



MEMO

To: Guido Persicone
CITY OF SAN MATEO, PLANNING DIVISION

From: Patrick Angell

Cc: Paul Council

Date: January 13, 2015

Re: Responses to Comments Received on the Draft IS/MND for the Los Prados Park Turf Conversion Project (PA 14-105)

The City of San Mateo prepared a Draft Initial Study/Mitigated Negative Declaration (IS/MND) for the Los Prados Park Turf Conversion Project (PA 14-105). The Draft IS/MND was made available for public review on December 17, 2014, for a 20-day review period.

The City received eight comments via e-mail from individuals. One of the comment e-mails included reference to the analysis in the Draft IS/MND and to the Callander Associates report. Another e-mail included a general reference to the Callander report but not to the Draft IS/MND. The remaining e-mails did not reference the Callander report or the Draft IS/MND. The environmental issues raised in the comment letters are addressed below by topic. Comments received did not identify new significant impacts that requires new mitigation measures or project revisions or that an identified impact could not be mitigated to less than significant that would require recirculation of the IS/MND consistent with CEQA Guidelines Section 15073.5.

Issues not associated to the environmental review process under the California Environmental Quality Act (CEQA) are not addressed in this memorandum.

Traffic and Parking

The commenters expressed concern that the conversion to synthetic turf would result in more traffic and greater demand for parking in the immediate area. One of the comments cited the Callander Associates report as a source of information, noting that the report stated Los Prados has the capacity to accommodate the most games and user groups. The Callander report did not include a traffic study. Neither this comment nor the other comments specifically addressed the analysis in the Draft IS/MND for traffic and parking.

Traffic counts were prepared for the project to determine whether the proposed project would result in increased traffic. Hexagon Transportation Consultants (traffic consultant and preparer of the traffic counts) reviewed the usage description provided by the City to determine whether the project site would be subject to greater intensity of use after synthetic turf is installed. Greater intensity of use means that more people would use the space during peak periods (weekday,

Saturday, or Sunday) than use it on a typical weekday, Saturday, or Sunday or time of day under current operations.

The project would not add new fields or facilities. The existing field configuration would remain as it current exists. As identified on IS/MD page 2.0-10, the turf conversion would not expand field operations (including during peak periods) or increase the number of parking spaces. The turf conversion would allow the fields to be available more days during the year that it currently is closed for as a result of rain/wet conditions or repair. It is anticipated up to approximately 44 days of additional use may be possible. However, this would not increase the field usage during peak days that already occur during the spring months (April to May) and the fall months (August to November).

The results of the traffic counts were reported in the Draft IS/MND on pages 3.0-52 through -65. The Draft IS/MND evaluated conditions at three intersections. This included manual turning-movement counts at three intersections in the immediate vicinity of the park: S. Norfolk Street and E. Hillsdale Boulevard; S. Norfolk Street and Lago Street; and S. Norfolk Street/Los Prados Street to La Selva Street. All traffic generated by the project must use these intersections because they provide the only vehicular access to the neighborhood in which the park is located. The Draft IS/MND concluded (Draft IS/MND page 3.0-65) that the installation of synthetic turf is not projected to cause any increase in intensity of use that would result in an increased number of trips to and from the project site during any specific time of day or month of the year beyond the existing typical usage pattern. Therefore, traffic conditions after the project is completed are expected to be the same as existing traffic conditions as peak day usage would not change.

One of the commenters stated there is an existing parking problem at the park. Because no additional trips are projected, it was concluded that existing parking conditions would not be exacerbated as a result of installation of synthetic turf. Resolution of existing parking problems does not require mitigation under CEQA. Also, since no new fields are being added, the Zoning Code does not require additional parking on site (Section 27.64.020(2)).

The commenters did not provide any data or technical analysis demonstrating that the conclusions of the traffic counts presented in the Draft IS/MND are not valid.

Human Health and Environmental Effects

The turf conversion project evaluated in the Draft IS/MND assumed the use of crumb-rubber infill or styrene-butadiene rubber (SBR), which is made from recycled tires and cryogenically frozen to form smooth, rounded granules. Commenters expressed concern about the potential human health and environmental effects associated with synthetic turf. One comment letter made reference to the studies cited in the Draft IS/MND. The other comments were of a general nature. The following summarizes the information presented in the Draft IS/MND concerning these topics.

The potential human health and effects associated with synthetic turf are related to the compounds in the SBR infill material, bacterial infection, and the surface temperature of the turf on hot days. The Draft IS/MND evaluated these potential effects.

