21865 Copley Drive, Diamond Bar, CA 91765-4178 MD (909) 396-2000 • www.aqmd.gov

SENT VIA E-MAIL AND USPS:

March 10, 2020

ibecproject@cityofinglewood.org mwilcox@cityofinglewood.org Mindy Wilcox, AICP, Planning Manager City of Inglewood, Planning Division One West Manchester Boulevard, 4th Floor Inglewood, CA 90301

<u>Draft Environmental Impact Report (Draft EIR) for the Proposed</u> Inglewood Basketball and Entertainment Center Project (SCH No.: 2018021056)

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. The following comments include recommended revisions to the air quality analysis, health risk assessment, and mitigation measures that the Lead Agency should include in the Final EIR.

Based on the Draft EIR, the Lead Agency proposes to demolish 54,098 square feet of existing buildings and develop a 915,000-square-foot basketball and entertainment center with 18,000 fixed seats, 500 temporary seats, and 461,800 square feet of ancillary structures on 27.7 acres (Proposed Project). The Proposed Project is located on the southeast corner of South Prairie Avenue and West Century Boulevard within the City of Inglewood. Construction of the Proposed Project will occur over a four-year period from 2021-2024¹. It is anticipated that operations will begin in 2024².

Based on a review of the Draft EIR and supporting technical documents, South Coast AQMD staff has five main comments on the Draft EIR and supporting air quality and health risk assessment analyses. A summary of these comments is provided as follows with additional details provided in the attachments.

1. Air Quality Impacts from Backfilled Events at the Existing Entertainment Center: When the Proposed Project is operational, basketball events that are taking place at the existing entertainment center in the City of Los Angeles would be relocated to the Proposed Project in the City of Inglewood. Relocation of basketball events to the Proposed Project will likely allow additional events to take place at the existing entertainment center. The Lead Agency considered these events as backfilled events. The Draft EIR quantified greenhouse gas (GHG) emissions from those events that will occur at the existing entertainment center as an indirect environmental impact induced by operation of the Proposed Project. The Final EIR should analyze the air quality impacts from this indirect environmental impact, similar to how the Draft EIR analyzed GHG emissions from backfilled events.

.

¹ Draft EIR. Chapter 3.2 Air Quality. Page 3.2-38.

² *Ibid*. Page 3.2-41.

2. <u>Air Quality Impacts from Cleanup Activities</u>: In the Draft EIR, the Lead Agency discussed a need to conduct cleanup activities at the Proposed Project site due to the detection of hexavalent chromium, chlordane, chrome, lead, and total petroleum hydrocarbons (TPH)³. The Lead Agency should quantify emissions from cleanup activities in the Final EIR.

- 3. Health Risk Assessment (HRA): Based on the exposure durations used to estimate the health risks, the Proposed Project's operational health risk impacts are underestimated because the Lead Agency used a shorter exposure duration than is recommended. Because the closest sensitive receptors are located within 50 feet of the Proposed Project⁴, South Coast AQMD staff is concerned about health risk impacts on nearby receptors. Therefore, the Lead Agency should revise the health risk assessment in the Final EIR and use a 30-year exposure period for sensitive receptors and a 25-year exposure period for off-site workers.
- 4. Recommended Revisions to Existing Air Quality Project Design Features and Mitigation Measures: The Lead Agency will require the use of electric powered or alternative-fueled, and at a minimum, Tier 4 construction equipment. For on-road vehicles, the Lead Agency will strive to use zero-emissions (ZE) or near-zero emissions (NZE) heavy-duty trucks. Since NZE heavy-duty truck engines are already commercially available, and to further reduce the Proposed Project's significant construction and operational NOx emissions, the Lead Agency should require more electric construction equipment and use ZE heavy-duty trucks in the Final EIR.
- 5. South Coast AQMD Rules: In the Draft EIR, the Lead Agency discussed South Coast AQMD Rule 1401, Rule 1402, Rule 1403, and Rule 1470⁵. Since hexavalent chromium has been detected at the Proposed Project site, the Lead Agency should include a discussion in the Final EIR on South Coast AQMD Rule 1466 requirements to reduce fugitive dust emissions during earth-moving activities, including, but not limited to, conducting earth-moving activities in an area with fencing that is a minimum six feet tall and at least as tall as the height of the tallest stockpile, with a windscreen with a porosity of 50 ± 5%⁶. Rule 1466 also includes monitoring, notification, signage, and recordkeeping requirements that should be included in the soil management plan for Proposed Project. The Lead Agency should also include a discussion in the Final EIR on South Coast AQMD Rule 1166⁷ since presence of TPH has been detected at the Proposed Project site.

