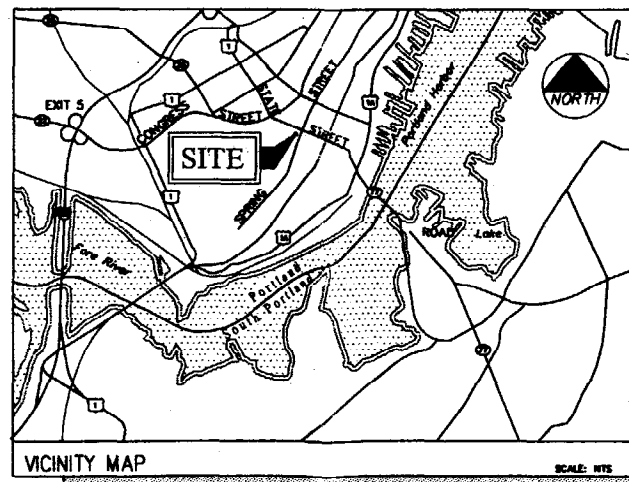


U.S. Cellular

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SITE NAME: MERCY HOSPITAL
SITE NO. 853333
LATITUDE: 43° 39' 05.02" (N)
LONGITUDE: 70° 15' 52.51" (W)

SITE NUMBER:	853333
SITE NAME:	MERCY HOSPITAL
TOWER TYPE:	40' GUYED TOWER (EXISTING)
SITE ADDRESS:	144 STATE STREET PORTLAND, ME 04101
ROOFTOP MANAGER:	COMMUNICATIONS FACILITIES 35 HARDY ROAD FALMOUTH, ME 04105
APPLICANT:	U.S. CELLULAR C/O LCC 482 CONGRESS STREET, SUITE 502 PORTLAND, MAINE 04101
PROJECT SUMMARY	



DIRECTIONS
 FROM PORTLAND INTERNATIONAL JETPORT; FROM AIRPORT TAKE THE ACCESS ROAD TO ROUTE 9/22 (APPROX. .8 MILES) AND TAKE A RIGHT ONTO CONGRESS STREET. PROCEED 2 MILES ON CONGRESS STREET TO THE OVERPASS AND CONTINUE STRAIGHT FOR AN ADDITIONAL 1.1 MILES TO THE INTERSECTION OF STATE STREET AND CONGRESS STREET. TAKE A RIGHT ONTO STATE STREET AND CONTINUE FOR .15 MILES AND MERCY HOSPITAL IS ON YOUR RIGHT BEFORE THE INTERSECTION OF SPRING AND STATE.

SHEET NO.	DESCRIPTION	DATE	REV. NO.
T-1	TITLE SHEET	08/07/03	0
S-1	STRUCTURAL PLANS ELEVATIONS & DETAILS	08/07/03	0
S-2	TOWER ELEVATION & DETAILS	08/07/03	0
S-3	ANTENNA PLAN & DETAILS	08/07/03	0
G-1	GENERAL NOTES	08/07/03	0

SHEET INDEX

BUILDING REQUIREMENTS:
 BUILDING IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS NOT REQUIRED.

PLUMBING REQUIREMENTS:
 FACILITY HAS NO PLUMBING.

Michael S. Deletetsky
 Professional Engineer

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 288 Route 101, 2nd Floor, Bedford, NH 03110

