Print Application

RFP Title: Urban Flood Protection Grant Program - January 2020

Project Title: Manila Flood Reduction and Drainage Enhancement Project

Estimated Date of Completion:	12/31/2022
Funds Requested($):	2,502,000.00
Other Sources of Funds($):	10,000.00
Total Budget($):	2,512,000.00

Applicant Organization: Manila Community Services District

Applicant Address: 1901 Park St , Arcata , ca - 95521

Federal Tax ID: 941653492

County: Humboldt **City/Town:** Manila

Project Address: 1901 Park St Arcata CA 95521

Senate District	02 02,
Assembly District	02 02,
US Congressional District	02 02,

Project Description:
A community-wide approach to address persistent flooding and drainage problems caused by undersized, disconnected, and failing infrastructure. A combination of simple, nature-based solutions and common storm water conveyance, consisting of vegetated bioswales, a rain garden, replacement of undersized and failing culverts, and new culverts in select locations are proposed. The project, led by the Manila Community Services District, will incorporate multi-objective, multi-benefit project components that address flood reduction, ecosystem services, and resiliency to sea level rise and climate change while enhancing communication and partnerships with Humboldt County, Caltrans, North Coast Rail Association, and community members.

Latitude: 40.852150000 **Longitude:** -124.165650000

Cordinates Represent: CSD Office

Coordinates Determined Using: SOARS Map

Project Director (Applicant's Representative Authorized in Resolution) **(Signature required at bottom of this page)**

Name:	Christopher - Drop	Title:	Project Director: Authorized Representative
Phone:	707-444-3803	Email:	manilacsd1@sbcglobal.net

Project Manager - Person with day to day responsibility for project (if different from authorized representative)

Name:	Brett - Vivyan	Title:	Project Manager: Day to day contact
Phone:	707-267-2275	Email:	brett.vivyan@ghd.com

I certify that the information contained in this project application, including required attachments, is complete and accurate

Signed: Christopher Drop **Date:** 06/12/2020

Applicant's Authorized Representative as shown in Resolution

Print Name: Christopher Drop **Title:** General Manager

Application Overview

RFP Title: Urban Flood Protection Grant Program - January 2020

Submitting Organization: Manila Community Services District

Submitting Organization Division:

Project Title: Manila Flood Reduction and Drainage Enhancement Project

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APPLICANT DETAILS

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Applicant Organization Division:

Applicant Address: 1901 Park St , Arcata , ca - 95521

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Latitude : 40.852150000 **Longitude:** -124.165650000

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Project Address (or nearest cross street): 1901 Park St Arcata CA 95521

Nearest City/Town: Manila

Cordinates Represent: CSD Office

Coordinates Determined Using: SOARS Map

PROJECT BUDGET

Funds Requested($): 2,502,000.00

Other Sources of Funds($): 10,000.00

Total Budget($): 2,512,000.00

Funding Program	Applied
Proposition 68 - Urban Flood Protection Grant Program	Yes

Project Management Role	Title	First Name	Last Name	Phone	Fax	Email
Project Director: Authorized Representative	Manila CSD	Christopher	Drop	707-444-3803	707-444-0231	manilacsd1@sbcglobal.net
Project Manager: Day to day contact	GHD	Brett	Vivyan	707-267-2275		brett.vivyan@ghd.com

Applicant Information

Name: Manila Community Services District

Division:

Address: 1901 Park St Arcata, ca , 95521

Federal Tax ID: 941653492

Person Submitting Information

Submitter Name: Christopher Drop

Submitter Phone: 707-444-3803

Submitter Fax: 707-444-0231

Submitter Email: manilacsd1@sbcglobal.net

Legislative Information	Primary	Additional District(s)
Senate District	02	02,
Assembly District	02	02,
US Congressional District	02	02,

Contacts	Name	Phone	Email
Manila Community Services District	Christopher Drop	707-444-3803	manilacsd1@sbcglobal.net

Cooperating Entities	Role	Name	Phone	Email
GHD Engineering	Project Management/Design/Engineering/Permitting	Brett Vivyan	707-267-2275	brett.vivyan@ghd.com
Humboldt County Public Works	Permitting, infrastructure	Hank Seeman	707-268-2680	HSeemann@co.humboldt.ca.us
North Coast Rail Authority	Encroachment Permit	David Anderson	603-944-9005	danderson@are-corp.com

Pre Submission Attachment Title	Phase	Submission Period	Date & Time
1.2 Photographs	PHASE1	PRE SUBMISSION	6/12/2020 4:43:58 PM
1.3 Cost Estimate	PHASE1	PRE SUBMISSION	6/12/2020 2:26:22 PM
1.4 Community Engagement Summary	PHASE1	PRE SUBMISSION	6/12/2020 4:20:22 PM
1.5 Site Plan	PHASE1	PRE SUBMISSION	6/12/2020 2:15:33 PM

Download all Pre Submission Attachments

Post Submission Attachment Title	Phase	Date & Time Attached
No Post Submission Attachments Available to Display		

Post Award Attachment Title	Phase	Date & Time Attached
No Post Award Attachments Available to Display		

Questionnaire - Phase1

STEP 1: PROJECT PROPOSAL

Please go to http://resources.ca.gov/grants/ufp/ to access the program guidelines and find the templates to upload on the Attachments tab.

PROJECT SUMMARY

Describe the discrete project including expected project deliverables and current site conditions.

Answer: The Project will apply a community-wide approach to address persistent flooding and drainage problems caused by undersized, disconnected, and failing infrastructure. Simple solutions, consisting of vegetated bioswales, a rain garden, replacement of undersized and failing culverts, and new culverts in select locations are proposed. The project, led by the Manila Community Services District, will incorporate multi-objective, multi-benefit project components that address flood reduction, ecosystem services, and resiliency to sea level rise and climate change.

Project Need

The community of Manila has been plagued with chronic flooding every winter for decades. Located on a half-mile wide peninsula between the Pacific Ocean and Humboldt Bay, within a patchwork of jurisdictions, winter rains and shallow ground water overwhelm the existing drainage system, resulting in widespread flooding of roadways, residences, and public spaces within this severely disadvantaged community. The proposed project provides an opportunity for the Manila Community Services District to coordinate with the County of Humboldt, North Coast Rail Authority (NCRA), California Department of Transportation (Caltrans), and private property owners to enhance the community by reducing flooding, providing resiliency to sea level rise and climate change, and enhancing habitat.

Current Site Condition

The existing drainage network lacks connectivity and sufficient capacity with single purpose fixes scattered throughout the community, without consideration of each system's reliance on the functioning of other systems owned by Manila Community Services District (District), the County of Humboldt, the North Coast Rail Association, Caltrans and private properties. In many locations surrounding local roads and homes, there is no planned drainage whatsoever, contributing to flooding of roadways, driveways, and residences. Culverts are undersized and failing, drainage ditches lack appropriate conveyance capacity. Many drainage paths span multiple jurisdictions, each relying on the capacity and condition of the next downstream reach.

Project Elements
Project components include:
•Bioswales: 15,000 linear feet of bioswales will be graded and planted with native species along existing and new drainage paths.
•Replace Existing Culverts: 1,000 feet of existing culverts that are undersized and or failing will be replaced with new, larger capacity culverts ranging from 12 to 36 inches in diameter.
•New Culverts: 700 linear feet of new culvert will be installed in select locations, ranging from 18 to 24 inches in diameter.
•Rain Garden: 5,000 square feet of concrete will be removed and replaced with a rain garden.

Project Deliverables
Project deliverables include:
•Monthly or Quarterly Invoices
•Alternatives Analysis
•30% Design Plans
•60% Design Plans
•100% Design Plans and Specifications
•Basis of Design Report
•CEQA Compliance (Initial Study/Mitigated Negative Declaration)
•Project Permits: CWA 401, CWA 404, CDFW 1600, Coastal Development Permit, Humboldt County Conditional Use Permit, County Encroachment Permit
•Bid Package (Contract Documents)
•Project Construction (Progress Payments)
•Construction Management (Submittals, Photos, Daily Logs)

Project Timeline
Project implementation will require 3 years. Year 1 will focus on developing the Alternative Analysis, 30% design, 60% design, and CEQA. Year 2 will focus on completing the 100% design, obtaining permits, and bidding the project. Year 3 will focus on project construction and construction management.