In conclusion, the Draft EIR likely underestimated the Proposed Project's emissions from cleanup activities and operational cancer risk, and did not discuss South Coast AQMD Rule 1466 and Rule 1166. The South Coast AQMD staff recommends that the Lead Agency revise the air quality analysis and health risk assessment in the Final EIR.

³ *Ibid.* Chapter 3.8. Hazards and Hazardous Materials. Page 3.8-42.

⁴ *Ibid.* Figure 3.2-2: Air-Sensitive Receptors. Page 3.2-20.

⁵ *Ibid.* Chapter 3.2. Air Quality. Page 3.2-31.

⁶ South Coast AQMD. Rule 1466. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1466.pdf.

⁷ South Coast AQMD. Rule 1166. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1166.pdf.

South Coast AQMD staff is available to work with the Lead Agency to address any air quality questions that may arise from this comment letter and on the Assembly Bill 987 analysis, which will be prepared separately from the EIR. Please feel free to call me at (909) 396-3308 if you have questions or wish to discuss the comments.

Sincerely,

Lijin Sun

Lijin Sun, J.D. Program Supervisor, CEQA IGR Planning, Rule Development & Area Sources

Attachments SN:JW:LS/AM LAC191227-10 Control Number

ATTACHMENT A

South Coast AQMD Staff's Summary of the Air Quality Analysis and Health Risk Assessment

The Lead Agency quantified the Proposed Project's regional construction and operational emissions and compared those emissions to South Coast AQMD's regional CEQA air quality significance thresholds. Based on the analysis, the Lead Agency found that the Proposed Project's mitigated construction NOx emissions would be significant at 127 pounds/day (lbs/day) and mitigated operational emissions for NOx, CO, PM10, and PM2.5 would also be significant at 99 lbs/day, 904 lbs/day, 328 lbs/day, and 89 lbs/day, respectively⁸. The Lead Agency performed air dispersion modeling to analyze the Proposed Project's localized construction and operational air quality impacts for NOx, CO, PM10, and PM2.5 and found that concentrations would not exceed the most stringent air quality standards⁹. The Lead Agency also conducted a HRA for the Proposed Project's construction and operational activities and found that the Proposed Project would result in an incremental increase of 9.7 in one million 10, which would not exceed South Coast AQMD's CEQA significance threshold of 10 in one million for cancer risk¹¹.

South Coast AQMD staff's detailed comments on the Draft EIR's air quality analysis and health risk assessment are provided as follows.

1. Air Quality Impacts from Backfilled Events at the Existing Entertainment Center

Once the Proposed Project is operational, basketball events that are taking place at the existing entertainment center in the City of Los Angeles would be relocated to the Proposed Project in the City of Inglewood. This relocation of basketball events to the Proposed Project will likely provide capacity at the existing entertainment center that can have or be filled with events that are not otherwise taking place there now. The Lead Agency considered these events as backfilled events.

In the Greenhouse Gas Emissions Chapter of the Draft EIR, the Lead Agency quantified the Proposed Project's greenhouse gas (GHG) emissions from backfilled events as an indirect environmental impact induced by operation of the Proposed Project. However, the Lead Agency did not evaluate the indirect air quality impacts from backfilled events in the Draft EIR. To be consistent with the GHG emissions analysis, to provide a more comprehensive analysis of the Proposed Project's operational air quality impacts, and to be consistent with CEOA's requirements for analyzing a project's direct and reasonably foreseeable indirect environmental impacts (CEOA Guidelines Section 15064(d)), South Coast AOMD staff recommends that the Lead Agency quantify the criteria pollutant emissions from backfilled events and include those emissions in the Proposed Project's operational emissions profile to be compared to South Coast AQMD's air quality CEQA significance thresholds for operation to determine the level of significance in the Final EIR. If the air quality impacts from backfilled events are not included in the Final EIR, the Lead Agency should provide reasons

⁸ Draft EIR, Chapter 3.2 Air Quality, Pages 3.2-74 and 80.

