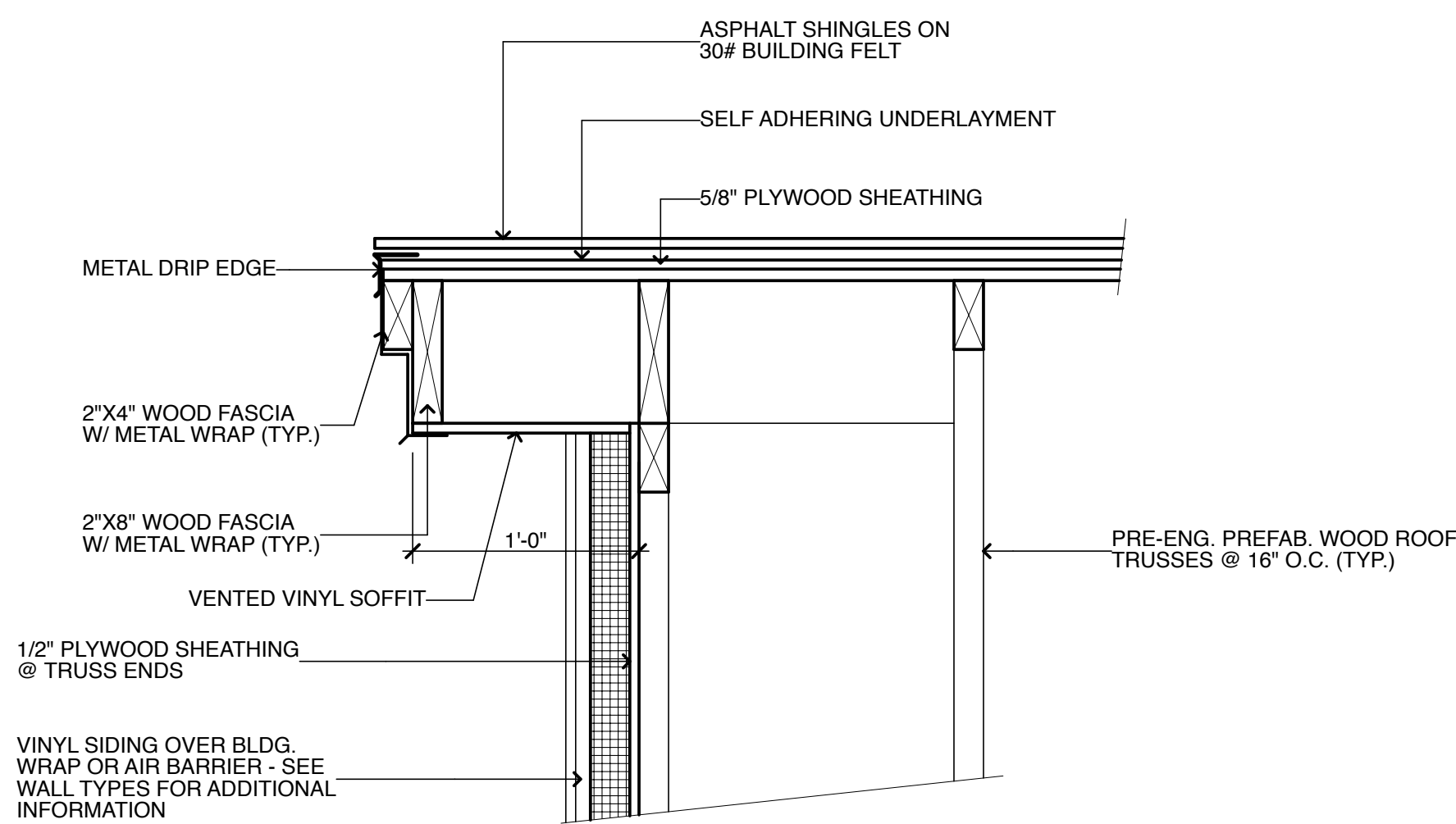
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 2 OF 3

GENERAL NOTES:

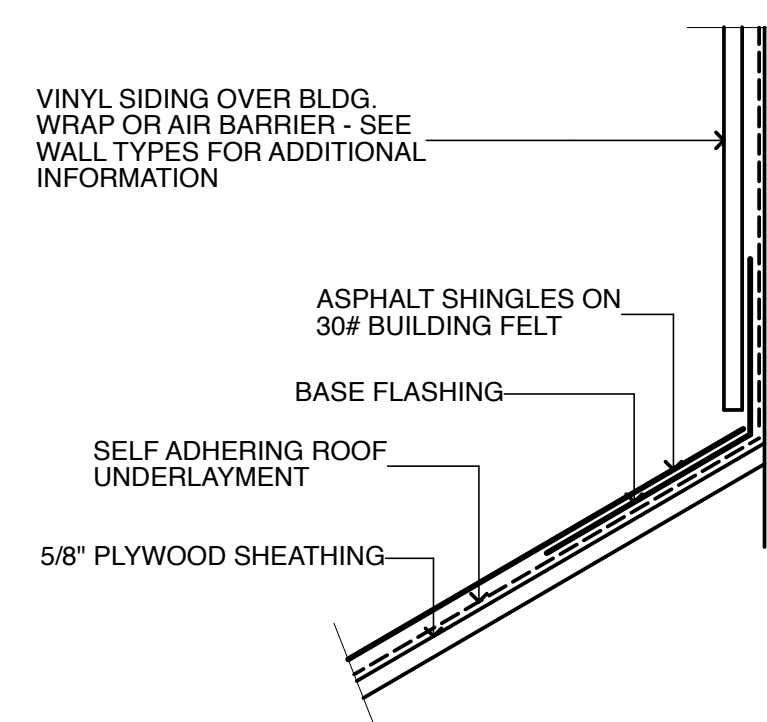
1. FOLLOW NEW ROOF PLAN FOR LOCATIONS OF NEW SELF ADHERING ROOF UNDERLAYMENT AREAS.
2. ALL DETAILS AND UNDERLAYMENT TYPES SHALL MEET ROOF SHINGLES SPECIFIED WARRANTY REQUIREMENTS. FOLLOW SPECIFICATIONS FOR TOTAL SYSTEMS WARRANTY REQUIREMENTS.
3. ROOFING MANUFACTURER'S DETAILS REQUIRED TO MEET SPECIFIED WARRANTIES, AND SHALL GOVERN OVER THE DETAILS SHOWN. TYP.



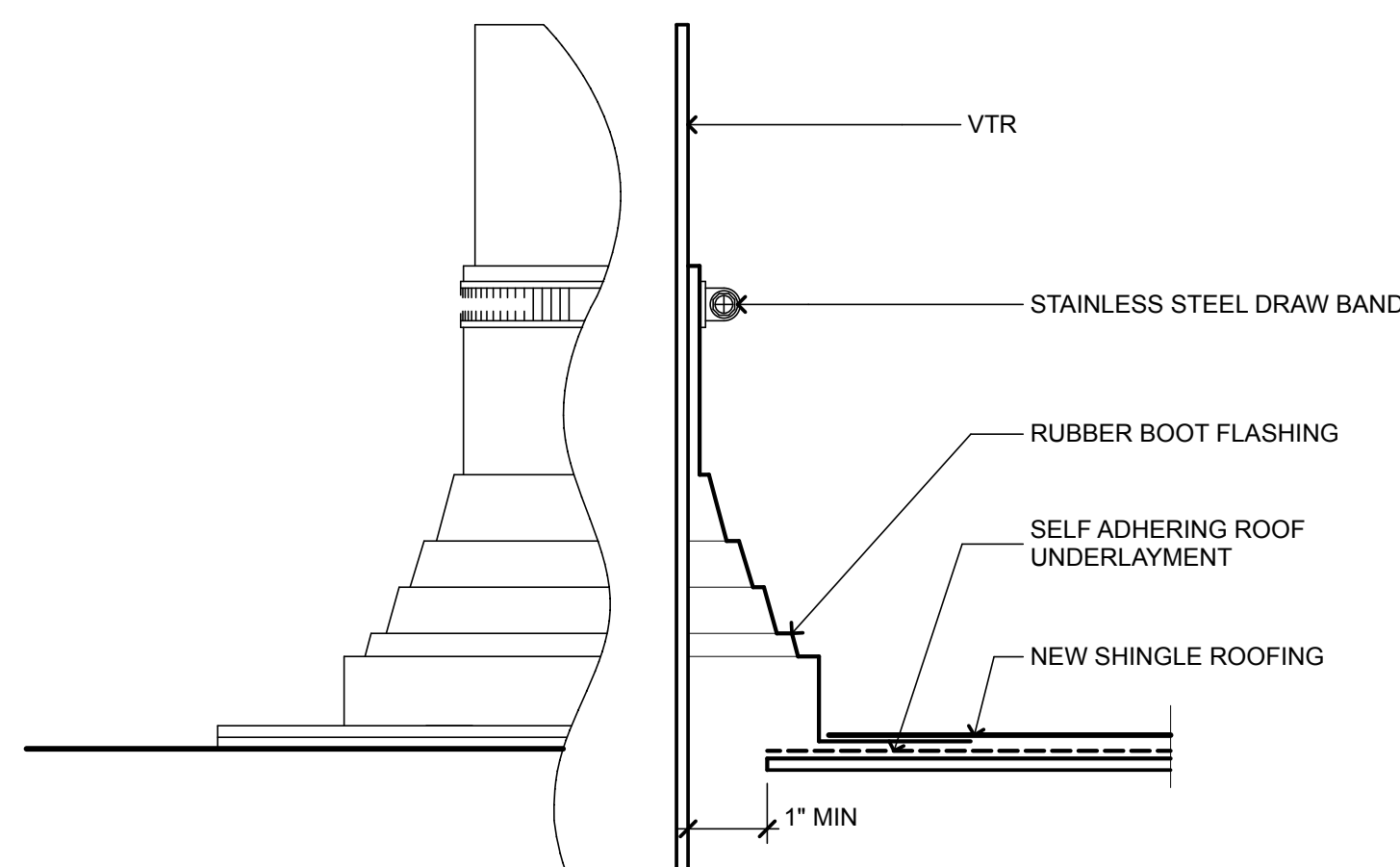
VENTED RIDGE - ASPHALT SHINGLE NTS **08**
BASE BID



RAKE - ASPHALT SHINGLE NTS **09**
BASE BID



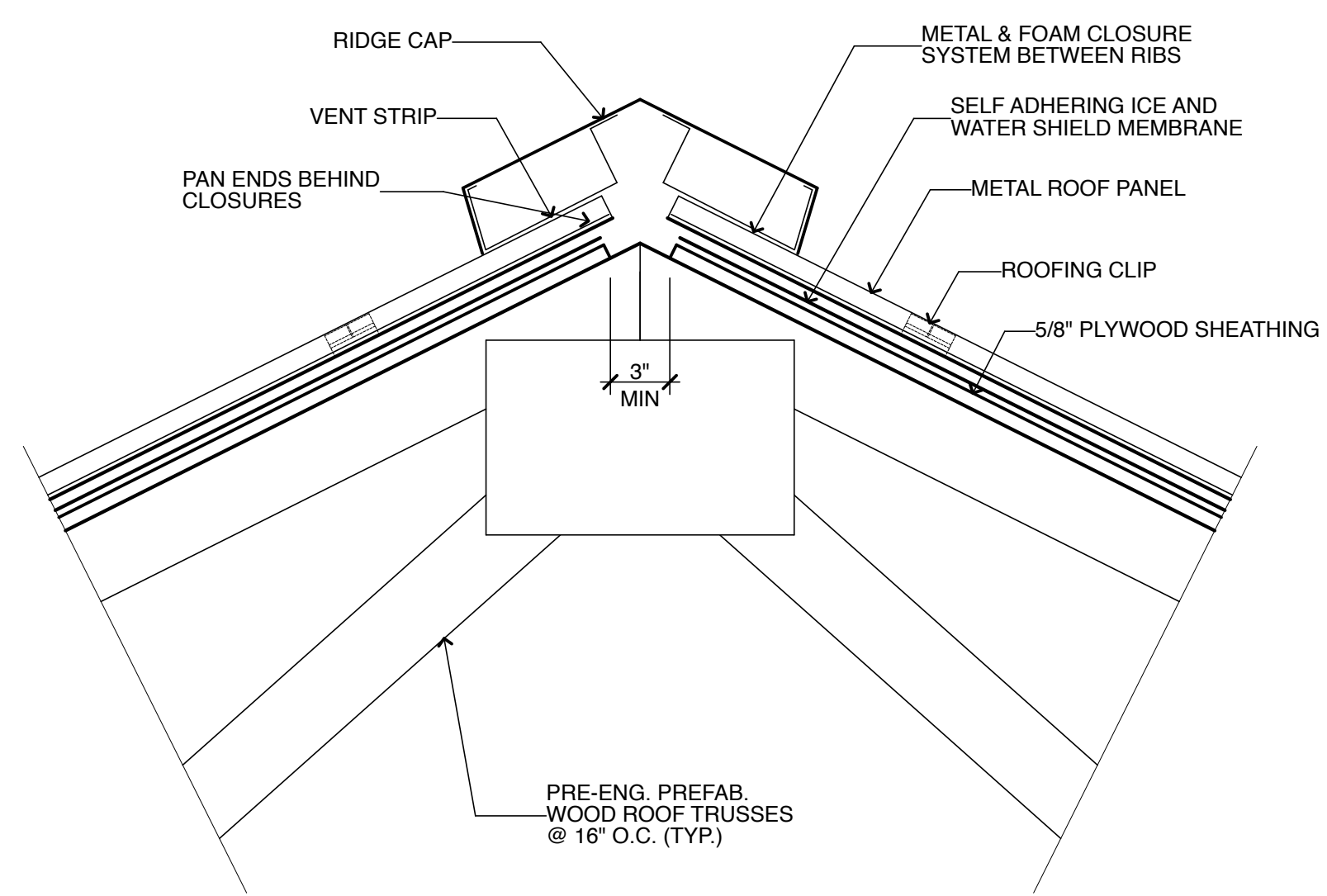
FLASHING DETAIL - ASPHALT SHINGLE NTS **10**
BASE BID



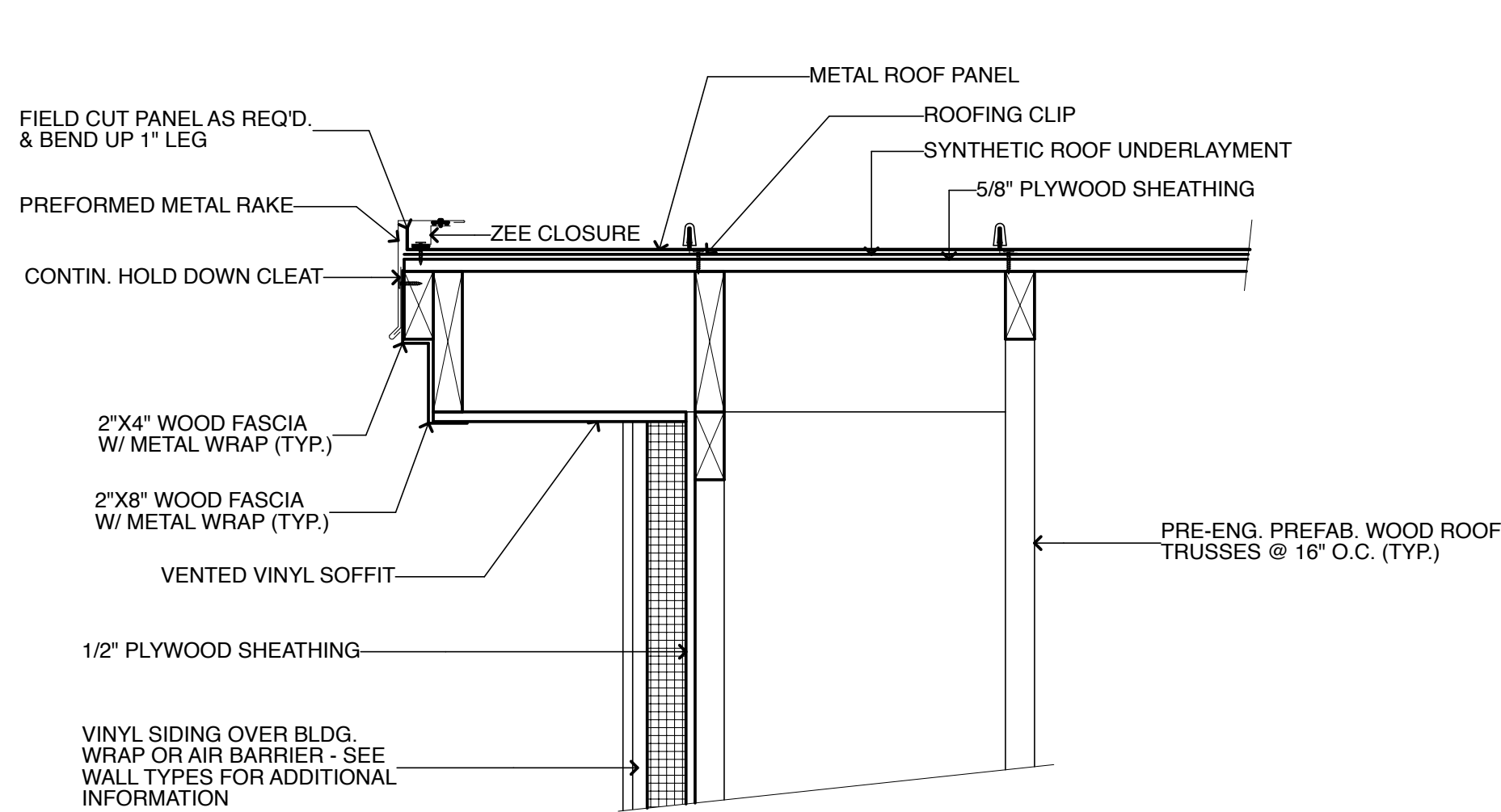
VENT THRU ROOF NTS **11**
BASE BID

GENERAL NOTES:

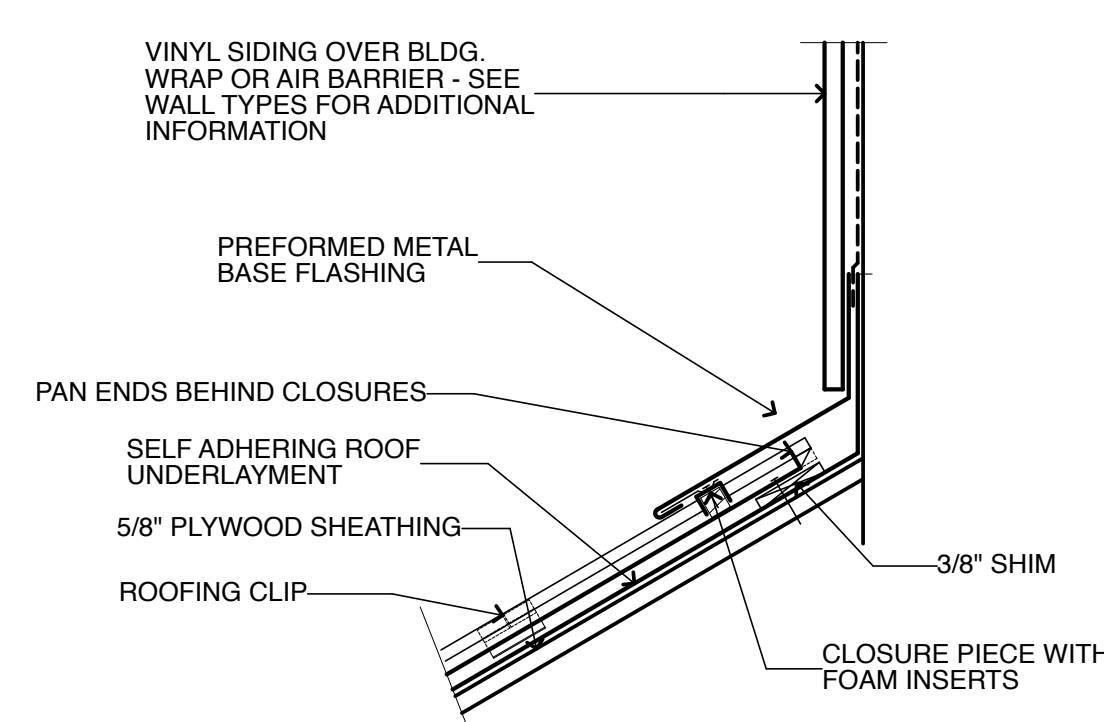
1. FOLLOW NEW ROOF PLAN FOR LOCATIONS OF NEW SYNTHETIC ROOF UNDERLAYMENT AREAS.
2. ALL METAL FLASHINGS AND REGLETS PROVIDED BY METAL ROOF MANUFACTURER
3. ALL EXPOSED SEALANTS TO BE CUSTOM COLOR TO MATCH METAL ROOF, FLASHING, ETC. TYP.



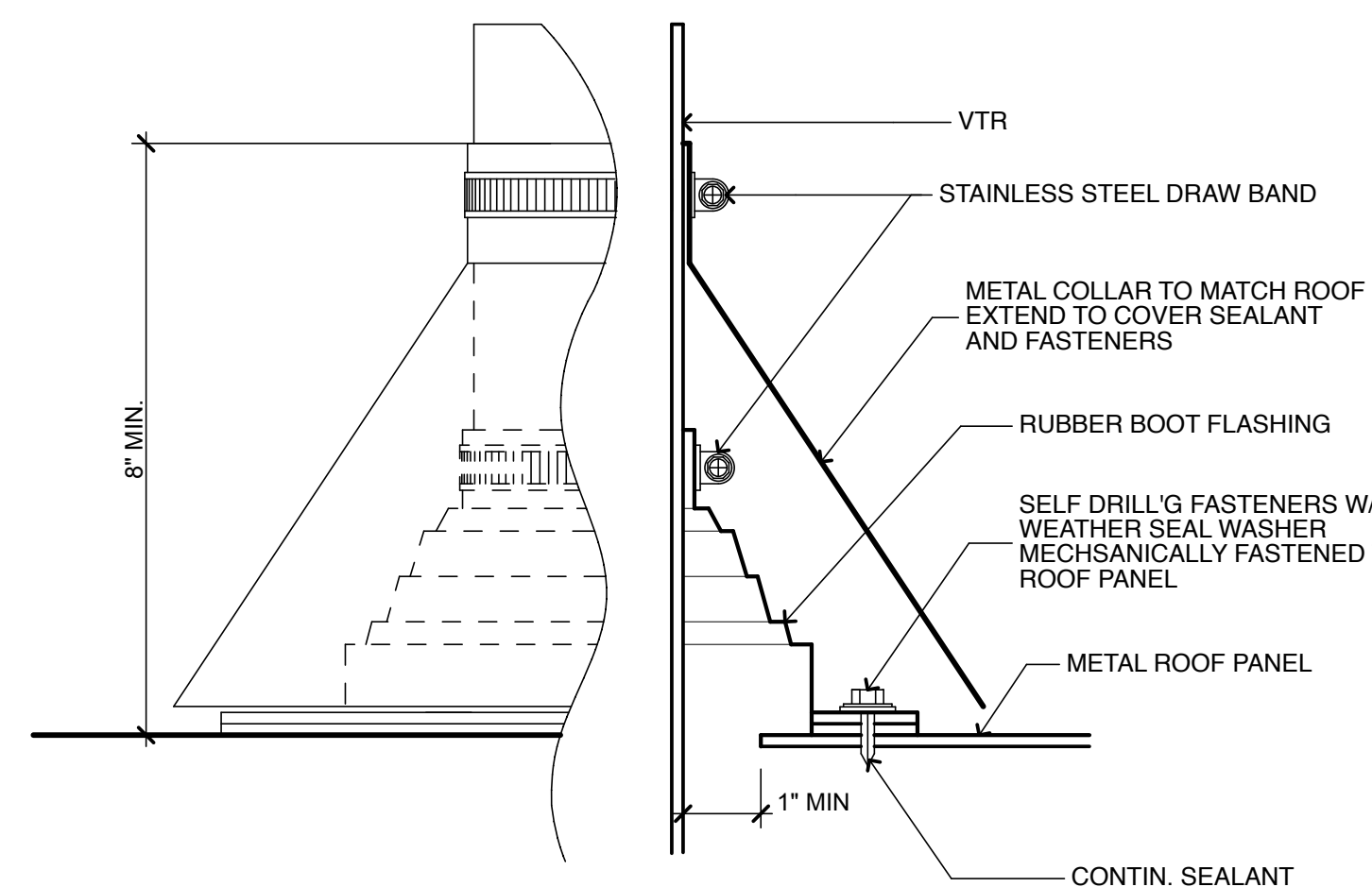
VENTED RIDGE - METAL ROOF NTS **04**
ALT-BID 02



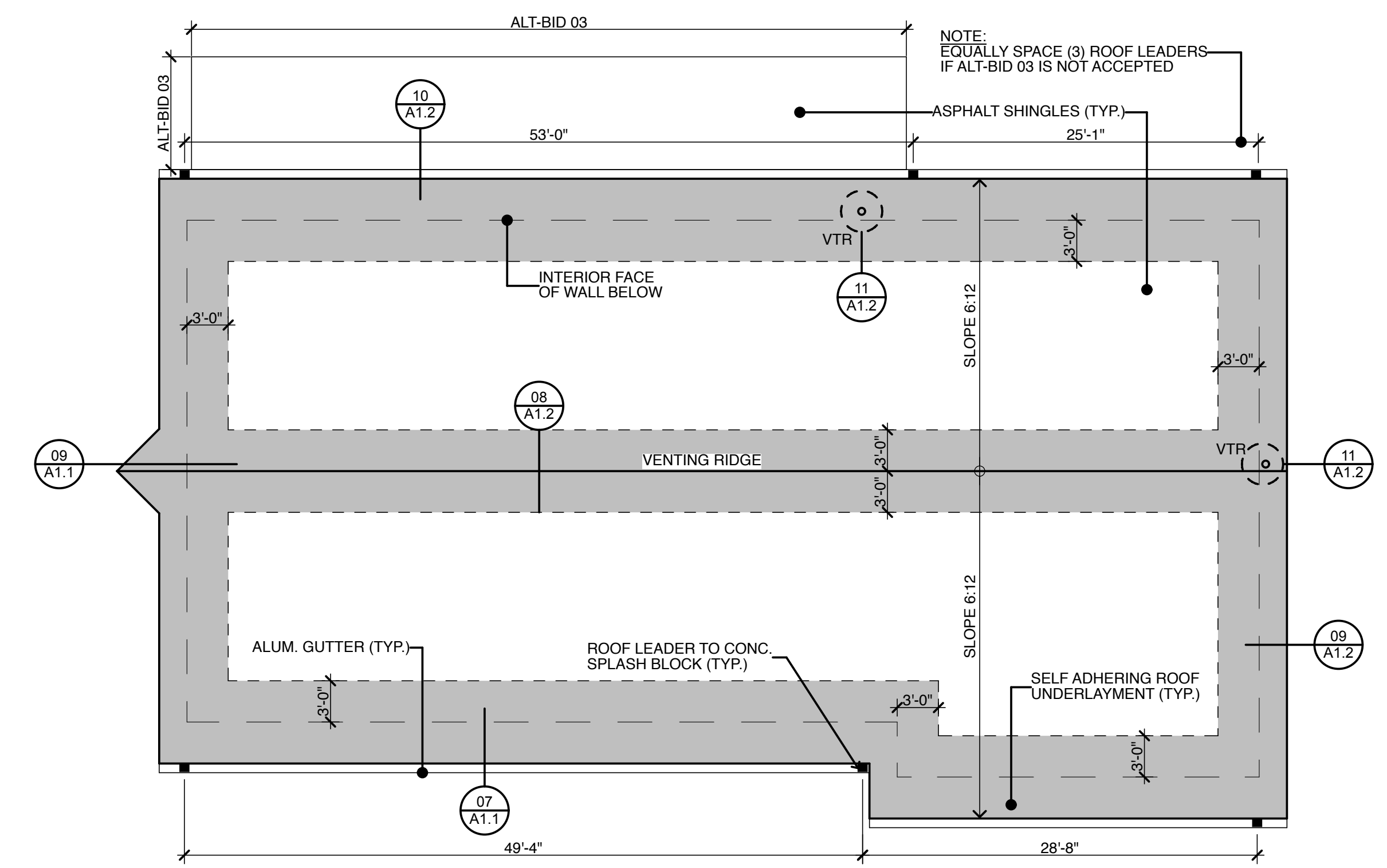
RAKE - METAL ROOF NTS **05**
ALT-BID 02



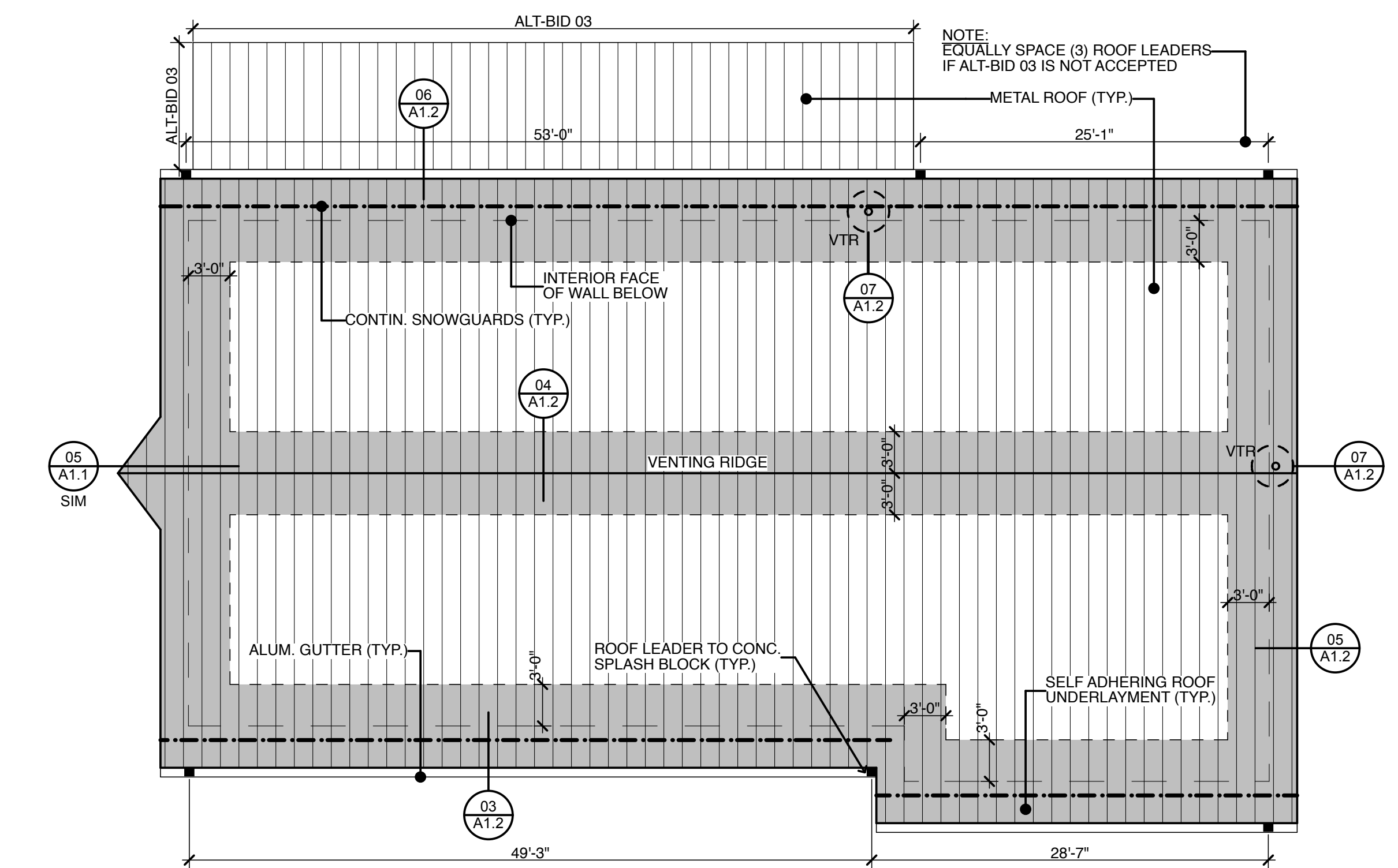
FLASHING DETAIL - METAL ROOF NTS **06**
ALT-BID 02



