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Chapter / Section	Project Type	Primary Reviewer	Comments
Executive Summary	Gravity Sewer Rehab / Replace	Engineering Director	
Project Background and Purpose	Gravity Sewer Rehab / Replace		
Existing Facility / Asset Conditions	Gravity Sewer Rehab / Replace	Asset Management	
Hydraulic Evaluation	Gravity Sewer Rehab / Replace	Hydraulic Analysis Manager	
Environmental / Permitting	Gravity Sewer Rehab / Replace	Lauren Grimmer	
Rehab/Replacement Methods & Materials	Gravity Sewer Rehab / Replace		
Alternative Development/Comparison/Selection	Gravity Sewer Rehab / Replace	Interceptors, Ron Corby/JD	
Easements / Real Estate Considerations	Gravity Sewer Rehab / Replace	Real Estate Managers	
Potential impacts to private utilities regarding relocations, costs, easement needs, schedule delays.	Gravity Sewer Rehab / Replace	Real Estate Managers	Consider costs to HRSD for private utility relocations and/or construction assistance.
Alternatives Evaluation / Life Cycle Cost Analysis / TBL / HRSD staffing O&M requirements / Rankings	Gravity Sewer Rehab / Replace	Ryan Radspinner	
Project Total Budget Development (all phases)	Gravity Sewer Rehab / Replace	PM/Chief/Finance	
Conclusion and Recommendations	Gravity Sewer Rehab / Replace		
Project Proposed Completion Schedule, Phasing, Project Delivery	Gravity Sewer Rehab / Replace		Include OPCC and proposed HRSD review periods, meetings, etc. where HRSD staff would need to be involved
Risk Identification and Possible Mitigation Considerations	Gravity Sewer Rehab / Replace		
Stakeholder / Public Coordination and Communication Approach	Gravity Sewer Rehab / Replace	Lisa Bolen	
CWRLF Requirements (if applicable)	Gravity Sewer Rehab / Replace	Melissa Josey-White	
Operation and Maintenance Considerations	Gravity Sewer Rehab / Replace	Interceptors	
Preconstruction Assessment Damage Mitigation	Gravity Sewer Rehab / Replace	Real Estate Managers	Evaluate proposed alternatives for potential to cause damage to nearby structures. While possibly too early to do a full assessment, they should be able to determine the relative risk of each alternative to damage nearby structures, etc. Consider combining with Risk ID and Mitigation section
Appendices, including preliminary drawings, as appropriate	Gravity Sewer Rehab / Replace		

Chapter / Section	Project Type	Primary Reviewer	Comments
Executive Summary	Force Main	Engineering Director	
Project Background and Purpose	Force Main		
Existing Facility / Asset Conditions	Force Main	Asset Management	
Hydraulic Evaluation	Force Main	Hydraulic Analysis Manager	
Environmental / Permitting	Force Main	Lauren Grimmer	
Pipeline Methods & Materials	Force Main	Interceptors	
Alternative Development/Comparison/Selection	Force Main	Interceptors	Include evaluation of FM size vs. velocity for the anticipated range of flows
Easements / Real Estate Considerations	Force Main	Real Estate Managers	
Potential impacts to private utilities regarding relocations, costs, easement needs, schedule delays.	Force Main	Real Estate Managers	Consider costs to HRSD for private utility relocations and/or construction assistance.
Alternatives Evaluation / Life Cycle Cost Analysis / TBL / HRSD staffing O&M requirements / Rankings	Force Main	Ryan Radspinner	
Project Total Budget Development (all phases)	Force Main	PM/Chief/Finance	
Conclusion and Recommendations	Force Main		
Project Proposed Completion Schedule, Phasing, Project Delivery	Force Main		Include OPCC and proposed HRSD review periods, meetings, etc. where HRSD staff would need to be involved
Risk Identification and Possible Mitigation Considerations	Force Main		
Stakeholder / Public Coordination and Communication Approach	Force Main	Lisa Bolen	
CWRLF Requirements (if applicable)	Force Main	Melissa Josey-White	
Operation and Maintenance Considerations	Force Main	Interceptors	Location of air vents, valves and other items requiring periodic or eventual maintenance, including long-term replacement of anodes, bolts, etc.
Electrical, Instrumentation and Control Considerations (is applicable)	Force Main	Electrical and Instrumentation	Generally only if there are automated valves, rectifier stations, pressure/FM/Salinity/PH meters, etc.
Prconstruction Assessment Damage Mitigation	Force Main	Real Estate Managers	Evaluate proposed alternatives for potential to cause damage to nearby structures. While possibly too early to do a full assessment, they should be able to determine the relative risk of each alternative to damage nearby structures, etc. Consider combining with Risk ID and Mitigation section
Appendices, including preliminary drawings, as appropriate	Force Main		
Coordination	Force Main		HRSD and External projects, maintenance activities, and initiatives

