CITY OF OAKLAND
STORMWATER SUPPLEMENTAL FORM

This form must be submitted with all Planning and Zoning applications for projects defined as Regulated Projects by Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). Regulated Projects are:

- *Projects that create or replace 10,000 square feet or more of new or existing impervious surface area; and*
- *Since December 1, 2011, the following projects that create or replace 5,000 square feet or more of new or impervious surface area:*
  - *Auto servicing, auto repair, and gas stations;*
  - *Restaurants (full service, limited service, and fast-food); and*
  - *Uncovered parking lots (including stand-alone parking lots, parking lots serving an activity, and uncovered portions of parking structures unless drainage from the uncovered portion of the parking structure is connected to the sanitary sewer system).*

Regulated Projects do not include individual single-family dwellings (that are not part of a larger multi-unit development) or routine maintenance activities. For more information about the C.3 stormwater requirements, please refer to the City of Oakland's Overview of Provision C.3 and the website of the Alameda Countywide Clean Water Program: http://www.cleanwaterprogram.org/

GENERAL INFORMATION

1. Project Name (if applicable): _____

2. Project Address (including cross street): _____

3. Assessor's Parcel Number(s): _____

4. Project Description: _____

_____

5. Applicant's Name: _____

6. Applicant's Address: _____

7. Applicant's Phone: _____ **Email:** _____

SUPPLEMENTAL PROJECT INFORMATION

8. Type of Development (check one): ❑ Development on previously undeveloped land

❑ Development on previously developed land

9. Site Calculations (square feet):

Total Site Area	Total Land Area Disturbed[1]	Total Existing/Pre-Project Impervious Surface[2]	Replaced Impervious Surface[3]	New Impervious Surface[4]	Total Post-Project Impervious Surface[5]

Impervious Surface = Any surface that cannot be effectively (easily) penetrated by water. Permeable paving (such as permeable concrete and interlocking pavers) underlain with permeable soil or permeable storage material, and green roofs with a minimum of three inches of planting media, are not considered impervious surfaces.

To Be Completed By City Staff:

Date Application Submitted: _____

Case Number(s): _____ SDS District: _____

➢ Note to Staff: Please route a copy of this form to the stormwater coordinator in the Planning and Zoning Division.

[1] Land Area Disturbed = Surface area of construction activities, including grading, construction, staging, and storage areas.
[2] Existing/Pre-Project Impervious Surface = Total amount of impervious surface on-site prior to the project.
[3] Replaced Impervious Surface = Project impervious surface that replaces existing/pre-project impervious surface.
[4] New Impervious Surface = Project impervious surface that replaces existing/pre-project permeable surface.
[5] Post-Project Impervious Surface = Total amount of impervious surface on-site after completion of the project.

APPLICABILITY OF C.3 REQUIREMENTS TO PROJECT

This section of the form will determine which requirements of Provision C.3 apply to the project.

SITE DESIGN MEASURES

Site design measures are site planning techniques that conserve natural spaces and/or limit the amount of impervious surface in development projects in order to minimize the amount of stormwater runoff.

10. Site Design Measures. The following site design measures are required for all projects as applicable (check "Applicable" if the measure is applicable to the project; check "Not Applicable" if the measure is not applicable):

	Applicable	Not Applicable
a. Limit disturbance of natural water bodies and drainage systems; minimize compaction of highly permeable soils; protect slopes and channels; and minimize impacts from stormwater and urban runoff on the biological integrity of natural drainage systems and water bodies.	❑	❑
b. Conserve natural areas, including existing trees, other vegetation, and soils.	❑	❑
c. Minimize impervious surfaces.	❑	❑
d. Minimize disturbances to natural drainages.	❑	❑
e. Minimize stormwater runoff by implementing one or more of the following site design measures (check "Applicable" for at least one measure below):		
i. Direct roof runoff into cisterns or rain barrels for reuse.	❑	❑
ii. Direct roof runoff onto vegetated areas.	❑	❑
iii. Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas.	❑	❑
iv. Direct runoff from driveways and/or uncovered parking lots onto vegetated areas.	❑	❑
v. Construct sidewalks, walkways, and/or patios with permeable surfaces.	❑	❑
vi. Construct driveways, bike lanes, and/or uncovered parking lots with permeable surfaces.	❑	❑

SOURCE CONTROL MEASURES

Source control measures are structural and operational measures that aim to prevent stormwater runoff pollution by reducing contact between runoff and the source of pollution.

11. Source Control Measures. The following source control measures are required for all projects as applicable (check "Applicable" if the measure is applicable to the project; check "Not Applicable" if the measure is not applicable):

	Applicable	Not Applicable
a. Cover trash storage areas and design these areas to prevent stormwater run-on into the trash area.	❑	❑
b. Cover outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas or design these areas to limit pollutant contact with runoff.	❑	❑

c. Direct discharges from indoor floor mats, equipment, hood filters, wash racks, and covered outdoor wash racks for restaurants to the sanitary sewer. ❑ ❑

d. Direct discharges from covered trash, food waste, and compactor enclosures to the sanitary sewer. ❑ ❑

e. Direct discharges from covered outdoor wash areas for vehicles, equipment, and accessories to the sanitary sewer. ❑ ❑

f. Discharge swimming pool water to on-site vegetated areas, or to the sanitary sewer if discharge to vegetated areas is not feasible. ❑ ❑

g. Discharge fire sprinkler test water to on-site vegetated areas, or to the sanitary sewer if discharge to on-site vegetated areas is not feasible. ❑ ❑

h. Incorporate sustainable landscaping practices, such as minimizing irrigation and runoff, promoting surface infiltration, minimizing the use of pesticides and fertilizers, and other practices of Bay Friendly Landscaping.[6] ❑ ❑

i. Use efficient irrigation systems (e.g., weather-based controllers with rain sensors). ❑ ❑

j. Install stenciling at storm drain inlets, such as "No Dumping – Drains to Bay." ❑ ❑

