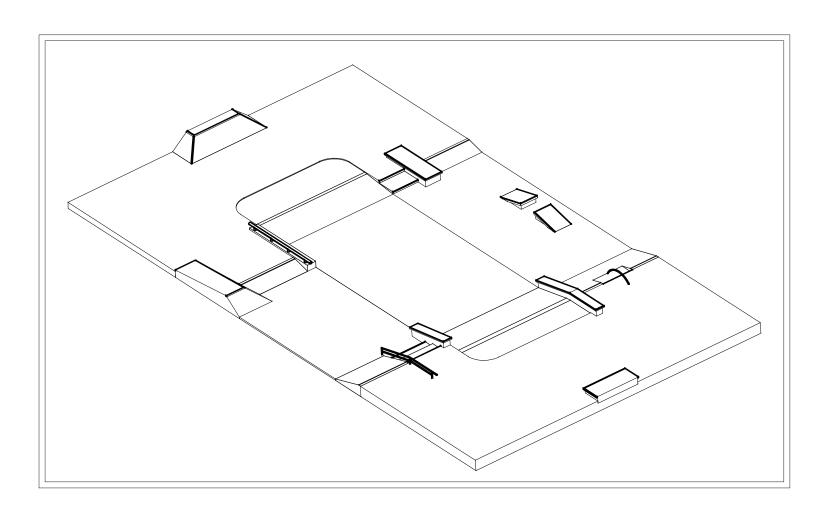


# CONSTRUCTION PLAN SET PREPARED FOR FAIRFAX COUNTY, VA

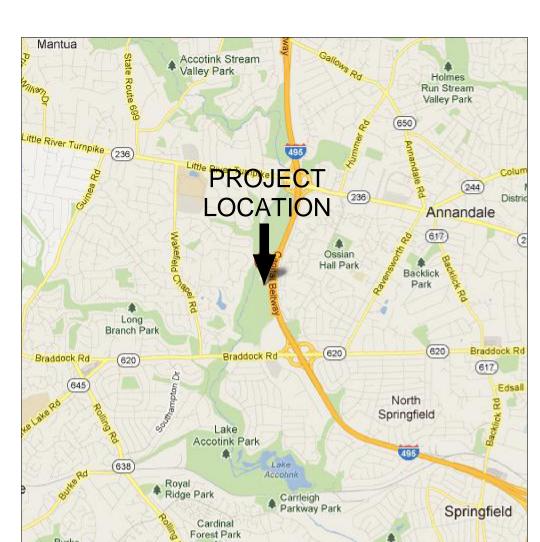


# WAKEFIELD SKATE PARK

PLAN DATE IDENTIFIER

**April 9, 2012** DATE OF LAST REVISIONS

VICINITY MAP



LOCATION MAP

# PROJECT INFORMATION

# **OWNER/ DEVELOPER**

FAIRFAX COUNTY PARK AUTHORITY 12055 GOVERNMENT CENTER PARKWAY, SUITE 406 FAIRFAX VA 22035

# SITE ADDRESS

8100 BRADDOCK ROAD ANNANDALE, VA 22003

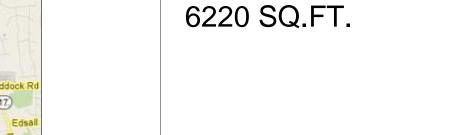
# **SKATE PARK FOOTPRINT**

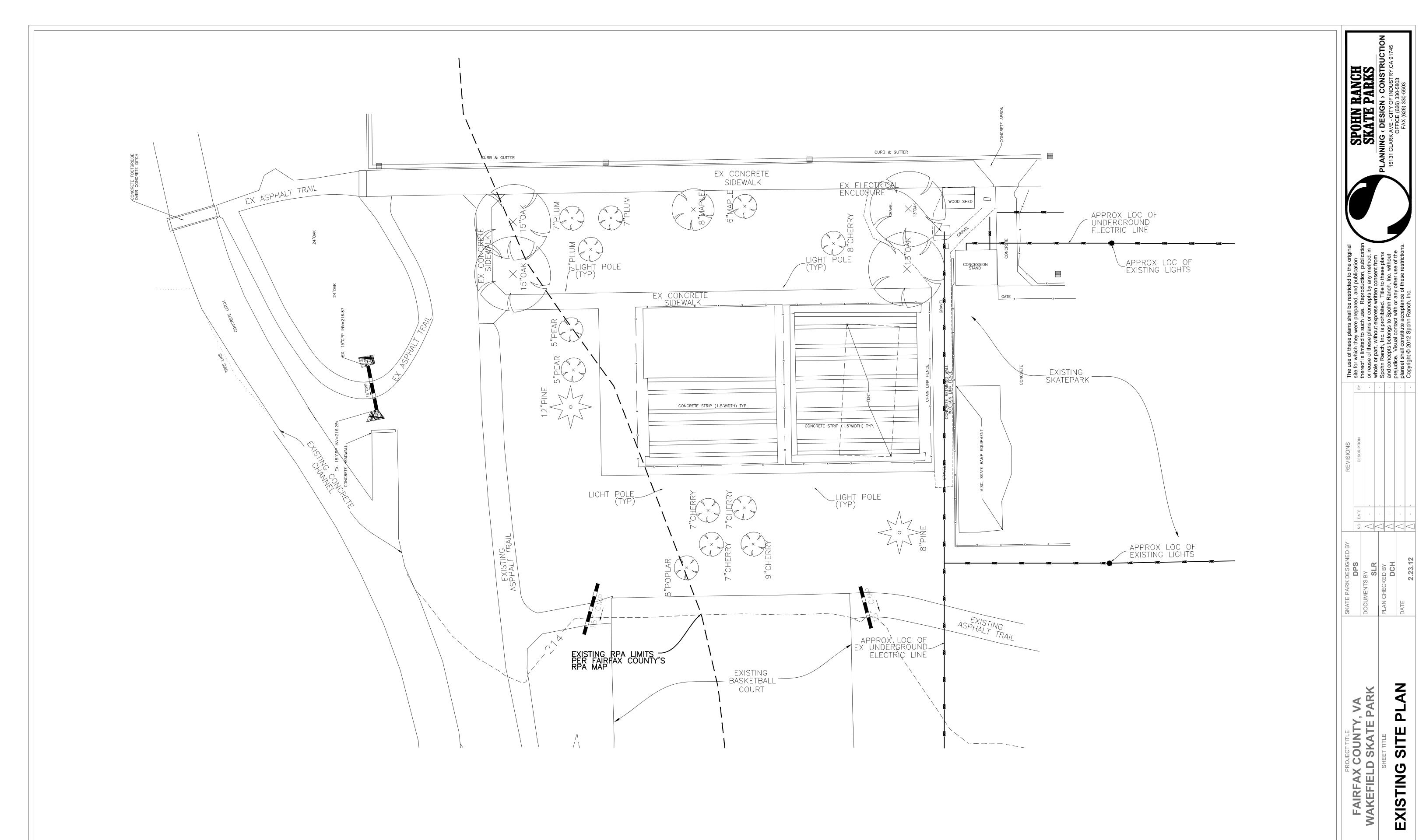
# SHEET INDEX

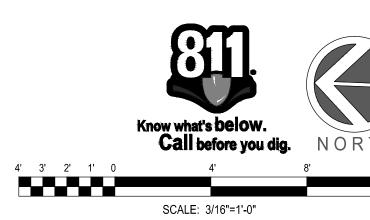
- TITLE SHEET
- **SITE PLAN**
- 3D PERSPECTIVE
- **CONSTRUCTION SPECIFICATIONS**
- **CONSTRUCTION INFORMATION PLAN**
- **CONSTRUCTION PLAN**
- **CONSTRUCTION SECTIONS**
- STEEL PLAN
- **GRADING & DRAINAGE PLAN**
- 10 CONSTRUCTION DETAILS

SHEET

SHEET NO.