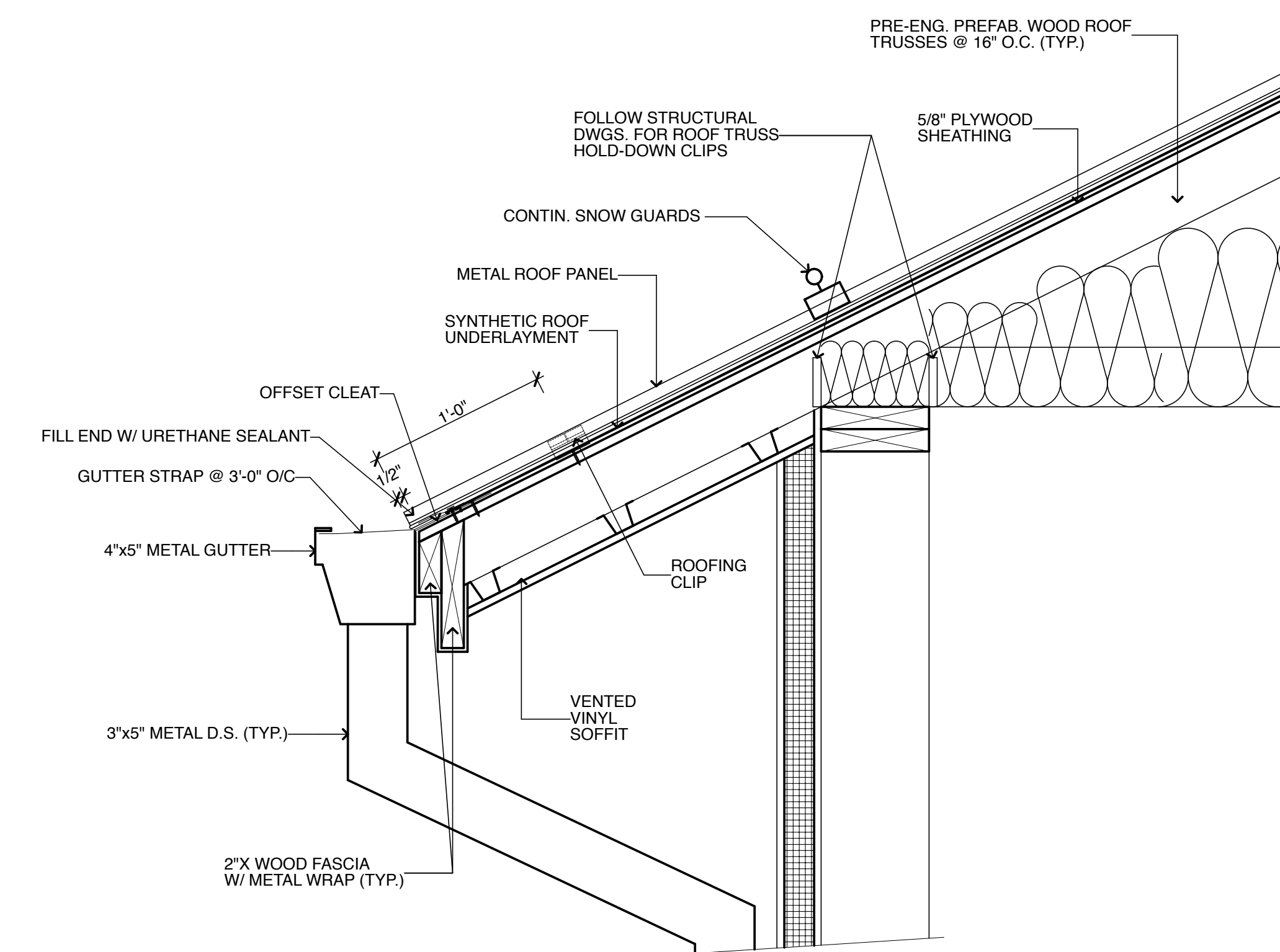
VENT THRU ROOF NTS **07**
ALT-BID 02



PROPOSED ROOF - BASE BID SCALE: 1/8" = 1'-0" **01** **A1.2**



PROPOSED ROOF - ALT-BID 02 SCALE: 1/8" = 1'-0" **02** **A1.2**



EAVE - METAL ROOF NTS **03**
ALT-BID 02

GENERAL NOTES

- BUILDING CODE – 2015 INTERNATIONAL BUILDING CODE (NJ EDITION)
- ROOF LOAD – 30/15 PSF
- WIND – 115 MPH EXPOSURE C, I=1.0
- SEISMIC – SDS=0.2 RISK CATEGORY II DESIGN CAT B SD1=0.05

USE PROPERLY DESIGNED SHORING, BRACING, UNDERPINNING, ETC. AS NECESSITATED BY CONDITIONS OR AS REQUIRED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION.

NO FIELD REVISIONS TO ANY STRUCTURAL COMPONENTS SHALL BE MADE WITHOUT PRIOR APPROVAL BY THE ARCHITECT/ENGINEER. THIS INCLUDES (BUT IS NOT LIMITED TO) REVISIONS DUE TO MISLOCATION, MISFIT OR ANY OTHER CONSTRUCTION ERROR.

BRACE ALL WALLS DURING CONSTRUCTION TO PREVENT DAMAGE FROM WIND, WATER, EARTH PRESSURE AND CONSTRUCTION LOADS UNTIL ALL SUPPORTING ELEMENTS ARE IN PLACE AND ARE OF SUFFICIENT STRENGTH.

NO OPENINGS SHALL BE PLACED IN ANY STRUCTURAL MEMBER (OTHER THAN AS INDICATED ON APPROVED SHOP DRAWINGS) UNTIL THE LOCATION HAS BEEN APPROVED BY THE ARCHITECT/ENGINEER.

PROVIDE SLEEVE LAYOUTS FOR ALL PIPES AND ELECTRICAL PENETRATIONS THROUGH STRUCTURAL MEMBERS (ALL TRADES ARE INCLUDED). LAYOUTS ARE TO BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.

STRUCTURAL DRAWINGS ARE TO BE COORDINATED AND USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS. SEE MECHANICAL DRAWINGS FOR EQUIPMENT PADS, BASES, SUPPORTS AND DUCT PENETRATIONS.

SUPPORT AIR CONDITIONING UNITS, COMPRESSORS AND OTHER ROOF MOUNTED OR SUSPENDED EQUIPMENT ONLY ON JOISTS, TRUSSES OR BEAMS DESIGNATED FOR THAT PURPOSE. IF NO SUPPORT HAS BEEN DESIGNED (OR IF QUESTION ARISES) NOTIFY THE ARCHITECT/ENGINEER PRIOR TO THE ERECTION OF EQUIPMENT AND BEFORE STRUCTURAL ERECTION IS COMPLETE.

ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE GOVERNING CODE AND ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY EXPECTED TO BE SHOWN ON THAT SHOWN AT CORRESPONDING PLACES, SHALL BE REPEATED.

CONTRACTOR SHALL VERIFY AND/OR ESTABLISH ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE.

IF THE EXISTING FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS SHOWN, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY AND PROVIDE A SKETCH OF THE CONDITION WITH HIS PROPOSED MODIFICATION OF THE DETAILS GIVEN ON THE CONTRACT DOCUMENTS.

CONTRACTOR SHALL PROVIDE FOR DEWATERING AS REQUIRED DURING EXCAVATION AND CONSTRUCTION.

BRACING, SHEETING, SHORING, ETC. REQUIRED TO SUPPORT UTILITIES, STRUCTURE, ETC. SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER ENGAGED BY THE CONTRACTOR; DETAILED SHOP DRAWINGS SHALL BE PREPARED INDICATING ALL WORK TO BE PERFORMED.

IN NO CASE SHALL HEAVY EQUIPMENT BE PERMITTED CLOSER THAN 8 FEET FROM ANY PILE OR SUPPORT STRUCTURE. IF THIS OCCURS, THE CONTRACTOR SHALL BE THE SOLELY RESPONSIBLE AND, AT HIS OWN EXPENSE, PROVIDE ADEQUATE SUPPORTS OR BRACE THE PILE SUPPORTED STRUCTURE TO WITHSTAND THE ADDITIONAL LOADS IMPOSED.

NO BLASTING SHALL BE PERMITTED.

SPECIAL INSPECTION IS REQUIRED OF ALL STRUCTURAL CONSTRUCTION. THE CONTRACTOR SHALL EMPLOY A QUALIFIED INSPECTING AGENCY THAT SHALL PROVIDE PERIODIC REPORTS TO ARCHITECT/ENGINEER DURING CONSTRUCTION. SUBMIT FINAL INSPECTION REPORT SUMMARY FOR EACH DIVISION OF WORK, CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER THAT SPECIAL INSPECTIONS WERE PERFORMED AND THAT WORK WAS PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

THE NOTES ON THESE DRAWINGS DO NOT REPLACE THE SPECIFICATIONS. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. SHOULD A CONFLICT ARISE BETWEEN THESE NOTES AND SPECIFICATIONS, WRITTEN CLARIFICATIONS SHOULD BE REQUESTED BY THE CONTRACTOR TO THE ARCHITECT/ENGINEER. INCONSISTENCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK.

IF DURING THE PROGRESS OF THE WORK, THE CONTRACTOR MAY DISCOVER ANY INCONSISTENCY IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL REPORT THIS INCONSISTENCY TO THE ARCHITECT/ENGINEER. EXTRAS WILL NOT BE PERMITTED FOR CORRECTION OF DISCREPANCIES THAT COULD HAVE BEEN AVOIDED BY CAREFUL REVIEW AND THE MINOR ADJUSTMENT OF SIZE AND/OR LOCATION OF VARIOUS ITEMS.

SHOULD THE CONTRACTOR SEEK APPROVAL OF A PRODUCT OTHER THAN SHOWN OR WITHIN THE SPECIFICATIONS, THE CONTRACTOR SHALL FURNISH WRITTEN EVIDENCE THAT THE PROPOSED PRODUCT CONFORMS IN ALL RESPECTS TO THE SPECIFIED PRODUCT.

THE ARCHITECT/ENGINEER OF RECORD IS NOT AND SHALL NOT BE HELD LIABLE FOR SITE SAFETY ISSUES. THESE ARE THE RESPONSIBILITY OF THE CONTRACTOR/CONSTRUCTION MANAGER AND THEIR SUBCONTRACTORS.

FOUNDATION

FOUNDATION STRUCTURE IS BASED ON THE USE OF SPREAD FOOTINGS AT A MAXIMUM SOIL PRESSURE OF 3000 POUNDS PER SQUARE FOOT. THE SUBGRADE IS TO BE VERIFIED BY A GEOTECHNICAL ENGINEER FOR SUITABILITY. IF FIELD CONDITIONS DO NOT PROVIDE THIS MINIMUM VALUE, THE ARCHITECT/ENGINEER SHOULD BE NOTIFIED IMMEDIATELY.

SHOULD ORGANIC SILT, CLAY POCKETS OR OTHER UNSUITABLE BEARING CONDITIONS BE ENCOUNTERED DURING EXCAVATION, NOTIFY THE ARCHITECT/ENGINEER BEFORE CONTINUING WITH CONSTRUCTION.

UNLESS NOTED OTHERWISE OR REQUIRED BY CONDITIONS SHOWN ON THE DRAWINGS, EXCAVATION FOR THE FOOTINGS SHALL BE SUCH THAT THE TOP OF FOOTING MEASURES 2 FEET MINIMUM BELOW FINISHED ADJACENT GRADE.

THE CONTRACTOR MUST PROVIDE SURFACE DRAINAGE AND PUMPS TO PROTECT ALL EXCAVATION FROM FLOODING. FLOODING OF ANY EXCAVATION AFTER APPROVAL OF THE SUBGRADE WILL BE CAUSE FOR COMPLETE REPREPARATION AND RE-APPROVAL OF THE SUBGRADE.

THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY WATER FROM PENETRATING ANY FOOTING OR SLAB SUBGRADE BEFORE AND AFTER THE PLACING OF CONCRETE AND UNTIL SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT BUILDING STRUCTURE.

SLABS ON GROUND SHALL BEAR ON MECHANICALLY COMPACTED SOIL CAPABLE OF SUPPORTING 3000 POUNDS PER SQUARE FOOT. DRAINAGE FILL UNDER SLABS SHALL BE COMPACTED SAND OR GRAVEL OR CRUSHED STONE.

ALL ORGANIC MATERIALS, EXCESSIVELY SOFT OR LOOSE SOILS, TREES, ASPHALT, CONCRETE, DEBRIS AND OTHER DELTERIOUS MATERIALS SHOULD BE REMOVED WITHIN AND AT LEAST 5 FEET BEYOND THE BUILDING LIMIT.

PROOF ROLL ALL SUBGRADES, UNDER THE OBSERVATION OF THE GEOTECHNICAL ENGINEER. UNSUITABLE AREAS SHALL BE REMOVED AND REPLACED AS DIRECTED BY GEOTECHNICAL ENGINEER. NO FILL FOR BUILDING SUPPORT SHALL BE PLACED UNTIL SUBGRADES AND FILL MATERIAL HAVE BEEN APPROVED BY THE GEOTECHNICAL ENGINEER. CONTRACTOR TO PROVIDE GEOTECHNICAL REPORT AND DOCUMENTS AS PART OF THIS WORK.

COMPACTED STRUCTURAL FILL BENEATH ALL FOUNDATIONS, SLABS ON GRADE AND ADJACENT TO FOUNDATION WALLS SHALL BE PLACED IN LIFTS NOT EXCEEDING 8 INCHES IN LOOSE THICKNESS AND BE COMPACTED TO 95 PERCENT OF MAXIMUM DRY DENSITY PER ASTM D-1557, MODIFIED PROCTOR TEST.

THE EXCAVATION FOR PLACEMENT OF COMPACTED STRUCTURAL FILL SHOULD EXTEND BEYOND THE EDGE OF FOOTINGS A MINIMUM DISTANCE EQUAL TO THE DEPTH OF THE FILL.

EXCAVATION SHALL BE PERFORMED SO AS NOT TO DISTURB EXISTING ADJACENT BUILDINGS, STREETS AND UTILITIES LINES. VERIFY LOCATION OF ALL UTILITIES PRIOR TO COMMENCEMENT OF WORK. HAND EXCAVATE AROUND UTILITIES AS REQUIRED.

BACKFILL SHALL BE BROUGHT UP EQUALLY ON EACH SIDE OF GRADE BEAMS, FOUNDATION WALLS, ETC.

DO NOT BACKFILL UNTIL CONCRETE HAS ATTAINED 75% OF SPECIFIED 28 DAY STRENGTH.

ALL SHEETING, SHORING AND EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH OSHA GUIDELINES.

SOILS EXPOSED AT THE BASES OF ALL APPROVED FOUNDATION EXCAVATIONS SHOULD BE PROTECTED AGAINST ANY DETRIMENTAL CHANGE IN CONDITIONS SUCH AS FROST, RAIN, ETC. EXCAVATIONS SHOULD BE PROTECTED FROM RAINFALL OR FREEZING.

CONCRETE:

CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH AND DENSITY, IN ACCORDANCE WITH THE FOLLOWING:

EXTERIOR SLABS, CURBS, SIDEWALKS & ALL OTHER CONCRETE (L.O.D.)	STRENGTH PSI	DENSITY PCF
	4000	145

SLUMP OF CONCRETE SHALL NOT EXCEED 4" UNLESS A HIGH RANGE WATER-REDUCING ADMIXTURE IS USED. THE SLUMP OF CONCRETE PRIOR TO ADDITION OF A HIGH RANGE WATER-REDUCING ADMIXTURE SHALL NOT EXCEED 4".

CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED. AIR CONTENT SHALL BE BETWEEN 4 AND 8 PERCENT.

THE NOMINAL MAXIMUM AGGREGATE SIZE SHALL BE A MINIMUM OF 3/4".

THE MINIMUM PORTLAND CEMENT CONTENT PER CUBIC YARD (ASTM C150) OF ALL CONCRETE SHALL CONFORM TO THE FOLLOWING TABLE.

SPECIFIED COMPRESSIVE STRENGTH (PSI)	MINIMUM CEMENT CONTENT (POUNDS PER CUBIC YARD)	NON-AIR ENTRAINED CONCRETE	AIR ENTRAINED CONCRETE
3000		495	517
4000		584	611

CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS FOR REVIEW WELL IN ADVANCE OF CONCRETE PLACEMENT. CONCRETE MIX DESIGN SHALL INCLUDE ALL STRENGTH DATA NECESSARY TO SHOW COMPLIANCE WITH THE PROJECT SPECIFICATIONS FOR EITHER THE TRIAL BATCH OR FIELD EXPERIENCE METHOD AND SHALL BE CERTIFIED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE STRUCTURE IS LOCATED.

REINFORCING SHALL CONFORM TO ASTM A615, G660, UNLESS NOTED OTHERWISE.

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED, IN ACCORDANCE WITH ACI DETAILING MANUAL 1989 (SP-66).

ALL REINFORCING SHALL BE SUPPORTED IN SPACES, FENCED WITH NECESSARY ACCESSORIES AND SHALL BE SECURELY WIRED TOGETHER, IN ACCORDANCE WITH CRSI "MANUAL OF STANDARD PRACTICE" (1986).

MINIMUM CONCRETE COVER, UNLESS NOTED OTHERWISE:

TENSION SPLICES (INCHES)	COMPRESSION SPLICES (INCHES)
UNFORMED SURFACE IN CONTACT WITH THE GROUND.	3 IN.
FORMED SURFACES EXPOSED TO EARTH OR WEATHER.	2 IN.
#6 BARS AND LARGER	1-1/2 IN.
#5 BARS AND SMALLER	1-1/2 IN.

FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER: BEAMS, GIRDERS, AND COLUMNS 1 1/2 IN. SLABS, WALLS, AND JOISTS 3/4 IN. #11 BARS AND SMALLER 3/4 IN. #14 AND #18 BARS 1 1/2 IN.

LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE. UNLESS NOTED OTHERWISE, WHERE CLASSES ARE NOT CALLED OUT ON DRAWINGS, USE CLASS "B" SPLICES.

BAR SIZE	TOP BARS A	OTHER BARS B
#3	16	21
#4	21	28
#5	27	35
#6	35	46
#7	46	62
#8	63	82
#9	80	104
#10	101	131
#11	125	162

COMPRESSION DOWEL EMBEDMENT: 22 BAR DIAMETERS LAP WELDED WIRE FABRIC ONE SPACING OF CROSS WIRES PLUS 2".

BASE PLATES, ANCHOR BOLTS, SUPPORT ANGLES, ETC., BELOW GRADE SHALL BE COVERED WITH A MINIMUM OF 3" OF CONCRETE.

CONCRETE WORK SHALL BE SUBJECT TO QUALITY ASSURANCE TESTING AND INSPECTIONS. SEE QUALITY ASSURANCE GENERAL NOTES AND PROJECT SPECIFICATIONS.

CONCRETE MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH ACI 318-89 (REVISED 1992) BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND ACI 301-89 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.

BAR SUPPORTS IN CONTACT WITH EXPOSED SURFACES SHALL BE PLASTIC TIPPED. ALL ACCESSORIES SHALL BE GALVANIZED.

PROVIDE SPACERS, CHAIRS, BOLSTERS, ETC. AS REQUIRED AND NECESSARY TO ASSEMBLE, PLACE AND SUPPORT ALL REINFORCING STEEL IN PLACE. USE WIRE BAR TYPE SUPPORTS COMPLYING WITH CRSI RECOMMENDATIONS.

NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE. NO WATER SHALL BE ADDED AT THE JOB SITE TO CONCRETE MIX.

THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER DESIGN AND CONSTRUCTION OF ALL FORM WORK, SHORING AND RESHORING. PROVIDE COMMERCIAL FORM COATING COMPOUNDS THAT WILL NOT BOND, STAIN OR ADVERSELY AFFECT CONCRETE SURFACES. SUBMITALS TO BE PROVIDED TO THE ARCHITECT/ENGINEER PRIOR TO BEGINNING WORK.

ALL CONCRETE SHALL BE CONSOLIDATED IN PLACE USING INTERNAL VIBRATOR. DO NOT USE VIBRATORS TO TRANSPORT CONCRETE WITHIN FORMS.

PLACEMENT OF CONCRETE SHALL NOT START UNTIL THE PLACEMENT OF REINFORCING STEEL HAS BEEN APPROVED BY OWNER'S INSPECTING AGENCY.

BONDING AGENT SHALL BE USED WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE.

CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.

COMPLETE SHOP DRAWINGS AND SCHEDULES OF ALL REINFORCING STEEL SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW.

WELDING OF REINFORCEMENT IS NOT PERMITTED.

FOR ALL OPENINGS IN CONCRETE WALLS AND SLABS, PROVIDE SUPPLEMENTAL REINFORCING AROUND OPENINGS.

CONTROL JOINTS IN SLABS ON GRADE SHALL NOT EXCEED 20 FEET ON CENTERS NOR 15 FEET FROM ANY CORNER. CONTROL JOINTS SHALL BE SAW CUT 1/4" X SLAB DEPTH 1/4" INCH DEEP) AND FILLED WITH JOINT SEALER. CUT JOINTS AS SOON AS POSSIBLE WITHOUT FRAYING CONCRETE SURFACE. CONSTRUCTION JOINTS SHALL INCLUDE A ONE INCH BY TWO INCH SHARP KEY AT MID HEIGHT OF SLAB.

THE FINISH TOLERANCE OF ALL SLABS SHALL BE IN ACCORDANCE WITH ACI 302 AND THAT SPECIFIED IN THE CONTRACT DOCUMENTS.

ANCHOR BOLTS SHALL CONFORM TO ASTM A307 UNLESS NOTED OTHERWISE.

LAP ALL BARS A MINIMUM OF 40 BAR DIAMETERS. LAP ALL WWF A MINIMUM OF 6 INCHES.

SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF DEPRESSED SLAB AREAS, DRAINS, AND DIMENSIONS.

PROVIDE GALVANIZED STEEL SLEEVES WHERE PIPES PASS THROUGH EXTERIOR CONCRETE WALLS, BEAMS OR SLABS. PROVIDE PVC SLEEVES WHERE PIPES PASS THROUGH INTERIOR CONCRETE WALLS, BEAMS OR SLABS.

DO NOT PLACE UNDERGROUND UTILITIES OR PIPES BELOW FOOTINGS. IF ANY SUCH CONDITIONS EXIST, NOTIFY THE ENGINEER IMMEDIATELY AND DROP THE BOTTOM OF FOOTING ELEVATION IN ACCORDANCE WITH THE TYPICAL STEP FOOTING DETAIL TO CLEAR PIPE.

STRUCTURAL STEEL:

STEEL SHALL CONFORM TO THE FOLLOWING GRADATIONS:

A992 (FY=50 KSI)
A36 (FY=36 KSI)
A500 (FY=46 KSI)
A53 (FY=35 KSI)
A307
A325
E70XX

ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE (1986), EXCEPT AS MODIFIED IN THESE NOTES AND THE PROJECT SPECIFICATIONS.

THE STRUCTURE IS A WOOD FRAME AND IS DEPENDENT UPON SHEAR WALLS. PROVIDE WELDED WIRE FABRIC TO THE MASONRY WALLS FOR STABILITY AND FOR RESISTANCE TO WIND AND SEISMIC FORCES. PROVIDE ALL TEMPORARY SUPPORTS REQUIRED FOR STABILITY AND FOR RESISTANCE TO WIND AND SEISMIC FORCES UNTIL THESE ELEMENTS ARE COMPLETE AND ARE CAPABLE OF PROVIDING THIS SUPPORT.

THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN OF ALL CONNECTIONS. CONNECTIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE SCHEMATIC AND ARE ONLY INTENDED TO SHOW THE RELATIONSHIP OF MEMBERS CONNECTED. CONNECTION DETAILS INDICATED ON THE DRAWINGS SHALL BE INCORPORATED INTO FABRICATOR'S CONNECTION DESIGN. SEE SPECIFICATIONS. ALL SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY THE FABRICATOR'S ENGINEER WITH THE SEAL FOR THE STATE WHERE THE STRUCTURE IS LOCATED. PROFESSIONAL ENGINEER'S SEAL MAY BE QUALIFIED FOR DESIGN OF CONNECTIONS ONLY.

SPlicing OF STEEL MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.

UNLESS NOTED OTHERWISE, BEAMS SHALL BEAR 8" MINIMUM ON CONCRETE OR MASONRY. UNLESS NOTED OTHERWISE, ANCHOR BEAMS TO MASONRY - 2" MINIMUM (2) 3/4" DIAMETER ANCHOR BOLTS WITH 4" HOOK AND 1'-4" EMBEDMENT.

STRUCTURAL STEEL WORK SHALL BE SUBJECT TO QUALITY ASSURANCE TESTING AND INSPECTIONS. SEE QUALITY ASSURANCE GENERAL NOTES AND PROJECT SPECIFICATIONS.

BOLTED CONNECTIONS SHALL USE A MINIMUM OF (2) 3/4 INCH DIAMETER HSB UNLESS NOTED OTHERWISE.

WELDING SHALL BE PERFORMED WITH E70XX ELECTRODES. ALL WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS AND SHALL CONFORM TO THE AWS D1.1 STRUCTURAL WELDING CODE.

AFTER FABRICATIONS, ALL STEEL SHALL BE CLEANED OF ALL RUST, LOOSE MILL SCALE OR OTHER FOREIGN MATERIALS PRIOR TO THE APPLICATION OF TWO COATS OF SHOP PRIMER.

STEEL ANGLES AND PLATES ALONG WITH BOLTS AND WASHERS, IN DIRECT AND PERMANENT CONTACT WITH EXTERIOR FINISH MASONRY, AND ALL EXPOSED STRUCTURAL STEEL, SHALL BE HOT-DIPPED GALVANIZED.

STEEL BEAMS AND COLUMNS ADJACENT TO MASONRY SHALL HAVE ADJUSTABLE MASONRY TIES.

STEEL SURFACES WITHIN 4 INCHES OF FIELD WELDS SHALL BE CLEANED AND GROUND SMOOTH. AFTER WELDING COLD SURFACE WITH PRIMER/PAIN.

FULL DEPTH DOUBLE ANGLE END CONNECTIONS ARE TO BE USED ON ALL GIRDER AND BEAM CONNECTIONS.

PROVIDE A MINIMUM OF 3/8 INCH THICK FULL DEPTH THRU-PLATE FOR ALL PIPE AND TUBE COLUMN CONNECTIONS.

ALL CONNECTIONS SHALL BE DESIGNED FOR THE GREATER OF THE REACTIONS GIVEN ON THE FRAMING PLANS OR 1/2 THE AISC UNIFORM LOAD CAPACITY OF THE BEAM UNLESS A MORE STRINGENT CRITERIA IS GIVEN ON THE CONTRACT DOCUMENTS.

ALL STEEL TO OTHER METAL CONNECTIONS ARE TO BE TREATED OR OTHERWISE SEPARATED TO PREVENT GALVANIC AND CORROSION EFFECTS.