SPECIAL PROJECTS

Provision C.3 requires development projects to incorporate stormwater treatment measures into the project in order to remove pollutants from stormwater runoff. Since December 1, 2011, only Low Impact Development (LID) treatment measures are allowed. LID treatment measures are rainwater harvesting, infiltration, evapotranspiration, and biotreatment (which are further discussed on page 6). Non-LID treatment measures include high flowrate tree well filters and mechanical vault-type media filters. Non-LID treatment measures are only allowed for Special Projects as defined by Provision C.3. This section of the form will determine if the project qualifies as a Special Project and non-LID treatment measures are allowed.

12. Density (check one): ❑ Residential Project – Dwelling Units per Acre: _____

❑ Nonresidential/Mixed-Use Project – Floor Area Ratio (FAR): _____

Special Project Category "A"

13. Does the project have the following characteristics?

	Yes	No
a. Located in a CBD, CN-1, CN-2, CN-3, RU-5, or S-15 zone; or Located in a Retail, Dining, and Entertainment district in Jack London Square on the City's General Plan map; or Located in a City-designated historic district (either an Area of Primary Importance or an Area of Secondary Importance); or Located on a site listed on the City's Local Register of Historical Resources (as defined by the Oakland Planning Code)?	❑	❑
b. Create and/or replace 0.5 acres or less of impervious surface?	❑	❑
c. Include no surface parking, except for incidental parking for emergency vehicle access, ADA access, and passenger or freight loading zones?	❑	❑
d. Have at least 85% lot coverage by permanent structures?	❑	❑

- If you checked "yes" for all of the above questions, the project qualifies as a Category "A" Special Project.
- If you checked "no" for any of the above questions, the project is not a Category "A" Special Project.

[6] More information about Bay Friendly Landscaping is available on the StopWaste.Org website: http://www.stopwaste.org/home/index.asp?page=8

Special Project Category "B"

14. Does the project have the following characteristics?

	Yes	No
a. Located in a CBD, CN-1, CN-2, CN-3, RU-5, or S-15 zone; or Located in a Retail, Dining, and Entertainment district in Jack London Square on the City's General Plan map; or Located in a City-designated historic district (either an Area of Primary Importance or an Area of Secondary Importance); or Located on a site listed on the City's Local Register of Historical Resources (as defined by the Oakland Planning Code)?	❑	❑
b. Create and/or replace more than 0.5 acres of impervious surface but no more than 2.0 acres of impervious surface?	❑	❑
c. Include no surface parking, except for incidental parking for emergency vehicle access, ADA access, and passenger or freight loading zones?	❑	❑
d. Have at least 85% lot coverage by permanent structures?	❑	❑
e. Have a minimum density of 50 dwelling units per acre (for residential projects) or a floor area ratio (FAR) of 2.0 (for nonresidential and mixed-use projects)?	❑	❑

- If you checked "yes" for all of the above questions, the project qualifies as a Category "B" Special Project.
- If you checked "no" for any of the above questions, the project is not a Category "B" Special Project.

Special Project Category "C"

15. Does the project have the following characteristics?

	Yes	No
a. Located within ½ mile of an existing transit hub;[7] or Located within a Planned Priority Development Area (PDA)?[8]	❑	❑
b. Characterized as a non-auto-related project?[9]	❑	❑
c. Have a minimum density of 25 dwelling units per acre (for residential projects) or a floor area ratio (FAR) of 2.0 (for nonresidential and mixed-use projects)?	❑	❑

- If you checked "yes" for all of the above questions, the project qualifies as a Category "C" Special Project.
- If you checked "no" for any of the above questions, the project is not a Category "C" Special Project.

[7] A transit hub is a rail station, ferry terminal, or bus transfer station served by three or more bus routes.

[8] A Planned PDA is an infill development area formally designated by the Association of Bay Area Governments (ABAG). A map of the Planned PDAs in Oakland is attached to this form (see Attachment A).

[9] A non-auto-related project for the purpose of Category "C" Special Projects is any project except stand-alone surface parking lots, car dealerships, auto and truck rental facilities with on-site surface vehicle storage, fast-food restaurants, activities with drive-through facilities, gas stations, car wash facilities, auto servicing, auto repair, and other auto-related uses.

16. Calculate the amount of stormwater runoff that can be treated with non-LID treatment measures by using the worksheet below. If the project does not quality as a Special Project, skip this step and go to no. 17 and check "no."

Check the Special Project Category(ies) the project qualifies for based on the information from pages 3-4 and circle the Treatment Reduction Credit amount that corresponds to the project's characteristics.

