

CONSTRUCTION PLANS FOR

SALT STORAGE BUILDING

FOR

EAST BUFFALO TOWNSHIP

589 FAIRGROUND ROAD LEWISBURG, PA 17837
EAST BUFFALO TOWNSHIP, UNION COUNTY

CODE SUMMARY

APPLICABLE PENNSYLVANIA BUILDING CODES
PENNSYLVANIA UNIFORM CONSTRUCTION CODE
INTERNATIONAL BUILDING CODE 2018
INTERNATIONAL MECHANICAL CODE 2018
2017 ICC/ANSI A117.1

CHAPTER 3 - USE AND OCCUPANCY CLASSIFICATION
302 CLASSIFICATION:
PRIMARY OCCUPANCY: UTILITY (U)

CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS
504.3 (TABLE) ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE:
BUILDING CLASSIFIED AS A SINGLE USE OCCUPANCY.

	ALLOWABLE	EXISTING	PROPOSED
HEIGHT IN FEET	40 FT	25 FT	25 FT
HEIGHT IN STORIES	2 ST	1 ST	1 ST
ALLOWABLE AREA	13,500 S.F.	2,553 S.F.	4,080 S.F.
		TOTAL =	3,620 S.F.

CHAPTER 6 - TYPES OF CONSTRUCTION
CONSTRUCTION TYPE: TYPE VB

601 (TABLE) FIRE RESISTANCE RATING REQUIREMENTS (HOURS)

PRIMARY STRUCTURAL FRAME	= 0
BEARING WALLS (EXTERIOR)	= 0
BEARING WALLS (INTERIOR)	= 0
NONBEARING WALLS AND PARTITIONS (EXTERIOR)	= 0
NONBEARING WALLS AND PARTITIONS (INTERIOR)	= 0
FLOOR CONSTRUCTION AND SECONDARY MEMBERS	= 0
ROOF CONSTRUCTION AND SECONDARY MEMBERS	= 0

CHAPTER 9 - FIRE PROTECTION SYSTEMS

903 AUTOMATIC SPRINKLER SYSTEMS	= NOT REQUIRED
904 ALTERNATIVE AUTOMATIC FIRE-EXTINGUISHING SYSTEMS	= NOT REQUIRED
905 STANDPIPE SYSTEMS	= NOT REQUIRED
906 PORTABLE FIRE EXTINGUISHERS	= REQUIRED
LIGHT (LOW) HAZARD OCCUPANCY	
MAXIMUM RATED SINGLE EXTINGUISHER	= 2A
MAXIMUM FLOOR AREA PER UNIT OF A	= 3,000 SQ. FT.
MAXIMUM FLOOR AREA FOR EXTINGUISHER	= 11,250 SQ. FT.
MAXIMUM TRAVEL DISTANCE TO EXTINGUISHER	= 75 FEET

LOCATION MAP

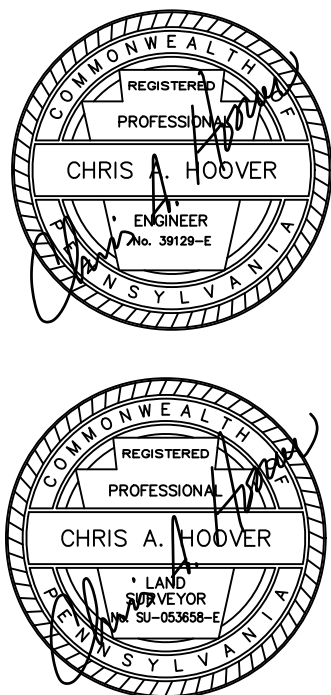


STRUCTURAL DESIGN CRITERIA

	VALUE
OCCUPANCY CATEGORY FOR WIND, SNOW, AND EARTHQUAKE	I
SNOW LOADING:	
GROUND SNOW LOAD (Pg)	35 PSF
SNOW EXPOSURE FACTOR	1.0
IMPORTANCE FACTOR (I)	1.0
WIND LOADING:	
BASIC WIND SPEED (V)	115 MPH
IMPORTANCE FACTOR (I)	1
EXPOSURE	C
LIVE LOADS:	
ROOF	20 PSF
DEAD LOADS	15 PSF
GEOTECHNICAL LOADING:	
ALLOWABLE BEARING CAPACITY	3,000 PSF
DENSITY OF SALT/AGGREGATE MIX	95 PCT
SALT ANGLE OF REPOSE	34°

SHEET INDEX

CS-1	COVER SHEET
CIVIL	
EX1.0	EXISTING CONDITIONS/DEMOLITION PLAN
C1.0	SITE/GRADING PLAN
C1.2	SITE DETAILS
STRUCTURAL	
S1.0	GENERAL NOTES
S2.0	FOUNDATION PLAN
S3.0	STRUCTURAL DETAILS - LEAN-TO
S3.1	STRUCTURAL DETAILS
S3.2	FLOOR PLAN
ARCHITECTURAL	
A1.0	ROOF PLAN
A2.0	BUILDING ELEVATIONS PLAN
A2.1	STRUCTURAL DETAILS
ELECTRICAL	
E1.0	PLANS, DETAILS, SCHEDULES



NO.	DATE	DESCRIPTION	BY

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ENGINEERING SERVICES, INC.

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NEW GUMBERLAND PA. 17070-2823

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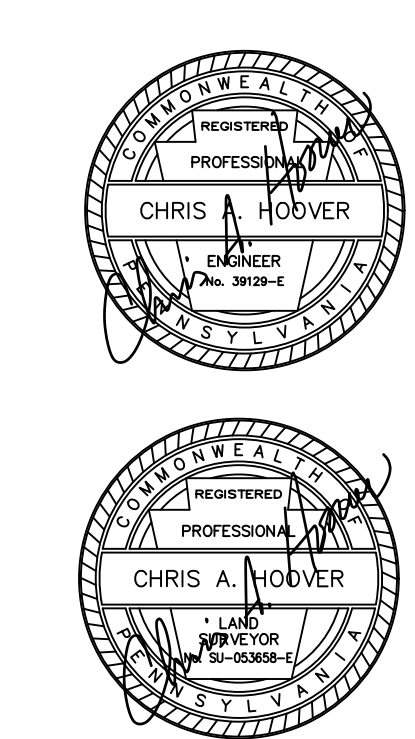
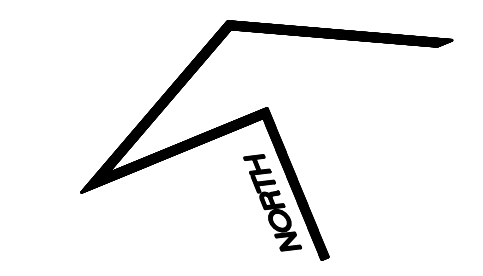
DATE: 11-12-24

SCALE: AS NOTED

FILE: 223073BASE81324 101024.DWG

COVER SHEET

EAST BUFFALO TOWNSHIP, UNION COUNTY, PENNSYLVANIA

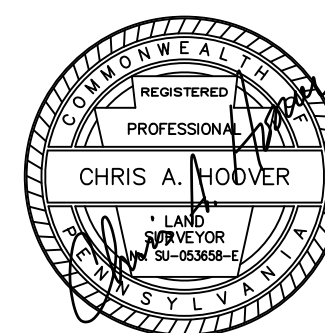
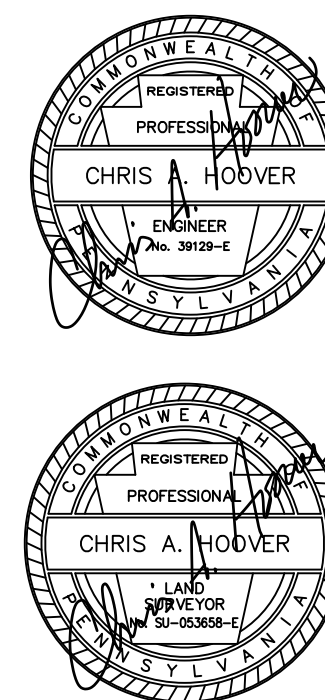
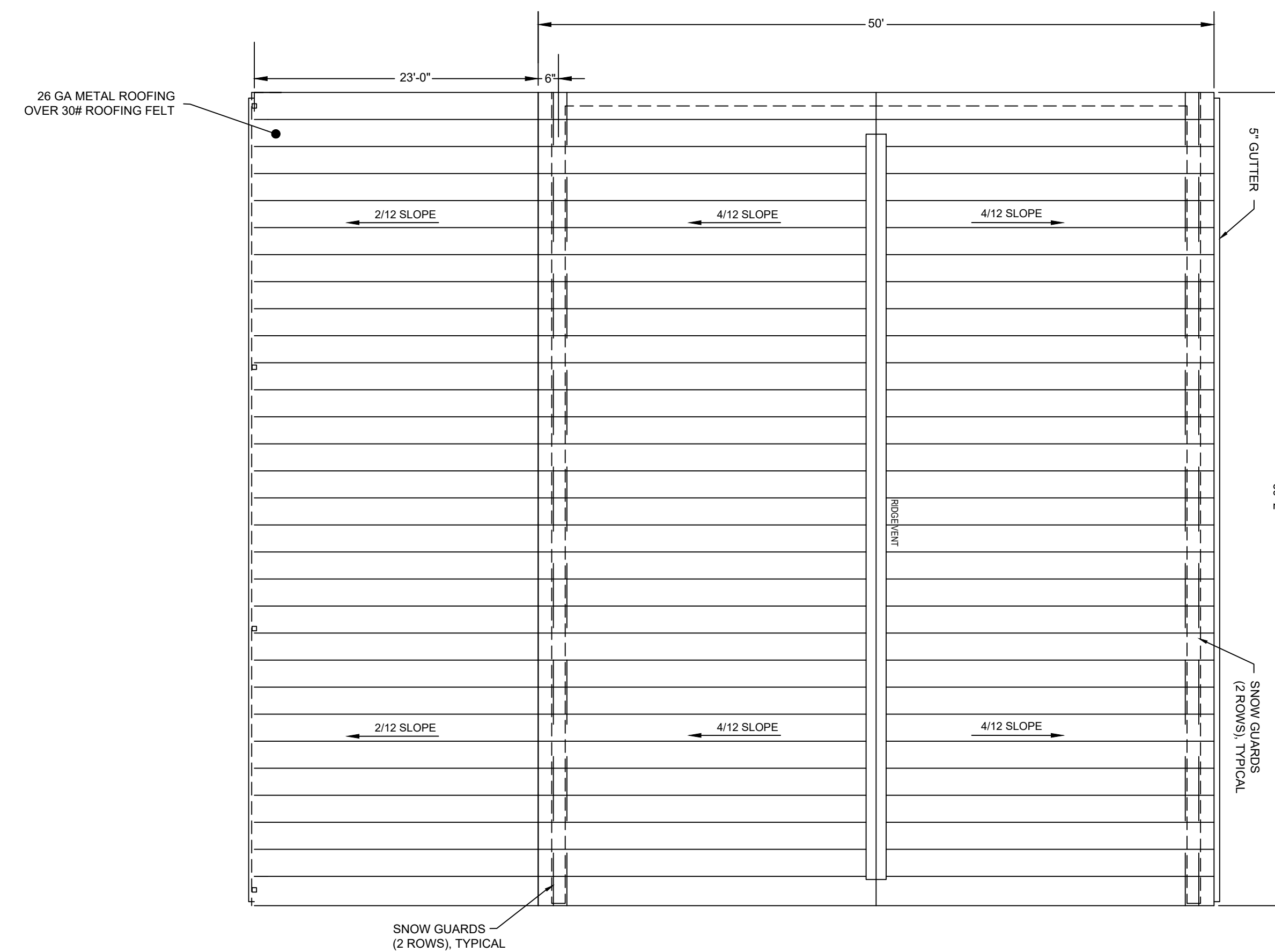
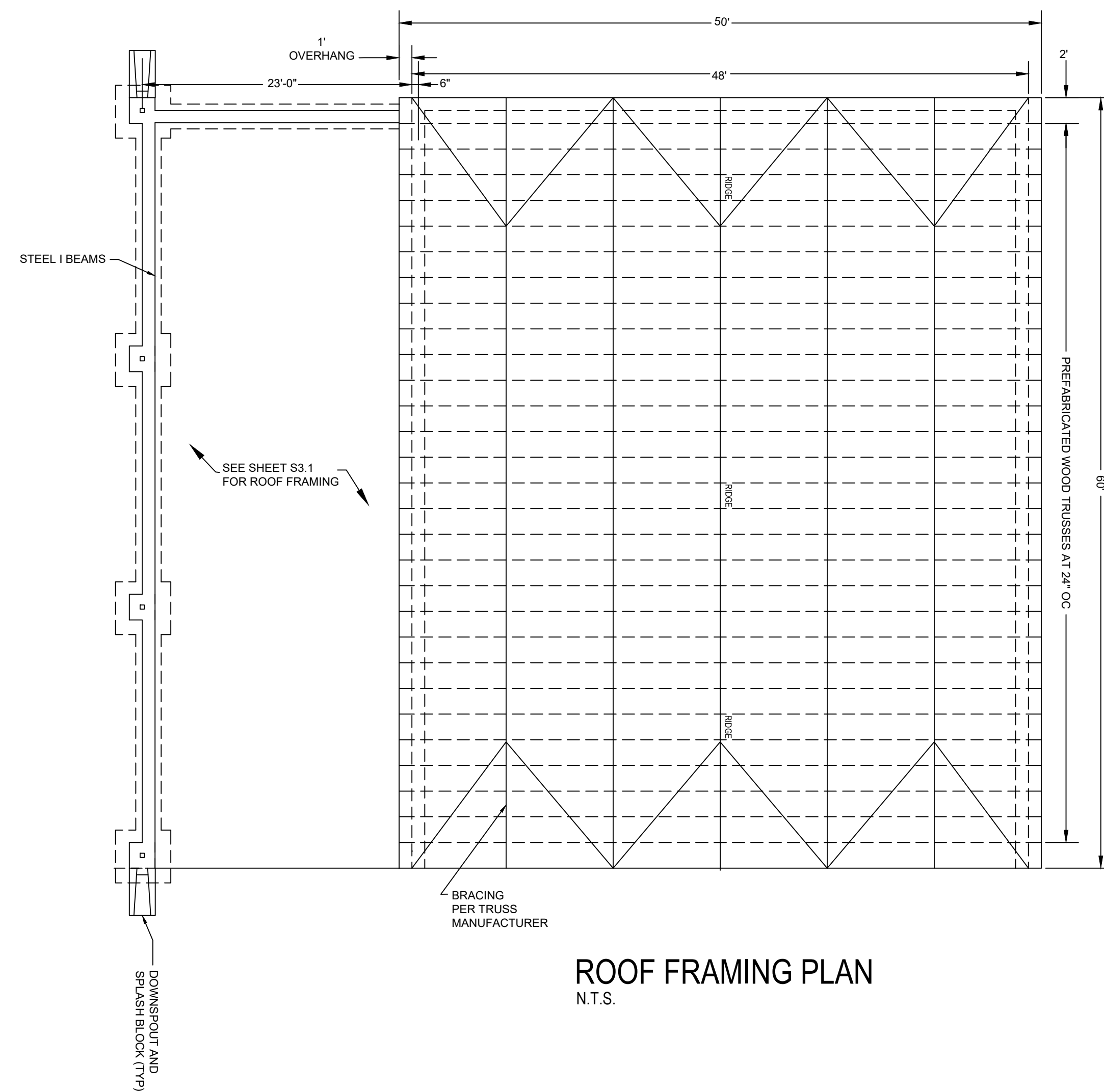


