

### **SPECIFICATIONS**

#### **DIVISION 1 - GENERAL CONDITIONS**

- A. ALL WORK SHALL COMPLY WITH THE LATEST ADDITION OF THE BUILDING CODE OF NEW YORK STATE, AISC CODE, ACI BUILDING CODE (ACI-318), AWS CODE, ASTM STANDARDS AND ANY OTHER APPLICABLE CODES, RULES AND REGULATIONS BY AGENCIES HAVING JURISDICTIONS. WHERE CODES OVERLAP, COMPLY WITH THE MORE STRINGENT REQUIREMENTS.
- B. THE CONTRACTOR SHALL MAINTAIN INSURANCE AS WILL PROTECT HIM FROM LIABILITY UNDER WORKMAN'S COMPENSATION ACTS AND OTHER EMPLOYEE BENEFITS ACTS IN ACCORDANCE WITH THE LAWS OF NEW YORK STATE, AND FROM LIABILITY FOR DAMAGES BECAUSE OF BODILY INJURY, INCLUDING DEATH AND PROPERTY DAMAGE.
- C. CONTRACTOR IS TO REVIEW DRAWINGS AND EXISTING SITE CONDITIONS AND DIMENSIONS FOR SCOPE OF WORK INVOLVED. CONTRACTOR IS TO INCLUDE IN HIS PROPOSAL ALL ITEMS, MATERIALS, ETC...TO ACHIEVE THE DESIGN CONCEPTS SHOWN ON THE DRAWINGS. MINOR CHANGES IN THE WORK, DUE TO EXISTING CONDITIONS, WILL BE ALLOWED IF APPROVED BY THE ENGINEER BEFORE PROCEEDING.
- D. EXISTING DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON THE JOB. VERIFICATION OF EXISTING DIMENSIONS AND CONDITIONS SHALL BE DONE PRIOR TO PREPARATION OF SHOP DRAWINGS.
- E. CONTRACTOR IS TO INCLUDE IN HIS PROPOSAL ALL ADDITIONAL MATERIALS AND LABOR AS REQUIRED TO WORK AROUND EXISTING CONDITIONS, AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED.
- F. ALL WORKMANSHIP MUST BE IN THE BEST PRACTICE OF THE TRADE AS DETERMINED BY THE ENGINEER. ANY WORK NOT MEETING THESE STANDARDS WILL BE REJECTED.
- G. THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS APPROVED IN WRITING BY
- H. CONTRACTOR IS TO DISPOSE OF ALL DEMOLITION MATERIALS AND LEAVE THE WORK IN A READY TO USE CONDITION.
- CONTRACTOR IS RESPONSIBLE FOR ALL MEANS, METHODS, LABOR PROCEDURES AND SAFETY PRECAUTIONS FOR COMPLETING THE WORK.
- J. CONTRACTOR IS RESPONSIBLE FOR ALL WORK DURING CONSTRUCTION UNTIL FINAL APPROVAL BY ENGINEER, OWNER AND LOCAL OFFICIALS.
- K. DURING DEMOLITION WORK, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING AND BRACING TO PREVENT DAMAGE TO ANY ADJACENT EXISTING STRUCTURES.
- L. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ANY EXISTING UTILITIES ON OR ADJACENT TO PROPERTY.
- M. WHERE A SPECIFIC MANUFACTURER'S PRODUCT IS CALLED OUT, ALL MATERIALS AND WORK MUST COMPLY WITH THE MANUFACTURER'S STRICT RECOMMENDATIONS FOR INSTALLATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN INSTRUCTIONS AND TO THEN FOLLOW THEM.
- N. WHERE A NAME BRAND IS NOT CALLED OUT, THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS AND/OR PRODUCT INFORMATION FOR ENGINEER REVIEW AND APPROVAL. MINOR ITEMS IN THE WORK ARE NOT SPECIFIED. CONTRACTOR IS TO USE QUALITY AND QUANTITY THAT IS STANDARD TO THE TRADE.
- O. TYPICAL DETAILS APPLY TO ALL DRAWINGS AND SHALL BE USED EXCEPT WHERE OTHERWISE SHOWN OR NOTED.

