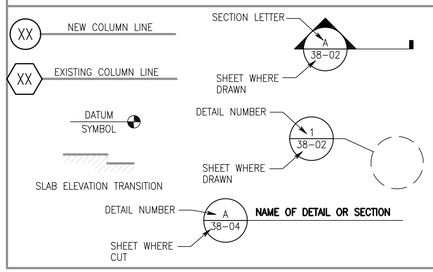
ABBREVIATIONS

A	
&	AND
@	AT
A/E	ARCHITECT/ENGINEER
AB	ANCHOR BOLT(S)
ABBRV	ABBREVIATION(S)
ABV	ABOVE
ADD'L	ADDITIONAL
ADJ	ADJACENT, ADJUST(ABLE)
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGGR	AGGREGATE
ANCH	ANCHOR(S)
ALT	ALTERNATE(S)(ING)
AL	ALUMINUM
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)
AVG	AVERAGE(S)
B	
℄	BUILDING LINE
B/	BOTTOM OF, BELOW
BAL	BALANCE
BL	BOTTOM LAYER
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BP	BEARING PLATE
BOT	BOTTOM
B PL	BASEPLATE
BRDG	BRIDGING
BRG	BEARING
BT	BENT
BTWN	BETWEEN
C	
℄, CL	CENTER LINE
CAIS	CAISSON
CANT	CANTILEVER(ED)
CAP	CAPACITY
CJ	CONTROL JOINT
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COMP	COMPRESSION
CPRS	COMPRESSIBLE
CONC	CONCRETE
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUE(OUS)(ATION)
CONTR	CONTRACTOR(S)
COORD	COORDINATE(S)
CTR	CENTER
D	
DBL	DOUBLE
DEG, °	DEGREE(S)
DEPR	DEPRESSION
DET	DETAIL(S)
DIA, ø	DIAMETER
DIAG	DIAGONAL
DIAPH	DIAPHRAGM
DIM	DIMENSION(S)
DK	DECK(S)
DL	DEAD LOAD
DN	DOWN
do	DITTO
DP	DEEP
D.S.	DOWNSPOUT
DWG	DRAWING(S)
DWL	DOWEL(S)
E	
E	EAST
(E)	EXISTING
EA	EACH
EE	EACH END
EF	EACH FACE
EJ	EXPANSION JOINT(S)
EL	ELEVATION(S)
ELEC	ELECTRIC(AL)
ELEV	ELEVATOR(S)
EMB	EMBEDDED, EMBEDMENT
ENCL	ENCLOSE(S)(D)(URE)
ENG	ENGINEER(S)(ING)
EOS	EDGE OF SLAB
EQ	EQUAL(S)
EQUIP	EQUIPMENT
ES	EACH SIDE
EW	EACH WAY
EXC	EXCAVATE(ION)
EXP	EXPANSION
EXT	EXTERIOR
F	
F/F	FACE TO FACE
FDN	FOUNDATION(S)
FF	FAR FACE
FIN	FINISH(ED)(ES)(ING)
FL	FULL LENGTH
FLG	FLANGE(S)
FLR	FLOOR(S)
FP	FULL PENETRATION
FR	FRAME(D)(S)
FT	FOOT, FEET
FTG	FOOTING(S)
FUT	FUTURE
G	
GA	GAGE, GAUGE
GALV	GALVANIZE(D)(S)
GB	GRADE BEAM
GC	GENERAL CONTRACTOR
GEN	GENERAL
GR	GRADE
H	
HC	HOLLOW CORE
HD	HEADED
HDR	HEADER
HT	HEIGHT
HK	HOOK
HORIZ	HORIZONTAL
HP	HIGH POINT
HVAC	HEATING/VENTILATING/AIR CONDITION
I	
IF	INSIDE FACE
IJ	ISOLATION JOINT
IN	INCH(ES)
INCL	INCLUDE(ED)(ING)
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR(S)
ISO	ISOLATION
J	
JST	JOIST
JT	JOINT
K	
K	KIPS
K/F	KIPS PER FOOT
KSF	KIPS PER SQUARE FOOT
L	
L	ANGLE
LB	POUND(S)
LEV	LEVEL(ING)
LG	LONG, LENGTH
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION
LONG	LONGITUDINAL
LP	LOW POINT
LSH	LONG SIDE HORIZONTAL
LT	LEFT
LWB	LONG WAY BOTTOM
LWGT	LIGHTWEIGHT
LWT	LONG WAY TOP
M	
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MK	MARK
MO	MASONRY OPENING
MTL	METAL
N	
#, NO.	NUMBER
N	NORTH
(N)	NEW
N/A	NOT APPLICABLE
NF	NEAR FACE
NIC	NOT IN CONTRACT
NOM	NOMINAL
NS	NEAR SIDE
NTS	NOT TO SCALE
O	
O/O	OUT TO OUT
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OGL	ON GAGE LINE
OH	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
OPP HD	OPPOSITE HAND
OSL	OUTSTANDING LEG
P	
#	POUND
PAR	PARALLEL
PC	PRECAST CONCRETE
PE	PROFESSIONAL ENGINEER
PERIM	PERIMETER
PL	PLATE
PLMB	PLUMBING
PLYW	PLYWOOD
PREFAB	PREFABRICATED
PROP	PROPERTY
PSF	POUNDS PER SQ FT
PSI	POUNDS PER SQ IN
PT	POINT
P/T	POST-TENSION
Q	
QTY	QUANTITY
R	
RAD	RADIUS
RD	ROOF DRAIN
RE	RIGHT END
REBAR	REINFORCING BAR
REF	REFERENCE(D)(S)
REINF	REINFORCING
REQ'D	REQUIRED
REV	REVISE(D)(ION)
RMV	REMOVE
S	
SC	SLIP CRITICAL
SCHED	SCHEDULE
SCW	SHALL CONFORM WITH
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SJI	STEEL JOIST INSTITUTE
SL	SLAB
SLV	SLEEVE
SOG	SLAB ON GRADE
SPA	SPACE(S)(ING)
SPEC	SPECIFICATION
SQ	SQUARE
SST	STAINLESS STEEL
STD	STANDARD
STIFF	STIFFEN(ER)
STIR	STIRRUP
STL	STEEL
STRUCT	STRUCTURE(AL)
SUP	SUPPORT
SWB	SHORT WAY BOTTOM
SWT	SHORT WAY TOP
SYM	SYMMETRICAL
T	
T & B	TOP & BOTTOM
T/	TOP OF
TEMP	TEMPERATURE
TEN	TENSION
THK	THICK
THK'N	THICKEN(ED)
TOL	TOLERANCE
TOT	TOTAL
TYP	TYPICAL
U	
UNO	UNLESS NOTED OTHERWISE
V	
V	VENT
VB	VAPOR BARRIER
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	
W/	WITH
W/O	WITHOUT
WD	WOOD
WH	WATER HOSE
WL	WIND LOAD
WPT	WORKPOINT
WS	WATERSTOP
WT	WEIGHT
WWF	WELDED WIRE FABRIC
X	
X	EXTRA
XFR	TRANSFER
Y	
YD	YARD