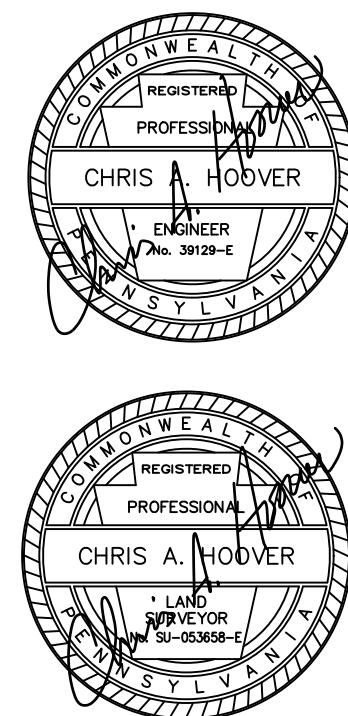
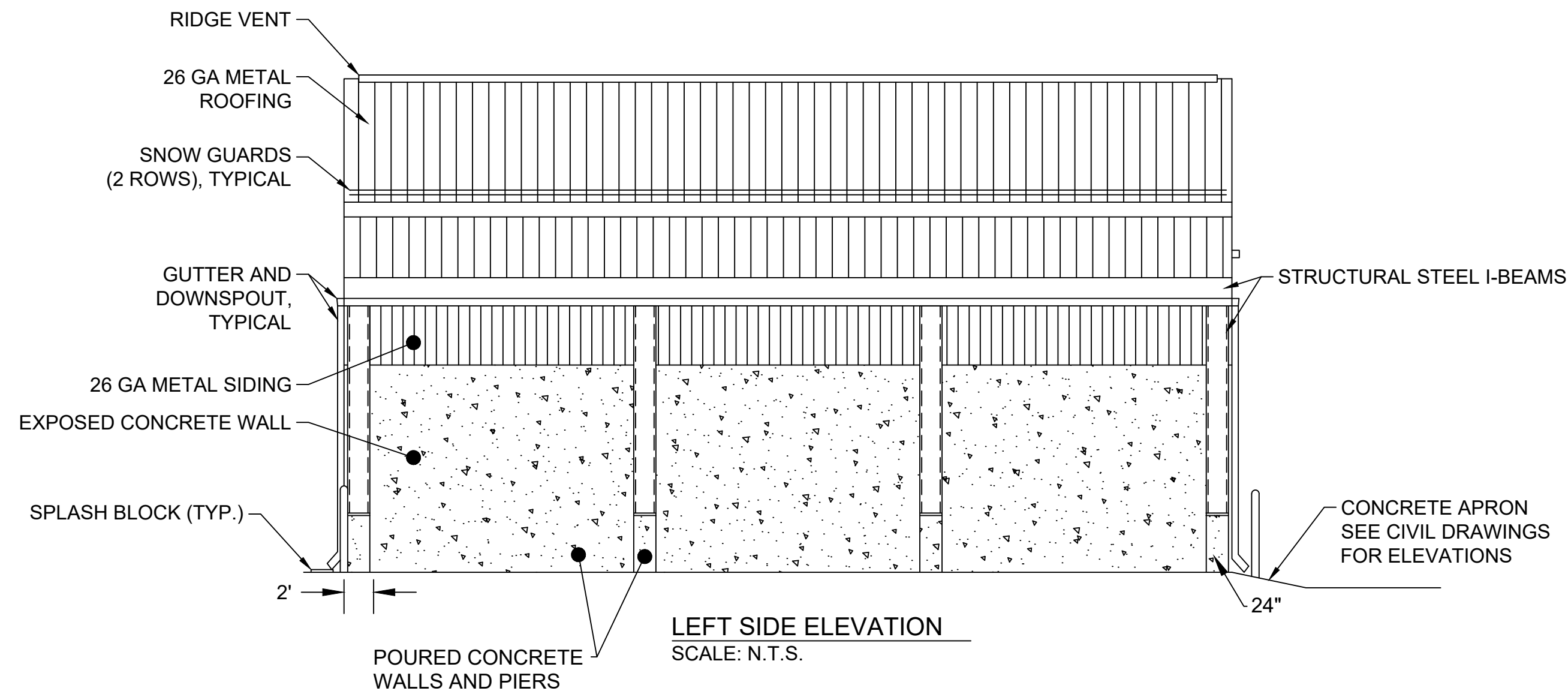
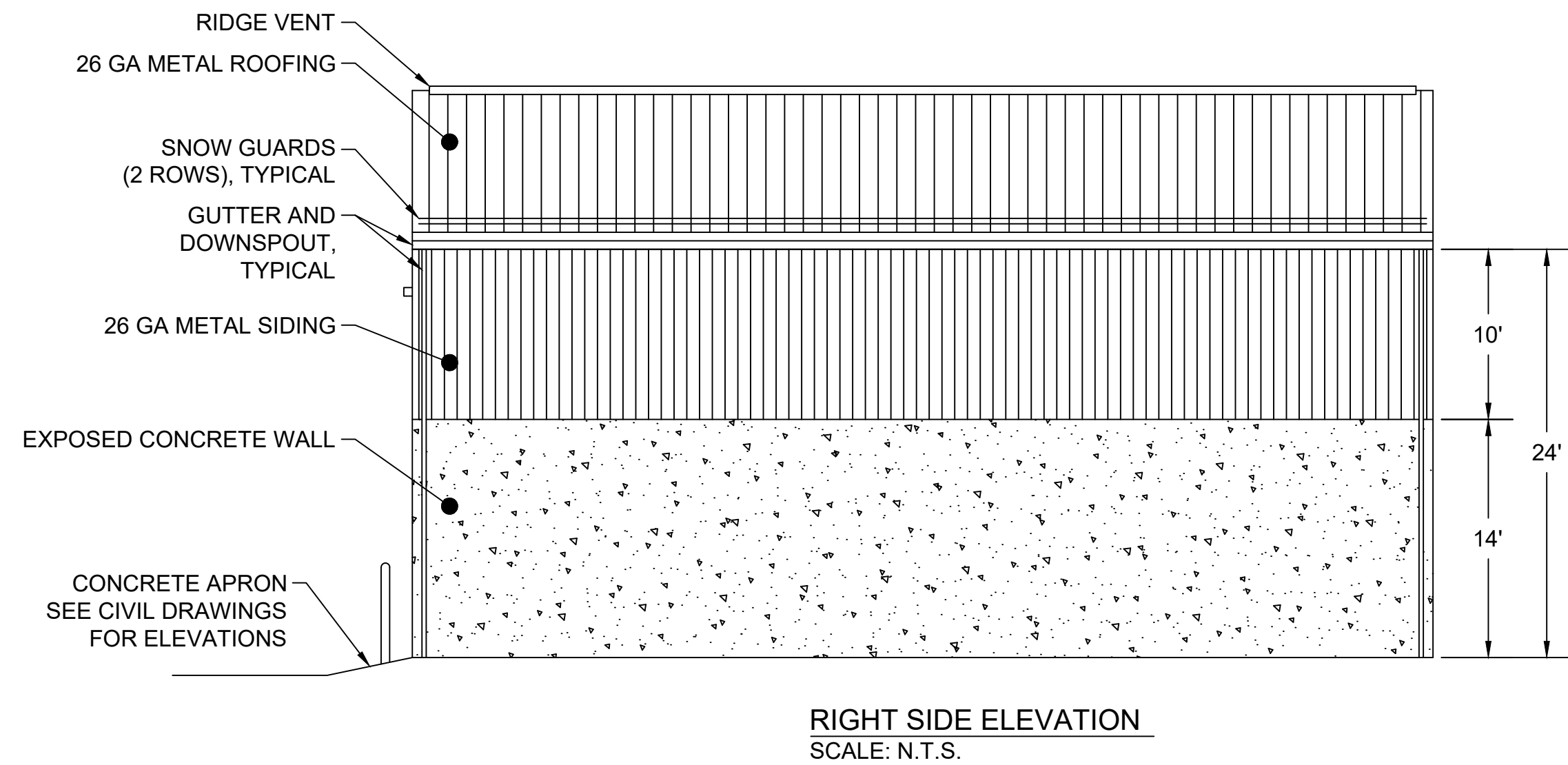
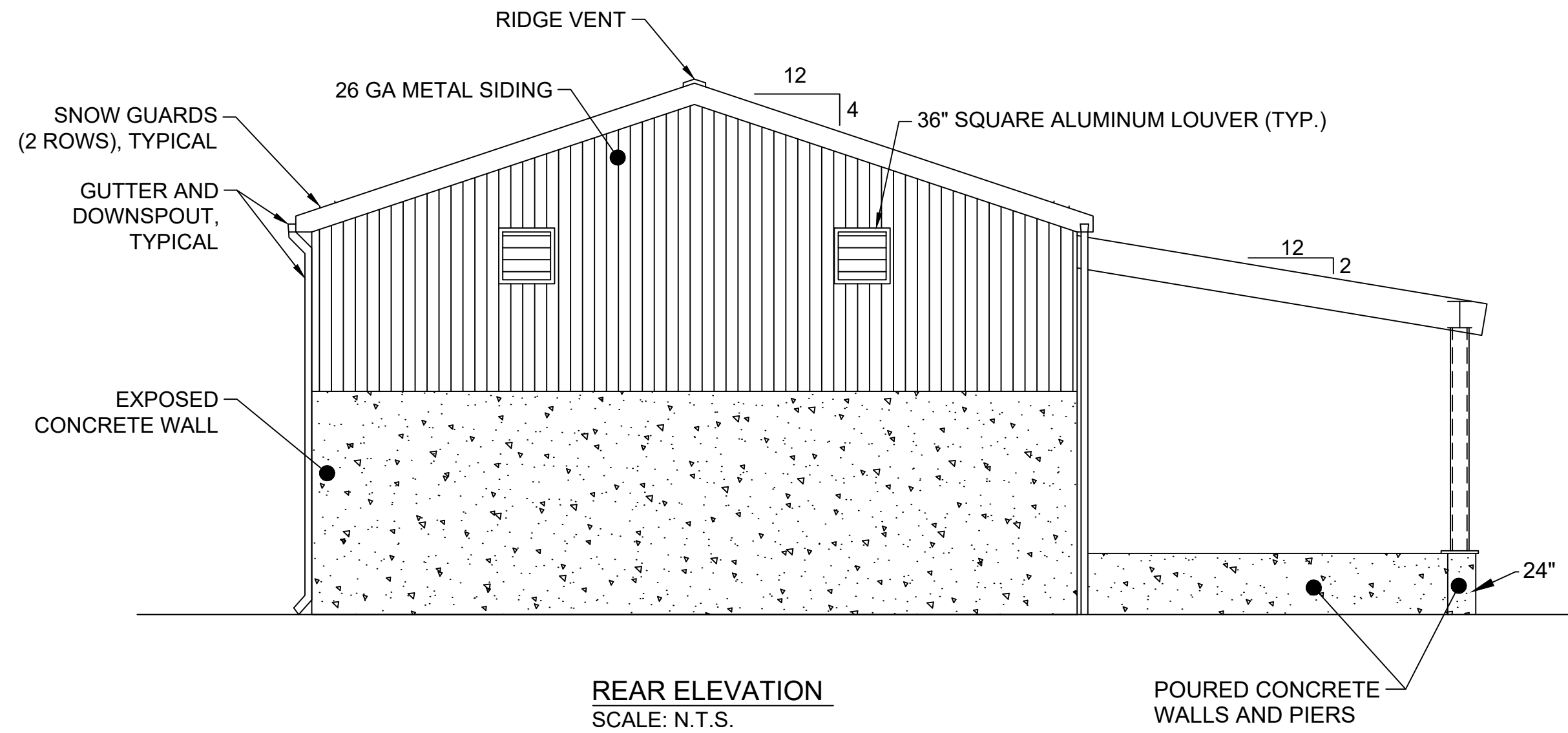
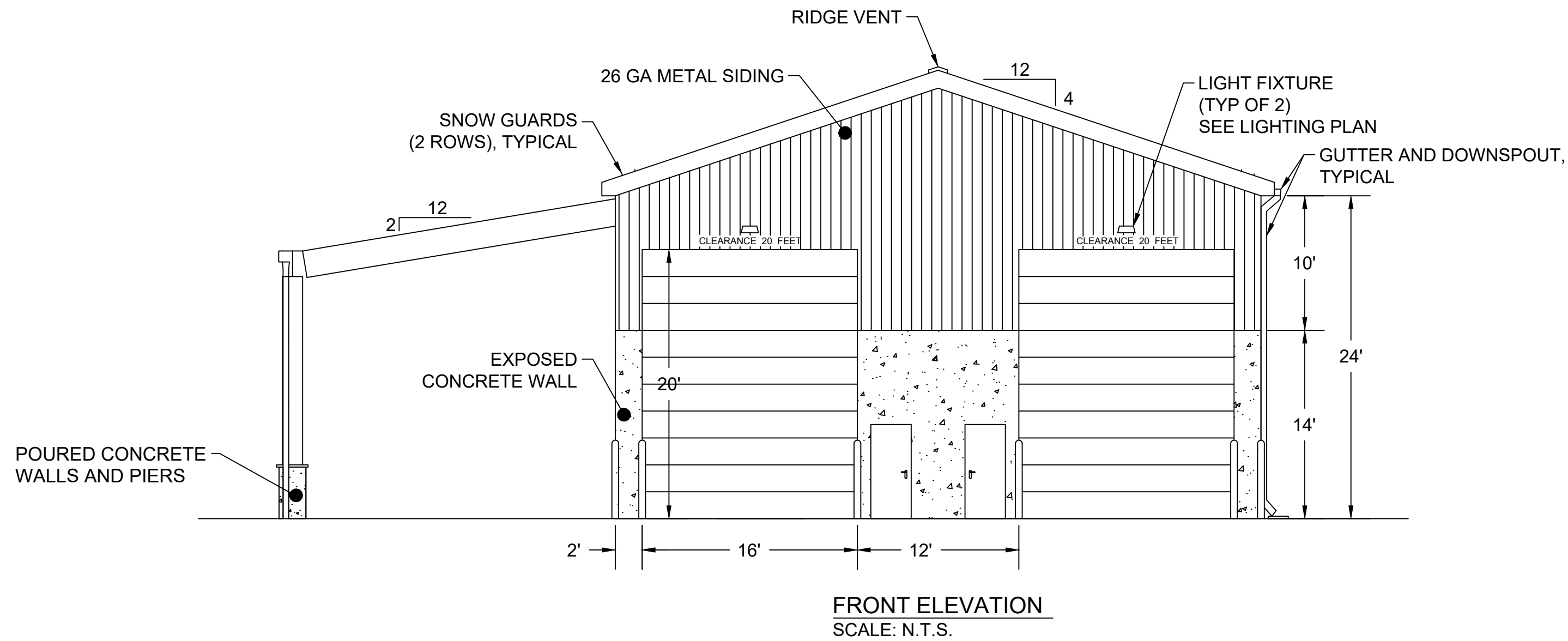
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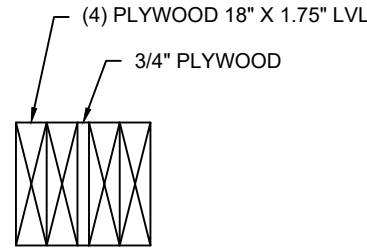
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SHEET EX1.0