## **DIVISION 2 - SITE WORK/EARTHWORK/FOUNDATIONS**

- A. A TESTING AGENCY WILL BE EMPLOYED BY THE OWNER TO VERIFY ACCEPTABILITY OF WORKMANSHIP AND MATERIALS IN ACCORDANCE WITH TABLE 1704.4 OF THE BUILDING CODE OF NEW YORK STATE, STRUCUTRAL TEST AND SPECIAL INSPECTIONS.
- B. SLOPE SIDES OF EXCAVATIONS ARE TO COMPLY WITH THE LOCAL CODES, ORDINANCES AND REQUIREMENTS OF AGENCIES HAVING JURISDICTION. SHORE AND/OR BRACE WHERE SLOPING IS NOT POSSIBLE BECAUSE OF SPACE RESTRICTIONS OR STABILITY OF MATERIAL EXCAVATED. MAINTAIN SIDES AND SLOPES OF EXCAVATIONS IN SAFE CONDITION UNTIL COMPLETION OF BACKFILLING.
- C. BARRICADE OPEN EXCAVATIONS OCCURRING AS PART OF THIS WORK AND POST WITH WARNING LIGHTS. OPERATE WARNING LIGHTS DURING HOURS FROM DUSK TO DAWN EACH DAY AND AS OTHERWISE REQUIRED.
- D. ALL SUBGRADE SUPPORTED FOOTINGS SHALL BEAR ON UNDISTURBED NATURAL SUBGRADE MATERIAL HAVING A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 1.5 KIPS PER SQUARE FOOT (1 KIP=1000 LBS.), AS TESTED AND INSPECTED BY THE OWNER'S SOIL TESTING AGENCY.
- E. PREVENT SURFACE WATER AND SUBSURFACE GROUND WATER FROM FLOWING INTO EXCAVATIONS AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA. NO FOOTINGS OR SLABS SHALL BE PLACED IN WATER OR ON FROZEN GROUND.
- F. ALL FOOTING EXCAVATIONS ARE TO BE FINISHED BY HAND.
- G. ALL FINISHED EXCAVATIONS AND BEARING GRADES SHALL BE INSPECTED AND APPROVED BY THE OWNER'S SOIL TESTING AGENCY BEFORE ANY CONCRETE IS
- H. THE SUBGRADE FOR THE SLAB ON GRADE SHALL BE A MINIMUM OF 0'-6" STRUCTURAL FILL PLACED AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY AT OPTIMUM MOISTURE CONTENT.
- USE SIDE FORMS FOR ALL FOOTINGS AND WALLS.
- J. SHOULD ROCK BE ENCOUNTERED DURING FOUNDATION EXCAVATION, NOTIFY THE ENGINEER IMMEDIATELY. DO NOT PROCEED WITH ROCK EXCAVATION UNTIL GIVEN AUTHORIZATION TO DO SO. SUCH EXCAVATION WILL BE PAID FOR ON THE BASIS OF UNIT PRICES AS GIVEN IN THE BID FORM.
- K. IN GENERAL, EXTERIOR CONSTRUCTION SHALL BE CARRIED DOWN NOT LESS THAN 4-FEET BELOW FINISHED EXTERIOR GRADE.
- BACKFILL AGAINST FOUNDATION WALLS BELOW GRADE SO THAT DIFFERENCE IN FILL LEVEL ON OPPOSITE SIDE DOES NOT EXCEED 1'-0" AT ANY TIME OR PROVIDE TEMPORARY LATERAL SUPPORT UNTIL PERMANENT LATERAL SUPPORT SYSTEM IS IN PLACE AND OF ADEQUATE STRENGTH TO WITHSTAND THE APPLIED LATERAL PRESSURES.

