

DIVISION 01 – GENERAL REQUIREMENTS

- A. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO FURNISH ALL SUPERVISION, LABOR, MATERIALS, EQUIPMENT, APPARATUS AND TRANSPORTATION REQUIRED TO COMPLETE THE CONSTRUCTION IN CONFORMITY WITH THE CONTRACT DOCUMENTS.
B. GENERAL SITE CONDITIONS
1. PAPERWORK
a) CONTRACTOR SHALL OBTAIN ALL TRADE PERMITS.
b) CONTRACTOR SHALL PROVIDE A PERFORMANCE BOND FOR 100% OF BID PRICE WHEN DIRECTED BY MURPHY OIL USA, INC.
c) CONTRACTOR SHALL PROVIDE A CERTIFICATE OF INSURANCE (MINIMUM COVERAGE \$1,000,000) NAMING MURPHY OIL USA, INC. AS 'ALSO INSURED' AND HOLDING MURPHY OIL USA, INC. HARMLESS.
d) CONTRACTOR SHALL OBTAIN STATE WIDE CLEAN WATER DISCHARGE PERMIT AS REQUIRED BY LOCAL, STATE, AND EPA REGULATIONS.
e) CONTRACTOR SHALL SUPPLY A DETAILED "AS-INSTALLED" DRAWING OF ALL LINES (ELECTRICAL, PRODUCT, WATER, SEWER, ETC.)
f) CONTRACTOR SHALL SUPPLY THE FOLLOWING DOCUMENTS:
1) TANK DISPOSAL CERTIFICATE.
2) COMPLETE MANUFACTURER'S TANK AND LINE INSTALLATION CHECK LIST.
3) COMPLETE TANK REGISTRATION FORMS FOR THE STATE (IF REQUIRED).
4) CONTAINMENT SUMP AND SECONDARY PIPING TEST RESULTS.
5) BACK FILL COMPACTION TEST RESULTS.
6) PICTURE LOG OF ALL KEY PHASES OF INSTALLATION.
7) "AS INSTALLED" DRAWING OF TANKS, PRODUCT LINES, VENT LINES, ELECTRICAL LINES, ETC.
8) DISPENSER'S MODEL NUMBER AND SERIAL NUMBER.
9) LIST OF ALL SUBCONTRACTORS.
10) LIEN WAIVERS FOR CONTRACTOR AND ALL SUBCONTRACTORS.
11) CERTIFICATE OF OCCUPANCY (CO) FROM THE LOCAL BUILDING DEPARTMENT.
12) ANY OTHER TEST RESULTS.
13) A COMPLETED COPY OF THE STATE'S "QUALITY CONTROL" REPORT FORM UPON COMPLETION OF THE PROJECT.
14) COPY OF ALL PAPER WORK REQUIRED BY STATE NECESSARY TO INSTALL NEW TANKS.
15) START-UP FOLDER, NOTING DATE OF REVIEW WITH SITE MANAGER.
16) "BEFORE AND AFTER" TRAILER INVENTORY.
17) RECORD OF VISITORS, INSPECTIONS, SAFETY MEETINGS, AND INCIDENTS.
18) A COMPLETED COPY OF THE STATE'S NEW TANK INSTALLATION FORM AFTER THE ENTIRE SYSTEM HAS BEEN TESTED AND CERTIFIED.
2. COORDINATION
a) CONTRACTOR SHALL BE RESPONSIBLE TO SCHEDULE ALL REQUIRED INSPECTIONS AND TO MAINTAIN A RECORD BOOK OF DATES, TIMES, PERSONNEL VISITS, AND APPROVAL PAPER WORK FOR MURPHY OIL USA, INC. FILES.
b) CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH LOCAL, STATE, FEDERAL, AND OSHA REGULATION.
c) IF MANUFACTURER'S INSTALLATION REQUIREMENTS VARY FROM THOSE INDICATED IN THESE DRAWINGS, CONTRACTOR SHALL CONTACT THE MURPHY OIL USA, INC. FIELD REPRESENTATIVE IN WRITING AND OBTAIN WRITTEN CLARIFICATION BEFORE PROCEEDING.
d) CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF ALL MEASUREMENTS.
e) CONTRACTOR SHALL HAVE ALL CHANGES OR ADDITIONS TO SCOPE OF WORK APPROVED FOR SCOPE AND COST BY THE MURPHY OIL USA, INC. FIELD REPRESENTATIVE AS SOON AS IDENTIFIED.