GRAPHIC SYMBOLS



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GENERAL CONDITIONS

1. GOVERNING CODE: INTERNATIONAL BUILDING CODE (IBC), 2006 WITH GEORGIA STATE AMENDMENTS.
2. COORDINATE WITH ALL DRAWINGS FOR PERTINENT INFORMATION RELATED TO THE STRUCTURAL WORK. ANY CHANGES TO THE STRUCTURAL SYSTEMS SHALL BE REDESIGNED BY A PROFESSIONAL ENGINEER AT NO COST TO THE OWNER OR A/E AND SUBMITTED TO THE A/E FOR REVIEW. SUBMITTAL SHALL BE ACKNOWLEDGED IN WRITING BEFORE BEGINNING CONSTRUCTION.
3. EQUIPMENT FRAMING LOADS, OPENINGS AND STRUCTURE IN ANY WAY RELATED TO HVAC, PLUMBING, PROCESS OR ELECTRICAL REQUIREMENTS ARE SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL OBTAIN APPROVAL OF THE PERTINENT TRADES BEFORE PROCEEDING WITH SUCH PORTION OF THE WORK. EXCESS COST RELATED TO VARIATION IN THESE REQUIREMENTS SHALL BE BORNE BY THE APPROPRIATE CONTRACTOR.
4. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS OR TIE-DOWNS MAY BE NECESSARY.
5. SEE THE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS. ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR AND SHALL CONFORM TO THOSE SHOWN ON THE ARCHITECTURAL DRAWINGS. REPORT ALL DISCREPANCIES TO THE A/E FOR RESOLUTION BEFORE PROCEEDING.