	Treatment Reduction Credit
❑ **Category "A" Special Project**	
All Category "A" Special Projects	100%
❑ **Category "B" Special Project**	
≥ 50 dwellings per acre (residential); or ≥ 2.0 floor area ratio (FAR) (nonresidential)	50%
≥ 75 dwellings per acre (residential); or ≥ 3.0 floor area ratio (FAR) (nonresidential)	75%
≥ 100 dwellings per acre (residential); or ≥ 4.0 floor area ratio (FAR) (nonresidential)	100%
❑ **Category "C" Special Project**[10]	
a. Location	
Within ¼ mile of existing transit hub	50%
Between ¼ mile and ½ mile of existing transit hub	25%
Within Planned PDA	25%
b. Density	
≥ 30 units per acre (residential); or ≥ 2.0 floor area ratio (FAR) (nonresidential/mixed-use)	10%
≥ 60 units per acre (residential); or ≥ 4.0 floor area ratio (FAR) (nonresidential/mixed-use)	20%
≥ 100 units per acre (residential); or ≥ 6.0 floor area ratio (FAR) (nonresidential/mixed-use)	30%
c. Parking	
Surface parking occupies ≤ 10% of total post-project impervious surface	10%
No surface parking (except for incidental parking for emergency vehicle access, ADA access, and passenger or freight loading zones)	20%
Total Category "C" (sum of location, density, and parking treatment reduction credits):	_____

17. Does the project qualify as a Special Project (check one)?

❑ No

❑ Yes:

a. Special Project Category (A, B, or C): [11] _____

b. LID Treatment Reduction Credit: _____ %

c. Maximum Impervious Surface Area Allowed to be Treated with Non-LID Treatment Measures (multiply the amount in [b] by the Total Post-Project Impervious Surface Area [see no. 9 on page 1]): [12] _____ sq. ft.

[10] Category "C" Special Projects are only allowed to claim one location credit, one density credit, and one parking credit even if the project qualifies for more than one.

[11] If the project qualifies for more than one category of Special Projects, the project applicant may choose which category applies to the project.

[12] The remaining stormwater runoff requiring treatment must be treated with LID treatment measures, either through rainwater harvesting or biotreatment (as explained on pages 6-8). The project applicant may choose to treat stormwater runoff with LID treatment measures even if non-LID treatment measures are allowed

RAINWATER HARVESTING FEASIBILITY

Except for certain Special Projects (see pages 3-5), Provision C.3 requires that stormwater runoff be treated with LID treatment measures. LID treatment measures are rainwater harvesting, infiltration, evapotranspiration, and biotreatment.[13] *Biotreatment is only allowed if rainwater harvesting, infiltration, and evapotranspiration are determined to be infeasible. This section of the form will determine if rainwater harvesting is considered feasible for the project.*[14]

- If the project qualifies as a Special Project and the LID Treatment Reduction Credit is 100% (see no. 17 on page 5), LID treatment is not required. Skip this section, go to no. 23 on page 8 and check "no."

18. Calculate the amount of impervious surface requiring LID treatment:

a. Total (sum) New and Replaced Impervious Surface (see no. 9 on page 1): _____ sq. ft.

b. Impervious Surface Treated with Non-LID Treatment Measures (up to the maximum amount allowed – see no. 17[c] on page 5): [15] _____ sq. ft.

c. Post-Project Impervious Surface Requiring LID Treatment (subtract [b] from [a]): _____ sq. ft.

d. Potential Rainwater Capture Acreage (divide [c] by 43,560): _____ acres

19. Presence of recycled water system:

a. Does the project include a recycled water plumbing system?[16] ❑ Yes ❑ No

- If you checked "yes" for the above question, rainwater harvesting is infeasible and biotreatment is allowed for treating runoff requiring LID treatment. Skip the rest of this section, go to no. 23 on page 8 and check "no."
- If you checked "no" for the above question, go to the next question.

20. Rainwater harvesting for landscape irrigation:

a. Acreage of on-site landscaping: _____ acres

b. Potential Rainwater Capture Acreage (from 18[d]): _____ acres

c. Multiply the amount in (b) by 14: _____ acres

d. Is the amount in (a) less than the amount in (c)? ❑ Yes ❑ No

- If you checked "yes" for the above question, rainwater harvesting for landscape irrigation is considered infeasible. Go to the next set of questions.
- If you checked "no" for the above question, rainwater harvesting for landscape irrigation may be feasible. Skip the rest of this section and go to no. 22 on page 8.

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[13] Rainwater harvesting is the capture of rainwater for outdoor use (typically for landscape irrigation) or indoor use (typically for toilet/urinal flushing or industrial processes). Infiltration is stormwater seepage through soil into the subsurface to mix with groundwater. Evapotranspiration is water evaporating into the air directly or through plants. Biotreatment is stormwater treatment to remove pollutants using biological processes.

[14] This section is based on the information contained in the "C.3 Stormwater Technical Guidance" manual (December 1, 2011) prepared by the Alameda Countywide Clean Water Program and the report "Harvesting and Use, Infiltration and Evapotranspiration Feasibility/Infeasibility Criteria Report" (May 1, 2011) prepared by the Bay Area Stormwater Management Agencies Association (BASMAA). Both of these documents are available on the Alameda Countywide Clean Water Program's website: http://www.cleanwaterprogram.org. This form focuses on determining feasibility of rainwater harvesting. Infiltration is considered infeasible in Oakland because local soils do not support adequate infiltration. Evapotranspiration occurs in conjunction with the use of vegetated surfaces and biotreatment measures, therefore, determining the feasibility of evapotranspiration as a separate treatment measure is not required. More information concerning rainwater harvesting is available on the website of the American Rainwater Catchment Systems Association (ARCSA): http://www.arcsa.org.

[15] If the project is not a Special Project, enter "0" in 18(b).

[16] If the project includes a recycled water system, a second non-potable water system is considered infeasible due to cost considerations.

