DATE: May 8, 2017

TO: Mayor and Members of the City Council

VIA: Kevin M. Miller, City Manager

FROM: Jeff Moneda, Public Works Director/District Engineer
Marlene Subhashini, Planning Manager
Edmund Suen, Finance Director

SUBJECT: LEVEE PROTECTION PLANNING AND IMPROVEMENTS PROJECT (CIP 301-657) INCLUDING: (1) CERTIFICATION OF THE FINAL ENVIRONMENTAL IMPACT REPORT AND ADOPTION OF A STATEMENT OF FINDINGS UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT, A STATEMENT OF OVERRIDING CONSIDERATIONS, AND A MITIGATION MONITORING AND REPORTING PROGRAM (EA-15-002); (2) APPROVE THE 2050 SLR PROJECT SCENARIO AND DIRECT STAFF TO FURTHER DEVELOP AND ANALYZE THE OPTION 4 2050 SLR AND FUTURE ADAPTATION STRATEGY DESIGN VARIATION BEFORE SUBMITTING TO REGULATORY AGENCIES FOR PROCESSING; AND (3) DIRECT STAFF TO PROCEED WITH THE 30-YEAR GENERAL OBLIGATION BOND ALTERNATIVE

RECOMMENDATION

It is recommended that the City Council of the City of Foster City adopt the attached resolutions:

1. Certifying the Final Environmental Impact Report (EIR) (Attachment 1);

2. Adopting California Environmental Quality Act (CEQA) Findings, Statement of Overriding Considerations, and Mitigation Monitoring and Reporting Program (MMRP) for the Project (Attachment 2); and

3. Approving the 2050 SLR project scenario; directing staff to further develop and analyze the Option 4 2050 SLR and Future Adaptation Strategy design variation before submitting to regulatory agencies for processing; and directing staff to proceed with the 30-year General Obligation Bond financing alternative.

EXECUTIVE SUMMARY

Environmental Impact Report

The proposed project is to improve the City's existing levee system to provide flood protection in accordance with updated Federal Emergency Management Agency (FEMA) guidelines, retain FEMA accreditation for the levee, and protect against future sea level rise. After reviewing the project, staff determined that it could result in potentially significant environmental impacts pursuant to CEQA. An EIR was prepared for the project by the environmental consultant in compliance with CEQA requirements. The EIR studied the following two scenarios at an equal level, which would have different ranges of levee elevations/floodwall heights as needed to meet FEMA freeboard requirements and protect against future sea level rise: (1) FEMA Freeboard + 15 inches of Sea Level Rise for the Year 2050 (2050 SLR); and (2) FEMA Freeboard + 46 inches of Sea Level Rise for the Year 2100 (2100 SLR).

The EIR must be certified before the various regulatory permitting agencies will act on the levee permits. The Planning Commission held an Adequacy Hearing on January 19, 2017 to receive comments on the EIR and Public Hearing on April 18, 2017 to make a recommendation to the City Council on whether or not to certify the Final EIR. The Commission voted 4-0-0-1 (Dyckman absent) to recommend that the City Council certify the EIR.

Design Variations

Schaaf & Wheeler was tasked with performing the preliminary engineering design work for the project, which included analyzing various levee design elevation strategies within the scope of the two project scenarios studied by the EIR that both meet the guidelines of regulatory permitting agencies and retain the levee certification from the Federal Emergency Management Agency (FEMA). The various elevation strategies and associated cost estimates are summarized in the "Design Variations" presentation. Based on Schaaf & Wheeler's presentation, staff recommends that the Council approve the 2050 SLR analyzed in the EIR and direct staff to further develop and analyze the Option 4 2050 SLR and Future Adaptation Strategy design variation before submitting to regulatory agencies for processing. The City Council's direction on which project scenario to proceed with will allow staff to continue developing the recommended financing alternative (discussed below), obtain regulatory permits and authorizations,

and prepare the final construction documents suitable for bidding for the project.