STRUCTURAL DESIGN LOADS

1. DESIGN LIVE LOADS:

FIRST FLOOR	– 100 PSF
ROOF	– 30 PSF

DESIGN DEAD LOADS:

BUILDING COMPONENTS	– SELF WEIGHT
HUNG LOAD ALLOWANCE	– 5 PSF, TYP

2. SNOW LOAD AND SNOW DRIFTING ARE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. SNOW LOAD DESIGN PARAMETERS ARE AS FOLLOWS:

GROUND SNOW LOAD (Pg)	– 5 PSF
FLAT-ROOF SNOW LOAD (Pf)	– 4.2 PSF + DRIFTING
SNOW EXPOSURE FACTOR (Ce)	– 1.0
SNOW LOAD IMPORTANCE FACTOR (I)	– 1.0
SNOW THERMAL FACTOR (Ct)	– 1.2
MINIMUM ROOF LIVE LOAD USED IN DESIGN	– 20 PSF

3. WIND DESIGN SHALL BE IN CONFORMANCE WITH PROVISIONS IN SECTION 1609 OF THE INTERNATIONAL BUILDING CODE. WIND DESIGN PARAMETERS ARE AS FOLLOWS:

BASIC WIND SPEED (V) (3 SEC GUST)	– 90 MPH
WIND LOAD IMPORTANCE FACTOR (I)	– 1.0
WIND EXPOSURE CATEGORY	– EXPOSURE C

WIND DESIGN PRESSURE (P) – FOR BUILDING MAIN WIND RESISTING
SYSTEM ONLY: 0' – 20' – 21.0 PSF

BUILDING – CONSIDERED OPEN

4. SEISMIC DESIGN SHALL BE IN CONFORMANCE WITH PROVISIONS IN SECTIONS 1613 OF THE INTERNATIONAL BUILDING CODE. SEISMIC DESIGN PARAMETERS ARE AS FOLLOWS:

DESIGN SPECTRAL RESPONSE ACCELERATION, SHORT PERIODS (S_{DS})	– 27.3%
DESIGN SPECTRAL RESPONSE ACCELERATION, 1 SECOND PERIODS (S_{D1})	– 17.4%
SEISMIC USE GROUP	– GROUP I
SEISMIC PERFORMANCE CATEGORY	– C
SOIL CLASSIFICATION	– D

ORDINARY STEEL MOMENT FRAMES

RESPONSE MODIFICATION FACTOR (R)	– 3
DEFLECTION AMPLIFICATION FACTOR (Cd)	– 3.5

DESIGN BY EQUIVALENT STATIC LATERAL FORCE PROCEDURE. (1617.4)
DESIGN BASE SHEAR – 1 KIP

ATTACHMENT OF ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PROCESS SYSTEMS COMPONENTS TO COMPLY WITH ASCE 7.

FOUNDATIONS

1. FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE SUBSURFACE INVESTIGATION REPORT BY QORE, INC. DATED SEPTEMBER 30, 2008. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SURVEY AND THE SUBSURFACE INVESTIGATION REPORT BEFORE BEGINNING CONSTRUCTION.
2. NOTIFY THE A/E AS SOON AS POSSIBLE OF ANY UNUSUAL SOIL CONDITIONS OR SOIL CONDITIONS AT VARIANCE WITH TEST BORINGS, SUCH AS UNEXPECTED SPRING OR SEEPAGE WATER, MATERIAL DIFFERING FROM TEST BORINGS OR SOIL OF QUESTIONABLE BEARING CAPACITY.
3. SET FOUNDATIONS AT ELEVATIONS SHOWN, OR ON FIRM, UNDISTURBED MATERIAL OF DESIGN BEARING CAPACITY, WHICHEVER ELEVATION IS LOWER. THE CONTRACTOR SHALL VERIFY THAT EACH FOOTING PLACED IS BEARING ON DESIGN MATERIAL. DESIGN BEARING CAPACITY = 2,000 PSF.

