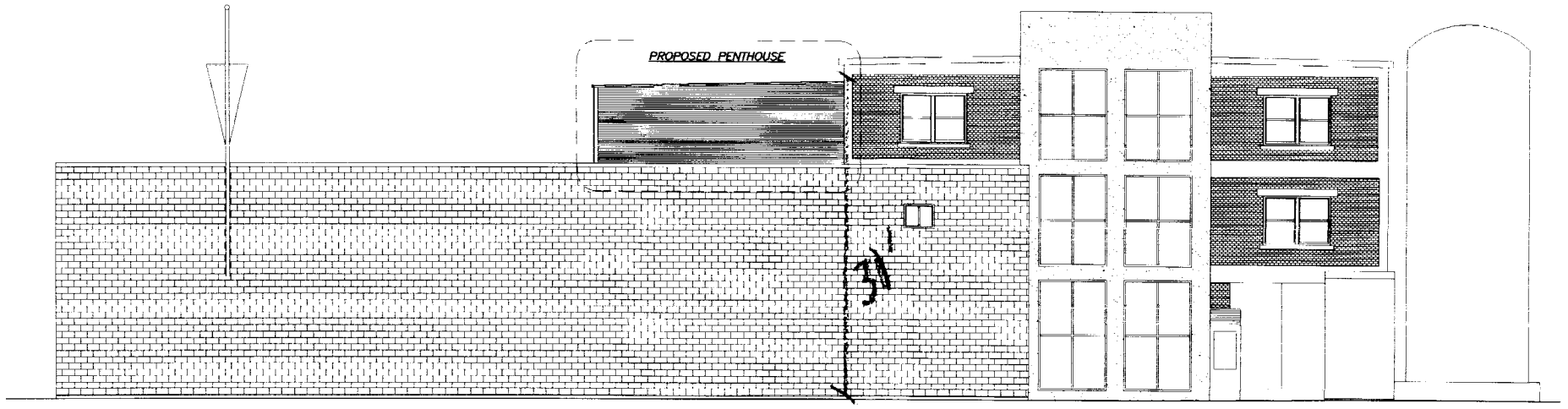
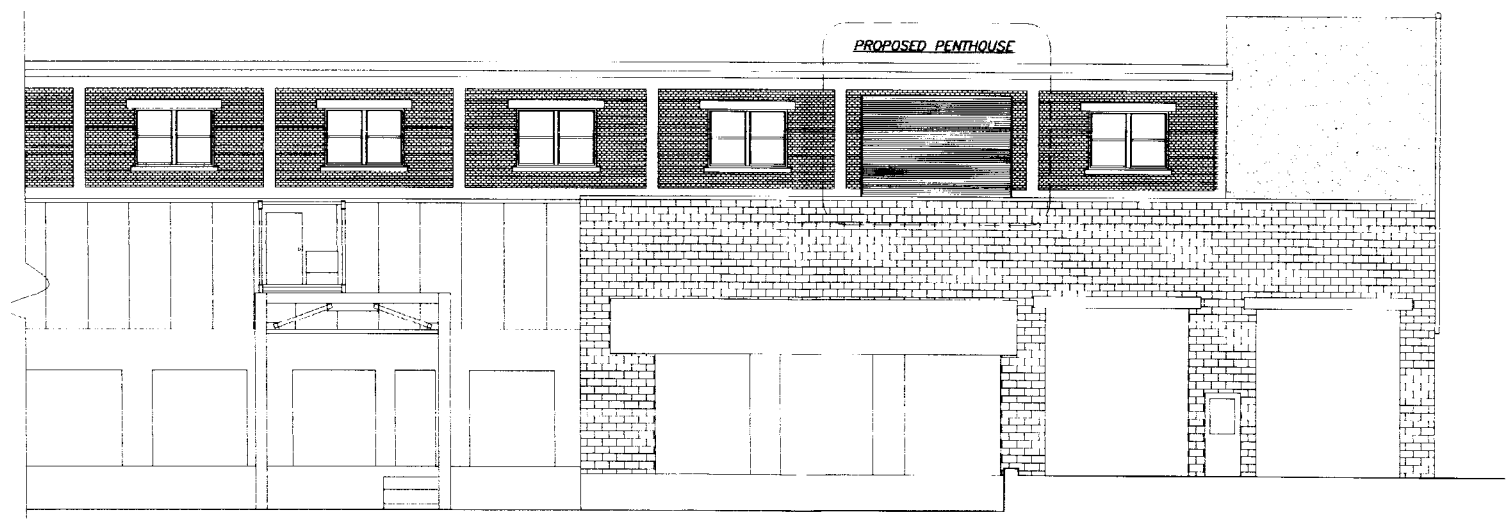
IN Zone
75' max Height Allowed
31' Scaled



SOUTH ELEVATION
1/8"=1'-0"



WEST ELEVATION
1/8"=1'-0"