Financing Alternatives

In consultation with the City's municipal financial advisors, staff recommends the use of General Obligation (G.O.) bonds for this project as it is the most cost-efficient form of financing for this project, having the lowest interest rate and, therefore, the lowest cost of debt service compared to either an Assessment District or Mello-Roos Community Facility Special Tax (M-R) option.

BACKGROUND

Environmental Impact Report

One of the stated primary objectives of CEQA is to maintain a high-quality environment, now and in the future, and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state. CEQA meets these goals by requiring local governments to disclose the significant environmental effects of a project to the community, as well as to the decision makers, and to identify measures and alternatives that will avoid or reduce the identified significant environmental effects of a project. On October 19, 2015, the City Council entered into an agreement with Urban Planning Partners, Inc. for consulting services for the preparation of an EIR for the project. The City of Foster City is the Lead Agency for the project under CEQA. All procedural and notice requirements under CEQA and the City's rules, regulations, and environmental guidelines have been met or exceeded. Staff issued a Notice of Preparation (NOP) to invite comments from public agencies and the general public on the scope of the EIR. The NOP was issued on January 5, 2016 for a 30-day comment period. The Planning Commission held a Public Scoping Session on February 4, 2016 to obtain public input on the scope of the EIR. A revised NOP was issued on August 12, 2016 with certain modifications to the scope of the project. On January 19, 2017, the Planning Commission held an Adequacy Hearing to receive public comments on the adequacy of the Draft EIR.

The Draft EIR (State Clearinghouse # 2016012012) was published on November 23, 2016 and made available for a 45-day public comment period through January 12, 2017. The EIR studied the following two scenarios at an equal level, which would have different ranges of levee elevations/floodwall heights as needed to meet FEMA freeboard requirements and protect against future sea level rise: (1) FEMA Freeboard + 15 inches of Sea Level Rise for the Year 2050 (2050 SLR); and (2) FEMA Freeboard + 46 inches of Sea Level Rise for the Year 2100 (2100 SLR)

Copies of the Draft EIR were distributed to all affected agencies, City departments, the Planning Commission and City Council members. Copies of the Draft EIR were made

available to the general public at City Hall and the Foster City Public Library. The Draft EIR was also posted on the City's website. Following the close of the 45-day public review period, a Response to Comments (RTC) Document was prepared to document responses to comments received on the Draft EIR. The RTC document, together with the Draft EIR, constitutes the Final EIR for the project. On April 18, 2017, the Planning Commission held a Public Hearing and made a recommendation that the City Council certify the EIR.

Design Variations

At the regular meeting on October 17, 2016, the City Council adopted Minute Order No. 1476, accepting the Basis of Design Overview report. The Basis of Design Overview Report outlined designated sub-reaches along the levee and elevation deficiencies, preliminary geotechnical conditions and design constraints, design alternative analyses and improvement types, preliminary structural design considerations, sea level rise adaptation measures, and preliminary cost estimates for basic flood protection and Bay Trail restoration. Following approval of the Basis of Design Report, staff and project consultants met with regulatory agencies to seek feedback in order to refine the levee elevation requirements for accreditation by FEMA. The recommended option (the "2050 SLR and Future Adaptability Strategy") that will be presented in the "Design Variations" presentation incorporates feedback received from the regulatory agencies.

Financing Alternatives

The project is required in order to retain FEMA accreditation of the City's levee system. If accreditation is lost, the City would be placed into a flood zone by FEMA and all properties with federally insured mortgages would be required to obtain flood insurance. Based on information obtained from a local insurance brokerage firm, the current price range for basic flood insurance costs between $1,500 and $2,500 per year, depending on the deductible.

At the March 27, 2017 budget study session, staff provided the City Council with an information report on financing alternatives for the Wastewater Treatment Plant, Levee Improvements, and Recreation Center Improvement Projects, collectively the "Big 3" projects. An Assessment District, Mello Roos (M-R) bonds, or G.O. bonds can be used to finance the project. Staff and the City's financial advisors have determined that G.O. bonds are the most cost-efficient form of financing for this type of project. They are the most secure and highly rated form of municipal bond financing, resulting in the lowest interest rate and, therefore, the lower cost of debt service. While both G.O. bonds and M-R bonds require 2/3 voter approval, an M-R bond has historically resulted in a higher interest rate compared to the G.O. bond (approximately 0.38% higher). Assuming a $90 million 30-year bond issuance at an interest rate of 3.5% for a G.O. bond, the total debt

service payment of an M-R bond would be $7 million higher than a G.O. bond.