f) CONTRACTOR SHALL SUPPLY ALL EQUIPMENT THAT IS NOT LISTED AS SUPPLIED BY MURPHY OIL USA, INC. (MURPHY)
g) MURPHY OIL USA, INC. WILL PROVIDE A TRAILER ON SITE TO STORE EQUIPMENT.
h) CONTRACTOR SHALL NOT VARY CONSTRUCTION FROM PERMIT PLANS UNLESS COORDINATED THROUGH FIELD REPRESENTATIVE.
i) CONTRACTOR SHALL ENSURE THAT SITE SUPERINTENDENT IS ON-SITE WHEN MURPHY OIL USA, INC. INSPECTOR IS PRESENT.
j) CONTRACTOR SHALL ENSURE THAT SITE SUPERINTENDENT IS ON-SITE WHEN ANY WORK IS PERFORMED.
3. HOUSEKEEPING AND HYGIENE
a) CONTRACTOR SHALL CONSTRUCT & MAINTAIN A 4' HIGH ORANGE MESH FENCE AROUND THE ENTIRE PERIMETER OF THE SITE.
b) CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OR SOIL EROSION COUNTERMEASURES AT ALL TIMES.
c) CONTRACTOR SHALL REPLACE ALL DISTURBED CONCRETE AND LANDSCAPING LIKE FOR LIKE.
d) CONTRACTOR SHALL REPLACE ANY DISTURBED WIRING FOR ITS ENTIRE LENGTH WITH NEW WIRING AND OF APPROPRIATE TYPE AND SIZE.
e) CONTRACTOR SHALL POLICE SITE CONTINUOUSLY FOR BLOWING TRASH. NIGHTLY SITE SECURING SHALL INCLUDE TRASH POLICING.
f) CONTRACTOR SHALL CONTAIN ALL CONSTRUCTION MATERIAL RUNOFF OR MUD TRACKING ON-SITE.
4. UTILITIES
a) CONTRACTOR SHALL CONSIDER ALL OVERHEAD AND UNDERGROUND UTILITIES WHICH MIGHT BE OBSTACLES SUCH AS ELECTRICAL LINES, PHONE LINES, ETC.
b) CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND MARKING ALL UNDERGROUND UTILITIES ASSOCIATED WITH THE PROPERTY AND ANY DAMAGE DONE TO THESE UTILITIES WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
c) CONTRACTOR SHALL PROVIDE TEMPORARY POWER, WATER, RESTROOM, AND PHONES DURING CONSTRUCTION.
5. GOOD NEIGHBOR POLICY
a) CONTRACTOR SHALL ASSURE THAT ADJACENT PROPERTY OWNERS HAVE NO CLAIMS TO DAMAGE OR IMPAIRMENT DUE TO FACILITY CONSTRUCTION.
b) CONTRACTOR SHALL REPORT ANY NEIGHBOR PROBLEMS TO MURPHY OIL USA, INC.
c) CONTRACTOR SHALL NOT IMPEDE SURROUNDING BUSINESSES IN ANY WAY.
C. SAFETY
1. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY ON THE SITE, INCLUDING THE ACTIONS OF DIRECT EMPLOYEES, SITE VISITORS, SUBCONTRACTORS, AND DELIVERY PERSONNEL.
2. CONTRACTOR SHALL BE RESPONSIBLE TO CONDUCT SAFETY MEETINGS WITH ALL PERSONNEL ENTERING SITE AND TO KEEP RECORDS OF ALL VISITORS, DATES, TIMES, SAFETY REVISIONS, ANY INCIDENTS, INJURIES OR NOTABLE OCCURRENCES ON THE JOB SITE.
D. SCHEDULE
1. CONTRACTOR SHALL COORDINATE THE SCHEDULING OF BUILDING AND CANOE INSTALLATION AND DELIVERY OF TANKS WITH MANUFACTURERS.
2. CONTRACTOR SHALL DELIVER A COPY OF THE UPDATED WORK SCHEDULE TO MURPHY OIL USA, INC. EVERY WEDNESDAY BY 5 P.M. MURPHY OIL USA, INC. WILL RETURN THE UPDATED COPY TO THE CONTRACTOR THE FOLLOWING MONDAY MORNING.