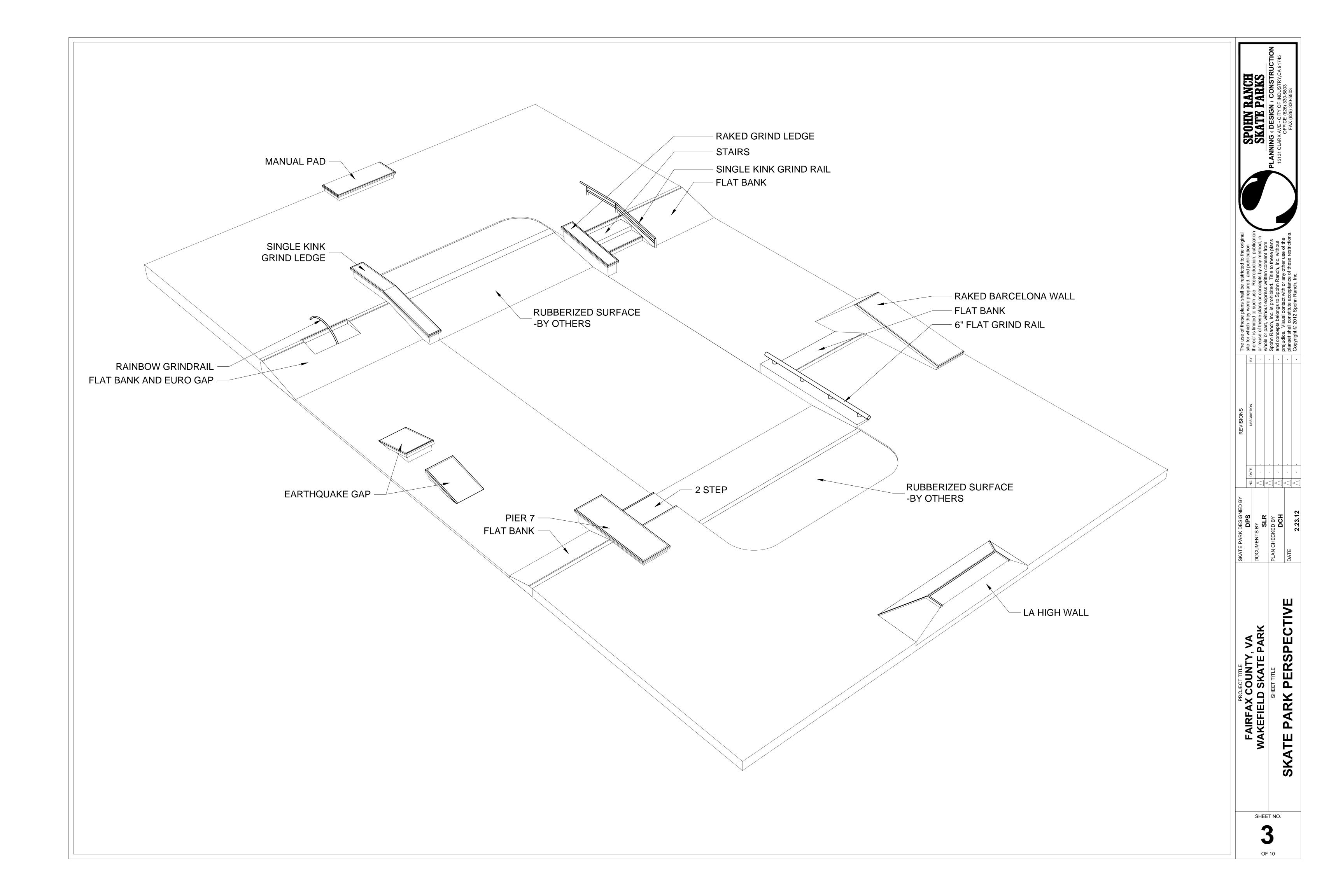






SHEET NO. OF 10

**EXISTING SITE PLAN** 



### **GENERAL STRUCTURAL NOTES**

1. THESE GENERAL STRUCTURAL NOTES APPLY UNLESS NOTED OTHERWISE ON STRUCTURAL

2. COMPLY WITH CURRENT LOCAL BUILDING CODE.

REQUIREMENTS OF THE CONTRACT DOCUMENTS

- 3. COMPLY WITH ACI 301, "SPECIFICATION FOR STRUCTURAL CONCRETE," UNLESS MODIFIED BY THE
- 4. TESTING SERVICES: COORDINATE THE FOLLOWING TESTING WITH THE OWNER SELECTED TESTING AGENCY (IF REQUIRED BY THE PROJECT SPECIFICATIONS):
- A. MATERIAL EVALUATIONS TESTS FOR CONCRETE MIX. AGGREGATE BASE, SUBGRADE, AND
- B. INSPECTION OF STRUCTURAL FILL PLACEMENT AND COMPACTION.
- C. INSPECTION OF FINAL SUBGRADE.
- D. BASE MATERIAL COMPACTION TEST FOR EVERY 1000 S.F. OF CONCRETE FLATWORK IN SKATEPARK AREA TO ENSURE 95% COMPACTION IN ACCORDANCE WITH CIVIL ENGINEERING SPECIFICATIONS AND TESTING AGENCY RECOMMENDATIONS.

THE STRUCTURAL SHOP DRAWING REVIEW IS INTENDED TO HELP THE ENGINEER VERIFY THEIR DESIGN CONCEPT. THIS REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH DESIGN DRAWINGS & SPECIFICATIONS, WHICH HAVE A PRIORITY OVER SHOP DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR CONFIRMED & CORRELATED DIMENSIONS, FABRICATION PROCESSES, MEANS, METHODS, TECHNIQUES, SAFETY, AND COORDINATION OF THE WORK WITH OTHER TRADES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK HIS OWN SHOP DRAWINGS AND THOSE OF HIS

- THE STRUCTURAL SHOP DRAWINGS SHALL BE CHECKED BY CONTRACTOR PRIOR TO SUBMITTAL. THE SHOP DRAWINGS WILL BE RETURNED FOR RESUBMITTAL IF A CURSORY REVIEW SHOWS MAJOR ERRORS WHICH SHOULD HAVE BEEN FOUND BY THE CONTRACTOR'S CHECKING. ALL SHOP DRAWINGS SHALL INCLUDE PLAN LAYOUTS SHOWING LOCATIONS OF ITEMS DETAILED ON THE SHOP VINGS. ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM THE CONTRACT DOCUMENTS SHALL BE CLOUDED ON SHOP DRAWINGS ANY OF THE CHANGES WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES, SHALL NOT BE CONSIDERED REVIEWED AFTER ENGINEER'S
- REVIEW UNLESS NOTED ACCORDINGLY ANY RESUBMITTAL OF A DETAIL SHEET WITH CHANGED INFORMATION SHALL BE ACCOMPANIED BY LOCATION PLAN IDENTIFYING THE MEMBERS INVOLVED, AND CLOUDING AROUND CHANGED
- ANY ENGINEERING SUBMITTED FOR REVIEW SHALL BE APPROPRIATELY SEALED. FULL

### RESPONSIBILITY OF SUCH ENGINEERING RESTS WITH THE PERSON SEALING THE DESIGN.

- 1. ESTABLISH AND MAINTAIN REQUIRED LINES AND GRADE ELEVATIONS.
- 2. REMOVE UPPER SIX INCHES OR MORE CONTAINING ROOTS, GRASS, AND ORGANIC MATERIAL AND DISPOSE OFF THE SITE. EXCAVATE AND STOCKPILE. SCARIFY AND COMPACT EXPOSED SUBGRADE
- 3. PROVIDE STRUCTURAL FILL AS REQUIRED TO MEET PROPOSED SUBGRADE ELEVATIONS IN ACCORDANCE WITH CIVIL ENGINEERING SPECIFICATIONS AND TESTING AGENCY
- RECOMMENDATIONS. BRING UP FILL USING STOCKPILED MATERIAL AND/OR APPROVED MATERIAL WITH LOW PLASTICITY IN 12-INCH THICK MAXIMUM LAYERS (UNLESS OTHERWISE SPECIFIED IN THE SOILS REPORT OR BY
- LOCAL PRACTICE). COMPACTING EACH LAYER TO 95 PERCENT OF ASTM D-698. 5. COMPACT SUBGRADE TO OBTAIN FIRM. EVEN SUBGRADE SURFACE. FILL AND CONSOLIDATE DEPRESSED AREAS. REMOVE UNCOMPACTABLE MATERIALS. REPLACE WITH CLEAN FILL AND COMPACT TO 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D698 STANDARD
- 6. THE EARTHWORK SHALL BE DONE UNDER SUPERVISION OF A SOILS ENGINEER RETAINED BY THE OWNER (IF REQUIRED BY THE PROJECT), WHO SHALL VERIFY ABOVE SPECIFICATIONS FOR THE SUPPORT OF SLAB ON GRADE AND FOR THE CONTROL OF SOIL SWELLING.
- 7. THE EXCAVATION CONTRACTOR SHALL REMOVE ALL SWELLABLE SOIL AS DIRECTED BY THE SOILS
- 8. EXCAVATION AND COMPACTION OF FILL SHALL EXTEND TO THE BUILDING LINES 9. PROCEED WITH SUB-BASE ONLY AFTER NONCONFORMING CONDITIONS HAVE BEEN CORRECTED
- 10. PROVIDE THE SPECIFIED DEPTH OF COMPACTED AGGREGATE BASE MATERIAL. COMPACT AGGREGATE BASE TO 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D698
- STANDARD PROCTOR METHOD. 11. PROCEED WITH CONCRETE ONLY AFTER NONCONFORMING CONDITIONS HAVE BEEN CORRECTED,
- SUBGRADE HAS BEEN INSPECTED, AND FORMWORK AND FIELD MOCK-UPS HAVE BEEN REVIEWED. 12. REMOVE LOOSE MATERIAL FROM COMPACTED SUB-BASE SURFACE IMMEDIATELY BEFORE PLACING CONCRETE.

THERE MAY NOT BE A SOILS REPORT FOR THIS PROJECT. OWNER SHALL RETAIN A SOILS ENGINEER IF SO REQUIRED BY THE PROJECT, TO VERIFY EXCAVATIONS FOR ASSUMED ALLOWABLE SOIL BEARING, LOW SETTLEMENT AND SWELL POTENTIAL AND TO MAKE ANY ADDITIONAL RECOMMENDATIONS. IING WALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED SOIL AT 1'-6" MINIMUM BELOW LOW ADJACENT NATURAL OR FINISH GRADE. ALLOWABLE SOIL BEARING 2.000 P.S.F. IN THE PRESENCE OF SITE FILLS, THE CONTRACTOR SHALL VERIFY THESE DEPTHS TO FURNISH MINIMUM DEPTH OF 1'-6" BELOW NATURAL GRADE AND DEEPEN FOOTINGS WHERE NECESSARY.

- FORM MATERIALS: PLYWOOD METAL METAL-ERAMED PLYWOOD OR OTHER APPROVED PANEL-TYPE MATERIALS FREE FROM DEFECTS AND DISTORTION. AND TO PROVIDE FULL-DEPTH CONTINUOUS, STRAIGHT, SMOOTH EXPOSED SURFACES.
- 2. USE FLEXIBLE OR CURVED FORMS AS REQUIRED TO PROVIDE VERTICAL AND HORIZONTAL RADII AS INDICATED IN THE DRAWINGS.
- 3. PROVIDE 2" NOMINAL THICKNESS, SURFACED PLANK WOOD FORMS FOR STRAIGHT SECTIONS. USE FLEXIBLE METAL, 1" LUMBER, OR PLYWOOD FORMS FOR RADIUS BENDS. DO NOT OVERLAP FORMS, CREATING AN OFFSET FINISHED EDGE.
- 4 FORM-RELEASE AGENT: COMMERCIALLY FORMULATED FORM-RELEASE AGENT THAT WILL NOT BOND WITH, STAIN, OR ADVERSELY AFFECT CONCRETE SURFACES AND WILL NOT IMPAIR SUBSEQUENT TREATMENTS OF CONCRETE SURFACES.
- 5. EDGE FORMS AND SCREED CONSTRUCTION

AND SUBGRADE HAS BEEN INSPECTED.