ISSUED FOR PERMIT

BECKER

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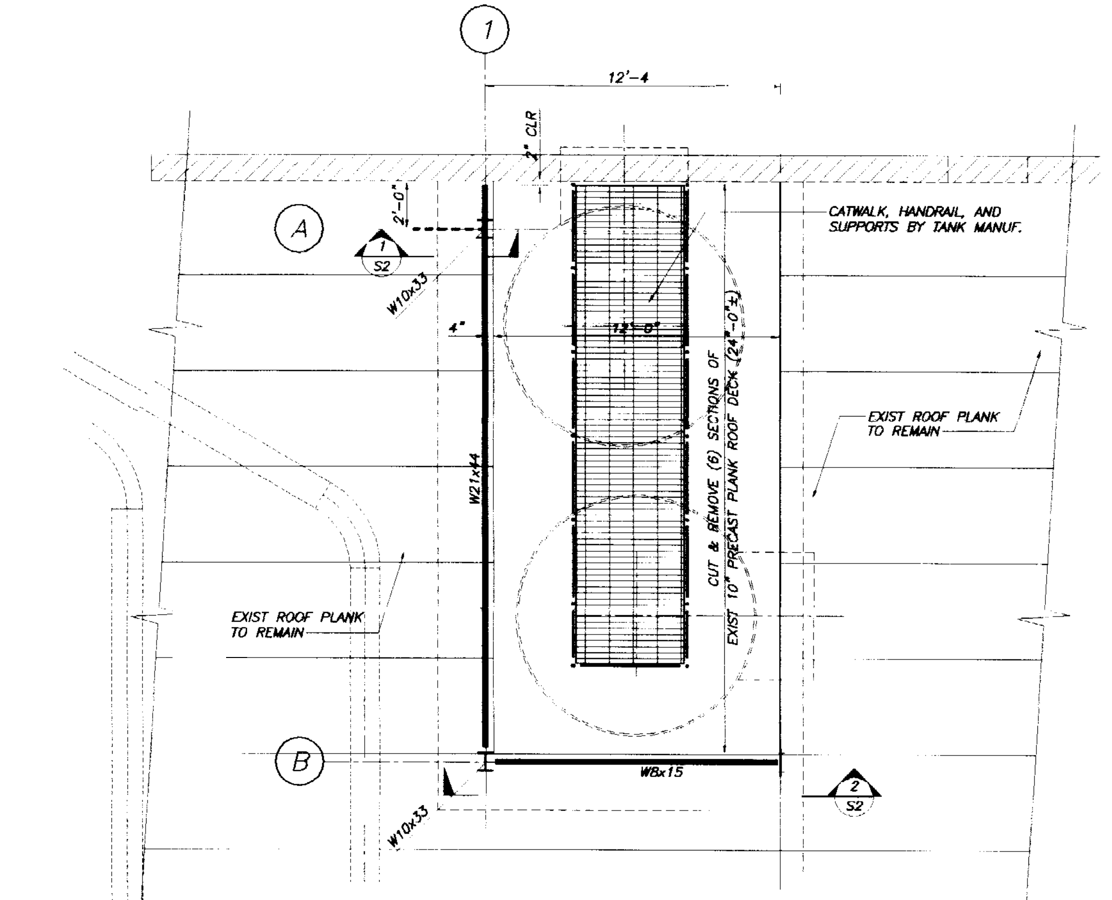
