STRUCTURAL GENERAL NOTES

INTERNATIONAL BUILDING CODE 2003 (IBC) WITH STATE OF CONNECTICUT SUPPLEMENTS DATED 2005

DESIGN LOADS

ROOF DEAD LOADS:	
AS MATERIALS REQUIRED BY PRE-ENGINEERED BUILDING MANUFACTURER	
ROOF LIVE LOAD:	
GROUND SNOW	30 PSF
FLAT-ROOF SNOW LOAD	Pf = 30 PSF
DRIFTING	2003 INTERNATIONAL BUILDING CODE
SNOW LOAD IMPORTANCE FACTOR	I = 1.0
SNOW LOAD EXPOSURE FACTOR	Ce = 1.0
SNOW LOAD THERMAL FACTOR	Ct = 1.0
ROOF DESIGN LIVE LOAD	30 PSF
WIND LOAD:	2003 INTERNATIONAL BUILDING CODE
BASIC WIND SPEED	V = 100 mph
WIND LOAD IMPORTANCE FACTOR	I = 1.0
WIND EXPOSURE	C
WIND DESIGN PRESSURE	P = 12 PSF MWFRS WALLS = 12 PSF COMP. & CLADDING = 19.1 PSF GROSS UPLIFT ON ROOF
EARTHQUAKE LOAD:	2003 INTERNATIONAL BUILDING CODE AND ASCE 7-02
SITE CLASS	D
MAPPED SPECTRAL REPSONSE ACCELERATIONS	Ss = 0.274 S1 = 0.085
SEISMIC USE GROUP	I
SEISMIC DESIGN CATEGORY	C
BASIC SEISMIC RESISTING SYSTEM	
RESPONSE MODIFICATION FACTOR	AS PER PRE-ENGINEERED BUILDING MANUFACTURER

DESIGN STRESSES:

SOIL PRESSURE:	Fp = 1,000 PSF
CONCRETE:	
EXTERIOR SLABS	f'c = 4,000 PSI
ALL OTHERS	f'c = 4,000 PSI
REINFORCING STEEL:	
#3 BARS AND SMALLER:	Fy = 40,000 PSI
#4 BARS AND LARGER:	Fy = 60,000 PSI
WELDED WIRE FABRIC:	Fy = 65,000 PSI
STRUCTURAL STEEL:	
WIDE FLANGE SHAPES	Fy = 50,000 PSI
ALL OTHER ROLLED SHAPES	Fy = 36,000 PSI
PLATES AND BARS	Fy = 36,000 PSI
TUBE SHAPES	Fy = 46,000 PSI

GENERAL:

1. USE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR INCLUDING ALL REQUIREMENTS INTO SHOP DRAWINGS AND WORK.
2. DO NOT CHANGE SIZE OR DIMENSIONS OF STRUCTURAL MEMBERS WITHOUT APPROVAL OF THE ARCHITECT.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF STRUCTURAL MEMBERS AT THE TIME THE LOADS ARE IMPOSED.
4. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE STRUCTURE IS DEPENDENT UPON DIAPHRAGM ACTION OF THE ROOF DECK AND ATTACHMENT TO THE BRACED BAYS FOR STABILITY AND FOR RESISTANCE TO WIND AND SEISMIC FORCES. PROVIDE ALL TEMPORARY BRACING REQUIRED FOR STABILITY AND FOR RESISTANCE TO WIND AND SEISMIC FORCES UNTIL THESE ELEMENTS ARE COMPLETE AND ARE CAPABLE OF PROVIDING THIS SUPPORT.
5. DO NOT SCALE DRAWINGS, USE DIMENSIONS.
6. CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.
7. INFORM THE ARCHITECT OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY OF SUCH DEVIATION BY THE ARCHITECT'S REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC., UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ARCHITECT OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE ARCHITECT HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
8. VERIFY ALL DIMENSIONS AND ELEVATIONS ON STRUCTURAL DRAWINGS WITH ARCHITECTURAL DRAWINGS. REPORT DISCREPANCIES TO ARCHITECT BEFORE PROCEEDING WITH WORK.
9. UNDERGROUND UTILITY LOCATIONS AND MATERIALS OF CONSTRUCTION SHOWN HEREIN AND OTHER LOCATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO START OF CONSTRUCTION.
10. CONTRACTOR SHALL NOT DISRUPT OPERATION DURING CONSTRUCTION.
11. ALL DISTURBED AREAS TO BE RESTORED TO THE ORIGINAL CONDITIONS.
12. CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND BRACING TO SUPPORT UTILITIES DURING CONSTRUCTION.
13. PRIOR TO START OF CONSTRUCTION CONTRACTOR SHALL PROVIDE TEST PITS TO VERIFY LOCATION AND ELEVATIONS OF CROSSING SANITARY WATER LINES, STORM SEWER LINES AND ELECTRICAL UTILITIES. THE CONTRACTOR SHALL REQUEST MARK OUT OF UTILITY LOCATION FROM CALL BEFORE YOU DIG (1-800-922-4455) AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION OPERATION.

