- 2. EXISTING DIMENSIONS AND CONDITIONS ARE FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ALL EXISTING CONSTRUCTION AND DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION OR FABRICATION. ALL DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING WORK.
- 3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF DEVIATIONS OR CHANGES ARE REQUIRED TO THE CONTRACT DOCUMENTS OR APPROVED SHOP DRAWINGS DUE TO INTERFERENCES, FABRICATION ERRORS, OR OTHER CAUSES.
- 4. THE STRUCTURE IS SELF—SUPPORTING AND STABLE AFTER THE ENTIRE BUILDING IS COMPLETELY CONSTRUCTED. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ERECTION PROCEDURES AND SEQUENCING DURING CONSTRUCTION AND ERECTION TO PROVIDE AND ENSURE LOCAL AND OVERALL STABILITY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION AND ERECTION. THE CONTRACTOR SHALL RETAIN A LICENSED STRUCTURAL ENGINEER TO DESIGN TEMPORARY BRACING/SHORING AND DETERMINE WHERE THE TEMPORARY BRACING/SHORING IS NEEDED.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTION PROCEDURES, SEQUENCING AND FOR COMPLYING WITH ALL APPLICABLE SAFETY REGULATIONS DURING THE WORK.
- 6. ONE ELECTRONIC COPY OR TWO SETS OF HARD COPIES OF SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER. ONE HARD COPY WILL BE RETURNED TO THE CONTRACTOR AND ONE HARD COPY WILL BE RETAINED BY THE ENGINEER.
- 7. REFERENCE THE PROJECT SPECIFICATIONS FOR MATERIAL, WORKMANSHIP AND ADDITIONAL INFORMATION NOT COVERED IN THESE NOTES (WHERE APPLICABLE)

### DESIGN CRITERIA:

. BUILDING CODES:
INTERNATIONAL BUILDING CODE (IBC), 2009 EDITION
ASCE 7-05 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES

2. LIVE LOADS: DECK = 100 PSF

3. SNOW LOADS:

GROUND SNOW LOAD (Pg) = 60 PSF

SNOW EXPOSURE FACTOR (Ce) = 1.0

SNOW LOAD IMPORTANCE FACTOR (Is) = 1.0

THERMAL FACTOR (Ct) = 1.1

4. WIND LOADS:

BASIC WIND SPEED = 100 MPH
IMPORTANCE FACTOR (Iw) = 1.0
WIND EXPOSURE B
MAIN WINDFORCE—RESISTING SYSTEM (INCLUDES WINDWARD + LEEWARD) = 20 PSF
COMPONENTS & CLADDING — PER ASCE 7-05

5. SEISMIC CRITERIA:

BASED ON EQUIVALENT LATERAL FORCE PROCEDURE
OCCUPANCY CATEGORY II
SOIL SITE CLASSIFICATION = D
SEISMIC IMPORTANCE FACTOR (Ie) = 1.0
DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETER:
Sds = .371