3. CONTRACTOR SHALL COMPLETE THE PROJECT WITHIN THE AGREED PERIOD.
E. COMMUNICATION WITH LOCAL AUTHORITIES
1. THE SITE CONTRACTOR IS RESPONSIBLE TO OPEN AND MAINTAIN A LINE OF COMMUNICATION WITH LOCAL BUILDING AND SAFETY OFFICIALS.
2. THE FOLLOWING STEPS ARE NECESSARY:
a) COORDINATE AND CONDUCT A PRE-CONSTRUCTION MEETING AND DISCUSS THE LOCATION OF THE WORK, INCLUDING ANY OBSTACLES ACROSS THE LOT, THE SAFETY AND TRAFFIC CONTROL MEASURES BEING TAKEN, THE SCHEDULE FOR CONSTRUCTION.
b) ALERT THE LOCAL AUTHORITIES IN ADVANCE OF ANY CHANGES IN THE ABOVE, AND ANY SPECIAL SITUATIONS OR INCIDENTS WHICH MAY DEVELOP.
c) PROVIDE A 24 HOURS/DAY LOCAL EMERGENCY CONTACT AND PHONE NUMBER TO THE LOCAL AUTHORITY. HOLD THE MANAGER, AS WELL AS THE MURPHY OIL USA, INC. FIELD REPRESENTATIVE.

DIVISION 01 – GENERAL REQUIREMENTS (CONTINUED)

- F. RECEIVING AND STORING: PROTECTION OF WORK
1. CONTRACTOR SHALL SIGN EACH SHIPPING MANIFEST THAT ALL EQUIPMENT THAT IS RECEIVED IS IN GOOD CONDITION.
2. CONTRACTOR SHALL NOTIFY MURPHY OIL USA, INC. AND THE MANUFACTURER IMMEDIATELY OF ANY DAMAGE OR DEFECT DISCOVERED IN RECEIVED MATERIALS.
3. CONTRACTOR SHALL REPLACE (IN KIND) AT HIS COST ANY SIGNED FOR, BUT NOT RECEIVED MATERIALS.
4. CONTRACTOR SHALL INVENTORY AND RETURN UNUSED EQUIPMENT.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR OVERNIGHT CHARGES INCURRED TO REPLACE DAMAGED EQUIPMENT IF CAUSED BY CONTRACTOR ERROR.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EQUIPMENT, STRUCTURES, AND CONSTRUCTED WORK UNTIL ACCEPTANCE OF SITE BY MURPHY OIL USA, INC.
G. SPECIAL HANDLING ITEMS
1. CONTRACTOR SHALL ENSURE THAT ALL OPERATORS AND INSTALLERS ARE CERTIFIED FOR EQUIPMENT AND MATERIALS HANDLED.
2. CONTRACTOR SHALL STRICTLY ADHERE TO TANK MANUFACTURER'S INSTALLATION PROCEDURES. FAILURE TO DO SO WILL EXPOSE CONTRACTOR TO ANY COST TO REPAIR OR REPLACE THE DAMAGE TANK.
3. CONTRACTOR SHALL FILL TANKS WITH WATER (FULL CAPACITY) FOR BALLAST.
4. CONTRACTOR SHALL COMPLETELY REMOVE ALL WATER FROM TANKS PRIOR TO INITIAL FUEL DELIVERY.
H. TESTING
1. CONTRACTOR SHALL TEST FIBERGLASS TANKS AS PER MANUFACTURER'S SPECIFICATIONS.
2. CONTRACTOR SHALL NOT INSTALL ANY TANK NOT PASSING INITIAL AIR/SOAP TEST.
3. CONTRACTOR SHALL MAINTAIN PRESSURE ON ALL PRIMARY AND SECONDARY PIPING UNTIL ALL ASPHALT AND CONCRETE PAVING IS COMPLETE.
4. CONTRACTOR SHALL CONDUCT A TIGHTNESS TEST ON EACH CONTAINMENT SUMP – WATER TIGHT FOR 60 MINUTES.
5. CONTRACTOR SHALL CONDUCT A TIGHTNESS TEST ON SECONDARY PIPING – AIR TIGHT FOR 60 MINUTES AT 5 PSI.
6. OWNER SHALL CONDUCT A PRECISION TIGHTNESS TEST ON PRODUCT PIPING AND TANKS AFTER PRODUCT DELIVERY.
7. CONTRACTOR SHALL, AT NO COST TO MURPHY OIL USA, INC., REPAIR OR REPLACE ANY ITEM WHICH FAILS PRECISION TESTING.
8. THE COST OF ADDITIONAL PRECISION TESTING DUE TO DEFECTIVE INSTALLATION BY CONTRACTOR SHALL BE BORNE BY THE CONTRACTOR.