## **DIVISION 3 - CONCRETE**

- A. ALL CONCRETE SHALL HAVE A 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI. PORTLAND CEMENT SHALL BE ASTM C150, TYPE 1.
- B. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH A NOMINAL AIR DRY **DENSITY OF 145 PCF.**
- C. CONCRETE ACCEPTANCE SHALL BE ON THE BASIS OF "30 CONSECUTIVE TEST" OR "TRIAL MIXTURES" AS DESCRIBED IN ACI 318, SECTION 5.3. PROVIDE TRIAL MIXTURES FOR THREE DIFFERENT WATER-CEMENT RATIOS INDICATING 7-DAY AND 28-DAY COMPRESSIVE STRENGTH (FC); 1200 PSI GREATER THAN REQUIRED SHALL BE ACCEPTED.
- D. A MINIMUM OF ONE SET OF THREE STANDARD TEST CYLINDERS FOR EACH DAY'S PLACEMENT SHALL BE TAKEN, AND THE OWNER'S TESTING AGENCY WILL PERFORM COMPRESSION TESTS ON ONE CYLINDER AT 7 DAYS AND 28 DAYS, LEAVING ONE CYLINDER IN RESERVE.
- E. ADD POZZOLITH OR WRDA WATER REDUCING ADMIXTURE TO MIX PER MANUFACTURER'S RECOMMENDATIONS.
- F. ADD AIR ENTRAINING ADMIXTURE TO PRODUCE MAXIMUM AIR BY VOLUME OF:

#### 6% +/- 1% CLASS A CONCRETE, FOR EXPOSURE TO EARTH OR WEATHER.

- G. FINE AGGREGATE SHALL CONSIST OF WASHED NATURAL SAND CONFORMING TO ASTM C-33 AND COARSE AGGREGATE SHALL CONSIST OF WELL-GRADED CRUSHED STONE OR WASHED GRAVEL CONFORMING TO ASTM C-33, 3/4" SIZE.
- H. WATER CONTENT SHALL NOT EXCEED 5.5 GALLONS/BAG OF CEMENT FOR CLASS A CONCRETE. WATER SHALL BE CLEAN AND FREE FROM DELETERIOUS AMOUNTS OF ACIDS, ALKALIS OR ORGANIC MATERIALS.
- I. SLUMP SHALL BE 3" +/-1", MAXIMUM 8" AFTER PLASTICIZER.
- J. ALL CONCRETE SHALL BE TRUCK MIXED.
- K. WALLFORM PANELS SHALL BE PLYWOOD OR TEMPERED HARDBOARD FACES WITH AN ACCEPTED APPLIED FORM RELEASE AGENT.
- L. CLEARANCE OF MAIN REINFORCEMENT FROM ADJACENT SURFACES SHALL CONFORM TO THE FOLLOWING (UNLESS OTHERWISE SHOWN IN DETAIL):

UNFORMED SURFACES IN CONTACT WITH	

1/2 INCHES

GROUND (FOOTING OR WALL BOTTOM) SLABS ON GRADE

FORMED SURFACES IN CONTACT WITH

GROUND OR EXPOSED TO WEATHER (WALLS)

4. IN ALL CASES, CLEARANCE NOT LESS THAN DIAMETER OF BARS.

NOTE: MAXIMUM DEVIATION FROM THESE REQUIREMENTS SHALL BE +1/4" FOR SECTIONS TEN (10) INCHES OR LESS AND +1/2" FOR SECTIONS OVER TEN (10) INCHES THICK.