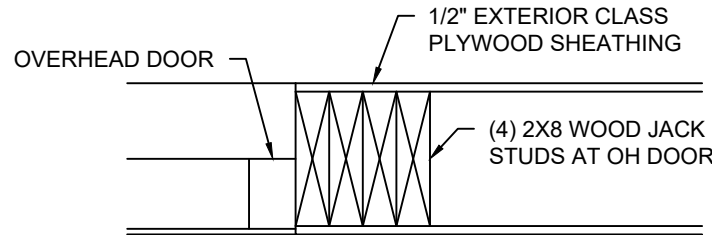
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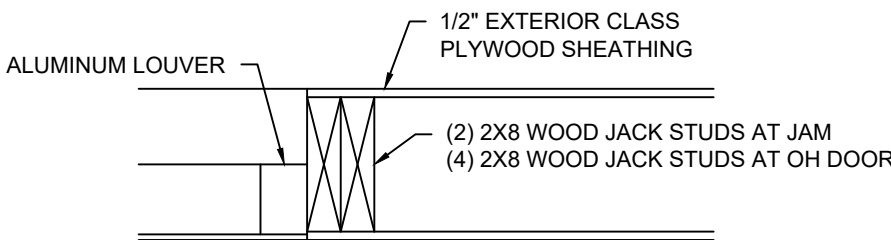
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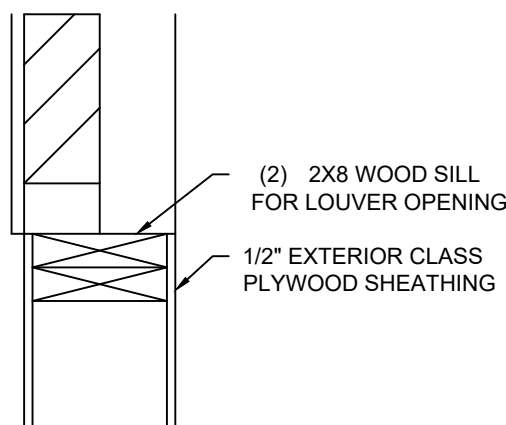
HEADER DETAIL AT OH DOORS
NT.S



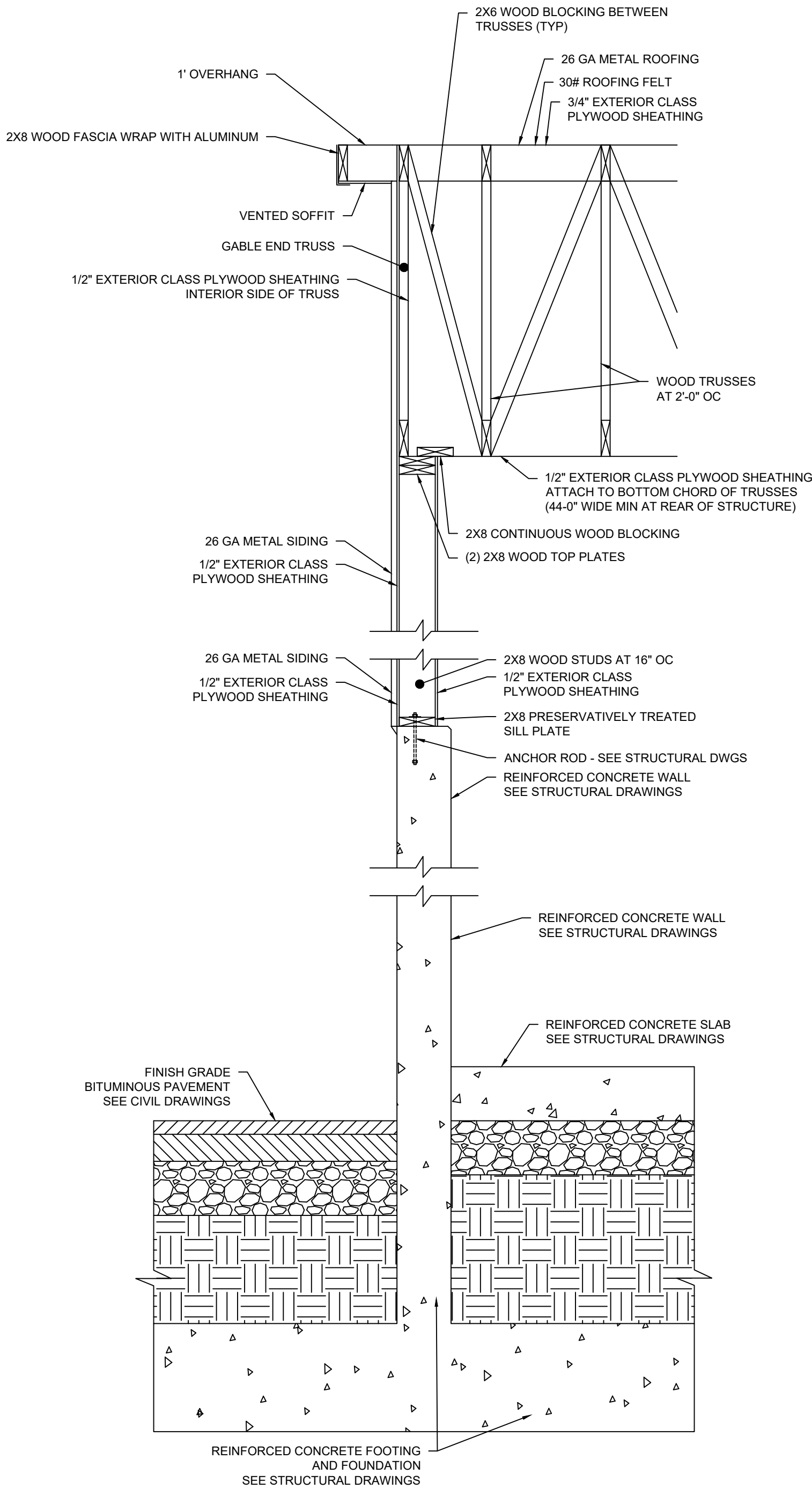
OVERHEAD DOOR JAMB
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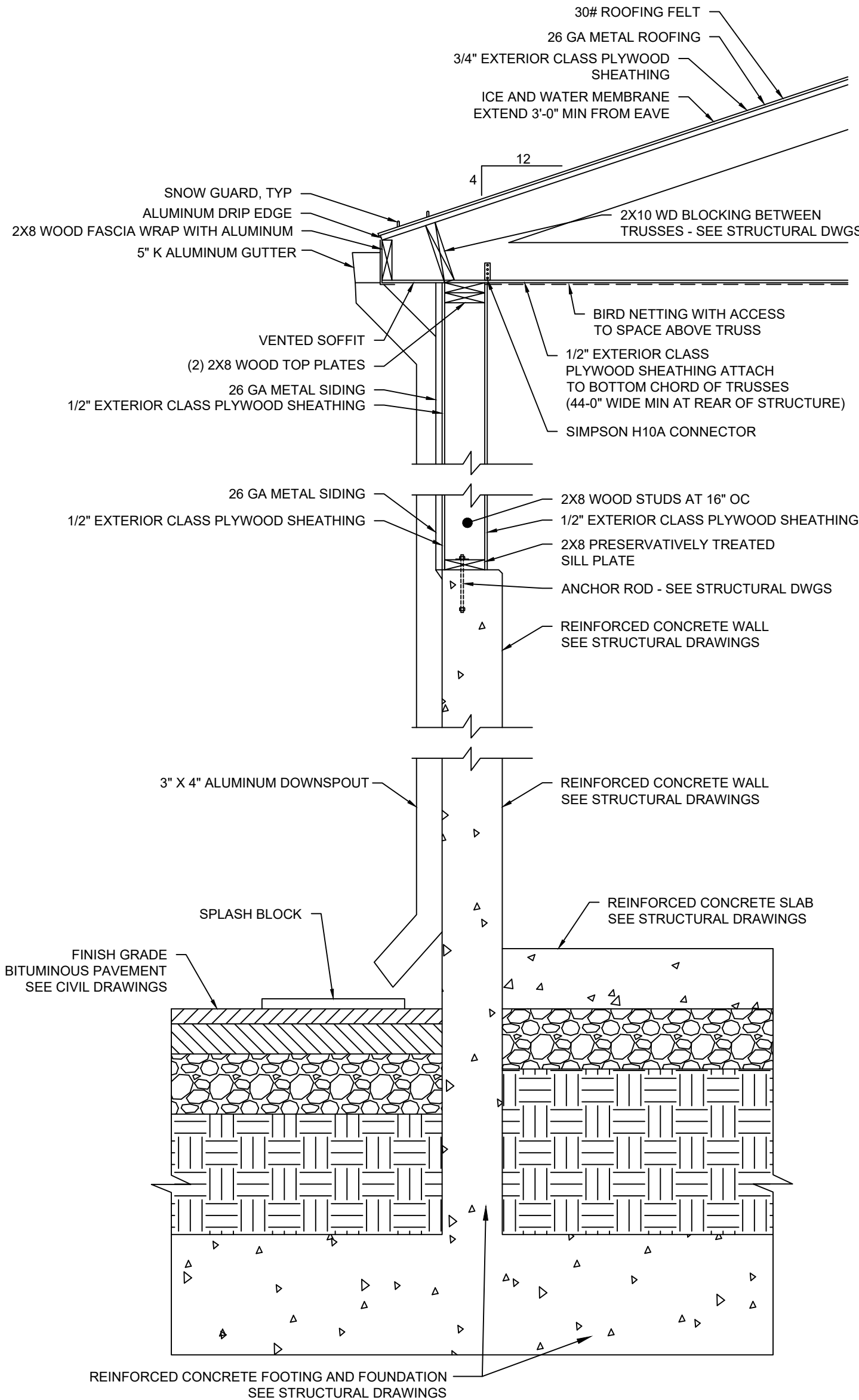
LOUVER JAMB
NTS



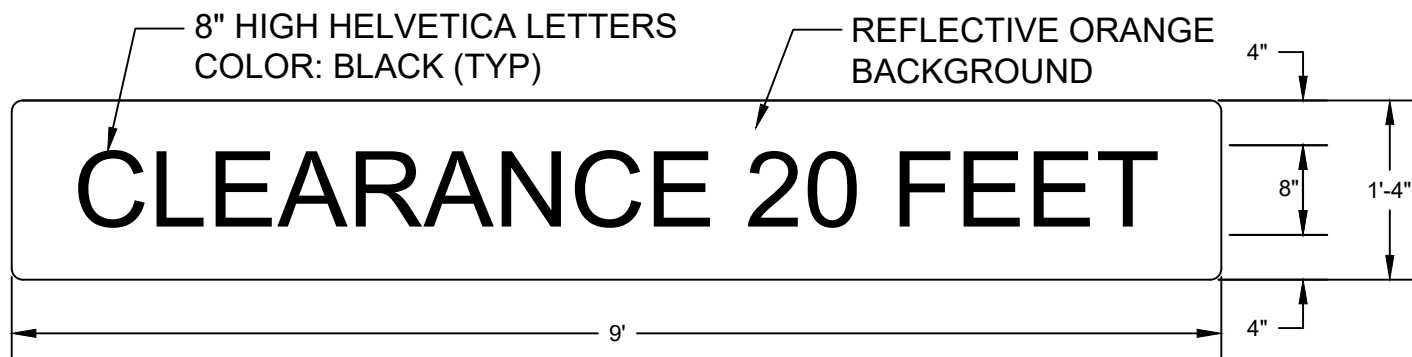
LOUVER SECTION
NTS



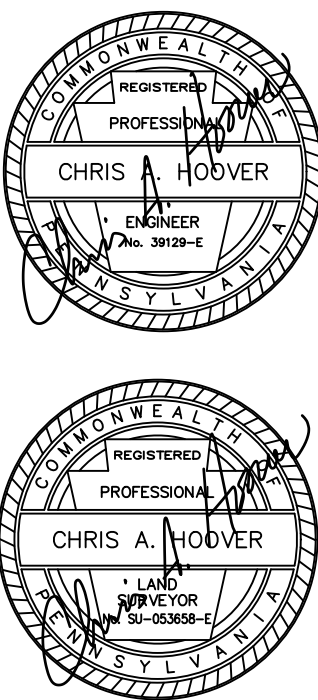
WALL SECTION (GABLE)
NTS



WALL SECTION (EAVE)
NTS



SIGNAGE DETAIL
NTS



DATE:	11-12-24
SCALE:	AS NOTED
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STRUCTURAL DETAILS
EAST BUFFALO TOWNSHIP, UNION COUNTY, PENNSYLVANIA

REVISIONS	NO.	DATE	DESCRIPTION	BY

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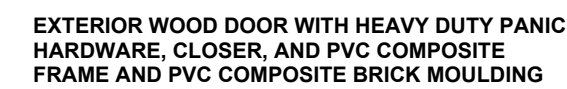
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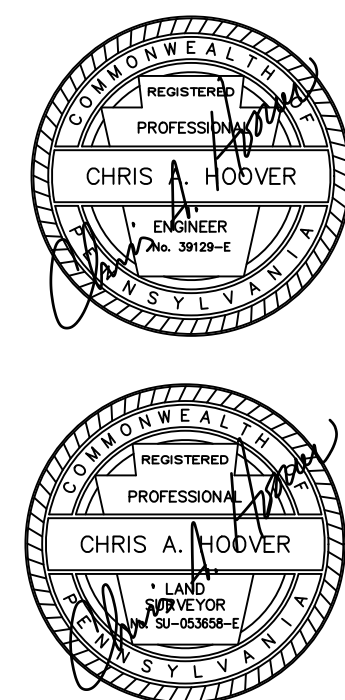
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N.T.S.



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GENERAL STRUCTURAL NOTES:

1. THE STRUCTURE IS DESIGNED TO ACT AS A STRUCTURAL UNIT UPON COMPLETION. DESIGN AN PROVIDE NECESSARY BRACING, TEMPORARY SUPPORTS, AND SHORING TO RESIST ALL FORCES TO WHICH THE STRUCTURE MAY BESUBJECTED DURING CONSTRUCTION, INCLUDING LATERAL LOADS, EQUIPMENT, AND OPERATION OF THE SAME.
2. WORK IS TO BE COORDINATED WITH THE VARIOUS TRADES TO AVOID CONFLICT OF INTERFERENCE WITH REINFORCING STEEL OR WOOD.
3. THE LOCATION OF ALL UNDERGROUND UTILITIES WILL BE IDENTIFIED IN THE FIELD BEFORE CONSTRUCTION COMMENCES.
4. VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO STARTING WORK. NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
5. CONTRACTOR IS TO EXERCISE EXTREME CARE DURING THE CONSTRUCTION OF NEW STRUCTURE TO AVOID DAMAGE TO EXISTING STRUCTURES. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL MEANS AND METHODS REQUIRED FOR FACILITATING CONSTRUCTION OF THE WORK AND FOR ENSURING THE SAFETY, STABILITY AND INTEGRITY OF ADJACENT STRUCTURES AND FACILITIES.
6. DETAILS, SECTIONS, AND NOTES SHOWN ON THESE DRAWINGS ARE INTENDED TO BE TYPICAL, AND WILL APPLY TO SIMILAR CONDITIONS ELSEWHERE UNLESS NOTED OTHERWISE.