- A SET BRACE AND SECURE EDGE FORMS BUILKHEADS AND INTERMEDIATE SCREED GUIDES FOR PAVEMENT TO REQUIRED LINES, GRADES, AND ELEVATIONS. INSTALL FORMS TO ALLOW CONTINUOUS PROGRESS OF WORK AND SO FORMS CAN REMAIN IN PLACE AT LEAST 24 HOURS
- B. CLEAN FORMS AFTER EACH USE AND COAT WITH FORM RELEASE AGENT TO ENSURE SEPARATION FROM CONCRETE WITHOUT DAMAGE

- 1 ASTM A-615 GRADE 40 (MINIMUM) EXCEPT AS FOLLOWS:
- A. A-185: WIRE MESH, FLAT SHEETS
- B. A-108: WELDED ANCHORS, GRADE 60, SEE AWS SPEC FOR WELDING WITHOUT PREHEAT
- 2 JOINT DOWEL BARS: PLAIN STEEL DOWELS, ASTM A 615/A 615M, GRADE 40 (MINIMUM). CUT BARS
- 4 BAR SUPPORTS: BOLSTERS, CHAIRS, SPACERS AND OTHER DEVICES FOR SPACING, SUPPORTING AND FASTENING REINFORCEMENTS BARS. WELDED WIRE FABRIC, AND DOWELS IN PLACE. MANUFACTURE BAR SUPPORTS ACCORDING TO CRSI'S "MANUAL OF STANDARD PRACTICE" FROM STEEL WIRE, PLASTIC, OR PRECAST CONCRETE OR FIBER-REINFORCED CONCRETE OF GREATER
- ALL REINFORCING BARS DEFORMED EXCEPT #2 BARS AND WIRE MESH. LATEST ACI CODE AND DETAILING MANUAL APPLY. CLEAR CONCRETE COVERAGES TO ANY REINFORCING INCLUDING TIES
- A. 3" CONCRETE PLACED AGAINST ROUGH EARTH.
- B. 2" FORMED CONCRETE EXPOSED TO EARTH OR WEATHER (#6 OR LARGER REBAR ONLY). C. 1" SLABS AND JOISTS NOT EXPOSED TO WEATHER.
- D. 1-1/2" ALL OTHER.
- 6 SMALLER CLEARANCES PERMISSIBLE FOR PRECAST OR PRESTRESSED.
- 7 LAP SPLICES IN MASONRY: SHALL BE 48 DIAMETERS 8 MESH SPLICES: WIRE SPACING PLUS 2 INCHES.
- 9 TENSION LAP SPLICES IN CONCRETE: UNLESS NOTED OTHERWISE, PROVIDE THE FOLLOWING:
- A. #3, 22"; #4, 29"; #5, 36"; #6, 43"; #7, 63"; #8, 72"; #9, 81"; #10, 91"; #11, 101". MULTIPLY BY 1.3 FOR

10 MINIMUM CLEAR COVER FOR SPLICED REINFORCING IS GREATER THAN ONE BAR DIAMETER, AND MINIMUM CLEAR SPACING IS GREATER THAN TWO BAR DIAMETERS. SPLICE BOTTOM BAR OVER SUPPORTS AND TOP BAR AT MIDSPAN ONLY. WHERE BARS ARE SHOWN SPLICED, THEY MAY RUN

CONTINUOUS AT CONTRACTOR'S OPTION. 11 PLACE REBAR PER CRSI MANUAL. REBAR SPACINGS GIVEN ARE MAXIMUM ON CENTER WHETHER PROVIDE BENT CORNER REBAR TO MATCH AND LAP WITH HORIZONTAL REBARS AT CORNERS AND INTERSECTION OF WALLS, BEAMS, BOND BEAMS AND FOOTINGS PER ACI MANUAL. DOWEL ALL VERTICAL REBAR TO FOUNDATIONS. SECURELY TIE ALL REBAR, INCLUDING DOWELS, IN LOCATION BEFORE PLACING CONCRETE OR GROUT

12 GENERAL: COMPLY WITH CRSI'S MANUAL OF STANDARD PRACTICE FOR FABRICATING REINFORCEMENT AN WITH RECOMMENDATIONS IN CRSI'S "PLACING REINFORCING BARS FOR PLACING AND SUPPORTING REINFORCEMENT. CLEAN REINFORCEMENT OF LOOSE RUST AND MILL SCALE FARTH ICE OR OTHER BOND-REDUCING MATERIALS. ARRANGE, SPACE, AND SECURELY TIL BARS AND BAR SUPPORTS TO HOLD REINFORCEMENT IN POSITION DURING CONCRETE PLACEMENT. MAINTAIN MINIMUM COVER TO REINFORCEMENT.

- 1 ALL CONCRETE SHALL MEET ALL THE REQUIREMENTS OF ACI 301 WITH TYPE II CEMENT. MINIMUM 28 DAY STRENGTH 4.000 PSI, EXCEPT AS FOLLOW
- A. NO ADMIXTURES WITHOUT APPROVAL. ADMIXTURES CONTAINING CHLORIDES SHALL NOT BE SED. CONCRETE SHALL NOT BE IN CONTACT WITH ALUMINUM.
- B. CONCRETE SHALL BE PLACED WITHIN 90 MINUTES OF BATCHING AND SHALL NOT EXCEED A MPERATURE OF 90 DEGREES FAHRENHEIT UNLESS PRE-APPROVED BY THE ENGINEER.
- C. SLUMP RANGE: 2 TO 4 INCHES.
- D. SMALL TO MEDIUM AGGREGATE (3/4" MAX.) FIBER REINFORCEMENT OK.
- 2 ALL SLAB CONSTRUCTION SHALL CONFORM TO ACI 302.1.
- 3 DO NOT INSTALL CONCRETE WORK OVER SATURATED MUDDY OR FROZEN SUBGRADE 4 DO NOT INSTALL CONCRETE WHEN AIR TEMPERATURE IS BELOW 40 DEGREES. USE OF CALCIUM
- CHLORIDE, SALT, OR OTHER ADMIXTURE TO PREVENT CONCRETE FROM FREEZING IS PROHIBITED 5 PROTECT ADJACENT WORK AND PROVIDE TEMPORARY BARRICADES AS REQUIRED FOR
- PROTECTION OF PROJECT WORK AND PUBLIC SAFETY. 6 MFCHANICALLY VIBRATE ALL CONCRETE WHEN PLACED. EXCEPT THAT SLABS ON GRADE AND
- SLABS ON DECK NEED BE VIBRATED ONLY AROUND EMBEDDED ITEMS. 7 CONCRETE CYLINDERS SHALL BE TAKEN AND TESTED PER THE ACI CODE, WHEN REQUIRED BY THE
- ALL REINFORCING, INCLUDING DOWELS AND ANCHOR BOLTS, SHALL BE SECURELY TIED IN LOCATION BEFORE PLACING CONCRETE OR GROUT. DOWELS WILL NOT BE ALLOWED TO BE
- 9 IF ENTIRE SLAB CANNOT BE POURED IN ONE DAY, SUBCONTRACTOR MUST DISCUSS POUR
- OPTIONS WITH THE SKATE PARK DESIGNER 10 CONDUITS, PIPES, AND SLEEVES EMBEDDED IN CONCRETE SHALL CONFORM TO THE
- 1 CONSOLIDATE CONCRETE BY MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY
- HAND-SPADING, RODDING OR TAMPING. USE EQUIPMENT AND PROCEDURES TO CONSOLIDATE CONCRETE ACCORDING TO RECOMMENDATIONS IN ACI 3091 CONSOLIDATE CONCRETE ALONG FACE OF FORMS AND ADJACENT TO TRANSVERSE JOINTS WITH AN INTERNAL VIBRATOR, KEEP VIBRATOR AWAY FROM JOINT ASSEMBLIES
- REINFORCEMENT, OR SIDE FORMS. USE ONLY SQUARE-FACED SHOVELS FOR HAND-SPREADING AND CONSOLIDATION. CONSOLIDATE WITH CARE TO PREVENT DISLOCATING REINFORCEMENT, DOWELS, AND JOINT DEVICES
- COLD WEATHER PLACEMENT: COMPLY WITH ACI 306.1 AND AS FOLLOWS. PROTECT CONCRETE WORK FROM PHYSICAL DAMAGE OR REDUCED STRENGTH THAT COULD BE CAUSED BY FROST, FREEZING ACTIONS, OR LOW TEMPERATURES. A. DO NOT INSTALL CONCRETE WHEN AIR TEMPERATURE IS BELOW 40 DEGREES WITHOUT
- NOT MORE THAN 80 DEG F AT POINT OF PLACEMEN
- B. DO NOT USE FROZEN MATERIALS OR MATERIALS CONTAINING ICE OR SNOW. C. DO NOT USE CALCIUM CHLORIDE, SALT, OR OTHER MATERIALS CONTAINING ANTIFREEZE AGENTS OR CHEMICAL ACCELERATORS, UNLESS OTHERWISE SPECIFIED AND APPROVED IN MIX

WRITTEN AUTHORIZATION FROM THE OWNER. WHEN AIR TEMPERATURE HAS FALLEN TO OR IS EXPECTED TO FALL BELOW 40 DEG F, UNIFORMLY HEAT WATER AND AGGREGATES BEFORE