9. IF A FAILURE IS DETERMINED TO BE THE FAULT OF A DEFECTIVE PIECE OF EQUIPMENT, CONTRACTOR SHALL FULLY DOCUMENT AND PRESERVE EVIDENCE FOR CLAIMS SUPPORT.
I. START UP
1. CONTRACTOR SHALL NOTIFY AND COORDINATE THE INITIAL START UP OF ALL EQUIPMENT (START UP OF ALL EQUIPMENT TO BE CONDUCTED BY CERTIFIED MANUFACTURER'S REPRESENTATIVE.)
J. TURN OVER
1. CONTRACTOR SHALL CLEAN ENTIRE SITE OF ALL TRASH AND DEBRIS UPON COMPLETION OF JOB.
2. CONTRACTOR SHALL CLEAN INTERIOR OF STORE – SHOP VAC, MOP FLOORS AND CLEAN ALL GLASS.
3. CONTRACTOR SHALL PRESSURE WASH ENTIRE MURPHY OIL USA, INC. LOT UPON COMPLETION.

DIVISION 03 – CONCRETE

- A. CEMENT
1. PROVIDE AN APPROVED STANDARD BRAND PORTLAND CEMENT CONFORMING TO ASTM C 150.
2. PROVIDE TYPE I NORMAL STRENGTH OR TYPE III HIGH EARLY STRENGTH.
B. AIR ENTRAINED CEMENT
1. PROVIDE AN APPROVED STANDARD BRAND TYPE I-A PORTLAND CEMENT CONFORMING TO ASTM C 494.
C. ALL CONCRETE FLAT WORK SHALL HAVE A MINIMUM OF 4" COMPACTED GRANULAR BEDDING.
D. FINE AGGREGATES
1. PROVIDE FINE AGGREGATES CONFORMING TO ASTM C 33 CONSISTING OF WASHED SAND HAVING CLEAN, HARD, STRONG, DURABLE, UNCOATED GRAINS, FREE OF INJURIOUS AMOUNTS OF DUST, LUMPS, SOFT OR FLAKY PARTICLES, SHALE, ALKALI, ORGANIC MATTER, OR OTHER DELETERIOUS SUBSTANCES.
2. PROVIDE FINE AGGREGATES WITH A MINIMUM OF NINE PERCENT PASSING THROUGH A NO. 100 SIEVE.
3. IN ADDITION NOT MORE THAN 45 PERCENT IS TO BE RETAINED BETWEEN ANY TWO CONSECUTIVE SIEVES.
E. COARSE AGGREGATES
1. PROVIDE COARSE AGGREGATES CONFORMING TO ASTM C 33 CONSISTING OF CRUSHED STONE OR WASHED GRAVEL HAVING A CLEAN, HARD, STRONG, DURABLE, UNCOATED, PARTICLE FREE FROM INJURIOUS AMOUNTS OF DUST, FLAKY PIECES, ALKALI, ORGANIC MATTER, OR OTHER DELETERIOUS SUBSTANCES.
2. PROVIDE COARSE AGGREGATE WITH A MAXIMUM OF 1-1/2 INCHES WITH A MINIMUM OF 95 PERCENT PASSING A 1-1/2 INCH SIEVE.
3. NOT MORE THAN FIVE PERCENT IS TO PASS A NO. 4 SIEVE.
F. WATER
1. USE CLEAN WATER FREE FROM INJURIOUS AMOUNTS OF OILS, ACIDS, ALKALI, SILTS, ORGANIC MATERIALS, OR OTHER SUBSTANCES THAT MAY BE DELETERIOUS TO CONCRETE OR STEEL.
G. ALL CONCRETE SHALL BE COVERED WITH A VAPOR BARRIER OF 4 MIL OR GREATER POLYETHYLENE TO ASSURE COMPLETE HYDRATION CURES.
H. CONCRETE DESIGN MIXTURES TO BE FURNISHED UPON DELIVERY OF THE CONCRETE TO ENSURE CONCRETE MEETS ALL SPECIFICATION. CONTRACTOR TO PROVIDE PLANT BATCH IDENTIFICATION TO OWNER'S FIELD REPRESENTATIVE.