FABRICATE BEAMS WITH THE NATURAL CAMBER UP.

ALL STEEL NOT RECEIVING FIREPROOFING SHALL BE PAINTED WITH THE FABRICATOR'S RUST INHIBITIVE PRIMER. OMIT PAINT AT SLIP CRITICAL CONNECTIONS.

NON-SHRINK GROUT FOR COLUMN BASE PLATES SHALL BE PRE-MIXED, NONMETALLIC GROUT COMPLYING WITH ASTM C-1107.

ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED.

MASONRY:

REINFORCED MASONRY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH, f'm, OF 1500 PSI. MASONRY UNITS SHALL BE NORMAL WEIGHT BLOCK CONFORMING TO ASTM C90, GRADE N, TYPE 1. AND SHALL HAVE A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 2000 PSI. MORTAR SHALL CONFORM TO ASTM C270, TYPE S. GROUT SHALL CONFORM TO ASTM C476.

REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE.

CONTINUOUS WIRE REINFORCING (JOINT REINFORCING) SHALL BE GALVANIZED TRUSS TYPE FABRICATED UNITS WITH A SINGLE PAIR OF 9 GAUGE SIDE ROSS AND 9 GAUGE CONTINUOUS DIAGONAL CROSS ROSS FABRICATED FROM COLD-DRAWN STEEL WIRE COMPLYING WITH ASTM A82. JOINT REINFORCING SHALL BE SPACED AT 16" O.C. VERTICALLY IN ALL MASONRY WALLS.

SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF VERTICAL CONTROL JOINTS. HORIZONTAL BOND BEAM AND Lintel REINFORCING SHALL BE CONTINUOUS ACROSS VERTICAL CONTROL JOINTS. JOINT REINFORCING SHALL BE STOPPED EITHER SIDE OF VERTICAL CONTROL JOINTS.

ALL REINFORCED CELLS, ALL CELLS BELOW GRADE AND ALL CELLS BELOW FINISH FLOOR SHALL BE GROUTED SOLID WITH HIGH SLUMP ($f_c = 1^* \text{ SUPER P} - 3000\text{PSI FEA G} \text{ RAVEL CONCRETE}$. GROUT LIFTS TO BE COMPLETED IN 4 FOOT LIFTS.

ALL EXTERIOR MASONRY WALLS THAT ARE TO RECEIVE KORFIL INSULATION, INSULATION SHALL BE REMOVED FROM MASONRY UNITS THAT ARE TO BE USED FOR BOND BEAMS OR MASONRY LEVELS. REMOVE CORN/CORFIL FROM MASONRY UNITS THAT ARE TO CONTAIN VERTICAL REINFORCING, UNLESS NOTED OTHERWISE.

WHEN A FOUNDATION DOWEL DOES NOT LINE UP WITH A VERTICAL BLOCK JOINT, THE DOWEL SHALL BE SLOPED MORE THAN ONE HORIZONTAL IN 8 VERTICAL. DOWELS MAY BE GROUTED INTO A CELL IN VERTICAL ALIGNMENT, EVEN THOUGH IT IS IN AN ADJACENT CELL TO THE VERTICAL WALL REINFORCEMENT.

SPliced STEEL SHALL BE SECURED IN PLACE BEFORE GROUTING.

SPURCED REINFORCING SHALL BE LAPPED 48 BAR DIAMETERS OR 24 INCHES, WHICHEVER IS GREATER. SPURCED BARS SHALL BE WIRED TOGETHER.

VERTICAL BARS SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 200 DIAMETERS OF THE REINFORCING, NOR 10 FEET.

VERTICAL REINFORCING BARS SHALL HAVE A MINIMUM CLEARANCE OF 3/4 OF AN INCH FROM THE MASONRY AND NOT LESS THAN ONE BAR DIAMETER BETWEEN BARS.

VERTICAL CELLS THAT WILL BE GROUTED SHALL HAVE A VERTICAL ALIGNMENT TO MAINTAIN A CONTINUOUS UNOBSTRUCTED CELL AREA NOT LESS THAN 3" X 4".

GROUTING SHALL BE STOPPED 1'-1/2" BELOW THE TOP OF A COURSE SO AS TO FORM A KEY AT THE POUR JOINT.

ALL BOLTS, ANCHORS, ETC., INSERTED IN THE WALLS, SHALL BE GROUTED SOLID INTO POSITION.

REINFORCED MASONRY HAS BEEN DESIGNED USING VALUES FOR CONSTRUCTION WITH SPECIAL INSPECTION.

REINFORCED MASONRY WORK SHALL BE SUBJECT TO QUALITY ASSURANCE PROJECT SPECIFICATIONS.

THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN & IMPLEMENTATION OF ALL SHORING & BRACING TO ASSURE STABILITY OF WALLS DURING CONSTRUCTION.

PROVIDE HORIZONTAL JOINT REINFORCING AT 8 INCHES ON CENTERS FOR TWO COURSES ABOVE AND BELOW ALL WALL OPENINGS.

MORTAR JOINT THICKNESS=3/8 INCHES.

ALL CONCRETE MASONRY WALLS ARE TO BE SUPPORTED LATERALLY AT INTERIOR WALLS, FLOORS, ROOF, OR OTHER STRUCTURAL MEMBERS. WALLS SHALL BE ANCHORED TO THESE MEMBERS WITH HOOKED WIRE DETAIL ANCHORS INTO THE GROUTED CELL OR BOND BEAM OF ADJACENT BLOCK.

DOVETAIL ANCHORS, WALL PLUGS, ACCESSORIES AND OTHER MISCELLANEOUS ITEMS SHALL BE INSTALLED AS THE MASONRY WORK PROGRESSES.

STORE BLOCKS ON PALLETS AND COVER WITH VISQUEEN.

USE ALL MORTAR WITHIN 2 HOURS OF MIXING AT TEMPERATURES OF 80 DEGREES F. USE ALL MORTAR WITHIN 2-1/2 HOURS AT TEMPERATURES BELOW 50 DEGREES F.

PROVIDE VERTICAL CONTROL JOINTS AT 25 FEET MAXIMUM HORIZONTAL SPACING AT CHANGES OF WALL HEIGHT OR THICKNESS. AT CONSTRUCTION JOINTS IN FOUNDATION, ROOF OR FLOORS, AT CHASES AND SECTIONS FOR PIPING, COLUMNS, FIXTURES, ETC. AT ABUTMENT OF WALLS AND COLUMNS. AT RETURN ANGLES OF "L", "T" OR "U" SHAPED STRUCTURES, AT ONE OR BOTH SIDES OF WALL OPENINGS.

MASONRY HAS BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530) AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR MASONRY STRUCTURES (ACI303.1).

GROUT PLACEMENT SHALL NOT START UNTIL THE PLACEMENT OF REINFORCING HAS BEEN APPROVED BY THE OWNER'S INSPECTION AGENCY.

FILL ALL BEAM, GIRDER, JOIST, ETC. BEARING PLATES SOLID WITH GROUT.

ALLOW GROUT IN REINFORCED CMU WALLS TO CURE A MINIMUM OF 48 HOURS BEFORE IMPOSING CONCENTRATED OR OTHER LOADS.

CMU PLACED BELOW GRADE SHALL BE FILLED SOLID.

CMU SHALL BE LAID IN RUNNING BOND UNLESS OTHERWISE NOTED IN ARCHITECTURAL DRAWINGS. BOND CORNERS AND INTERSECTIONS OF WALLS.

ALL CMU JOINTS SHALL BE FULLY BEDDED AND STRUCK SMOOTH.

WOOD TIMBER

ALL STRUCTURAL TIMBER SHALL BE HEM-FIR #2 (OR BETTER) STRESS GRADE LUMBER OR APPROVED EQUAL WITH THE FOLLOWING MINIMUM ALLOWABLE PROPERTIES:

Fb=1200 PSI	Fv=75PSI	E=1,400,000 PSI
-------------	----------	-----------------

ALL 2X NOMINAL LUMBER SHALL BE KILN DRIED (KD) AND STAMPED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION'S "CONSTRUCTION MANUAL" SHOWING GRADE MARK.

ALL STEEL TO OTHER METAL CONNECTIONS ARE TO BE TREATED OR OTHERWISE SEPARATED TO PREVENT GALVANIC AND CORROSION EFFECTS.

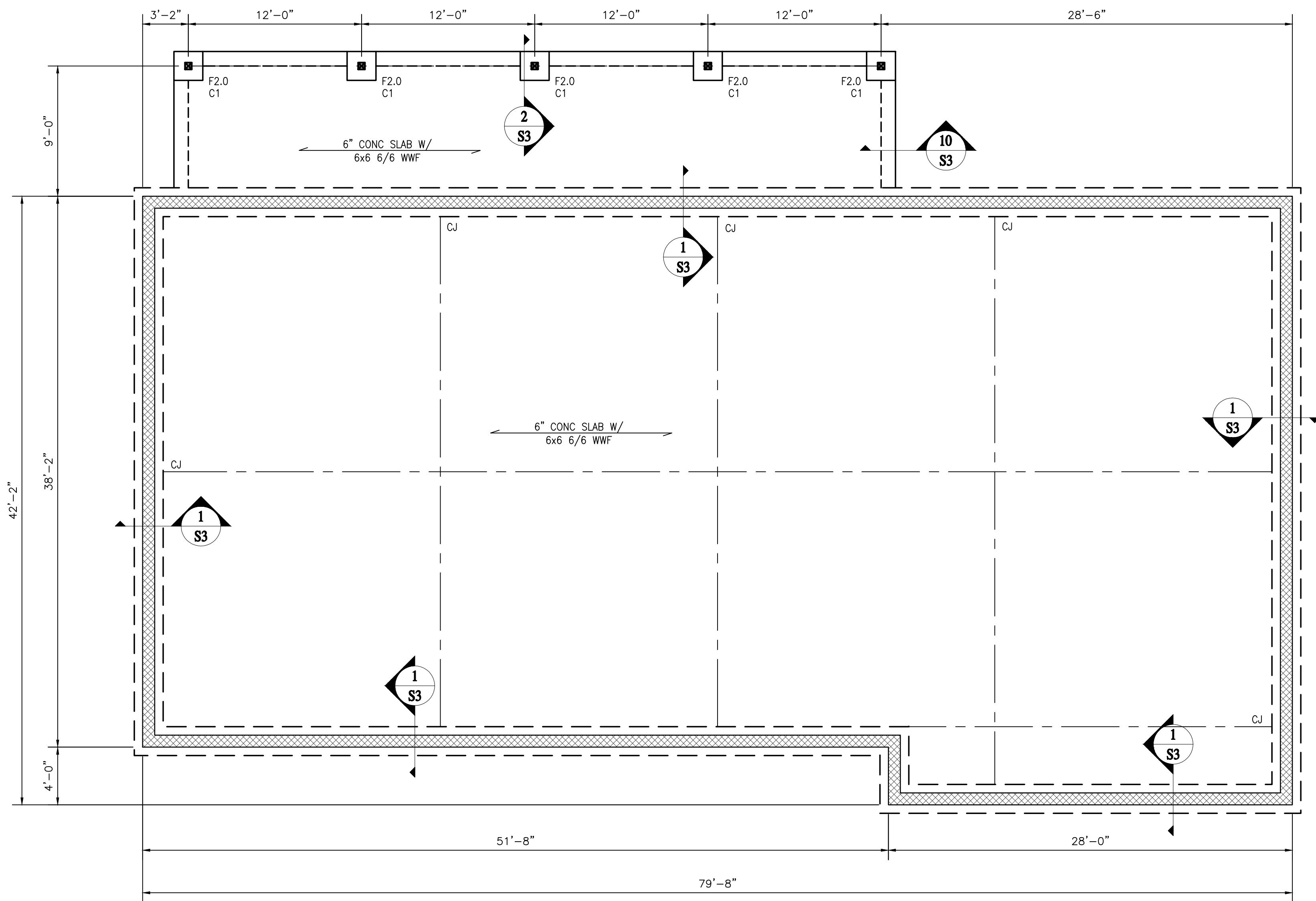
FABRICATE BEAMS WITH THE NATURAL CAMBER UP.

ALL STEEL NOT RECEIVING FIREPROOFING SHALL BE PAINTED WITH THE FABRICATOR'S RUST INHIBITIVE PRIMER. OMIT PAINT AT SLIP CRITICAL CONNECTIONS.

NON-SHRINK GROUT FOR COLUMN BASE PLATES SHALL BE PRE-MIXED, NONMETALLIC GROUT COMPLYING WITH ASTM C-1107.

ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED.

ALL PARALLEL (PSL) BE



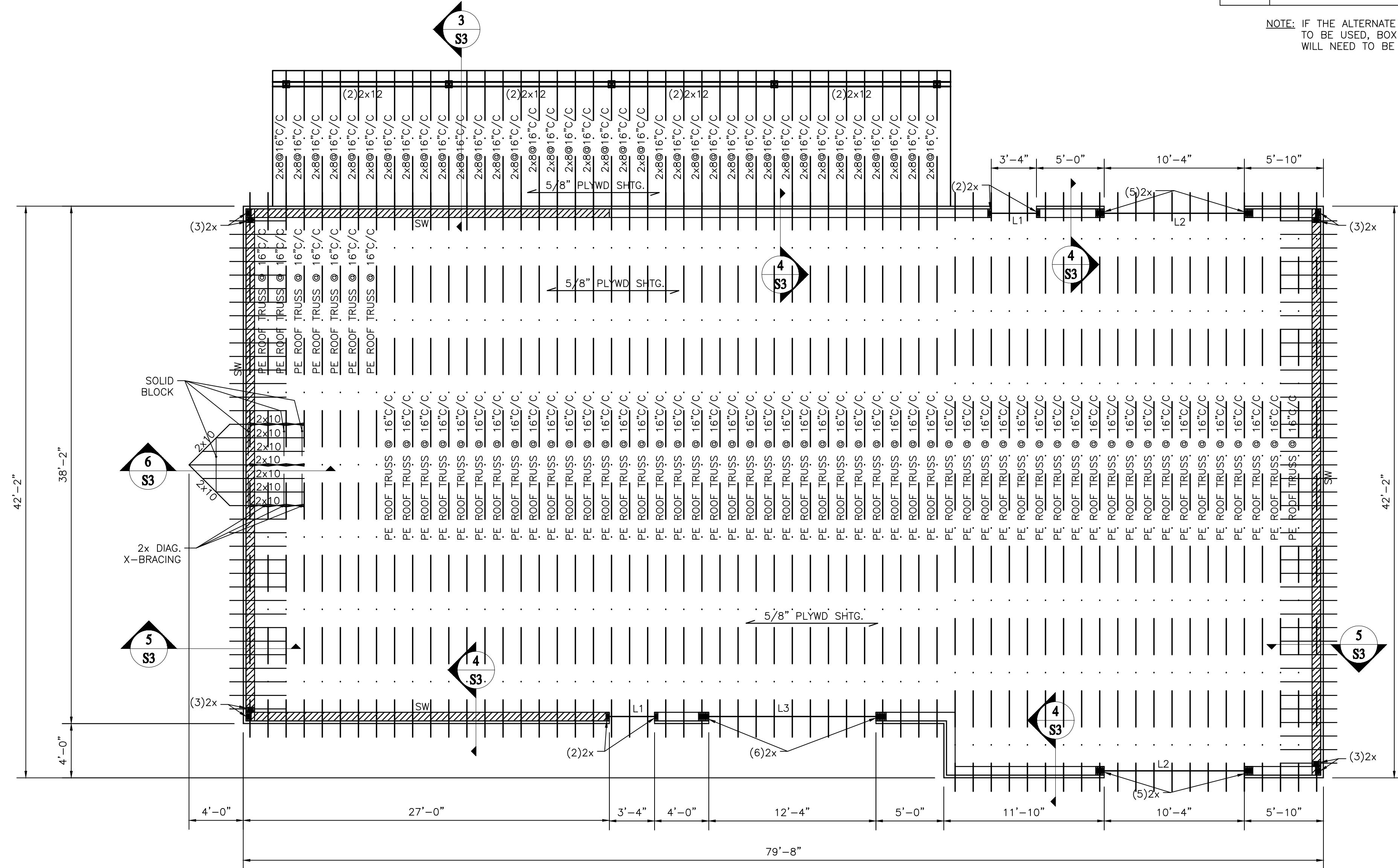
1 FOUNDATION PLAN
SCALE: 3/16"=1'-0"

FOOTING SCHEDULE		
MARK	FOOTING INFORMATION	
	SIZE	REINFORCEMENT
F2.0	2'-0"x2'-0"x3'-0"	BULK CONCRETE

COLUMN SCHEDULE	
MARK	COLUMN SIZE
C1	6x6 WD. POST

LINTEL SCHEDULE		
MARK	TYPE	
L1	(4) PCS. 2x10 + (3) 1/2" PLYWD. FILLERS	
L2	7"x3 1/2" PL.	
L3	7"x1 1/8" PL.	

NOTE: IF THE ALTERNATE METAL STUDS ARE TO BE USED, BOX BEAM LINTELS WILL NEED TO BE DESIGNED.



2 ROOF FRAMING PLAN
SCALE: 3/16"=1'-0"
TYP. WALL STUDS - 2x8 @ 16"/C
A.I.T. BSW16 @ 16"/C

PRINT DATE: 2019

REGAN YOUNG, AIA
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NJ DDE SP #05-4930-070-19-1000

PROPOSED MAINTENANCE & OPERATIONS BUILDING
SOUTHAMPTON TOWNSHIP BOE
26 PLEASANT STREET
SOUTHAMPTON, NEW JERSEY

TITLE: **FOUNDATION & ROOF FRAMING PLANS**

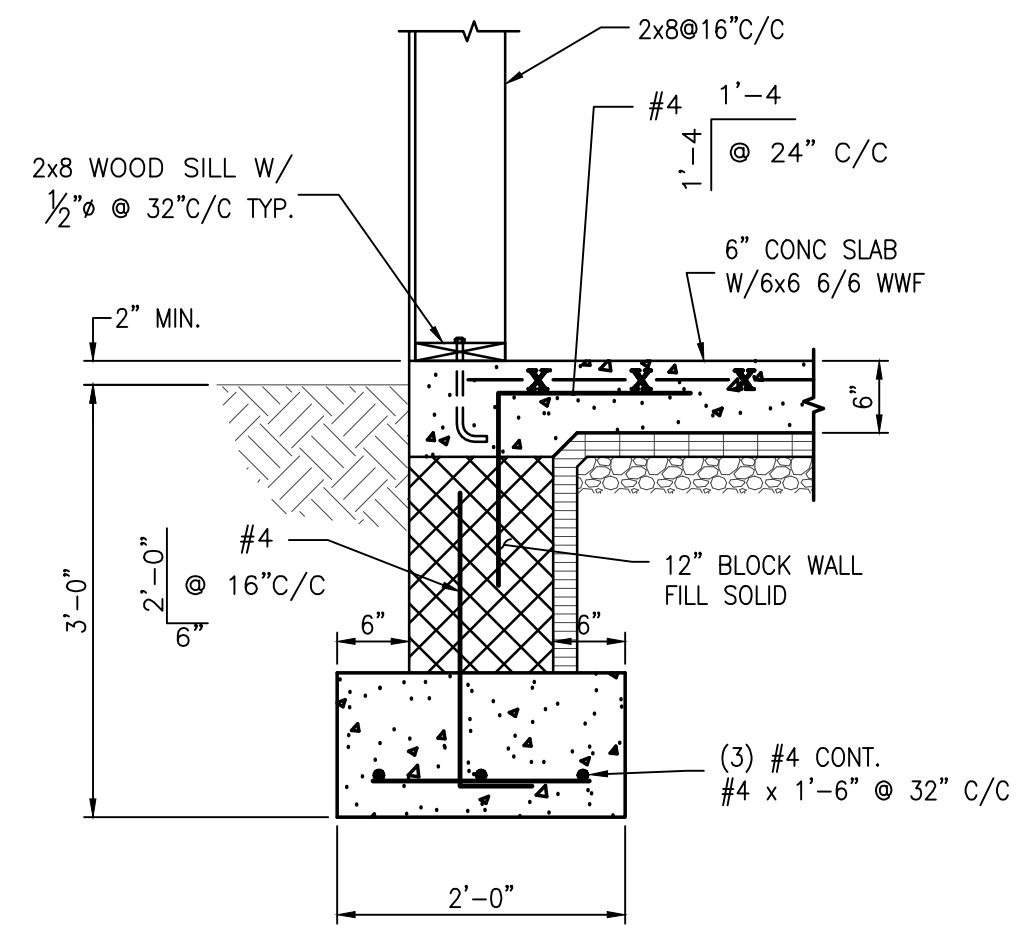
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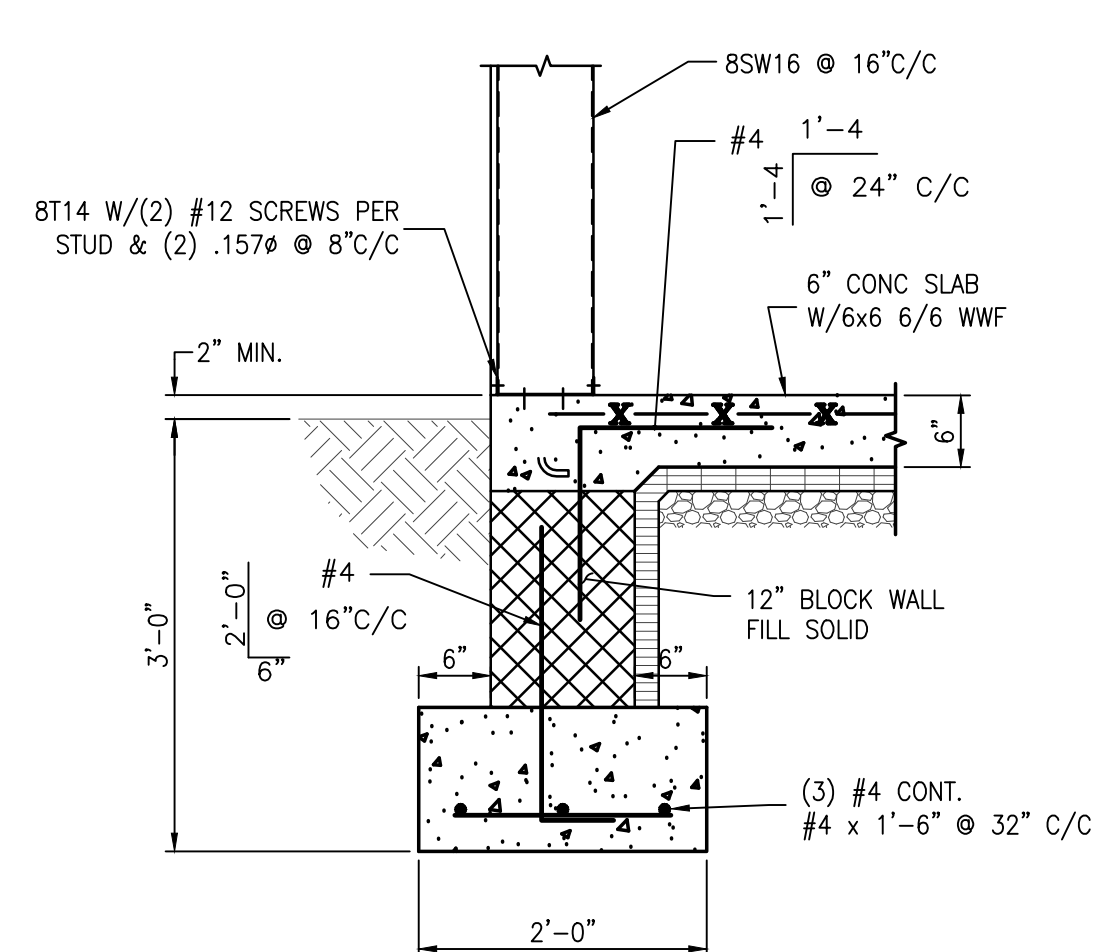
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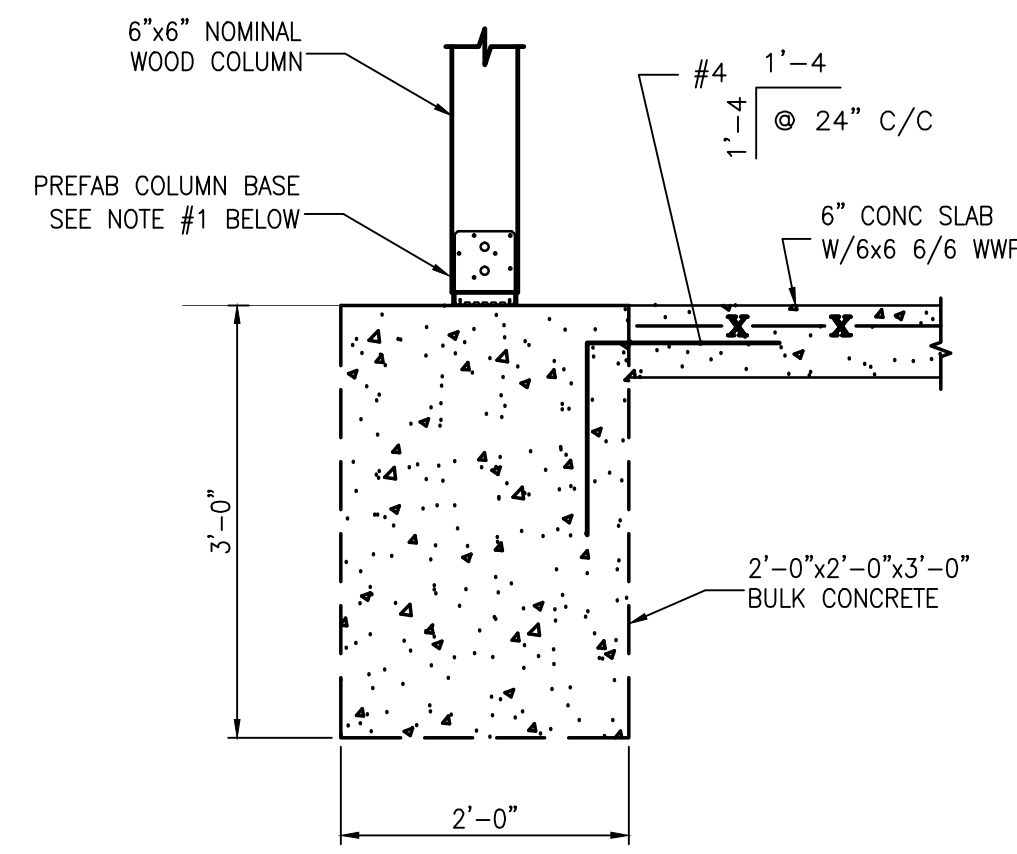
2 OF 3



1 TYP. WALL FOOTING DETAIL
SCALE: 3/4" = 1'-0"

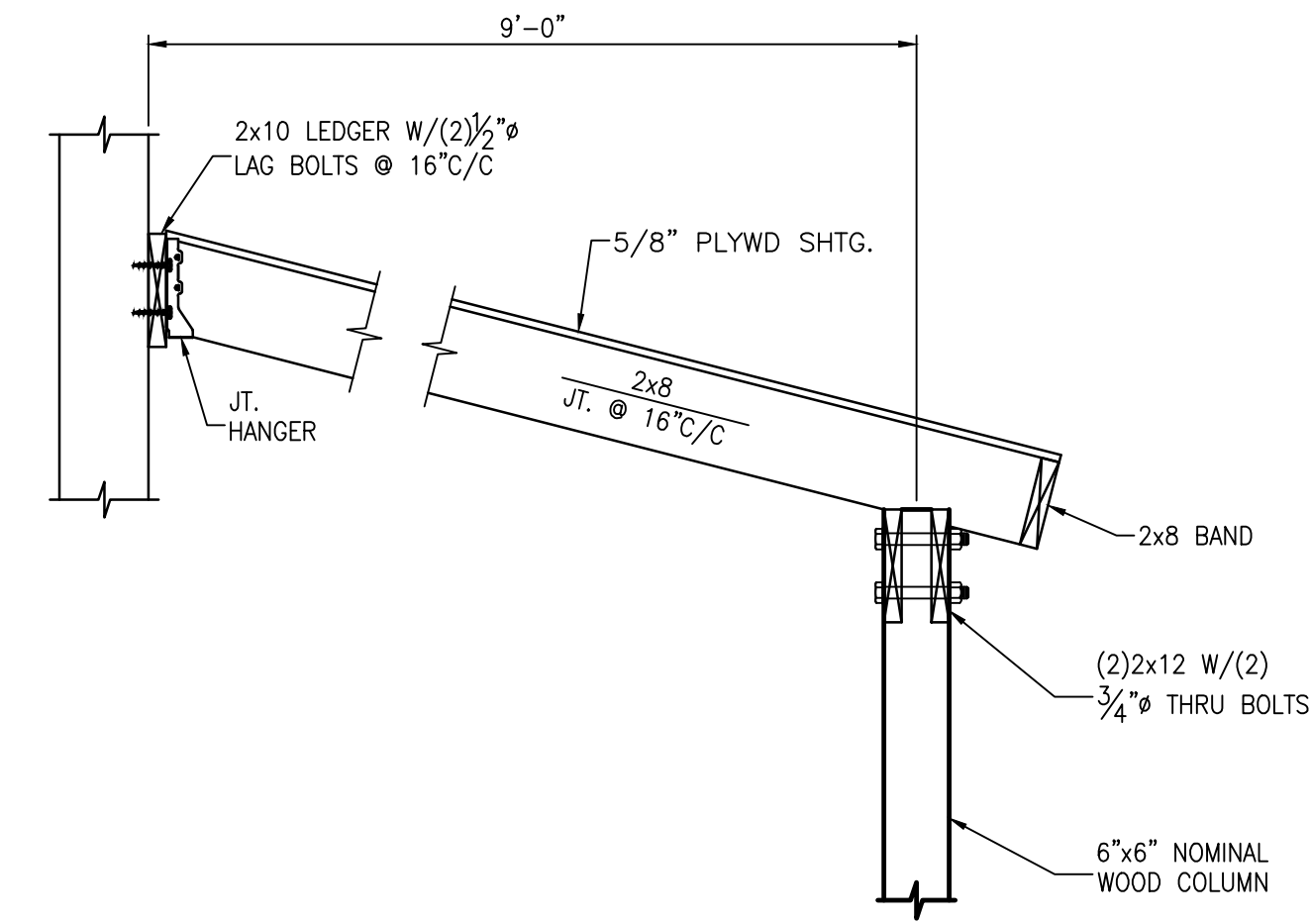


1A ALT. WALL FOOTING DETAIL
SCALE: 3/4" = 1'-0"