MIXING TO OBTAIN A CONCRETE MIXTURE TEMPERATURE OF NOT LESS THAN 50 DEG F AND

- 3 HOT-WEATHER PLACEMENT: PLACE CONCRETE ACCORDING TO RECOMMENDATION IN ACI 305R AND AS FOLLOWS WHEN HOT-WEATHER CONDITIONS EXIST
- A. COOL INGREDIENTS BEFORE MIXING TO MAINTAIN CONCRETE TEMPERATURE AT TIME OF PLACEMENT BELOW 90 DEG F. CHILLED MIXING WATER OR CHOPPED ICE MAY BE USED TO CONTROL TEMPERATURE, PROVIDED WATER EQUIVALENT OF ICE IS CALCULATED TO TOTAL AMOUNT OF MIXING WATER. USING LIQUID NITROGEN TO COOL CONCRETE IS CONTRACTORS
- B. COVER REINFORCEMENT STEEL WITH WATER-SOAKED BURLAP SO STEEL TEMPERATURE WILL NOT EXCEED AMBIENT AIR TEMPERATURE IMMEDIATELY BEFORE EMBEDDING IN CONCRETE.
- C. FOG-SPRAY FORMS, REINFORCEMENT STEEL, AND SUBGRADE JUST BEFORE PLACING CONCRETE. KEEP SUBGRADE MOISTURE UNIFORM WITHOUT STANDING WATER, SOFT SPOTS,
- 4 FINISH: HARD TROWEL UNTIL ALL VISIBLE POURS ARE CLOSED. CEASE TROWEL BEFORE GLASS FORMS ON SURFACE OF SLAB. DO NOT BROOM FINISH.
- A ALL EDGE TOOLING SHOULD BE 1/4 INCH RADIUS OR LESS 1/8 INCH PREFERRED. CHAMFERED. EDGES ON SLAB / FLATWORK PERIMETER PREFERRED TO MITIGATE SLAB EDGE BREAKAGE.
- CONCRETE PROTECTION AND CURING GENERAL: PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES. COMPLY WITH ACI 306.1 FOR COLD-WEATHER PROTECTION AND FOLLOW RECOMMENDATIONS IN ACI 305R FOR HOT-WEATHER PROTECTION DURING CURING.
- EVAPORATION RETARDANT: APPLY EVAPORATION RETARDANT TO CONCRETE SURFACES IF HOT, DRY, OR WINDY CONDITIONS CAUSE MOISTURE LOSS APPROACHING 0.2 LB/SQ, FT, X H BEFORE AND G FINISHING OPERATIONS. APPLY TO EXPOSED SURFACE OF CONCRETE ACCORDING TO MANUFACTURERS WRITTEN INSTRUCTIONS.
- 3 BEGIN CURING AFTER FINISHING CONCRETE, BUT NOT BEFORE FREE WATER HAS DISAPPEARED
- 4 CURING METHODS: CURE CONCRETE BY MOISTURE CURING, MOISTURE-RETAINING-COVER CURING, CURING COMPOUND, OR A COMBINATION OF THESE AS FOLLOWS: A. MOISTURE CURING: KEEP SURFACES CONTINUOUSLY MOIST FOR NOT LESS THAN SEVEN DAYS WITH THE FOLLOWING MATERIALS:
  - CONTINUOUS WATER-FOG SPRAY ABSORPTIVE COVER, WATER SATURATED, AND KEPT CONTINUOUSLY WET. COVER CONCRETE SURFACES AND EDGES WITH 6 - INCH LAP OVER ADJACENT
- B. MOISTURE-RETAINING-COVER CURING: COVER CONCRETE SURFACES WITH MOISTURE-RETAINING COVER FOR CURING CONCRETE, PLACED IN WIDEST PRACTICABLE WIDTH, WITH SIDES AN ENDS LAPPED AT LEAST 6 INCHES, AND SEALED BY WATERPROOF TAPE OR ADHESIVE WHERE NECESSARY. IMMEDIATELY REPAIR ANY HOLES OR TEARS DURING CURING PERIOD USING THE SAME MATERIAL AND WATERPROOF TAPE.
- C. CURING COMPOUND: APPLY UNIFORMLY IN CONTINUOUS OPERATION BY POWER SPRAY OR ROLLER ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. RECOAT AREAS SUBJECTED TO HEAVY RAINFALL WITHIN THREE HOURS AFTER INITIAL APPLICATION. MAINTAIN CONTINUITY OF COATING AND REPAIR DAMAGE DURING CURING PERIOD.

- 1 ABSORPTIVE COVER: AASHTO M 182, CLASS 2, BURLAP CLOTH MADE FROM JUTE OR KENAF, WEIGHING APPROXIMATELY 9 OZ./SQ. YD. DRY.
- 2 MOISTURE-RETAINING COVER: ASTM C 171, POLYETHYLENE FILM OR WHITE **BURLAP-POLYETHYLENE SHEET**
- 3 WATER: POTABLE.
- 4 EVAPORATION RETARDANT: WATERBORNE, MONOMOLECULAR FILM FORMING, MANUFACTURED FOR APPLICATION TO FRESH CONCRETE.
- EXPANSION AND ISOLATION JOINT FILLER STRIPS: EXPANSION JOINT MATERIALS SHALL BE FLEXIBLE POLYETHYLENE CLOSED CELL FOAM OR SIMILAR AND SUPPLIED BY CONCRETE
- 2 EXPANSION JOINT SEALANT: SIKAFLEX 2C NS TG POLYURETHANE ELASTOMERIC SEALANT, OR
- PPROVED EQUAL. COLOR OF CAULK SHOULD RESEMBLE COLOR OF CONCRETE (ALUMINUM GRAY
- 3 BONDING AGENT: ASTM C 1059, TYPE II, NON-REDISPERSIBLE, ACRYLIC EMULSION OR STYRENE
- GENERAL: CONSTRUCT CONSTRUCTION, ISOLATION, AND CONTRACTION JOINTS AND TOOL EDGINGS TRUE TO LINE WITH FACES PERPENDICULAR TO SURFACE PLANE OF CONCRETE ONSTRUCT TRANSVERSE JOINTS AT RIGHT ANGLES TO CENTERLINE, UNLESS OTHERWISE
- 2 KEY JOINTS: SET CONSTRUCTION JOINTS AT SIDE AND END TERMINATIONS OF PAVEMENT AND AT LOCATIONS WHERE PAVEMENT OPERATIONS ARE STOPPED FOR MORE THAN ONE-HALF HOUR, UNLESS PAVEMENT TERMINATES AT ISOLATION JOINTS.
- A. PROVIDE PRE-FORMED GALVANIZED STEEL OR PLASTIC KEYWAY-SECTION FORMS OR BULKHEAD FORMS WITH KEYS, UNLESS OTHERWISE INDICATED. EMBED KEYS AT LEAST 1.5 INCHES INTO CONCRETE.

B. CONTINUE REINFORCEMENT ACROSS KEY JOINTS, UNLESS OTHERWISE INDICATED. DO NOT

- CONTINUE REINFORCEMENT THROUGH SIDES OF PAVEMENT STRIPS WHERE INDICATED. C. PROVIDE TIE BARS AT SIDES OF PAVEMENT STRIPS WHERE INDICATED.
- D. USE A BONDING AGENT AT LOCATIONS WHERE FRESH CONCRETE IS PLACED AGAINST ENED OR PARTIALLY HARDENED CONCRETE SURFACES. 3 EXPANSION JOINTS: FORM EXPANSION JOINTS OF SPECIFIED JOINT-FILLER STRIPS ABUTTING DRAIN
- STRUCTURES, AND OTHER FIXED OBJECTS, AND WHERE INDICATED. A. LOCATE EXPANSION JOINTS AS INDICATED ON DRAWINGS.
- B. EXTEND JOINT FILLERS FULL WIDTH AND DEPTH OF JOINT.
- C. TERMINATE JOINT FILLER TO DEPTH INDICATED ON DRAWINGS TO ALLOW FOR BOND BREAKER
- D. FURNISH JOINT FILLERS IN ONE-PIECE LENGTHS. WHERE MORE THAN ONE LENGTH IS REQUIRED, LACE OR CLIP JOINT-FILLER SECTIONS TOGETHER.
- E. PROTECT TOP EDGE OF JOINT FILLER DURING CONCRETE PLACEMENT WITH METAL, PLASTIC OR OTHER TEMPORARY PREFORMED CAP. REMOVE PROTECTIVE CAP AFTER CONCRETE HAS BEEN PLACED ON BOTH SIDES OF JOINT.

- 4 INSTALL DOWEL BARS AND SUPPORT ASSEMBLIES AT JOINTS WHERE INDICATED. LUBRICATE OR ASPHALT-COAT ONE-HALF DOWEL LENGTH TO PREVENT CONCRETE BONDING TO ONE SIDE
- 5 CONTROL JOINTS: FORM WEAKENED-PLANE JOINTS, SECTIONING CONCRETE INTO AREAS AS
- INDICATED. CONSTRUCT CONTROL JOINTS FOR A DEPTH AS INDICATED IN THE DRAWINGS (GENERALLY 1/3 OF THE PAVEMENT THICKNESS), AS FOLLOWS:
- A. SAWED JOINTS: FORM CONTROL JOINTS WITH POWER SAWS EQUIPPED WITH SHATTERPROOF ABRASIVE OR DIAMOND-RIMMED BLADES. CUT 1/8 INCH WIDE JOINTS INTO CONCRETE WHEN CUTTING ACTION WILL NOT TEAR, ABRADE, OR OTHERWISE DAMAGE SURFACE AN BEFORE DEVELOPING RANDOM CONTRACTION CRACKS. EARLY SAW CUTS ARE APPROXIMATELY 1 INCH DEEP, REGARDLESS OF PAVEMENT THICKNESS. REFER TO CONTROL JOINT GUIDE DRAWING OF PLAN SET IF APPLICABLE.
- B. IF SKATEPARK PROJECT DESIGN UTILIZES POURED STEPS, CONTROL JOINTS MUST BE CUT 3 4
- 6 POST CURE DETAIL WORK (AS NEEDED): GRIND SMOOTH ANY INCONSISTENCIES IN THE FINISH OR HIGH SPOTS BETWEEN POURS
- STRUCTURAL STEEL 1 ASTM A-36 FOR C, MC, ANGLES, AND PLATES.

SUPPLEMENTARY NOTES

- 2 ASTM A-53 GRADE B OR A-501 FOR STEEL PIPES.
- 3 ASTM A-513 GRADE B, FY=46 KSI FOR TS/HSS TUBE STEEL FOR SIZES UP TO 5/8" THICK.