The Draft IS/MND (pages 3.0-26 through -30) summarized the results of extensive studies of synthetic turf materials, which included investigations of crumb rubber (SBR). The Draft IS/MND (page 3.0-26) stated that various organic compounds (VOCs) have been identified to be associated with the infill component of synthetic turf materials. The VOCs can be released into the atmosphere (off-gassing) where they can be inhaled. The Draft IS/MND presented the conclusions of studies to date, which have demonstrated that concentrations of VOCs do not pose significant health risks. Metals can also be present in SBR. The Draft IS/MND (page 3.0-27) noted that metals do not pose a human health risk, but may leach into stormwater runoff from a synthetic turf field. Zinc is the primary metal of concern, but studies to date have shown that concentrations of zinc in runoff were similar to that in urban runoff. There has been no evidence to date that runoff containing metals from infill material in synthetic turf is an environmental hazard. The threat of bacterial infection is a common concern with all turf fields, and studies to date have shown the risk of infection is no higher with synthetic turf than with natural turf (Draft IS/MND page 3.0-29). Synthetic turf fields have a tendency to absorb heat more than natural turf fields, resulting in higher than ambient air temperatures (Draft IS/MND page 3.0-29). The Draft IS/MND reported the results of studies showing children have a lower exercise tolerance for heat than adults when air temperatures exceed 95°F. The surface temperature for synthetic fields installed in the communities in the San Francisco Bay Area averaged approximately 10 degrees (°F) warmer than ambient air temperature on sunny days. San Mateo does not typically have the weather conditions that would generate great differences between ambient air and surface temperatures, and extremely hot days are rare. As such, the risk from surface temperatures to athletic field users was not considered substantial. However, the Draft IS/MND includes a mitigation measure that addressed surface temperatures, which requires the City to include notices in use agreements encouraging coaches, team managers, and parents to ensure water is supplied and shade tents are available (Draft IS/MND page 3.0-30).

One commenter was concerned that installation of synthetic turf would be similar to “paving” the site, which could result in higher ambient temperatures in the neighborhood, and that this could cause adverse microclimate effects not evaluated in the Draft IS/MND. Artificial turf does not contribute to the urban heat island effect (UHI), which is the commenter’s concern. UHI is a phenomenon where structures and paved surfaces (particularly darker surfaces) heat up during the daytime in the summer, and the heat is retained in those structures during the night, with little cooling. While synthetic turf could be up to 10°F warmer on a summer day than the surrounding surfaces, artificial turf does not hold this heat for a significant period of time and therefore does not contribute to UHI. Further, as noted above, extremely hot days are rare in San Mateo, and there are not great differences between ambient air and surface temperatures.

In addition, the California Office of Environmental Health Hazard Assessment performed a study of potential health risks to children playing on synthetic turf that evaluated potential ingestion of tire shreds and identified that the risk of accidental ingestion (assuming a one-time ingestion of 10 grams of tire shreds was “considerably below the de minimus risk level of one in one million for cancer risk and is generally considered an acceptable cancer risk (City of San Carlos Highlands Park Lower Athletic Field Conversion to a Synthetic Surface Project Draft Initial Study – Appendix B-1). Thus, potential accidental ingestion of rubber crumbs is not considered a significant public health impact.

With regard to the comment concerning the studies cited in the Draft IS/MND, the commenter stated scientific, peer-reviewed studies should have been used instead of the studies cited in the

Draft IS/MND, many of which were prepared by or were prepared under the authority of government agencies. Studies prepared by government agencies are credible sources of information and comprise substantial evidence under CEQA for purposes of the impact evaluation (CEQA Guidelines Section 15834). Further, the government studies included information from peer-reviewed scientific journals and investigations. The comment stated the individual had reviewed literature concerning synthetic turf and that was the basis for the comment. However, the commenter did not provide the names of any scientific, peer-reviewed studies that should have been used instead of or in addition to the studies referenced in the Draft IS/MND in Section 6.0, References. No technical analyses have been provided that provide a countering analysis of showing a significant public health impact beyond the reports referenced in the IS/MND.

Alternatives to Crumb-Rubber Infill

The City is exploring two options to crumb-rubber (or SBR) infill for the synthetic turf conversion project in response to recently proposed Senate Bill 47 that would prohibit the installation of a synthetic turf field that contains recycled crumb rubber until a study of potential adverse health impacts from such fields is completed. These options are ethylene propylene diene monomer (EPDM) and thermoplastic elastomers (TPE). EPDM infill materials are a cross-linked vulcanized rubber compound made from virgin materials. TPE infill materials are virgin blends of polymers in both the rubber and plastic phase, giving the final material characteristics of both rubber and plastic.

One of the major studies of infill materials (TRC 2008) was used as a source of information in the Draft IS/MND (see Section 6.0, References). That study, which was a compilation of numerous research studies, showed emissions of chemicals of potential concern were determined to be at non-detectable or similar to background levels in synthetic turf infill materials. The TRC 2008 review included the results of research on SBR, EPDM, and TPE (Draft IS/MND page 3.0-27). As reported in the TRC 2008 review, all of the studies identified TPE as producing the lowest level of contaminants when compared to SBR and EPDM infill materials.

The Center for Sports Surface Research (CSSR) at Penn State University conducted a series of experiments to evaluate the effects of various synthetic turf components on surface temperatures. The study compared SBR and TPE as well as different color combinations. TPE infill alone had lower surface temperature than SBR infill, but when combined with synthetic green turf, the overall surface temperature with TPE was only slightly lower than SBR with green turf.