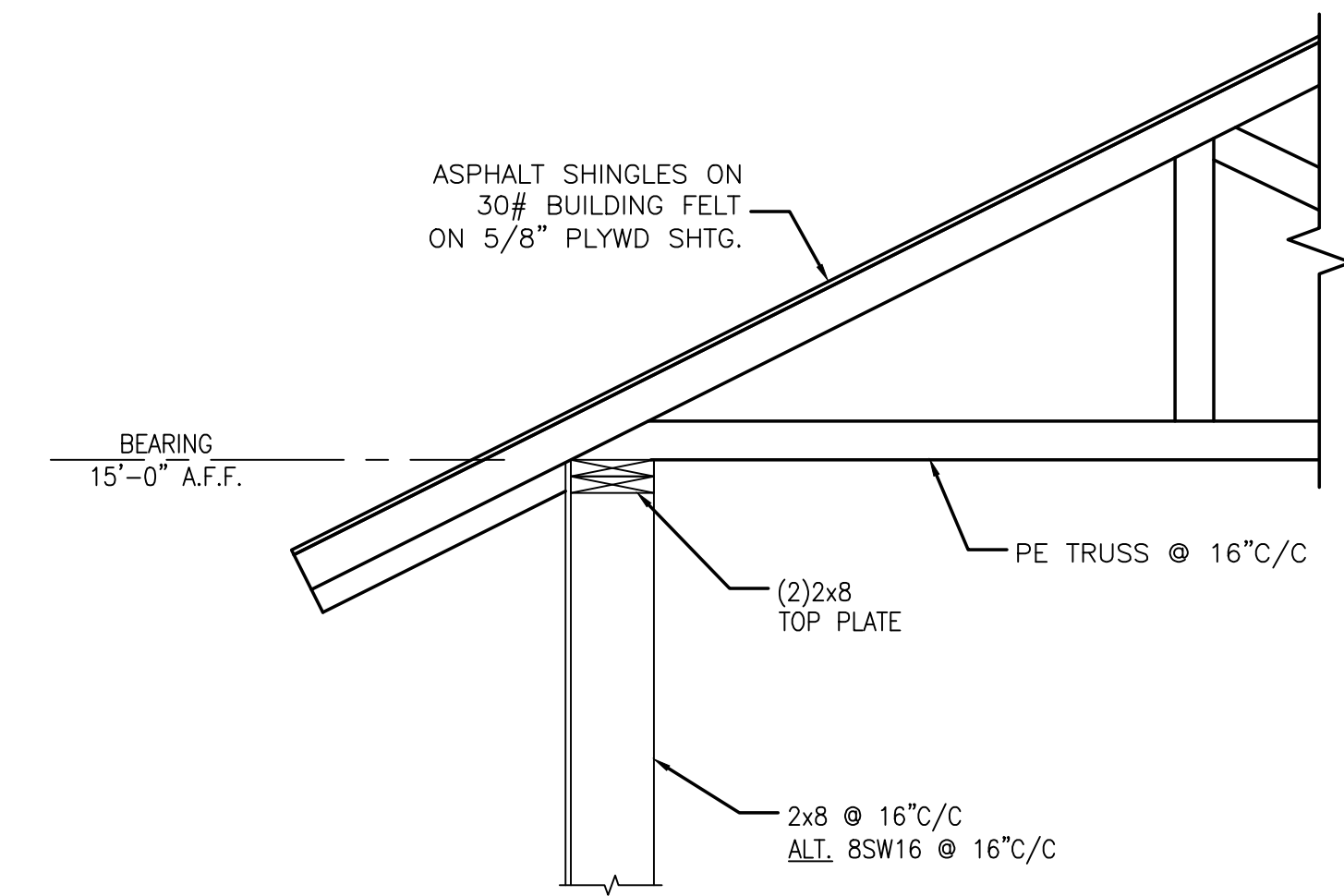


2 COLUMN/FOOTING DETAIL
SCALE: 3/4" = 1'-0"

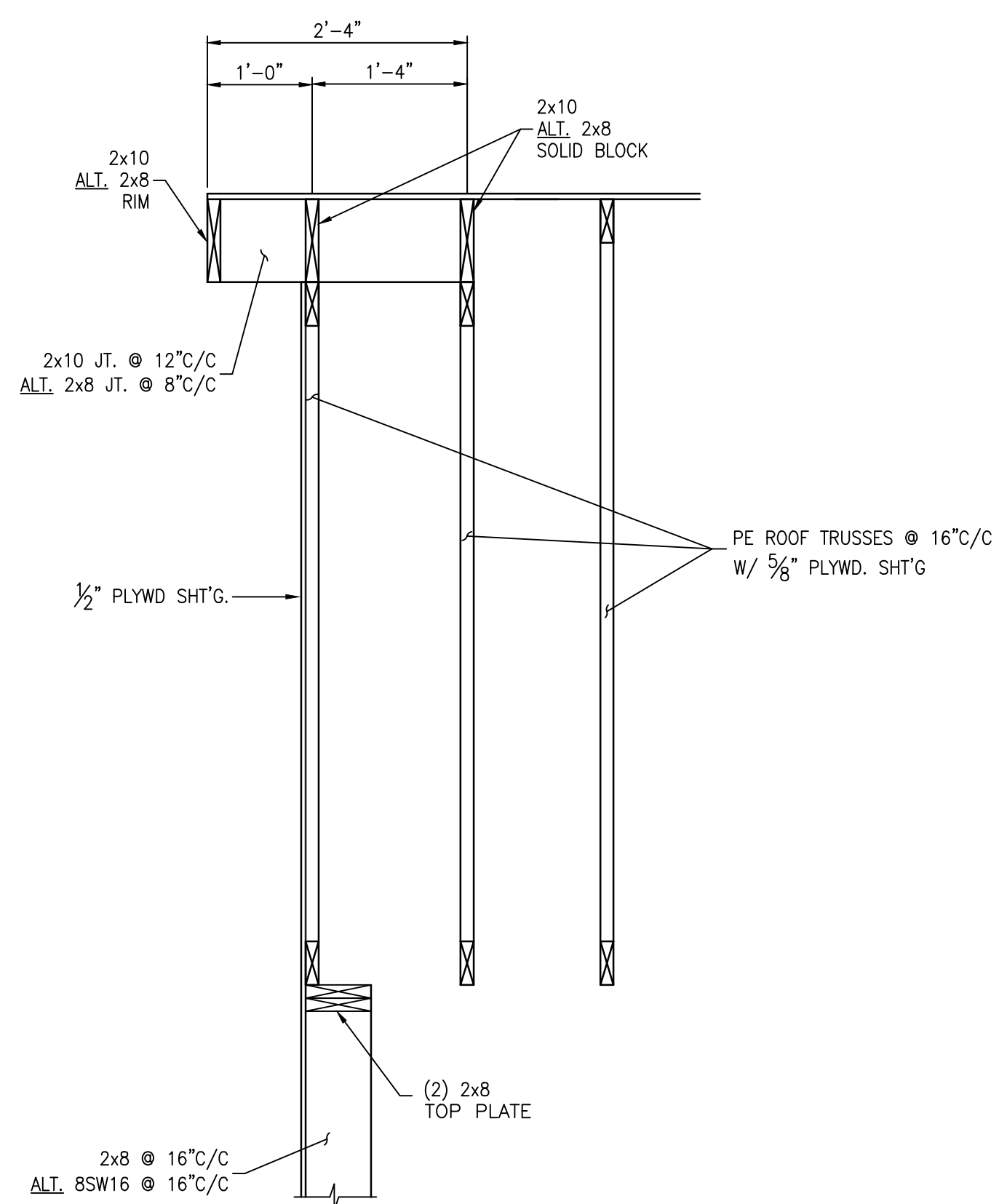
NOTE:
1. PROVIDE SIMPSON STRONG TIE PREFABRICATED COLUMN BASE @ ALL WOOD COLUMN/CONCRETE FOOTING INTERFACES.



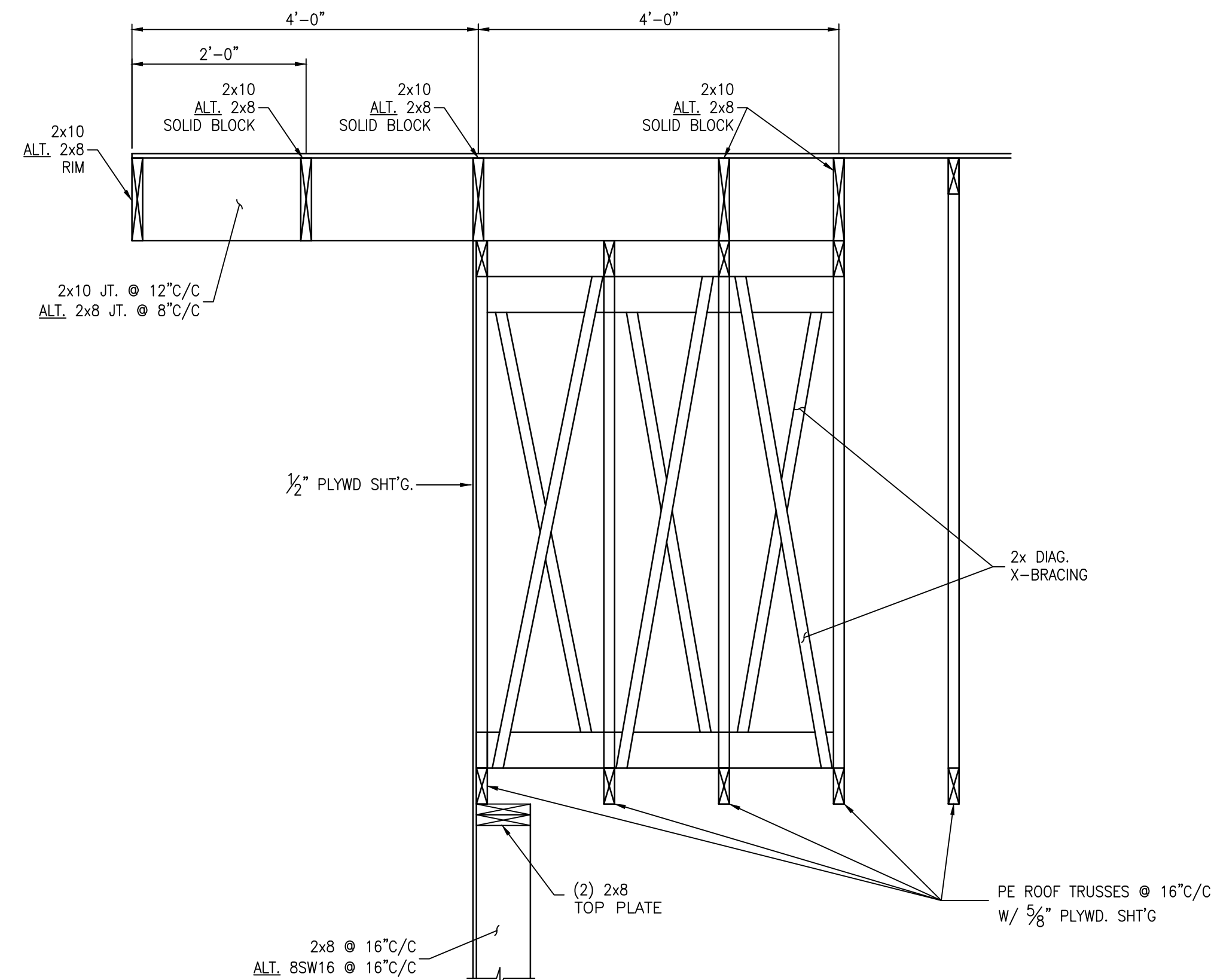
3 WALL/CANOPY DETAIL
SCALE: 3/4" = 1'-0"



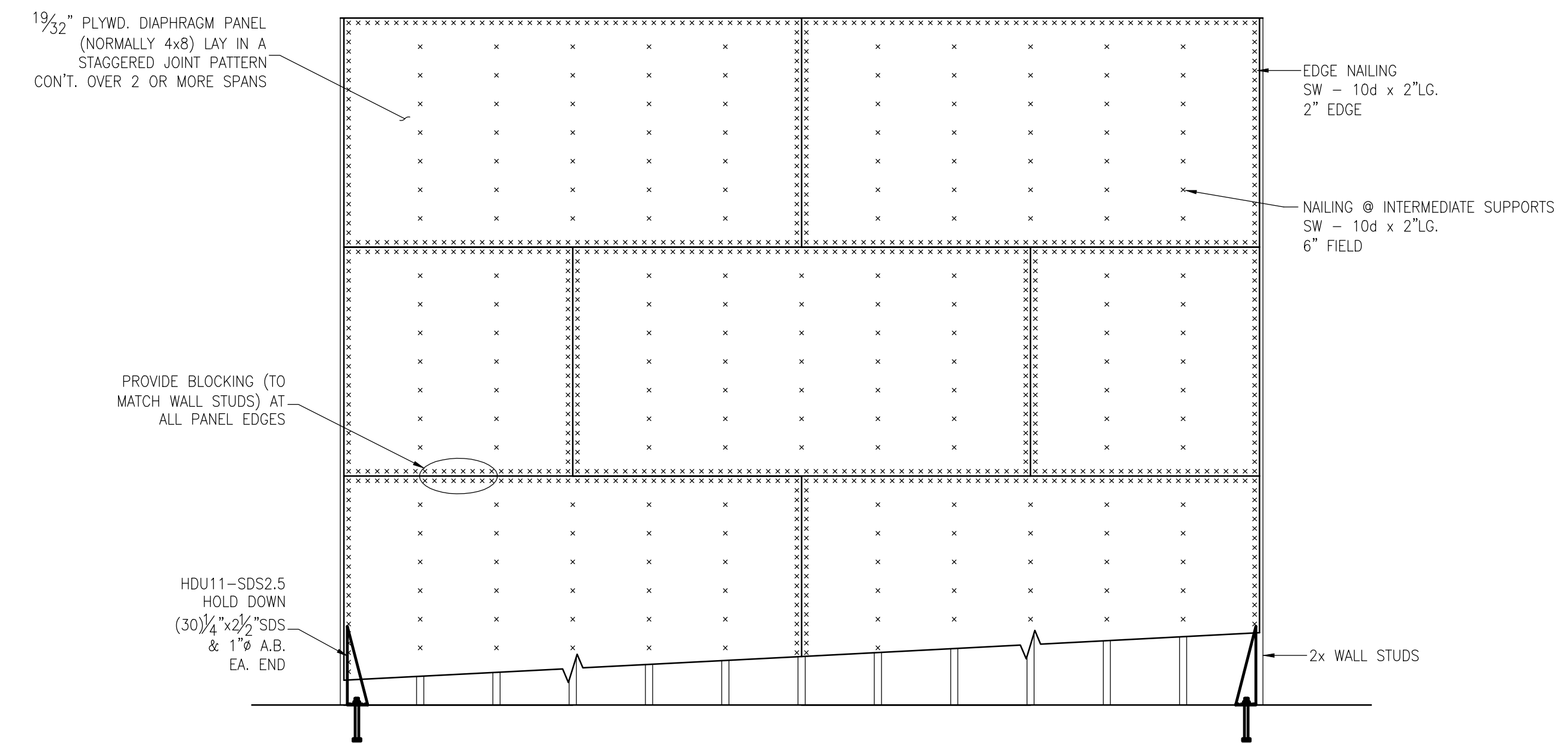
4 WALL/TRUSS DETAIL
SCALE: 3/4" = 1'-0"



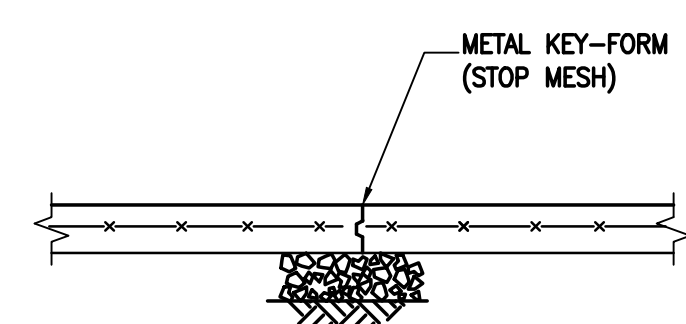
5 WALL/TRUSS GABLE END DETAIL
SCALE: 3/4" = 1'-0"



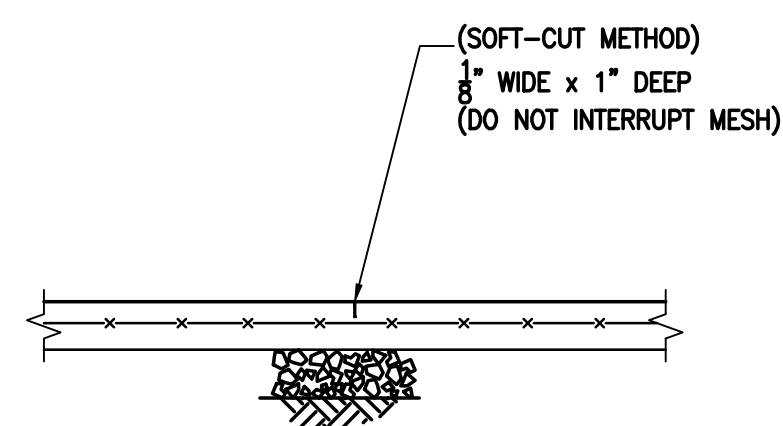
6 WALL/TRUSS GABLE END DETAIL
SCALE: 3/4" = 1'-0"



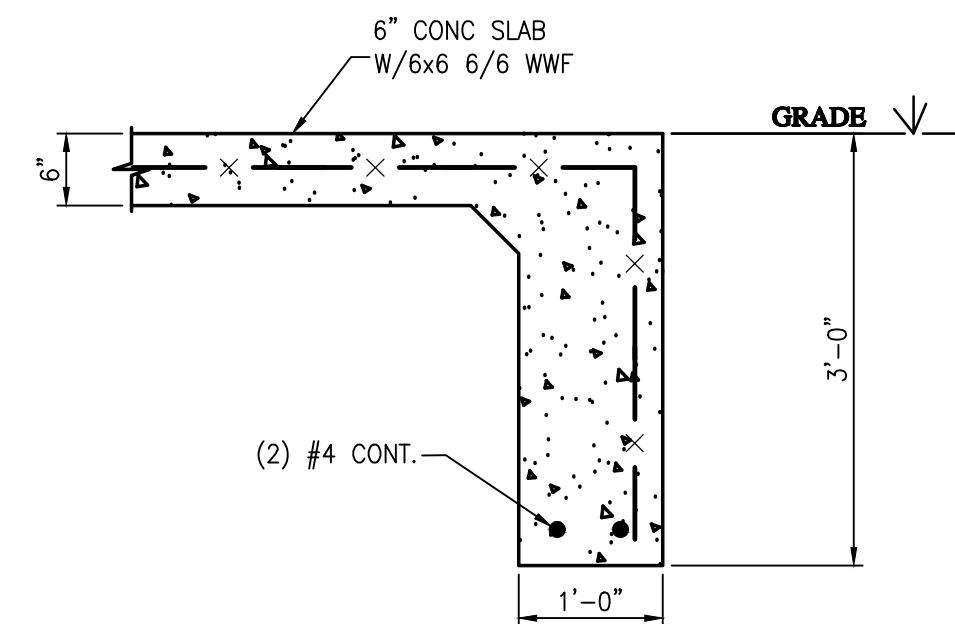
7 SHEAR WALL "SW" DETAIL
SCALE: 1/2" = 1'-0"



AT CONTRACTOR'S OPTION A CONSTRUCTION JOINT MAY BE SUBSTITUTED FOR A CONTROL JOINT.
8 TYP SLAB CONSTRUCTION JOINT
SCALE: 3/4" = 1'-0"
UNINDICATED AS (C/J) ON PLAN.



9 TYP SLAB CONTROL JOINT
SCALE: 3/4" = 1'-0"
INDICATED AS (C/J) ON PLAN.



10 CONCRETE PAD FOOTING
SCALE: 3/4" = 1'-0"

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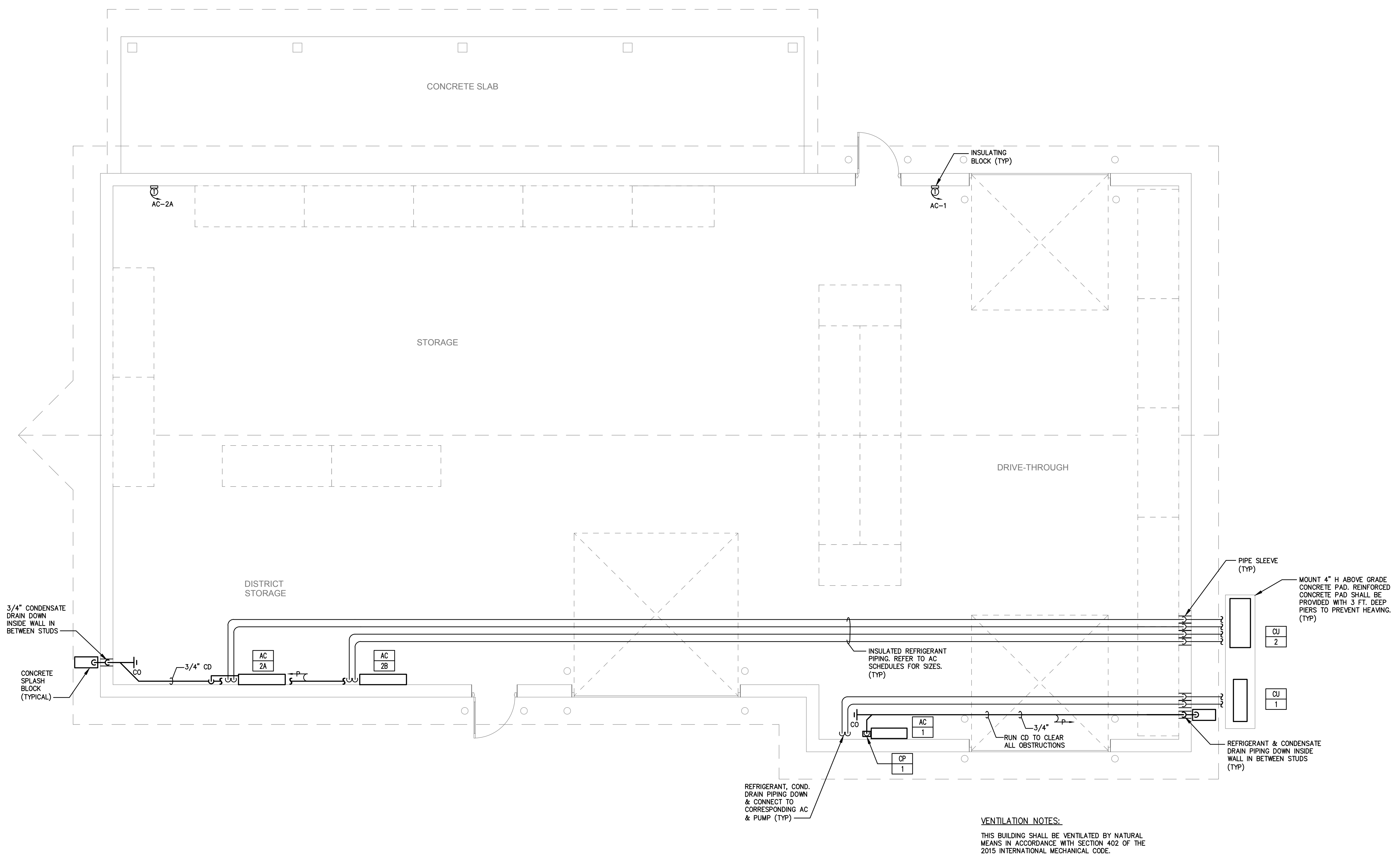
NJ DDE SP #05-4930-070-19-1000

PROPOSED MAINTENANCE & OPERATIONS BUILDING
SOUTHAMPTON TOWNSHIP BOE
26 PLEASANT STREET
SOUTHAMPTON, NEW JERSEY
TITLE: CONSTRUCTION DETAILS

DRAWING DATE:
14 FEB 2019
REVISION DATE:

DRAWN BY:
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COMMISSION NO.:
5561A

S3
3 OF 3



1 SOUTHAMPTON STORAGE
H-1 SCALE 1/4" = 1'-0"

PRINT DATE: 2/20/19

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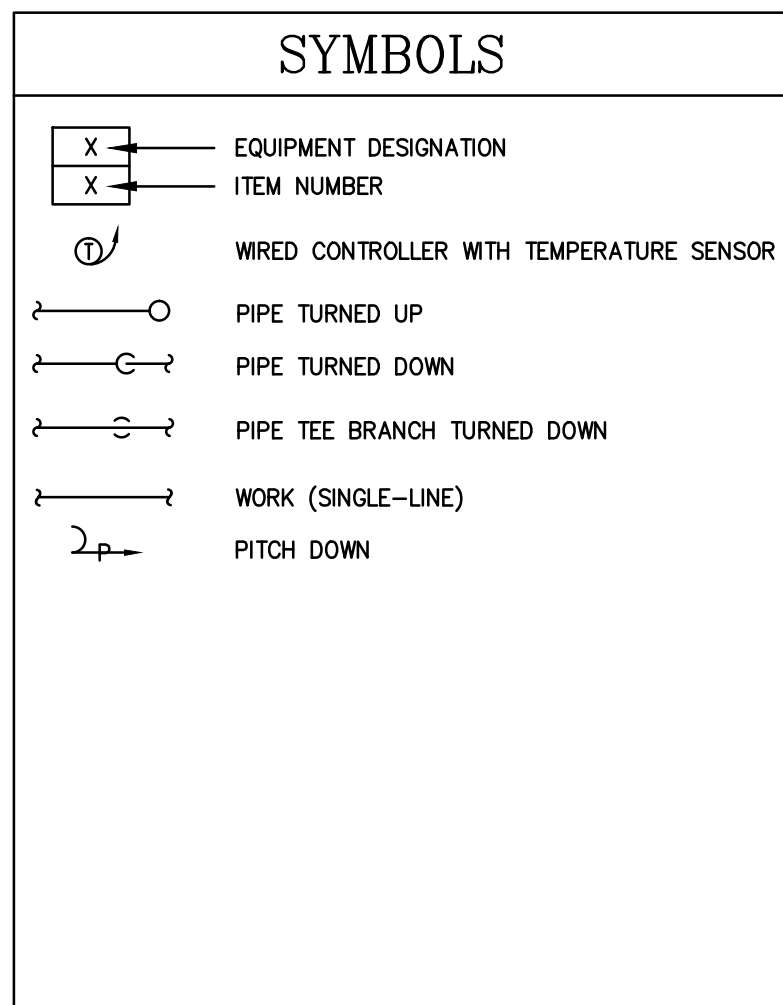
PROPOSED MAINTENANCE & OPERATIONS BUILDING
SOUTHAMPTON TOWNSHIP BOE
26 PLEASANT STREET
SOUTHAMPTON, NEW JERSEY
TITLE: FLOOR PLAN - HVAC

DRAWING DATE:	14 FEB 2019
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DRAWN BY:	
COMMISSION NO.:	5561A

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ABBREVIATIONS	
&	AND
AC	AIR CONDITIONING UNIT
CFM	CUBIC FEET PER MINUTE
CU	CONDENSING UNIT
Ø / DIA.	DIAMETER
DN	DOWN
DWG	DRAWING
F	FAHRENHEIT
FPM	FEET PER MINUTE
FT	FEET
H	HEIGHT
HP	HORSE POWER
HZ	HERTZ (FREQUENCY)
IN	INCH
KW	KILOWATTS
L	LENGTH
LBS	POUNDS
LxWxH	LENGTH BY WIDTH BY HEIGHT
MAX	MAXIMUM
MBH	MAXIMUM MAX THOUSAND BTU PER HOUR
MIN	MINIMUM
# NO.	NUMBER
RPM	REVOLUTIONS PER MINUTE
SO FT	SQUARE FOOT
SP	STATIC PRESSURE
TEMP	TEMPERATURE
TYP	TYPICAL
V/PH/Hz	VOLTS/PHASE/HERTZ
W/	WITH



SPLIT AC UNIT SCHEDULE

	AC	CU
BASE MANUFACTURER	DAIKIN	DAIKIN
SERVICE	DRIVE THROUGH	STORAGE
COOLING CAPACITY	MBH	24
HEATING CAPACITY	MBH	27
REFRIGERANT TYPE	R410A	R410A
SEER	17.60	17.60
INDOOR UNIT:		
TAG	AC-1	AC-2A.2B
MODEL No.	FAQ24TAVJU	FAQ24TAVJU
V/PH/Hz	208/1/60	208/1/60
APPROX. WEIGHT	LBS	31
SIZE (H x W x D)	IN	11-3/8 x 41-3/8 x 9-1/4
MINIMUM CIRCUIT AMPS	AMPS	0.6
MAXIMUM OVERCURRENT PROTECTION	AMPS	15
AIR FLOW	L/H (CFM)	470/635
OUTDOOR UNIT:		
TAG	CU-1	CU-2
MODEL No.	R2024TAVJU	5MXS48TVJU
V/PH/Hz	208-230/1/60	208-230/1/60
APPROX. WEIGHT	LBS	16.5
MINIMUM CIRCUIT AMPS	AMPS	25
MAXIMUM OVERCURRENT PROTECTION	AMPS	50
REFRIG. PIPE LIQUID	IN	3/8 (2) 1/4
REFRIG. PIPE GAS	IN	5/8 (2) 5/8
MAX LENGTH	FT	164
SIZE (HxWxD)	IN	34-1/4 x 12-5/8
APPROX. WEIGHT	LBS	200

- NOTES:**
- PROVIDE FUSED DISCONNECT FOR INDOOR UNIT & WEATHERPROOF FUSED DISCONNECT FOR OUTDOOR UNIT.
 - PROVIDE WIRED WALL MOUNTED CONTROLLER/THERMOSTAT.
 - PROVIDE LOW AMBIENT ACCESSORY KIT FOR HEATING OPERATION DOWN TO 0°F.
 - INSTALL POWER & CONTROL WIRING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - INSTALL REFRIGERANT PIPING WITH INSULATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - PROVIDE PROGRAMMING, START-UP AND PERSONNEL TRAINING.