Sd1 = .160
SEISMIC DESIGN CATEGORY C

RESPONSE MODIFICATION COEFFICIENT (R) = 6.5 (WOOD FRAMED SHEAR WALLS) SEISMIC RESPONSE COEFFIENT (Cs) = 0.057

## FOUNDATION NOTES:

- 1. FOUNDATIONS HAVE BEEN DESIGNED USING A PRESUMED ALLOWABLE BEARING PRESSURE PER TABLE 1806.2 OF THE INTERNATIONAL BUILDING CODE BASED ON TYPICAL SOILS FOUND IN THIS AREA. IF CLAY, MUD, ORGANIC SILT, PEAT OR UNPREPARED FILL IS FOUND DURING CONSTRUCTION, NOTIFY ENGINEER IMMEDIATELY, AS THE ALLOWABLE LOADS USED IN DESIGN WILL NEED TO BE VERIFIED BY A GEOTECHNICAL ENGINEER. CASCO BAY ENGINEERING RECOMMENDS PROCURING A GEOTECHNICAL ENGINEER TO VERIFY EXISTING SOIL CONDITIONS.
- 2. ALLOWABLE SOIL BEARING CAPACITY USED IN DESIGN = 2,000 PSF
- 3. MINIMUM FROST DEPTH COVER = 4'-6" FOR EXTERIOR FOOTINGS BELOW FINAL EXTERIOR GRADE.
- 4. EXCAVATION, BACKFILL, COMPACTION, GRADATION REQUIREMENTS, FOUNDATION DRAINAGE AND PERMANENT DEWATERING REQUIREMENTS SHALL BE PROVIDED BY A GEOTECHNICAL ENGINEER.
- 5. CONCRETE SLABS ON GRADE SHALL BE CONSTRUCTED ON A MINIMUM 12" THICK LAYER OF PROPERLY COMPACTED STRUCTURAL FILL, UNLESS OTHERWISE DIRECTED BY A GEOTECHNICAL ENGINEER.
- 6. FOUNDATIONS SHALL BEAR ON UNDISTURBED NATIVE SOIL, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL AND STRUCTURAL ENGINEER IF ANY UNSUITABLE SOILS ARE ENCOUNTERED PRIOR TO PLACING FOUNDATIONS.
- 7. FOUNDATION WALLS AND SLAB-ON-GRADES SHALL REACH THEIR FULL 28 DAY COMPRESSIVE STRENGTH PRIOR TO BACKFILLING. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING/BRACING FOR WALLS WHEN BACKFILL IS PLACED PRIOR TO CONCRETE ACHIEVING ITS FULL 28 DAY STRENGTH. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING/BRACING FOR WALLS AND OTHER STRUCTURAL ELEMENTS PRIOR TO INSTALLATION OF PERMANENT BRACING/FLOOR/STRUCTURE.
- 8. PROTECT FOUNDATIONS FROM FROST AND KEEP BOTTOM OF TRENCH DRY DURING CONSTRUCTION. IF GROUNDWATER IS ENCOUNTERED NEAR OR ABOVE THE BASE OF THE FOOTINGS, EXCAVATIONS SHALL BE DEWATERED DURING CONSTRUCTION. SURFACE WATER SHALL BE DIVERTED AWAY FROM EXCAVATIONS.
- 9. DO NOT UNDERMINE EXISTING FOUNDATIONS OF ADJACENT STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SHORING, BRACING AND UNDERPINNING OF EXISTING STRUCTURES DURING EXCAVATION, BACKFILLING, AND CONSTRUCTION. CONTRACTOR SHALL SLOPE EXCAVATIONS TO ACHIEVE SOIL STABILITY.

#### **CONCRETE NOTES:**

1. ALL WORK SHALL CONFORM TO IBC 2009 REFERENCED EDITIONS OF "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301).

2. REQUIRED CONCRETE PARAMETERS ARE AS FOLLOWS:

 LOCATION	MAX W/C RATIO	f'c	AIR-ENTRAINMEI
INT. WALLS/ELEV. SLABS	.52	3,000 PSI	2% ± 1½%
FOUNDATIONS, FOOTINGS, & FOUNDATION WALLS	.45	4,500 PSI	6% ± 1½%
INT. SLAB-ON-GRADE	.45	4,500 PSI	2% ± 1½%
EXT. SLAB-ON-GRADE	.45	4,500 PSI	6% ± 1½%

WHERE: W/C = WATER TO CEMENT RATIO AND f'c = COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS

USE PORTLAND CEMENT TYPE II, IN CONFORMANCE WITH ASTM 150 AIR ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C 260 ADMIXTURES SHALL CONFORM TO ASTM C 494

