



**Notification of Lake or Streambed Alteration  
for the Non-Motorized Pathway –  
Franklin Avenue to Grant Avenue Project**

**June 2016**

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# Acronyms and Abbreviations

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AMM	avoidance and minimization measures
BMP	best management practices
CDFW	California Department of Fish and Wildlife
CY	cubic yard
EIR	Environmental Impact Report
IOS	Initial Operating Segment
MP	Mile Post
NES	Natural Environment Study
NMFS	National Marine Fisheries Service
NMP	Non-Motorized Pathway
project	Non-motorized Pathway - Franklin Avenue to Grant Avenue Project
ROW	right-of-way
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SMART	Sonoma-Marín Area Rail Transit District
SWPPP	Storm Water Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

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FOR DEPARTMENT USE ONLY

<i>Date Received</i>	<i>Amount Received</i>	<i>Amount Due</i>	<i>Date Complete</i>	<i>Notification No.</i>
	\$	\$		



STATE OF CALIFORNIA  
DEPARTMENT OF FISH AND WILDLIFE  
**NOTIFICATION OF LAKE OR STREAMBED ALTERATION**



**Complete EACH field, unless otherwise indicated, following the enclosed instructions and submit ALL required enclosures. Attach additional pages, if necessary.**

**1. APPLICANT PROPOSING PROJECT**

Name			
Business/Agency			
Street Address			
City, State, Zip			
Telephone		Fax	
Email			

**2. CONTACT PERSON** *(Complete only if different from applicant)*

Name			
Street Address			
City, State, Zip			
Telephone		Fax	
Email			

**3. PROPERTY OWNER** *(Complete only if different from applicant)*

Name			
Street Address			
City, State, Zip			
Telephone		Fax	
Email			

**4. PROJECT NAME AND AGREEMENT TERM**

A. Project Name				
B. Agreement Term Requested		<input type="checkbox"/> Regular (5 years or less) <input type="checkbox"/> Long-term (greater than 5 years)		
C. Project Term		D. Seasonal Work Period		E. Number of Work Days
Beginning (year)	Ending (year)	Start Date (month/day)	End Date (month/day)	

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**5. AGREEMENT TYPE**

Check the applicable box. If box B, C, D, or E is checked, complete the specified attachment.

A.	<input type="checkbox"/> Standard (Most construction projects, excluding the categories listed below)	
B.	<input type="checkbox"/> Gravel/Sand/Rock Extraction (Attachment A)	Mine I.D. Number: _____
C.	<input type="checkbox"/> Timber Harvesting (Attachment B)	THP Number: _____
D.	<input type="checkbox"/> Water Diversion/Extraction/Impoundment (Attachment C)	SWRCB Number: _____
E.	<input type="checkbox"/> Routine Maintenance (Attachment D)	
F.	<input type="checkbox"/> CDFW Fisheries Restoration Grant Program (FRGP)	FRGP Contract Number _____
G.	<input type="checkbox"/> Master	
H.	<input type="checkbox"/> Master Timber Harvesting	

**6. FEES**

Please see the current fee schedule to determine the appropriate notification fee. Itemize each project's estimated cost and corresponding fee. **Note: The Department may not process this notification until the correct fee has been received.**

A. Project		B. Project Cost	C. Project Fee
1			
2			
3			
4			
5			
		D. Base Fee (if applicable)	
		<b>E. TOTAL FEE ENCLOSED</b>	

**7. PRIOR NOTIFICATION OR ORDER**

A. Has a notification previously been submitted to, or a Lake or Streambed Alteration Agreement previously been issued by, the Department for the project described in this notification?

Yes (Provide the information below)       No

Applicant: \_\_\_\_\_ Notification Number: \_\_\_\_\_ Date: \_\_\_\_\_

B. Is this notification being submitted in response to an order, notice, or other directive ("order") by a court or administrative agency (including the Department)?

No       Yes (Enclose a copy of the order, notice, or other directive. If the directive is not in writing, identify the person who directed the applicant to submit this notification and the agency he or she represents, and describe the circumstances relating to the order.)

Continued on additional page(s)

NOTIFICATION OF LAKE OR STREAMBED ALTERATION

**8. PROJECT LOCATION**

A. Address or description of project location. (Include a map that marks the location of the project with a reference to the nearest city or town, and provide driving directions from a major road or highway)					
<input type="checkbox"/> Continued on additional page(s)					
B. River, stream, or lake affected by the project.					
C. What water body is the river, stream, or lake tributary to?					
D. Is the river or stream segment affected by the project listed in the state or federal Wild and Scenic Rivers Acts?			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
E. County					
F. USGS 7.5 Minute Quad Map Name		G. Township	H. Range	I. Section	J. ¼ Section
<input type="checkbox"/> Continued on additional page(s)					
K. Meridian (check one)		<input type="checkbox"/> Humboldt <input type="checkbox"/> Mt. Diablo <input type="checkbox"/> San Bernardino			
L. Assessor's Parcel Number(s)					
<input type="checkbox"/> Continued on additional page(s)					
M. Coordinates (If available, provide at least latitude/longitude or UTM coordinates and check appropriate boxes)					
Latitude/Longitude	Latitude:		Longitude:		
	<input type="checkbox"/> Degrees/Minutes/Seconds		<input type="checkbox"/> Decimal Degrees <input type="checkbox"/> Decimal Minutes		
UTM	Easting:	Northing:		<input type="checkbox"/> Zone 10 <input type="checkbox"/> Zone 11	
Datum used for Latitude/Longitude or UTM		<input type="checkbox"/> NAD 27		<input type="checkbox"/> NAD 83 or WGS 84	