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL CONTACT THE PA ONE CALL SYSTEM (1-800-242-1776), NO LESS THAN THREE(3) AND NO MORE THAN TEN(10) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ACTUAL SITE CONDITIONS PRIOR TO THE START OF ANY WORK. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTING OFFICER PRIOR TO THE START OF ANY WORK.
3. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING ANY WORK. THE CONTRACTOR WILL BE FULLY RESPONSIBLE FOR THE COST OF ANY AND ALL DAMAGES WHICH OCCUR AS A RESULT OF A FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES TO REMAIN.
4. THE CONTRACTOR SHALL CONTACT THE OWNER IMMEDIATELY UPON FINDING ANY UNFORESEEN CONDITIONS DURING CONSTRUCTION.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION WASTE FROM THE SITE.

GENERAL NOTES

1. THE TOPOGRAPHY AND UTILITY LOCATIONS SHOWN ON THE PLANS ARE FROM A FIELD SURVEY PROVIDED BY HOOVER ENGINEERING SERVICES, INC.
2. THE HORIZONTAL CONTROL FOR THIS PROJECT IS BASED UPON PA STATE PLANE COORDINATE SYSTEM PA SOUTH ZONE NAD 83.
3. THE CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY EROSION AND SEDIMENTATION CONTROL MEASURES REQUIRED DURING THE COURSE OF WORK. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL AND MONITOR ALL MEASURES INSTALLED DURING THE PROJECT. EROSION CONTROL DETAILS, INSTALLATION, MONITORING, AND REMOVAL SHALL BE IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION GUIDELINES.

SILL PLATE ANCHORS

1. BOLTS ARE DIAMETER OF 5/8-INCH. (UNO)
2. BOLTS ARE TO HAVE EMBEDMENT OF 12-INCHES. (UNO)
3. BOLTS ARE TO BE SPACED AT 4 FEET APART (MAXIMUM). (UNO)
4. BOLTS ARE TO BE 12-INCHES FROM EACH END (MAXIMUM)
5. BOLTS SHALL UTILIZE 1/4" X 3" X 3" STEEL PLATE WASHERS UNDER EACH NUT.

STRUCTURAL LUMBER

1. STRUCTURAL LUMBER MEMBERS AND CONNECTIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, 2005 (NDS-2005) AND ITS SUPPLEMENTS.
2. THE FOLLOWING STAND SHALL BE FOLLOWED DURING CONSTRUCTION:
(A) AMERICAN WOOD PROTECTION ASSOCIATION STANDARDS, 2010.
(B) AMERICAN SOFTWOOD LUMBER STANDARD (PS 20-10).
3. STRUCTURAL WOOD MEMBERS, BOTH PRESSURE TREATED AND UNTREATED, SHALL BEAR A GRADE MARK OF A LUMBER GRADING AGENCY CERTIFIED BY THE AMERICAN LUMBER STANDARDS COMMITTEE.
4. THE MINIMUM GRADE AND SPECIES FOR STRUCTURAL LUMBER SHALL BE #2 SOUTHERN PINE, UNLESS NOTED OTHERWISE.
5. LUMBER SHALL BE PRESSURE TREATED IF IT MEETS ANY OF THE FOLLOWING CRITERIA:
(A) LUMBER MEMBERS ARE EXPOSED TO WEATHER OR INSECTS.
(B) LUMBER MEMBERS ARE IN DIRECT CONTACT WITH CONCRETE OR EARTH.
(C) LUMBER MEMBERS THAT ARE LESS THAN 12-INCHES ABOVE GRADE.
(D) LUMBER THAT WILL BE IN CONTACT WITH SALT OR SALT/AGGREGATE MIX.
6. CONTRACTOR SHALL FIELD TREAT PRESSURE TREATED LUMBER THAT IS NEWLY CUT, NOTCHED OR DRILLED.
7. ALL METAL CONNECTORS SHALL BE GALVANIZED.
8. INTERIOR AND EXTERIOR PLYWOOD SHEATHING SHALL BE APA EXTERIOR CLASS AND COMPLY WITH VOLUNTARY PRODUCT STANDARDS PS-1-09 AND PS-2-04.
9. ORIENTED STRAND BOARD (OSB) IS NOT PERMITTED.
10. PLYWOOD NAILING PATTERN FOR WALLS SHALL BE 8d GALVANIZED COMMON NAILS @ 4 INCHES ON CENTER AT EDGES AND 6 INCHES ON CENTER IN FIELD BOTH INTERIOR AND EXTERIOR.
11. PLYWOOD NAILING PATTERN FOR ROOF SHALL BE 8d GALVANIZED COMMON NAILS @ 4 INCHES ON CENTER AT EDGES AND 6 INCHES ON CENTER IN FIELD.

POST INSTALLED ANCHORS

1. INSTALL ANCHORS IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND THE APPLICABLE APPROVED ICC-ES LEGACY REPORT.
2. ADHESIVE ANCHORS SHALL NOT BE USED IN TENSION APPLICATIONS.
3. INSTALL EXPANSION ANCHORS ONLY AFTER CONCRETE HAS REACHED ITS MINIMUM SPECIFIED 28 DAY COMPRESSIVE STRENGTH.

EARTHWORK

MATERIALS

1. ALL FILL MATERIAL PLACED WITHIN THE BUILDING FOOTPRINT SHALL CONSIST OF STRUCTURAL FILL (PENNDOT 2A)
2. PROVIDE SELECTED GRANULAR BACK FILL AROUND CONDUITS, CABLES, ETC.
3. SELECTED GRANULAR BACK FILL IS TO CONSIST OF SAND, STONE, CRUSHED STONE OR CRUSHED GRAVEL, REASONABLY FREE FROM SOFT OR UNSOUND PARTICLES AND DEBRIS (PENNDOT 2RC)

EXCAVATION

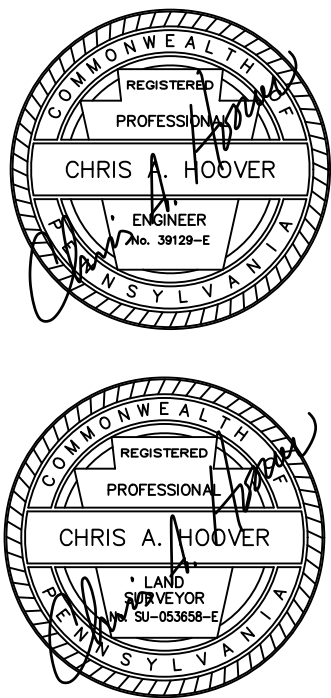
1. CONTRACTOR IS TO PROVIDE ALL EQUIPMENT, MATERIAL, LABOR, AND SUPERVISION TO REMOVE, HAUL, AND DISPOSE OF SUBGRADE MATERIALS TO SATISFY THE SCOPE OF WORK FOR THE PROJECT COMPLETION.
2. PRIOR TO EXCAVATING, THE CONTRACTOR SHALL COORDINATE UTILITY LOCATIONS VIA THE ONE CALL SYSTEM.
3. PRIOR TO EXCAVATING, THE CONTRACTOR SHALL VERIFY ANY EXISTING EAST BUFFALO TOWNSHIP OWNED UTILITIES, BOTH UNDERGROUND AND OVERHEAD.
4. CONTRACTOR SHALL RELOCATE OR PROTECT IN PLACE ALL UTILITIES DURING EARTHWORK OPERATIONS.
5. CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY UTILITIES DAMAGED DURING EARTHWORK OPERATIONS.
6. CONTRACTOR SHALL PROTECT EXCAVATION BOTTOMS AGAINST FREEZING WHEN THE ATMOSPHERIC TEMPERATURE IS LESS THAN 35 DEGREES FAHRENHEIT.
7. CONTRACTOR SHALL PROVIDE ALL NECESSARY SHORING AND BRACING TO GUARD AGAINST EXCESSIVE MOVEMENT OR SETTLEMENT OF STRUCTURES, SIDEWALKS, UTILITIES, ETC.
8. CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE INCURRED DUE TO IMPROPER SHORING AND/OR BRACING.
9. CONTRACTOR SHALL DIVERT STORM WATER AWAY FROM OPEN EXCAVATIONS PREVENTING WATER FROM ACCUMULATING IN EXCAVATIONS AND DIRECT IT TO APPROVED RUN-OFF AREAS.
10. CONTRACTOR SHALL REMOVE ALL EXCESS SPOILS FROM PROJECT SITE.
11. CONTRACTOR SHALL PROVIDE EROSION CONTROL DEVICES TO CONTAIN SOIL ON SITE.

PREFABRICATED WOOD TRUSSES

1. METAL PLATE CONNECTED WOOD TRUSSES SHALL BE ENGINEERED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION (ANSI/TP1 1-2007).
2. TEMPORARY TRUSS BRACING IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IN ACCORDANCE WITH THE BUILDING COMPONENT SAFETY INFORMATION GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES.(BCSI 2008).
3. PERMANENT BRACING SHALL BE INSTALLED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, THE TRUSS MANUFACTURER'S DESIGN AND THE TRUSS PLATE INSTITUTES REQUIREMENTS.
4. SHOP DRAWINGS AND ASSOCIATED STRUCTURAL DESIGN CRITERIA, SIGNED AND SEALED BY A STRUCUTAL ENGINEER LICENSED IN THE COMMONWEALTH OF PENNSYLVANIA, SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND ERECTION.
5. ALL ROOF TRUSSES SHALL BE INSTALLED AT 24-INCHES ON CENTER (MAXIMUM).
6. STRUCTURAL PERFORMANCE: DESIGN, ENGINEER, FABRICATE, AND ERECT PREFABRICATED WOOD TRUSSES TO WITHSTAND SPECIFIED DESIGN LOADS WITHIN LIMITS AND UNDER CONDITIONS INDICATED UNLESS MORE STRINGENT REQUIREMENTS ARE IMPOSED BY THE GOVERNING CODE. LOADS ARE SHOWN IN THE PREFABRICATED WOOD TRUSS SPECIFICATION AND DRAWING CS-1. INCASE OF A DISCREPANCY, THE STRICTER SHALL APPLY.
7. UNBALANCED SNOW LOAD CASE SHALL BE USED IN THE DESIGN OF WOOD TRUSSES.
8. GABLE END STRUCTURE SHALL BE 2X8 STRUCTURAL LUMBER TO MATCH WALL CONSTRUCTION.

DEMOLITION NOTES

1. EXISTING BUILDING, PRECAST WALLS, AND CONCRETE FLOOR TO BE REMOVED IN ITS ENTIRETY.
2. ALL DEMOLISHED MATERIALS TO BE PROPERLY HAULED OFFSITE AND DISPOSED OF PROPERLY PER OSHA, DEP, AND LOCAL AUTHORITIES.



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GENERAL NOTES
EAST BUFFALO TOWNSHIP, UNION COUNTY, PENNSYLVANIA

REVISIONS					BY
NO.	DATE	DESCRIPTION			

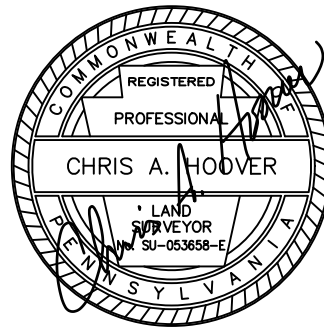
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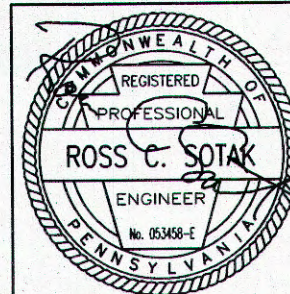


- NOTES:**
1. CONSTRUCTION JOINTS NOTED "CJ" ON PLAN. SEE DETAIL FOR CONSTRUCTION JOINTS.
 2. WATERSTOP REQUIRED IN VERTICAL WALL CONSTRUCTION JOINTS. HORIZONTAL CONSTRUCTION JOINTS ARE NOT PERMITTED.



- JOINT NOTES:**
1. WATERSTOPS SHALL BE PLACED IN JOINT AS REQUIRED IN THE SPECIFICATIONS OR AS SHOWN ON STRUCTURAL DRAWINGS.
 2. FOR KEYS IN WALL TERMINATE KEY 6" FROM TOP OF WALL.
 3. IN WALLS PROVIDE 3/4" X 3/4" CHAMFER EACH SIDE OF CONSTRUCTION JOINTS WHERE EXPOSED TO VIEW.
 4. WATERSTOP NOT REQUIRED IN FOOTING.