- FLY ASH USED AS ADMIXTURES SHALL CONFORM TO ASTM C 618

  3. MAXIMUM AGGREGATE SIZE SHALL BE ¾", IN CONFORMANCE WITH ASTM C33.
- 4. CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE IS NOT PERMITTED.
- 5. MAXIMUM SLUMP AFTER THE ADDITION OF A WATER-REDUCING ADMIXTURE IS 6 INCHES.
- 6. CONTRACTOR SHALL NOT PLACE CONCRETE ON FROZEN GROUND OR IN WATER. ADEQUATE EQUIPMENT SHALL BE PROVIDED FOR HEATING CONCRETE MATERIALS AND PROTECTING CONCRETE DURING NEAR-FREEZING OR FREEZING WEATHER. REFERENCE ACI 306, AS NOTED ABOVE, FOR RECOMMENDATIONS FOR COLD WEATHER CONCRETING.
- 7. VERTICAL CONSTRUCTION JOINTS IN WALLS SHALL NOT EXCEED A SPACING OF 40 FEET, U.N.O.
- 8. ANCHOR BOLTS SHALL BE HEADED RODS AND CONFORM TO ASTM F1554, GRADE 36 KSI WELDABLE STEEL, U.N.O. ON DRAWINGS. PROVIDE GALVANIZED ANCHOR BOLTS WHERE IN CONTACT WITH PRESSURE TREATED LUMBER OR EXPOSED TO THE WEATHER.
- 9. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED BARS.
- 10. WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185 AND BE PROVIDED IN FLAT SHEETS. PROVIDE ADEQUATE SUPPORT FOR WWF TO ENSURE PROPER LOCATION WITHIN SLAB DURING CONCRETE PLACEMENT.

11. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE AS FOLLOWS:

A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH

B. FORMED CONCRETE IN CONTACT WITH EARTH OR EXPOSED TO WEATHER

C. CONCRETE NOT EXPOSED TO EARTH OR WEATHER IN SLABS & WALLS

1½ INCHES

- 12. WELDING OF REINFORCEMENT IS NOT PERMITTED.
- 13. PROVIDE NON-SHRINK GROUT BENEATH LEVELING PLATES & BEARING PLATES w/ MINIMUM COMPRESSIVE STRENGTH OF 7,000 PSI AT 28 DAYS.
- 14. PROVIDE CONTINUOUS REINFORCEMENT AT ALL CORNERS AND INTERSECTIONS, SEE TYPICAL FOUNDATION WALL DETAILS ON FOUNDATION DETAILS SHEET.
- 15. REINFORCING BARS AND ALL EMBEDDED ITEMS, INCLUDING ANCHOR BOLTS, MUST BE ACCURATELY PLACED AND ADEQUATELY SECURED <u>BEFORE</u> CONCRETE IS PLACED. "WET SETTING" OF EMBEDDED ITEMS INTO CONCRETE IS STRICTLY PROHIBITED.
- 16. UNLESS NOTED ON DRAWINGS, FOLLOW ACI STANDARDS FOR LAP SPLICE LENGTHS OF REINFORCING BARS.

REBAR LAP SPLICE TABLE							
BAR SIZE	#3	#4	#5	#6	#7	#8	#9
3000 PSI CONCRETE	18"	24"	30"	36"	48"	56"	64"
4500 PSI CONCRETE	16"	20"	24"	30"	40"	48"	54"

# STRUCTURAL STEEL NOTES:

- 1. STRUCTURAL STEEL WORK SHALL CONFORM TO IBC 2009 REFERENCED EDITIONS OF AISC "SPECIFICATION FOR THE DESIGN FABRICATIONS, AND ERECTION OF STRUCTURAL STEEL" AND THE "CODE OF STANDARD PRACTICE"
- 2. STRUCTURAL STEEL MEMBERS SHALL BE IN CONFORMANCE WITH THE FOLLOWING:

WIDE FLANGE SHAPES AND TEES

ASTM A992

ANGLES, PLATES, CHANNELS

SQUARE/RECTANGULAR HSS

ROUND HSS

STEEL PIPE

ASTM A500, GRADE B, Fy=46 KSI

ASTM A500, GRADE B, Fy=42 KSI

ASTM A53, TYPE E OR S, GRADE B, Fy=35 KSI

- 3. SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO COMMENCING FABRICATION.
- 4. FIELD CONNECTIONS SHALL UTILIZE MINIMUM ¾" DIAMETER A325 HIGH STRENGTH BOLTS, U.N.O. BOLTED CONNECTIONS SHALL BE SLIP CRITICAL AT ALL MOMENT FRAMES, BRACED FRAMES, AND AT ADDITIONAL LOCATIONS INDICATED "SC" IN THE DRAWINGS. SLIP CRITICAL CONNECTIONS SHALL UTILIZE LOAD INDICATOR WASHERS OR TENSION CONTROL BOLTS. USE A490 BOLTS WHERE INDICATED ON DRAWINGS.
- 5. CONTRACTOR IS RESPONSIBLE FOR DESIGN OF CONNECTIONS NOT ALREADY DETAILED ON STRUCTURAL DRAWINGS. CONTRACTOR SHALL SUBMIT DESIGN STAMPED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE WHERE PROJECT IS LOCATED PRIOR TO COMMENCING FABRICATION.
- 6. WELDING SHALL CONFORM TO AWS D1.1. USE LOW—HYDROGEN SMAW ELECTRODES WITH MINIMUM TENSILE STRENGTH OF 70 KSI.
- 7. PROVIDE ¼" LEVELING PLATES UNDER ALL COLUMN BASE PLATES, U.N.O. LEVELING PLATES SHALL BE SET AND GROUTED PRIOR TO COLUMN ERECTION.
- 8. ALL STRUCTURAL STEEL NOT EXPOSED TO WEATHER SHALL RECEIVE ONE COAT OF STANDARD SHOP PRIMER, U.N.O.
- 9. SEE DRAWINGS AND CONCRETE NOTES FOR ANCHOR BOLT INFORMATION.

## WOOD NOTES:

MINIMUM ALLOWABLE STRESSES:

Ft = 1555 PSI

- 1. ALL TIMBER FRAMING SHALL BE IN ACCORDANCE WITH IBC 2009 REFERENCED EDITIONS OF THE AITC TIMBER CONSTRUCTION MANUAL AND AF&PA NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS).
- 2. ALL FRAMING SHALL BE SPRUCE-PINE-FIR, No.2 OR BETTER U.N.O. AND HAVE A MAXIMUM MOISTURE CONTENT
- 3. ALL WOOD IN CONTACT WITH MASONRY OR CONCRETE OR EXPOSED TO WEATHER SHALL BE PRESSURE TREATED
- (PT) SOUTHERN YELLOW PINE.

4. WHERE "LVL" IS NOTED ON DRAWINGS, PROVIDE LAMINATED VENEER LUMBER, WHICH HAS THE FOLLOWING

Fb = 2600 PSI Fc = 2510 PSI (PARALLEL TO GRAIN) Fv = 285 PSI Fc = 750 PSI (PERPENDICULAR TO GRAIN)