PROJECT QUESTIONS

Applicants must answer the following questions, as applicable. If a question does not apply to the project, indicate "Not Applicable" with a brief explanation. Do not leave blank fields.

Eligibility, Statutory Requirements and Project Need

1 **Explain how the project addresses flooding in an urbanized area and will protect persons and property from flood damage. Include information on current conditions and a brief history of flooding on the project site.**

Answer: Chronic flooding currently impacts Manila residents and pedestrians throughout the community, every winter. Impacts include persistent roadway and driveway flooding from average rainfall events due to undersized culverts, undersized roadway ditches, and lack of connectivity between facilities. In many locations, roadside drainage facilities are entirely absent, resulting in reduced or closed travel lanes and ponding that inhibits access to residences. Roadway flooding and access limitations related to flooding impact mobility through and within Manila and create hazardous conditions for pedestrians and automobiles. Access to public infrastructure such as water meters is inhibited throughout the winter. Flooding in some areas results in inflow to the Septic Tank Effluent Pump system posing potential risks to septic tank overflows and increasing the cost of pumping and maintaining the wastewater system. Flooding in Manila has become more severe over time as connectivity between the limited existing facilities has diminished and undersized roadside ditches and failing culverts constrain hydraulic capacity.

While rural in character, Manila is considered an urban area under the Humboldt County General Plan. Urban Service Areas are described as areas where public sewer and water exist or may be feasible and urban level densities of greater than one unit per acre may be appropriate. The Manila Community Services District provides water and sewer services to all Manila residents and businesses. Single and multi-family homes are typically located on parcels less than one acre.

The General Plan's Phased Urban Development promotes existing focused community development patterns and the

efficient use of public infrastructure to provide higher development potential in urban areas with access to public sewer and water. Manila fits this targeted development pattern. Rural Lands are generally characterized by agriculture and timber and a lack of connection to public services.

2 **How does the project provide flood mitigation in accordance with applicable design storm requirements (local, state or federal standards)?**

Answer: New drainage facilities connecting to existing Caltrans facilities will use a 10-year design storm and evaluate downstream hydraulics as listed in the Caltrans Highway Design Manual Desirable Roadway Drainage Guidelines. Other Project facilities will be designed to convey and or store a minimum 2-year, 24-hour design storm of 2.99 inches (NOAA, 2020), as identified in the Humboldt County Low Impact Development Stormwater Manual. In the limited areas that are located within the FEMA Special Flood Hazard Area (Zone A, Zone AE, Zone VE), the project will not cause a rise in the Base Flood Elevation, which is due to tidal water levels.

3 **How will the project be implemented with Low Impact Development (LID) techniques? If not, describe why LID is not feasible.**

Answer: The project is based upon LID techniques to emphasize conservation and use of on-site natural features to capture, treat and infiltrate stormwater to protect water quality in Manila and adjacent Humboldt Bay. The project will be consistent with LID approaches to stormwater management by implementing a series of small scale, landscape-based features throughout the community. Features include bioswales, removing impervious asphalt and converting to rain gardens, and plating native plant species. Culverts will be placed under roadways and driveways to convey storm water off existing impervious areas, increase capacity and hydraulically connect existing and new system components. The project will not include any new or expanded impervious surfaces.

4 **Describe any innovative techniques to reduce flooding to be implemented in the project.**

Answer: Innovative techniques included in the project to reduce flooding include removal of an impervious concrete courtyard and creation of a large 5,000 square foot bioretention facility/rain garden at the Manila Community Center currently leased to a K-8 charter school and approximately 15,000 linear feet of bio-swales, planted with native plant species. The project is also innovative in that it takes a community-wide, landscape-scale approach to reducing flood risk and flood-related impacts by implementing a series of small scale, landscape-based features throughout the community of Manila. The project will achieve improved stormwater drainage and flood impact reduction without increasing the area of pervious surfaces; in fact, pervious surfaces will be reduced as a result of this project.

5 **How will the effectiveness of the project be monitored and assessed?**

Answer: Effectiveness monitoring will be based on comparison of pre- and post-project photographs taken at established photo points during average rainfall events. A minimum of one photo point will be established at each major project element. Comparison of pre- and post-project photographs will enable documentation of progress made toward provide relief from chronic flooding in Manila.

6 **Describe the multiple benefits offered by the project (e.g., economic, environmental, social, improved physical and mental health, etc.).**

Answer: Benefits provided by the project include:

I. Relief from existing flood related impacts – Manila is plagued by chronic flooding issues related to insufficient stormwater drainage. The project will provide relief to local chronic flooding.

II. Flood risk reduction – Improving the capacity of Manila's storm drainage capacity will reduce the risk of future flood-related impacts.

III. Protection of public infrastructure - Upgrading culverts and implementing bioswales in Manila will protect local County roadways from degradation as well as State Route 255, which bi-sects the community. Water meters are regularly submerged limiting the District's ability to read meters and bill customers and inflow to the Septic Tank Effluent Pump System increases pumping costs and poses risk to sewer overflows

IV. Protection of private property - By its very nature, Manila is a low lying coastal community. Residences are low in elevation and suffer from localized flooding (ponding on private property, impeded driveway access, and structure flooding) due to overflow and impediments in the existing stormwater system. Flood-related impacts related to insufficient drainage on adjacent public roadways will be addressed through this project, thus protecting private

property as well.

V. Maintain and enhance community mobility and circulation – Local flooding during average rain events makes it difficult for pedestrian, bicycle, and traffic circulation around and through Manila. Reducing roadway flooding will maintain and enhance physical access throughout the community.

VI. Water quality protection and enhancement – Enhancement with bioswales will also enhance water quality in on-site wetlands and the adjacent waters of Humboldt Bay.

VII. Improved carbon sequestration – Enhanced wetlands within bioswales will increase rates of carbon sequestration.

VIII. Increase sea level rise resiliency – Based on contemporary sea level rise estimates (Ocean Protection Council 2018), flood impacts in Manila will become exacerbated with rising sea levels. Improving storm drainage and enhancing wetlands within bioswales will increase Manila's resiliency against these future impacts.

IX. Increase resiliency to climate change impacts – With climate change, altered precipitation patterns will likely result in higher-intensity rainfall events. Given average rainfall events already result in flood-related impacts, higher-intensity rainfall will increase flood-related impacts. Improving the storm drainage network and enhancing wetlands will improve resiliency to future climate change impacts.

7 **If the project is serving either a disadvantaged or a severely disadvantaged community, specify which type of community and the tool used to make the determination.**

Answer: According to the DWR DAC Mapping Tool, the entire community of Manila is a severely disadvantaged community(SDAC) with a median household income of $34,236

https://gis.water.ca.gov/app/dacs/

8 **If the project is serving a disadvantaged or severely disadvantaged community, explain how the project is serving the community and list the direct benefits provided. (See definition of Serving a Disadvantaged or Severely Disadvantaged Community in Appendix P of the Guidelines.)**

Answer: Direct benefits to serving a severely disadvantaged community provided by the project include:

1. Training and Workforce Education – District staff will be trained and educated on operations and maintenance of the stormwater system. District staff will also become more familiar with the standard procedures to coordinate operations with the County and Caltrans.

2. Job Opportunities – Project planning and construction will result in employment opportunities for the local workforce. Project construction is likely to require up to 5 months and will involve a workforce of approximately 14 California Conservation Corps crew members from the Fortuna, CA site and 5-10 individuals with a general contractor.