21. Rainwater harvesting for indoor use (check the box for the applicable project type, then fill in the requested information and answer the question):

❑ Residential Project

a. Number of dwelling units (total post-project): _____ units

b. Divide the amount in (a) by the amount in 18(d): _____ du/ac

c. Is the amount in (b) less than 255? ❑ Yes ❑ No

❑ Commercial Project

a. Floor area (total interior post-project square footage): _____ sq. ft.

b. Divide the amount in (a) by the amount in 18(d): _____ sf/ac

c. Is the amount in (b) less than 172,000? ❑ Yes ❑ No

❑ School Project[17]

a. Floor area (total interior post-project square footage): _____ sq. ft.

b. Divide the amount in (a) by the amount in 18(d): _____ sf/ac

c. Is the amount in (b) less than 51,000? ❑ Yes ❑ No

❑ Industrial Project

a. Estimated demand for non-potable water (gallons/day): _____ gal/day

b. Is the amount in (a) less than 5,900? ❑ Yes ❑ No

❑ Mixed-Use Residential/Commercial Project[18]

	Residential	*Commercial*
a. Number of residential dwelling units and commercial floor area:	_____ units	_____ sq. ft.
b. Percentage of total interior post-project floor area serving each activity:	_____ %	_____ %
c. Prorated Potential Rainwater Capture Acreage per activity (multiply the amount in 18[d] by the percentage amounts in [b]):	_____ acres	_____ acres
d. Prorated project demand per impervious acre (divide the amounts in [a] by the amounts in [c]):	_____ du/ac	_____ sf/ac
e. Is the amount in (d) in the residential column less than 255 AND is the amount in (d) in the commercial column less than 172,000?	❑ Yes	❑ No

- If you checked "yes" for the question above that is applicable to the type of project, rainwater harvesting for indoor use is considered infeasible and biotreatment is allowed for treating runoff requiring LID treatment. Skip the rest of this section, go to no. 23 on page 8 and check "no."
- If you checked "no" for the question applicable to the type of project, rainwater harvesting for indoor use may be feasible. Go to no. 22 on page 8.

[17] A school project is a child care facility, elementary/secondary school, college, or adult education center.

[18] For a mixed-use project involving activities other than residential and commercial activities, follow the steps for residential/commercial mixed-use projects. Prorate the Potential Rainwater Capture Acreage for each activity based on the percentage of the project serving each activity.

22. Rainwater harvesting – other factors:

	Yes	No
a. Would the cost of incorporating a rainwater harvesting system into the project exceed 2% of the total project construction costs?[19]	❑	❑
b. Does the topography of the site, such as slopes over 10%, make it infeasible to locate an adequately-sized cistern to capture rainfall?	❑	❑
c. Does lack of available space on the site make it infeasible to locate an adequately-sized cistern to capture rainfall?	❑	❑
d. Are there geotechnical/stability concerns related to cistern location that make capturing rainfall infeasible?	❑	❑
e. Are there other reasons why rainfall harvesting is infeasible at the site?	❑	❑

Provide an explanation for each "yes" answer in the space below (attach additional sheets if necessary). If there is a project-specific feasibility analysis demonstrating that rainwater harvesting is infeasible, please attach it to this form.

- If you checked "yes" for <u>any</u> of the questions above, rainwater harvesting for indoor use is considered <u>infeasible</u>. Go to no. 23 and check "no."
- If you checked "no" for <u>all</u> of the questions above, rainwater harvesting is considered <u>feasible</u>. Go to no. 23 and check "yes."

23. Is Rainwater Harvesting Required (check one)? ❑ No[20]

❑ Yes

[19] Construction costs include labor and materials but do not include costs associated with land acquisition, transactions, financing, permitting, demolition, or off-site mitigation.

[20] The project applicant may choose to incorporate rainwater harvesting into the project even if rainwater harvesting is not required.

HYDROMODIFICATION MANAGEMENT

Changes to the timing and volume of stormwater runoff from a site are known as "hydrograph modification" or "hydromodification." Provision C.3 requires certain development projects to incorporate measures to manage hydromodification. This section of the form will determine if hydromodification management measures are required for the project.

24. Does the project have the following characteristics?

	Yes	No
a. Create and/or replace one acre or more of impervious surface?	❑	❑
b. The total post-project amount of impervious surface would exceed the amount of existing/pre-project impervious surface?	❑	❑
c. Located in a susceptible area on the Hydromodification Susceptibility Map?[21]	❑	❑

- If you checked "no" for any of the questions above, hydromodification management measures are not required. Go to no. 25 and check "no."
- If you checked "yes" for all of the questions above, hydromodification management measures are required. Go to no. 25 and check "yes."

25. Are Hydromodification Management Measures Required (check one)?

❑ No

❑ Yes. Hydromodification management measures must be designed to meet the following standard:

Hydromodification Management Standard

Hydromodification management measures shall be designed such that post-project stormwater discharge rates and durations match pre-project discharge rates and durations from 10% of the pre-project two-year peak flow up to the pre-project 10-year peak flow.

To assist in the design of hydromodification management measures, the Alameda Countywide Clean Water Program, in collaboration with other clean water agencies, has developed a computer software program called the Bay Area Hydrology Model (BAHM). The BAHM is available at www.bayareahyrologymodel.com. Please refer to the "C.3 Stormwater Technical Guidance" manual available on the Alameda Countywide Clean Water Program's website http://www.cleanwaterprogram.org/ for more information about the BAHM and hydromodification management measures.