NOTIFICATION OF LAKE OR STREAMBED ALTERATION

**9. PROJECT CATEGORY AND WORK TYPE** (Check each box that applies)

PROJECT CATEGORY	NEW CONSTRUCTION	REPLACE EXISTING STRUCTURE	REPAIR/MAINTAIN EXISTING STRUCTURE
Bank stabilization – bioengineering/recontouring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bank stabilization – rip-rap/retaining wall/gabion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boat dock/pier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boat ramp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bridge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Channel clearing/vegetation management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Culvert	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Debris basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diversion structure – weir or pump intake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Filling of wetland, river, stream, or lake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geotechnical survey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat enhancement – revegetation/mitigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Levee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low water crossing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Road/trail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sediment removal – pond, stream, or marina	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storm drain outfall structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temporary stream crossing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Utility crossing : Horizontal Directional Drilling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jack/bore	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Open trench	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Other</b> (specify):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**10. PROJECT DESCRIPTION**

A. Describe the project in detail. Photographs of the project location and immediate surrounding area should be included.

- Include any structures (e.g., rip-rap, culverts, or channel clearing) that will be placed, built, or completed in or near the stream, river, or lake.
- Specify the type and volume of materials that will be used.
- If water will be diverted or drafted, specify the purpose or use.

Enclose diagrams, drawings, plans, and/or maps that provide all of the following: site specific construction details; the dimensions of each structure and/or extent of each activity in the bed, channel, bank or floodplain; an overview of the entire project area (i.e., "bird's-eye view") showing the location of each structure and/or activity, significant area features, and where the equipment/machinery will enter and exit the project area.

Continued on additional page(s)

B. Specify the equipment and machinery that will be used to complete the project.

Continued on additional page(s)

C. Will water be present during the proposed work period (specified in box 4.D) in the stream, river, or lake (specified in box 8.B).

Yes     No (*Skip to box 11*)

D. Will the proposed project require work in the wetted portion of the channel?

Yes (*Enclose a plan to divert water around work site*)  
 No

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**11. PROJECT IMPACTS**

A. Describe impacts to the bed, channel, and bank of the river, stream, or lake, and the associated riparian habitat. Specify the dimensions of the modifications in length (linear feet) and area (square feet or acres) and the type and volume of material (cubic yards) that will be moved, displaced, or otherwise disturbed, if applicable.

Continued on additional page(s)

B. Will the project affect any vegetation?

Yes (Complete the tables below)  No

Vegetation Type	Temporary Impact	Permanent Impact
	Linear feet: _____ Total area: _____	Linear feet: _____ Total area: _____
	Linear feet: _____ Total area: _____	Linear feet: _____ Total area: _____

Tree Species	Number of Trees to be Removed	Trunk Diameter (range)

Continued on additional page(s)

C. Are any special status animal or plant species, or habitat that could support such species, known to be present on or near the project site?

Yes (List each species and/or describe the habitat below)  No  Unknown

Continued on additional page(s)

D. Identify the source(s) of information that supports a “yes” or “no” answer above in Box 11.C.

Continued on additional page(s)

E. Has a biological study been completed for the project site?

Yes (Enclose the biological study)  No

*Note: A biological assessment or study may be required to evaluate potential project impacts on biological resources.*

F. Has a hydrological study been completed for the project or project site?

Yes (Enclose the hydrological study)  No

*Note: A hydrological study or other information on site hydraulics (e.g., flows, channel characteristics, and/or flood recurrence intervals) may be required to evaluate potential project impacts on hydrology.*

NOTIFICATION OF LAKE OR STREAMBED ALTERATION

**12. MEASURES TO PROTECT FISH, WILDLIFE, AND PLANT RESOURCES**

A. Describe the techniques that will be used to prevent sediment from entering watercourses during and after construction.

Continued on additional page(s)

B. Describe project avoidance and/or minimization measures to protect fish, wildlife, and plant resources.

Continued on additional page(s)

C. Describe any project mitigation and/or compensation measures to protect fish, wildlife, and plant resources.

Continued on additional page(s)

**13. PERMITS**

List any local, state, and federal permits required for the project and check the corresponding box(es). Enclose a copy of each permit that has been issued.

A. \_\_\_\_\_  Applied  Issued

B. \_\_\_\_\_  Applied  Issued

C. \_\_\_\_\_  Applied  Issued

D. Unknown whether  local,  state, or  federal permit is needed for the project. (Check each box that applies)

Continued on additional page(s)

