C. GENERAL PROJECT CODE INFORMATION

1. APPLICABLE CODES INCLUDE, BUT ARE NOT LIMITED TO:

STANDARD BUILDING CODE, 1999 EDITION, EXCEPT CHAPTER 10
STANDARD FIRE PREVENTION CODE, 1997 EDITION
STANDARD PLUMBING CODE, 1999 EDITION
STANDARD MECHANICAL CODE, 1999 EDITION
STANDARD ELECTRICAL CODE NFPA 1970

NFPA 1, FIRE PREVENTION CODE (1997)
NFPA 13, INSTALLATION OF SPRINKLER SYSTEMS (1996)
NFPA 14, INSTALLATION OF STANDPIPE AND HOSE SYSTEMS (1996)
NFPA 22, WATER TANKS FOR PRIVATE FIRE PROTECTION (1998)
NFPA 24, PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES (1995)
NFPA 30, FLAMMABLE AND COMBUSTIBLE LIQUIDS (1996)
NFPA 45, LABORATORIES USING CHEMICALS (1996)
NFPA 50A, GASEOUS HYDROGEN SYSTEMS (1994)
NFPA 50B, LIQUEFIED HYDROGEN SYSTEMS (1994)
NFPA 54, NATIONAL FUEL GAS CODE (1996)
NFPA 70, NATIONAL ELECTRIC CODE (1996)
NFPA 72, NATIONAL FIRE ALARM CODE (1996)
NFPA 75, ELECTRONIC COMPUTER/DATA PROCESSING EQUIPMENT (1995)
NFPA 80A, PROTECTION OF BUILDINGS FROM EXTERIOR FIRE EXPOSURE (1996)
NFPA 90A, STANDARD FOR THE INSTALLATION OF AIR CONDITIONING AND VENTILATING SYSTEMS (1996)
NFPA 90B, STANDARD FOR THE INSTALLATION OF WARM AIR HEATING AND AIR CONDITIONING SYSTEMS (1996)
NFPA 92A, SMOKE CONTROL SYSTEMS (1996)
NFPA 101, LIFE SAFETY CODE (1997)
NFPA 110, EMERGENCY AND STANDBY POWER SYSTEMS (1996)
NFPA 111, STORED ELECTRICAL ENERGY EMERGENCY AND STANDBY POWER SYSTEMS (1996)
NFPA 220, TYPES OF BUILDING CONSTRUCTION (1995)
NFPA 780, LIGHTNING PROTECTION SYSTEMS (1997)
NFPA 801, FACILITIES HANDLING RADIOACTIVE MATERIALS (1998)
NFPA 1141, PLANNED BUILDING GROUPS (1998)

2. BUILDING OCCUPANCY & CONSTRUCTION

	BUILDING	OCCUPANCY	CONSTRUCTION TYPE
CL	CLO (CENTRAL LAB OFFICE BUILDING)	A, B, F	TYPE I
CY	CRYOGENICS BUILDING	F	TYPE IV UNPROTECTED
FE	FRONT END BUILDING	F	TYPE IV UNPROTECTED
HE	HEBT TUNNEL	F	TYPE II
HS	HEBT SERVICE AREA	F	TYPE IV UNPROTECTED
KL	KLYSTRON	F	TYPE IV UNPROTECTED
LN	LINAC (LINEAR ACCELERATOR) TUNNEL	F	TYPE II
RG	RING TUNNEL	F	TYPE II
RN	RSB (RING SERVICE BUILDING)	F	TYPE IV UNPROTECTED
RT	RTBT TUNNEL	F	TYPE II
TA	TARGET BUILDING	F	TYPE IV-1 HR
CU	CUB (CENTRAL UTILITIES BUILDING)	F	TYPE IV UNPROTECTED
DU	DUMP BUILDINGS	F	TYPE IV UNPROTECTED
ME	MAKE UP AIR BUILDING	F	TYPE IV UNPROTECTED
PE	CENTRAL EXHAUST STACK	F	TYPE V UNPROTECTED
RS	RTBT SERVICE BUILDING	F	TYPE IV UNPROTECTED
CN	CNMS (CENTER FOR NANOPHASE MATERIALS SCIENCES)	B	TYPE IV 1 HR. PROTECTED