3. Educational and Recreational Opportunities –
A new bioretention facility (wetland) will be created at the public charter school housed in the Manila Community Center. The bioretention facility is within the courtyard, adjacent to learning classrooms and will be a focal point of the school campus, providing opportunity for public education about wetlands and stormwater.

Drainage and wetlands improvements adjacent to Manila Community Park will reduce flooding impacting the entrance to the parking lot on Peninsula Drive, improving access to the community park.

Public outreach will be conducted throughout the design and construction process to engage the community and educate community members about LID features and balancing flood reduction with ecosystem services.

4. Reduced Pollution Burden – Wetland enhancements will improve water quality in adjacent Humboldt Bay. As many of the local public roadways throughout Manila remain unpaved, improvements to storm drainage will reduce erosion and resulting turbidity/fine sediment impacts to Humboldt Bay.

5. Increased Resilience to Climate Change – With climate change, sea level elevations will rise and exacerbate existing flooding. Additionally, higher-intensity rainfall is expected and would overwhelm the present-day storm drainage system, causing significant flooding. Improving drainage and enhancing wetlands will increase flood capacity and, as a result, climate change resiliency to this very vulnerable community.

9 **If the project is not serving a disadvantaged or severely disadvantaged community, describe how the 25 percent match requirement will be met (private, federal, state, or local funding; in-kind services; etc.).**

Answer: N/A- Manila is a SDAC

10 **If the project is subject to the Stormwater Resource Planning Act, provide the name of the Storm Water Resource Plan (SWRP) or functionally equivalent plan that incorporates the project.**

Answer: Manila is a severely disadvantaged community with a population of 750 and not a co-permittee for an MS4. The project is not applicable to the guidelines per Water Code section 10563 and therefore does not require a Stormwater Resource Plan

11 **If the project is subject to the Stormwater Resource Planning Act but is not included in a SWRP or functionally equivalent plan, explain why. Describe steps taken to incorporate the project into a new or existing SWRP or functionally equivalent plan and the anticipated timeline for plan completion or project incorporation.**

Answer: N/A

12 **If applicable, how will the project impact communities upstream or downstream from the project site?**

Answer: Manila is located on a half-mile wide peninsula between the Pacific Ocean and Humboldt Bay. No communities are located upstream or downstream of Manila, as all flow in the proposed storm water facilities originates in Manila and discharges to Humboldt Bay. Water quality benefits achieved through this project will directly improve the water quality of Humboldt Bay. Anticipated improvements resulting from erosion reduction and wetland improvements include a decrease in fine sediments, nutrients such as nitrates and phosphates, and other pollutants. Neighboring communities along the shoreline of Humboldt Bay include the Town of Samoa, City of Eureka and the City of Arcata. These communities would not be affected by the project.

13 **Explain how the project addresses the State's critical need to address flooding and how it is consistent with the California Water Action Plan.**

Answer: The California Water Action Plan (2016 Update) calls for increased flood protection as well as the protection and restoration of important ecosystems, such as wetlands. The Plan specifically calls for coordinated and streamlined flood control efforts that result in multi-benefit flood and stormwater projects to help improve flood protection for existing communities and infrastructure. The project specifically addresses the Plan's objective to encourage flood projects that plan for climate change and achieve multiple benefits. Multiple benefits achieved through the proposed project include reducing impacts from flooding, reducing the risk of flood-related impacts, protecting private and public infrastructure, maintaining and enhancing community mobility, enhancing wetlands, improving water quality and carbon sequestration, and increasing resiliency to sea level rise and climate change.

14 **For development projects, how will the project provide workforce education and training, contractor, and job opportunities for disadvantaged communities? If not applicable or practicable, explain why.**

Answer: Project planning and construction will result in employment opportunities for the local workforce for approximately 24-36 months. Project planning will provide opportunities for multiple levels of engineers, planners, scientists and District staff to develop innovative strategies to capture, treat and infiltrate stormwater to protect water quality in Manila and adjacent Humboldt Bay using local, state and federal design guidelines and recommendations.

Project construction is likely to require up to 5 months and will involve a workforce of approximately 14 California Conservation Corps crew members from the Fortuna, CA site and 5-10 individuals with a general contractor.

15 **For development projects, describe how the following is included in the project design. If not feasible, explain why:**

a. Efficient use and conservation of water supplies.
b. Use of recycled water.
c. Storm water capture to reduce storm water runoff, reduce water pollution and/or recharge groundwater supplies.
d. Provision of safe and reliable drinking water supplies to park and open-space visitors.

Answer: a.Efficient use and conservation of water supplies.

During construction, the use of water supplies will be limited to dust control, required to meet air quality standards established by the North Coast Regional Air Quality Management District. The quantity of water required to implement dust control requirements is not expected to be significant.

b.Use of recycled water.

During construction, local dewatering may be necessary to protect water quality and meet permitting conditions. Water sourced from dewatering activities will be pumped into Baker tanks (or similar) or dewatering bags and recycled for dust control purposes, consistent with the efficient use and conservation of water supplies.

c.Storm water capture to reduce storm water runoff, reduce water pollution and/or recharge groundwater supplies.

The 5,000 square foot rain garden will capture and infiltrate storm water and plant uptake. Bioswales provide pathways for infiltration and plant uptake throughout 15,000 linear feet of permeable area.

d.Provision of safe and reliable drinking water supplies to park and open-space visitors.

Drinking water in Manila is sourced from the Mad River via the Humboldt Bay Municipal Water District with delivery provided by the Manila Community Services District (applicant). Project construction will not impact existing utility infrastructure for drinking water or result in a service interruption.

16 **What will happen to the project if grant funding is not awarded (e.g., loss of matching funds, impacts on overall project vision, project momentum, timing difficulties, etc.)?**

Answer: Without grant funding through the Urban Flood Protection Grant program, this project would not be implemented and will lose valuable momentum created through community outreach. As a severely disadvantaged community, grant funding is critical to the District's ability to implement projects. Storm drainage in Manila would continue to be a problem until additional grant funds could be identified and secured. Additional sources of grant funding have not been identified at this time.

Statutory and Program Priorities

17 **For development projects, what is the status of applicant's consultation with the California Conservation Corps or a certified community conservation corps about the project?**

Answer: Consultation with the CCC Fortuna Center indicated that this project is feasible for CCC services to be used. Corps members can assist with vegetation management around the drainages and native plant installation.

Consultation with the CALCC indicated their participation in this project is not feasible (see attached CALCC response form).

18 **For development projects, describe any water efficiencies, storm water capture for infiltration or reuse, or carbon sequestration and greenhouse gas emissions reduction features included in the project design. If not feasible, explain why.**

Answer: Planned bioswlaes will result in an increase in carbon sequestration and associated reduction in greenhouse gases. Bioswales will provide freshwater and brackish wetland habitat. Recent work by Philip Williams and Associates (2009) suggests that freshwater wetlands, riparian forest, brackish wetlands, and salt marsh all have high rates of carbon sequestration. However, wetlands also produce low levels of methane, which is a potent greenhouse gas, during anaerobic decomposition in low-salinity, saturated soils. Methods for measuring carbon sequestration and methane production in wetlands are just becoming standardized. Balancing high levels of carbon sequestration from enhanced wetlands with low levels of methane production, restoring tidal salt marsh wetlands remains an effective means to sequester carbon while reducing methane emissions (Mitsch et al. 2012).

Mitsch, W. B. Bernal, A. Nahlik, U. Mander, L. Zhang, C. Anderson, S. Jorgensen, and H. Brix. 2012. Wetlands, carbon, and climate change. Landscape Ecology 28: 583-597.

Philip Williams & Associates. 2009. Greenhouse Gas Mitigation Typology Issues Paper Tidal Wetlands Restoration. San Francisco, CA.

19 **How does the project leverage private, federal, or local funding?**

Answer: As a severely disadvantaged community, the District is only able to provide matching funds in the form of in-kind, staff personnel services. However, implementation of the project will indirectly leverage funding. Reduction in chronic flooding and associated impacts will improve the desirability of the community and better attract business and private investment into the community.