E = 2,000,000 PSI

5. WHERE "PSL" IS NOTED ON DRAWINGS, PROVIDE PARALLAM STRAND LUMBER, WHICH HAS THE FOLLOWING MINIMUM ALLOWABLE STRESSES:

- 6. ALL ENGINEERED LUMBER THAT IS EXPOSED TO WEATHER SHALL BE WOLMANIZED.
- 7. ALL FLOOR SHEATHING SHALL BE 3/4" TONGUE AND GROOVE, GLUED AND NAILED TO FLOOR FRAMING WITH 8d RINK SHANK NAILS AT 6" o.c. AT SUPPORTED PANEL EDGES, 12" o.c. AT INTERMEDIATE SUPPORTS UNLESS NOTED OTHERWISE ON DRAWINGS.
- 8. ALL ROOF SHEATHING (5/8") AND WALL SHEATHING (1/2") SHALL BE APA PERFORMANCE—RATED. ATTACH TO SUPPORTED PANEL EDGES WITH 8d NAILS AT 6" o.c. AND AT INTERMEDIATE SUPPORTS WITH 8d NAILS AT 12" o.c. U.N.O. SEE DRAWINGS FOR MORE STRINGENT NAILING REQUIREMENTS AT WOOD SHEAR WALLS.
- 9. SHEATHING SHALL BE ORIENTED WITH LONG DIMENSION PERPENDICULAR TO THE SUPPORTS AND BE CONTINUOUS OVER TWO OR MORE SUPPORTS. STAGGER ALL JOINTS & PROVIDE ADEQUATE JOINT SPACING (1/8" TYP) AS RECOMMENDED BY MANUFACTURER.
- 10. PROVIDE FULL DEPTH BLOCKING AT ENDS AND INTERIOR SUPPORTS OF ALL JOISTS AND RAFTERS WHERE JOISTS AND RAFTERS FRAME OVER SUPPORTS. PROVIDE 1x3 DIAGONAL BRIDGING OR FULL DEPTH SOLID BLOCKING FOR EACH 8'-0" OF SPAN FOR ALL JOISTS AND RAFTERS.
- 11. WHERE BEAMS ARE LABELED ON PLAN, DO NOT SPLICE BEAM NOR ANY PLY OF BEAM BETWEEN SUPPORTS.
- 12. ALL CONNECTION HARDWARE SHALL BE BY SIMPSON STONG—TIE (OR APPROVED EQUIVALENT) AND SHALL BE HOP—DIPPED GALVANIZED. HARDWARE IN CONTACT WITH PRESSURE TREATED (PT) LUMBER SHALL BE GALVANIZED G185 (ZMAX). REFER TO MANUFACTURERS LITERATURE FOR PROPER INSTALLATION GUIDELINES.
- 13. FASTENERS USED IN CONTACT WITH PRESSURE TREATED (PT) LUMBER SHALL BE HOT-DIPPED GALVANIZED, STAINLESS STEEL, OR OTHER FINISH APPROVED BY ENGINEER.
- 14. ALIGN COLUMNS SUCH THAT COLUMNS BEAR CONTINUOUSLY TO FOUNDATION SUPPORT. INSTALL ADDITIONAL SOLID BLOCKING WITHIN FLOOR PACKAGE TO PROVIDE CONTINUITY OF LOAD PATH.
- 15. PROVIDE HORIZONTAL BLOCKING FOR ALL LOAD BEARING WALLS AT 4'-0" O.C. VERTICAL, MAXIMUM.
- 16. SUBMIT SHOP DRAWINGS FOR ALL PREFABRICATED WOOD JOISTS AND WALL PANELS TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.

