SKATEPARK CONSTRUCTION - ENSURING QUALITY

SKATEPARK CONSTRUCTION IS SPECIALITY CONSTRUCTION WORK. EXPERIENCE AND EXPERTISE

Ensuring quality is the most important task in skatepark planning. Contemporary municipal skate space should only be designed and built by highly experienced skatepark specialty contractors. Experienced skatepark firms will understand the many nuances of skateparks and will be well practiced in their design and execution.

WARNING!!
Hiring anyone BUT a skatepark specialty firm (including general contractors with extensive concrete experience) is the quickest way to waste all the money for the skatepark. It will not function as intended, even if built according to the design. Many of the skilled trades in skatepark work are closer to artistic sculptural concreting and require years to learn how to do right.

Again - skateboard wheels are measured in millimeters!

Skatepark design and construction requires highly experienced experts in multiple skatepark specific trades. It helps tremendously if they are also skaters themselves.

HOW TO ENSURE QUALITY?

- **Ensure stakeholders** (municipal officials and local advocates) understand the importance of quality, and the steps needed.
- **Choose your desired designers and builders based on their experience, reviews and references** (from government and local skaters who have one of their parks in town).
- **If a project must go out to Public Bid, work with a designer and the city to create an appropriate Request for Qualifications (RFQ) or clear Bid Specifications to ensure that only experienced skatepark builders can participate.** This is a critical step. See Appendix A on Specific Tolerances or Appendix I for example bid specifications.
- **If no experienced skatepark firm is available, wait until one is available and pursue appropriate temporary options** (like a Community DIY Build. Call The Skatepark Project staff to discuss your available options).
- **If you cannot wait: as a last resort, consider hiring a project manager from an experienced skatepark construction firm to help manage a hybrid project.**
- **Consider aiming to hire women or minority owned or operated businesses whenever possible.**

DESIGN/BID/BUILD VS. DESIGN/BUILD

Most governments are bound by law to have a public bidding process in place. This is intended to keep the public project award process fair. If the site or project is owned or managed by the city, it’s likely that the project will need to go through the proper bid process: DESIGN/BID/BUILD. In which case, doing an RFQ or having stringent bid specifications is key to ensuring skatepark quality.

However, some projects are owned privately (sometimes handed over from the city to the project group or builder) until completion, and are then donated to the city. In these cases, or in cases where there’s no legal requirement for a public bid process, project leaders can do a DESIGN/BUILD where they select the designer and builder without the bidding process. It’s still critical to select experienced skatepark specialty firms in either case, and if donating a build project to the city, it’s crucial to have a conversation with them about what they can accept and what they cannot accept as a new public park space.
QUALITY - SPECIFIC LANGUAGE

Only hire a specialty skatepark construction firm if they have been responsible, either as a primary or as a subcontractor, for the footprint of the actual skatepark for a minimum of:

THREE CONCRETE SKATEPARKS IN THE LAST 5 YEARS

If you intend to work with a firm that cannot match that requirement, make sure their key personnel members can match the required experience.

PROPER DUE DILIGENCE

- Get a list of key personnel who did the work
  - SITE MANAGER
  - SHOTCRETE (Certified Nozzle Operator for shotcrete on banks or transition steeper than 20 degrees)
  - SKATEPARK FINISHERS
- Construction must be built per plan
- In a pre-bid meeting, all parties must read and agree upon specifications and tolerances (acceptable degree of error or deviation from plan) for construction and finish. See Appendix A - Construction - Material Specifics and Tolerances and Appendix I - Bid Specification Suggestions at the end of this document.
- For a municipality to reject work, they need to be clear about definitions and tolerances
- Every job can start with a test-panel pour to be judged by construction management and city engineer per specified tolerances. This pour can be a part of the project and does not have to be extraneous.

Test Panel Pour for flat and/or transition

A tolerance check of test a panel pour can verify proper execution/construction of

- TRANSITION RADIUS
- COPING REVEAL
- FINISH
- COLOR
- CURING
- TRANSITION SEAMS
WHO CAN HELP?

The importance of hiring experienced skatepark construction specialists can't be understated. However, in a pinch, some elements of the job can be done by experienced general contractors if under the supervision of, and in communication with, the experienced skatepark construction firm. This should only be considered when all other funding options have been exhausted. In general, it's recommended to have the job handled by one experienced skatepark specialty company.