3. FIRE RESISTIVE REQUIREMENTS

	TYPE I[2]	TYPE II	TYPE IV-1HR PROTECTED	TYPE IV-- UNPROTECTED	TYPE IV-- PROTECTED
INTERIOR BEARING WALLS:					
SUPPORING MORE THAN 1 FLOOR	3-HR	3-HR	1	NC	1
SUPPORTING 1 FLOOR ONLY	2-HR	2-HR	1	NC	1
SUPPORTING ROOFS ONLY	2-HR	2-HR	1	NC	1
INTERIOR NON-BEARING WALLS:	NC	NC	1	NC	NC
COLUMNS:[3]					
SUPPORTING MORE THAN 1 FLOOR	3-HR	3-HR	2	NC	1
SUPPORTING 1 FLOOR ONLY	2-HR	2-HR	2	NC	1
SUPPORTING ROOFS ONLY	2-HR	2-HR	2	NC	1
BEAMS, GIRDERS & TRUSSES:					
SUPPORTING MORE THAN 1 FLOOR	3-HR	3-HR	1	NC	1
SUPPORTING 1 FLOOR ONLY	2-HR	2-HR	1	NC	1
SUPPORTING ROOFS ONLY	1-HR	1-HR	NC[3]	NC	1
FLOOR & FLOOR/CEILING ASSEMBLIES:	2-HR	2-HR	1	NC	1
ROOF & ROOF/CEILING ASSEMBLIES:	1 1/2-HR[1]	1-HR[1]	NC[3]	NC	1

FOOTNOTES:
NC NONCOMBUSTIBLE
1 IN BUILDINGS OF GROUPS A, B, E AND R OCCUPANCIES, THE REQUIRED FIRE RESISTANCE OF THE ROOF OR ROOF/CEILING ASSEMBLY INCLUDING THE BEAMS, GIRDERS, TRUSSES, OR ARCHES THAT SUPPORT THE ROOF ONLY, MAY BE OMITTED WHERE EVERY PART OF THE ROOF STRUCTURAL MEMBERS HAVE A CLEAR HEIGHT OF 20 FT (6.096 METERS) OR MORE ABOVE ANY FLOOR, MEZZANINE OR BALCONY.
2 1-HR REDUCTION AS PERMITTED BY SBC, TABLE 600, FOOTNOTE L, HAVE BEEN INCORPORATED INTO THIS TABLE.
3 AS ACCEPTED BY THE AUTHORITY HAVING JURISDICTION.

4. OCCUPANCY SEPARATION

A	LARGE OR SMALL ASSEMBLY	2 HOUR
B	BUSINESS	1 HOUR
F	FACTORY-INDUSTRIAL	2 HOUR
S1	STORAGE, MODERATE HAZARD S1	3 HOUR
S2	STORAGE, LOW HAZARD S2	2 HOUR
	BOILER ROOMS	1 HOUR PER SBC 704.1.3.3 BUT NOT REQUIRED AT "I" OCCUPANCIES
	REFRIGERATION EQUIPMENT ROOMS	1 HOUR PER SBC 704.1.3.3.4

	H4 HAZARDOUS OCCUPANCY SEPARATION FROM ALL OTHER OCCUPANCIES
A	4 HOUR
B	1 HOUR
F	1 HOUR
S1	2 HOUR
S2	2 HOUR

5. SPRINKLERS
ALL BUILDINGS ARE FULLY SPRINKLERED, EXCEPT FOR THE FOLLOWING:

DU DUMP BUILDINGS
ME MECHANICAL EQUIPMENT BUILDING
PE CENTRAL EXHAUST STACK
RS RTBT SERVICE BUILDING

B. PROJECT CONSTRUCTION DOCUMENTS

4. BUILDING LEVEL DESIGNATIONS

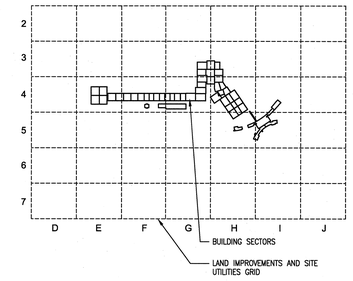
DUE TO THE EXISTING SLOPING SITE AND THE VARYING LEVELS OF EACH BUILDING WITH RESPECT TO ONE ANOTHER, FOR PURPOSES OF DRAWING CONVENTION THE VARIOUS FLOOR ELEVATIONS OF EACH BUILDING ARE ASSIGNED A FLOOR "LEVEL" DESIGNATION AS FOLLOWS:

LEVEL 5	CLO	= +155'-3"	(1131'-3")
LEVEL 4	CLO	= +141'-3"	(1117'-3")
	TARGET (TRUSS)	= +138'-9"	(1114'-9")
LEVEL 3	RSB (GROUND FLOOR)	= +134'-0"	(1110'-0")
	WEST ME	= +132'-0"	(1108'-0")
	EAST ME	= +130'-0"	(1106'-0")
	CLO	= +127'-3"	(1103'-3")
	TARGET (HIGH BAY LEVEL)	= +126'-11"	(1104'-11")
	RTBT SERVICE	= +122'-6"	(1098'-6")
	CNMS	= +127'-3"	(1103'-3")
LEVEL 2	RSB (BASEMENT)	= +118'-6"	(1094'-6")
	FE (MECH FLR)	= +118'-2"	(1094'-2")
	CLO (BRIDGE LEVEL)	= +113'-3"	(1089'-3")
	TARGET (MEZZ)	= +113'-3"	
	CNMS	= +113'-3"	
	DATUM +100'-0" = EL. 1076'-0"		
LEVEL 1	KLYSTRON/HS	= +109'-0"	(1085'-0")
	CY	= +107'-0"	(1083'-0")
	HE/RG/RT	= +100'-0"	(1076'-0")
	FE/LN	= +100'-0"	
	CUB	= +100'-0"	
	CLO (ENTRY LEVEL)	= +99'-3"	(1075'-3")
	TARGET (INSTRUMENT)	= +96'-11"	(1072'-11")
	CNMS	= +99'-3"	(1075'-3")
LEVEL B1	CUB (BASEMENT)	= +87'-10"	(1063'-10")
	CLO (SERVICE)	= +80'-7"	(1056'-7")
	TARGET (BASEMENT)	= +76'-11"	(1052'-11")
	CNMS (ENTRY LEVEL)	= +80'-7"	(1056'-7")
LEVEL B2	CLO SUB-BASEMENT	= +61'-11"	(1037'-11")

1. PROJECT GRID SYSTEM

THE SNS PROJECT CONSISTS OF TWO CONSTRUCTION GRID SYSTEMS. THE FIRST IS THE "MASTER GRID" BY WHICH SITE INFORMATION IS LOCATED AND COORDINATED, AND CONSISTS OF AN ALPHA-NUMERIC IDENTIFIER. THESE GRIDS ARE 680' BY 540' IN SIZE, AND GENERALLY USED FOR LAND IMPROVEMENTS, LANDSCAPING AND SITE UTILITIES.

THE SECOND GRID SYSTEM IS BASED ON "SECTORS" AND USED TO IDENTIFY BUILDINGS, STRUCTURES AND PORTIONS THEREOF FOR PURPOSES OF DRAWING ORGANIZATION AND LOCATION. "SECTORS" ARE SOLELY NUMERIC AND THE SEQUENCE USED FOR THIS PROJECT IS NOT CONTIGUOUS.



2. BUILDING ACRONYMS AND IDENTIFICATION CODES

THE SNS PROJECT CONSISTS OF SEVERAL SEPARATE BUILDINGS AND ANCILLIARY STRUCTURES IN SUPPORT OF A SINGLE BUILDING CONTAINING THE PROTON BEAM GENERATING AND CONTROLLING EQUIPMENT. THIS SINGLE BUILDING IS A SERIES OF INTER-CONNECTED BUILDINGS THAT ARE IDENTIFIED BY A TWO-LETTER CODE AS FOLLOWS:

CL CLO (CENTRAL LAB OFFICE BUILDING)
CY CHL/RF BUILDING
FE FRONT END BUILDING
HE HEBT (HIGH ENERGY BEAM TRANSPORT) TUNNEL
HS HEBT SERVICE AREA
KL KLYSTRON
LN LINAC (LINEAR ACCELERATOR) TUNNEL
RG RING TUNNEL
RN RSB (RING SERVICE BUILDING)
RT RTBT (RING TO TARGET BEAM TRANSPORT) TUNNEL
TA TARGET BUILDING
CN CNMS

TWO-LETTER IDENTIFIERS FOR OTHER STRUCTURES ARE AS FOLLOWS:

CU CUB (CENTRAL UTILTIES BUILDING)
DU DUMP BUILDINGS
ME MAKE UP AIR BUILDING
RS RTBT SERVICE BUILDING
PW PROCESS WASTE (FARM)
ST SITE UTILITIES (GENERAL)