The Draft IS/MND's assumption for SBR therefore provided a conservative analysis of potential human health and environmental impacts, based on published studies to date. Use of EPDM or TPE would not result in any new or greater human health or environmental impacts than disclosed in the Draft IS/MND because these materials generate similar or lesser public health impacts in regards to exposure to compounds in the materials and similar or surface temperatures (as documented in the TRC 2008 report cited in the Draft IS/MND).

Revisions to the Draft IS/MND

In light of the City's decision to consider two options to crumb-rubber infill, the Draft IS/MND has been revised to incorporate information about alternatives to crumb rubber infill (referred to hereafter as Final IS/MND) as well as additional information associated health risks from ingestion of rubber crumbs. This additional information does not identify new significant impacts that

requires new mitigation measures or project revisions or that an identified impact could not be mitigated to less than significant that would require recirculation of the IS/MND consistent with CEQA Guidelines Section 15073.5.

Project Description. The following new paragraph has been added to page 2.0-13 in Section 2.0, Project Description, immediately following the "Optional Baseball/Softball Diamond Infield Turf Conversion" heading and above the "Permits and Approvals" heading:

ALTERNATIVES TO CRUMB-RUBBER INFILL

Since release of the Draft IS/MND, the City has explored two options to crumb-rubber (or SBR) infill for the synthetic turf conversion project. These options are ethylene propylene diene monomer (EPDM) and thermoplastic elastomers (TPE). EPDM infill materials are a cross-linked vulcanized rubber compound made from virgin materials. TPE infill materials are virgin blends of polymers in both the rubber and plastic phase, giving the final material characteristics of both rubber and plastic.

Section 3.9.b (Hazardous Materials). The following text has been added immediately following the "Synthetic Turf Surface Temperature" heading and before the "Mitigation Measures" heading:

Ingestion of Rubber Crumbs

The California Office of Environmental Health Hazard Assessment performed a study of potential health risks to children playing on synthetic turf that evaluated potential ingestion of tire shreds and identified that the risk of accidental ingestion (assuming a one-time ingestion of 10 grams of tire shreds) was "considerably below the de minimus risk level of one in one million for cancer risk and is generally considered an acceptable cancer risk (City of San Carlos 2009, Appendix B-1). Thus, potential accidental ingestion of rubber crumbs is not considered a significant public health impact.

Alternatives to Crumb-Rubber Infill

The City explored two options to crumb-rubber (or SBR) infill for the synthetic turf conversion project. These options are ethylene propylene diene monomer (EPDM) and thermoplastic elastomers (TPE). EPDM infill materials are a cross-linked vulcanized rubber compound made from virgin materials. TPE infill materials are virgin blends of polymers in both the rubber and plastic phase, giving the final material characteristics of both rubber and plastic.

The TRC 2008 review included the results of research on SBR, EPDM, and TPE. As reported in the TRC 2008 review, all of the studies identified TPE as producing the lowest level of contaminants when compared to SBR and EPDM infill materials. As noted in the TRC 2008 review, no significant risks to human health were identified associated with these materials based on estimates of exposure to polycyclic aromatic hydrocarbons, volatile organic compounds, and particulate matter.

The Center for Sports Surface Research (CSSR) at Penn State University conducted a series of experiments to evaluate the effects of various synthetic turf components on surface temperatures. The study compared SBR and TPE as well as different color combinations. TPE infill alone had lower surface temperature than SBR infill, but when

combined with synthetic green turf, the overall surface temperature with TPE was only slightly lower than SBR with green turf.

Lighting

Although the Callander report included some information about lighting, no lighting would be installed at Los Prados Park as part of the turf conversion project. The Draft IS/MND (pages 2.0-10 and 3.0-2) stated that no nighttime lighting fixtures would be added to the park.

Noise

One comment expressed concern about noise from park uses. The Draft IS/MND evaluated noise impacts that could occur with construction activities and potential additional use as the result of the conversion to synthetic turf. No new noise impacts would occur beyond current noise conditions during park usage as peak field usage conditions would not change from existing conditions (as described on Draft IS/MND page 3.0-63). Mitigation measures have been identified to address temporary noise associated with construction activities as identified on Draft IS/MND pages 3.0-45 and -46.

Quality of Life Issues

Commenters raised "quality of life" concerns regarding synthetic turf. Issues noted by commenters included the look and feel of synthetic turf compared to natural turf, synthetic turf would be too hot to sit and play on, uses such as lawn chairs and activities that could result in spills would be prohibited, and aesthetic value of the neighborhood would be diminished, causing property values to decline.

The issues raised by the commenters would not result in physical changes in the environment. These are social and economic considerations, which do not require under CEQA (CEQA Guidelines Section 15131). The visual appearance of synthetic turf is similar to natural and would not substantially alter the visual characteristics of the field and park to not appear as an active recreation park (see Draft IS/MND page 3.0-2).

One commenter expressed a safety concern about balls coming into the backyard and window breakage. This is an existing condition. It is not any more or less likely that the frequency of balls being hit out of the park would change as a result of the synthetic turf project as the existing sports field configurations would not change.

Cost of Synthetic Turf

The cost of installing synthetic turf was raised as a concern. Cost is not an environmental impact consideration requiring analysis in the Draft IS/MND because it would not involve changes in the physical environment.