NOTIFICATION OF LAKE OR STREAMBED ALTERATION

**14. ENVIRONMENTAL REVIEW**

A. Has a draft or final document been prepared for the project pursuant to the California Environmental Quality Act (CEQA), National Environmental Protection Act (NEPA), California Endangered Species Act (CESA) and/or federal Endangered Species Act (ESA)?			
<input type="checkbox"/> Yes (Check the box for each CEQA, NEPA, CESA, and ESA document that has been prepared and enclose a copy of each) <input type="checkbox"/> No (Check the box for each CEQA, NEPA, CESA, and ESA document listed below that will be or is being prepared)			
<input type="checkbox"/> Notice of Exemption	<input type="checkbox"/> Mitigated Negative Declaration	<input type="checkbox"/> NEPA document (type): _____	
<input type="checkbox"/> Initial Study	<input type="checkbox"/> Environmental Impact Report	<input type="checkbox"/> CESA document (type): _____	
<input type="checkbox"/> Negative Declaration	<input type="checkbox"/> Notice of Determination (Enclose)	<input type="checkbox"/> ESA document (type): _____	
<input type="checkbox"/> THP/ NTMP	<input type="checkbox"/> Mitigation, Monitoring, Reporting Plan		
B. State Clearinghouse Number (if applicable)			
C. Has a CEQA lead agency been determined?		<input type="checkbox"/> Yes (Complete boxes D, E, and F) <input type="checkbox"/> No (Skip to box 14.G)	
D. CEQA Lead Agency			
E. Contact Person		F. Telephone Number	
G. If the project described in this notification is part of a larger project or plan, briefly describe that larger project or plan.			
<input type="checkbox"/> Continued on additional page(s)			
H. Has an environmental filing fee (Fish and Game Code section 711.4) been paid?			
<input type="checkbox"/> Yes (Enclose proof of payment) <input type="checkbox"/> No (Briefly explain below the reason a filing fee has not been paid)			
<p><i>Note: If a filing fee is required, the Department may not finalize a Lake or Streambed Alteration Agreement until the filing fee is paid.</i></p>			

**15. SITE INSPECTION**

Check one box only.	
<input type="checkbox"/> In the event the Department determines that a site inspection is necessary, I hereby authorize a Department representative to enter the property where the project described in this notification will take place at any reasonable time, and hereby certify that I am authorized to grant the Department such entry.	
<input type="checkbox"/> I request the Department to first contact (insert name) _____ at (insert telephone number) _____ to schedule a date and time to enter the property where the project described in this notification will take place. I understand that this may delay the Department's determination as to whether a Lake or Streambed Alteration Agreement is required and/or the Department's issuance of a draft agreement pursuant to this notification.	

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16. DIGITAL FORMAT

Is any of the information included as part of the notification available in digital format (i.e., CD, DVD, etc.)?
<input checked="" type="checkbox"/> Yes (Please enclose the information via digital media with the completed notification form)
<input type="checkbox"/> No

17. SIGNATURE

<p>I hereby certify that to the best of my knowledge the information in this notification is true and correct and that I am authorized to sign this notification as, or on behalf of, the applicant. I understand that if any information in this notification is found to be untrue or incorrect, the Department may suspend processing this notification or suspend or revoke any draft or final Lake or Streambed Alteration Agreement issued pursuant to this notification. I understand also that if any information in this notification is found to be untrue or incorrect and the project described in this notification has already begun, I and/or the applicant may be subject to civil or criminal prosecution. I understand that this notification applies only to the project(s) described herein and that I and/or the applicant may be subject to civil or criminal prosecution for undertaking any project not described herein unless the Department has been separately notified of that project in accordance with Fish and Game Code section 1602 or 1611.</p>	
	
_____ Signature of Applicant or Applicant's Authorized Representative	_____ Date
<b>Bill Gamlen</b> _____ Print Name	

## Box 8A. Project Location

The Sonoma-Marín Area Rail Transit (SMART) District's Non-Motorized Pathway (NMP) – Franklin Avenue to Grant Avenue Project<sup>1</sup> (project), as described in this notification, is located in Novato, Marin County, California. The project area is a linear corridor extending from Franklin Avenue (Mile Post<sup>2</sup> [MP] 27.5) north to Grant Avenue (MP 27.9). Figure 1 in Appendix A provides an overview of the entire NMP Project (described in Box 8 below) and Figure 2 and 3 show the extent of the NMP – Franklin Avenue to Grant Avenue Project.

The project area occurs within an unsectioned portion of Township 3 North, Range 6 West of the Novato 7.5-minute U.S. Geological Survey quadrangle. The coordinates of the southern and northern ends of the project are as follows.

- Southern terminus (Franklin Avenue): 38.102661° N, -122.561929° W
- Northern terminus (Grant Avenue): 38.106707°, -122.565524° W

## Directions to the Project Location

To ensure compliance with safety requirements, access to the project area must be coordinated with SMART. Directions to the southern limit of the project from 7329 Silverado Trail, Napa, CA 94558 are as follows:

Head northeast on Silverado Trail then turn right onto Yountville Cross Road. After 1.9 miles, turn left onto Yount Street then right onto Madison Street. Turn left onto California Highway (CA) 29 south. After 11.3 miles turn right onto CA-12 West and continue for 8.2 miles then turn right onto CA-121 South toward Petaluma. Keep right onto CA-37 West and after 7.1 miles merge onto U.S. Highway 101 North. After 2.0 miles, take exit 462B for De Long Avenue toward downtown Novato. Turn left onto De Long Avenue, then left onto Reichert Avenue. Turn left on to Lamont Avenue and continue to the turn in the road where Lamont Avenue changes to Franklin Avenue. The southern limit of the project area will be on the left where the rail alignment is parallel to Franklin Avenue. The project area extends approximately 0.35 mile north from this location.

## Existing Conditions

The project is mostly within an existing railway corridor historically operated by the Northwestern Pacific Railroad. The railway corridor in the project area averages approximately 60 feet wide but widens to approximately 180 feet wide at the northern 0.1 mile of the project area where a gravel parking lot is located. The project area is generally characterized by disturbed conditions relative to

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<sup>1</sup> Also referred to as Segment 11 in the Existing and Proposed Condition Drawings.

<sup>2</sup> Mile posts designations relate to the approximate location relative to previously permitted SMART rail projects

vegetation, hydrology, and soils, although some areas have become naturalized or vegetated over time. The project area is adjacent to U.S. Highway 101 and residential use to the east and predominantly residential use to the west. The project area occurs under overpasses at the intersections with U.S. Highway 101 and De Long Avenue.