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REVISIONS

NO.	DATE	NAME	DESCRIPTION OF CHANGES

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS

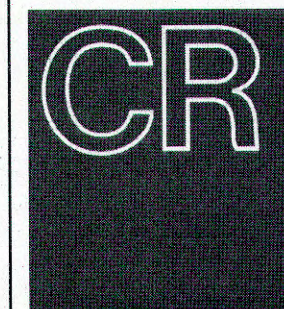
250 WEST MAIN STREET, SUITE 200

CHARLOTTESVILLE VA 22902

434-975-7262 FAX 434-975-7263

401 EAST WINDING HILL ROAD
MECHANICSBURG PA 17055
717-458-0272 FAX 717-458-0047

New Salt Shed
East Buffalo Township
East Buffalo Twp., Union County, Pennsylvania



Foundation Plan, Notes and Details
PLOT SCALE:
As indicated
FILENAME:
1040924.000
DATE:
11/12/2024

PROJECT
1040924.000

S3.0

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MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

GENERAL NOTES

- THE CONTRACTOR IS ADVISED THAT ALL PLANS, DIMENSIONS, AND DETAILS DEPICT FIELD CONDITION AS SHOWN. MINOR VARIATIONS ARE TO BE EXPECTED AND ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS SHALL BE APPROVED BY THE ARCHITECT IN WRITING PRIOR TO PROCEEDING.
- THE CONTRACTOR SHALL FIELD CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING WORK PRIOR TO FABRICATION OF ANY NEW MATERIALS. IF THE EXISTING FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PROVIDE A SKETCH OF THE CONDITION WITH THEIR PROPOSED MODIFICATION OF THE DETAILS GIVEN ON THE CONTRACT DOCUMENTS. DO NOT COMMENCE WORK UNTIL CONDITION IS RESOLVED AND MODIFICATION IS APPROVED BY THE ENGINEER.
- IF THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF UTILITIES IN THE IMMEDIATE VICINITY OF CONSTRUCTION SO AS TO PREVENT DAMAGE TO THEM, SHOULD DAMAGE TO SUCH UTILITIES OCCUR, THE CONTRACTOR SHALL BE REQUIRED TO REPAIR SUCH DAMAGE AT THEIR OWN EXPENSE AND TO THE SATISFACTION OF THE OWNER.
- SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY THE GENERAL CONTRACTOR AND REVIEWED BY THE ENGINEER. IF THE CONTRACTOR OR OWNER FAILS TO OBTAIN ENGINEER'S REVIEW OF THE SHOP DRAWINGS, THE ENGINEER WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. SHOP DRAWINGS ARE REVIEWED BY THE ENGINEER AS A CONVENIENCE TO THE GENERAL CONTRACTOR AND ARE NOT A CONTRACT DOCUMENT.
- LOADS GREATER THAN THE DESIGN LIVE LOADS SHALL NOT BE PLACED ON THE STRUCTURE. A CONCRETE STRUCTURE MAY NOT SUPPORT ITS DESIGN LIVE LOAD FOR 28 DAYS. CONTRACTOR SHALL SUPPORT ADJACENT STRUCTURES, UTILITIES, AND EXCAVATIONS AS REQUIRED. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL TEMPORARY FORM WORK, SHEETING, SHORING AND UNDERPINNING SEALED BY A PROFESSIONAL ENGINEER AS A PART OF THE CONTRACTOR'S WORK. THE CONTRACTOR SHALL CONSULT THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR THE QUANTITY, LOCATION, AND DIMENSION OF HOLES THROUGH FLOOR AND ROOF, CHASES, INSERTS, OPENINGS, SLEEVES, WASHERS, DRIPS, REVEALS, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR THE FOLLOWING INFORMATION:
 - DETAIL DIMENSIONS AND SECTION DETAILS AS REQUIRED
- THIS STRUCTURE HAS BEEN DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE CONSTRUCTION OF THE BUILDING IS TO BE COMPLETED. THE STABILITY OF THE STRUCTURE PRIOR TO COMPLETION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. THIS RESPONSIBILITY EXTENDS TO ALL RELATED ASPECTS OF THE CONSTRUCTION ACTIVITY INCLUDING, BUT NOT LIMITED TO, ERECTION METHODS, ERECTION SEQUENCE, TEMPORARY BRACING, FORMS, SHORING, USE OF EQUIPMENT AND SIMILAR CONSTRUCTION PROCEDURES.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE DESIGN FOR THE CONSTRUCTION OF FALSEWORK, FORMWORK, STAGING, BRACING, SHEETING, SHORING, AND UNDERPINNING AS NECESSARY TO PREVENT ANY LATERAL OR VERTICAL MOVEMENTS TO, AND TO INSURE THE STRUCTURAL INTEGRITY OF EXISTING BUILDINGS, STREETS, AND ANY EXISTING UTILITY LINES.

SHOP DRAWINGS

- DUPLICATION/PHOTOCOPYING OF THESE STRUCTURAL DRAWINGS SHALL NOT BE PERMITTED FOR SHOP DRAWINGS. THIS INCLUDES PARTIAL AND/OR COMPLETE DUPLICATION OF PLAN SHEETS AS BACKGROUNDS FOR SHOP DRAWINGS. ALL SECTIONS INCLUDED IN THESE CONTRACT DRAWINGS MAY NOT BE DUPLICATED/PHOTOCOPYED ON ANY SHOP DRAWINGS.
- ORIGINAL SHOP DRAWINGS SHALL BE SUBMITTED FOR THE ARCHITECT/ENGINEER REVIEW FOR THE FOLLOWING ITEMS AND AS PER THE SPECIFICATIONS:
 - a. CONCRETE REINFORCING
 - b. SLAB ON GRADE CONTROL JOINT LAYOUT
 - c. CONCRETE MIX DESIGNS
 - d. SLAB ON GRADE LISTING FIBER MESH REINFORCEMENT & DOSAGE RATE
 - e. STEEL DECKING
 - f. STRUCTURAL STEEL
- CONTRACTOR SHALL SUBMIT, FOR REVIEW, DRAWINGS AND CALCULATIONS FOR ALL PERFORMANCE ASSEMBLIES IDENTIFIED IN THE GENERAL NOTES AND SPECIFIC MATERIAL NOTES AS WELL AS LISTED BELOW. THE DESIGN OF THESE ASSEMBLIES IS THE RESPONSIBILITY OF THE CONTRACTOR'S ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION. ALL SUBMITTALS SHALL BEAR THE ENGINEER'S SEAL AND SIGNATURE. REVIEW SHALL BE FOR GENERAL CONFORMANCE WITH THE PROJECT REQUIREMENTS AS INDICATED ON THE DRAWINGS AND IN THE GENERAL NOTES.

FOUNDATIONS AND BACKFILL

- SOIL BEARING CAPACITY OF 2,000 PSF WAS UTILIZED IN THE DESIGN OF THE FOUNDATION SYSTEM.
- SLAB ON GRADE DESIGN BASED ON MODULUS OF SUBGRADE REACTION OF 100 PCL.
- PLACE EXTERIOR FOOTINGS AND FROST WALLS EXPOSED TO WEATHER AT LEAST 36" BELOW THE ADJACENT OUTSIDE FINISHED GRADE TO PROTECT FROM FROST DAMAGE.
- THE CONTRACTOR SHALL ENGAGE THE SERVICES OF A REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER TO MONITOR AND INSPECT ALL EARTH WORK AND TO PERFORM THE SPECIAL INSPECTIONS REQUIRED BY THE SCHEDULE OF SPECIAL INSPECTIONS. THE GEOTECHNICAL ENGINEER SHALL SUPERVISE THE PLACING OF THE COMPACTED FILL AND ALL THE MATERIALS AND EQUIPMENT USED FOR THIS PURPOSE. THE GEOTECHNICAL ENGINEER SHALL CERTIFY, BY SEAL AND SIGNATURE, THAT THE EARTH-WORK IS IN ACCORDANCE WITH THE GEOTECHNICAL REPORT, PLANS AND SPECIFICATIONS.
- THE SUB-FLOOR MATERIALS SHALL CONSIST OF AT LEAST FOUR TO SIX INCHES OF GRAVEL OR CRUSHED STONE. THE SUB-FLOOR MATERIALS SHALL BE COMPACTED BY AT LEAST FOUR COVERAGES OF A HEAVY-DUTY VIBRATORY ROLLER OR UNTIL NO FURTHER COMPACTION IS OBSERVED. SEE THE DRAWINGS AND SPECIFICATIONS FOR THE VAPOR BARRIER SIZE, TYPE AND LOCATION.
- PRIOR TO CONCRETE PLACEMENT THE FOUNDATION BOTTOM SHALL BE COMPACTED USING A WALK BEHIND VIBRATORY ROLLER OR GAS-POWERED TAMPER.
- IF SOIL OF THE BEARING CAPACITY NOTED ABOVE IS NOT ENCOUNTERED AT THE ELEVATIONS SHOWN ON PLAN, UNSUITABLE SOILS SHALL BE REMOVED AND REPLACED WITH STRUCTURAL FILL IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S DIRECTION.
- IF BEDROCK IS ENCOUNTERED AT OR ABOVE FOUNDATION SUBGRADE ELEVATION, THE BEDROCK SURFACE SHALL BE OVER EXCAVATED A MINIMUM OF SIX INCHES AND BACKFILLED WITH CRUSHED STONE TO THE SUBGRADE ELEVATION.
- THE GEOTECHNICAL ENGINEER SHALL APPROVE SAMPLES OF ALL CONTRACTOR PROPOSED COMPACTED FILL MATERIAL. IMPORTED STRUCTURAL FILL SHALL BE FREE OF ORGANIC MATTER, ASH, CINDERS AND DEMOLITION DEBRIS.
- CONTROL OF MOISTURE FOR PLACING FILL WILL BE BASED ON THE RESULTS OF ASTM D-1557 MODIFIED PROCTOR TESTS.
- ALL COMPACTED FILL SHALL HAVE A DENSITY OF AT LEAST 98% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM D-1557 MODIFIED PROCTOR TEST. PLACING OF FILL WITH MOISTURE CONTENT OUTSIDE THE LIMITS FOR PROPER COMPACTION SHALL NOT BE PERMITTED.
- THE EXISTING SUBGRADE IN ALL FILL AND CUT AREAS SHALL BE COMPACTED TO A FIRM, STABLE CONDITION AS DETERMINED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF FILL AND EXCAVATION FOR FOOTINGS.
- FILL MATERIAL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8" IN THICKNESS AND SHALL BE MOVED, SPREAD, AND PLACED IN SUCH A WAY AS TO PRODUCE A UNIFORM THICKNESS OF MATERIAL AFTER PLACING.
- EACH LAYER OF FILL MATERIAL SHALL BE COMPACTED ON ALL PORTIONS OF THE SURFACE OF EACH LIFT OF FILL BY RUBBER TIRE ROLLERS, SHEEP'S FOOT ROLLERS, VIBRATORY ROLLERS, ETC. AS NECESSARY TO ATTAIN THE MAXIMUM DRY DENSITY NOTED ABOVE AND AS APPROVED BY THE GEOTECHNICAL ENGINEER. WHENEVER IN PLACE DENSITIES ARE FOUND TO BE BELOW LIMITS ACCEPTABLE TO THE GEOTECHNICAL ENGINEER, ADDITIONAL ROLLING TO PRODUCE THE SPECIFIED DENSITIES SHALL BE REQUIRED.
- PLACING OF FILL WHEN FREE WATER IS STANDING ON THE EXISTING SURFACE SHALL NOT BE PERMITTED.
- PLACING OF FILL IN A FROZEN CONDITION OR ON TOP OF FROZEN MATERIAL SHALL NOT BE PERMITTED.
- SUBGRADE SUITABILITY SHALL BE VERIFIED BY GEOTECHNICAL ENGINEER WITHIN 24 HOURS PRIOR TO PLACING CONCRETE FOUNDATIONS AND CONCRETE SLABS ON GRADE TO CONFIRM THAT NO DETEIORATION HAS OCCURRED SUBSEQUENT TO TESTING PERFORMED AT TIME OF FILL PLACEMENT. UNSUITABLE CONDITIONS SHALL BE CORRECTED PER GEOTECHNICAL ENGINEER'S RECOMMENDATION.
- EXCAVATIONS SHOULD BE BACKFILLED OR HAVE CONCRETE PLACED AS SOON AS POSSIBLE DURING CONSTRUCTION TO MINIMIZE ADVERSE EFFECTS TO SUBGRADE CONDITIONS. GRADING DEPRESSIONS SHOULD BE AVOIDED.
- WATER SHALL BE PREVENTED FROM ENTERING OPEN EXCAVATIONS. ANY ACCUMULATED WATER SHALL BE REMOVED AS SOON AS POSSIBLE. IT IS RECOMMENDED THAT CONCRETE BE PLACED THE SAME DAY THE EXCAVATION IS MADE.
- THE CONTRACTOR SHALL PROVIDE FOR DEWATERING AS REQUIRED DURING EXCAVATION AND CONSTRUCTION.

CONCRETE

- ALL WORK SHALL CONFORM TO THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE" (AMERICAN CONCRETE INSTITUTE, ACI 301) AND THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318), LATEST EDITIONS, UNLESS NOTED OTHERWISE IN THE DRAWINGS OR PROJECT SPECIFICATIONS.
- CONSTRUCTION TOLERANCES SHALL CONFORM TO THE "SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS" (ACI 117), LATEST EDITION.
- SHOP DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH THE "GUIDE TO PRESENTING REINFORCEMENT DESIGN DETAILS" (ACI 315) AND THE "ACI DETAILING MANUAL" (SP-06), LATEST EDITIONS.
- CONCRETE MATERIALS SHALL BE PROVIDED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:
 - PORTLAND CEMENT: ASTM C150
 - HYDRAULIC CEMENT: ASTM C1157
 - FLY ASH AND NATURAL POZZOLAN: ASTM C915
 - SLAG CEMENT: ASTM C989
 - SILICA FUME: ASTM C1240
 - NORMAL WEIGHT AGGREGATE: ASTM C33
 - LIGHTWEIGHT AGGREGATE: ASTM C330
 - MIXING WATER: ASTM C1602
 - ADMITURES:
 - WATER REDUCTION AND SETTING TIME MODIFICATION: ASTM C494
 - PRODUCING FLOWING CONCRETE: ASTM C107
 - AIR ENTRAINMENT: ASTM C260
 - INHIBITING CHLORIDE-INDUCED CORROSION: ASTM C1582
- REINFORCING MATERIALS:
 - REINFORCING BARS PLAN-STEEL: ASTM A615, GRADE 60, DEFORMED
 - REINFORCING BARS LOW-ALLOY-STEEL: ASTM A706, DEFORMED (WELDABLE)
 - WELDED WIRE FABRIC: ASTM A1064
- REINFORCING SHALL COMPLY WITH ACI FOR FABRICATING, PLACING, AND SUPPORTING REINFORCEMENT, AND THE FOLLOWING:
 - BAR SPLICE LOCATIONS SHALL CONFORM TO ACI 318
 - HORIZONTAL REINFORCING BARS IN WALLS AND FOOTINGS SHALL BE CONTINUOUS AROUND CORNERS.
 - UNLESS DETAILED CALCULATIONS ARE PROVIDED, REINFORCING BARS DEVELOPMENT LENGTHS, EMBEDMENT DEPTHS AND LAP SPLICE DISTANCES FOR $f_c = 4000$ psi, NORMAL-WEIGHT CONCRETE, SHALL BE PER BELOW
- ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED $3/4"$ AT 45 DEGREES UNLESS NOTED OTHERWISE.
- PROVIDE CONSTRUCTION CONTROL JOINT INSTALLATION PLAN AND PLACEMENT SEQUENCE PLAN SUBMITTALS FOR REVIEW OF STRUCTURAL ENGINEER OF RECORD PRIOR TO PLACING CONCRETE.
- CORE-DRILLING CONCRETE WALLS, SLABS, BEAMS OR COLUMNS WITHOUT REINFORCING LOCATION SCANS AND PRIOR APPROVAL OF STRUCTURAL ENGINEER OF RECORD SHALL NOT BE PERMITTED.
- FIBER REINFORCED CONCRETE SHALL COMPLY WITH "GUIDE TO DESIGN WITH FIBER-REINFORCED CONCRETE" (ACI 544.4), LATEST EDITION. DESIGN CALCULATIONS SHALL BE SUBMITTED AS PER THE SHOP DRAWING NOTES AND SPECIFICATIONS.
- NON-SHRINK GROUT SHALL CONFORM TO ASTM C1107 AND ACHIEVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 8,000 psi.
- STRUCTURAL ADHESIVES SHALL ONLY BE USED WITH PRIOR PERMISSION OF THE STRUCTURAL ENGINEER OF RECORD OR AS SHOWN ON CONSTRUCTION DOCUMENTS. THE SCHEDULE OF DESIGN FOR ADHESIVES IS 7000 BY "1LT" OR SET BY "SIMPSON" - THE USE OF ANY OTHER STRUCTURAL ADHESIVES SHALL BE SUBJECT TO REVIEW BY THE EOR PRIOR TO INSTALLATION.
- HOT-WEATHER CONCRETE PLACEMENT SHALL COMPLY WITH THE PROVISIONS OF ACI 308.
- MINIMUM CONCRETE CLEAR COVER SHALL BE PROVIDED FOR REINFORCEMENT PER ACI AND THE FOLLOWING:
 - CONCRETE CAST AGAINST EARTH OR PERMANENTLY EXPOSED: 3"
 - CONCRETE EXPOSED TO EARTH OR WEATHER: 2"
 - #6 & LARGER: 1-1/2"
 - #5 & SMALLER: 1"