1. PROVIDE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS WITH A MINIMUM OF SIX BAGS (564 LBS.) OF CEMENT IN EACH CUBIC YARD OF CONCRETE CONFORMING TO ASTM C 94 FOR READY-MIXED CONCRETE. ALL CONCRETE SHALL BE READY-MIXED CONCRETE.
2. DO NOT EXCEED THE MAXIMUM WATER CEMENT RATIO OF 0.44 (FIVE GALLONS/BAG OF CEMENT).
3. PROVIDE CONCRETE WITH A MAXIMUM FOUR INCH SLUMP WHEN TESTED WITH A STANDARD SLUMP CONE CONFORMING TO ASTM C 143. SLUMP SHALL BE 4"-5".
a) IF CONCRETE DEVELOPS CONSISTENCY OF DIFFICULT WORKABILITY THEN A SUPER PLASTICIZER ADMIXTURE MAY BE USED WHEN APPROVED BY MURPHY OIL USA, INC.
b) DO NOT ADD WATER TO INCREASE SLUMP.
4. CALCIUM CHLORIDE SHALL NOT BE USED.
5. CURING COMPOUND TO BE MASTER BUILDERS' MASTERKURE OR TAMS INDUSTRIES' TRI-DOR 44, APPLIED PER MANUFACTURER'S SPECIFICATIONS.
I. PROVIDE AIR ENTRAINED CONCRETE FOR ALL CONCRETE TO BE FINISHED INCLUDING FOUNDATIONS, WALKS, PAVEMENTS, AND RETAINING WALLS.
1. AIR ENTRAINED IS TO BE A MINIMUM OF FIVE PERCENT AND MAXIMUM OF SEVEN PERCENT BY VOLUME.
2. MEASURE THE AIR CONTENT AT THE POINT OF DISCHARGE INTO FORMS.

DIVISION 03 – CONCRETE (CONTINUED)

- J. PLACING CONCRETE
1. MIX AND PLACE CONCRETE FOLLOWING ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
2. SCHEDULE CONCRETING THAT ONCE STARTED REMAINS A CONTINUOUS OPERATION UNTIL THE PARTICULAR SECTION OR PANEL HAS BEEN COMPLETED.
3. PROVIDE CONSTRUCTION JOINTS AS INDICATED.
4. DEPOSIT CONCRETE INTO THE FINAL POSITION AT THE SPECIFIED SLUMPS WITHOUT SEGREGATION BY RE-HANDLING OR FLOWING.
a) DEPOSIT CONCRETE AT A RATE THAT CONCRETE REMAINS PLASTIC AND FLOWABLE INTO THE SPACES BETWEEN THE REINFORCING BARS.
b) DO NOT DEPOSIT FRESH CONCRETE ON CONCRETE THAT HAS HARDENED SUFFICIENTLY TO CAUSE FORMATION OF SEAMS OR PLANES OF WEAKNESS WITH THE SECTION OR PANEL.
c) DO NOT DEPOSIT PARTIALLY HARDENED CONCRETE OR CONCRETE THAT HAS BEEN CONTAMINATED BY FOREIGN MATERIALS.
d) DO NOT RE-TEMPER CONCRETE.
5. THOROUGHLY COMPACT CONCRETE BY MEANS OF MECHANICAL VIBRATORS SUPERVISED BY EXPERIENCED PERSONNEL.
a) PROVIDE SUFFICIENT VIBRATION INTENSITY TO CAUSE FLOW OR SETTLEMENT AROUND REINFORCEMENT, EMBEDDED ITEMS, AND CORNERS OF THE FORMS; BUT NOT LONG ENOUGH TO CAUSE SEGREGATION OF THE MIX.
b) SUPPLEMENT MECHANICAL VIBRATION BY HAND SPADING IN CORNERS AND ANGLES OF THE FORMS AND ALONG FORM SURFACES WHILE THE CONCRETE IS PLASTIC TO ENSURE EVEN DENSE SURFACES FREE FROM AGGREGATE POCKETS OR HONEYCOMBS.
6. PROTECT CONCRETE FROM EXCESSIVE HEAT AND PREMATURE DRYING BY THE USE OF KRAFT PAPER AND WATER MIST.
7. COAT CONCRETE AFTER ALL FINISHING IS COMPLETE USING THE SPECIFIED CURATIVE AGENTS.
8. IF SAW CUTTING IS EMPLOYED, IT MUST OCCUR FROM 8-12 HOURS AFTER INITIAL SET.
a) SPALLING DUE TO SAW CUTTING ACTIONS MAY RESULT IN REJECTION OF THE CONCRETE WORK.