Please refer to the following documents for visual representation of the character of the project area.

- Appendix B, *Representative Photographs*
- Appendix D, *Existing Condition Drawings*
- Appendix F, *Habitat Maps*<sup>3</sup>

## Vegetation

As described above, the proposed project extends through a relatively urbanized area and is significantly influenced by surrounding development and historic disturbance from railroad operations. Natural plant communities occurring in the project corridor have a significant component of nonnative and ornamental species. The project area is dominated by a mixture of ruderal areas, nonnative grassland, isolated trees (including oaks and ornamental species), and a seasonal wetland. Biological field surveys were conducted by Area West Environmental, Incorporated in 2014. Habitats types occurring in the project area are mapped in Appendix F.

## Jurisdictional Areas

Prior delineations completed for SMART's Initial Operating Segment (IOS)-1 South Project (Notification No. 1600-2013-0237-R3) were reviewed and relied upon, where available, to determine the extent of wetlands and non-wetland waters in the project area. One coastal freshwater seasonal wetland (YYY) totaling approximately 0.123 acre occurs in the project area<sup>4</sup>. Wetland YYY was previously verified by the U.S. Army Corps of Engineers (USACE) and the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) during permitting of the IOS-1 South Project. The extent of wetlands and non-wetland waters in the project area is depicted in the Existing Condition drawings (Appendix D). Wetland YYY is described below.

## Coastal Freshwater Seasonal Wetland (YYY)

Coastal freshwater seasonal wetland is a wetland type associated with depressions that retain water from direct rainfall and channels that convey runoff from the surrounding land. One coastal freshwater seasonal wetlands (YYY) occurs at the southern end of the project area. This wetland occurs between the bottom of the railroad track ballast and adjacent uplands (including along residential fence lines and Franklin Avenue). Vegetation in this wetland is dominated by species such as bristly ox-tongue (*Helminthotheca echioides*), Harding grass (*Phalaris aquatica*), ripgut brome (*Bromus diandrus*), tall flatsedge (*Cyperus eragrostis*), fennel (*Foeniculum vulgare*), tree of

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<sup>3</sup> Habitat maps were prepared by AECOM for the California Department of Transportation Natural Environment Study for the entire NMP system and may not accurately reflect the currently proposed pathway alignment or ancillary features.

<sup>4</sup> Note: coastal freshwater seasonal wetland zzz is depicted on sheet EV1241 of the Existing Condition drawings (Appendix D) but is not included as a wetland in the project area due to its location approximately 300 feet south and on the opposite side of the tracks from any proposed work.

heaven (*Ailanthus altissima*), and a mix of weedy, nonnative, herbaceous species. Wetland YYY is expected to exhibit hydrologic connectivity to Novato Creek or its adjacent wetlands (which occur approximately 0.3 mile south of the project site) via culverts, though this connectivity has not been confirmed.

## Box 10A. Project Description

The proposed project would involve construction of approximately 0.35 mile of paved NMP and other ancillary features such as retaining walls, culverts, fences, curbs, and signage. The Engineering Plans (Appendix C) and Proposed Condition drawings (Appendix E) depict the location of project elements including the NMP alignment, culverts, and retaining walls.

### Non-Motorized Pathway

The entire proposed NMP segment and associated project features are located on the west side of the rail, mostly within the existing SMART ROW. Construction of the NMP would permanently affect wetlands at one location.

Approximately 0.35 mile of paved NMP would be installed in the project area. The NMP would generally consist of an 8-foot-wide asphalt concrete pathway with two 2-foot-wide shoulders (Appendix A, Figure 4). In some areas the pathway may be Portland cement concrete rather than asphalt. The minimum offset of the NMP from the rail would be 10.5 feet from the rail center line.

In general, NMP construction would occur from within the proposed NMP footprint; as a result, temporary impacts from project implementation would be negligible. The construction methods focus on utilizing the NMP alignment for the temporary work area, particularly near wetlands.

The general NMP construction process would be sequenced as follows.

1. *Install environmental controls* (fencing, wattles, stabilized construction access).
2. *Clearing and grubbing.* Remove existing surface features to allow grading of the NMP footprint.
3. *Rough grading.* Excavate and fill to produce a stable subgrade on which the NMP would be built and shape slopes and swales to provide positive drainage.
4. *Supporting features.* Construct culverts below the NMP to allow existing drainage patterns to be maintained; construct retaining structures and other supporting features.
5. *Structural section.* Place and compact base material and asphalt, concrete, or Portland cement concrete NMP surface.
6. *Finish features.* Perform final grading; construct fencing, striping, signage, and other items to complete the work including removing any temporary work; and place permanent erosion control measures.

### Culverts

Installation of new culverts is necessary to maintain hydrologic connections through the NMP and to reduce the likelihood of localized flooding. Two new culverts will need to be installed along or through the NMP. Only one of these two new culverts would involve features under California Department of Fish and Wildlife (CDFW) jurisdiction. The culvert within the CDFW jurisdiction

(P-N90) occurs at the southern end of the project area at Wetland YYY (Station 1366+55). This culvert will be a 30-inch diameter high-density polyethylene culvert extending approximately 15 feet with rock aprons on each side. Culvert P-N90's purpose is to maintain the hydrologic connectivity of Wetland YYY occurring on each side of the new NMP. To prevent temporary impacts to wetlands, culvert P-N91 would be constructed from the future NMP footprint (i.e., within the permanent impact footprint).