20 **If the project will result in displacement (e.g., unsheltered individuals, neighborhood gentrification, etc.), what solutions are included in the project design?**

Answer: The project will not result in displacement through gentrification or resulting reductions in housing. Existing access to private housing currently impeded by flooding will be improved. The project will not have a negative impact on housing in any way.

21 **If the project is to be publicly accessible, what features in the design are intended to maximize safe and equitable access to the project?**

Answer: Many project features are located within public road (County and District) right-of-ways and are entirely open to the public of all mobility types. Improvements in local roadway flooding (reduced frequency and inundation footprint) will improve safe and equitable access throughout the community of Manila. In addition, the wetland rain garden located at the Manila Community Center in the center of the public school campus will also be publicly accessible to people of all mobility types.

22 **How does the project utilize natural infrastructure?**

Answer: Natural infrastructure integrated into the project design will include bioswales and a rain garden to enhance wetlands. Bioswales will be used in place of traditional asphalt roadside storm gutter with small areas of pervious natural features. Bioswales will not use typical concrete curbs or other impervious materials. The bioswales will be vegetated with coastal wetland species, which will help remove pollution and recharge groundwater. Enhancement and expansion of wetlands in Manila, adjacent to Humboldt Bay, will help attenuate local flooding, improve and protect water quality, recharge groundwater, and sequester carbon. Enhancement of roadside wetlands with bioswlaes will also reduce flood related impacts and protect water quality. A wetland rain garden (approximately 5,000 square feet) will be constructed in the center of the Manila Community Center campus, which is used as a public school. The wetland rain garden will replace an impervious cement surface. The wetland rain garden will be planted with native species and used as an educational focal point for the school and broader Manila public.

23 **How does the project use multi-benefit approaches that meet multiple needs at once?**

Answer: The project will use natural infrastructure and pervious drainage improvements on a community landscape scale throughout Manila to improve flood resiliency and reduce flood risk. By applying natural infrastructure to address storm drainage and flooding issues instead of increased pavement and asphalt drainage, improvements in flood risk reduction will also (1) enhance wetlands, (2) protect water quality, (3) improve resiliency to sea level rise and climate change, and (4) maintain and improve mobility and public access throughout the community. In addition, benefits also achieved include the protection of public infrastructure including roadways and utilities and private residences and housing throughout the community.

24 **How was the project developed with local community engagement?**

Answer: Flooding and drainage issues have long been discussed at MCSD Board of Directors' meetings. Additionally, in the fall of 2018, the District worked with students from Humboldt State University's Environmental Resources Engineering program to develop projects to reduce flooding throughout the community. The District reached out to the community to obtain feedback on locations of existing flooding issues using the website NextDoor and received a number of replies. Project locations were discussed with the Board of Directors and community members at the monthly Board of Directors meetings and have been included on the proposed project site plan. Students attended a monthly MCSD Board of Director's meeting to present findings and invited community members to presentations of projects held at the Humboldt State University campus. Since then, the District General Manager has worked with individual property owners to obtain additional information and has worked with the District's on-call engineer to develop project concepts, which are also included in the proposed project site plan.

Project Readiness

25 **If the requested funds are insufficient to cover all project costs, what is the funding gap and how will it be bridged?**

Answer: This grant request includes the total (100%) project budget. A funding gap is not anticipated.

26 **On a scale of 1-10 (with 1 being the least and 10 being the most), how ready is the project for implementation? Explain.**

Answer: 3.000

Answer: Conceptual designs, described in the Manila Drainage Study Storm Drain Master Plan be utilized and updated. The proposed improvements consist of simple solutions such as minor grading and culvert replacements to connect flow paths and increase capacity. The project is ready to commence immediately upon funding. The project includes all the necessary steps to prepare for implementation including alternatives analysis, design (30%, 60%, and 100%), CEQA compliance, permitting, bid services, construction, and construction management. As presented, the project is feasible. There are no outstanding constraints that might prevent or hinder design development or implementation (e.g. issues related to land access or unsurmountable regulatory hurdles).
MCSD will work with GHD Inc., their on-call technical consultant to provide engineering and regulatory support services. GHD has available staff resources to dedicate to implementing the project as soon as it is funded. The District has communicated project concepts to Humboldt County and NCRA and obtained support. The project environmental documents will meet all requirements to obtain encroachment permits from Caltrans, Humboldt County and NCRA.

27 **Describe the status of the following items, including anticipated timing for completion of each:**

a **Preliminary design.**

Answer: Preliminary sizing of culvert and bioswales facilities was completed in the Storm Drain Master Plan. The calculations and concepts will be updated as needed to complete preliminary and final design tasks (Alternatives Analysis, 30%, 60%, and 100%) that are included in this proposal and will be completed via this grant, if funded. Design tasks will be completed in Year 1 and 2.

b **Environmental documentation (CEQA - see definition in Appendix P of the Guidelines).**

Answer: Completion of CEQA is included in this proposal and will be completed via this grant, if funded. The planned CEQA document will be an Initial Study and Proposed Mitigated Negative Declaration (IS/Proposed MND). CEQA will be completed in Year 1 and 2.

c **Necessary permits and long-term operation and maintenance commitments/agreements.**

Answer: Environmental permits will be completed in Year 2. Anticipated permits include: Clean Water Act 401 (Regional Water Board), CWA 404 (US Army Corps of Engineers), California Department of Fish and Wildlife 1600 Permit, California Coastal Commission Coastal Development Permit, and a Humboldt County Conditional Use Permit. This project will provide the basis for the development of maintenance commitments and agreements with Humboldt County, NCRA and Caltrans.

d **Other funding sources needed to complete the project.**

Answer: The requested grant funding in this application covers all funding to complete the project.

e **For acquisitions, willing seller (e.g., purchase agreement, option, discussions, etc.).**

Answer: N/A

28 **List the legal owners for each parcel within the project footprint and the status of notifications, negotiations, agreements, etc. to implement the project.**

Answer: The vast majority of project components are located within District, County, NCRA and Caltrans right-of-way.
County of Humboldt: email correspondence with the County's Director of Environmental Services, who expressed support in the County being listed as a collaborator and the land use division will review any encroachment permit requests.

North Coast Rail Authority (NCRA): The site plan included in this application was reviewed by NCRA's CEO/President Dave Anderson. He views the project as "long overdue". The project team will keep the NCRA informed as the design develops and obtain an encroachment permit.

California Department of Transportation: The District will apply for a Caltrans encroachment permit for facilities within the Caltrans right-of-way. The District has requested similar encroachment permits for drinking water crossings and have not had any issues receiving concurrence from Caltrans.

Manila Community Services District: The District owned parcels and right-of-way do not require additional approvals.

Property owners affected will be notified.

Proposed project components intersect properties owned by the following:
Alvin and Dawn Spears, Michael and Sharon Fennell, Richard Herron, Damian and Jennifer Meyer, Albert Settles, Richard Settles, Gerald Rotter, Ava Petrick and Vita Miller, Violet Glass.
The District General Manager has been in contact with property owners listed above regarding general drainage improvements. Existing roadway and utility easements will be utilized to the extent practical and new easements will be requested as needed.

29 **List all entities with jurisdiction over the project and the status of notifications, agreements, meetings, etc. with each jurisdictional entity.**

Answer: The majority of the project is within the jurisdiction of the County of Humboldt, NCRA, Caltrans and Manila Community Services District. The County of Humboldt and NCRA are aware of and supportive of the proposed project (see above). Approved permits from natural resource agencies will also be required, as described above, including the Regional Water Board, US Army Corps of Engineers, California Coastal Commission, and the Humboldt County Planning Department. Pre-application consultation with permitting agencies has not occurred.