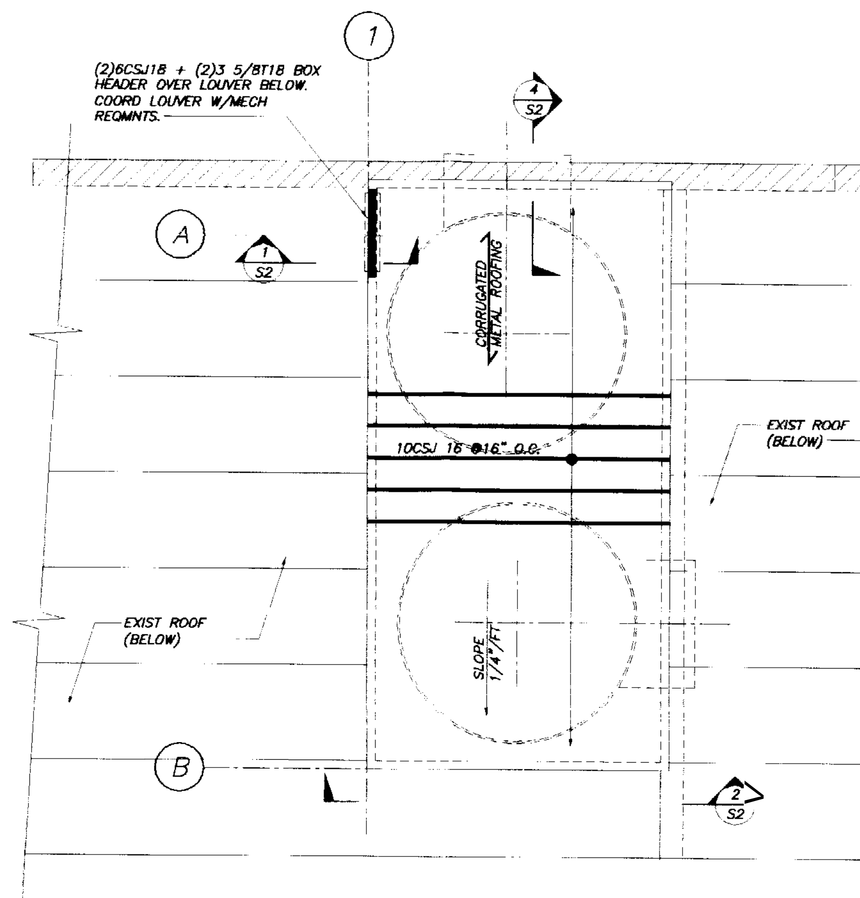
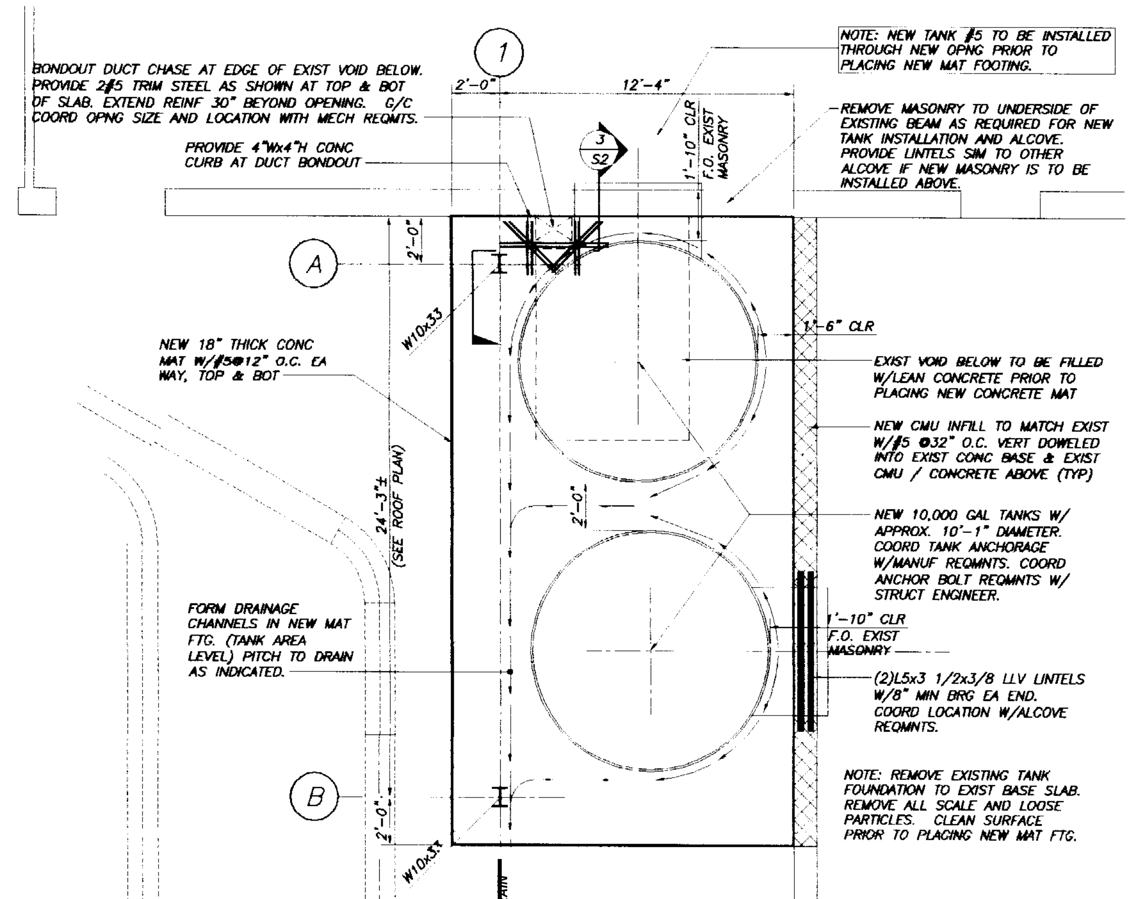