Impacts to wetlands resulting from culvert work are detailed in in Box 11A below. The general construction sequence for culvert work is as follows:

1. Dewater work site (see *Dewatering* section below)
2. Excavate down to and around proposed culvert grade
4. Install and compact new pipe bedding<sup>5</sup> under new culvert
5. Install new culvert
6. Install and compact new pipe bedding around new culvert
7. Backfill and compact above bedding to subgrade elevation
8. Install ungrouted rock apron/slope protection on each side of the culvert
9. Remove water diversion
10. Construct NMP over new culvert

### **Dewatering**

It is anticipated that the culvert would be dry at the time of work; however, the following dewatering procedure will be followed if water is present:

1. The contractor will use a simple bypass pumping operation to intercept surface flows in the existing waterway and pump the water around the culvert work area in order for work to be conducted in a dry environment. The contractor will procure a pump and discharge hose of a suitable size to ensure adequate capacity is available. The primary pump system will be an electric submersible pump powered by a generator. If this pump unexpectedly fails, a backup diesel or gasoline powered trash pump system will be utilized. Both systems will be tested prior to excavation.
2. Additional preparatory work prior to initiating the bypass procedure includes having all materials, equipment, and personnel onsite. To the extent feasible, pre-excavation work will be conducted to reduce the total time requirement for bypass pumping.
3. Once pump bypass materials are on site, the contractor will construct a temporary gravel bag cofferdam lined with visqueen at the upstream end of the culvert to prevent water from entering the work area. The contractor will then install the pump immediately upstream of the dam and begin pumping. The discharge hose will extend up and over the embankment beyond the downstream end of the culvert outlet. A second gravel bag dam lined with visqueen will be placed downstream from the culvert (immediately upstream of the discharge end of the hose) to prevent water from backing up into the work area.
4. After the pumping has been initiated and the work site is dewatered, the work area will be excavated to the required depth for pipe installation. Excavation will work in the upstream

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<sup>5</sup> Pipe bedding is a manufactured sand-like material placed below and above culverts for stability

direction. Once there is adequate space to work, the new pipe will be installed and the area will be backfilled to the specified grade.

## Retaining Walls

The project would involve the construction of two retaining walls along the NMP alignment. The retaining walls are summarized in Table 1, below, and would be constructed out of precast masonry blocks or cast-in-place concrete. Construction of retaining walls, in combination with NMP construction described above, would affect wetlands at one location.

**Table 1. Retaining Wall Work Summary**

<b>Mile Post</b>	<b>Approx. Station</b>	<b>Approx. Length (feet)</b>	<b>Side of ROW</b>
27.53	1366+50	40	East
27.55 - 27.68	1366+75 - 1373+90	715	West

## Fencing

To separate the NMP from the rail use, a fence approximately 4 to 6 feet in height would be constructed on the rail side of the NMP. The lengths of safety fencing between the NMP and railroad would be minimized, and the height would not exceed 6 feet. No wetlands or non-wetland waters would be affected by fence installation.

## Other Project Features

The proposed project may involve some utility relocations. Any potential utility relocations would be in place and would not extend outside of the project footprint. The proposed project does not include any lighting. Plantings would be limited to those on proposed fencing and retaining walls and grasses for soil retention and stormwater pollution prevention. No wetlands or non-wetland waters would be affected by utility relocations, lighting, or project landscaping.

## Construction Footprint and Techniques

All construction materials would be transported to the site via trucks within the existing ROW. In general, NMP construction would occur from within the proposed NMP footprint; as a result, temporary impacts from project implementation would be negligible. The lack of temporary impacts is the result of the construction methods, which focus on utilizing the NMP alignment for the temporary work area, particularly near wetlands or non-wetland waters. Where retaining walls abut wetlands that would not be permanently affected by retaining wall installation, construction would occur from the area of permanent impact and utilize appropriate best management practices (BMPs) to avoid temporary impacts on wetlands.

Construction equipment anticipated to be used for NMP construction includes motor graders; bulldozers; backhoes; excavators; haul trucks to remove dirt and deposit base rock and asphalt; asphalt paving machines; compactors for base, soil, and asphalt; stripers; and concrete trucks and pumps to pump concrete into forms.

## **Construction Staging and Access**

Staging for the project is proposed within the ROW. Construction staging activities would utilize standard BMPs per the Stormwater Pollution Prevention Plan (SWPPP) for the project.

During the construction period, any areas within the ROW could be used for construction staging and access. All areas mapped as wetlands or non-wetland waters and other sensitive habitats would be flagged in the field and would not be used for staging, including storage of construction equipment and materials. All materials and equipment would be transported to the sites by truck and rail. Access points for NMP work and construction equipment would be primarily from the existing parking lot at the north end of the project area and from Franklin Avenue at the south end. Access routes would be established from the nearest entry point and would proceed overland within the NMP footprint.

## **Construction Schedule**

SMART proposes to begin constructing the project in spring 2016 or as soon as authorized to do so. Depending on seasonal restrictions imposed on the project to protect wildlife and/or water quality, construction is anticipated to take 4 to 6 months to complete.

## **Box 10B. Equipment**

Construction equipment anticipated to be used for NMP construction includes: motor graders; bulldozers; backhoes; excavators; haul trucks to remove dirt and deposit base rock and asphalt; asphalt paving machines; compactors for base, soil, and asphalt; stripers; and, concrete trucks and pumps to pump concrete into forms.

