WOOD ROOF DECK NOTES:

1. ROOF SHEATHING SHALL BE 5/8" (MIN) APA STRUCTURAL I RATED SHEATHING, PANEL SPAN RATING 40/20, EXPOSURE 1.

   A 1/8" GAP IS REQUIRED BETWEEN ROOF PANELS AT ALL END AND EDGE JOINTS.

2. FASTEN ROOF SHEATHING TO SUPPORTS W/ 8d NAILS. EXCEPT AT LOCATION WHERE SPECIAL NAILING IS INDICATED, SPACE NAILS @ 6" O.C. @ SUPPORTED PANEL EDGES & @ 12" O.C. @ INTERMEDIATE SUPPORTS. WHERE INDICATED, PROVIDE 2" (NOMINAL) THICKNESS BLOCKING AT PANEL EDGES & FASTEN ALL PANEL EDGES @ 6" O.C. SEE PLAN FOR ADDITIONAL REQUIREMENTS.

3. THE QUANTITY AND SIZE OF FASTENERS CONNECTING WOOD FRAME MEMBERS SHALL BE NOT LESS THAN SPECIFIED IN THE INTERNATIONAL BUILDING CODE, 2003 – TABLE 2304.9.1 FASTENING SCHEDULE. ALL NAILS SHALL BE COMMON TYPE NAILS.

4. LAY ROOF SHEATHING PANELS W/ LONG DIMENSION ACROSS SUPPORTS & SHORT DIMENSIONS STAGGERED AS SHOWN:

CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL CONFORM TO ACI 318-02.
2. CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 4000 PSI.
3. ALL EXTERIOR AND FOUNDATION CONCRETE SHALL BE AIR ENTRAINED.
4. CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.
5. REINFORCING BARS SHALL CONFORM TO ASTM A-615 GRADE 60 DEFORMED BARS AND SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH ACI 315-LATEST EDITION.
6. SPLICES OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH ACI 318-02, UNLESS OTHERWISE NOTED ON DRAWINGS.
7. ALL SLABS-ON-GRADE SHALL BE FIBER REINFORCED. FIBER MANUFACTURER AND RATE OF APPLICATION SHALL BE APPROVED PRIOR TO PLACEMENT OF CONCRETE.
8. ANCHOR RODS SHALL CONFORM TO ASTM F1554, GR36 UNLESS OTHERWISE NOTED ON DRAWINGS.

GENERAL NOTES:

1. THE NOTES ON THESE DRAWINGS ARE NOT INTENDED TO REPLACE SPECIFICATIONS. SEE SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO GENERAL NOTES. INCONSISTENCIES BETWEEN THESE DRAWINGS AND THE SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
2. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR LOCATIONS AND DIMENSIONS OF OPENINGS, CHASES, INSERTS, REGLETS, SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.
3. ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
4. THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS, OR TIEDOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
5. SECTIONS AND DETAILS SHOWN ON ANY STRUCTURAL DRAWINGS SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS.
6. ALL APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.

ROOF TRUSS NOTES:

1. ROOF TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING LOADS:
   A. DEAD LOADS CONSISTING OF THE WEIGHT OF THE TRUSS PLUS A UNIFORM TOP CHORD DEAD LOAD = 8 PSF AND A UNIFORM BOTTOM CHORD DEAD LOAD = 10 PSF.
   B. TOP CHORD LIVE LOAD = SNOW LOAD APPLIED UNIFORMLY ALONG A HORIZONTAL PROJECTION OF THE ROOF SURFACE. DESIGN ALL COMPONENTS AND CONNECTIONS FOR THE WORST CASE AS FOLLOWS:
      CASE 1: 42 PSF APPLIED ACROSS THE ENTIRE ROOF SURFACE.
      CASE 2: 63 PSF APPLIED AT ONE SIDE OF THE RIDGE W/12 PSF APPLIED AT THE OTHER.
   C. WIND LOAD AS UPLIFT APPLIED UNIFORMLY AND PERPENDICULAR TO THE ROOF SURFACE PER ASCE 7-02. GROSS UPLIFT SHALL BE 26 PSF IN ZONES 2 AND 3 AND 21 PSF IN ZONE 1. MINIMUM WIDTH OF ZONES 2 AND 3 IS 54'.
   D. WHEN EVALUATING UPLIFT LOADS, BOTTOM CHORD DEAD LOAD SHALL BE TAKEN AS 3 PSF.
   E. LOAD DIAGRAMS FOR GIRDER TRUSSES ARE PROVIDED.
   F. TRUSS DEFLECTION UNDER SNOW LOAD SHALL BE LIMITED TO L/360, UNLESS NOTED OTHERWISE IN PLAN OR SECTION.
2. REQUIRED DIMENSIONAL PARAMETERS ARE SHOWN ON THE ARCHITECTURAL SECTIONS AND ELEVATIONS. LAYOUT OF WEB MEMBERS, SIZE, GRADE AND SPECIES OF ALL MEMBERS SHALL BE SELECTED BY THE TRUSS FABRICATOR TO COMPLY WITH THE 2001 EDITION OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION AND ITS SUPPLEMENT BY THE AMERICAN FOREST AND PAPER ASSOCIATION & THE 2001 EDITION OF THE NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION BY THE TRUSS PLATE INSTITUTE.
3. METAL CONNECTORS INDICATED ARE STOCK NUMBERS FROM SIMPSON STRONG-TIE. REFER TO SPECIFICATIONS SECTION 06100 FOR ACCEPTABLE ALTERNATIVE SUPPLIERS.
4. THE CONTRACTOR SHALL PROVIDE PERMANENT & TEMPORARY BRACING FOR BOTTOM CHORDS & WEBS IN ACCORDANCE WITH "BRACING WOOD TRUSSES: COMMENTARY AND RECOMMENDATIONS", BY THE TRUSS PLATE INSTITUTE AND IN ACCORDANCE WITH APPROVED SHOP DRAWINGS. BOTTOM CHORD BRACING SHOWN SHALL BE TAKEN AS A MINIMUM. WHERE INCREASED BRACING IS REQUIRED, THAT SHALL BE PROVIDED IN ADDITION TO WHAT IS SHOWN. ALL REQUIRED TRUSS BRACING AND ITS CONNECTIONS SHALL BE CLEARLY INDICATED ON SHOP DRAWINGS.
5. THE TRUSS SUPPLIER SHALL DESIGN TRUSSES AT THEIR SUPPORTS FOR THE MAXIMUM ALLOWABLE BEARING STRESS OF 425 PSI AND THE PROVIDED BEARING LENGTH. DOUBLE TRUSSES OR SHOP/FIELD INSTALLED REINFORCEMENT AT TRUSS BEARING MAY BE REQUIRED WHERE BEARING STRESSES ARE EXCEEDED. TRUSS DESIGNER SHALL SPECIFY ON THE TRUSS SHOP DRAWINGS ALL REQUIRED SHOP OR FIELD, TRUSS BEARING REINFORCEMENT.
6. SUBMITTALS:
   A. PROVIDE DESIGN CALCULATIONS, SHOP DRAWINGS, AND ERECTION PROCEDURES ALL APPROVED WITH THE SEAL OF A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE OF MAINE.
   B. SHOP DRAWINGS SHALL SHOW STRESS GRADE AND SIZE OF MEMBERS, SIZE AND LOCATION OF PLATE CONNECTORS, SIZE AND LOCATION OF BRACING.
   C. GENERAL CONTRACTOR SHALL REVIEW AND APPROVE TRUSS SHOP DRAWINGS PRIOR TO SUBMITTING THEM TO THE PROJECT ARCHITECT.
7. FABRICATED TRUSSES SHALL BE INSPECTED AT THE FABRICATION PLANT, AND APPROVED TRUSSES SHALL RECEIVE THE TPI MARK OF APPROVAL IN ACCORDANCE WITH THE TPI IN-PLANT INSPECTION LICENSE AGREEMENT.
8. CONNECTOR PLATES SHALL BE GALVANIZED.

FOUNDATION NOTES:

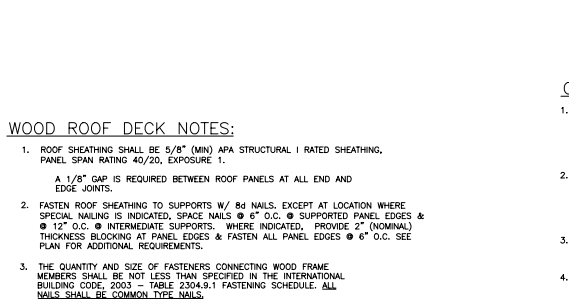
1. FOUNDATION DESIGN IS BASED IBC-2003 CHAPTER 18 PRESUMPTIVE SOIL GUIDELINES.
2. FOUNDATIONS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE = 1.5 KSF.
3. FOOTINGS SHALL BEAR ON LEDGE, SELECT FILL, OR UNDISTURBED NATIVE SOILS. PERIMETER FOUNDATIONS SHALL BEAR A MINIMUM OF 4'-6" FROM FINISHED GRADE. SLAB SUBGRADES ARE TO BE PROOFROLLED W/ A MINIMUM OF THREE PASSES; ANY SOFT OR UNSTABLE AREAS SHALL BE REMOVED & BACKFILLED WITH COMPACTED STRUCTURAL FILL (SEE NOTE 8).
4. REMOVE ALL ORGANIC MATERIAL FROM WITHIN THE BUILDING & WITHIN THE ZONE OF INFLUENCE BENEATH PERIMETER FOOTINGS. THE ZONE OF INFLUENCE SHALL BE DEFINED AS THAT AREA BENEATH THE FOOTING WITH A HORIZONTAL LIMIT ORIGINATING FROM THE OUTSIDE FACE OF FOOTING AND EXTENDING LATERALLY AT LEAST ONE FOOT PER FOOT OF FILL DEPTH.
5. FILL PLACED WITHIN THE ZONE OF INFLUENCE BENEATH THE FOOTINGS & WITHIN 5' OF FOUNDATION WALLS & WHERE FILL IS REQUIRED WITHIN THE BUILDING SHALL CONSIST OF COMPACTED STRUCTURAL FILL, AND SHALL BE PLACED IN HORIZONTAL LIFTS NOT TO EXCEED 6" AND COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698.
6. THE CONTRACTOR SHALL DEWATER EXCAVATION TO AT LEAST ONE FOOT BELOW SUBGRADE.
8. STRUCTURAL FILL SHALL COMPLY WITH THE FOLLOWING GRADATION:

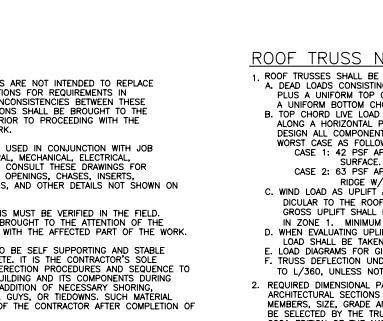
SIEVE SIZE	PERCENT FINER BY WEIGHT
6"	100
NO. 4	30-90
NO. 40	10-50
NO. 200	0-8

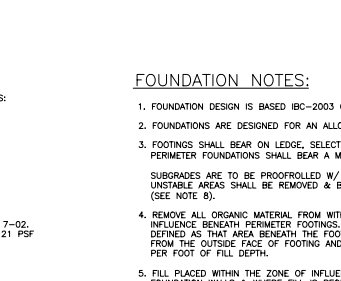
9. BACKFILL FOUNDATION WALLS WITHIN 5' OF FOUNDATION WALLS WITH GRANULAR FILL COMPACTED IN 8" LIFTS TO 95% MAX. DRY DENSITY. COMPACT BY HAND OPERATED VIBRATING PLATE COMPACTORS. ORGANIC FREE SITE SOILS MAY BE USED IN LIEU OF STRUCTURAL FILL STARTING A MINIMUM OF 2 FEET AWAY FROM FOUNDATION WALLS.
10. BACKFILL BOTH SIDES OF WALLS SIMULTANEOUSLY.

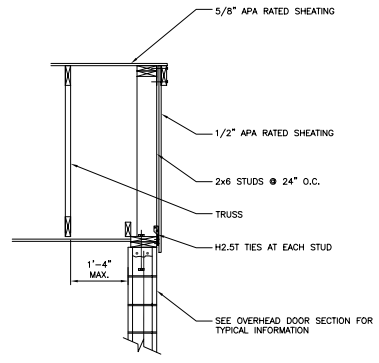
CONCRETE MASONRY NOTES:

1. ALL MASONRY WORK SHALL BE IN COMPLIANCE WITH ACI 530 " BUILDING CODE REQUIREMENTS FOR MASONRY CONSTRUCTION" AND ACI 530.1, "SPECIFICATIONS FOR MASONRY CONSTRUCITON".
2. CONCRETE MASONRY UNITS (CMU):
   A. UNITS SHALL BE NORMAL WEIGHT CELLULAR UNITS CONFORMING TO ASTM C90, GRADE N, TYPE 1. CONCRETE MASONRY NET AREA UNIT STRENGTH SHALL BE NOT LESS THAN 1900 PSI IN ACCORDANCE WITH ASTM C140, WITH A UNIT WEIGHT NOT EXCEEDING 135 PCF.
   B. DESIGN COMPRESSIVE STRENGTH OF CMU WALL (f'm) EQUALLS 1500 PSI.
3. CONTRACTOR SHALL SUBMIT FOR APPROVAL TEST REPORTS ON MASONRY UNITS SHOWING UNIT STRENGTH, COMPRESSIVE STRENGTH, ABSORPTION, VOLUME CHANGE AND SHRINKAGE PER ASTM. C90 NO LATER THAN 15 WORKING DAYS PRIOR TO THE COMMENCEMENT TO MASONRY CONSTRUCTION.
4. MORTAR SHALL BE TYPE S AND SHALL CONFORM TO ASTM C270.
5. CONCRETE GROUT SHALL BE HIGH SLUMP (8" +/-), CONCRETE WITH PEA-SIZED AGGREGATE AND SHALL CONFORM TO ASTM C476. GROUTY COMPRESSIVE STRENGTH SHALL BE NOT LESS THAN 2000 PSI AT 28 DAYS.
6. GROUTING:
   A. GROUT STOP SHALL BE USED UNDER BOND BEAM BLOCKS TO CONFINE GROUT.
   B. GROUT LIFT HEIGHT SHALL NOT EXCEED FIVE (5) FEET. GROUT POUR HEIGHT SHALL NOT EXCEED TEN (10) FEET. PROVIDE CLEAN-OUTS IN THE BOTTOM COURSE OF MASONRY FOR EACH GROUT POUR, WHEN GROUT POUR EXCEEDS 5 FEET.
   C. GROUTING SHALL BE STOPED 1-1/2" BELOW THE TOP OF A COURSE TO FORM A KEY AT THE JOINT.
   D. GROUTING OF MASONRY BEAMS OR LINTELS SHALL BE DONE IN ONE CONTINUOIS OPERATION.
7. REINFORCING:
   A. VERTICAL REINFORCING SIZE SHALL BE AS SPECIFIED ON THE DRAWINGS, AND SHALL BE PLACED WITHIN 4 INCHES OF OPENING, EACH OPENING JAMB, THE WALL ENDS, AND AT A MAXIMUM SPACING OF 48 INCHES ON CENTER.
   B. WHERE VERTICAL MASONRY REINFORCEMENT IS OBSTRUCTED BY STEEL BEARING PLATES, OFFSET BARS AT THE FOUNDATION IN ORDER TO MAINTAIN CONTINUITY OF VERTICAL BAR FROM FOUNDATION TO ROOF.
   C. SPLICED REINFORCING SHALL BE LAPPED 48 BAR DIAMETERS OR AS SHOWN ON DRAWINGS, WITHEVER IS GREATER. BAR POSITIONERS SHALL BE NSTALLED AT 4'-0" ON CENTER MAX.
   D. VERTICAL REINFORCING BARS SHALL BE CENTERED IN THE WALL CELL AND SHALL BE HELD IN POSITION TOP AND BOTTOM AND AT INTERVALS NOT TO EXCEED 4'-0". WIRE ACCESSORIES SHALL BE USED FOR SUCH SUPPORT. FOR EXAMPLE REBAR POSITIONERS RB-8/10 BY HOHMANN AND BARNARD, OR APPROVED EQUIVALENT.
   E. FOUNDATION DOWELS MAY BE SLOPED NO MORE THAN 1:6 TO ALIGN WITH WALL CAVITIES OR VERTICAL CMU COURSE.
   F. HORIZONTAL JOINT REINFORCING SHALL BE HOT-DIPPED GALVANIZED STANDARD LADDER TYPE WITH 9 GA. DIAMETER WIRE. REINFORCEMENT SHALL BE LOCATED IN ALTERNATING COURSES, 16" ON CENTER MAX. VERTICALLY. LADDER SHALL BE CONTINUOUS LAPPED NOT LESS THAN 12" AT ALL SPLICES, INCLUDING CORNERS AND TEES.
8. ALL BOND BEAM BLOCKS SHALL BE KNOCK-OUT TYPE BLOCKS. 4 1/2" MINIMUM KNOCK-OUT SHALL BE PROVIDED. USE LINTEL-TYPE BLOCKS ONLY AT OPENINGS. GROUT-STOPS SHALL BE USED AT BOND BEAMS TO CONFINE GROUT FROM HOLLOW CORES.
9. FOR COLD OR HOT WEATHER CONDITIONS MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530.1-02/ASCE 5-02 AND ACI 305 AND 306.
10. MASONRY CONTRACTOR SHALL PROVIDE FOR AND COORDINATE WITH OTHER TRADES FOR PLACEMENT OF ALL ITEMS TO BE EMBEDED, OR BUILT INTO, THE MASONRY.