⁹ *Ibid.* Pages 3.2-91 through 3.2-94.

¹⁰ Ibid.

¹¹ South Coast AQMD's CEQA significance threshold of 10 in one million for cancer risk is based on the most current methodology recommended by the California Office of Environmental Health Hazard assessment.

for the inconsistency between the GHG and air quality analyses supported by substantial evidence in the record.

2. Air Quality Impacts from Cleanup Activities

In the Hazards and Hazardous Materials Chapter of the Draft EIR, the Lead Agency stated that due to detection of hexavalent chromium, chlordane, chrome, lead, and total petroleum hydrocarbons, a soil management plan will be prepared prior to the commencement of any ground disturbing activities¹². The soil management plan may include cleanup activities to excavate, transport, and dispose contaminated soil and materials off-site. If suspected contaminated soil and materials are encountered during site preparation or construction activities, construction work will stop in the contaminated areas until remediation is completed and a "no further action" letter is obtained¹³.

Workers and Equipment for Cleanup Activities

While the Draft EIR quantified the Proposed Project's emissions from demolition and construction activities in support of the proposed entertainment center and ancillary uses, it did not quantify emissions from cleanup activities, which may take place concurrently with development of the proposed entertainment center and ancillary uses. Cleanup activities will likely involve the use of heavy-duty, diesel-fueled trucks for soil export and result in emissions from vehicle trips by workers that will be required to conduct cleanup activities. Additionally, cleanup activities will likely require the use of additional equipment that may be different from typical equipment for grading and site preparation for construction. Since cleanup activities are reasonably foreseeable at the time the Draft EIR was prepared, the Lead Agency should use good faith, best efforts to provide information on the scope, types, and duration of cleanup activities, quantify emissions from cleanup activities, and include those emissions in the Proposed Project's construction emissions profile to be compared to South Coast AQMD's air quality CEQA significance thresholds for construction to determine the level of significance in the Final EIR. Alternatively, if emissions from cleanup activities are not included in the Final EIR, the Lead Agency should provide reasons for not including them supported by substantial evidence in the record.

3. Health Risk Assessment (HRA)

In the Air Quality Section of the Draft EIR, the Lead Agency conducted a construction HRA and an operational HRA¹⁴. The Lead Agency found that the Proposed Project's combined construction and operational incremental cancer risk would be 9.7 in one million¹⁵, which would not exceed South Coast AQMD's CEQA significance threshold of 10 in one million for cancer risk. However, upon review of the "CSTN + Operations HRA" in Appendix D, South Coast AQMD staff found that the Lead Agency calculated cancer risk to residential receptors, workers, and children at school and daycare facilities based on a 26.98-year, 21.73-year, and 3.73-year exposure duration, respectively¹⁶.

¹² Draft EIR. Chapter 3.8 Hazards and Hazardous Materials. Pages 3.8-40 through 3.8-43.

¹³ *Ibid.* Page 3.8-43.

¹⁴ *Ibid.* Pages 3.2-97 through 3.2-102.

¹⁵ *Ibid*.

¹⁶ Ibid. Appendix D. CSTN + Operations HRA "Residential Exposure Factors". PDF pages 6057, 7541, and 7937.

The Proposed Project's operational health risk impacts may be underestimated because the Lead Agency used a shorter exposure duration for sensitive receptors and off-site workers. Additionally, the South Coast AQMD's CEQA significance threshold of 10 in a million for cancer risk is based on a 30-year exposure duration for sensitive receptors and a 25-year exposure duration for off-site workers. Since the Lead Agency compared the Proposed Project's cancer risk to the South Coast AQMD's CEQA significance threshold of 10 in a million to determine the level of significance for the Proposed Project's health risk impacts, the Lead Agency should use a 30-year exposure period for sensitive receptors (residents and children at school and daycare facilities) and a 25-year exposure period for off-site workers to re-calculate the Proposed Project's health risks in the Final EIR.