FOUNDATIONS:

1. FOOTING ELEVATIONS SHOWN ON PLAN ARE TO BOTTOM OF FOOTINGS. 1
2. REFER TO CIVIL DRAWINGS FOR ROUGH GRADE ELEVATIONS.
3. DO NOT PLACE CONCRETE FOR FOOTINGS UNTIL BEARING CAPACITY IS VERIFIED BY OWNER'S GEOTECHNICAL CONSULTANT.
4. OVER EXCAVATION OF SOIL FOR FOOTINGS SHALL BE REPLACED AND COMPACTED IN LAYERS, TO 95% OF MODIFIED PROCTOR.
5. UNSUITABLE BEARING MATERIALS, SUCH AS MISCELLANEOUS FILL AND ORGANIC SOILS MAY EXIST IN AREAS OF NEW FOUNDATIONS. EXISTING UNSUITABLE MATERIALS SHALL BE EXCAVATED AS DIRECTED OR AS INDICATED ON THE DRAWINGS AND SHALL BE FILLED BY PLACEMENT OF COMPACTED GRAVEL FILL AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
6. STEP WALL FOOTINGS 1 VERTICAL TO 2 HORIZONTAL WHERE ELEVATIONS CHANGE UNLESS NOTED OTHERWISE ON DRAWINGS.
7. EDGES OF FOOTINGS SHALL NOT BE PLACED AT A SLOPE GREATER THAN 1 VERTICAL TO 2 HORIZONTAL WITH RESPECT TO ANY ADJACENT FOOTING OR EXCAVATION UNLESS NOTED OTHERWISE ON THE DRAWINGS.
8. DO NOT USE EARTH FORMED TRENCH FOR FOOTINGS OR FOUNDATION WALLS.
9. DO NOT PLACE FOUNDATION CONCRETE ON FROZEN SOIL OR INTO AN EXCAVATION CONTAINING FREE WATER.
10. REFER TO ARCHITECTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL LOCATIONS OF TRENCHES, PITS, CONDUITS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS.
11. COORDINATE PLACEMENT OF ANCHOR BOLTS AND SLEEVES WITH FOUNDATION REINFORCEMENT.
12. WALLS MONOLITHICALLY WITH EACH OTHER.

SLAB ON GRADE:

1. SUPPORT WELDED WIRE FABRIC REINFORCEMENT OR REINFORCING STEEL BARS ON CONTINUOUS SLAB BOLSTERS (WITH SAND PLATES) SPACED AS REQUIRED TO ADEQUATELY SUPPORT FABRIC OR REINFORCING STEEL BARS, BUT IN NO CASE GREATER THAN 24" O/C. PLACE WELDED WIRE FABRIC OR REINFORCING STEEL BARS AS SHOWN.
2. PLACE ALL INTERIOR SLABS ON GRADE OVER VAPOR BARRIER. REFER TO SPECIFICATION FOR VAPOR BARRIER REQUIREMENTS.
3. EXTERIOR SLABS ON GRADE CONSTRUCTION AND CONTRACTION JOINTS (INCLUDING SIDEWALKS) SHALL BE TOOLED. REFER TO CIVIL DRAWINGS FOR REQUIRED DEPTH.
4. SLOPE FLOORS TO DRAINS WHERE INDICATED ON DRAWINGS.
5. PLACE ELECTRIC CONDUIT AND OTHER PIPES BELOW CONCRETE FLOOR SLABS.
6. PROVIDE DIAGONAL REINFORCEMENT AT RE-ENTRANT CORNERS IN SLABS AS FOLLOWS: 2#4 X 4'-0" BAR FOR EACH 4 INCHES OF SLAB THICKNESS.