Hydraulic calculations for hydromodification management measures are not required to be submitted with applications for Planning and Zoning permits/approvals. However, adequate area for hydromodification management measures must be provided in the project drawings submitted with applications for Planning and Zoning permits/approvals.

[21] The Hydromodification Susceptibility Map is a tool created by the Alameda Countywide Clean Water Program to locate areas susceptible to hydromodification. The Hydromodification Susceptibility Map is attached to this form (see Attachment B) and is located on the Alameda Countywide Clean Water Program's website: http://www.cleanwaterprogram.org.

PROPOSED STORMWATER MANAGEMENT MEASURES

Use this section to identify the stormwater measures that will be incorporated into the project to comply with Provision C.3.

26. Proposed Site Design Measures. List the required measures from page 2 along with any other proposed site design measures:

27. Proposed Source Control Measures. List the required measures from pages 2 and 3 along with any other proposed source control measures:

28. Proposed Non-LID Treatment Measures. Non-LID treatment measures are only allowed for Special Projects (see pages 3 to 5) AND if it is infeasible to incorporate 100% LID treatment. Are non-LID treatment measures proposed (check one)?

❑ No

❑ Yes (describe):

a. If both non-LID and LID treatment proposed, percentage of drainage area treated with non-LID treatment: _____

b. Non-LID treatment measures must meet minimum design criteria published by a government agency or be certified by a government agency. Identify the government agency and the applicable criteria/certification:

c. If non-LID treatment measures are proposed, provide a discussion explaining why it is infeasible to incorporate 100% LID treatment in the project (attach additional sheets if necessary):[22]

[22] Both technical and economic factors may be considered in the discussion of the feasibility of 100% LID treatment.

29. Proposed Rainwater Harvesting. Rainwater harvesting is required if it is feasible (see pages 6 to 8). Is rainwater harvesting proposed (check one)?

❑ No

❑ Yes (describe):[23]

30. Proposed Biotreatment Measures. Biotreatment measures may be used to treat stormwater runoff requiring LID treatment if rainwater harvesting is infeasible (see pages 6 to 8). Are biotreatment measures proposed (check one)?

❑ No

❑ Yes (describe):

31. Numeric Sizing for Stormwater Treatment Measures. Stormwater treatment measures—both non-LID treatment measures and LID treatment measures (including rainwater harvesting and biotreatment)—must be designed to capture a specified amount of stormwater runoff using one of the design criteria in Provision C.3. Indicate the method to be used to size the proposed stormwater treatment measures (check one):[24]

a. Volume Hydraulic Design Basis – Treatment measures whose primary mode of action depends on *volume capacity*:

❑ i. The maximized stormwater capture volume for the area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients set forth in Urban Runoff Quality Management, WEF Manual of Practice No. 23 / ASCE Manual of Practice No 87 (1998), pages 175-178 (e.g., approximately the 85th percentile 24-hour storm runoff event);

❑ ii. The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology set forth in Section 5 of the California Stormwater Quality Association's Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003), using local rainfall data;

b. Flow Hydraulic Design Basis – Treatment measures whose primary mode of action depends on *flow capacity*:

❑ i. 10 percent of the 50-year peak flowrate;

❑ ii. The flow of runoff produced by a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall depths;

❑ iii. The flow of runoff resulting from a rain event equal to at least 0.2 inches per hour intensity; or

c. ❑ Combination Flow and Volume Design Basis – Treatment measures using a combination of flow and volume capacity sized to treat at least 80 percent of the total runoff over the life of the project, using local rainfall data.

32. Proposed Hydromodification Management Measures. Hydromodification management measures are required for certain projects (see page 9). Are hydromodification management measures proposed (check one)?

❑ No

❑ Yes (describe):

[23] If rainwater harvesting is proposed, please contact City staff to discuss design standards prior to submitting the application and this form.

[24] Hydraulic calculations for proposed stormwater treatment measures are not required to be submitted with applications for Planning and Zoning permits/approvals. However, Provision C.3 requires that the *preliminary* proposed hydraulic sizing method be identified with the Planning and Zoning application.