#### M. ALL PLACEMENT OF CONCRETE AND REINFORCEMENT:

ACCORDING TO ACI 318 (INCLUDING ACI RECOMMENDATIONS FOR HOT AND COLD WEATHER CONDITIONS); AND CRSI RECOMMENDED PRACTICES FOR 'PLACING **REINFORCING BARS'.** 

#### N. CURING COMPOUND:

## FOUNDATION WALLS: MASTER BUILDERS CO. MB-429.

- O. FLOOR FINISH: HARD STEEL TROWEL UNLESS OTHERWISE INDICATED ON DRAWINGS.
- P. FORM REMOVAL (MINIMUM TIME):

5-DAYS FOR AIR TEMPERATURES BETWEEN 40 & 50 DEGREES. 3-DAYS FOR AIR TEMPERATURE ABOVE 55 DEGREES.

- R. WHERE EXPOSED ABOVE GRADE, CONCRETE SHALL HAVE A SMOOTH FINISH AS OBTAINED BY THE USE OF SMOOTH PLYWOOD OR TEMPERED BOARD FORMS. GRIND OFF FINS, JOINT MARKS, BULGES AND OTHER PROMINENT GRAIN MARKINGS. FILL AND GRIND OFF HONEYCOMBED OR DEPRESSED AREAS AND LEAVE SMOOTH AND WASHED
- S. REINFORCING BARS SHALL BE NEW ASTM A615, GRADE 60.
- T. STEEL WELDED WIRE FABRIC SHALL BE NEW ASTM A185. FURNISH IN FLAT SHEETS. LAP 1-1/2 SQUARES IN ALL DIRECTIONS AT JOINTS.
- U. BAR SUPPORTS SHALL BE GALVANIZED OR STAINLESS STEEL. BAR SUPPORTS IN CONTACT WITH EXPOSED SURFACES SHALL BE GALVANIZED AND PLASTIC TIPPED.
- V. WHERE CONTINUOUS REINFORCING IS CALLED FOR, IT SHALL BE LAPPED AT **NECESSARY SPLICES AND HOOKED AT DISCONTINUOUS ENDS.**
- W. SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION OF
- X. ALL REINFORCING SHALL BE INSPECTED BY THE OWNER'S TESTING AGENCY BEFORE CONCRETE IS PLACED.
- Y. NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE.

# **SLAB AND WALL REINFORCING LAP SPLICE LENGTHS**

# LAP SPLICE LENGTHS FOR REINFORCING IN 4000 PSI CONCRETE ARE AS FOLLOWS:

TENSION SPLICE						
BAR SIZE	TOP	OTHER	DEVELOPMENT LENG			
5	42	31	24			
7	70	54	42			
NOTES:						