### 4 ASTM F-1554 GRADE 36, A-307 OR A-36 PLAIN ANCHOR BOLTS.

### 1 THESE CONTRACT DOCUMENTS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKERS, AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, MEANS AND METHODS, BRACING, SHORING, FORMS, SCAFFOLDING, GUYING OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. DBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER OR STRUCTURAL OBSERVERS

- SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS. 2 OPTIONS AND SUBSTITUTIONS (APPROVED BY OWNER/SKATEPARK DESIGNER/ARCHITECT) ARE FOR CONTRACTOR'S CONVENIENCE. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITT CHANGES AND ADDITIONAL COSTS NECESSARY AND SHALL COORDINATE ALL DETAILS WITH SKATEPARK DESIGNER THROUGH PRIME
- ANY ENGINEERING DESIGN PROVIDED BY CONTRACTOR OR OTHERS AND SUBMITTED FOR REVIEW SHALL BE WET SIGNED AND STAMPED BY AN INSURED REGISTERED STRUCTURAL OR CIVIL NGINEER LICENSED IN THE STATE OF WHICH THE PROJECT IS LOCATED, IF REQUIRED BY CITY OR
- UNLESS NOTED OTHERWISE, DETAILS ON CONSTRUCTION DRAWINGS ARE TYPICAL AS INDICATED BY CUTS, REFERENCES, OR TITLES. ALL DETAILS SHOWN SHALL BE IMPORTED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS, WHETHER SPECIFICALLY INDICATED OR NOT. TYPICAL DETAILS MAY OR MAY NOT BE REFERENCED ON THE DOCUMENTS, BUT SHALL APPLY AT ALL LOCATIONS, UNLESS NOTED OTHERWISE. WHERE NO DETAIL CUTS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK SHOWN ELSEWHERE ON THE PROJECT. FOR BIDDING PURPOSES WHERE ANY SHOWN MEMBER OR STRUCTURAL ELEMENT IS NOT SIZED ON THE DOCUMENTS, THE LARGEST SIMILAR MEMBER USED IN THE PROJECT SHALL BE UTILIZED.
- ALL DIMENSIONS AND ELEVATIONS SHOWN ON CONSTRUCTION DRAWINGS SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS (IF REQUIRED BY THE PROJECT). RESOLVE ALL DISCREPANCIES WITH SKATEPARK DESIGNER AND PRIME PRIOR TO START OF CONSTRUCTION. DO NOT SCALE
- CONTRACTOR SHALL ESTABLISH AND VERIFY IN FIELD ALL EXISTING CONDITIONS AFFECTING NEW CONSTRUCTION. CONTACT SKATEPARK DESIGNER AND PRIME IMMEDIATELY IF EXISTING CONDITIONS ARE NOT AS DEPICTED IN DRAWINGS.
- ELEVATION: 1/4 INCH. CONTRACTOR MUST ACHIEVE POSITIVE DRAINAGE FOR ALL SURFACES WITHIN THE SKATEPARK AREA. STANDING WATER WILL NOT BE ALLOWED. (REFER TO DRAINAGE GUIDE
- REMOVE AND REPLACE CONCRETE PAVEMENT THAT IS BROKEN, DAMAGED, OR DEFECTIVE, OR
- DOES NOT MEET REQUIREMENTS IN THIS SECTION. THE CONTRACTOR SHALL FIX ALL CRACKS AND DISPLACEMENTS LARGER THAN 3/32" UP TO THE PROJECT COMPLETION. 2 PROTECT CONCRETE FROM DAMAGE. EXCLUDE TRAFFIC FROM PAVEMENT FOR AT LEAST 14 DAYS AFTER PLACEMENT. WHEN CONSTRUCTION TRAFFIC IS PERMITTED, MAINTAIN PAVEMENT AS CLEAN AS POSSIBLE BY REMOVING SURFACE STAINS AND SPILLAGE OF MATERIALS AS THEY OCCUR.
- 3 MAINTAIN CONCRETE PAVEMENT OF STAINS, DISCOLORATION, DIRT, AND OTHER FOREIGN

# SHOTCRETE SPECIFICATIONS

### PART 1- GENERAL

# A. SPECIALTY CONSTRUCTION:

i.DESCRIPTION: SHOTCRETE APPLICATION, CUTTING, SCULPTING AND FINISH WORK HAS BEEN DEEMED AS SPECIALTY CONSTRUCTION WORK WITHIN THE CONSTRUCTION DOCUMENTS. ALL WORK RELATED TO THE SPECIALTY CONSTRUCTION SHALL BE COORDINATED BY THE SKATE PARK DESIGNER, AND THE PRE-QUALIFIED SPECIALTY CONTRACTOR, PRIOR TO THE START OF

### 1.2 QUALITY ASSURANCE

- A. STANDARDS: COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF THE FOLLOWING CODES AND STANDARDS, EXCEPT AS HEREIN MODIFIED:
- - ii. AMERICAN CONCRETE INSTITUTE (ACI): 506, CHAPTER 13, WET METHOD. CHAPTER 5, SHOTCRETE CREW

### iii. ASTM: "AMERICAN SOCIETY FOR TESTING MATERIALS" 1.3 SUBMITTALS

A. MANUFACTURER'S DATA: CURRENT PRINTED SPECIFICATIONS WITH APPLICATION AND INSTALLATION INSTRUCTION FOR PROPRIETARY MATERIALS INCLUDING CONCRETE ADMIXTURES

### 1.4 REFERENCE STANDARDS

- A. ACI 211.1- RECOMMENDED PRACTICE FOR SELECTING PROPORTIONS FOR NORMAL-WEIGHT CONCRETE B. ACI 211.3- RECOMMENDED PRACTICE FOR SELECTING PROPORTIONS FOR LIGHTWEIGHT CONCRETE.
- C. ACI 301- SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS. D. ACI 305- RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING.
- E. ACI 306- RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING. F. ACI 318- BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
- G. ASTM C33- CONCRETE AGGREGATES H. ASTM C94- READY-MIXED CONCRETE
- I. ASTM C143- TEST FOR SLUMP OF PORTLAND CEMENT CONCRETE J. ASTM C150- PORTLAND CONCRETE

i. IBC: "INTERNATIONAL BUILDING CODE"

K. ASTM C260- AIR-ENTRAINING ADMIXTURES FOR CONCRETE L. ASTM C494- CHEMICAL ADMIXTURES FOR CONCRETE M. ASTM C618- FLY ASH AND RAW OR CALCINED NATURAL POZZOLANS FOR USE IN PORTLAND CEMENT

## 1.5 JOB CONDITIONS

- A. COORDINATION
- i. COORDINATE SCHEDULES OF CONCRETE WORK TO ALLOW ADEQUATE TIME FOR INSTALLATION OF OTHER RELATED WORK.
- ii. VERIFY THAT ANCHOR BOLTS AND OTHER EMBEDDED STEEL ITEMS TO BE CAST INTO CONCRETE ARE PROPERLY PLACED
- iii. COORDINATE SIZE AND LOCATION OF MECHANICAL AND ELECTRICAL EQUIPMENT CONCRETE PADS. iv. COORDINATE EARTHWORK AND SOILS REPORT RECOMMENDATIONS WITH PLACEMENT
- REQUIREMENTS. v. COORDINATE WITH FORM-WORK AND FINISHES SECTIONS TO PROVIDE FINISH FLOOR LEVELNESS AND FLATNESS AS SPECIFIED HEREIN. SLOPE TO DRAINS AT GRADES AND

### PERCENT SLOPE SHOWN IN THE CONSTRUCTION DRAWING PART 2- SHOTCRETE WORK

### 2.1 SHOTCRETE MIX DESIGN

MIN.28 DAY

- A. ACI STANDARD 506, LATEST EDITION, "SPECIFICATION FOR MATERIALS, PROPORTIONING AND APPLICATION OF SHOTCRETE" AND ACI 506.2, LATEST EDITION, "RECOMMENDED PRACTICES FOR
- SHOTCRETING" SHALL BE FOLLOWED. B. MIX DESIGNS FOR SHOTCRETE CONTAINING FLY ASH SHALL BE BY AN INDEPENDENT TESTING LABORATORY. ONLY ASTM C618 CLASS F FLY ASH SHALL BE USED. THE AMOUNT OF FLY ASH USED SHALL NOT EXCEED 20% BY WEIGHT OF THE COMBINED WEIGHT OF FLY ASH PLUS CEMEN
- C. PROVIDE MIX DESIGNS THAT WILL MEET THE MINIMUM REQUIREMENTS LISTED BELOW. INCREASE CEMENT CONTENT OVER THAT SHOWN, IF REQUIRED TO OBTAIN THE COMPRESSIVE STRENGTH:
- COMPRESSIVE CONTENT (POUNDS) (INCHES) SIZE (INCHES) ENTRAINING STRENGTH (PSI) (PERCENT

MIN.CEMENT MAX. SLUMP MAX. AGGREGATE

# 4000 (27.56 MPS) 600(217.72KG) 3" (7.62CM) 3/8" (0.94CM)

- 2.2 CONCRETE APPLICATION EQUIPMENT A. FOR WET MIX SHOTCRETE
  - i. MIXING EQUIPMENT: CAPABLE OF THOROUGHLY MIXING AGGREGATE, CEMENT AND WATER IN SUFFICIENT QUANTITY TO MAINTAIN CONTINUOUS PLACEMENT.

ii. READY-MIXED CONCRETE: ASTM C94, EXCEPT THAT IT MAY BE DELIVERED TO THE SITE

- IN THE DRY STATE IF THE EQUIPMENT IS CAPABLE OF ADDING THE WATER AND MIXING IT SATISFACTORILY WITH THE DRY INGREDIENTS iii. AIR SUPPLY: CLEAN AIR ADEQUATE FOR MAINTAINING SUFFICIENT NOZZLE VELOCITY
- FOR PARTS OF WORK, AND FOR SIMULTANEOUS OPERATION OF BLOW PIPE FOR CLEANING AWAY REBOUND. iv. DELIVERY EQUIPMENT: CAPABLE OF DISCHARGING AGGREGATE-CEMENT-WATER MIXTURE ACCURATELY, UNIFORMLY, AND CONTINUOUSLY THROUGH DELIVERY HOSE.