SUBMITTAL REQUIREMENTS

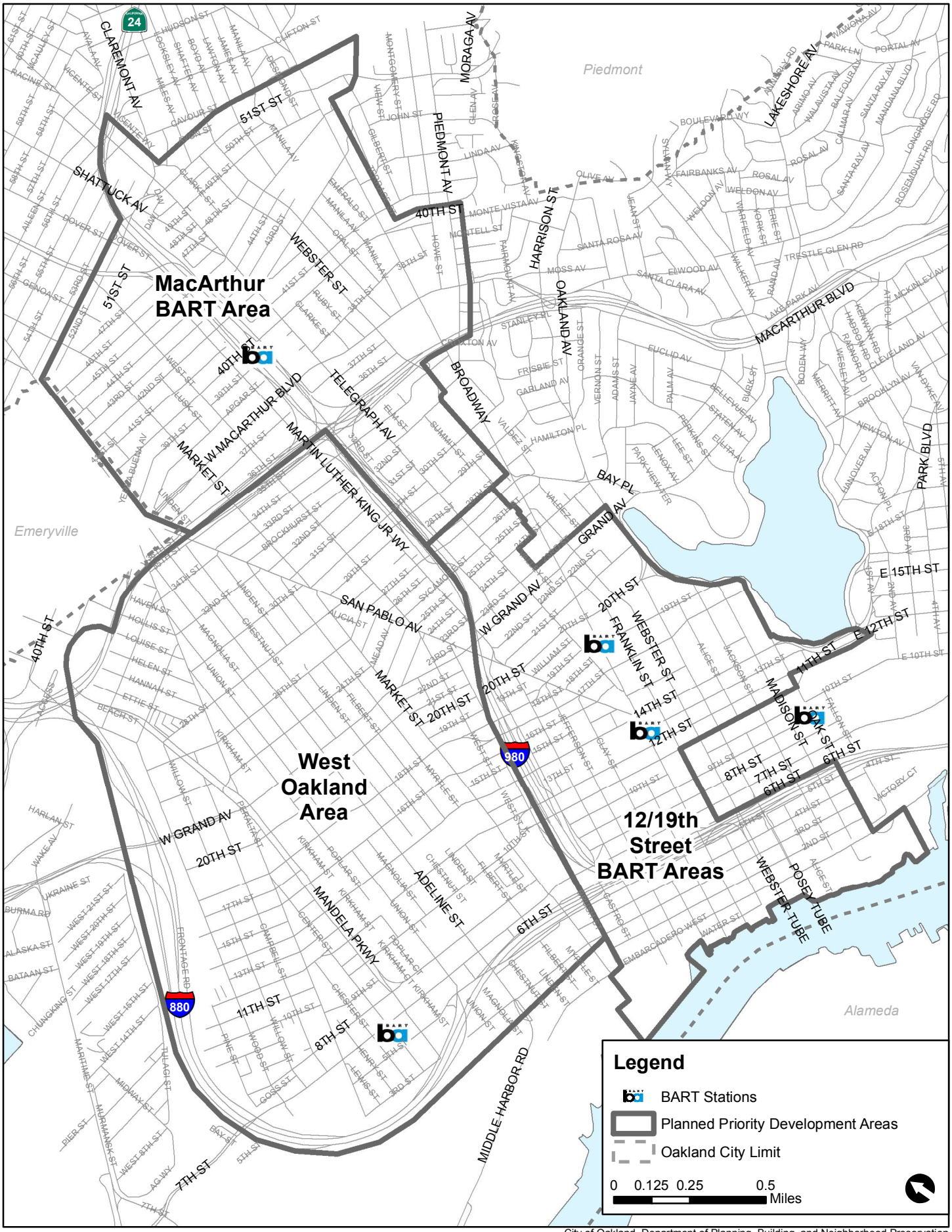
This section of the form identifies the stormwater-related information required to be submitted with the project application.

33. Submittal Requirements. The following materials/information must be submitted with the application for Planning and Zoning permit(s)/approval:

- ❑ **a. Stormwater Supplemental Form** – A completed copy of this form.
- ❑ **b. Preliminary Post-Construction Stormwater Management Plan** – A project drawing containing the following information (shown and labeled):
  - ❑ Location and size of new and replaced impervious surface;
  - ❑ Directional surface flow of stormwater runoff;
  - ❑ Location of proposed on-site storm drain lines;
  - ❑ Preliminary type and location of proposed site design measures;
  - ❑ Preliminary type and location of proposed source control measures;
  - ❑ Preliminary type and location of proposed stormwater treatment measures; and
  - ❑ Preliminary type and location of proposed hydromodification management measures (if applicable).

ATTACHMENT A

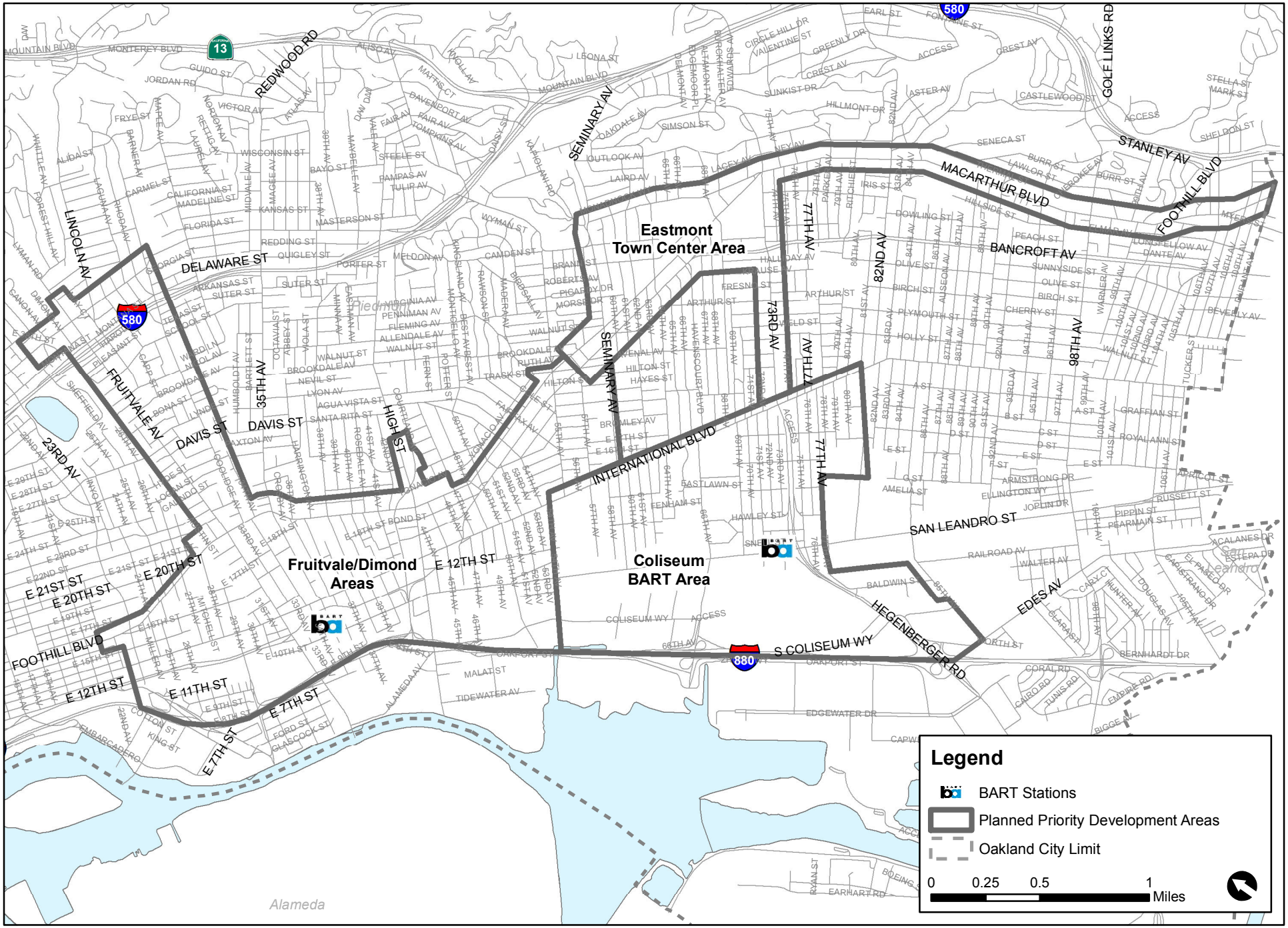
MAP OF OAKLAND PLANNED PRIORITY DEVELOPMENT AREAS (PDAS)