R.F. _____

SA/ZN _____

CONST. _____

U.S.C.C. _____

P.M. _____

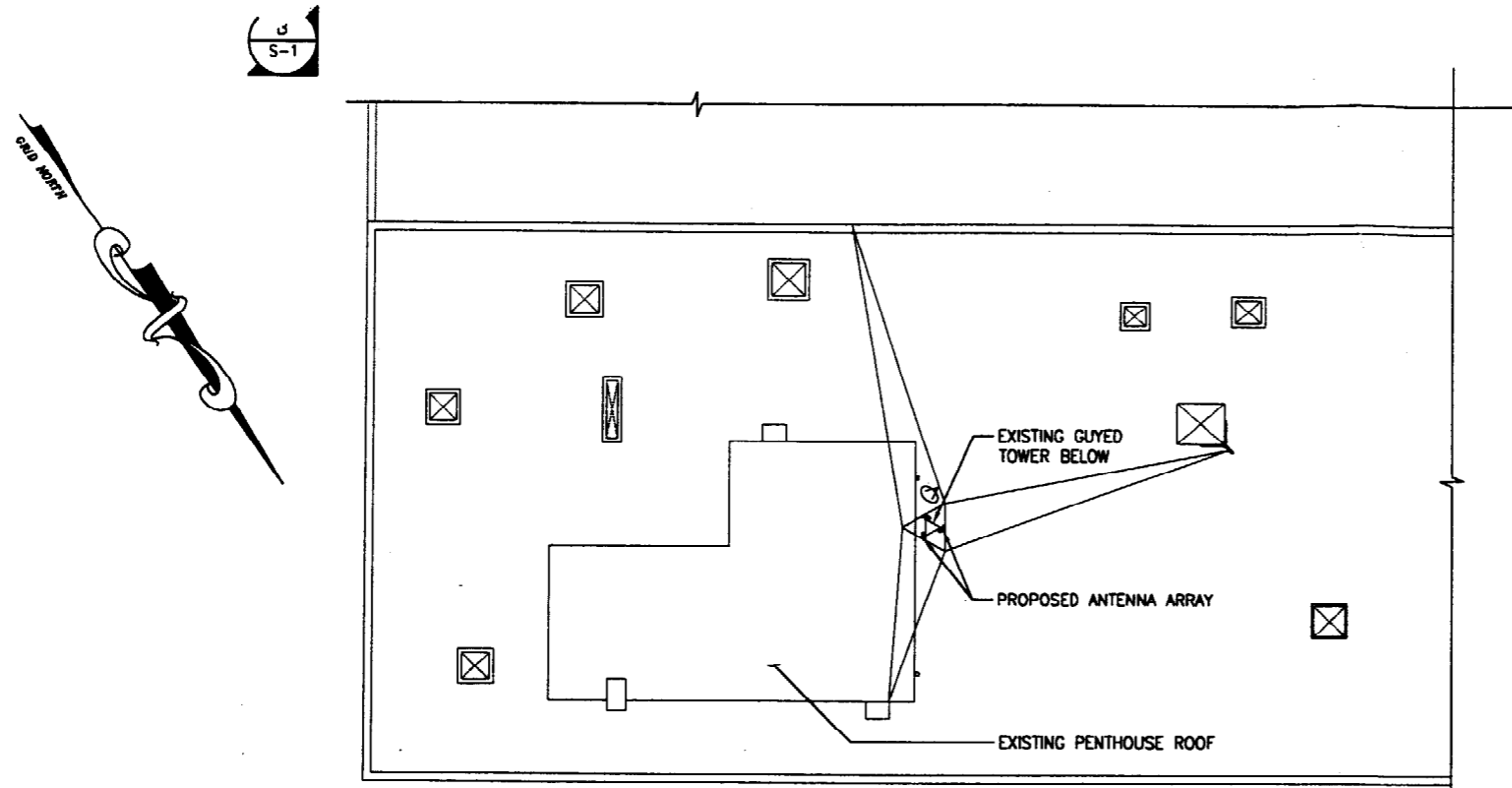
CEST Associates, Inc.
 343 Durham Road • South Portland, ME 04106
 TEL: (207) 781-1770
 FAX: (207) 774-1246
 CEST PROJ. NO: 390.06.01

SITE NAME: MERCY HOSPITAL
SITE NUMBER: 853333
ADDRESS: 144 STATE STREET
DRAWING TITLE: TITLE SHEET

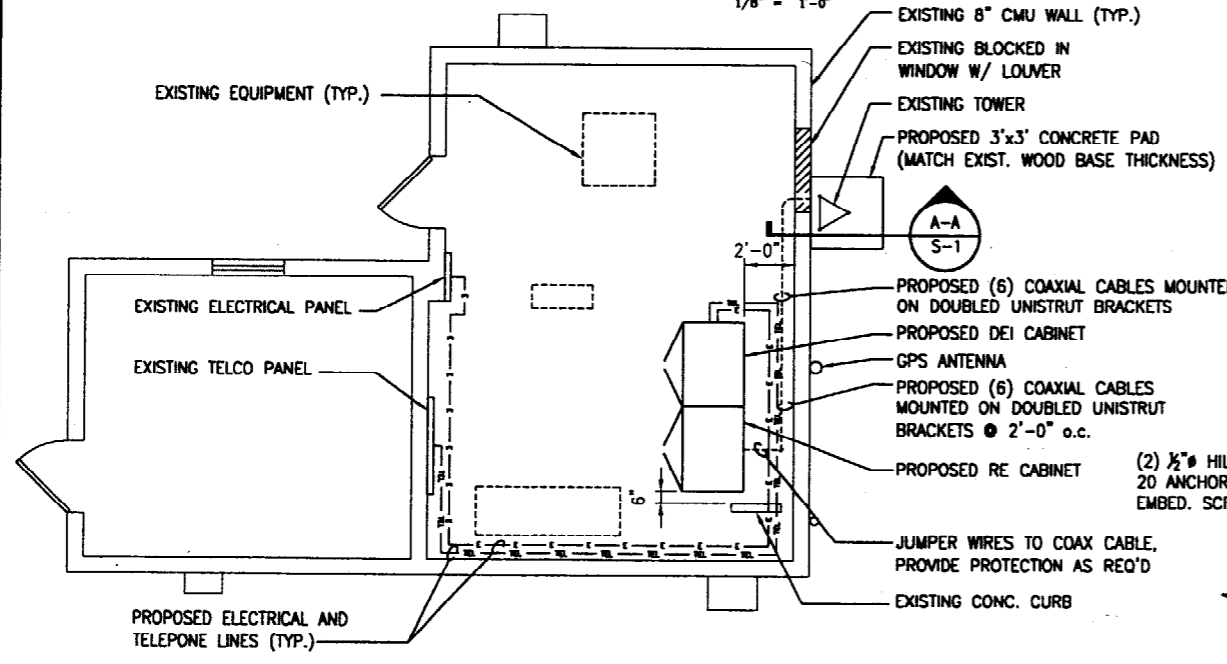
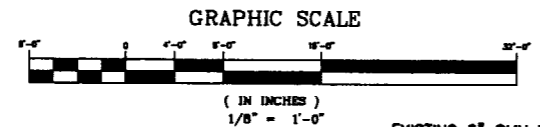
REVISIONS	
NO.	DESCRIPTION
0	FOR CONSTRUCTION 07/18/03
A	FOR REVIEW 07/21/03