K. COLD WEATHER REQUIREMENTS
1. FOLLOW THE REQUIREMENTS OF ACI 306.1-90 AND THE FOLLOWING
a) REFER TO "RECOMMENDED PRACTICES FOR COLD WEATHER MASONRY CONSTRUCTION" AS PUBLISHED BY INTERNATIONAL MASONRY INDUSTRY ALL WEATHER COUNCIL FOR TYPICAL COLD WEATHER MASONRY PRACTICES TO BE FOLLOWED.
b) PROVIDE ADEQUATE EQUIPMENT FOR HEATING CONCRETE MATERIALS.
c) PROTECTION OF THE CONCRETE DURING FREEZING OR NEAR FREEZING WEATHER.
d) MAINTAIN CONCRETE MATERIALS, REINFORCEMENT, FORM WORK, FILLERS, AND SAND TO BE IN CONTACT WITH THE CONCRETE FREE OF FROST. DO NOT USE FROZEN MATERIALS OR MATERIALS CONTAINING ICE.
e) PROVIDE CONCRETE, DELIVERED IN COLD WEATHER, WITH THE FOLLOWING TEMPERATURES
AIR TEMPERATURE 30-40 °F
MIN. CONCRETE TEMP. 60 °F
0-30 °F 65 °F
BELOW 0 °F 70 °F
f) WHEN PRODUCING CONCRETE WITH HEATED AGGREGATES, HEATED WATER OR BOTH, DO NOT ALLOW CONCRETE TO EXCEED 90° F DURING PRODUCTION AND TRANSPORTATION.
g) ALL CONCRETE SLABS PLACED AT AIR TEMPERATURES FROM 30° F TO 50° F MAY HAVE AN ACCELERATING WATER REDUCING ADMIXTURE ADDED TO ACCELERATE SETTING TIME AND STRENGTH. ADMIXTURE COMPLYING WITH ASTM C 494, TYPE C.
1) ACCEPTABLE ADMIXTURES ARE EUCILD CHEMICAL COMPANY'S "ACCELGAURD 90", OR EQUAL PROVIDED BY R. MEADOWS, INC. OR W.R. GRACE & CO.
2) ALL CONCRETE BLENDS DO NOT DISPENSE ONTO DRY CONCRETE.
c) FOR TEMPERATURES BELOW 32° F, HEAT AGGREGATE AND USE WARM WATER SO LONG AS WHEN MIXED CONCRETE TEMPERATURE WILL BE ABOVE 60°.
d) FOLLOW THE MANUFACTURER'S INSTRUCTION FOR THE QUANTITY TO BE ADDED TO THE CONCRETE MIX, DEPENDING UPON THE AMBIENT TEMPERATURE, DESIRED RATE OF ACCELERATION, EARLY STRENGTH GAIN, AND STRIPPING SCHEDULE.
e) CONCRETE ABOVE 50° F IN A MOIST CONDITION FOR A MINIMUM OF SEVEN DAYS AFTER PLACEMENT FOLLOWING THE RECOMMENDATIONS OF ACI 308-92.
L. HOT WEATHER REQUIREMENTS
1. FOLLOW THE REQUIREMENTS OF ACI 305R.
2. DURING HOT WEATHER, TAKE STEPS TO REDUCE CONCRETE TEMPERATURE AND WATER EVAPORATION ATTENTION TO INGREDIENTS, PRODUCTION METHODS, HANDLING, PLACING, PROTECTION, AND CURING.
3. THE PREFERRED PROTECTION IS A COVERING OF KRAFT PAPER, CONFORMING TO ASTM C 171, FOR A TWENTY FOUR HOUR PERIOD AFTER PLACEMENT.
M. CONCRETE FORMWORK
1. PROVIDE DRESSED LUMBER OR MANUFACTURED FORMS CONFORMING TO THE SHAPE, LINES, AND DIMENSIONS OF CONCRETE STRUCTURES INDICATED ON THE DRAWINGS; FREE FROM DEFECTS AND SUFFICIENTLY TIGHT TO PREVENT LEAKAGE OF MORIAR.
2. ALL WOODEN FORMS TO BE NO LESS THAN THE SPECIFIED DEPTH OF THE SLAB TO BE POURED, AND NOT LESS THAN NOMINAL 2" X 4" SIZE.