CONDENSATE PUMP SCHED.

MARK No.	CP-1
MANUFACTURER	LITTLE GIANT
MODEL	YOMA-200LS
CAPACITY	25
LIFT	10
MOUNTING	FLOOR
LOCATION	SEE FLOOR PLANS
TANK CAPACITY	0.5
MOTOR DATA:	
HP	1/30
V/PH-HZ	1.5
	115-1-60

PROVIDE 6 FT. ELECTRIC CORD.

HVAC SPECIFICATIONS:

- 1.0. GENERAL**
- A. GOVERNING CODES AND STANDARDS**
- N.J. UNIFORM CONSTRUCTION CODE
 - 2015 INTERNATIONAL BUILDING CODE
 - 2015 INTERNATIONAL MECHANICAL CODE
 - NFPA STANDARDS 80A
 - ALL APPLICABLE ASHRAE STANDARDS
 - ALL APPLICABLE SMACNA STANDARDS
 - 2014 NATIONAL ELECTRICAL CODE
 - IL (ALL EQUIPMENT MUST BE LABELED)
 - NEBB.
- B. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH RECOGNIZED INDUSTRY STANDARDS, GOVERNING CODES, APPROVED SHOP DRAWINGS AND MANUFACTURER'S INSTRUCTIONS.**
- C. PERMITS: ACQUIRE ALL PERMITS AND PAY ALL PERMIT FEES FOR THIS WORK.**
- D. WARRANTY: THE EQUIPMENT SHALL HAVE A MANUFACTURER'S WARRANTY FOR A PERIOD OF TWO (2) YEARS FROM DATE OF INSTALLATION. IF DURING THIS PERIOD, ANY PART SHOULD FAIL TO FUNCTION PROPERLY DUE TO DEFECTS IN WORKMANSHIP OR MATERIAL, IT SHALL BE REPLACED OR REPAIRED AT THE DISCRETION OF THE MANUFACTURER. MANUFACTURER SHALL HAVE FIFTEEN YEARS EXPERIENCE IN THE U.S. MARKET.**
- E. SHOP DRAWINGS ARE REQUIRED FOR ALL MATERIALS, METHODS AND EQUIPMENT. PRIOR TO EXECUTION OF CONTRACT WORK, SUBMIT SHOP DRAWINGS PER 01330 INCLUDING COMPOSITE THAT SHOW ALL NEW OUTWORK, LIGHTING, CONDUITS, ETC. SHOW ALL ELEVATIONS OF ALL COMPONENTS TO ENGINEER FOR REVIEW AND OBTAIN APPROVAL.**
- F. CONTRACTOR SHALL SUBMIT O&M MANUALS & MARKED UP HVAC DRAWINGS TO ENGINEER TO SHOW "AS-BUILT" CONDITIONS AFTER SATISFACTORY COMPLETION OF PROJECT, PER 017839.**
- G. PROVIDE FOR EACH NEW HVAC EQUIPMENT PERMANENT ATTACHED NAMEPLATE, 3" LONG BY 1-1/2" WIDE, EACH CONTROL VALVE 1-1/2" DIA. BRASS TAG WITH 1/2" INDENTED NUMERALS, AND IDENTIFY ALL NEW HANGING, REFRIGERANT AND OUTWORK WITH SNAP ON TYPE MARKERS IN ACCORDANCE WITH SCHEME FOR IDENTIFICATION OF SYSTEM ANSI A13.1 AND OSHA SAFETY REGULATION.**
- H. PROVIDE ALL SCAFFOLDING, RIGGING, HOISTING & INSTALLATION SERVICES NECESSARY FOR ERECTION AND DELIVERY INTO THE PREMISES OF ALL EQUIPMENT AND MATERIALS FURNISHED UNDER THIS SECTION OF THE SPECIFICATIONS, AND REMOVE SAME FROM PREMISES WHEN NO LONGER REQUIRED.**
- I. PROVIDE ALL BASES AND SUPPORTS NOT PART OF THE BUILDING STRUCTURE OF REQUIRED SIZE, TYPE AND STRENGTH, AS APPROVED BY THE ARCHITECT, FOR ALL EQUIPMENT AND MATERIALS FURNISHED UNDER THIS CONTRACT. ALL EQUIPMENT BASES AND SUPPORTS SHALL BE ADEQUATELY ANCHORED TO THE BUILDING STRUCTURE TO PREVENT SHIFTING OF POSITION UNDER OPERATING CONDITIONS.**
- J. PROVIDE AND ASSUME RESPONSIBILITY FOR THE LOCATION AND MAINTENANCE IN PROPER POSITION OF ALL SLEEVES, INSERTS, AND ANCHOR BOLTS REQUIRED FOR THE WORK IN THE EVENT THAT FAILURE TO DO SO REQUIRES CUTTING AND PATCHING OF FINISHED WORK, IT SHALL BE DONE WITHOUT ADDITIONAL COST TO THE OWNER.**
- K. ALL PIPES AND CONDUITS PASSING THROUGH MASONRY WALLS OR PARTITIONS SHALL BE PROVIDED WITH SLEEVES HAVING AN INTERNAL DIAMETER LARGER THAN THE OUTSIDE DIAMETER OF THE PIPE OR INSULATION ENCLONGING THE PIPE OR CONDUIT. SLEEVES SHALL BE SCHEDULE 40 BLACK PIPE.**
- L. SLEEVES THROUGH FOUNDATION WALLS SHALL BE JAMES B. CLOW & SONS NO. F-1430 OR F-1435 CAST IRON WALL SLEEVE WITH INTERMEDIATE INTEGRAL FLANGE. SLEEVES SHALL BE SET WITH ENDS FLUSH WITH EACH FACE OF WALL. THE SPACE BETWEEN SLEEVES AND PIPE SHALL BE PACKED WITH OAKUM TO WITHIN 2" OF EACH FACE OF THE WALL. THE REMAINING SPACE SHALL BE PACKED AND MADE WATER-TIGHT WITH A WATERPROOF COMPOUND.**
- M. SLEEVES THROUGH CONCRETE FLOORS OR INTERIOR MASONRY WALLS SHALL BE SCHEDULE 40 BLACK STEEL PIPE, SET FLUSH WITH FINISHED WALL SURFACES, BUT EXTENDING 1/2" ABOVE FINISHED FLOORS. THE OPEN SLEEVE SPACE SHALL BE PACKED WITH NON-COMBUSTIBLE MATERIALS.**
- N. SLEEVES THROUGH NON-MASONRY PARTITIONS SHALL BE 22 GAUGE GALVANIZED SHEET STEEL, SET FLUSH WITH FINISHED SURFACES OF PARTITIONS.**
- O. INSERTS SHALL BE PRESET CONCRETE INSERTS WITH STEEL REINFORCED RODS THROUGH THE INSERT AND BOTH ENDS HOOKED OVER THE REINFORCED MESH. INSERTS SHALL BE OF INDIVIDUAL TYPE OF WALLEABLE IRON CONSTRUCTION WITH ACCOMMODATION FOR REMOVABLE NUTS AND THREADED RODS UP TO 3/4" DIAMETER, PERMITTING LATERAL ADJUSTMENT, EXCEPT AS OTHERWISE NOTED. INDIVIDUAL INSERTS SHALL BE GRINNELL FIG. 282 UP TO 5" PIPE AND CONDUIT, FIG. 282, 6" AND UP TO 8" PIPE AND CONDUIT, FIG. 152 ABOVE 8" AND UP TO 12" PIPE AND CONDUIT. FOR FIGURES 282 AND 152, THEY SHALL COME WITH AN OPENING AT THE TIP TO ALLOW REINFORCING RODS UP TO 1/2" DIAMETER TO BE PASSED THROUGH THE INSERT BODY. RODS SHALL EXTEND A MINIMUM OF 4" ON EITHER SIDE OF THE INSERT. PIPES LARGER THAN 12" SHALL BE SUSPENDED FROM STEEL MEMBERS ONLY.**
- P. FOR OPENINGS AROUND PIPES AND CONDUITS AND/OR SLEEVES, 3M PRODUCT CALK CP 25 AND PUTTY 303 IS APPROVED EQUAL.**
- Q. PROVIDE ESCUTCHEONS ON PIPES WHEREVER THEY PASS THROUGH CEILINGS, WALLS, OR PARTITIONS.**
- R. ESCUTCHEONS FOR PIPES PASSING THROUGH OUTSIDE WALLS SHALL BE RITTER PATTERN AND CASTING CO., NO. 1, SOLID, CAST BRASS, FLAT TYPE SECURED TO PIPE WITH SET SCREW.**
- S. ESCUTCHEONS FOR PIPES PASSING THROUGH FLOORS SHALL BE RITTER PATTERN AND CASTING CO., NO. 36A, SPLIT-HINGED, CAST BRASS TYPE, DESIGNED TO FIT PIPE ON ONE END AND COVER SLEEVE PROJECTING THROUGH FLOOR ON THE OTHER END.**
- T. ESCUTCHEONS FOR PIPES PASSING THROUGH INTERIOR WALLS, PARTITIONS, AND CEILINGS SHALL BE RITTER PATTERN AND CASTING CO., NO. 3A, SPLIT-HINGED, CAST BRASS CHROMIUM PLATED TYPE.**
- 2.0. SYSTEM DESCRIPTION**
- THE VARIABLE CAPACITY HEAT PUMP SYSTEM SHALL BE A DAIKIN INVERTER DRIVEN SKYAIR SERIES SPLIT SYSTEM. THE SYSTEM SHALL CONSIST OF A CEILING MOUNTED ROUNDLOW DISCHARGE SENSING CASSETTE INDOOR EVAPORATOR MODEL EXCLUSIVELY MATCHED TO THE OUTDOOR CONDENSING UNIT MODEL. THE R20 OUTDOOR CONDENSING UNIT MODELS SHALL BE A DIRECT EXPANSION (DX) AIR-COOLED HEAT PUMP AIR-CONDITIONING SYSTEM WITH A VARIABLE SPEED INVERTER DRIVEN COMPRESSOR & FAN MOTOR USING R-410A REFRIGERANT. THE OUTDOOR UNIT IS A HORIZONTAL DISCHARGE, VARIABLE SPEED, SINGLE FAN UNIT USING A SINGLE PHASE POWER SUPPLY.
- 2.02. QUALITY ASSURANCE**
- A. THE UNITS SHALL BE TESTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL), IN ACCORDANCE WITH ANSI/UL 995 - HEATING AND COOLING EQUIPMENT AND BEAR THE LISTED MARK.**
- B. ALL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC).**
- C. THE SYSTEM SHALL BE RATED IN ACCORDANCE WITH AIR CONDITIONING REFRIGERATION INSTITUTES (ARI) STANDARD 210/240 AND BEAR THE ARI LABEL.**
- D. THE SYSTEM WILL BE PRODUCED IN AN ISO 9001 AND ISO 14001 FACILITY, WHICH ARE STANDARDS SET BY THE INTERNATIONAL STANDARD ORGANIZATION (ISO). THE SYSTEM SHALL BE FACTORY TESTED FOR SAFETY AND FUNCTION.**
- E. THE OUTDOOR UNIT WILL BE FACTORY CHARGED WITH R-410A.**
- F. A HOLDING CHARGE OF DRY NITROGEN SHALL BE PROVIDED IN THE EVAPORATOR.**
- G. SYSTEM EFFICIENCY SHALL MEET OR EXCEED 18.5 SEER AND 12.0 EER.**
- 2.03. DELIVERY, STORAGE AND HANDLING**
- A. UNIT SHALL BE STORED AND HANDLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.**
- 3.0. WARRANTY**
- 3.01. LIMITED WARRANTY**
- DAIKIN NORTH AMERICA LLC (DAIKIN) WARRANTS TO THE CUSTOMER WHO IS THE ORIGINAL OWNER AND USER OF THE DAIKIN PRODUCTS SPECIFIED ABOVE (CUSTOMER) THAT UNDER NORMAL USE AND MAINTENANCE FOR COMFORT COOLING AND CONDITIONING APPLICATIONS SUCH PRODUCTS (THE PRODUCTS) WILL BE FREE FROM DEFECTS IN MATERIAL OR WORKMANSHIP. WARRANTY COVERAGE BEGINS ON THE DATE OF SUBSTANTIAL COMPLETION.
- A. THE WARRANTY LASTS FOR A PERIOD UP TO 10 YEARS.**
- 3.02. INSTALLATION REQUIREMENTS**
- INSTALLATION MUST COMPLY WITH INSTALLATION MANUAL. IT IS RECOMMENDED THE SYSTEM BE INSTALLED BY A CONTRACTOR/DEALER WHO HAS BEEN THROUGH DAIKIN TRAINING PROGRAMS. THE COOLING PERFORMANCE IS BASED ON 80°F DB / 67°F WB FOR THE INDOOR UNIT AND 95°F DB / 75°F WB FOR THE OUTDOOR UNIT WITH 25FT OF INTERCONNECTING PIPE-WORK & 0FT LEVEL DIFFERENCE. THE OPERATING RANGE IN COOLING WILL BE 23°F DB - 122°F DB. THE SYSTEM SHALL BE CAPABLE OF REFRIGERANT PIPING UP TO 164 TOTAL FEET WITH A 98 FEET MAXIMUM VERTICAL DIFFERENCE, WITHOUT ANY OIL TRAPS OR ADDITIONAL COMPONENTS.
- 4.0. PRODUCTS**
- 4.01. OUTDOOR UNIT**
- A. GENERAL: THE OUTDOOR CONDENSING UNIT IS DESIGNED SPECIFICALLY FOR USE WITH MATCHED CAPACITY (E.G. R2024TAVJU/FAQ24TAVJU) SKYAIR SERIES INDOOR EVAPORATOR UNITS.**
- THE OUTDOOR UNIT SHALL BE FACTORY ASSEMBLED AND PRE-WIRED WITH ALL NECESSARY ELECTRONIC AND REFRIGERANT CONTROLS. THE REFRIGERATION CIRCUIT OF THE CONDENSING UNIT SHALL CONSIST OF A DAIKIN SWING COMPRESSOR, MOTORS, FANS, CONDENSER COIL, ELECTRONIC EXPANSION VALVES, SOLENOID VALVES, 4 WAY VALVE, DISTRIBUTION HEADERS, CAPILLARIES, FILTERS, SHUT OFF VALVES, SERVICE PORTS AND SUCTION ACCUMULATOR.
 - BOTH LIQUID AND SUCTION LINES MUST BE INDIVIDUALLY INSULATED BETWEEN THE OUTDOOR AND INDOOR UNITS.
 - THE OUTDOOR UNIT CAN BE WIRED AND PIPED IN THE FRONT, LATERAL OR DOWNWARD DIRECTIONS, ACCESSED FROM THE RIGHT SIDE OF THE UNIT.
 - THE SOUND PRESSURE LEVEL STANDARD SHALL BE THAT VALUE AS LISTED IN THE DAIKIN ENGINEERING MANUAL FOR THE SPECIFIED MODELS AT 3 FEET FROM THE FRONT OF THE UNIT
 - THE SYSTEM WILL AUTOMATICALLY RESTART OPERATION AFTER A POWER FAILURE AND WILL NOT CAUSE ANY SETTINGS TO BE LOST, THUS ELIMINATING THE NEED FOR RE-PROGRAMMING.
 - THE OUTDOOR UNIT SHALL BE MODULAR IN DESIGN AND SHOULD ALLOW FOR SIDE-BY-SIDE INSTALLATION WITH MINIMUM SPACING.

- THE FOLLOWING SAFETY DEVICES SHALL BE INCLUDED ON THE CONDENSING UNIT; HIGH PRESSURE SWITCH, OUTDOOR FAN DRIVER OVERLOAD PROTECTOR, INVERTER OVERLOAD PROTECTOR, FUSIBLE PLUGS, FUSES.
 - EACH CONDENSING UNIT SHALL UTILIZE AN ALGORITHM TO AUTOMATICALLY ADJUST THE REFRIGERANT SUCTION AND CONDENSING TEMPERATURES IN RESPONSE TO THE HEATING AND COOLING LOADS, AND IN RESPONSE TO THE CURRENT WEATHER CONDITIONS. THE VRT CONTROL SHALL BE CAPABLE OF BEING CUSTOMIZED IN THE FOLLOWING MODES AND SUB-MODES:
 - AUTOMATIC (FACTORY PRESET) - THE AUTOMATIC VRT CONTROL SHALL ALLOW THE TARGET EVAPORATOR TEMPERATURE (TC) AND TARGET CONDENSING TEMPERATURE (TC) TO FLUCTUATE BASED ON OUTDOOR AMBIENT TEMPERATURE CONDITIONS, AND SHALL INCORPORATE THE FOLLOWING SUB-MODES:
 - POWERFUL
 - QUIK
 - MILD (FACTORY PRESET)
 - HIGH SENSIBLE - THE HIGH SENSIBLE MODE SHALL ALLOW THE SYSTEM TE AND TC VALUES TO BE PROGRAMMED TO SERIES OF FIXED TE AND TC VALUES. THE HIGH SENSIBLE MODE SHALL ALSO BE CAPABLE OF INCORPORATING THE FOLLOWING SUB-MODES:
 - EEO
 - BASIC - THE BASIC MODE SHALL DISABLE THE VRT CONTROL OF THE OUTDOOR UNIT AND ALLOW THE SYSTEM TO OPERATE WITH CONSTANT TE AND TC VALUES.
- B. UNIT CABINET**
- THE OUTDOOR UNIT MODEL R20...TAVJU SHALL BE COMPLETELY WEATHERPROOF AND CORROSION RESISTANT. THE UNIT SHALL BE CONSTRUCTED FROM RUST-PROOFED MILD STEEL PANELS COATED WITH A BAKED ENAMEL FINISH. THE OUTDOOR UNIT WILL COME FURNISHED WITH FOUR (4) MOUNTING FEET, MOUNTED ACROSS THE BASE FAN, TO ALLOW BOLTING TO A GEMENT PAD OR OPTIONALLY SUPPLIED MOUNTING BRACKET.
- C. UNIT CABINET**
- THE CONDENSING UNIT SHALL CONSIST OF ONE PROPELLER TYPE, DIRECT-DRIVE 70 W FAN MOTOR THAT HAS MULTIPLE SPEED OPERATION VIA A DC (DIGITALLY COMMUTATING) INVERTER. THE FAN SHALL BE A HORIZONTAL DISCHARGE CONFIGURATION WITH A NOMINAL AIRFLOW MAXIMUM OF 2,682 CFM. THE FAN MOTOR SHALL HAVE INHERENT PROTECTION AND PERMANENTLY LUBRICATED BEARINGS AND BE MOUNTED. THE FAN MOTOR SHALL BE PROVIDED WITH A FAN GUARD TO PREVENT CONTACT WITH MOVING PARTS.
- D. CONDENSER COIL**
- THE CONDENSER COIL SHALL BE MANUFACTURED FROM COPPER TUBES EXPANDED INTO ALUMINUM FINS TO FORM A MECHANICAL BOND. THE HEAT EXCHANGER COIL SHALL BE OF A WAFFLE LOUVER FIN AND RIFLED BORE TUBE DESIGN TO ENSURE HIGHLY EFFICIENT PERFORMANCE. THE HEAT EXCHANGER ON THE CONDENSING UNITS SHALL BE MANUFACTURED FROM H-X SEAMLESS COPPER TUBE. THE FINS ARE TO BE COVERED WITH AN ANTI-CORROSION ACRYLIC RESIN AND HYDROPHILIC FILM TYPE E1 RATED FOR UP TO 1000 HOURS SALT SPRAY. THE PIPE PLATES SHALL BE TREATED WITH POWDERED POLYESTER RESIN FOR CORROSION PREVENTION. THE THICKNESS OF THE COATING MUST BE BETWEEN 2.0 TO 3.0 MICRONS.
- E. COMPRESSOR**
- THE DAIKIN SWING COMPRESSOR SHALL BE VARIABLE SPEED (PAM INVERTER) CONTROLLED WHICH IS CAPABLE OF CHANGING THE SPEED TO FOLLOW THE VARIATIONS IN TOTAL COOLING LOAD AS DETERMINED BY THE SUCTION GAS PRESSURE AS MEASURED IN THE CONDENSING UNIT. IN ADDITION, SAMPLINGS OF EVAPORATOR AND CONDENSER TEMPERATURES SHALL BE TAKEN SO THAT THE HIGH/LOW PRESSURES DETECTED ARE READ EVERY 20 SECONDS AND CALCULATED. WITH EACH READING, THE COMPRESSOR CAPACITY SHALL BE CONTROLLED TO ELIMINATE DEVIATION FROM TARGET VALUE.
 - THE COMPRESSOR SHALL BE EQUIPPED WITH A CRANKCASE HEATER, HIGH PRESSURE SAFETY SWITCH, AND INTERNAL THERMAL OVERLOAD PROTECTOR.
 - THE COMPRESSOR SHALL BE MOUNTED TO AVOID THE TRANSMISSION OF VIBRATION.
- F. ELECTRICAL**
- THE POWER SUPPLY TO THE OUTDOOR UNIT SHALL BE 208-230 VOLTS, 1 PHASE, 60 HERTZ +/- 10%.
 - THE CONTROL VOLTAGE BETWEEN THE INDOOR AND OUTDOOR UNIT SHALL BE 16VDC NON-SHELDED, STRANDED 2 CONDUCTOR CABLE.
 - THE CONTROL WIRING SHALL BE A TWO-WIRE MULTIPLEX TRANSMISSION SYSTEM.
 - THE CONTROL WIRING LENGTHS SHALL BE AS SHOWN BELOW:
- 4.02. FAQ INDOOR UNIT - WALL MOUNTED UNIT**
- A. GENERAL:**
- DAIKIN INDOOR UNIT MODEL FAQ SHALL BE A WALL MOUNTED FAN COIL UNIT, OPERABLE WITH R-410A REFRIGERANT, EQUIPPED WITH AN ELECTRONIC EXPANSION VALVE, FOR INSTALLATION ON WALL. COMPUTERIZED PID CONTROL SHALL BE USED TO CONTROL SUPERHEAT TO DELIVER A COMFORTABLE ROOM TEMPERATURE CONDITION.
- B. INDOOR UNIT**
- THE DAIKIN INDOOR UNIT FAQ SHALL BE COMPLETELY FACTORY ASSEMBLED AND TESTED. INCLUDED IN THE UNIT IS FACTORY WIRING, PIPING, ELECTRONIC PROPORTIONAL EXPANSION VALVE, CONTROL CIRCUIT BOARD, FAN MOTOR THERMAL PROTECTOR, FLARE CONNECTIONS, CONDENSATE SAFETY SHUTOFF AND ALARM VIA OPTIONAL FIELD MOUNTED FLAT SWITCH AND CONDENSATE PUMP, SELF-DIAGNOSTICS, AUTO-RESTART FUNCTION, 3-MINUTE FUSED DELAY, AND TEST RUN SWITCH.
 - INDOOR UNIT AND REFRIGERANT PIPES WILL BE CHARGED WITH DEHYDRATED AIR PRIOR TO SHIPMENT FROM THE FACTORY.
 - BOTH REFRIGERANT LINES SHALL BE INSULATED FROM THE OUTDOOR UNIT.
 - THE INDOOR UNIT WILL BE SEPARATELY POWERED WITH 208-230V/1-PHASE/60HZ.
 - THE VOLTAGE RANGE WILL BE 253 VOLTS MAXIMUM AND 187 VOLTS MINIMUM.
- C. UNIT CABINET**
- THE CABINET SHALL BE AFFIXED TO A FACTORY SUPPLIED WALL MOUNTING TEMPLATE AND LOCATED IN THE CONDITIONED SPACE.
 - THE CABINET SHALL BE CONSTRUCTED WITH SOUND ABSORBING FIBERGLASS URETHANE FOAM INSULATION.
 - MAINTENANCE ACCESS SHALL BE A MINIMUM OF 1/4" INCH IN THE REAR, 4 INCHES ON THE RIGHT AND LEFT SIDES.
- D. FAN**
- THE FAN SHALL BE A DIRECT-DRIVE SIROCOO TYPE FAN, STATICALLY AND DYNAMICALLY BALANCED IMPELLER WITH HIGH AND LOW FAN SPEEDS AVAILABLE.
 - THE FAN MOTOR SHALL OPERATE ON 208/230 VOLTS, 1 PHASE, 60 HERTZ WITH A MOTOR OUTPUT RANGE 0.034 TO 0.047 HP.
 - THE AIRFLOW RATE SHALL BE AVAILABLE IN HIGH AND LOW SETTINGS.
 - THE FAN MOTOR SHALL BE THERMALLY PROTECTED.
- E. FILTER**
- THE RETURN AIR SHALL BE FILTERED BY MEANS OF A WASHABLE LONG-LIFE FILTER WITH MILDEW PROOF RESIN.
- F. COIL**
- COILS SHALL BE OF THE DIRECT EXPANSION TYPE CONSTRUCTED FROM COPPER TUBES EXPANDED INTO ALUMINUM FINS TO FORM A MECHANICAL BOND.
 - THE COIL SHALL BE OF A WAFFLE LOUVER FIN AND HIGH HEAT EXCHANGE, RIFLED BORE TUBE DESIGN TO ENSURE HIGHLY EFFICIENT PERFORMANCE.
 - THE COIL SHALL BE A 3-ROW GROSS FIN COPPER EVAPORATOR COIL WITH 17 FPI DESIGN COMPLETELY FACTORY TESTED.
 - THE REFRIGERANT CONNECTIONS SHALL BE FLARE CONNECTIONS AND THE CONDENSATE WILL BE 27/32 INCH OUTSIDE DIAMETER PVC.
 - A THERMOSTAT WILL BE LOCATED ON THE LIQUID AND GAS LINE.
- G. ELECTRICAL**
- A SEPARATE POWER SUPPLY WILL BE REQUIRED OF 208-230 VOLTS, 1 PHASE, 60 HERTZ. THE ACCEPTABLE VOLTAGE RANGE SHALL BE 187 TO 253 VOLTS.
 - TRANSMISSION (CONTROL) WIRING BETWEEN THE INDOOR AND OUTDOOR UNIT SHALL BE A MAXIMUM OF 3,280 FEET.
 - TRANSMISSION (CONTROL) WIRING BETWEEN THE INDOOR UNIT AND REMOTE CONTROLLER SHALL BE A MAXIMUM DISTANCE OF 1,940 FEET.
- H. CONTROL**
- THE UNIT SHALL HAVE CONTROLS PROVIDED BY DAIKIN TO PERFORM INPUT FUNCTIONS NECESSARY TO OPERATE THE SYSTEM.
 - A FULL ARRAY OF FAULT DIAGNOSTICS SHALL BE ACCESSIBLE VIA THE REMOTE CONTROLLER.
 - THE UNIT SHALL BE COMPATIBLE WITH INTERFACING WITH CONNECTION TO BACNET AND LONWORKS NETWORKS OR INTERFACING WITH CONNECTION TO BMS SYSTEM.