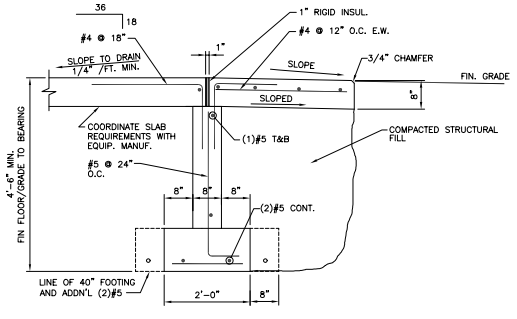








SECTION AT TYP GABLE



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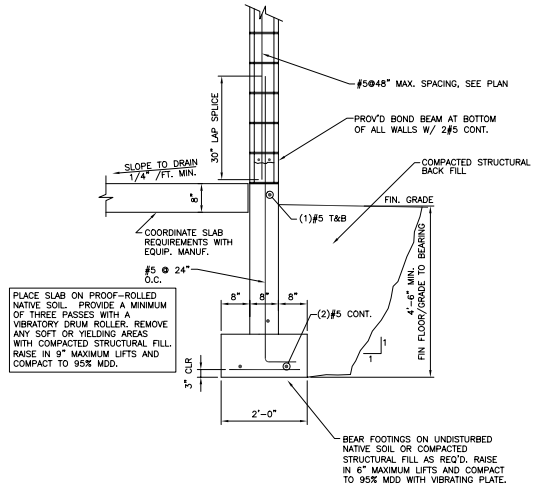
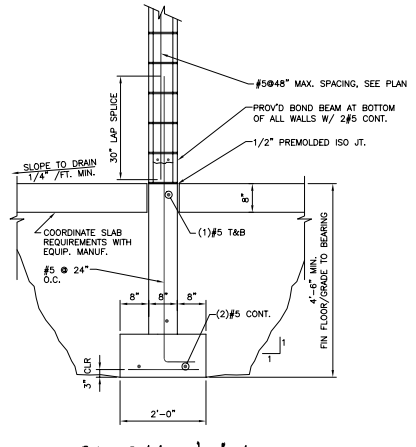


SECTION AT TYP EXT WALL



SECTION AT INTERIOR PARTITION

CMU REINFORCING NOTES;

1. PROVIDE 180 DEGREE AT BOTTOM OF ALL VERTICAL REINFORCING ABOVE OPENINGS. 90 DEGREE HOOKS MAY BE USED AT CONTRACTOR'S OPTION.
2. PROVIDE L-SHAPED CORNER BARS AT ALL BOND BEAM REINFORCING WITH A 30" LAP SPLICE TO CONTINUOUS REINFORCING.
3. PROVIDE A STANDARD HOOK ON HORIZONTAL REINFORCING AT OPENING JAMBS. WHERE 90 HOOKS ARE USED ALIGN VERTICAL LEG WITH JAMB REINFORCING; WHERE 180 DEGREE HOOKS ARE USED, PLACE HOOK AROUND JAMB REINFORCING.

NOTE: FOUNDATION DRAINS REMOVED AT OWNER REQUEST.

CUSTOM CONCEPTS, INC.
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JOB: THE CAR WASH AT WARREN AVENUE
JOB NUMBER: ******
DRAWING: STRUCTURAL NOTES / FOUNDATION DETAILS
SCALE: 1/4" = 1'-0" UNO.
APPROVED BY:
UPDATED: 11 OCTOBER 04
APPROVED BY:
DRAWN BY: TPD

- PRELIMINARY DESIGN (FOR CLIENT REVIEW) ☐
- DESIGN DEVELOPMENT (FOR CLIENT REVIEW AND COST ESTIMATING) ☐
- CONTRACT DOCUMENTS (FOR PERMITS, BIDS, AND CONSTRUCTION) ☑

A5