ANALYSIS

Environmental Impact Report

The project analyzed in the Draft EIR includes approximately 43,000 linear feet (8 miles) of the existing levee system that surrounds Foster City along the bay front with a slight deviation from the existing levee system footprint and includes six (6) proposed construction staging areas. The purpose of the project is to provide flood protection in accordance with updated FEMA guidelines and retain FEMA accreditation for Foster City's existing levee system. Current FEMA guidelines require the current levee elevation along the City's levee system to be raised to protect the City from flooding associated with levee overtopping from extreme high tides or storm surges. In addition, the improved levee system will be designed to adapt to future sea level rise while maintaining public access along the levee system and protections for sensitive species. The environmental analysis studied two scenarios at an equal level, which would have different ranges of levee elevations/floodwall heights as needed to meet FEMA freeboard requirements and protect against future sea level rise. The two scenarios are:

1. FEMA Freeboard + 15 inches of Sea Level Rise for the Year 2050 (2050 SLR)

2. FEMA Freeboard + 46 inches of Sea Level Rise for the Year 2100 (2100 SLR)

Either the 2050 SLR scenario or the 2100 SLR scenario will utilize a combination of three different levee improvement types, depending on the location along the existing levee and the adjacent site constraints. These three levee improvement types are as follows: (1) sheet pile floodwall, (2) earthen levee, and (3) conventional floodwall.

The Draft EIR identified environmental impacts that are likely to be associated with the implementation of the project and recommended mitigation measures to reduce potentially significant impacts. In addition, the Draft EIR included an analysis of the project's consistency with relevant City and regional planning policies, as well as potential alternatives to the project and cumulative impacts. Impacts in the following areas were identified to be potentially significant but would be reduced to a less-than-significant level by implementation of the recommended mitigation measures.

- Aesthetics and Shade and Shadow
- Air Quality
- Biological Resources
- Cultural Resources
- Soils, Geology, and Seismicity
- Hazards and Hazardous Materials

- Hydrology and Water Quality
- Noise and Vibration
- Traffic and Transportation
- Recreation

However, the Draft EIR concluded that the following two environmental impacts related to aesthetics and noise would be significant and unavoidable even with all feasible mitigation measures imposed:

- Impact AES-1 – The increased elevation of the levee would alter the existing visual character and may adversely impact scenic vistas of the San Francisco Bay from Shorebird Park (segment 4) under the two project scenarios (2050 SLR and 2100 SLR) and scenic vistas of the Belmont Hills from Sea Cloud Park (segment 6) under the 2100 SLR project scenario.

  Implementation of the following mitigation measure would help reduce adverse changes to the visual quality and loss of scenic vistas. However, the impact would remain significant and unavoidable because the installation of a sheet pile floodwall would result in a substantial permanent change in the visual quality of the surroundings and block scenic vistas of the bay (segment 4) and Belmont Hills (segment 6).

  Mitigation Measure AES-1: During the landscaping/wall enhancement, the floodwall adjacent to Shorebird Park (segment 4) and adjacent to Sea Cloud Park (segment 6) shall be treated with landscaping and/or variations of wall materials. The City of Foster City Public Works Department and/or the project team shall select drought-tolerant plantings compatible with the Foster City Climate Zone vegetation for this landscaping work suitable for the project site and consistent with the aesthetic characteristic of the surrounding area and reflective of existing plantings in the surrounding area.

- Impact NOISE-3 – Construction of the proposed project could result in the exposure of nearby sensitive receptors, such as residences, schools, hospitals, and retirement homes, to temporary noise levels that would conflict with the City of Foster City Municipal Code regulations, and could generate substantial increases in noise levels for intermittent periods when certain construction activities occur (e.g., pile driving).