PRINT DATE: 2/20/19

REGAN YOUNG, AIA
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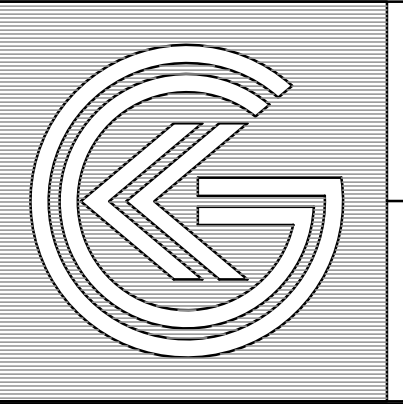
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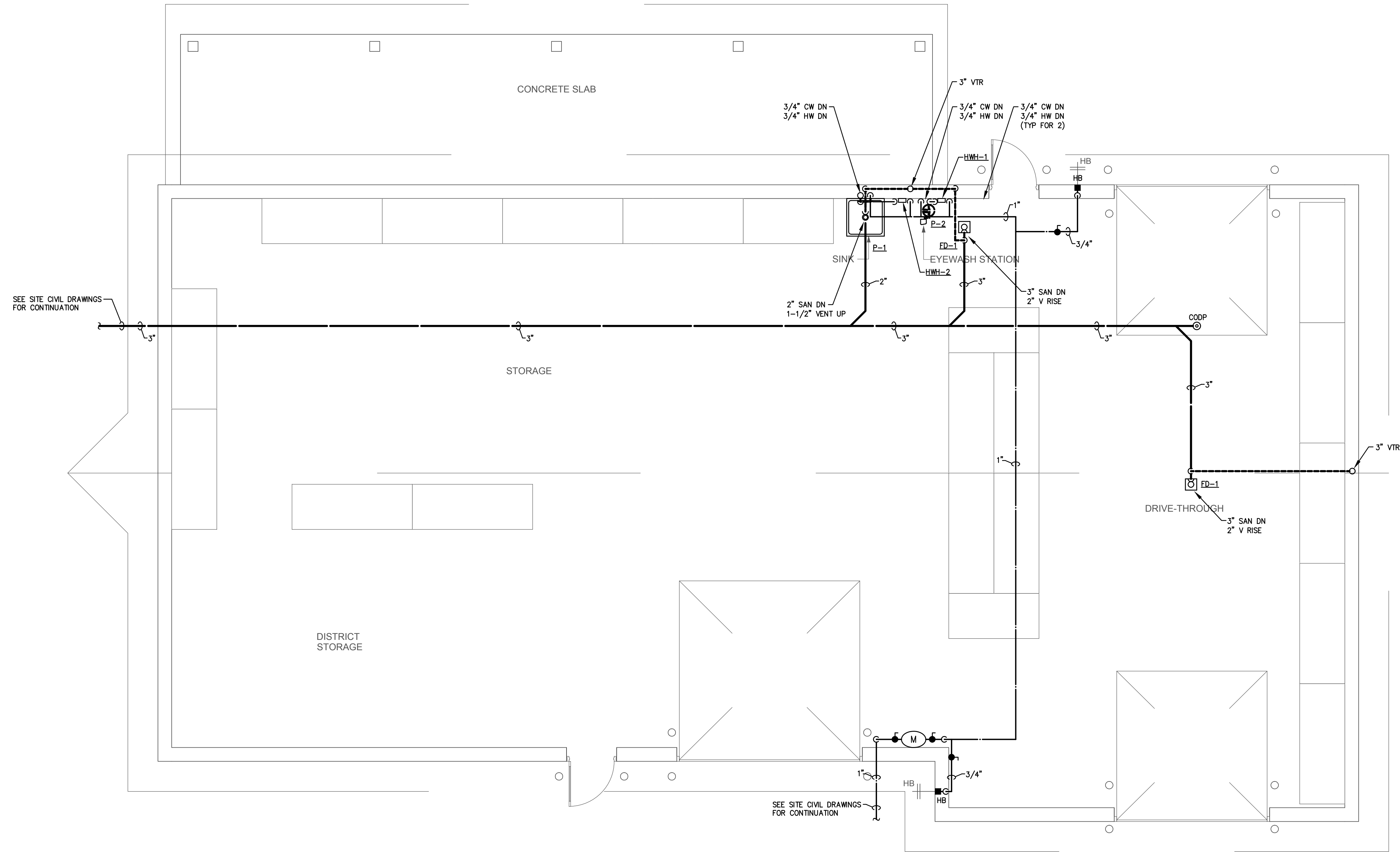
PROPOSED MAINTENANCE & OPERATIONS BUILDING
SOUTHAMPTON TOWNSHIP BOE
26 PLEASANT STREET
SOUTHAMPTON, NEW JERSEY
TITLE: SCHEDULES & SPECIFICATIONS - HVAC

DRAWING DATE:	14 FEB 2019
REVISION DATE:	
DRAWN BY:	
COMMISSION NO.:	5561A

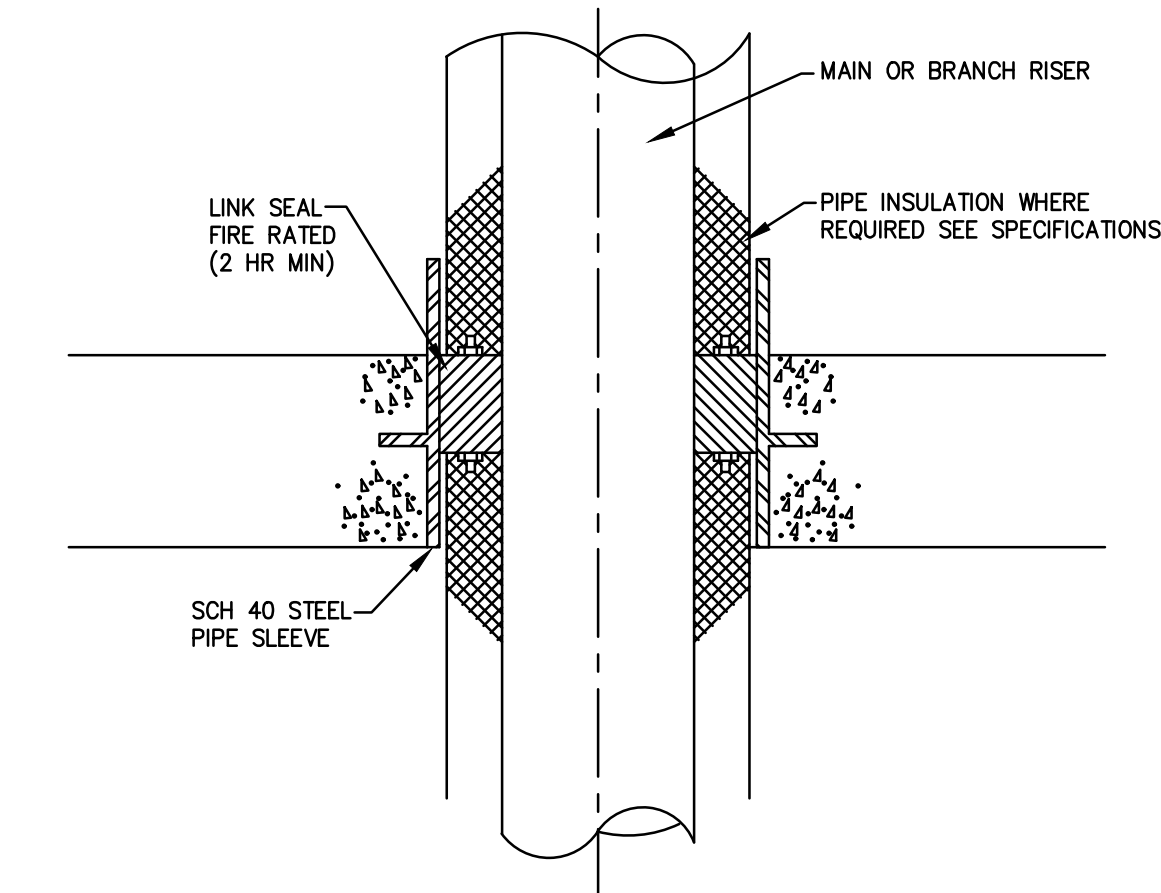
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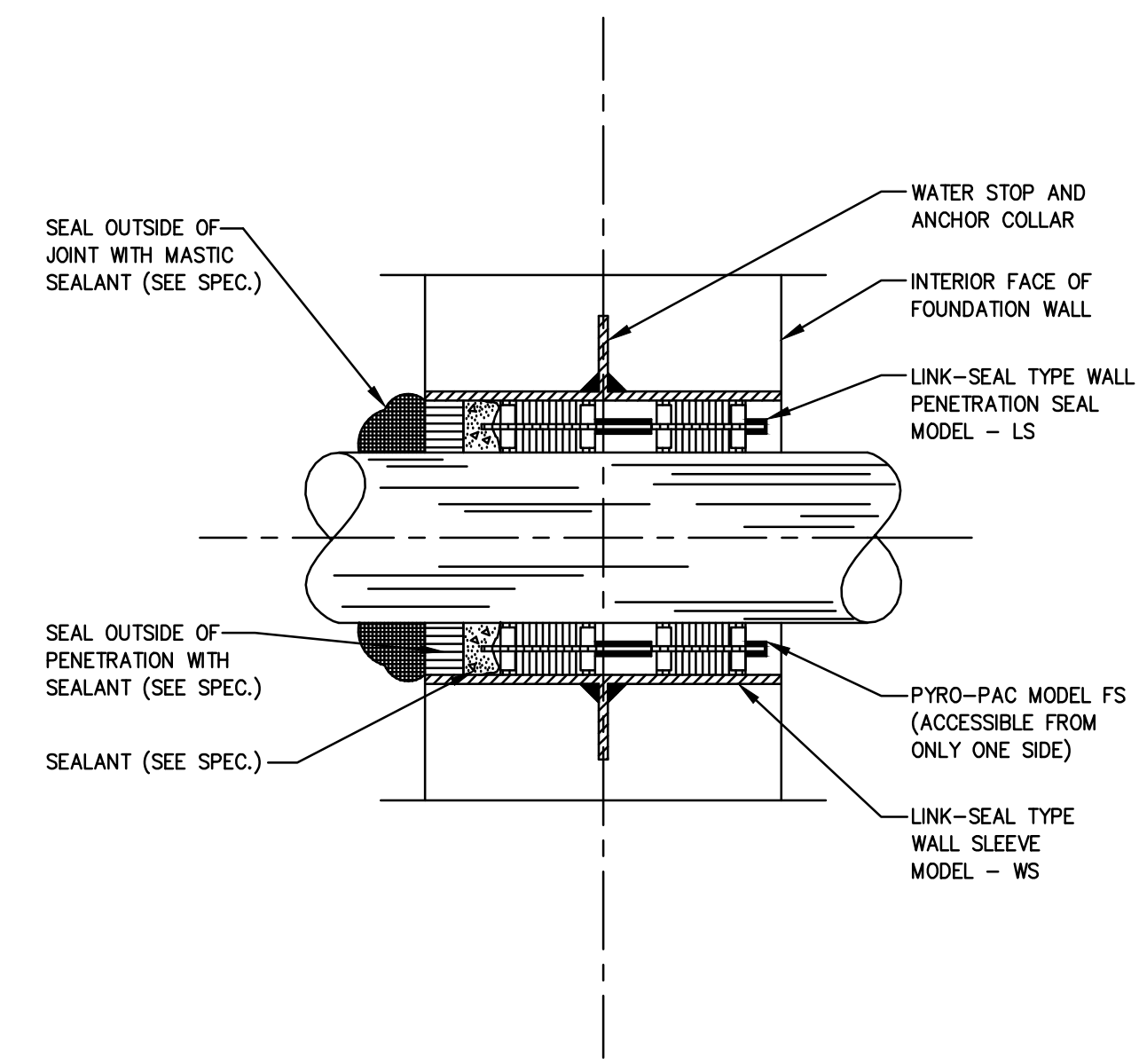
KELTER & GILLIGO
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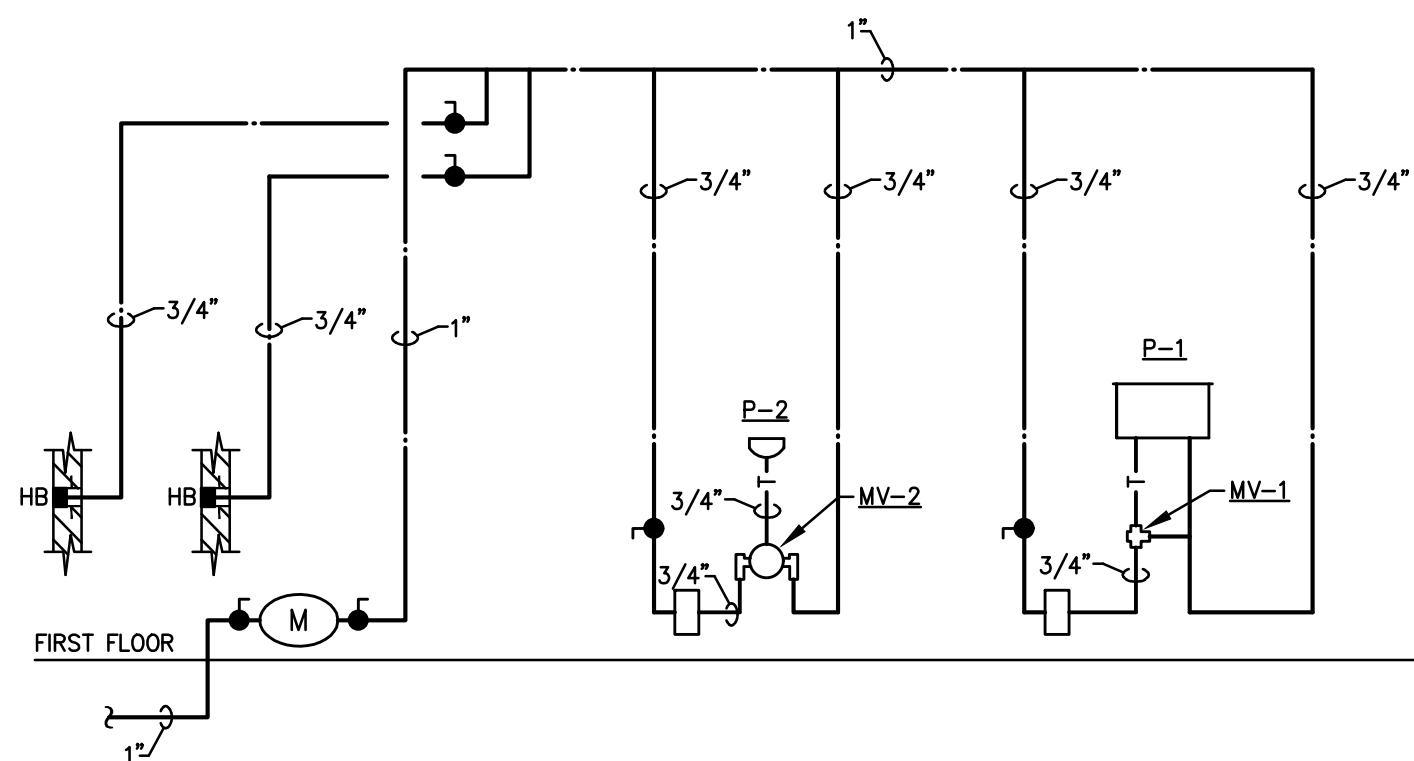
1 SOUTHAMPTON STORAGE - PLUMBING
 P-1 SCALE 1/4" = 1'-0"



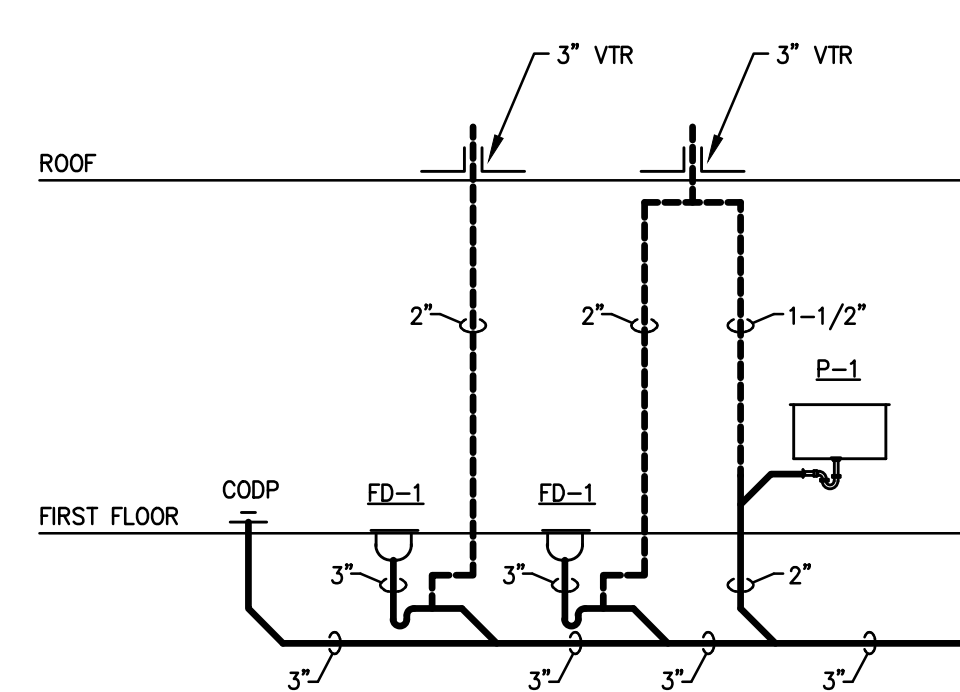
4 PIPE SLEEVE THROUGH FLOOR SLAB
 P-4 NOT TO SCALE



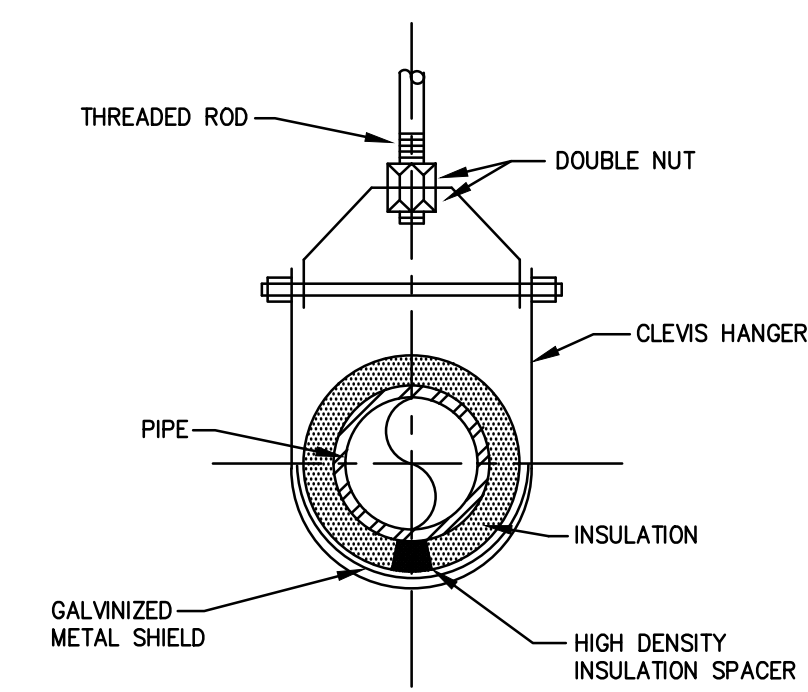
5 PIPE SLEEVE THROUGH EXTERIOR FOUNDATION WALL
 P-1 NOT TO SCALE



2 DOMESTIC WATER RISER DIAGRAM
 P-1 NOT TO SCALE



3 SANITARY & VENT RISER DIAGRAM
 P-1 NOT TO SCALE



6 CLEVIS HANGER DETAIL
 P-1 NOT TO SCALE
 NOTE:
 1. ALL HANGERS, SUPPORTS, & HARDWARE SHALL BE GALVANIZED.

PIPE HANGER SCHEDULE						
PIPE DIA.	SHIELD LENGTH	SHIELD THICKNESS	ROD DIA.	MAX. PIPE SUPPORT SPAN		
				STEEL	COPPER	CAST IRON
1/2"	12"	.048"	3/8"	8'-0"	6'-0"	-
3/4"	12"	.048"	3/8"	8'-0"	6'-0"	-
1"	12"	.048"	3/8"	8'-0"	6'-0"	-
1-1/4"	12"	.048"	3/8"	8'-0"	6'-0"	-
1-1/2"	12"	.048"	1/2"	10'-0"	8'-0"	5'-0"
2"	12"	.048"	1/2"	10'-0"	8'-0"	5'-0"
2-1/2"	12"	.048"	1/2"	10'-0"	8'-0"	-
3"	12"	.048"	1/2"	12'-0"	10'-0"	5'-0"
4"	12"	.060"	5/8"	12'-0"	10'-0"	5'-0"

PLUMBING SPECIFICATIONS:

1. **SCOPE OF WORK**
 - A. DOMESTIC WATER PIPING.
 - B. SANITARY AND VENT PIPING.
 - C. INSULATION.
 - D. HANGERS AND SUPPORTS.
 - E. VALVES.
 - F. CUTTING AND ROUGH PATCHING.
 - G. EQUIPMENT.
 - H. SUBMITTALS.
 - I. PERMITS.
 - J. WARRANTY.
 - K. SUPERVISION.
 - L. RIGGING.
 - M. EXCAVATION AND BACKFILL.
 - N. SITE RESTORATION.
2. **STANDARDS AND CODES**
 - A. NEW JERSEY UNIFORM CONSTRUCTION CODE.
 - B. INTERNATIONAL BUILDING CODE 2015, NEW JERSEY EDITION.
 - C. NATIONAL STANDARD PLUMBING CODE 2015.
 - D. LOCAL MUNICIPAL UTILITY AUTHORITY.
 - E. LOCAL WATER COMPANY RULES AND REGULATIONS.
 - F. OTHER STATE AND LOCAL AUTHORITIES HAVING JURISDICTION.
3. **MATERIALS:**
 - A. **PIPE AND FITTINGS**
 1. PIPE

SERVICE	MATERIAL	SCHEDULE	DESIGNATION
SOIL, WASTE & VENT ABOVE GROUND	NO-HUB CAST IRON	STANDARD WEIGHT	CISPI-30-7B
SOIL, WASTE & VENT BELOW GROUND	CAST IRON HUB & SPIGOT	STANDARD WEIGHT	ASTM A-74
COLD & HOT WATER ABOVE GROUND	COPPER	TYPE "L"	ASTM B-88
COLD WATER BELOW GROUND	CEMENT LINED DUCTILE IRON	PRESSURE CLASS 350	AWWA C151 AWWA C104/A21.4
 2. FITTINGS

SERVICE	SIZE	MATERIAL	WEIGHT	TYPE
SOIL, WASTE & VENT ABOVE GROUND	ALL	CAST IRON	STANDARD WEIGHT	NO-HUB ASTM A-48 NO COUPLING ASSEMBLY OR STAINLESS STEEL EQUAL TO CLAMP-ALL
SOIL, WASTE & VENT BELOW GROUND	ALL	CAST IRON	STANDARD WEIGHT	ASTM C-565 65T COMPRESSION GASKET
COLD AND HOT WATER ABOVE GROUND	ALL	WROUGHT COPPER	STANDARD	SOLDERED 95/5 TIN & ANTIMONY
COLD WATER BELOW GROUND	ALL	CEMENT LINED DUCTILE IRON	PRESSURE CLASS 350	MECHANICAL JOINT AWWA C111/A21.11
 3. DISSIMILAR METALS: PIPE, FITTINGS, HANGERS, ETC. IF DISSIMILAR METALS SHALL BE INSULATED AGAINST DIRECT CONTACT WITH EACH OTHER, BY USING A HIGH QUALITY OR GRADE OF DIELECTRIC MATERIAL.
 - B. **VALVES**
 1. BALL VALVES SHALL BE APOLLO, 77-200 SERIES, FULL PORT, SOLDER END WITH THE TEFLON SEATS AND SEALS WITH STEEL LEVER HANDLES WITH STOPS.
 - C. **INSULATION**
 1. INSULATE ALL DOMESTIC WATER PIPING, FITTINGS AND VALVES.
 2. PIPE INSULATION
 - A. 0.4 LB DENSITY FIBROUS GLASS, ONE-PIECE MOLDED SECTIONAL PIPE COVERING, MAXIMUM K FACTOR 0.26 AT 75F MEAN TEMPERATURE. OWENS-CORNING CORP. OR APPROVED EQUAL.
 - B. REPLACE NORMAL INSULATION INSIDE HANGER SHIELDS WITH INCOMPRESSIBLE INSULATING BLOCK INSIDE JACKET, OR USE LONGER SHIELDS AT HANGER.
 - C. JACKETS: FIRE RETARDANT ALL SERVICE OR PURPOSE TYPE LAMINATE OF VINYL COATED WHITE KRAFT FACING, GLASS REINFORCING AND ALUMINUM FOIL.
 - D. ADHESIVES AND COATINGS: FOSTER OR APPROVED EQUAL AS FOLLOWS:
 1. ADHESIVES: LAPS, 85-75; SELF SEALING LAPS MAY BE USED.
 2. FITTING, VALVE AND EQUIPMENT COATINGS: COLD WATER, 30-35; HOT WATER, 30-36.
 - E. FASTENING DEVICES
 1. WIRE: MINIMUM 16 GAUGE COPPER CLAD ANNEALED STEEL.
 2. TAPE: PRESSURE SENSITIVE.
 - F. INSULATION AND JACKETS
 1. HOT & COLD WATER: 1" THICK WITH VAPOR BARRIER JACKET.
 - G. FLAME & SMOKE SPREAD
 1. FLAME SPREAD INDEX OF 20 OR LESS
 2. SMOKE DEVELOPED INDEX OF 50 OR LESS
4. **HANGERS AND SUPPORTS**
 - A. HANGERS AND SUPPORTS
 1. SHALL CONFORM TO NATIONAL STANDARD PLUMBING CODE 2015, WITH SEISMIC RESTRAINTS AS REQUIRED FOR NEW CONSTRUCTION UNDER 2015 IBC.
 2. PIPE HANGERS SHALL BE SPACED NOT GREATER THAN 10'-0" O.C. WITH 1/2" MINIMUM ROD SIZE.
 3. ALL PIPE HANGERS, SUPPORTS, & HARDWARE SHALL BE GALVANIZED.
 4. PIPE SUPPORTS SHALL BE OF THE FOLLOWING TYPE AND FIGURE NUMBER, MANUFACTURED BY CAP, F&M, GRINNELL, MIRO INDUSTRIES OR APPROVED EQUAL:
 - a. BEAM CLAMP:
 1. CAP - FIGURE 268
 2. F&M - FIGURE 282
 - b. CLEVIS HANGER:
 1. CAP - FIGURE 100
 2. F&M - FIGURE 239
 3. GRINNELL - FIGURE 260
 - c. FLOOR SUPPORT
 1. CAP - FIGURE 125SP
 - d. U-BOLT:
 1. CAP - FIGURE 283
 2. F&M - FIGURE 176
 3. GRINNELL - FIGURE 137
 - e. RISER CLAMP:
 1. CAP - FIGURE 89 OR 126
 2. F&M - FIGURE 241
 3. GRINNELL - FIGURE 261
 - B. PIPE SHIELDS
 1. FOR ALL INSULATED PIPE FURNISH CLEVIS HANGERS WITH WELDED SHIELDS AND EQUAL TO CAP, INC., FIG. 100 SH.