Organizational Capacity

30 **Describe applicant's experience in completing similar projects.**

Answer: Due to the limited staff and variety of needs, the District is under contract with GHD for as requested professional engineering, environmental and related consultation services. District staff and GHD staff work closely together on projects to provide regular communications with stakeholders, timely delivery of work products, and updates to the Board of Directors. While the District has not implemented a similar project since the 1990s, GHD staff are well versed in design and implementation of drainage projects ranging from small LID retrofits within public right-of-way and at local k-12 schools ($100,000-$1,000,000) to large scale flood control projects designed and implemented to convey the 100-year storm, while integrating LID and habitat features ($10,000,000).

31 **Describe applicant's experience in managing other grant-funded projects.**

Answer: Manila CSD staff have recently managed planning grants for their water ($500,000) and wastewater system ($350,000), administered by the State Water Resources Control Board. District Staff worked with GHD to provide timely deliverables and monthly invoicing. GHD provides assistance to the District staff as needed and regularly manage grants for client projects ranging from $50,000 to $10,000,000.

32 **Describe applicant's fiscal capacity to carry out the proposed project.**

Answer: The District will be relying on grant funds to pay consultants and contractors. The District's general fund may be used for payment, if needed, prior to receiving reimbursement from the grant agency.

33 **Describe applicant's plan for long-term operations and maintenance of the project (see Appendix I of the Guidelines for requirements).**

Answer: The design will focus on self maintaining and low maintenance approaches to reduce flooding. Maintenance will include regular clearing of debris from culvert inlets, occasional removal of sediment, and annual maintenance of vegetation. The District will follow County, NCRA and Caltrans processes for maintenance requests as well as develop a method for completing maintenance if these entities are unable to complete maintenance in a timely manner. This option includes enlistment of the CCCs or CalFire High Rock Camp labor.

34 **What is the source of funds for ongoing operations and maintenance?**

Answer: The District's General Fund is typically used for drainage maintenance, using revenue sources such as Property Taxes, the Community Park, and the Community Center.

Collaboration

35 **Describe partnerships with other entities and their corresponding roles in the project.**

Answer: Design development will include outreach to the County of Humboldt (Department of Public Works) in regards to related nearby projects and existing County infrastructure within or near the project area. Additional outreach to NCRA for enhancements along the rail corridor and also Caltrans as a result of the two large unpaved drainage ditches on either side of State Route 255 and existing culverts that run underneath State Route 255 to provide drainage connectivity across the highway. Encroachment permits from both the County of Humboldt County and Caltrans are anticipated to

conduct work within public road right-of-ways.

36 **Describe past, current and future community involvement (neighbor/user groups, etc.), outreach, partnerships, and support for the project.**

Answer: The District worked with students from Humboldt State University's Environmental Resources Engineering program to develop projects to reduce flooding throughout the community. The District reached out to the community for feedback on locations of existing flooding issues using NextDoor. Project locations were discussed with the Board of Directors and community members at the monthly Board of Directors meetings. Students attended a monthly MCSD Board of Director's meeting to present findings and invited community members to presentations of projects.

37 **What steps are being taken to ensure the project will not cause unanticipated negative consequences to neighboring communities?**

Answer: Manila is geographically isolated and there is no "neighboring community" with any hydrologic connectivity beyond Humboldt Bay. Unanticipated negative consequences to neighboring communities are thus not anticipated.

Additional Project Characteristics

38 **Describe American with Disabilities Act (ADA) access and/or improvements included in the project. If not applicable, explain.**

Answer: The project does not include typical ADA features such as parking. The project will not result in an ADA obstacle (e.g. uneven terrain, significant change in topography) that would reduce ADA access along rural public roadways, some of which remain unpaved, to be less than existing conditions. The project does not include trails or new points of public access. ADA access to and within the Manila Community Center would not be impacted, and the proposed wetland raingarden at the community center/public school would be ADA accessible.

39 **Explain how the project incorporates climate adaptation strategies to help protect against climate change impacts.**

Answer: Climate change will result in rising sea levels and altered precipitation patterns, including higher-intensity rainfall. As Manila is a low-lying coastal community that already suffers from flooding resulting from average rainfall, impacts from climate change are expected to be significantly detrimental. Without implementation of climate change adaptation strategies, existing flood-related impacts to private residents (housing) and public infrastructure (roadways and utilities) will become more severe. This project proposes to enhance and expand wetlands, upgrade undersized culverts, and improve drainage through natural technologies absent an increase in impervious surfaces in identified problem areas throughout the entire community of Manila, at a community-wide scale. Once complete, Manila will be more prepared for increases in sea levels in adjacent Humboldt Bay, increases in groundwater elevations, and higher-intensity rainfall.

40 **Describe any other project characteristics not previously discussed that would assist in evaluating the Project Proposal.**

Answer: The Manila Flood Reduction and Drainage Enhancement Project provides the Urban Flood Protection Grant Program a unique opportunity to implement a community-wide project, spanning multiple jurisdictions, that incorporates simple, low-cost, nature-based solutions to a decades long problem that will only be compounded in the future with sea level rise and climate change. This project also provides the District with an opportunity to take control of their drainage powers and lead the other agencies (County, Caltrans, NCRA) improve Manila. Without significant revenue from this severely disadvantaged population, large infrastructure projects are not often feasible without grant funding.

End of Project Questions

Certification And Submission Statement

Please read before signing and submitting application.

I certify under penalty of perjury:

- The information entered on behalf of Applicant Organization is true and complete to the best of my knowledge;
- I am an employee of or a consultant for the Applicant Organization authorized to submit the application on behalf of the Applicant Organization; and
- I understand that any false, incomplete or incorrect statements may result in the disqualification of this application.

By signing this application, I waive any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent provided in this RFP.