For more information on specific materials and tolerances, see Appendix A.
CONSTRUCTION - MATERIAL SPECIFICS AND TOLERANCES

MATERIAL AND DESIGN CONSIDERATIONS
The following are suggestions based on best practices for skatepark design and construction to ensure intended functionality and durability. Additional tolerance specifications follow. Talk to your skatepark designer and builder about:

STREET OBSTACLES

GRANITE LEDGE (CAP)

BUTTER BENCH

FLAT BAR

TRUCK WIDTH

REPURPOSED EDGE MATERIAL

(Grind Ledge material)
Minimum 40 Schedule Steel (some prefer 0.125 in beveled edge)

MINIMUM 40 Schedule Steel
“Cast into concrete, not sleeved”

Optimum width for truck grinds on square rails (3 - 4 in)

COPING

2”-2.5” Average outside diameter for coping and round rails

0.25” - 0.125” coping reveal on top and bottom (open to some slight interpretation)

Skate specific “bullnose” pool coping, tile of your choice.

COPING EXAMPLES

REGULAR COPING

POOL COPING

FLAT COPING

FAT COPING

HYBRID/ CURB/HAND FORMED

“NO-PING”
APPENDIX A

GENERAL
The quality of features should comply with ASTM F2480 Standard Guide for In-Ground Skate Parks, or your national skatepark construction guidelines if they are up to date. Experienced skatepark builders who skate will understand these standards and know if a standard is up to date, or if practices should be held to a higher standard. For a complete list of potential bid specification language, tolerances and standards, see Appendix I.

FLAT
Expansion joint locations should be designed to not interfere with approaches to obstacles. A professional skatepark designer and builder will know where to put them. Generally, sawcut is the way to go as it’s a smaller “dip” in the concrete compared to alternatives. Vertical surfaces should be properly vibrated. Flat Finish Work must conform to Finish Work requirements listed below.

METAL
All coping and steel edging must be cleaned, primed and painted correctly. Coping should be anchored by welded steel anchors, not rebar.

TRANSITION FACE
ACI Certified Nozzle Operator required for shotcrete applications on banks and transitions steeper than 20 degrees. Transition Finish Work must conform to Finish Work requirements listed below.

REBAR
No smaller than 0.125” reinforcing steel rebar. Wire mesh can be used in addition to, but not to replace rebar.

CONCRETE MIX
Generally around 4,000 psi. No aggregate smaller than ¾”, no slump greater than 5”. Your experienced skatepark builder will have the mix design they know will work for the specific climate and application. Another critical reason to hire experienced skatepark build firms.

TOLERANCES
The tolerances below are in line with proper skatepark construction, but any specifications and tolerances should be discussed by project stakeholders (municipality, designer and builder) and agreed upon prior to construction.

DRAINAGE
All flatwork should have a uniform and consistent minimum of 2% slope for sheet drainage. Puddles and standing water in the skatepark are unacceptable. 3% slope is too steep in most instances.

FINISH WORK
Uniform Finish: Float finish on unformed face of wall/flat shall consist of smooth, hard, uniform surface of smooth steel trowel. Level to a tolerance of 0.25 - 0.5 inch in 10 feet when tested with a 10-foot steel straightedge placed on the surface horizontally, and vertically with radial template with appropriate radii. Be sure to agree to tolerances long before construction begins.

For more tolerances and bid specification language, see Appendix I.
BID SPECIFICATION SUGGESTIONS

This is a generic concrete skatepark RFP that can be used as a template. You are invited to copy and/or modify this language to suit your needs.

IMPORTANT: City Planners must be skeptical of proposals that cite “or like replacement” clauses in their bid proposals as they are often used to introduce steel or wood ramp products. Steel or wooden structures are NO REPLACEMENT for poured-in-place structures. Steel and wooden structures—and any skatepark structure that features a steel transition plate to adjoin two riding surfaces—are not equitable in structural, usage, or aesthetic quality and must be avoided.

ALL BIDDERS SHALL PROVIDE PROOF OF:

• 3 years of continuous operation under current corporate or entity name.
• 5 References, including name and contact information, based on contracts held by bidding corporation or entity using Poured In Place construction methods similar to those required under this bid.
• Proof of proper liability and Workers Compensation Insurance including limits.
• Declaration of any suits or claims against bidder, (or subsidiary or co-owned entity), for warranty, negligence or failure to complete any project within the last 10 years.

BID REQUIREMENTS

• All Bids shall include a detailed timeline, including start and completion dates. Bids that do not include this item will be deemed unresponsive and disqualified.
• All Bids shall include full detail and specification sheet for concrete mix and supplier to be used in construction. Bids that do not include this item will be deemed unresponsive and disqualified.
• All Bids shall include a written plan for typical hydration and sawcut methods and schedule. (Expected special conditions such as summer or winter weather should be taken into consideration.)