4. Recommended Revisions to Existing Air Quality Project Design Features and Mitigation Measures (MMs)

Based on the air quality project design features and mitigation measures in the Draft EIR, the Lead Agency will require the use of electric powered or alternative-fueled concrete/industrial saws, pumps, aerial lifts, material hoist, air compressors, and forklift, and, at a minimum, require the use of off-road diesel-powered construction equipment that meets or exceeds the California Air Resources Board (CARB) and U.S. Environmental Protection Agency (US EPA) Tier 4 Final off-road emissions standards for equipment rated at 50 horsepower or greater during construction (Construction Project Design Feature 3.2-1)¹⁷. For on-road vehicles, the Lead Agency will strive to use heavy-duty trucks with ZE or NZE engines during construction and operation, and, at a minimum, require the use of heavy-duty trucks with 2010 model year engines or trucks with newer, cleaner engines during construction and operation (MMs 3.2-2(c)(3) and MM 3.2-2(d))¹⁸.

NZE heavy-duty truck engines are commercially available. Examples of commercially available NZE heavy-duty truck engines that meet CARB's optional low NOx standards include, but are not limited to, Cummins Westport 8.9- and 6.7-liter natural gas engines and Roush Cleantech 6.8- liter compressed natural gas and liquefied petroleum gas engines ¹⁹. Therefore, NZE heavy-duty trucks should be required for use during construction (e.g., material delivery trucks and soil import/export) and operation (e.g., vendors and material delivery trucks).

CEQA requires that the Lead Agency considers mitigation measures to minimize significant adverse impacts (CEQA Guidelines Section 15126.4) and that all feasible mitigation measures that go beyond what is required by law be utilized to minimize or eliminate any significant adverse air quality impacts. The Proposed Project's construction and operational air quality impacts, particularly from NOx, would remain significant and unavoidable after mitigation. To comply with CEQA requirements, more electric powered construction equipment should be used. Additionally, since NZE heavy-duty truck engines are commercially available, the Lead Agency should also require the use of ZE heavy-duty trucks (e.g., material delivery trucks and soil import/export) during construction to further reduce the Proposed Project's construction NOx emissions. South Coast AQMD staff also

¹⁷ Draft EIR. Air Quality. Page 3.2-64.

¹⁸ Draft EIR. Summary. Pages S-55 and 56

¹⁹ CARB. "Optional Reduced NOx Emissions Standards for On-Road Heavy-duty Engines". Accessed at: https://ww3.arb.ca.gov/msprog/onroad/optionnox/optionnox.htm

recommends ZE heavy-duty trucks (e.g., vendors and material delivery trucks) be used to further reduce the Proposed Project's operational NOx emissions. When requiring electric construction equipment and ZE heavy-duty trucks, the Lead Agency should include analyses to evaluate and identify sufficient power and supportive infrastructure available in the Energy and Utilities and Service Systems Chapters of the Final EIR, where appropriate. Please see Attachment B for a list of companies and electric powered equipment that can and should be used during construction.

Implementation of the Proposed Project contributes to Basin-wide NOx emissions. Requiring the use of more electric construction equipment and ZE heavy-duty trucks supports South Coast AQMD's efforts to attain state and federal air quality standards as outlined in the 2016 Air Quality Management Plan (AQMP), specifically an additional 45 percent reduction in NOx emissions in 2023 and an additional 55 percent NOx reduction beyond 2031 levels for ozone attainment^{20,21}. Requiring the use of more electric construction equipment and ZE heavy-duty trucks also fulfills the Lead Agency's legal obligation to mitigate the Proposed Project's significant air quality impacts and complies with CEQA's requirements for mitigation measures.

South Coast AQMD staff's recommended revisions to Construction Project Design Feature 3.2-1, MM 3.2-2(c)(3), and MM 3.2-2(d) in strikethrough and underline are provided as follows.

Construction Project Design Feature 3.2-1

[...]

Equipment such as concrete/industrial saws, pumps, aerial lifts, material hoist, air compressors, and forklifts, excavator, wheel loader, and soil compactors, must be electric or alternative-fueled (i.e., non-diesel). Pole power shall be utilized at the earliest feasible point in time, and shall be used to the maximum extent feasible in lieu of generators. If stationary construction equipment, such as diesel- or gasoline-powered generators, must be operated continuously, such equipment must be located at least 100 feet from air quality sensitive land uses (e.g., residences, schools, childcare centers, hospitals, parks, or similar uses), whenever possible.