CAST-IN-PLACE CONCRETE

1. CAST-IN-PLACE CONCRETE WORK SHALL CONFORM TO THE LATEST AMERICAN CONCRETE INSTITUTE CODES AND STANDARDS, INCLUDING, BUT NOT LIMITED TO, ACI 301 (AS MODIFIED IN THE PROJECT MANUAL.), ACI 315 AND ACI 318.
2. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS:

   4000 PSI WITHOUT ENTRAINED AIR FOR ALL CONCRETE UNLESS SPECIFICALLY NOTED OTHERWISE.

   4000 PSI WITH ENTRAINED AIR FOR ALL CONCRETE PERMANENTLY EXPOSED TO THE WEATHER. THE AMOUNT OF ENTRAINED AIR SHALL BE 6% ±1%.

   3000 PSI WITHOUT ENTRAINED AIR FOR ALL FOOTINGS.

   1500 PSI WITHOUT ENTRAINED AIR FOR LEAN CONCRETE FILL.
3. ALL REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO ASTM A615, GRADE 60.
4. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185 DELIVERED IN FLAT SHEETS.
5. THE CONTRACTOR SHALL REVIEW ALL DRAWINGS FOR SIZE AND LOCATION OF ALL EMBEDDED ITEMS, SLEEVES, SLAB DEPRESSIONS, OPENINGS, ETC. REQUIRED BY OTHER TRADES. RECONCILE THEIR EXACT SIZES AND LOCATIONS BEFORE PROCEEDING WITH THE WORK. ALL ITEMS SHALL BE FURNISHED AND INSTALLED PRIOR TO PLACEMENT OF CONCRETE. SECURE THE APPROVAL OF THE STRUCTURAL ENGINEER PRIOR TO PLACING OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
6. WHERE BAR LENGTHS ARE GIVEN ON THE DRAWINGS, THE LENGTH OF ANY HOOK, IF REQUIRED, IS NOT INCLUDED. USE STANDARD 90° BAR HOOK, UNLESS NOTED OTHERWISE.
7. PROVIDE HORIZONTAL CONTROL/CONSTRUCTION JOINTS IN SLABS AS SHOWN ON THE DRAWINGS.
8. WELDING OF REINFORCING STEEL IS NOT PERMITTED.
9. COMPLY WITH THE ARCHITECTURAL DRAWINGS FOR LOCATION AND EXTENT OF SPECIAL FINISHES OR TREATMENTS TO EXPOSED CONCRETE.
10. PROVIDE 6x6-W2.1xW2.1 WELDED WIRE FABRIC IN ALL SLABS ON GRADE, UNLESS NOTED OTHERWISE.
11. LAP WELDED WIRE FABRIC 1 SPACE (2 CROSS WIRES) + 2" AT ALL EDGES AND ENDS OF SHEETS.
12. REINFORCING BAR LAP SPLICES AND ANCHORAGE LENGTHS SHALL CONFORM WITH TABLE #1, "MINIMUM LAP SPLICE AND ANCHORAGE DIMENSION TABLE".
13. PROVIDE A MINIMUM OF TWO (2) #5 TOP REINFORCING BARS IN BEAMS WHERE NO OTHER TOP BARS ARE AVAILABLE FOR SUPPORTING STIRRUPS. ALL SPANDREL AND EDGE BEAMS SHALL HAVE A MINIMUM OF TWO (2) #5 TOP REINFORCING BARS AND CLOSED STIRRUPS CONTINUOUS ACROSS THE SPAN.

TABLE #2

TYPICAL REINFORCING BAR CLEARANCE TABLE

LOCATION	CLEARANCE
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
COLUMNS AND PIERS (VERTICAL REINFORCING)	2"
COLUMN AND PIER TIES	1 1/2"
SLABS ON GRADE (WELDED WIRE FABRIC)	1/3 SLAB THICKNESS FROM TOP OF SLAB

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REVISIONS

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF INNOVATIVE PROGRAM DELIVERY

STRUCTURAL GENERAL NOTES, ABBREVIATIONS & LEGENDS

NEWNAN SR 34 AND HOLLZ PKWY
PARK AND RIDE LOT

38-02
DRAWING No.