ROOF PART PLAN
1/4"=1'-0"



PENTHOUSE ROOF
1/4"=1'-0"



NOTE: TANK ANCHORAGE TO BE DESIGNED FOR SEISMIC FORCES PER IBC 2003 – CHAPTER 16. SUBMIT DESIGN FOR REVIEW. SUBMITTAL MUST BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MAINE.

FOUNDATION PART PLAN
1/4"=1'-0"

DESIGN LOADS

1. BUILDING CODE:
   INTERNATIONAL BUILDING CODE, 2003 EDITION
   ASCE 7-02 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
2. DESIGN TANK LOADS
   TANK SELF WEIGHT: 12000 LBS.
   TANK CAPACITY: 88000 LBS.
3. DESIGN ROOF SNOW LOAD:
   GROUND SNOW LOAD (Pg): 60 PSF
   SNOW EXPOSURE FACTOR (Ce): 1.0
   SNOW LOAD IMPORTANCE FACTOR (Is): 1.0
   SNOW LOAD THERMAL FACTOR (Ct): 1.0
   FLAT ROOF SNOW LOAD (Pf): 42 PSF + DRIFT
4. DESIGN WIND LOAD:
   BASIC WIND SPEED: 100 MPH
   WIND LOAD IMPORTANCE FACTOR (Iw): 1.00
   WIND EXPOSURE: B
   INTERNAL PRESSURE COEFFICIENT: ±0.18
   COMPONENTS & CLADDING LOADS PER ASCE 7-02
5. DESIGN SEISMIC LOADS:
   EQUIVALENT LATERAL FORCE PROCEDURE
   SEISMIC USE GROUP: I
   SEISMIC IMPORTANCE FACTOR (Ie):1.0
   MAPPED SPECTRAL RESPONSE ACCELERATIONS:
   Ss: 0.385
   S1: 0.101
   SEISMIC SITE CLASS: D
   SPECTRAL RESPONSE COEFFICIENTS:
   Sds: 0.371
   sD1: 0.157
   BASIC STRUCTURAL SYSTEM: BUILDING FRAME SYSTEM
   BASIC SIESMIC FORCE RESISTING SYSTEM:
   LIGHT FRAMED WALLS WITH SHEAR PANELS – ALL OTHER MATERIALS
   RSPONSE MODIFICATION FACTOR (R): 2.5

CONCRETE NOTES

1. CONCRETE WORK SHALL CONFORM TO "ACI MANUAL OF CONCRETE PRACTICE", LATEST EDITION. THIS PUBLICATION IS AVAILABLE THROUGH THE AMERICAN CONCRETE INSTITUTE (248) 848-3800.
2. ALL CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI, U.N.O. ADDITIONAL CONCRETE MIX PERFORMANCE DATA INCLUDING AIR CONTENT, WATER-CEMENT RATIO, AIR CONTENT, AGGREGATE SIZE, SLUMP, ETC. HAS BEEN INCLUDED IN THE PROJECT SPECIFICATIONS. SEE THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. ■———■ SHALL NOT BE PLACED IN WATER.
4. REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60 DEFORMED BARS AND SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 315, LATEST EDITION.
5. MINIMUM CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:
   A) SURFACES CAST AGAINST AND PERMANENTLY IN CONTACT WITH EARTH, 3.0"
   B) FORMED SURFACES IN CONTACT WITH EARTH OR EXPOSED TO WEATHER #5 BARS, 5/8" DIAMETER WIRE, AND SMALLER, 1.5"
6. WELDING OF REINFORCEMENT IS NOT PERMITTED.
7. FOR ALL OPENINGS IN CONCRETE PROVIDE SUPPLEMENTAL REINFORCING AROUND OPENING AS SHOWN ON THE CONTRACT DOCUMENTS TYPICAL DETAILS.
8. ANCHOR RODS SHALL BE CONFORMING TO ASTM F1554, GRADE 36 KSI

STRUCTURAL STEEL NOTES

1. STRUCTURAL STEEL FABRICATION, ERECTION, AND CONNECTION DESIGN SHALL CONFORM TO AISC "SPECIFICATION FOR THE DESIGN FABRICATION, AND ERECTION OF STRUCTURAL STEEL" 9TH EDITION, AND THE "CODE OF STANDARD PRACTICE, LATEST EDITION.
2. STRUCTURAL STEEL: STEEL PLATES, SHAPES, AND BARS, CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE (U.N.O.). STRUCTURAL STEEL SHAPES DESIGNATED ON THE DRAWINGS FOR WIDE-FLANGE SECTIONS: ASTM A992 (ASTM A572 GRADE 50 WITH SPECIAL REQUIREMENTS PER AISC TECHNICAL BULLETIN #3 DATED MARCH, 1997)
3. FIELD CONNECTIONS SHALL BE BOLTED USING ASTM A325N HIGH STRENGTH BOLTS (U.N.O.)
4. WHERE WELDING IS INDICATED, ALL WELDING SHALL CONFORM TO AWS D1.1- LATEST EDITION. ELECTRODES SHALL BE CONFORM TO AWS A5.1 E70XX SERIES WITH PROPER ROD TO PRODUCE OPTIMUM WELD (LOW HYDROGEN).
5. SEE CONCRETE NOTES AND DRAWINGS FOR ANCHOR BOLT INFORMATION, TYP.
6. PROVIDE 3/8" MINIMUM STIFFENER PLATES EACH SIDE OF BEAM WEB AT BEAMS FRAMING OVER COLUMNS AND AT BEAMS SUPPORTING COLUMNS ABOVE.