Chapter / Section	Project Type	Primary Reviewer	Comments
Executive Summary	PS / PRS / OLSF	Engineering Director	
Project Background and Purpose	PS / PRS / OLSF		
Existing Facility / Asset Conditions	PS / PRS / OLSF	AM	
Hydraulic Evaluation	PS / PRS / OLSF	HAMs	
Alternative Development/Comparison/Selection	PS / PRS / OLSF		Include preliminary pump selections showing number of pumps, system curve and where proposed pumps will operate relative to POR across the min/max dry, and 2yr/5yr peak flow conditions
Easements / Real Estate Considerations	PS / PRS / OLSF	Real Estate Managers	Note that for any properties purchased for this project, a phase 1 ESA to be performed.
Potential impacts to private utilities regarding relocations, costs, easement needs, schedule delays.	PS / PRS / OLSF	Real Estate Managers	Account for needed easements and access / setbacks for private utilities currently located on parcels being considered for HRSD purchase and for proposed private utilities to service constructed HRSD facilities on parcel.
Standby Power, Electrical, Instrumentation and Control Considerations	PS / PRS / OLSF	E&I Division, Automotive	
Odor Control Analysis and Considerations	PS / PRS / OLSF	Mark Feltner	
Alternatives Evaluation / Life Cycle Cost Analysis / TBL / HRSD staffing O&M requirements / Rankings	PS / PRS / OLSF	BCE Team	Should ISI Envision workshop be deferred to early Design Phase?
Environmental / Permitting	PS / PRS / OLSF	Lauren Grimmer	Environmental Site Assessment, Wetland Delineation, Protected Species, Invasive Species, Historical & Cultural Resources
Project Total Budget Development (all phases)	PS / PRS / OLSF	PM/Chief/Finance	Include OPCC
Conclusion and Recommendations	PS / PRS / OLSF		What would be included in this section that isn't discussed in the ES or some other section of the PER?
Project Proposed Completion Schedule, Phasing, Project Delivery	PS / PRS / OLSF		Include OPCC and proposed HRSD review periods, meetings, etc. where HRSD staff would need to be involved
Architectural and Site Considerations and Options	PS / PRS / OLSF	Architectural Review Committee	Provide architectural options as per standards
Risk Identification and Possible Mitigation Considerations	PS / PRS / OLSF		
Stakeholder / Public Coordination and Communication Approach	PS / PRS / OLSF	Lisa Bolen	
CWRLF Requirements (if applicable)	PS / PRS / OLSF	Melissa Josey-White	
Operation and Maintenance Considerations	PS / PRS / OLSF		

Preconstruction Assessment Damage Mitigation	PS / PRS / OLSF	Real Estate Managers	Evaluate proposed alternatives for potential to cause damage to nearby structures. While possibly too early to do a full assessment, they should be able to determine the relative risk of each alternative to damage nearby structures, etc. Consider combining with Risk ID and Mitigation section
Hydraulic Institute Compliance	PS / PRS / OLSF	Interceptors/PM	Tabular review of how the the proposed design will comply with HI standards (this may need to be delayed until further in design)
-- Consider adding to above... "& Physical Modeling"			Determination if and when physical modeling will be performed with consideration of the type of project (new/replacement vs. rehabilitation)
Appendices, including preliminary drawings, as appropriate	PS / PRS / OLSF		
Sea Level Rise and Resilience	PS / PRS / OLSF	Planning & Analysis	What elevation will protective measures be taken and what hardening approaches will generally be considered/employed? If the current elevation differs from HRSD's long term planning elevation, what is the feasibility/cost to provide that level of protection today or to retrofit the asset(s) in the future.
Site Design	PS / PRS / OLSF		Access, Parking, Driveway, Stormwater Management, E&S
Coordination	PS / PRS / OLSF		HRSD and External projects, maintenance activities, and initiatives