CONCRETE:

1. HEATING WILL NOT BE PERMITTED FOR BENDING OF REINFORCEMENT STEEL.
2. CONCRETE COVER FOR STEEL REINFORMENT, UNLESS NOTED OTHERWISE:
   UNFORMED SURFACE IN CONTACT WITH THE GROUND. 3 IN.
   FORMED SURFACES EXPOSED TO EARTH OR WEATHER. 2 IN.
3. MINIMUM CONCRETE COVER FOR ANCHOR BOLTS: 3 IN.
4. LAP CONTINUOUS CONCRETE HORIZONTAL REINFORCING BARS 38 DIAMETERS, UNLESS OTHERWISE NOTED. ALL OTHER LAP SPLICES SHALL BE IN ACCORDANCE WITH ACI318-99.
5. PROVIDE CORNER BARS FOR ALL HORIZONTAL REINFORCEMENT.
6. ALL CONCRETE SHALL BE AIR-ENTRAINED.
7. REFER TO CIVIL, ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION AND DIMENSIONS OF PADS, DEPRESSIONS, OPENINGS, SLEEVES, DRAINS, INSERTS, ANCHORS HANGERS, MISCELLANEOUS IRON, CHASES, CONDUITS, FLOOR FILLS AND FINISHES, CURBS, STONE AND MASONRY DETAILS AND OTHER DETAILS RELATED TO CONCRETE WORK NOT SHOWN ON STRUCTURAL DRAWINGS.
8. PROVIDE DIAGONAL REINFORCEMENT ON EACH SIDE OF OPENINGS, OR RE-ENTRANT CORNERS IN SLABS AS FOLLOWS 2- #4 X 4'-0" BAR FOR EACH 4 INCHES OF SLAB THICKNESS.
9. REFER TO ARCHITECTURAL DRAWINGS AND/OR SPECIFICATIONS FOR CONCRETE FINISHES.
10. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL CONCRETE WORK NOT SHOWN ON STRUCTURAL DRAWINGS.

PRE-ENGINEERED STEEL BUILDING:

1. THE PRE-ENGINEERED BUILDING SHALL BE DESIGNED TO SUPPORT THE MINIMUM DESIGN LOADS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS FOLLOWING THE STATE OF CONNECTICUT BUILDING CODE
2. THE PRE-ENGINEERED BUILDING SHALL BE COATED BOTH AT THE EXTERIOR AND INTERIOR OF THE BUILDING
3. THE NAMUFACTURER OF THE PRE-ENGINEERED BUILDING AND THE CONTRACTOR SHALL COORDINATE ALL DIMENSIONS, ANCHOR BOLTS SIZES, ANCHOR BOLT LOCATION AND PLACEMENT AND BASE PLATE SIZES PRIOR TO ANY FAVRICATION OF THE BUILDING OR PLACEMENT OF CONCRETE FOUNDATIONS.
4. THE PRE-ENGINEERED BUILDING MANUFACTURER SHALL SUPPLY CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STAT OF CONNECTICUT WITH THE SHOP DRAWING OF THE PRE-ENGINEERED BUILDING.
5. PROVIDE LATERAL BRACING AS REQUIRED TO RESIST WIND AND SEISMIC LATERAL LOADS 1
6. PROVIDE LATERAL BRACING TO RESISTI LATERAL LOAD FOR EACH STAGE OF CONSTRUCTION.

STRUCTURAL ABBREVIATIONS:

ADDN'L	ADDITIONAL
AGGR	AGGREGATE
ALT	ALTERNATE
AB	ANCHOR BOLT
L	ANGLE
APPROX	APPROXIMATE
AOBE	ARCHITECTURAL AS ORDERED BY THE ENGINEER
BPL	BASE PLATE
BRG	BEARING
BLKG	BLOCKING
BOT	BOTTOM
BE	BOTTOM ELEVATION
BRKT	BRACKET
BLDG	BUILDING
BL	BUILDING LINE
BFE	BOTTOM FOOTING ELEVATION
CTR	CENTER
CL	CENTER LINE
C	CENTER TO CENTER
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUE, CONTINUOUS
CONTR	CONTRACTOR
CJ	CONTROL JOINT
CS	COLUMN STRIP
COV	COVER
PL	PLATE
DL	DEAD LOAD
DET	DETAIL
DIAG	DIAGONAL
DIA	DIAMETER
DIM	DIMENSION
DIST	DISTANCE
DWL	DOWEL
DWG	DRAWING
EA	EACH
EF	EACH FACE
EW	EACH WAY
E	EAST
EOD	EDGE OF DECK
EOS	EDGE OF SLAB
EL	ELEVATION
ELEV	ELEVATOR
ENGR	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EXIST	EXISTING
EXP	EXPANSION
EJ	EXPANSION JOINT
ES	END STRIP
EXT	EXTERIOR
FS	FAR SIDE
FT or '	FEET OR FOOT
FIN	FINISH, FINISHED
FPRFG	FIREPROOFING
FLASH	FLASHING
FLR	FLOOR
FD	FLOOR DRAIN
FTG	FOOTING
FDN	FOUNDATION
FURR	FURRED, FURRING
FUT	FUTURE
GALV	GALVANIZED
GA	GAUGE
GC	GENERAL CONTRACTOR
GR	GRADE
HGT	HEIGHT
HP	HIGH POINT
HSB	HIGH STRENGTH BOLT
HORIZ	HORIZONTAL, HORIZONTALLY
IN or "	INCH OR INCHES
INCL ID	INCLUDE, INCLUDING INSIDE DIAMETER
JT	JOINT
JST	JOIST
K	KIP (1,000 LB)
LGTH	LENGTH
LEV	LEVEL
LL	LIVE LOAD
LG	LONG
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
MANU	MANUFACTURER
MAS	MASONRY
MAX	MAXIMUM
MET	METAL
MIN	MINIMUM
MISC	MISCELLANEOUS
MS	MIDDLE STRIP
NS	NEAR SIDE
NOM	NOMINAL
N	NORTH
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO or #	NUMBER
OC	ON CENTER
OPG	OPENING
OPP	OPPOSITE
OO	OUT TO OUT
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
PVMT	PAVEMENT
PERIM	PERIMETER
PC	PIECE
PCS	PIECES
PL	PLATE
PT	POINT
PVC	POLYVINYLCHLORIDE
LBS or #	POUNDS
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PC	PRECAST
PREFAB	PREFABRICATED
RAD or R	RADIUS
REC	RECESS
RECT	RECTANGLE, RECTANGULAR
REINF	REINFORCE, REINFORCING
RC	REINFORCED CONCRETE
REQ'D	REQUIRED
RET	RETURN
REV	REVISED, REVISION
RD	ROOF DRAIN
RFG	ROOFING
SCH	SCHEDULE
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
S	SOUTH
SP	SPACE
SPEC	SPECIFICATIONS
SF	SQUARE FEET (FOOT)
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STL PL	STEEL PLATE
STR	STRAIGHT
STRUCT	STRUCTURAL
S STL	STRUCTURAL STEEL
SUPP	SUPPORT
SURF	SURFACE
SYM	SYMBOL, SYMMETRICAL
SYS	SYSTEM
THK	THICK, THICKNESS
KIP or K	THOUSAND POUNDS
THD	THREAD, THREADED
THRU	THROUGH
T & B	TOP AND BOTTOM
TE	TOP ELEVATION
TF	TOP OF FRAME
TSE	TOP OF SLAB ELEVATION
TOS	TOP OF STEEL
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL, VERTICALLY
VIF	VERIFY IN FIELD
WP	WATERPROOF
WT	WEIGHT
WWF	WELDED WIRE FABRIC
W	WEST
W WO	WITH, WITHOUT
WL	WORKING LINE
W	WORKING
PT	POINT
YS	YIELD STRENGTH

X — SECTION OR DETAIL NUMBER
X-XXX — *SHEET ON WHICH SECTION OR DETAIL IS LOCATED**

SECTION KEY

X — SECTION OR DETAIL NUMBER
X-XXX — *SHEET ON WHICH SECTION OR DETAIL IS LOCATED**

DETAIL KEY

CONNECTICUT RESOURCES RECOVERY AUTHORITY
TEL. NO. (860)-757-7700
FAX. NO. (860)-757-7743

A&E FIRM

URS
URS CORPORATION AES
500 ENTERPRISE DRIVE
ROCKY HILL, CT. 06067
1-(860)-529-8882

A&E SEAL

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE, DISCLOSURE OTHER THAN THAT WHICH RELATES TO CONNECTICUT RESOURCES RECOVERY AUTHORITY IS STRICTLY PROHIBITED.

REVISIONS

NUMBER	DATE	REMARKS
1	05/23/08	MISC. NOTE CHANGES

MID-CONNECTICUT PROJECT
POWER BLOCK FACILITY
ASH LOADOUT BUILDING
& SITE MODIFICATIONS

RESERVE ROAD
HARTFORD, CT.

PROJECT NO: 36937668	
DRAWN BY:	PD
CHECKED BY:	PJG
DATE: 05/14/08	
CADD FILE:	S-001.dwg

STRUCTURAL GENERAL NOTES AND ABBREVIATIONS

S-001

P:\Disciplines\Structural\Sheet\S-001.dwg May 21, 2008 - 3:57 PM