DESIGNED BY: JW	DATE: 07/18/03
DRAWN BY: TJG	SCALE: AS NOTED
CHECKED BY: MSD	PROJECT NO.: 390.06.01
DRAWING NO.:	

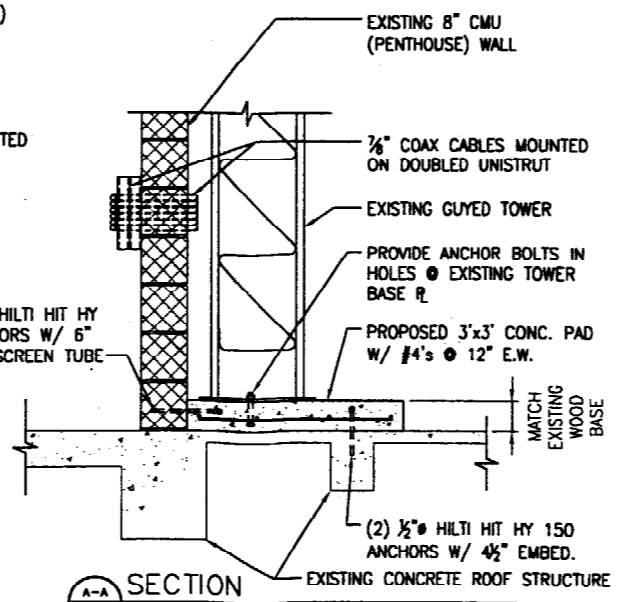
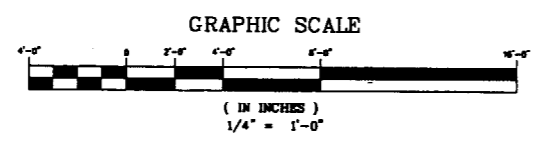
T-1



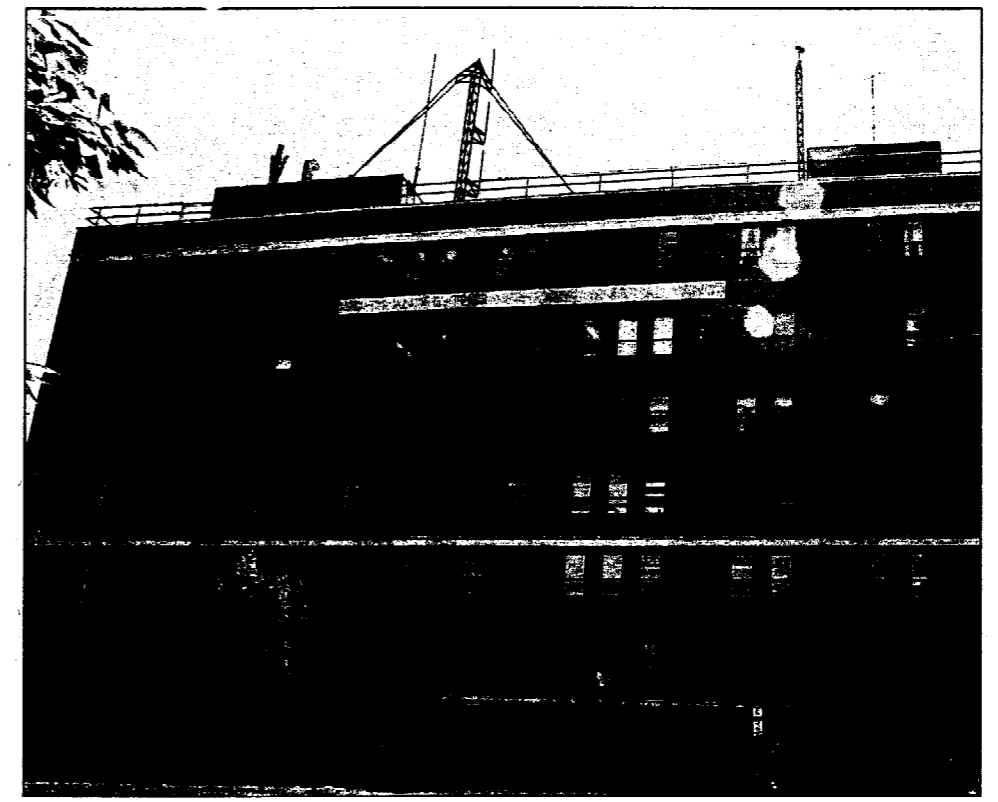
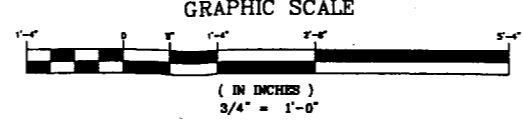
ROOF PLAN (PARTIAL)
1/8" = 1'-0"