  Mitigation Measure NOISE-3: Implementation of the following mitigation measures is recommended for construction activity along segments 5 through 8 and to any staging areas located within 60 feet of a sensitive receptor under the 2050 Sea Level Rise and the 2100 Sea Level Rise scenarios. These measures are summarized below:

Noise-3a: Residences and landowners shall be provided with written notice of construction activity within at least seven days of before work begins. The notice shall state the date of planned construction activity in proximity to that landowner's property and the range of hours during which maximum noise levels are anticipated.

Noise-3b: City of Foster City shall require the project contractor to submit a Construction Noise Management Plan, prepared by a qualified acoustical consultant, that contains a set of site-specific noise attenuation measures, potentially including the use of mobile sound barriers within the project footprint, to further reduce construction noise impacts, for review and approval by the City of Foster City Public Works Department and/or the project team.

Noise-3c: The City of Foster City Public Works Department and/or the project team shall require the project contractor to implement the construction contractor to designate a "noise disturbance coordinator" who shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaints (e.g., beginning work too early, bad muffler) and institute reasonable measures warranted to correct the problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.

Noise-3d: The construction activities shall be limited to the hours of 8:00 a.m. to 5:00 p.m. on weekdays unless deviations from this schedule are approved in advance by the City. Non-construction activities may take place between the hours of 7:00 a.m. and 8:00 a.m. on weekdays and 9:00 a.m. and 4:00 p.m. on Saturdays, but they must be limited to quiet activities and shall not include the use of engine-driven machinery. No actual construction activities may take place between 7:00 a.m. and 8:00 a.m. Forklifts shall be allowed to operate on site between the hours of 5:00 p.m. and 6:30 p.m. on weekdays. The Planning Commission reserves the right to rescind this condition and further restrict construction activities in the event that the public health, safety, and welfare are not protected due to noise levels emanating from the construction project.

Noise-3e: The construction contractor, to minimize construction noise impacts, shall use all engine-driven construction vehicles, equipment, and pneumatic tools that shall be required to use effective intake and exhaust mufflers; equipment shall be properly adjusted and maintained; and all construction equipment shall be equipped with mufflers in accordance with Cal/OSHA standards.

Noise-3f: The construction contractor shall place all stationary construction equipment such that emitted noise is directed away from sensitive receptors

nearest the project site.

Noise-3g: The construction contractor shall locate equipment staging in areas that will create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.

Additional factors that would reduce the severity of this impact include the short-term nature of the impact. Exposure of any given receptor to levels of construction noise greater than 100 dBA would be brief relative to the total duration of each construction activity (Table III-3 of Draft EIR) because the location where the work for each construction activity is occurring would move along the project alignment over time. More specifically, the construction work would move along the project alignment at a speed of approximately 100 feet per day. Therefore, each phase of the construction work would be expected to last no more than one day within 60 feet of any given residence.

Implementation of the above Mitigation Measure NOISE-3 would reduce construction period noise to the extent feasible. However, the construction of the proposed project could still generate noise levels that conflict with the City of Foster City Municipal Code regulations at the producer's property plane temporarily. Therefore, the impact of noise from construction equipment on the project site and in staging areas would conservatively remain significant and unavoidable.

The Draft EIR studied four project alternatives: (1) the No Project/No Build Alternative, which assumed the project would not be developed, and the existing levee would remain in its current condition; (2) the Existing Levee Footprint 2050 SLR Alternative, which assumes the project would improve the existing levee with no deviation from the existing levee alignment; (3) the Horizontal Levee 2050 SLR Alternative, which assumes portions of the levee system would be replaced with earthen fill in what is known as an "ecotone slope" or "horizontal levee" that blend a traditional earthen levee with restored tidal marshes; and (4) the FEMA Freeboard Alternative, which assumes the same alignment and improvement types as the project except that the height would be lowered to meet only the elevations necessary to retain FEMA accreditation and not address sea level rise.

A public hearing was held for the Draft EIR to receive comments on the adequacy of the Draft EIR on January 19, 2017. Members of the public provided comments at the public hearing. During the 45-day comment period, the City also received written comments from seven agencies and three individuals. The staff report prepared for the January 19, 2017 Planning Commission is attached (Attachment 4).