5. **SUBMITTALS:**
 - A. SHOP DRAWINGS SHALL BE REQUIRED FOR:
 1. ALL EQUIPMENT, MATERIALS, MEANS & METHODS INTENDED FOR USE UNDER THIS CONTRACT.
 - B. PRIOR TO DELIVERY TO JOB SITE, BUT SUFFICIENTLY IN ADVANCE OF REQUIREMENTS NECESSARY TO ALLOW ARCHITECT AMPLE TIME FOR REVIEW, SUBMIT SHOP DRAWINGS OF ALL EQUIPMENT, FITTINGS, MATERIALS, PIPING, SLEEVES, WRING DIAGRAMS, ETC. AND FURTHER OBTAIN WRITTEN COMMENTS OF "APPROVED" OR "APPROVED AS NOTED" FOR SAME FROM ARCHITECT BEFORE INSTALLING ANY OF THESE ITEMS.
 - C. SHOP DRAWINGS SHALL CONSIST OF MANUFACTURER'S CERTIFIED SCALE DRAWINGS, CUTS, OR CATALOGS, INCLUDING DESCRIPTIVE LITERATURE AND COMPLETE CERTIFIED CHARACTERISTICS OF EQUIPMENT, FITTINGS, ETC. SHOWING DIMENSIONS, CAPACITY, CODE REQUIREMENTS, MOTOR AND DRIVE TESTING, AS INDICATED IN THE CONTRACT DOCUMENTS.
 - D. CERTIFIED PERFORMANCE CURVES FOR ALL PUMPING EQUIPMENT SHALL BE SUBMITTED FOR REVIEW.
 - E. SAMPLES, DRAWINGS, SPECIFICATIONS, CATALOGS, ETC. SUBMITTED FOR REVIEW SHALL BE PROPERLY LABELED INDICATING PROJECT NAME, AND SPECIFIC SERVICE FOR WHICH MATERIAL OR EQUIPMENT IS TO BE USED.
 - F. FAILURE TO SUBMIT SHOP DRAWINGS IN AMPLE TIME FOR CHECKING SHALL NOT ENTITLE AN EXTENSION OF CONTRACT TIME, AND NO CLAIM FOR EXTENSION BY REASON OF SUCH DEFAULT SHALL BE ALLOWED.
 - G. PRIOR TO SUBMISSION OF SHOP DRAWINGS CONTRACTOR SHALL THOROUGHLY CHECK EACH SHOP DRAWING, REJECT THOSE NOT CONFORMING TO THE SPECIFICATIONS, AND INDICATE BY SIGNED, WRITTEN DECLARATION THAT THE SHOP DRAWINGS SUBMITTED MEET CONTRACT REQUIREMENTS.
 - H. THE COMMENT "APPROVED" OR "APPROVED AS NOTED" RENDERED ON SHOP DRAWINGS SHALL NOT BE CONSIDERED AS A GUARANTEE OF MEASUREMENTS OR BUILDING CONDITIONS. WHERE DRAWINGS ARE REVIEWED, SAID REVIEW DOES NOT IN ANY WAY RELIEVE THE RESPONSIBILITY, OR NECESSITY, OF FURNISHING MATERIAL OR PERFORMING WORK AS REQUIRED BY THE CONTRACT DRAWINGS AND SPECIFICATIONS.
 - I. "APPROVED AS NOTED" MEANS, UNLESS OTHERWISE NOTED ON THE DRAWINGS, TO APPROVE FOR CONSTRUCTION, FABRICATION, AND/OR MANUFACTURE SUBJECT TO THE PROVISION THAT THE WORK SHALL BE CARRIED OUT IN COMPLIANCE WITH ALL ANNOTATIONS AND/OR CORRECTIONS INDICATED ON THE SHOP DRAWINGS AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
 1. WHERE THE COMMENT "APPROVED AS NOTED" INCLUDES DIRECTION TO THE CONTRACTOR TO RESUBMIT CORRECTED SHOP DRAWING FOR RECORD, FAILURE TO COMPLY WITH THE INSTRUCTION TO RESUBMIT RECORD COPY SHALL RENDER THE APPROVAL NULL AND VOID.
6. **PERMITS & FEES:**
 - A. CONTRACTOR SHALL ACQUIRE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE EXECUTION OF THIS CONTRACT.
7. **WARRANTY:**
 - A. CONTRACTOR SHALL:
 1. UNCONDITIONALLY WARRANTY HIS WORK TO BE FREE OF DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD TWO (2) YEARS FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER.
 - a. ANY DEFECTS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE OWNER AT NO ADDITIONAL COST.
 2. ALL EQUIPMENT SHALL CARRY THE ORIGINAL MANUFACTURER'S WARRANTY AS SPECIFIED IN THE MANUFACTURER'S WARRANTY DOCUMENTATION PROVIDED WITH THE EQUIPMENT. WARRANTY PERIOD SHALL BE CALCULATED FROM THE DATE OF SUBSTANTIAL COMPLETION.
 - a. ANY DEFECTS SHALL BE REPAIRED OR REPLACED AT THE DISCRETION OF THE MANUFACTURER.
 - b. MANUFACTURERS SHALL HAVE MINIMUM 15 YEARS EXPERIENCE IN THE US MARKET.
8. **EQUIPMENT**
 - A. ELECTRIC HOT WATER HEATER
 1. HOT WATER HEATER SHALL BE DURA-POWER MODEL, NO. DEN-120 AS MANUFACTURED BY A. G. SMITH OR APPROVED EQUAL.
 2. HEATER SHALL BE RATED AT 1.5 KW, 208 VOLT, SINGLE PHASE 60 HERTZ, AC, AND LISTED BY UNDERWRITERS LABORATORIES.
 3. MODEL SHALL MEET THE STANDBY LOSS REQUIREMENTS OF THE US DEPARTMENT OF ENERGY, AND CURRENT EDITION OF ASHRAE/IESNA 90.1.
 4. TANK SHALL BE 120 GALLON CAPACITY.
 5. HEATER SHALL HAVE 150 PSI WORKING PRESSURE AND BE EQUIPPED WITH EXTRUDED, HIGH DENSITY ANODE ROD.
 6. ALL INTERNAL SURFACES OF THE HEATER EXPOSED TO WATER SHALL BE GLASS LINED WITH AN ALKALINE BOROSILICATE COMPOSITION THAT HAS BEEN FUSED-TO-STEEL BY FIRING AT A TEMPERATURE RANGE OF 1400(F) TO 1600(F).
 7. ELECTRIC HEATING ELEMENTS SHALL BE MEDIUM WATT DENSITY WITH ZINC PLATED COPPER SHEATH.
 8. ELEMENT SHALL BE CONTROLLED BY THERMOSTAT AND HIGH TEMPERATURE CUT-OFF SWITCH.
 9. THE DRAIN VALVE SHALL BE LOCATED ON THE FRONT FOR EASE OF SERVICING.
 10. HEATER TANK SHALL HAVE A THREE (3) YEAR LIMITED WARRANTY AS OUTLINED IN THE WRITTEN WARRANTY.
 11. ILLUSTRATED INSTRUCTION MANUAL SHALL BE INCLUDED.
 12. CONTRACTOR SHALL PROVIDE ELECTRICAL JUNCTION BOX WITH HEAVY-DUTY TERMINAL BLOCK.
 13. THE SERVICE OF A FACTORY-TRAINED REPRESENTATIVE SHALL BE MADE AVAILABLE ON THE JOBSITE FOR START-UP AND INSTRUCTING OPERATING PERSONNEL.
9. **EXECUTION:**
 - A. CONCEALED PIPING
 1. ALL PIPING INSTALLED IN FINISHED AREAS SHALL BE COMPLETELY CONCEALED WITHIN HUNG CEILINGS, FURRING, SOFFITS, PIPE SPACES, ETC.
 2. WHERE COMPLETE CONCEALMENT IS IMPOSSIBLE BECAUSE OF OBSTRUCTIONS SUCH AS BEAMS, DUCTS, LIGHTS, PIPING, ETC., DO NOT INSTALL ANY WORK BEFORE FIRST CONSULTING WITH THE ARCHITECT, AND HIS INSTRUCTIONS (WRITTEN OR ON REVISED DRAWINGS) SHALL BE FOLLOWED.
 3. ALL PIPING, ETC. SHALL BE COMPLETELY TESTED AND APPROVED BY ALL AUTHORITIES HAVING JURISDICTION BEFORE ANY CONCEALMENT BEGINS.
 10. **EXCAVATION, BACKFILLING & COVER**
 - A. ALL EXTERIOR EXCAVATION AND BACKFILL, EXCEPT HAND EXCAVATING, SHALL BE DONE BY THE GENERAL CONTRACTOR. ALL HAND AND INTERIOR EXCAVATION AND BACKFILL SHALL BE DONE BY EACH CONTRACTOR.
 - B. EACH CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND APPLIANCES REQUIRED TO COMPLETE THE EXCAVATING, BACKFILL AND PUMPING REQUIRED FOR HIS WORK, TO THE EXTENT SPECIFIED HEREINAFTER.
 - C. UNCLASSIFIED EXCAVATION SHALL INCLUDE THE EXCAVATION OF ALL MATERIALS ENCOUNTERED IN THE WORK, SUCH AS EARTH, BOULDERS, ROCK, SHALE, RUBBLE, MASONRY OR TIMBER FOUNDATIONS, STUMPS AND ALL MATERIALS WITHOUT CLASSIFICATION. DO ALL EXCAVATION, TRENCHING AND BACKFILLING NECESSARY TO CONSTRUCT AND COMPLETE THE UTILITY AND ALL ITS APPURTENANCES. ALL EXCAVATION SHALL BE MADE BY OPEN CUT FROM THE SURFACE. NO TUNNELING WILL BE ALLOWED EXCEPT BY WRITTEN CONSENT OF THE OWNER. PROVIDE ALL NECESSARY SHORING AND BRACING. CARE SHALL BE TAKEN TO AVOID UNDERMINING OF ALL EXISTING UTILITIES, FOOTINGS OR FOUNDATIONS. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY ADDITIONAL WORK RESULTING FROM HIS EXCAVATING AND TRENCHING.
 - D. LOCATIONS OF PIPE LINES, CONDUITS, CABLES, ETC., SHOWN ARE NOT TO BE USED AS FINAL FOR INSTALLATION OF WORK; HOWEVER, THEY ARE TO BE FOLLOWED AS CLOSELY AS POSSIBLE. GROUND CONDITIONS PERMITTING EXACT LOCATIONS OF ALL UNDERGROUND UTILITIES SHALL BE DETERMINED ON JOB.
 - E. UNDER NO CIRCUMSTANCES, LAY PIPE OR CONDUIT OR INSTALL APPURTENANCES IN WATER. KEEP TRENCHES FREE FROM WATER. PERFORM ALL NECESSARY PUMPING AS REQUIRED TO KEEP TRENCHES FREE FROM WATER AT NO ADDITIONAL COST TO THE OWNER.
 - F. BEFORE STARTING THE EXCAVATION WORK, STRIP ALL EXISTING SOIL AND SOIL WITHIN ENTIRE LIMITS OF THIS CONTRACT, WHICH IS SUITABLE FOR TOP SOIL AND STOCKPILE IN LOCATION APPROVED BY THE OWNER.

- G. A BED OF SAND OR OTHER SELECT FILL MATERIAL APPROVED BY THE DIVISION SHALL BE PLACED AROUND THE WATER SERVICE PIPE AND EXTENDED 1'-0" ABOVE THE TOP OF PIPE.
- H. REMAINDER OF EXCAVATION SHALL BE FILLED WITH MATERIAL EXCAVATED FROM DITCH IF SUITABLE AND APPROVED BY THE ARCHITECT/ENGINEER.
- I. BACKFILL SHALL BE PLACED AND TAMPED IN 1'-0" INCREMENTS AND COMPACTED TO 95% DENSITY.
- J. ALL WATER SERVICES SHALL HAVE A MINIMUM COVER OF 4'-0" FOR PROTECTION AGAINST FREEZING.
11. **TESTING**
 - A. FURNISH ALL TESTING INSTRUMENTS, GAUGES, PUMPS, AND ALL OTHER EQUIPMENT NECESSARY TO PERFORM TESTS.
 - B. ALL TESTS SHALL BE MADE IN THE PRESENCE OF THE REPRESENTATIVES OF THE ARCHITECT, THE OWNER AND THE PLUMBING INSPECTOR. GIVE NOT LESS THAN 5 DAYS NOTICE.
 - C. TEST
 1. DRAINAGE AND VENT PIPING: TEST WITH WATER AT 10 FT. HD.
 2. DOMESTIC WATER: TEST WITH WATER AT 125 PSI.
12. **DISINFECTION OF DOMESTIC WATER PIPING**
 - A. SHALL CONFORM WITH NATIONAL PLUMBING CODE 2015
13. **PIPE INSTALLATION**
 - A. MODIFY PIPING INSTALLATION TO SUIT BUILDING CONDITIONS AND TO AVOID INTERFERENCES WITH OTHER TRADES, MAINTAINING ACCESS TO ALL PARTS OF THE PIPING SYSTEMS AND DUCTWORK AND TO MAINTAIN PROPER PITCH.
 - B. RUN PIPING GENERALLY PARALLEL TO THE AXIS OF THE BUILDING, ARRANGED TO CONFORM TO THE BUILDING REQUIREMENTS AND TO SUIT THE NECESSITIES OF CLEARANCE OF DUCTS, FLUES, CONDUITS AND WORK OF OTHER TRADES AND CLOSE TO CEILING OR OTHER CONSTRUCTION AS PRACTICAL, FREE OF TRAPS OR BENDS.
 - C. PROVIDE ADDITIONAL OFFSETS, FITTINGS, VALVES, DRAINS, ETC. WHERE REQUIRED BY CONSTRUCTION AND WORK OF OTHER TRADES.
 - D. RUN IN CHASES, RECESSES, SHAFTS, HUNG CEILINGS AND BEAM CUTS WHERE APPLICABLE. DO NOT COVER BEFORE EXAMINATION AND TESTING. NO PIPING IN FLOOR FILL, UNLESS NOTED OR APPROVED.
 - E. RUN PARALLEL WITH OR AT RIGHT ANGLES TO WALLS AND OTHER PIPING, NEATLY SPACED AND WITH PLUMB RISERS. MAINTAIN MAXIMUM HEADROOM.
 - F. PROVIDE REDUCING FITTINGS FOR CHANGES IN PIPE SIZE. NO BUSHINGS ARE PERMITTED.
 - G. RUN WATER PIPING FREE OF TRAPS, GRADE AND VALVE FOR COMPLETE CONTROL AND DRAINAGE OF SYSTEM.
 - H. VALVES SHALL NOT BE INSTALLED WITH THE OPERATING HANDLE POINTING DOWNWARD.
 - I. MANUFACTURER'S NAMEPLATE, NAME OR TRADEMARK, SHALL BE PERMANENTLY AFFIXED TO ALL EQUIPMENT AND MATERIAL FURNISHED UNDER THIS SPECIFICATION. WHERE SUCH EQUIPMENT IS IN A FINISHED OCCUPIED SPACE, THE NAMEPLATE SHALL BE IN A CONCEALED BUT ACCESSIBLE LOCATION. THE NAMEPLATE OF A SUBCONTRACTOR OR DISTRIBUTOR WILL NOT BE ACCEPTABLE.
 - J. PROVIDE FOR EACH ITEM OF EQUIPMENT, INCLUDING PANELBOARDS, DISCONNECTS, BREAKERS, STARTERS, SWITCHES, AND ALL CONTROL DEVICES, PUMPS, FANS, HOT WATER HEATERS, ETC., A PERMANENTLY ATTACHED NAMEPLATE MADE OF BLACK SURFACE, WHITE CORE. FURNISHING EQUIPMENT SHALL PROVIDE NAMEPLATE, PNEUMATIC, ELECTRIC AND MECHANICALLY ACTUATED GAUGES SHALL HAVE A BRIEF, BUT COMPLETE DESCRIPTION OF THEIR FUNCTION, STATING THE AIR PRESSURE OR VOLTAGE RANGE ALONE IS NOT ACCEPTABLE. NAMEPLATES SHALL BE A MINIMUM OF 3" LONG BY 1-1/2" WIDE AND SHALL BEAR THE EQUIPMENT NAME AND ITEM NUMBER OF 1/2" HIGH WHITE LETTERS AS DESIGNATED IN THE EQUIPMENT SCHEDULE. MOUNTING SCREWS SHALL HAVE CHROME PLATED ACORN HEADED SCREWS.
 - K. FURNISH AND ATTACH TO EACH VALVE AS HEREINAFTER SPECIFIED, A 1-1/2" DIAMETER BRASS TAG WITH 1/2" INDENTED NUMERALS FILLED WITH DURABLE BLACK COMPOUND. TAGS SHALL BE SECURELY ATTACHED TO STEMS OF VALVES WITH COPPER WIRE AND "S" HOOKS.
 1. VALVE TAG SCHEDULE

SERVICE	TAG DESIGNATION
COLD WATER	CW
HOT WATER	HW _ DEG. F
DRAIN	D

MARK	FIXTURE	MOUNTING	MANUFACTURER	MODEL NO.	TRIM NO.	SUPPORT NO.	TRAP	WASTE	VENT MML	CW	HW	REMARKS
P-1	SERVICE SINK	FLOOR MOUNTED	FIAT	P-1	AMERICAN STANDARD A1000	N/A	1-1/4" x 1-1/2"	2"	1-1/2"	3/4"	3/4"	24" x 20" SINGLE BASIN POLY TUB W/ WHITE ENAMEL BAKED STEEL ANGLE LEGS; PROVIDE BRASS MAGNARE P-TRAP, ANGLE STOPS, & BRANDED STEEL HOSE
P-2	EYE WASH	FLOOR MOUNTED	GUARDIAN	G1074HFC	LEONARD TM-600	N/A	N/A	N/A	N/A	N/A	3/4"	EYE/FACE WASH STATION WITH STAINLESS STEEL BOWL; PROVIDE POWDER COATED FINISH. ARCHITECT SHALL SELECT COLOR; PROVIDE MV-2

MARK	DESCRIPTION	GENERAL			DESIGN DATA			ELECTRICAL			GAS CH	REMARKS	
		MANUFACTURER	MODEL NUMBER	LOCATION	CAPACITY	PUMP HEAD	KW	RPM	VOLTS	PH			HZ
HW-1	ELECTRIC HOT WATER HEATER	BRADFORD WHITE	EFC-8300-2-5-10	STORAGE	0.75 GPH @ 78(F) TEMPERATURE RISE	-	8.3	-	208	3	60	N/A	TANKLESS WALL MOUNTED HOT WATER HEATER HEATER BODY AND ELEMENT SHALL BE GLASS REINFORCED. ELEMENT SHALL BE REPLACEABLE CARTRIDGE TYPE.
HW-2	ELECTRIC HOT WATER HEATER	BRADFORD WHITE	EFC-8300-2-5-10	STORAGE	0.75 GPH @ 78(F) TEMPERATURE RISE	-	8.3	-	208	3	60	N/A	TANKLESS WALL MOUNTED HOT WATER HEATER HEATER BODY AND ELEMENT SHALL BE GLASS REINFORCED. ELEMENT SHALL BE REPLACEABLE CARTRIDGE TYPE.

MARK	DESCRIPTION	MANUFACTURER	MODEL	LOCATION	REMARKS
FD-1	FLOOR DRAIN	ZURN INDUSTRIES, INC.	ZN-415-P	SEE PLANS	C.I. BODY, OUTLET SIZE AS INDICATED ON DRAWINGS, SQUARE TYPE, 5 POLISHED NICKEL BRONZE STRAINER, PROVIDE PROSET TRAP GUARD

MARK	GENERAL				SERVICE	REMARKS
	DESCRIPTION	MANUFACTURER	MODEL NUMBER	LOCATION		
MV-1	THERMOSTATIC MIXING VALVE	LEONARD	170	BELOW P-1	P-1	INSTALL BELOW P-1; OUTLET TEMPERATURE SET TO 120°F
MV-2	EMERGENCY MIXING VALVE	LEONARD	TM-600	WALL MOUNT	P-2	PROVIDE SURFACE MOUNTED STAINLESS STEEL ACCESS BOX; OUTLET TEMPERATURE SET TO 100°F; FAIL TO COLD

A	COMPRESSED AIR
ADD'L	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
BFP	BACKFLOW PREVENTOR
CFH	CUBIC FEET PER HOUR
CO	CLEANOUT
CW	COLD WATER
DN	DOWN
DR	DROP
DWG	DRAWING
(E)	EXISTING
FD	FLOOR DRAIN
G	NATURAL GAS
HW	HOT WATER SUPPLY
HWR	HOT WATER RETURN
S	SANITARY
SAN.	SANITARY
ST	STORM
T	TEMPERED WATER

ABBREVIATION	SYMBOL	DESCRIPTION	ABBREVIATION	SYMBOL	DESCRIPTION
CW		COLD WATER PIPING	BV		BALL VALVE
HW		HOT WATER PIPING	WH		NON-FREEZE WALL HYDRANT
V		VENT	FD/RO		FLOOR/ROOF DRAIN
SAN		UNDERGROUND/BELOW SLAB SOIL, WASTE, OR SANITARY SEWER	COOP		CLEAN OUT DECK PLATE
TV		HOT WATER TEMPERING VALVE	CO		CLEANOUT
TMV		THERMOSTATIC MIXING VALVE			PIPING DROP
M		WATER METER & VALVE ASSEMBLY			PIPING RISE
		BRANCH - BOTTOM CONNECTION			BRANCH - TOP CONNECTION
		TEMPERATURE & PRESSURE RELIEF VALVE	T&P		TEMPERATURE & PRESSURE RELIEF VALVE

- PLUMBING GENERAL NOTES**
1. CONTRACTOR FOR THIS WORK SHALL CAREFULLY INSPECT AND ACQUAINT HIMSELF WITH ALL THE EXISTING CONDITIONS IN ORDER THAT HE FULLY UNDERSTANDS THE SCOPE OF WORK REQUIRED. HE SHALL FIELD MEASURE AND VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS BEFORE PROCEEDING WITH THE WORK.
 2. ALL PLUMBING INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF ALL APPLICABLE STATE AND LOCAL BUILDING AND PLUMBING CODES, SUBSEQUENT AMENDMENTS, DEPARTMENT OF HEALTH REQUIREMENTS AND AUTHORITY HAVING JURISDICTION.
 3. CONTRACTOR SHALL VERIFY ALL LOCATIONS, ELEVATIONS AND PIPE SIZES OF EXISTING SERVICES AND UTILITIES BEFORE STARTING ANY WORK. REPORT ANY DISCREPANCIES TO THE ENGINEER FOR RESOLUTION.
 4. PIPING LAYOUTS ARE DIAGNOSTIC AND INTENDED TO SHOW GENERAL ARRANGEMENT, SIZE, AND CAPACITY. ALL OFFSETS ARE NOT NECESSARILY SHOWN. CONTRACTOR SHALL ARRANGE AND COORDINATE THE WORK, FURNISH NECESSARY OFFSETS, VALVES, VENTS, AND FITTINGS TO AVOID CONFLICTS WITH OTHER MECHANICAL AND ELECTRICAL SYSTEMS, WITH STRUCTURAL AND ARCHITECTURAL ELEMENTS.
 5. CONTRACTOR SHALL PERFORM ALL STEEL CUTTING & REINFORCEMENT AS REQUIRED TO COMPLETE THIS WORK.
 6. CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING ALL FLOOR AND WALL PENETRATIONS WITH FIRE RATED SEALANT.
 7. CONTRACTOR SHALL PROVIDE AND INSTALL ALL INDIRECT WASTE PIPING.
 8. CONTRACTOR SHALL RUN ALL PIPING TO AVOID REINFORCING AT ALL COLUMN LINES.
 9. CONTRACTOR SHALL INSTALL PIPING SO AS NOT TO ENCRANCH ON REQUIRED CLEARANCES ABOVE ANY ELECTRIC PANEL. NO PIPING SHALL BE INSTALLED DIRECTLY OVER ELECTRICAL PANELS AND NO PIPING SHALL BE INSTALLED WITH THE BOTTOM AT LESS THAN 66" ABOVE THE 4'-0" SPACE DIRECTLY IN FRONT OF ANY ELECTRIC PANELS.
 10. CONTRACTOR SHALL APPLY FOR, OBTAIN, AND PAY FOR ALL PERMITS, CERTIFICATIONS, INSPECTIONS, AND APPROVALS REQUIRED IN CONNECTION WITH THIS WORK.
 11. ALL PIPING AND INSTALLATION SHALL BE IN COMPLIANCE WITH INTERNATIONAL BUILDING CODE 2015 NEW JERSEY EDITION, NATIONAL STANDARD PLUMBING CODE 2015 AND ANY APPLICABLE LOCAL CODES AND STANDARDS.

COLOR	NAME	FEDERAL STANDARD NUMBER
WHITE	INSIGNIA WHITE	17875
RED	OSHA SAFETY RED	11120
YELLOW	OSHA SAFETY YELLOW	13591
GREEN	OSHA SAFETY GREEN	14120
BLUE	OSHA SAFETY BLUE	15102

0. PIPE SHALL BE LETTERED AND VALVES TAGGED IN ACCORDANCE WITH THE SCHEDULE BELOW. LETTERING SHALL BE LOCATED NEAR EACH VALVE AND BRANCH CONNECTION AND AT INTERVALS OF NOT OVER 40' (10' ON FIRE LINES) ON STRAIGHT RUNS OF PIPE. PROVIDE FLOW ARROWS FOR ALL PIPING AT EACH MARKER, ADJACENT TO THE LEGEND. STENCIL THE SIZE OF THE PIPE. LETTER COLORS ARE AS FOLLOWS: YELLOW WITH BLACK LETTERS, GREEN WITH WHITE LETTERS, BLUE WITH WHITE LETTERS AND RED WITH WHITE LETTERS.

SERVICE	STENCIL DESIGNATION	COLOR	TAG DESIGNATION
COLD WATER	COLD WATER	BLUE	CW
HOT WATER	HOT WATER - DEG. F	RED	HW _ DEG. F
SANITARY SEWER	SAN. SEWER	GREEN	<NONE>
VENT PIPING	VENT	GREEN	<NONE>

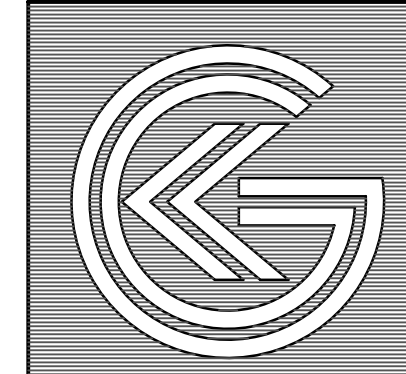
PRINT DATE: 2/20/19
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NJDOE SP #05-4930-070-19-1000
PROPOSED MAINTENANCE & OPERATIONS BUILDING
SOUTHAMPTON TOWNSHIP BOE
26 PLEASANT STREET
SOUTHAMPTON, NEW JERSEY
TITLE: SCHEDULES & SPECIFICATIONS - PLUMBING

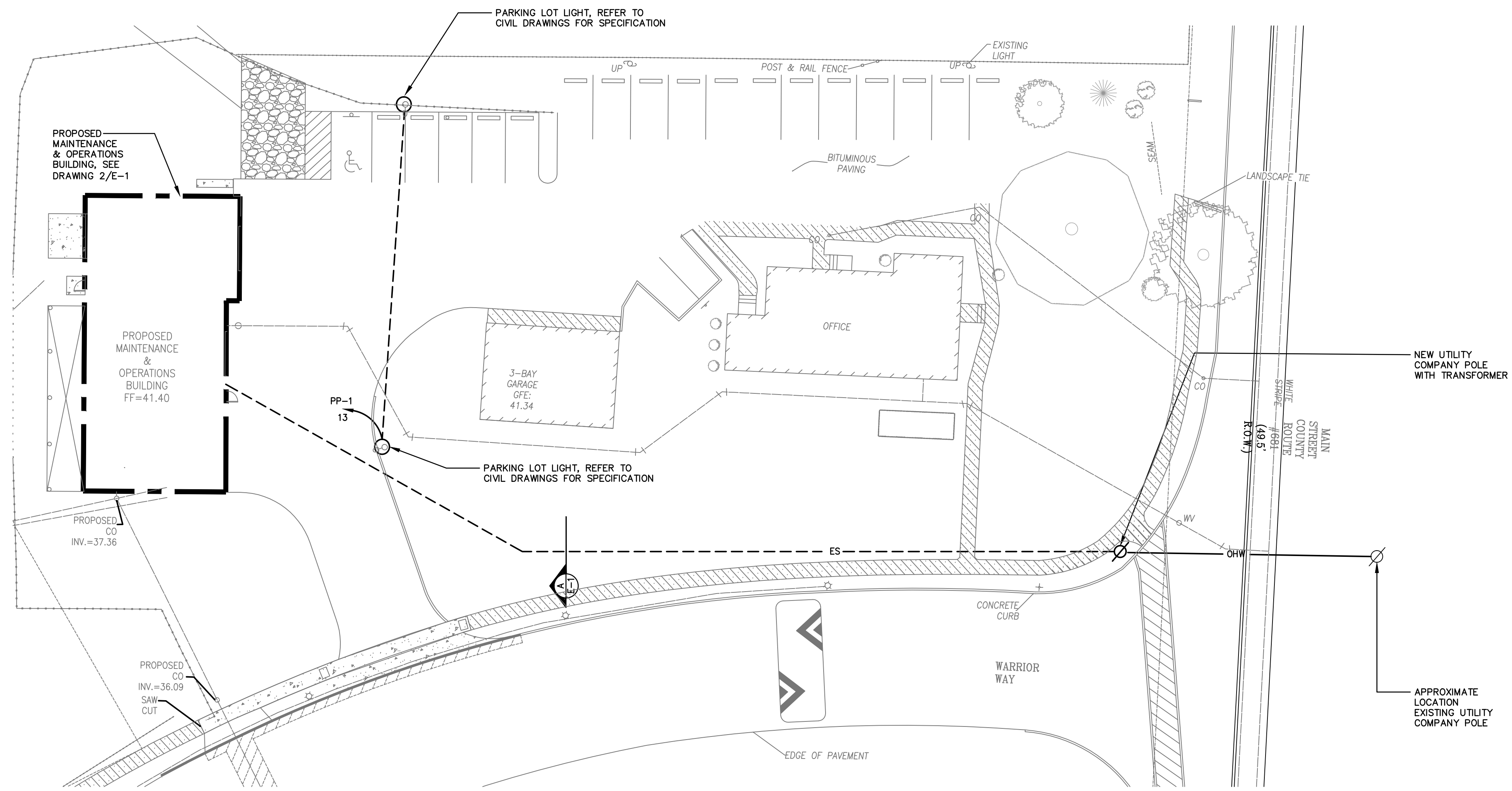
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REVISION DATE:

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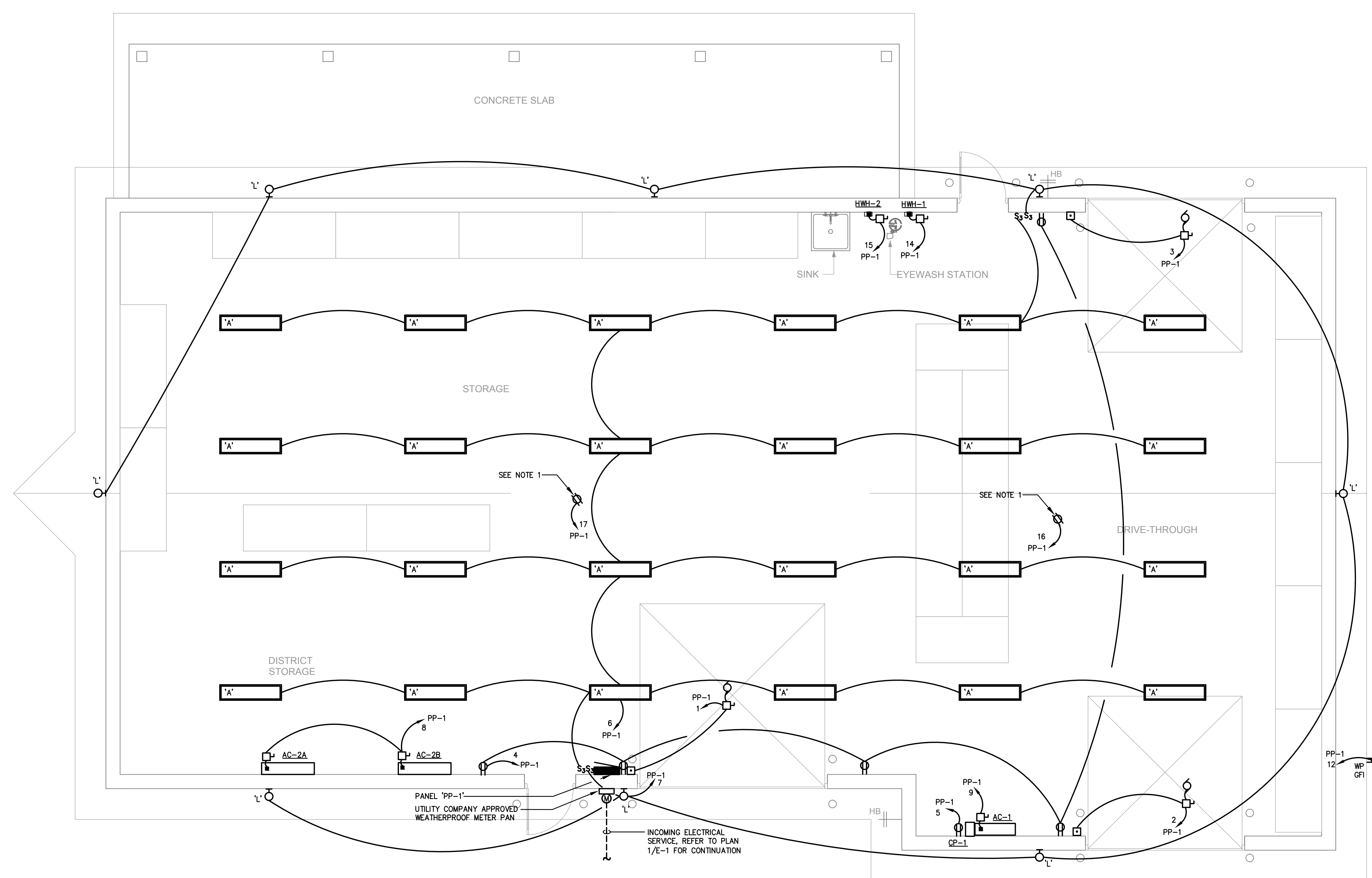