REBAR LAP SPLICE LENGTHS

BAR LOCATION	BAR SIZE											
	#3			#4			#5			#6		
	ld	ls	ldh	ld	ls	ldh	ld	ls	ldh	ld	ls	ldh
VERT. & HORIZ. WALL BARS	20"	25"	8"	25"	33"	10"	32"	41"	12"	30"	38"	12"
FOOTING TOP BARS	20"	25"	8"	25"	33"	10"	32"	41"	12"	30"	38"	12"
FOOTING BOTTOM BARS	15"	18"	8"	19"	25"	10"	24"	31"	12"	20"	24"	12"

BAR LOCATION	BAR SIZE											
	#6			#7			#8			#9		
	ld	ls	ldh	ld	ls	ldh	ld	ls	ldh	ld	ls	ldh
VERT. & HORIZ. WALL BARS	38"	50"	15"	55"	71"	17"	62"	81"	19"	48"	62"	19"
FOOTING TOP BARS	38"	50"	15"	55"	71"	17"	62"	81"	19"	48"	62"	19"
FOOTING BOTTOM BARS	29"	38"	15"	42"	54"	17"	47"	62"	19"	36"	47"	19"

NOTE:

- VALUES ABOVE ARE FOR NORMAL WEIGHT CONCRETE ONLY.
- l_d = MINIMUM TENSION DEVELOPMENT LENGTH
- l_{eH} = MINIMUM 90 DEGREE HOOKED BAR DEVELOPMENT LENGTH
- l_e = MINIMUM LENGTH OF LAP SPLICES IN TENSION

CONCRETE MIX DESIGN CRITERIA

	EXPOSURE CLASS	MAX. w/c RATIO	MIN. f _c	AIR CONTENT	CEMENT TYPE
FOOTINGS AND FOUNDATION WALLS	F1,S0,W0,C1	0.55	3,500	5%	I or II
INTERIOR SLABS ON GRADE	F0,S0,W0,C1	0.50	4,000	N/A	I or II
INTERIOR ELEVATED SLABS	F0,S0,W0,C1	0.50	4,000	N/A	I or II
EXTERIOR SLABS	F3,S0,W0,C2	0.40	5,000	6%	I or II

ABBREVIATION LIST

A.F.F.	Above Finish Floor	LG	Long
BCX	Bottom Chord Extension	LLH	Long Leg Horizontal
B.O.F.	Bottom of Footing	LLV	Long Leg Vertical
B.S.	Brick Shelf Elevation (plans)	LSH	Long Side Horizontal
B.S.	Both Sides (sections)	LSV	Long Side Vertical
CANT.	Cantilever	N.T.S.	Not To Scale
CJ	Control Joints	O.C.	On Center
CL	Center Line	PL	Plate
CMU	Concrete Masonry Units	REINF.	Reinforcing
CONT.	Continuous	REM.	To Remain
DIA.	Diameter	S.F.	Step Footing
DBA	Deformed Bar Anchor	STIFF	Stiffener Plate
E.E.	Each End	T.B.R.	To Be Removed
E.F.	Each Face	T&B	Top and Bottom
E.S.	Each Side	T.F.	Top of Footing
E.W.	Each Way	T.O.S.	Top of Steel
EXIST	Existing	T.O.W.	Top of Wall
F.F.	Finish Floor	T.P.	Typical
F.S.	Flat Strip	TYP	Typical
GA	Gage	U.N.O.	Unless Noted Otherwise
GALV	Galvanized	VERT.	Vertical
HORIZ	Horizontal	V.I.F.	Verify In Field
HSS	Hollow Structural Section	WWF	Welded Wire Fabric
L	Angle	XE	Extended End - Type R

Schedule - Wall Footing

MARK	DEPTH	WIDTH	REINFORCING
WF1224	1'-0"	2'-0"	(3) #5 CONT.

- NOTES:
- CONTINUOUS BARS SHALL HAVE 3" MINIMUM COVER ON ALL SIDES.
 - BENT BARS SHALL BE THE SAME SIZE AND SPACING AS FOUNDATION WALL VERTICAL REINFORCING.

Wall Footing Schedule at Concrete Foundation Walls

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

Schedule - Concrete Foundation Wall

MARK	WIDTH	REINFORCING
W12	12"	#4 @ 12" o.c. (V) #4 @ 12" o.c. (H)

- NOTES:
- ALL REINFORCING BARS SHALL HAVE 2" MINIMUM COVER ON ALL SIDES. 8" WALLS SHALL HAVE ONLY ONE LAYER OF REINFORCING CENTERED IN THE WALL.
 - BENT BARS SHALL BE THE SAME SIZE AND SPACING AS FOUNDATION WALL VERTICAL REINFORCING.
 - FOR WALL WITH SHELF - "Z" BARS SIZE AND SPACING SHALL MATCH (V) BARS.
 - FOR WALLS BACKING VENEER INSTALL DOVETAIL SLOTS @ 24" o.c. HORIZONTALLY AND METAL TIES @ 16" o.c. VERTICALLY.
 - COORDINATE SHELF LOCATIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.

Concrete Foundation Wall Schedule

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

Foundation Plan

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

- NOTES:
- SEE CHART BELOW FOR FINISH FLOOR ELEVATION AND SLAB CONSTRUCTION
 - COORDINATE BRICK SHELF ELEVATIONS WITH FINISH GRADE
 - DENOTES SLEEVE LOCATIONS IN FOOTINGS/FOUNDATION WALLS FOR UNDERGROUND PIPING - SEE TYPICAL PIPE SLEEVE THROUGH FOUNDATION DETAIL

TYPE	FINISH GRADE
GRAVEL	462'-9"

Schedule - Square Column Footing

MARK	WIDTH	LENGTH	THICKNESS	REINFORCING
F4.0	4'-0"	4'-0"	1'-0"	3 #5 (E.W.)

- NOTES:
- REINFORCING BARS SHALL HAVE 3" MINIMUM COVER ON ALL SIDES.
 - COLUMNS SHALL BE ATTACHED ACCORDING TO BASE PLATE SCHEDULE INFORMATION.
 - SEE BASE PLATE DETAILS FOR MORE INFORMATION.

Column Footing Schedule Detail

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

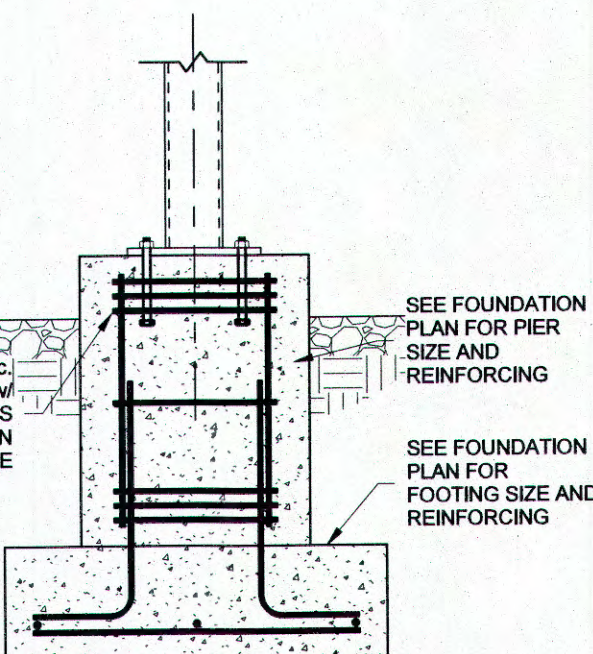
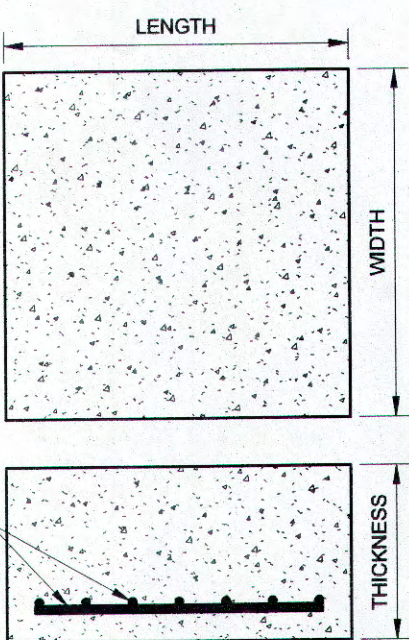
Schedule - Square Concrete Pier

MARK	SIZE	VERTICAL BARS	TIES
P24	24"	(6) #8	(2) #3 @ 12" o.c.

- NOTES:
- ALL TIE SIZES TO BE (3) - #3 BARS AT 1 1/2" o.c. (T&B) REMAINDER @ 12" o.c.
 - SEE FOUNDATION PLAN FOR PIER SIZES

Square and Rectangular Concrete Pier Schedule

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

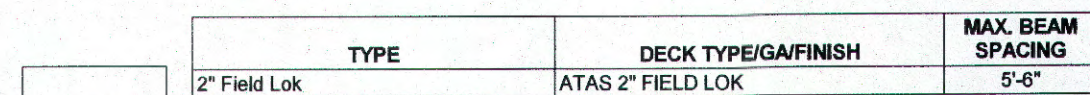


Typical Pier Detail

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

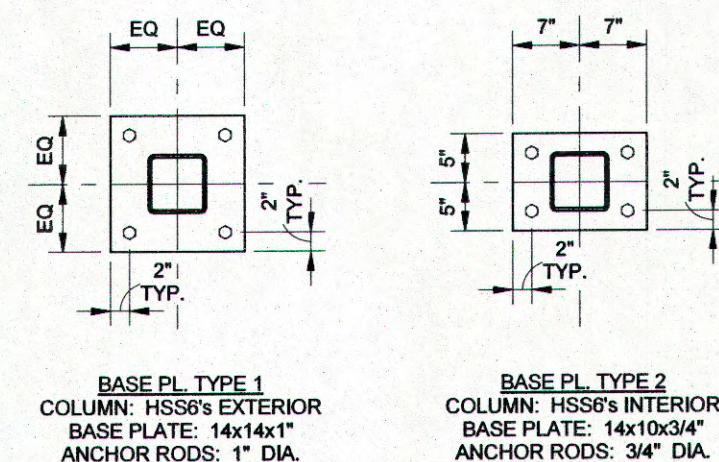
Foundation Symbol Legend

Step Footing Marker	
Transition from Standard Footing to Trench Footing Marker	
Top of Pier Marker	
Top of Footing Marker	
Top of Wall Marker	
Pier Size Marker	
Rectangular Pier Size Marker	
Column Footing Size Marker	
Combined Column Footing Size Marker	
Foundation Wall Size Marker	
Retaining Wall Footing Marker	
Foundation Wall Footing Size Marker	

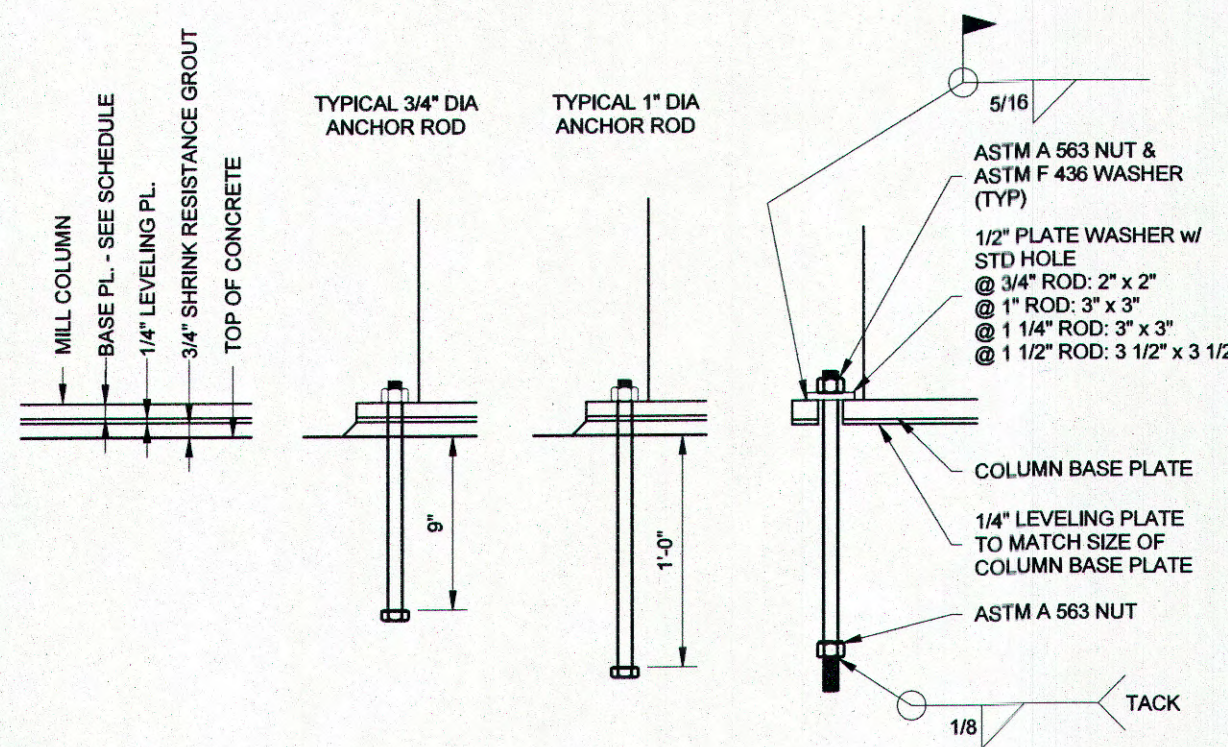


Beam Connection Values			
SIZE	VERTICAL (kips)	MIN. ROWS OF BOLTS	MOMENT (ft-kips)
W10	12.0	2	N/A
W12	12.0	2	N/A

Schedule - Column Base Plate		
MARK	COLUMN SIZE	BASE PLATE TYPE
A-1	HSS6x6x5/16	Base Plate : Type 1
A-2	HSS6x6x5/16	Base Plate : Type 1
A-3	HSS6x6x5/16	Base Plate : Type 1
A-4	HSS6x6x5/16	Base Plate : Type 1
B-1	HSS6x6x5/16	Base Plate : Type 2
B-2	HSS6x6x5/16	Base Plate : Type 2
B-3	HSS6x6x5/16	Base Plate : Type 2
B-4	HSS6x6x5/16	Base Plate : Type 2



Base Plate Types



Anchor Rods Details

DESIGN ROOF LIVE LOADS	
ROOF LIVE LOAD	20 PSF

DESIGN ROOF SNOW LOADS	
GROUND SNOW LOAD (Pg)	35 PSF
FLAT ROOF SNOW LOAD (Pf)	30 PSF
SNOW EXPOSURE FACTOR (Ce)	1.0
SNOW LOAD IMPORTANCE FACTOR (Is)	1.00
THERMAL FACTOR (Ct)	1.0
MINIMUM UNIFORM DESIGN SNOW LOAD (NOT REDUCIBLE)	30 PSF
SNOW DRIFT	N/A