Following the close of the 45-day public review period, a RTC Document was prepared to document responses to comments received on the Draft EIR (Attachment 6). The RTC document includes: a short description of the environmental review process, the comments that were received on the Draft EIR and responses to those comments, and text revisions to the Draft EIR in response to the comments received and/or to amplify or clarify material in the Draft EIR. The RTC document, together with the Draft EIR, constitutes the Final EIR for the project.

On April 18, 2017, the Planning Commission held a Public Hearing to make a recommendation to the City Council on whether or not to certify the EIR. The staff report prepared for the April 18, 2017 Planning Commission meeting is attached (Attachment 5).

The Planning Commission found the Final EIR (which includes the Draft EIR and the RTC document) as an adequate informational document that has been completed in compliance with CEQA and voted 4-0-0-1 to recommend City Council certification of the Final EIR by adoption of Resolution P-09-17.

Prior to taking action to approve the levee design and financing options, the City Council must approve a Resolution certifying that the EIR adequately analyzes environmental impacts associated with the project under CEQA.

Section 15151 of the State CEQA Guidelines includes the following standard for judging the adequacy of the EIR:

> *"An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreements among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good faith effort."*

In connection with approval of the project, the City Council must adopt a Statement of Findings under CEQA. Because there are two significant unavoidable impacts associated with the project, it must also adopt a Statement of Overriding Considerations indicating that the City finds that the benefits of the project outweigh the unavoidable impacts related to aesthetics and noise. Finally, the Council must also adopt the Mitigation Monitoring and Reporting Program, which assigns responsibility and timing for implementation of the mitigation measures.

Design Variations

The Design Variations builds on the analysis of the levee Basis of Design Report presented at the October 17, 2016 City Council meeting. The presentation examined design elevations and adaptation strategies to address different sea level rise scenarios and refined cost estimates for flood protection and Bay Trail restoration. The Design Variations presentation also incorporated feedback received from recent meetings with the regulatory permitting agencies.

After the City Council's direction to proceed with the preliminary design of the hybrid levee wall type analyzed in the Basis of Design Report, the following levee height alternatives were evaluated in conjunction with the estimates of future SLR:

- FEMA Freeboard (minimum required for accreditation)
- FEMA Freeboard + 15 inches of Sea Level Rise for 2050 (2050 SLR)
- FEMA Freeboard + 46 inches of Sea Level Rise for 2100 (2100 SLR)

However, based on recent developments in the regulatory arena and feedback received at the meetings with the permitting agencies, staff understands that the project needs to demonstrate resiliency to SLR because:

- The State recognizes that SLR is a significant threat.
- Bay Conservation and Development Commission (BCDC) requires resilience to the high range estimates of 2050 SLR so "FEMA Freeboard" is no longer a viable option to receive permits to construct the project and obtain accreditation.
- Regional Water Quality Control Board (RWQCB) and Bay Conservation and Development Commission (BCDC) require an adaptation plan to address high range 2100 SLR estimates, which is "Freeboard + 66 inches (2100 High SLR)".

Therefore, only the 2050 SLR and 2100 SLR scenarios were analyzed in detail in the EIR and the FEMA Freeboard scenario was analyzed as a project alternative. In anticipation that the regulatory agencies would require either full build out to the 2100 SLR project scenario or potential to eventually adapt to the 2100 SLR project scenario in the future, the following design variations were developed and evaluated:

1. 2100 SLR - Build to the 2100 SLR scenario elevation now with an estimated cost of $380 million.

2. 2050 SLR and Deep Foundation - Build to the 2050 SLR scenario elevation now, but with a foundation sufficiently deep for the 2100 SLR scenario in order to allow building additional wall on top. The estimated initial cost for this option is $240 million with an estimated future cost of $150 million.

3. 2050 SLR and Future Anchor Wall - Build to the 2050 SLR scenario elevation now with a foundation that will work with a second future tie-back anchor wall. The initial estimated cost for this option is $130 million with a future estimated cost of $200 million.