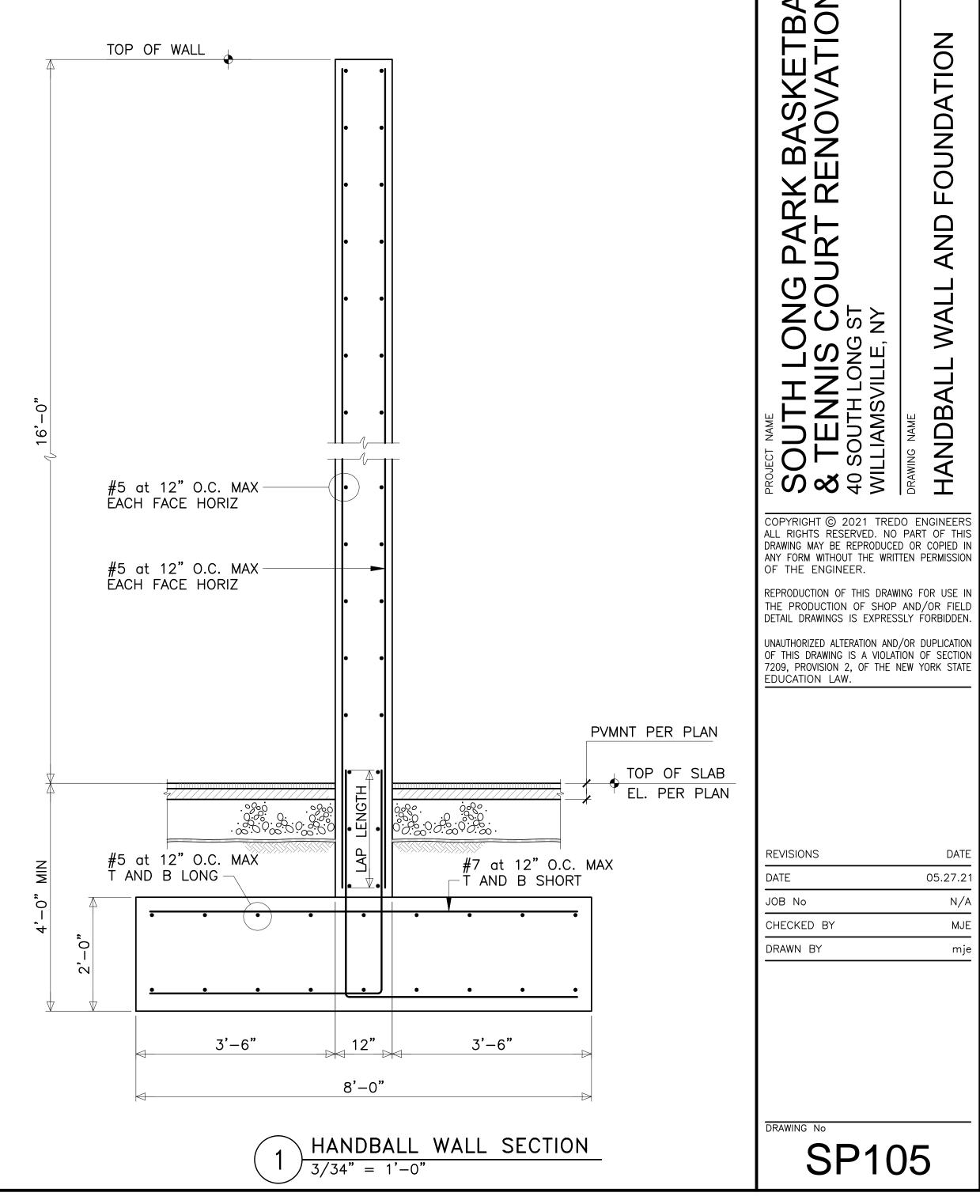
- LAPPED SPLICE LENGTHS BASED ON ASTM A-615, GRADE 60, REBAR. REINFORCING BARS ARE CLASSED AS TOP BARS WHEN MORE THAN 12" OF
- CONCRETE IS CAST BENEATH RESPECTIVE REINFORCING BAR.
- COMPRESSION SPLICES PERMISSIBLE ONLY WHERE SPECIFICALLY NOTED ON THE DRAWINGS, DETAILS OR SCHEDULES.

WHEN LAPPING LARGER BAR WITH SMALLER BAR, LAP LENGTH FOR SMALLER BAR

- TENSION SPLICES SHALL BE USED IN ALL BEAMS, SLABS AND WALLS UNLESS OTHERWISE NOTED.
- SHALL GOVERN RESPECTIVE SPLICE. SPLICE CONTINUOUS TOP REINFORCING BARS AT CENTER OF CLEAR SPAN WITH
- COMPRESSION SPLICES. SPLICE CONTINUOUS BOTTOM REINFORCING BARS AT CENTER OF SUPPORTING
- **ELEMENT WITH COMPRESSION SPLICES.** 8. ALL SPLICE LENGTHS NOTED IN INCHES.

# **DESIGN LOADS**

SNOW LOAD	N/A
WIND LOAD: ASCE 7; SOLID FREESTANDING WALLS	
ULTIMATE WIND SPEED	115 MF
NOMINAL WIND SPEED	90 MPI
WIND IMPORTANCE FACTOR, I=	1.0
WIND EXPOSURE	С
GUST FACTOR	0.85
NET FORCE COEFFICIENT (FIGURE 6-20)	1.45



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PREPARED FOR

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DATE 05.27.2 JOB No N/A CHECKED BY MJE DRAWN BY mj.

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