Submission By: christopherdrop **Submitter Initials:** **Submission Date:**

Manila Community Services District

1901 Park Street • Arcata, CA 95521 • 707-444-3803 • Fax 707-444-0231

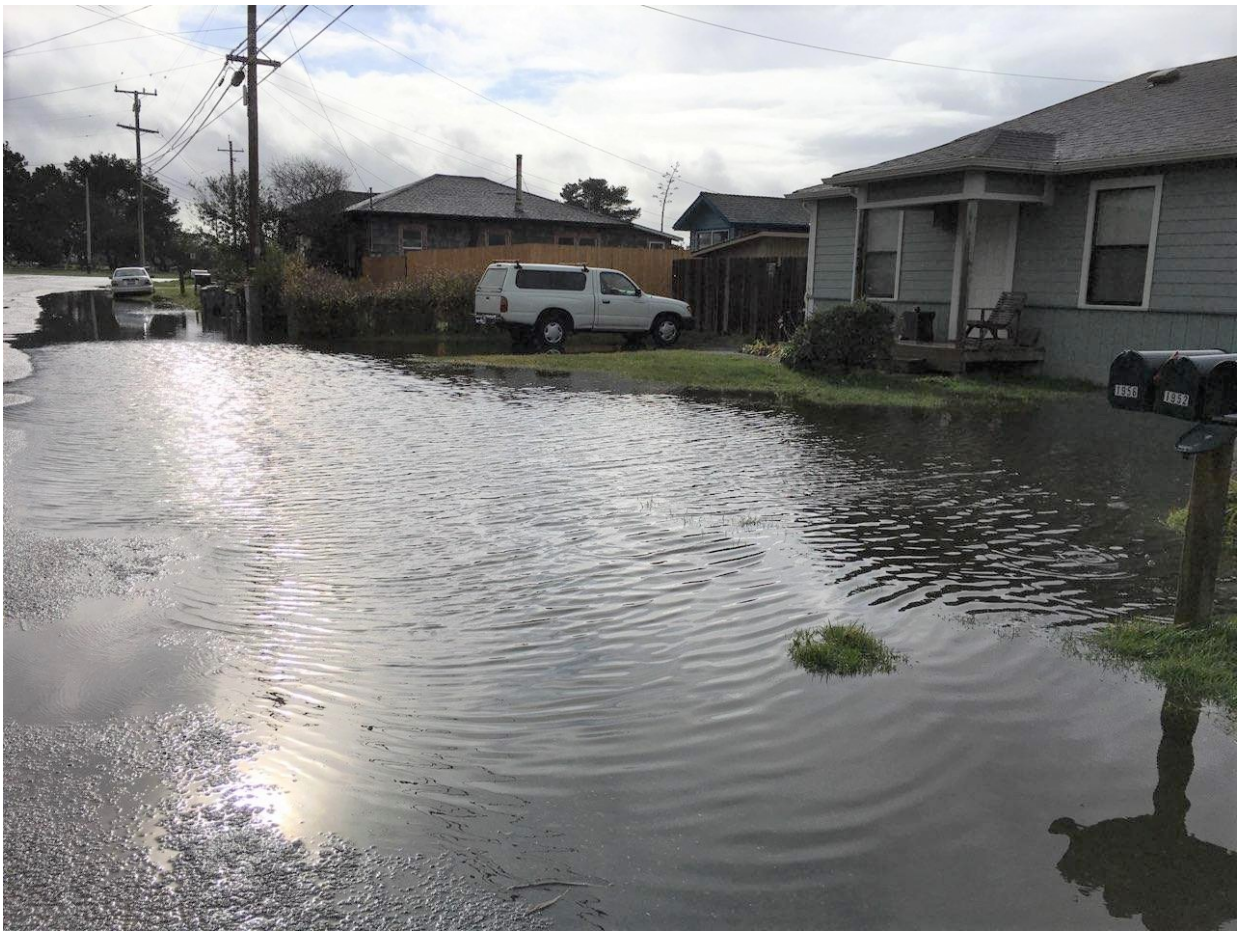

Figure 1. Common representation of flooding on Peninsula Drive due to Undersized, Failing Culverts and Drainage Channels. The proposed project will replace the failing culverts and implement bioswales.

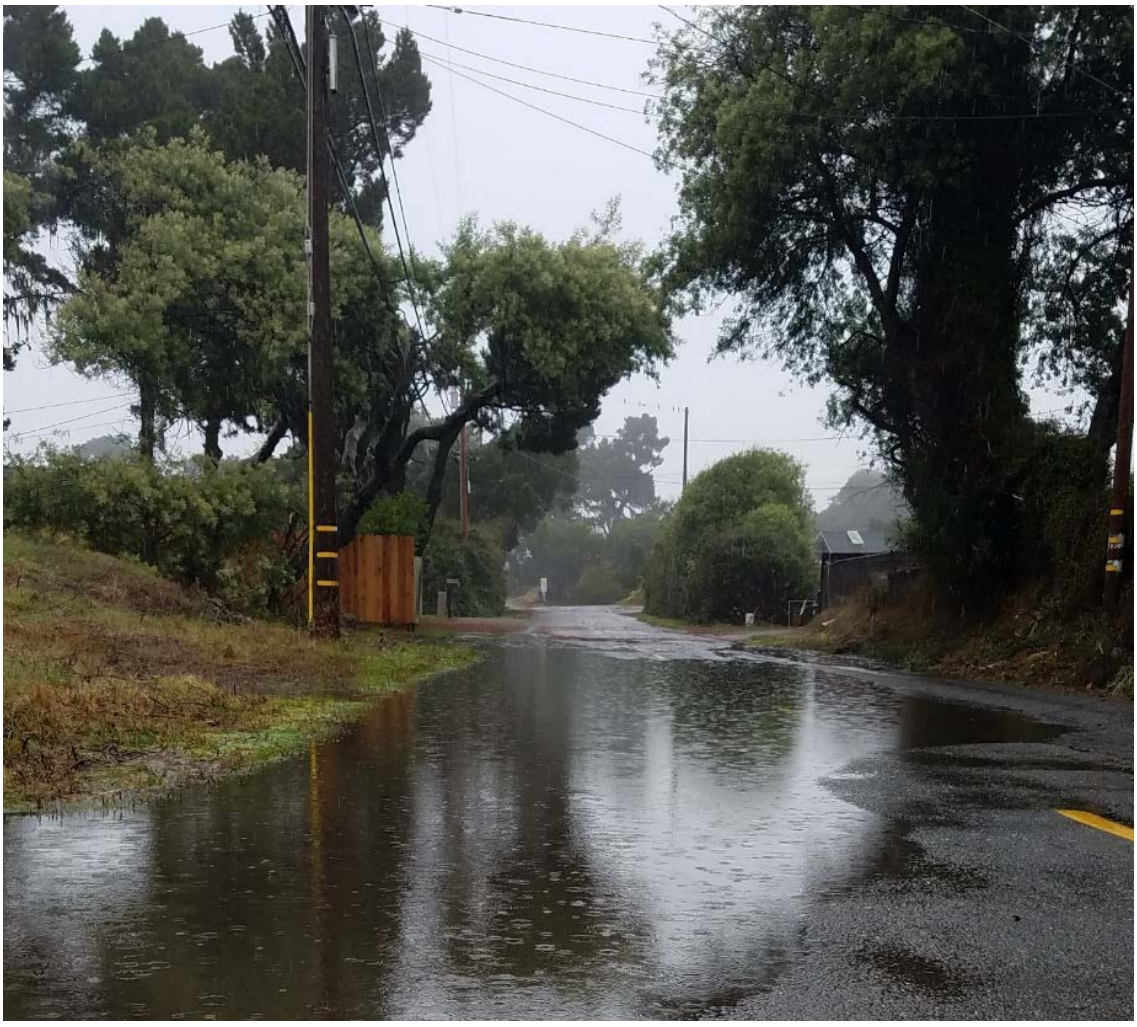

Figure 2. Common Flooding on Peninsula Drive due to Lack of Drainage Infrastructure. The proposed project includes a catch basin and culvert to a bioswale in this location.