4. 2050 SLR and Future Adaptation - Build to the 2050 SLR scenario elevation now and use offshore solutions in the future where applicable to dissipate wave energy in front of the wall. The initial estimated cost is $90 million with a potential future cost of $100 million.

The estimated costs for each of these design variations are shown below.

	Adaptation Alternative	Initial Cost	Future Cost	Total
1.	2100 High SLR	$380 million	-	$380 million
2.	2050 SLR and Deep Foundation	$240 million	$150 million	$390 million
3.	2050 SLR and Future Anchor Wall	$130 million	$200 million	$300 million
4.	2050 SLR and Future Adaptation	$90 million	$100 million	$190 million

Each of these design variations are within the scope of the two project variations studied by the EIR: The “FEMA Freeboard with Sea Level Rise for the Year 2050 (2050 SLR)” and the “FEMA Freeboard with Sea Level Rise for the Year 2100 (2100 SLR).” Option 1 is the FEMA Freeboard with Sea Level Rise for the Year 2100 (2100 SLR) project scenario studied in the EIR. Options 2-4 are variations of the "FEMA Freeboard with Sea Level Rise for the Year 2050 (2050 SLR)” project scenario studied in the EIR.

As detailed in the Design Variations presentation, staff recommends that City Council approve the 2050 SLR project scenario analyzed in the EIR and direct staff to further develop and analyze the Option 4 2050 SLR and Future Adaptation Strategy design variation before submitting to regulatory agencies for processing. Based on early regulatory feedback, Option 4 is the most cost-effective option for providing future adaptability to SLR as required by the regulatory agencies with jurisdiction over the project.

Financing Alternatives

As discussed above, staff and the City’s financial advisors recommend that the City Council authorize staff to begin drafting documents for a G.O. bond. Based on Design Alternative 4, and estimated construction and project management costs of $90 million, a 30-year G.O. bond at current interest rates of 3.50% would result in an annual tax levy of approximately $48 per $100,000 of assessed valuation. Therefore, a homeowner with an assessed valuation of $1,000,000 would see a property tax bill assessment of $480 compared to paying for flood insurance (which at current market

rates would cost approximately $1,500-$2,000 each year) should the City not upgrade its levee system and be placed as a FEMA high risk flood zone.

Staff Recommendation

Staff recommends that the City Council adopt the attached resolutions:

1. Certifying the EIR;

2. Adopting CEQA Findings, Statement of Overriding Considerations, and Mitigation Monitoring and Reporting Program (MMRP) for the Project (EA-15-002); and

3. Approving the 2050 SLR scenario analyzed in the EIR, and directing staff to further develop and analyze the Option 4 2050 SLR and Future Adaptation Strategy design variation before submitting to regulatory agencies for processing; and directing staff to proceed with the 30-year General Obligation Bond financing alternative.

Levee Subcommittee

The Levee Subcommittee, consisting of Mayor Bronitsky and Councilmember Pollard, has reviewed and discussed this analysis and support staff's recommendation, as presented in the subject staff report.

FISCAL IMPACT

The Levee Project Team will prepare the design documents, associated cost estimates, and miscellaneous financial documents, based on the "2050 SLR and Future Adaptation" strategy.

Next Steps

Community Outreach
Prepare Ballot Measure
Obtain Regulatory Permits and Authorizations
Prepare Construction Documents

Attachments:

- Attachment 1 - Resolution Certifying the Final EIR
- Attachment 2 - Resolution Adopting the Statement of Findings, Statement of

Overriding Considerations and MMRP

- Attachment 3 - Resolution Directing Staff to: (1) Implement the “2050 SLR and Future Adaptation Strategy”; and (2) Proceed with General Obligation Bond Funding
- Attachment 4 - Staff Report for January 19, 2017 Planning Commission Meeting (without attachments)
- Attachment 5 - Staff Report for April 18, 2017 Planning Commission Meeting (without attachments)
- Attachment 6 - Response to Comments Document dated March 2017
- Attachment 7 - Draft Environmental Impact Report dated February 2017*

*Available for review at the Community Development Department at City Hall and at www.fostercity.org