## **Box 11A. Project Impacts**

The project will result in unavoidable permanent impacts on approximately 0.019 acre (816 square feet) of coastal freshwater seasonal wetland within CDFW jurisdiction. For a detailed summary of avoidance and minimization of impacts, see Box 12 below.

### **Reasons for Discharge**

Unavoidable permanent impacts on wetland YYY would result from construction of the proposed project. NMP construction (including a new culvert and retaining walls) would result in placement of permanent structural fill in wetland YYY to facilitate NMP construction. Clean structural fill would be placed in the wetland in order to establish the appropriate pathway grade. Concrete foundations would be constructed within wetland YYY to support retaining walls adjacent to the pathway. Rock aprons associated with the culvert would also result in placement of fill within the wetland.

### **Impacts on Wetlands**

Permanent impacts on CDFW jurisdiction would occur at one location, coastal freshwater seasonal wetland YYY. Permanent impacts would result from NMP construction (e.g., grading, paving) and retaining wall installation that would permanently convert wetland YYY to hardscape. A total of

0.019 acre (816 square feet) would be permanently affected. Of this total, the NMP (including the footprint of the culvert pipe) and the retaining wall would result in impacts on 0.018 acre (765 square feet) while the culvert rock aprons (outside the NMP footprint) would impact 0.001acre (51 square feet). Approximately 71 cubic yards of material would be discharged as a result of the proposed project. See the Proposed Condition drawings (Appendix E; sheet EV1341) for mapping of these impacts.

Table 2 summarizes impacts on and discharge into Wetland YYY resulting from project construction.

**Table 2. Impacts on Wetland YYY**

<b>Impact Source</b>	<b>Permanent Impact Area</b>	<b>Discharge Volume</b>
NMP/culvert pipe/retaining walls	0.018 acre (765 square feet)	67 cubic yards of clean structural fill, concrete, culvert pipe, and pipe bedding
Culvert Rock Aprons	0.001 acre (51 square feet)	4 cubic yards of rock
<b>Total</b>	<b>0.019 acre (816 square feet)</b>	<b>71 cubic yards</b>

### Impacts on Water Quality

Short-term or temporary construction-related impacts on water quality have the potential to occur during grading, vegetation removal, NMP installation, and other construction-related activities. The primary concerns regarding water quality during construction are impacts associated with erosion and contaminated runoff originating from land disturbance activities, staging areas, access routes, and use of construction equipment. Disturbance of the ground surface and exposure of soils to wind, rain, and surface runoff during construction could mobilize sediment to nearby surface waters, potentially causing an increase in surface water turbidity. This potential impact would be avoided and minimized through implementation of site-specific BMPs and erosion control measures identified in the project’s SWPPP, currently in preparation.

## Box 11B. Vegetation Impacts

Impacts on vegetation within CDFW jurisdiction have been captured as impacts on wetlands, as described in Box 11A above.

## Box 11C/D. Special-Status Species

### Federally Listed Species

Species listed as threatened or endangered by the federal Endangered Species Act are not expected to be affected by the proposed project. See the following documents/sections for an evaluation of federally listed species potentially present in the project area.

- Section 3.2.1 of the Natural Environment Study (NES; Appendix G) and the *Botanical Technical Report* (Appendix C of the NES) for a complete discussion of special-status plant species, habitats, surveys, and results
- Sections 3.2.2 and 4.2.1 of the NES (Appendix G) and the *NMP Site Assessment for California Red-legged Frog* (Appendix D of the NES) for an evaluation of habitat suitability of the California red-legged frog in the project area.
- Sections 3.2.2 and 4.2.2 of the NES (Appendix G) and the *NMP Site Assessment for California Tiger Salamander* (Appendix E of the NES) for an evaluation of habitat suitability of the California tiger salamander in the project area
- Sections 3.2.2 and 4.2.3 of the NES (Appendix G) and the *NMP Review of Essential Fish Habitat* (Appendix F of the NES) for an evaluation of impacts on federally listed fish species and essential fish habitat

The U.S. Fish and Wildlife Service issued a Biological Opinion for the entire NMP Project (08ESMF00-2014-F-0576-2) on March 11, 2015, which was amended on October 8, 2015 and January 22, 2016 (Appendix H). The National Marine Fisheries Service issued a letter of concurrence with the no effect determination to the USACE on January 16, 2015 (WCR-2014-1615) (Appendix I).

### State-Listed Species

Species listed as threatened or endangered by the California Endangered Species Act as well as species listed in California as fully protected (CFP) and species of special concern (SSC) have the potential to occur in the project area. As described in the NES, 19 state-listed and/or special-status species have potential to occur in the project area for the entire NMP Project. Of these 19 species, the following 9 species have the potential to occur in the NMP – Franklin Avenue to Grant Avenue Project area.

- American badger (*Taxidea taxus*) – SSC
- Golden eagle (*Aquila chrysaetos*) – CFP
- Loggerhead shrike (*Lanius ludovicianus*) – SSC
- Northern harrier (*Circus cyaneus*) – SSC
- Pallid bat (*Antrozous pallidus*) – SSC
- Short-eared owl (*Asio flammeus*) – SSC
- Western burrowing owl (*Athene cunicularia hypugaea*) – SSC
- White-tailed kite (*Elanus leucurus*) – CFP
- Yellow warbler (*Dendroica petechia brewsteri*) – SSC

Conservation measures described in Section 3.9.7 (*Biological Resources – Impacts and Mitigation Measures*) of the Final EIR prepared for the SMART project would be implemented to ensure the protection of special-status species on and near the project site.