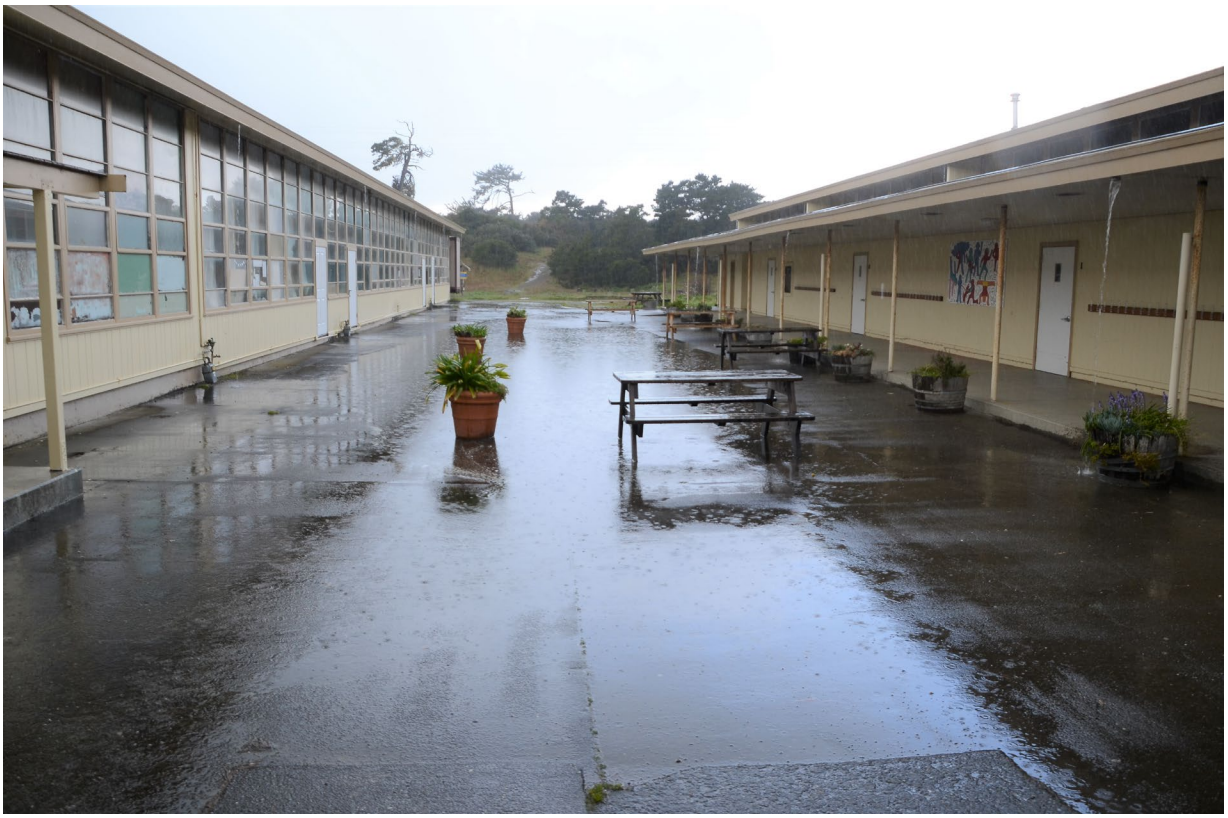

Figure 3. Flooding of the courtyard at the Manila Community Center, occupied by a local charter school. The proposed project will replace the concrete slab with a rain garden.

Urban Flood Protection Program - Budget

Applicant: Manila Community Services District
Project: Manila Flood Reduction and Drainage Enhancement
PIN 2406

	Budget Item	Unit Cost	Urban Flood Protection Grant	In-Kind Match CSD Staff Time
Non-Construction				
1.0	**Direct Project Mangement & Administration**			
1.1	Manila CSD Staff Time	$ 10,000.00		$ 10,000.00
1.2	Technical Consultants	$ 15,000.00	$ 15,000.00	
2.0	**Planning, Design & Permitting**			
2.1	Design & Engineering	$ 275,000.00	$ 275,000.00	
2.2	Environmental Documents	$ 215,000.00	$ 215,000.00	
2.3	Permits	$ 30,000.00	$ 30,000.00	
2.4	Community Outreach	$ 20,000.00	$ 20,000.00	
	Total Non-Construction	**$ 565,000.00**	**$ 555,000.00**	**$ 10,000.00**
Construction/Implementation				
3.0	**Site Preparation**			
3.1	Mobilization	$ 75,000.00	$ 75,000.00	
3.2	Demobilization	$ 75,000.00	$ 75,000.00	
3.3	Traffic Control	$ 100,000.00	$ 100,000.00	
3.4	Potholing	$ 20,000.00	$ 20,000.00	
3.5	Clearing and Grubbing	$ 350,000.00	$ 350,000.00	
3.6	Trenching and Shoring	$ 15,000.00	$ 15,000.00	
3.7	Excavation and Disposal	$ 260,000.00	$ 260,000.00	
4.0	**Construction and Materials**			
4.1	12" HDPE Pipe	$ 6,500.00	$ 6,500.00	
4.2	18" HDPE Pipe	$ 45,000.00	$ 45,000.00	
4.3	24" HDPE Pipe	$ 16,500.00	$ 16,500.00	
4.4	30" HDPE Pipe	$ 46,000.00	$ 46,000.00	
4.5	36" HDPE Pipe	$ 40,000.00	$ 40,000.00	
4.6	Catch Basins	$ 15,000.00	$ 15,000.00	
4.7	Class II Aggregate Base	$ 150,000.00	$ 150,000.00	
4.8	Hot Mix Ashpalt	$ 37,500.00	$ 37,500.00	
4.9	Erosion Control Fabric	$ 175,000.00	$ 175,000.00	
4.10	Seed	$ 122,500.00	$ 122,500.00	
4.11	Planting	$ 175,000.00	$ 175,000.00	
4.11	Rain Garden	$ 98,000.00	$ 98,000.00	
5.0	**Other**			
5.1	Construction Mangement/Inspection/Testing	$ 120,000.00	$ 120,000.00	
5.2	Funding Acknowledgement Sign	$ 5,000.00	$ 5,000.00	
	Total Construction	**$ 1,947,000.00**	**$ 1,947,000.00**	$ -
	Grand Total:	**$ 2,512,000.00**	**$ 2,502,000.00**	**$ 10,000.00**

Manila Community Services District

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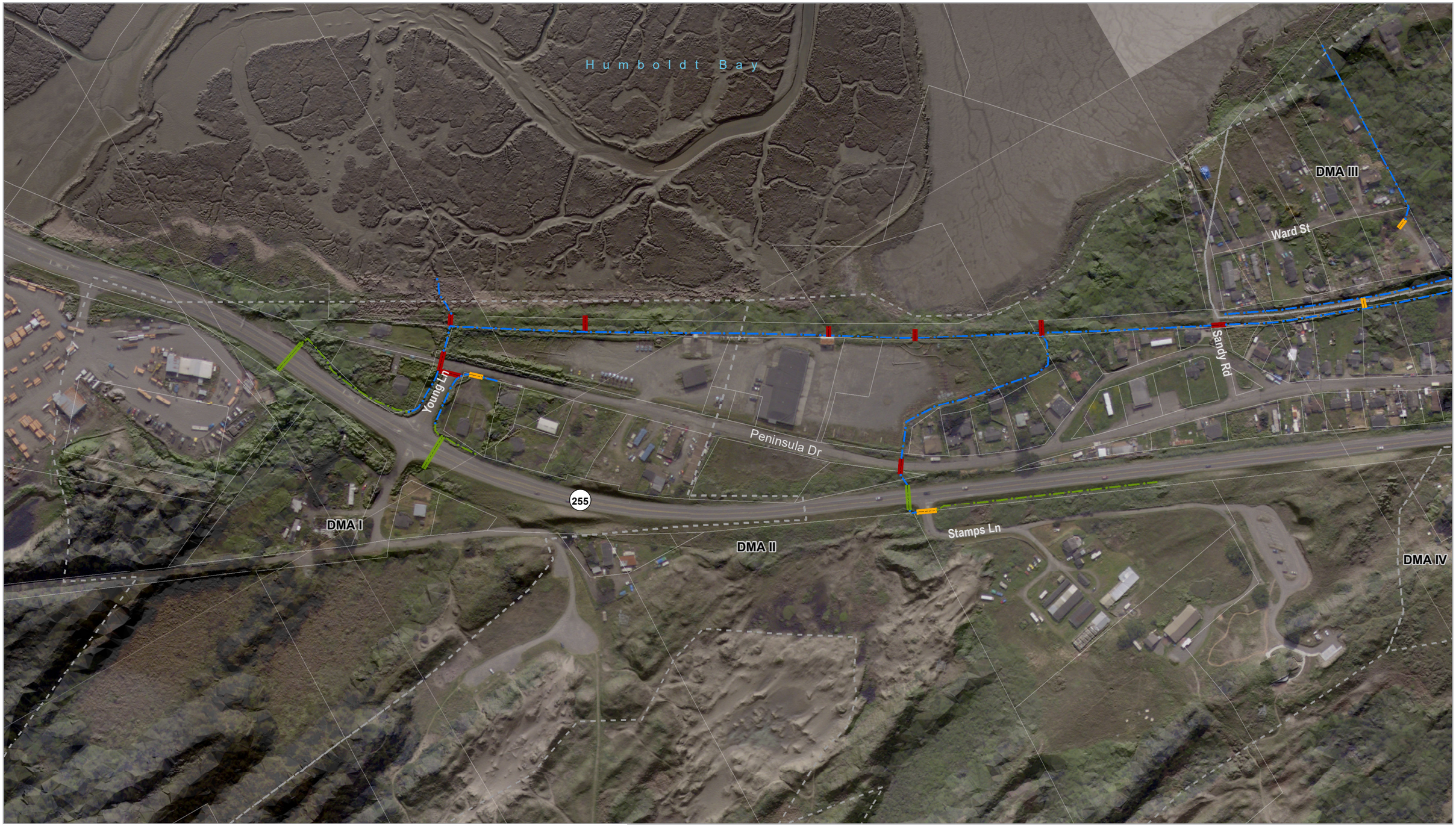
Community Engagement Strategy Summary

Flooding and drainage issues have been brought up and discussed at MCSD Board of Directors' meetings for decades. The first documented attempt to resolve these issues is contained in the April 1987 Manila Drainage Study Storm Drainage Master Plan (Drainage Study). The Drainage Study surveyed residents and collected information on persistent problem areas. Many of these problem areas still persist today. Comments by current residents are common at monthly Board of Directors' meetings during the wet winter months.