3. STAKING FOR STRAIGHT SECTIONS SHALL OCCUR NOT LESS FREQUENTLY THAN EVERY FOUR FEET AND SHALL BE BOTH INSIDE AND OUTSIDE OF THE FORM.
4. FOR CURVES, STAKING SHALL OCCUR NOT LESS THAN EVERY FOOT, AND SHALL BE BOTH INSIDE AND OUTSIDE OF THE FORM.
5. STEEL FORMS SHALL BE STAKED ACCORDING TO THEIR DESIGN REQUIREMENTS.
6. ALL REMOVABLE FORMS SHALL BE COATED WITH FORM RELEASE OIL PRIOR TO PLACEMENT OF CONCRETE.
7. CYLINDRICAL FORMS SHALL BE OF NEW SONOTUBE OR EQUIVALENT DISPOSABLE MATERIALS.
a) THESE MATERIALS MUST BE REMOVED COMPLETELY AFTER USE. ISLAND FORMS SHALL BE POSITIONED USING MASONRY BLOCKING AND STEEL STAKES BOTH INSIDE AND OUTSIDE OF THE FORM, TO ACHIEVE AN AVERAGE AS PER REVEAL HEIGHT AS MEASURED AT THE CENTER OF ANY LONG SIDE OF THE ISLAND, SEE DRAWINGS FD-1 AND FD-2
8. THE SIDES OF THE ISLAND FORM SHALL BE SHIMMED AGAINST THE STAKES TO PROVIDE A PERFECTLY PLUMB FRELBOARD.
9. ALL EDGES CREATED BY REMOVABLE FORMS SHALL BE TOOL-RADIUS AFTER SURFACE FINISHING TO PROVIDE A SMOOTH BORDER ON ALL SLABS.
10. FORMS SHALL BE REMOVED NO SOONER THAN 24 HOURS FROM THE TIME OF THE POUR.
11. PROPERLY BRACE OR THE FORMS TOGETHER TO MAINTAIN SHAPE AND POSITION.
12. PROVIDE SQUARE EDGE WOOD OR, IF AVAILABLE, METAL FORMS FOR FLOOR SLABS.
13. BEFORE POURING CONCRETE, REMOVE ALL DEBRIS FROM THE FORMWORK.
14. WET DOWN FORMWORK PRIOR TO PLACEMENT, OR APPLY A FORM RELEASE AGENT FOLLOWING MANUFACTURER'S RECOMMENDATIONS.
15. DO NOT REMOVE FORMWORK AND BRACING UNTIL CONCRETE HAS GAINED SUFFICIENT STRENGTH TO CARRY ITS OWN WEIGHT, CONSTRUCTION LOADS, AND DESIGN LOADS WHICH ARE LIABLE TO BE IMPOSED ON IT.
16. REMOVE FORMS IN A MANNER TO ASSURE THE COMPLETE SAFETY OF THE STRUCTURE.
17. DO NOT PLACE ANY CONCRETE IF THE SUB GRADE HAS STANDING WATER OR IS MUDDY.

DIVISION 03 – CONCRETE (CONTINUED)

- N. STEEL REINFORCEMENT
1. PROVIDE REINFORCING BARS CONFORMING TO ASTM A 615, GRADE 60 FREE OF LOOSE FLAKY RUST, MUD, OIL, OR OTHER COATINGS WHICH WILL ADVERSELY AFFECT REINFORCING CAPACITY.
2. PLACE REINFORCEMENT ACCURATELY AND ADEQUATELY SUPPORTED BY CONCRETE MASONRY UNITS OR OTHER APPROVED SPACERS.
3. SECURE REINFORCEMENT AGAINST DISPLACEMENT WITHIN TOLERANCES SPECIFIED IN "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318).
4. HOLD BARS IN PLACE USING A MINIMUM 18 GAUGE ANNEALED IRON WIRE.
5. SPLICES IN DEFORMED REINFORCING BARS WILL NOT BE PERMITTED UNLESS APPROVED BY MURPHY OIL USA, INC.
6. REINFORCING ROD TO COMPLY WITH ASTM 615, GRADE 60.
7. DOWELED JOINTS SHALL BE LOCATED ON 12" CENTERS, ALONG THE INSIDE OF THE MOST EXTERIOR SLABS. DOWELS SHALL BE SMOOTH TYPE AND INSERTED INTO GREENSTREAK SPEED DOWEL FORMS. THE DOWEL SHALL BE LOCATED AT MID-SLAB DEPTH AND HELD IN PLACE LEVEL AND PERPENDICULAR TO THE JOINT USING SPEED DOWEL, WHICH REMAINS WITH THE FORM. AFTER FULL INSERTION AND ALIGNMENT IN THE INITIAL SLAB BEFORE POURING THE ADJACENT SLAB, DOWELS OCCURRING UNDER AND PARALLEL TO CONTROL JOINTS SHOULD BE DELETED.