City of Oakland, Department of Planning, Building, and Neighborhood Preservation
March 2012

CITY OF OAKLAND

Planned Priority Development Areas - West



City of Oakland, Department of Planning, Building, and Neighborhood Preservation
March 2012

CITY OF OAKLAND

Planned Priority Development Areas - East

ATTACHMENT B

HYDROMODIFICATION SUSCEPTIBILITY MAP

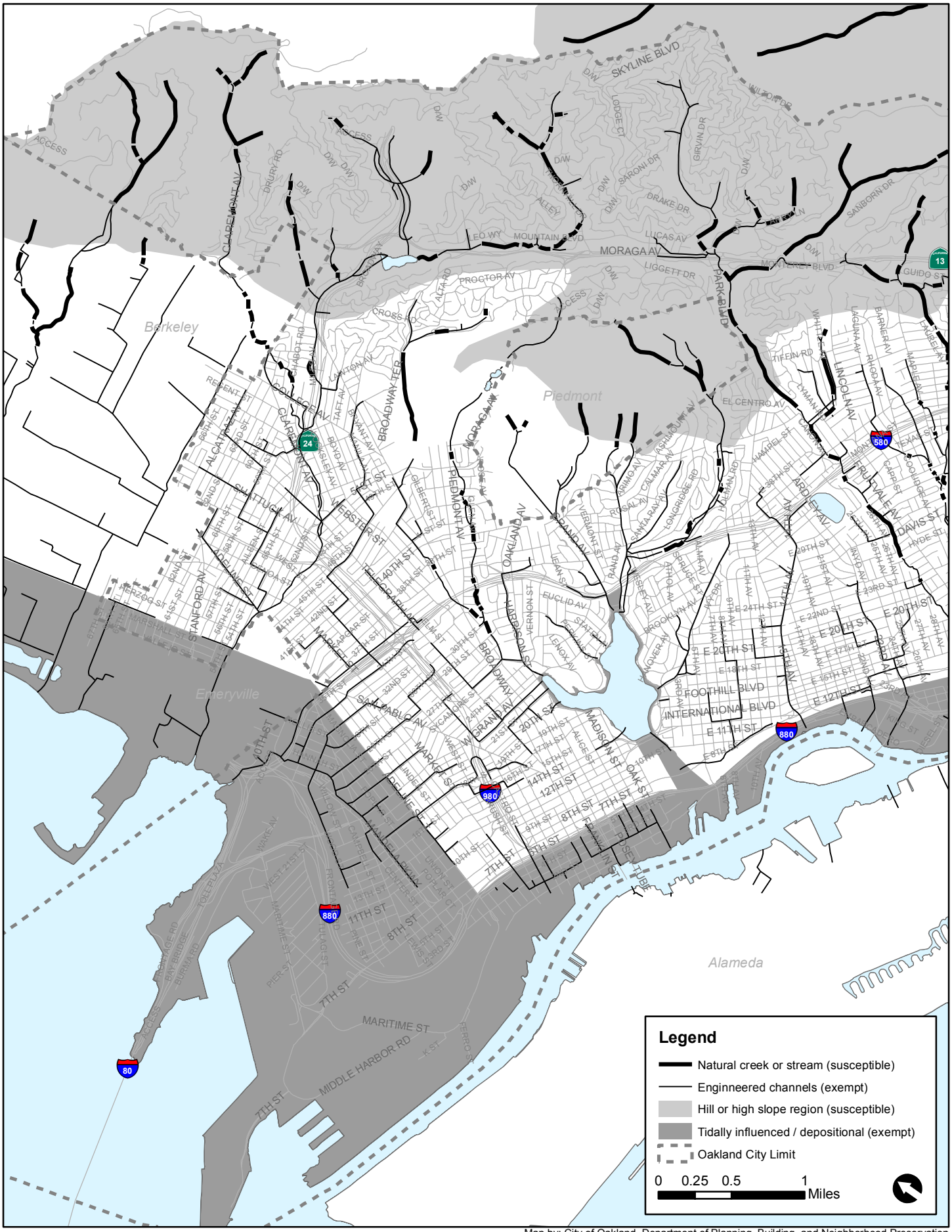
Map Instructions

Use the map on the following pages to determine if the project is located in a susceptible area. The map is divided into three areas:

High Susceptibility Area (Light Grey) – This area generally consists of steep slopes. Applicable projects in this area are required to incorporate hydromodification management measures.