DESIGN WIND LOAD PARAMETERS	
ULTIMATE DESIGN WIND SPEED (Vult)	115 MPH
ALLOWABLE STRESS DESIGN WIND SPEED (Vasd)	89 MPH
WIND EXPOSURE CATEGORY - PLAN NORTH-SOUTH	B
WIND EXPOSURE CATEGORY - PLAN WEST-EAST	B
INTERNAL PRESSURE COEFFICIENT	+/- 0.18

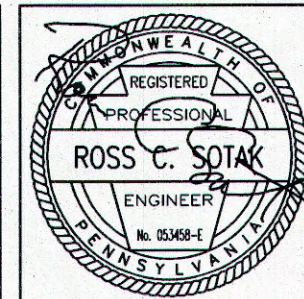
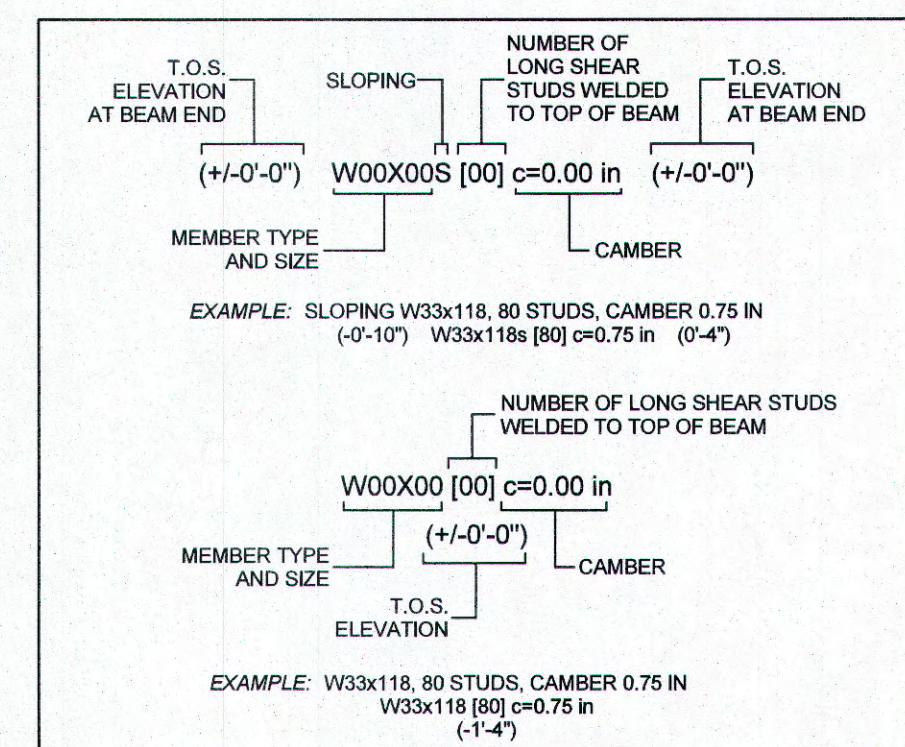
ROOF RAIN LOADS	
INTENSITY (i)	3.0 IN/HR

DESIGN DEAD LOADS - NOT INCL. STRUCTURE SELF WEIGHT	
ROOF	20 PSF

a. THE CONTRACTOR IS CAUTIONED AS TO NOT STORE ANY CONSTRUCTION MATERIALS OR UNDERTAKE ANY CONSTRUCTION OPERATION WILL EXCEED THE DESIGN LIVE LOAD CAPACITIES NOTED IN THE DRAWINGS. HAS BEEN CONSIDERED THE DESIGN LIVE LOAD INDICATED ABOVE, ANY INCREASE OF LOADS DUE TO CHANGE IN USAGE OR CONSTRUCTION MATERIALS, ETC., SHALL HAVE THE WRITTEN APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE OF THE STRUCTURE IS DEPENDENT UPON THE DIAPHRAGM ACTION OF THE ROOFS, THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR THE METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE THE REQUIRED STRENGTH REQUIRED TO ACCOMMODATE ALL INTERIM LOADING CONDITIONS THROUGHOUT THE CONSTRUCTION PHASE.

d. WEIGHT OF EQUIPMENT SHOWN ON THE STRUCTURAL DRAWINGS HAVE BEEN CONSIDERED IN THE DESIGN OF THE FRAMING. ANY ADDITIONAL EQUIPMENT NOT SHOWN ON THE STRUCTURAL DRAWINGS AND EXCEEDING 300 POUNDS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

1. DESIGN, FABRICATION AND ERECTION OF THE STRUCTURAL STEEL SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS, EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE SHOWN:
 - "AISC SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS", INCLUDING THE "COMMENTARY" AND "SUPPLEMENTS" THEREON, AS ISSUED.
 - "AISC SPECIFICATIONS FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL".
 - "AISC SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A-325 OR A-490 BOLTS".
 - "AMERICAN WELDING SOCIETY (AWS) D1.1 "STRUCTURAL WELDING CODE".
 - "AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIGES".
2. AISC 318-"BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE AISC AGENCY TO PERFORM THE SPECIAL INSPECTIONS REQUIRED BY THE SCHEDULE OF SPECIAL INSPECTIONS.
4. ALL SPECIAL INSPECTIONS SHALL BE DESIGNED BY THE FABRICATOR'S ENGINEER FOR THE FORCES INDICATED. ALL FORCES NOTED ON THE DRAWINGS ARE ASSA VALUED. DESIGN CALCULATIONS SHALL BE SUBMITTED AS PER THE SHOP DRAWINGS AND SPECIFICATIONS.
5. THE STEEL MATERIALS SHALL BE PROVIDED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS
 - WIDE FLANGE STEEL SHAPES
 - OTHER ROLLER STEEL SHAPES
 - HEAVY (TUBULAR SHAPES)
 - BOLTS
 - ASTM A992
 - ASTM A36
 - ASTM A572 GRADE B
 - ASTM F1552, GRADE F1552, TYPE I
 - ASTM F1554 GR36
 - ANCHOR RODS
6. SEAMS OF I-BEAM SECTIONS SHALL BE MADE WITH CONTINUOUS FULL PENETRATION BUTT WELDS.
7. PROVIDE CONTINUOUS MINIMUM SIZE FILLET WELDS PER AISC. FILLER MATERIALS SHALL BE OF MINIMUM YIELD STRENGTH OF 38 KSI. EXPOSED WELDS SHALL BE GROUNDE SMOOTH.
8. ALL EXTERIOR EXPOSED STRUCTURAL STEEL SHALL BE PRIMED AND POWDER COATED.
9. SHOP AND FIELD HOLES SHALL BE PUNCHED OR DRILLED.



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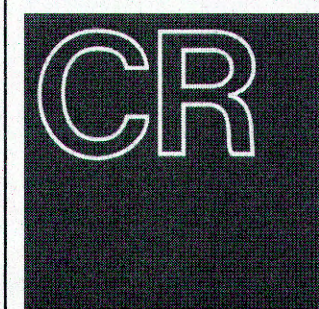
CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS

**401 EAST WINDING HILL ROAD
MECHANICSBURG PA 17055
717-458-0272 FAX 717-458-0047**

250 WEST MAIN STREET, SUITE 200
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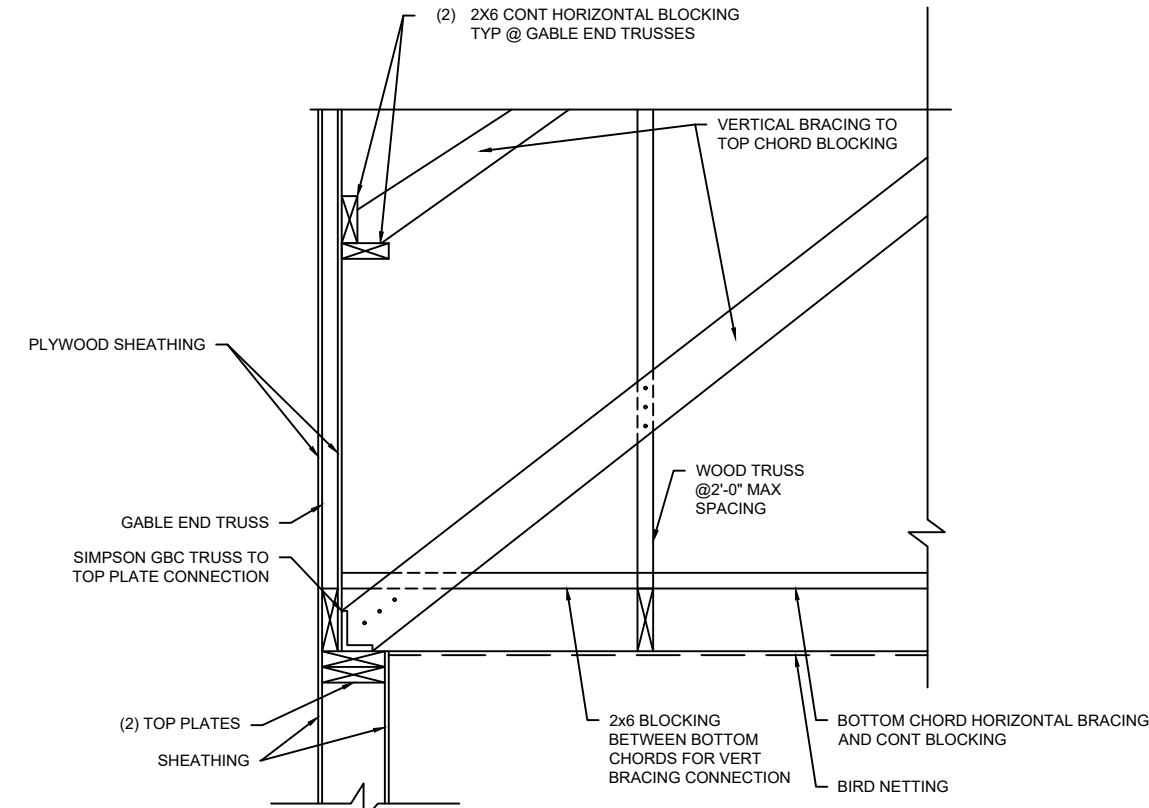
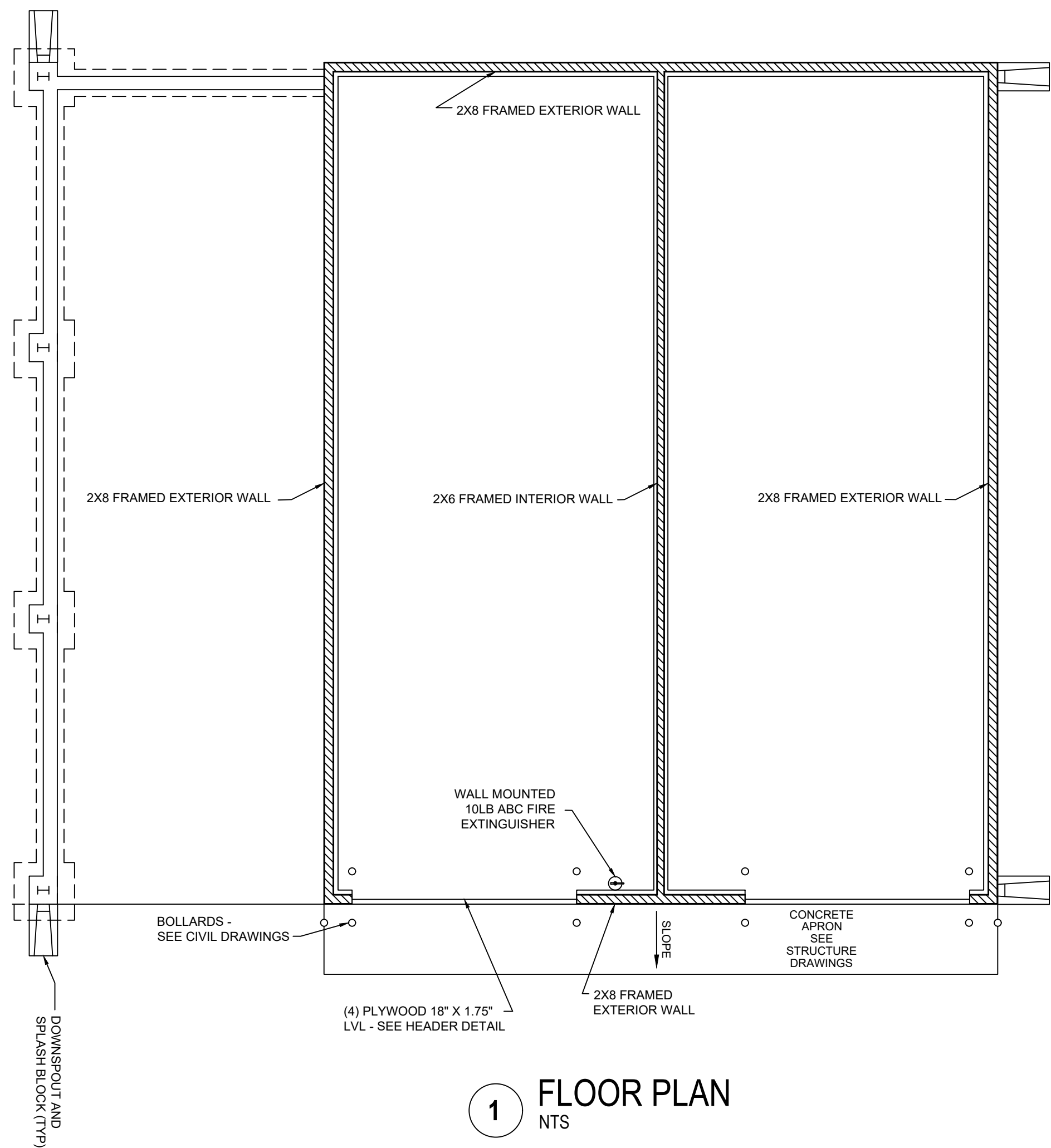
New Salt Shed
East Buffalo Township
East Buffalo Twp., Union County, Pennsylvania