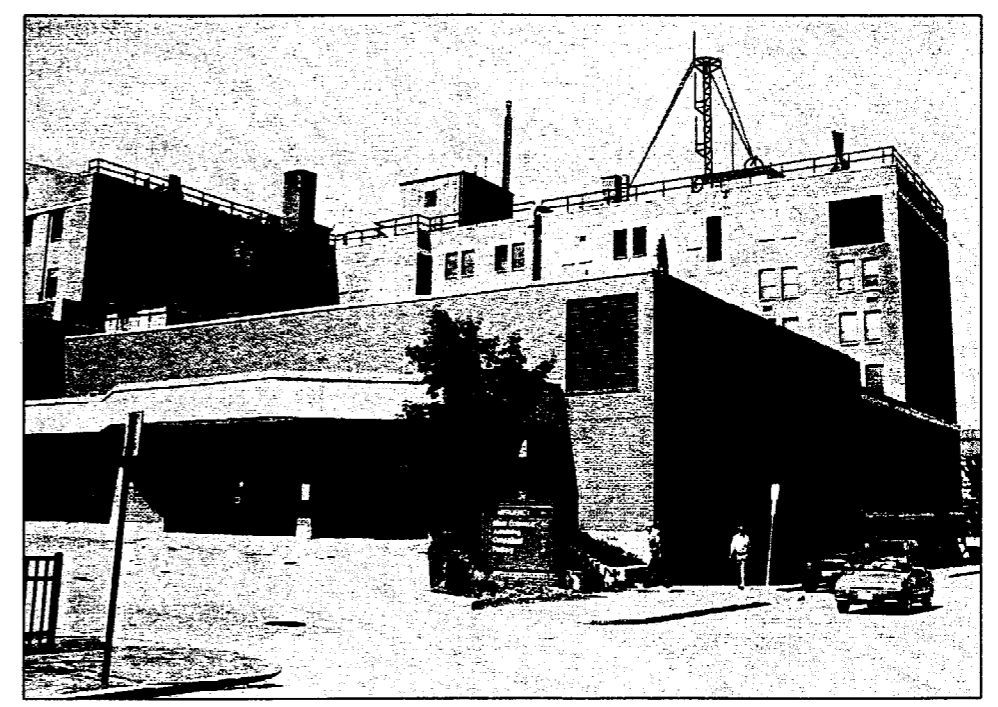
PENTHOUSE FLOOR PLAN
1/4" = 1'-0"



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



NORTHEAST ELEVATION
SCALE: N.T.S.



SOUTH ELEVATION
SCALE: N.T.S.

Professional Engineer Seal
 State of New Hampshire
 T.J.G.
 8.18.03

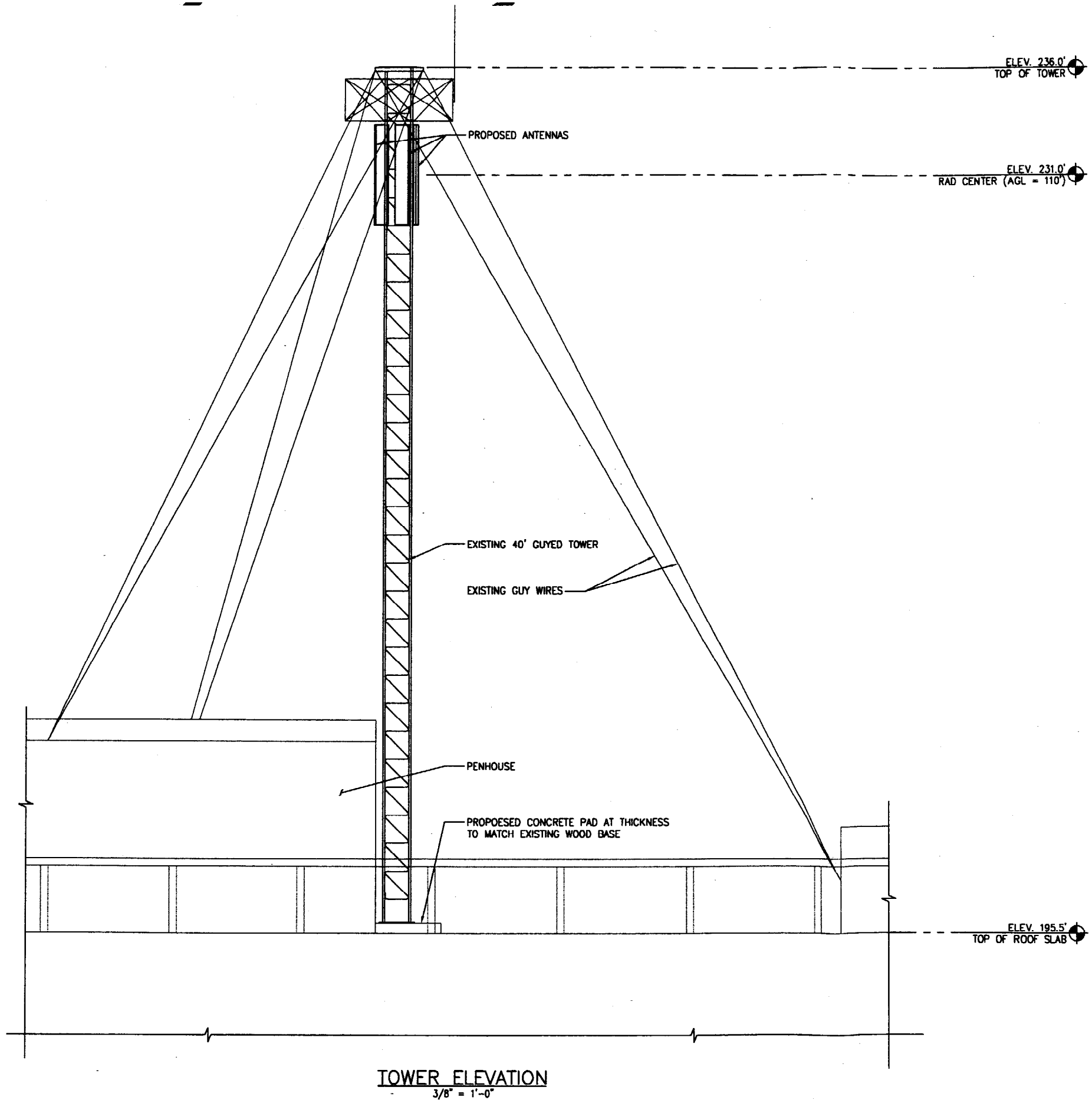
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 288 Route 101, 2nd Floor, Bedford, NH 03110