Potential Susceptibility Area (White) – This area is located between the hills and the tidal zone of San Francisco Bay. This area may be susceptible to hydromodification depending upon the nature of the drainage system. Applicable projects in this area are required to incorporate hydromodification management measures *unless* project stormwater runoff will flow through fully hardened, engineered channels from the project site to the tidal zone. If stormwater runoff from the project site will flow through a natural creek or stream (shown as a thick black line on the map), hydromodification management measures are required.

Tidal Influence / Depositional Area (Dark Grey) – This area is located in the tidal zone of San Francisco Bay. Creeks in this area are generally tidally influenced or primarily depositional. Projects in this area are exempt from hydromodification management measures.



Map by: City of Oakland, Department of Planning, Building, and Neighborhood Preservation
Source: Alameda Countywide Clean Water Program
March 2012

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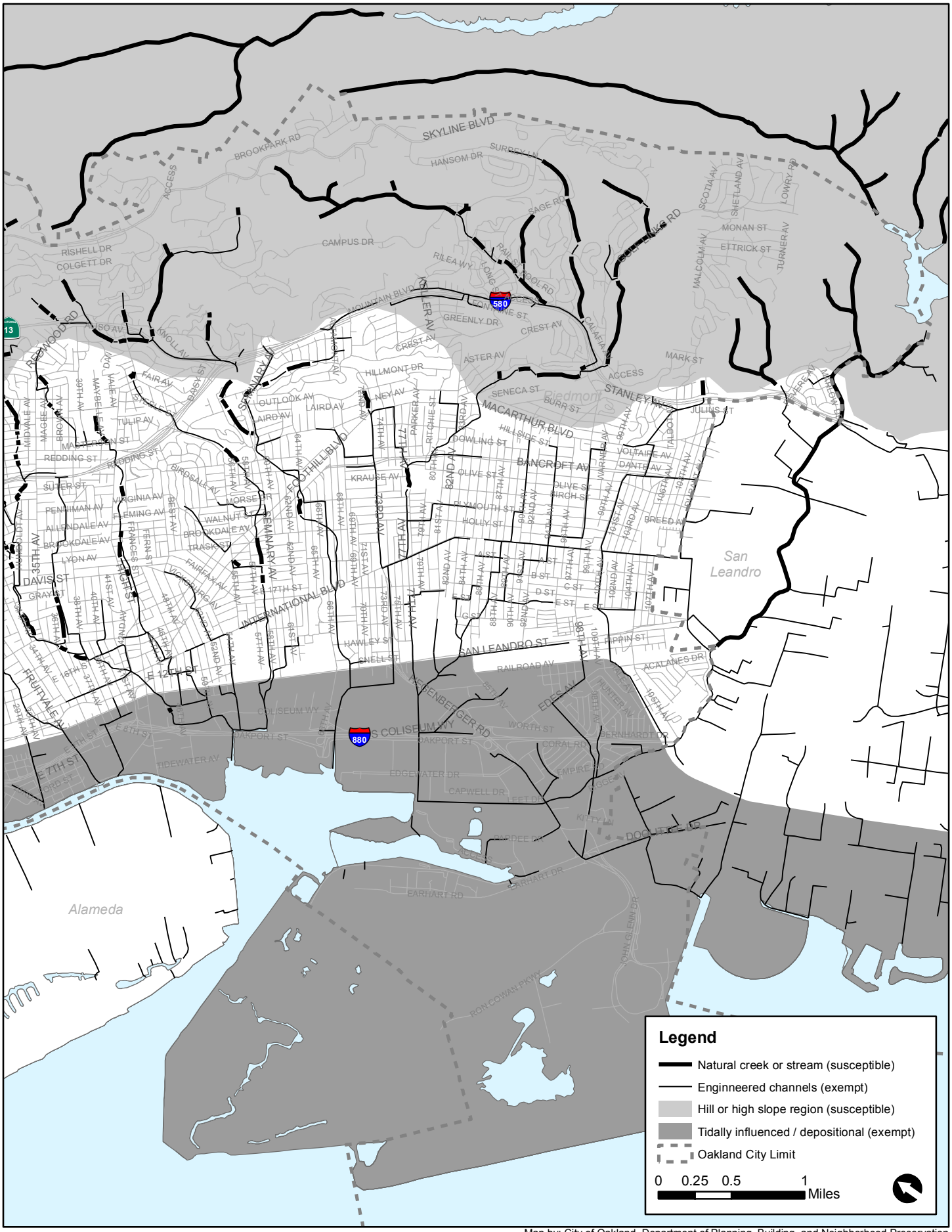
Hydromodification Susceptibility Map - West



Map by: City of Oakland, Department of Planning, Building, and Neighborhood Preservation
Source: Alameda Countywide Clean Water Program
March 2012

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Hydromodification Susceptibility Map - East