 $[\ldots]$

Mitigation Measure 3.2-2(c)(3)

The project applicant shall require, at a minimum, that operators of heavy-duty haul trucks visiting the Project during construction commit to using ZE or NZE heavy-duty trucks during construction, such as trucks with natural gas engines that meet CARB's

-

²⁰ South Coast AQMD. March 3, 2017. 2016 Air Quality Management Plan. Accessed at: http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan.

²¹ Based on the air dispersion modeling that was performed to analyze the Proposed Project's localized air quality impacts, the Lead Agency found that the Proposed Project would result in NO2 concentration of 0.132 parts per million (ppm) during construction and 0.127 ppm during operation. (Draft EIR. Chapter 3.2 Air Quality. Page 3.2-91 through 3.2-94). In the Appendix I: Health Effects of the 2016 AQMP, South Coast AQMD staff discussed a 2016 health study by the U.S. EPA. The study found that when adults with asthma are exposed to NO2 at the 100 parts per billion (ppb) to 300 ppb concentrations, they experienced an increase in airway responsiveness, which in asthmatics can worsen symptoms and reduce lung function. (Page I-54. Accessed at: https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plans/final-2016-aqmp/appendix-i.pdf).

adopted optional NOx emission standard of 0.02 g/bhp-hr, or at a minimum, 2010 model year or newer engines that meet CARB's 2010 engine emission standards of 0.01 grams per brake horsepower-hour (g/bhp-hr) for particulate matter (PM) and 0.20 g/bhp-hr of NOx emissions or newer, cleaner trucks. In addition, the project applicant shall strive require to use of zero-emissions (ZE) or near-zero-emissions (NZE) heavy-duty haul trucks during construction, such as trucks with natural gas engines that meet CARB's adopted optional NOx emissions standard of 0.02 g/bhp-hr. Contractors shall be required to maintain records of all trucks visiting the Project, and such records shall be made available to the City upon request.

Mitigation Measure 3.2-2(d)

The project applicant shall require the use of ZE or NZE vendors and material delivery trucks during operation such as trucks with natural gas engines that meet CARB's adopted optional NOx emissions standard of 0.02 grams per brake horsepower-hour (g/bhp-hr) provide incentives for vendors and material delivery trucks that would be visiting the Project to encourage the use of ZE or NZE trucks during operation, such as trucks with natural gas engines that meet CARB's adopted optional NOx emissions standard of 0.02 grams per brake horsepower-hour (g/bhp-hr). At a minimum, incentivize require the use of 2010 model year vendor and material delivery trucks.

If the specific details regarding ZE heavy-duty trucks are impractical or infeasible to include in the Final EIR, the Lead Agency should develop and include performance standards to achieve the use of ZE heavy-duty trucks (CEQA Guidelines Section 15126.4(a)). The Lead Agency can and should develop the following performance standards.

- Develop a minimum amount of ZE heavy-duty trucks that the Proposed Project must use each year during construction to ensure adequate progress. Include this requirement in the Proposed Project's Construction Management Plan.
- Establish a contractor(s) selection policy that prefers contractor(s) who can supply ZE heavy-duty trucks during construction. Include this policy in the Request for Proposal for selecting contractor(s).
- Establish a policy to select and use vendors that use ZE heavy-duty trucks. Include this policy in the vendor contracts and business agreements.
- Establish a purchasing policy to purchase and receive materials from vendors that use ZE heavy-duty trucks to deliver materials. Include this policy in the purchase orders with vendors.
- Develop a target-focused and performance-based process and timeline to implement the use of ZE heavy-duty trucks.
- Develop a project-specific process and criteria for periodically assessing progress in implementing the use of ZE heavy-duty trucks.