MASONRY NOTES

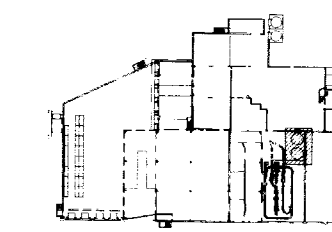
1. ALL MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530.1-02.
2. ALL CONCRETE MASONRY UNITS SHALL BE ASTM C90 GRADE N, TYPE I STANDARD WEIGHT BLOCKS INCLUDING STRETCHERS AND CORNER BLOCKS. MINIMUM PRISM STRENGTH OF BLOCK SHALL BE F'M = 1500 PSI IN 28 DAYS.
3. MORTAR SHALL CONFORM TO ASTM SPECIFICATION C270, TYPE M OR S
4. GROUT SHALL CONFORM TO ASTM C476
5. REINFORCING FOR BOND BEAMS, LINTEL BLOCKS AND VERTICAL WALL REINFORCING SHALL BE BILLET STEEL CONFORMING TO ASTM A615, GRADE 60
6. HORIZONTAL JOINT REINFORCING SHALL BE DUR-O-WAL TRUSS DESIGN, STANDARD CLASS MILL GALVANIZED WITH 3/16" DIAMETER SIDE RODS AND 9 GAUGE CROSS TIES, UNO. REINFORCING SHALL BE PLACED IN MASONRY WALLS AT EVERY SECOND BLOCK COURSE.
7. CONCRETE MASONRY UNITS SHALL BE LAID IN RUNNING BOND UNLESS OTHERWISE NOTED. PROVIDE FULL MORTAR COVERAGE ON ALL WEBS AND FACE SHELLS. PROVIDE CORNER BLOCKS AND END BLOCKS TO FINISH ALL 90 DEGREE CORNERS AND WALL OPENINGS.
8. PROVIDE LINTELS AT WALL PENETRATIONS AS SHOWN.
9. STANDARD LAP LENGTH OF GRADE 60 MASONRY REINFORCING BARS SHALL BE 48 BAR DIAMETERS.
10. CELLS TO BE GROUTED SHALL BE 2-CELL BLOCK. ALIGN CELLS TO MAINTAIN A CLEAR UNOBSTRUCTED, CONTINUOUS VERTICAL CHASE. CELLS MUST BE KEPT CLEAN OF PROTRUSIONS OR FINS OF MORTAR. FILL CELLS OF MASONRY UNITS AND WALL CAVITIES WHERE INDICATED WITH 2500 PSI GROUT. MAXIMUM GROUT LIFT WITHOUT CLEAN-OUTS SHALL BE 4'-0". HIGH LIFT GROUTING SHALL CONFORM TO CODE REQUIREMENTS WITH A MINIMUM CEMENT CONTENT OF 8 SACKS PER CUBIC YARD. SUPPORT ALL VERTICAL BARS IN CENTER OF GROUTED CELLS WITH VERTICAL BAR POSITIONER.
11. FIELD PENETRATIONS THROUGH BLOCK WALLS SHALL NOT BE MADE THROUGH BOND BEAMS, LINTELS OR GROUTED CELLS.

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. ALL DIMENSIONS, EXISTING CONDITIONS, AND AS-BUILT CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
3. THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE ONLY AFTER THE STRUCTURAL WORK CONTAINED IN THE S- DRAWINGS IS COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO INSURE 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.
4. SECTIONS AND DETAILS SHOWN ON ANY STRUCTURAL DRAWINGS SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS AS DETERMINED BY THE STRUCTURAL ENGINEER. THE STRUCTURAL ENGINEER RESERVES THE RIGHT TO INTERPRET DETAILS TO ADDRESS OTHER PROJECT CONDITIONS.
5. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS FOR ALL PARTS OF THE WORK, INCLUDING DESCRIPTION OF SHORING, AND CONSTRUCTION METHODS AND SEQUENCING WHERE APPLICABLE. NO PERFORMANCE OF THE WORK INCLUDING, BUT NOT LIMITED TO, DEMOLITION OF EXISTING STRUCTURE, OR FABRICATION OR ERECTION OF NEW STRUCTURAL ELEMENTS, SHALL COMMENCE WITHOUT REVIEW OF THE SHOP DRAWINGS BY THE STRUCTURAL ENGINEER. SUBMIT ONE COPY AND ONE SEPIA. COPY WILL BE REVIEWED AND SEPIA WILL BE RETURNED. FOR SHOP DRAWINGS AND SUBMITTALS REQUIRED, REFERENCE THE PROJECT SPECIFICATIONS.
6. ALL APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.
7. IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE (2003 EDITION, SECTION 1704.1), A STATEMENT OF SPECIAL INSPECTIONS IS REQUIRED AS A CONDITION FOR PERMIT ISSUANCE BY THE LOCAL CODE OFFICIAL. THIS STATEMENT SHALL INCLUDE A COMPLETE LIST OF MATERIALS AND WORK REQUIRING SPECIAL INSPECTIONS, THE INSPECTIONS TO BE PERFORMED AND A LIST OF THE INDIVIDUALS, APPROVED AGENCIES AND FIRMS INTENDED TO BE RETAINED FOR CONDUCTING SUCH INSPECTIONS.
8. REFERENCE THE PROJECT SPECIFICATIONS FOR ALL TESTING REQUIREMENTS.