CONCRETE FINISH REQUIREMENTS

Concrete finish and smoothness is of the utmost importance. Before construction begins, the winning bidder shall furnish on-site samples of the following at bidder’s expense. Samples must be of the mix type declared in Bid/Proposal and will be retained by City for comparison to finished product. Samples may also be tested for color, stamped pattern and/or for comprehensive strength at City’s expense: 24” x 24” x 6” flat with typical sawcut and rebar placement. Sample shall include any examples of radius edging and sealant proposed in Skatepark.

(Sample sections may not be appropriate for “skate spots” under 3,000 square feet. Photographic evidence of previous samples may suffice.)

• 36” x 12” EXAMPLE OF STEEL EDGING DETAIL including any radius edging adjacent to steel edging.
• 36” x 12” EXAMPLE OF STEEL COPING DETAIL including any radius edging adjacent to steel edging.
• IF APPLICABLE 36” x 12” EXAMPLE OF CONCRETE (pool) COPING DETAIL including any radius edging adjacent to CONCRETE edging.
• Cylinder test at City’s discretion and expense.
APPENDIX I

BASIC STANDARDS AND REQUIREMENTS

• Coping and steel edging must be cleaned, primed and painted correctly.
• At no point shall standard ‘flat’ concrete be less than 5” thick.
• At no point shall ramp or bank concrete be less than 6” thick.
• At no point shall reinforcing steel be smaller than 3/8” rebar. Welded wire mesh may be used WITH—but not in place of—rebar.
• At no point shall reinforcing steel be spaced more than 12” on center except in flat pours where 18” is acceptable.
• No concrete shall have a comprehensive strength less than 4000 psi unless otherwise noted on plan or allowed by City.
• Water added on site shall not exceed 1 gallon per yard remaining on the truck unless allowed by the client.
• All concrete should be poured in place and obtained from a plant not further than 30 miles from the construction site.
• Concrete must be placed completely within 120 minutes of leaving the batch plant.
• Steel coping shall be anchored by welded steel anchors. Rebar is NOT considered a steel anchor. All anchors shall be at minimum cold rolled black steel rod or bolts.
• Steel coping anchors shall never be placed within 2” of surface of concrete to avoid cracking and rust broadcast.
• ALL concrete shall have a 1/8” radius tooled edge in any instance where it comes in contact with steel edging.
• Vertical 1/4” steel plate is excepted from above requirement.

BASIC JOBSITE STANDARDS AND REQUIREMENTS

• Site should be secured with fencing.
• Site must manage water retention.
• Site must remain clean, orderly and free of trash or debris at all times.
• Blowing debris must be contained at all times.
• Contractor shall have a dumpster or containment system on site at all times.
• Building debris must be cleaned and removed from site daily.
• All trash including food containers may not be visible at any time.

WARRANTY INFORMATION

(Note: Cities are encouraged to develop a warranty that best suits their needs. It is not uncommon for Municipalities to document their own priorities for this type of purchase. In the event that a City allows the Bidder to propose their own warranty, consider including or amending the following items.)

• Contractor shall accept warranty items as follows;
• Contractor shall warrant that the product shall be free from hydration cracking for the entire duration of the construction project.
• Cracks in excess of 1/4-inch shall be warranted for 1 year.
• All steel edging shall be warranted against becoming loose for a period of 1 year.
• All concrete surfaces shall be warranted against spalling or scaling for a period of 1 year.
• Concrete under or adjacent to steel edging or coping shall be free from voids, chipping, and/or failure for a period of 1 year.
SUPPORT FROM THE SKATEPARK PROJECT

Founded by Tony Hawk, The Skatepark Project (TSP) is a nonprofit organization working to increase access to outdoor recreation and free play through the creation of safe and inclusive community skateparks. TSP provides the resources, advocacy skills, grants and fellowship programs that guide skaters in creating their own community skateparks, from conception through construction. This is a collaborative process between skaters and city authorities to invest in capital improvements that will enrich a community for decades. The Skatepark Project’s grant programs have awarded over $10 million to help fund nearly 700 public skateparks in all 50 states, enjoyed by an estimated six million people annually. The organization’s International Program has provided technical and financial support to assist youth through the Skateistan educational programs in Afghanistan, Cambodia, and South Africa. To get involved, visit www.skatepark.org