In the fall of 2018, in an effort to gather community feedback and develop preliminary concepts to alleviate flooding, the District worked with students from Humboldt State University's Environmental Resources Engineering program. The students collected spatial and dimensional information for the existing stormdrain system to develop design alternatives and concept designs. During site walks, the District Staff and District On-Call Engineer fielded questions from community members. The District's General Manager reached out to the community to obtain feedback on locations of existing flooding issues using the website NextDoor and received a number of replies. The NextDoor website was also used to invite community members to the student's project presentations held on the Humboldt State University campus.

Since then, the District General Manager has worked with individual property owners to obtain additional information and has worked with the District's On-Call Engineer to develop project concepts, which are included in the proposed project site plan.

As a part of the proposed project, additional community outreach is proposed. Outreach may include a design charrette to gather additional information for the alternatives analysis, presentations at Board of Directors' meetings, individual property owner meetings, calls for feedback on NextDoor and outreach through the Peninsula Community Collaborative (PCC). The PCC is a group of community members from Manila and other communities on the peninsula, who have been hosting monthly meetings and other events for over two years with a focus on improving health and safety on the peninsula.



Proposed Project

- Bioswale (Excavation)
- New Culvert (Within Existing Roadway/Driveway)
- Culvert, Replacement (Restore Existing Grade)
- Culvert, Removal (Restore Existing Grade)
- Rain Garden (Remove Existing Concrete)

Existing

- Bioswale, Maintenance (Not Included in Grant Request)
- Culvert, Maintenance (Not Included in Grant Request)
- Existing Stormdrain Inlet
- Drainage Management Area (DMA)
- Approx. Parcel Boundary

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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

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GHD

Manila Community Services District
Urban Flood Protection Grant Program PIN 2406

Site Plan 1 of 3
Manila Flood Reduction & Drainage Enhancement Project

Project No. **11159207**
Revision No. **-**
Date **06/12/2020**

FIGURE 1

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Print date: 12 Jun 2020 - 14:13

Data source: Oscar Larson & Assoicates, Manila Drainage Study, 1987. GHD, Proposed Drainage Improvements, 2020, Humboldt County, Hillshade Humboldt County LiDAR, 2019. NOAA, Imagery, 2012, . Created by: bvivyan

Humboldt Bay

Manila Community Park

DMA V

DMA III

DMA VI

Victor Blvd

Dean St

Ward St

Mill St

Peninsula Dr

Lupin Dr

DMA VII

255

Pacific Ave

Raineri Rd

Beach St

DMA II

Carlson Dr

DMA IV

Locke St

Lupin Dr

Manila CSD Office

Park St

Keye St

Proposed Project

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- Culvert, Replacement (Restore Existing Grade)
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Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
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Manila Community Services District
Urban Flood Protection Grant Program PIN 2406

Site Plan 2 of 3
Manila Flood Reduction & Drainage Enhancement Project

Project No. **11159207**
Revision No. **-**
Date **06/12/2020**

FIGURE 2

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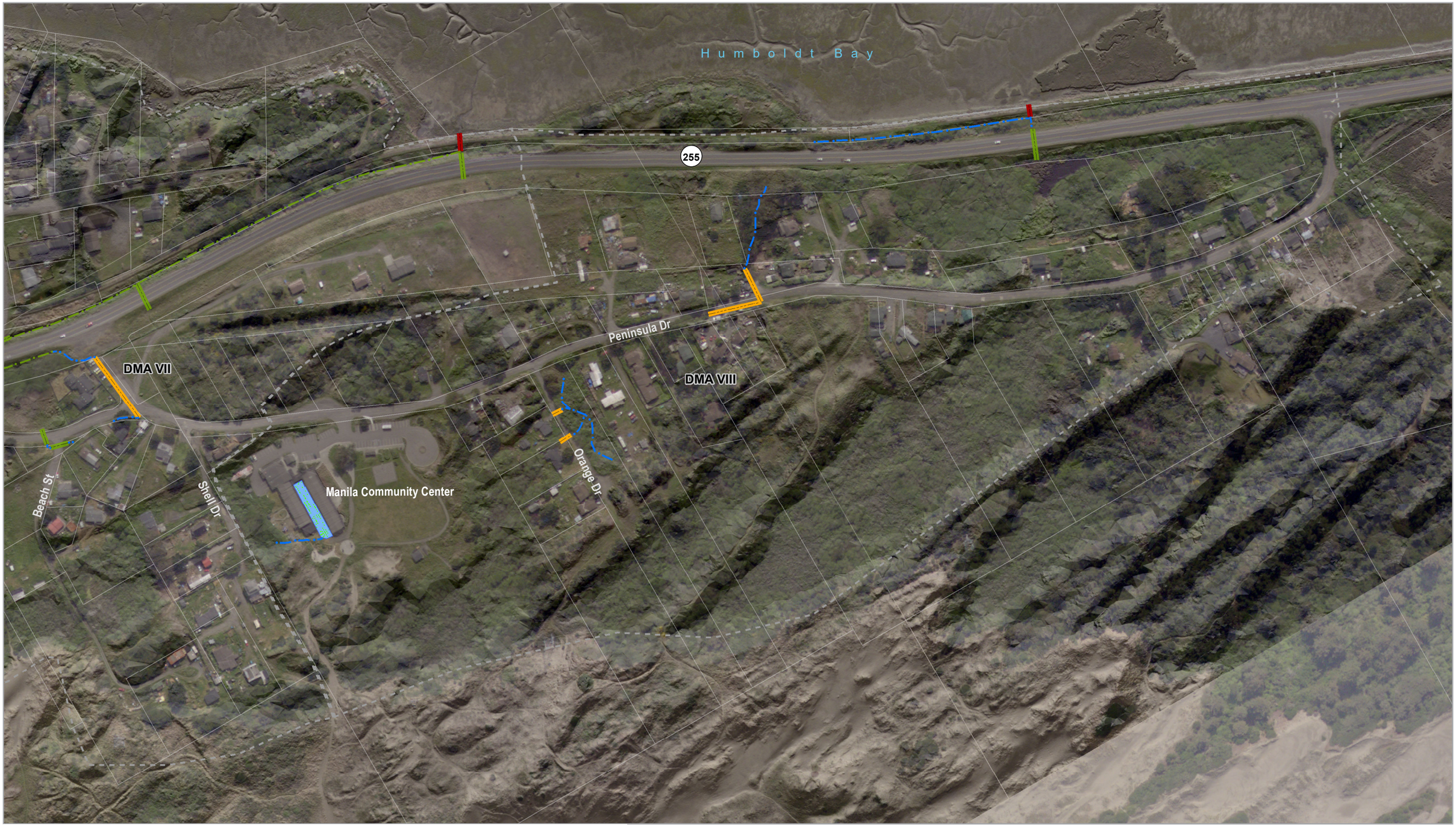
Data source: Oscar Larson & Assoicates, Manila Drainage Study, 1987. GHD, Proposed Drainage Improvements, 2020, Humboldt County, Hillshade Humboldt County LiDAR, 2019. NOAA, Imagery, 2012, . Created by: bvivyan



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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

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Manila Community Services District
Urban Flood Protection Grant Program PIN 2406

Site Plan 3 of 3
Manila Flood Reduction & Drainage Enhancement Project

Project No. **11159207**
Revision No. **-**
Date **06/12/2020**

FIGURE 3

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