COLD FORMED FRAMING NOTES

1. PRODUCTS AND INSTALLATION SHALL MEET THE REQUIREMENTS OF AISI SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS, 1996 EDITION & 1999 SUPPLEMENT, AWS SPECIFICATION FOR WELDING SHEET STEEL IN STRUCTURES, D1.3, ASTM 653 STANDARD SPECIFICATION FOR SHEET STEEL, ZINC (GALVANIZED) OR ZINC-IRON ALLOY-COATED (GALVANIZED) BY THE HOT DIP PROCESS AND ASTMC-955 STANDARD SPECIFICATION FOR LOAD BEARING (TRANSVERSE AND AXIAL STEEL STUDS, RUNNER (TRACK) AND BRACING AND BRIDGING, FOR SCREW APPLICATION OF GYPSUM BOARD AND METAL PLASTER BASES.
2. FRAMING MATERIALS SHALL BE AS INDICATED ON THE DRAWINGS AS MANUFACTURED BY DIETRICH INDUSTRIES, INC. 500 GRANT ST., SUITE 2226, PITTSBURG, PA. 15219, (412) 281-2805. ALTERNATE MANUFACTURERS MAY BE ACCEPTABLE PENDING SUBMITTAL REVIEW AND APPROVAL OF MANUFACTURER'S DATA SHEETS.
3. ALL GALVANIZED STUDS, JOISTS, TRACK, BRIDGING AND ACCESSORIES SHALL BE FORMED FROM STEEL HAVING A G-90 COATING MEETING ASTM C 955.
4. WALL BRIDGING AND SOLID BLOCKING SHALL BE PROVIDED TO BRACE STUDS AGAINST ROTATION. INSTALL WALL BRIDGING AND BLOCKING PER DETAILS THIS DWG.
5. SCREWS SHALL BE SELF DRILLING, SELF TAPPING, ZINC COATED AND NOT LESS THAN #10.
6. SCREW PENETRATION THROUGH JOINED MATERIALS SHALL NOT BE LESS THAN THREE EXPOSED SCREW THREADS
7. PROTECTIVE COATINGS ON SCREW FASTENERS SHALL BE COMPATIBLE WITH LIGHT GAGE MATERIAL BEING JOINED
8. CONTRACTOR SHALL REFER TO INSTALLATION INSTRUCTIONS PUBLISHED BY THE SCREW MANUFACTURER AND ASTM C954 FOR MINIMUM SPACING AND EDGE DISTANCE REQUIREMENTS AND TORQUE REQUIREMENTS.
9. CUTTING OF COLD FORMED STEEL FRAMING SHALL BE BY SAW, SHEAR OR PLASMA CUTTING EQUIPMENT. OXYACETYLENE TORCH CUTTING IS NOT PERMITTED.
10. TEMPORARY BRACING SHALL BE PROVIDED AND REMAIN IN PLACE UNTIL WORK IS PERMANENTLY STABILIZED.
11. TOP TRACKS SHALL BE CONTINUOUS. WHERE SPLICING OF TRACK IS NECESSARY BETWEEN STUD SPACING, A PIECE OF STUD SHALL BE PLACED BETWEEN ADJACENT TRACKS AND FASTENED BY WELDS OR SCREWS TO EACH SIDE OF THE TRACK, EACH END, UNO.
12. SPLICING OF FRAMING COMPONENTS, OTHER THAN TRACK, IS NOT PERMITTED.
13. A SEALANT SHALL BE APPLIED TO CONCRETE OR MASONRY SURFACES PRIOR TO ANCHORING TRACKS.
14. PROVIDE HORIZ STRAP BRIDGING FOR ALL WALLS. HORIZ BRIDGING SHALL BE CONT 20GA x 1 1/2" (MIN) WIDE STEEL STRAPS ON EA FACE OF STUD, LOCATED AT MAX 4'-0" ON CENTER FOR THE FULL HEIGHT OF THE WALL. PROVIDE TRACK SOLID BLOCKING AT 10'-0" ON CENTER ALONG THE WALL AT EA LINE OF BRIDGING. ALTERNATELY, BRIDGING CHANNELS AND BRIDGING CLIPS MAY BE USED.