### Migratory Birds

Raptors and other native birds could nest within habitats present in and adjacent to the project area, including natural vegetation and disturbed areas. Birds use a variety of locations for nesting,

including the ground, in shrubs and trees, on buildings, under bridges, and within cavities, crevices, and human-made structures. Active nests of most bird species are protected by the federal Migratory Bird Treaty Act and Section 3503 of the California Fish and Game Code. Avoidance and Minimization Measures (AMMs) described in the Final EIR prepared for the SMART project would be implemented to ensure the protection of nesting birds on and near the project site.

## **Box 12. Measures to Protect Fish, Wildlife, and Plant Resources**

### **Avoidance of Impacts**

The project has been designed to avoid impacts on areas within CDFW jurisdiction to the maximum extent practicable. A total of 0.123 acre of areas subject to CDFW jurisdiction occur in the project area. Most of the project would take place outside of areas subject to CDFW jurisdiction. However, a total of 0.019 acre of permanent impact on coastal freshwater seasonal wetland is considered unavoidable. This impact represents approximately 15% of the total jurisdictional area in the project area. The remaining 85% of jurisdictional areas (0.104 acre) in the project area would be avoided by the project.

The project staging area would be located in a previously developed gravel parking lot to avoid wetlands and other sensitive habitats. There would be no permanent or temporary impacts on CDFW jurisdiction at the staging area.

AMMs would be implemented to protect resources under CDFW jurisdiction. AMMs to be implemented by SMART are presented below.

### **Avoidance and Minimization Measures**

To avoid and minimize adverse effects on resources in CDFW jurisdiction, the following measures would be implemented.

- Before construction begins, the project engineer and a qualified biologist will identify locations for equipment and personnel access and materials staging that will minimize disturbance on sensitive vegetation. Construction access, staging, storage, and parking areas will be located in uplands and on ruderal or developed lands to the extent possible. Access routes and work areas will be limited to the minimum amount necessary to achieve the project goals. Unpaved routes and boundaries will be clearly marked prior to initiating construction.
- Areas within CDFW jurisdiction to be avoided will be designated with Environmentally Sensitive Area fencing in order to clearly delineate the extent of the construction, and work will be limited to outside the marked areas. Vehicle travel adjacent to waters will be limited to existing roads and designated access paths.
- During construction, as much understory brush and as many trees as possible will be retained. The emphasis will be on retaining shade-producing and bank-stabilizing native vegetation.
- When chainsaws are used to remove sensitive vegetation, saws with vegetable-based bar oil will be used if possible.

- All equipment will be maintained such that there will be no leaks of automotive fluids such as gasoline, oils, or solvents.
- Hazardous materials such as fuels, oils, solvents, etc., will be stored in sealable containers in a designated location that is at least 200 feet from aquatic habitats. All fueling and maintenance of vehicles and other equipment and staging areas will occur at least 200 feet from any aquatic habitat.
- When heavy equipment is required, unintentional soil compaction will be minimized by using equipment with a greater reach, or using low-ground-pressure equipment.
- Sediment, debris, and erosion controls will be used to protect wetlands and non-wetland waters and could include silt fencing, straw wattles, check dams, mulch, blankets and mats, and gravel berms in appropriate areas.
- Any disturbed features will be recontoured to pre-project conditions to the extent practicable.
- SMART will remove all materials used to maintain flow and divert water, if these materials were necessary, from wetlands and non-wetland waters at the completion of the construction period.
- To prevent introduction and/or transport of aquatic invasive species into or from wetlands and non-wetland waters, any equipment that comes into contact with these areas will be inspected and cleaned before and after contact, according to the most current *Inspection and Cleaning Manual for Equipment and Vehicles to Prevent the Spread of Invasive Species*.<sup>6</sup>
- All foods and food-related trash items will be enclosed in sealed trash containers at the end of each day, and removed completely from the site once every 3 days.
- No pets will be allowed anywhere in the project site during construction.
- A speed limit of 15 miles per hour on dirt roads will be maintained.
- Grading and clearing will typically be conducted between April 15 and October 15, of any given year, depending on the level of rainfall and/or site conditions.
- A SWPPP will be developed and implemented that identifies all pollutant sources, including sediments, that may affect waters and BMPs to reduce or eliminate pollutants from entering wetlands and other surface waters.

## General Measures to Protect Water Quality

SMART would update its SWPPP to include activation of the NMP – Franklin Avenue to Grant Avenue Project and include it in project plans and specifications. The construction contractor(s) would then be required to post a copy of the SWPPP at the project site, file a notice of intent to discharge stormwater with the SFBRWQCB, and implement all measures required by the SWPPP. SMART would be responsible for monitoring to ensure that the provisions of the SWPPP are effectively enforced.

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<sup>6</sup> DiVittorio, J., M. Grodowitz, and J. Snow. 2012. *Inspection and Cleaning Manual for Equipment and Vehicles to Prevent the Spread of Invasive Species*. U.S. Department of the Interior, Bureau of Reclamation, Technical Memorandum No. 86-68220-07-05.

The SWPPP would include the following information and stipulations.