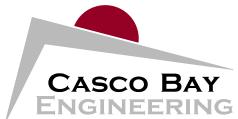
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AB	ANCHOR BOLT	L	ANGLE
ADDL	ADDITIONAL	LL	DOUBLE ANGLE
ARCH &	ARCHITECT AND	LB LF	POUND LINEAR FOOT
a.	AND	LLH	LONG LEG HORIZONTAL
B/FTG, BOF	BOTTOM OF FOOTING	LLV	LONG LEG VERTICAL
BLDG	BUILDING	MAV	A A A VILAI IA A
BM BOT	BEAM BOTTOM	MAX MECH	MAXIMUM MECHANICAL
BRG	BEARING	MFR	MANUFACTURER
BTWN	BETWEEN	MIN	MINIMUM
		MISC	MISCELLANEOUS
C	STRUCTURAL STEEL CHANNEL	NF	NEAD FACE
CANT CIP	CANTILEVER CAST-IN-PLACE CONCRETE	NO NO	NEAR FACE NUMBER
CJ	CONTROL JOINT	NS	NEAR SIDE
CL	CENTERLINE	NTS	NOT TO SCALE
CLR	CLEAR	22	ON OFNITED
CMU	CONCRETE MASONRY UNIT	OC OF	ON CENTER OUTSIDE FACE
CNJ COL	CONSTRUCTION JOINT COLUMN	OPNG	OPENING
CONC	CONCRETE	OPP	OPPOSITE
CONN	CONNECTION		
CONT	CONTINUOUS	P	PIER DESIGNATION
CONTR	CONTRACTOR	PL PP	PLATE PARTIAL PENETRATION WELD
CP CY	COMPLETE PENETRATION WELD CUBIC YARD	PREFAB	PREFABRICATED
01	CODIC TARD	PSF	POUNDS PER SQUARE FOOT
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DIM	DIMENSION	DEINE	DEINICODOINO CTELI
DISCONT DWG	DISCONTINUOUS DRAWING	REINF REQ, REQD	REINFORCING STEEL REQUIRED
DWG	DRAWING	RD	ROOF DRAIN
(E), EX, EXIST	EXISTING		
ÈÁ	EACH	SC	SLIP CRITICAL
EF	EACH FACE	SECT SHEATH	SECTION
EL, ELEV	ELEVATION	SIM	SHEATHING SIMILAR
EQ EQUIP	EQUAL EQUIPMENT	SOG	SLAB-ON-GRADE
ES	EACH SIDE	SPAC	SPACING
EW	EACH WAY	SPECS	SPECIFICATIONS
EXP	EXPANSION	SS STD	STAINLESS STEEL STANDARD
EXT	EXTERIOR	STIFF	STIFFENER
F	FOOTING DESIGNATION	STL	STEEL
FDN	FOUNDATION	STR	STRAIGHT
FF	FINISH FLOOR	STRUCT	STRUCTURAL
FLG	FLANGE	T	TOP
FLR FT	FLOOR FOOT	T&B	TOP AND BOTTOM
FTG	FOOTING	TOC, T/CONC	TOP OF CONCRETE
FV	FIELD VERIFY	T/FTG, TOF	TOP OF FOOTING
_		TEMP	TEMPERATURE
G	GAGE	T/SHELF	TOP OF SHELF
GALV	GALVANIZED	T/SLAB	TOP OF SLAB
HOR, HORIZ	HORIZONTAL	T/STL	TOP OF STEEL TOP OF WALL
HSS	HOLLOW STRUCTURAL SHAPE	T/WALL TS	STRUCTURAL TUBING
HT	HEIGHT	TYP	TYPICAL
IF	INSIDE FACE		
IN	INCH	UNO	UNLESS NOTED OTHERWISE
INFO	INFORMATION	VER, VERT	VERTICAL
IT.	IOINIT	VIF	VERIFY IN FIELD
JT	JOINT		
K	KIP (1 KIP = 1,000 LBS)	W	STRUCTURAL STEEL WIDE FLANG
KSI	KIPS PER SQUARE INCH	w/	WITH
		w/O WP	WITHOUT WORK POINT

WORK POINT

WELDED WIRE FABRIC

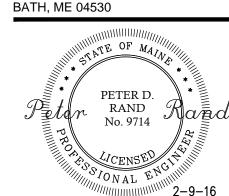
WEIGHT



424 Fore Street
Portland, ME 04101
Phone 207.842.2800
Fax 207.842.2828
www.cascobayengineering.com

# DAVID MATERO ARCHITECTURE

100 FRONT STREET, SUITE 40



FAURANT ORTLAND, MAINE

S MEXICAN BAR & RES

No. DESCRIPTION BY BY 2-9-16

1 ISSUED FOR PERMIT PR 2-9-16

SHEET TITLE:

STRUCTURAL NOTES

DESIGNED:	ED
DRAWN:	CD
DATE:	10-09-15
PROJECT NUMBER:	 15-189

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