## PART 3- EXECUTION

- 3.1 INSPECTION A. EXAMINATION: EXAMINE CONCRETE FORMWORK AND VERIFY THAT IT IS TRUE TO LINE AND DIMENSION
- ADEQUATELY BRACED AGAINST VIBRATION, AND CONSTRUCTED TO PERMIT ESCAPE OF AIR AND REBOUND BUT TO PREVENT LEAKAGE DURING SHOTCRETING. CORRECT DEFICIENCIES.
- B. INSPECTION: INSPECT REINFORCEMENT STEEL AND ITEMS TO BE EMBEDDED IN CONCRETE. CORRECT ANY DEVIATIONS FROM THE ACCEPTED SHOP DRAWINGS. C. NOTIFICATION: NOTIFY OTHER TRADES INVOLVED IN AMPLE TIME TO PERMIT THE PROPER INSTALLATION
- OF THEIR WORK. COOPERATE IN SETTING SUCH WORK. D. EXISTING SURFACES: EXAMINE EXISTING CONCRETE SURFACES FOR UNSOUND MATERIAL. CORRECT

### 3.2 PREPARATION FOR INSTALLATION OF CONCRETE A. FORMS: USE A FORM-COATING MATERIAL ON REMOVABLE FORMS TO PREVENT ABSORPTION OF

MOISTURE AND TO PREVENT BOND WITH SHOTCRETE.

- 3.3 CONCRETE BATCHING AND MIXING
- A. PROPORTIONS: MIX PROPORTIONS SHALL BE CONTROLLED BY WEIGHT BATCHING. THE CONTRACTOR'S FESTING LABORATORY SHALL MAINTAIN QUALITY CONTROL RECORDS DURING SHOTCRETE PRODUCTION AND MAKE THOSE RECORDS AVAILABLE TO THE CLIENT. B. SCHEDULING: CONCRETE SHALL BE PLACED WITHIN 90 MINUTES OR BATCHING AND SHALL NOT EXCEED

### A TEMPERATURE OF 90 DEGREES FAHRENHEIT (32 DEGREES CELSIUS) UNLESS PRE-APPROVED BY THE SKATE PARK DESIGNER.

- 3.4 CONCRETE PLACEMENT A. PLACEMENT: USE SUITABLE DELIVERY EQUIPMENT AND PROCEDURES THAT WILL RESULT IN SHOTCRETE IN PLACE MEETING THE REQUIREMENTS OF THIS SPECIFICATION. DETERMINE OPERATING PROCEDURES FOR PLACEMENT IN, EXTENDED DISTANCES, AND AROUND ANY OBSTRUCTIONS WHERE PLACEMENT
- VELOCITIES AND MIX CONSISTENCY MUST BE ADJUSTED B. PLACEMENT TECHNIQUES: DO NOT PLACE SHOTCRETE IF DRYING OR STIFFENING OF THE MIX TAKES PLACE AT ANY TIME PRIOR TO DELIVERY TO THE NOZZLE.
  - SHOTCRETING OR PROVIDE SUITABLE MEANS TO SCREEN THE NOZZLE STREAM IF WIND OR AIR CURRENTS CAUSE SEPARATION OF THE NOZZLE STREAM DURING PLACEMENT. b. HOLD NOZZLE AS PERPENDICULAR TO SURFACE AS WORK WILL PERMIT, TO SECURE

CONTENT OF SHOTCRETE TO PRECLUDE SAGGING OR SLOUGHING OFF. DISCONTINUE

c. IN SHOTCRETING WALLS, BEGIN APPLICATION AT BOTTOM. ENSURE WORK DOES NOT SAG. d. LAYERING: BUILD UP LAYERS BY MAKING SEVERAL PASSES OF NOZZLE OVER WORK AREA.

SURFACE JUST PRIOR TO APPLICATION OF SUCCEEDING LAYERS.

a. CONTROL THICKNESS, METHOD OF SUPPORT, AIR PRESSURE, AND/OR WATER

MAXIMUM COMPACTION WITH MINIMUM REBOUND

- BROOM OR SCARIFY THE SURFACE OF FRESHLY PLACED SHOTCRETE TO WHICH AFTER HARDENING, ADDITIONAL LAYERS OF SHOTCRETE ARE TO BE BONDED. DAMPEN
- ALLOW EACH LAYER OF SHOTCRETE TO TAKE INITIAL SET BEFORE APPLYING SUCCEEDING USE RADIAL TEMPLATES TO INSURE EXACT RADII FROM FLAT BOTTOM OF BOWL/PIPE TO FACE OF COPING. TEMPLATE SHALL BE FABRICATED FROM STEEL OR ¾" MINIMUM (19.05MM) PLYWOOD. CHECK EVERY HORIZONTAL FOOT (30.48CM) WHEN APPLYING SHOTCRÉTE FOR CONFORMANCE OF INTENDED WALL RADII. BRAĆE TEMPLATE AND PLACE

LEVELS AT ARC TO TANGENT CONNECTIONS TO INSURE NO KINKS WILL BE FORMED. KINKS

AT THE BOTTOM OF BOWLS WILL NOT BE ACCEPTABLE. SLUMPING OF THE SHOTCRETE

COVERED PRIOR TO PLACING THE INITIAL OR ANY SUCCEEDING LAYERS OF SHOTCRETE.

CAUSING COPING SETBACK WILL NOT BE ACCEPTABLE. REMOVE ANY REBOUND OR ACCUMULATED LOOSE AGGREGATE FROM SURFACES TO BE

### a. PLACEMENT AROUND REINFORCEMENT

- HOLD THE NOZZLE AT SUCH DISTANCE AND ANGLE TO PLACE MATERIALS BEHIND REINFORCEMENT BEFORE ANY MATERIAL IS ALLOWED TO ACCUMULATE ON ITS FACE. IN THE DRY-MIX PROCESS, ADDITIONAL WATER MAY BE ADDED TO THE MIX WHEN ENCASING REINFORCEMENT TO FACILITATE A SMOOTH FLOW OF
- MATERIAL BEHIND THE BARS. TEST TO ASCERTAIN IF ANY VOID OR SAND POCKETS HAVE DEVELOPED AROUND OR BEHIND REINFORCEMENT BY PROBING WITH AN AWL OR OTHER POINTED TOOL AFTER THE SHOTCRETE HAS ACHIEVED ITS INITIAL SET, BY REMOVAL OF

RANDOMLY SELECTED BARS, OR CORING OR OTHER SUITABLE STANDARDS.

C. ACCESS: ALLOW EASY ACCESS TO SHOTCRETE SURFACES FOR SCREEDING AND FINISHING,

### PERMITTING UNINTERRUPTED APPLICATION. 3.5 REMOVAL OF SURFACE DEFECTS IN CONCRETE

- A. GENERAL: REMOVE AND REPLACE SHOTCRETE WHICH LACKS UNIFORMITY, EXHIBITS
- REGATION HONEYCOMBING, OR LAMINATION, OR WHICH CONTAINS ANY DRY PATCHES, SLUGS, VOIDS OR POCKETS. REMOVE DEFECTIVE AREAS. B. SOUNDING: SOUND WORK WITH HAMMER FOR VOIDS. REMOVE AND REPLACE DAMAGED

### 3.6 SHOTCRETE FINISH

IN-PLACE SHOTCRETE.

- A. FINISH-GENERAL: SMOOTH FORM FINISH SHALL CONSIST OF A SMOOTH, HARD, UNIFORM EXTURE WITH A MINIMUM OF SEAMS B. RADIAL/BANKED WALL FINISH: FLOAT FINISH ON RADIAL/BANKED FACE OF WALL SHALL CONSIST OF A SMOOTH, HARD, UNIFORM SURFACE OF SMOOTH STEEL TROWEL. LEVEL TO A OLERANCE OF 1/4 INCH (6.35MM) IN 10 FEET (3.05) WHEN TESTED WITH A 10 FOOT (3.05) STEEL
- STRAIGHTEDGE PLACED ON THE SURFACE HORIZONTALLY AND VERTICALLY WITH RADIAL/BANK TEMPLATE WITH THE APPROPRIATE RADII/ANGLE. GRINDING THE SURFACES WILL NOT BE AN ACCEPTABLE MEANS OF ACHIEVING THE INTENDED RADII/ANGLE. C. COLOR: MINOR VARIATIONS IN APPEARANCE OF COLORED CONCRETE, WHICH ARE SIMILAR TO
- NATURAL VARIATIONS IN COLOR AND APPEARANCE OF UNCOLORED CONCRETE, ARE ACCEPTABLE. D. DURING THE CURING PERIOD, CONCRETE SHALL BE MAINTAINED AT A TEMPERATURE ABOVE 40 DEGREES AND IN MOIST CONDITION. FOR INITIAL CURING, CONCRETE SHALL BE KEPT CONTINUOUSLY MOIST FOR 24 HOURS AFTER PLACEMENT IS COMPLETE. FINAL CURING SHALL CONTINUE FOR SEVEN DAYS AFTER PLACEMENT AND SHALL CONSIST OF APPLICATION OF CURING COMPOUND PER ASTM C309. APPLY AT A RATE SUFFICIENT TO RETAIN MOISTURE. BUT
- NOT LESS THAN 1 GALLON PER 200 SQUARE FEET. COVER CONCRETE WITH POLYETHYLENE PLASTIC TO MAINTAIN TEMPERATURE IF NECESSARY. LAP SEAMS IN THE PLASTIC 6", WEIGH DOWN AND TAPE THE PLASTIC SEAMS AS NEEDED.

# E. THE CONTRACTOR SHALL FIX ALL CRACKS AND DISPLACEMENTS LARGER THAN 1/16"

REINFORCEMENT ACROSS JOINTS.