3. CONSTRUCTION DOCUMENTS ORGANIZATION

a. THE SITE UTILITIES CONSTRUCTION DOCUMENTS ARE ORGANIZED AND IDENTIFIED BY AN EIGHT DIGIT ALPHA-NUMERIC SHEET NUMBERING SYSTEM AS FOLLOWS:

Uxx0.00.00

SEQUENCE NUMBERS 00 THRU 99
SUB-CATEGORY/SUB-TASK NUMBER
CATEGORY/SHEET TYPE CODE
UTILITY TYPE LETTER CODE
EL ELECTRICAL (POWER/AUXILIARY)
HU MECHANICAL (HVAC) UTILITIES
W INDUSTRIAL WASTE
LT ELECTRICAL LIGHTING
NG NATURAL GAS
SS SANITARY SEWER
WT UTILITY WATER
U=UTILITIES IDENTIFIER

b. ALL OTHER CONSTRUCTION DOCUMENTS ARE ORGANIZED AND IDENTIFED BY A SIX-DIGIT ALPHA-NUMERIC SHEET NUMBERING SYSTEM AS FOLLOWS.

X0.00.00

SEQUENCE NUMBERS 00 THRU 99
FOR GENERAL PLAN DRAWINGS:
01 THRU XX REFERS TO BUILDING PLAN SECTORS
FOR NON-PLAN DRAWINGS:
01-09 REFERS TO STANDARD DETAILS
10-19 REFERS TO BUILDINGS FE, LN, KL
20-29 REFERS TO BUILDINGS HE, HS, RG, RN, RT AND RS
30-39 REFERS TO BUILDINGS TA, AND RING DUMPS
40-49 REFERS TO BUILDING CL AND CN
50-59 REFERS TO BUILDING CU
60-69 REFERS TO BUILDING CY
SUB-CATEGORY NUMBERS 00 THRU 99
FOR GENERAL PLAN DRAWINGS:
B1 THRU 08 REFERS TO FLOOR LEVELS
09 REFERS TO ALL BUILDING ROOF PLANS
FOR NON-PLAN DRAWINGS:
11 AND HIGHER ARE DRAWING SUB-CATEGORIES
CATEGORY NUMBERS 0 THRU 9
CATEGORY NUMBERS WILL VARY WITH DISCIPLINE

DISCIPLINE IDENTIFIER
G GENERAL
C CIVIL
A ARCHITECTURAL
S STRUCTURAL
H HVAC (ENVIRONMENTAL)
K FOOD SERVICE
P PLUMBING
J PROCESS
E ELECTRICAL
L LANDSCAPE

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NUMBER OF SECTION OR DETAIL
DRAWING ON WHICH SECTION OR DETAIL IS SHOWN OR TAKEN
SECTION AND DETAIL KEY

THIS DOCUMENT CONTROLLED BY
CHANGE CONTROL SYSTEM _____
ENGINEERING PROCEDURE _____

REV	CHANGE TYPE	CHANGE CONTROL SYSTEM	CHANGE REQUEST NUMBER	DESCRIPTION (REVISION OR ISSUE PURPOSE)	DSN	CHK	DEPT	DATE	PE	DATE	PJ	DATE	REQ	DATE	UTB	DATE	RPE	RPE NO	DATE	ST	CV	EC	EE	EM	IE	M	PD	SE	AR
0				CERTIFIED FOR CONSTRUCTION - 12/9/02	BKS	KM												-	-	-	RZ	AW	BWJ	AK	IM	DM	---	BWJ	---	TW

REVISION OR ISSUE PURPOSE — REVISION APPROVALS — SQUAD CHECK

RPE		
DSN	B. SMITH	12/9/02
DRW	B. SMITH	12/9/02
CHK	K. MCKEAN	12/9/02
DEPT		
PE		
PJ		
REQ		
REV.	DATE	UTB

DRAWING APPROVALS

ORNL DRAWING NUMBER:

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PROJECT NAME:
CENTER FOR NANOPHASE MATERIALS SCIENCES
GENERAL PROJECT NOTES

1	48	49	50	PLANT	BLDG	FL	SH.	OF	TYPE	CLASS
3	G	X	X	8	8610		1	1	G	U
51		52		53	A/E DRAWING NUMBER:		G1.11.01		REV 0	
NC		NA								