OEST Associates, Inc.
 243 Durham Road - South Portland, ME 04106
 TEL: (207) 761-1770
 FAX: (207) 774-1246
 OEST PROJ. NO: 390.06.01

MERCY HOSPITAL
 144 STATE STREET
 DRAWING TITLE: STRUCTURAL PLANS, ELEVATIONS & DETAILS

REVISIONS		
NO.	DESCRIPTION	DATE
0	FOR CONSTRUCTION	07/18/03
A	FOR REVIEW	07/22/03

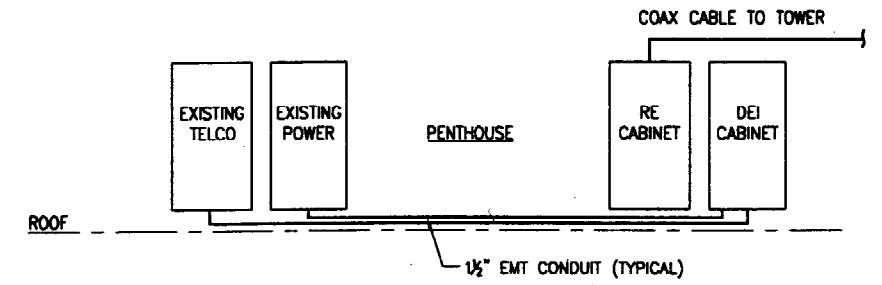
DESIGNED BY: JW DATE: 07/18/03
 DRAWN BY: T.J.G. SCALE: AS NOTED
 CHECKED BY: MSD PROJECT NO.: 390.06.01
 DRAWING NO.:



TOWER ELEVATION
3/8" = 1'-0"

ELECTRICAL AND TELEPHONE NOTES:

1. ATTACH TO EXISTING POWER PANEL, LOCATION AS SHOWN ON S-1 REPLACE MULTIPLE 20 AMP CIRCUIT BREAKER WITH 100 AMP BREAKER IN PANEL.
2. ATTACH TELEPHONE CABLING TO EXISTING TELEPHONE BOX, LOCATION AS SHOWN ON S-1.
3. CABINET INSTALLATION SHALL BE IN LOCATION AS SHOWN ON DRAWINGS AND SHALL MEET NEC IN ALL RESPECTS INCLUDING CLEARANCE.
4. SERVICE GROUND PER NEC. ATTACH TO EXISTING GROUNDING SYSTEM, STRUCTURAL STEEL OR WATER MAIN ENTRANCE TO BUILDING.
5. PROVIDE APPROVED FIREPROOFING PER NFPA CODES IF PENETRATIONS OF WALLS REQUIRE FIRE STOPPING.



POWER RISER DIAGRAM FOR CABINET
N.T.S.

Michael S. Deletetsky

 GRAPHIC SCALE

 (IN INCHES)

 3/8" = 1'-0"

CEST Associates, Inc.

 313 Main Road - South Portland, ME 04106

 TEL: (207) 761-1770

 FAX: (207) 774-1246

 OEST PROJ. NO: 390.06.01

SITE NAME: MERCY HOSPITAL

 SITE NUMBER: 853333

 ADDRESS: 144 STATE STREET

 DRAWING TITLE: TOWER ELEVATION & DETAILS

REVISIONS	
NO.	DATE
0	FOR CONSTRUCTION 07/18/03
A	FOR REVIEW 07/22/03

DESIGNED BY: JW DATE: 07/18/03

 DRAWN BY: TJG SCALE: AS NOTED

 CHECKED BY: MSD PROJECT NO.: 390.06.01

 DRAWING NO.:

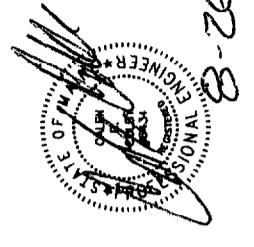


CEST Associates, Inc.
343 Green Road - South Portland, ME 04106
engineers - architects - surveyors - planners
TEL: (207) 761-1770
FAX: (207) 774-1248
CEST PROJ. NO: 390.08.01