5. South Coast AQMD Rules

Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants²²

Presence of hexavalent chromium has been detected at the Proposed Project site²³. The Lead Agency should require dust control measures in accordance with South Coast AQMD Rule 1466, as applicable. Rule 1466 includes a list of dust control measures to reduce fugitive dust emissions from toxic air contaminants, such as hexavalent chromium, during earth-moving activities. For example, Rule 1466 prohibits conducting of earth-moving activities unless the area is surrounded with fencing that is a minimum six feet tall and at least as tall as the height of the tallest stockpile, with a windscreen with a porosity of $50 \pm 5\%$. PM10 monitoring will need to be conducted during earthmoving and vehicular traffic. Work stoppages, South Coast AOMD notification, and dust mitigation measures will need to occur if the site contribution exceeds 25 ug/m³ of PM10 averaged over two hours. The Lead Agency should consider multiple downwind monitors and utilize PM10 monitors with telemetry to reduce response time to PM10 exceedances. Rule 1466 also includes speed limit, project date notification, signage, and recordkeeping requirements. Stockpiles will need to be maintained less than 400 cubic yards. Additionally, a Rule 403 Dust Control Supervisor will need to be on-site. Therefore, South Coast AQMD staff recommends that the Lead Agency include information on how the Proposed Project will meet the South Coast AQMD Rule 1466 requirements in the Final EIR. The information on Rule 1466 should also be included in the soil management plan.

Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil²⁴

Presence of TPH has been detected at the Proposed Project site²⁵. Disturbed and excavated soils that may contain petroleum hydrocarbons are subject to the requirements of South Coast AQMD Rule 1166. Excavation operations will need to be monitored for VOC concentrations, and notification, work practice, and handling requirements will need to be implemented for elevated VOC readings. A Rule 1166 excavation plan application will need to be submitted to South Coast AQMD, or the site may be able to utilize a various locations plan. In addition, a discussion should be included regarding the treatment and handling of any VOC-contaminated soil. Therefore, South Coast AQMD recommends that the Lead Agency include a discussion to demonstrate specific compliance with South Coast AQMD Rule 1166 in the Final EIR. South Coast AQMD Rule 1166 should be incorporated in the soil management plan.

Conclusion

Pursuant to California Public Resources Code Section 21092.5(a) and CEQA Guidelines Section 15088(b), South Coast AQMD staff requests that the Lead Agency provide South Coast AQMD staff with written responses to all comments contained herein prior to the certification of the Final EIR. In addition, issues raised in the comments should be addressed in detail giving reasons why specific comments and suggestions are not accepted. There should be good faith,

²² South Coast AQMD. Rule 1466. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xiv/rule-1466.pdf.

²³ Draft EIR. Chapter 3.8: Hazards and Hazardous Materials. Page 3.8-42.

²⁴ South Coast AQMD. Rule 1166. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1166.pdf.

²⁵ Draft EIR. Chapter 3.8: Hazards and Hazardous Materials. Page 3.8-42.

reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice (CEQA Guidelines Section 15088(c)). Conclusory statements do not facilitate the purpose and goal of CEQA on public disclosure and are not meaningful, informative, or useful to decision makers and to the public who are interested in the Proposed Project. Further, if the Lead Agency makes the finding that the recommended revisions to the existing air quality project design features and mitigation measures are not feasible, the Lead Agency should describe the specific reasons supported by substantial evidence for rejecting them in the Final EIR (CEQA Guidelines Section 15091).

ATTACHMENT B List of Companies and Electric Powered Construction Equipment²⁶

Company Name	Construction Equipment Type
Volvo Construction	L25 electric compact wheel loader
Equipment	ECR25 electric compact excavator
	For more information, please visit: https://www.oemoffhighway.com/trends/electrification/press-release/21063694/volvo-construction-equipment-volvo-ce-unveils-electric-compact-excavator-and-wheel-loader-at-bauma
Hidromek	HMK 70W electric excavator
	HMK 145L SR crawler excavator
	HMK 635 WL wheel loader
	HMK 110 CS soil compactors
	HMK 130 CR soil compactors
	For more information, please visit: https://www.oemoffhighway.com/trends/equipment-launches/press-release/21045014/hidromek-hidromek-exhibits-new-electric-excavator-at-bauma-2019
Mecalac	e12 electric compact excavator
	For more information, please visit: https://www.oemoffhighway.com/trends/electrification/press-release/21002253/mecalac-france-sas-mecalac-offering-100-electric-machine

_

²⁶ForConstructionPros. *Electrified Construction Equipment Gaining Momentum*. January 27, 2020. Accessed at: https://www.forconstructionpros.com/construction-technology/article/21107531/electrified-construction-equipment-gaining-momentum.