- 3.7 CONCRETE JOINTS A. CLEANING: THE ENTIRE JOINT SHALL BE THOROUGHLY CLEANED AND WETTED PRIOR TO THE
- APPLICATION OF ADDITIONAL SHOTCRETE. B. REINFORCEMENT: MAKE JOINTS PERPENDICULAR TO THE MAIN REINFORCEMENT. CONTINUE

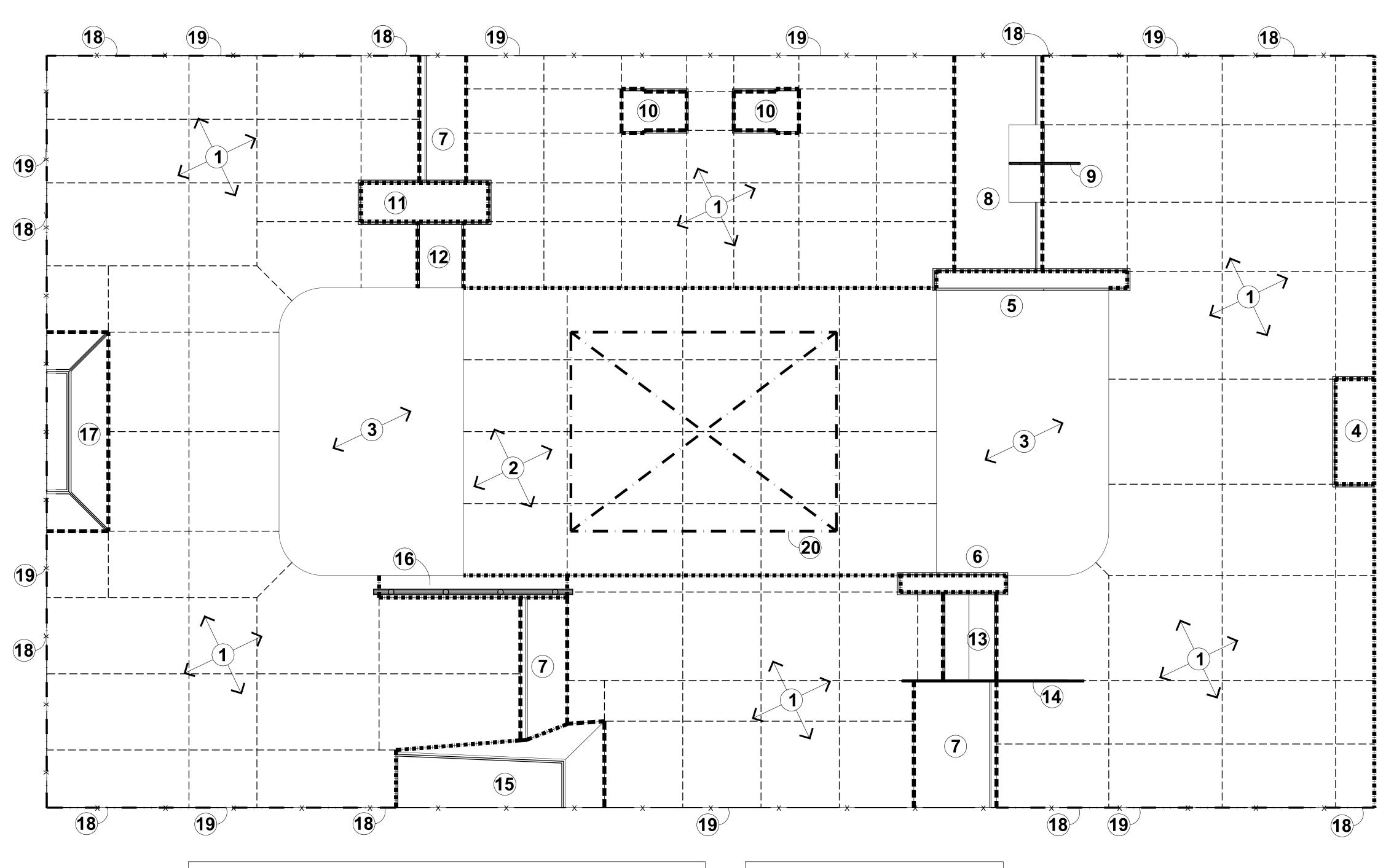
## 3.8 CRACKING

- A. CRACKING FROM INADEQUATE CURING IS NOT ALLOWED. SAW CUT JOINTS AND
- CONSTRUCTION JOINTS MAY BE SHOWN IN THE CONSTRUCTION DRAWINGS FOR DIAGRAMMATIC PURPOSES ONLY. THE CONTRACTOR MAY, WITH APPROVAL OF THE SKATE PARK DESIGNER, RECOMMEND AND DETAIL OTHER JOINTS REQUIRED TO PREVENT CRACKING

B. THE CONTRACTOR SHALL FIX ALL CRACKS AND DISPLACEMENTS LARGER THAN 1/16" (1.59MM).

SHEET NO.

OF 10



# **CONSTRUCTION INFORMATION LEGEND**

- 1) 4" THICK CONCRETE FLAT WORK SEE TYPICAL DETAILS ON SHEET 10
- (2) 4" THICK CONCRETE FLAT WORK BY OTHERS
- (3) RUBBERIZED SURFACE BY OTHERS (4) COLORED CONCRETE MANUAL PAD - SEE CONSTRUCTION SECTIONS ON SHEET 7 & DETAILS ON SHEET 10
- (5) COLORED CONCRETE SINGLE KINKED GRIND LEDGE SEE CONSTRUCTION SECTIONS ON SHEET 7 & DETAILS ON SHEET 10
- (6) COLORED CONCRETE RAKED GRIND LEDGE SEE CONSTRUCTION SECTIONS ON SHEET 7 & DETAILS ON SHEET 10
- (7) FLAT BANK SEE CONSTRUCTION SECTIONS ON SHEET 7 & DETAILS ON SHEET 10
- (8) EURO GAP SEE CONSTRUCTION SECTIONS ON SHEET 7 & DETAILS ON SHEET 10
- (9) RAINBOW GRIND RAIL SEE CONSTRUCTION SECTIONS ON SHEET 7 & DETAILS ON SHEET 10
- (10) COLORED CONCRETE EARTHQUAKE GAP SEE CONSTRUCTION SECTIONS ON SHEET 7 & DETAILS ON SHEET 10
- (11) COLORED CONCRETE PIER 7 SEE CONSTRUCTION SECTIONS ON SHEET 7 & DETAILS ON SHEET 10
- (12) 2 STEP SEE CONSTRUCTION SECTIONS ON SHEET 7 & DETAILS ON SHEET 10
- (13) STAIRS SEE CONSTRUCTION SECTIONS ON SHEET 7 & DETAILS ON SHEET 10
- (14) SINGLE KINK GRIND RAIL SEE CONSTRUCTION SECTIONS ON SHEET 7 & DETAILS ON SHEET 10
- (15) COLORED CONCRETE RAKED BARCELONA WALL SEE CONSTRUCTION SECTIONS ON SHEET 7 & DETAILS ON SHEET 10
- (16) 6" FLAT GRIND RAIL ON LEDGE SEE CONSTRUCTION SECTIONS ON SHEET 7 & DETAILS ON SHEET 10
- (17) COLORED CONCRETE LA HIGH WALL SEE CONSTRUCTION SECTIONS ON SHEET 7 & DETAILS ON SHEET 10
- (18) TURN DOWN WALL SEE DETAIL 2 ON SHEET 10
- (19) CHAINLINK FENCE BY OTHERS SEE DETAIL 17 ON SHEET 10
- (20) SHADE STRUCTURE BY OTHERS

\*COLORED CONCRETE TO BE RED AVAILABLE FROM DAVIS COLORS 1-800-356-4848



\_\_\_\_ SAW CUT

\*\*JOINT PLAN HAS BEEN DEVELOPED TO PROVIDE CONTRACTOR WITH BMP'S FOR THE USE OF SAW CUTS, COLD & EXPANSION JOINTS.

ALIGN SAW CUTS WITH EXPANSION AND COLD JOINTS AND START FROM CORNERS WHERE POSSIBLE TO PREVENT EXCESS CRACKING. SAW CUTS SHALL BE NO MORE THAN 10' X 12' AND/OR NOT TO EXCEED 120 SQUARE FEET BETWEEN SAW CUTS AND COLD OR EXPANSION JOINTS.