KEY PLAN

ISSUED FOR PERMIT

BECKER

RAW TANK REPLACEMENT PROJECT
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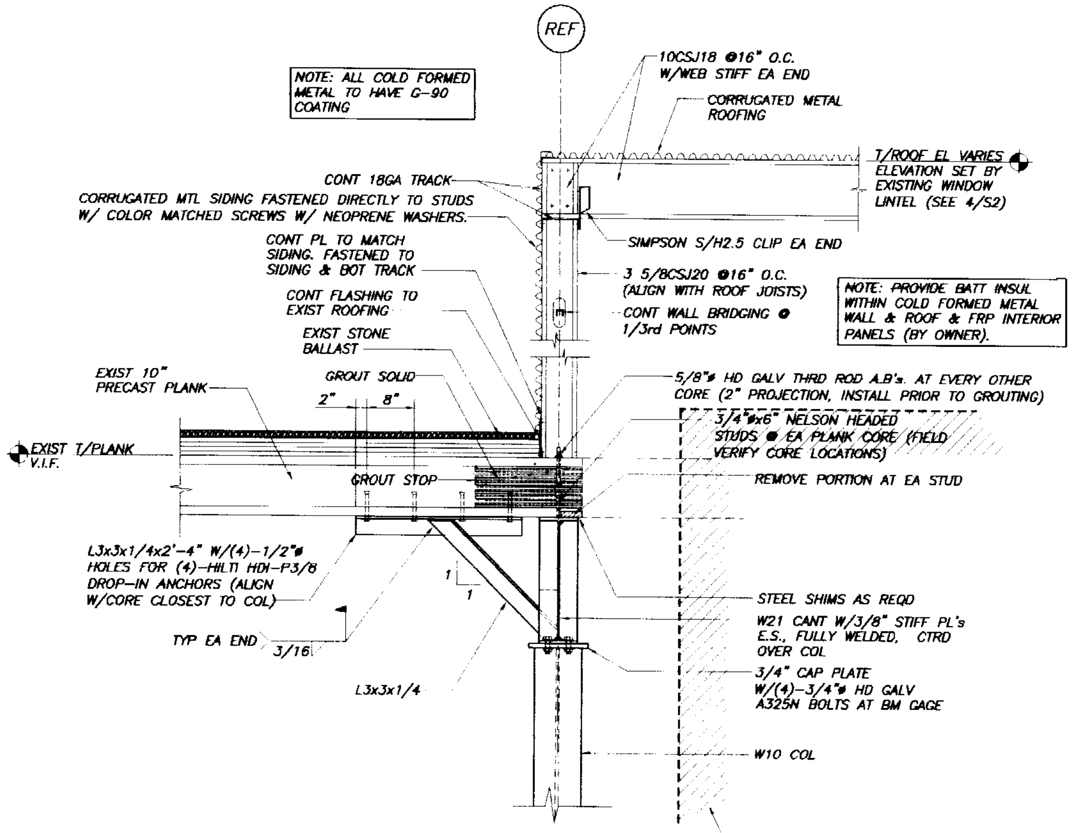
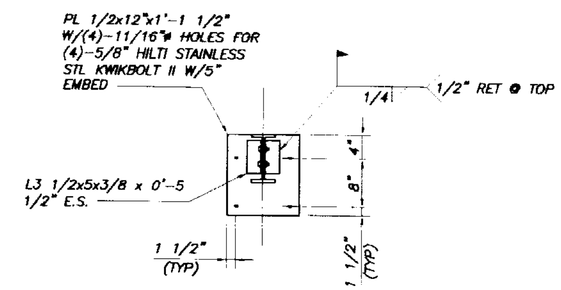
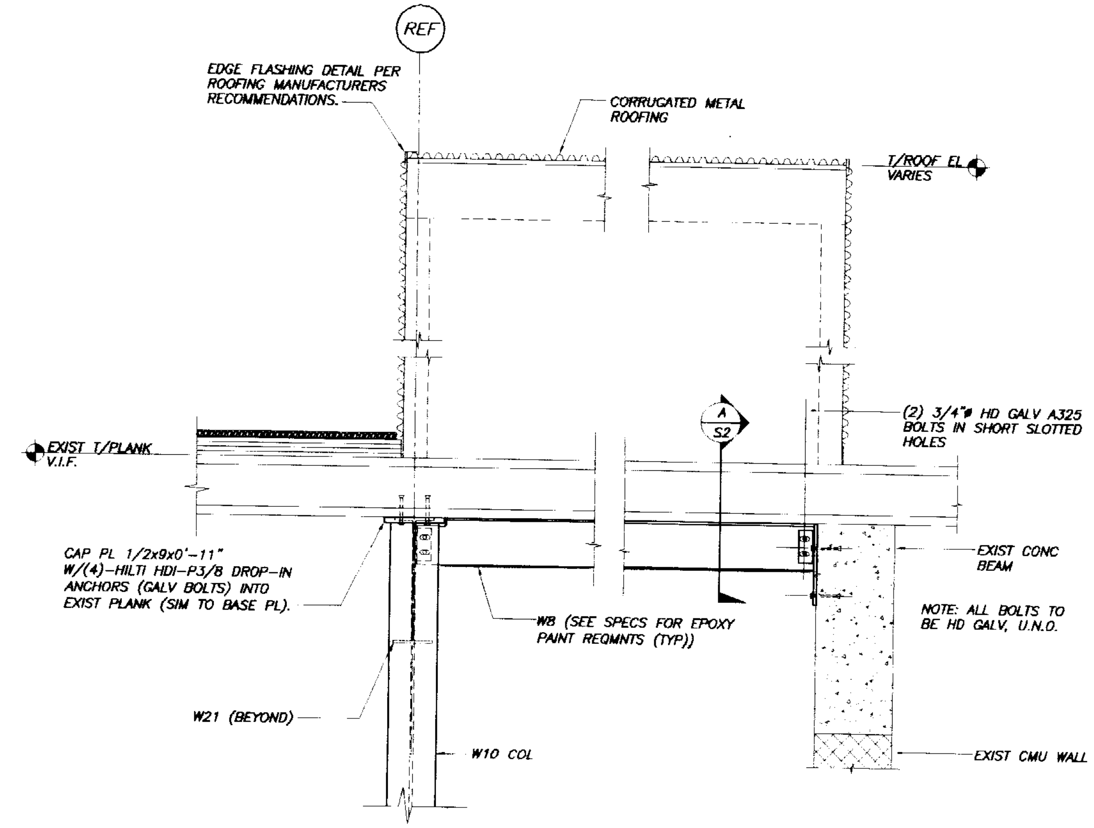
Designed	Scale
DSB	N
Drawn	Date
APP	0
Checked	Becker
PBB	14