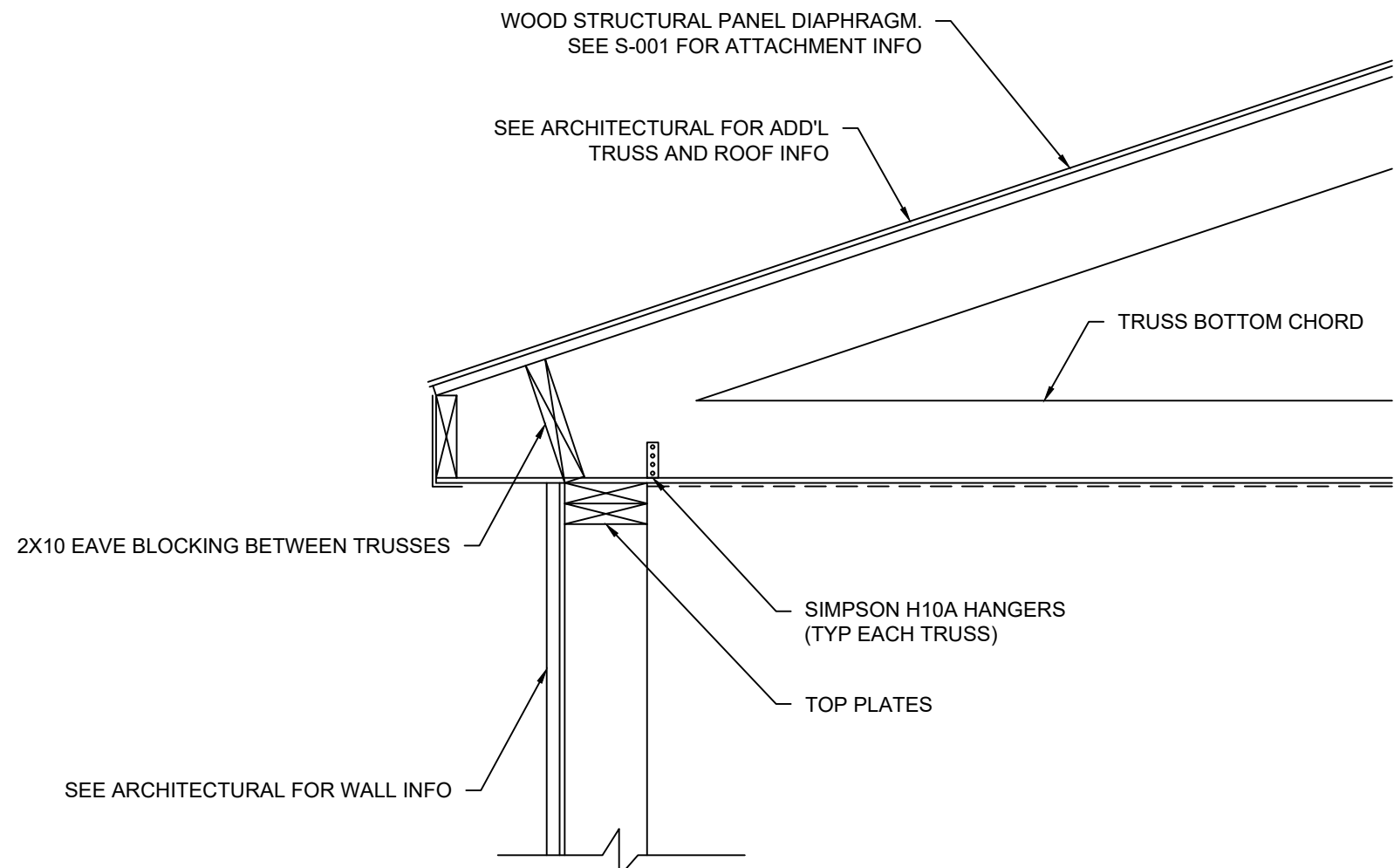
Framing Plan Notes, Sections and Details
PLOT SCALE: As indicated
FILENAME: 1040924.000
DATE: 11/12/2024

PROJECT
1040924.000

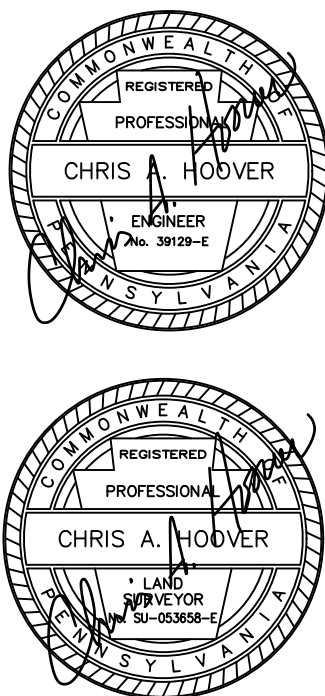
S3.1



BRACING AT GABLE END (BOTTOM)
N.T.S.

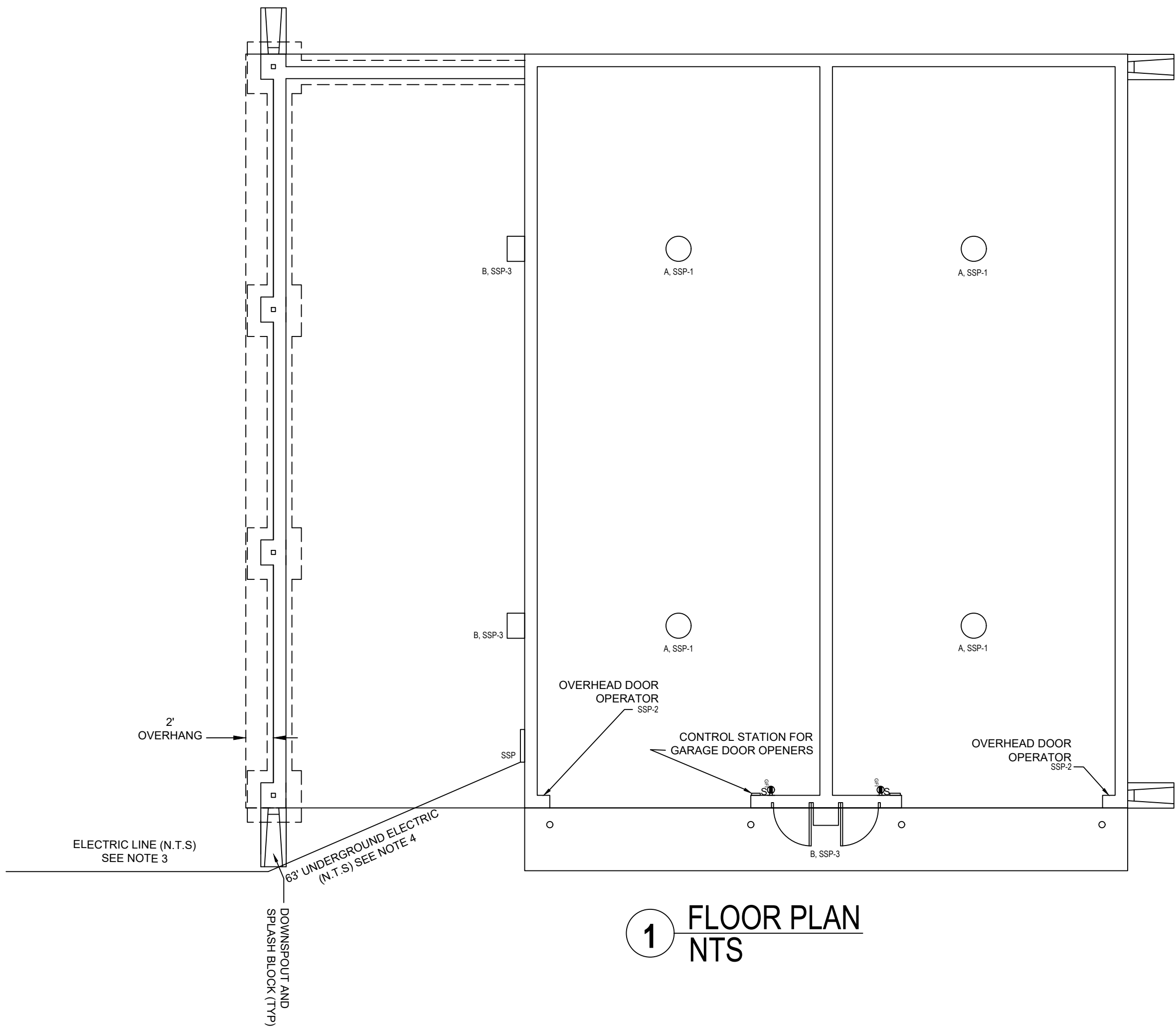


EAVE DETAIL
N.T.S.



HOOVER
ENGINEERING SERVICES, INC.
ENGINEERS • PLANNERS • SURVEYORS
1655 GAUMER ROAD SUITE 100
NEW CUMBERLAND PA. 17070-2823
TELEPHONE (717) 770-9100 FAX (717) 770-1557

REVISIONS				NO.	DATE	DESCRIPTION	BY



1 FLOOR PLAN
NTS

#6 CU BARE GROUND
ELECTRODE DIRECT BURIED AND
BONDED TO WMP GROUND BUS

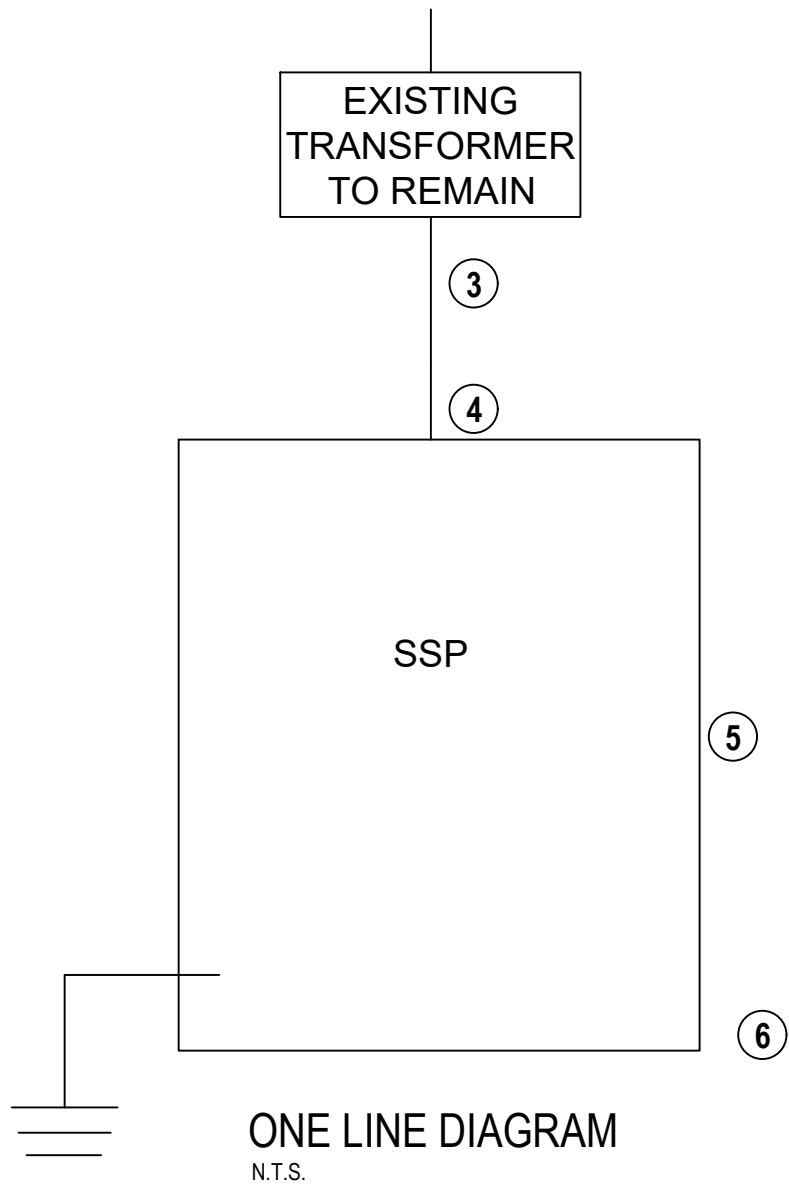
CADWELD TO #6 CU BARE
GROUND ELECTRODE
3/4" X 10'-0" COPPER CLAD
STEEL GRD ROD SET 36" BELOW GRADE
AT EVERY PLATFORM COLUMN

PANEL GROUNDING DETAIL
N.T.S.

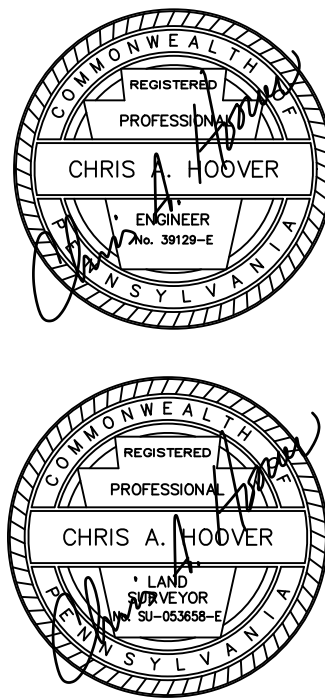
- NOTES:
1. PROVIDE GROUND ROD AT NEW BUILDING PANEL USING #6 WIRE TO CONNECT TO PANEL EQUIPMENT GROUND BUS.
 2. NEUTRAL BUS SHALL NOT BE BONDED TO EQUIPMENT GROUND BUS.
 3. ELECTRODE SHALL BE IN 3/4" PVC SCH 80 CONDUIT FROM PANEL TO GRADE.

LIGHT FIXTURE SCHEDULE								
TAG	MANUFACTURER		LED/LAMP INFO			MOUNTING		VOLTS
	NAME	CATALOG NUMBER	CRI	K	LUMENS	TYPE	HEIGHT	
A	DIALIGHT	HEU-7MC2--EDNW-NG N	80	5000	27,500	PENDANT	22'-0"	120
B	DIALIGHT	W2U12ZN	70	5000	15,600	WALL PACK	22'-0"	120

Feeder Information													
Source from (PDC/Transformer Tag Name):					Existing Transformer								
Feeder cable size:					4/0								
Feeder cable (Copper/ Aluminum):					Aluminum								
Type of Raceway(Cable Tray, EMT, etc.):					EMT								
Panel Information													
Panel Tag Name:		Salt Storage Panel (SSP)											
Voltage (LN/LL):		120/240											
System (3W, 4W):		3 Wire											
Main Bus Rating (A):		200											
Main Breaker Rating (@100%or80%):		200											
Panel Type (N/E/UPS):		Normal											
Relative Panel location:		Public Ground Side											
Mounting:		Surface											
Panel Make and Model:		TBD											
Number of Circuits:		24											
	01	20	#12	(4) Interior Hi-Bay Lights	1	1800	3600	2	(2) Interior OH Door Operators	#12	20	02	
	03	20	#12	(3) Exterior Wall Packs	1	1800						04	
	05	15	#12	(1) Exterior Receptacle	1	1200	1200	1	(2) Interior Receptacles	#12	15	06	
	07											08	
	09											10	
	11											12	
	13											14	
	15											16	
	17											18	
	19											20	
	21											22	
	23											24	
Power Per Phase (VA)					4800		4800						
Amps Per Phase					40.00		40.00						
Total Power (VA)					9600								



- NOTES:
1. CONTRACTOR TO PROVIDE (2) CONVENIENCE OUTLETS ON FRONT SIDE OF THE BUILDING BESIDE SSP.
 2. CONTRACTOR TO INSTALL PHOTOCELL FOR CONTROL OF EXTERIOR LIGHTING.
 3. EXISTING CONDUCTOR AND CONDUIT TO REMAIN.
 4. PROVIDE 63 FEET OF NEW 2 1/2" EMT CONDUIT FROM EXISTING CONDUIT TO NEW PANEL.
 5. PROVIDE NEW SSP. SEE SCHEDULE.
 6. PROVIDE GROUNDING PER DETAIL.



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