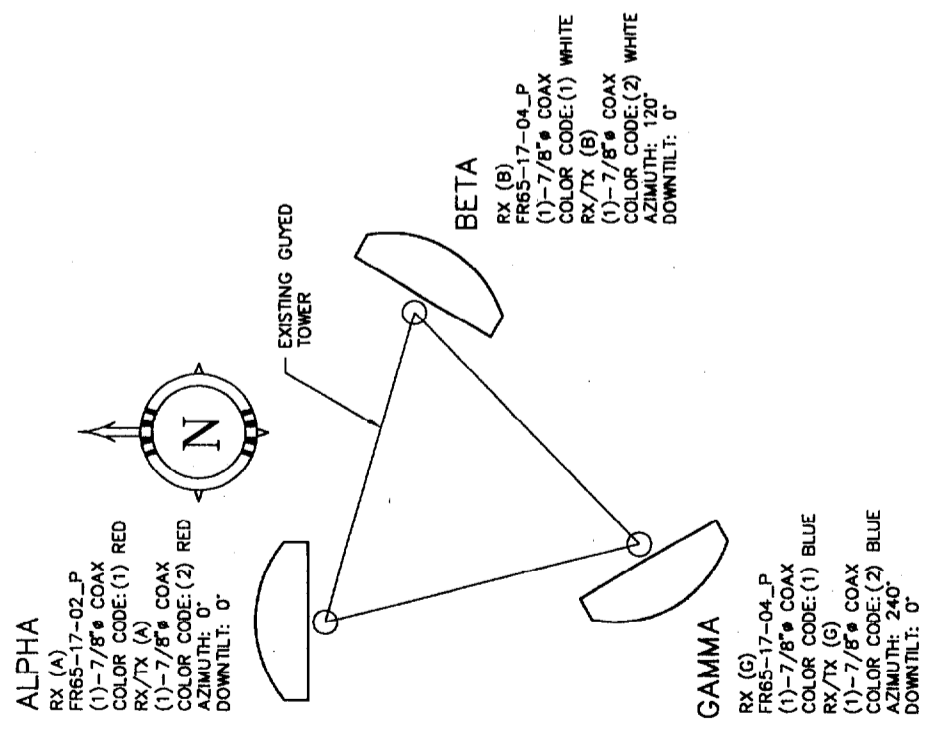
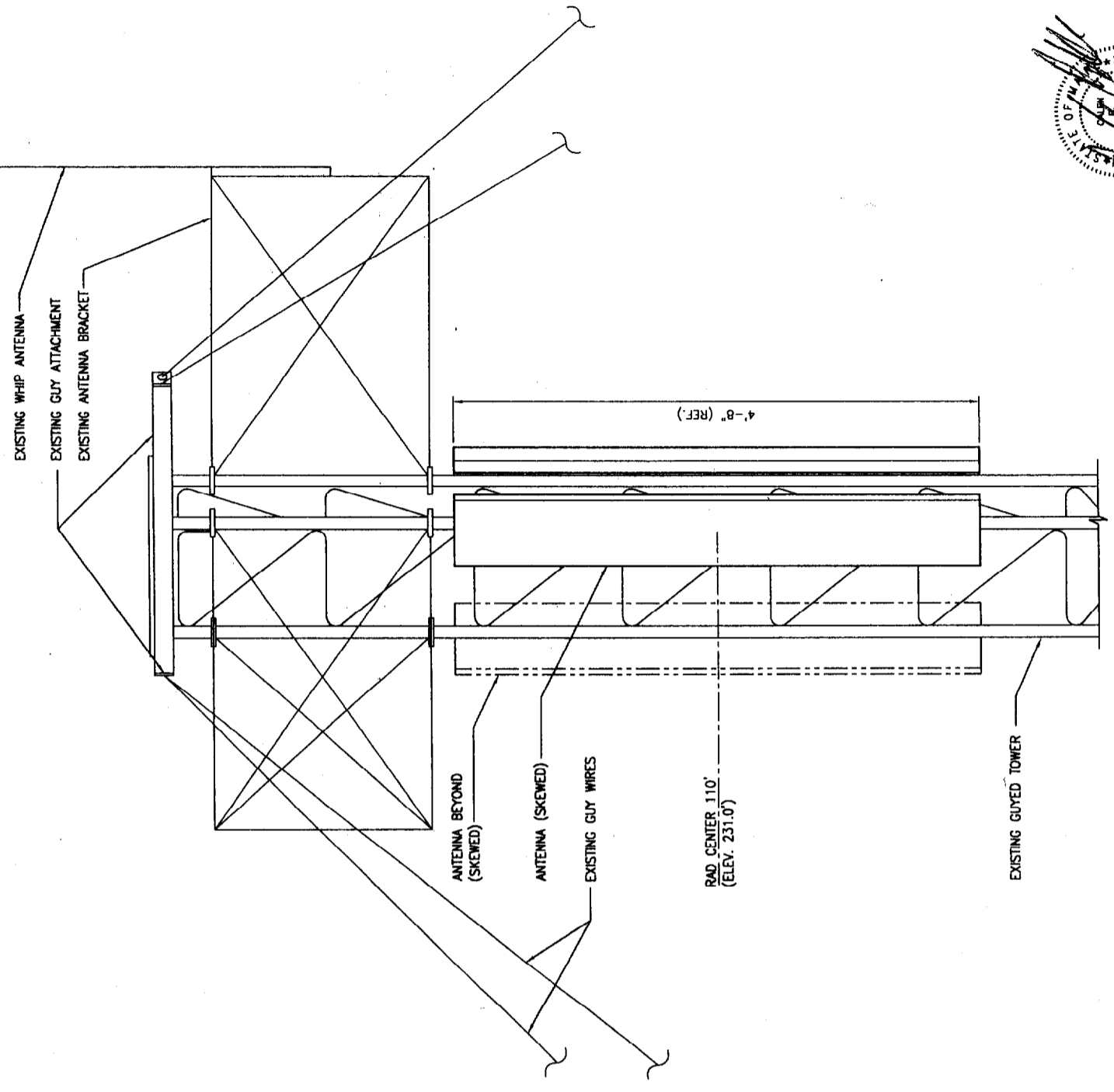
SITE NAME: MERCY HOSPITAL
SITE NUMBER: B55555
ADDRESS: 144 STATE STREET
DRAWING TITLE: ANTENNA PLAN & DETAILS