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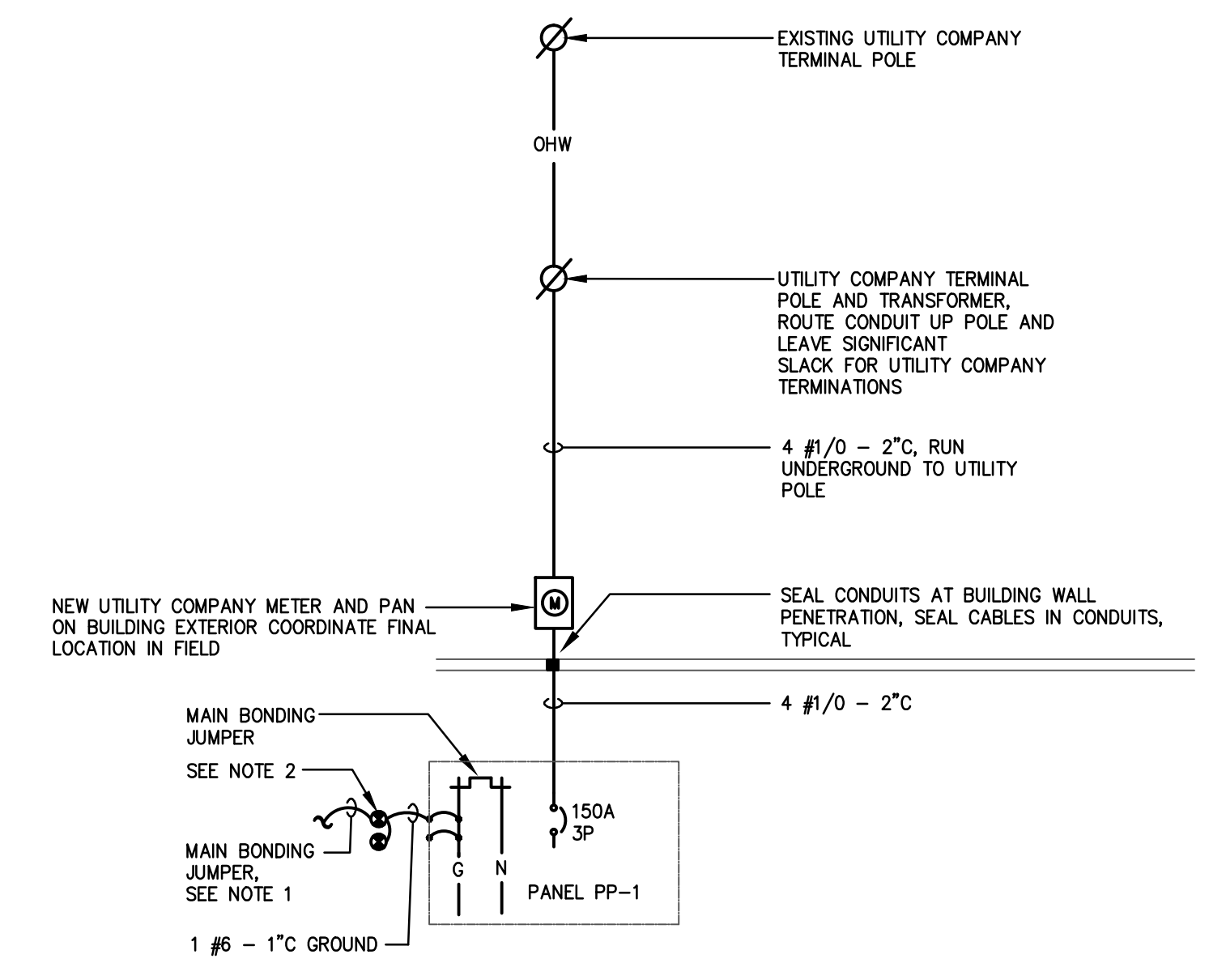


1 SITE PLAN - ELECTRICAL
 E-1 SCALE 1" = 20'-0"



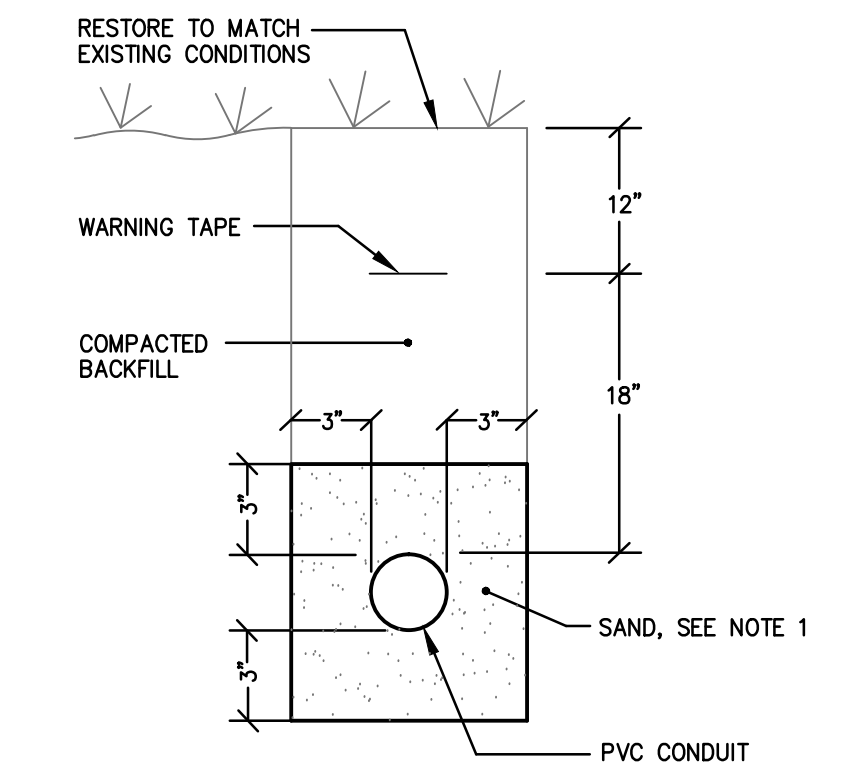
2 SOUTHAMPTON STORAGE - ELECTRICAL
 E-1 SCALE 1/4" = 1'-0"

NOTES:
 1. PROVIDE 50' 2 #12 & 1 #12 RETRACTABLE CORD REEL, HUBBELL MODEL NO HBL45123L2UW, COORDINATE EXACT LOCATION IN FIELD.



3 SINGLE LINE DIAGRAM
 E-1 SCHEMATIC

NOTES:
 1. WHERE THERE IS 20' OR MORE OF 1/2" OR LARGER REBAR ENCASED IN A MINIMUM OF 2" OF CONCRETE IT SHALL BE BONDED TOGETHER WITH STEEL WIRE TIES AND TO THE GROUNDING ELECTRODE SYSTEM WITH #4 AWG SOLID COPPER CONDUCTOR AND AN APPROVED GROUNDING CLAMP, BURNBY TYPE "GAR" SERIES OR EQUAL, PER NEC 250-50(C), 250-52(A-3), 250-66(B), AND 250-70.
 2. ALL GROUNDING SHALL BE IN ACCORDANCE WITH NEC AND ELECTRICAL INSPECTOR. PROVIDE A MINIMUM OF (2) 3/4" DIA. x 10' LONG COPPER GLAD GROUND RODS LOCATED NOT LESS THAN 6" APART.
 3. METER PAN SHALL BE APPROVED BY THE UTILITY COMPANY.



A DUCTBANK DETAIL
 E-1 SCHEMATIC

NOTE:
 1. ENCASE DUCTBANK IN 3000 PSI CONCRETE UNDERNEATH PROPOSED CONCRETE DRIVEWAY, SEE CIVIL DRAWING FOR LOCATION.

ELECTRICAL SYMBOL LIST

[Symbol]	LIGHT FIXTURE - SEE LIGHT FIXTURE SCHEDULE
[Symbol]	208/120 VOLT PANELBOARD
[Symbol]	DUPLEX RECEPTACLE, 20A, 125V, 2 POLE, 3 WIRE, GROUNDED, GF1 INDICATES GROUND FAULT INTERRUPTION
[Symbol]	CEILING MOUNTED RECEPTACLE
[Symbol]	THREE-WAY LIGHT SWITCH
[Symbol]	METER
[Symbol]	MOTOR
[Symbol]	UNFUSED DISCONNECT
[Symbol]	MOTORIZED DOOR OPERATOR
[Symbol]	HOMERUN TO PANEL, NUMERAL INDICATES CIRCUIT NUMBER
[Symbol]	WIRE & CONDUIT, EXPOSED INSIDE BUILDING
[Symbol]	WIRE & CONDUIT, CONCEALED IN SLAB OR BELOW GRADE
[Symbol]	CONNECTION TO EQUIPMENT
[Symbol]	AIR CONDITIONING UNIT
[Symbol]	CONDENSATE PUMP
[Symbol]	CONDENSING UNIT
[Symbol]	ELECTRICAL SECONDARY
[Symbol]	OVERHEAD WIRING
[Symbol]	WEATHER PROOF

PANELBOARD 'PP-1'
 208/120V, 3ø, 4W, 5/N, SURFACE, 150A/3P MAIN BREAKER (42K AIC)

CKT. NO.	CIRCUIT BREAKER	LOAD	CIRCUIT DESCRIPTION	WIRE & CONDUIT		
					AMPS	POLES
1	20	1	0.96	-	MOTORIZED DOOR	2 #12 & 1 #12 GRD - 3/4"C
2	20	1	0.96	-	MOTORIZED DOOR	2 #12 & 1 #12 GRD - 3/4"C
3	20	1	0.96	-	MOTORIZED DOOR	2 #12 & 1 #12 GRD - 3/4"C
4	20	1	0.90	-	GENERAL RECEPTACLES	2 #12 & 1 #12 GRD - 3/4"C
5	20	1	0.18	-	CP-1 RECEPT.	2 #12 & 1 #12 GRD - 3/4"C
6	20	1	0.96	-	INTERIOR LIGHTING	2 #12 & 1 #12 GRD - 3/4"C
7	20	1	0.96	-	EXTERIOR LIGHTING	2 #12 & 1 #12 GRD - 3/4"C
8	15	2	0.32	-	AC-2A/2B	2 #12 & 1 #12 GRD - 3/4"C
9	15	2	0.32	-	AC-1	2 #12 & 1 #12 GRD - 3/4"C
10	25	2	6.24	-	CU-1	2 #10 & 1 #10 GRD - 3/4"C
11	50	2	6.91	-	CU-2	2 #8 & 1 #10 GRD - 1"C
12	20	1	0.18	-	CU SERVICE RECEPTACLE	2 #12 & 1 #12 GRD - 3/4"C
13	20	1	0.30	-	PARKING LOT LTC.	2 #12 & 1 #12 GRD - 3/4"C
14	20	3	8.3	-	HWH-1	3 #8 & 1 #10 GRD - 1"C
15	20	3	8.3	-	HWH-2	3 #8 & 1 #10 GRD - 1"C
16	20	1	0.18	-	RECEPTACLE FOR CORD REEL	2 #12 & 1 #12 GRD - 3/4"C
17	20	1	0.18	-	RECEPTACLE FOR CORD REEL	2 #12 & 1 #12 GRD - 3/4"C
18	20	1	-	-	SPARE	-
19	20	1	-	-	SPARE	-
20	20	1	-	-	SPARE	-
21	20	1	-	-	SPARE	-
22	20	1	-	-	SPARE	-
23	20	1	-	-	SPARE	-
24	20	1	-	-	SPARE	-
25	20	1	-	-	SPARE	-
26	-	1	-	-	SPACE	-
27	-	1	-	-	SPACE	-
28	-	1	-	-	SPACE	-
29	-	1	-	-	SPACE	-
30	-	1	-	-	SPACE	-
31	-	1	-	-	SPACE	-
32	-	1	-	-	SPACE	-
33	-	1	-	-	SPACE	-
34	-	1	-	-	SPACE	-
37.11				TOTAL CONNECTED LOAD		

CONTRACTOR SHALL COORDINATE REQUIRED POWER WITH DOOR OPERATOR, PROVIDE ALL POWER AS RECOMMENDED BY OVERHEAD DOOR MANUFACTURER.

LIGHTING FIXTURE SCHEDULE

ID	LAMPS	MANUF.	CAT. NO.	MOUNTING	DESCRIPTION
A	(1)-53W LED	METALUX	SNLED-LD1-52-UNV-LW-L835 CD2-U	PENDANT	3"W x 4"L LENSED PENDANT FIXTURE, DIE FORMED PRIME STEEL REFLECTOR, BAKED WHITE ENAMEL FINISH, 120V INPUT
L	(1)-37W LED	RAB LIGHTING	SLIMC37	WALL	5"W X 9"D X 9.3"H FIXTURE, UL WET LOCATION LISTED, BRONZE FINISH, 120V LED DRIVER

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PROPOSED MAINTENANCE & OPERATIONS BUILDING
 SOUTHAMPTON TOWNSHIP BOE
 26 PLEASANT STREET
 SOUTHAMPTON, NEW JERSEY
 TITLE: PLANS, DIAGRAMS, SCHEDULES AND SYMBOL LIST - ELECTRICAL

DRAWING DATE:
14 FEB 2019

REVISION DATE:

DRAWN BY:
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COMMISSION NO.:
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GENERAL REQUIREMENTS

This Section is coordinate with and complementary to the General Conditions and Special Requirements. Drawings are diagrammatic. Sizes and locations of equipment are shown to scale where possible, but may be distorted for clarity on the Drawings. Final locations shall be as required or directed.

Light and power and system riser diagrams and schematic diagrams generally indicate equipment and connections to be used for various systems. System conduit and wiring shall be as required. Provide all work shown on diagrams whether or not it is duplicated on the plans.

SCOPE OF WORK

In general the work includes, but is not limited to the following:

1. Raceways and installation components.
2. Wire and Cable.
3. Incoming Electrical Service
4. Panelboards
5. Fuses.
6. Safety and disconnect switches.
7. Manual motor starters.
8. Grounding.
9. Lighting fixtures.
10. Testing.
11. Furnishing and setting of all sleeves through the floors, roof, and walls where required, including waterproofing and fireproof sealing and cap finishing.
12. Cutting, drilling and boring associated with electrical work.
13. Prime painting, where required for electrical equipment and installation.
14. Provisions for temporary light and power.
15. Final connection of all equipment unless otherwise noted.

QUALITY ASSURANCE AND STANDARDS

The complete installation shall be in accordance with NAJCC (The State Building Code). Contractor to be responsible for securing all necessary permits and obtaining all necessary approvals. He shall complete all necessary forms and pay all necessary fees, to be returned by Owner.

SUBMITTALS

The Contractor shall submit shop drawings for all systems and components with such promptness as to cause no delay in his own work or that of another contractor.

EXAMINATION OF EXISTING CONDITIONS ON PREMISES

Before submitting his bid, this Contractor shall visit the site of the work and shall thoroughly familiarize himself with the existing conditions affecting the work. By the act of submitting a bid, the Contractor shall be deemed to have made such an examination, to have accepted such conditions, and to have made allowance therefore in preparing his bid. No additional compensation will be granted on account of extra work made necessary by the Contractor's failure to investigate such existing conditions. Verify all grades, elevations, dimensions, and clearances at the site.

COORDINATION OF WORK WITH OTHER TRADES

The contractor shall coordinate the work of this Section with the work of all other Contracts and all the Utility Companies. It shall be so arranged that there will be no delay in the proper installation and completion of all work.

INSPECTION AND TESTS

The entire wiring system must test free from short and open circuits. Every ground shall be tested for compliance with standards listed below.

PROTECTION, MAINTENANCE AND PRODUCT HANDLING OF ELECTRICAL EQUIPMENT

Electrical equipment shall be delivered and stored at the site, properly packed and crated until finally installed.

Provide effective protection against damage for all material and equipment during shipment and storage at the Project Site.

This Contractor shall be responsible for the maintenance of all installed equipment and systems until final acceptance by the Owner.

WARRANTY

This Contractor shall guarantee in writing to the Owner that all work installed by him shall be free of defects in workmanship and materials and that all apparatus will develop the capacities and characteristics as indicated, and that, if during a period of two years from date of final approval of work by the architect, any defects in workmanship, materials or performance appear, he will remedy them without any cost to the Owner.

ACCESSIBILITY AND MEASUREMENTS

All work shall be installed so as to be readily accessible for operation, maintenance, and repair. Minor deviations from the plans may be made to accomplish this, subject to approval.

Before ordering any material or doing any work, the Contractor shall verify all measurements at the Building, and shall be responsible for the correctness of same as related to the work under this Contract.

TEMPORARY LIGHT AND POWER

Electric services for temporary light and power shall be extended from existing as required. Provide all required material and work.

The Electrical Contractor shall furnish, install, and maintain the temporary lighting and power system for all Contractors. Provide temporary power for all areas of work as required. The use of electricity shall be kept to a minimum.

Provide all wiring, supports, lamp sockets, receptacle sockets and any other materials, supplies or equipment necessary for temporary light and power system.

Ground fault protection required by OSHA.

Install separate stringer circuits for lighting and receptacles. Provide one lamp socket and one duplex receptacle for every 400 square feet of new general construction area. (Approximately 20 feet on centers).

Provide sufficient supplementary temporary lighting to permit proper execution of the work.

Keep the temporary lighting and power system operational commencing fifteen (15) minutes before the established starting time of that trade which starts work earliest in the morning and ending fifteen (15) minutes after the established quitting time of that trade which stops work latest in the evening.

IDENTIFICATION NAMEPLATES

Identify and mark all electrical equipment to meet OSHA standards and as specified herein.

Unless otherwise noted, nameplates shall be black laminate with white letters of uniform size consisting of reasonably large capital letters, 3/16 inch minimum.

RACEWAYS AND INSTALLATION COMPONENTS

The requirements of this Section apply to raceway work specified elsewhere in these specifications. The work includes the providing of completely coordinated grounded raceway systems complete with boxes, fittings, flexible connections to vibrating equipment and accessories, as specified and as required for a complete system.

The work permits the use of metal-clad cable in conjunction with conduit. See below.

Raceways and fittings shall be manufactured by Triangle or approved equal by Allied or Republic.

Rigid steel conduit shall be full weight steel pipe, hot dip galvanized inside and outside, threaded, minimum 3/4 inch.

Intermediate metal conduit (IMC) shall be intermediate steel pipe, hot dip galvanized, threaded, minimum 3/4 inch.

Electric metallic tubing (EMT) shall be steel thin wall pipe, galvanized, threadless, minimum 3/4 inch, maximum 2 inch.

Flexible steel conduit (Greenfield) shall be continuous single strip, galvanized, minimum 3/4 inch.

Liquid-tight flexible steel conduit (Seal-Hite) shall be zinc coated, consist of flexible galvanized steel tubing over which is extruded a liquid-tight sheathing of polyvinyl chloride (PVC). Conduit shall be provided with a continuous copper bonding conductor wound spirally between the convolutions.

Rigid steel and IMC conduit fittings shall be standard threaded couplings, locknuts, bushings, and elbows. Material shall be steel or malleable iron only.

Electrical metallic tubing fittings shall be compression waterproof connection type. Set screw or indent type connectors are not permitted.

Rigid steel conduit (Greenfield) fittings shall be multiple point type, threading into the internal wall of the conduit convolutions, and shall have insulated throat.

Liquid-tight flexible metal conduit fittings shall incorporate a threaded grounding cone, a steel or plastic compression ring, and a gland for lightning. Connectors shall have insulated throats.

Expansion and deflection couplings shall be manufactured by O-2/Gedney, Crouse-Hinds, Appleton or approved equal.

Individual conduit hangers, shall be designed for the purpose, and have pre-assembled closure bolt and nut, and provisions for receiving hanger rod.

Multiple conduit (trapezoid) hangers shall be not less than 1-1/2 by 1-1/2 inch, 12 gauge steel, cold formed, lipged channels. Hanger rods shall be not less than 3/8-inch diameter steel.

Solid masonry and concrete anchors shall be a type approved for the purpose.

Provide and assume responsibility for locating and maintaining in proper position all sleeves required for the work.

Openings through floors and walls in which cables, conduits, or pipe pass shall be sealed by U.L. classified smoke and fire stop fittings, and have an hourly rating equal to the fire rating of the floor or wall. Fittings shall be similar to O-2/Gedney Type "CFS" or "CAFS".

Penetrations through fire-rated floors in which wiring for floor service outlets are routed shall be sealed by U.L. classified smoke and fire-stop fittings, and shall have an hourly rating equal to the floor rating. Fittings shall be similar to O-2/Gedney Type "FIS".

Outlet boxes shall be manufactured by Raco, RussellStolt, Steel City, Thomas & Betts or Crouse Hinds.

Outlet boxes for concealed work shall be galvanized steel, 4 in. square or octagon (except as otherwise required by construction, devices or wiring). Provide sufficient depth for application.

Outlet boxes located outdoors and in damp locations shall be weatherproof.

Offset back-to-back outlets shall have minimum 6 in. separation between them. In rated walls, they are to be separated by a stud.

Junction, splice and pull boxes shall be made of code gauge sheet steel with removable covers fastened with brass or stainless steel screws, except as noted, and will include insulated supports for cables. Box dimensions shall conform to N.E.C. requirements.

Provide junction, splice and/or pull boxes as noted or as required to facilitate pulling of conductors or in raceway runs that have more than three (3) 90-degree bends.

For indoor applications, boxes shall have a gray enamel finish. For outdoor and damp locations, boxes shall be galvanized.

Wireways shall be as manufactured by Square D, General Electric, or approved equal.

Wireways shall be square, brake-formed of code gauge steel, furnished in standard 10-foot sections with knockouts as required. Wireways shall be of the cover cover type and all necessary offset and elbow fittings. They shall have a gray enamel finish. Size shall be as required for proper cable fill.

Install raceway and installation components as indicated, in accordance with manufacturer's written instructions, applicable requirements of NEC and in accordance with the recognized industry practices, to ensure that products serve intended function.

Raceway supports shall be provided by means of ceiling trapeza, strap hangers, or wall brackets. Use structural steel angles or channels, or manufacturer's steel support system. Spacing of supports shall be as per NEC and per manufacturer's recommendations but in no case shall exceed 8'-0" on centers. Provide U-bolts at each floor level for floor raceways and anchor to accessible surfaces. Secure raceways to supports with pipe straps or U-bolts.

Mechanically join all metal raceways, enclosures and junction boxes to assure continuity.

Branch circuit conduits shall be supported by the building structure.

Conduits located underground beyond the building for branch wiring shall be installed with a minimum of 30 in. top cover as shown on the drawings.

Provide expansion-deflection fittings at expansion joints in accordance with manufacturer's recommendations. Expansion-deflection fittings shall be used for all trade sizes 1-1/4" or larger.

For trade sizes up to 1" in size, a suitable length of flexible conduit (or liquid-tight flexible conduit) with sufficient slack for movement and grounding conductor fastened on each side of joint shall be permitted.

Rigid steel conduit shall be used for underground installation: in wet, damp or wash down locations; for exposed runs on the exterior of the building; embedded in concrete or masonry or below concrete that is in contact with earth.

Intermediate metal conduit (IMC) may be used in place of rigid steel in dry locations only.

EMT is to be used for feeders and branch circuits in dry locations such as hung ceilings, interior hollow block walls and furred spaces.

Flexible steel conduit shall be used in dry locations for short connections where rigid conduits or tubing is impracticable, and for final connections to lights and equipment other than motors and transformers.

Liquid-tight flexible steel conduit shall be used in damp locations for final connections to motor terminal boxes, transformers, and other vibrating equipment in damp and dry locations.

In general, cutting and core drilling is to be avoided. Where it becomes necessary, locations are to be coordinated with other trades, the Owner and the structural engineer. There is to be no cutting or core drilling without prior approval.

Provide an outlet box for each lighting fixture and device shown, or required, in the wiring system.

Provide galvanized steel extension rings (depth as required) and raised cover plates in plaster, dry wall, masonry and tile walls.

Mount outlet boxes for similar equipment at uniform height within same or similar areas.

Outlet boxes for fixtures recessed in non-accessible ceilings shall be accessible through the opening created by the removal of the fixture or through access doors provided by this contractor.

All outlet boxes in finished areas for convenience receptacles or local switches shall be 4" square and 1-5/8" deep minimum. Provide with regular deep switch extension cover.

Boxes for use with surface mounted raceways shall be of the same construction and manufacture as the raceway.

Provide junction, splice and pull boxes where required to facilitate installation of wiring, whether or not shown on Drawings. See boxes according to code, and provide interior partitions, insulated supports, hot dip galvanized angle iron braces, screw-on one-piece or split covers, ground connectors, and other accessories as required.

All outdoor installations shall be weatherproof.

Support all material from the building structure in an approved manner.

Where electrical equipment is mounted in suspended ceiling panels, provide support members to span between runners of ceiling suspension system. Do not support electrical equipment from occasional panels or other ceiling material; attach to this material for alignment only.

Where electrical outlet boxes, lighting fixtures, and other equipment is installed on tee bars of suspended ceilings, use independent support clips with threaded studs. Do not attach to tee bar except for alignment; use clip similar to Caddy "TOP" that snaps around tee bar and has provision for independent support wire. Attach a suitable anchor in the structure above ceiling, and suspend a minimum No. 12 support wire to engage the clip.

Do not exceed manufacturer's load rating for mounting devices.

At drywall partitions, provide support members to carry weight of equipment; do not use drywall material to carry any weight.

Where electrical outlet boxes, lighting fixtures, and other equipment is installed on tee bars of suspended ceilings, use independent support clips with threaded studs. Do not attach to tee bar except for alignment; use clip similar to Caddy "TOP" that snaps around tee bar and has provision for independent support wire. Attach a suitable anchor in the structure above ceiling, and suspend a minimum No. 12 support wire to engage the clip.

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Do not exceed manufacturer's load rating for mounting devices.

Plates shall be beveled stainless steel satin chrome finish #302, of minimum .035" thickness.

Manual motor starters shall be Allen Bradley Bulletin 600 or approved equal by Square D or General Electric and shall be horsepower-rated, and voltage rated for the motor load.

Wallboard and masonry shall fit snugly to all sides of outlet boxes, grout and patch as required.

Convenience receptacles shall be mounted with ground pole up, except those mounted above counter levels.

Local wall switches and receptacles shall be mounted vertically unless otherwise indicated.

SAFETY AND DISCONNECT SWITCHES

Switches shall be heavy-duty and service rated. They shall be General Electric Type "TH" or equal by Square D, Cutler Hammer, or Siemens. Switches shall include solid neutral where required. Provide auxiliary contacts where required to break motor control circuit power.

Interior enclosures shall be NEMA 1. Enclosures shall have interlocked doors and be capable of being positively padlocked in ON and OFF positions. For exterior installations, the enclosure shall be NEMA 4.

Motor enclosures shall be NEMA 1. Enclosures shall have interlocked doors and be capable of being positively padlocked in ON and OFF positions. For exterior installations, the enclosure shall be NEMA 4.

MOTOR INSTALLATION

Run all power feeds and connections from power panels to all motor starters or control panel locations. Where shown on Drawings connect the motor starting devices for motors, supplying and installing all necessary connections between starters and control devices and motors, in conduit, and leave motors ready to start. The power supply leads to the motors from the starters or control panels shall be of the same size and number of the other leads required for the proper operation of each motor. Provide (6) wires from starters to two speed motors.

Check motor nameplates for full-load current rating and allowable temperature rise to determine overload heater elements. Install correct heater element in the corresponding starter. Verify proper rotation.

Furnish motor safety disconnect switches for all motors except where such switches are specified to be furnished in other divisions or are included in the equipment control panel. Install all motor safety disconnect switches furnished under this Division or other Divisions of the Specification.

Install manually-operated devices, such as push-buttons and manual starters, to permit convenient operation and be readily accessible.

Install "Sealtite" flexible conduit for final connections to all motors and vibrating equipment including transformers.

Individual starters furnished by others shall be received and erected under this Section. Starters shall be individually or group mounted plumb and level, on freestanding angle iron frames, supplied under this Section.

Provide manual motor starters for all fractional horsepower motors as shown on the Drawings or otherwise required.

PANELBOARDS