SECTION 1/S1
3/4"=1'-0"



SECTION A/S2
3/4"=1'-0"



SECTION 2/S1
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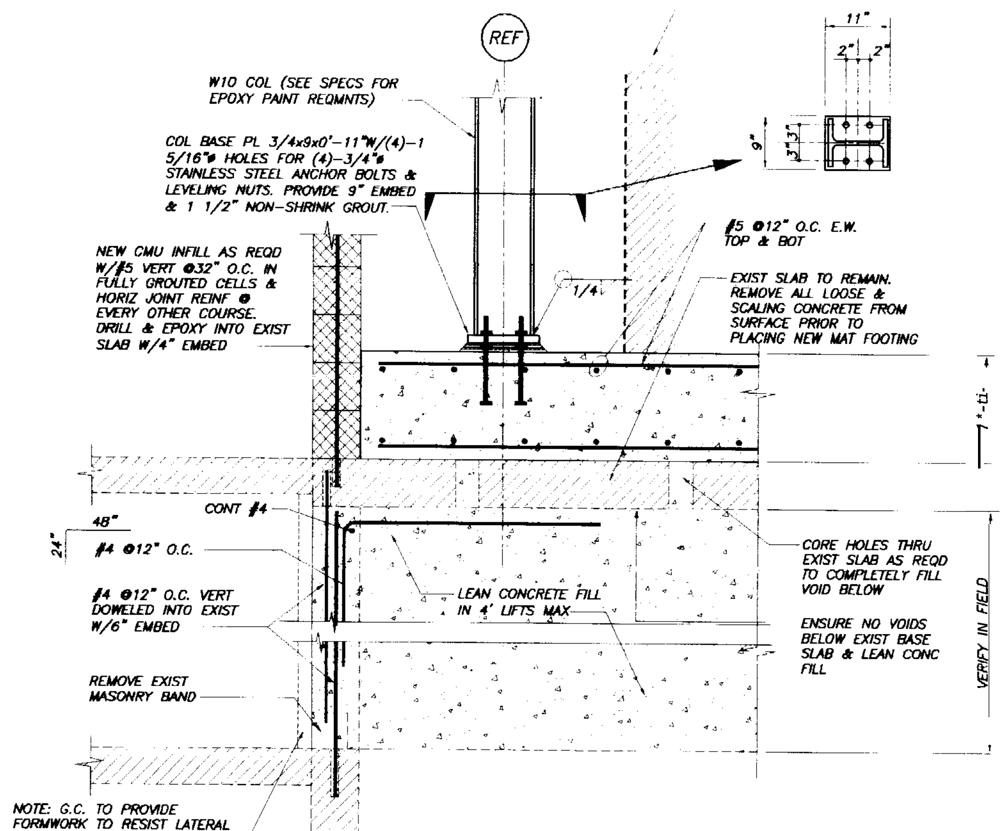
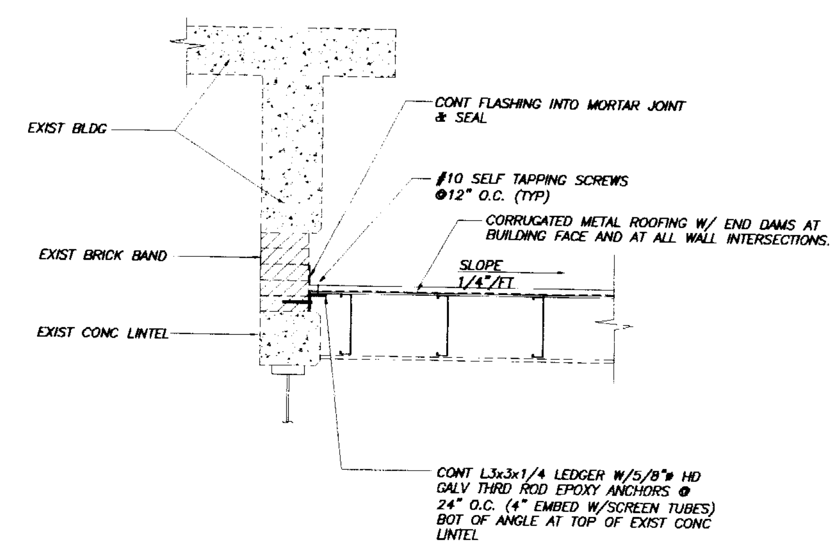


SECTION 3/S1
3/4"=1'-0"



SECTION 4/S1
3/4"=1'-0"

BECKER

RAW TANK REPLACEMENT PROJECT
H.P. HOOD – PORTLAND, MAINE

Designed	DSB	Scale	NOT
Drawn	APP	Date	04/
Checked	PBB	Becker Job	146