O. ALTERNATE WELDED WIRE FABRIC REINFORCEMENT
1. ONLY WHEN INDICATED ON THE DRAWINGS, PROVIDE WELDED WIRE FABRIC CONFORMING TO ASTM A 641 FOR #56 W2 X W2.9 IN FLAT SHEETS UNLESS OTHERWISE INDICATED.
2. INSTALL WELDED WIRE FABRIC IN LAPS AS LONG AS PRACTICAL.
3. THE MINIMUM OVERLAP LENGTH MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT TO BE LESS THAN ONE SPACING OF CROSS WIRES PLUS TWO INCHES.
FOUNDATIONS
1. PROVIDE SMOOTH FINISH AT ALL EXPOSED SURFACES.
2. CONSTRUCT CORNERS WITH A ONE INCH CHAMFER.
3. INCREASE THE DEPTH OF FOUNDATIONS, IF REQUIRED BY FROST LINE CONDITIONS OR BY LOCAL CODES.
4. OBTAIN MURPHY OIL USA, INC. APPROVAL OF ADDITIONAL DEPTH REQUIREMENTS.
5. CONSTRUCT TOP ELEVATION OF FOUNDATIONS TO WITHIN +1/4 INCH OF THE ELEVATION INDICATED ON THE DRAWINGS.
6. INSTALL ANCHOR BOLTS WITH A HORIZONTAL TOLERANCE OF +1/8 INCH AND A VERTICAL ALIGNMENT OF +1/8 INCH OUT OF PLUMB.
Q. GROUT
1. PROVIDE NON-METALLIC, NON-SHRINK, PREMIXED NON-STAINING GROUT CONTAINING SELECTED SILICA SANDS, ASTM C 150 TYPE I PORTLAND CEMENT, AND SHRINKAGE COMPENSATING AGENTS.
2. ACCEPTABLE PRODUCTS ARE "EMBECCO" BY MASTER BUILDERS AND "TIVE STAR GROUT" BY U.S. GROUT CORPORATION.

DIVISION 09 – FINISHES

- A. G.C. SHALL FURNISH ALL PAINT MATERIALS.
1. THE ACCEPTABLE MANUFACTURER FOR ALL PAINTS OTHER THAN MATERIALS IN TABLE IS SHERWIN-WILLIAMS, OR AN APPROVED EQUAL.
2. DELIVER PAINT TO THE SITE IN THE MANUFACTURER'S ORIGINAL CONTAINERS, BEARING THE MANUFACTURER'S NAME.
B. PROTECT EXISTING EQUIPMENT WITHIN THE WORK AREA BY COVERING/MASKING AS REQUIRED
1. PROTECT BUILDING AREAS OUTSIDE OF THE WORK AREA FROM PAINT OR PAINT RESIDUE.
2. DO NOT PAINT OVER ANY CODE REQUIRED LABELS, EQUIPMENT IDENTIFICATION, PERFORMANCE RATING, NAME OR NOMENCLATURE PLATES, HARDWARE, OR LIGHT FIXTURES.
C. PREPARATION
1. PREPARE BARE METAL SURFACES WITH HAND TOOLS, SCRAPERS, AND WIRE BRUSHES FOLLOWING SSPC-SP2.
2. SAND AND SCRAPE SHOD PRIMED STEEL SURFACES TO REMOVE LOOSE PRIMER AND RUST.
3. REMOVE DUST, DIRT, POWDER RESIDUE, GREASE, OIL, WAX, OR ANY OTHER CONTAMINANTS.
4. FEATHER EDGES.
5. SOLVENT CLEAN SURFACES FOLLOWING SSPC-SP1, AND PRIME METAL.
6. CLEAN GALVANIZED SURFACES WITH MINERAL SPIRITS OR NAPHTHA.

CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT AND ALL CIVIL DOCUMENTS. THE GEOTECHNICAL REPORT AND CIVIL DOCUMENT SUPERCEDE ANY OF THE STANDARD SPECIFICATIONS ON THIS SHEET.



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