NO.	DESCRIPTION	DATE
0	FOR CONSTRUCTION	
A	FOR REVIEW	

Drawn by: JW
 Date: 07/18/03
 Scale: AS NOTED
 Checked by: T.J.G.
 Project No.: 590.06.01
 Drawing No.:



ANTENNA ELEVATION DETAIL
SCALE: 1-1/2" = 1'-0"



ANTENNA LOCATION PLAN
N.T.S.

GENERAL

- COORDINATE THE STRUCTURAL WORK WITH THE ARCHITECTURAL, CIVIL MECHANICAL, ELECTRICAL AND PIPING WORKS.
- NOTIFY OEST OF ANY CONDITIONS ENCOUNTERED IN THE FIELD CONTRADICTORY TO THOSE SHOWN ON THE STRUCTURAL DRAWING.
- VERIFY ALL DIMENSIONS IN THE FIELD. DURING ERECTION AND CONSTRUCTION PHASES, PROVIDE ADEQUATE SHORING AND TEMPORARY BRACING OF ALL STRUCTURAL COMPONENTS AND ASSEMBLAGES. NOTIFY OEST OF ALL FIELD CHANGES OR DIMENSION DISCREPANCIES PRIOR TO FABRICATION OR ERECTION.

CODES

- ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE IBC 2000.
- ADDITIONAL REFERENCED STANDARDS:
 - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION - ALLOWABLE STRESS DESIGN 1989, 9TH EDITION
 - METAL BUILDING MANUFACTURES ASSOCIATION (MBMA) 1986 LOW RISE BUILDING SYSTEMS MANUAL
 - AMERICAN CONCRETE INSTITUTE ACI 318-95 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
 - AMERICAN IRON AND STEEL INSTITUTE (AISI) SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS
 - AMERICAN SOCIETY OF CIVIL ENGINEERS ASCE 7-98 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
- ALL APPLICABLE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND THE AMERICANS WITH DISABILITIES ACT (ADA).

CONCRETE AND REINFORCING STEEL

- ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE REMOVED FROM BENEATH FOUNDATION AREAS.
- STRUCTURAL FILL AND BACKFILL SHALL CONSIST OF A NON GRANULAR MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER AND PLACED IN UNIFORM 6" LIFTS.
- STRUCTURAL FILL PLACED FOR SUPPORT OF FOUNDATION SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY FROM ASTM D998 (STANDARD PROCTOR).
- CONSTRUCT THE SIDES OF THE STRIP FOOTING FOUNDATION STRAIGHT AND VERTICAL TO REDUCE THE RISK OF FROZEN SOIL ADHERING TO THE CONCRETE AND LIFTING THE FOUNDATION. THE USE OF FORMS AT THE TOP OF THE STRIP FOOTING MAY BE NECESSARY TO PREVENT THE CREATION OF AN ENLARGED AREA OF CONCRETE (MUSHROOM). IF A MUSHROOM OF CONCRETE OCCURS, HEAVE OF THE FOUNDATION CAN TAKE PLACE FROM FROZEN SOIL BENEATH THE MUSHROOM HEAVING UP AND CARRYING THE FOUNDATION WITH IT.
- CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301 AND ACI 318. CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD 28-DAY CYLINDER TESTS, UNLESS AN ALTERNATE CONCRETE MIX DESIGN IS APPROVED. CONCRETE MIXES SHALL BE AS FOLLOWS:
 - CONCRETE SHALL HAVE 4000 PSI MINIMUM 28 DAY COMPRESSIVE STRENGTH.
 - MAXIMUM AGGREGATE SIZE SHALL BE 3/4" (ASTM C33/487).
 - CEMENT SHALL BE ASTM C150 TYPE 1 OR TYPE II U.N.D.
 - ALL STRUCTURAL CONCRETE SHALL BE AIR ENTRAINED (5.5 +/- 1.5%).
 - SUMP SHALL BE 2" TO 4".
- REINFORCING STEEL SHALL HAVE MINIMUM COVER PROTECTION AS FOLLOWS:
 - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
 - CONCRETE EXPOSED TO EARTH OR WEATHER: 2"
 - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
 - SLABS 1 1/4"
 - WALLS, JOISTS - #11 BAR AND SMALLER 3/4"
 - BEAMS, COLUMNS: PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS 1 1/2"
 - LIQUID RETAINING STRUCTURES: SURFACES EXPOSED TO LIQUID 2"