FREE SUPPORT
TECHNICAL ASSISTANCE, WORKSHOPS & PROGRAMS

PUBLIC SKATEPARK DEVELOPMENT GUIDE V2

THE SKATESPACE PODCAST

OTHER DOWNLOADS FROM TSP
MOBILE APP
INSTRUCTIONAL VIDEOS
SIGNATURE ELEMENTS
DIY CDS
GREEN SKATEPARKS

SUPPORT FROM SKATEISTAN AND GOOD PUSH
GOODPUSH TOOLKIT

GRANT FUNDING
Over 600 granted parks open in the United States.
LEARN MORE

FEEDBACK SURVEY
<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
</tr>
<tr>
<td>DEDICATION</td>
</tr>
<tr>
<td>INTENTION OF DOCUMENT</td>
</tr>
<tr>
<td>COMMITMENT TO ANTI-RACISM</td>
</tr>
<tr>
<td>GENERAL</td>
</tr>
<tr>
<td>WHAT ARE SKATEPARKS</td>
</tr>
<tr>
<td>BENEFITS OF SKATEPARKS</td>
</tr>
<tr>
<td>TYPES OF SKATEPARKS</td>
</tr>
<tr>
<td>PRIORITIZING EFFORTS</td>
</tr>
<tr>
<td>PUBLIC SKATEPARK PLANNING</td>
</tr>
<tr>
<td>NEED AND COST</td>
</tr>
<tr>
<td>RESPONSIBILITY FOR SUPPORT</td>
</tr>
<tr>
<td>ADVOCACY</td>
</tr>
<tr>
<td>BUILDING YOUR GROUP</td>
</tr>
<tr>
<td>SKATEPARK ADVOCACY TERMS</td>
</tr>
<tr>
<td>INSERTING A SKATEPARK PROJECT</td>
</tr>
<tr>
<td>COMMUNITY RELATIONS</td>
</tr>
<tr>
<td>BAD REASONS, GOOD RESPONSES</td>
</tr>
<tr>
<td>PULL VS. PUSH</td>
</tr>
<tr>
<td>CITY COUNCIL MEETINGS</td>
</tr>
<tr>
<td>DEMONSTRATING SUPPORT AND ONGOING SKATEPARK ADVOCACY</td>
</tr>
<tr>
<td>YOUR DIGITAL PRESENCE</td>
</tr>
<tr>
<td>WEBSITE AND SOCIAL</td>
</tr>
<tr>
<td>FUNDING</td>
</tr>
<tr>
<td>TASKED WITH FUNDING</td>
</tr>
<tr>
<td>COMMUNITY GROUP SUPPORT</td>
</tr>
<tr>
<td>SITE SELECTION</td>
</tr>
<tr>
<td>SKATEPARKS</td>
</tr>
<tr>
<td>THE OLD WAY &amp; YOUR OLD PARK</td>
</tr>
<tr>
<td>PRE-FABRICATED SKATEPARKS</td>
</tr>
<tr>
<td>SKATEPARK DESIGN CONSIDERATIONS &amp; CONSTRAINTS, SUSTAINABLE DESIGN &amp; CONSTRUCTION ACCESSIBILITY, CAPACITY &amp; FLOW SKATEPARK OBSTACLES DESIGN FOR INCLEMENT WEATHER</td>
</tr>
<tr>
<td>SKATEPARK CONSTRUCTION ENSURING QUALITY QUALITY - SPECIFIC LANGUAGE PROCESS &amp; WHO CAN HELP</td>
</tr>
<tr>
<td>SKATEPARK OPERATION MAINTENANCE &amp; SIGNAGE HOW TO USE, EVENTS &amp; DEALING WITH ISSUES</td>
</tr>
<tr>
<td>ACCELERATED PROJECTS INTERIM/SIMPLE SKATEPARKS LEGALIZED SKATE SPOT DIY SKATEPARKS</td>
</tr>
<tr>
<td>SUPPORT FROM THE SKATEPARK PROJECT</td>
</tr>
<tr>
<td>APPENDIX A CONSTRUCTION - MATERIAL SPECIFICS AND TOLERANCES</td>
</tr>
<tr>
<td>APPENDIX B LEARNING CONCRETE</td>
</tr>
<tr>
<td>APPENDIX C STAKEHOLDER INVOLVEMENT MATRIX</td>
</tr>
<tr>
<td>APPENDIX D - COMMON QUESTIONS &amp; MISCONCEPTIONS SAFETY LIABILITY &amp; NOISE POLICE STUDY</td>
</tr>
<tr>
<td>APPENDIX E MEASURING TRANSITION</td>
</tr>
<tr>
<td>APPENDIX F RETAIL AND “COMPETITION CERTIFIED” SKATEPARKS</td>
</tr>
<tr>
<td>APPENDIX G FOUR SIMPLE ADVOCACY RULES</td>
</tr>
<tr>
<td>APPENDIX H HOW TO START A SOCIAL SKATE ORGANIZATION</td>
</tr>
<tr>
<td>APPENDIX I BID SPECIFICATION SUGGESTIONS</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
</tr>
<tr>
<td>PHOTO CREDITS</td>
</tr>
</tbody>
</table>