- A description of site characteristics, including runoff and drainage characteristics and soil erosion hazards.
- A description of proposed construction procedures and construction-site housekeeping practices, including prohibitions on discharging or washing potentially harmful materials into streets, shoulder areas, inlets, catch basins, gutters, or agricultural fields, associated drainage, or irrigation features.
- A description of measures that would be implemented for erosion and sediment control, including requirements to:
  - Conduct major construction activities involving excavation and spoils haulage during the dry season, to the extent possible.
  - Conduct all construction work in accordance with site-specific construction plans that minimize the potential for increased sediment inputs to storm drains and surface waters.
  - Grade and stabilize spoils sites to minimize erosion and sediment input to surface waters.
  - Implement erosion control measures as appropriate to prevent sediment from entering surface waters, agricultural water features, and storm drains to the extent feasible, including the use of silt fencing or fiber rolls to trap sediments and erosion control blankets on exposed slopes.
- A Spill Prevention and Response Plan that identifies any hazardous materials to be used during construction; describes measures to prevent, control, and minimize the spillage of hazardous substances; describes transport, storage, and disposal procedures for these substances; and outlines procedures to be followed in case of a spill of a hazardous material. The Spill Prevention and Response Plan would require that hazardous and potentially hazardous substances stored on site be kept in securely closed containers away from drainage courses, agricultural areas, storm drains, and areas where stormwater is allowed to infiltrate. It would also stipulate procedures, such as the use of spill containment pans, to minimize hazards during on-site fueling and servicing of construction equipment. Finally, the Spill Prevention and Response Plan would require that SMART be notified immediately of any substantial spill or release.
- A stipulation that construction would be monitored by SMART personnel to ensure that contractors are adhering to all provisions relevant to state and federal stormwater discharge requirements, and that SMART would shut down the construction site in the event of noncompliance.

## Proposed Compensatory Mitigation

SMART proposes compensatory mitigation for unavoidable permanent impacts on wetlands through re-establishment of tidal wetlands at SMART's Mira Monte Marsh Restoration Project, constructed in 2015. The Mira Monte Marsh Restoration Project has been used to mitigate for impacts on wetlands and non-wetland waters for previous SMART projects and would provide high-quality mitigation for project impacts. SMART proposes a mitigation ratio of 1.35:1, thereby compensating for the 0.019 acre of impacts on relatively low-value seasonal wetland areas through re-establishment of 0.026 acre of higher-value tidal wetlands. Upon request, SMART can provide verification that sufficient mitigation area is currently available for these project impacts.

While these impacts would not be mitigated in-kind (i.e., seasonal freshwater wetland impacts mitigated with tidal wetlands), the proposed ratio reflects the temporal gain as wetlands have been re-established prior to impacts. Furthermore, the affected wetlands are of lower biological value relative to the recently re-established tidal wetlands. The proposed mitigation ratio was determined by ICF International using USACE's *Mitigation Ratio Setting Checklist* and is subject to review and confirmation by USACE and SFBRWQCB. A copy of the draft checklist used to calculate the proposed mitigation ratio can be provided upon request.

## Box 13. Permits

Table 3, below, describes other consultations, permits or approvals that are in process or will be completed/obtained by SMART prior to construction of the project.

**Table 3. Required Permits and Approvals**

<b>Agency</b>	<b>Contact</b>	<b>Permit/Authorization</b>	<b>Status</b>
SFBRWQCB	Christina Toms (510) 622-2506	Water Quality Certification	Applied concurrently
USACE	Bryan Matsumoto (415) 503-6786	Nationwide Permit 14	Applied concurrently
USFWS - Coast Bay/Forest Foothills Division	Joseph Terry (916) 414-6600	Biological Opinion (08ESMF00-2014-F-0576-2)	Biological Opinion issued on March 11, 2015. Amended on October 8, 2015 and January 22, 2016.
NMFS – West Coast Region	Dan Wilson (707) 578-8555	Concurrence Letter (WCR-2014-1615)	Concurrence Letter issued on January 16, 2015
State Historic Preservation Office/California Department of Transportation (Caltrans)	Tom Holstein (Caltrans) (510) 286-5250	National Historic Preservation Act Section 106 Consultation (RPSTPLE 6411 (005))	Consultation completed on November 20, 2015.

## Box 14G. Larger Plan or Development

The proposed project is part of the larger NMP Project, which extends north from North San Pedro Road in San Rafael, Marin County, at the southern end to Guerneville Road in Santa Rosa, Sonoma County (MP 55.3) (Appendix A, Figure 1). The project is broken down into segments due to SMART's anticipated construction schedule and availability of local, state, and federal funding. Some NMP segments have already been constructed, or are being constructed, by other entities, but the timing of construction of future SMART segments is dependent on unknown funding availability. Most segments are anticipated to be constructed over the next 10 years. The entire NMP Project would involve construction of approximately 23 miles of paved NMP, 12 prefabricated bridges, numerous culverts, drainage swales, safety fences, retaining walls, and other minor project elements such as signage and pavement striping. The portion of the NMP from MP 28.8 to MP 36.8 is already

environmentally approved and will be built as part of the Caltrans Marin-Sonoma Narrows Project. The overall SMART Project, which included the NMPs, was previously evaluated in a series of EIRs and related technical studies. A NES (Appendix G) was prepared for the entire NMP system<sup>7</sup>. Furthermore, the USFWS issued a Biological Opinion for the entire NMP Project (08ESMF00-2014-F-0576-2) on March 11, 2015, which was amended on October 8, 2015 and January 22, 2016 (Appendix H), and the NMFS issued a letter of concurrence with the no effect determination to the USACE on January 16, 2015 (WCR-2014-1615) (Appendix I).

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<sup>7</sup> The Non-Motorized Pathway – North San Pedro to Merrydale Project, which occurs at the NMP systems southern end, was not included in the NES analysis.