Chapter / Section	Project Type	Primary Reviewer	Comments
Executive Summary	Buildings	Engineering Director	
Project Background and Purpose	Buildings		
Existing Facility / Asset Conditions	Buildings	Asset Management	
Alternative	Buildings		
Development/Comparison/Selection			
Easements / Real Estate Considerations	Buildings	Real Estate Managers	Note that for any properties purchased for this project, a phase 1 ESA to be performed.
Potential impacts to private utilities regarding relocations, costs, easement needs, schedule delays.	Buildings	Real Estate Managers	Account for needed easements and access / setbacks for private utilities currently located on parcels being considered for HRSD purchase and for proposed private utilities to service constructed HRSD facilities on parcel.
Standby Power, Electrical, Instrumentation and Control Considerations	Buildings	E&I Division, Automotive	
Materials of Construction	Buildings	Ray Holmes	Roof and exterior walls
HVAC Considerations	Buildings	Facility Maint/Ops	Note that FM only maintains main office facilities - plants are responsible for their own maintenance
Alternatives Evaluation / Life Cycle Cost Analysis / TBL / HRSD staffing O&M requirements / Rankings	Buildings	Ryan Radspinner	
Environmental / Permitting	Buildings	Lauren Grimmer	
Project Total Budget Development (all phases)	Buildings	PM/Chief/Finance	Include OPCC
Conclusion and Recommendations	Buildings		
Project Proposed Completion Schedule, Phasing, Project Delivery	Buildings		Include OPCC and proposed HRSD review periods, meetings, etc. where HRSD staff would need to be involved
Architectural and Site Considerations and Options	Buildings	Architectural Review Committee	Provide architectural options as per standards
Risk Identification and Possible Mitigation Considerations	Buildings		
Stakeholder / Public Coordination and Communication Approach	Buildings	Lisa Bolen	
CWRLF Requirements (if applicable)	Buildings	Melissa Josey-White	
Operation and Maintenance Considerations	Buildings	Facility Maint/Ops	assuming this may also include admin building on WWTP sites
Preconstruction Assessment Damage Mitigation	Buildings	Real Estate Managers	Evaluate proposed alternatives for potential to cause damage to nearby structures. While possibly too early to do a full assessment, they should be able to determine the relative risk of each alternative to damage nearby structures, etc.

Appendices, including preliminary drawings, as appropriate

Sea Level Rise and Reliance

Buildings

Buildings

Planning & Analysis

What elevation will protective measures be taken and what hardening approaches will generally be considered/employed? If the current elevation differs from HRSD's long term planning elevation, what is the feasibility/cost to provide that level of protection today or to retrofit the asset(s) in the future.

Chapter / Section	Project Type	Primary Reviewer	Comments
Executive Summary	Treatment / Process	Engineering Director	
Project Background and Purpose	Treatment / Process		
Existing Facility / Asset Conditions	Treatment / Process	Asset Management	
Hydraulic / Process Evaluation	Treatment / Process	Hydraulic Analysis Manager	
Alternative Development/Comparison/Selection	Treatment / Process		Include preliminary pump selections showing number of pumps, system curve and where proposed pumps will operate relative to POR across the min/max dry, and 2yr/5yr peak flow conditions
Real Estate Considerations	Treatment / Process	Real Estate Managers	Note that for any properties purchased for this project, a phase 1 ESA to be performed.
Standby Power, Electrical, Instrumentation and Control Considerations	Treatment / Process	E&I Division, Automotive	
Odor Control Analysis and Considerations	Treatment / Process	Mark Feltner	
Alternatives Evaluation / Life Cycle Cost Analysis / TBL / HRSD staffing O&M requirements / Rankings	Treatment / Process	Ryan Radspinner	
Environmental / Permitting	Treatment / Process	Lauren Grimmer	
Project Total Budget Development (all phases)	Treatment / Process	PM/Chief/Finance	Include OPCC
Conclusion and Recommendations	Treatment / Process		
Project Proposed Completion Schedule, Phasing, MOPO, Project Delivery	Treatment / Process		Include OPCC and proposed HRSD review periods, meetings, etc. where HRSD staff would need to be involved
Architectural and Site Considerations and Options	Treatment / Process	Architectural Review Committee	Provide architectural options as per standards
Risk Identification and Possible Mitigation Considerations	Treatment / Process		
Stakeholder / Public Coordination and Communication Approach	Treatment / Process	Lisa Bolen	
CWRLF Requirements (if applicable)	Treatment / Process	Melissa Josey-White	
Operation and Maintenance Considerations	Treatment / Process	Operations	
Prconstruction Assessment Damage Mitigation	Treatment / Process	Real Estate Managers	Evaluate proposed alternatives for potential to cause damage to nearby structures. While possibly too early to do a full assessment, they should be able to determine the relative risk of each alternative to damage nearby structures, etc. Consider combining with Risk ID and Mitigation section
Hydraulic Institute Compliance	Treatment / Process	Operations	Applicable to any pump application. Tabular review of how the the proposed design will comply with HI standards (this may need to be delayed until further in design)



Appendices, including preliminary drawings, as appropriate	Treatment / Process		
Sea Level Rise and Relience	Treatment / Process	Planning & Analysis	What elevation will protective measures be taken and what hardening approaches will generally be considered/employed? If the current elevation differs from HRSD's long term planning elevation, what is the feasibility/cost to provide that level of protection today or to retrofit the asset(s) in the future.