ALL JOINTS TO BE FILLED WILL POLYURETHANE BASED NON SAGGING ELASTOMERIC SEALANT AND TOOLED FLAT

\*\* SEE TYPICAL DETAILS & CONSTRUCTION SPECIFICATIONS FOR JOINT INFORMATION & INSTALLATION

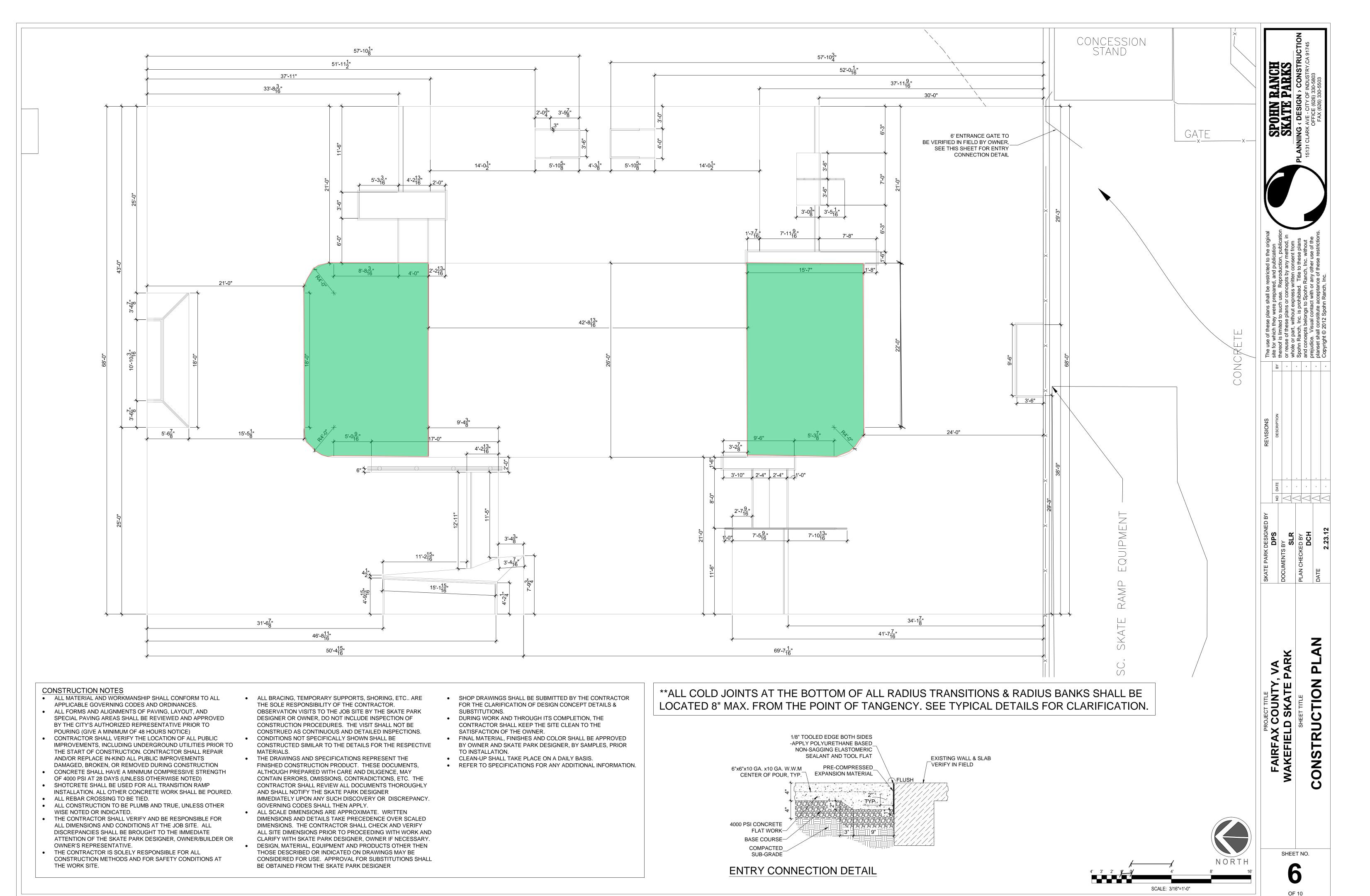


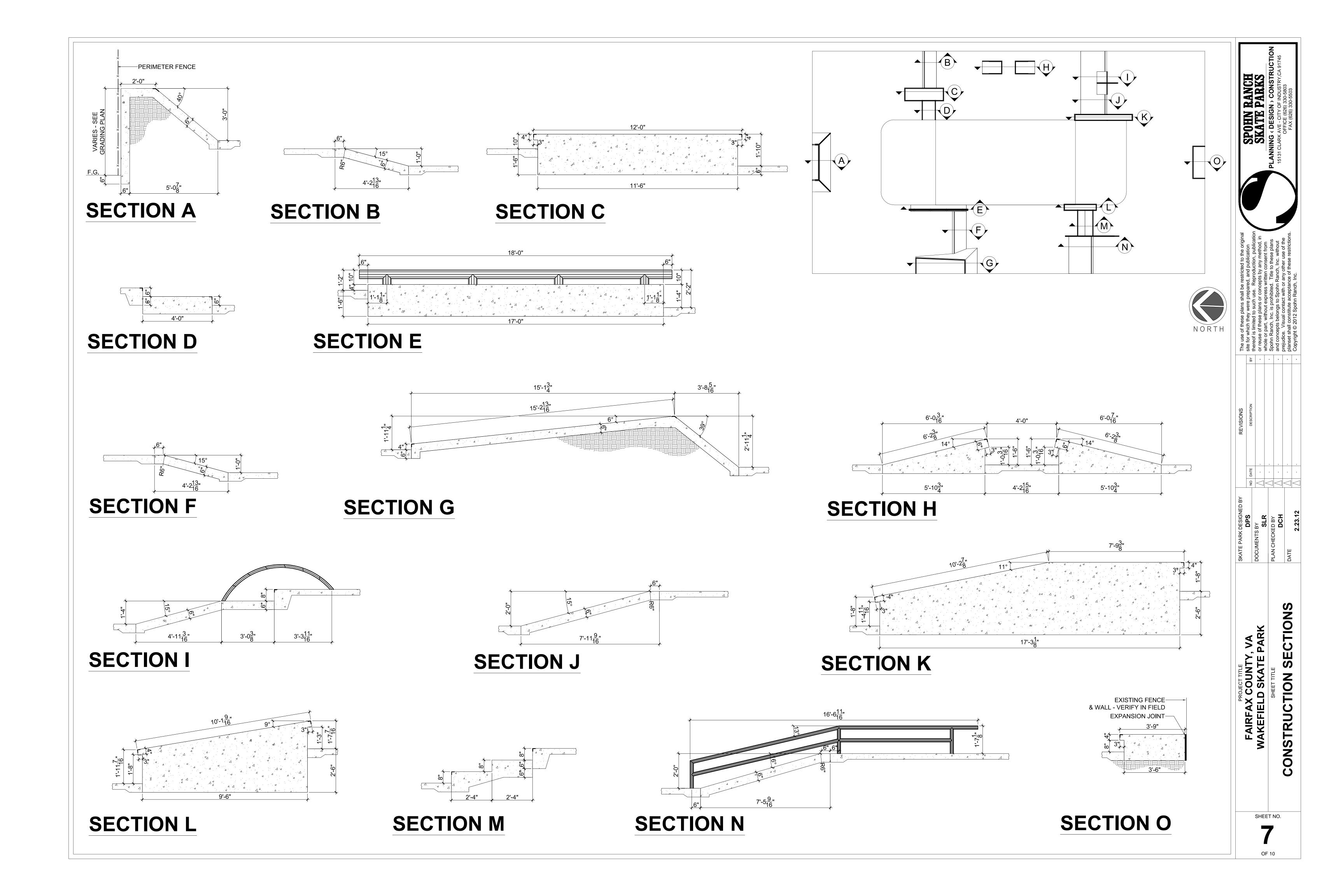
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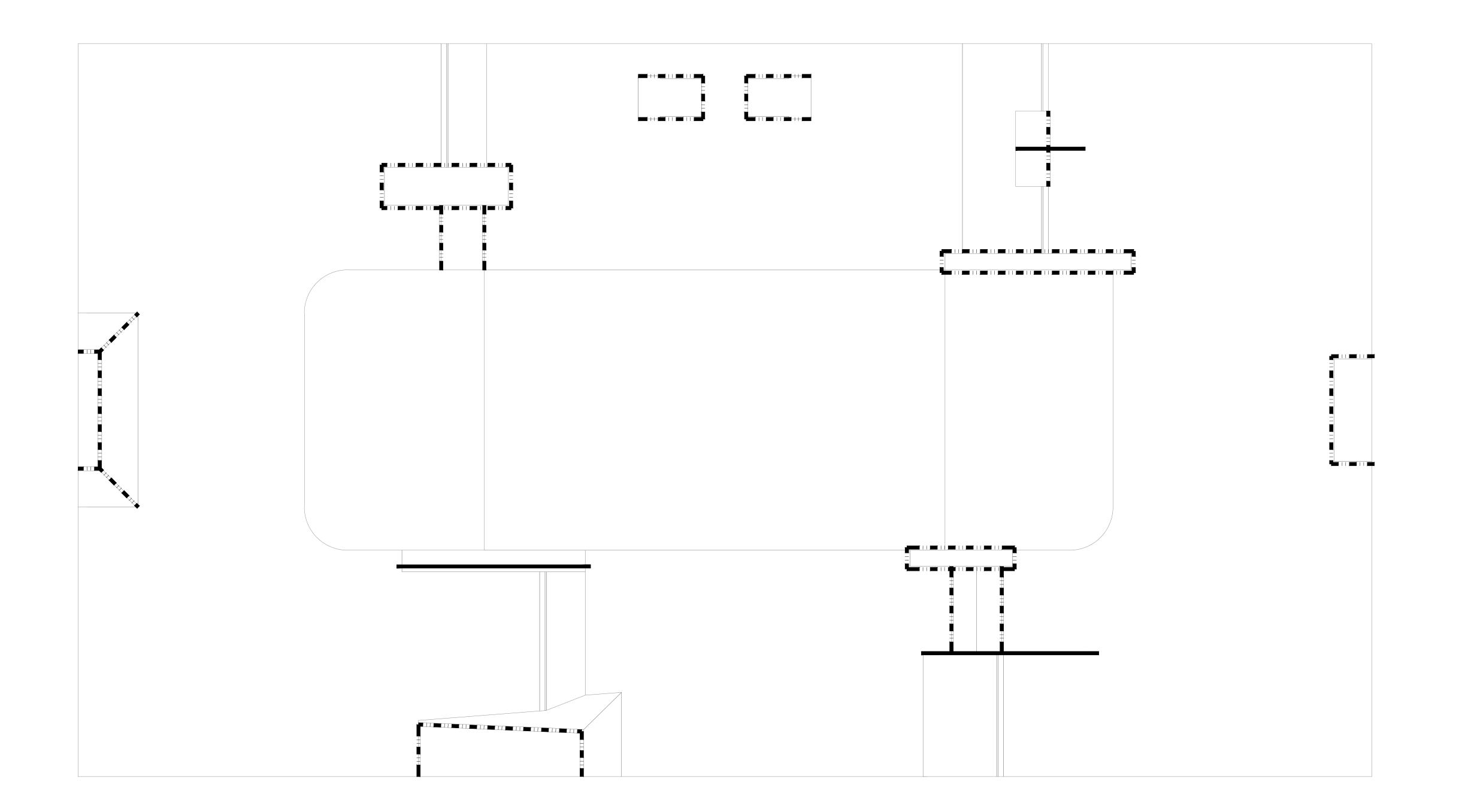
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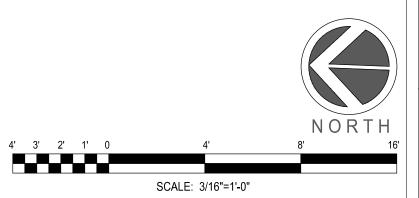






LEGEND					
SYMBOL	DESCRIPTION	FINISH	QTY		
	$1.5 \times 2 \times \frac{3}{16}$ THK. STEEL EDGING	HOT DIPPED GALVANIZED	226'-0" APPROX		
	GRIND RAILS - SEE SHEET 10	HOT DIPPED GALVANIZED	-		

NOTES
-ALL STEEL SIZES ARE NOMINAL
-SEE CONSTRUCTION SPECIFICATIONS FOR STEEL SPECIFICATIONS



	PROJECT TITLE FAIRFAX COUNTY, VA WAKEFIELD SKATE PARK	SHEET TITLE	STEEL PLAN

SHEET NO.

OF 10