STRUCTURAL AND MISCELLANEOUS STEEL

- STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH AISC - SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS - ALLOWABLE STRESS DESIGN, JUNE 1, 1989 (9TH EDITION).
- HIGH STRENGTH BOLTS SHALL BE IN ACCORDANCE WITH AISC - SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR 490 BOLTS, NOVEMBER 13, 1985.
- WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 USE AWS PREQUALIFIED JOINT DETAILS.
- STRUCTURAL STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING:
 - CONNECTION MATERIAL EMBEDDED ITEMS, HOT ROLLED STRUCTURAL SHAPES, BASE PLATES AND WRS. STEEL ASTM A36
 - STRUCTURAL TUBES ASTM A500 GRADE B
 - STEEL PIPE ASTM A53, GRADE B
 - STRUCTURAL BOLTS ASTM A325-W U.N.D.
 - ANCHOR BOLTS ASTM A307 OR ASTM A36/SPECIFIC
 - THREADED RODS ASTM A36 OR ASTM A307
 - WELDING ELECTRODES E70XX

GROUNDING NOTES:

- ALL DETAILS ARE SHOWN DIAGRAMMATICALLY. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
- ALL GROUND WIRE SHALL BE BARE TINNED COPPER #2 AWG UNLESS OTHERWISE NOTED.
- ALL GROUND WIRES SHALL PROVIDE A STRAIGHT, DOWNWARD PATH TO GROUND WITH GRADUAL BENDS AS REQUIRED. GROUND WIRES SHALL NOT BE LOOPED OR SHARPLY BENT.
- ELECTRICAL CONTRACTOR SHALL COORDINATE CONNECTIONS TO EXISTING GROUND RINGS WITH SITE CONSTRUCTION MANAGER.
- EACH EQUIPMENT CABINET SHALL BE CONNECTED TO THE MASTER ISOLATION GROUND BAR (MIGB) WITH #2 AWG INSULATED STRANDED COPPER WIRE. EQUIPMENT CABINETS SHALL EACH HAVE (2) CONNECTIONS UNLESS NOTED OTHERWISE. GROUNDING INSTALLATION SHALL BE ACCORDANCE WITH THE EQUIPMENT SITE SPECIFICATIONS GUIDELINES.
- PROVIDE DEDICATED #2 AWG COPPER GROUND WIRE FROM EACH ANTENNA MOUNTING PIPE TO ASSOCIATED CDSB (TYPICAL FOR TWO MOUNTING PIPES PER SECTOR).
- ANTENNA GROUND KITS SHALL BE FURNISHED BY US CELLULAR AND INSTALLED BY RF CONTRACTOR.
- GROUND SYSTEM SHALL BE TESTED AND SHALL HAVE A RESISTANCE OF 3 OHMS OR LESS.

COAXIAL-CABLE BRIDGE NOTES

- ALL BRIDGE KITS SHALL BE INSTALLED AS PER THE MANUFACTURERS RECOMMENDATIONS.
- STRUCTURAL STEEL SHALL BE ASTM A36. PIPE SHALL BE ASTM A53, GRADE B (SEAMLESS).
- EXTERIOR STEEL SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION AND WELDING TO ASTM A123. HARDWARE SHALL BE EITHER A325 STEEL, GALVANIZED TO ASTM A153, OR 18-8 STAINLESS.
- SIZE, NUMBER AND POSITION OF COAXIAL CABLES MAY VARY.
- POSITION BRIDGE ASSEMBLY SO THAT COAXIAL CABLES INTERSECT AT LADDER CENTERLINE. HEIGHT ABOVE GROUND MAY VARY ACCORDING TO SITE LAYOUT.
- FOUNDATION SHALL BE 24" DIA. SONOTUBE 48" DEEP BELOW GRADE AND 8" ABOVE GRADE FILLED WITH 4000 PSI CONCRETE WITH 3/4" MAXIMUM AGGREGATE.
- FOR BURIED LEDGE AT LESS THAN 3'-6" BELOW FINISHED GRADE, CORE 8" DIA. HOLE INTO LEDGE 18" DEEP. EMBED CABLE BRIDGE COLUMN TO BOTTOM OF HOLE. FILL AROUND PIPE WITH NON-SHRINK GROUT. USE COAL TAR ON BURIED LENGTH OF PIPE, AND BACKFILL TO FINISHED GRADE.
- FOR POSTS ON CONCRETE OR EXPOSED LEDGE, PROVIDE 8"x8"x 5/8" BASEPLATE ANCHORED SHOWN ON PLAN.

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288 Route 101, 2nd Floor, Bedford, NH 03110

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343 Graham Road, South Portland, ME 04106
TEL: (207) 761-1770
FAX: (207) 774-1245
OEST PROJ. NO. 390.08.01

MERCY HOSPITAL
SITE NUMBER: 853333
ADDRESS: 144 STATE STREET
DRAWING TITLE: GENERAL NOTES

NO.	REVISIONS	DATE
0	FOR CONSTRUCTION	07/18/03
A	FOR REVIEW	

DESIGNED BY: JW	DATE: 07/18/03
DRAWN BY: TJG	SCALE: AS NOTED
CHECKED BY: MSD	PROJECT NO.: 500.06.01
DATE: 07/18/03	SCALE: AS NOTED

G-1

